

CODE ANALYSIS

BUILDING INFORMATION:

- A) OCCUPANCY CLASSIFICATION(S): B
- B) OCCUPANCY LOAD(S): 83 OCC
- C) SPRINKLERS: YES
- D) CONSTRUCTION TYPE: IIB
- E) BUILDING HEIGHT: 1 STORY
- F) PROJECT SQUARE FOOTAGE: ~6,146 S.F.
- G) APPLICABLE CODES:
2021 INTERNATIONAL FIRE CODE
2019 NFPA 72
2021 NEC
STATE AND LOCAL MARSHAL REGULATIONS
- H) CIRCUIT CLASSIFICATION: POWER LIMITED
- I) PARCEL NUMBER: 6021010051

**JD SPORTS
SOUTH HILL MALL #1315
3500 SOUTH MERIDIAN, SPACE #530
PUYALLUP, WA 98373
FIRE ALARM TENANT IMPROVEMENT DRAWINGS**



JD SPORTS - SOUTH HILL MALL
3500 SOUTH MERIDIAN,
530 # PUYALLUP, WA 98373

| AC Branch Current | | | | |
|--|--------------------------------|-------------------|----------------|----------------------|
| AC Branch Current: | 2.08 Amps @ 120V | | | |
| Maximum NAC Output | | | | |
| Panel Max: | 6.50 Amps | | | |
| Circuit Max: | 3.00 Amps | | | |
| Regulated Load in Standby | | | | |
| Device Type | Model | Number of Devices | Current (Amps) | Total Current (Amps) |
| TOTAL STANDBY LOAD 0.000000 | | | | |
| Regulated Load in ALARM | | | | |
| Device Type | Model | Number of Devices | Current (Amps) | Total Current (Amps) |
| FPS1 Additional Load.1 (See Voltage Drop Calculations) 1.087000 = 1.087000 | | | | |
| TOTAL ALARM LOAD 1.087000 | | | | |
| Battery Requirements | | | | |
| Standby Load | Required Standby Time in Hours | | | |
| Current (Amps) | 0.000000 X | 24.00000 | = | 0.000000 |
| Alarm Load | Required Alarm Time in Hours | | | |
| Current (Amps) | 1.087000 X | 0.250000 | = | 0.271750 |
| Total Ampere Hours (before derating factor) | | | | 0.271750 |
| Derating Factor | X | | | 1.2 |
| TOTAL AMPERE HOURS REQUIRED = 0.326100 | | | | |
| BATTERIES TO BE PROVIDED (2 - 12v) FIELD VERIFY | | | | |

NOTE: THE ABOVE BATTERY CALCULATION IS A COMBINED TOTAL OF THE ADDITIONAL LOADS THAT WILL BE ADDED FROM THE SCOPE OF THIS PROJECT. FIELD VERIFY THE SIZE OF THE EXISTING BATTERIES AND UPSIZE ACCORDINGLY.

| Point to Point NAC Voltage Drop Calculation | | | | | | | | |
|---|----------------|----------------------------|----------------|----------------|--------------------------|-------------------|------------------|--------------|
| Date | 5/3/2024 | | | | | | | |
| Project Name | JD SPORTS TI | | | | | | | |
| Circuit Number | FPS1.1 | | | | | | | |
| Nominal System Voltage | 20.4 volts | | | | | | | |
| Minimum Device Voltage | 16.0 volts | | | | | | | |
| Distance from source to 1st device | 45 feet | | | | | | | |
| Wire Gauge for balance of circuit | 14 | | | | | | | |
| Max Output Current | 3.00 amps | | | | | | | |
| Total Circuit Current | 1.087 amps | | | | | | | |
| Spare Current Capacity | 20% | | | | | | | |
| End of Line Voltage | 19.16 volts | | | | | | | |
| Notification Appliance Manufacturer | System Sensor | | | | | | | |
| Circuit is within limits | | | | | | | | |
| Speaker Identifier | NAC Identifier | Device Model # and Candela | Device Wattage | Device Current | Distance Previous Device | Voltage at Device | Drop From Source | Percent Drop |
| S1.1.1 | N1.1.1 | SPSCL 75 | 1/2 | 0.111 | 45 | 20.10 | 0.300 | 1.47% |
| S1.1.2 | N1.1.2 | SPSCL 15 | 1/4 | 0.041 | 17 | 20.00 | 0.402 | 1.97% |
| S1.1.3 | N1.1.3 | SPSCL 15 | 1/4 | 0.041 | 16 | 19.91 | 0.494 | 2.42% |
| S1.1.4 | N1.1.4 | SPSCL 115 | 1/2 | 0.158 | 44 | 19.66 | 0.736 | 3.61% |
| S1.1.5 | N1.1.5 | SPSCL 115 | 1 | 0.158 | 24 | 19.56 | 0.844 | 4.14% |
| S1.1.6 | N1.1.6 | SPSCL 15 | 1/4 | 0.041 | 31 | 19.45 | 0.954 | 4.68% |
| S1.1.7 | N1.1.7 | SPSCL 30 | 1 | 0.063 | 16 | 19.39 | 1.007 | 4.94% |
| S1.1.8 | N1.1.8 | SPSCL 115 | 1 | 0.158 | 39 | 19.28 | 1.120 | 5.49% |
| S1.1.9 | N1.1.9 | SPSCL 115 | 1 | 0.158 | 37 | 19.21 | 1.192 | 5.84% |
| S1.1.10 | N1.1.10 | SPSCL 115 | 1 | 0.158 | 46 | 19.16 | 1.237 | 6.06% |
| Totals | | | 6 3/4 | 1.087 | 315 | | | |

