



# PIERCE COLLEGE S.T.E.M. BUILDING

1601 39TH AVENUE SE PUYALLUP, WA 98374

## FIRE ALARM SYSTEM

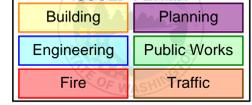
DESIGNER OF RECORD

*At PL*  
AUTUMN PELATA

NICET III FIRE ALARM SYSTEMS  
NICET I SPECIAL HAZARDS SYS  
CERT # 109987  
EXPIRE DATE: 11-31-2023



City of Puyallup  
Development & Permitting Services  
ISSUED PERMIT



NEW QTY	EXIST QTY	DESCRIPTION	PART #	MANUFACTURER	MOUNTING/DIMENSIONS
1	-	ADDRESSABLE FIRE ALARM PANEL	NFS2-640	NOTIFIER	
1	-	C-SIZE DOOR WITH WINDOW; BLACK	DR-C4	NOTIFIER	FIRE ALARM BACKBOX
1	-	BACKBOX, 3 CHASSIS; BLACK	SBB-C4	NOTIFIER	SURFACE OR FLUSH MOUNT
1	-	CENTRAL PROCESSING UNIT WITH DISPLAY	CPU2-640	NOTIFIER	FIRE ALARM BACKBOX
1	-	KEYBOARD DISPLAY MODULE	KDM-R2	NOTIFIER	FIRE ALARM BACKBOX
1	-	LOOP EXPANDER MODULE	LEM-320	NOTIFIER	FIRE ALARM BACKBOX
1	-	BATTERY DRESS PANEL FOR CAB-4 SERIES	BP2-4	NOTIFIER	FIRE ALARM BACKBOX
2	-	BLAKE MODULE DRESS PLATE	BMP-1	NOTIFIER	FIRE ALARM BACKBOX
1	-	BLACK PAINTED COVER PLATE	DP-1B	NOTIFIER	FIRE PANEL BACK BOX
1	-	MAIN UNIT 50 WATT 25V	NFC-50/100	NOTIFIER	FACP BACK BOX
1	-	AMPLIFIER FOR SECOND SPEAKER	NFC-BDA-25V	NOTIFIER	FACP BACK BOX
1	-	REMOTE MICROPHONE BLACK	NFC-RM	NOTIFIER	FACP BACK BOX
1	-	UNIVERSAL DIGITAL ALARM COMMUNICATOR	UDACT-2	NOTIFIER	FIRE ALARM BACK BOX
2	-	12VDC 18AH SEALED LEAD ACID BATTERY	UB12180	INTERSTATE	FIRE ALARM BACK BOX
1	-	80 CHARACTER DISPLAY ANNUNCIATOR	FDU-80	NOTIFIER	SBB-3 THREE GANG BOX OR WEATHERPROOF ENCLOSURE
3	-	24V POWER SUPPLY EXPANDER UP TO FIVE CLASS B CIRCUITS	PSE-10	NOTIFIER	BACKBOX INCLUDED
6	-	12VDC 8AH BATTERY ACID SEALED	UB1280/F1	INTERSTATE	IN POWER SUPPLY CAN
1	-	ADDRESSABLE MANUAL PULL STATION	NBG-12LX	NOTIFIER	SINGLE GANG BOX
14	-	DUCT DETECTOR HOUSING	DNR	NOTIFIER	SINGLE CONTAINED
14	-	DUCT PHOTO DETECTOR HEAD	FSP-951R	NOTIFIER	DNR
14	-	36" DUCT SAMPLING TUBE	DST3	NOTIFIER	DNR
199	-	ADDRESSABLE PHOTO DETECTOR	FSP-951	NOTIFIER	DETECTOR BASE
4	-	ADDRESSABLE THERMAL 190° DETECTOR	FST-951H	NOTIFIER	DETECTOR BASE
9	-	6" STANDARD FLANGED LOW PROFILE BASE WHITE	B300-6	NOTIFIER	4" BACK BOX
19	-	6" STANDARD FLANGED LOW PROFILE BASE WHITE BULK 10 PACK	B300-6-BP	NOTIFIER	4" O BOX
4	-	RELAY DDPDT, MULTI VOLTAGE	MR-201/CR	NOTIFIER	4" SQUARE BOX 2 1/8" DEEP
1	-	RELAY SPDT, MULTI VOLTAGE	MR-101/CR	NOTIFIER	4" SQUARE BOX 2 1/8" DEEP
8	-	ADDRESSABLE RELAY MODULE	FRM-1	NOTIFIER	4" SQUARE BOX
8	-	ADDRESSABLE CONTROL MODULE	FCM-1	NOTIFIER	4" SQUARE BOX
6	-	ADDRESSABLE DUAL MONITOR MODULE	FDM-1	NOTIFIER	4" SQUARE BOX 2 1/8" DEEP
91	-	CEILING MOUNT SPEAKER/STROBE WHITE	SPSCWL	SYSTEM SENSOR	4" SQUARE BOX
8	-	WALL MOUNT SPEAKER/STROBE WHITE	SPSWL	SYSTEM SENSOR	4" SQUARE BOX
3	-	WALL MOUNT SPEAKER WHITE	SPWL	SYSTEM SENSOR	4" SQUARE BOX
9	-	CEILING MOUNT SPEAKER WHITE	SPCWL	SYSTEM SENSOR	4" SQUARE BOX
39	-	CEILING MOUNT STROBE WHITE	SCWL	SYSTEM SENSOR	4" SQUARE BOX
1	-	WALL MOUNT HORN/STROBE WHITE WEATHERPROOF	P2WK	SYSTEM SENSOR	SA-WBBW OUTDOOR BACK BOX
2	-	CALL STATION	2100-958NSR	RATH	
6	-	ADDRESSABLE SINGLE MONITOR MODULE	FMM-1	NOTIFIER	
6	-	FSO (FIRE SMOKE DAMPER)	N/A	BY OTHERS	
3	-	ISOLATION MODULE	ISO-X(A)	NOTIFIER	4" SQUARE BOX 2 1/4" DEEP

### SCOPE OF WORK & DESIGN BASIS

- NEW FIRE ALARM SYSTEM WITH VOICE, FULL COVERAGE SMOKE DETECTION, MONITORING HVAC, SPRINKLER SYSTEM.
- RATH TWO WAY COMMUNICATION, FIRE PHONE AND AREA OF REFUGE LOCATIONS.
- IN OPEN AREAS FIRST AND SECOND FLOORS SMOKE DETECTOR AND NOTIFICATION DEVICES ARE TO BE WALL MOUNTED PER ARCHITECT.

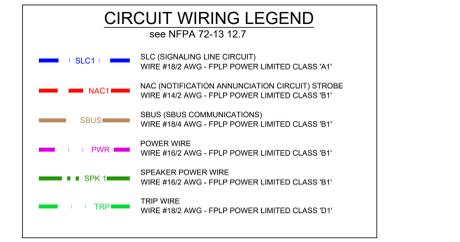
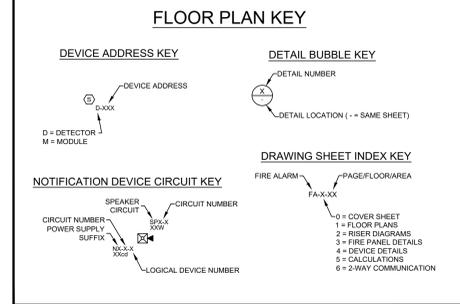
**DESIGN CRITERIA APPLIED CODES AND STANDARDS:**  
NFPA 72 2019 EDITION  
IBC 2018 EDITION WITH WASHINGTON AMENDMENTS  
NFPA 70 (NEC) 2017 EDITION

**DOCUMENTS RECEIVED BY ADT:**  
Integrus ARCHITECTURE  
SHEETS: ARCH.ELECTRICAL DRAWING SETS  
DATE: 08/31/2022

**USE AND OCCUPANCY CLASSIFICATION (SECTIONS 302, 303, 304 & 311)**  
GROUP "B" BUSINESS (HIGHER EDUCATION FACILITIES, OFFICES, ALL OTHER AREAS EXCEPT AS NOTED BELOW)  
GROUP "A-3" ASSEMBLY (LECTURE HALL)  
GROUP "S-1" STORAGE

### ABBREVIATIONS

AC - ABOVE CEILING	FFD - FIRE SMOKE DAMPER (THIRD PARTY)
AFF - ABOVE FINISHED FLOOR	HVAC - HEATING, VENTILATION, AND AIR CONDITIONING (THIRD PARTY)
ADA - AMERICAN DISABILITIES ACT	LA - LOW AIR (THIRD PARTY)
AHJ - AUTHORITY HAVING JURISDICTION	NA - NOT APPLICABLE
AHU - AIR HANDLING UNIT (THIRD PARTY)	NAC - NOTIFICATION APPLIANCE CIRCUIT
ASD - ASPIRATION SMOKE DETECTION	NFPA - NATIONAL FIRE PROTECTION ASSOCIATION
CD - CANDELA (EX. 150C)	NIC - NOT IN CONTRACT
CIS - COMMON INTELLIGIBILITY SCALE	NTS - NOT TO SCALE
DI - DOOR HOLDER (THIRD PARTY UNO)	PS - POWER SUPPLY
EF - EXHAUST FAN (THIRD PARTY)	RTU - ROOF TOP UNIT (THIRD PARTY)
ELEV - ELEVATOR (THIRD PARTY)	SLC - SIGNALING LINE CIRCUIT
EOL - END OF LINE	SPF - STAIR PRESSURIZATION FAN (THIRD PARTY)
EPF - ELEVATOR PRESSURIZATION FAN (THIRD PARTY)	STI - SPEECH TRANSMISSION INDEX
FA - FIRE ALARM	TYP - TYPICAL
FAA - FIRE ALARM ANNUNCIATOR	UND - UNLESS NOTED OTHERWISE
FACP - FIRE ALARM CONTROL PANEL	VAV - VARIABLE AIR VOLUME (THIRD PARTY)
FACU - FIRE ALARM CONTROL UNIT	VFD - VARIABLE FREQUENCY DRIVE (THIRD PARTY)
FATC - FIRE ALARM TERMINAL CABINET	W - WITH
FBD - FURNISHED BY OTHERS	W - WATT (EX. 1/2W)
FCU - FAN COIL UNIT (THIRD PARTY)	WP - WEATHERPROOF
FFT - FIREFIGHTER'S TELEPHONE	XP - EXPLOSION PROOF
FM - FACTORY MUTUAL	



