

East Providence School Department RFP# EPSD.DISTRICT.2023.006 Oldham Classroom Re-Configuration

## ADDENDUM #1

Attached are the classroom modification drawings and basis of design narrative.

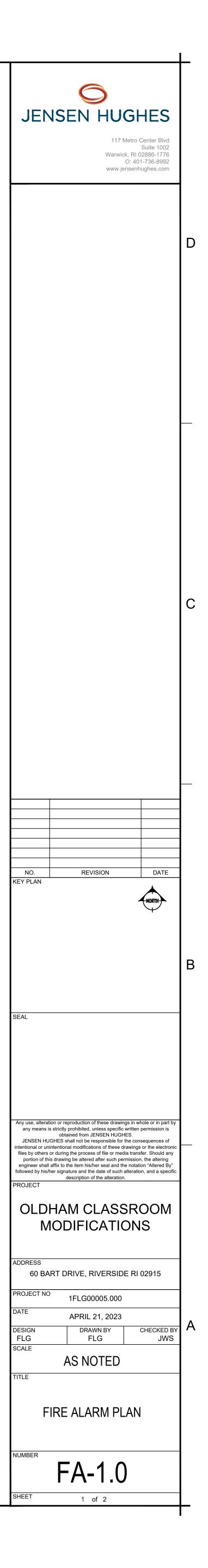


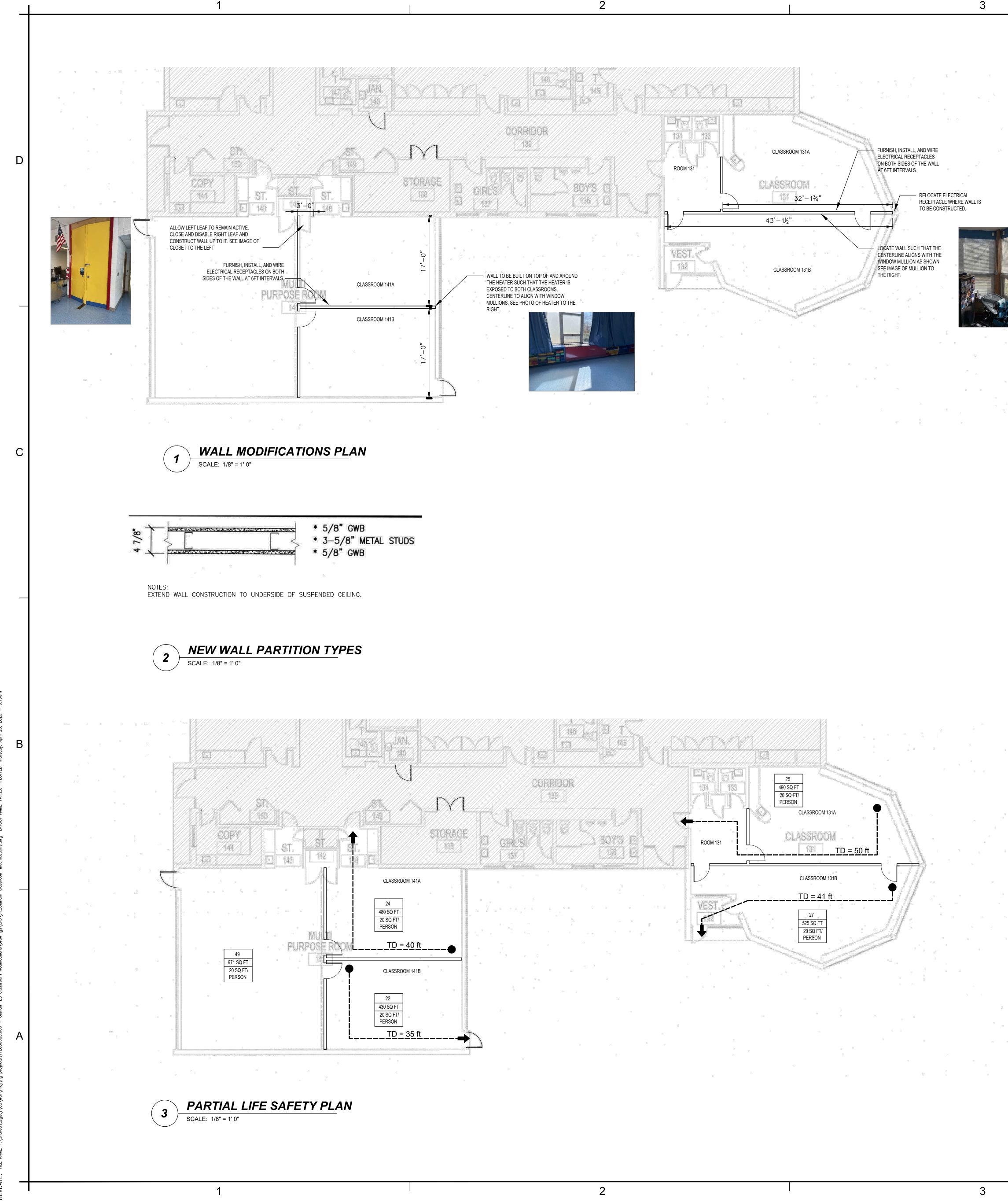


| FIRE ALARM SYMBOLS LEGEND                                 |  |  |  |  |
|---|--|--|--|--|
| \$  | S ADDRESSABLE PHOTOELECTRIC SMOKE DETECTOR                                     |  |  |  |
|   | ADDRESSABLE HEAT DETECTOR  |  |  |  |
| F         ADDRESSABLE DOUBLE-ACTION MANUAL FIRE ALARM BOX |  |  |  |  |
| ▼cd<br>⊠C   | HORN/STROBE NOTIFICATION APPLIANCE - CEILING MOUNTED (CANDELA RATING AS NOTED) |  |  |  |
| FACU  | SIMPLEX 4010 ADDRESSABLE FIRE ALARM CONTROL UNIT (EXISTING TO REMAIN)          |  |  |  |
|   | AREA NOT IN SCOPE  |  |  |  |
| FIRE ALARM SUBSCRIPT LEGEND                               |  |  |  |  |
| E   | EXISTING EQUIPMENT TO REMAIN   |  |  |  |
| x   | EXISTING EQUIPMENT TO BE DEMOLISHED  |  |  |  |
| N   | NEW EQUIPMENT TO BE FURNISHED AND INSTALLED                                    |  |  |  |