Notes: Wire resistance is doubled in the calculations for two wires (Positive and Negative). The voltage calculated to the last device must not be lower than the manufactures listed minimum operating voltage (IE: rated operating voltage 16-33 VDC (24 VDC nominal)).

**City of Puyallup
Fire
REVIEWED
FOR
COMPLIANCE**

DDrake
05/28/2024
10:32:42 AM

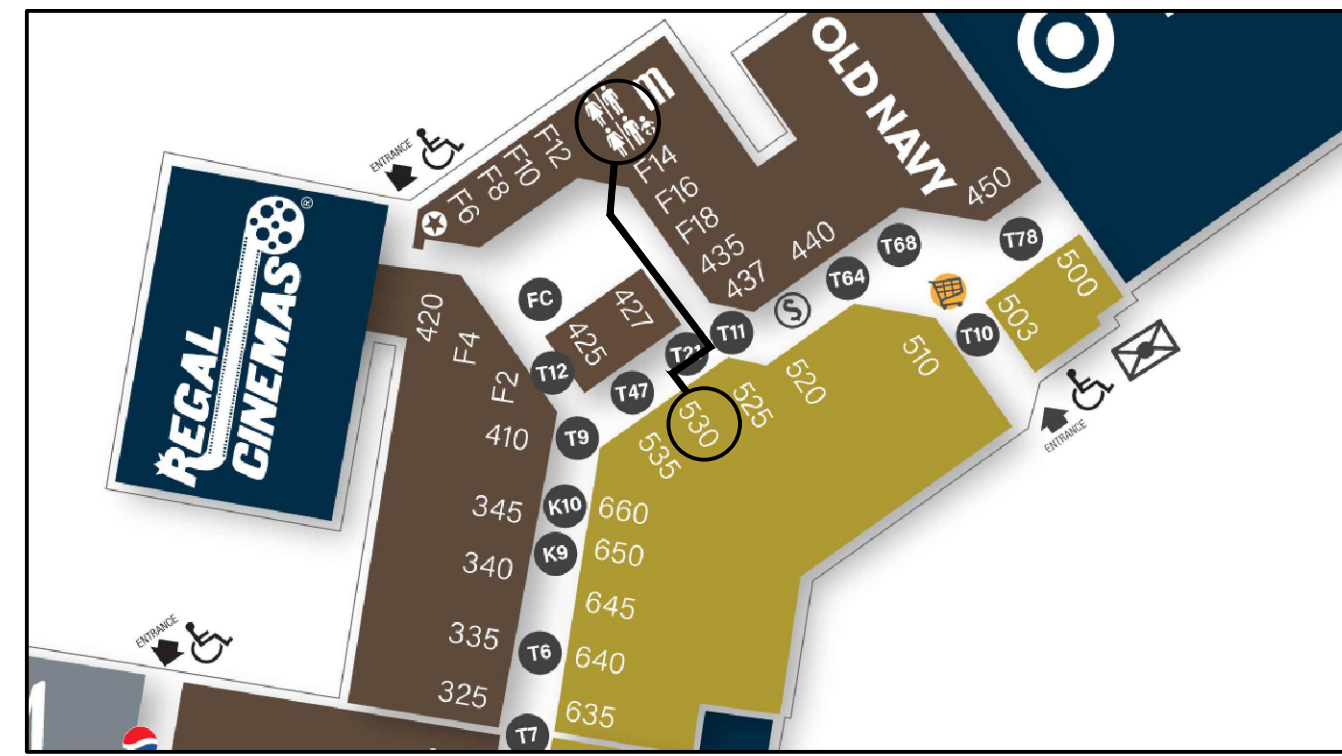


THE APPROVED CONSTRUCTION PLANS AND ALL ENGINEERING MUST BE POSTED ON THE JOB AT ALL INSPECTIONS IN A VISIBLE AND READILY ACCESSIBLE LOCATION.