### INSTALLATION & GENERAL WIRING NOTES:

**GENERAL NOTES:**

- INSTALLATION SHALL BE ACCOMPLISHED IN STRICT COMPLIANCE WITH NFPA, LOCAL AND STATE AHJ's, NEC AND CONTRACT DRAWINGS.
- WIRE ROUTING IS DIAGRAMMATIC IN NATURE ONLY AND NOT INTENDED FOR ACTUAL CONDUIT ROUTING.
- ALL CONDUIT SIZING AND ROUTING BY ELECTRICAL CONTRACTOR PER NEC AND AHJ.
- VERIFY ALL LOCATIONS OF DEVICES WITH ELECTRICAL/ARCHITECTURAL PLANS. SCALE AND PLACE ALL DEVICES PER ELECTRICAL/ARCHITECTURAL PLANS.
- ALL CIRCUITS WILL BE PROPERLY TAGGED AND TESTED FOR OPENS, SHORTS, GROUNDS AND PROPER "END-OF-LINE" RESISTANCE. EACH CIRCUITS METER READING MUST BE DOCUMENTED AND PRESENTED TO ADT COMMERCIAL (RHF&S) FIELD TECHNICIAN UPON ARRIVAL ONSITE FOR STARTUP & CHECKOUT.
- AS-BUILTS:
  - A SET OF INSTALLATION AS-BUILT DRAWINGS SHOWING ACTUAL CONDUIT AND CONDUCTOR ROUTES SHALL BE KEPT BY PROJECT FOREMAN FOR USE BY ADT COMMERCIAL (RHF&S) TECHNICIAN.
  - AS-BUILTS SHALL BE KEPT ORDERLY AND BE CLEARLY MARKED WITH DIFFERENT COLOR PENS FOR EACH CIRCUIT AND/OR CIRCUIT TYPE. AS-BUILTS MUST INDICATE CHANGES TO THE FINAL DEVICE INSTALLED LOCATIONS IF NOT INSTALLED AT LOCATION SHOWN ON DESIGN DOCUMENTS.
  - AS-BUILT REVISIONS NOT PROVIDING THIS INFORMATION WILL BE RETURNED TO THE INSTALLATION CONTRACTOR FOR CORRECTION. ADT COMMERCIAL (RHF&S) IS NOT RESPONSIBLE FOR THESE DELAYS.
- AGREEMENT AND CONFIRMATION OF ALL MILESTONE EVENTS WILL BE MADE WITH ADT COMMERCIAL (RHF&S) PROJECT MANAGER.
- ALL ADT COMMERCIAL (RHF&S) FIELD SERVICES MUST BE SCHEDULED WITH ADT COMMERCIAL (RHF&S) PROJECT MANAGER WITH A MINIMUM OF 14 WORKING DAYS ADVANCE NOTICE.
- DO NOT INSTALL LINE VOLTAGE IN SAME CONDUIT AS POWER LIMITED CABLES.

### FIRE ALARM SPECIFIC NOTES:

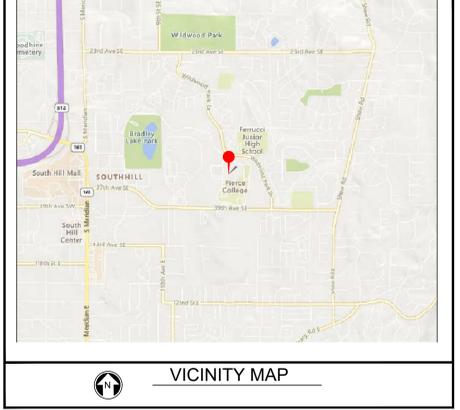
- SMOKE DETECTORS SHALL NOT BE INSTALLED WITHIN 36" OF ANY AIR DIFFUSER.
- 2018 NFPA 72-17.7.1.11 REQUIRES THAT SMOKE DETECTORS SHALL NOT BE INSTALLED UNTIL AFTER FINAL CONSTRUCTION CLEAN-UP.
- ANY SMOKE DETECTORS THAT HAVE BEEN INSTALLED PRIOR TO CLEAN-UP MUST BE CLEANED OR REPLACED AND WILL BE INVOICED ON A T/M BASIS.
- WALL MOUNTED NOTIFICATION DEVICES BACKBOX BETWEEN A MINIMUM OF 80" AFF TO A MAXIMUM OF 96" AFF.
- DEVICES THAT ARE UNABLE TO BE MOUNTED WITHIN THAT RANGE MUST BE VERIFIED BY ADT COMMERCIAL (RHF&S) PRIOR TO INSTALLATION.
- SEE FLOOR PLANS FOR CANDELA RATING OF EACH DEVICE INSTALLED.
- ALL MANUAL PULL STATIONS ARE TO BE MOUNTED AT A HEIGHT NO GREATER THAN 48" TO TOP AND NO LOWER THAN 36" TO BOTTOM (PER ADA REQUIREMENTS).
- FIELD VERIFY ALL SPRINKLER MONITORING DEVICES WITH FIRE PROTECTION CONTRACTOR.
- FIELD VERIFY ALL HVAC, FAN CONTROL, FIRE/SMOKE DAMPERS AND DUCT DETECTORS LOCATIONS WITH MECHANICAL CONTRACTOR.
- FACP SHALL NOT BE ENERGIZED WITHOUT THE PRESENCE OF ADT COMMERCIAL (RHF&S) TECHNICIANS.
- NO TAPPING OF SIGNALING OR INITIATING ZONE CIRCUITS ARE ALLOWED. TAPPING OF STYLE 4 ADDRESSABLE CIRCUITS IS ALLOWED PROVIDED A SPLICE IS PROFESSIONALLY INSTALLED. POLARITY IS OBSERVED AND SHIELDS ARE CONTINUOUS AND FREE OF GROUNDS. SHIELDS MUST BE TERMINATED AT FACP ONLY.
- CABLE SHIELDS SHALL BE SPLICED TOGETHER AT EVERY JUNCTION BETWEEN THE FACP AND THE LAST DEVICE ON EACH CABLE RUN. SHIELDS AND OTHER FIRE ALARM CONDUCTORS (EXCEPT POWER GROUNDS) SHALL BE INSULATED AND COMPLETELY FREE FROM CONDUIT OR EARTH GROUNDS. SHIELDS WILL BE TIES TO GROUND ONLY AT THE FACP BY THE ADT COMMERCIAL (RHF&S) FIELD TECHNICIAN.
- THE SYSTEM SHALL BE MONITORED BY A U.L. LISTED MONITORING STATION BEFORE AHJ TEST.
- AS-BUILTS ARE REQUIRED AT TIME OF AHJ ACCEPTANCE. ADT COMMERCIAL (RHF&S) REQUIRED ELECTRICAL RED LINES WITHIN 2 WEEKS PRIOR TO AHJ TESTS.
- EACH CIRCUIT (SLC, NAC OR POWER) MUST BE CLEARLY IDENTIFIED WITH A DISTINCT COLOR.
- EACH NAC CIRCUIT MUST BE CLEARLY MARKED AS TO WHICH DEVICES ARE ON EACH CIRCUIT AND IN THE ORDER THE DEVICES ARE WIRED TO COMPLETE THE CIRCUIT.

### PROJECT CONTACT INFORMATION:

CUSTOMER:  
NAME: Valley Electric  
ADDRESS: 1100 Merrill Creek PRWY  
Everett, WA 98203  
CONTACT: Joe Tremblay  
PHONE: 206.743.5989  
FAX:  
EMAIL: jpet@velectric.com

FIRE ALARM / LIFE SAFETY PROVIDER:  
NAME: ADT COMMERCIAL (SEATTLE)  
ADDRESS: 21312 30TH DRIVE SE, SUITE #103  
BOTHELL, WA 98021  
PHONE: 425-486-2600  
FAX: 425-486-2611

PROJECT MANAGER: Don Makena donmakena@adt.com EXT:  
DESIGNER: Autumn Pelata autumnpelata@adt.com EXT:



### DRAWING INDEX

Sheet Number	Sheet Title
FA-0-1	COVER SHEET
FA-0-2	PROJECT NOTES
FA-1-0	0 FLOOR PLAN (Basement)
FA-1-1	1ST FLOOR PLAN
FA-1-2	2ND FLOOR PLAN
FA-1-3	3RD FLOOR PLAN
FA-1-R	ROOF TOP PLAN
FA-2-1	RISER
FA-3-1	WIRING DETAILS
FA-5-1	Battery calculations

REV #	DATE	BY	DESCRIPTION
1	12/28/2022	APL	ISSUED FOR PERMIT
Rev#1	date	By	Description
Rev#2	date	By	Description
Rev#3	date	By	Description
Rev#4	date	By	Description
Rev#5	date	By	Description

