

# GOLDFISH SWIM SCHOOL FIRE ALARM SYSTEM TI 3500 SOUTH MERIDAN UNIT 900 PUYALLUP, WA 98373

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DRAWING DIRECTORY	
SHEET #:	SHEET TITLE:
FA-01	COVER SHEET, BILL OF MATERIALS AND GENERAL INFORMATION
FA-02	INITIATING DEVICE LAYOUT
FA-03	NOTIFICATION DEVICE LAYOUT
FA-04	BATTERY CALCULATIONS & SYSTEM RISER DIAGRAM
FA-05	DEVICE DETAILS

**SCOPE OF WORK:**

NORTHWEST FIRE SYSTEMS WILL BE EXPANDING THE EXISTING FIRE ALARM CONTROL SYSTEM TO PROVIDE COMPLETE DETECTION AND NOTIFICATION COVERAGE IN SUITE 900 (GOLDFISH SWIM SCHOOL). ALL NOTIFICATION AND DETECTION WILL BE INSTALLED TO MEET NFPA 72 AND LOCAL JURISDICTION REQUIREMENTS.

\*NOTE\* THE BUILDING HAS COMPLETE SPRINKLER COVERAGE.

LEGEND	PART NUMBER	QTY.	DESCRIPTION
FACP	E3	1	FIRE ALARM CONTROL PANEL (EXISTING)
RPS	HPF-PS6	1	REMOTE POWER SUPPLY
	12V8AH	2	12VDC 8AHR BATTERIES
F	MS-7AF	3	ADDRESSABLE DOUBLE ACTION PULL STATION
⊕ <sub>p</sub>	ASD-PL3	21	SMOKE DETECTOR (PHOTO-ELECTRIC)
⊕ <sub>F</sub>	ATD-L3(R)	22	HEAT DETECTOR (X=TYPE, F=FIXED R=RATE OF RISE)
MM	AMM-4F	1	ADDRESSABLE INPUT MONITOR MODULE
⊗ <sub>CD</sub>	SPSCWL	14	SPEAKER/STROBES(CEILING MOUNT)(CD=CANDELA RATING)
⊗ <sub>CD</sub>	SPSCWK	9	SPEAKER/STROBES(CEILING MOUNT)(CD=CANDELA RATING)(WEATHER PROOF)
⊗ <sub>CD</sub>	SPSWL	1	SPEAKER/STROBES(WALL MOUNT)(CD=CANDELA RATING)
⊗ <sub>CD</sub>	SPSWK	6	SPEAKER/STROBES(WALL MOUNT)(CD=CANDELA RATING)(WEATHER PROOF)

### CONSULTANTS & CONTRACTOR INFO

**PROJECT NAME:**  
GOLDFISH SWIM SCHOOL  
3500 S. MERIDIAN UNIT 900  
PUYALLUP, WA 98373

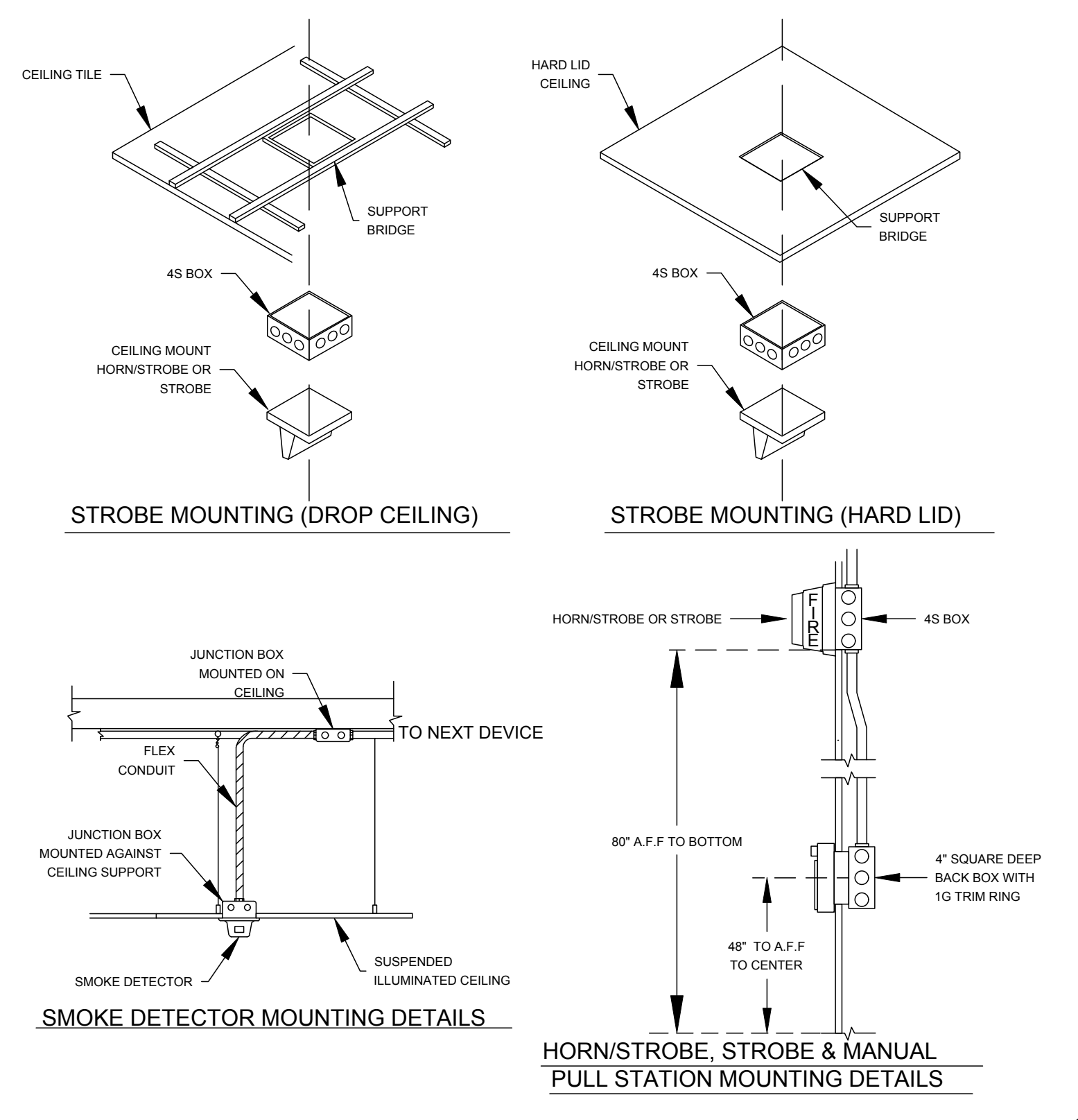
**FIRE ALARM SUPPLIER:**  
NORTHWEST FIRE SYSTEMS  
22645 83RD AVE S.  
KENT, WA 98032  
PHONE: (206)772-7502  
WWW.NWFIRESYSTEMS.COM

**REFERENCES:**  
WASHINGTON STATE BUILDING CODE (WSBC)  
WASHINGTON STATE MECHANICAL CODE (WSMC)  
NFPA 70 NATIONAL ELECTRICAL CODE (2019)  
NFPA 72 NATIONAL FIRE CODE (2019)  
IFC INTERNATIONAL FIRE CODE (2020)  
UL-864 AND OTHER APPLICABLE STANDARDS  
COMPLETE FIRE PROTECTION SYSTEM, UL LISTED  
CONFORM TO REQUIREMENTS OF NFPA APPLICABLE SECTIONS  
THE AMERICAN DISABILITIES ACT (ADA)  
CITY OF PUYALLUP FIRE CODE (2021)  
ALL MANUFACTURER GUIDELINES AND REQUIREMENTS

Read Permit Conditions prior to calling for inspection.

