

This addendum is hereby made part of the Contract Documents to the same extent as though it were originally included therein. Refer to "Proposal Form (Lump Sum)" for acknowledgment of addenda.

All Contractors, Subcontractors and suppliers are reminded that they shall be familiar with all addenda items (as well as all parts of the construction documents) so as to understand the extent of their work and its interrelation with other trades.

To all Offerors for furnishing all labor and materials necessary for the following contract:

ADDENDUM NO. 1
Los Lunas Middle School Gym Renovation
Los Lunas Schools
Los Lunas, New Mexico

Architectural Items: Project Manual

ITEM AD1-A1

Pre-Proposal Conference

A mandatory Pre-Proposal Conference, for prime contractors, was held on December 19, 2017 as scheduled. Reference agenda and attendee sign-in sheet attached to this addendum.

ITEM AD1-A2

Additional Project Information

Offerors may review and download Roof Inspection Report conducted by Armstrong Group, Inc. from the Greer-Stafford FTP site. Reference attached Conference Agenda for website address and login information.

ITEM AD1-A3

Table of Contents

Add the following specification sections to Division 32 of the table of contents and include into Project Manual:

32 17 23	Parking Bumpers
32 17 23.13	Painted Pavement Markings
32 17 26	Surface Applied Tactile/Detectable Warning Surface Tile

ITEM AD1-A4

Request for Proposal – Sequence of Events

Replace Sequence of Events Items 6 and 6A with the following:

	<u>Action</u>	<u>Responsibility</u>	<u>Date *</u>
6.	Submission of Proposal	Offerors Time: 4:00 PM (local)	1.8.18
6A.	Submission of <u>Copies</u> of Subcontractor Qualifications Statements	Offerors Time: 4:00 PM (local)	1.9.18

ITEM AD1-A5

Section 09 67 00 – High-Build Decorative Epoxy/Urethane Coating System

1. Page 09 67 00-2: Section 2.01 Materials
Paragraph A System Description, replace Item 2 with the following:

2. The coating system shall be Key Luster Metallic Coating System using Key #502 Primer/Low Modulus Binder, Key #510 100% Solids Epoxy with Metallic pigment base and top coat and Key #470/471 UV Resistant Clear Polyaspartic Finish Coat. This system shall be applied over a clean, vacuum blasted substrate.
3. Page 07 67 00-3: Section 3.02 Installation – Flooring
Paragraph D Metallic Body Coat Application, replace Item 1 with the following:
 1. Apply Key Luster Metallic epoxy #510 bodycoat at a minimum total thickness of 8 mils, 200 square feet per gallon is required coverage for 100% solids epoxy to achieve 8 mils thickness. Follow instructions for curing and recoat times.
4. Page 07 67 00-3: Section 3.02 Installation – Flooring
Paragraph E Metallic Top Coating Application, replace Item 1 with the following:
 1. Apply Key Luster Metallic Epoxy #510 topcoat at a minimum total thickness of 16 mils. 100 square feet per gallon is required coverage for 100% solids epoxy to achieve 16 mils thickness. Follow instructions for curing and recoat times.
5. Page 07 67 00-3: Section 3.02 Installation – Flooring
Paragraph F Urethane Top Coat Application, replace entire paragraph with the following:
 - F. Polyaspartic Finish Coat Application
 1. Apply clear polyaspartic finish coat Key #470/471 to yield desired finish texture. Approximate coverage should be 160 square feet per gall to yield 10 dry mils. Cure to manufacturer's recommendations.
 2. Follow manufacturer's instructions for mixing and application techniques.

Architectural Items: Drawing Sheets

ITEM AD1-A6 **SHEET A101**

1. Plan B1/A101, revise interior elevation symbol in Lobby 102 to read as A1/A402 for west elevation and A1/A403 for east elevation.

ITEM AD1-A7 **SHEET A102**

1. Plan A3/A102, add translucent wall panel assembly type 'TP5' to northeast and southeast corners of Gym 124.

ITEM AD1-A8 **Sheet A131**

1. Add detail as shown on Sheet AD1-8.1 included in this addendum to quadrant E1/A131.
2. Plan A1/A131, revise blank detail indicator located on the west side of shaded roof area, at parapet coping, to read as E1/A131.