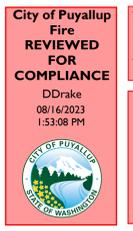
### WIRE LEGEND

SYMBOL	DESCRIPTION	THHN	FPL	FPLP	WET	COLOR CODING	CIRCUIT TYPE	NOTES
A	1 PAIR 16AWG FIRE RATED CABLE	YES	971	60991B	AQ225	RED JACKET w/ NO STRIPE	CONVENTIONAL (DC) CIRCUIT	
B	1 PAIR 16AWG FIRE RATED CABLE	YES	971	60991B	AQ225	RED JACKET w/ LT BLUE STRIPE	DEVICE INTERCONNECT	
C	1 PAIR 14AWG FIRE RATED CABLE	YES	972	60993B	AQ226	RED JACKET w/ WHITE STRIPE	ALDUBLE (NAC) CIRCUIT	
D	1 PAIR 16AWG FIRE RATED CABLE	---	971	60991B	AQ225	RED JACKET w/ NO STRIPE	DATA (SLC) CIRCUIT	
E	1 PAIR 16AWG FIRE RATED CABLE	---	971	60991B	AQ225	RED JACKET w/ NO STRIPE	FIREMANS PHONE DATA (SLC) C	
E	2 PAIR 18AWG SHIELDED CABLE (CMP)	---	293 (2)	25293B (2)	AQ224 (2)	GRAY JACKET	EMERGENCY PHONE CIRCUIT	
G	1 PAIR 14AWG FIRE RATED CABLE	YES	972	60993B	AQ226	RED JACKET w/ BLACK STRIPE	AUX RELAY INTERFACE	
J	1 PAIR 14AWG FIRE RATED CABLE	YES	972	60993B	AQ226	RED JACKET w/ BLACK STRIPE	HVAC INTERFACE	
K	1 PAIR 16AWG FIRE RATED CABLE	YES	971	60991B	AQ225	RED JACKET w/ BLACK STRIPE	DAMPER INTERFACE	
L	1 PAIR 16AWG FIRE RATED CABLE	YES	971	60991B	AQ225	RED JACKET w/ BLACK STRIPE	AUX EQUIPMENT INTERFACE	
N	1 PAIR 16AWG SHIELDED FIRE RATED CABLE	---	991	D60990	AQ294	RED JACKET w/ ORANGE STRIPE	485 NETWORK CIRCUIT	
P	1 PAIR 16AWG FIRE RATED CABLE	YES	971	60991B	AQ225	RED JACKET w/ NEON GREEN	AUX POWER CIRCUIT	
S	1 PAIR 14AWG FIRE RATED CABLE	YES	972	60993B	AQ226	RED JACKET w/ WHITE STRIPE	STROBE (NAC) CIRCUIT	
T	2 PAIR 24AWG TELEPHONE CABLE	YES	CAT3	CAT3	---	GREY JACKET	TELEPHONE CIRCUIT	
U	1 PAIR 14AWG FIRE RATED CABLE	YES	972	60993B	AQ226	RED JACKET w/ WHITE STRIPE	NAC SYNC CIRCUIT	
V	1 PAIR 14AWG SHIELDED FIRE RATED CABLE	---	995	60992B	AQ295	RED JACKET w/ YELLOW STRIPE	SPEAKER (AUDIO) CIRCUIT	
Z	1 PAIR 18AWG FIRE RATED CABLE	---	1990	D9990	AQ224	RED JACKET	DIGITAL AUDIO LOOP (DALI) CIRC	58

NOTES:  
\*\* STRIPES ARE NOT REQUIRED, HOWEVER IT DOES MAKE IT EASIER FOR CIRCUIT IDENTIFICATION.

- WIRE MANUFACTURER IS FOR REFERENCE PURPOSE ONLY. WHEN USING OTHER MANUFACTURE, ENSURE PROPER CROSS REFERENCE
- FPLP CAN BE USED IN MOST ALL APPLICATIONS WITH THE EXCLUSION OF WET AND CIRCUIT INTEGRITY REQUIREMENTS
- INSTALL WIRING PER NEC. USE CABLE TYPE CONSISTENT WITH NEC REQUIREMENTS, IE: PLENUM, RISER, UNDERGROUND, ETC.
- THE "M" FIBER OPTIC CABLE LISTED IS A Belden CABLE PART NUMBER AS WEST PENN NO LONGER SUPPORTS FIBER OPTIC CABLE
- THIS CABLE MUST BE INSTALLED IN A CONTINUOUS PATH POINT-TO-POINT. ABSOLUTELY NO SPLICES ARE ALLOWED.
- THIS IS A SPECIFIC CABLE, NO ALTERNATES ARE ALLOWED

Read Permit Conditions prior to calling for inspection.



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.

SCALE: As Shown

PREPARED BY: APL

CHECKED BY: RM

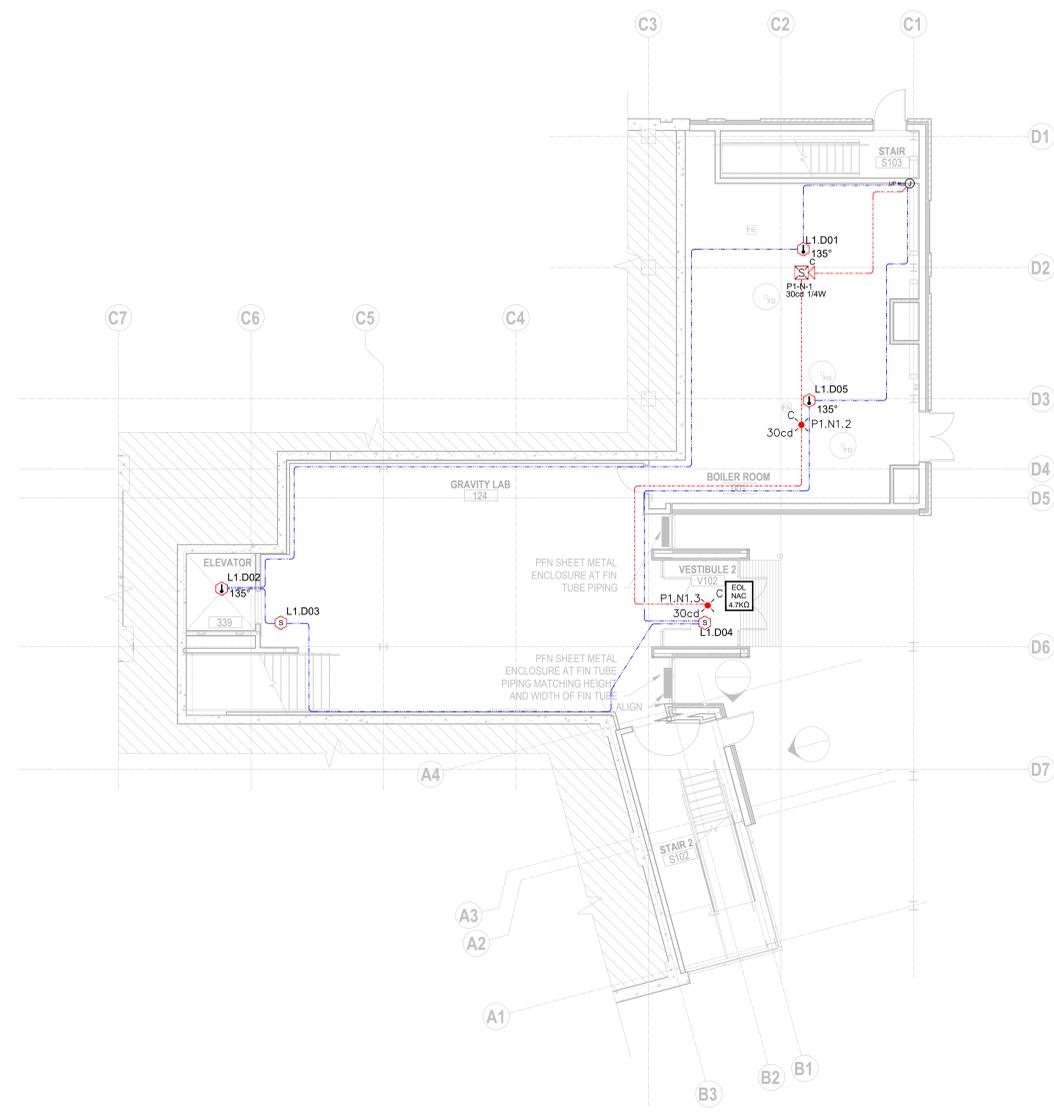
DATE: 01/30/2023

PROJECT NO: 281716084

TITLE: COVER SHEET

SHEET: FA-0-1





**01 Fire Alarm Plan— 0 FLOOR (Basement)**  
 Scale: 1/8" = 1'0"

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

Building	Planning
Engineering	Public Works
Fire	Traffic

**PIERCE COLLEGE**  
**STEM BUILDING**  
 1601 39th Avenue SE  
 Puyallup, WA 98374

REV #	DESCRIPTION	DATE	BY
-	ISSUED FOR PERMIT	12/28/2022	APL
Rev#1	Description	date	By
Rev#	Description	date	By
Rev#	Description	date	By
Rev#	Description	date	By
Rev#	Description	date	By