CAUSE	FIRE ALARM SYSTEM OPERATIONAL MATRIX				REMARKS
	ALARM	TROUBLE	SUPERVISORY	MISCELLANEOUS	
<b>EFFECT</b>					
<b>ALARM AT FACP</b>	•				
<b>ALARM AT ANNUCIATOR</b>	•				
<b>ALARM AT OFF SITE REPORTING</b>	•				
<b>ACTIVATE ALL AUDIBLES</b>	•				
<b>ACTIVATE VISUALS</b>	•				
<b>TROUBLE AT FACP</b>					
<b>TROUBLE AT ANNUCIATOR</b>					
<b>TROUBLE AT OFF SITE REPORTING</b>					
<b>SUPERVISORY AT FACP</b>					
<b>SUPERVISORY AT ANNUCIATOR</b>					
<b>SUPERVISORY AT OFF SITE REPORTING</b>					
<b>DEACTIVATE AUDIBLES</b>					
<b>DEACTIVATE VISUALS</b>					
<b>SYSTEM NORMAL</b>					
<b>SMOKE / HEAT DETECTORS</b>	•	•	•		
<b>MANUAL PULL STATION</b>	•	•	•		
<b>SYSTEM RESET</b>					
<b>SIGNAL SILENCE</b>					
<b>AC POWER FAILURE</b>				•	
<b>FIRE ALARM TROUBLE (OPEN, SHORTS, OR GROUNDS) ON INITIATION OR SIGNALING CIRCUITS</b>				•	
<b>TAMPER SWITCHES</b>				•	
<b>WATERFLOW SWITCH</b>				•	

### STANDARD MOUNTING HEIGHT DETAIL



**City of Puyallup Fire REVIEWED FOR COMPLIANCE**  
DDrake  
04/05/2023  
7:08:48 AM

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

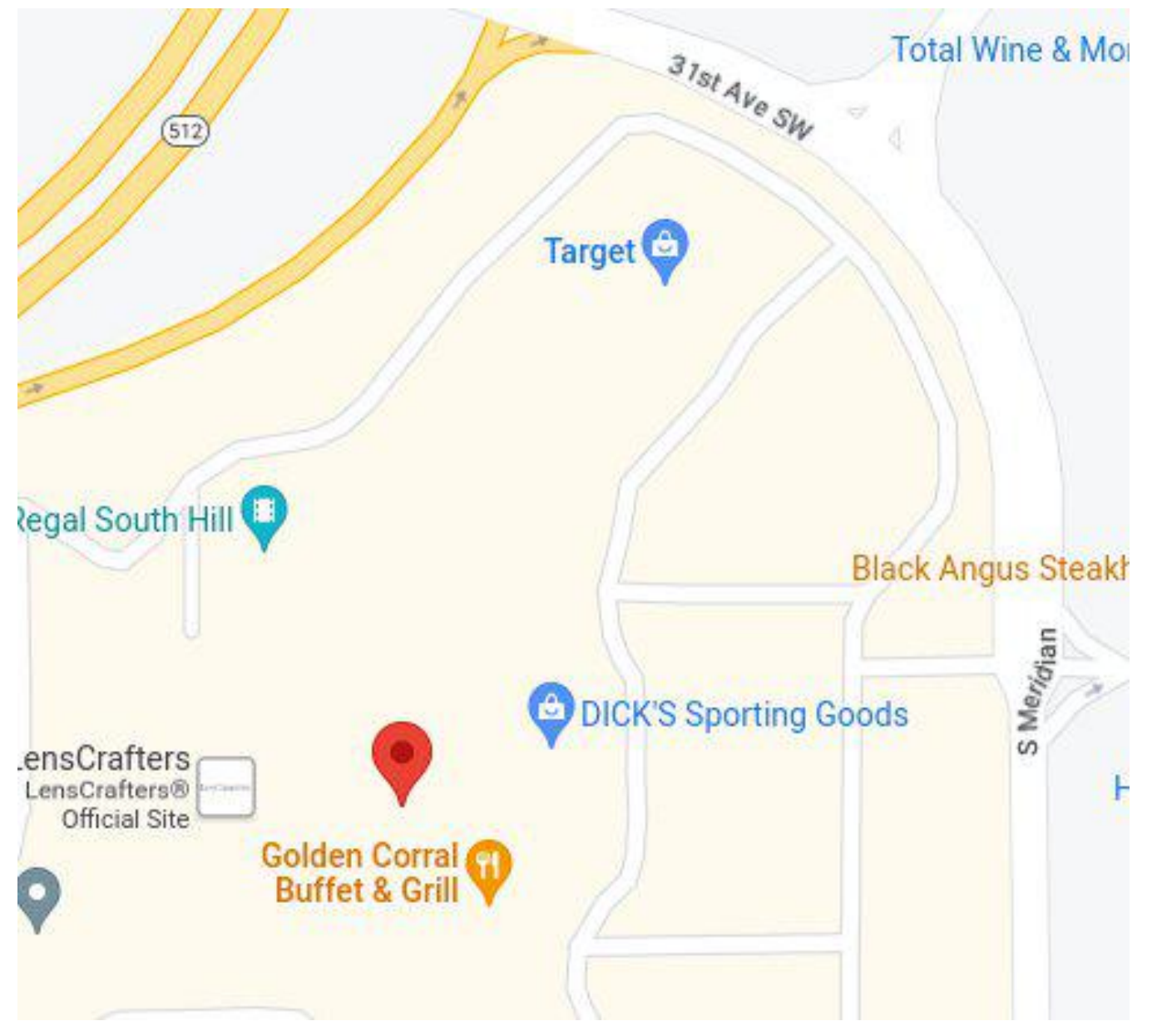
Approval of submitted plans is not an approval of omissions or oversight by this office or noncompliance with any applicable regulations of local government. The contractor is responsible for making sure that the building complies with all applicable building codes and regulations of the local government.

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

Building	Planning
Engineering	Public Works
Fire	Traffic

ABBREVIATIONS	
FACP	FIRE ALARM CONTROL PANEL
AFP	ABOVE FINISHED FLOOR
BFF	BELOW FINISHED FLOOR
WP	WEATHER PROOF
H/S	HORN STROBE
S	SMOKE DETECTOR
P	MANUAL PULL
H	HEAT DETECTOR
WF	WATERFLOW SWITCH
SCM	SUPERVISED CONTROL MODULE
MM	MONITOR MODULE
T	TAMPER SWITCH

MONITORING COMPANY INFORMATION	
COMPANY NAME	ALARM CENTER INC.
PHONE NUMBER	1-800-752-2490
ADDRESS	4500 3RD AVE SE #1, LACEY, WA 98503
ACCOUNT NUMBER	ABS-1AD85
RECEIVER NUMBER 1	N/A
RECEIVER NUMBER 2	N/A



**SITE LOCATION**

SCALE: NTS

**NORTHWEST FIRE SYSTEMS**  
Saving Lives and Protecting Property

22645 83RD AVE. S., BLDG D \*KENT, WA 98032  
PHONE: 206-772-7502 • FAX: 206-772-7504  
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LIC # NORTHFS8781AJ

