

DUTCH FORK ELEMENTARY SCHOOL

FIRE ALARM REPLACEMENT

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NOTES TO FIRE ALARM WORK

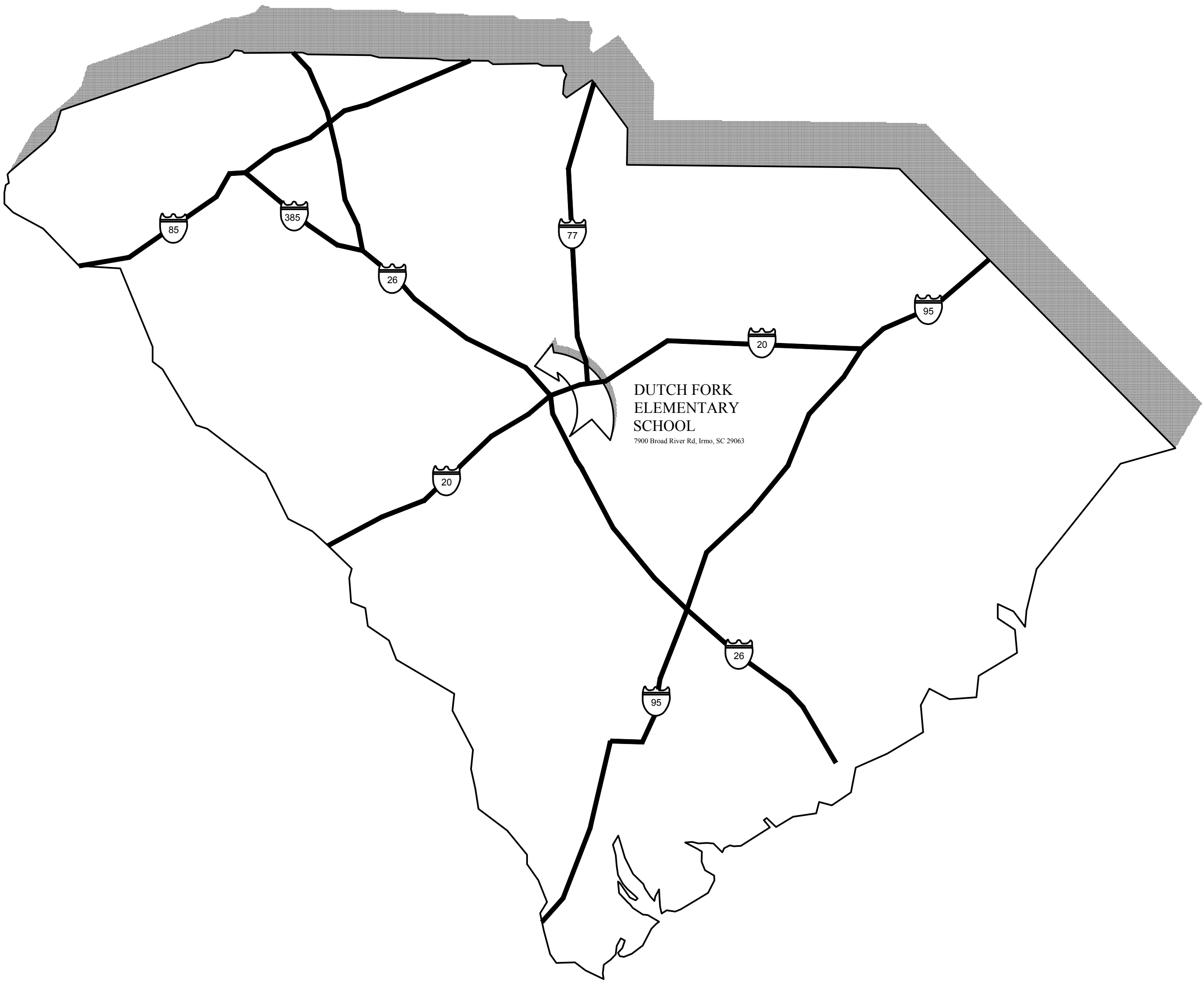
- 1. ALL WORK SHALL BE INSTALLED BY A QUALIFIED AND LICENSED CONTRACTOR. CONTRACTOR SHALL BE EXPERIENCE, LICENSED AND INSURED FOR THE TYPE WORK PERFORMED.**
- 2. ALL WORKMANSHIP SHALL BE IN ACCORDANCE WITH BEST PRACTICE. COMPLY WITH NECA STANDARD OF INSTALLATION.**
- 3. COORDINATE CLOSELY WITH OWNER FOR PHASING OF WORK. ALL WORK SHALL BE PERFORMED WHILE BUILDING IS NOT OCCUPIED.**
- 4. EXISTING FIRE ALARM SYSTEM IS TO REMAIN IN OPERATION UNTIL NEW SYSTEM IS INSPECTED AND ACCEPTED BY OFFICE OF SCHOOL FACILITIES AND FIRE MARSHAL. SEE SPECIFICATIONS.**
- 5. CONTRACTOR IS CAUTIONED THAT THESE PLANS ARE SCHEMATIC IN NATURE. ROUGH ONLY FROM APPROVED FIRE ALARM SHOP DRAWINGS - REFER TO SPECIFICATIONS.**

APPLICABLE CODES

THE FOLLOWING CODES APPLY TO THIS WORK:

INTERNATIONAL BUILDING CODE (IBC), 2021 EDITION
INTERNATIONAL EXISTING BUILDING CODE (IEBC), 2021 EDITION
INTERNATIONAL FIRE CODE (IFC), 2021 EDITION
INTERNATIONAL ENERGY CONSERVATION CODE (IECC), 2009 EDITION
NATIONAL ELECTRIC CODE (NEC-NFPA 70), 2020 EDITION
NATIONAL FIRE ALARM AND SIGNALING CODE (NFPA 72), 2019 EDITION
ACCESSIBLE AND USEABLE BUILDINGS AND FACILITIES (ANSI A117.1), 2017 EDITION

LOCATION MAPS



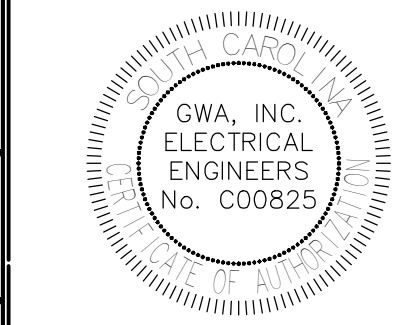
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SEALS:



PROJECT TITLE:
**DUTCH FORK ELEMENTARY
SCHOOL - FIRE ALARM
REPLACEMENT**
7900 Broad River Road
Inno, SC 29063

SHEET TITLE:
**FIRE ALARM
SYMBOLS,
SCHEDULES, AND
DETAILS**

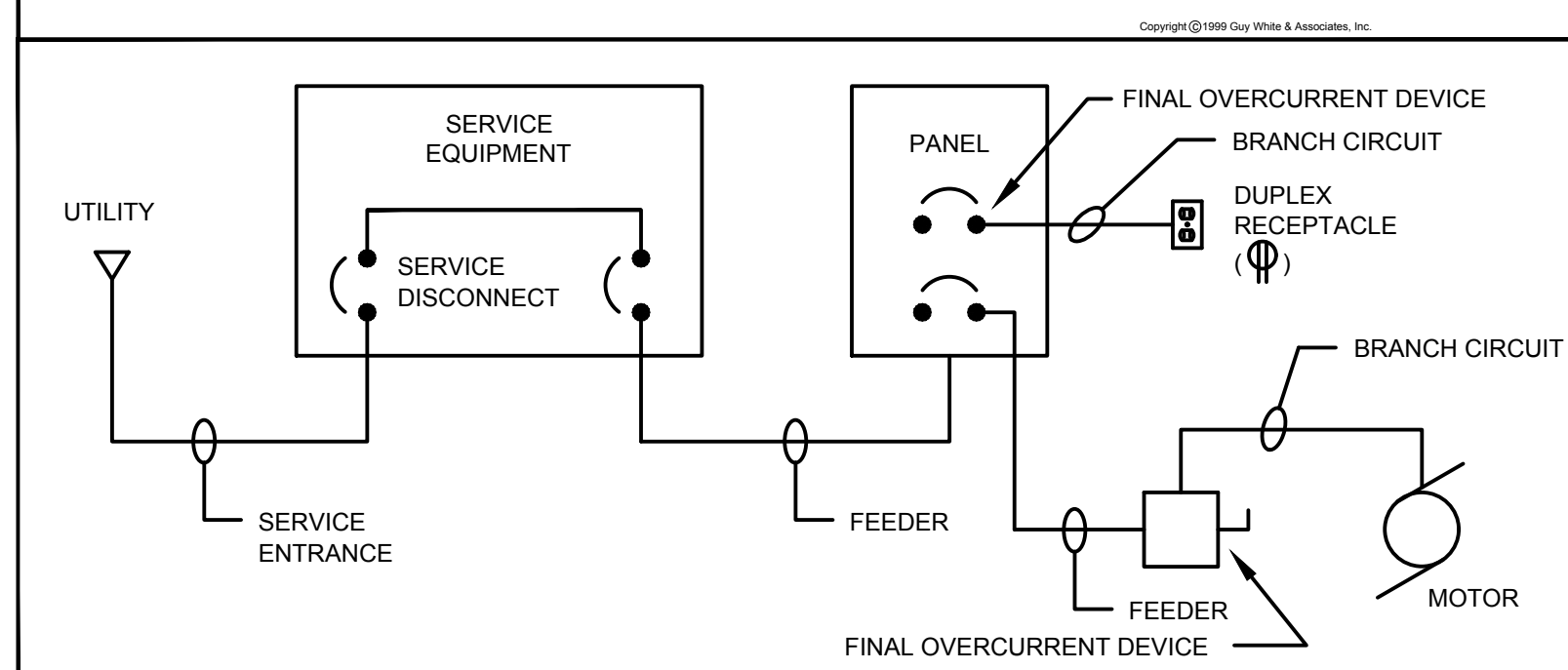
PROJ. ENG.:
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DATE: 09/26/2025
PROJECT NO.
24225
SHEET

E001

CDS FOR FINAL OWNER REVIEW

RACEWAY MATERIAL USE TABLE

APPLICATION	EMT	IMC	GRS	40 PVC	ENT	ACMC CABLE	MFD. WIRING
CONTRACTOR MAY USE ANY MATERIAL MARKED (●) FOR APPLICATION LISTED. IF MATERIAL IS NOT MARKED FOR AN APPLICATION, IT SHALL NOT BE USED FOR THAT APPLICATION.							
CONCEALED ABOVE CEILING	●	●	●				
CONCEALED IN WALLS	●	●	●				
EXPOSED FROM FLOOR TO 7'-0" A.F.F. (INTERIOR)		●	●				
EXPOSED FROM 7'-0" A.F.F. AND ABOVE (INTERIOR)	●	●	●				
IN OR UNDER CONCRETE FLOORS							
OUTDOORS - BELOW GRADE							
OUTDOORS - EXPOSED							
STUB-UPS BELOW PANELS & ENCLOSURES							
FEEDER CONDUITS							
SERVICE ENTRANCE							
(1) WITH BITUMINOUS COATING. SEE SPEC.							
(2) FIRE ALARM RACEWAYS SHALL BE RED. SEE SPEC.							



ABBREVIATIONS

THE FOLLOWING STANDARD ABBREVIATIONS ARE USED IN THESE PLANS AND SPECIFICATIONS. CONTRACTOR IS CAUTIONED THAT ALL ABBREVIATIONS LISTED MAY NOT BE USED; CONSULT PLANS AND SPECIFICATIONS FOR ABBREVIATIONS APPLICABLE TO THIS PROJECT.

A.F.F. ABOVE FINISHED FLOOR
B.F.F. BELOW FINISHED FLOOR
A.F.G. ABOVE FINISHED GRADE
B.F.G. BELOW FINISHED GRADE
U.N.O. UNLESS NOTED OTHERWISE
C.K.T. CIRCUIT
C. CONDUIT
E.C. EMPTY CONDUIT
F.L.X. FLEXIBLE CONDUIT
W.F.L.X. WEATHERPROOF FLEXIBLE CONDUIT

BRANCH CIRCUIT WIRING - HASHMARK CODE

NO SCALE

BRANCH CIRCUITS SHOWN ON THESE DRAWINGS MAY INCLUDE HASHMARKS WHICH INDICATE THE NUMBER OF WIRES TO BE PROVIDED IN A CONDUIT RUN BETWEEN OUTLETS OR JUNCTION BOXES. WIRE SIZES SHALL BE AS TABULATED IN PANELBOARD SCHEDULES UNLESS OTHERWISE INDICATED ON PLAN. SEE SYMBOL SCHEDULE FOR CONDUIT ROUTING NOTATION. HASHMARK CODE IS AS FOLLOWS:

EACH PHASE AND NEUTRAL WIRE IN A CONDUIT RUN IS REPRESENTED BY A HASHMARK. FOR EXAMPLE -

— TWO WIRES (NO HASHMARKS)
— THREE WIRES (3 HASHMARKS)
— FOUR WIRES (4 HASHMARKS)
— FIVE WIRES (5 HASHMARKS)
... AND SO FORTH.

NOTE: GROUND WIRES ARE NOT GENERALLY SHOWN. EXAMINE SPECIFICATIONS AND GENERAL NOTES TO DETERMINE REQUIREMENTS FOR GROUND WIRES AND WHERE SPECIFIED, PROVIDE IN ADDITION TO THE NUMBER OF WIRES INDICATED BY HASHMARK CODE.

NOTE: CONTRACTOR IS CAUTIONED THAT MULTIWIRE (LINE-TO-NEUTRAL) BRANCH CIRCUITS DO NOT INDICATE ALL REQUIRED NEUTRAL CONDUCTORS. PROVIDE SEPARATE NEUTRAL CONDUCTORS (WITH COLORED STRIPE TO MATCH PHASE CONDUCTOR) FOR EACH PHASE CONDUCTOR.

EMPTY CONDUITS ARE NOTED BY "EC" WITH TRADE SIZE.

GENERAL NOTES

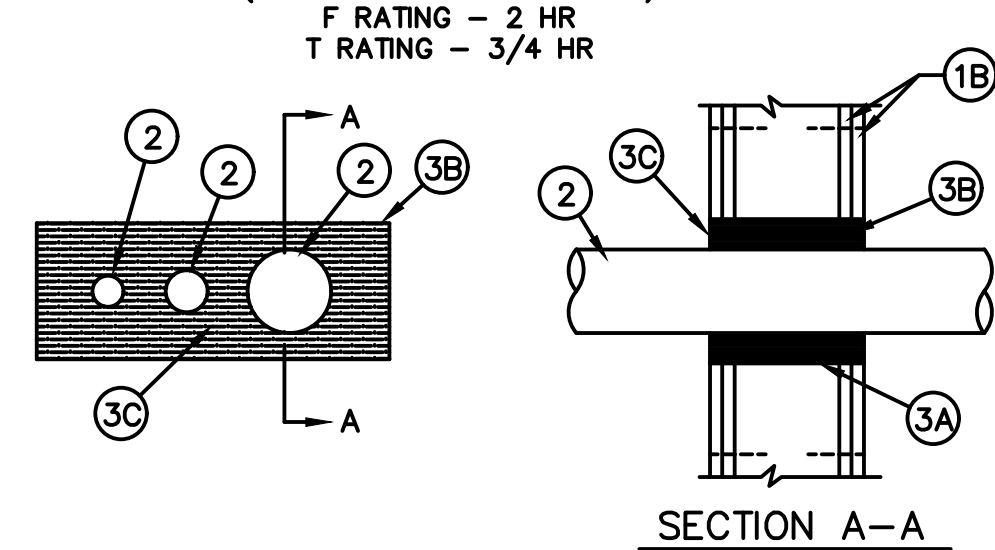
- DO NOT SCALE DRAWINGS UNLESS DIMENSIONS ARE SHOWN. LOCATE OUTLETS AND EQUIPMENT AS OBVIOUSLY INDICATED AND COORDINATE WITH OTHER TRADES TO AVOID CONFLICTS.
- MINIMUM SIZE CONDUCTOR FOR POWER SHALL BE NO. 12 AWG.
- ALL FUSES SHALL BE DUAL-ELEMENT TYPE, "FUSETRON" BY BUSSMAN, OR "ECON" BY ECONOMY.
- BRANCH CIRCUIT SIZES ARE AWG 12-1/2" C. UNLESS OTHERWISE NOTED IN PANELBOARD SCHEDULES.
- ALL BRANCH CIRCUIT LOADS SHALL BE BALANCED ACROSS PANELBOARD BUSES TO OBTAIN MINIMUM NEUTRAL CURRENT.
- ALL FLEXIBLE CONDUIT SHALL CONTAIN A GREEN WIRE BONDED TO RIGID RACEWAY, BOX OR FIXTURE AT EACH END OF FLEX. SIZE GROUND WIRE PER N.E.C. TABLE 250-122.
- ALL ELECTRICAL WORK ABOVE CEILINGS UTILIZED AS RETURN AIR PLenums SHALL COMPLY WITH N.E.C. AND LOCAL CODES FOR WIRING USED IN ENVIRONMENTAL AIR.
- PROVIDE PULL CORD IN ALL EMPTY RACEWAYS.
- DO NOT MOUNT FLUSH JUNCTION BOXES BACK TO BACK. STAGGER JUNCTION BOXES TO REDUCE SOUND TRANSMISSION BETWEEN ROOMS.
- CONTRACTOR SHALL MINIMIZE REMOVAL OF STRUCTURAL STEEL FIREPROOFING FOR INSTALLATION OF CONDUIT AND EQUIPMENT HANGERS. OBTAIN APPROVAL OF GENERAL CONTRACTOR PRIOR TO REMOVAL.

