

February 26, 2026

RE: **Houston Elementary School Safe Entrance Addition**

310 South Sherman Street, Houston, MN

ISD #294 – HOUSTON PUBLIC SCHOOLS  
306 West Elm Street  
Houston, MN 55943

WIDSETH Project No. 2025-11441

**BID DATE: Bids will be received until 11:00 AM local time, on March 5, 2026.**

**SUBJECT: ADDENDUM #1**

The following items shall become a part of the drawings and specifications and shall supersede any conflicting provisions of these Documents:

**GENERAL CLARIFICATION:**

1. Insurance requirements for the project can be found in Section 00 7300 – Supplementary Conditions, Article 11, which shall take precedence over any conflicting information found in the *Sample AIA Agreement Form*, Exhibit A (Section 00 5200). The contractor's Builder's Risk policy will need to insure the new work while the Owner is responsible for insuring the existing building.

**SPECIFICATIONS:**

**Add** the following Sections to the Specifications:

|         |                               |
|---------|-------------------------------|
| 08 4413 | Glazed Aluminum Curtain Wall  |
| 08 5659 | Aluminum Service Window Units |

Section 00 0110 – TABLE OF CONTENTS – **Replace** with revised section.

- Added Sections 08 4413 and 08 5659 to Division 08.

Section 08 8000 - GLAZING – **Replace** with revised section.

- 2.03 Insulating Glass Units; Paragraph C; Item 11 – removed sub-paragraphs a-e.

## DRAWINGS:

A1.10 - GYM ENTRY FLOOR PLAN / DETAILS – **Replace** with attached revised Sheet.

- 1/A1.10 - GYM / ENTRY LEVEL - Added missing elevation marker, added section detail, adjusted window dimensions for W12FC.
- 4/A1.10 - FLOOR PLAN DETAIL - CONNECTION TO EXIST. - Changed wall type tag.
- 5/A1.10 - FLOOR PLAN DETAIL AT JAMB - Changed wall type tag.

A3.10 - ROOF PLAN – **Replace** with attached revised Sheet.

- 1/A3.10 - ROOF PLAN - Added Detail.
- 5/A3.10 - DETAIL AT SCUPPER / DOWNSPOUT - Detail changed location on sheet.
- 6/A3.10 - DETAIL AT OVERFLOW SCUPPER - Added detail.
- 7/A3.10 - DETAIL AT EXIST. WALL - Added detail.

A4.10 - BUILDING ELEVATIONS – **Replace** with attached revised Sheet.

- 2/A3.10 - FRONT ELEVATION - Marking missing material tag with ST-1.

A5.10 - BUILDING SECTIONS – **Replace** with attached revised Sheet.

- 1/A5.10 - SECTION E/W AT VESTIBULE - Removed foundation footing.

A5.20 - WALL SECTIONS – **Replace** with attached revised Sheet.

- 2/A5.20 - WALL SECTION AT WINDOW - Adjusted grade height shown.
- 3/A5.20 - TYPICAL WALL SECTION - Adjusted grade height shown.
- 7/A5.20 - WALL SECTION AT EXISTING FOUNDATION - Adjusted grade height shown.
- 9/A5.20 - FOUNDATION DETAIL - Added detail.

A7.10 - INTERIOR ELEVATIONS, DETAILS & ROOM FINISH SCHEDULE – **Replace** with attached revised Sheet.

- 3/A7.10 - STUDENT LEARNING COMMONS - adjusted window dimensions for W12FC.
- 4/A7.10 - RECEPTION DESK FRONT - Marked portion of desk to be open.
- 6/A7.10 - VESTIBULE INT. ELEVATION - adjusted window dimensions for W12FC.
- 9/A7.10 - RECEPTION DESK - Added detail marker and adjusted window dimensions for W12FC.
- 10/A7.10 - RECEPTION DESK INT. - Marked portion of desk to be open and added detail marker.
- 19/A7.10 - CASEWORK DETAIL - WATERFALL COUNTERTOP - Added detail.

A9.10 - DOOR AND FRAME TYPES AND SCHEDULES – **Replace** with attached revised Sheet.

- ALUMINUM FRAME TYPES - Changed type AL05 from storefront to curtain wall, adjusted window dimensions for type AL07 and changed window type label.

## **APPROVALS:**

| SECTION  | APPROVED MANUFACTURER | ITEM              |
|----------|-----------------------|-------------------|
| 26 09 23 | COOPER                | Lighting controls |
| 26 51 00 | Columbia Lighting     | Light Fixture A   |
| 26 51 00 | EXO Outdoor Lighting  | Light Fixture B   |
| 26 51 00 | Compass               | Light Fixture C   |
| 26 51 00 | Compass               | Light Fixture D   |
| 26 51 00 | Compass               | Light Fixture EM  |
| 26 51 00 | Compass               | Light Fixture EM1 |
| 26 51 00 | METALUX               | Light Fixture A   |
| 26 51 00 | MCGRAW-ED             | Light Fixture B   |
| 26 51 00 | MULE LIGHTING, INC    | Light Fixture C   |
| 26 51 00 | MULE LIGHTING, INC    | Light Fixture D   |
| 26 51 00 | MULE LIGHTING, INC    | Light Fixture EM  |
| 26 51 00 | MULE LIGHTING, INC    | Light Fixture EM1 |

## **ATTACHMENTS:**

1. Section 00 0110 – Table of Contents
2. Section 08 4413 – Glazed Aluminum Curtain Wall
3. Section 08 5659 – Aluminum Service Window Units
4. Section 08 8000 – Glazing
5. Sheet A1.10 – Gym Entry Floor Plan / Details (Rev. 1, 02/26/2026)
6. Sheet A3.10 – Roof Plan (Rev. 1, 02/26/2026)
7. Sheet A4.10 – Building Elevations (Rev. 1, 02/26/2026)
8. Sheet A5.10 – Building Sections (Rev. 1, 02/26/2026)
9. Sheet A5.20 – Wall Sections (Rev. 1, 02/26/2026)
10. Sheet A7.10 – Interior Elevations, Details & Room Finish Schedule (Rev. 1, 02/26/2026)
11. Sheet A9.10 – Door and Frame Types and Schedules (Rev. 1, 02/26/2026)

**SECTION 00 0110  
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**PROCUREMENT AND CONTRACTING REQUIREMENTS**

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- 00 0105 - Certifications Page
- 00 0110 - Table of Contents
- 00 0115 - List of Drawing Sheets
- 00 1113 - Advertisement for Bids
- 00 2113 - Instructions to Bidders
  - AIA Document A701 (Current Edition), Instruction to Bidders
- 00 3100 - Available Project Information
- 00 4100 - Bid Form
- 00 4114 - Responsible Contractor Certification and Response Form
- 00 4325 - Substitution Request Form - During Procurement
- 00 5200 - Agreement Form
  - AIA A101-2017, Standard Form of Agreement Between Owner and Contractor - Sample
- 00 6113 - Performance and Payment Bond
  - AIA Document A312 (Current Edition), Performance Bond - Sample
  - AIA Document A312 (Current Edition), Payment Bond - Sample
- 00 7200 - General Conditions
  - AIA A201-2017, General Conditions of the Construction Contract
- 00 7300 - Supplementary Conditions
- 00 7343 - Prevailing Wage Requirements

**SPECIFICATIONS**

**DIVISION 01 -- GENERAL REQUIREMENTS**

- 01 1000 - Summary
- 01 2000 - Price and Payment Procedures
- 01 2300 - Alternates
- 01 2500 - Substitution Procedures
- 01 3000 - Administrative Requirements
- 01 4000 - Quality Requirements
- 01 4533 - Code-Required Special Inspections
- 01 4533.10 - Special Inspection Schedule
- 01 5000 - Temporary Facilities and Controls
- 01 6000 - Product Requirements
- 01 7000 - Execution and Closeout Requirements
- 01 7800 - Closeout Submittals

**DIVISION 02 -- EXISTING CONDITIONS**

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**DIVISION 03 -- CONCRETE**

03 3000 - Cast-in-Place Concrete

**DIVISION 04 -- MASONRY**

04 2000 - Unit Masonry

04 2600 - Adhered Masonry Veneer

**DIVISION 05 -- METALS**

05 1200 - Structural Steel Framing

05 2100 - Steel Joist Framing

05 3100 - Steel Decking

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05 5000 - Metal Fabrications

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07 2100 - Thermal Insulation

07 2500 - Weather Barriers

07 2613 - Above Grade Vapor Retarder

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07 6200 - Sheet Metal Flashing and Trim

07 9200 - Joint Sealants

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08 1416 - Flush Wood Doors

08 4100 - Exterior Aluminum-Framed Entrances and Storefronts

08 4113 - Interior Aluminum-Framed Entrances and Storefronts

08 4413 - Glazed Aluminum Curtain Wall

08 5659 - Aluminum Service Window Units

08 7100 - Door Hardware

08 8000 - Glazing

**DIVISION 09 -- FINISHES**

09 2116 - Gypsum Board Assemblies

09 5100 - Acoustical Ceilings

09 6813 - Tile Carpeting

09 9000 - Painting and

**DIVISION 21 -- FIRE SUPPRESSION**

- 21 0501 - Fire Suppression
- 21 0523 - Valves for Fire-Suppression Piping
- 21 0529 - Hangers and Supports for Fire Suppression Piping and Equipment
- 21 0553 - Identification for Fire Suppression Piping and Equipment
- 21 1101 - Fire Suppression Piping
- 21 1313 - Wet Pipe Sprinkler Systems

**DIVISION 22 -- PLUMBING (NOT USED)**

**DIVISION 23 -- HEATING, VENTILATING, AND AIR-CONDITIONING (HVAC)**

- 23 0501 - General Mechanical Requirements
- 23 0513 - Motor Requirements for HVAC Equipment
- 23 0519 - Meters and Gauges for HVAC Piping, Ductwork & Equipment
- 23 0523 - General-Duty Valves for HVAC Piping
- 23 0529 - Hangers and Supports for HVAC Piping and Equipment
- 23 0548 - Vibration and Seismic Controls for HVAC Piping and Equipment
- 23 0553 - Identification for HVAC Piping and Equipment
- 23 0593 - Testing, Adjusting, and Balancing for HVAC
- 23 0713 - Duct Insulation
- 23 0719 - HVAC Piping Insulation
- 23 0993 - Sequence of Operations
- 23 2113 - Hydronic Piping
- 23 2119 - Hydronic Piping Specialties
- 23 3113 - Metal Ductwork
- 23 3300 - Air Duct Accessories
- 23 3700 - Air Outlets and Inlets
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**DIVISION 26 -- ELECTRICAL**

- 26 0505 - Selective Demolition for Electrical
- 26 0519 - Low-Voltage Electrical Power Conductors and Cables
- 26 0526 - Grounding and Bonding for Electrical Systems
- 26 0529 - Hangers and Supports for Electrical Systems
- 26 0533.13 - Conduit for Electrical Systems
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- 26 0923 - Lighting Control Devices
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- 26 2816.16 - Enclosed Switches
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**DIVISION 27 -- COMMUNICATIONS**

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**DIVISION 28 -- ELECTRONIC SAFETY AND SECURITY**

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28 2000 - Video Surveillance System

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**END OF SECTION**

**SECTION 08 4413  
GLAZED ALUMINUM CURTAIN WALLS**

**PART 1 GENERAL**

**1.01 SUMMARY**

- A. This Section covers Architectural Aluminum Curtain Wall Systems, including perimeter trims, stools, accessories, shims and anchors, and perimeter sealing of curtain wall framing.

**1.02 DEFINITIONS**

- A. For fenestration industry standard terminology and definitions, refer to the Fenestration & Glazing Industry Alliance (FGIA) Glossary AAMA AG-13.

**1.03 PERFORMANCE REQUIREMENTS**

- A. General Performance:
1. Product to comply with the specified performance requirements without failure due to defective manufacture, fabrication, installation, or other defects in construction, as determined by testing of glazed aluminum curtain walls representing those indicated for this project.
  2. Glazed aluminum curtain walls shall withstand movements of supporting structure including, but not limited to, story drift, twist, column shortening, long-term creep, and deflection from uniformly distributed and concentrated live loads.
  3. Failure includes any of these events:
    - a. Thermal stresses transferring to building structure
    - b. Glass breakage
    - c. Loosening or weakening of fasteners, attachments, and other components
    - d. Failure of operating units
- B. Wind Loads:
1. The curtain wall system shall include anchorage that is capable of withstanding the following wind load design pressures:
    - a. Inward: (35) psf
    - b. Outward: (45) psf
- C. Air Leakage:
1. Maximum air leakage through fixed glazing and framing areas of 0.06 cfm/ft<sup>2</sup> (0.31 l/s·m<sup>2</sup>) of fixed wall area as determined according to ASTM E 283 and TAS 202 at a minimum static-air-pressure differential of 6.2 psf (300 Pa).
- D. Water Resistance:
1. Static:
    - a. The test specimen shall be tested in accordance with TAS 202 and ASTM E331.
    - b. There shall be no leakage at a minimum static air pressure differential of 15 psf (720 Pa) as defined in AAMA 501.
  2. Dynamic:
    - a. The test specimen shall be tested in accordance with AAMA 501.1.
    - b. There shall be no leakage at an air pressure differential of 15 psf (720 Pa) as defined in AAMA 501.
- E. Structural-Test Performance:
1. Test according to ASTM E 330 and TAS 202.
  2. When tested at positive and negative wind load design pressures, assemblies do not evidence deflection exceeding L/175 of clear span.
  3. A static air design load of 40 psf (1915 Pa) shall be applied in the positive and negative direction.
    - a. When tested at 150% of positive and negative wind-load design pressures, assemblies, including anchorage, do not evidence material failures, structural distress, and permanent deformation of main framing members exceeding 0.2% percent of clear span.

- b. Minimum test duration according to ASTM E 330 is 10 seconds.
- F. Structural-Test Performance:
  - 1. Based on Aluminum Association "Specification for Aluminum Structures" or CSA CAN3-S157 "Strength Design in Aluminum".
  - 2. There shall be no deflection exceeding  $L/175$  of the span of any framing member at design load.
- G. Deflection of Framing Members at Design Wind Pressure:
  - 1. Deflection Normal to Wall Plane:
    - a. Limited to edge of glass in a direction perpendicular to glass plane not exceeding  $L/175$  of the glass edge length for each individual glazing lite, or an amount that restricts edge deflection of individual glazing lites to  $3/4$ ", whichever is less.
    - b. Limit deflection of clear span of framing members to  $L/175$  for spans less than or equal to 13'-6" and  $L/240 + 1/4$ " for spans greater than 13'-6" (4.11 meters).
  - 2. Deflection Parallel to Glazing Plane:
    - a. Operable Units - Provide a minimum 1/16-inch clearance between framing members and operable units.
    - b. Limited to  $L/360$  of clear span or 1/8 inch, whichever is smaller
  - 3. Cantilever Deflection:
    - a. Where framing members overhang an anchor point, limit deflection to two times the length of cantilevered member, divided by 175.
- H. Thermal Movements:
  - 1. Allow for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures:
    - a. Temperature Change (Range): 0 °F (-18 °C); 180 °F (82 °C).
    - b. Test Interior Ambient Air Temperature: 75 °F (24 °C).
    - c. Test Performance: No buckling; stress on glass; sealant failure; excess stress on framing, anchors, and fasteners; or reduction of performance when tested according to AAMA 501.5 for a minimum 3 cycles.
- I. Seismic:
  - 1. When tested to AAMA 501.4, system must meet design displacement (elastic) of 0.010 times the story height and ultimate displacement (inelastic) of 1.5 times the design displacement.
  - 2. When tested to AAMA 501.6, system must meet dynamic seismic drift causing glass fallout ( $\Delta$ Fallout) of 4.9" or 0.0300 times the story height.
- J. Thermal Transmittance (U-factor), Simulation:
  - 1. Thermal transmittance simulation results using NFRC 100 or AAMA 507 are based upon argon-filled 1" clear low-emissivity coated glass with warm edge spacer.
- K. Condensation Resistance Factor (CRF):
  - 1. Condensation resistance test results in accordance with AAMA 1503 or CSA A440 are based upon argon-filled 1" clear low-emissivity coated glass with warm edge spacer.
  - 2. For 1" glass: When tested using AAMA 1503, the CRF<sub>frame</sub> and CRF<sub>glass</sub> shall not be less than 79 and 76 respectively.