**NORTHWEST FIRE SYSTEMS**  
Saving Lives  
Protecting Property

NO.	BY	DATE	REVISION DESCRIPTION
0	J.S.	3/9/22	SUBMITTAL DRAWINGS

CONTRACT NAME: GOLDFISH SWIM SCHOOL  
3500 SOUTH MERIDIAN UNIT 900  
PUYALLUP, WA 98373

CONTRACT WITH: SEAHURST ELECTRIC  
2815 CHESTNUT ST.  
EVERETT, WA 98201

ON-SITE CONTACT: JEFF HARDER (425)773-2253

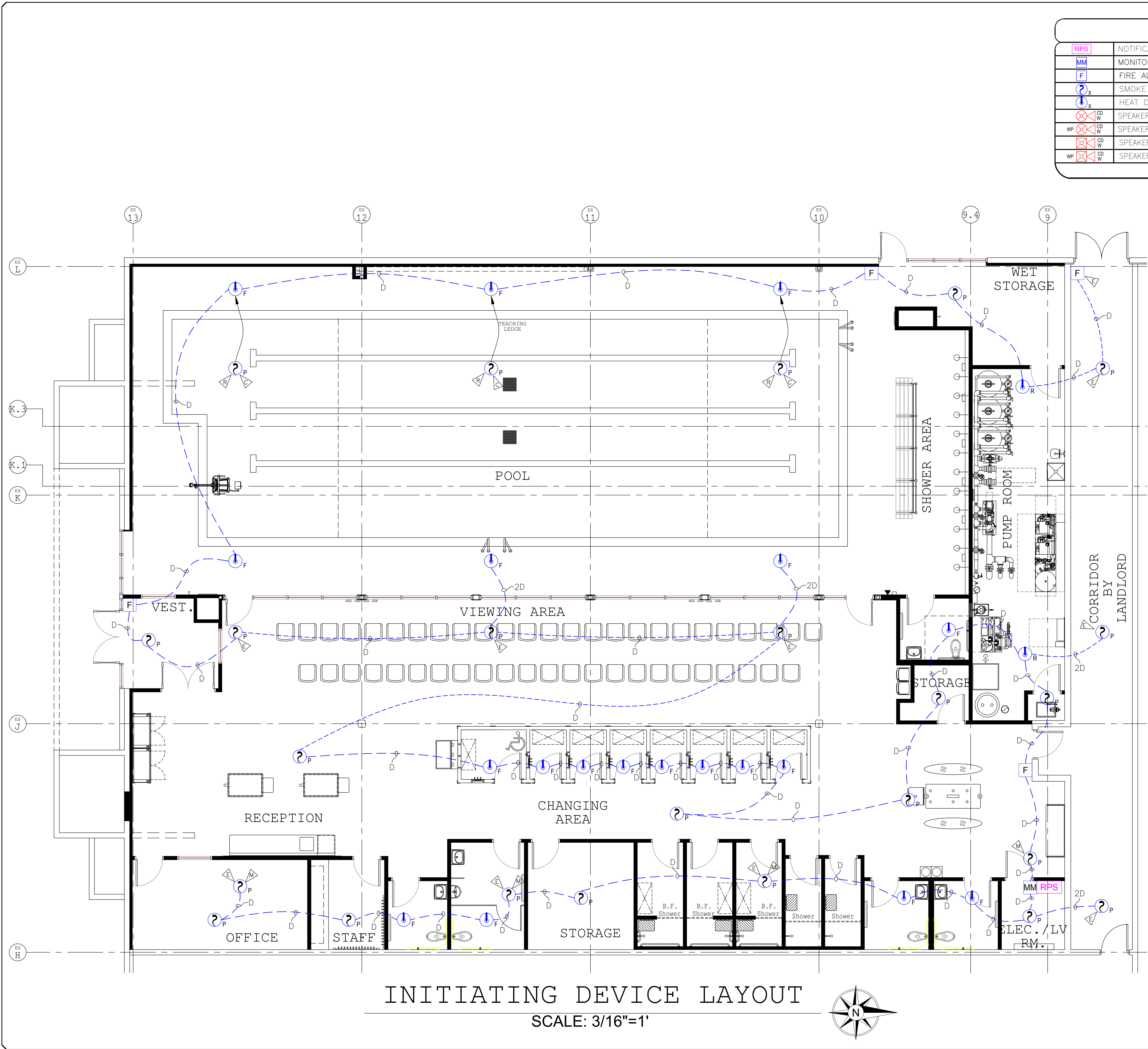
DRAWN BY: JOE SHELTON	DATE: 2/28/23
DESIGNED BY: JOE SHELTON	DATE: 2/28/23
APPROVED BY: MIKE REGAN	DATE: 2/29/23

**NICET STAMP**  
Michael Regan, ET  
*Michael Regan*  
NICET Level III Fire Alarm Technician ID: 144327  
Expires: 03/01/2026

PROJECT NUMBER: 05143L

SHEET TITLE: COVER PAGE & GENERAL INFORMATION  
SHEET NUMBER: FA - 01 OF 05





**INITIATING DEVICE LAYOUT**  
SCALE: 3/16"=1'

LEGEND	
[RPS]	NOTIFICATION POWER SUPPLY
[MM]	MONITOR MODULE
[F]	FIRE ALARM PULL STATION
[?]	SMOKE DETECTOR (X=TYPE, P=PHOTO, I-ION)
[?]	HEAT DETECTOR (X=TYPE, F=FIXED R-RATE OF RISE)
[WP] [X] [CD] [W]	SPEAKER/STROBES (CEILING MOUNT)(CD=CANDELA RATING)(W=SPEAKER PWR SETTING)
[WP] [X] [CD] [W]	SPEAKER/STROBES (WALL MOUNT)(CD=CANDELA RATING)(W=SPEAKER PWR SETTING)
[WP] [X] [CD] [W]	SPEAKER/STROBES (WALL MOUNT)(CD=CANDELA RATING)(WEATHER PROOF)(W=SPEAKER PWR SETTING)

TAG DESCRIPTIONS	
[A]	DEVICE TO BE ADDED
[C]	DEVICE TO BE CHANGED OUT
[D]	DEVICE TO BE REMOVED
[E]	EXISTING DEVICE
[M]	EXISTING MEZZANINE DEVICE
[R]	DEVICE TO BE REPLACED

WIRE TAG DESCRIPTION		
CIRCUIT ID	CIRCUIT DESCRIPTION	WIRE DESCRIPTION
B	FACP SBus CIRCUIT	4 CONDUCTOR, 16 AWG - FPLP
D	FACP SLC CIRCUIT	2 CONDUCTOR, 14 AWG - FPLP
N	NAC CIRCUIT	2 CONDUCTOR, 14 AWG - FPLP
P	AUX CIRCUIT	2 CONDUCTOR, 14 AWG - FPLP
V	VOICE CIRCUIT	2 CONDUCTOR, 16 AWG SOL - FPLP
Z	EQUIPMENT INTERFACE CKT.	CONTRACTORS EQUIPMENT WIRING

NATIONAL ELECTRICAL CODE CABLE MARKINGS TABLE 760-71(h)		
CABLE MARKING	TYPE	LISTING REFERENCES
FPLP	POWER-LIMITED FIRE ALARM PLENUM CABLE	SECTIONS 760-71(b) AND (h)
FPLR	POWER-LIMITED FIRE ALARM RISER CABLE	SECTIONS 760-71(e) AND (h)
FPL	POWER-LIMITED FIRE ALARM CABLE	SECTIONS 760-71(e) AND (h)

FPLP SHALL BE USED IN PLENUM CEILING.  
FPLR SHALL BE USED WHEN PASSING THROUGH FLOORS.  
FPL SHALL BE USED ONLY IN NON-PLENUM AREAS.

- NOTES**
- (1) ALL ADDRESSABLE DEVICES WILL BE ADDRESSED IN THE FIELD TO AVOID ANY CONFLICT IN PROGRAMMING OF THE FACP.
  - (2) EXISTING CIRCUIT INTEGRITY SHALL BE MAINTAINED.
  - (3) THE EXISTING NAC CIRCUIT WITHIN THE EFFECTED SPACE WILL BE REPURPOSED TO TRIGGER THE NEW RPS LOCATED IN SUITE 900.
  - (4) NOTIFICATION DEVICES IN THE CORRIDOR WILL BE ON AN INDEPENDENT NOTIFICATION CIRCUIT.
  - (5) CURRENT DRAW READINGS OF THE EXISTING SYSTEM AND THE EFFECTED VOICE CIRCUITS, SO THAT PROPER BATTERY CALCULATIONS COULD BE PREFORMED.

