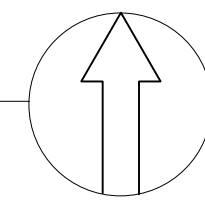


# PSE OPERATIONAL TRAINING CENTER

325 TODD ROAD NW  
PUYALLUP, WA 98371



## VICINITY MAP NTS FIRE ALARM SYSTEM



DEVICE LEGEND			
SYMBOL	MANUFACTURER	PART NO	DESCRIPTION
[NAC]	HONEYWELL	HPF-PS10	10.0 A, 120 VAC REMOTE CHARGER POWER SUPPLY IN A LOCKABLE, METAL ENCLOSURE
[RADIO]	HONEYWELL	HWF2V-COM	LTE DIGITAL CELLULAR FIRE ALARM COMMUNICATOR AND INTERNET PANEL, VERIZON LTE / IP
[S]	NOTIFIER	DNR W/FSP-951R	INTELLIGENT NON-RELAY PHOTOELECTRIC DUCT DETECTOR/ FSP-951R, FLASHSCAN AND CLIP MODE.
[CM]	NOTIFIER	FCM-1	ADDRESSABLE CONTROL MODULE W/ FLASHSCAN, 1 CLASS A OR 1 CLASS B
[DM]	NOTIFIER	FDM-1	ADDRESSABLE DUAL MONITOR MODULE W/ FLASHSCAN, 2 CLASS B
[FAA]	NOTIFIER	FDU-80	ANNUNCIATOR, TERMINAL MODE, 80-CHARACTER, BACKLIT LCD DISPLAY
[RM]	NOTIFIER	FRM-1	ADDRESSABLE RELAY MODULE W/ FLASHSCAN, 2 FORM-C DRY CONTACTS
[S]	NOTIFIER	FSP-951 W/B300-6	ADDRESSABLE LOW-PROFILE PHOTOELECTRIC SMOKE DETECTOR, FLASHSCAN ONLY.
[135° H]	NOTIFIER	FST-951R W/B300-6	LOW-PROFILE, INTELLIGENT, RATE-OF-RISE THERMAL SENSOR, FLASHSCAN ONLY.
[ISO]	NOTIFIER	ISO-X	SLC LOOP ISOLATOR MODULE
[F]	NOTIFIER	NBG-12LX	DUAL-ACTION ADDRESSABLE PULL STATION. INCLUDES KEY LOCKING FEATURE.
[FACU]	NOTIFIER	NFS2-640	INTELLIGENT ADDRESSABLE FIRE ALARM CONTROL UNIT
[WP]	SYSTEM SENSOR	P2GRKLED	2-WIRE HORN STROBE, STANDARD CD, RED, OUTDOOR
[WP]	SYSTEM SENSOR	P2WLLED	2-WIRE, HORN STROBE, WHITE
[H]	SYSTEM SENSOR	PC2WLLED	2-WIRE, HORN STROBE, CEILING, WHITE
[WP]	SYSTEM SENSOR	SRK	STROBE, STANDARD CD, RED, OUTDOOR
[WP]	SYSTEM SENSOR	SWLED	STROBE, WALL, WHITE
[T]	SYSTEM SENSOR	RTS-O	LOW TEMP. SENSOR
[SS DC]	BY OTHERS	BY OTHERS	SURGE SUPPRESSORS PROVIDED BY OTHERS

## BILL OF MATERIALS

QUANTITY	MANUFACTURER	PART NO	DESCRIPTION	MOUNTING	BOX
1	NOTIFIER	NFS2-640	INTELLIGENT ADDRESSABLE FIRE ALARM CONTROL UNIT	72" TO TOP	SUPPLIED
1	NOTIFIER	CPU2-640	NFS2-640 FIRE ALARM CONTROL UNIT MAIN BOARD (CENTRAL PROCESSING UNIT)		
1	NOTIFIER	SBB-B4	BACKBOX ASSEMBLY, TWO TIERS, BLACK, 26.88 LBS.		
1	NOTIFIER	DR-B4	DOOR ASSEMBLY, WINDOW, TWO TIERS, BLACK, 17.45 LBS.		
1	NOTIFIER	DP-DISP2	DRESS PANEL		
1	NOTIFIER	DP-1B	BLANK DRESS PANEL, COVERS ONE CAB-4 TIER, BLACK.		
1	NOTIFIER	UDACT-2	UNIVERSAL DIGITAL ALARM COMMUNICATOR TRANSMITTER-2		
1	NOTIFIER	KDM-R2	KEYPAD/DISPLAY UNIT		
1	NOTIFIER	BP2-4	BATTERY PLATE, USED TO COVER BATTERY AND POWER SUPPLY WHEN LOWER POSITION IS USED IN BACKBOX, 3.10 LBS.		
2	NOTIFIER	BMP-1	BLANK MODULE		
1	NOTIFIER	LEM-320	LOOP EXPANDER MODULE		
1	HONEYWELL	HPF-PS10	10.0 A, 120 VAC REMOTE CHARGER POWER SUPPLY IN A LOCKABLE, METAL ENCLOSURE	72" TO TOP	SUPPLIED
1	HONEYWELL	HPF-PS10 MAIN BOARD	FIRE ALARM POWER SUPPLY MAIN BOARD		
1	NOTIFIER	FDU-80	ANNUNCIATOR, TERMINAL MODE, 80-CHARACTER, BACKLIT LCD DISPLAY	54" TO TOP	SUPPLIED
1	NOTIFIER	FDU-80 CARD	TERMINAL MODE, 80-CHARACTER, BACKLIT LCD DISPLAY		
2	NOTIFIER	DNR W/FSP-951R	INTELLIGENT NON-RELAY PHOTOELECTRIC DUCT DETECTOR/ FSP-951R, FLASHSCAN AND CLIP MODE.	AS REQUIRED	SUPPLIED
2	SYSTEM SENSOR*	DST3	METAL SAMPLING TUBE DUCT WIDTHS 2 TO 4 FT		
14	NOTIFIER	FDM-1	ADDRESSABLE DUAL MONITOR MODULE W/ FLASHSCAN, 2 CLASS B	AS REQUIRED	4-SQUARE BOX
12	NOTIFIER	FRM-1	ADDRESSABLE RELAY MODULE W/ FLASHSCAN, 2 FORM-C DRY CONTACTS	AS REQUIRED	4-SQUARE BOX
112	NOTIFIER	FSP-951 W/B300-6	ADDRESSABLE LOW-PROFILE PHOTOELECTRIC SMOKE DETECTOR, FLASHSCAN ONLY.	CEILING	3-ROUND BOX
4	NOTIFIER	FST-951R W/B300-6	LOW-PROFILE, INTELLIGENT, RATE-OF-RISE THERMAL SENSOR, FLASHSCAN ONLY.	CEILING	3-ROUND BOX
5	NOTIFIER	ISO-X	SLC LOOP ISOLATOR MODULE	AS REQUIRED	4-SQUARE BOX
19	NOTIFIER	NBG-12LX	DUAL-ACTION ADDRESSABLE PULL STATION. INCLUDES KEY LOCKING FEATURE.	48" TO TOP	1-GANG BOX
1	SYSTEM SENSOR	P2GRKLED	2-WIRE HORN STROBE, STANDARD CD, RED, OUTDOOR	80" TO BOTTOM	SUPPLIED (SA-WBB)
13	SYSTEM SENSOR	P2WLLED	2-WIRE, HORN STROBE, WHITE	80" TO BOTTOM	1-GANG BOX
20	SYSTEM SENSOR	PC2WLLED	2-WIRE, HORN STROBE, CEILING, WHITE	CEILING	1-GANG BOX
2	SYSTEM SENSOR	SRK	STROBE, STANDARD CD, RED, OUTDOOR	80" TO BOTTOM	SUPPLIED (SA-WBB)
4	SYSTEM SENSOR	SWLED	STROBE, WALL, WHITE	80" TO BOTTOM	1-GANG BOX
1	HONEYWELL	HWF2V-COM	LTE DIGITAL CELLULAR FIRE ALARM COMMUNICATOR AND INTERNET PANEL, VERIZON LTE / IP	AS REQUIRED	SUPPLIED
1	HONEYWELL	HWF2V-COM MAIN BOARD	MAIN BOARD		
1	POTTER	RTS-O	LOW TEMP. SENSOR	AS REQUIRED	1-GANG BOX
1	SPACEAGE	SSU00689	DOCUMENT RECORD BOX	AS REQUIRED	SUPPLIED
1	NOTIFIER	NFS-LBB	BATTERY CABINET	AS REQUIRED	SUPPLIED
1	ULTRATECH	IM-12120NB	12V 12AH BATTERY		COMMUNICATOR
2	ULTRATECH	IM-1272FA	12V 7AH BATTERY		NAC POWER SUPPLY
2	POWERSONIC	PS-12260	12V 26AH BATTERY		FACU
1300LF		RDP BUS	4 CONDUCTOR SOLID COPPER FPLP/R ANALOG UNSHIELDED / 184 SOL JKT FPLR 1M RL RED		
4000LF		SIGNAL LINE CIRCUIT	2 CONDUCTOR SOLID COPPER FPLR / 18/2 SOL JKT FPLR 1M RL RED		
2000LF		NOTIFICATION CIRCUIT	2 CONDUCTOR SOLID COPPER FPLP/R UNSHIELDED / 14/2 SOL JKT FPLR 1M RL RED		
100LF		INDICATING	2 CONDUCTOR SOLID COPPER FPLP/R / 18/2 SOL JKT FPLR 1M RL RED		
300LF		DIRECT BURIAL	2 CONDUCTOR SOLID COPPER UNSHIELDED / 14/2 SOL FPLR 1M RL WET/DIRECT BURIAL		
300LF		DIRECT BURIAL	2 CONDUCTOR SOLID COPPER UNSHIELDED / 18/2 SOL FPLR 1M RL WET/DIRECT BURIAL		

\*VERIFY IF REMOTE SWITCH IS NEEDED AND CONFIRM CORRECT SAMPLING TUBE LENGTHS IN FIELD PRIOR TO ORDERING

## BUILDING CODE NOTES

BUILDING TO BE CONSTRUCTION TYPE V-B, SPRINKLERED

A. PER TABLE 504.3 ALLOWABLE BUILDING HEIGHT IN FEET ABOVE GRADE PLANE  
1. OCCUPANCY GROUP 'B' ALLOWABLE: 60'-0" PROPOSED: 26'-2"

B. PER TABLE 504.4 ALLOWABLE NUMBER OF STORIES ABOVE GRADE PLANE  
1. OCCUPANCY GROUP 'B' ALLOWABLE: 3 STORIES PROPOSED: 1 STORIES

C. PER TABLE 506.2 ALLOWABLE AREA FACTOR IN SQUARE FEET  
1. OCCUPANCY GROUP 'B' ALLOWABLE: 36,000 SF PROPOSED: 42,510 SF

D. ALLOWABLE AREA PER SECTION 506.2.1 EQUATION 5-1:  $A_a = A_t + (NS \times I_f)$

1. ALLOWABLE BUILDING AREA =  $36,000 + (9,000 \times 0.75) = 42,750$  SF  
2. PROPOSED BUILDING AREA = 42,510 SF

A. THE STRUCTURE WILL REQUIRE AN EMERGENCY RESPONDER RADIO ANALYSIS TO BE CONDUCTED (IFC 510). ANY DEFICIENCIES FOUND WILL NEED TO BE CORRECTED PRIOR TO CERTIFICATE OF OCCUPANCY ISSUANCE.

## GENERAL NOTES

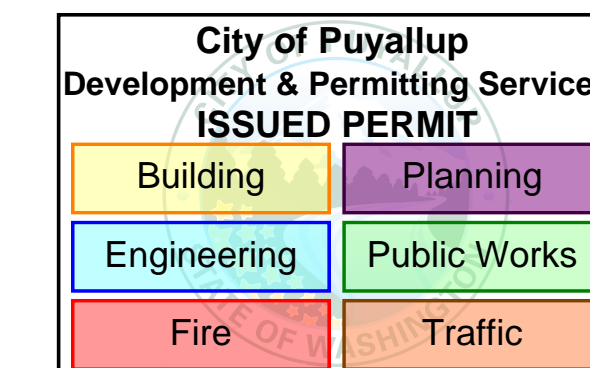
- INSTALL NEW ADDRESSABLE NOTIFIER 640 FIRE PANEL PER (IFC 2021, NFPA 72 2019), NPFA 70 (NEC) 2017 REQUIREMENTS WITH WASHINGTON STATE AMENDMENTS. PROVIDE FULL DETECTION COVERAGE OF BUILDING PER LOCAL MUNICIPAL REQUIREMENTS AND NFPA 72 (2019) 7.5.3.1.
- CONDUIT IS TO BE PROVIDED AND INSTALLED BY OTHERS.
- CORE DRILLING REQUIRED TO FACILITATE ALL CONDUIT WORK. CORE DRILLED HOLES SHALL NOT PENETRATE THROUGH ANY STRUCTURAL BEAMS, REBAR AND/OR CONDUIT CONTAINED WITHIN THE CONCRETE SLABS AND/OR WALLS THAT MAY COMPROMISE THE STRUCTURAL INTEGRITY OF THE BUILDING. CORE DRILL LOCATION MAY NEED TO BE ADJUSTED TO ACCOMMODATE OBSTRUCTIONS. PRIOR TO DRILLING COORDINATE EXACT LOCATIONS OF HOLES WITH GENERAL CONTRACTOR.
- THIS DRAWING SHOWS THE LAYOUT OF THE FIRE ALARM SYSTEM AND INDICATES THE APPROXIMATE LOCATION OF EQUIPMENT, WIRING, AND CONDUIT. WIRING AND CONDUIT ARE SHOWN POINT TO POINT ONLY. THE CONDUIT IS TO BE INSTALLED IN APPROXIMATELY THE AREA AS INDICATED ON THE DRAWINGS; HOWEVER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY MODIFICATIONS AS MAY BE REQUIRED TO SUIT STRUCTURAL OR JOB CONDITIONS. THE CONTRACTOR SHALL FURNISH ALL OFFSETS, ADDITIONAL MATERIAL, CONDUIT ADJUSTMENTS, ETC. AS MAY BE REQUIRED TO MEET INSTALLATION CONDITIONS. ACTUAL WIRE RUNS SHALL BE KEPT IN AN ORGANIZED MANNER BY THE INSTALLING CONTRACTOR TO FACILITATE AS-BUILT DRAWINGS.
- PRIOR TO ROUGH-IN COORDINATE THE EXACT LOCATIONS OF FIRE ALARM EQUIPMENT, DEVICES, AND CONDUIT WITH THE ELECTRICAL, MECHANICAL, AND FIRE PROTECTION CONTRACTORS.
- THE CONTRACTOR IS TO REVIEW AND VERIFY ALL FIELD CONDITIONS, MEASUREMENTS, PLANS, AND STOCK LISTS, PRIOR TO ORDERING, FABRICATION, AND INSTALLING. SECURITY SOLUTIONS NW WILL NOT ASSUME THE RESPONSIBILITY OF THE ALARM COMPONENTS OR CONDUIT FITTING PER PLAN.
- THE FIRE ALARM SYSTEM CONTRACTOR AND GENERAL CONTRACTOR SHALL COORDINATE ALL CUTTING, PATCHING, AND FINISH WORK.
- ALL ALARM WIRING IS TO BE IN ACCORDANCE WITH NFPA 72
- WIRING PATHWAY CLASS DESIGNATIONS:  
- NAC PATHWAY CLASS DESIGNATIONS: CLASS B  
- SLC PATHWAY CLASS DESIGNATIONS: CLASS B
- PENETRATIONS THROUGH FIRE RATED PARTITIONS TO BE SEALED BY OTHERS TO MAINTAIN THE INTEGRITY OF THE PARTITION.
- MOUNT PULL STATIONS WITHIN 60" OF THE LATCH SIDE OF THE EXIT DOORWAY AND BETWEEN 42" AND 48" ABOVE FLOOR LEVEL. ALL DEVICES SHALL BE MOUNTED AT THE SAME HEIGHT.
- LOCATE SMOKE AND HEAT DETECTORS NOT CLOSER THAN 36" FROM AIR-SUPPLY DIFFUSER OR RETURN-AIR OPENINGS.
- LOCATE DETECTORS NOT CLOSER THAN 12" FROM ANY PART OF A LIGHTING FIXTURE AND NOT DIRECTLY ABOVE PENDANT MOUNTED OR INDIRECT LIGHTING.
- INSTALL A COVER ON EACH SMOKE DETECTOR THAT IS NOT PLACED IN SERVICE DURING CONSTRUCTION. COVER SHALL REMAIN IN PLACE EXCEPT DURING SYSTEM TESTING.
- AUDIBLE/VISUAL ALARM INDICATION DEVICES SHALL BE INSTALLED NOT LESS THAN 6" BELOW THE CEILING BETWEEN 80" AND 96" ABOVE FLOOR LEVEL. INSTALL HORN/STROBES ON FLUSH MOUNTED BACK BOXES. ALL DEVICES SHALL BE MOUNTED AT THE SAME HEIGHT.
- AUDIBLE ALARM INDICATION DEVICES SHALL BE INSTALLED NOT LESS THAN 90" ABOVE THE FLOOR AND NOT LESS THAN 6" BELOW THE CEILING. ALL DEVICES SHALL BE MOUNTED AT THE SAME HEIGHT.
- MOUNT REMOTE ANNUNCIATOR AT 54" ABOVE FLOOR LEVEL.
- CONTRACTOR SHALL PERFORM AND MEET ALL CODE REQUIRED TESTS, AND FILE A MATERIALS TEST CERTIFICATE PER NFPA 72.