SCALE: **As Shown**

PREPARED BY: **APL**

CHECKED BY: **RM**

DATE: **01/30/2023**

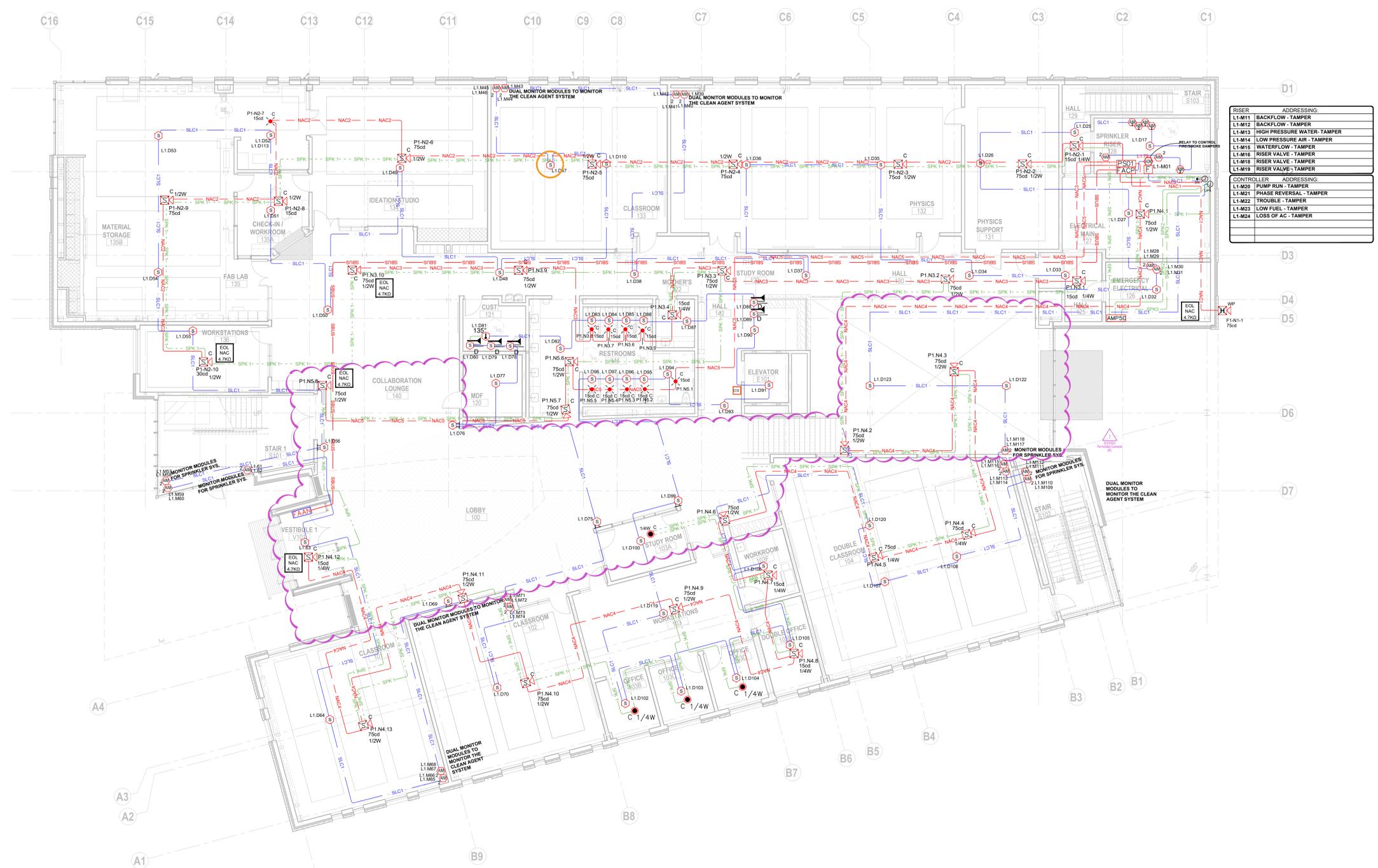
PROJECT NO: **281716084**

TITLE: **0 FLOOR PLAN (Basement)**

SHEET: **FA-1-0**

**NOTE:**

- All CEILING MOUNT DEVICES TO BE MOUNTED CENTER OF TILE WHERE APPLICABLE.
- NOTE SEVEN SMOKE DETECTORS SHALL BE WALL MOUNTED AS PER END USER'S REQUEST.



RISER ADDRESSING:	
L1-M11	BACKFLOW - TAMPER
L1-M12	BACKFLOW - TAMPER
L1-M13	HIGH PRESSURE WATER - TAMPER
L1-M14	LOW PRESSURE AIR - TAMPER
L1-M15	WATERFLOW - TAMPER
L1-M16	RISER VALVE - TAMPER
L1-M18	RISER VALVE - TAMPER
L1-M19	RISER VALVE - TAMPER

CONTROLLER ADDRESSING:	
L1-M20	PUMP RUN - TAMPER
L1-M21	PHASE REVERSAL - TAMPER
L1-M22	TROUBLE - TAMPER
L1-M23	LOW FUEL - TAMPER
L1-M24	LOSS OF AC - TAMPER

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

Building	Planning
Engineering	Public Works
Fire	Traffic

**PIERCE COLLEGE**  
**STEM BUILDING**  
1601 39th Avenue SE  
Puyallup, WA 98374

REV #	DESCRIPTION	DATE	BY
-	ISSUED FOR PERMIT	12/28/2022	APL
Rev#1	Description	date	By
Rev#	Description	date	By
Rev#	Description	date	By
Rev#	Description	date	By
Rev#	Description	date	By

SCALE: #####

PREPARED BY: APL

CHECKED BY: RM

DATE: 01/30/2023

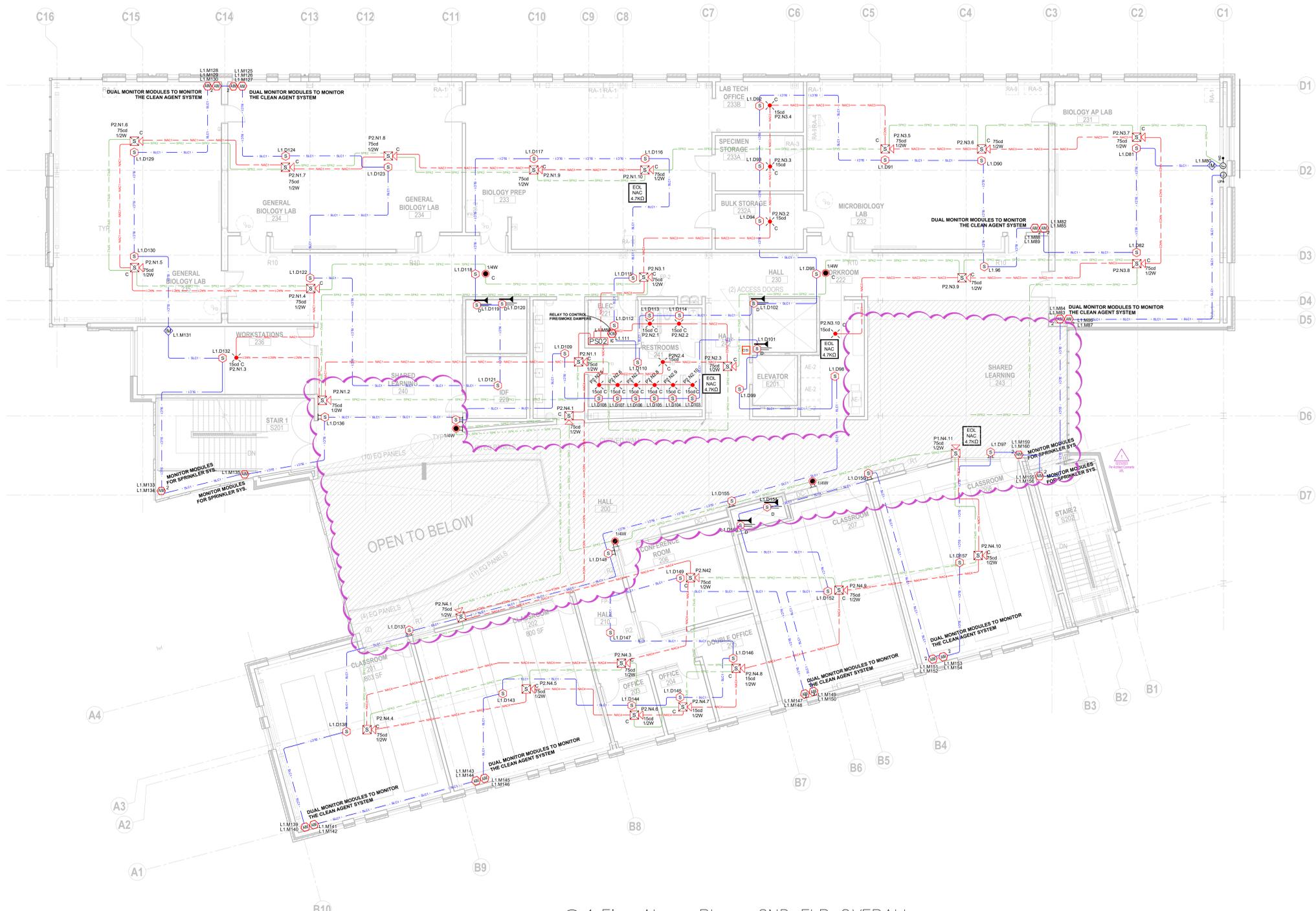
PROJECT NO: 281716084

TITLE: 1ST FLOOR PLAN

SHEET: FA-1-1

**01 Fire Alarm Plan- 1ST FLR OVERALL**  
Scale: 1/8" = 1'0"  
2' 4' 8' 10' 12' 14' 16' 18' 20'

**NOTE:**  
 1. MOUNT CEILING DEVICES CENTER OF TILE WHERE APPLICABLE.  
 2. SEVEN SMOKE DETECTORS TO BE WALL MOUNTED AS PER ARCHITECT.