#### 1.04 SUBMITTALS

- A. Product Data:
  - 1. For each type of product indicated, include:
    - a. Construction details
    - b. Material descriptions
    - c. Dimensions of individual components and profiles
    - d. Finishes
- B. Shop Drawings:
  - 1. Plans
  - 2. Elevations

3. Sections
  4. Full-size details
  5. Attachments to other work
- C. Samples for Verification:
1. Provide a verification sample for each type of exposed finish required, in manufacturer's standard sizes.
- D. Product Test Reports:
1. Provide test reports for glazed aluminum curtain walls.
  2. Test reports must be based on evaluation of comprehensive tests performed by a qualified preconstruction testing agency.
  3. Test reports must indicate compliance with performance requirements.
- E. Fabrication Sample:
1. Provide a fabrication sample of each vertical-to-horizontal intersection of aluminum-framed curtain wall systems, made from 12" lengths of full-size components and showing details of the following:
    - a. Joinery
    - b. Glazing

### **1.05 QUALITY ASSURANCE**

- A. Installer Qualifications:
1. Installer must have successfully installed the same or similar systems required for the project and other projects of similar size and scope.
- B. Manufacturer Qualifications:
1. Manufacturer must be capable of fabricating glazed aluminum curtain walls that meet or exceed the stated performance requirements.
- C. Source Limitations:
1. Obtain aluminum curtain wall system through one source from a single manufacturer.
- D. Product Options:
1. Information on drawings and in specifications establishes requirements for aesthetic effects and performance characteristics of assemblies. Aesthetic effects are indicated by dimensions, arrangements, alignment, and profiles of components and assemblies as they relate to sightlines, to one another, and to adjoining construction.
  2. Do not modify intended aesthetic effects, as judged solely by Architect, except with Architect's approval. If modifications are proposed, submit comprehensive explanatory data to Architect for review.
- E. Pre-installation Conference:
1. Conduct conference at project site to comply with requirements in Division 01 Project Management and Coordination Section.

### **1.06 PROJECT CONDITIONS**

- A. Field Measurements:
1. Verify actual locations of structural supports for glazed aluminum curtain walls by field measurements before fabrication.
  2. Indicate measurements on shop drawings.

### **1.07 WARRANTY**

- A. Submit manufacturer's standard warranty for owner's acceptance.
- B. Warranty Period:
1. Two years from Date of Substantial Completion of the project provided however that in no event shall the Limited Warranty begin later than six months from date of shipment by manufacturer.

## **PART 2 PRODUCTS**

### **2.01 MANUFACTURERS**

- A. Basis-of-Design Product:
  - 1. Kawneer Company, Inc.
  - 2. Aluminum Curtain Wall Type AL05:
    - a. 1600UT System™ 1 Curtain Wall with 1" double glazed insulating glass:
      - 1) Sight line: 2-1/2"
      - 2) Outside glazed pressure plate format
      - 3) System depth: 6"
  - 3. Test to AAMA 501-05 and TAS 202.
- B. Substitutions:
  - 1. Refer to Division 01 Substitutions Section for procedures and submission requirements.
  - 2. Product Literature and Drawings:
    - a. Submit product literature and drawings modified to suit specific project requirements and job conditions.
  - 3. Certificates:
    - a. Submit certificate(s) certifying that the substitute manufacturer (1) attests to adherence to specification requirements for curtain wall system performance criteria, and (2) has been engaged in the design, manufacture, and fabrication of aluminum curtain walls for a period of not less than ten (10) years. (Company Name).
  - 4. Test Reports:
    - a. Submit test reports verifying compliance with each test requirement required by the project.
  - 5. Samples:
    - a. Provide samples of typical product sections and finish samples in manufacturer's standard sizes.
- C. Substitution Acceptance:
  - 1. Acceptance will be in written form, either as an addendum or modification.

### **2.02 MATERIALS**

- A. Aluminum Extrusions:
  - 1. Alloy and temper recommended by glazed aluminum curtain wall manufacturer for strength, corrosion resistance, and application of required finish
  - 2. Not less than 0.070" wall thickness at any location for the main frame
  - 3. Complying with ASTM B221: 6063-T6 alloy and temper
- B. Aluminum Sheet Alloy:
  - 1. Shall meet the requirements of ASTM B209.
- C. Fasteners:
  - 1. Aluminum, nonmagnetic stainless steel or other materials must be non-corrosive and compatible with aluminum members, trim hardware, anchors, and other components.
- D. Anchors, Clips, and Accessories:
  - 1. Aluminum, nonmagnetic stainless steel, or zinc-coated steel or iron complying with ASTM B633 for SC 3 severe service conditions or other suitable zinc coating.
  - 2. Anchors, clips, and accessories shall provide sufficient strength to withstand the design pressure indicated.
- E. Pressure Plate:
  - 1. Pressure plate shall be aluminum or fiberglass.
  - 2. Pressure plate shall be fastened to the mullion with stainless steel screws.
  - 3. Fiberglass pressure plate shall be tested to ASTM D638, D790, D695, D953, D3846.
- F. Reinforcing Members:

1. Aluminum, nonmagnetic stainless steel, or nickel/chrome-plated steel complying with ASTM B456 for Type SC 3 severe service conditions, or zinc-coated steel or iron complying with ASTM B633 for SC 3 severe service conditions or other suitable zinc coating.
  2. Reinforcing members must provide sufficient strength to withstand the design pressure indicated.
- G. Sealant:
1. For sealants required within fabricated curtain wall system, provide permanently elastic, non-shrinking, and non-migrating type recommended by sealant manufacturer for joint size and movement.
- H. Thermal Barrier:
1. Thermal barrier consists of 1" separation between the interior and exterior metal members in a typical condition.
  2. Thermal barrier assembly shall be tested to the thermal cycling requirements of ASTM E2692 and show no sign of degradation following the test.
- I. Tolerances:
1. References to tolerances for wall thickness and other cross-sectional dimensions of glazed curtain wall members are nominal and in compliance with AA Aluminum Standards and Data.

### **2.03 CURTAIN WALL FRAMING**

- A. Framing Members:
1. Manufacturer's standard extruded- or formed-aluminum framing members of thickness required and reinforced as required to support imposed loads
  2. Glazing System: Four-sided captured
  3. Glazing Plane: Front
- B. Glass:
1. 1" insulating glass option
- C. Brackets and Reinforcements:
1. Manufacturer's standard high-strength aluminum with non-staining, non-ferrous shims for aligning system components.
- D. Framing Sealants:
1. Shall be suitable for glazed aluminum curtain wall as recommended by sealant manufacturer.
- E. Fasteners and Accessories:
1. Manufacturer's standard corrosion-resistant, non-staining, non-bleeding fasteners and accessories must be compatible with adjacent materials.
  2. Where exposed, fasteners and accessories shall be stainless steel.
- F. Perimeter Anchors:
1. When steel anchors are used, provide insulation between steel material and aluminum material to prevent galvanic action.
- G. Packing, Shipping, Handling, and Unloading:
1. Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
- H. Storage and Protection:
1. Store materials so that they are protected from exposure to harmful weather conditions.
  2. Handle material and components to avoid damage.
  3. Protect material against damage from elements, construction activities, and other hazards before, during, and after installation.

### **2.04 GLAZING**

- A. Glazing: See Section 08 8000.
- B. Glazing Gaskets:
1. Gaskets to meet requirements of ASTM C864.

## **GLAZED ALUMINUM CURTAIN WALLS**

- C. Spacers and Setting Blocks:
  - 1. Manufacturer's standard elastomeric type
- D. Bond-Breaker Tape:
  - 1. Manufacturer's standard TFE-fluorocarbon or polyethylene material to which sealants will not develop adhesion.
- E. Glazing Sealants:
  - 1. As recommended by manufacturer for joint type.

## **2.05 FABRICATION**

- A. Extrude or form aluminum shapes before finishing.
- B. Fabricate components that, when assembled, have the following characteristics:
  - 1. Profiles that are sharp, straight, and free of defects or deformations
  - 2. Accurately fitted joints
  - 3. Physical and thermal isolation of glazing from framing members
  - 4. Accommodations for thermal and mechanical movements of glazing and framing that maintain required glazing edge clearances
  - 5. Provisions for field replacement of glazing from exterior
  - 6. Fasteners, anchors, and connection devices that are concealed from view to the greatest extent possible
  - 7. Internal weeping system or other means to drain water passing joints, condensation occurring within framing members, and moisture migrating within glazed aluminum curtain wall to exterior
  - 8. Double seal design with primary air and vapor barrier at interior side of glazed aluminum curtain wall and secondary seal weeped and vented to exterior.
- C. Curtain Wall Framing:
  - 1. Fabricate components for assembly using shear block system following manufacturer's standard installation instructions.
- D. After fabrication, clearly mark components to identify their locations in project according to shop drawings.

## **2.06 ALUMINUM FINISHES**

- A. Finish designations that are prefixed by AA comply with the system established by the Aluminum Association for designating aluminum finishes.
- B. Factory Finishing:
  - 1. Finish 1: Kawneer Permanodic® AA-M10C21A44, AAMA 611, Architectural Class I Color Anodic Coating (Color #40 Dark Bronze)

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. With installer present, examine areas for compliance with requirements for installation tolerances and other conditions affecting performance of the work.
- B. Proceed with installation only after correcting unsatisfactory conditions.

### **3.02 INSTALLATION**

- A. Curtain Wall System Installation:
  - 1. Install curtain wall systems plumb, level, and true to line, without warp or rack of frames, within manufacturer's prescribed tolerances, and complying with installation instructions.
  - 2. Provide support and anchor in place.
  - 3. Dissimilar Materials:
    - a. Provide separation of aluminum materials from sources of corrosion or electrolytic action contact points.
  - 4. Glazing:
    - a. Glass shall be outside-glazed.

- b. Glass shall be held in place with extruded aluminum pressure plates anchored to the mullion using stainless steel fasteners that are spaced no more than 9" (9 inch) on center.
  - 5. Water Drainage
    - a. Each light of glass shall be compartmentalized using joint plugs and silicone sealant to divert water to the horizontal weep locations.
    - b. Weep holes shall be located in the horizontal pressure plates and covers to divert water to the exterior of the building.
- B. Related Products Installation:
  - 1. Sealants (Perimeter):
    - a. Refer to Joint Treatment (Sealants) Section.
  - 2. Glass:
    - a. Refer to Glass and Glazing Section.
    - b. Reference: ANSI Z97.1, CPSC 16 CFR 1201, and GANA Glazing Manual.

### **3.03 FIELD QUALITY CONTROL**

- A. Manufacturer's Field Services:
  - 1. Upon owner's written request, provide periodic site visit by manufacturer's field service representative.

### **3.04 ADJUSTING, CLEANING, AND PROTECTION**

- A. Adjusting: Not applicable.
- B. Protection:
  - 1. Protect installed product's finish surfaces from damage during construction.
  - 2. Protect aluminum curtain wall system from damage from grinding and polishing compounds, plaster, lime, acid, cement, or other harmful contaminants.
- C. Cleaning:
  - 1. Repair or replace damaged installed products.
  - 2. Clean installed products in accordance with manufacturer's instructions prior to owner's acceptance.
  - 3. Remove and replace glass that has been broken, chipped, cracked, abraded, or damaged during the construction period.
  - 4. Remove construction debris from project site and legally dispose of debris.

**END OF SECTION**

**SECTION 08 5659  
ALUMINUM SERVICE WINDOW UNITS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Service window units.

**1.02 RELATED REQUIREMENTS**

- A. Section 09 2116 - Gypsum Board Assemblies - Metal stud framing
- B. Section 06 4100 - Architectural Wood Casework - Solid Surface Countertop

**1.03 REFERENCE STANDARDS**

- A. AAMA 611 - Specification for Anodized Architectural Aluminum.

**1.04 SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Product Data: Submit manufacturer's product data for specified products indicating materials, operation, glazing, finishes, and installation instructions.

**1.05 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver units in manufacturer's original packaging and unopened containers with identification labels intact.
- B. Store units in area protected from exposure to weather and vandalism.

**PART 2 PRODUCTS**

**2.01 MANUFACTURERS**

- A. Service and Teller Window Units:
  - 1. C.R Laurance Co., Inc.: [www.crlaurence.com](http://www.crlaurence.com).
  - 2. Substitutions: See Section 01 6000 - Product Requirements.

**2.02 SERVICE WINDOW UNITS**

- A. Location: Built within interior wall, as indicated on drawings.
- B. Window Type: Sliding, single horizontal.
  - 1. Mounting: Flush with wall surface.
  - 2. Window Size: 47-1/2 inch wide by 43-3/4 inch high.
  - 3. Material: Aluminum.
    - a. Finish: Color anodized, dark bronze.
  - 4. Sill: Full bottom track.
- C. Glazing: Laminated, 1/4 inch thickness, clear.
- D. Products:
  - 1. C.R Laurance Co., Inc.; SCDW Series Self-Closing Sliding Windows, SCDW4844XOGDU.
  - 2. Substitutions: See Section 01 6000 - Product Requirements.

**2.03 ASSEMBLY COMPONENTS**

- A. Windows: Factory-fabricated, finished, and glazed, with extruded aluminum frame and glazing stops; complete with hardware and anchors.
  - 1. Provide window units that are re-glazable from the secure side without dismantling the non-secure side of framing.
  - 2. Rigidly fit and secure joints and corners with internal reinforcement. Make joints and connections flush, hairline, and weatherproof. Fully weld corners.
  - 3. Apply factory finish to exposed surfaces.

**2.04 ACCESSORIES**

- A. Solid Surface Countertops - See Section 06 4100.

**PART 3 EXECUTION**

**3.01 EXAMINATION**

- A. Verify that window openings are ready for installation of windows.
- B. Verify that correct embedded anchors are in place and in proper location; repair or replace anchors as required to achieve satisfactory installation.
- C. Notify Architect if conditions are not suitable for installation of units; do not proceed until conditions are satisfactory.

**3.02 INSTALLATION**

- A. Install in accordance with manufacturer's instructions.
- B. Install units in correct orientation (inside/outside or secure/non-secure).
- C. Anchor units securely in manner so as to achieve performance specified.

**3.03 ADJUSTING**

- A. Adjust operating components for smooth operation while also maintaining a secure, weather-tight enclosure and a tight fit at the contact points; lubricate operating hardware.

**3.04 CLEANING**

- A. Remove protective material from factory finished surfaces.
- B. Clean exposed surfaces promptly after installation without damaging finishes.

**3.05 PROTECTION**

- A. Provide temporary protection to ensure that service windows are without damage upon Date of Substantial Completion.

**END OF SECTION**

**SECTION 08 8000  
GLAZING**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Insulating glass units.
- B. Glazing units.
- C. Glazing compounds.

**1.02 RELATED REQUIREMENTS**

- A. Section 08 1213 - Hollow Metal Frames: Glazed borrowed lites.
- B. Section 08 1416 - Flush Wood Doors: Glazed lites in doors.
- C. Section 08 4100 - Exterior Aluminum-Framed Entrances and Storefronts
- D. Section 08 4113 - Interior Aluminum-Framed Entrances and Storefronts

**1.03 REFERENCE STANDARDS**

- A. 16 CFR 1201 - Safety Standard for Architectural Glazing Materials.
- B. ANSI Z97.1 - American National Standard for Safety Glazing Materials Used in Buildings - Safety Performance Specifications and Methods of Test.
- C. ASCE 7 - Minimum Design Loads and Associated Criteria for Buildings and Other Structures.
- D. ASTM C864 - Standard Specification for Dense Elastomeric Compression Seal Gaskets, Setting Blocks, and Spacers.
- E. ASTM C920 - Standard Specification for Elastomeric Joint Sealants.
- F. ASTM C1036 - Standard Specification for Flat Glass.
- G. ASTM C1048 - Standard Specification for Heat-Strengthened and Fully Tempered Flat Glass.
- H. ASTM C1193 - Standard Guide for Use of Joint Sealants.
- I. ASTM C1376 - Standard Specification for Pyrolytic and Vacuum Deposition Coatings on Flat Glass.
- J. ASTM E1300 - Standard Practice for Determining Load Resistance of Glass in Buildings.
- K. ASTM E2190 - Standard Specification for Insulating Glass Unit Performance and Evaluation.
- L. BS EN 14179-1 - Glass in Building - Heat Soaked Thermally Toughened Soda Lime Silicate Safety Glass - Part 1: Definition and Description.
- M. GANA (SM) - GANA Sealant Manual.
- N. ICC (IECC) - International Energy Conservation Code.
- O. NFRC 100 - Procedure for Determining Fenestration Product U-factors.
- P. NFRC 200 - Procedure for Determining Fenestration Product Solar Heat Gain Coefficient and Visible Transmittance at Normal Incidence.
- Q. NFRC 300 - Test Method for Determining the Solar Optical Properties of Glazing Materials and Systems.