City of Puyallup  
Fire  
REVIEWED  
FOR  
COMPLIANCE

THE APPROVED CONSTRUCTION PLANS AND ALL ENGINEERING MUST BE POSTED ON THE JOB AT ALL INSPECTIONS IN A VISIBLE AND READILY ACCESSIBLE LOCATION.

Approval of submitted plans is not an approval of omissions or oversight by this office or noncompliance with any applicable regulations of local government. The contractor is responsible for making sure that the building complies with all applicable building codes and regulations of the local government.

- Read Permit Conditions prior to calling for inspection.
- Field verification will be required.
- Plans have too many layers turned on to verify full code compliance.



## SHEET INDEX

SHEET	DESCRIPTION
FA.0.01	SHEET INDEX, LEGEND, GEN. NOTES, ETC...
FA.1.01	RISER DIAGRAM
FA.2.01	SITE PLAN
FA.2.02	BUILDING FLOOR PLAN - OVERALL
FA.2.03	SOUTH FLOOR PLAN
FA.2.04	NORTH SOUTH FLOOR PLAN
FA.2.05	ROOF FLOOR PLAN
FA.2.06	BUILDING ELEVATIONS
FA.3.01	OPERATIONS MATRIX & SMOKE CONTROL
FA.4.01	PANEL & DEVICE DETAILS
FA.4.02	PANEL & DEVICE ELEVATIONS
FA.5.01	BATTERY CALCULATIONS

10.11.24  
12.04.24  
12.19.24

DRAWING FOR PERMIT SUBMITTAL  
CHANGES PER ENGINEERS REVIEW  
REVISIONS PER INTERNAL REVIEW & AUI COMMENTS

SECURITY SOLUTIONS

1619 N. STATE ST  
BELLINGHAM WA 98225  
T: 360.734.4940  
F: 360.647.9540

DATE

SYM DESCRIPTION

DRAWING REVIEWED BY: CHRIS RUSSELL  
NICET CERTIFICATION NO. 120520  
FIRE ALARM SYSTEMS - LEVEL III  
CERTIFICATION EXPIRES: AUGUST 1, 2025

SYSTEM TYPE  
FIRE ALARM

PROJECT INFORMATION  
325 TODD ROAD NW  
PUYALLUP, WA 98371

PROJECT DESCRIPTION  
PSE OPERATIONAL TRAINING CENTER

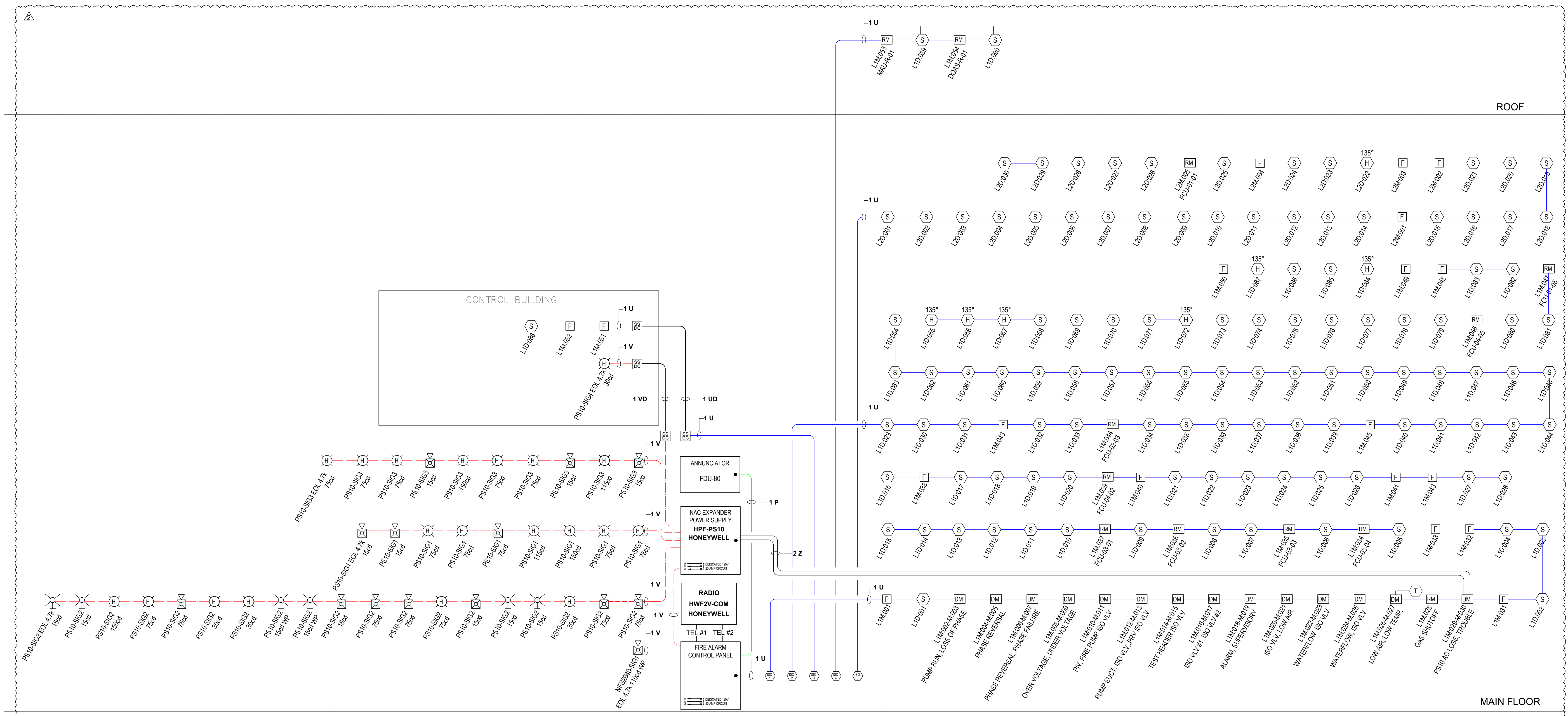
DRAWING SIZE: E1 SIZE 30"x42"  
DRAWN BY: MATT WATT

DATE DRAWN: 10/11/2024  
REV DATE: 12/19/2024 M.W.  
BUSINESS LICENSE #  
SECURSN790NE  
ELECTRICAL LICENSE #  
SECURSN954JC  
UL IDENTIFICATION #  
1237799-000

FA.0.01

Cable/Circuit Report

Source	Circuit	Circuit Type	Circuit Abbr	Wiring Style	Symbol	Type	Description	Gauge	Length
640	RDP BUS	Power/Serial	P	Class B		Fire Alarm	18/4 SOL JKT FPLR 1M RL RED	#18	130'-0
HPF-PS10	SIG	Notification	V	Class B		Fire Alarm	14/2 SOL JKT FPLR 1M RL RED	#14	200'-0
640	SLC	Signaling line	U	Class B		Fire Alarm	18/2 SOL JKT FPLR 1M RL RED	#18	4000'-0
640	IDC	Indicating	Z	Class B		Fire Alarm	18/2 SOL JKT FPLR 1M RL RED	#18	100'-0
HPF-PS10	SIG	Notification	VD	Class B		Fire Alarm	14/2 SOL JKT FPLR 1M RL RED, WET/ DIRECT BURIAL	#14	250'-0
640	SLC	Signaling line	UD	Class B		Fire Alarm	18/2 SOL JKT FPLR 1M RL RED, WET/ DIRECT BURIAL	#18	250'-0
TEST SWITCH	IDC	Indicating	K	Class B		Fire Alarm	18/6 SOL JKT FPLR 1M RL RED	#18	100'-0



RISER DIAGRAM

DATE	DESCRIPTION
10.11.24	0 DRAWING FOR PERMIT SUBMITTAL
12.04.24	A CHANGES PER ENGINEERS REVIEW
12.19.24	A REVISIONS PER INTERNAL REVIEW & AHI COMMENTS

**SECURITY SOLUTIONS**

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 FIRE ALARM SYSTEMS - LEVEL III  
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**FIRE ALARM**

PROJECT INFORMATION  
**325 TODD ROAD NW  
 PUYALLUP, WA 98371**

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**PSE OPERATIONAL TRAINING CENTER**

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**FIRE ALARM**

DRAWING SIZE: E1 SIZE 30"x42"  
 DRAWN BY: MATT WATT

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 ELECTRICAL LICENSE #  
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FA.1.01

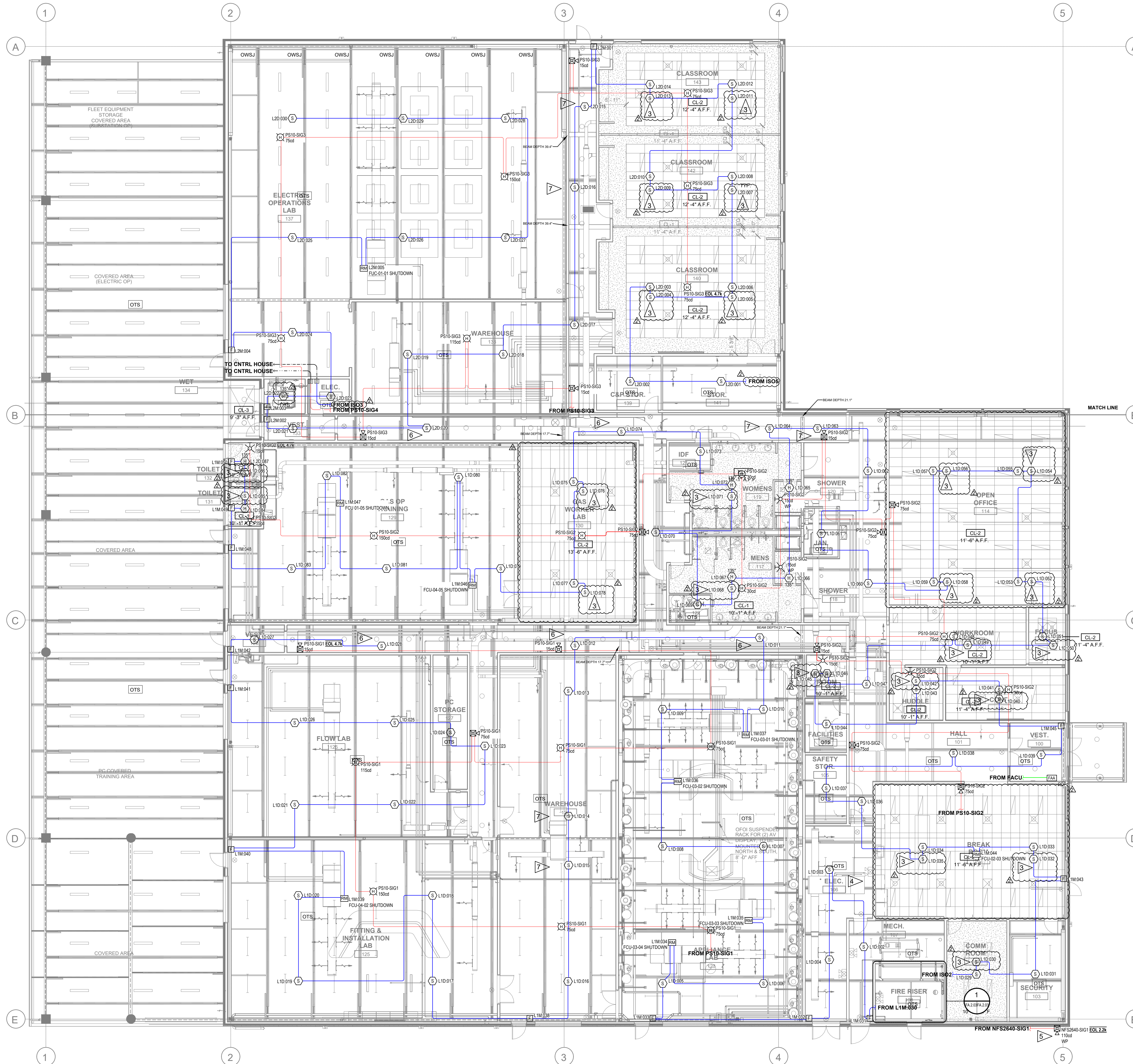
City of Puyallup  
 Development & Permitting Services  
**ISSUED PERMIT**

Building Planning  
 Engineering Public Works  
 Fire Traffic



Cable/Circuit Report

Source	Circuit	Circuit Type	Circuit Abbr	Wiring Style	Symbol	Type	Description	Gauge	Length
640	RDP BUS	Power/Serial	P	Class B		Fire Alarm	18/4 SOL JKT FPLR 1M RL RED	#18	130'-0"
HPF-PS10	SIG	Notification	V	Class B		Fire Alarm	14/2 SOL JKT FPLR 1M RL RED	#14	200'-0"
640	SLC	Signaling line	U	Class B		Fire Alarm	18/2 SOL JKT FPLR 1M RL RED	#18	4000'-0"
640	IDC	Indicating	Z	Class B		Fire Alarm	18/2 SOL JKT FPLR 1M RL RED	#18	100'-0"
HPF-PS10	SIG	Notification	VD	Class B		Fire Alarm	14/2 SOL JKT FPLR 1M RL RED, WET/ DIRECT BURIAL	#14	250'-0"
640	SLC	Signaling line	UD	Class B		Fire Alarm	18/2 SOL JKT FPLR 1M RL RED, WET/ DIRECT BURIAL	#18	250'-0"
TEST SWITCH	IDC	Indicating	K	Class B		Fire Alarm	18/6 SOL JKT FPLR 1M RL RED	#18	100'-0"



FLAG NOTES:

- 1 PULL STATION SIGN: IT IS THE RESPONSIBILITY OF ANYONE PLACING THIS FIRE ALARM SYSTEM INTO TEST TO INFORM THE MONITORING STATION TO NOT PLACE THE FACU PULL STATION INTO TEST. THIS POINT MUST STAY ACTIVE.
- 2 LOCATE RELAY MODULE WITHIN 3'-0" OF INTERFACE EQUIPMENT. OTHERS TO PROVIDE ACCESS TO EQUIPMENT FOR INSPECTION TESTING & MAINTENANCE.
- 3 SMOKE DETECTOR TO BE INSTALLED IN CONCEALED COMBUSTIBLE SPACES IN ACCORDANCE WITH MUNICIPAL AND NFPA 72 REQUIREMENTS FOR TOTAL COVERAGE. SMOKE DETECTION IS BEING PROVIDED IN LIEU OF HEAT DETECTORS AT THE EXPRESS DIRECTION OF THE AHJ.
- 4 DEDICATED CIRCUIT BREAKER FOR FIRE ALARM SYSTEM PROVIDED BY OTHERS & LOCATED IN ELECTRICAL ROOM.
- 5 LOCATION OF EXTERIOR HORN STROBE TO BE APPROVED BY AHJ. EXTERIOR HORN STROBE ACTIVATED BY WATER FLOW SWITCH & NON-RESETTABLE.
- 6 BEAM DEPTHS IN CORRIDOR ARE LESS THAN 10% OF CEILING HEIGHT. SMOOTH CEILING SPACING ALLOWED.
- 7 BEAM DEPTH EXCEEDS 10% OF CEILING HEIGHT. A DETECTOR MUST BE INSTALLED IN BEAM POCKETS.
- 8 MONITOR MODULE FOR PIV IN RISER ROOM. UNDERGROUND CONDUIT AND DIRECT BURIAL WIRE TO SWITCH BY OTHERS.