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 |

| FIRE ALARM SYMBOL LEGEND | | | | | |
|---|----------------------|--------------------------------|----------------------------|--|---------------------|
| NOTE: ALL SYMBOLS MAY NOT BE USED ON THIS PROJECT | | | | | |
| QTY | SYMBOL | DESCRIPTION | MANUF. & PART # | MOUNTING | MOUNT IN |
| E | [FACP] | FIRE ALARM CONTROL PANEL | EXISTING | WALL - TOP @ 66" | EXISTING TO REMAIN |
| E | [FPS] | FIRE ALARM POWER SUPPLY | EXISTING | WALL - TOP @ 66" | EXISTING TO REMAIN |
| E | [E] | FIRE ALARM POWER SUPPLY | EXISTING | WALL - TOP @ 66" | EXISTING TO REMAIN |
| 10 (R) | [S] | CEILING MOUNT SPEAKER / STROBE | SYSTEM SENSOR - SPSCR(W/L) | CEILING | REMOVE AND RELOCATE |
| ABBREVIATION | DESCRIPTION | | ABBREVIATION | DESCRIPTION | |
| E | EXISTING | | AWG | AMERICAN WIRE GAUGE | |
| G | WITH GUARD | | TWP | TWISTED PAIR | |
| P | PENDENT MOUNT | | TWSP | TWISTED SHIELDED PAIR | |
| R | REMOVE AND RELOCATE | | FPLP | FIRE POWER LIMITED PLENUM | |
| S | SOUNDER BASE | | FPLR | FIRE POWER LIMITED RISER | |
| WP | WEATHERPROOF | | | 1-#16/2 TWP | |
| EOL | END OF LINE RESISTOR | | | WIRE TYPE ABBREVIATED | |
| EOLR | END OF LINE RELAY | | | CONDUCTOR COUNT | |
| | | | | WIRE SIZE | |
| | | | | # OF CABLES (IF OMITTED ONLY 1 CABLE NEEDED) | |



CONSTRUCTION CLASSIFICATION (TABLE 601)- TYPE 2B

| BUILDING ELEMENT | FIRE RATING |
|--|-------------|
| STRUCTURAL BEARING WALLS | 0-HR |
| EXTERIOR INTERIOR | 0-HR |
| NONBEARING WALLS AND PARTITIONS EXTERIOR | 0-HR |
| NONBEARING WALLS AND PARTITIONS INTERIOR | N/A |
| FLOOR CONSTRUCTION INCLUDING SUPPORTING BEAMS AND JOISTS | 0-HR |
| ROOF CONSTRUCTION INCLUDING SUPPORTING BEAMS AND JOISTS | 0-HR |

GENERAL NOTES:

- SCOPE OF WORK: THIS PROJECT SHALL INCLUDE. TENANT IMPROVEMENTS TO EXISTING FIRE ALARM SYSTEM AT THE SOUTH HILLS MALL. REMOVE AND RELOCATE EXISTING SPEAKER STROBES IN TENANT SPACE. CONNECT NEWLY RELOCATED SPEAKER STROBES TO EXISTING SPEAKER AND STROBE CIRCUITS LOCATED IN TENANT SPACE. EXISTING FIRE ALARM POWER SUPPLY IN ELECTRICAL ROOM TO REMAIN. EXISTING SMOKE DETECTOR IN ELECTRICAL ROOM TO REMAIN.
- THESE DRAWINGS ARE DIAGRAMMATIC. REFER TO THE ARCHITECTURAL DRAWINGS FOR EXACT DIMENSIONS.
- INSTALLATION SHALL COMPLY WITH NEC, NFPA 72 AND ALL OTHER APPLICABLE CODES AS REQUIRED BY THE LOCAL AUTHORITY HAVING JURISDICTION.
- WIRING DEPICTED ON THESE PLANS IS SCHEMATIC - ACTUAL WIRE LOCATIONS MAY DIFFER FROM THESE PLANS. WIRING SHALL BE PERFORMED AS ACTUAL BUILDING CONSTRUCTION CONDITIONS ALLOW AND TO MINIMIZE PENETRATIONS THROUGH AREA SEPARATION WALLS AND FIRE WALLS. THE USE OF A RACEWAY IS PERMITTED AS LONG AS NO 110V OR HIGHER VOLTAGE CABLES ARE IN THE SAME RACEWAY.
- FIRE RATINGS SHALL BE MAINTAINED FOR ALL PENETRATIONS THROUGH FIRE-RATED CONSTRUCTION.
- POWER FOR ALL FIRE ALARM PANELS AND FIRE ALARM POWER SUPPLIES MUST BE PROVIDED BY A DEDICATED AC BRANCH CIRCUIT. THE LOCATION OF THE BRANCH CIRCUIT BREAKER SHALL BE PERMANENTLY IDENTIFIED AT THE CONTROL UNIT, MECHANICALLY PROTECTED, ACCESSIBLE ONLY TO AUTHORIZED PERSONNEL AND SHALL BE RED AND LABELED "FIRE ALARM CIRCUIT CONTROL" IN ACCORDANCE WITH NFPA 72. ELECTRICAL CONTRACTOR SHALL PERFORM LOAD CALCULATIONS TO DETERMINE SIZE OF WIRING AND BREAKERS FOR ALL FIRE ALARM AC BRANCH CIRCUITS BASED ON THE INFORMATION PROVIDED IN THE BATTERY CALCULATIONS FOR THE FIRE ALARM EQUIPMENT.
- POWER-LIMITED AND NONPOWER-LIMITED CIRCUIT WIRING MUST REMAIN SEPARATED IN CABINET. ALL POWER-LIMITED CIRCUIT WIRING MUST REMAIN AT LEAST 0.25" AWAY FROM ANY NONPOWER-LIMITED CIRCUIT WIRING. FURTHERMORE, ALL POWER-LIMITED AND NONPOWER-LIMITED CIRCUIT WIRING MUST ENTER AND EXIT THE CABINET THROUGH DIFFERENT KNOCK OUTS AND/OR SEPARATE CONDUITS.
- WHEN UTILIZING CLASS "A" CIRCUITS, SEPARATE OUTGOING AND RETURN CONDUCTORS OF CLASS "A" CIRCUITS BY A MINIMUM OF 12" WHERE RUN VERTICALLY AND 48" WHERE RUN HORIZONTALLY.
- WHEN UTILIZING SHIELDED CABLE TIE SHIELDS THROUGH AND INSULATE AT EACH JUNCTION BOX. INSULATE AND TAPE BACK AT END.
- ALL FIRE ALARM CABLING SHALL BE ACCEPTABLE TO THE FIRE ALARM EQUIPMENT MANUFACTURER FOR THE INTENDED PURPOSE. CABLES USED IN VERTICAL RUNS SHALL BE TYPE FPLP OR FPLR. CABLE SPLICES OR TERMINATIONS SHALL BE MADE IN LISTED FITTINGS, BOXES, ENCLOSURES, FIRE ALARM DEVICES, OR UTILIZATION EQUIPMENT. WHERE INSTALLED EXPOSED, CABLES SHALL BE ADEQUATELY SUPPORTED AND INSTALLED IN SUCH A WAY THAT MAXIMUM PROTECTION AGAINST PHYSICAL DAMAGE IS AFFORDED BY BUILDING CONSTRUCTION. WHERE LOCATED WITHIN 7 FT OF THE FLOOR, CABLES SHALL BE SECURELY FASTENED IN AN APPROVED MANNER AT INTERVALS OF NOT MORE THAN 18 IN.
- SMOKE DETECTORS SHALL NOT BE INSTALLED UNTIL AFTER CONSTRUCTION CLEAN-UP IS COMPLETED AND FINAL.
- LOCATE SMOKE DETECTORS A MINIMUM OF THREE (3) FEET FROM MECHANICAL DIFFUSERS. WALL-MOUNTED SMOKE DETECTORS SHALL BE LOCATED A MAXIMUM OF 12" FROM CEILING.
- PROVIDE SYNCHRONIZATION OF ALL VISUAL NOTIFICATION APPLIANCE CIRCUITS. PROVIDE ALL REQUIRED SYNC MODULES. PROVIDE A MULTI-SYNC MODE SLAVE CONNECTION BETWEEN ALL SYNC MODULES.
- UPON COMPLETION OF THE FIRE ALARM SYSTEM INSTALLATION AND PROGRAMMING, THE INSTALLING CONTRACTOR SHALL PERFORM FINAL TESTING OF THE ENTIRE SYSTEM, PER ALL APPLICABLE CODES, AND SHALL COORDINATE AND PERFORM A FINAL FIRE ALARM SYSTEM INSPECTION.
- PROVIDE OFF-SITE MONITORING AS REQUIRED BY THE INTERNATIONAL FIRE CODE, SECTION 907.6.6 AND THE LOCAL AUTHORITY HAVING JURISDICTION.
- INSTALLING CONTRACTOR SHALL, PHYSICALLY, LABEL ALL INITIATING DEVICES AND NOTIFICATION APPLIANCE CIRCUIT END OF LINE (WHEN WIRING CLASS "B"). THESE LABELS SHALL BE IN PLACE PRIOR TO START-UP AND TESTING.
- ROOMS CONTAINING CONTROLS FOR AIR-CONDITIONING SYSTEMS, SPRINKLER RISERS AND VALVES OR OTHER FIRE DETECTION, SUPPRESSION OR CONTROL ELEMENTS SHALL BE IDENTIFIED WITH PERMANENTLY MOUNTED SIGNS WITH LETTERING NOT LESS THAN 2 INCHES TALL WITH A PRINCIPAL STROKE OF NOT LESS THAN 3/8 INCH. LETTERS SHALL CONTRAST WITH BACKGROUND.



| REVISION | DESCRIPTION | DATE |
|----------|------------------------------|----------|
| 0 | ISSUED FOR REVIEW & APPROVAL | 5/3/2024 |