**1.04 SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Product Data on Insulating Glass Unit and Glazing Unit Glazing Types: Provide structural, physical and environmental characteristics, size limitations, special handling and installation requirements.
- C. Samples: Submit two samples 12 by 12 inch in size of glass units.
- D. Test Reports: Indicate compliance of glazing assembly meets or exceed specified requirements.

- E. Warranty Documentation: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

#### **1.05 QUALITY ASSURANCE**

- A. Perform Work in accordance with GANA (GM), GANA (SM), and IGMA TM-3000 for glazing installation methods.
- B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.
- C. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years documented experience.

#### **1.06 FIELD CONDITIONS**

- A. Do not install glazing when ambient temperature is less than 40 degrees F.
- B. Maintain minimum ambient temperature before, during and 24 hours after installation of glazing compounds.

#### **1.07 WARRANTY**

- A. See Section 01 7800 - Closeout Submittals for additional warranty requirements.
- B. Insulating Glass Units: Provide a ten (10) year manufacturer warranty to include coverage for seal failure, interpane dusting or misting, including replacement of failed units.
- C. Heat Soaked Tempered Glass: Provide a five (5) year manufacturer warranty to include coverage for spontaneous breakage of fully tempered glass caused by nickel sulfide (NiS) inclusions.

### **PART 2 PRODUCTS**

#### **2.01 PERFORMANCE REQUIREMENTS - EXTERIOR GLAZING ASSEMBLIES**

- A. Provide type and thickness of exterior glazing assemblies to support assembly dead loads, and to withstand live loads caused by positive and negative wind pressure acting normal to plane of glass.
  - 1. Design Pressure: Calculated in accordance with ASCE 7.
  - 2. Comply with ASTM E1300 for design load resistance of glass type, thickness, dimensions, and maximum lateral deflection of supported glass.
  - 3. Provide glass edge support system sufficiently stiff to limit the lateral deflection of supported glass edges to less than 1/175 of their lengths under specified design load.
  - 4. Glass thicknesses listed are minimum.
- B. Weather-Resistive Barrier Seals: Provide completed assemblies that maintain continuity of building enclosure water-resistive barrier, vapor retarder, and/or air barrier.
  - 1. In conjunction with weather barrier related materials described in other sections, as follows:
- C. Thermal and Optical Performance: Provide exterior glazing products with performance properties as indicated. Performance properties are in accordance with manufacturer's published data as determined with the following procedures and/or test methods:
  - 1. Center of Glass U-Value: Comply with NFRC 100 using Lawrence Berkeley National Laboratory (LBNL) WINDOW 7 computer program.
  - 2. Center of Glass Solar Heat Gain Coefficient (SHGC): Comply with NFRC 200 using Lawrence Berkeley National Laboratory (LBNL) WINDOW 7 computer program.
  - 3. Solar Optical Properties: Comply with NFRC 300 test method.
  - 4. Coordinate glass U-value with required thermal performance of assembly U-value; See section(s), 08 4100 and current energy code (ICC (IECC)) or the local Authority Having Jurisdiction, whichever is more stringent.

#### **2.02 GLASS MATERIALS**

- A. Float Glass: Provide float glass based glazing unless otherwise indicated.
  - 1. Annealed Type: ASTM C1036, Type I - Transparent Flat, Class 1 - Clear, Quality - Q3.
  - 2. Kind HS - Heat-Strengthened Type: Complies with ASTM C1048.
  - 3. Kind FT - Fully Tempered Type: Complies with ASTM C1048.

4. Fully Tempered Safety Glass: Complies with ANSI Z97.1 or 16 CFR 1201 criteria for safety glazing used in hazardous locations.
5. Heat-Soak Testing (HST): Provide HST of fully tempered glass used on canopy, point-supported, spider wall, high-risk, sloping overhead, horizontal overhead, free-standing glass protective barrier, or other demanding applications of project, to reduce risks of spontaneous breakage due to nickel sulfide (NiS) induced fractures in accordance with BS EN 14179-1.
6. Thicknesses: As indicated; provide greater thickness as required for exterior glazing wind load design.

### 2.03 INSULATING GLASS UNITS

- A. Insulating Glass Units: Types as indicated.
  1. Durability: Certified by an independent testing agency to comply with ASTM E2190.
  2. Coated Glass: Comply with requirements of ASTM C1376 for pyrolytic (hard-coat) type coatings on flat glass; coated vision glass, Kind CV; Kind CO; or coated spandrel glass, Kind CS.
  3. Warm-Edge Spacers: Flexible silicone with polyisobutylene (PIB) primary seal.
    - a. Spacer Width: As required for specified insulating glass unit.
  4. Spacer Color: Black.
  5. Edge Seal:
  6. Color: Black.
  7. Purge interpane space with dry air, hermetically sealed.
- B. Type GL-1 -Insulating Glass Units: Vision glass, double glazed.
  1. Applications: Exterior glazing unless otherwise indicated.
  2. Space between lites filled with argon.
  3. Outboard Lite: Fully tempered float glass, 1/4 inch thick, minimum.
    - a. Tint: Clear.
    - b. Low-E Coating: Vitro Architectural Glass (formerly PPG Glass) Solarban 60, on #2 surface.
  4. Warm-edge spacer.
  5. Inboard Lite: Fully tempered float glass, 1/4 inch thick, minimum.
    - a. Tint: Clear.
    - b. Coating: Pilkington Energy Advantage, on #4 surface.
  6. Total Thickness: 1 inch.
  7. Thermal Transmittance (U-Value), Assembly: 0.29, maximum.
  8. Visible Light Transmittance (VLT): 70 percent, nominal.
  9. Solar Heat Gain Coefficient (SHGC): 0.40, assembled maximum.
  10. Visible Light Reflectance, Outside: 11 percent, nominal.
  11. Glazing Method: Wet glazing method, sealant and sealant.
- C. Type GL-2 -Insulating Glass Units: Vision glass, double glazed.
  1. Applications: Exterior glazing unless otherwise indicated.
  2. Space between lites filled with argon.
  3. Outboard Lite: Heat-strengthened float glass, 1/4 inch thick, minimum.
    - a. Tint: Clear.
    - b. Low-E Coating: Vitro Architectural Glass (formerly PPG Glass) Solarban 60, on #2 surface.
  4. Warm-edge spacer.
  5. Inboard Lite: Heat-strengthened float glass, 1/4 inch thick, minimum.
    - a. Tint: Clear.
    - b. Coating: Pilkington Energy Advantage, on #4 surface.
  6. Total Thickness: 1 inch.
  7. Thermal Transmittance (U-Value), Assembly: 0.29, maximum.
  8. Visible Light Transmittance (VLT): 70 percent, nominal.
  9. Solar Heat Gain Coefficient (SHGC): 0.40, assembled maximum.
  10. Visible Light Reflectance, Outside: 11 percent, nominal.

11. Glazing Method: Wet glazing method, sealant and sealant.

#### **2.04 GLAZING UNITS**

- A. Type G-3 - Monolithic Safety Glazing: Non-fire-rated.
  1. Applications:
    - a. Glazed lites in doors, except fire doors.
    - b. Glazed sidelights to doors, except in fire-rated walls and partitions.
    - c. Other locations required by applicable federal, state, and local codes and regulations.
    - d. Other locations indicated on drawings.
  2. Glass Type: Fully tempered safety glass as specified.
  3. Tint: Clear.
  4. Thickness: 1/4 inch, nominal.
  5. Glazing Method: Dry glazing method, gasket glazing.

#### **2.05 GLAZING COMPOUNDS**

- A. Butyl Sealant: Single component; ASTM C920, Grade NS, Class 12-1/2, Uses M and A, Shore A hardness of 10 to 20; black color.
- B. Silicone Sealant: Single component; neutral curing; capable of water immersion without loss of properties; non-bleeding, non-staining; ASTM C920, Type S, Grade NS, Class 25, Uses M, A, and G; with cured Shore A hardness range of 15 to 25; color as selected.

#### **2.06 ACCESSORIES**

- A. Setting Blocks: Silicone, with 80 to 90 Shore A durometer hardness; ASTM C864 Option II. Length of 0.1 inch for each square foot of glazing or minimum 4 inch by width of glazing rabbet space minus 1/16 inch by height to suit glazing method and pane weight and area.
- B. Spacer Shims: Neoprene, 50 to 60 Shore A durometer hardness; ASTM C864 Option II. Minimum 3 inch long by one half the height of the glazing stop by thickness to suit application, self adhesive on one face.
- C. Glazing Tape, Back Bedding Mastic Type: Preformed, butyl-based, 100 percent solids compound with integral resilient spacer rod applicable to application indicated; 5 to 30 cured Shore A durometer hardness; coiled on release paper; black color.
  1. Width: As required for application.
  2. Thickness: As required for application.
- D. Glazing Gaskets: Resilient silicone extruded shape to suit glazing channel retaining slot; ASTM C864 Option I; color black.
- E. Glazing Clips: Manufacturer's standard type.

### **PART 3 EXECUTION**

#### **3.01 VERIFICATION OF CONDITIONS**

- A. Verify that openings for glazing are correctly sized and within tolerances, including those for size, squareness, and offsets at corners.
- B. Verify that the minimum required face and edge clearances are being provided.
- C. Verify that surfaces of glazing channels or recesses are clean, free of obstructions that may impede moisture movement, weeps are clear, and support framing is ready to receive glazing system.
- D. Verify that sealing between joints of glass framing members has been completed effectively.
- E. Proceed with glazing system installation only after unsatisfactory conditions have been corrected.

#### **3.02 PREPARATION**

- A. Clean contact surfaces with appropriate solvent and wipe dry within maximum of 24 hours before glazing. Remove coatings that are not tightly bonded to substrates.
- B. Seal porous glazing channels or recesses with substrate compatible primer or sealer.
- C. Prime surfaces scheduled to receive sealant where required for proper sealant adhesion.

### **3.03 INSTALLATION, GENERAL**

- A. Install glazing in compliance with written instructions of glass, gaskets, and other glazing material manufacturers, unless more stringent requirements are indicated, including those in glazing referenced standards.
- B. Install glazing sealants in accordance with ASTM C1193, GANA (SM), and manufacturer's instructions.
- C. Do not exceed edge pressures around perimeter of glass lites as stipulated by glass manufacturer.
- D. Set glass lites of system with uniform pattern, draw, bow, and similar characteristics.
- E. Set glass lites in proper orientation so that coatings face exterior or interior as indicated.
- F. Prevent glass from contact with any contaminating substances that may be the result of construction operations such as, and not limited to the following; weld splatter, fire-safing, plastering, mortar droppings, and paint.

### **3.04 INSTALLATION - DRY GLAZING METHOD (GASKET GLAZING)**

- A. Application - Exterior and/or Interior Glazed: Set glazing infills from either the exterior or the interior of the building.
- B. Place setting blocks at 1/4 points with edge block no more than 6 inch from corners.
- C. Rest glazing on setting blocks and push against fixed stop with sufficient pressure on gasket to attain full contact.
- D. Install removable stops without displacing glazing gasket; exert pressure for full continuous contact.

### **3.05 INSTALLATION - WET GLAZING METHOD (SEALANT AND SEALANT)**

- A. Application - Exterior Glazed: Set glazing infills from the exterior of the building.
- B. Place setting blocks at 1/4 points and install glazing pane or unit.
- C. Install removable stops with glazing centered in space by inserting spacer shims both sides at 24 inch intervals, 1/4 inch below sight line.
- D. Fill gaps between glazing and stops with \_\_\_\_\_ type sealant to depth of bite on glazing, but not more than 3/8 inch below sight line to ensure full contact with glazing and continue the air and vapor seal.
- E. Apply sealant to uniform line, flush with sight line. Tool or wipe sealant surface smooth.

### **3.06 INSTALLATION - WET/DRY GLAZING METHOD (TAPE AND SEALANT)**

- A. Application - Interior Glazed: Set glazing infills from the interior of the building.
- B. Cut glazing tape to length and install against permanent stops, projecting 1/16 inch above sight line.
- C. Place setting blocks at 1/4 points with edge block no more than 6 inch from corners.
- D. Rest glazing on setting blocks and push against tape to ensure full contact at perimeter of pane or unit.
- E. Install removable stops, spacer shims inserted between glazing and applied stops at 24 inch intervals, 1/4 inch below sight line.
- F. Fill gaps between pane and applied stop with sealant to depth equal to bite on glazing, to uniform and level line.
- G. Carefully trim protruding tape with knife.

### **3.07 CLEANING**

- A. Remove excess glazing materials from finish surfaces immediately after application using solvents or cleaners recommended by manufacturers.
- B. Remove nonpermanent labels immediately after glazing installation is complete.
- C. Clean glass and adjacent surfaces after sealants are fully cured.

- D. Clean glass on both exposed surfaces not more than 4 days prior to Date of Substantial Completion in accordance with glass manufacturer's written recommendations.

**3.08 PROTECTION**

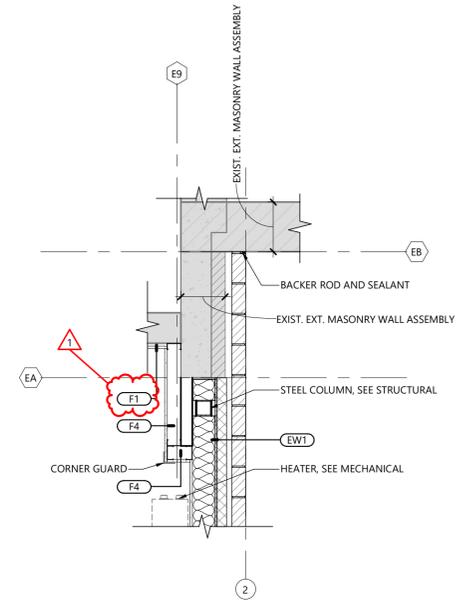
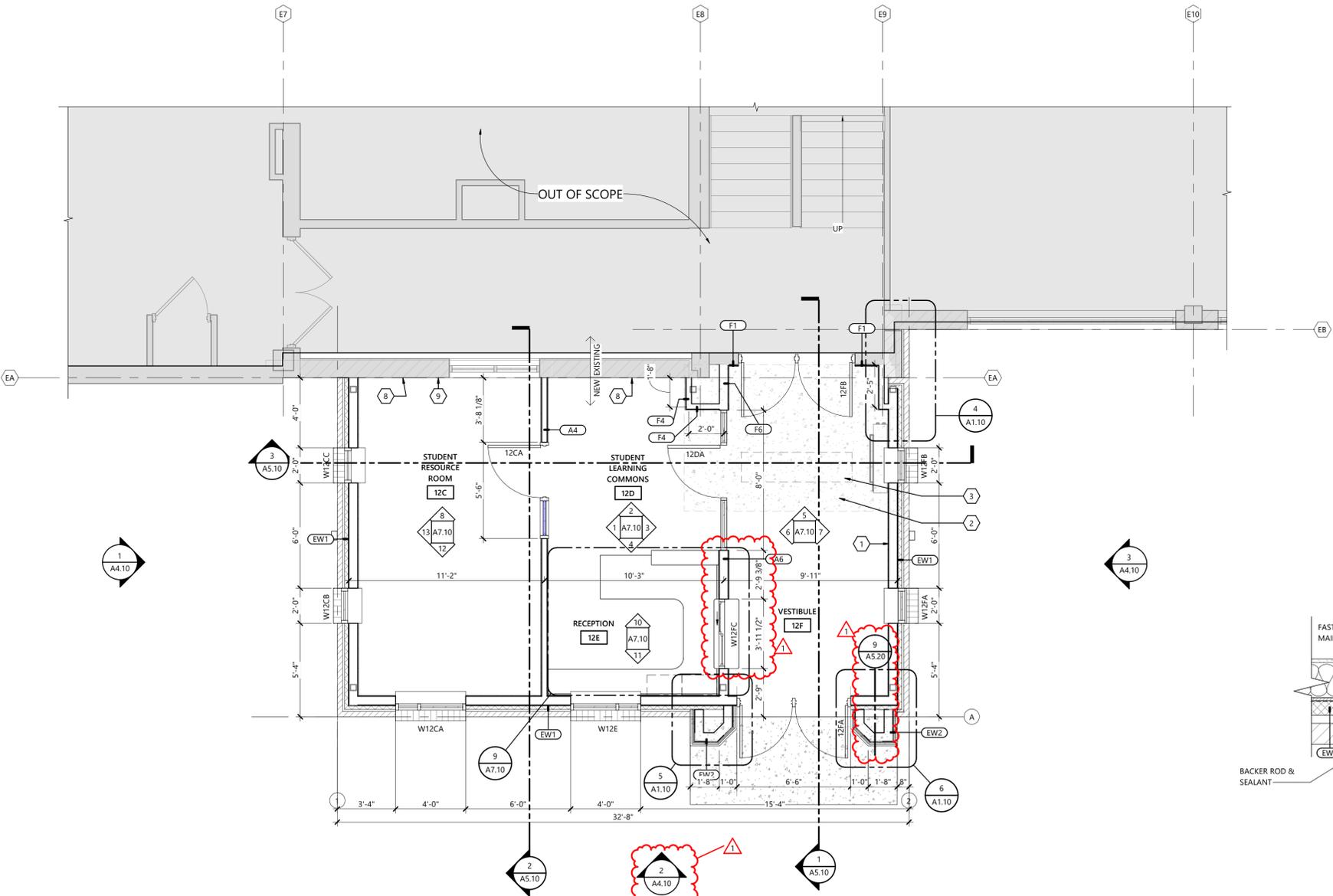
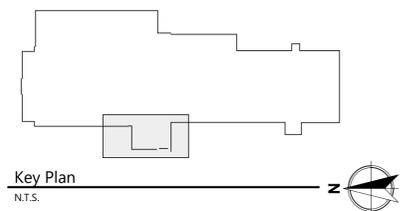
- A. After installation, mark pane with an 'X' by using removable plastic tape or paste; do not mark heat absorbing or reflective glass units.
- B. Remove and replace glass that is damaged during construction period prior to Date of Substantial Completion.