01 Fire Alarm Plan - 2ND FLR OVERALL  
 Scale: 1/8" = 1'0"



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

Building	Planning
Engineering	Public Works
Fire	Traffic

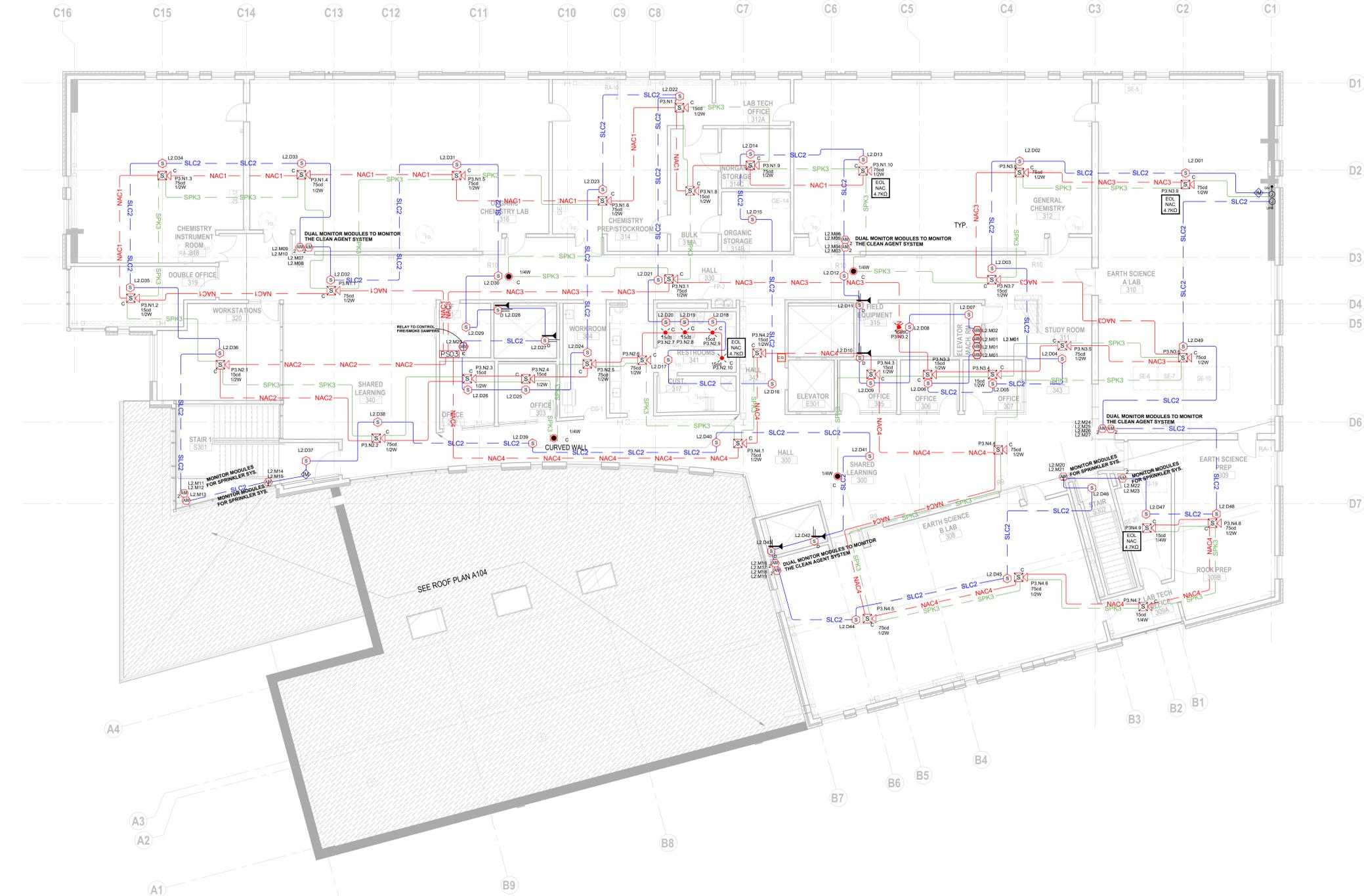
**PIERCE COLLEGE  
 STEM BUILDING**  
 1601 39th Avenue SE  
 Puyallup, WA 98374

REV #	DESCRIPTION	DATE	BY
-	ISSUED FOR PERMIT	12/28/2022	APL
Rev#1	Description	date	By
Rev#	Description	date	By
Rev#	Description	date	By
Rev#	Description	date	By
Rev#	Description	date	By

SCALE: As Shown  
 PREPARED BY: APL  
 CHECKED BY: RM  
 DATE: 01/30/2023  
 PROJECT NO: 281716084  
 TITLE: 2ND FLOOR PLAN  
 SHEET: FA-1-2

**NOTE:**

1. All ceiling mount devices to be installed center of tile where applicable.
2. SMOKE DETECTORS LOCATED ABOVE CLOUDS NOT SHOWN ON PLAN, TO BE LOCATED DIRECTLY ABOVE SMOKE IN CLOUD.



01 Fire Alarm Plan— 3RD FLR OVERALL  
 Scale: 1/8" = 1'0"  
 2' 4' 6' 8' 10' 12' 14' 16' 18' 20'

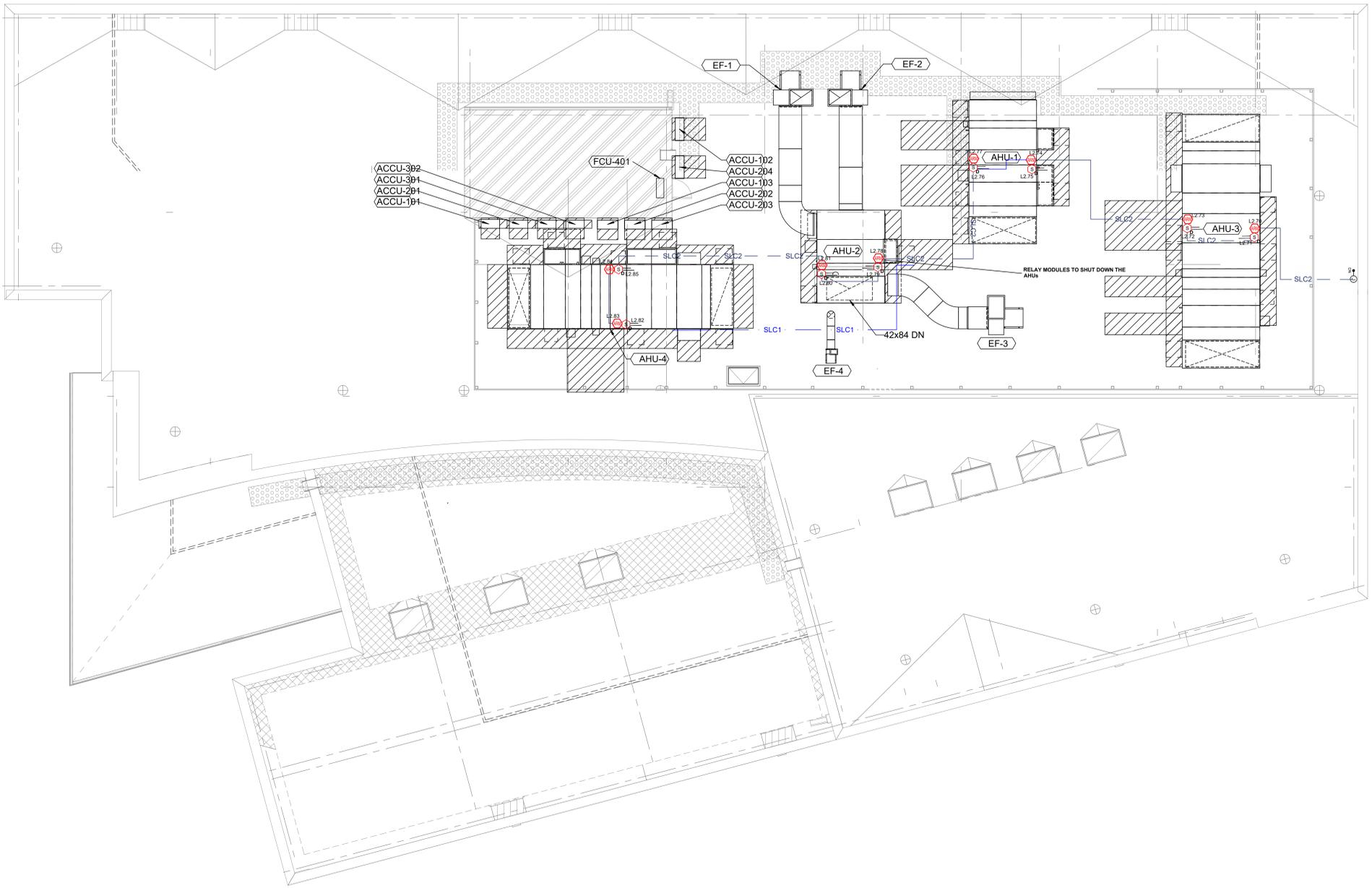
**City of Puyallup  
 Development & Permitting Services  
 ISSUED PERMIT**

Building	Planning
Engineering	Public Works
Fire	Traffic

**PIERCE COLLEGE  
 STEM BUILDING**  
 1601 39th Avenue SE  
 Puyallup, WA 98374

REV #	DESCRIPTION	DATE	BY
-	ISSUED FOR PERMIT	12/28/2022	APL
Rev#1	Description	date	By
Rev#	Description	date	By
Rev#	Description	date	By
Rev#	Description	date	By
Rev#	Description	date	By

SCALE: As Shown  
 PREPARED BY: APL  
 CHECKED BY: RM  
 DATE: 01/30/2023  
 PROJECT NO: 281716084  
 TITLE: 3RD FLOOR PLAN  
 SHEET: FA-1-3