FIRE CHIEF EQUIPMENT
14214 NE 21st Street Bellevue, WA. 98007
(425) 641-2127 FAX (425) 562-6662
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**JD SPORTS #1315 - SOUTH HILLS MALL
3500 SOUTH MERIDIAN - SPACE #530
PUYALLUP, WA 98373
FIRE ALARM PLAN**

| | |
|----------|--|
| DRAWN | CORY W. HAWS UNICAD JOB #24294 |
| CHECKED | CORY W. HAWS, SET NICET IV FAS 112381 |
| DATE | 5/3/2024 |
| REVISION | 0 |
| SCALE | 1/8"=1'-0" |

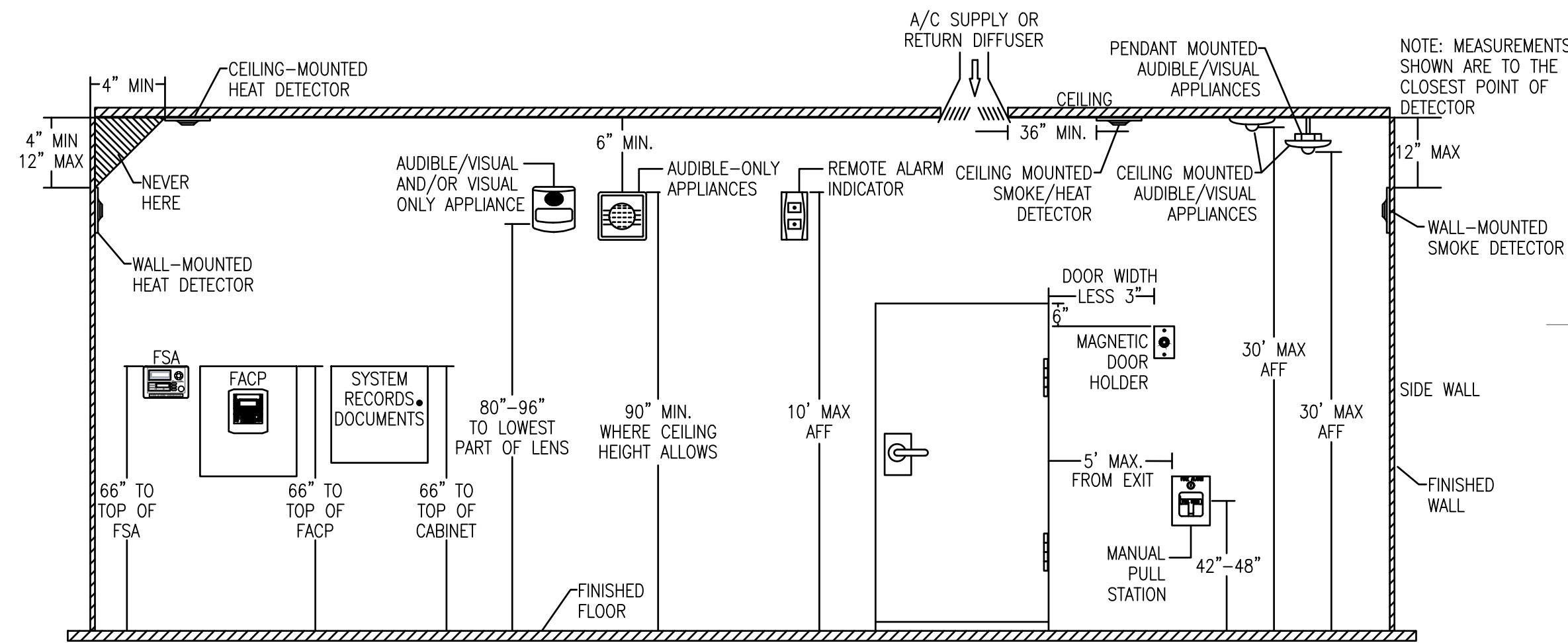
shop drawings created by
5784 W. 4600 St.
Hesper, UT 84315
Office: 801.985.0410
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FA-1