MATCH LI

City of Puyallup  
Development & Permitting Services  
**ISSUED PERMIT**

Building	Planning
Engineering	Public Works
Fire	Traffic

DATE	DESCRIPTION
10.11.24	DRAWING FOR PERMIT SUBMITTAL
12.04.24	CHANGES PER ENGINEERS REVIEW
12.19.24	REVISIONS PER INTERNAL REVIEW & AHJ COMMENTS

**SECURITY SOLUTIONS**

1619 N. STATE ST.  
BELLINGHAM WA 98225  
t. 360.734.4940  
f. 360.647.9540

DRAWING REVIEWED BY: CHRIS RUSSELL  
NICET CERTIFICATION NO. 120520  
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CERTIFICATION EXPIRES: AUGUST 1, 2025

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PSE OPERATIONAL TRAINING CENTER

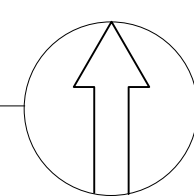
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FA.2.02

FLOOR PLAN - BUILDING

SCALE: 3/32" = 1'-0"



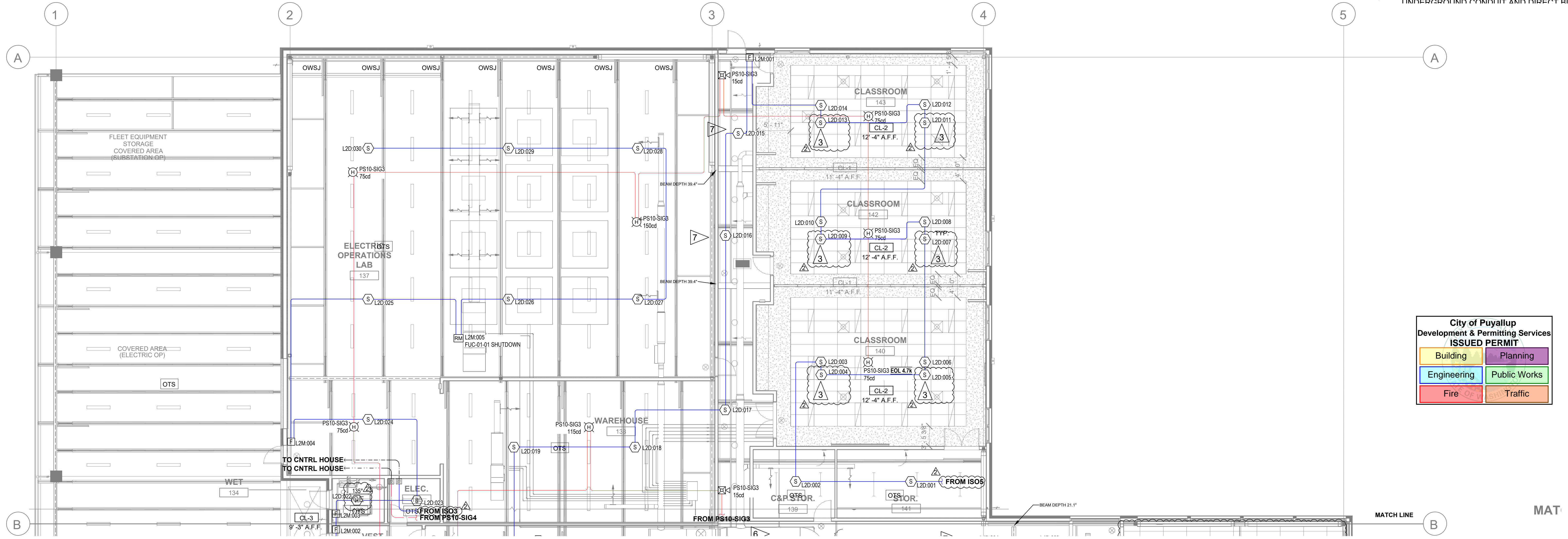


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640	SLC	Signaling line	U	Class B		Fire Alarm	18/2 SOL JKT FPLR 1M RL RED	#18	4000'-0
640	IDC	Indicating	Z	Class B		Fire Alarm	18/2 SOL JKT FPLR 1M RL RED	#18	100'-0
HPF-PS10	SIG	Notification	VD	Class B		Fire Alarm	14/2 SOL JKT FPLR 1M RL RED, WET/ DIRECT BURIAL	#14	250'-0
640	SLC	Signaling line	UD	Class B		Fire Alarm	18/2 SOL JKT FPLR 1M RL RED, WET/ DIRECT BURIAL	#18	250'-0
TEST SWITCH	IDC	Indicating	K	Class B		Fire Alarm	18/6 SOL JKT FPLR 1M RL RED	#18	100'-0

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FIRE ALARM SYSTEMS - LEVEL III  
CERTIFICATION EXPIRES: AUGUST 1, 2025

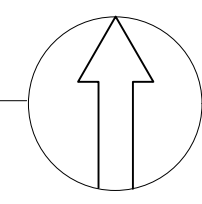
SYSTEM TYPE: FIRE ALARM  
PROJECT INFORMATION: 325 TODD ROAD NW PUYALLUP, WA 98371  
PROJECT DESCRIPTION: PSE OPERATIONAL TRAINING CENTER

DRAWING SIZE: E1 SIZE 30"x42"  
DRAWN BY: MATT WATT  
DATE DRAWN: 10/11/2024  
REV DATE: 12/19/2024 M.W.  
BUSINESS LICENSE # SECURSN790NE  
ELECTRICAL LICENSE # SECURSN954IG  
UL IDENTIFICATION # 1237799-000