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

Building	Planning
Engineering	Public Works
Fire	Traffic

**NORTHWEST FIRE SYSTEMS**  
Saving Lives and Protecting Property  
22845 63RD AVE. S., BLDG D KENT, WA 98032  
PHONE: 206.772.7502 \* FAX: 206.772.7504  
WWW.NWFIRESYSTEMS.COM  
LIC # NWTFHS876MJ

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**CONTRACT NAME:** GOLDFISH SWIM SCHOOL  
3500 SOUTH MERIDAN UNIT 900  
PUYALLUP, WA 98373

**CONTRACT WITH:** SEAHURST ELECTRIC  
2915 CHESTNUT ST.  
EVERETT, WA 98201

**ON-SITE CONTACT:** JEFF HARDER (425)775-2253

NO.	BY	DATE	REVISION DESCRIPTION
0	J.S.	3/9/22	SUBMITTAL DRAWINGS

**DRAWN BY:** JOE SHELDON **DATE:** 2/28/23

**DESIGNED BY:** JOE SHELDON **DATE:** 2/28/23

**APPROVED BY:** MIKE REGAN **DATE:** 2/29/23

**NICET STAMP**  
Michael Regan, ET  
*Mike Regan*  
NICET Level III Fire Alarm  
Technician ID: 144327  
Expires: 03/01/2026

**PROJECT NUMBER:** 05143L

**SHEET TITLE:** INITIATING DEVICE LAYOUT

**SHEET NUMBER:** FA - 02 OF 05



LEGEND	
[RPS]	NOTIFICATION POWER SUPPLY
[MM]	MONITOR MODULE
[F]	FIRE ALARM PULL STATION
[S]	SMOKE DETECTOR (X=TYPE, P=PHOTO, I-ION)
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Z	EQUIPMENT INTERFACE CKT.	CONTRACTORS EQUIPMENT WIRING

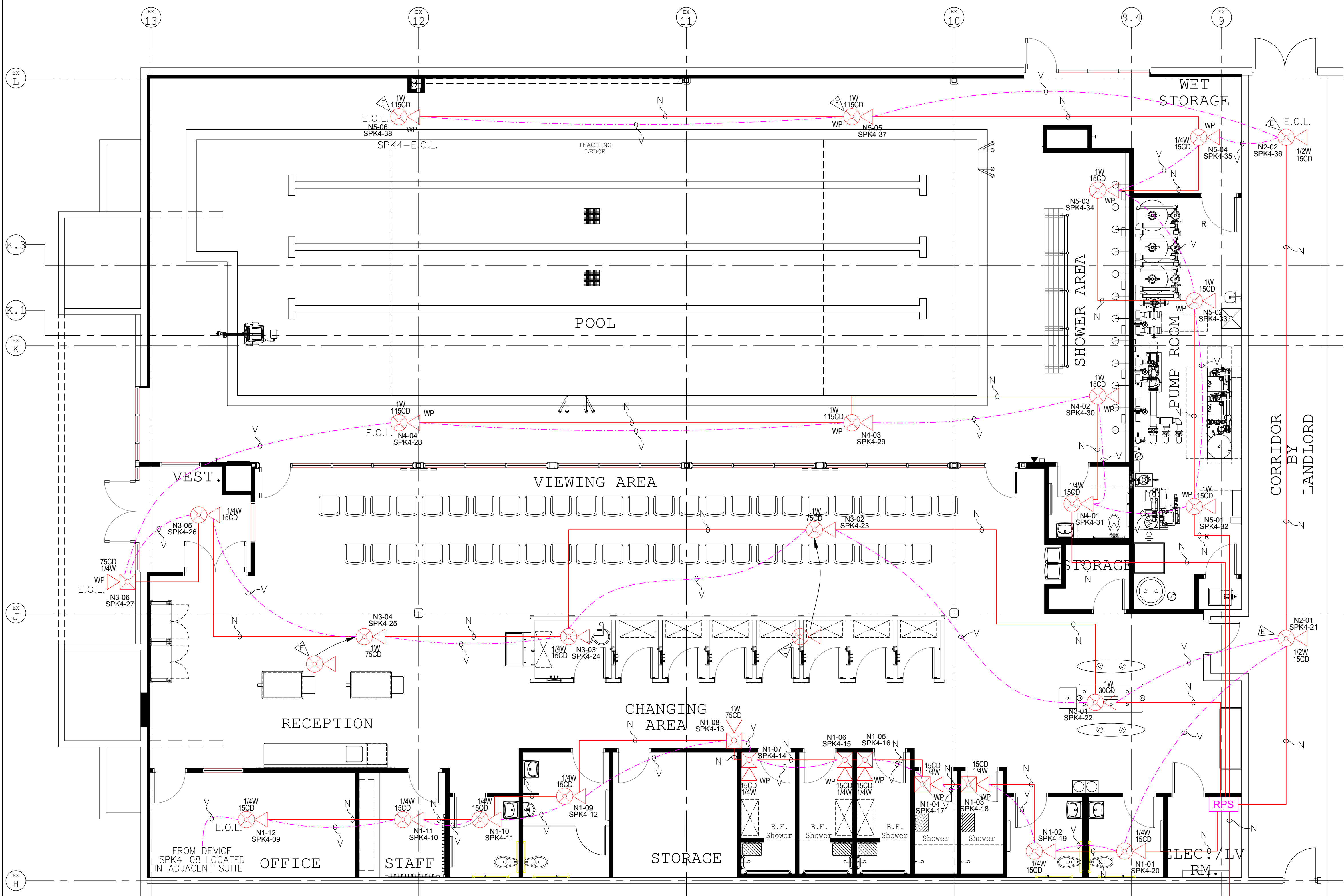
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**City of Puyallup  
Development & Permitting Services  
ISSUED PERMIT**

Building	Planning
Engineering	Public Works
Fire	Traffic



**NOTIFICATION DEVICE LAYOUT**  
SCALE: 3/16"=1'

**NORTHWEST FIRE SYSTEMS**  
Saving Lives and Protecting Property  
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PHONE: 206.772.7502 \* FAX: 206.772.7504  
WWW.NWFIRESYSTEMS.COM  
LIC # NORTHWEST8764

**CONTRACT NAME:** GOLD FISH SWIM SCHOOL  
3500 SOUTH MERIDIAN UNIT 900  
PUYALLUP, WA 98373

**CONTRACT WITH:** SEAHURST ELECTRIC  
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EVERETT, WA 98201

**ON-SITE CONTACT:** JEFF HARDER (425)775-2253

NO.	BY	DATE	REVISION DESCRIPTION
0	J.S.	3/9/22	SUBMITTAL DRAWINGS

**DRAWN BY:** JOE SHELDON  
**DESIGNED BY:** JOE SHELDON  
**APPROVED BY:** MIKE REGAN

**DATE:** 2/28/23  
**DATE:** 2/28/23  
**DATE:** 2/29/23

**NICET STAMP**  
Michael Regan, ET  
NICET Level III Fire Alarm  
Technician ID: 144327  
Expires: 03/01/2026

**PROJECT NUMBER:** 05143L

**SHEET TITLE:** NOTIFICATION DEVICE LAYOUT

**SHEET NUMBER:** FA - 03 OF 05



FACP BATTERY CALCULATIONS				
COMPONENTS	QTY.	STANDBY CURRENT	ALARM CURRENT	
LI-MB-E3	1		0.08100A	0.15000A
PM-9	1		0.05000A	0.05000A
LCD-E3	1		0.02400A	0.02800A
NGA	1		0.03000A	0.06500A
LCD-7100 (ANN)	1		0.01200A	0.02300A
SLC DEVICES		SUPERVISORY CURRENT	ALARM CURRENT	
ASD-PL3	1	0.00020A	0.00450A	0.00020A
MS-7AF	2	0.00030A	0.00700A	0.00060A
AMM-2IF	1	0.00075A	0.00097A	0.00075A
AMM-4F	4	0.000375A	0.00060A	0.00075A
DNR	0	0.00058A	0.11720A	0.00000A
		STANDBY CURRENT	ALARM CURRENT	
INX1 (AMPLIFIER)		0.049A	2.30A	0.049A
INX2 (AMPLIFIER)		0.049A	2.30A	0.049A
NAC CKT 3		0.00A	0.00A	0.000A
NAC CKT 4		0.00A	0.00A	0.000A
TOTAL			0.300A	5.406A
TOTAL STANDBY CURRENT = 0.300A		TOTAL ALARM CURRENT = 5.406A		
X STANDBY TIME 24 HRS		X ALARM TIME 15 MINS (0.25A)		
STANDBY AMP HOUR 7.20 AH		ALARM AMP HOUR 1.352 AH		
STANDBY AH + ALARM AH = 8.55 AH				
TOTAL AH X 20% DE-RATING 10.26 AH				
REQUIRED BATTERY SIZE = 12 AH				