OPERATIONS MATRIX

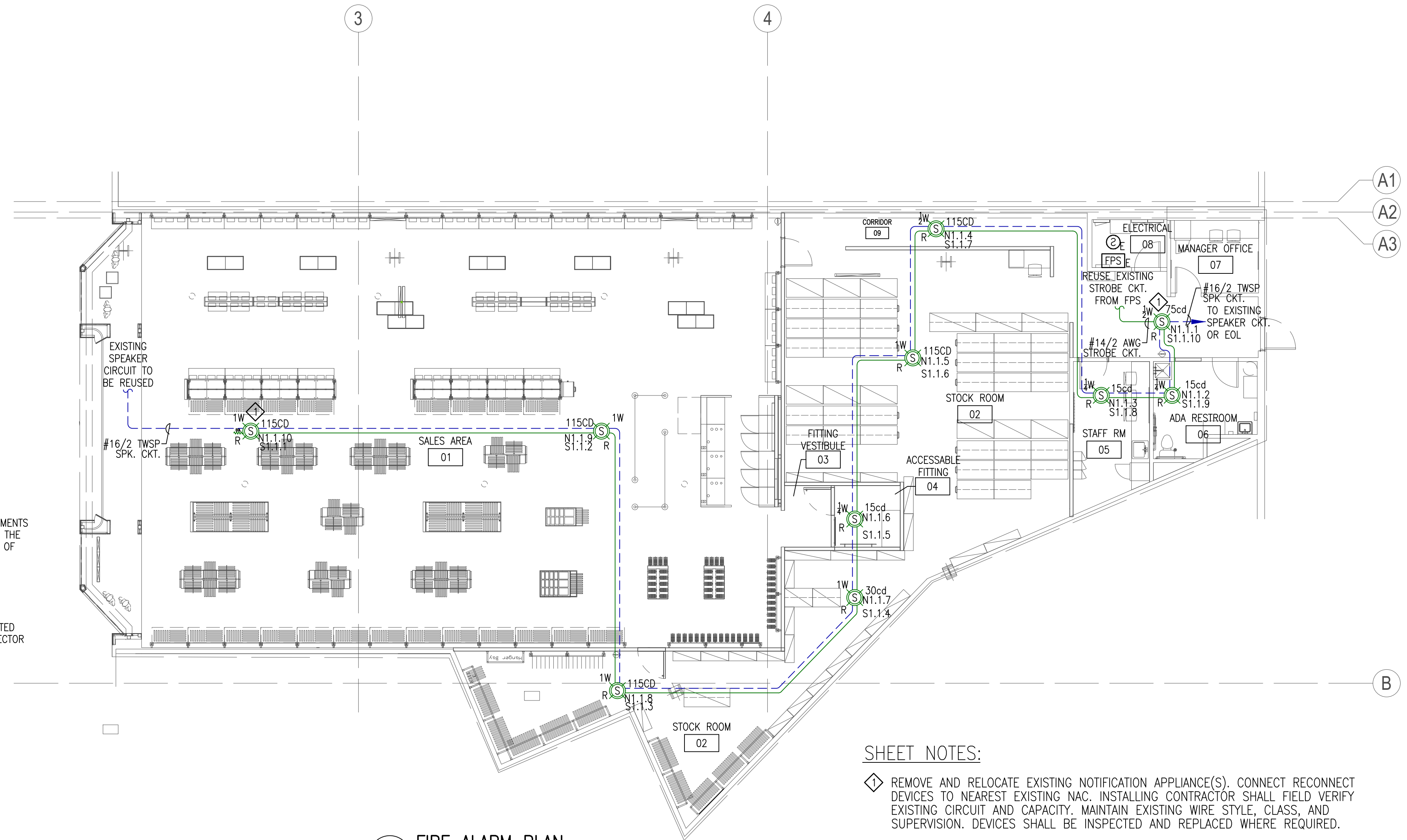
| FIRE ALARM INPUT | FIRE ALARM OUTPUT | | | | | | | | | | | |
|----------------------------|---|----------------------------------|--------------------------------|--|---|------------------------------------|--|---------------------------|-----------------------|-----------------------------|-------------------------|----------------------------------|
| | DISPLAY DESCRIPTIVE TEXT AT FACP AND/OR ANNUNCIATOR | ACTIVATE ALARM INDICATOR AT FACP | ACTIVATE AUDIBLE ALARM AT FACP | ACTIVATE SUPERVISORY INDICATOR AT FACP | ACTIVATE AUDIBLE SUPERVISORY SIGNAL AT FACP | ACTIVATE TROUBLE INDICATOR AT FACP | ACTIVATE AUDIBLE TROUBLE INDICATOR AT FACP | TRANSMIT WATERFLOW SIGNAL | TRANSMIT ALARM SIGNAL | TRANSMIT SUPERVISORY SIGNAL | TRANSMIT TROUBLE SIGNAL | ACTIVATE NOTIFICATION APPLIANCES |
| SMOKE DETECTORS | ● | ● | ● | | | | | ● | | | | ● |
| PULL STATIONS | ● | ● | ● | | | | | ● | | | | ● |
| WATERFLOW SWITCHES | ● | ● | ● | | | | | ● | | | | ● |
| VALVE SUPERVISORY SWITCHES | ● | | | ● | ● | | | | ● | | | ● |
| FIRE ALARM AC POWER FAIL | ● | | | | | ● | ● | | | | | ● |
| FIRE ALARM LOW BATTERY | ● | | | | | ● | ● | | | | | ● |
| OPEN CIRCUIT | ● | | | | | ● | ● | | | | | ● |
| GROUND FAULT | ● | | | | | ● | ● | | | | | ● |
| NAC SHORT CIRCUIT | ● | | | | | ● | ● | | | | | ● |
| LOSS OF AC TO BUILDING | ● | | | | | ● | ● | | | | | ● |

NOTE: NO NEW INITIATING DEVICES ARE BEING INSTALLED AS PART OF THIS SCOPE OF WORK. EXISTING INPUT/OUTPUT OPERATIONS SHALL REMAIN. NOTIFICATION APPLIANCES ARE BEING REMOVED AND RELOCATED AND SHALL MAINTAIN EXISTING OUTPUT MAPPING.