# FIRE ALARM GENERAL NOTES & SCOPE OF WORK

- THE FIRE ALARM SYSTEM MODIFICATIONS SHALL BE INSTALLED BY A LICENSED FIRE ALARM CONTRACTOR IN ACCORDANCE WITH THE RHODE ISLAND FIRE CODE (NFPA 1-2018 EDITION, AS AMENDED), THE RHODE ISLAND LIFE SAFETY CODE (NFPA 101-2018 EDITION, AS AMENDED), NFPA 72-2019 EDITION, AND THE DESIGN DOCUMENTS.
- 2. THE SCOPE OF WORK TO BE COMPLETED BY THE CONTRACTOR INCLUDES CONNECTION OF NEW INITIATING DEVICES AND NOTIFICATION APPLIANCES IN THE AFFECTED CLASSROOMS TO THE FIRE ALARM SYSTEM. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE THESE WIRING CONNECTIONS WITH A LICENSED FIRE ALARM TECHNICIAN / ELECTRICIAN.
- 3. THE SCOPE OF WORK INCLUDES COORDINATING THE FIRE ALARM SYSTEM INSTALLATION WITH THE OWNER AND JENSEN HUGHES.
- 4. ALL NEW FIRE ALARM SYSTEM CONTROL EQUIPMENT, DEVICES, AND APPLIANCES SHALL BE UL LISTED AND/OR FM APPROVED.
- 5. THE EXISTING FIRE ALARM SYSTEM CONTROL EQUIPMENT, DEVICES, AND APPLIANCES ARE EXISTING TO REMAIN AND SHALL BE MAINTAINED WITH THE EXCEPTION OF THE FOLLOWING:
- REMOVAL OF THE HEAT DETECTOR IN CLASSROOM 131 --
- REMOVAL OF THE HEAT DETECTOR IN MULTI PURPOSE ROOM 141 --REMOVAL OF THE HORN/STROBE IN MULTI PURPOSE ROOM 141 --
- --INSTALLATION OF NEW HORN/STROBE AND HEAT DETECTOR IN ROOM 131
- INSTALLATION OF NEW HORN/STROBE AND NEW HEAT DETECTOR IN CLASSROOM 131A --INSTALLATION OF NEW HORN/STROBE AND NEW HEAT DETECTOR IN CLASSROOM 131B --
- INSTALLATION OF NEW HORN/STROBE AND NEW HEAT DETECTOR IN CLASSROOM 141A --
- INSTALLATION OF NEW HORN/STROBE AND NEW HEAT DETECTOR IN CLASSROOM 141B --
- 6. THE NEW HEAT DETECTOR DEVICES SHALL HAVE THE SAME SEQUENCE OF OPERATION OUTPUTS AS THE OTHER EXISTING HEAT DETECTOR DEVICES ON THE EXISTING SYSTEM.
- 7. ALL FIRE ALARM SYSTEM WIRING SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND GUIDELINES. ALL WIRING SHALL BE INSTALLED IN METAL RACEWAY OR APPROVED MC CABLE. MC CABLE SHALL NOT BE PERMITTED TO BE INSTALLED EXPOSED. ALL EXPOSED RACEWAY INSTALLED SHALL BE PAINTED TO MATCH THE SURROUNDING CONDITIONS. PAINT COLORS SHALL BE COORDINATED WITH THE OWNER AND JENSEN HUGHES. ALL WIRING SHALL MEET THE COLOR CODE AS OUTLINED IN RILSC SECTION 9.6.9.8.
- 8. THE SEPARATION BETWEEN ALL OUTGOING AND RETURN CIRCUITS SHALL BE A MINIMUM OF 1-FOOT VERTICALLY AND 4-FEET HORIZONTALLY.
- 9. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ISOLATION MODULES SUCH THAT NO MORE THAN TWENTY-FIVE (25) ADDRESSABLE DEVICES BECOME INOPERABLE DURING A SINGLE SHORT CIRCUIT CONDITION. ADDITIONALLY, FAULT ISOLATION MODULES SHALL BE PROVIDED ON BOTH SIDES OF ANY CONTROL MODULE WHICH IS RESPONSIBLE FOR ACTIVATING A REMOTE POWER SUPPLY AND TO ISOLATE ANY CONTROL MODULES WHICH ARE RESPONSIBLE FOR EMERGENCY FORCES NOTIFICATION FROM THE REMAINDER OF THE SLC.
- 10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING P-TOUCH LABELS ON ALL NEW ADDRESSABLE DEVICES WHICH INDICATE THEIR ASSOCIATED SLC LOOP AND DEVICE NUMBER.
- 11. THE CONTRACTOR SHALL BE REQUIRED TO COORDINATE AND CONDUCT 100% PRE-ACCEPTANCE TESTING OF THE NEW FIRE ALARM DEVICES AND APPLIANCES WITHIN THE SCOPE OF THIS PROJECT, ALONG WITH A MINIMUM OF 10% OF THE OTHER INITIATING DEVICES IN THE BUILDING PER NFPA 72.
- 12. THE CONTRACTOR SHALL BE REQUIRED TO COORDINATE AND CONDUCT FINAL ACCEPTANCE TESTING OF THE FIRE ALARM SYSTEM FOR THE EAST PROVIDENCE FIRE DEPARTMENT APPROVAL.
- 13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CUTTING, PATCHING, AND PAINTING NECESSARY TO COMPLETE THE SCOPE OF WORK.





| WALL CONSTRUCTION LEGEND |  |  |
|--------------------------|--|--|
|                          | EXISTING WALL<br>NEW WALL<br>EXISTING DOOR<br>NEW DOOR |  |