INX2 BATTERY CALCULATIONS		
COMPONENTS		ALARM CURRENT
AMP3 (SPK3)		0.064A
AMP4 (SPK4)		0.270A
-		0.000A
-		0.000A
AMP MB CURRENT		0.150A
TOTAL		0.484A
TOTAL STANDBY CURRENT = 0.081A		TOTAL ALARM CURRENT = 4.84A
X STANDBY TIME 24 HRS		X ALARM TIME 15 MINS (0.25)
STANDBY AMP HOUR 1.95AH		ALARM AMP HOUR 0.121AH
STANDBY AH + ALARM AH = 2.065AH		
TOTAL AH X 20% DE-RATING 2.48AH		
REQUIRED BATTERY SIZE = 7AH		

LEGEND	
RPS	NOTIFICATION POWER SUPPLY
MM	MONITOR MODULE
F	FIRE ALARM PULL STATION
?	SMOKE DETECTOR (X=TYPE, P=PHOTO, I-ION)
X	HEAT DETECTOR (X=TYPE, F=FIXED R-RATE OF RISE)
WP	SPEAKER/STROBES (CEILING MOUNT)(CD=CANDELA RATING)(W=SPEAKER PWR SETTING)
WP	SPEAKER/STROBES (WALL MOUNT)(CD=CANDELA RATING)(W=SPEAKER PWR SETTING)
WP	SPEAKER/STROBES (WALL MOUNT)(CD=CANDELA RATING)(WEATHER PROOF)(W=SPEAKER PWR SETTING)

TAG DESCRIPTIONS	
TAG SYMBOL	DESCRIPTION
A	DEVICE TO BE ADDED
C	DEVICE TO BE CHANGED OUT
D	DEVICE TO BE REMOVED
E	EXISTING DEVICE
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R	DEVICE TO BE REPLACED

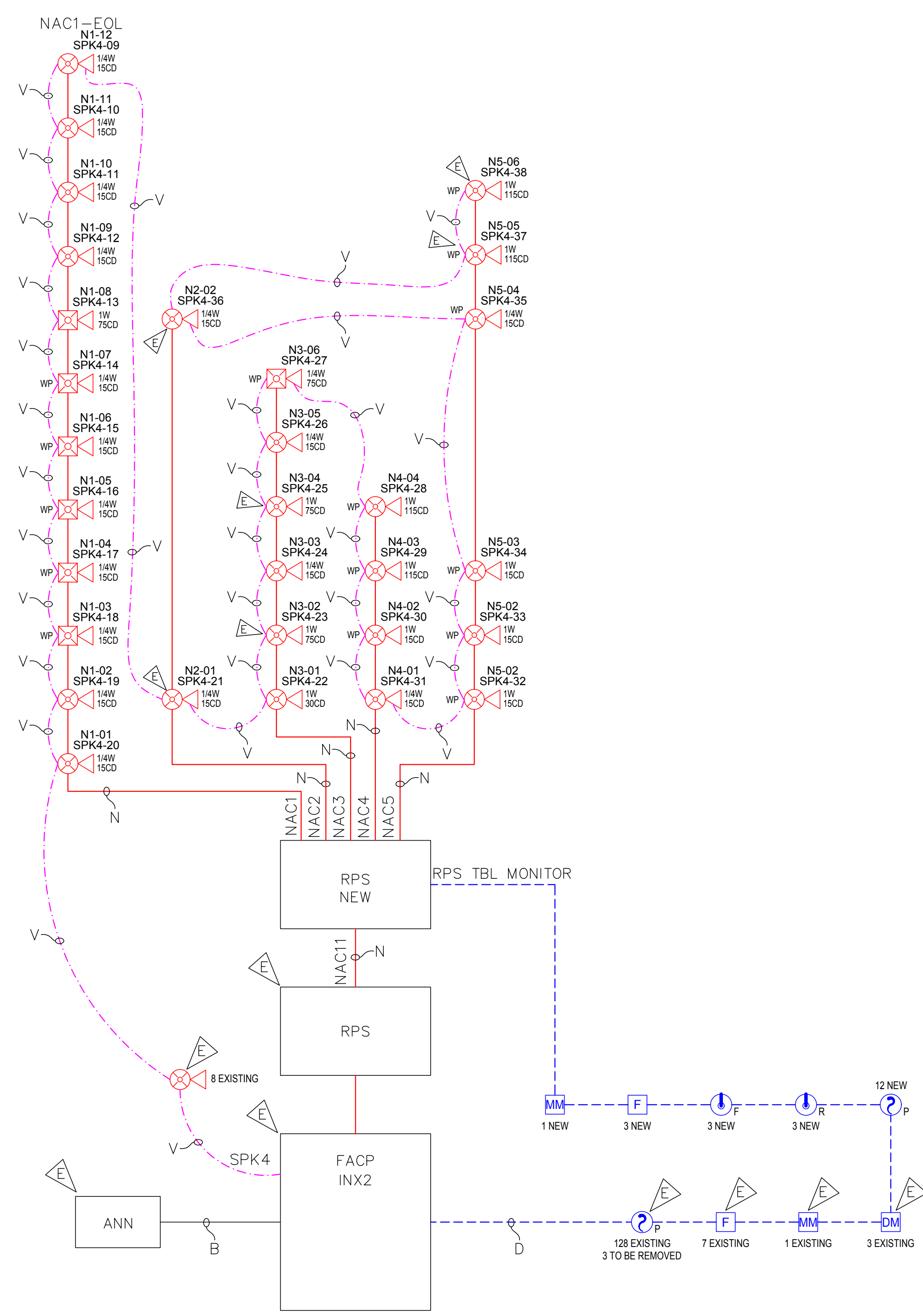
RPS BATTERY CALCULATIONS		
COMPONENTS		ALARM CURRENT
NAC CKT 1		0.687A
NAC CKT 2		0.082A
NAC CKT 3		0.525A
NAC CKT 4		0.423A
NAC CKT 5		0.555A
NAC CKT 6		0.000A
NAC CKT 7		0.000A
RPS ALARM CURRENT		0.145A
TOTAL		2.417A
TOTAL STANDBY CURRENT = 0.065A		TOTAL ALARM CURRENT = 2.417A
X STANDBY TIME 24 HRS		X ALARM TIME 15 MINS (0.083)
STANDBY AMP HOUR 1.56AH		ALARM AMP HOUR 0.61AH
STANDBY AH + ALARM AH = 2.17AH		
TOTAL AH X 20% DE-RATING 2.61AH		
REQUIRED BATTERY SIZE = 3AH		