ITEM AD1-A9 **Sheet A201**

3. Delete 'General Notes: Exterior Elevs' legend in quadrant E6/A201.

ITEM AD1-A10 **Sheet A311**

1. Wall Section A3/A311, revise detail indicator at parapet coping to read as E1/A131 shown on Sheet AD1-D8.1.

ITEM AD1-A11

Sheet A402

2. Interior elevation B1/A402, at four (4) existing doors to locker rooms and offices, change Keyed Note 02 00 00.27 to read:
"Existing hollow metal door and frame to remain. Temporarily remove door and hardware, sand and patch door and frame as required for uniform finish, paint color per Architect. Reinstall door and hardware."

ITEM AD1-A12

Sheet A403

1. Change Keyed Note 09 84 00.WFL to read:
"2'-0" tall lettering routed into 2" thick wood fiber wall panels to depth of 1", paint lettering relief color per Architect. Contractor shall coordinate lettering layout with number of panels requiring routing."

ITEM AD1-A13

Sheet A530

1. Replace details C5, E4/A530 with details C5, E4 as shown on Sheet AD1-13.1 included in this addendum.
2. Replace details D6, E6/A530 with details D6, E6 as shown on Sheet AD1-13.2 included in this addendum.

ITEM AD1-A14

Sheet A531

1. Replace details B3, B5/A531 with details B3, B5 as shown on Sheet AD1-14.1 included in this addendum.
2. Replace detail C5/A531 with detail C5 as shown on Sheet AD1-14.2 included in this addendum.

END OF ADDENDUM NO. 1

Attachments:

Pre-Proposal Conference Agenda and Sign-in (6 pages)

Project Manual Section 32 17 23 Parking Bumpers (2 pages)

Project Manual Section 32 17 23.13 Painted Pavement Markings (2 pages)

Project Manual Section 32 17 26 Surface Applied Tactile/Detectable Warning Surface Tile (4 pages)

Architectural Addendum Sketches AD1-8.1, 13.1, 13.2, 14.1, 14.2

Los Lunas Middle School Gym Renovation

Los Lunas Schools

PRE-PROPOSAL CONFERENCE

held at

Los Lunas Middle School

Los Lunas, NM

December 19, 2017 @ 3:30 PM

A. OWNER / DESIGN TEAM

1. Owner: Los Lunas Schools
2. Owner's Director of Purchasing: Michelle Romero
3. Owner's Project Manager: Antonio Sedillo, Supervisor of Construction Management (505) 410-1296
4. Los Lunas MS Principal: Lawrence Sosa, (505) 865-7273
5. Greer Stafford Principal-in-Charge: Mike Heitman, AIA (505) 821-0235
6. Architect's Project Manager: Joseph Grijalva (505) 821-0235
7. Civil Engineer: Bohannon Huston, Inc.
8. Structural Engineer: Chavez-Grieves Consulting Engineers, Inc.
9. Mechanical/Electrical Engineers: Bridgers and Paxton Consulting Engineers, Inc.

B. GENERAL

1. Proposals Due: Monday, **January 8, 2018 @ 10:00 AM (local)** at the address listed below. Offerors will be afforded an additional 24 hours to submit the additional copies of Subcontractor Questionnaires.
 - a. Delivery Address:
 - i. Michelle Romero, Director of Purchasing
Physical Address: 119 Luna Ave., Los Lunas, NM 87031
Mailing Address: P.O. Drawer 1300, Los Lunas, NM 87031
2. There is no PSFA funding is included in this project. Contractor will not be required to use the PSFA e-Builder software for document tracking and exchange.
3. The contractor is responsible for providing builders risk insurance; refer to Section 00 72 00. The prime contractor shall secure builder's risk insurance in the amount of the Estimate of Probable Construction Cost listed in the Request for Proposal.

4. The construction documents are in the process of being permitted through CID. The contractor shall pay for the permit fee before building permit will be issued. The building permit fee will have to be adjusted by the successful contractor based on their proposal amount.
5. The current lists of plan holders for this project can be obtained from Albuquerque Reprographics - (505) 884-0862 or www.ariplans.com.