ELECTRICAL SYMBOLS

TRANSFORMER	FIRE ALARM SPEAKER/STROBE (CEILING MOUNTED)
PANELBOARD	FIRE ALARM FULL STATION
SAFETY SWITCH	FIRE ALARM SPEAKER/STROBE (HC DENOTES HIGH CANDELLA)
ENCLOSED, MOLDED CASE CIRCUIT BREAKER	FIRE ALARM STROBE (VISUAL ONLY) (HC DENOTES HIGH CANDELLA)
MOTOR CONTROLLER OR CONTACTOR	ELECTRIC MOTOR
FLUSH JUNCTION BOX CEILING ()	CONDUIT STUB
PULL BOX OR JUNCTION BOX IN FLOOR	EXISTING; TO REMAIN
	EXISTING; BEING RELOCATED
	EXISTING; NEW LOCATION
	CONNECTION TO EXISTING CIRCUIT
	DUCT SMOKE DETECTOR WITH SAMPLING TUBE
	DOOR HOLD-OPEN DEVICE
	BRANCH CIRCUIT RACEWAY - CONCEALED IN WALL OR CEILING
	BRANCH CIRCUIT RACEWAY - CONCEALED IN FLOOR OR UNDERGROUND
	BRANCH CIRCUIT RACEWAY - EXPOSED

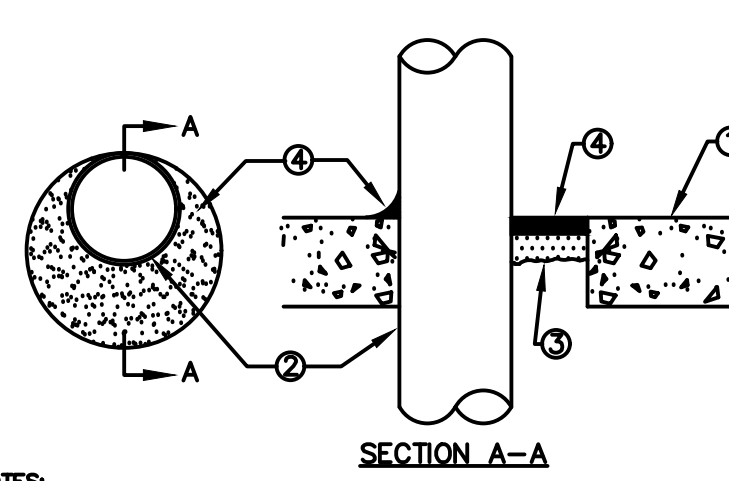
NOTE: ALL DEVICES SHOWN ON THIS SCHEDULE ARE SYMBOLIC ONLY. SEE ELECTRICAL SPECIFICATIONS FOR EXACT DEVICE REQUIREMENTS AND PERFORMANCE CHARACTERISTICS.

SYSTEM NO. WL1014 (FORMERLY SYSTEM NO. 259)



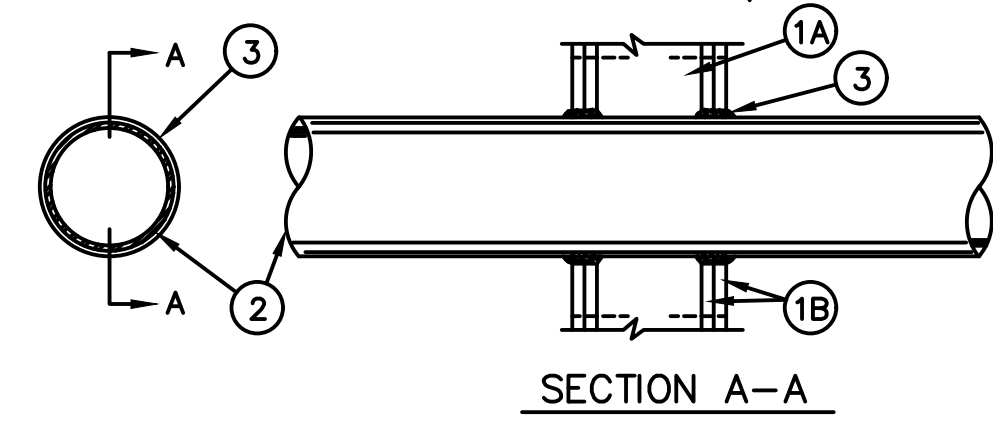
SYSTEM NO. C-AJ-1001

F RATING - 3 HR
T RATING - 0 HR
W RATING - CLASS 1 (SEE ITEM 4)



SYSTEM NO. W-L-1001

F RATINGS - 1, 2, 3 AND 4 HR (SEE ITEMS 2 AND 3)
T RATINGS - 0, 1, 2, 3 AND 4 HR (SEE ITEM 3)
L RATING AT AMBIENT - LESS THAN 1 CFM/SF FT
L RATING AT 400 F - LESS THAN 1 CFM/SQ FT



- WALL ASSEMBLY - THE FIRE RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES WALL AND PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION:
 - STUDS - WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM. 2 BY 4 IN. LUMBER SPACED 16 IN. OC. STEEL STUDS TO BE MIN. 2-1/2 IN. WIDE AND SPACED MAX. 24 IN. OC.
 - WALLBOARD GYPSUM - TWO LAYERS OF NOM. 5/8 IN. THICK GYPSUM WALLBOARD, AS SPECIFIED IN THE INDIVIDUAL WALL AND PARTITION DESIGN. MAX. AREA OF OPENING IS 78 SQ. IN. WITH MAX. DIMENSION OF 12 IN.
- METALLIC PIPE - NOM. 3-1/2 IN. DIAM. (OR SMALLER) SCHEDULE 5 (OR HEAVIER) STEEL PIPE, CONDUIT OR STEEL ELECTRICAL METALLIC TUBING. THE SPACE BETWEEN PIPES, CONDUITS, OR TUBING SHALL MIN. BE 1 IN. TO MAX. 2-5/8" THE SPACE BETWEEN PIPES, CONDUITS OR TUBING AND PERIPHERY OF OPENING SHALL BE MIN. 1 IN. TO MAX. 2-5/8". PIPE, CONDUIT OR TUBING TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY.
- FIRESTOP SYSTEM - THE FIRESTOP SYSTEM SHALL CONSIST OF THE FOLLOWING:
 - STEEL WIRE MESH - NO. 6 STEEL WIRE MESH HAVING A MIN. 1 IN. LAP ALONG THE LONGITUDINAL SEAM. LENGTH OF STEEL WIRE MESH TO BE 4 IN., CENTERED AND FORMED TO FIT PERIPHERY OF THROUGH OPENING.
 - FILL, VOID OR CAVITY MATERIAL* - PILLOW-LIKE MATERIAL TIGHTLY PACKED INTO THE ANNULAR SPACE BETWEEN THE PIPES AND PERIMETER OF THROUGH OPENING. PRIOR TO INSTALLATION, THE PILLOW-LIKE MATERIAL SHALL BE PATTED DOWN BY HAND OR WITH A FLAT BOARD TO EVENLY DISTRIBUTE CONTENTS. THE PILLOW-LIKE MATERIAL SHALL BE INSTALLED HORIZONTALLY SUCH THAT IT IS FLUSH WITH THE SURFACES OF THE WALL. METALINES, INC. - METACAULK 910 RETROFIT BAGS. RETORSEAL CORP. - METACAULK 950.
 - FILL, VOID OR CAVITY MATERIAL* - CAULK - APPLIED TO ALL RETROFIT BAG JOINTS, VOIDS, PERIMETER OF PIPES, AND PERIMETER OF THROUGH OPENING TO A MIN. DEPTH OF 1/8 IN. THE RETORSEAL CORP. - METACAULK 950.

* BEARING THE UL CLASSIFICATION MARKING.

NOTES:

- FLOOR OR WALL ASSEMBLY - MIN. 4-1/2" THICK LIGHTWEIGHT OR NORMAL WEIGHT (100-150 pcf) CONCRETE. WALL MAY ALSO BE CONSTRUCTED OF ANY UL CLASSIFIED CONG. BLOCKS MAX. DIAMETER OF CIRCULAR THROUGH OPENING IS 22-1/2".
- STEEL SLEEVE - (OPTIONAL, NOT SHOWN) - NOM. 12" DIAMETER (OR SMALLER) SCH. 40 PVC (OR HEAVIER) STEEL PIPE SLEEVE CAST INTO CONCRETE FLOOR OR WALL. SLEEVE TO BE FLUSH WITH OR PROJECT MAX. 2" FROM TOP SURFACE OF FLOOR OR FROM BOTH SURFACES OF WALL.
- PIPE OR CONDUIT - NOM. 20" DIAMETER (OR SMALLER) SCH. 10 (OR HEAVIER) STEEL PIPE, NOM. 4" DIAMETER (OR SMALLER) RIGID STEEL CONDUIT OR TYPE L (OR HEAVIER) COPPER TUBE, NOM. 4" DIAMETER (OR SMALLER) CAST IRON PIPE OR STEEL EMT. MAX. ONE PIPE OR CONDUIT PER THROUGH OPENING. MAX. ANNULAR SPACE BETWEEN PIPE OR CONDUIT AND EDGE OF THROUGH OPENING NOT TO EXCEED 2-1/2". MIN. ANNULAR SPACE BETWEEN PIPE OR CONDUIT AND EDGE OF THROUGH OPENING IS 200 INCHES (POINT CONTACT). PIPE OR CONDUIT TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF FLOOR OR WALL ASSEMBLY.
- PACKING MATERIAL - POLYETHYLENE BACKER ROD OR NOM. 1" THICKNESS OF TIGHTLY PACKED CERAMIC (ALUMINA SILICA) FIBER BLANKET, MINERAL WOOL BATT OR GLASS FIBER INSULATION MATERIAL USED AS A PERMANENT FORM. PACKING MATERIAL TO BE RECESSED FROM TOP SURFACE OF FLOOR OR FROM BOTH SURFACES OF WALL AS REQUIRED TO ACCOMMODATE THE REQUIRED THICKNESS OF CAULK FILL MATERIAL (ITEM 4). AS AN ALTERNATE WHEN MAX. PIPE SIZE IS 10" DIAMETER AND WHEN MAX. ANNULAR SPACE IS 1", A MIN. 1" THICKNESS OF TIGHTLY PACKED CERAMIC FIBER BLANKET OR MINERAL WOOL BATT PACKING MATERIAL MAY BE RECESSED MIN. 1/2" FROM BOTTOM SURFACE OF FLOOR OR FROM EITHER SIDE OF WALL.
- FILL, VOID OR CAVITY MATERIALS - CAULK - APPLIED TO FILL THE ANNULAR SPACE TO THE MIN. THICKNESS SHOWN IN THE FOLLOWING TABLE:

MAX. PIPE DIAM., INCHES	MAX. ANNULAR SPACE INCHES	PACKING MATERIAL TYPE (a)	MIN. CAULK THICKNESS INCHES
10	1	BR, CF, OF OR MW	1/2 (b)
10	1	CF OR MW	1/2 (c)
20	2-1/2	BR, CF, OF OR MW	1 (b)

(a) BR = POLYETHYLENE BACKER ROD.
CF = CERAMIC FIBER BLANKET.
OF = GLASS FIBER INSULATION.
MW = MINERAL WOOL BATT.

(b) CAULK INSTALLED FLUSH WITH TOP SURFACE OF FLOOR OR BOTH SURFACES OF WALL.
(c) CAULK INSTALLED FLUSH WITH BOTTOM SURFACE OF FLOOR OR ONE SURFACE OF WALL (CAULK = 3M COMPANY - TYPE CP 25WB+ OR FB-3000 WT)

- WALL ASSEMBLY - THE 1, 2, 3 OR 4 HR FIRE RATED GYPSUM WALLBOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER DESCRIBED IN THE INDIVIDUAL U300 OR U400 SERIES WALL OR PARTITION DESIGNS IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES:
 - STUDS - WALL FRAMING MAY CONSIST OF EITHER WOOD STUDS (MAX. 2 H FIRE RATED ASSEMBLIES) OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM. 2 BY 4 IN. LUMBER SPACED 16" OC WITH NOM. 2 BY 4 IN. LUMBER END PLATES AND CROSS BRACES. STEEL STUDS TO BE MIN. 3-5/8 IN. WIDE BY 1-3/8 IN. DEEP CHANNELS SPACED MAX. 24 IN. OC.
 - WALLBOARD GYPSUM - NOM. 1/2 OR 5/8 IN. THICK, 4 FT. WIDE WITH SQUARE OR TAPERED EDGES. THE GYPSUM WALLBOARD TYPE, THICKNESS, NUMBER OF LAYERS, FASTENER TYPES AND SHEET ORIENTATION SHALL BE AS SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES DESIGN IN THE UL FIRE RESISTANCE DIRECTORY. MAX. DIAM. OF OPENING IS 13-1/2 IN.
- PIPE OR CONDUIT - NOM. 12 IN. DIAM. (OR SMALLER) SCHEDULE 10 (OR HEAVIER) STEEL PIPE, NOM. 12 IN. DIAM. (OR SMALLER) SERVICE WEIGHT (OR HEAVIER) CAST IRON SOIL PIPE, NOM. 12 IN. DIAM. (OR SMALLER) CLASS 50 (OR HEAVIER) DUCTILE IRON PRESSURE PIPE, NOM. 6 IN. DIAM. (OR SMALLER) STEEL CONDUIT, NOM. 4 IN. DIAM. (OR SMALLER) STEEL ELECTRICAL METALLIC TUBING, NOM. 6 IN. DIAM. (OR SMALLER) TYPE L (OR HEAVIER) COPPER TUBING OR NOM. 1 IN. DIAM. (OR SMALLER) FLEXIBLE STEEL CONDUIT. WHEN COPPER PIPE IS USED, MAX. F RATING OF FIRESTOP SYSTEM (ITEM 3) IS 2 H. STEEL PIPES OR CONDUITS LARGER THAN NOM. 4 IN. DIAM. MAY ONLY BE USED IN WALLS CONSTRUCTED USING STEEL CHANNEL STUDS. A MAX. OF ONE PIPE OR CONDUIT IS PERMITTED IN THE FIRESTOP SYSTEM. PIPE OR CONDUIT TO BE INSTALLED NEAR CENTER OF STUD CAVITY WIDTH AND TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY.
- FILL VOID OR CAVITY MATERIAL* - CAULK - CAULK FILL MATERIAL INSTALLED TO COMPLETELY FILL ANNULAR SPACE BETWEEN PIPE OR CONDUIT AND GYPSUM WALLBOARD AND WITH A MIN. 1/4 IN. DIAM. BEAD OF CAULK APPLIED TO PERIMETER OF PIPE OR CONDUIT AT ITS EGRESS FROM THE WALL. CAULK INSTALLED SYMMETRICALLY ON BOTH SIDES OF WALL ASSEMBLY. THE HOURLY F RATING OF THE FIRESTOP SYSTEM IS DEPENDENT UPON THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED, AS SHOWN IN THE FOLLOWING TABLE. THE HOURLY T RATING OF THE FIRESTOP SYSTEM IS DEPENDENT UPON THE TYPE OR SIZE OF THE PIPE OR CONDUIT AND THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED, AS TABULATED BELOW:

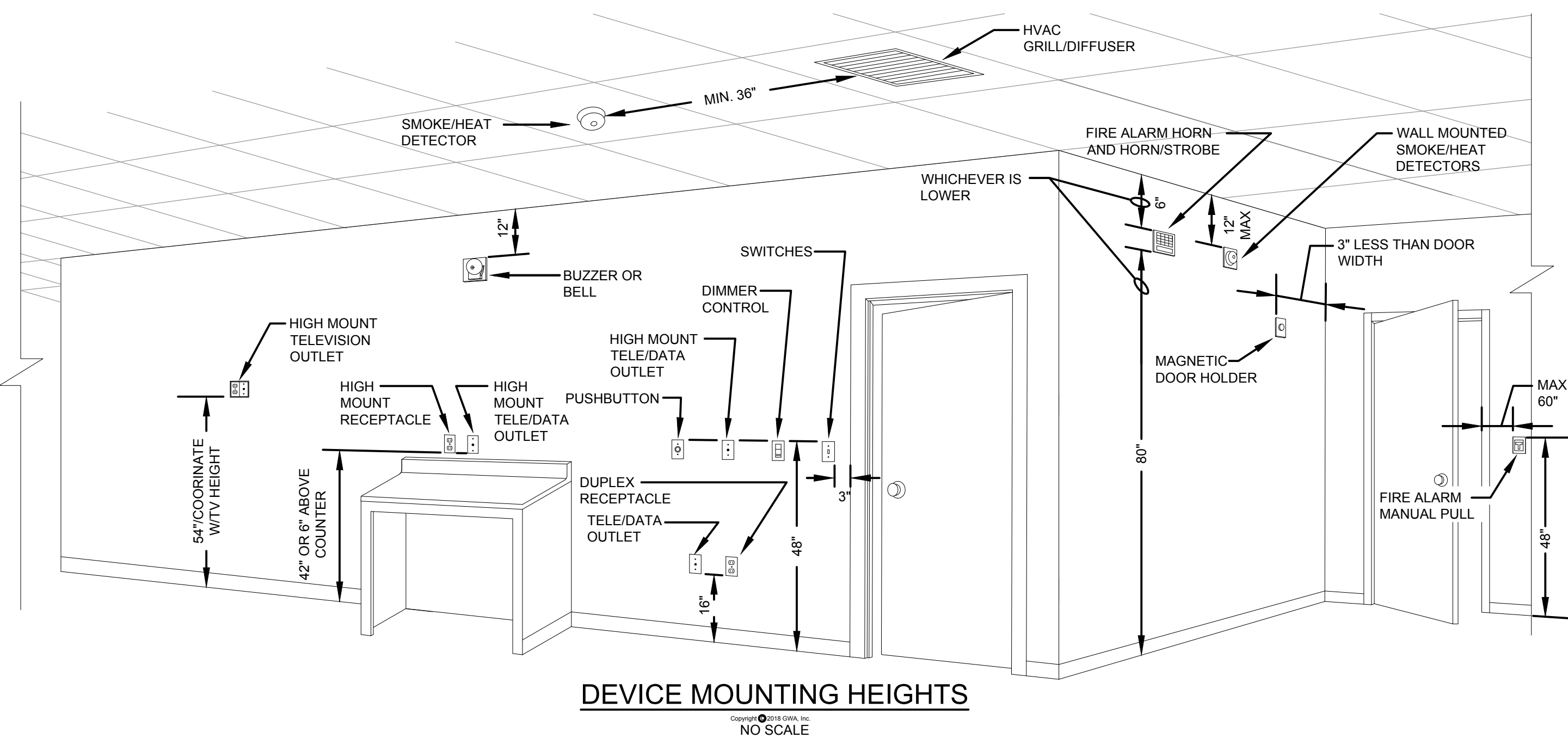
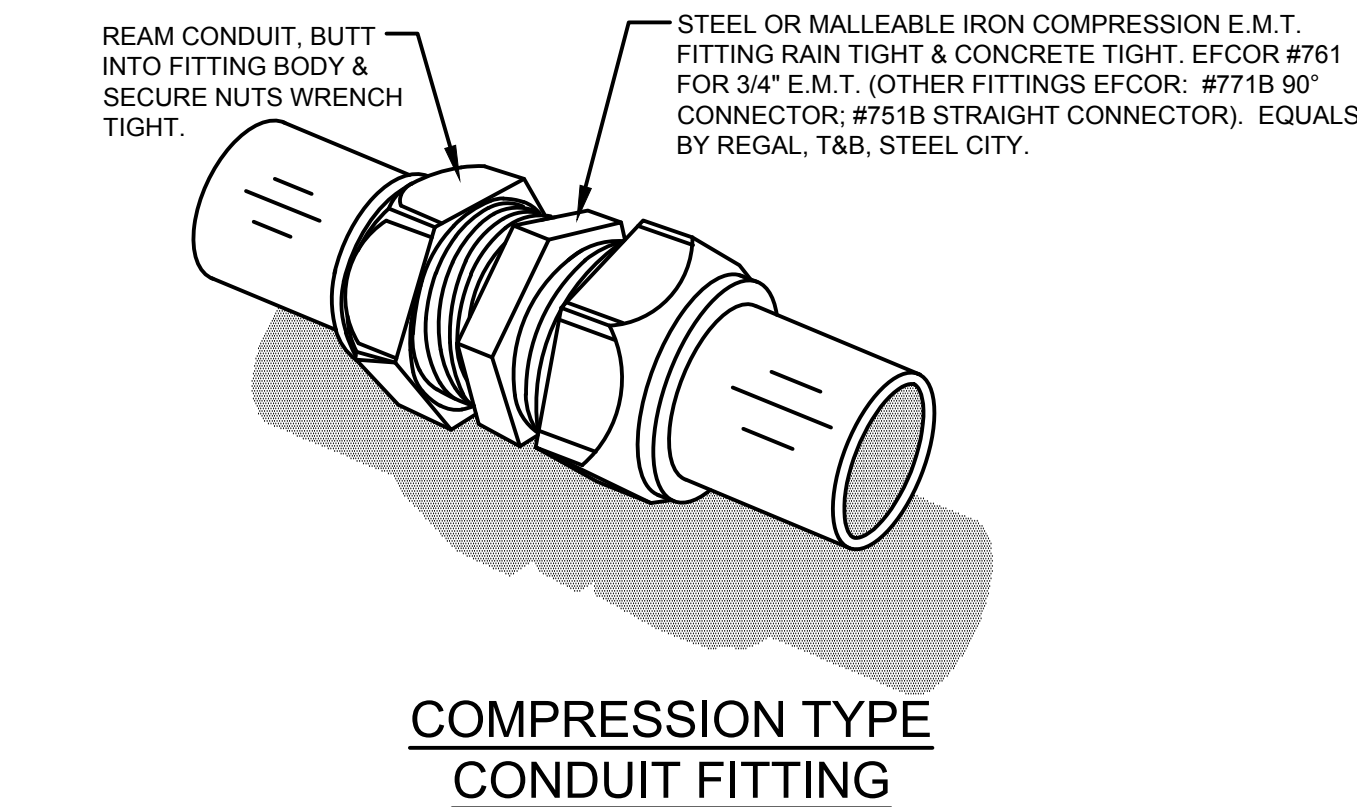
MAX. PIPE OR CONDUIT DIAM., IN.	ANNULAR SPACE IN.	F RATING HR	T RATING HR
1	0 TO 3/16	1 OR 2	0+ 1 OR 2
1	1/4 TO 1/2	3 OR 4	3 OR 4
4	0 TO 1/4	1 OR 2	0
4	0 TO 1-1/4	1 OR 2	0
6	1/4 TO 1/2	3 OR 4	0
12	3/16 TO 3/8	1 OR 2	0

+ WHEN COPPER PIPE IS USED, T RATING IS 0 H.
0 TO 1-1/2 IN. ANNULAR SPACE APPLIES ONLY WHEN TYPE CP-25 WB - CAULK IS USED AND ONLY WHEN THE MIN. THICKNESS OF THE GYPSUM WALLBOARD IS 5/8 IN. FOR 1 HR RATED WALLS AND 1-1/4 IN. FOR 2 HR RATED WALLS.

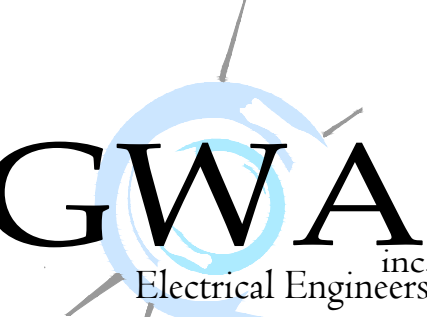
CAULK=3M COMPANY-TYPE CP 25WB+ OR FB-3000WT
* BEARING THE UL CLASSIFICATION MARKING.

NOTES TO THROUGH PENETRATION FIRESTOPPING

- WHERE RACEWAYS PASS THRU FIRE-RATED WALLS, FLOORS OR OTHER PARTITIONS, PROVIDE A UL-LISTED THROUGH PENETRATION SYSTEM WITH RATINGS EQUAL TO THAT OF CONSTRUCTION BEING PENETRATED.
- EACH ASSEMBLY SHALL BE SPECIFIC TO THE PENETRATING DEVICE (E.G. SINGLE CONDUIT, MULTIPLE CONDUITS, CABLE TRAY, ETC.) AND SHALL BE A UL LISTED SYSTEM AS PUBLISHED IN THE UL FIRE RESISTANCE DIRECTORY, LATEST EDITION.
- FIRESTOP SYSTEMS SHALL MEET REQUIREMENTS OF ASTM E-814/UL 1749 TESTED ASSEMBLIES THAT PROVIDE A FIRE RATING EQUAL TO THAT OF CONSTRUCTION BEING PENETRATED.
- FOR THOSE FIRESTOP APPLICATIONS THAT EXIST FOR WHICH NO UL TESTED SYSTEM IS AVAILABLE THROUGH THE MANUFACTURER, A MANUFACTURER'S ENGINEERING JUDGEMENT DERIVED FROM SIMILAR UL SYSTEM DESIGNS OR OTHER TESTS SHALL BE SUBMITTED TO LOCAL AUTHORITY HAVING JURISDICTION FOR THEIR APPROVAL PRIOR TO INSTALLATION. ENGINEERING JUDGEMENT DRAWINGS SHALL FOLLOW REQUIREMENTS SET FORTH BY THE INTERNATIONAL FIRESTOP CONVENTION.
- INSTALLATION SHALL BE IN COMPLIANCE WITH MANUFACTURER'S INSTRUCTION AND IN ACCORDANCE WITH UL FIRE RESISTANCE DIRECTORY FOR EACH SYSTEM UTILIZED.
- FIRESTOP MATERIALS SHALL BE BY 3M COMPANY, HILTI USA, SPECIFIED TECHNOLOGIES INC (STI), METACAULK, TREMCO OR APPROVED EQUAL.
- SUBMIT UL SYSTEM DETAIL AND PRODUCT DATA FOR EACH FIRE STOP COMPONENT UTILIZED, INCLUDING DETAILED DRAWINGS, INSTALLATION INSTRUCTIONS, ASSEMBLY LISTING NUMBER, CERTIFICATED OF CONFORMANCE AND MATERIAL SAFETY DATA SHEETS. MAINTAIN A COPY OF APPROVED SHOP DRAWINGS ON SITE FOR REVIEW BY ENGINEER, THIRD PARTY INSPECTOR AND AHJ.
- COORDINATE WITH OTHER TRADES AND CONTRACT REQUIREMENTS FOR ADDITIONAL FIRESTOPPING REQUIREMENTS. WHERE REQUIRED, ALL FIRESTOP MATERIAL SHALL BE BY SAME MANUFACTURER AND/OR SAME FIRESTOPPING SUB-CONTRACTOR.



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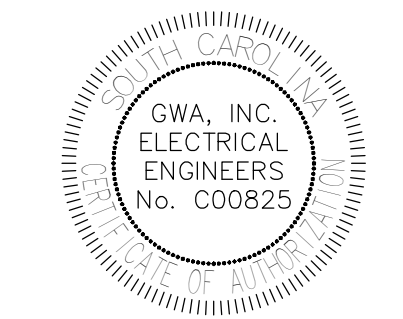
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SEALS:



09/26/2025



PROJECT TITLE:
DUTCH FORK ELEMENTARY
SCHOOL - FIRE ALARM
REPLACEMENT
DETAILS

SHEET TITLE:
FIRE ALARM
SYMBOLS,
SCHEDULES, AND
DETAILS

PROJ. ENG.:
SDO
DRAWN BY:
AS
CHECKED BY:
SDO

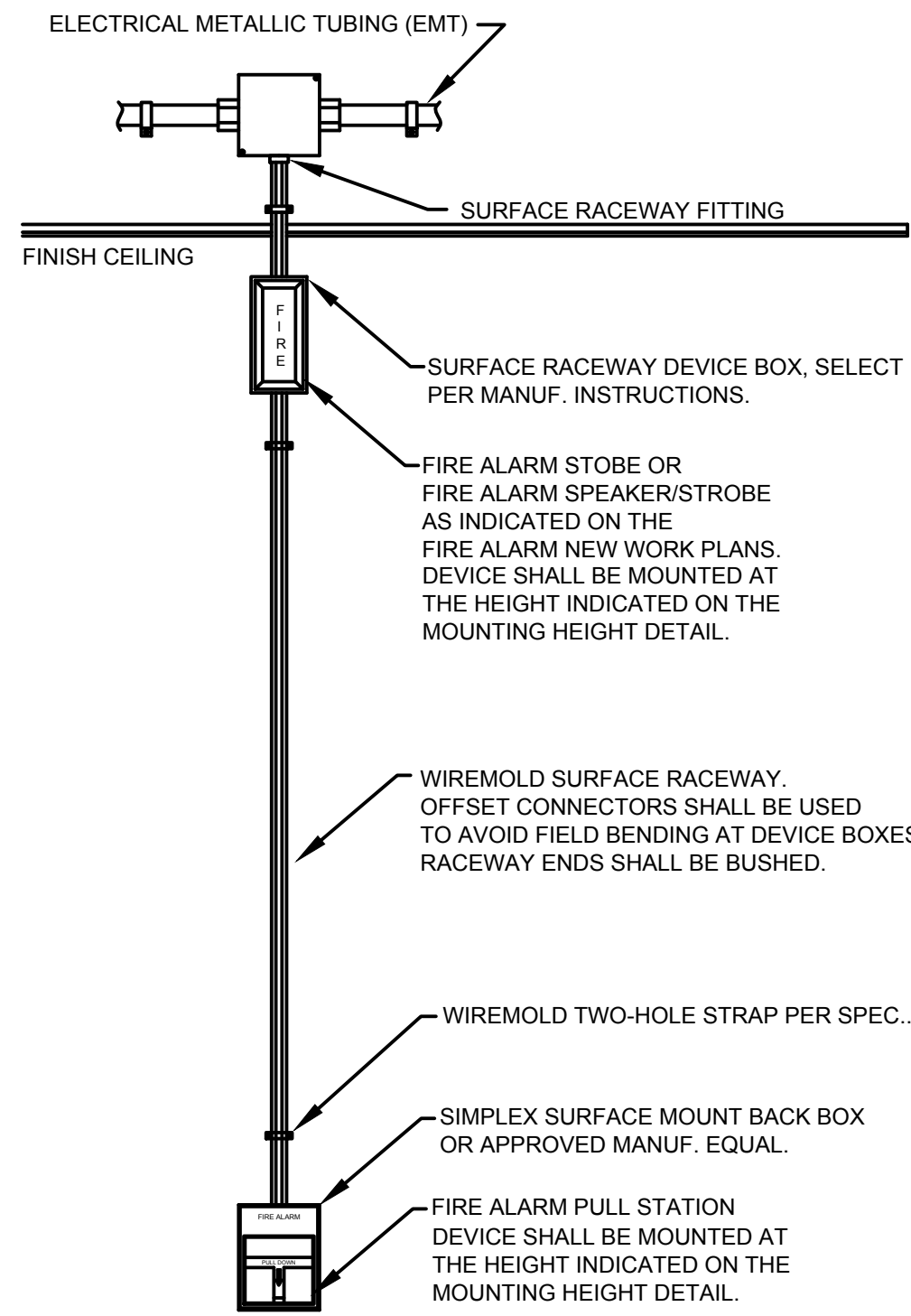
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PROJECT NO.
24225