FA.2.04

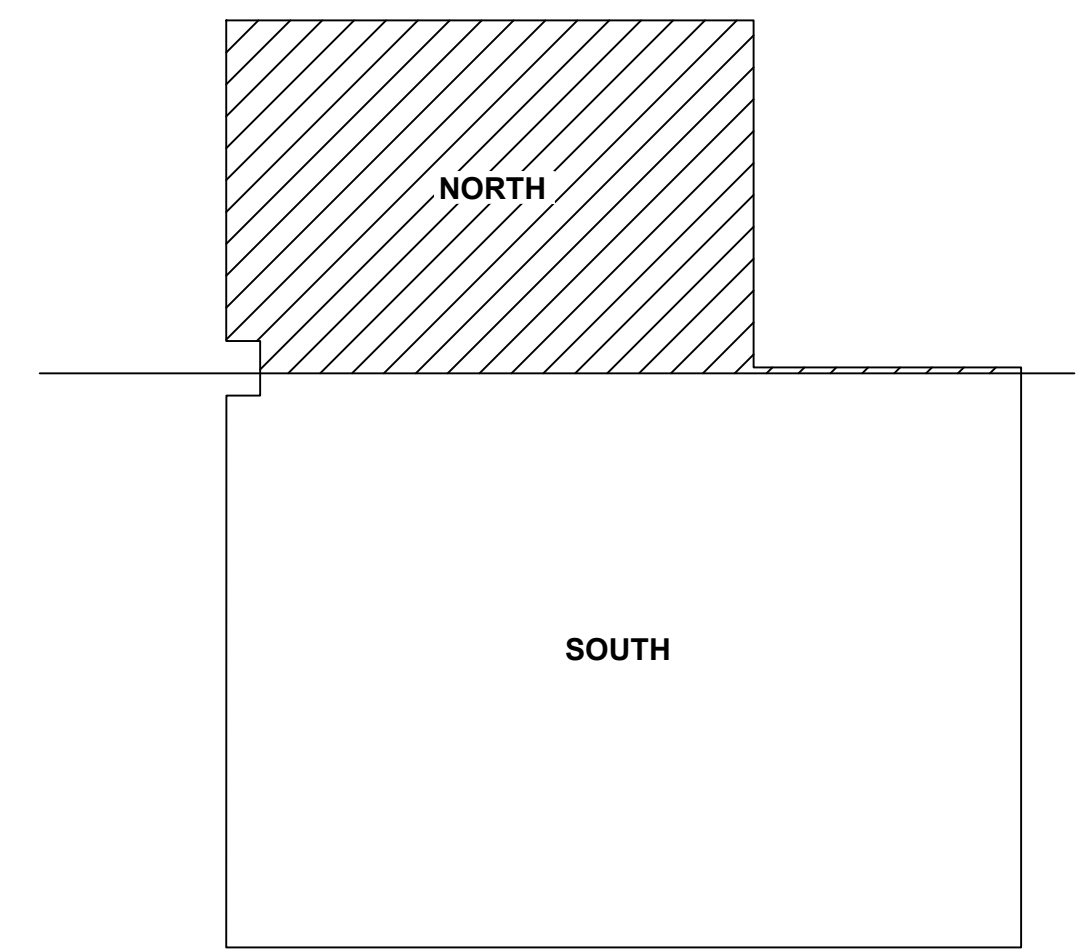
FLOOR PLAN - NORTH

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



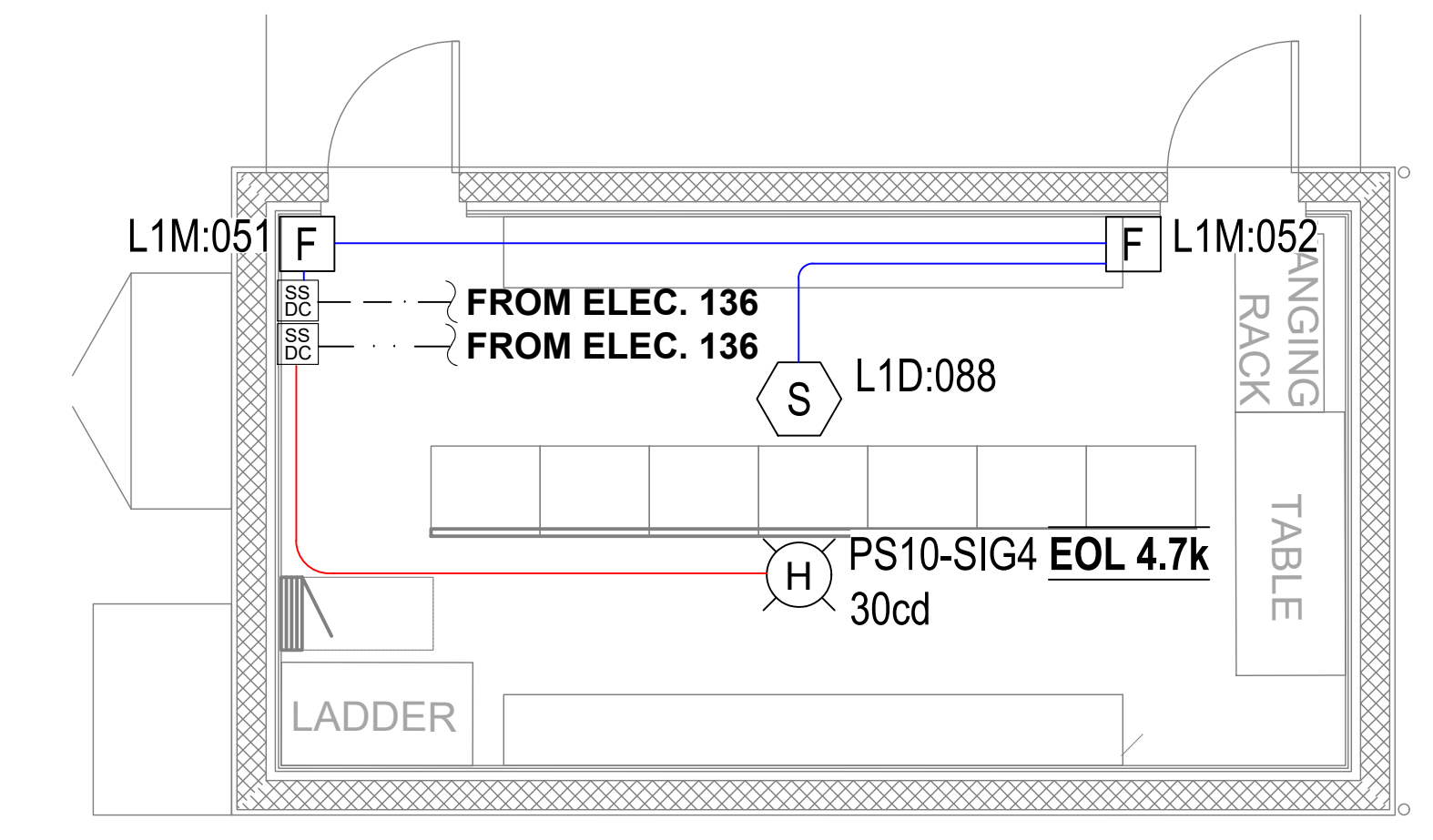
KEY PLAN

SCALE: NTS



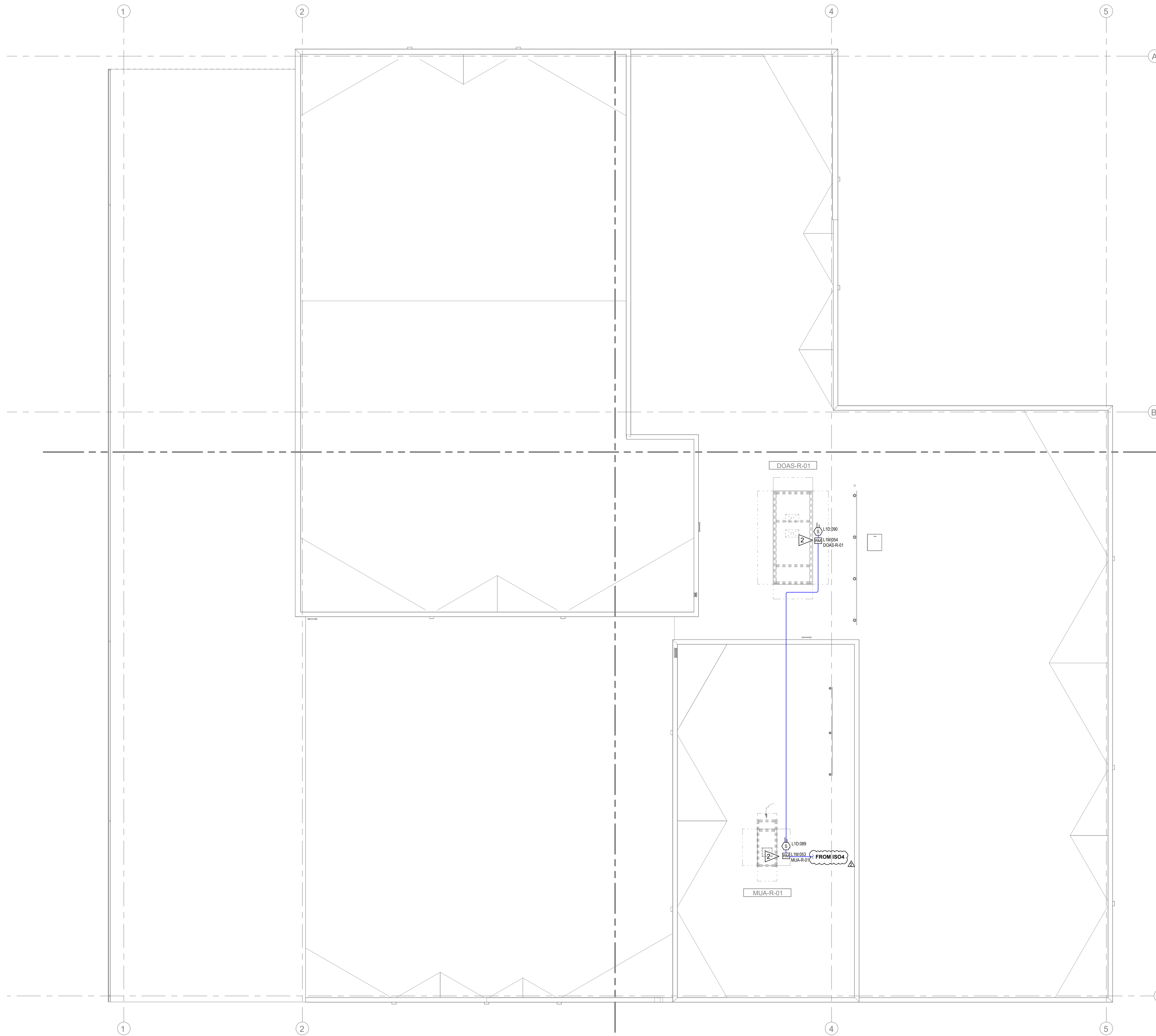
CONTROL BUILDING ENLARGED

SCALE: 1/4" = 1'-0"



Cable/Circuit Report

Source	Circuit	Circuit Type	Circuit Abbr	Wiring Style	Symbol	Type	Description	Gauge	Length
640	RDP BUS	Power/Serial	P	Class B		Fire Alarm	18/4 SOL JKT FPLR 1M RL RED	#18	130'-0"
HPF-PS10	SIG	Notification	V	Class B		Fire Alarm	14/2 SOL JKT FPLP 1M RL RED	#14	200'-0"
640	SLC	Signaling line	U	Class B		Fire Alarm	18/2 SOL JKT FPLR 1M RL RED	#18	4000'-0"
640	IDC	Indicating	Z	Class B		Fire Alarm	18/2 SOL JKT FPLR 1M RL RED	#18	100'-0"
HPF-PS10	SIG	Notification	VD	Class B		Fire Alarm	14/2 SOL JKT FPLR 1M RL RED, WET/ DIRECT BURIAL	#14	250'-0"
640	SLC	Signaling line	UD	Class B		Fire Alarm	18/2 SOL JKT FPLR 1M RL RED, WET/ DIRECT BURIAL	#18	250'-0"
TEST SWITCH	IDC	Indicating	K	Class B		Fire Alarm	18/6 SOL JKT FPLR 1M RL RED	#18	100'-0"



FLAG NOTES:

- 1 PULL STATION SIGN: "IT IS THE RESPONSIBILITY OF ANYONE PLACING THIS FIRE ALARM SYSTEM INTO TEST TO INFORM THE MONITORING STATION TO NOT PLACE THE FACU PULL STATION INTO TEST. THIS POINT MUST STAY ACTIVE."
- 2 LOCATE RELAY MODULE WITHIN 3'-0" OF INTERFACE EQUIPMENT. OTHERS TO PROVIDE ACCESS TO EQUIPMENT FOR INSPECTION TESTING & MAINTENANCE.
- 3 SMOKE DETECTOR TO BE INSTALLED IN CONCEALED COMBUSTIBLE SPACES IN ACCORDANCE WITH MUNICIPAL AND NFPA 72 REQUIREMENTS FOR TOTAL COVERAGE. SMOKE DETECTION IS BEING PROVIDED IN LIEU OF HEAT DETECTORS AT THE EXPRESS DIRECTION OF THE AHJ.
- 4 DEDICATED CIRCUIT BREAKER FOR FIRE ALARM SYSTEM PROVIDED BY OTHERS & LOCATED IN ELECTRICAL ROOM.
- 5 LOCATION OF EXTERIOR HORN STROBE TO BE APPROVED BY AHJ. EXTERIOR HORN STROBE ACTIVATED BY WATER FLOW SWITCH & NON-RESETTABLE.
- 6 BEAM DEPTHS IN CORRIDOR ARE LESS THAN 10% OF CEILING HEIGHT. SMOOTH CEILING SPACING ALLOWED.
- 7 BEAM DEPTH EXCEEDS 10% OF CEILING HEIGHT. A DETECTOR MUST BE INSTALLED IN BEAM POCKETS.
- 8 MONITOR MODULE FOR PIV IN RISER ROOM. UNDERGROUND CONDUIT AND DIRECT BURIAL

City of Puyallup  
Development & Permitting Services  
**ISSUED PERMIT**

Building	Planning
Engineering	Public Works
Fire	Traffic

DATE	SYMBOL	DESCRIPTION
10.11.24	0	DRAWING FOR PERMIT SUBMITTAL
12.04.24	1	CHANGES PER ENGINEERS REVIEW
12.19.24	2	REVISIONS PER INTERNAL REVIEW & AHT COMMENTS

**SECURITY SOLUTIONS**

1619 N. STATE ST.  
BELLINGHAM WA 98225  
T: 360.734.4940  
F: 360.647.9540

DRAWING REVIEWED BY: CHRIS RUSSELL  
NICET CERTIFICATION NO. 120520  
FIRE ALARM SYSTEMS - LEVEL III  
CERTIFICATION EXPIRES: AUGUST 1, 2025

SYSTEM TYPE  
**FIRE ALARM**

PROJECT INFORMATION  
**325 TODD ROAD NW  
PUYALLUP, WA 98371**

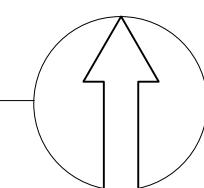
PROJECT DESCRIPTION  
**PSE OPERATIONAL TRAINING CENTER**

DRAWING SIZE: E1 SIZE 30"x42"  
DRAWN BY: MATT WATT

DATE DRAWN: 10/11/2024  
REV DATE: 12/19/2024 M.W.  
BUSINESS LICENSE # SECURSN790NE  
ELECTRICAL LICENSE # SECURSN954JG  
UL IDENTIFICATION # 1237799-000