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# WALL CONSTRUCTION GENERAL NOTES & SCOPE OF WORK

- 1. CONSTRUCTION SHALL COMPLY WITH THE RHODE ISLAND BUILDING CODE, RHODE ISLAND LIFE SAFETY CODE, RHODE ISLAND ELECTRICAL CODE, AND ALL OTHER APPLICABLE CODES OR STANDARDS AND REGULATORY AGENCIES.
- 2. VERIFY EXISTING CONDITIONS IN THE FIELD PRIOR TO ANY NEW CONSTRUCTION. REPORT DISCREPANCIES TO ENGINEER PROMPTLY.
- 3. ALL NEW ELECTRICAL RECEPTACLES ARE TO BE COLOR WHITE. COORDINATE HEIGHT ON WALL TO ALIGN.
- 4. PATCH & REPAIR ALL DAMAGE TO EXISTING FINISHES CREATED BY COMPLETION OF THE NEW WORK.
- 5. DOOR JAMBS ARE TYPICALLY LOCATED 4" FROM FACE OF PERPENDICULAR PARTITION TO INSIDE FACE OF DOOR FRAME, UNLESS OTHERWISE NOTED.
- 6. WHERE NEW WALLS ABUT EXISTING WALLS, ALIGN COMMON FACES OF MATERIALS, REMOVE EXISTING CORNER BEAD AND PROVIDE SMOOTH FINISH AT INTERSECTION.
- 7. THE WORK INCLUDES PAINTING NEWLY CONSTRUCTED WALLS. COORDINATE WALL PAINT COLOR WITH OWNER.
- 8. THE WORK INCLUDES FURNISHING AND INSTALLING NEW DOORS, LOCKING HARDWARE, AND FRAMES AS DEPICTED ON THE DESIGN DRAWINGS. ALL NEW DOORS ARE TO BE 3' X 7' IN SIZE.
- 9. FURNISH AND INSTALL BASEBOARDS TO MATCH EXISTING COLOR AND STYLE.

# CODE SUMMARY

• RHODE ISLAND STATE BUILDING CODE (RISBC) - ADOPTS AND AMENDS THE INTERNATIONAL BUILDING CODE (2018)

APPLICABLE CODES:

 RHODE ISLAND FIRE CODE (RIFC) - ADOPTS AND AMENDS NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 1, FIRE CODE (2018) RHODE ISLAND LIFE SAFETY CODE (RILSC) - ADOPTS AND AMENDS NFPA 101, LIFE SAFETY CODE (2018)

THE RISBC APPLIES TO THE CONSTRUCTION, ALTERATION, MOVEMENT, ENLARGEMENT, REPLACEMENT, REPAIR, EQUIPMENT, USE AND OCCUPANCY, LOCATION, MAINTENANCE, REMOVAL, AND DEMOLITION OF EVERY BUILDING OR STRUCTURE OR ANY APPURTENANCES CONNECTED OR ATTACHED TO SUCH BUILDINGS OR STRUCTURES.

PROJECT SUMMARY:

MODIFICATIONS TO THE EXISTING 20,410 SQUARE FOOT BUILDING TO CREATE ADDITIONAL SEPARATE CLASSROOM SPACES FOR TEMPORARY USE (2 YEARS). THE CURRENT MULTI-PURPOSE ROOM WILL BE DIVIDED TO REDUCE THE MULTI-PURPOSE AREA AND ADD TWO CLASSROOMS. THE CURRENT CLASSROOM 131 WILL BE SPLIT IN HALF TO RESULT IN TWO CLASSROOMS. EACH NEW CLASSROOM WILL HAVE TWO EXIT ACCESS DOORS.

OCCUPANCY CLASSIFICATION: EXISTING EDUCATIONAL OCCUPANCY PER RILSC SECTION 6.1.3.1.

GENERAL INFORMATION:

BUILDING IS NOT SPRINKLERED BUILDING IS EQUIPPED WITH FIRE ALARM SYSTEM WITH EMERGENCY FORCES NOTIFICATION

OCCUPANT LOAD CALCULATED WITH 20 SQ FT/PERSON DENSITY OUTLINED IN RILSC TABLE 7.3.1.2 FOR CLASSROOMS NEW WALLS CONSTRUCTED ARE PARTITIONS AND NOT REQUIRED TO MAINTAIN ANY FIRE RESISTANCE RATING OR SMOKE BARRIER SEPARATION.

IN ORDER TO COMPLY WITH RILSC SECTION 15.2.5.5, EACH NEWLY CREATED CLASSROOM HAS AN EXIT ACCESS DOOR LEADING DIRECTLY TO AN EXIT ACCESS CORRIDOR OR AN EXTERIOR DOOR EXCEPT CLASSROOM 131A. THIS ROOM IS PERMITTED TO TRAVEL THROUGH INTERVENING ROOM 131 TO THE CORRIDOR USING EXCEPTION (2A). THE TRAVEL DISTANCE TO THE DOOR TO THE CORRIDOR IS LESS THAN 75 FEET WHICH IS COMPLIANT FOR A NONSPRINKLERED BUILDING.