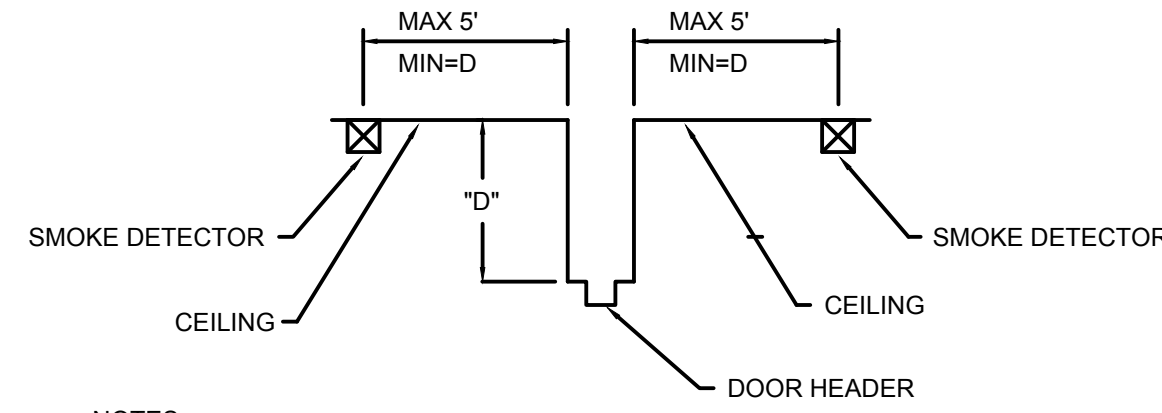
SHEET

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SDS FOR FINAL OWNER REVIEW

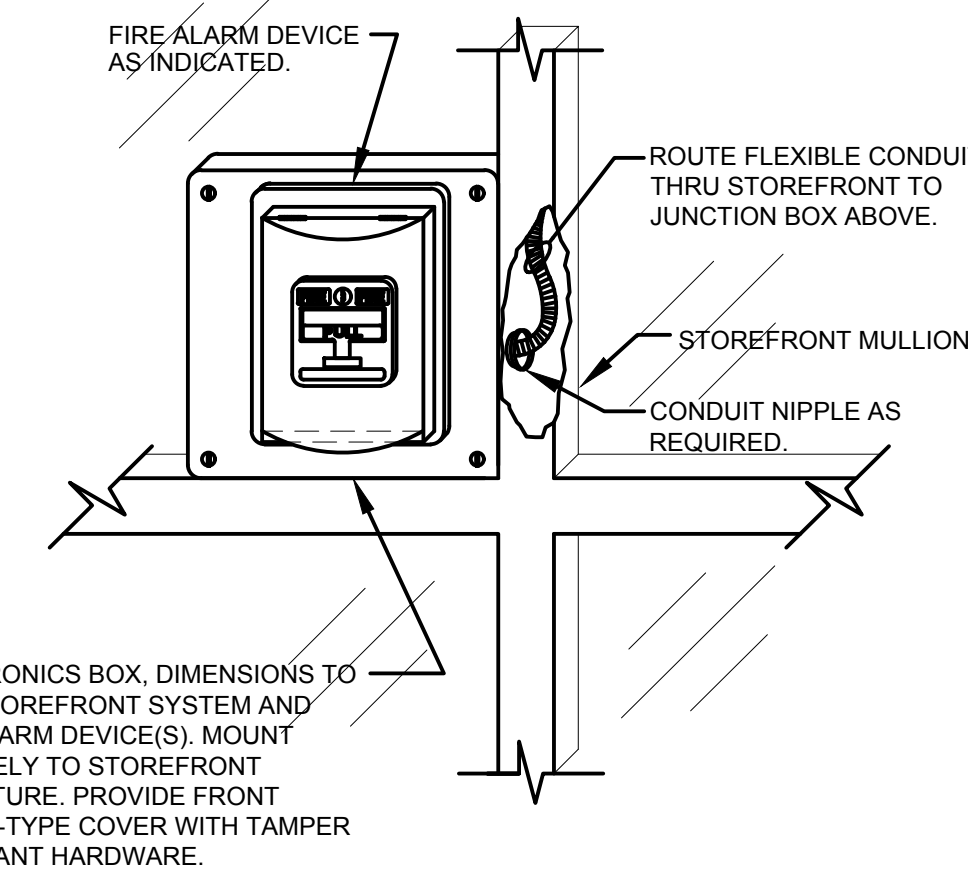


SURFACE MOUNTED DEVICE DETAIL
NOT TO SCALE



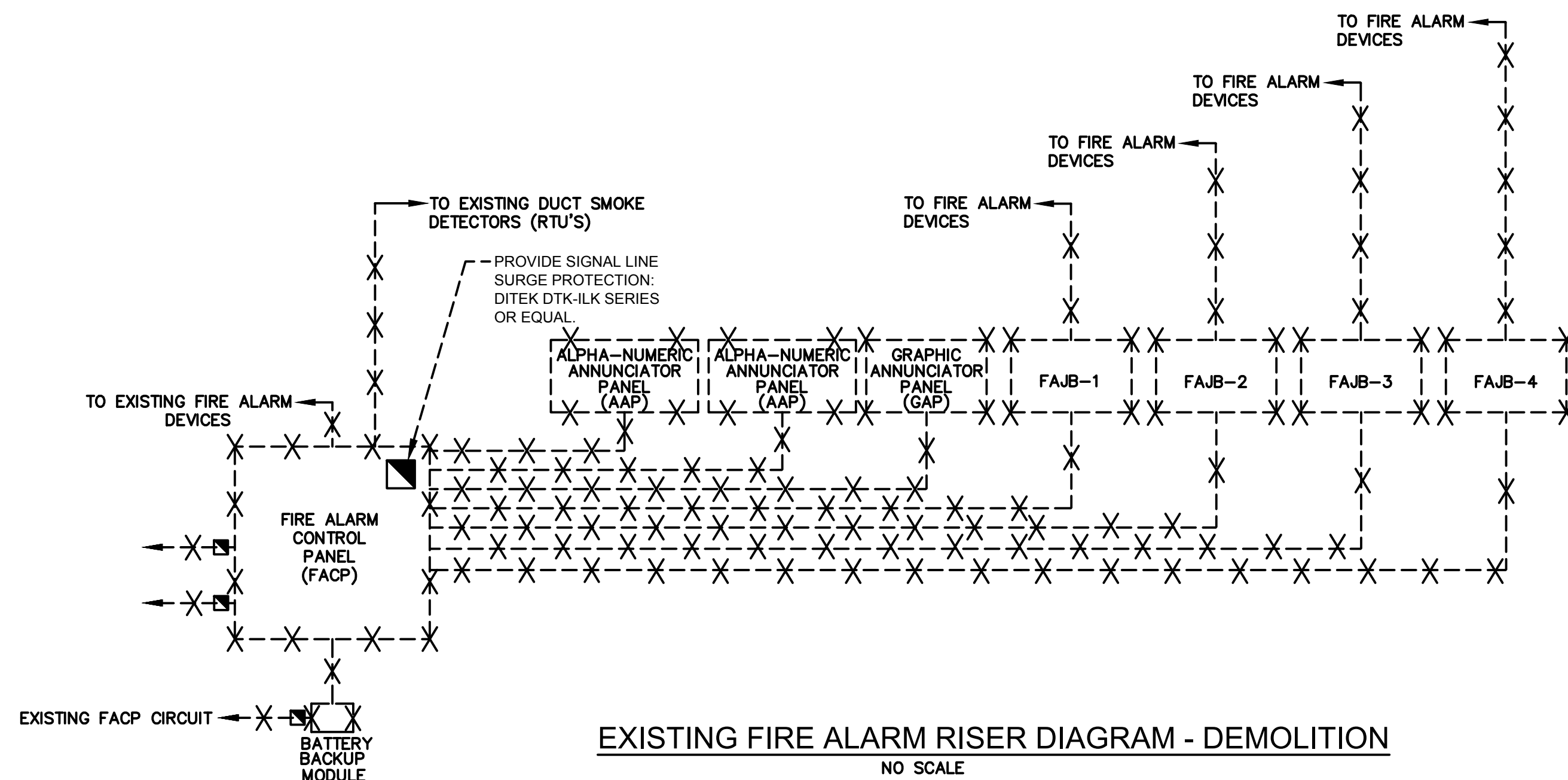
- NOTES:**
1. IF 'D' > 5', WALL MOUNT SMOKE DETECTORS ABOVE DOOR HEADER AS DIRECTED BY ENGINEER ON JOB.
 2. PROVIDE ELECTRICAL WORK COMPLETE FOR DOOR HOLDERS AND LOCAL SMOKE DETECTORS. SEE ELECTRICAL PLANS. CONNECT DOOR HOLDERS TO RELEASE UPON ACTIVATION OF LOCAL SMOKE DETECTOR(S) AND TO SOUND GENERAL ALARM. DOOR HOLDERS SHALL RELEASE UPON ACTIVATION OF LOCAL SMOKE DETECTOR(S) ONLY.

SMOKE DETECTOR INSTALLATION AT SMOKE DOOR
NOT TO SCALE

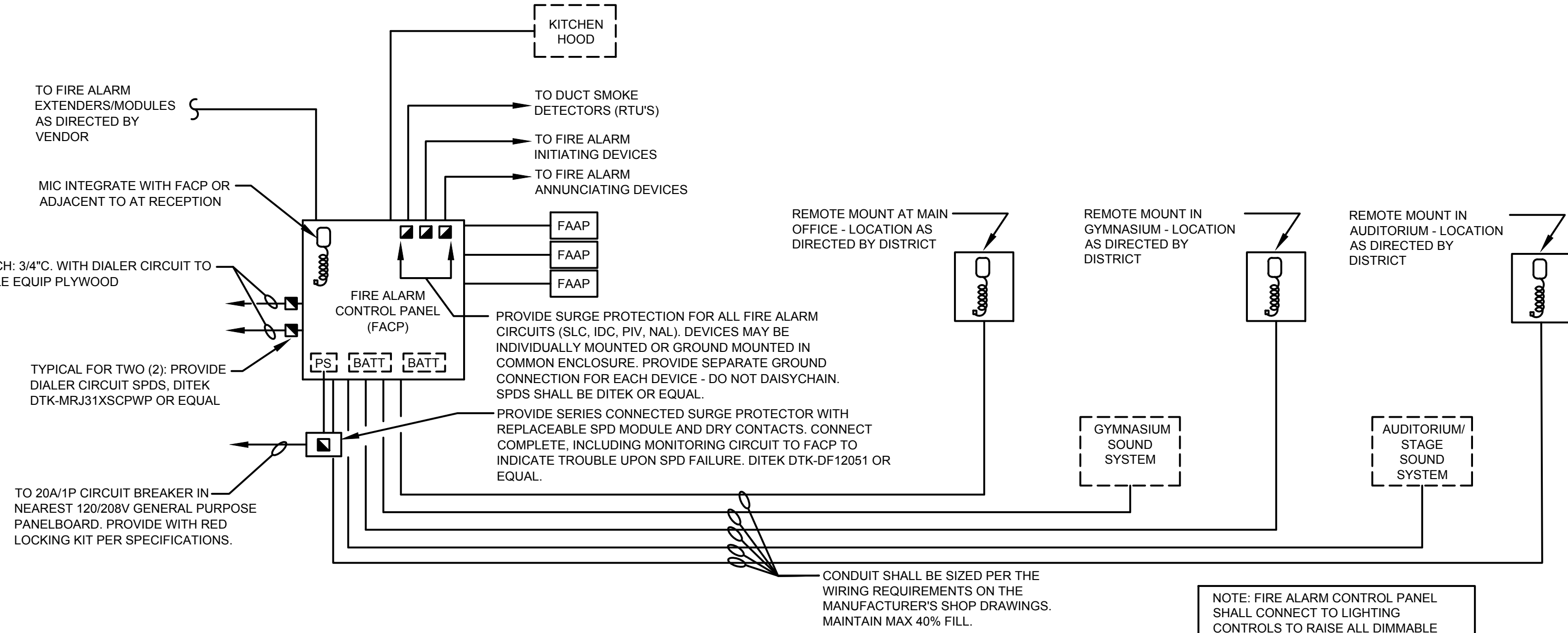


- ELECTRONICS BOX, DIMENSIONS TO SUIT STOREFRONT SYSTEM AND FIRE ALARM DEVICE(S). MOUNT SECURELY TO STOREFRONT STRUCTURE. PROVIDE FRONT SCREW-TYPE COVER WITH TAMPER RESISTANT HARDWARE.

STOREFRONT DEVICE MOUNTING
SCALE: NONE



EXISTING FIRE ALARM RISER DIAGRAM - DEMOLITION
NO SCALE



FIRE ALARM RISER DIAGRAM
NO SCALE

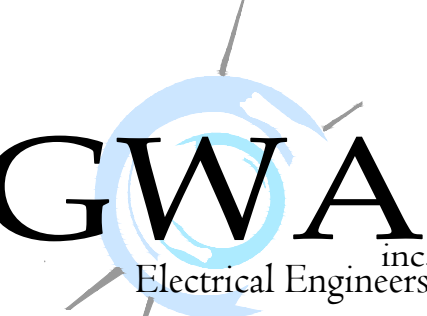
NOTES TO FIRE ALARM RISER DIAGRAM

1. ALL WORK SHALL BE IN ACCORDANCE WITH IBC (2021), IFC (2021), NFPA 70 (2020), NFPA 72 (2019), ADA AND ICC/ANSI A117.1 AND ALL LOCAL CODES AND REGULATIONS. FIRE ALARM SYSTEM SHALL MEET SCRR (SOUTH CAROLINA RULES AND REGULATIONS) 71-8300.11 AND SC FIRE MARSHAL REQUIREMENTS FOR MONITORING AND CERTIFICATION.
2. SYSTEM SHALL BE MULTIPLEX WITH INTEGRAL VOICE COMMUNICATION SYSTEM IN ACCORDANCE WITH IBC. ALL DEVICES AND SYSTEM COMPONENTS SHALL BE UL LISTED FOR APPLICATION. VOICE MESSAGES SHALL BE AS DIRECTED BY AHJ.
3. SYSTEM COMPONENTS AND RACEWAY SHALL BE SUPPORTED IN COMPLIANCE WITH IBC SEISMIC REQUIREMENTS.
4. PROVIDE A FIRE ALARM DOCUMENTS BOX (FDB) IN ACCORDANCE WITH NFPA 72, 7.7.2 REQUIREMENTS. INSTALL IN ACCESSIBLE AREA NEAR FIRE ALARM CONTROL PANEL AS APPROVED BY AHJ.
5. ALL STROBES SHALL BE SYNCHRONIZED.
6. ALL RACEWAYS SHALL BE METALLIC CONDUIT (RED COLOR), MINIMUM 3/4" SIZE.
7. PROVIDE SURGE PROTECTION FOR POWER SUPPLIES, TRANSPONDERS, EXTENDER PANELS, DIALERS, ANNUNCIATION AND INITIATING CIRCUITS. EQUIPMENT SHALL BE UL LISTED FOR APPLICATION AND INSTALLED IN ACCORDANCE WITH MANUFACTURER GUIDELINES.
8. COORDINATE WITH OWNER FOR UL APPROVED REPORTING SERVICE - OWNER WILL CONTRACT WITH REPORTING SERVICE. PROVIDE REPORTING DEVICES(S), DUAL-REPORTING TYPE, COMPATIBLE WITH AND AS APPROVED BY REPORTING SERVICE SELECTED.
9. THE OPERATION OF ANY MANUAL PULL STATION, OR ANY AUTOMATIC DETECTOR, AS REQUIRED BY IBC SHALL AUTOMATICALLY ACTIVATE THE ONE-WAY VOICE ALARM SYSTEM. ACTIVATION OF THE VOICE ALARM SYSTEM SHALL AUTOMATICALLY SOUND AN ALERT SIGNAL FOLLOWED BY VOICE INSTRUCTIONS. VOICE MESSAGES SHALL BE AS DIRECTED BY FIRE MARSHAL AND OWNER.
10. FIRESTOP ALL PENETRATIONS THRU RATED PARTITIONS AND FLOORS. USE UL LISTED THROUGH-PENETRATION FIRESTOP SYSTEMS APPROPRIATE FOR CONSTRUCTION TYPE AND WITH RATING EQUAL TO THAT BEING PENETRATED.
11. FIELD ADJUST SMOKE DETECTOR SPACING IN CORRIDORS AS REQUIRED TO MAINTAIN MIN. 3'-0" SEPARATION FROM AIR REGISTERS. MAINTAIN MAXIMUM 30'-0" SPACING BETWEEN DETECTORS AND 3'-0" FROM DOOR HOLD OPEN DEVICES.
12. CONTRACTOR SHALL FIELD VERIFY TRANSPONDER, EXTENDER PANEL AND FIRE ALARM J-BOX LOCATIONS AND COORDINATE FINAL LOCATIONS WITH OWNER PRIOR TO ROUGHING. PROVIDE SMOKE DETECTORS AT ALL NEW CONTROL PANELS IN ACCORDANCE WITH NFPA 72.
13. CONTRACTOR SHALL COORDINATE FIRE ALARM DEVICE LOCATIONS TO AVOID CONFLICT WITH EXISTING CONDITIONS SUCH AS LOCKERS, ARTWORK, BULLETIN BOARDS, CASEWORK, STRUCTURAL COMPONENTS, BULKHEADS AND THE LIKE. ADJUST AS REQUIRED, MAINTAINING COMPLIANCE WITH NFPA 72.
14. INSTALL ALL STROBE AND COMBINATION DEVICES WITHIN 15' FROM THE END OF CORRIDORS IN ACCORDANCE WITH NFPA 72.
15. PROVIDE ELECTRICAL WORK COMPLETE FOR DOOR HOLDERS. CONNECT DOOR HOLDERS TO RELEASE UPON ACTIVATION OF RESPECTIVE LOCAL DETECTOR(S) AND TO SOUND GENERAL ALARM. DOOR HOLDERS SHALL RELEASE UPON ACTIVATION OF LOCAL DETECTOR(S) ONLY.
16. FIELD VERIFY ACCESS CONTROLLED DOORS AND GATES AND PROVIDE ALL ASSOCIATED ELECTRICAL WORK AS REQUIRED TO RELEASE DOORS OR GATES UPON ACTIVATION OF FIRE ALARM SYSTEM IN ACCORDANCE WITH IBC AND LOCAL CODES.
17. REFER TO OWNER'S ARCHIVED MECHANICAL DRAWINGS AND FIELD VERIFY EXISTING FIRE/SMOKE DAMPERS, MECHANICAL UNIT TYPES AND CHARACTERISTICS, LOCATIONS, QUANTITIES AND FUNCTIONS. PROVIDE DUCT AND AREA DETECTORS IN COMPLIANCE WITH LOCAL CODES. MOUNTING IN DUCTS SHALL BE IN ACCORDANCE WITH CODES AND MANUFACTURER GUIDELINES. PROVIDE DETECTORS AT CONNECTIONS TO VERTICAL RETURN AIR SHAFTS PER IBC. CONNECT COMPLETE FOR AIR HANDLER SHUTDOWN IN ACCORDANCE WITH LOCAL CODES.
18. FIELD VERIFY LOCATIONS OF RELIEF DAMPERS, PRESSURIZATION FANS, SMOKE CONTROL FANS AND OTHER SMOKE CONTROL COMPONENTS. PROVIDE ALL REQUIRED DETECTORS, RELAYS, MODULES AND ASSOCIATED ELECTRICAL REQUIRED FOR COMPLETE INTERFACE WITH SMOKE CONTROL SYSTEMS.
19. CONTRACTOR SHALL COORDINATE REQUIREMENTS FOR EXISTING STAGE HEAT AND SMOKE VENTS AND PROVIDE ALL MODULES, RELAYS, WIRING AND ASSOCIATED ELECTRICAL WORK AS REQUIRED FOR FUNCTION IN ACCORDANCE WITH IBC 410.910 AND LOCAL CODES.
20. EXISTING FIRE ALARM SYSTEM SHALL REMAIN IN OPERATION UNTIL NEW SYSTEM IS ACCEPTED BY AHJ AND FIRE MARSHAL. ALLOW IN BID FOR PHASING OF WORK AS REQUIRED. ALL WORK SHALL COMPLY WITH NFPA 241 REQUIREMENTS.
21. ALLOW IN BID FOR ADDITIONAL FIRE ALARM DEVICES TO BE LOCATED IN FIELD AS DIRECTED BY ENGINEER AS FOLLOWS:
FIVE (5) ADDITIONAL SPEAKER/STROBE
FIVE (5) ADDITIONAL SMOKE/HEAT DETECTORS
TWO (2) ADDITIONAL PULL STATIONS
23. ALL UNUSED DEVICES SHALL BE TURNED OVER TO DISTRICT AT SUBSTANTIAL COMPLETION.
24. LABEL FIRE ALARM ANNUNCIATING DEVICES AS DIRECTED BY A.H.J.