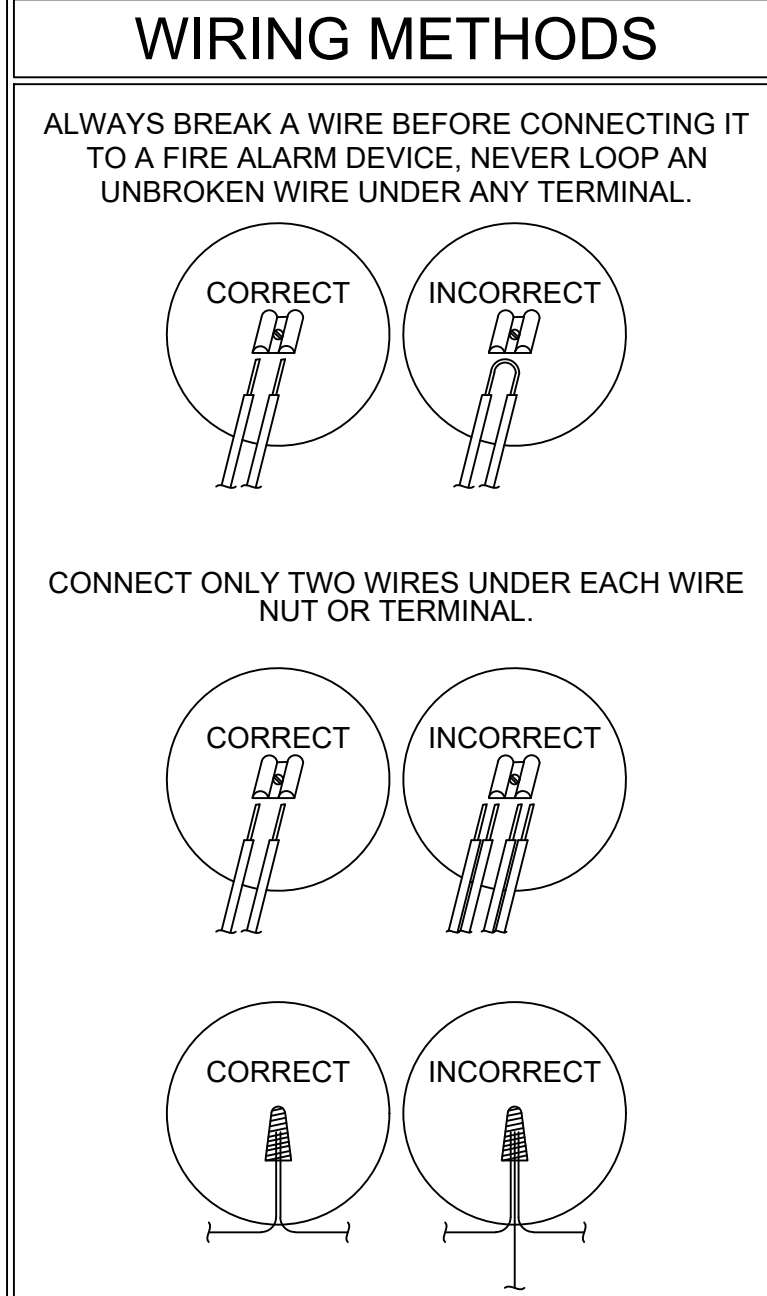
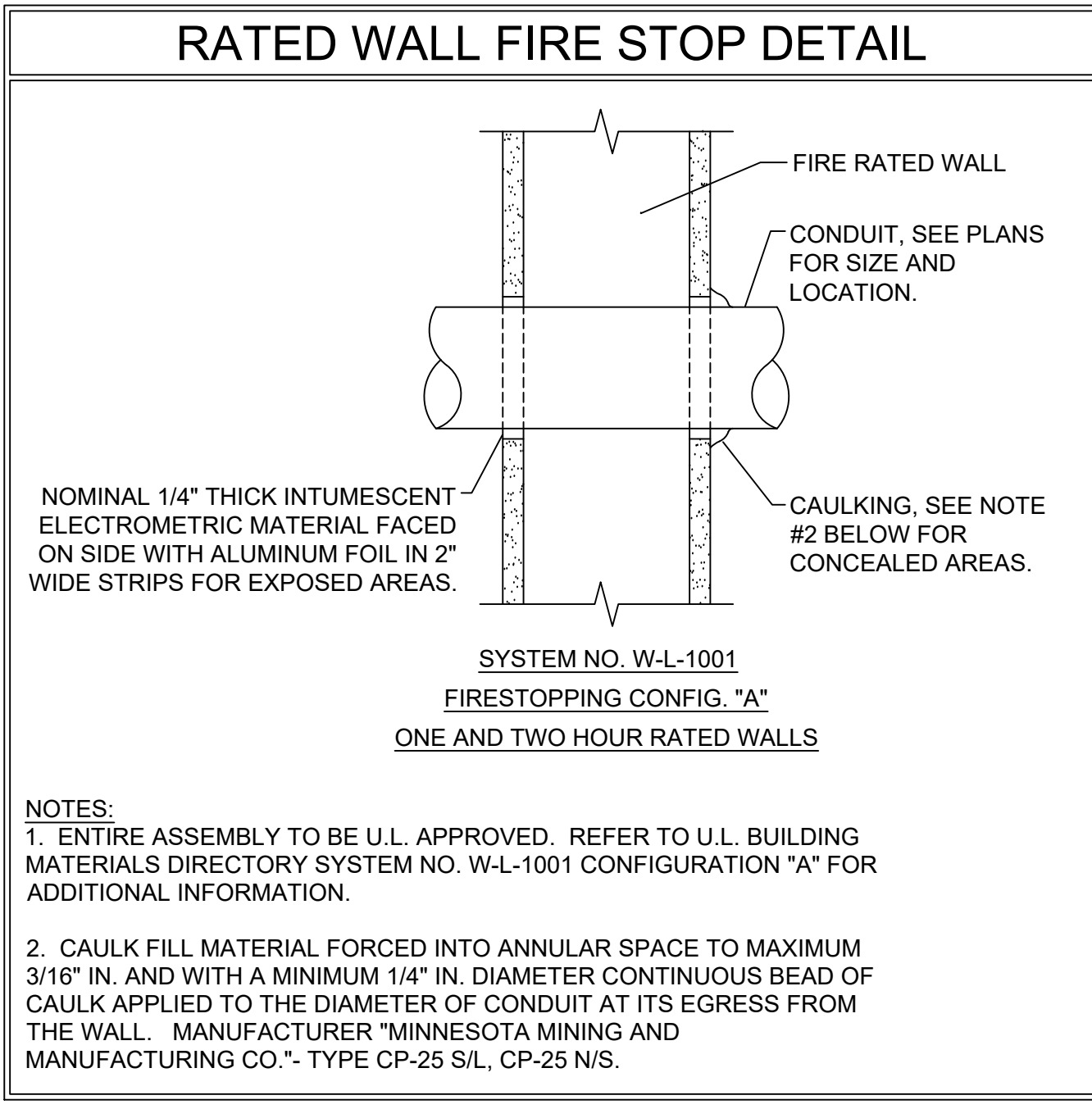
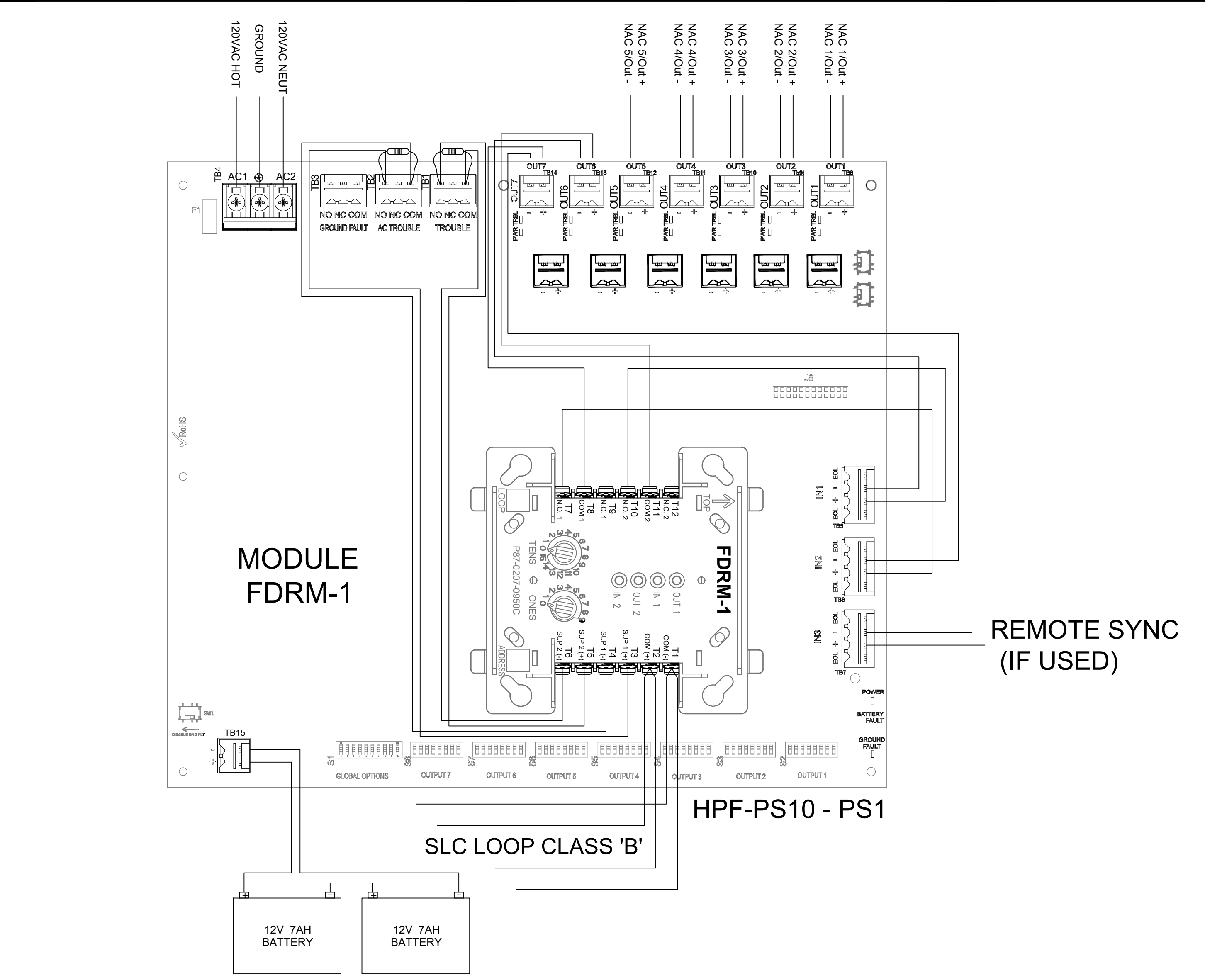
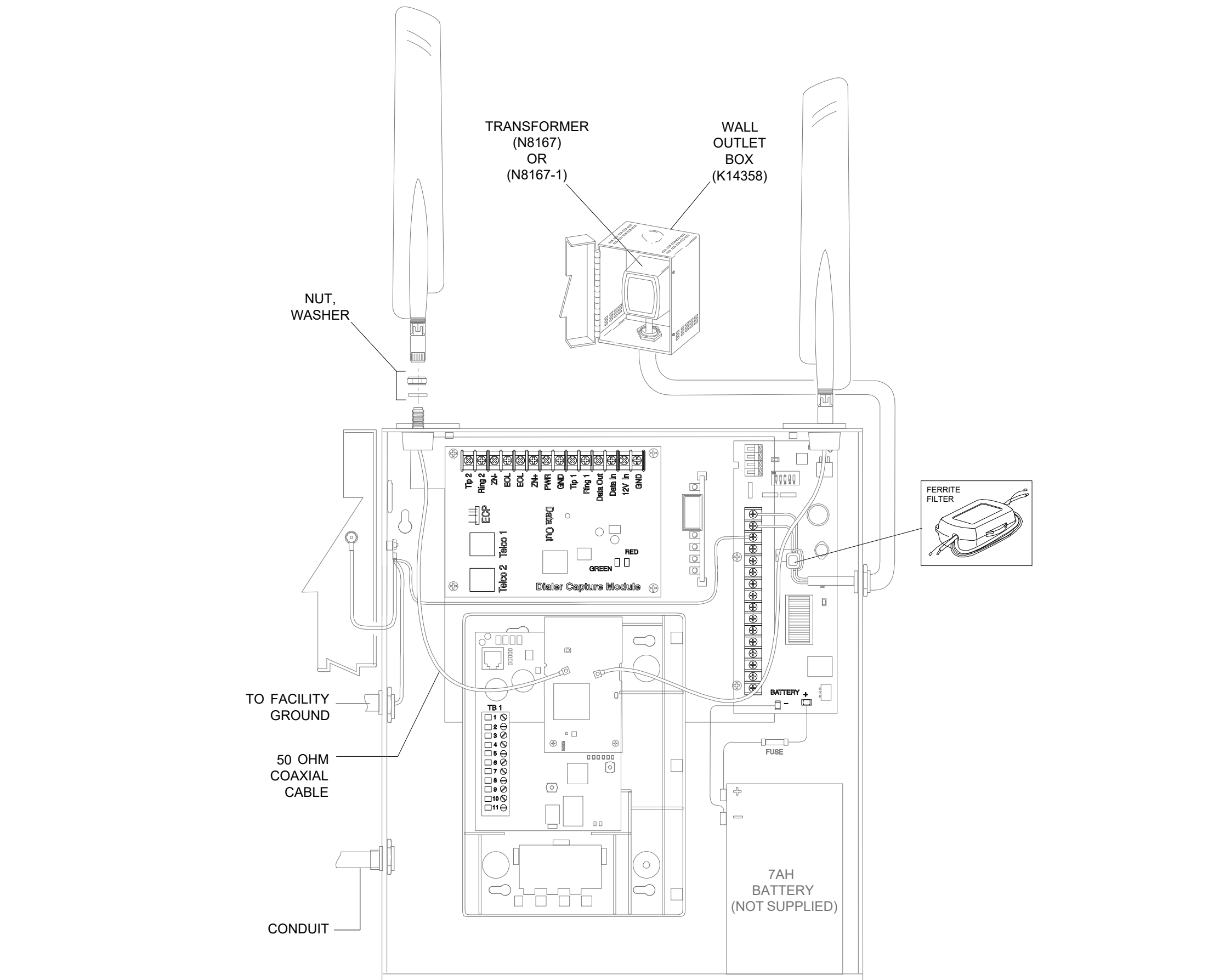
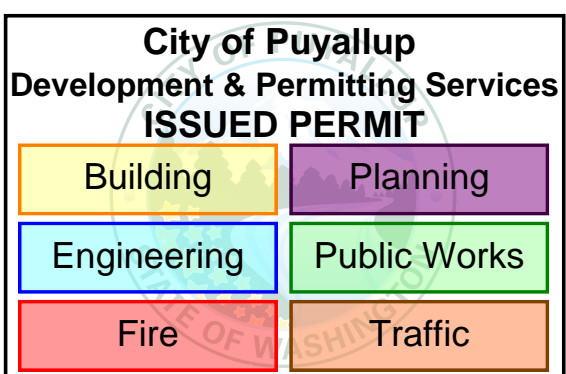
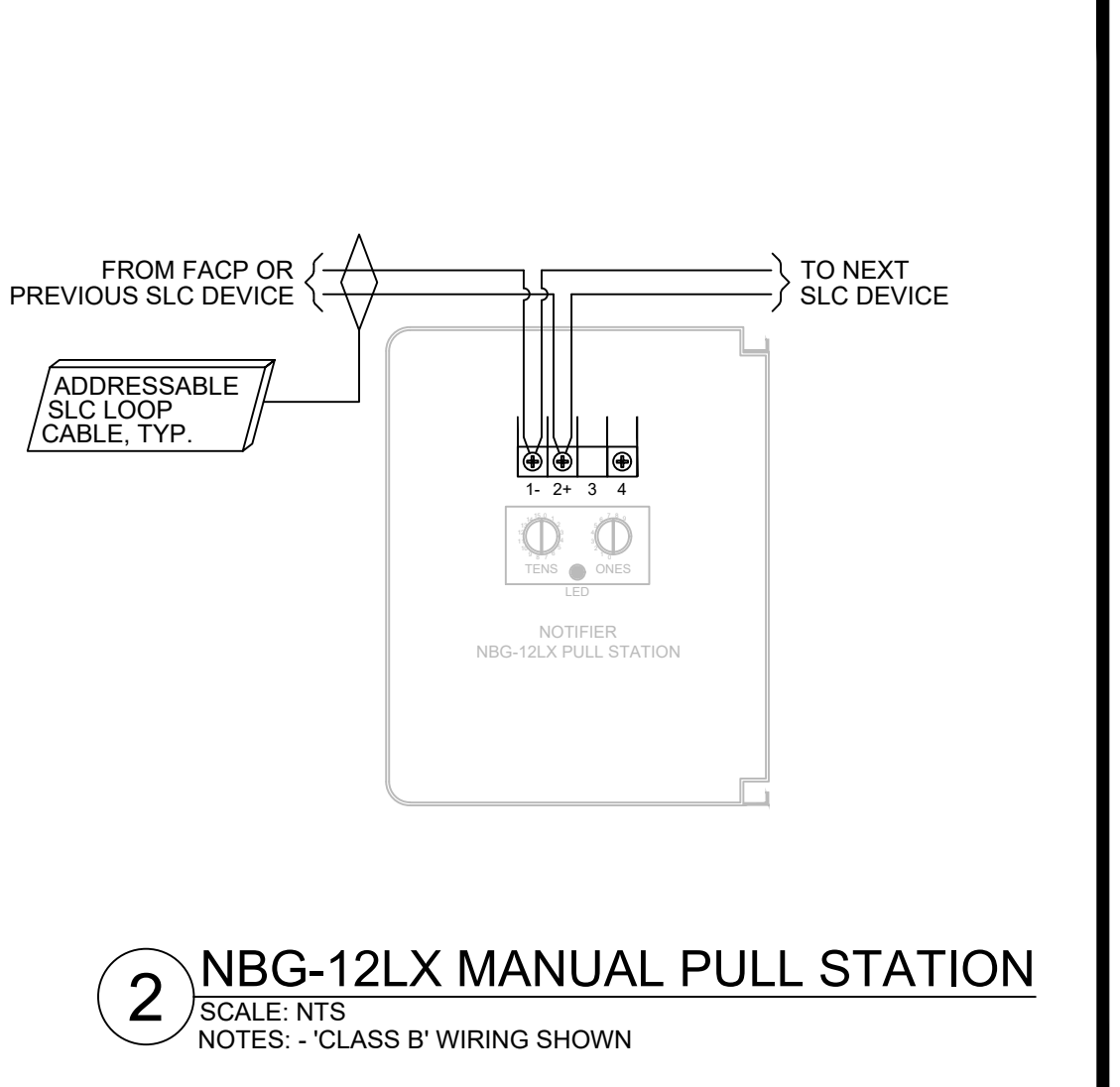