FIRE ALARM DEVICE MOUNTING HEIGHTS

SCALE: NOT TO SCALE

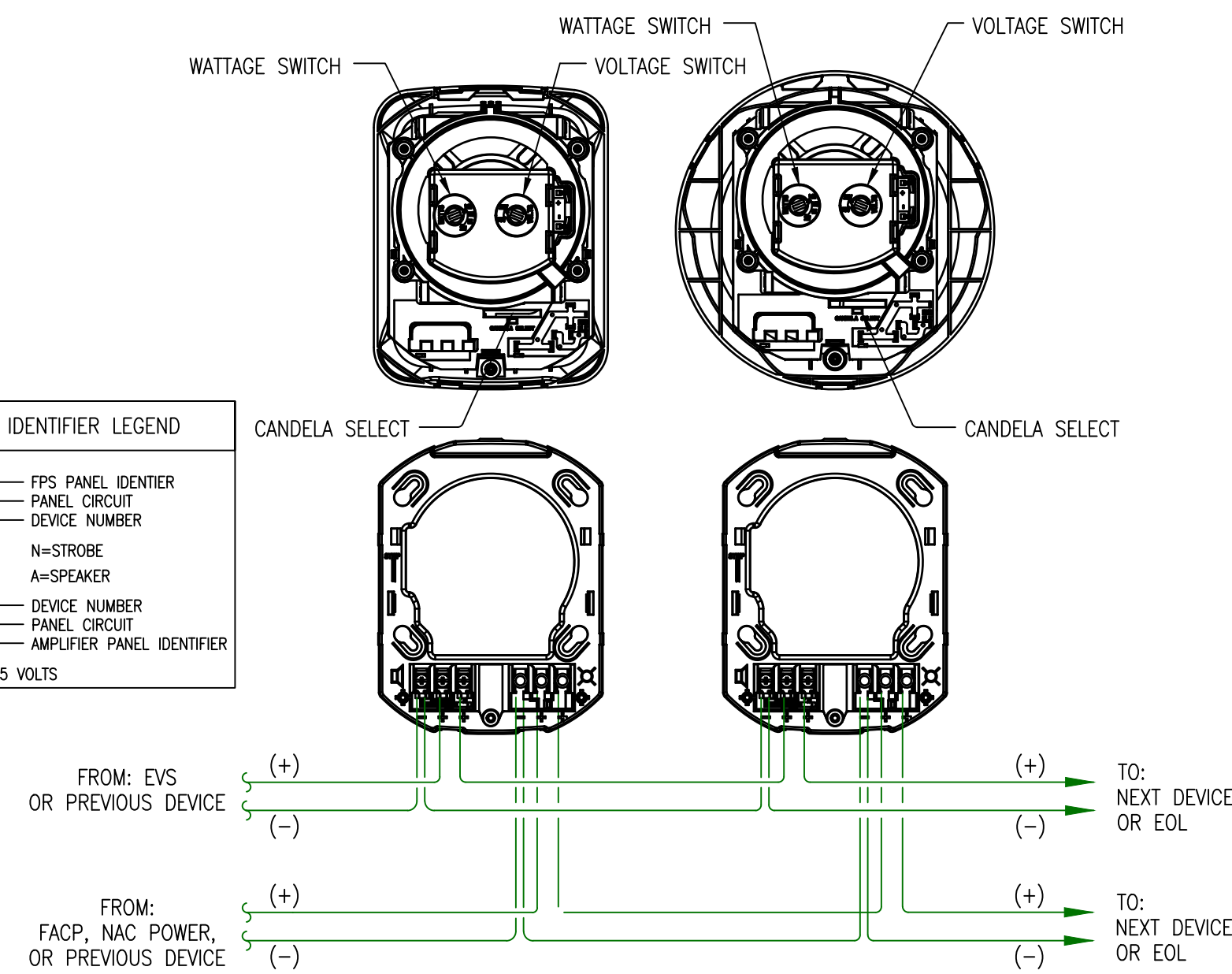
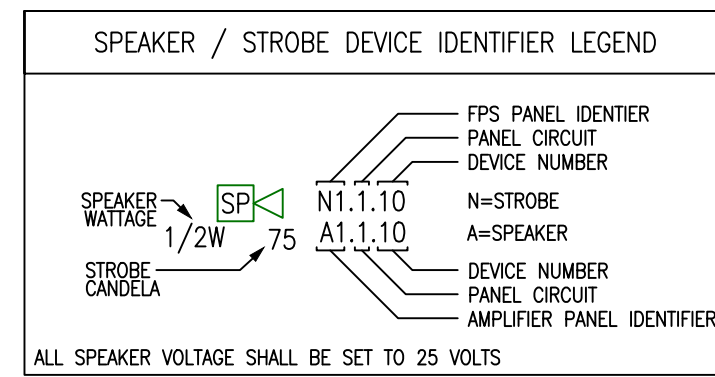