**END OF SECTION**

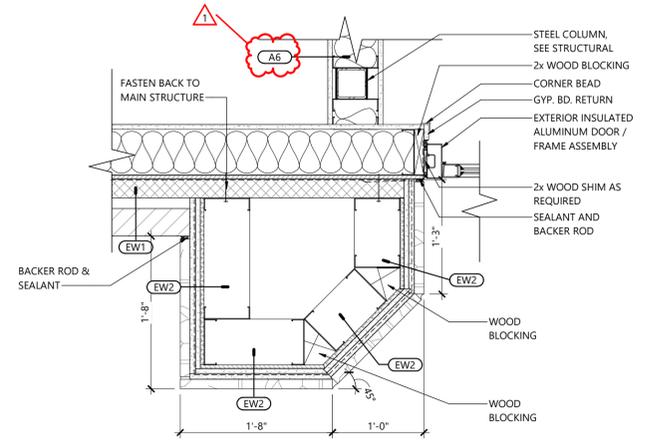
- GENERAL FLOOR PLAN NOTES:**
- ALL INTERIOR PARTITION WALLS ARE METAL STUDS @ 16" O.C. WITH 5/8" GWB EACH SIDE (U.N.O.)
  - DISCREPANCIES SHALL BE BROUGHT TO THE ARCHITECTS ATTENTION IMMEDIATELY
  - ALL PIPING, CONDUITS, AND RELATED MECHANICAL AND ELECTRICAL ITEMS SHALL BE CONCEALED WITHIN DRYWALL FURRING AS REQUIRED IN FINISHED AREAS WHETHER SHOWN ON DRAWINGS OR NOT, U.N.O.
  - PROVIDE METAL PLATE BACKING AND/OR TREATED WOOD BLOCKING IN WALLS WHERE WALL-MOUNTED EQUIPMENT IS SHOWN ON PLANS OR ELEVATIONS. VERIFY HEIGHT AND LENGTH WITH ACTUAL EQUIPMENT.
  - ALL DIMENSIONS ARE CLEAR FROM THE CENTER OF STUD, TO CENTER OF STUD. SEE PARTITION TYPES FOR ACTUAL THICKNESS OF PARTITIONS. MASONRY WALLS ARE DIMENSIONED TO THE NOMINAL FACE.
  - ALL EXTERIOR DIMENSIONS ARE EXTERIOR FACE OF BRICK TO OUTSIDE FACE OF BRICK. ALL INTERIOR DIMENSIONS ARE TO THE CENTER OF THE WALL (U.N.O.)
  - PATCH ALL HOLES IN SURFACES WHERE EQUIPMENT HAS BEEN REMOVED OR DEMOLITION HAS OCCURRED. PREPARED SURFACES AS REQUIRED FOR NEW FINISHES. PATCH TO MATCH ADJACENT SURFACE IF NOT SCHEDULED.
  - ALL FLOOR OPENINGS AND DEPRESSIONS IN THE WORK SHALL BE FILLED OR CLOSED U.N.O. WITH MATERIALS TO MATCH ADJACENT SURFACES. FINISHES ARE FIRE RATED.
  - PROVIDE CONTROL JOINTS FOR GYPSUM BOARD WALLS. MAXIMUM SPACING PER ASTM C 840 AND GA-216.

| ROOM FINISH SYMBOL LEGEND |  |
|---------------------------|--|
|                           | FLOOR FINISH CHANGE SYMBOL                         |
|                           | DENOTES DIRECTION OF FLOORING INSTALLATION PATTERN |
|                           | DENOTES LOCATION OF CORNER GUARDS                  |

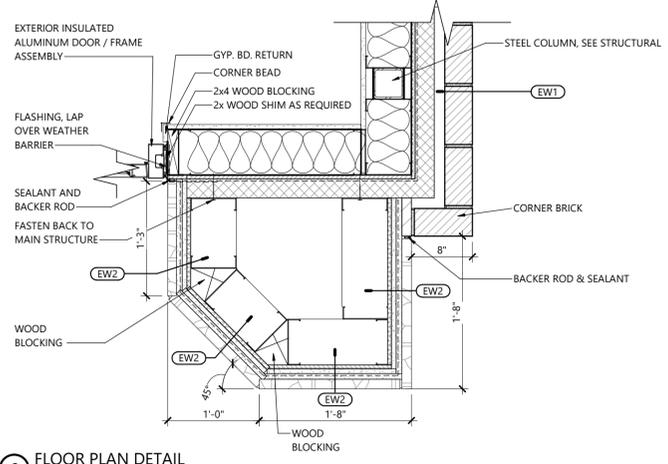
| # | DESCRIPTION   |
|---|---|
| 1 | REINSTALL SALVAGED BUILDING PLAQUES                                     |
| 2 | EXISTING FLOOR SLAB   |
| 3 | INFILL FLOOR GRATE FLUSH WITH SLAB, SEE STRUCTURAL                      |
| 8 | CLEAN EXISTING MASONRY WALL WHERE EXPOSED IN NEW INTERIOR, DO NOT PAINT |
| 9 | CLEAN EXISTING MASONRY WALL BELOW EXISTING VENT                         |



4 FLOOR PLAN DETAIL - CONNECTION TO EXIST.  
1/2" = 1'-0"



5 FLOOR PLAN DETAIL AT JAMB  
1" = 1'-0"



6 FLOOR PLAN DETAIL  
1" = 1'-0"

1 GYM / ENTRY LEVEL  
1/4" = 1'-0"

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ARCHITECTS • ENGINEERS • SCIENTISTS • SURVEYORS

DRAWN BY:  
BL  
CHECKED BY:  
KL

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.  
*Karl Larsen*  
Karl Larsen LIC # 54398 DATE: 02-12-26

| DATE       | REV# | REVISIONS DESCRIPTION |
|------------|------|-----------------------|
| 02/26/2026 | 1    | ADDENDUM 1            |

**Houston Elementary School Safe Entrance Addition**

GYM ENTRY FLOOR PLAN / DETAILS

**A1.10**

PROJECT #: 2025-11441

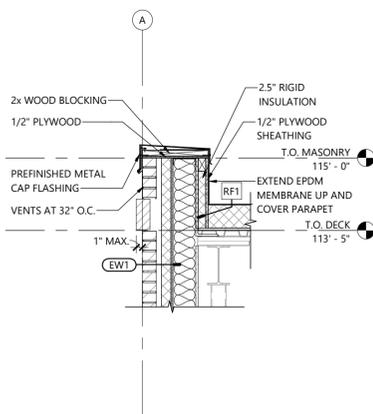
**GENERAL ROOF PLAN NOTES:**

- PROVIDE ROOFING MANUFACTURER'S RECOMMENDED STANDARDS, FLASHING DETAILS FOR ALL DRAINS, PENETRATIONS, ETC.
- VERIFY AND COORDINATE QUANTITY, SIZE AND LOCATIONS OF ROOF EQUIPMENT AND PENETRATIONS WITH OTHER TRADES.
- PROVIDE CRICKETS AT MECHANICAL EQUIPMENT CURBS ETC. TO PROVIDE POSITIVE DRAINAGE.
- UNIFORMLY SLOPE TAPERED INSULATION MINIMUM 1/4" IN HEIGHT PER 1'-0" HORIZONTALLY (OR AS REQUIRED BY CODE) AT LEVEL ROOF AREAS, UNLESS NOTED OTHERWISE.
- MINIMUM ROOF INSULATION THICKNESS AT ROOF DRAINS (LOW POINT)=2". SLOPE CRICKET INSULATION TO DRAIN AROUND PENETRATIONS (VENTS, STACKS, ETC.) AND AT VALLEYS BETWEEN ROOF DRAINS.
- ALL ROOF DRAINS SHALL HAVE AN OVERFLOW DRAIN OR SCUPPER SET AT ELEVATION 2" HIGHER THAN ROOF DRAIN, U.N.O.

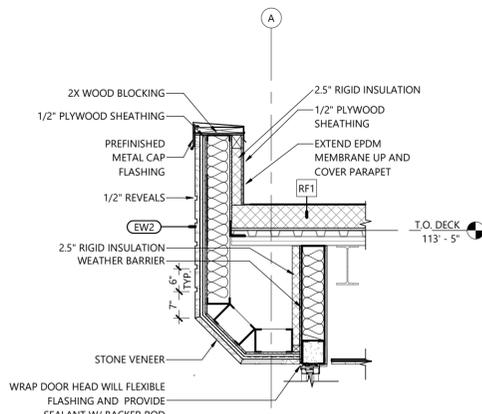
| ROOF PLAN LEGEND |   |
|------------------|---|
|                  | TAPERED ROOF INSULATION - INCHES PER FOOT AS INDICATED  |
|                  | APPROXIMATE TOTAL ROOF INSULATION THICKNESS - EXCLUDING CRICKETS (MINIMUM TWO LAYER - STAGGER JOINTS) |

| ROOF TYPES SCHEDULE |                                 |                 |      |
|---------------------|---------------------------------|-----------------|------|
| R#                  | DESCRIPTION                     | TESTS & RATINGS |      |
|                     |                                 | FIRE RATING     | UL # |
| RF1                 | MEMBRANE ROOFING, STEEL FRAMING |                 |      |

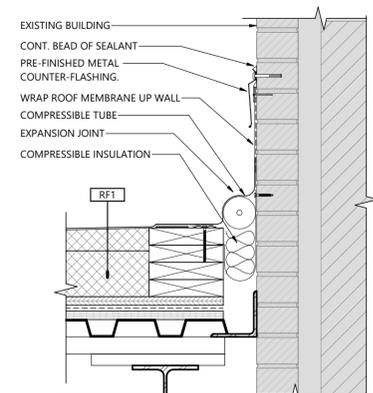
| KEYED PLAN NOTES |                                 |
|------------------|---------------------------------|
| #                | DESCRIPTION                     |
| 4                | METAL CAP FLASHING              |
| 5                | SCUPPER AND DOWNSPOUT           |
| 6                | OVERFLOW SCUPPER WITH EXTENSION |



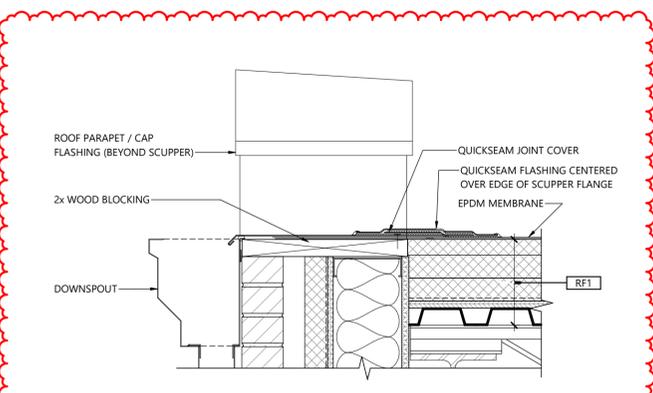
**2 ROOF DETAIL**  
1/2" = 1'-0"



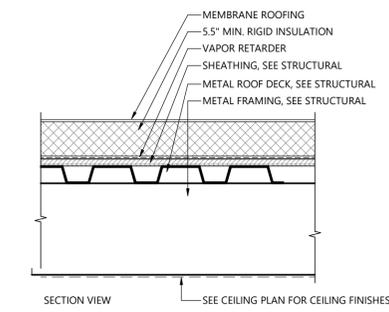
**3 ROOF DETAIL - SOFFIT AT ENTRY**  
1/2" = 1'-0"



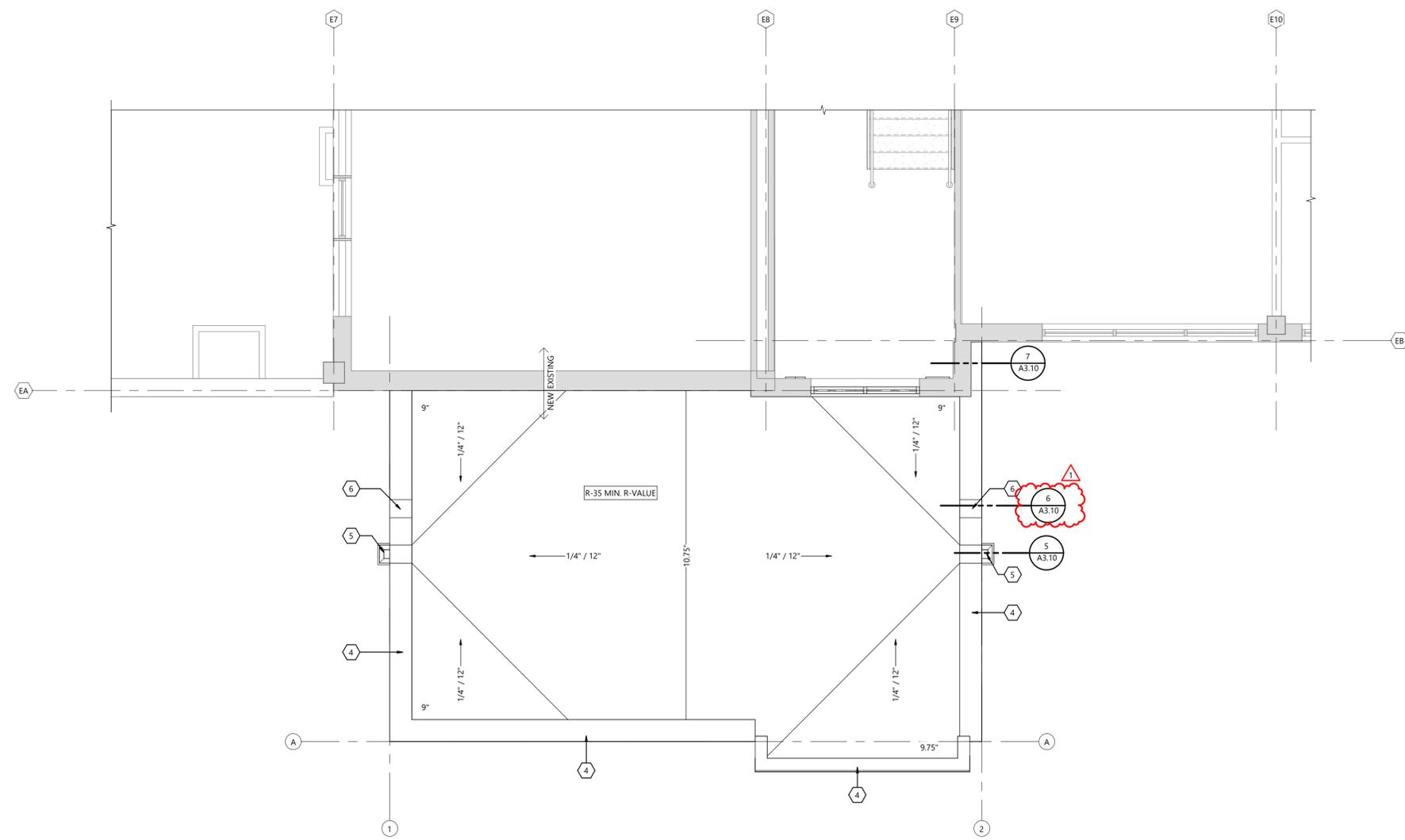
**4 ROOF DETAIL @ EXISTING WALL**  
1 1/2" = 1'-0"