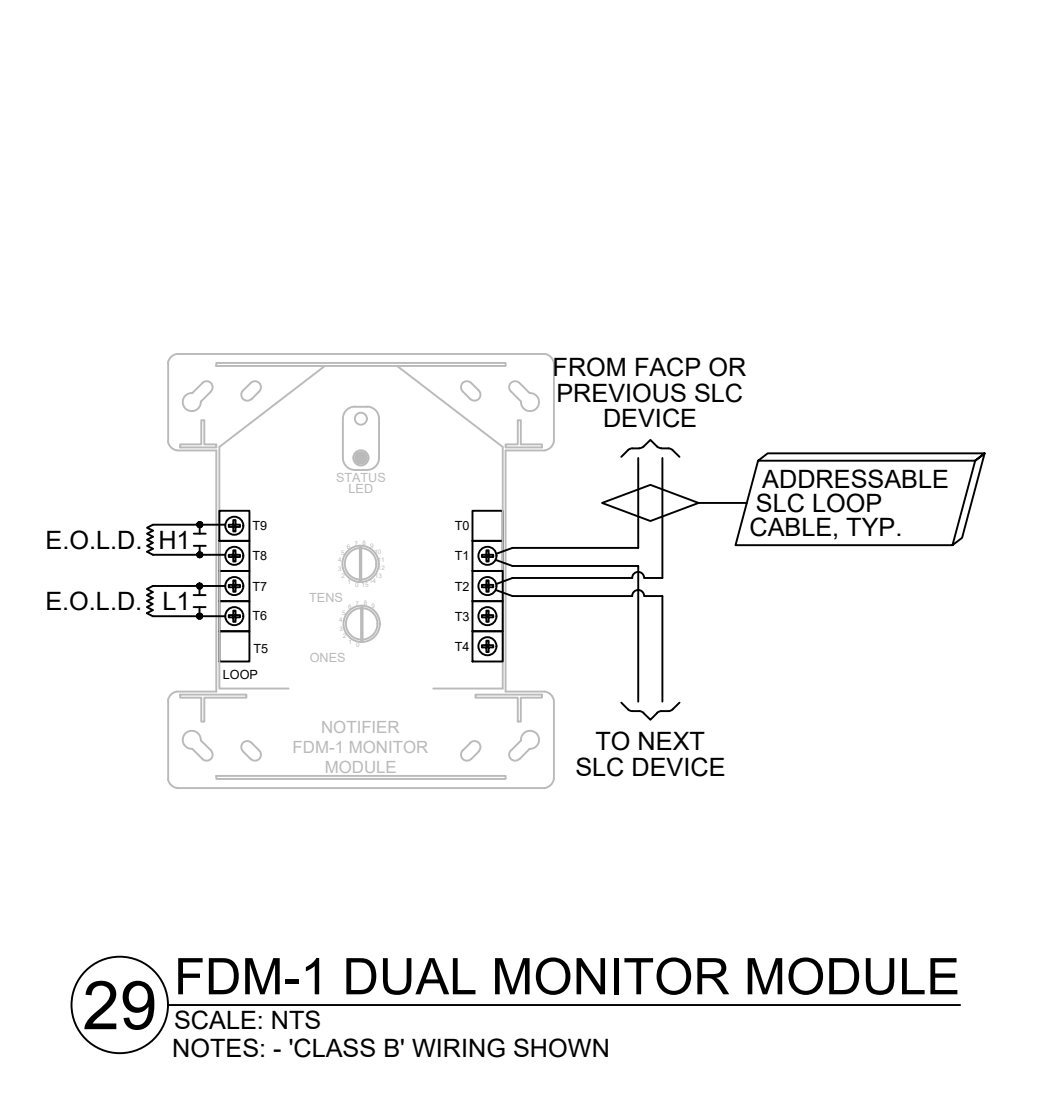
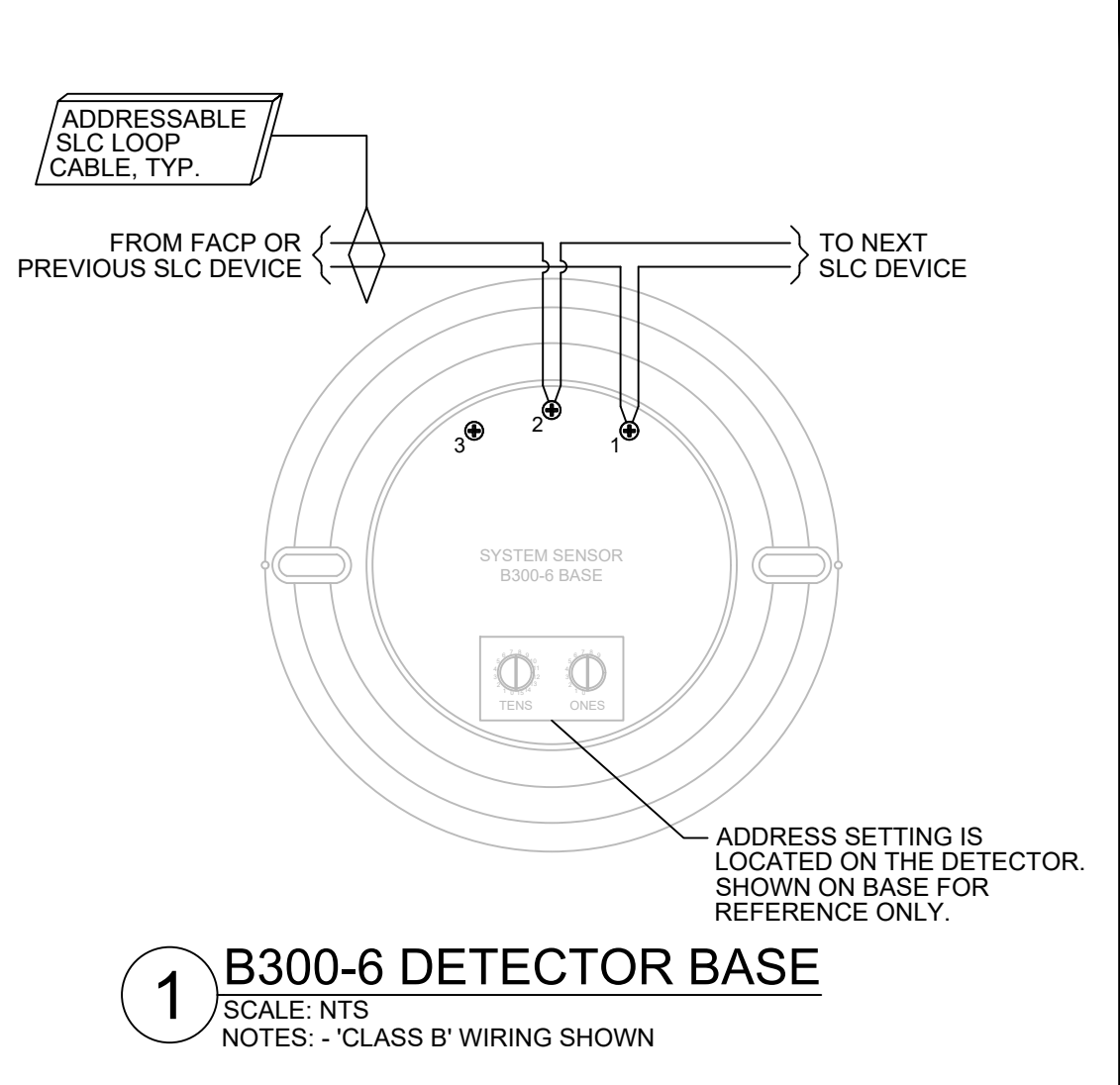
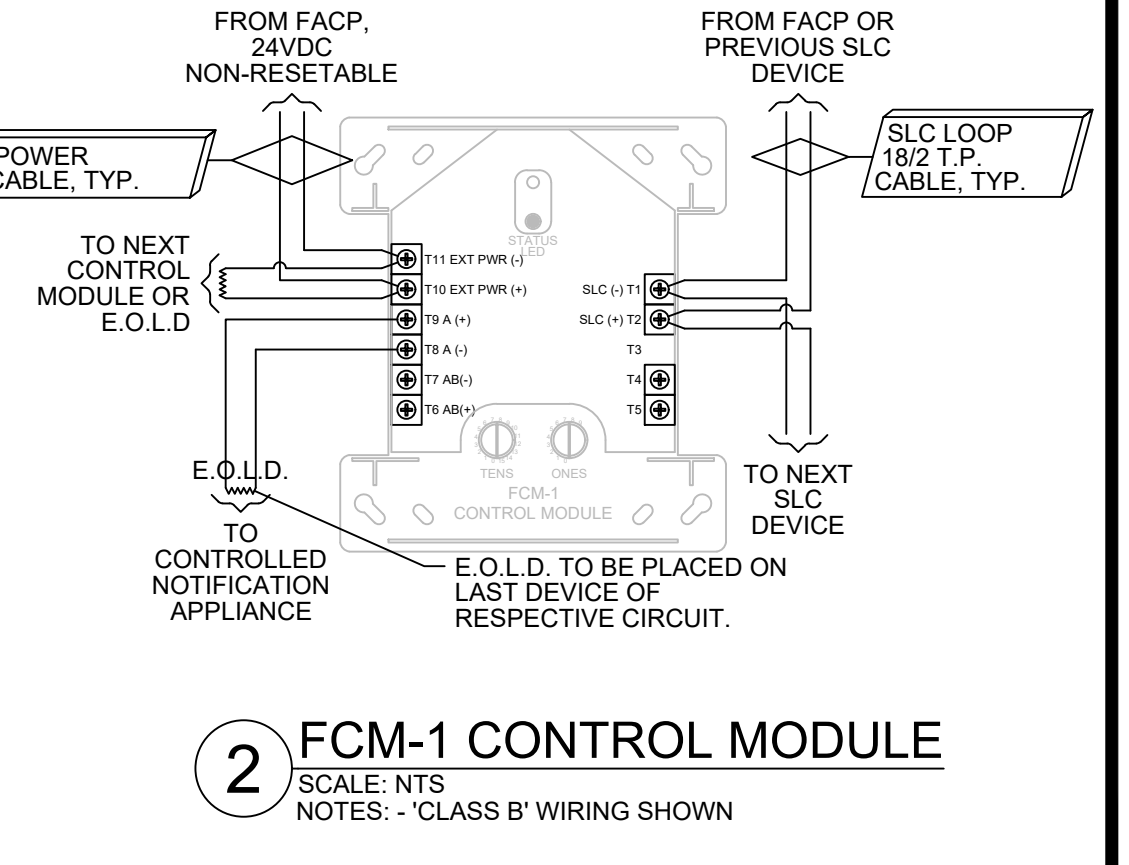
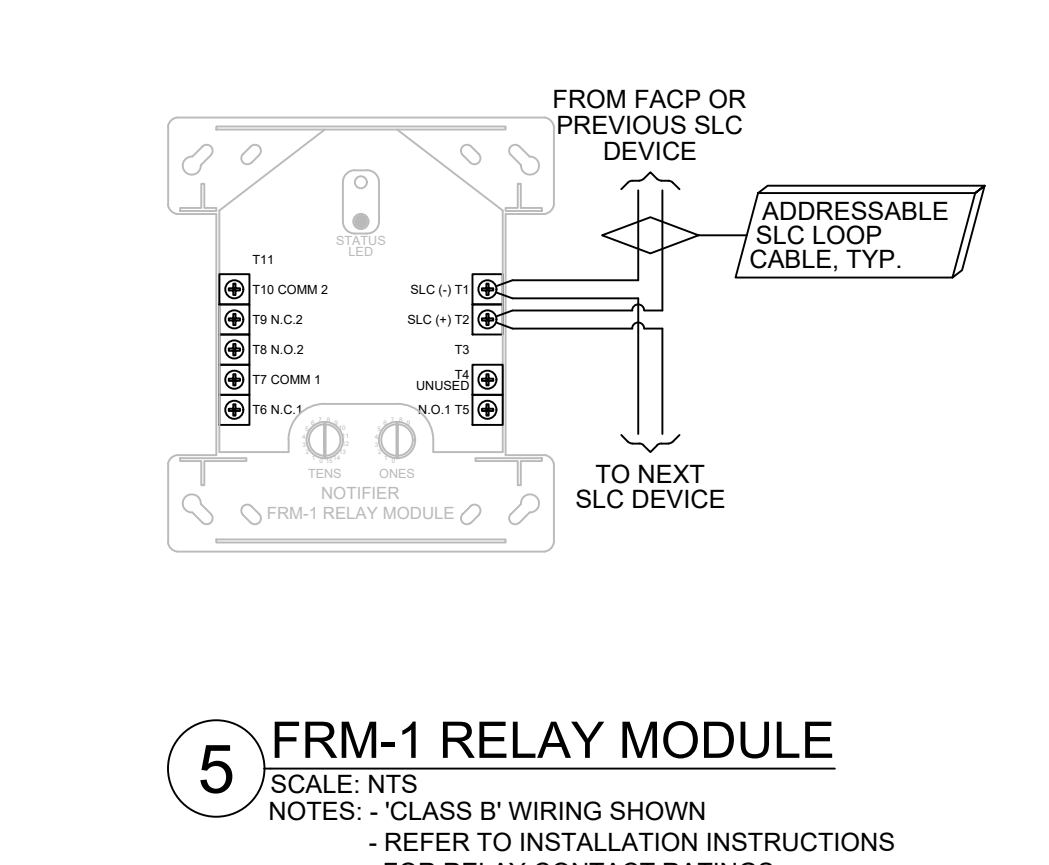
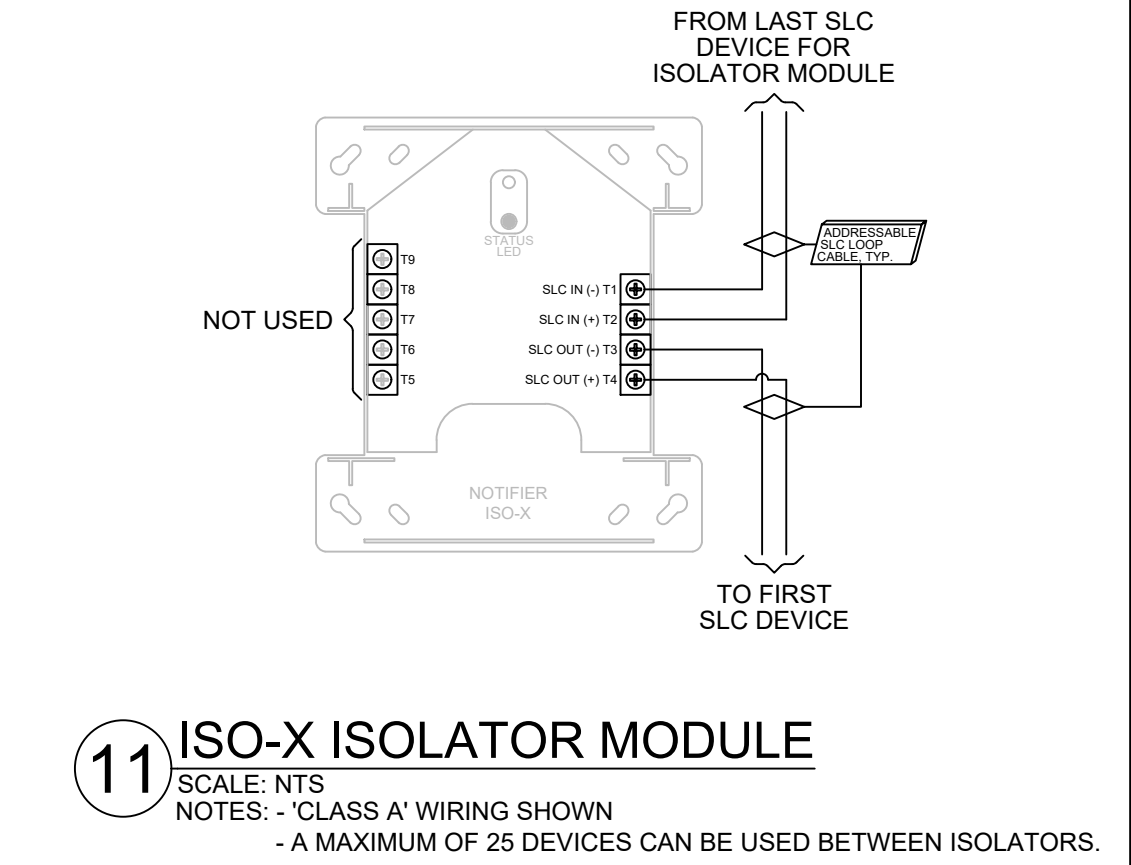
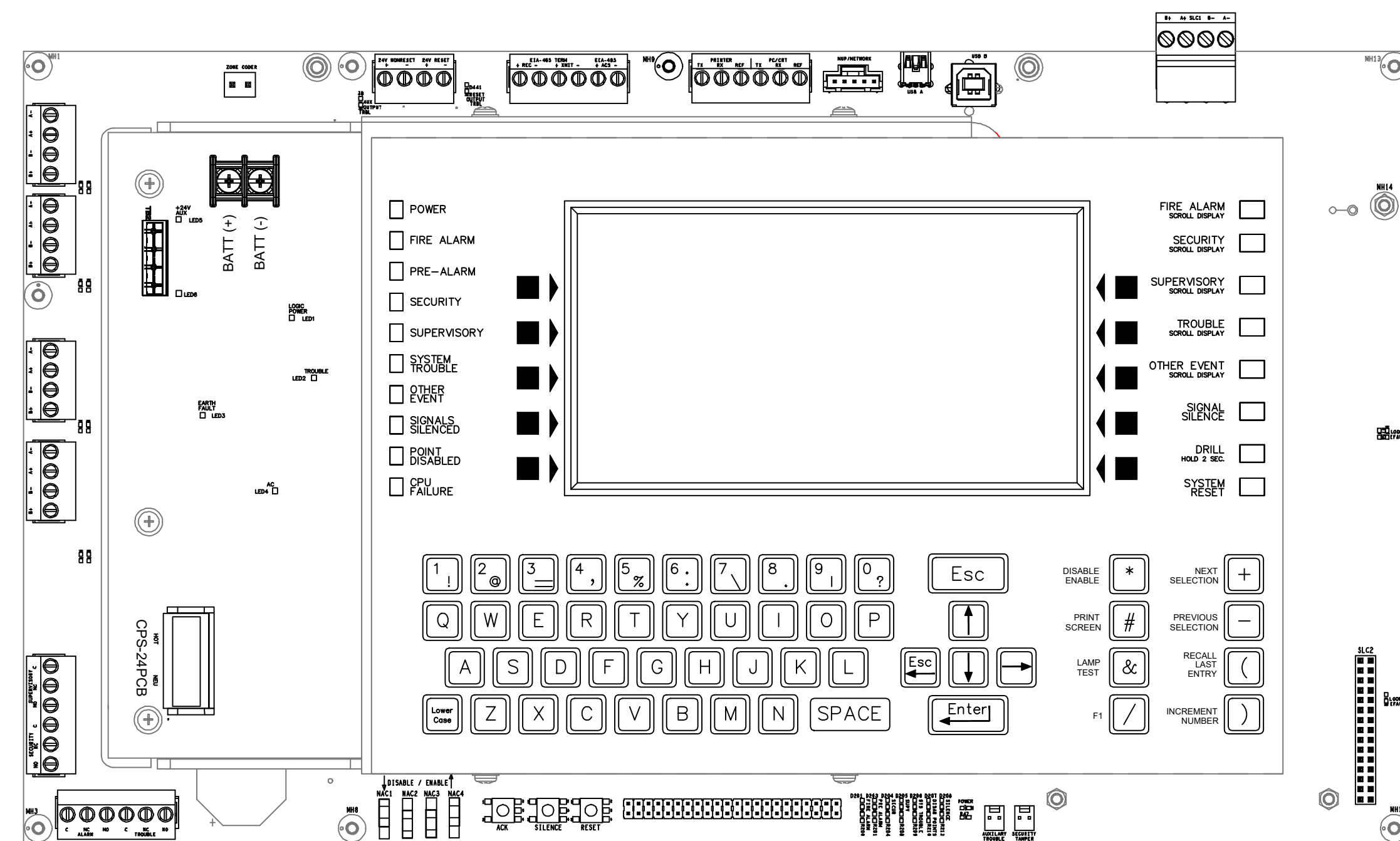
FLOOR PLAN - ROOF