FIRE ALARM PLAN

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

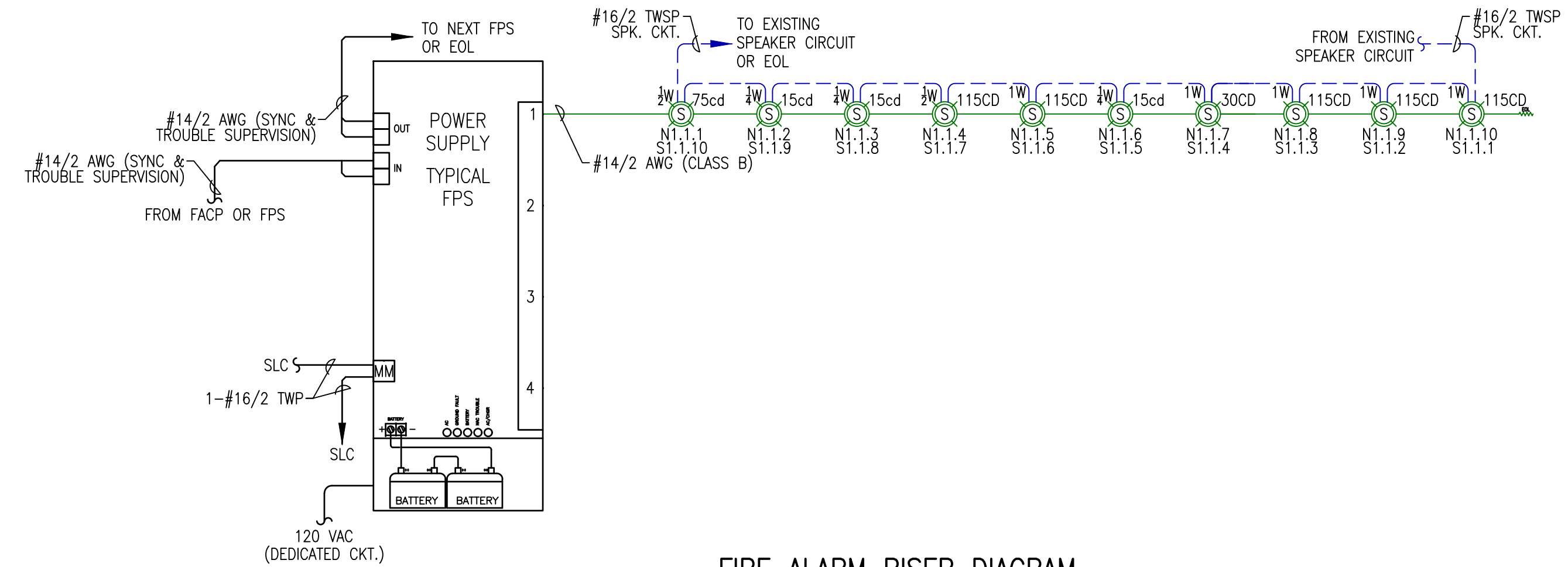
SHEET NOTES:

- ◇ REMOVE AND RELOCATE EXISTING NOTIFICATION APPLIANCE(S). CONNECT RECONNECT DEVICES TO NEAREST EXISTING NAC. INSTALLING CONTRACTOR SHALL FIELD VERIFY EXISTING CIRCUIT AND CAPACITY. MAINTAIN EXISTING WIRE STYLE, CLASS, AND SUPERVISION. DEVICES SHALL BE INSPECTED AND REPLACED WHERE REQUIRED.



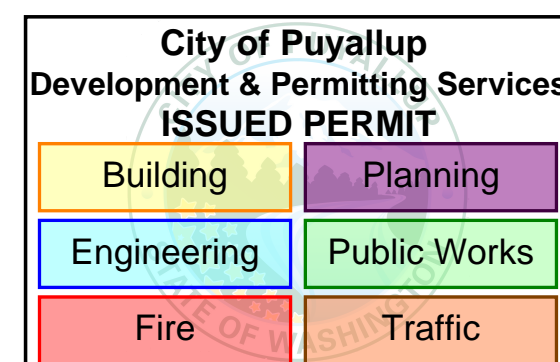
TYPICAL SPEAKER STROBE WIRING DIAGRAM

SCHEMATIC: NO SCALE



FIRE ALARM RISER DIAGRAM

SCHEMATIC: NOT TO SCALE



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3500 SOUTH MERIDIAN - SPACE #530
PUYALLUP, WA 98373
FIRE ALARM PLAN

| | |
|----------|--|
| DRAWN | CORY W. HAWS UNICAD JOB #24294 |
| CHECKED | CORY W. HAWS, SET NICET IV FAS 112381 |
| DATE | 5/3/2024 |
| REVISION | 0 |
| SCALE | 1/8"=1'-0" |

FA-2

| REVISION | DESCRIPTION | DATE |
|----------|------------------------------|----------|
| 0 | ISSUED FOR REVIEW & APPROVAL | 5/3/2024 |