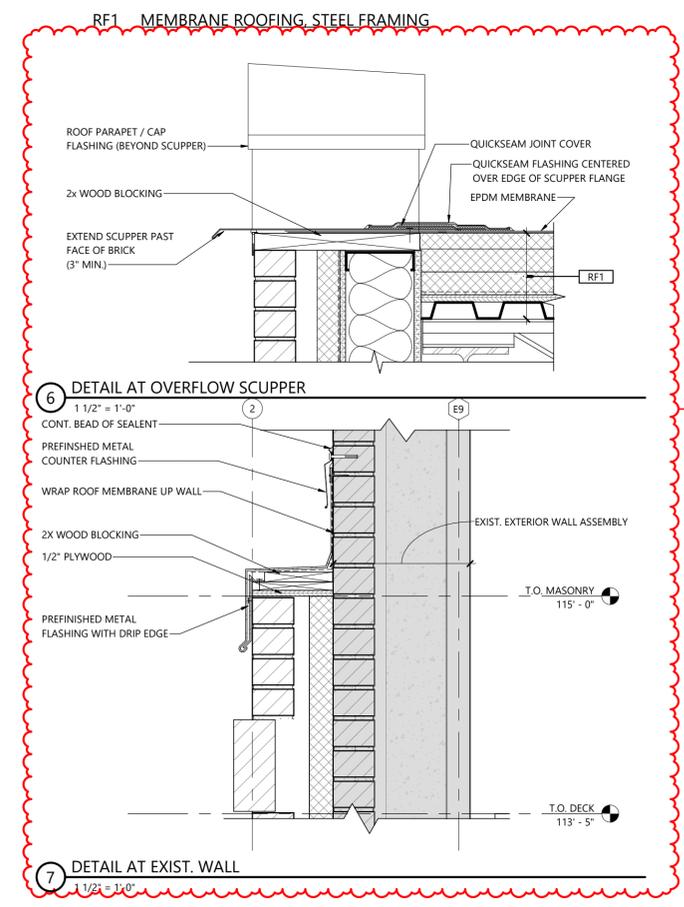
**5 DETAIL AT SCUPPER / DOWNSPOUT**  
1 1/2" = 1'-0"



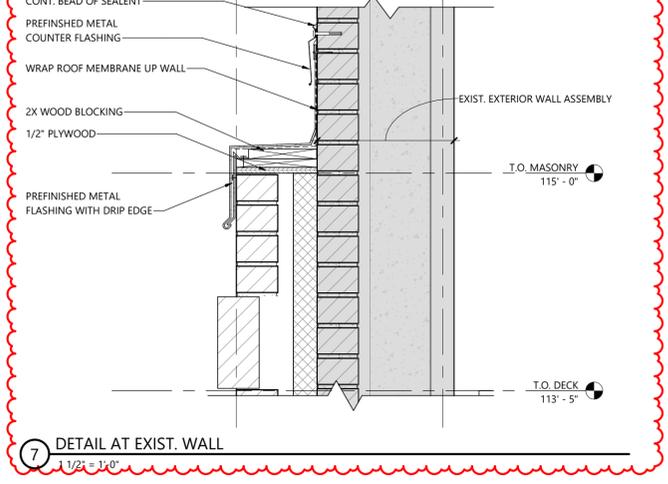
**KEY PLAN**  
N.T.S.



**1 ROOF PLAN**  
1/4" = 1'-0"



**6 DETAIL AT OVERFLOW SCUPPER**  
1 1/2" = 1'-0"



**7 DETAIL AT EXIST. WALL**  
1 1/2" = 1'-0"



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KL

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*Karl Larsen*  
Karl Larsen LIC # 54398 DATE: 02-12-26

| DATE       | REV# | REVISIONS DESCRIPTION |
|------------|------|-----------------------|
| 02/26/2026 | 1    | ADDENDUM 1            |

**Houston Elementary School Safe Entrance Addition**

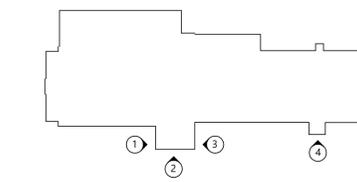
ROOF PLAN

**A3.10**

PROJECT #: 2025-11441

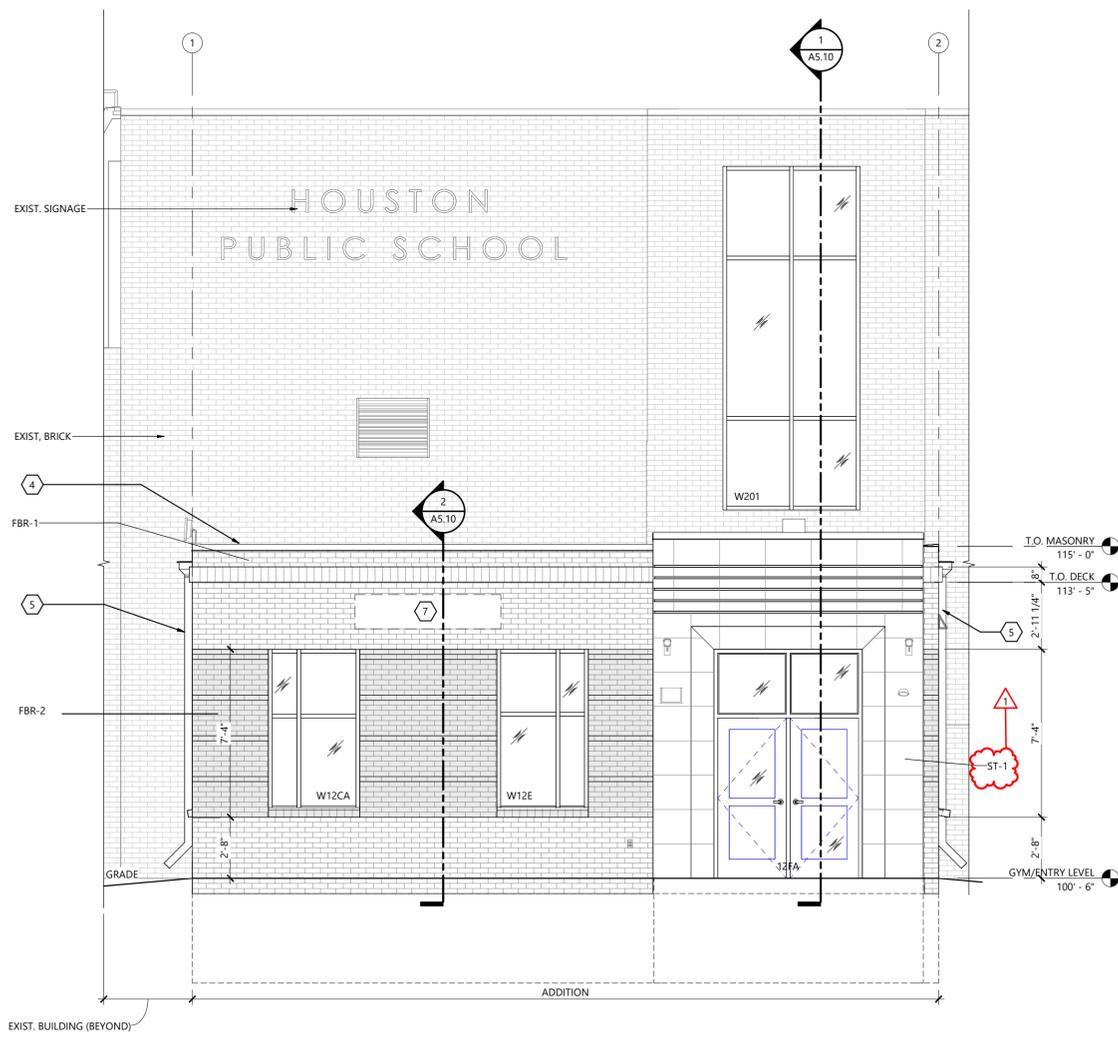


**4 WEST ELEVATION - ALTERNATE #1**  
1/4" = 1'-0"

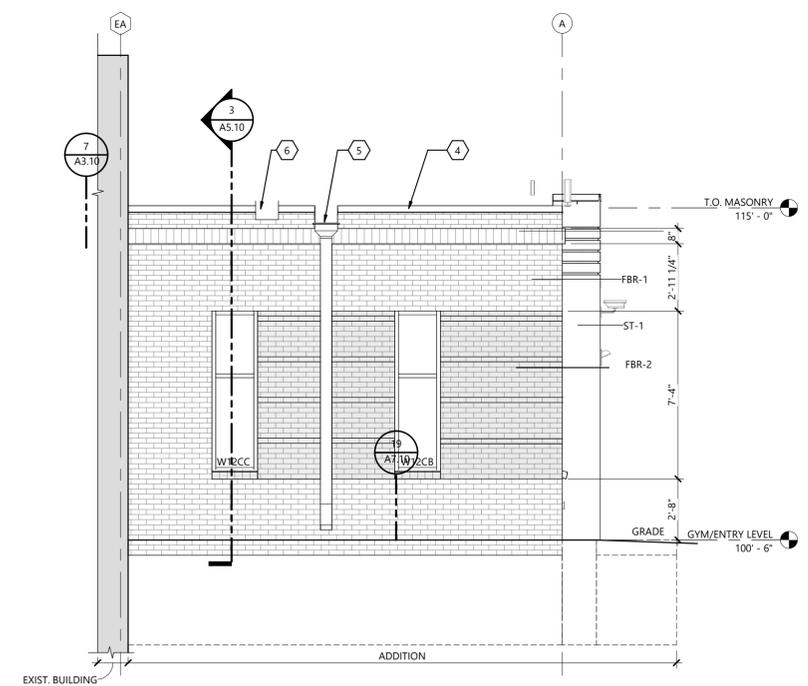


**5 ELEVATION KEY PLAN**  
1/4" = 1'-0"

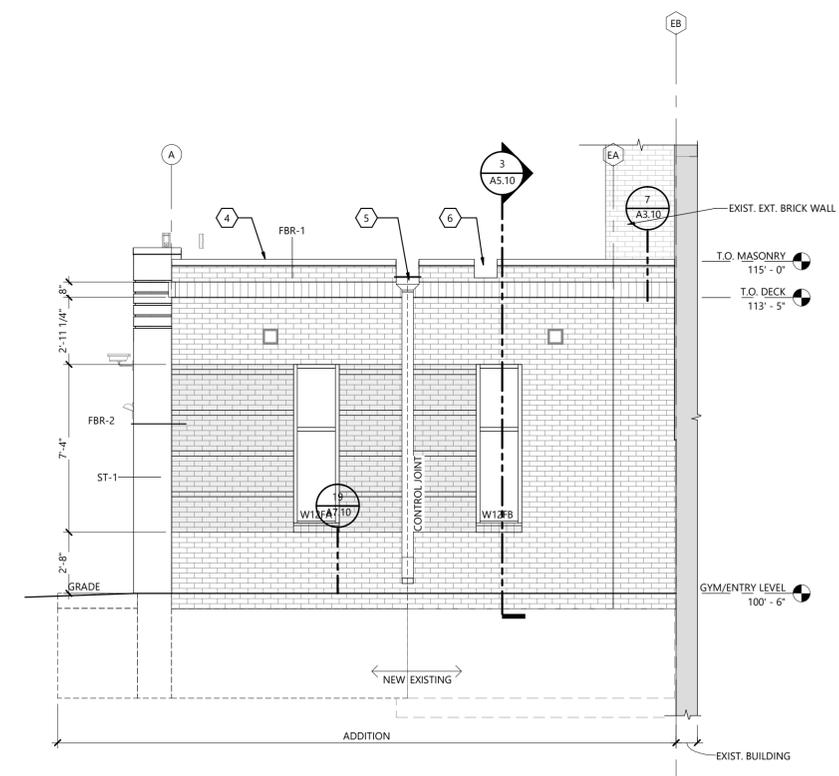
| # | DESCRIPTION                         |
|---|-------------------------------------|
| 4 | METAL CAP FLASHING                  |
| 5 | SCUPPER AND DOWNSPOUT               |
| 6 | OVERFLOW SCUPPER WITH EXTENSION     |
| 7 | REINSTALL SALVAGED BUILDING SIGNAGE |



**2 FRONT ELEVATION**  
1/4" = 1'-0"



**1 SIDE ELEVATION**  
1/4" = 1'-0"



**3 SIDE ELEVATION**  
1/4" = 1'-0"

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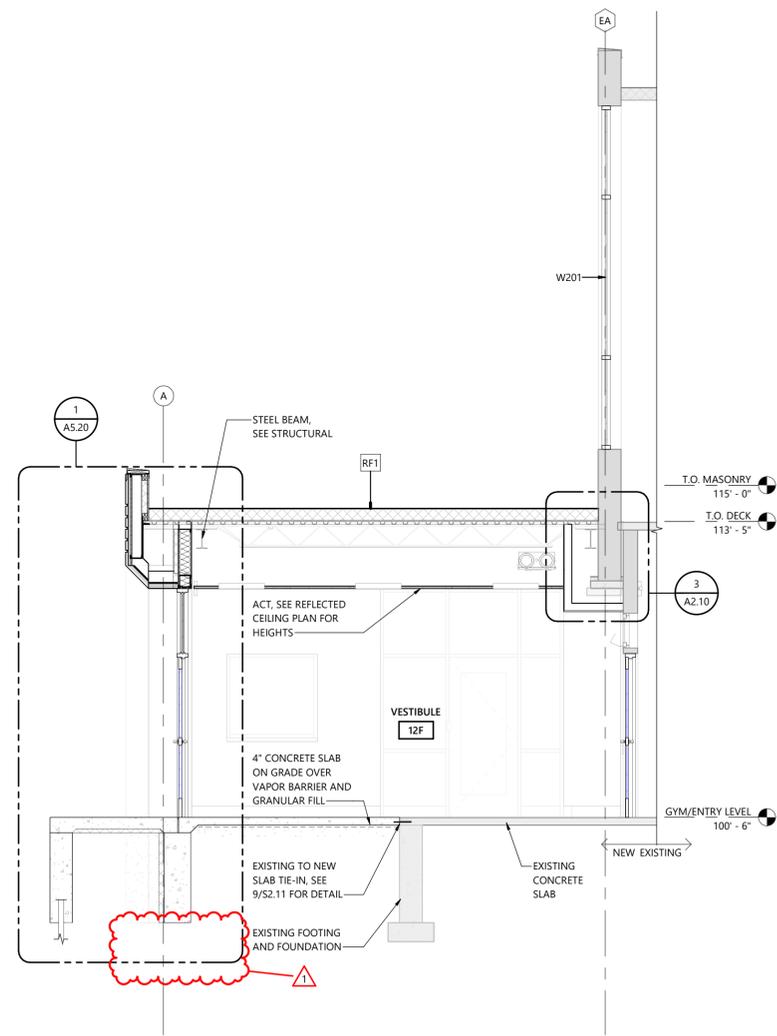