C. INSTRUCTIONS TO OFFERORS

1. Department of Workforce Solutions Minimum Wage Act Registration Number required by all Offerors (Generals and Subcontractors). Subcontractors need to submit registration number if their work is over \$60,000. Registration number must be obtained prior to submission of bids. General Contractors must list their number on the bid form.
2. Two Subcontractor Listing Forms are included in the project manual. Both are required to be submitted along with the Proposal.
 - a. **Document 00 4334 1** is required by the NMAC 1.4.8 that governs the RFP for construction. This form is used to determine which subcontractors shall submit a subcontractor questionnaire. The threshold for this form is **\$135,091.00**.
 - b. **Document 00 4336 1-3** is required by the Subcontractors Fair Practices Act, Section 13-4-34. This form is used to determine which subcontractors providing services are required to be listed as part of the Offeror's proposal. The listing threshold for this Project is **\$13,509.10**.
3. Liquidated damages shall be paid as identified below:
The Work to be performed under this Contract shall commence not later than ten (10) consecutive days after the date of written Notice to Proceed, and that Substantial Completion shall be achieved not later than as follows:

NTP + 170 Calendar Days

liquidated damages \$500/day

4. Alternates: Alternates in this project include:
 - a. **Additive Alternate No. 1:** Require replacement of existing lighting fixtures for LED fixtures in rooms Storage 111, Storage 114, Girls Locker Room 116, Girls RR 117, Boys RR 118, Boys Locker Room 119, Mech 120, Elec 121, Office 122 and Office 123.
 - b. **Additive Alternate No. 2:** Requires replacement of existing 2" thick gypsum plank deck where damaged. Work includes identification of areas which require replacement, removal of damaged formboard panels, gypsum fill and wire mesh, installation of new sheathing, wire mesh, cross tees and gypsum concrete patch. Refer to structural sheet S121.
5. Allowances as identified in Section 01 2100 and listed below:

a. for Unforeseen Conditions	(\$50,000)
b. for Gym Flooring	(\$150,00)
c. for Gym Bleachers and Equipment	(\$125,000)
d. for Fire Alarm, Sound System, Data, Intercom, Card Access Controls	(\$43,000)
e. for Gym Tiger Head Signage	(\$5,000)
6. Please send all questions and prior approvals in writing to Joseph Grijalva at Greer Stafford/SJCF Architecture, Inc. by email: jgrijalva@greer-stafford.com or fax (505) 821-0348 by 5:00 p.m. on **January 2, 2018**. Refer to Section 01 63 00 for product substitution procedures prior to bid.

7. Date of Last Addenda **January 4, 2018.**
8. The pre-proposal sign-in sheet and agenda will be distributed to all plan holders by addendum.
9. PDF's of the RFP Forms can be found on our FTP site:

Website: <http://ftp.greer-stafford.com/Contractors/5345.02-FTP-LLMS-Gym-Renovation/>

Login Information:

User Name: gs1717

Password: 1212

10. PDF's of the asbestos reports can be found on our FTP site per Section 02 00 10. The District will conduct further asbestos testing on the gym interior and Offerors will be notified of any additional reports by addendum. Interior asbestos abatement will be performed by the District.

D. SCOPE OF WORK

Project Description:

Los Lunas Middle School Gym Renovation

- Renovation of the gymnasium proper and general support spaces on the east and west sides of the building.
- Miscellaneous upgrades to the interiors and general support spaces.
- Roof replacement.
- Installation of new HVAC and fire sprinkler systems.
- Comprehensive energy efficiency and acoustic improvements.
- Minor site improvements for the west entry and parking lot.
- Other improvements/alterations as indicated in the Drawings.

E. SITE VISITS

1. A site visit tour will be held following this pre-proposal conference; however, Contractors are required to visit the site to familiarize themselves with local conditions that may in any manner affecting cost, progress, or performance as required per Paragraph 2.0 Examination of Proposal Documents and Site - Section 00 2000 Instructions to Offerors and Paragraph 4, Item B – Section 00 4113 Proposal Form.
2. Contractors shall coordinate any visits with Antonio Sedillo, Supervisor of Construction Management, of Los Lunas Schools (505) 410-1296.