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| OLDHAM CLASSROOM<br>MODIFICATIONS   |  |   |
| ADDRESS<br>60 BA<br>PROJECT NC<br>DATE  | 1FLG00005.000  |   |
| DESIGN<br>FLG<br>SCALE  | APRIL 21, 2023           DRAWN BY         CHECKED BY           FLG         JWS           AS NOTED  | A |
| WALL MODIFICATIONS PLAN   |  |   |
| NUMBER  | FA-2.0   |   |
| SHEET   | 2 of 2   | ┢ |

DESIGN NARRATIVE

# OLDHAM SCHOOL

Temporary Classroom Modifications



#### PREPARED FOR

Oldham School 60 Bart Drive Riverside, RI 02915

Project #: 1FLG00005.000 Date: April 21, 2023

#### PREPARED BY

Faye Gauthier, EIT 117 Metro Center Blvd, Suite 1002 Warwick, RI 02886

faye.gauthier@jensenhughes.com (401) 252-0140

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#### *1.0 Introduction*

Jensen Hughes has prepared this document to outline the scope of work associated with the temporary classroom modifications at Oldham Elementary School located at 60 Bart Drive, Riverside RI. This narrative describes the work related to the temporary wall construction necessary to modify two existing spaces to create new classroom spaces. This narrative also describes the fire alarm system information and design criteria necessary to provide code compliant NFPA 72 alterations to the existing system to accommodate the new classroom layouts.

### 2.0 Basis of Design

#### 2.1 BUILDING DESCRIPTION

The Oldham Elementary School building is a single-story mixed-use occupancy as defined by the *Rhode Island State Building Code* (RISBC) and the *Rhode Island Life Safety Code* (RILSC). The following summarizes the general building features:

1. Construction Type: II-A (RISBC)

| 2. | Occupancy Use Groups: | E, Educational (Classrooms)<br>S-1, Storage (Moderate Hazard Storage Rooms)<br>F-1/F-2, Industrial (Mechanical/Utility Equipment Rooms) (Assumed that<br>all hazardous materials in building do not exceed exempt quantities and<br>that there are no high hazard areas.) |
|----|-----------------------|---|
| 3. | Square Footage:       | Approximately 26,000 gross square feet  |

- 4. Building Height: Approximately 12 feet from grade plane to top of building
- 5. Number of Floors Above Grade:
- 6. Number of Floors Below Grade:
- 7. Fire Alarm System: The building is equipped with an existing fire alarm system throughout the occupiable areas. This fire alarm system is currently provided with emergency forces notification to the East Providence Fire Department through existing radio master box #2126. Several existing initiating devices and notification appliances will be removed and new equipment added as part of this scope.
- 8. Fire Protection System: The building is not provided with an automatic sprinkler system.

#### 2.2 APPLICABLE LAWS, REGULATIONS, AND STANDARDS

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The automatic fire sprinkler, fire alarm, and life safety systems will be designed and installed in accordance with the applicable provisions of the following codes and standards:

- 1. Rhode Island State Fire Code (RIFC) National Fire Protection Association (NFPA) Standard 1-2018, "Fire Code", as amended by Section 7 of the Rhode Island Fire Safety Code.
- Rhode Island State Life Safety Code (RILSC) NFPA 101-2018, "Life Safety Code", as amended by Section 8 of the Rhode Island Fire Safety Code.
- 3. NFPA 70, "National Electrical Code", 2017 Edition.
- 4. NFPA 72, "National Fire Alarm Code", 2019 Edition.
- 5. All applicable standards referenced by the RIFC and RILSC.

## 3.0 Fire Alarm System

#### 3.1 DESIGN RESPONSIBILITY FOR FIRE PROTECTION SYSTEM

The Professional Engineer (P.E.) from Jensen Hughes will specify the design criteria to be used by the installing contractor who will finalize the system layout and confirm the design criteria (working plans). This will include the design identifying modifications to the existing system. The P.E. from Jensen Hughes will be considered the Engineer of Record (EOR). Jensen Hughes will review the system installation for code compliance periodically during construction and will certify the system installation for general conformance with the construction documents at completion.

#### 3.2 SYSTEM DESIGN BASIS

The scope of work of this project includes demolishing two heat detectors and one horn/strobe and installing four (4) new heat detectors and five (5) new horn/strobes. The existing system will otherwise not be altered.

#### 3.2.1 Fire Alarm Control Unit & Control Equipment

The existing addressable Simplex 4010 fire alarm control unit is located in the main lobby next to the radio masterbox. Both the fire alarm control unit and masterbox will be maintained.