DEMOLITION NOTES

1. BIDDERS SHALL VISIT THE SITE OF WORK PRIOR TO BIDDING AND SHALL INCLUDE IN BID ALL WORK REQUIRED TO PROVIDE NEW WORK AND TO MODIFY EXISTING WORK AS REQUIRED TO CONTINUE IN OPERATION.
2. DEMOLITION WORK SHALL COMPLY WITH ANSI 10.6, NFPA 241, OSHA, AHERA AND ALL OTHER APPLICABLE LOCAL, STATE AND FEDERAL STANDARDS, CODES AND GUIDELINES.
3. CONTRACTOR IS CAUTIONED THAT DEMOLITION PLANS ARE BASED ON RECORD DRAWINGS AND VISUAL FIELD OBSERVATION AND ARE INTENDED TO COMMUNICATE INTENT OF DEMOLITION AND DO NOT INDICATE EVERY COMPONENT OF ELECTRICAL SYSTEMS.
4. OWNER SHALL RETAIN FIRST RIGHT OF REFUSAL ON ELECTRICAL EQUIPMENT BEING DEMOLISHED. PRIOR TO BEGINNING DEMOLITION WORK, CONTRACTOR SHALL WALL DEMOLITION AREA WITH OWNER REPRESENTATIVE AND IDENTIFY ITEMS TO BE REMOVED AND TURNED OVER TO OWNER. ALL SUCH ITEMS SHALL BE CAREFULLY REMOVED, PROTECTED AND DELIVERED TO OWNER.
5. EXISTING RACEWAY AND WIRING SYSTEMS REUSED AS PART OF THIS CONTRACT SHALL BE REWORKED AS REQUIRED TO COMPLY WITH REQUIREMENTS FOR NEW WORK AND CURRENT CODES AND STANDARDS.
6. CONTRACTOR SHALL EXAMINE DEMOLITION AND NEW WORK PLANS AND INCLUDE IN BID ALL REQUIRED REWORK AND/OR RELOCATION OF EXISTING RACEWAY, JUNCTION BOXES, DEVICES, WIRING SYSTEMS AND THE LIKE AS REQUIRED TO ACCOMMODATE NEW FIRE ALARM SYSTEM.
7. INCLUDE IN BID ALL WORK REQUIRED FOR TEMPORARY WIRING AND ASSOCIATED ELECTRICAL WORK REQUIRED TO MAINTAIN EXISTING SYSTEMS IN SERVICE DURING DEMOLITION PHASE. INTERRUPTIONS IN ANY ELECTRICAL SERVICE OR SYSTEM (POWER, LIGHTING, COMMUNICATION, FIRE ALARM, ETC.) SHALL BE COORDINATED WITH AND APPROVED BY OWNER A MINIMUM OF 48 HOURS PRIOR TO PERFORMING WORK U.N.O.
8. WIRING SYSTEMS SHALL BE REMOVED BACK TO THE SOURCE OF SUPPLY UNLESS NOTED OTHERWISE. CIRCUIT BREAKERS SUPPLYING LOADS DEMOLISHED AS PART OF THIS CONTRACT SHALL BE LABELED AS SPARE AND SET TO THE OFF POSITION.
9. ALL COMPONENTS AND DEVICES INDICATED AS TO REMAIN OR TO BE RELOCATED SHALL BE PROTECTED AGAINST DAMAGE DURING DEMOLITION PROCESS AND CLEANED PRIOR TO BEING RESTORED INTO SERVICE.
10. REMOVE ALL EXISTING, ABANDONED WIRING SYSTEMS IN CEILING SPACE, EQUIPMENT ROOMS, SHAFTS, CRAWL SPACES AND SIMILAR CAVITIES OF THE WORK AREA, INCLUDING WIRING, RACEWAYS, BOXES AND SUPPORTS.

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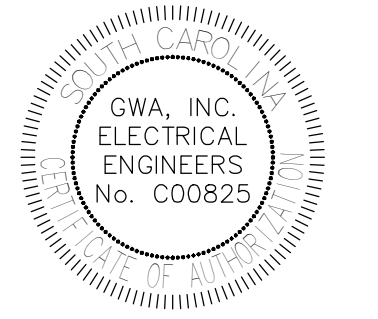
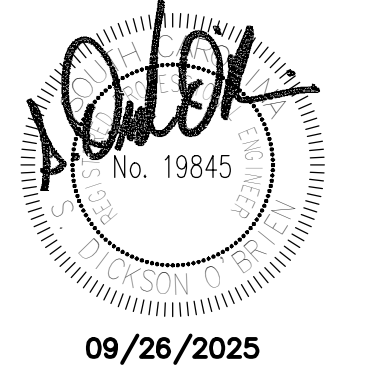


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SEALS:



PROJECT TITLE:
DUTCH FORK ELEMENTARY SCHOOL - FIRE ALARM RISER DIAGRAM REPLACEMENT

7900 Broad River Road
Irmo, SC 29063

SHEET TITLE:
FIRE ALARM RISER DIAGRAM AND DETAILS

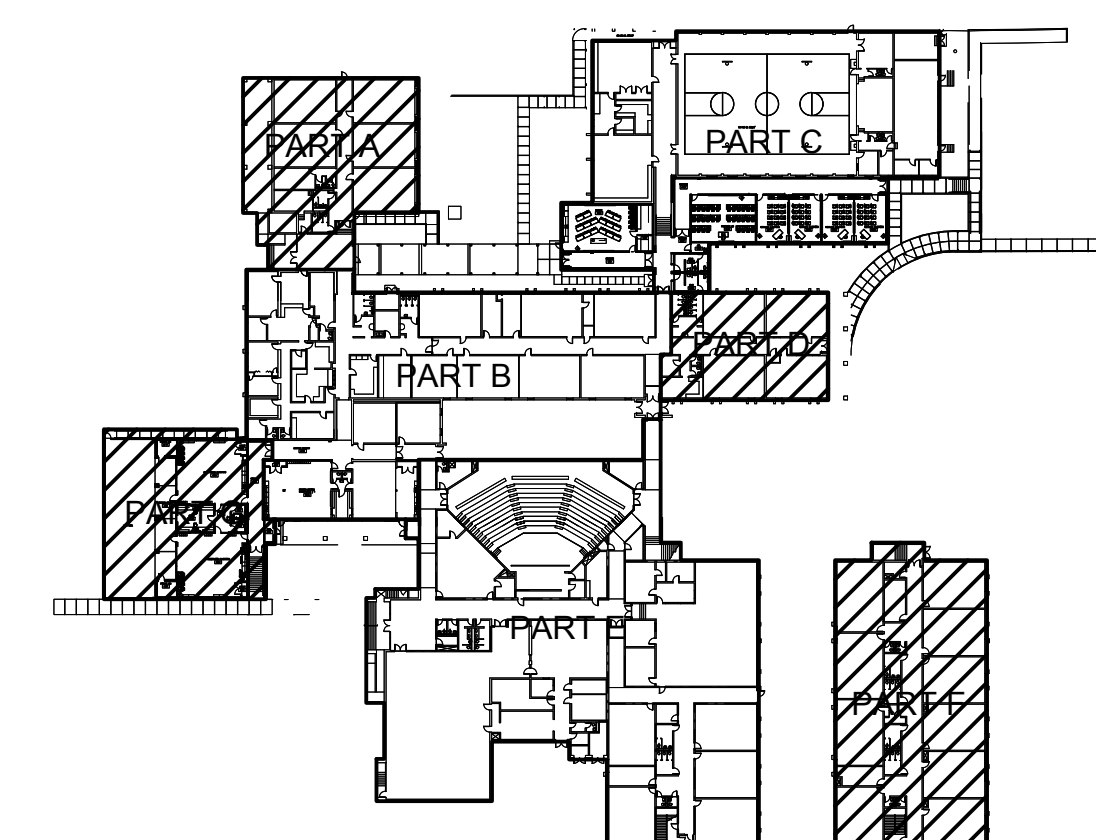
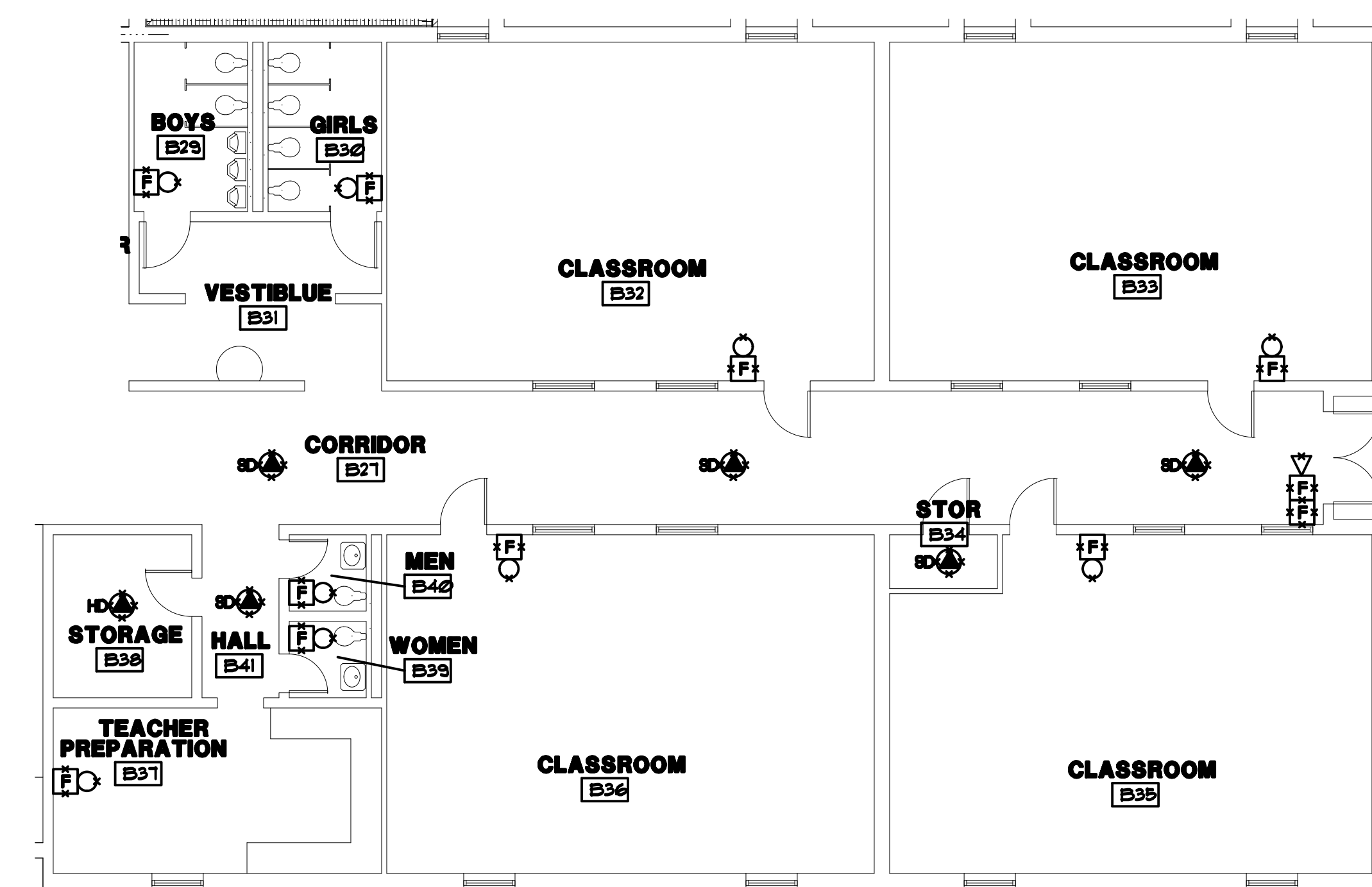
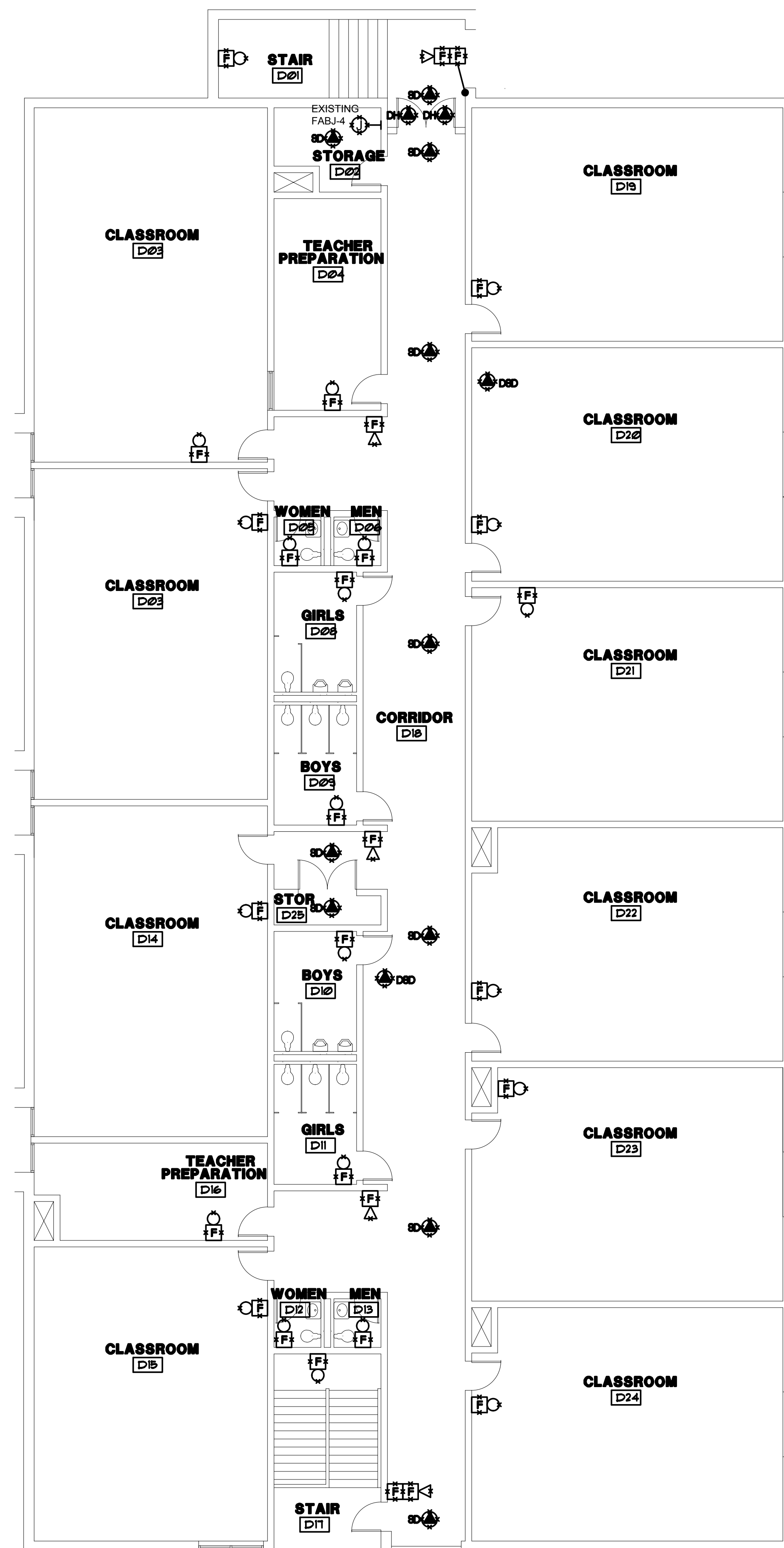
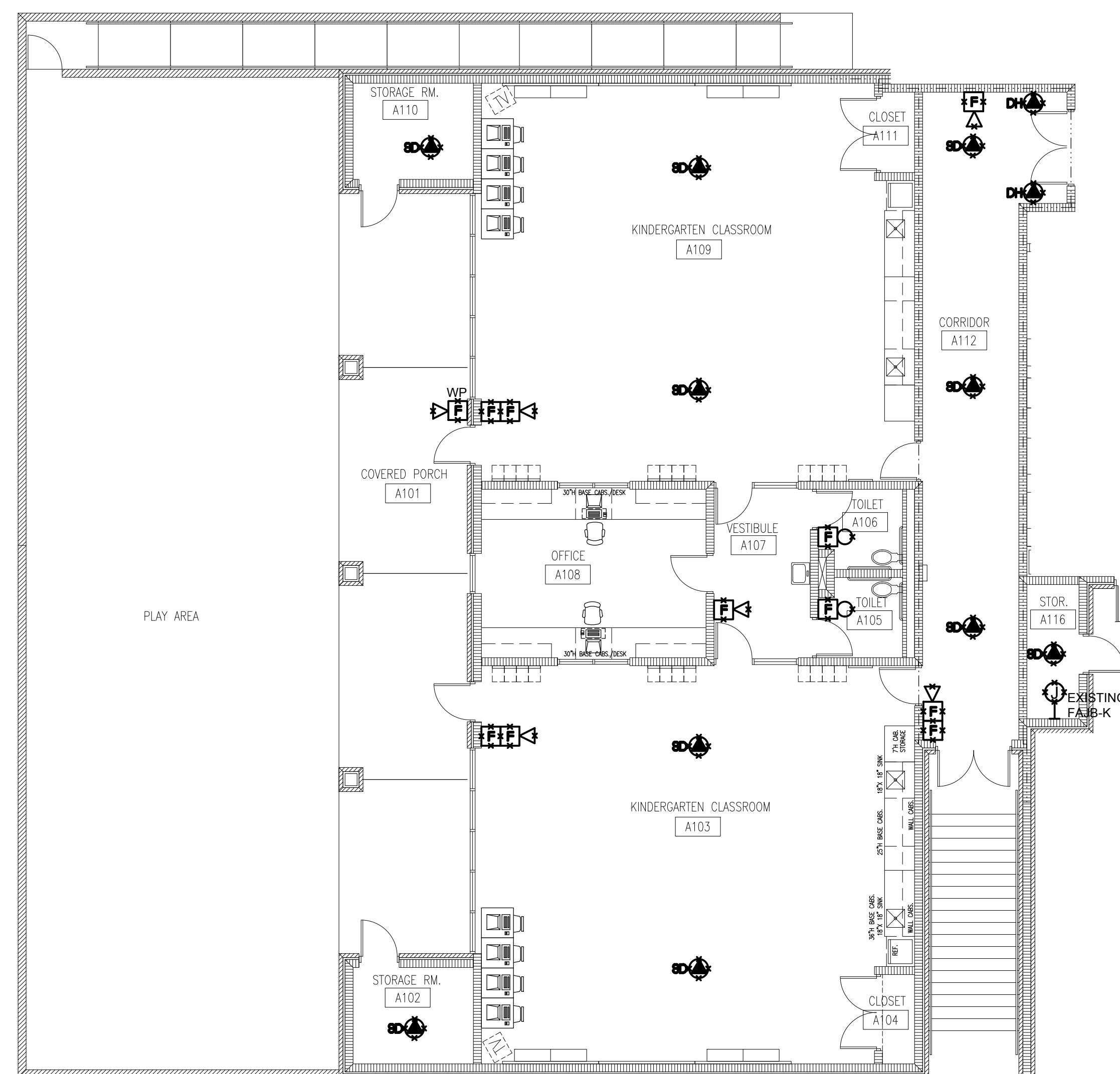
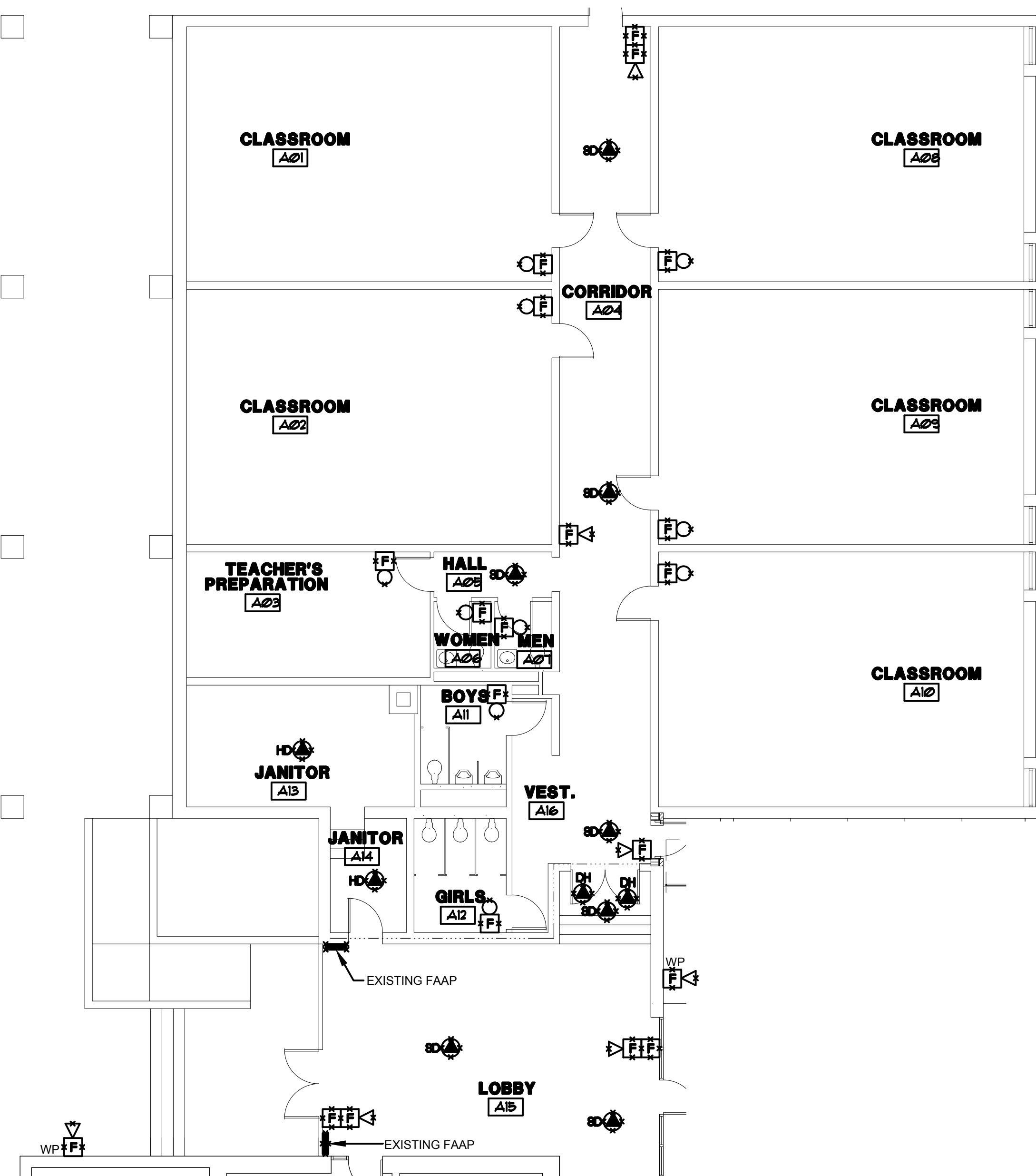
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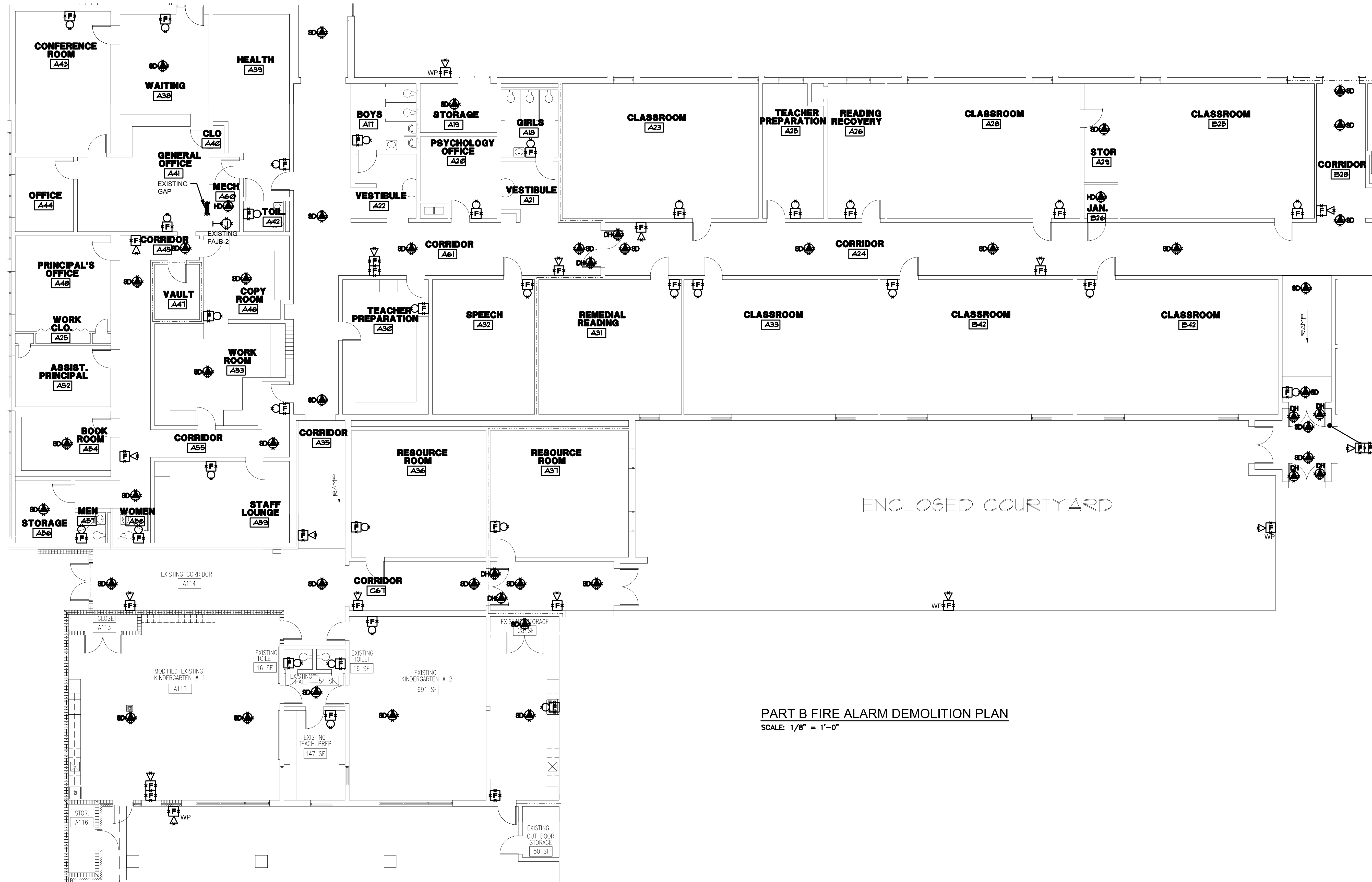
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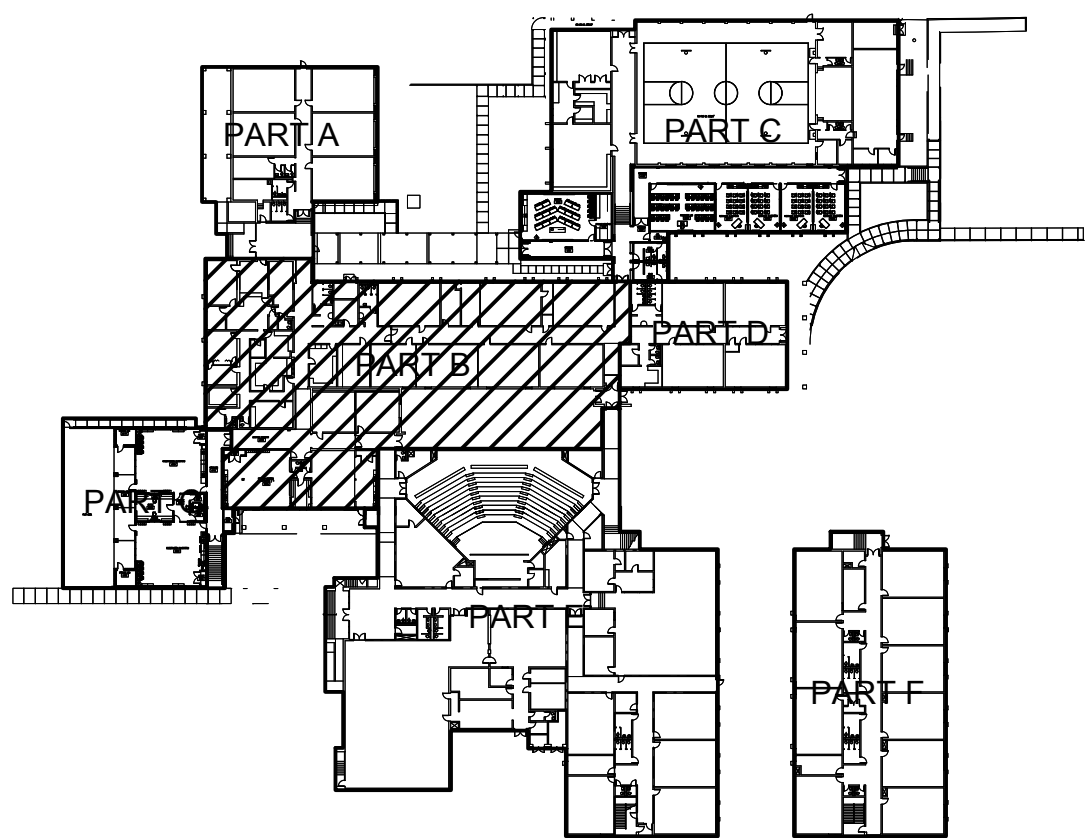
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CDS FOR FINAL OWNER REVIEW