01 Fire Alarm Plan— ROOF  
Scale: 1/8" = 1'0"

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

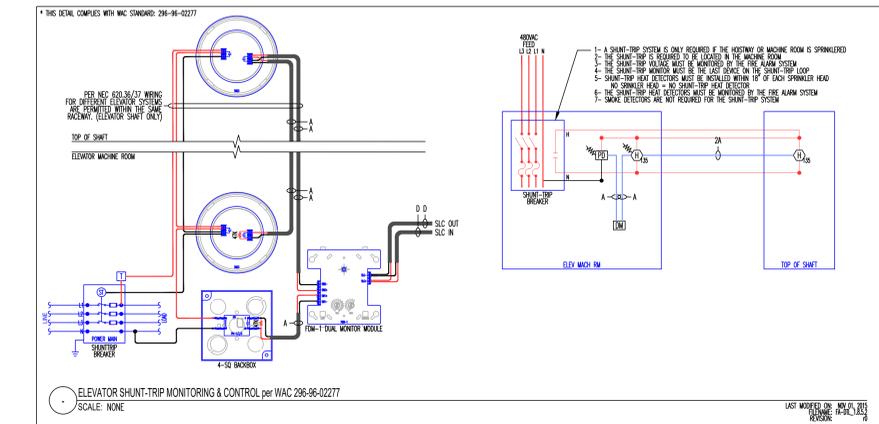
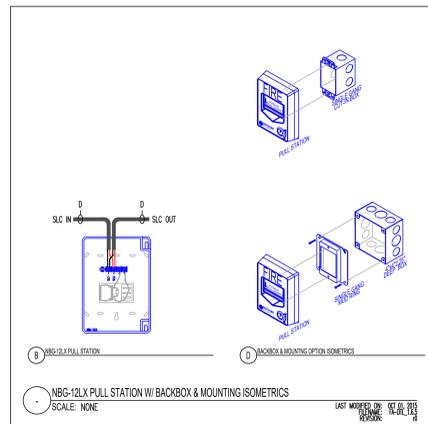
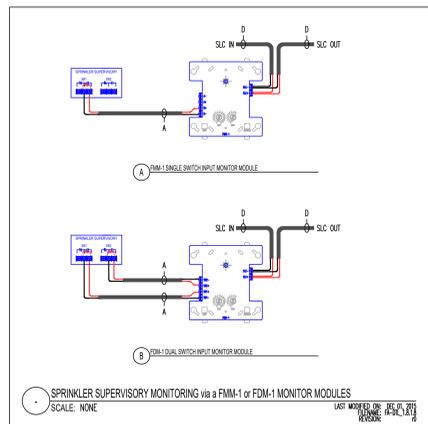
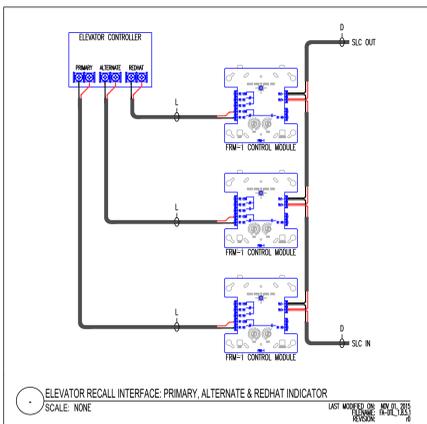
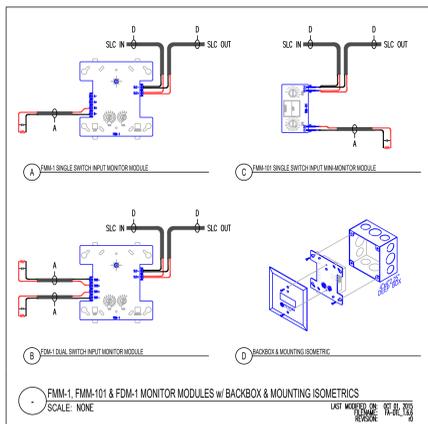
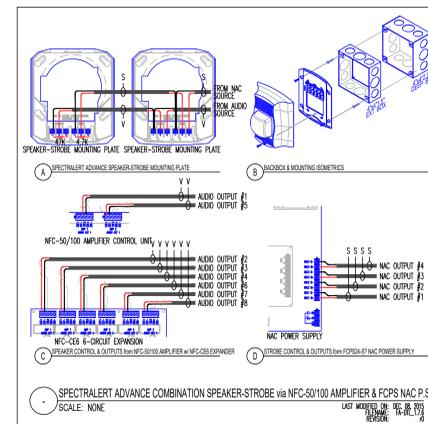
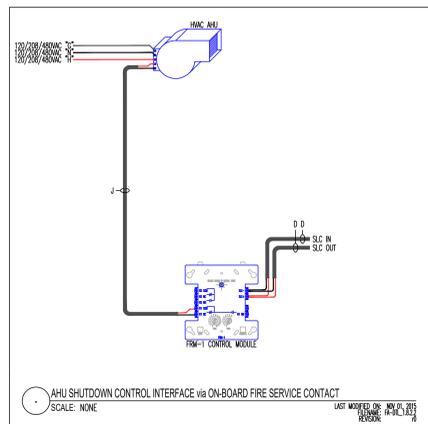
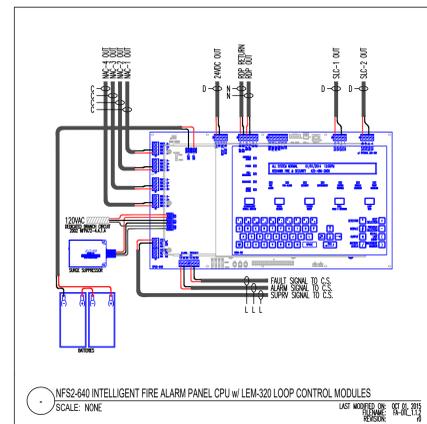
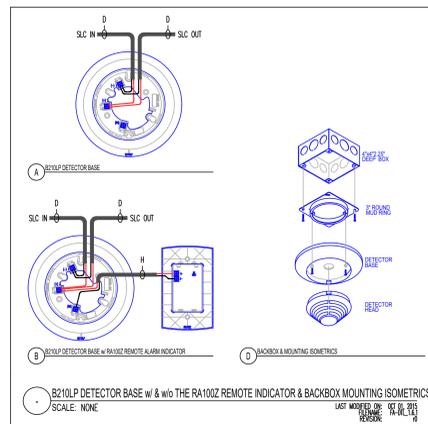
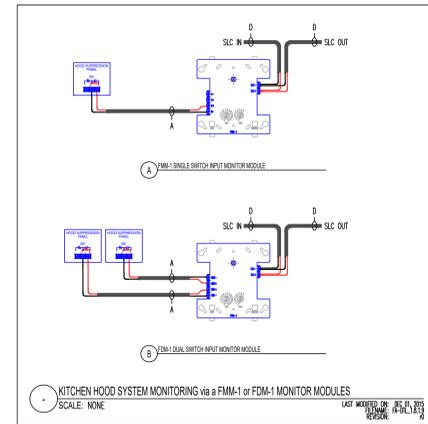
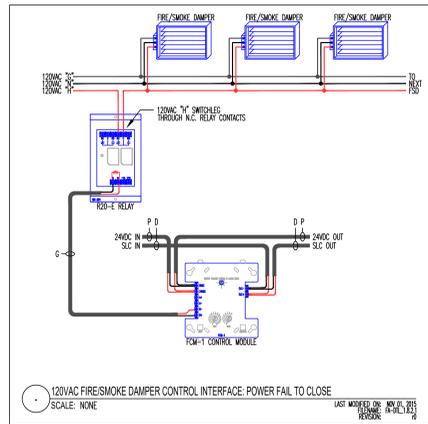
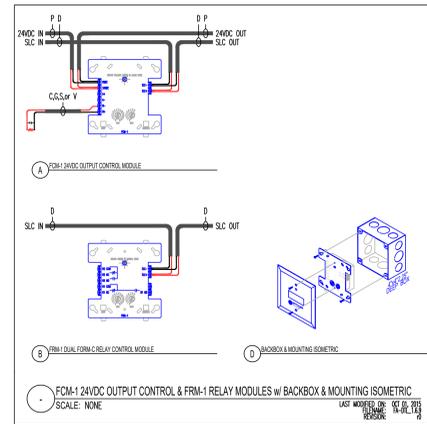
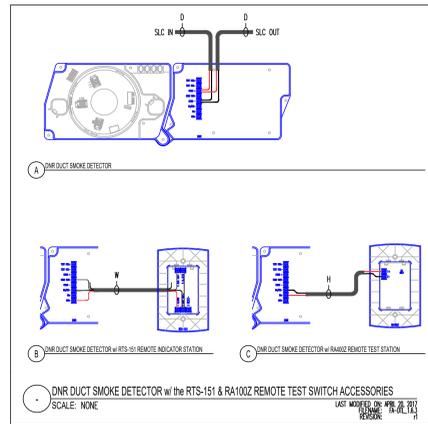
Building	Planning
Engineering	Public Works
Fire	Traffic

**PIERCE COLLEGE  
STEM BUILDING**  
1601 39th Avenue SE  
Puyallup, WA 98374

REV #	DESCRIPTION	DATE	BY
-	ISSUED FOR PERMIT	12/28/2022	APL
Rev#1	Description	date	By
Rev#	Description	date	By
Rev#	Description	date	By
Rev#	Description	date	By
Rev#	Description	date	By

SCALE: **As Shown**  
 PREPARED BY: **APL**  
 CHECKED BY: **RM**  
 DATE: **01/30/2023**  
 PROJECT NO: **281716084**  
 TITLE:

**ROOF TOP PLAN**  
 SHEET: **FA-1-R**



City of Puyallup  
Development & Permitting Services  
ISSUED PERMIT

Building	Planning
Engineering	Public Works
Fire	Traffic

**PIERCE COLLEGE  
STEM BUILDING**

1601 39th Avenue SE  
Puyallup, WA 98374

REV #	DESCRIPTION	DATE	BY
1	ISSUED FOR PERMIT	12/28/2022	APL
Rev#1	Description	date	By
Rev#2	Description	date	By
Rev#3	Description	date	By
Rev#4	Description	date	By
Rev#5	Description	date	By

SCALE: As Shown

PREPARED BY: APL

CHECKED BY: RM

DATE: 01/30/2023

PROJECT NO: 281716084

TITLE: WIRING DETAILS

SHEET: FA-3-1





### NOTIFIER System Power Requirements

Notifier NFS2-640 Fire Alarm Control Panel

Protected Premises: PIERCE COLLEGE STEM BUILD Date: 4/11/2023  
 Address: 1601 39TH AVE SE  
 City: PUYALLUP State: WA Zip: 98374

Prepared By: ADT COMMERCIAL Phone:  
 Address: 21312 30TH AVE SE Email: JOHNPELATA@ADT.COM  
 City: BOTHELL State: WA Zip: 98021

Clear Project Information

**AC Branch Current Requirements**  AMPS @ 120 VAC

Current required by source to power the fire alarm system.