SCALE: 3/32" = 1'-0"



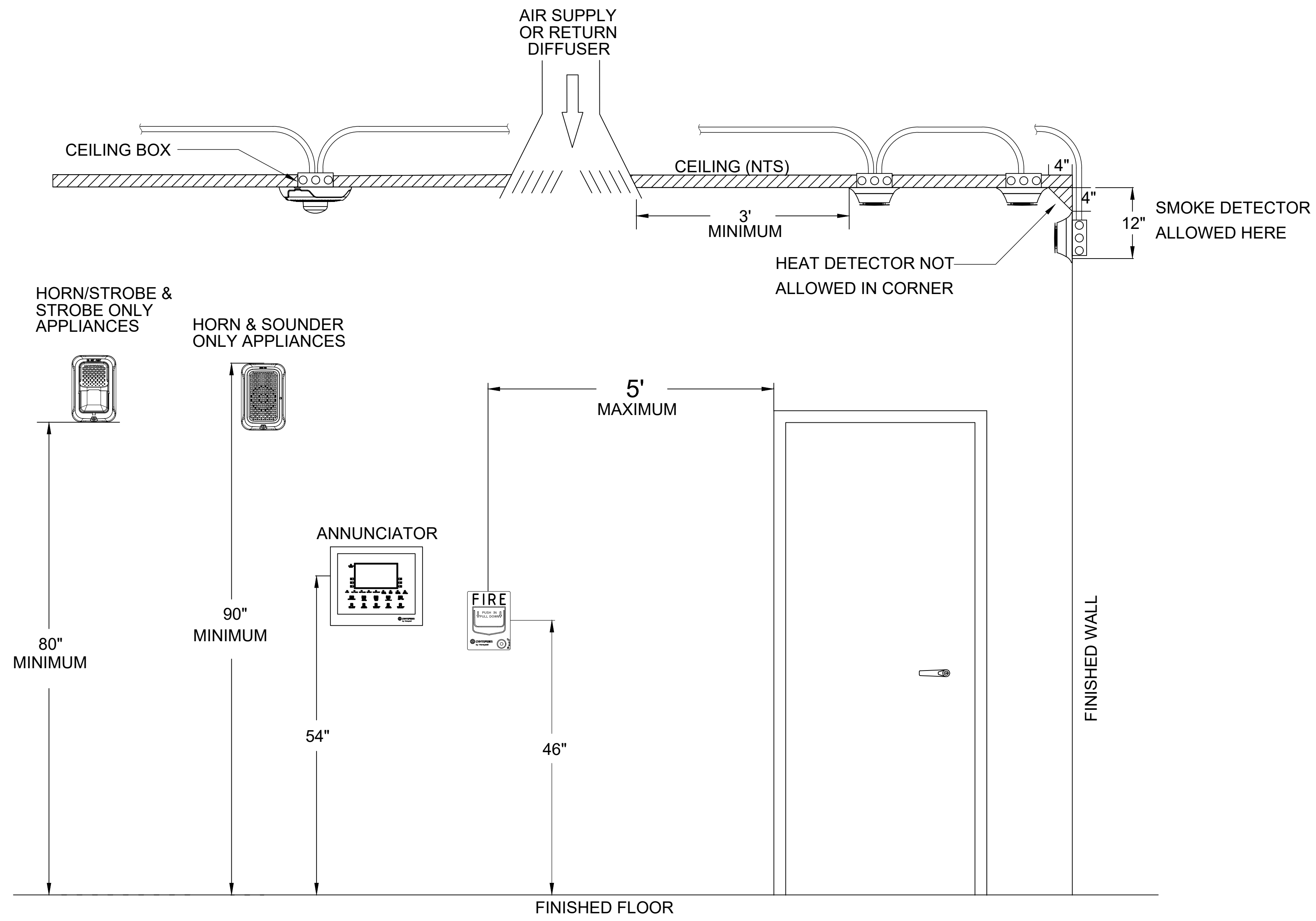






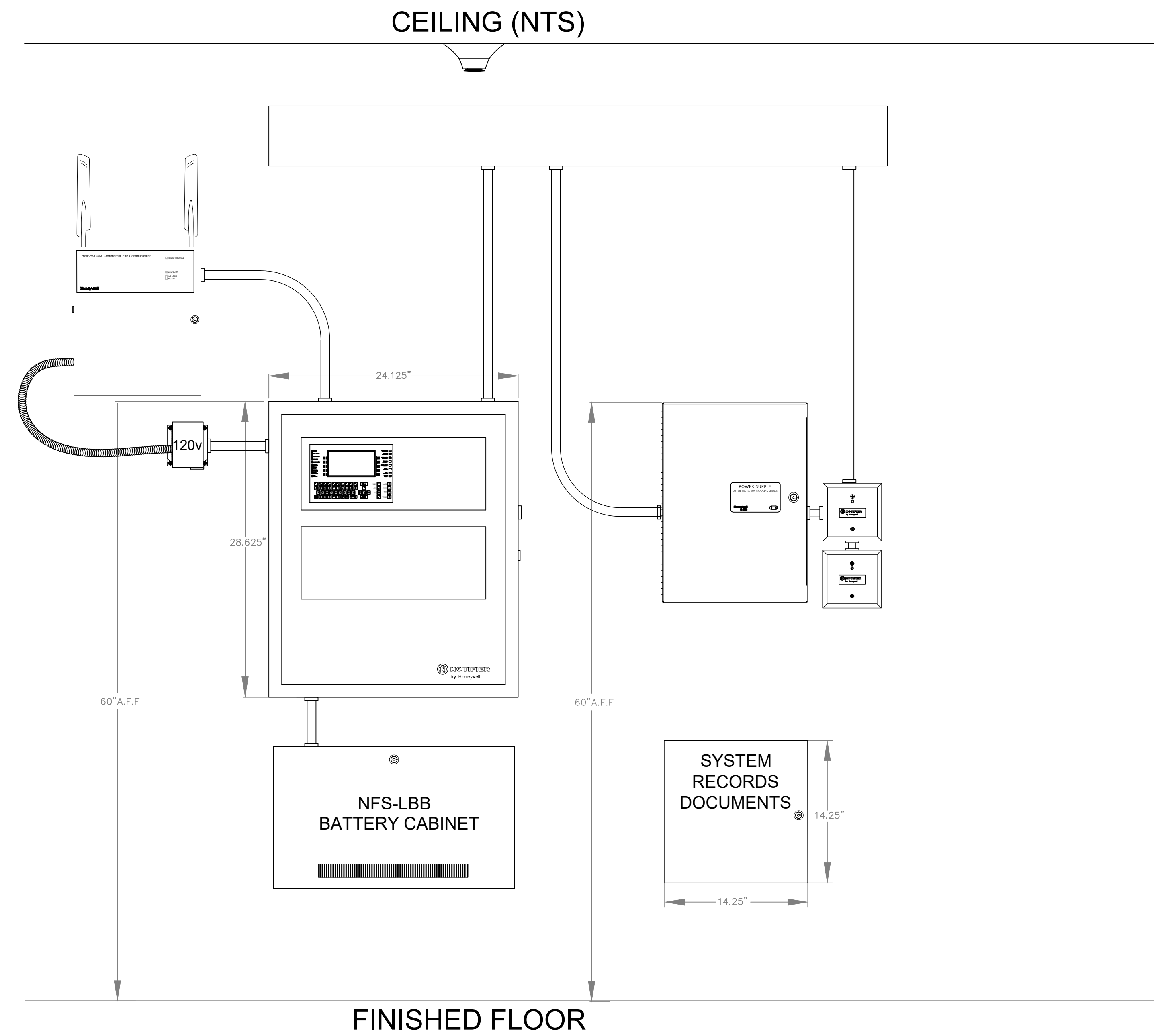
PANEL & DEVICE DETAILS

10.11.24	0	DRAWING FOR PERMIT SUBMITTAL	SYN	DESCRIPTION	DATE
12.04.24	1	CHANGES PER ENGINEERS REVIEW			
12.19.24	2	REVISIONS PER INTERNAL REVIEW & AHI COMMENTS			
<b>SECURITY SOLUTIONS</b> 1619 N. STATE ST BELLINGHAM WA 98225 t. 360.734.4940 f. 360.647.9540					
City of Puyallup Development & Permitting Services <b>ISSUED PERMIT</b> Building Planning Engineering Public Works Fire Traffic					
DRAWING REVIEWED BY: CHRIS RUSSELL					
NICET CERTIFICATION NO. 120520					
FIRE ALARM SYSTEMS - LEVEL III					
CERTIFICATION EXPIRES: AUGUST 1, 2025					
SYSTEM TYPE		PROJECT INFORMATION			
FIRE ALARM		325 TODD ROAD NW PUYALLUP, WA 98371			
PROJECT DESCRIPTION		PSE OPERATIONAL TRAINING CENTER			
DRAWING SIZE: E1 SIZE 30"x42"					
DRAWN BY: MATT WATT					
DATE DRAWN: 10/11/2024					
REV DATE: 12/19/2024 M.W.					
BUSINESS LICENSE #					
SECURSN790NE					
ELECTRICAL LICENSE #					
SECURSN954JG					
UL IDENTIFICATION #					
1237799-000					
FA..4.01					



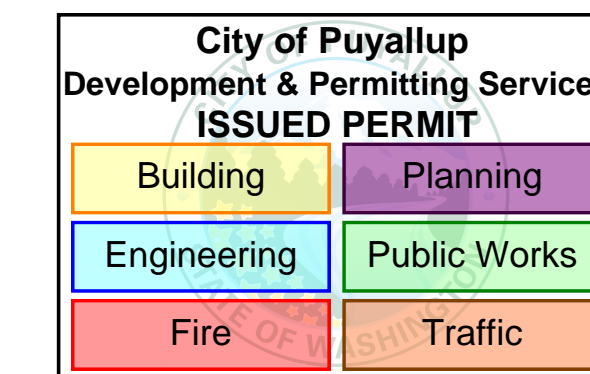
1 DEVICE MOUNTING DETAIL (TYP)

SCALE: NTS



2 FACU, PS, ETC., ELEVATION (RISER ROOM)

SCALE: NTS



DATE	DESCRIPTION
10.11.24	DRAWING FOR PERMIT SUBMITTAL
12.04.24	CHANGES PER ENGINEERS REVIEW
12.19.24	REVISIONS PER INTERNAL REVIEW & AHJ COMMENTS

**SECURITY SOLUTIONS**

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 BELLINGHAM WA 98225  
 t. 360.734.4940  
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DRAWING REVIEWED BY: CHRIS RUSSELL  
 NICET CERTIFICATION NO. 120520  
 FIRE ALARM SYSTEMS - LEVEL III  
 CERTIFICATION EXPIRES: AUGUST 1, 2025

SYSTEM TYPE: FIRE ALARM  
 PROJECT INFORMATION:  
 325 TODD ROAD NW  
 PUYALLUP, WA 98371  
 PROJECT DESCRIPTION:  
 PSE OPERATIONAL TRAINING CENTER

DRAWING SIZE: E1 SIZE 30"x42"  
 DRAWN BY: MATT WATT  
 DATE DRAWN: 10/11/2024  
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 BUSINESS LICENSE # SECURN790NE  
 ELECTRICAL LICENSE # SECURN954JG  
 UL IDENTIFICATION # 1237799-000

**NOTE: DEVICE AND PANEL ELEVATIONS ARE FOR GRAPHIC PURPOSES ONLY & DO NOT REFLECT ACTUAL TYPES, QUANTITIES, & MOUNTING LOCATIONS OF REQUIRED EQUIPMENT.**

PANEL (HFF-PS10) BATTERY CALCULATION (SECONDARY POWER SOURCE REQUIREMENTS)														
CIRCUIT	MAX CARD AMPS	USED CARD AMPS	SPARE CARD AMPS	SYMBOL	QTY	PART NO.	DESCRIPTION	STANDBY CURRENT		SECONDARY ALARM CURRENT				
								CURRENT DRAW (A)	TOTAL (A)	CURRENT DRAW (A)	TOTAL (A)			
PS10-SIG1					1	HFF-PS10	TO 1X 10V 100V BATTERY CHARGER POWER SUPPLY IN A LOCKABLE, METAL ENCLOSURE	0.000	0.000	0.000	0.000			
								1	0.156	0.156	0.185	0.185		
								3	PZWLED	2-WIRE, HORN STROBE, WHITE 15CD	0.000	0.000	0.035	0.105
								1	PZWLED	2-WIRE, HORN STROBE, WHITE 75CD	0.000	0.000	0.087	0.087
								4	PCZWLED	2-WIRE, HORN STROBE, CEILING, WHITE 75CD	0.000	0.000	0.087	0.348
								1	PCZWLED	2-WIRE, HORN STROBE, CEILING, WHITE 115CD	0.000	0.000	0.120	0.120
								1	PCZWLED	2-WIRE, HORN STROBE, CEILING, WHITE 150CD	0.000	0.000	0.189	0.189
								2	PZWLED	2-WIRE, HORN STROBE, WHITE 15CD	0.000	0.000	0.035	0.070
								5	PZWLED	2-WIRE, HORN STROBE, WHITE 75CD	0.000	0.000	0.087	0.435
								3	PCZWLED	2-WIRE, HORN STROBE, CEILING, WHITE 30CD	0.000	0.000	0.038	0.114
PS10-SIG2					2	PCZWLED	2-WIRE, HORN STROBE, CEILING, WHITE 75CD	0.000	0.000	0.087	0.174			
								1	PCZWLED	2-WIRE, HORN STROBE, CEILING, WHITE 150CD	0.000	0.000	0.189	0.189
								2	PZWLED	2-WIRE, HORN STROBE, WHITE 15CD	0.000	0.000	0.035	0.070
								5	PZWLED	2-WIRE, HORN STROBE, WHITE 75CD	0.000	0.000	0.087	0.435
								3	PCZWLED	2-WIRE, HORN STROBE, CEILING, WHITE 30CD	0.000	0.000	0.038	0.114
								2	PCZWLED	2-WIRE, HORN STROBE, CEILING, WHITE 75CD	0.000	0.000	0.087	0.174
								1	PCZWLED	2-WIRE, HORN STROBE, CEILING, WHITE 150CD	0.000	0.000	0.189	0.189
								2	SRK-P	STROBE, STANDARD CD, RED, OUTDOOR, FLAN 15CD	0.000	0.000	0.066	0.132
								4	SWLED	STROBE, WALL, WHITE 15CD	0.000	0.000	0.018	0.072
								PS10-SIG3					4	PZWLED
5	PCZWLED	2-WIRE, HORN STROBE, CEILING, WHITE 75CD	0.000	0.000	0.087	0.435								
1	PCZWLED	2-WIRE, HORN STROBE, CEILING, WHITE 115CD	0.000	0.000	0.120	0.120								
1	PCZWLED	2-WIRE, HORN STROBE, CEILING, WHITE 150CD	0.000	0.000	0.189	0.189								
1	PCZWLED	2-WIRE, HORN STROBE, CEILING, WHITE 30CD	0.000	0.000	0.038	0.038								
TOTAL STANDBY (A)	0.156	TOTAL ALARM (A)	3.142											
REQUIRED STANDBY TIME (HOURS)	24	REQUIRED ALARM TIME (MINUTES)	5											
STANDBY AND ALARM SUBTOTAL (AMP HOURS)	3.744	DERATING FACTOR	1.200											
SECONDARY LOAD REQUIREMENTS (AMP HOURS)	4.006	PROVIDE (2) 12V 7AH BATTERIES	4.807											