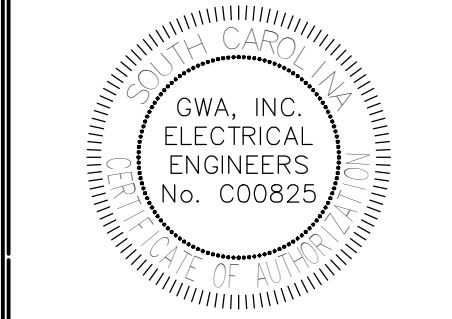
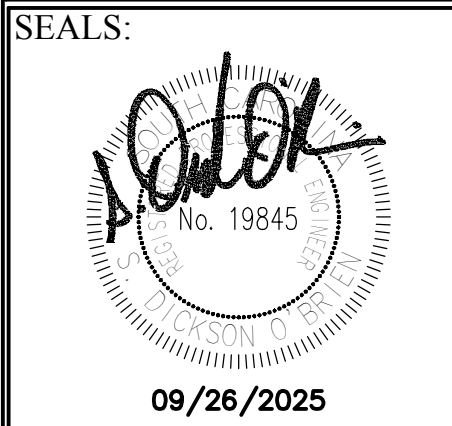


PART B FIRE ALARM DEMOLITION PLAN
SCALE: 1/8" = 1'-0"



KEY PLAN
NO SCALE

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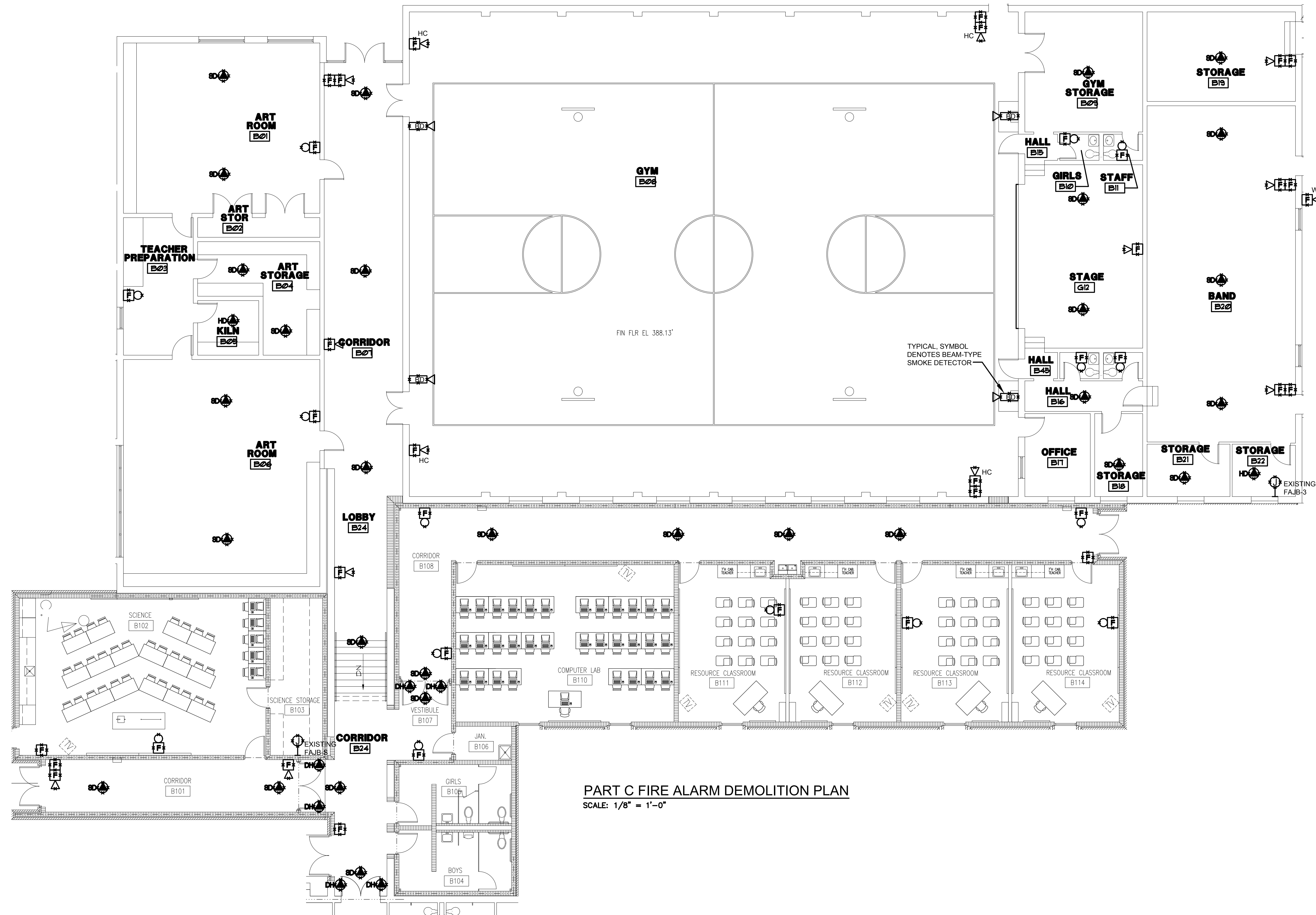
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DUTCH FORK ELEMENTARY
SCHOOL - FIRE ALARM
REPLACEMENT
7900 Broad River Road
Irmo, SC 29065

SHEET TITLE:
PART B FIRE
ALARM
DEMOLITION
PLAN

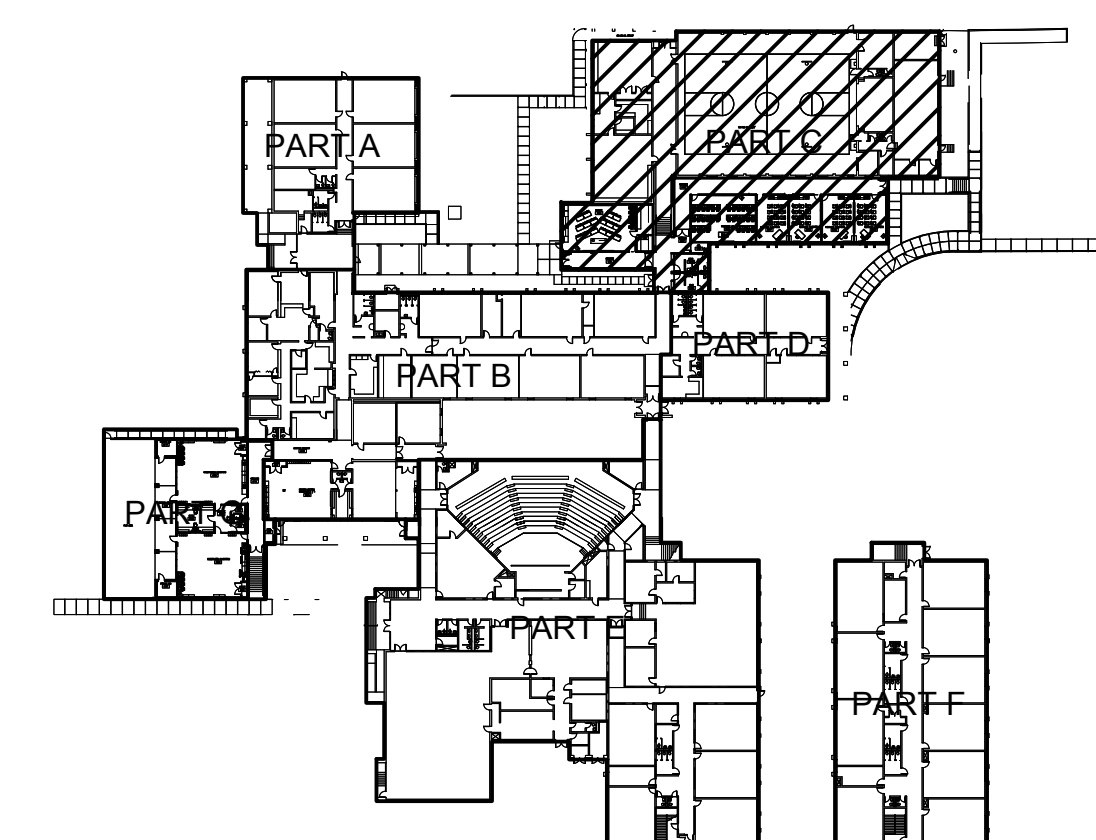
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CDS FOR FINAL OWNER REVIEW



PART C FIRE ALARM DEMOLITION PLAN
SCALE: 1/8" = 1'-0"



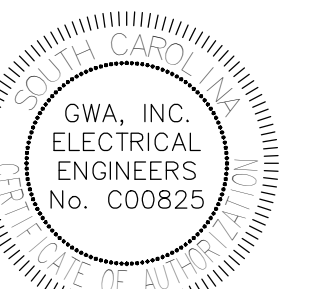
KEY PLAN
NO SCALE

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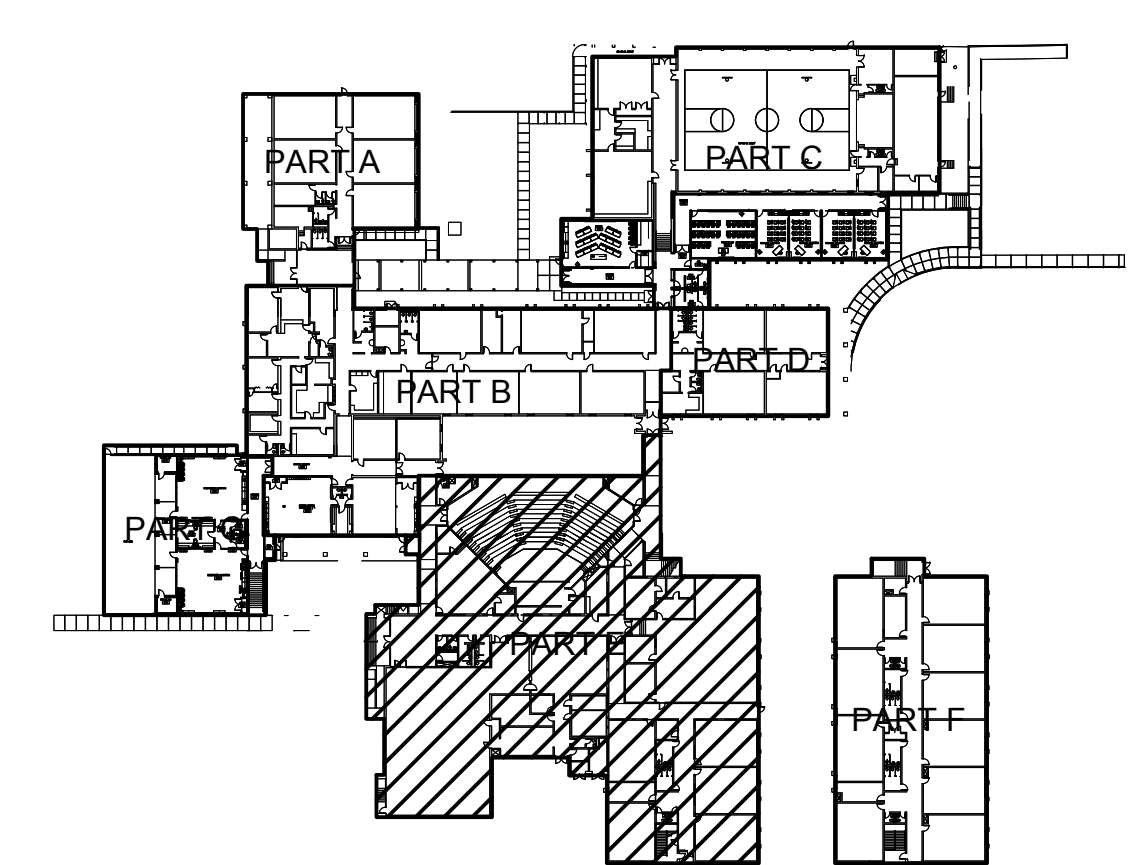
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**DUTCH FORK ELEMENTARY
SCHOOL - FIRE ALARM
REPLACEMENT**
7900 Broad River Road
Irmo, SC 29065