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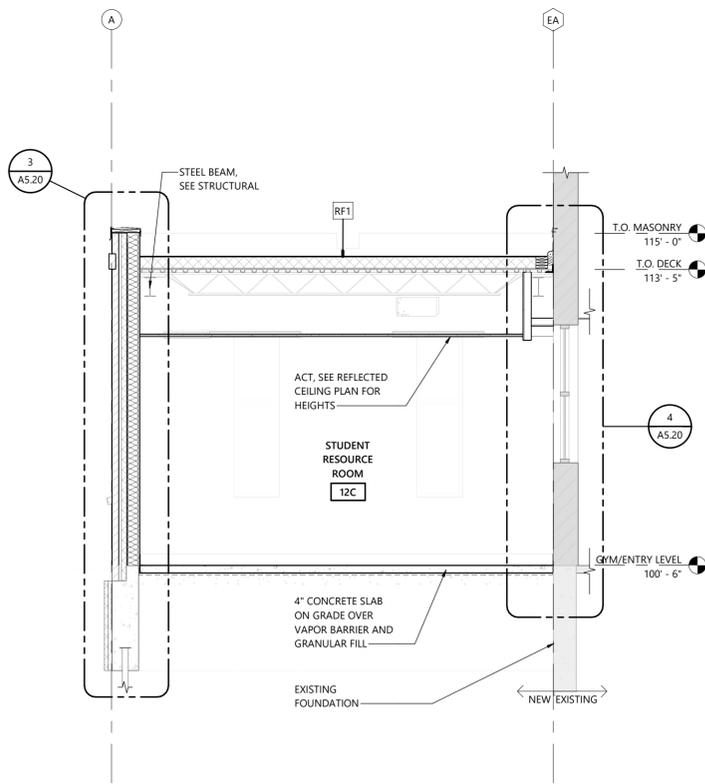
| DATE       | REV# | REVISIONS DESCRIPTION |
|------------|------|-----------------------|
| 02/26/2026 | 1    | ADDENDUM 1            |

**Houston Elementary School Safe Entrance Addition**  
 BUILDING ELEVATIONS

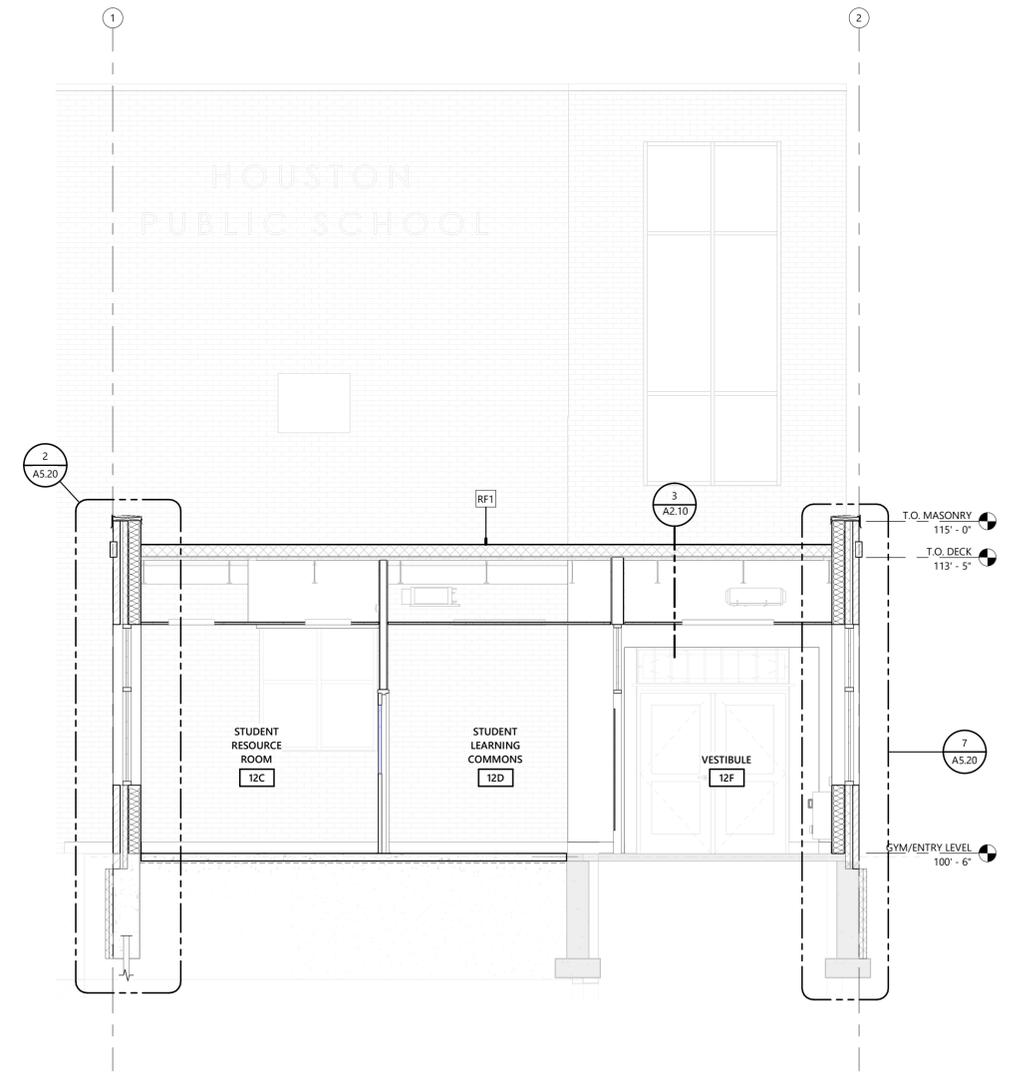
**A4.10**  
 PROJECT #: 2025-11441



1 SECTION E/W AT VESTIBULE  
1/4" = 1'-0"



2 SECTION E/W AT STUDENT RESOURCE ROOM  
1/4" = 1'-0"



3 SECTION N/S  
1/4" = 1'-0"



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Karl Larsen LIC # 54398 DATE: 02-12-26

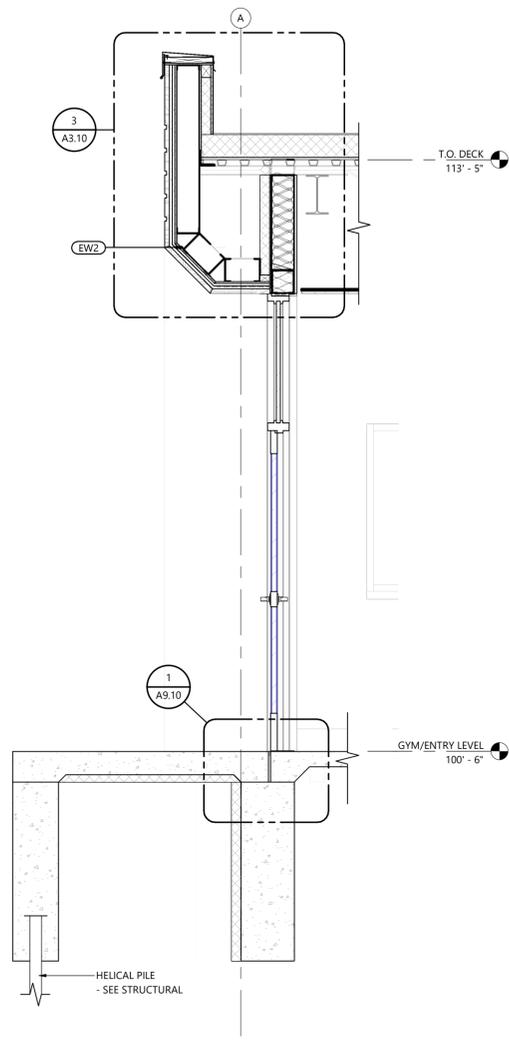
| DATE       | REV# | REVISIONS DESCRIPTION |
|------------|------|-----------------------|
| 02/26/2026 | 1    | ADDENDUM 1            |

Houston Elementary School Safe Entrance Addition

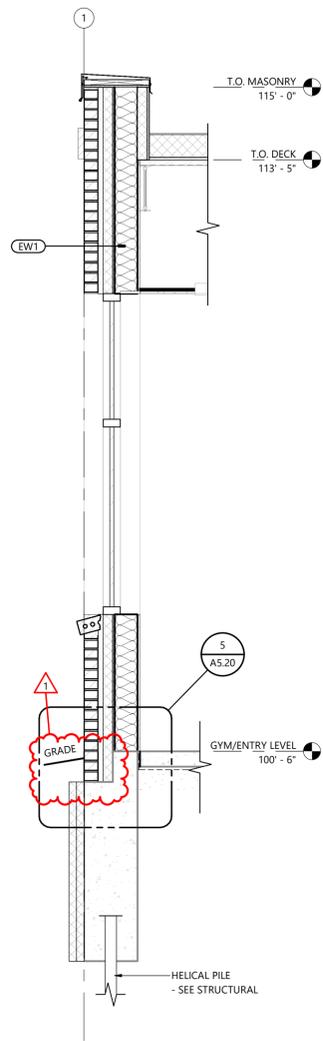
BUILDING SECTIONS

A5.10

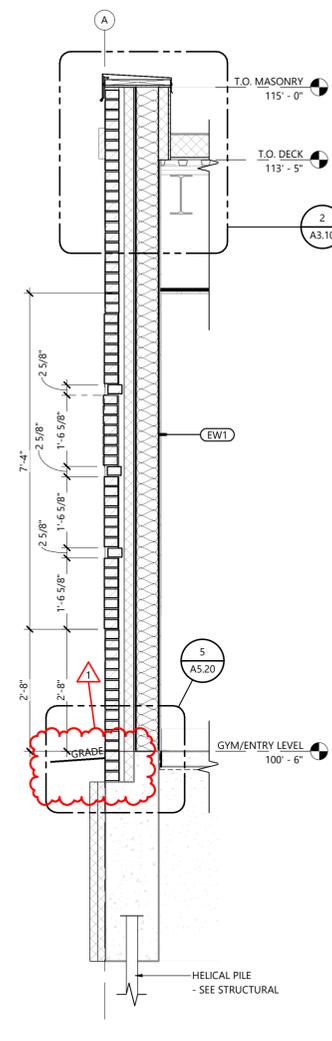
PROJECT #: 2025-11441



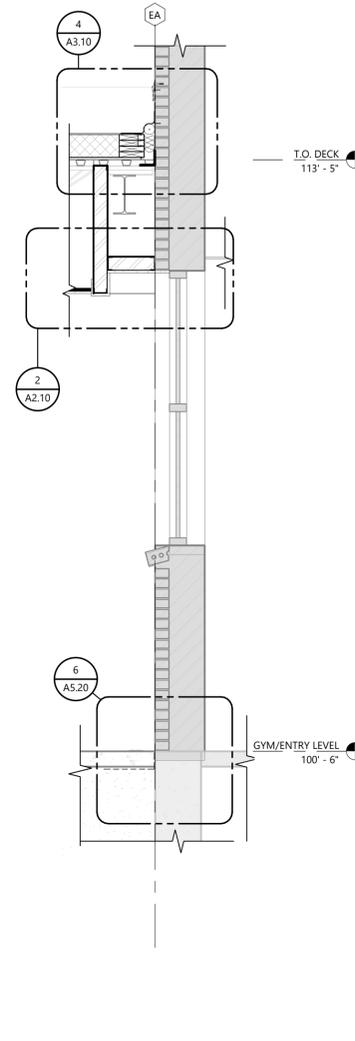
1 WALL SECTION AT ENTRY  
1/2" = 1'-0"



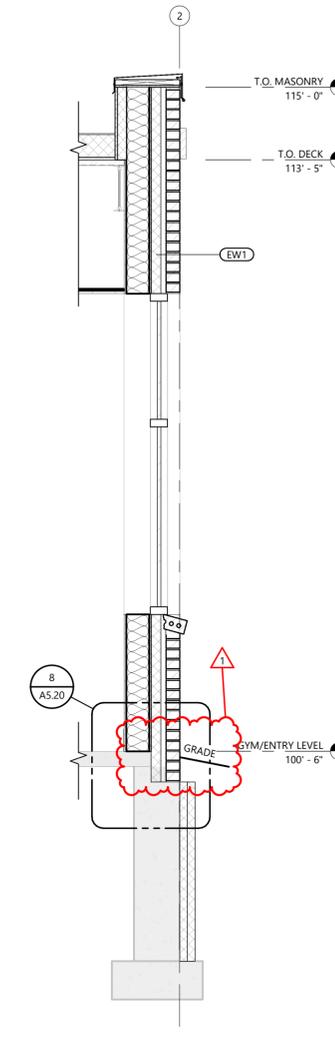
2 WALL SECTION AT WINDOW  
1/2" = 1'-0"



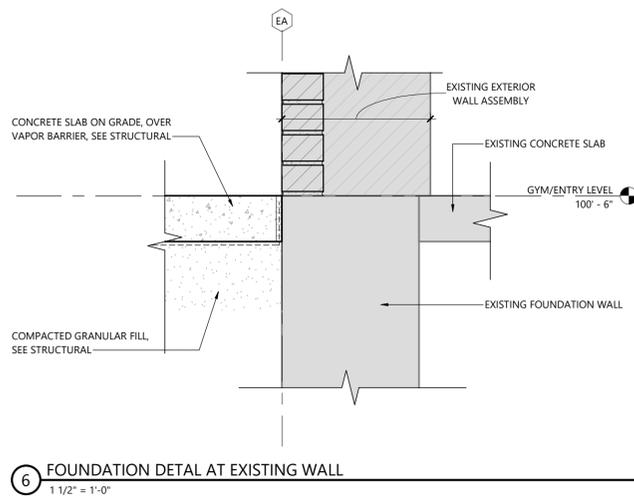
3 TYPICAL WALL SECTION  
1/2" = 1'-0"



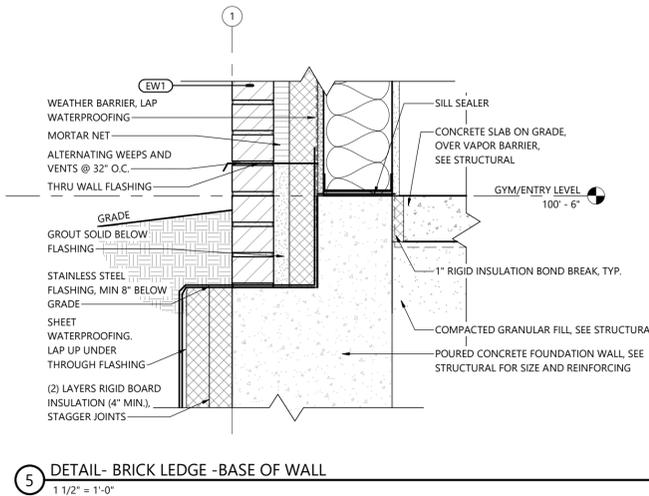
4 WALL SECTION AT EXISTING WALL / WINDOW  
1/2" = 1'-0"



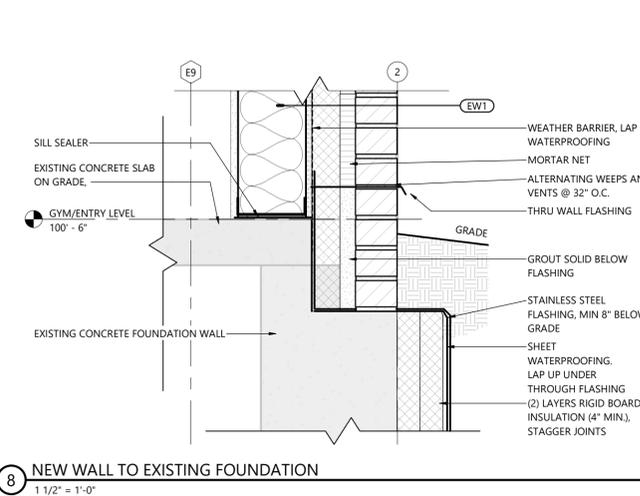
5 WALL SECTION AT EXISTING FOUNDATION  
1/2" = 1'-0"