WIRE TAG DESCRIPTION		
CIRCUIT ID	CIRCUIT DESCRIPTION	WIRE DESCRIPTION
B	FACP SBus CIRCUIT	4 CONDUCTOR, 16 AWG - FPLP
D	FACP SLC CIRCUIT	2 CONDUCTOR, 14 AWG - FPLP
N	NAC CIRCUIT	2 CONDUCTOR, 14 AWG - FPLP
P	AUX CIRCUIT	2 CONDUCTOR, 14 AWG - FPLP
V	VOICE CIRCUIT	2 CONDUCTOR, 16 AOS SOL - FPLP
Z	EQUIPMENT INTERFACE CKT.	CONTRACTORS EQUIPMENT WIRING

NATIONAL ELECTRICAL CODE CABLE MARKINGS		
CABLE MARKING	TYPE	LISTING REFERENCES
FPLP	POWER-LIMITED FIRE ALARM PLENUM CABLE	SECTIONS 760-71(b) AND (h)
FPLR	POWER-LIMITED FIRE ALARM RISER CABLE	SECTIONS 760-71(e) AND (h)
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FPLP SHALL BE USED IN PLENUM CEILING.  
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RPS VOLTAGE DROP CALCULATION								
CIRCUIT NAME	SUPPLY VOLTAGE	ALARM CURRENT	WIRE TYPE	OHMS / 1000 FT.	LENGTH (FEET)	TOTAL RESISTANCE	VOLTAGE DROP %	
NAC1	20.4 VDC	0.687A	#14AWG SOLID	3.07	125	0.7675	19.87 VDC	2.59%
NAC2	20.4 VDC	0.082A	#14AWG SOLID	3.07	78	0.4789	20.36 VDC	0.19%
NAC3	20.4 VDC	0.525A	#14AWG SOLID	3.07	169	1.0377	19.86 VDC	2.67%
NAC4	20.4 VDC	0.423A	#14AWG SOLID	3.07	135	0.8289	20.05 VDC	1.72%
NAC5	20.4 VDC	0.555A	#14AWG SOLID	3.07	175	1.0745	19.80 VDC	2.92%
NAC6	20.4 VDC	0.000A	#14AWG SOLID	3.07	0	0.000	20.40 VDC	0.00%
NAC7	20.4 VDC	0.000A	#14AWG SOLID	3.07	0	0.000	20.40 VDC	0.00%



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

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NO.	BY	DATE	REVISION DESCRIPTION
0	J.S.	3/9/22	SUBMITTAL DRAWINGS

DRAWN BY: JOE SHELDON DATE: 2/28/23

DESIGNED BY: JOE SHELDON DATE: 2/28/23

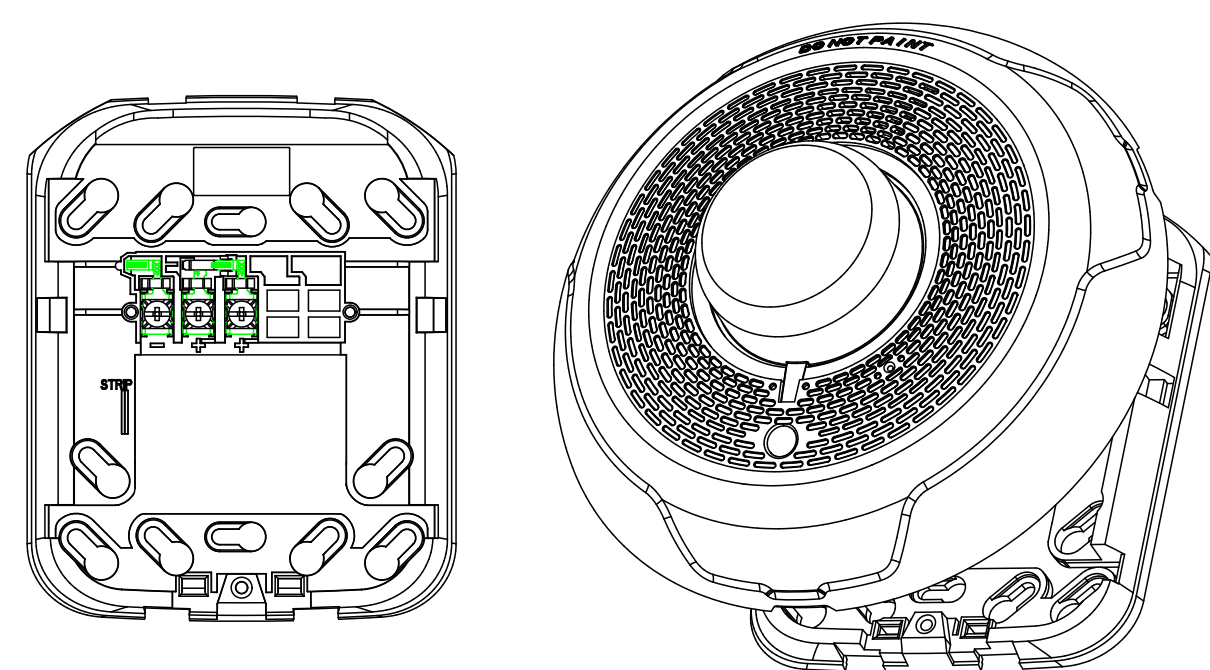
APPROVED BY: MIKE REGAN DATE: 2/29/23

NICET STAMP  
Michael Regan, ET  
NICET Level III Fire Alarm  
Technician ID: 144327  
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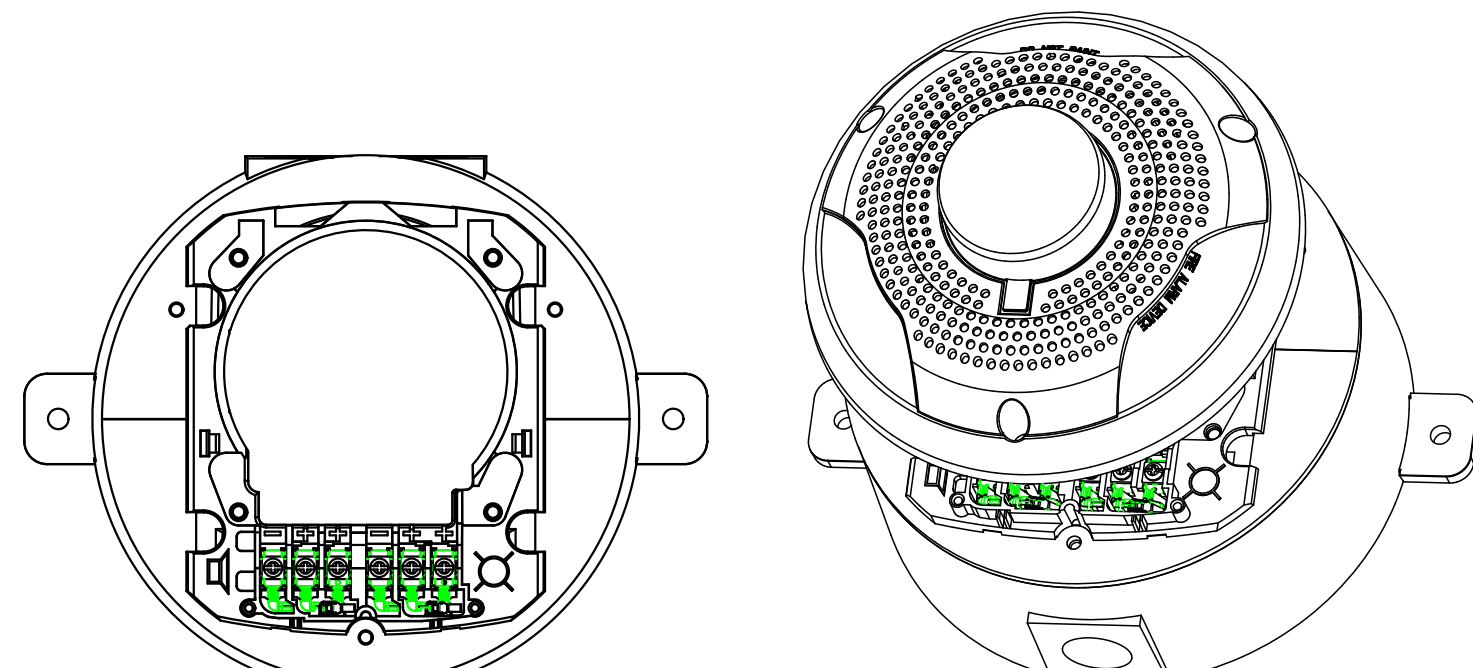
PROJECT NUMBER: 05143L