#### 3.2.2 Notification Appliances

Existing notification appliances shall remain except those shown to be demolished on the design drawings. New horn/strobes are to be installed in each room where shown on the design drawings.

#### 3.2.3 Initiating, Monitoring & Control Devices

Existing initiating devices shall remain except those shown to be demolished on the design drawings. New heat detectors are to be installed in each classroom where shown on the design drawings.

#### 3.2.4 Fire Alarm System Wiring

Existing signaling line circuits and notification appliance circuits shall remain. The existing signaling line circuit(s) and notification appliance circuit(s) shall be reused as much as is practical and extended to connect to the new devices. New signaling line circuits and notification appliance circuits shall be installed as necessary. All fire alarm wiring will be Class A and of the correct color code, as required in RILSC 9.6.9.8. All wiring shall be installed in metal raceway of 3/4 inch minimum or approved MC Cable. MC Cable shall only be installed above accessible ceilings.

#### 3.2.5 Fire Alarm System Sequence of Operation

The existing sequence of operation is to be maintained.

#### 3.3 SYSTEM ACCEPTANCE

The Contractor will submit copies of completed test certificates and other required documentation to the East Providence Fire Department (AHJ) and coordinate scheduling (minimum ten (10) business days' notice) of common fire alarm system acceptance testing.

The Contractor will coordinate rescheduled testing where unsatisfactory results cannot be resolved such that testing can be completed to the satisfaction of the AHJ.

#### 3.4 APPROVAL REQUIREMENTS

It is the Contractor's responsibility to obtain the following approvals and submit the following documentation prior to the start of work:

- 1. East Providence Fire Department Fire Alarm;
- 2. East Providence Department of Inspections and Standards; and
- 3. All documentation required by the RIFC.

The following documentation and approvals are necessary prior to the final acceptance test:

- 1. East Providence Electrical Inspection;
- 2. East Providence Fire Department Fire Alarm Division Rough Inspection;
- 3. Documentation of names, addresses, and telephone numbers of personnel for emergency notification will be submitted to code officials; and
- 4. Document(s) certifying that the system is in compliance with all laws, regulations, standards, and preapproved narrative reports (to be submitted to professional in charge after pre-acceptance testing).

The following approval is necessary after the fire alarm system installation is complete:

1. A fire alarm system acceptance test witnessed by the East Providence Fire Department.

#### 3.5 CONSTRUCTION SUPERVISION AND CLOSEOUT

Prior to installation beginning, the contractor shall provide product data sheets and associated calculations to Jensen Hughes for review and approval.

#### 3.6 METHOD FOR FUTURE TESTING AND MAINTENANCE

The fire alarm system contractor will provide all initial system acceptance testing as required per NFPA 72. The fire alarm system contractor will be responsible for providing all required as-built documents, equipment O&M manuals, and information regarding the necessary system inspection, testing and maintenance instructions listed in NFPA 72. All future testing, inspection and maintenance, at the completion of the project, will be the responsibility of the Building Owner.

## 4.0 Temporary Wall Construction

#### 4.1.1 Design Basis

The scope of work addresses a temporary need for additional classroom spaces to accommodate students displaced from another East Providence school undergoing construction. It is anticipated that these classrooms are used for 2 years before the students may return to the other school.

#### 4.1.2 Code Implications

The classrooms are arranged such that each classroom has two exit access doors, and at least one door leading directly to the exterior or to an exit access corridor. Classroom 131A relies on Section 15.2.5.5 Exception 2a of the RILSC to allow access to the corridor through an intervening room (Room 131). None of the new walls are part of a corridor, so there is no fire rating or smoke barrier separation required.

#### 4.1.3 Wall Construction

The walls are to be constructed as non-fire rated partitions that extend to the existing suspended ceiling. The wall assembly is to be comprised of two layers of 5/8" gypsum wall board surrounding typical 2x4 steel stud framing. Walls are to align with the existing window mullions at the exterior walls as noted on the design drawings. Walls are to be painted with a color specified by the owner.

The walls are to be provided with electrical receptacles at 6-foot horizontal intervals to serve each classroom as noted on the design drawings.

#### 4.1.4 Doors

The doors are to be standard 3'x7' door leaves with accompanying frames. Door hardware is to be capable of standard key locking with keys that match the building's master key system. Door hardware shall allow free egress at all times and comply with the provisions of the RILSC for means of egress.