F. QUESTIONS

1. Questions???

End of Pre-Proposal Agenda

Los Lunas Middle School Gym Renovation

Los Lunas Schools

PRE-PROPOSAL CONFERENCE

held at

Los Lunas Middle School

Los Lunas, NM

December 19, 2017 @ 3:30 PM

Name	Company	Telephone # / E-mail
Joseph Grijalva	Greer Stafford SJCF	505-821-0235 / jgrijalva@greer-stafford.com
Mike Heitman	Greer Stafford SJCF	505-821-0235 / mheitman@greer-stafford.com
James Ziroc	First mesa	505 843-8990 SCOTT @first-mesa.net
Byron Pompey	Franken Const	505 974 3686 byronpompey@construction.net
Tim Davis	i3 Systems	505-869-2629 tim@i3systems.net
Wylee Curry	Futures Mechanical	505-385-7176 WCurry@futuresmechanical.com
Paul Norris	Enterprise Builders	505-264-3940 pnorris@cbnm.com
Andre Hernandez	National Roofing Co.	505 414-1913 andre's@nationalroofing.com
Ian Looney	ESA Construction inc.	505-884-2171 ian@esaconstruction.com bids@esaconstruction.com
Tim Zagar	Weil Construction	(505) 899-3535 tim@weilconstruction.com
ANTONIO GARCIA	WEIL CONSTRUCTION	(505) 899-3535 A.GARCIA@WEILCONSTRUCTION.COM
SAM ROMERO	Longhorn Const Serv	(505) 858-1360 /CSINC@comcast.net
Ellen Topian	Bradbury Starn	(505) 765-1200 bids@bradburystarn.com

Telephone # / E-mail

Michelle Romero LLSO. 866-8246

SECTION 32 17 13

PARKING BUMPERS

PART 1 GENERAL

1.01 SUMMARY:

- A. **WORK INCLUDED:** Furnish and install all precast concrete parking bumpers (wheel stops) as shown on the Drawings or specified herein, or as required to complete the Work.
- B. **RELATED WORK:**
 - 1. Asphaltic concrete pavement is specified in Section 321200.
 - 2. Pavement markings are specified in Section 321723.
- C. **RELATED DOCUMENTS:** Drawings, General and Supplementary Conditions, and applicable provisions of Division 1 Sections apply to this Section.

1.02 SUBMITTALS:

- A. **SUBMITTAL PROCEDURES:** Refer to Section 013300.
- B. **PRODUCT DATA:** Submit manufacturer's published descriptive literature and complete specifications for products specified herein.

1.03 DELIVERY, STORAGE, AND HANDLING:

- A. **ACCEPTANCE AT SITE:** Do not accept parking bumpers until ready for installation or until adequate, protected storage facilities are available.

PART 2 PRODUCTS

2.01 MATERIALS:

- A. **CONCRETE MATERIALS:** Comply with the applicable requirements of Section 03 30 00.
- B. **REINFORCEMENT:** Comply with the applicable requirements of Section 03 20 00.

2.02 PRODUCT DESCRIPTION:

- A. **PRECAST CONCRETE PARKING BUMPERS:**
 - 1. Provide minimum 6'-0" long precast concrete sections with tapered or trapezoidal cross section not less than 6" high x 9" wide at base x 4-1/2" wide at top, with chamfered corners and drainage slots on the underside, and pre-drilled or sleeved for two anchor pins or rods.
 - 2. Fabricate parking bumpers from air-entrained concrete developing minimum compressive strength of not less than 4000 psi at 28 days, reinforced with not less than two #4 rebars.

PART 3 EXECUTION

3.01 EXAMINATION:

- A. **VERIFICATION OF CONDITIONS:** Examine areas and conditions under which the work of this Section will be performed. Do not proceed with the work until unsatisfactory conditions have been corrected. Commencement of work implies acceptance of all areas and conditions.

3.02 PREPARATION:

- A. **SUBSTRATE PREPARATION:**
 - 1. Where wheel stops are installed on portland cement concrete paving or on structural concrete decks, predrill substrate prior to installing wheel stop anchor dowels or pins.
 - 2. Where parking bumpers are installed on precast or prestressed concrete decks, confirm anchor locations with precast concrete manufacturer prior to drilling deck.
- B. **INSTALLATION:** Install wheel stops at locations indicated using one of the following methods:
 - 1. At concrete paving, use expansion-type steel bolts set in holes drilled into concrete paving. Apply continuous bead of Type 2 sealant as specified in Section 07900 around each predrilled hole prior to placing wheel stops and installing anchor bolts. **CAUTION:** Do not drill through or otherwise damage between-slab waterproofing membrane at elevated parking decks when installing anchor bolts.

3.03 CLEANING AND PROTECTION:

- A. CONSTRUCTION CLEANING: Remove all excess materials, packaging materials, debris, and tools; leave the site and work area in clean condition. Leave protective coverings in place until final cleaning.
- B. PROTECTION OF WORK: Protect completed or in-place wheel stops from damage due to subsequent construction or finishing activities.
- C. DAMAGED OR DEFECTIVE WORK: Replace at no additional cost, wheel stops which been damaged or found to be defective prior to final completion and acceptance of the Work by the Owner.

END OF SECTION

SECTION 32 17 23.13

PAINTED PAVEMENT MARKINGS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Parking lot markings, including parking bays, crosswalks, arrows, handicapped symbols, and curb markings.
- B. "No Parking" curb painting.