SHEET TITLE: RISER DIAGRAM & BATTERY CALCULATIONS  
SHEET NUMBER: FA - 04 OF 05

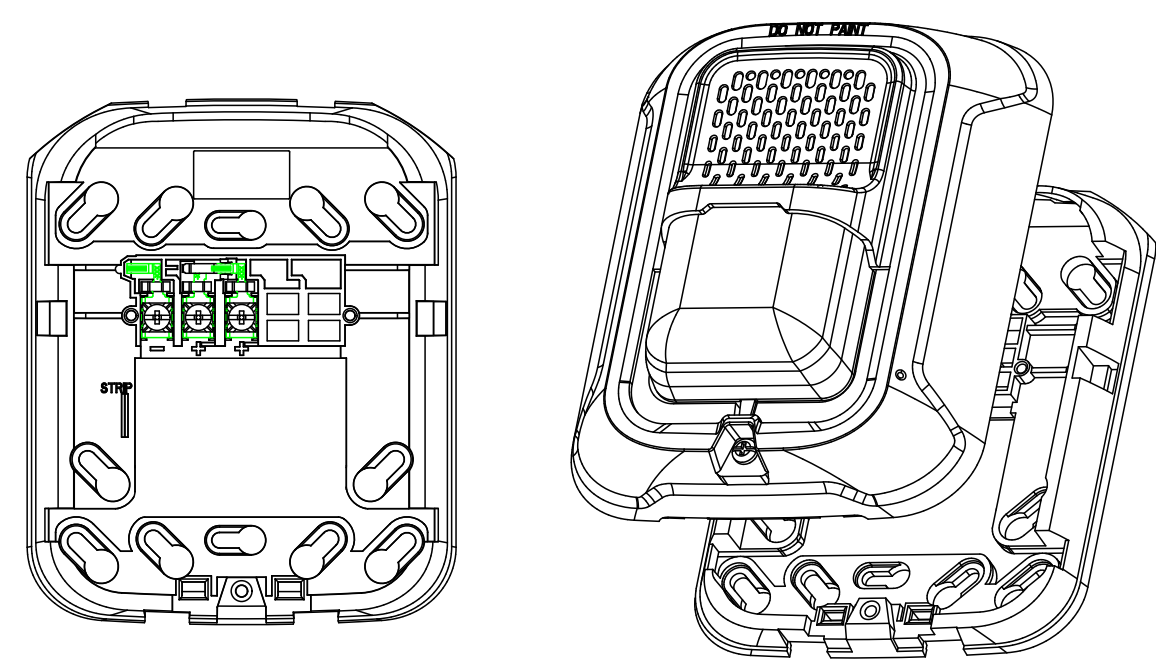




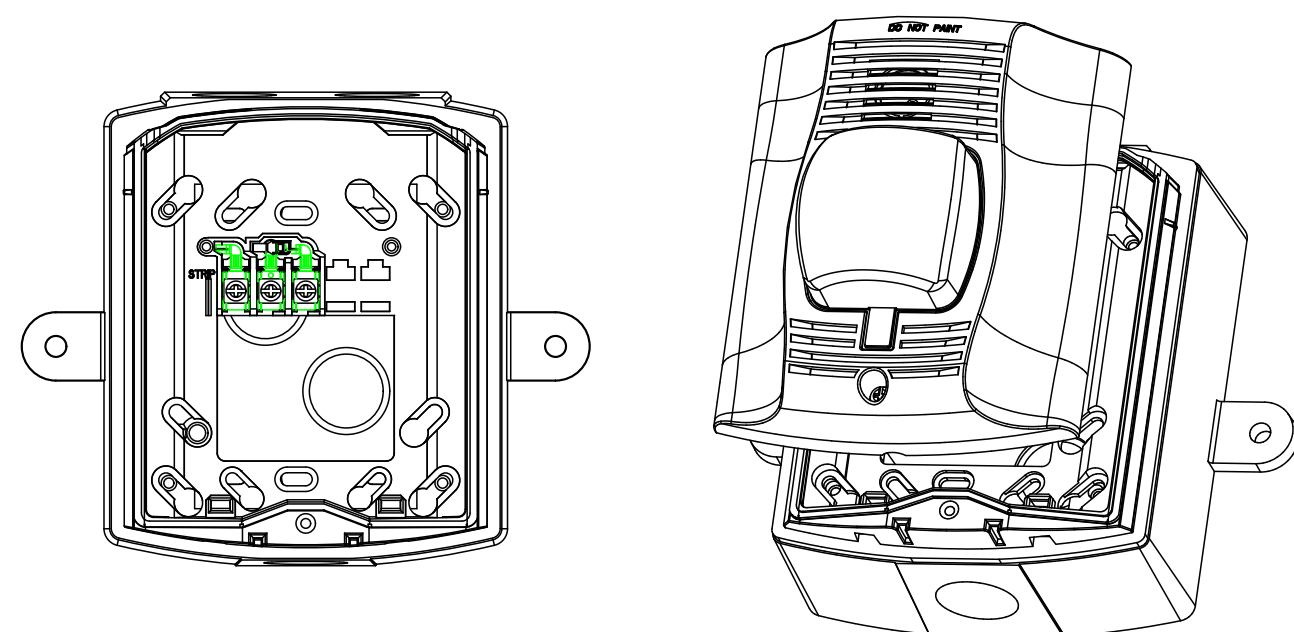
CEILING NOTIFICATION DEVICE DETAIL



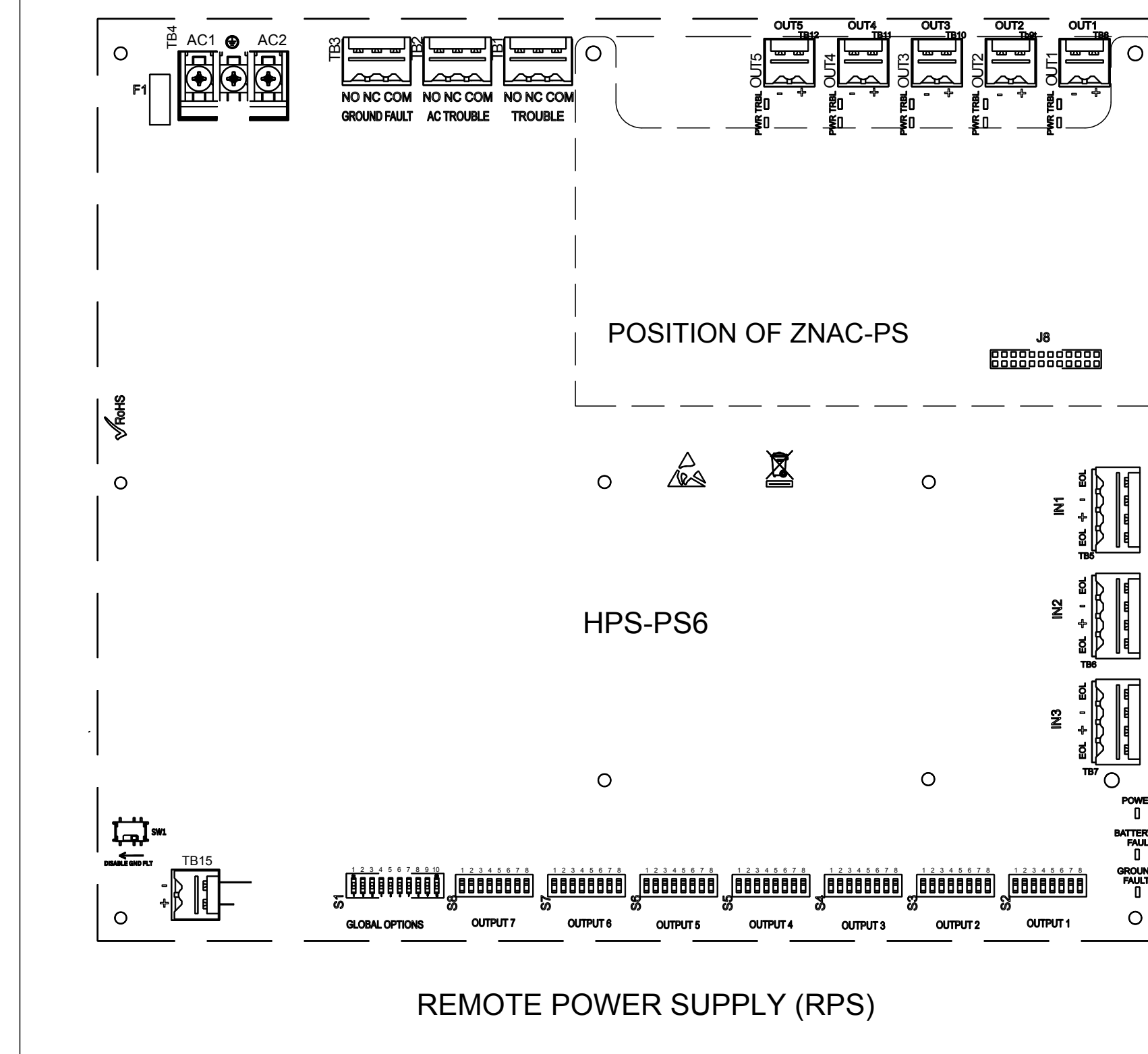
WEATHER PROOF CEILING NOTIFICATION DEVICE DETAIL



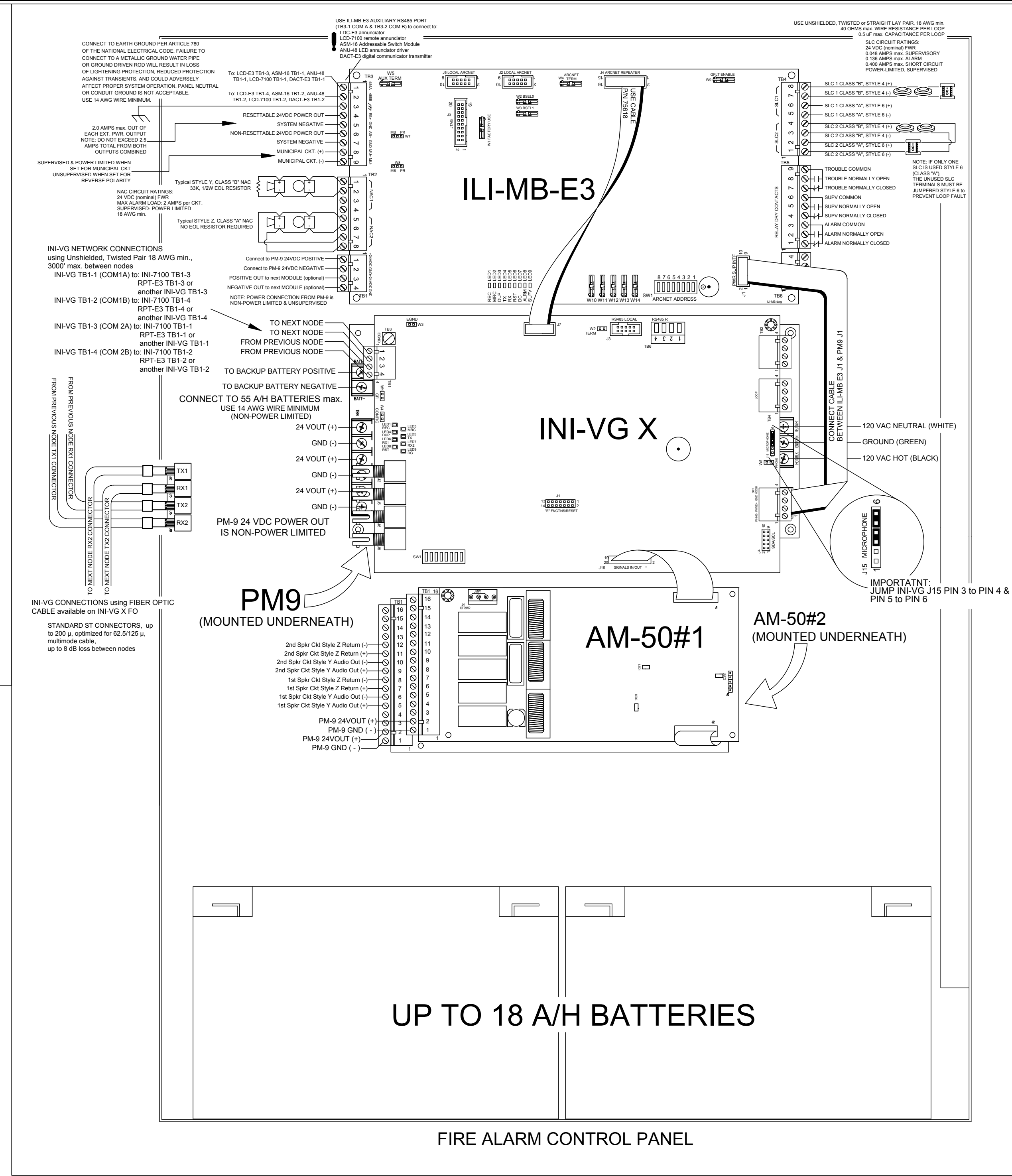
WALL NOTIFICATION DEVICE DETAIL



WEATHER PROOF WALL NOTIFICATION DEVICE DETAIL



REMOTE POWER SUPPLY (RPS)



UP TO 18 A/H BATTERIES

FIRE ALARM CONTROL PANEL

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

Building	Planning
Engineering	Public Works
Fire	Traffic

<p><b>NORTHWEST FIRE SYSTEMS</b> Saving Lives and Protecting Property</p> <p>22845 83RD AVE. S., BLDG D 'KENT, WA 98032 PHONE: 206.772.7502 * FAX: 206.772.7504 WWW.NWFIRESYSTEMS.COM LIC # NORTHWEST8756J</p>					
NO.	0	DATE	3/9/22	REVISION DESCRIPTION	
BY	J.S.			SUBMITTAL DRAWINGS	
<p>CONTRACT NAME: GOLDFISH SWIM SCHOOL 3500 SOUTH MERIDAN UNIT 900 PUYALLUP, WA 98373</p> <p>CONTRACT WITH: SEAHURST ELECTRIC 2915 CHESTNUT ST. EVERETT, WA 98201</p> <p>ON-SITE CONTACT: JEFF HARDER (425)773-2253</p>					
DRAWN BY:	JOE SHELDON	DATE:	2/28/23		
DESIGNED BY:	JOE SHELDON	DATE:	2/28/23		
APPROVED BY:	MIKE REGAN	DATE:	2/29/23		
<p>NICET STAMP</p> <p>Michael Regan, ET <i>Michael Regan</i> NICET Level III Fire Alarm Technician ID: 144327 Expires: 03/01/2026</p>					
PROJECT NUMBER: 05143L					
SHEET TITLE: DEVICE DETAILS					
SHEET NUMBER: FA - 05 OF 05					