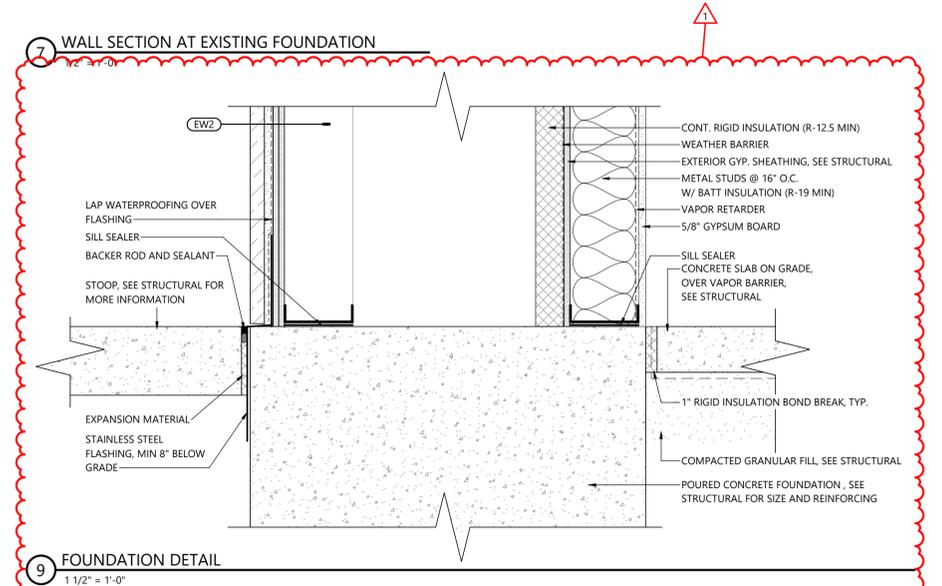
6 FOUNDATION DETAIL AT EXISTING WALL  
1 1/2" = 1'-0"



7 DETAIL - BRICK LEDGE - BASE OF WALL  
1 1/2" = 1'-0"



8 NEW WALL TO EXISTING FOUNDATION  
1 1/2" = 1'-0"



9 FOUNDATION DETAIL  
1 1/2" = 1'-0"

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Karl Larsen LIC #: 54398 DATE: 02-12-26

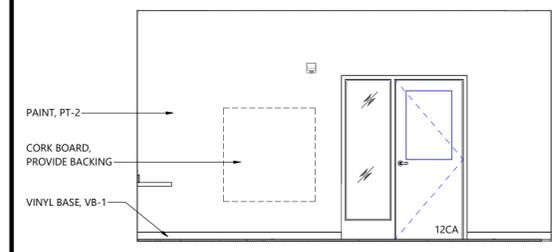
| DATE       | REV# | REVISIONS DESCRIPTION |
|------------|------|-----------------------|
| 02/26/2026 | 1    | ADDENDUM 1            |

**Houston Elementary School Safe Entrance Addition**

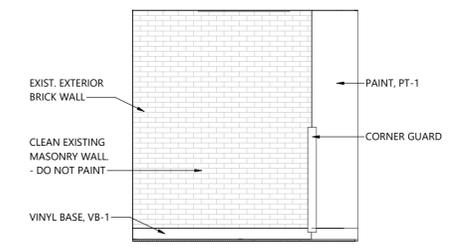
WALL SECTIONS

**A5.20**

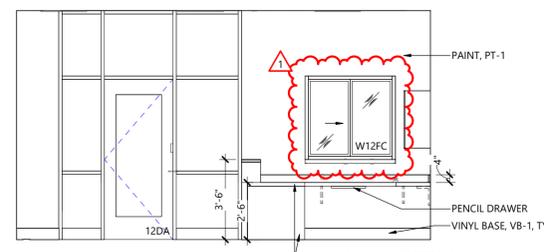
PROJECT #: 2025-11441



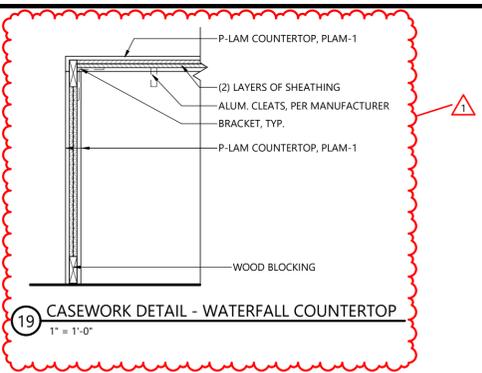
**1 STUDENT LEARNING COMMONS INT. ELEVATION**  
1/4" = 1'-0"



**2 STUDENT LEARNING COMMONS INT. ELEVATION**  
1/4" = 1'-0"

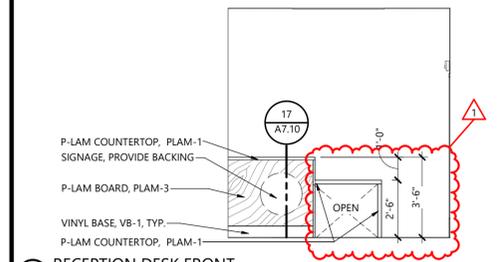
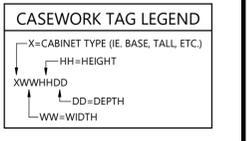


**3 STUDENT LEARNING COMMONS INT. ELEVATION**  
1/4" = 1'-0"

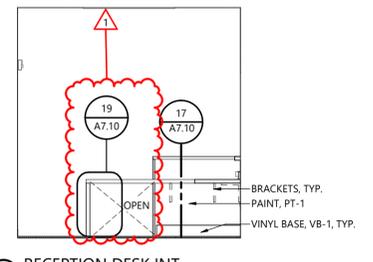


**19 CASEWORK DETAIL - WATERFALL COUNTERTOP**  
1" = 1'-0"

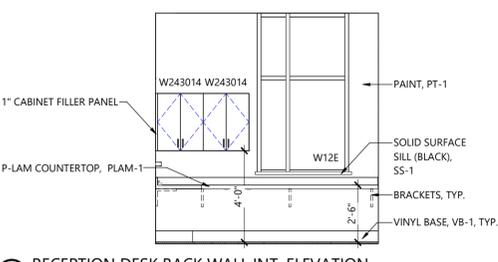
- INTERIOR ELEVATION NOTES:**
- ALL EXPOSED ENDS OF CASEWORK TO HAVE FINISHED END PANELS.
  - WOOD DOORS, FRAMES AND BASE MOLDING TO BE FILLED, STAINED, SEALED AND SHOP FINISHED TO MATCH PROVIDED SAMPLE. WORK SHOULD BE PERFORMED IN A DUST FREE ROOM.
  - PAINT ALL EXPOSED DUCTWORK, CONDUIT, ETC. TO MATCH ADJACENT SURFACES, UNLESS NOTED OTHERWISE.
  - SPECIFIED PRODUCTS AND FINISHES MAY HAVE SUBSTANTIAL LEAD TIMES. CONTRACTOR SHALL BE RESPONSIBLE FOR PLACING ORDERS IN A TIMELY MANNER TO KEEP THE PROJECT ON SCHEDULE. CONTRACTOR WILL BE RESPONSIBLE FOR EXPENSES AND DESIGN FEES, RELATED TO ANY RESELECTIONS REQUIRED DUE TO FAILURE TO ORDER PRODUCTS IN A TIMELY MANNER.
  - ALL FINISH WORK SHALL BE PERFORMED IN COMPLIANCE WITH SPECIFICATIONS AND DRAWINGS. SHOP DRAWING SUBMITTALS, SAMPLES AND PRODUCT DATA SHALL BE SUBMITTED TO THE ARCHITECT FOR THEIR REVIEW AND APPROVAL PRIOR TO BEGINNING WORK.
  - SEE "G" SHEETS FOR TYPICAL MOUNTING HEIGHTS



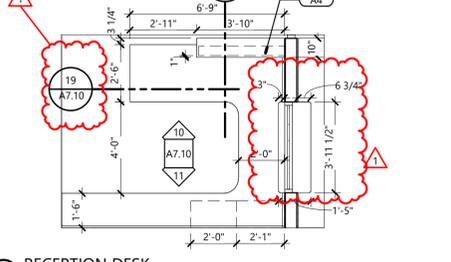
**4 RECEPTION DESK FRONT**  
1/4" = 1'-0"



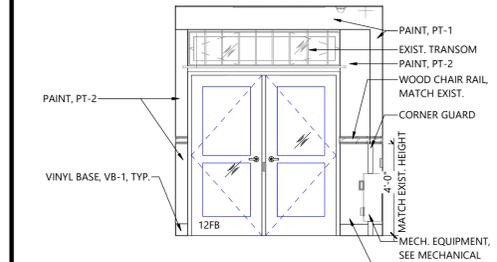
**10 RECEPTION DESK INT.**  
1/4" = 1'-0"



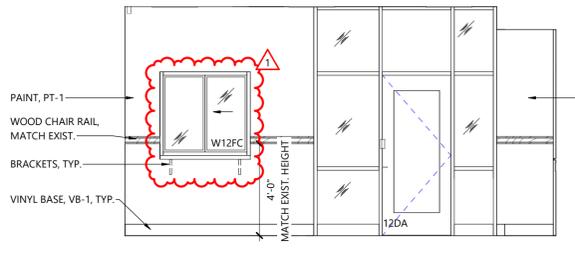
**11 RECEPTION DESK BACK WALL INT. ELEVATION**  
1/4" = 1'-0"



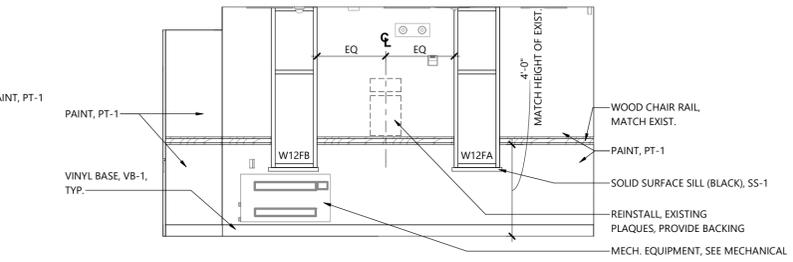
**9 RECEPTION DESK**  
1/4" = 1'-0"



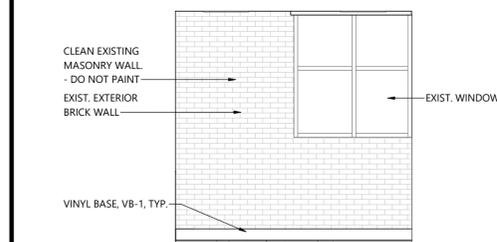
**5 VESTIBULE INT. ELEVATION**  
1/4" = 1'-0"



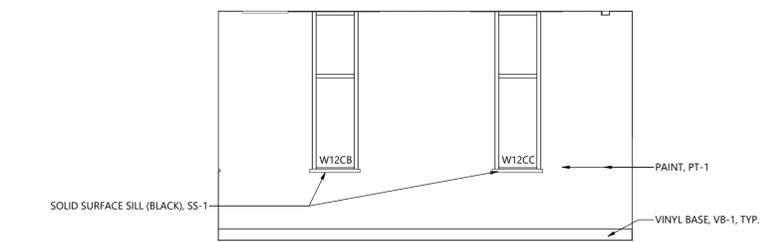
**6 VESTIBULE INT. ELEVATION**  
1/4" = 1'-0"



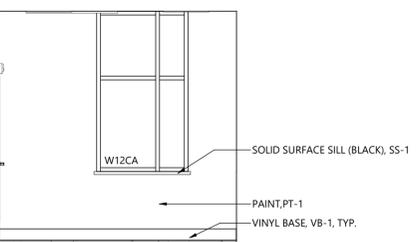
**7 VESTIBULE INT. ELEVATION**  
1/4" = 1'-0"



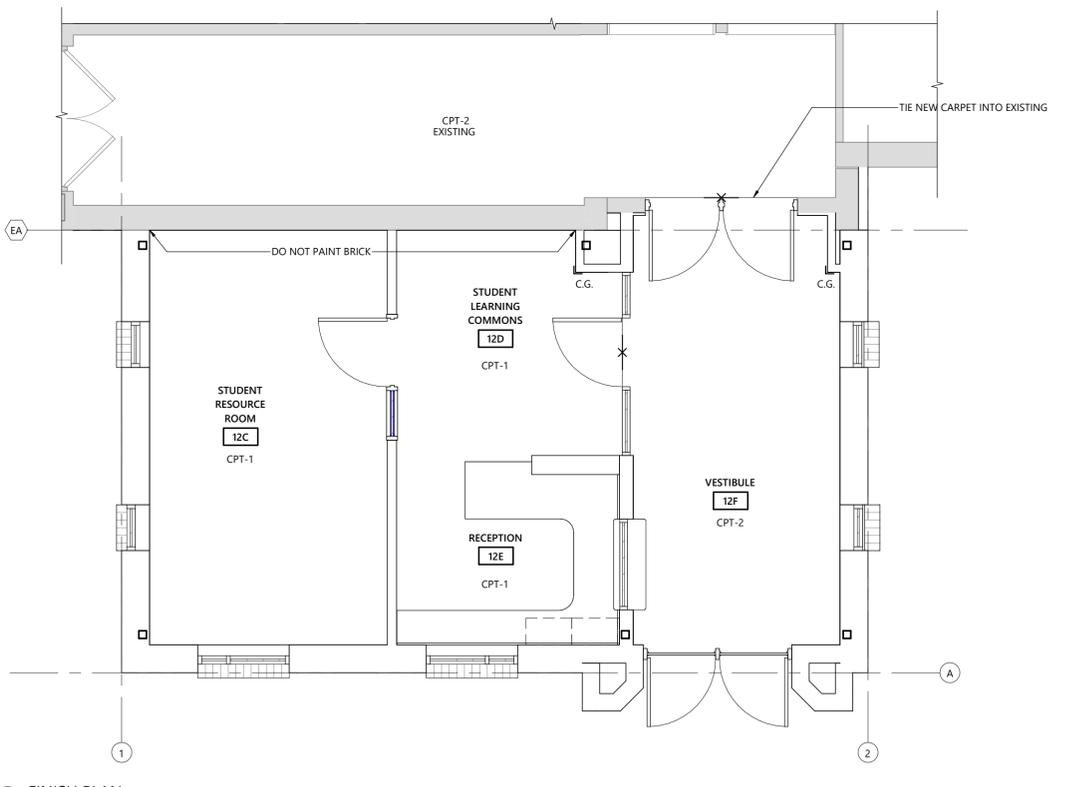
**8 STUDENT RESOURCE ROOM - INT. ELEVATION**  
1/4" = 1'-0"



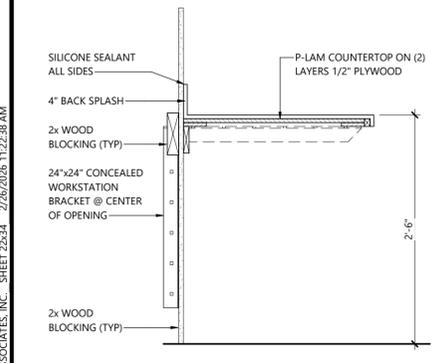
**13 STUDENT RESOURCE ROOM INT. ELEVATION**  
1/4" = 1'-0"



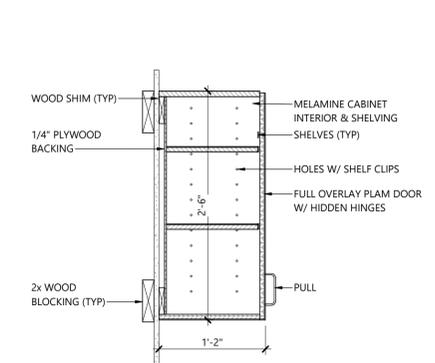
**12 STUDENT RESOURCE ROOM INT. ELEVATION**  
1/4" = 1'-0"



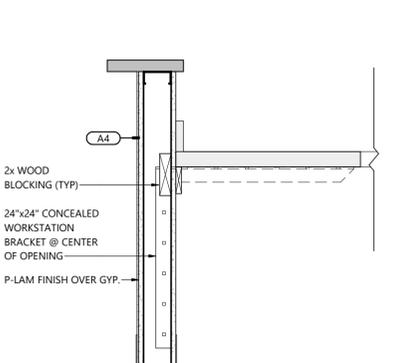
**16 FINISH PLAN**  
1/4" = 1'-0"