**Primary Standby Load**  Amps

Current load on the primary power supply during non-alarm conditions.

**Primary Alarm Load**  Amps

Current load on the primary power supply during alarm conditions.

**Secondary Load Requirements**  Amp Hours

Total Secondary Load from the calculation table below.

Current Draw	Time (hours)	Total (AH)
Secondary Standby Load	Required Standby Time	
0.681 A	4 hours	2.73
Secondary Alarm Load	Required Alarm Time	
1.076 A	0.250 hours	0.27
Total Secondary Load		2.99
Derating factor		x 1.2
<b>Secondary Load Requirements (Amp Hours)</b>		<b>3.59</b>

**Battery Selection**  Amp Hours

Select batteries from the list below.

**Battery Distribution Chart**  
Shows amp-hour distribution of your selections.

**Comments**

- Batteries will fit in the FACP cabinet.
- Selected battery size meets secondary load requirements.
- The selected batteries (18AH) are within the charger range of this power supply (18-200AH).

Spare Battery Capacity	3.41	Battery Selection (AH) - Secondary Load Requirements (AH)
Secondary Standby Load	3.27	Secondary Standby Load (AH) * Derating Factor
Secondary Alarm Load	0.32	Secondary Alarm Load (AH) * Derating Factor

### NOTIFIER System Power Requirements

NFC-50/100 Digital Audio Amplifier

Protected Premises: PIERCE COLLEGE STEM BUILD Date: 4/12/2023  
 Address: 161 39TH AVE SE  
 City: PUYALLUP State: WA Zip: 98374

Prepared By: ADT COMMERCIAL Phone:  
 Address: 21312 30TH AVE SE Email: johnpelata@adt.com  
 City: BOTHELL State: WA Zip: 98021

Clear Project Information

**AC Branch Current Requirements**  AMPS @ 120 VAC

Current required by source to power the fire alarm system.

**Secondary Load Requirements**  Amp Hours

Total Secondary Load from the calculation table below.

Current Draw	Time (hours)	Total (AH)
Secondary Standby Load	Required Standby Time	
0.372 A	24 hours	8.93
Secondary Alarm Load	Required Alarm Time (hours)	
3.881 A	0.250 hours	0.97
Total Secondary Load		9.90
Derating factor		x 1.2
<b>Secondary Load Requirements</b>		<b>11.88</b>

**Battery Selection**  Amp Hours

Select batteries from the list below.

Two  Four (two 12VDC sets in parallel)

**Battery Distribution Chart**  
Shows amp-hour distribution of your selections.

**Comments**

- Batteries will fit in the FACP cabinet.
- Selected battery size meets secondary load requirements.
- The selected batteries (18AH) are within the charger range of this power supply (12-26AH).

Spare Battery Capacity	6.12	Battery Selection (AH) - Secondary Load Requirements (AH)
Secondary Standby Load	10.71	Secondary Standby Load (AH) * Derating Factor
Secondary Alarm Load	1.16	Secondary Alarm Load (AH) * Derating Factor

### NOTIFIER Device Current Draw

NFC-50/100 Digital Audio Amplifier

Quantity x [device current draw] = total current draw per device (in amps)

Part Number	Qty	Secondary Non-Alarm	Secondary Alarm
NFC-50/100 Primary Console	1	x [0.27200] = 0.27200	x [0.44600] = 0.44600
NFC-80A-50/70V Optional Amplifier	1	x [0.10600] = 0.10600	x [0.23500] = 0.23500
SPSCWL15	7	x [0.00000] = 0.00000	x [0.01600] = 0.11200
SPSCWL75	12	x [0.00000] = 0.00000	x [0.01600] = 0.19200
SPSCWL15	13	x [0.00000] = 0.00000	x [0.03200] = 0.41600
SPSCWL30	2	x [0.00000] = 0.00000	x [0.03200] = 0.06400
SPSCWL75	63	x [0.00000] = 0.00000	x [0.03200] = 2.01600
SPSCWL30	1	x [0.00000] = 0.00000	x [0.01600] = 0.01600
SPWL	3	x [0.00000] = 0.00000	x [0.03200] = 0.09600
SPCWL	9	x [0.00000] = 0.00000	x [0.03200] = 0.28800
<b>Total (Amperes):</b>		<b>0.3720 A</b>	<b>3.8810 A</b>

### NOTIFIER Device Current Draw

NFS2-640 Fire Alarm Control Panel

Quantity x [device current draw] = total current draw per device (in amps)

Part Number	Qty	Primary Non-Alarm	Primary Alarm	Secondary Non-Alarm
CPJ2-640	1	x [0.25000] = 0.25000	x [0.25000] = 0.25000	x [0.25000] = 0.25000
CPS-24	1	x [0.00000] = 0.00000	x [0.00000] = 0.00000	x [0.04000] = 0.04000
# of NACs in use	1	x [0.03500] = 0.03500	x [0.03500] = 0.03500	x [0.03500] = 0.03500
KDM-R2 (Backlight On)	1	x [0.10000] = 0.10000	x [0.10000] = 0.10000	x [0.10000] = 0.10000
LEM-320 (SLC2)	1	x [0.10000] = 0.10000	x [0.10000] = 0.10000	x [0.10000] = 0.10000
NFC-50/100	1	x [0.00000] = 0.00000	x [0.00000] = 0.00000	x [0.00000] = 0.00000
FDU-30	1	x [0.06430] = 0.06430	x [0.06430] = 0.06430	x [0.06430] = 0.06430
UDACT-2 Communicator	1	x [0.05200] = 0.05200	x [0.08700] = 0.08700	x [0.05200] = 0.05200
FSP-951	168	x [0.00020] = 0.03360	x [0.00000] = 0.00000	x [0.00020] = 0.03360
FST-951	3	x [0.00020] = 0.00060	x [0.00000] = 0.00000	x [0.00020] = 0.00060
FSP-951R	8	x [0.00020] = 0.00160	x [0.00000] = 0.00000	x [0.00020] = 0.00160
NBG-12LX	1	x [0.00038] = 0.00038	x [0.00000] = 0.00000	x [0.00038] = 0.00038
FRM-1	15	x [0.00026] = 0.00383	x [0.00000] = 0.00000	x [0.00026] = 0.00383
SLC Loop Device Activation Current	2	x [0.00000] = 0.00000	x [0.20000] = 0.40000	x [0.00000] = 0.00000
<b>Total (Amperes):</b>		<b>0.6413 A</b>	<b>1.0363 A</b>	<b>0.6813 A</b>

Part Number	Qty	Secondary Alarm
Total Primary Alarm Load - C2	1	x [0.03630] = 1.03630
CPS-24	1	x [0.04000] = 0.40000
<b>Total (Amperes):</b>		<b>1.0763 A</b>

### PSE-10 Battery Calculation

Note 1: You are fully responsible for verifying these calculations.  
 Note 2: You only need to make entries in the yellow cells.

**Calculation in Total Sheet**

Standby Load Current (Amps)	0.1560 Amps	Required Standby Time in Hours	24 Hours	Total
		X	24	= 3.744 AH
Alarm Load Current (Amps)	3.5760 Amps	Required Alarm Time in Hours	15 Minutes	Total
		X	0.25	= 0.894 AH
		<b>Total Current Load</b>		<b>4.64 AH</b>
		*Multiply by the Derating Factor		1.2
				= x 1.20
		<b>Total Ampere Hours Required</b>		<b>5.57 AH</b>

**Recommended Batteries:** BAT-1270 - 7AH Batteries

\*Derating Factor required to compensate for the non-linear discharge characteristic of a battery.

### PSE-10 Circuit Detail

NAC / Output # 1

Device	Qty	Non-Alarm Draw	Total	Qty	Alarm Draw	Total
SPSCWL-30	1	x 0.00000 =	0.00000	1	x 0.06300 =	0.06300
SCWL-30	2	x 0.00000 =	0.00000	2	x 0.06300 =	0.12600
<b>Total Standby Load</b>		<b>0.000000</b>		<b>Total Alarm Load</b>		<b>0.189000</b>

### PSE-10 Circuit Detail

NAC / Output # 2

Device	Qty	Non-Alarm Draw	Total	Qty	Alarm Draw	Total
SPSCWL-15	2	x 0.00000 =	0.00000	2	x 0.04100 =	0.08200
SPSCWL-30	1	x 0.00000 =	0.00000	1	x 0.06300 =	0.06300
SPSCWL-75	6	x 0.00000 =	0.00000	6	x 0.11100 =	0.66600
SCWL-15	1	x 0.00000 =	0.00000	1	x 0.04100 =	0.04100
<b>Total Standby Load</b>		<b>0.000000</b>		<b>Total Alarm Load</b>		<b>0.852000</b>

### PSE-10 Circuit Detail

NAC / Output # 3

Device	Qty	Non-Alarm Draw	Total	Qty	Alarm Draw	Total
SPSCWL-15	2	x 0.00000 =	0.00000	2	x 0.04100 =	0.08200
SPSCWL-75	4	x 0.00000 =	0.00000	4	x 0.11100 =	0.44400
SCWL-15	4	x 0.00000 =	0.00000	4	x 0.04100 =	0.16400
<b>Total Standby Load</b>		<b>0.000000</b>		<b>Total Alarm Load</b>		<b>0.690000</b>

### PSE-10 Circuit Detail

NAC / Output # 4

Device	Qty	Non-Alarm Draw	Total	Qty	Alarm Draw	Total
SPSCWL-15	3	x 0.00000 =	0.00000	3	x 0.04100 =	0.12300
SPSCWL75	9	x 0.00000 =	0.00000	9	x 0.11100 =	0.99900
<b>Total Standby Load</b>		<b>0.000000</b>		<b>Total Alarm Load</b>		<b>1.122000</b>

### PSE-10 Circuit Detail

NAC / Output # 5

Device	Qty	Non-Alarm Draw	Total	Qty	Alarm Draw	Total
SPSCWL-75	3	x 0.00000 =	0.00000	3	x 0.11100 =	0.33300
SCWL-15	5	x 0.00000 =	0.00000	5	x 0.04100 =	0.20500
<b>Total Standby Load</b>		<b>0.000000</b>		<b>Total Alarm Load</b>		<b>0.538000</b>

### PSE-10 Battery Calculation

Note 1: You are fully responsible for verifying these calculations.  
 Note 2: You only need to make entries in the yellow cells.