SHEET TITLE:
**PART C FIRE
ALARM
DEMOLITION
PLAN**

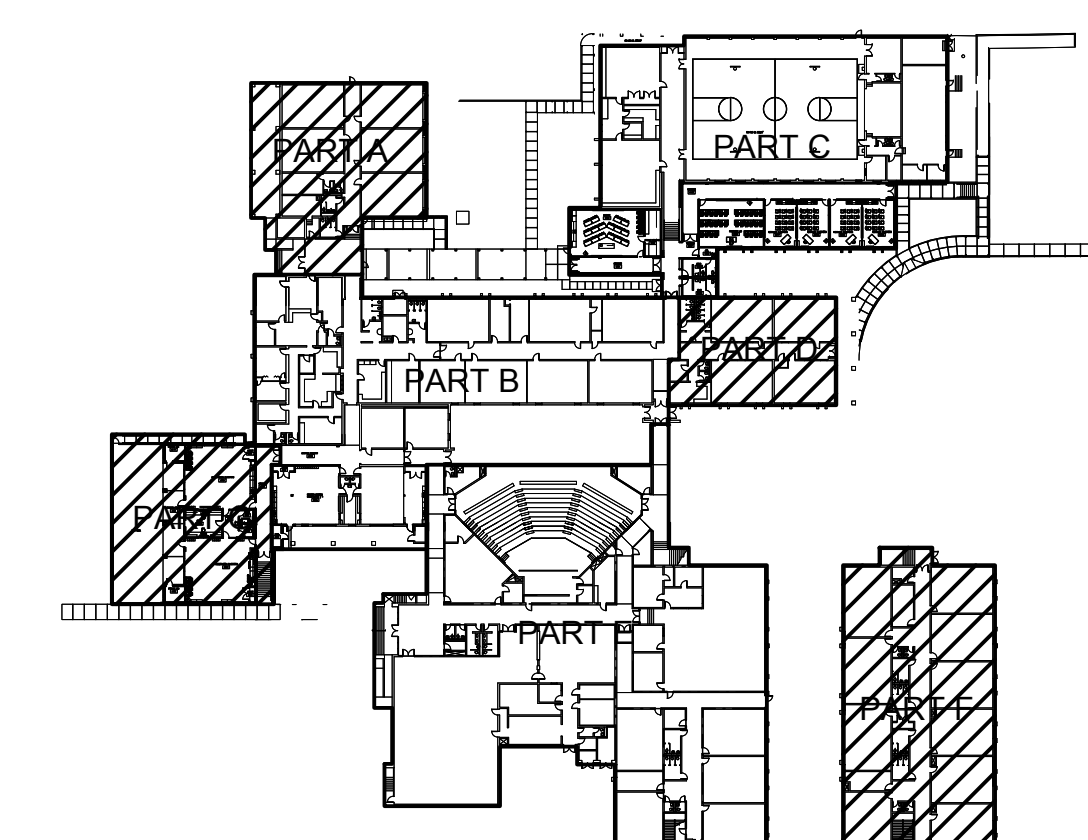
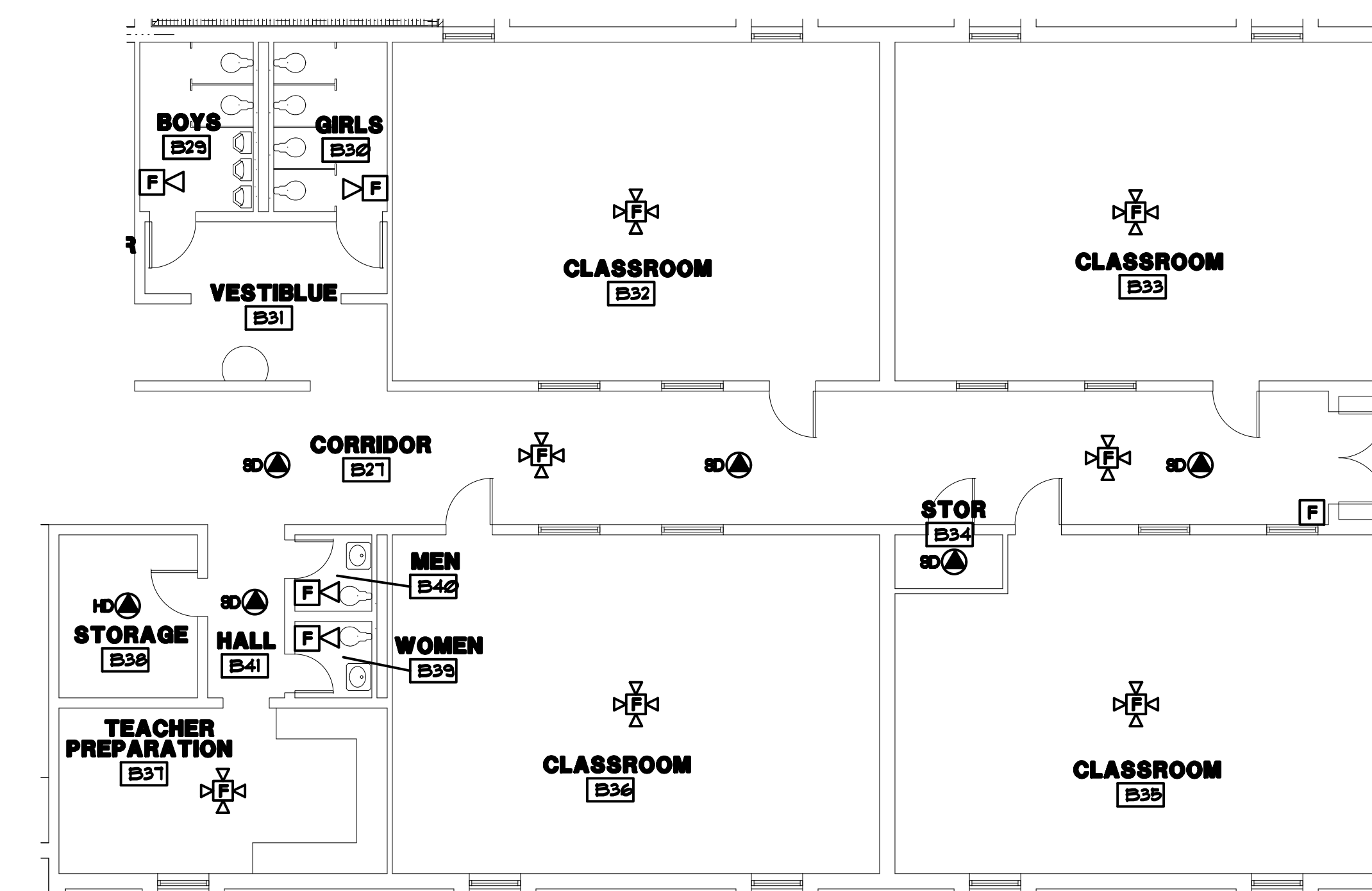
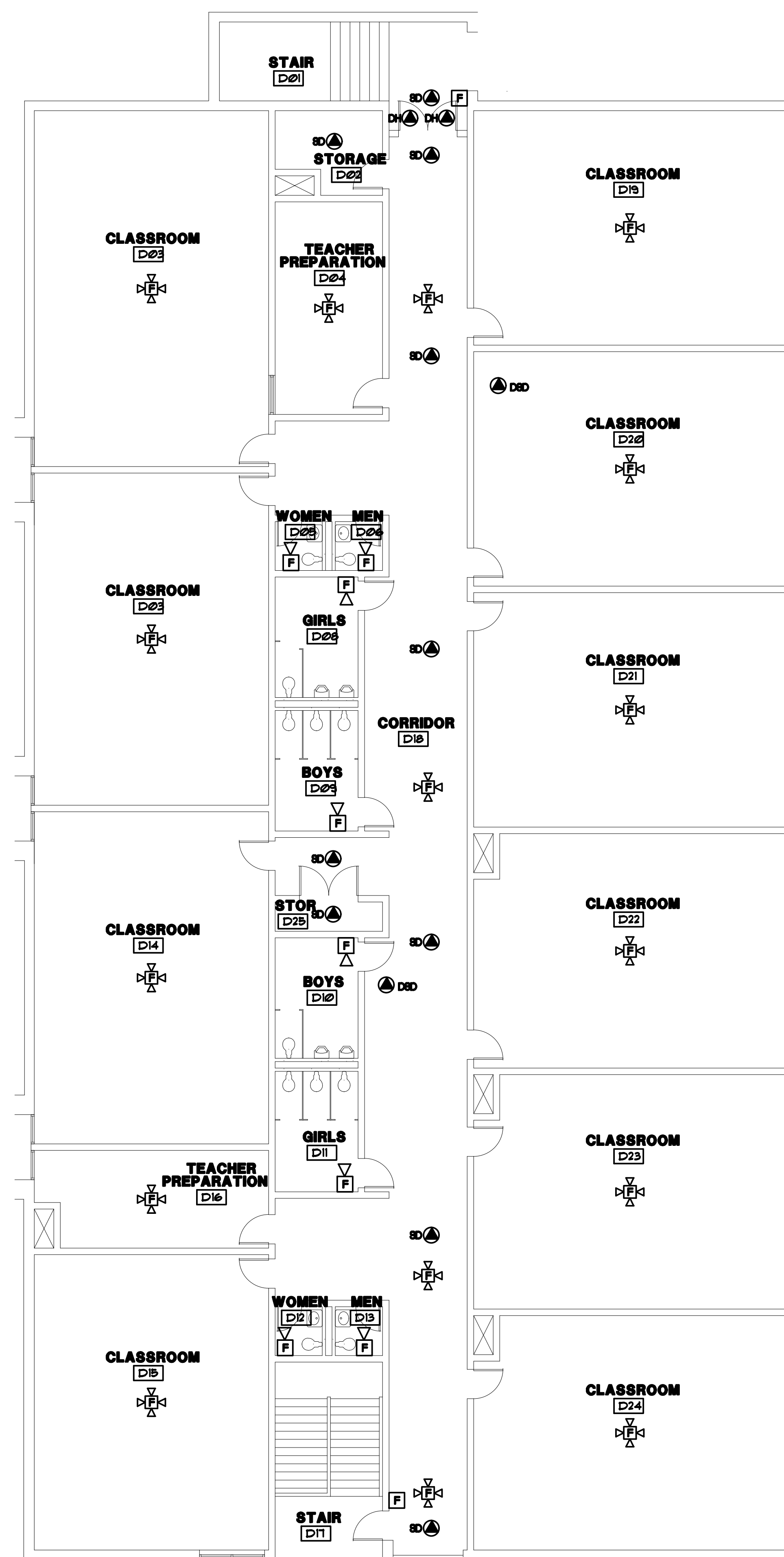
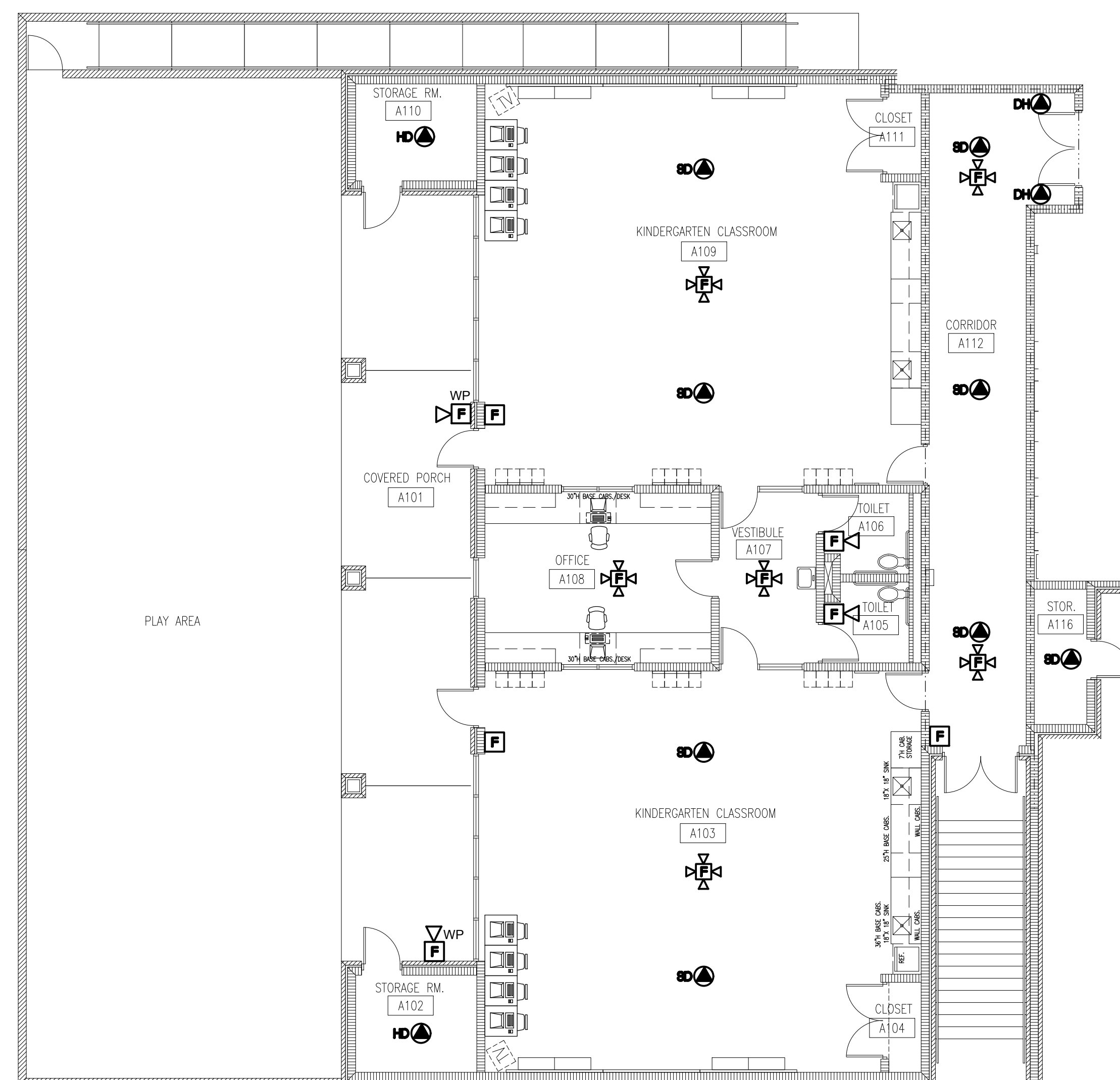
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CDS FOR FINAL OWNER REVIEW



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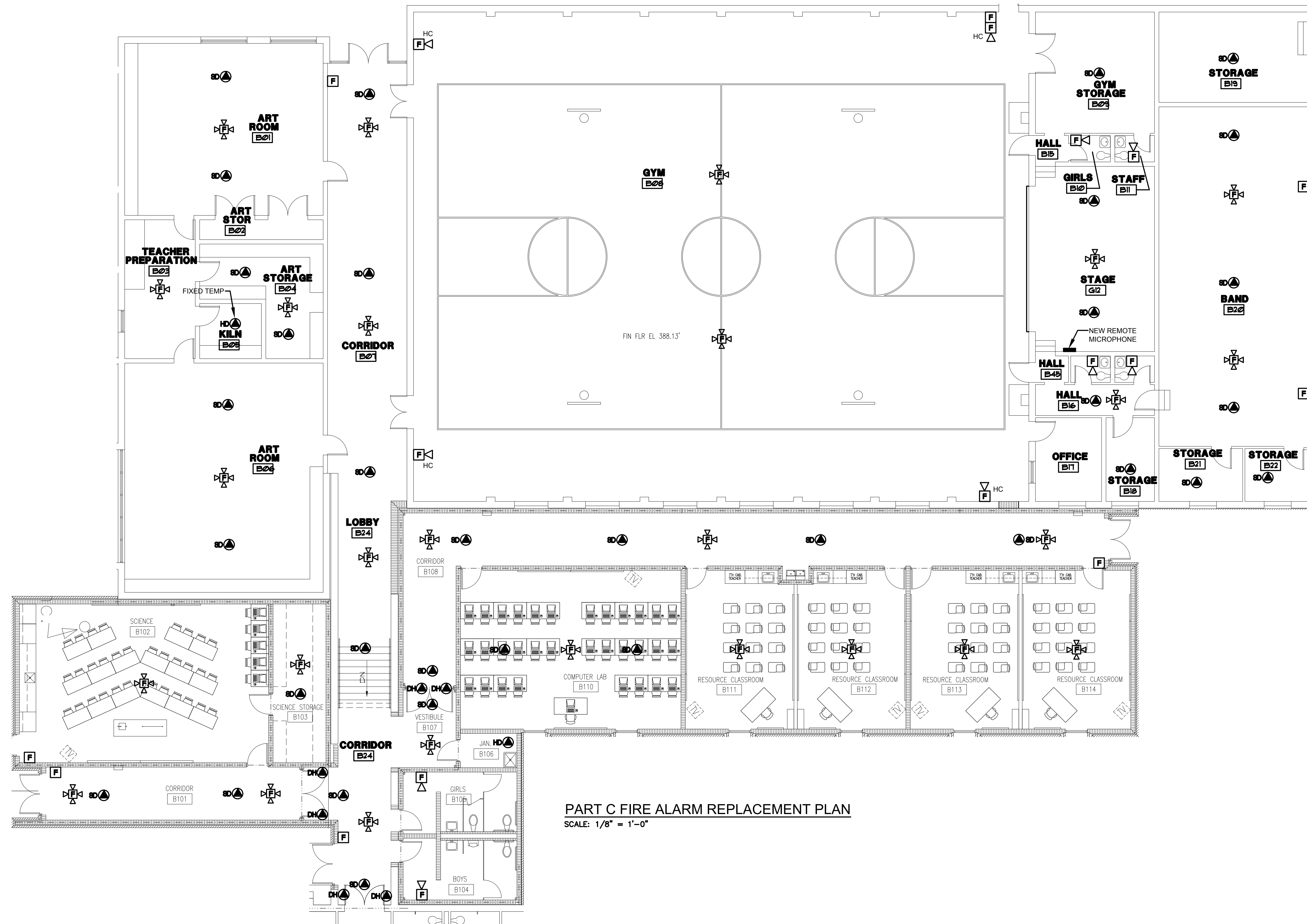
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PART B FIRE ALARM REPLACEMENT PLAN

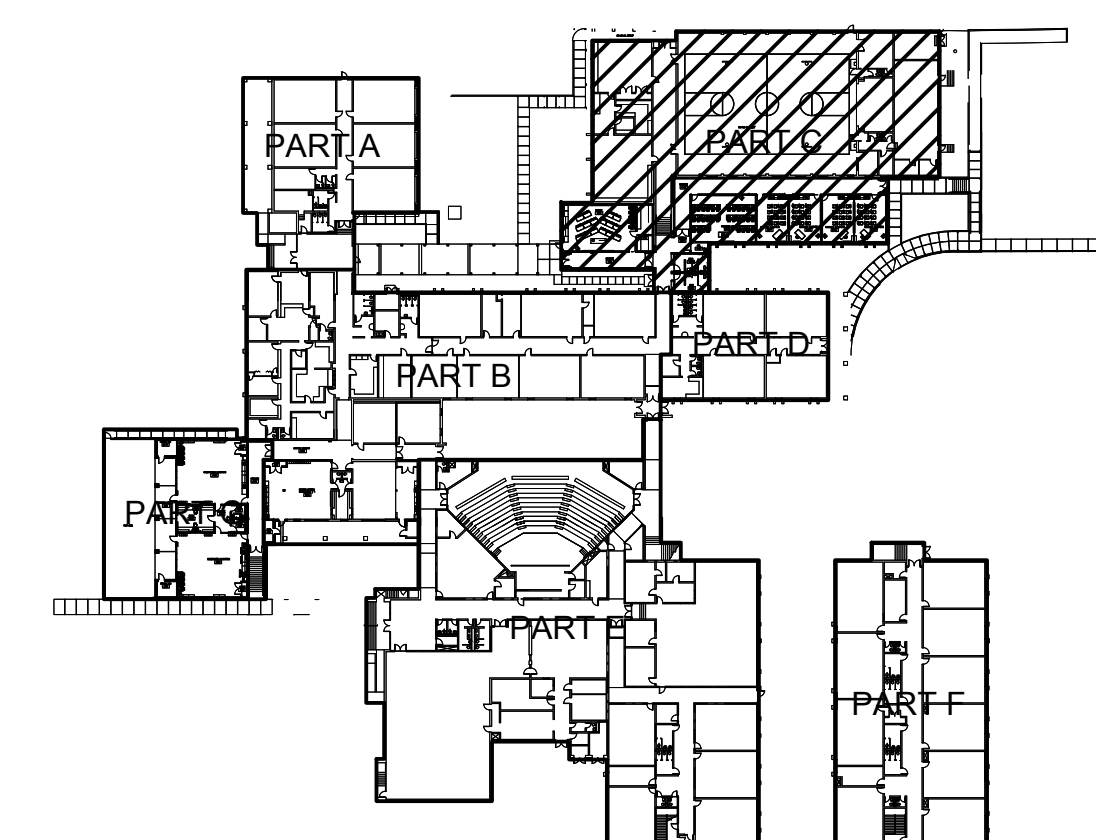
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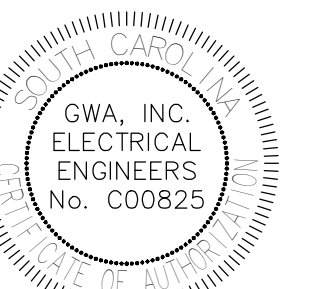
PART C FIRE ALARM REPLACEMENT PLAN
SCALE: 1/8" = 1'-0"



KEY PLAN
NO SCALE



09/26/2025



PROJECT TITLE:
**DUTCH FORK ELEMENTARY
SCHOOL - FIRE ALARM
REPLACEMENT**
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SHEET TITLE:
**PART C FIRE
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