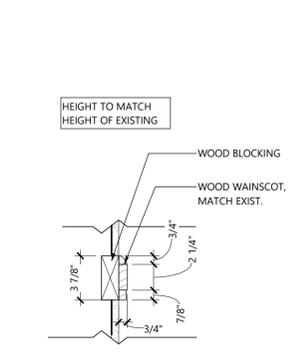
**14 CASEWORK DETAIL - WORKSTATION COUNTER**  
1" = 1'-0"



**15 UPPER CABINET**  
1" = 1'-0"



**17 BRACKET DETAIL @ FRONT COUNTER**  
1" = 1'-0"



**18 CHAIR RAIL DETAIL**  
1 1/2" = 1'-0"

| #   | ROOM NAME                | FLOOR FINISH | BASE MATERIAL | WALLS    |        |              |            |          |        |          |        | CEILING   |            | NOTES                         |
|-----|--------------------------|--------------|---------------|----------|--------|--------------|------------|----------|--------|----------|--------|-----------|------------|-------------------------------|
|     |                          |              |               | NORTH    |        | EAST         |            | SOUTH    |        | WEST     |        | MATERIAL  | FINISH     |                               |
|     |                          |              |               | MATERIAL | FINISH | MATERIAL     | FINISH     | MATERIAL | FINISH | MATERIAL | FINISH |           |            |                               |
| 12C | STUDENT RESOURCE ROOM    | CPT-1        | VB-1          | GYP BD   | PT-1   | GYP BD/BRICK | PT-1 (GYP) | GYP BD   | PT-1   | GYP BD   | PT-1   | ACT-1/GYP | PT-3 (GYP) |                               |
| 12D | STUDENT LEARNING COMMONS | CPT-1        | VB-1          | GYP BD   | PT-2   | GYP BD/BRICK | PT-1 (GYP) | GYP BD   | PT-1   | GYP BD   | PT-1   | ACT-1     |            |                               |
| 12E | RECEPTION                | CPT-1        | VB-1          | GYP BD   | PT-1   | GYP BD       | PT-1       | GYP BD   | PT-1   | GYP BD   | PT-1   | ACT-1     |            |                               |
| 12F | VESTIBULE                | CPT-2        | VB-1          | GYP BD   | PT-1   | GYP BD       | PT-1/PT-2  | GYP BD   | PT-1   | GYP BD   | PT-1   | ACT-1/GYP | PT-3 (GYP) | WOOD WAINSCOT TO MATCH EXIST. |

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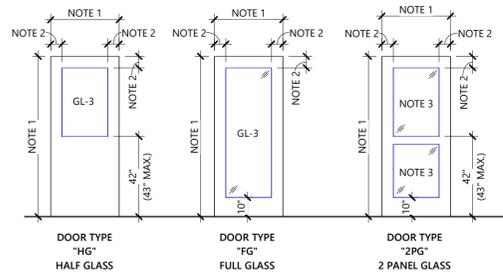
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DRAWN BY: MW  
CHECKED BY: KL  
Karl Larsen LIC # 54398 DATE: 02-12-26

| DATE       | REV# | REVISIONS DESCRIPTION |
|------------|------|-----------------------|
| 02/26/2026 | 1    | ADDENDUM 1            |

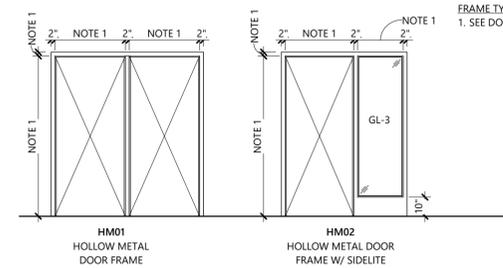
**Houston Elementary School Safe Entrance Addition**  
INTERIOR ELEVATIONS, DETAILS & ROOM FINISH SCHEDULE

**A7.10**  
PROJECT #: 2025-11441



**DOOR TYPE NOTES:**  
 1. SEE SCHEDULE FOR SIZES  
 2. STILE WIDTH  
 • AL = WIDE STILE (SEE SPECS)  
 • WD = 6 1/2"  
 3. GLAZING TYPES  
 A. EXTERIOR GL-1  
 B. INTERIOR GL-3

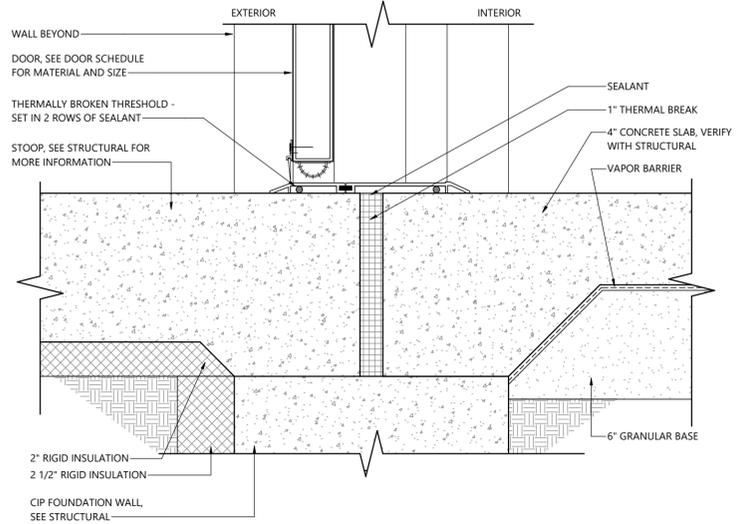
**DOOR TYPES**



**HOLLOW METAL FRAME TYPES**

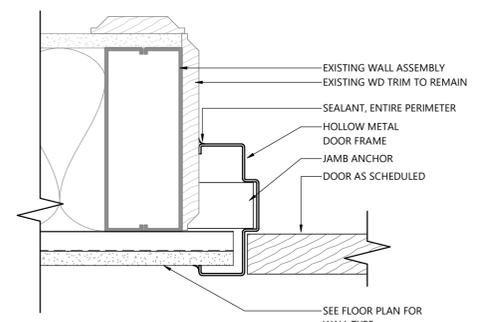
| GLAZING LEGEND |                               |
|----------------|-------------------------------|
| GL-1:          | INSULATED TEMPERED GLASS      |
| GL-2:          | INSULATED GLASS               |
| GL-3:          | CLEAR ANNEALED TEMPERED GLASS |

| DOOR SCHEDULE - NEW DOORS |        | DOOR                     |                |       |        |           |         |              |          |         |      | FRAME    |        |             | DETAIL # / SHEET # |                                |                | COMMENTS |           |         |
|---------------------------|--------|--------------------------|----------------|-------|--------|-----------|---------|--------------|----------|---------|------|----------|--------|-------------|--------------------|--------------------------------|----------------|----------|-----------|---------|
| DOOR #                    | ROOM # | ROOM NAME                | HARDWARE GROUP | WIDTH | HEIGHT | THICKNESS | TYPE    | GLAZING TYPE | MATERIAL | FINISH  | TYPE | MATERIAL | FINISH | HEAD HEIGHT | DEPTH              | (IF APPLICABLE) SIDELITE WIDTH | TRANSOM HEIGHT |          | HEAD      | JAMB    |
| 12CA                      | 12C    | STUDENT RESOURCE ROOM    | 1              | 3'-0" | 7'-0"  | 1 3/4"    | HG      | GL-3         | WD       | AL06    | AL   | FACTORY  | PT     | 2"          | 5 3/4"             | 24"                            |                | 5/A9.10  | 4/A9.10   |         |
| 12DA                      | 12D    | STUDENT LEARNING COMMONS | 2              | 3'-0" | 7'-0"  | 1 3/4"    | FG      | GL-3         | WD       | AL05    | AL   | FACTORY  | AL     |             |                    |                                |                | 7/A9.10  | 6/A9.10   |         |
| 12FA                      | 12F    | VESTIBULE                | 3              | 3'-0" | 7'-0"  | 1 3/4"    | DBL-2PG | GL-1         | AL       | FACTORY | HM01 | HM       | PT     | 2"          | 5 3/4"             |                                |                | 3/A3.10  | 586/A1.10 | 1/A9.10 |
| 12FB                      | 12F    | VESTIBULE                | 4              | 3'-1" | 7'-0"  | 1 3/4"    | DBL-2PG | GL-3         | WD       |         |      |          |        |             |                    |                                |                |          |           |         |

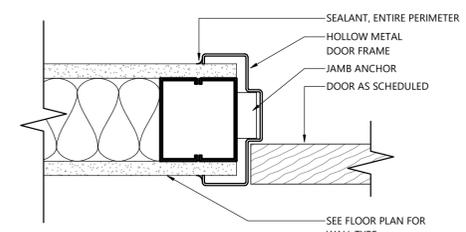


**1 DOOR DETAIL**  
3" = 1'-0"

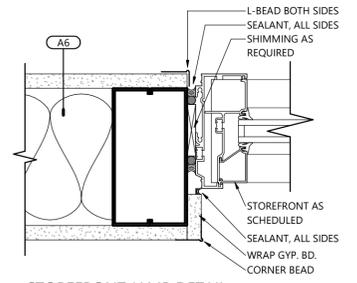
| WINDOW & STOREFRONT SCHEDULE |       |         |         |                    |         |              |          |  |  |
|------------------------------|-------|---------|---------|--------------------|---------|--------------|----------|--|--|
| W##                          | FRAME |         |         | DETAIL # / SHEET # |         |              | COMMENTS |  |  |
|                              | TYPE  | FINISH  | HEAD    | JAMB               | SILL    |              |          |  |  |
| W12CA                        | AL03  | FACTORY | 6/A9.11 | 5/A9.11            | 4/A9.11 |              |          |  |  |
| W12CB                        | AL01  | FACTORY | 6/A9.11 | 5/A9.11            | 4/A9.11 |              |          |  |  |
| W12CC                        | AL01  | FACTORY | 6/A9.11 | 5/A9.11            | 4/A9.11 |              |          |  |  |
| W12E                         | AL02  | FACTORY | 6/A9.11 | 5/A9.11            | 4/A9.11 |              |          |  |  |
| W12FA                        | AL01  | FACTORY | 6/A9.11 | 5/A9.11            | 4/A9.11 |              |          |  |  |
| W12FB                        | AL01  | FACTORY | 6/A9.11 | 5/A9.11            | 4/A9.11 |              |          |  |  |
| W12FC                        | AL07  | FACTORY | 3/A9.11 | 2/A9.11            | 1/A9.11 |              |          |  |  |
| W201                         | AL05  | FACTORY | 9/A9.11 | 8/A9.11            | 7/A9.11 |              |          |  |  |
| W202                         | AL05  | FACTORY | 9/A9.11 | 8/A9.11            | 7/A9.11 | ALTERNATE #1 |          |  |  |



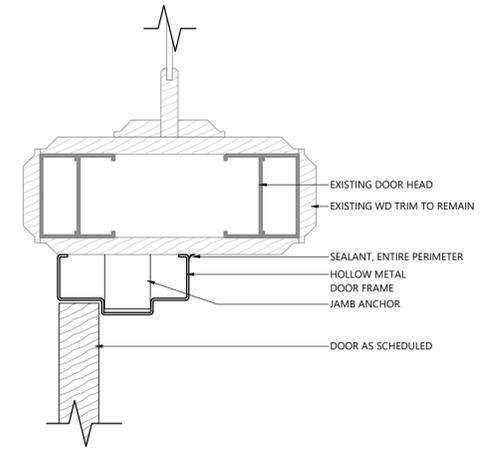
**2 JAMB DETAIL**  
3" = 1'-0"



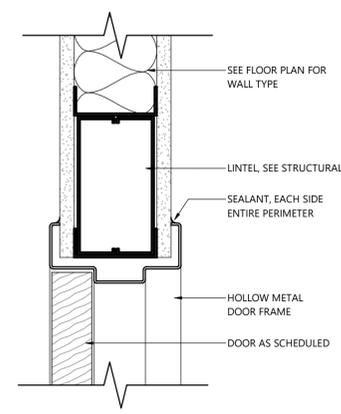
**4 JAMB DETAIL**  
3" = 1'-0"



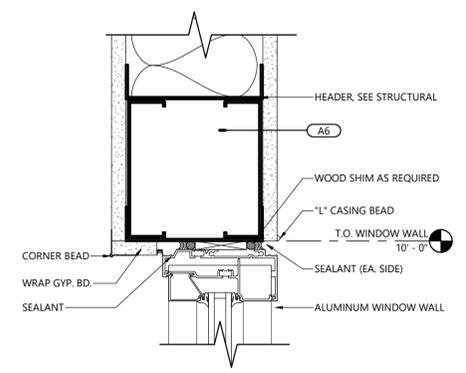
**6 STOREFRONT JAMB DETAIL**  
3" = 1'-0"



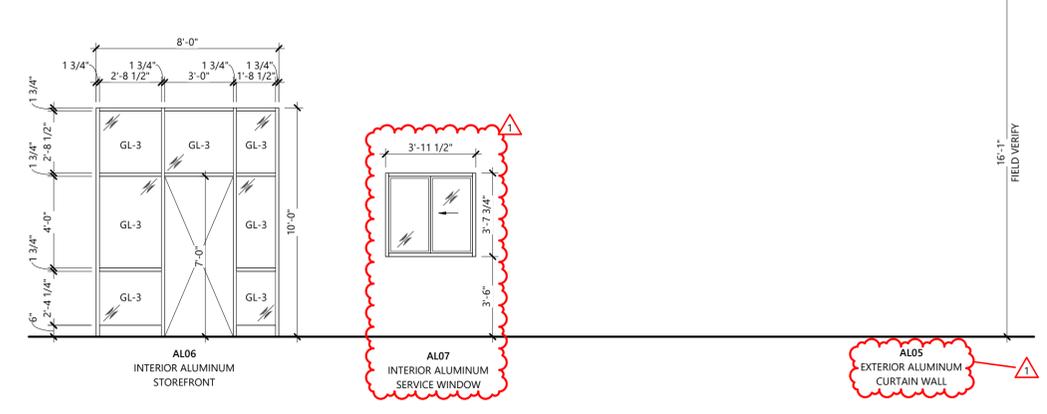
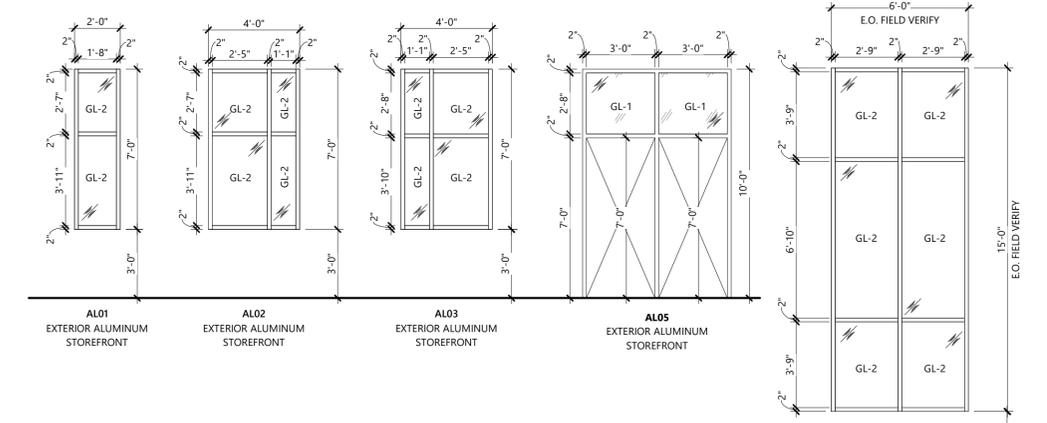
**3 HEAD DETAIL**  
3" = 1'-0"



**5 HEAD DETAIL**  
3" = 1'-0"



**7 STOREFRONT HEAD DETAIL**  
3" = 1'-0"



**ALUMINUM FRAME TYPES**

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DRAWN BY:  
MW / AB  
 CHECKED BY:  
KL

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA  
 Karl Larsen LIC # 54398 DATE: 02-12-26

| DATE       | REV# | REVISIONS DESCRIPTION |
|------------|------|-----------------------|
| 02/26/2026 | 1    | ADDENDUM 1            |

**Houston Elementary School Safe Entrance Addition**

**DOOR AND FRAME TYPES AND SCHEDULES**

**A9.10**

PROJECT #: 2025-11441