**Calculation in Total Sheet**

Standby Load Current (Amps)	0.1560 Amps	Required Standby Time in Hours	24 Hours	Total
		X	24	= 3.744 AH
Alarm Load Current (Amps)	4.0840 Amps	Required Alarm Time in Hours	15 Minutes	Total
		X	0.25	= 1.021 AH
		<b>Total Current Load</b>		<b>4.77 AH</b>
		*Multiply by the Derating Factor		1.2
				= x 1.20
		<b>Total Ampere Hours Required</b>		<b>5.72 AH</b>

**Recommended Batteries:** BAT-1270 - 7AH Batteries

\*Derating Factor required to compensate for the non-linear discharge characteristic of a battery.

### PSE-10 Circuit Detail

NAC / Output # 1

Device	Qty	Non-Alarm Draw	Total	Qty	Alarm Draw	Total
SPSCWL-75	9	x 0.00000 =	0.00000	9	x 0.11100 =	0.99900
SCWL-15	1	x 0.00000 =	0.00000	1	x 0.04100 =	0.04100
<b>Total Standby Load</b>		<b>0.000000</b>		<b>Total Alarm Load</b>		<b>1.040000</b>

### PSE-10 Circuit Detail

NAC / Output # 2

Device	Qty	Non-Alarm Draw	Total	Qty	Alarm Draw	Total
SPSCWL-75	1	x 0.00000 =	0.00000	1	x 0.11100 =	0.11100
SCWL-15	9	x 0.00000 =	0.00000	9	x 0.04100 =	0.36900
<b>Total Standby Load</b>		<b>0.000000</b>		<b>Total Alarm Load</b>		<b>0.480000</b>

### PSE-10 Circuit Detail

NAC / Output # 3

Device	Qty	Non-Alarm Draw	Total	Qty	Alarm Draw	Total
SPSCWL-75	5	x 0.00000 =	0.00000	5	x 0.11100 =	0.55500
SCWL-15	4	x 0.00000 =	0.00000	4	x 0.04100 =	0.16400
<b>Total Standby Load</b>		<b>0.000000</b>		<b>Total Alarm Load</b>		<b>0.830000</b>

### PSE-10 Circuit Detail

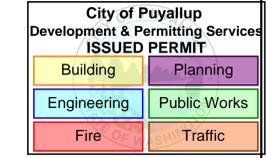
NAC / Output # 4

Device	Qty	Non-Alarm Draw	Total	Qty	Alarm Draw	Total
SPSCWL-15	3	x 0.00000 =	0.00000	3	x 0.04100 =	0.12300
SPSCWL-75	8	x 0.00000 =	0.00000	8	x 0.11100 =	0.88800
<b>Total Standby Load</b>		<b>0.000000</b>		<b>Total Alarm Load</b>		<b>1.011000</b>

### PSE-10 Circuit Detail

NAC / Output # 5

Device	Qty	Non-Alarm Draw	Total	Qty	Alarm Draw	Total
SPSCWL-75	3	x 0.00000 =	0.00000	3	x 0.11100 =	0.33300
SCWL15	5	x 0.00000 =	0.00000	5	x 0.04100 =	0.20500
<b>Total Standby Load</b>		<b>0.000000</b>		<b>Total Alarm Load</b>		<b>0.538000</b>



**PIERCE COLLEGE STEM BUILDING**  
 1601 39th Avenue SE  
 Puyallup, WA 98374

REV #	DESCRIPTION	DATE	BY
	ISSUED FOR PERMIT	12/28/2022	APL
Rev#1	Description	date	By
Rev#	Description	date	By
Rev#	Description	date	By
Rev#	Description	date	By
Rev#	Description	date	By

SCALE: As Shown

PREPARED BY: JAP

CHECKED BY: DK

DATE: 06/20/2023

PROJECT NO: 500392035

TITLE: Battery Calculations

SHEET: FA-5-1



**DESIGNER of RECORD**

*JAP*  
JOHN PELATA

NICET III FIRE ALARM SYSTEMS

CERT # 117231  
EXPIRE DATE: 11-23-2023



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

Building	Planning
Engineering	Public Works
Fire	Traffic

**PIERCE COLLEGE  
STEM BUILDING**  
1601 39th Avenue SE  
Puyallup, WA 98374

REV #	DESCRIPTION	DATE	BY
1	ISSUED FOR PERMIT	12/28/2022	APL
2	RISER CORRECTION	07/21/2023	JAP
3	Description	date	By
4	Description	date	By
5	Description	date	By
6	Description	date	By

SCALE: **As Shown**

PREPARED BY: **APL**

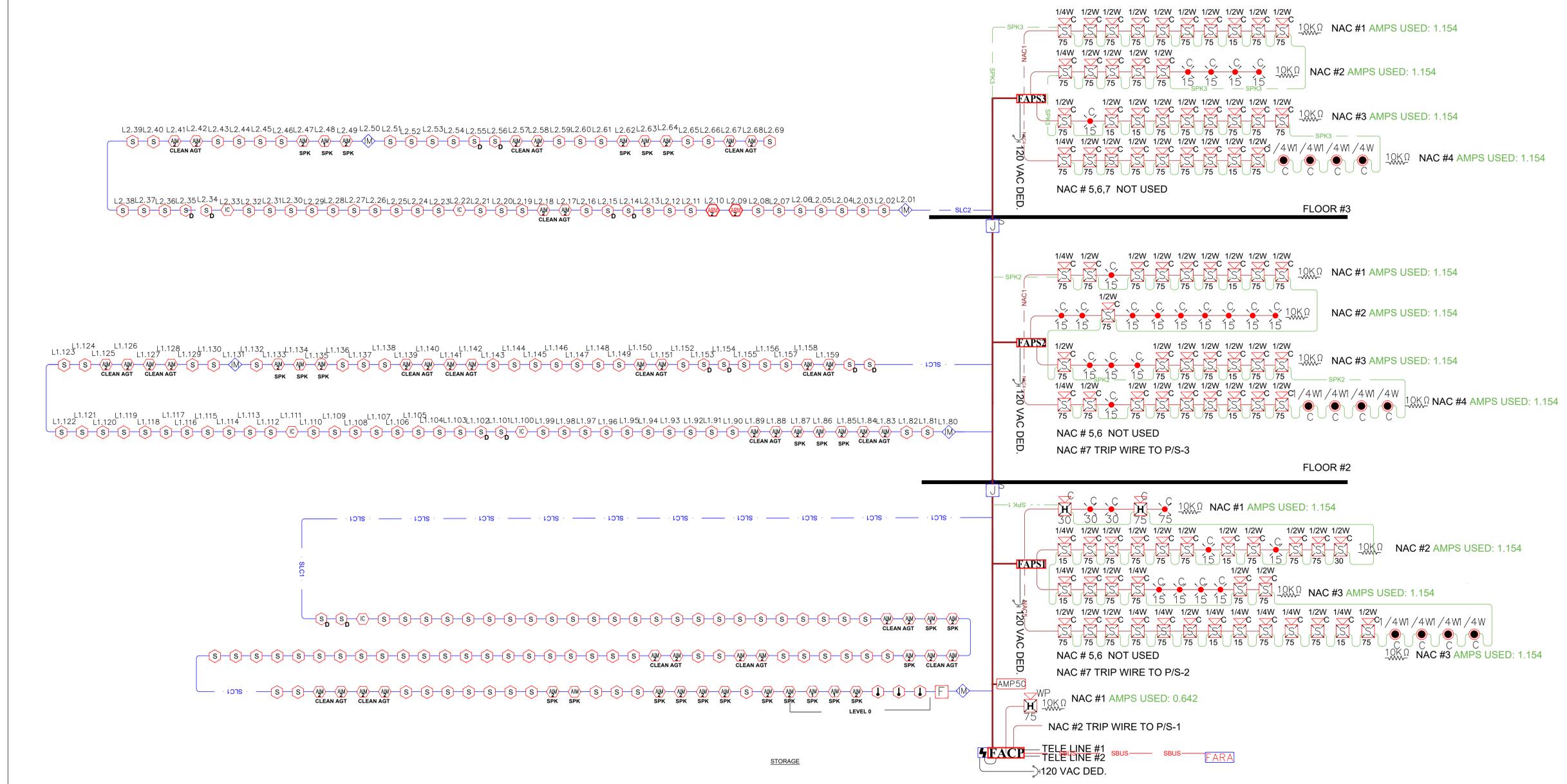
CHECKED BY: **RM**

DATE: **01/30/2023**

PROJECT NO: **281716084**

TITLE: **FA-0-RISER - FA-2-1**

SHEET: **FA-2-1**



01 Schematic Riser Diagram  
Scale: NTS