AUX PWR POINT-TO-POINT REPORT											
CIRCUIT	MAX CARD AMPS	USED CARD AMPS	SPARE CARD AMPS	SYMBOL	QTY	PART NO.	DESCRIPTION	STANDBY CURRENT		SECONDARY ALARM CURRENT	
								CURRENT DRAW (A)	TOTAL (A)	CURRENT DRAW (A)	TOTAL (A)
PS10-SIG4					1	PCZWLED	2-WIRE, HORN STROBE, CEILING, WHITE 30CD	0.000	0.000	0.038	0.038
								TOTAL STANDBY (A)	0.156	TOTAL ALARM (A)	3.142
								REQUIRED STANDBY TIME (HOURS)	24	REQUIRED ALARM TIME (MINUTES)	5
								STANDBY AND ALARM SUBTOTAL (AMP HOURS)	3.744	DERATING FACTOR	1.200
								SECONDARY LOAD REQUIREMENTS (AMP HOURS)	4.006	PROVIDE (2) 12V 7AH BATTERIES	4.807

CIRCUIT WIRING PROPERTIES: V=142 FLPLR (NAC) 14 AWG, 2 COND, SOLID COPPER FLPLR ANALOG UNSHIELDED											
DEVICE LABEL	PART NO	DESCRIPTION	CANDELAS	ALARM CURRENT (A)	REMAINING ALARM CURRENT (A)	DISTANCE FROM PREVIOUS	VOLTAGE DROP FROM PREVIOUS	VOLTAGE AT DEVICE	TOTAL VOLTAGE DROP	VOLTAGE DROP PERCENT	DECIBELS
AUX PWR01	FOM-1	ADDRESSABLE CONTROL MODULE W/ FLASHSCAN, 1 CLASS A OR 1 CLASS B	0.007	0.007	0.014	14	0.000	20.400	0.000	0.01%	
AUX PWR02	FOM-1	ADDRESSABLE CONTROL MODULE W/ FLASHSCAN, 1 CLASS A OR 1 CLASS B	0.007	0.007	0.014	14	0.000	20.400	0.000	0.01%	
AUX PWR EOL 4.7K	P26K	2-WIRE HORN STROBE, STANDARD CD, RED, OUTDOOR	110CD	0.212	0.212	71	0.090	20.310	0.090	0.46%	

CIRCUIT WIRING PROPERTIES: V=142 FLPLR (NAC) 14 AWG, 2 COND, SOLID COPPER FLPLR ANALOG UNSHIELDED									
STARTING CALCULATION VOLTAGE	MIN. OPERATIONAL VOLTAGE	TOTAL CIRCUIT CURRENT (A)	MAX. VOLTAGE DROP	VOLTAGE DROP %	DECIBELS				
20.400	16	3	0.89	4.4%	0.09				
16	16	3	19.23	93.6%	17.81				
MAX. CIRCUIT CURRENT (A)	3	3	0.89	4.4%	0.09				
WIRE RESISTANCE (DKFT)	3.070	3.070	0.89	4.4%	0.09				

PS10-SIG1 POINT-TO-POINT REPORT											
DEVICE LABEL	PART NO	DESCRIPTION	CANDELAS	ALARM CURRENT (A)	REMAINING ALARM CURRENT (A)	DISTANCE FROM PREVIOUS	VOLTAGE DROP FROM PREVIOUS	VOLTAGE AT DEVICE	TOTAL VOLTAGE DROP	VOLTAGE DROP PERCENT	DECIBELS
PS10-SIG1	PCZWLED	2-WIRE, HORN STROBE, CEILING, WHITE 75CD	0.087	0.087	0.087	37	0.320	19.780	0.320	1.57%	87DBA
PS10-SIG1	PCZWLED	2-WIRE, HORN STROBE, CEILING, WHITE 150CD	0.189	0.189	0.189	37	0.680	19.100	0.680	3.56%	87DBA
PS10-SIG1	PCZWLED	2-WIRE, HORN STROBE, CEILING, WHITE 115CD	0.120	0.120	0.120	37	0.460	18.640	0.460	2.21%	87DBA
PS10-SIG1	PZWLED	2-WIRE, HORN STROBE, WHITE 75CD	0.087	0.087	0.087	34	0.300	19.380	0.300	1.49%	87DBA
PS10-SIG1	PCZWLED	2-WIRE, HORN STROBE, CEILING, WHITE 75CD	0.087	0.087	0.087	25	0.290	19.390	0.290	1.44%	87DBA
PS10-SIG1	PCZWLED	2-WIRE, HORN STROBE, CEILING, WHITE 75CD	0.087	0.087	0.087	38	0.310	19.070	0.310	1.52%	87DBA
PS10-SIG1	PCZWLED	2-WIRE, HORN STROBE, CEILING, WHITE 150CD	0.189	0.189	0.189	39	0.690	18.400	0.690	3.73%	87DBA
PS10-SIG1	PZWLED	2-WIRE, HORN STROBE, WHITE 15CD	0.035	0.035	0.035	62	0.120	19.260	0.120	0.62%	87DBA
PS10-SIG1	PZWLED	2-WIRE, HORN STROBE, WHITE 75CD	0.087	0.087	0.087	7	0.280	19.100	0.280	1.41%	87DBA
PS10-SIG1	PZWLED	2-WIRE, HORN STROBE, WHITE 15CD	0.035	0.035	0.035	7	0.110	19.250	0.110	0.57%	87DBA
PS10-SIG1	PZWLED	2-WIRE, HORN STROBE, WHITE 75CD	0.087	0.087	0.087	7	0.280	19.100	0.280	1.41%	87DBA

CIRCUIT WIRING PROPERTIES: V=142 FLPLR (NAC) 14 AWG, 2 COND, SOLID COPPER FLPLR ANALOG UNSHIELDED									
STARTING CALCULATION VOLTAGE	MIN. OPERATIONAL VOLTAGE	TOTAL CIRCUIT CURRENT (A)	MAX. VOLTAGE DROP	VOLTAGE DROP %	DECIBELS				
20.400	16	3	1.17	5.7%	1.17				
16	16	3	19.23	93.6%	17.81				
MAX. CIRCUIT CURRENT (A)	3	3	1.17	5.7%	1.17				
WIRE RESISTANCE (DKFT)	3.070	3.070	1.17	5.7%	1.17				

PS10-SIG2 POINT-TO-POINT REPORT											
DEVICE LABEL	PART NO	DESCRIPTION	CANDELAS	ALARM CURRENT (A)	REMAINING ALARM CURRENT (A)	DISTANCE FROM PREVIOUS	VOLTAGE DROP FROM PREVIOUS	VOLTAGE AT DEVICE	TOTAL VOLTAGE DROP	VOLTAGE DROP PERCENT	DECIBELS
PS10-SIG2	PZWLED	2-WIRE, HORN STROBE, WHITE 75CD	0.087	0.087	0.087	36	0.290	19.810	0.290	1.46%	87DBA
PS10-SIG2	PZWLED	2-WIRE, HORN STROBE, WHITE 150CD	0.189	0.189	0.189	36	0.650	19.150	0.650	3.35%	87DBA
PS10-SIG2	PZWLED	2-WIRE, HORN STROBE, WHITE 115CD	0.120	0.120	0.120	36	0.450	18.700	0.450	2.19%	87DBA
PS10-SIG2	SWLED	STROBE, WALL, WHITE 15CD	0.018	0.018	0.018	24	0.060	19.140	0.060	0.31%	87DBA
PS10-SIG2	PZWLED	2-WIRE, HORN STROBE, WHITE 75CD	0.087	0.087	0.087	2	0.280	19.890	0.280	1.41%	87DBA
PS10-SIG2	PZWLED	2-WIRE, HORN STROBE, WHITE 150CD	0.189	0.189	0.189	34	0.670	19.080	0.670	3.42%	87DBA
PS10-SIG2	PZWLED	2-WIRE, HORN STROBE, WHITE 75CD	0.087	0.087	0.087	45	0.290	18.550	0.290	1.46%	87DBA
PS10-SIG2	PZWLED	2-WIRE, HORN STROBE, WHITE 150CD	0.189	0.189	0.189	7	0.650	18.500	0.650	3.51%	87DBA
PS10-SIG2	PZWLED	2-WIRE, HORN STROBE, WHITE 75CD	0.087	0.087	0.087	37	0.290	19.370	0.290	1.46%	87DBA
PS10-SIG2	SRK-P	STROBE, STANDARD CD, RED, OUTDOOR, FLAN 15CD	0.066	0.066	0.066	26	0.100	19.240	0.100	0.52%	87DBA
PS10-SIG2	SRK-P	STROBE, STANDARD CD, RED, OUTDOOR, FLAN 15CD	0.066	0.066	0.066	16	0.220	18.220	0.220	1.15%	87DBA
PS10-SIG2	PCZWLED	2-WIRE, HORN STROBE, CEILING, WHITE 30CD	0.038	0.038	0.038	13	0.040	19.180	0.040	0.21%	87DBA
PS10-SIG2	PCZWLED	2-WIRE, HORN STROBE, CEILING, WHITE 75CD	0.087	0.087	0.087	27	0.290	18.110	0.290	1.46%	87DBA
PS10-SIG2	PCZWLED	2-WIRE, HORN STROBE, CEILING, WHITE 75CD	0.087	0.087	0.087	38	0.290	18.020	0.290	1.44%	87DBA
PS10-SIG2	PCZWLED	2-WIRE, HORN STROBE, CEILING, WHITE 75CD	0.087	0.087	0.087	15	0.290	17.960	0.290	1.56%	87DBA
PS10-SIG2	PCZWLED	2-WIRE, HORN STROBE, CEILING, WHITE 180CD	0.189	0.189	0.189	50	0.670	17.290	0.670	3.81%	87DBA
PS10-SIG2	SWLED	STROBE, WALL, WHITE 15CD	0.018	0.018	0.018	32	0.060	17.910	0.060	0.34%	87DBA
PS10-SIG2	SWLED	STROBE, WALL, WHITE 15CD	0.018	0.018	0.018	20	0.060	17.850	0.060	0.34%	87DBA

CIRCUIT WIRING PROPERTIES: V=142 FLPLR (NAC) 14 AWG, 2 COND, SOLID COPPER FLPLR ANALOG UNSHIELDED									
STARTING CALCULATION VOLTAGE	MIN. OPERATIONAL VOLTAGE	TOTAL CIRCUIT CURRENT (A)	MAX. VOLTAGE DROP	VOLTAGE DROP %	DECIBELS				
20.400	16	3	2.56	12.5%	2.56				
16	16	3	17.84	87.5%	17.84				
MAX. CIRCUIT CURRENT (A)	3	3	2.56	12.5%	2.56				
WIRE RESISTANCE (DKFT)	3.070	3.070	2.56	12.5%	2.56				

PS10-SIG3 POINT-TO-POINT REPORT											
DEVICE LABEL	PART NO	DESCRIPTION	CANDELAS	ALARM CURRENT (A)	REMAINING ALARM CURRENT (A)	DISTANCE FROM PREVIOUS	VOLTAGE DROP FROM PREVIOUS	VOLTAGE AT DEVICE	TOTAL VOLTAGE DROP	VOLTAGE DROP PERCENT	DECIBELS
PS10-SIG3	PZWLED	2-WIRE, HORN STROBE, WHITE 15CD	0.035	0.035	0.035	26	0.140	19.960	0.140	0.70%	87DBA
PS10-SIG3	PCZWLED	2-WIRE, HORN STROBE, CEILING, WHITE 115CD	0.120	0.120	0.120	36	0.450	19.510	0.450	2.29%	87DBA
PS10-SIG3	PZWLED	2-WIRE, HORN STROBE, WHITE 75CD	0.087	0.087	0.087	49	0.290	18.550	0.290	1.46%	87DBA
PS10-SIG3	PZWLED	2-WIRE, HORN STROBE, WHITE 150CD	0.189	0.189	0.189	15	0.650	17.900	0.650	3.63%	87DBA
PS10-SIG3	PCZWLED	2-WIRE, HORN STROBE, CEILING, WHITE 75CD	0.087	0.087	0.087	29	0.290	18.370	0.290	1.52%	87DBA
PS10-SIG3	PCZWLED	2-WIRE, HORN STROBE, CEILING, WHITE 75CD	0.087	0.087	0.087	48	0.290	18.200	0.290	1.47%	87DBA
PS10-SIG3	PCZWLED	2-WIRE, HORN STROBE, CEILING, WHITE 150CD	0.189	0.189	0.189	63	0.650	17.550	0.650	3.70%	87DBA
PS10-SIG3	PCZWLED	2-WIRE, HORN STROBE, CEILING, WHITE 75CD	0.087	0.087	0.087	43	0.290	17.930	0.290	1.51%	87DBA
PS10-SIG3	PCZWLED	2-WIRE, HORN STROBE, CEILING, WHITE 75CD	0.087	0.087	0.087	36	0.290	17.880	0.290	1.51%	87DBA
PS10-SIG3	PCZWLED	2-WIRE, HORN STROBE, CEILING, WHITE 75CD	0.087	0.087	0.087	22	0.290	17.820	0.290	1.51%	87DBA
PS10-SIG3	PCZWLED	2-WIRE, HORN STROBE, CEILING, WHITE 75CD	0.087	0.087	0.087	24	0.290	17.840	0.290	1.52%	87DBA

CIRCUIT WIRING PROPERTIES: V=142 FLPLR (NAC) 14 AWG, 2 COND, SOLID COPPER FLPLR ANALOG UNSHIELDED									
STARTING CALCULATION VOLTAGE	MIN. OPERATIONAL VOLTAGE	TOTAL CIRCUIT CURRENT (A)	MAX. VOLTAGE DROP	VOLTAGE DROP %	DECIBELS				
20.400	16	3	2.56	12.5%	2.56				
16	16	3	17.84	87.5%	17.84				
MAX. CIRCUIT CURRENT (A)	3	3	2.56	12.5%	2.56				
WIRE RESISTANCE (DKFT)	3.070	3.070	2.56	12.5%	2.56				