1.02 RELATED REQUIREMENTS

- A. Section 32 13 13 - Concrete Paving.

1.03 REFERENCE STANDARDS

- A. MPI (APL) - Master Painters Institute Approved Products List; Master Painters and Decorators Association; current edition, www.paintinfo.com.
- B. FHWA MUTCD - Manual on Uniform Traffic Control Devices for Streets and Highways; U.S. Department of Transportation, Federal Highway Administration; Current Edition.

1.04 SUBMITTALS

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.

1.05 FIELD CONDITIONS

- A. Do not install products under environmental conditions outside manufacturer's absolute limits.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Line and Zone Marking Paint: MPI No. 97 Latex Traffic Marking Paint; color(s) as indicated.
 - 1. Parking Lots: White.
 - 2. Handicapped Symbols: Blue.
- B. Temporary Marking Tape: Preformed, reflective, pressure sensitive adhesive tape in color(s) required; General Contractor is responsible for selection of material of sufficient durability as to perform satisfactorily during period for which its use is required.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.02 PREPARATION

- A. Allow new pavement surfaces to cure for a period of not less than 14 days before application of marking materials.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Clean surfaces thoroughly prior to installation.
 - 1. Remove dust, dirt, and other granular surface deposits by sweeping, blowing with compressed air, rinsing with water, or a combination of these methods.
- D. Where oil or grease are present, scrub affected areas with several applications of trisodium phosphate solution or other approved detergent or degreaser, and rinse thoroughly after each application; after cleaning, seal oil-soaked areas with cut shellac to prevent bleeding through the new paint.

- E. Establish survey control points to determine locations and dimensions of markings; provide templates to control paint application by type and color at necessary intervals.
- F. Temporary Pavement Markings: When required or directed by Architect, apply temporary markings of the color(s), width(s) and length(s) as indicated or directed.
 - 1. After temporary marking has served its purpose, remove temporary marking by carefully controlled sandblasting, approved grinding equipment, or other approved method so that surface to which the marking was applied will not be damaged.
 - 2. At General Contractor's option, temporary marking tape may be used in lieu of temporary painted marking; remove unsatisfactory tape and replace with painted markings at no additional cost to Owner.

3.03 INSTALLATION

- A. Begin pavement marking as soon as practicable after surface has been cleaned and dried.
- B. Do not apply paint if temperature of surface to be painted or the atmosphere is less than 50 degrees F (10 degrees C) or more than 95 degrees F (35 degrees C).
- C. Apply in accordance with manufacturer's instructions using an experienced technician that is thoroughly familiar with equipment, materials, and marking layouts.
- D. Comply with FHWA MUTCD manual (<http://mutcd.fhwa.dot.gov>) for details not shown.
- E. Apply markings in locations determined by measurement from survey control points; preserve control points until after markings have been accepted.
- F. Apply uniformly painted markings of color(s), lengths, and widths as indicated on the drawings true, sharp edges and ends.
 - 1. Apply paint in one coat only.
 - 2. Wet Film Thickness: 0.015 inch (0.4 mm), minimum.
 - 3. Width Tolerance: Plus or minus 1/8 inch (3 mm).
- G. Parking Lots: Apply parking space lines, entrance and exit arrows, painted curbs, and other markings indicated on drawings.
 - 1. Mark the International Handicapped Symbol at indicated parking spaces.
 - 2. Hand application by pneumatic spray is acceptable.
- H. Symbols: Use a suitable template that will provide a pavement marking with true, sharp edges and ends, of the design and size indicated.

3.04 DRYING, PROTECTION, AND REPLACEMENT

- A. Protect newly painted markings so that paint is not picked up by tires, smeared, or tracked.
- B. Provide barricades, warning signs, and flags as necessary to prevent traffic crossing newly painted markings.
- C. Allow paint to dry at least the minimum time specified by the applicable paint standard and not less than that recommended by the manufacturer.
- D. Remove and replace markings that are applied at less than minimum material rates; deviate from true alignment; exceed length and width tolerances; or show light spots, smears, or other deficiencies or irregularities.
- E. Remove markings in manner to avoid damage to the surface to which the marking was applied, using carefully controlled sand blasting, approved grinding equipment, or other approved method.
- F. Replace removed markings at no additional cost to Owner.

END OF SECTION

SECTION 32 17 26

SURFACE APPLIED TACTILE/DETECTABLE WARNING SURFACE TILE

P1 GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.02 SUMMARY

- A. This Section specifies furnishing and installing Surface Applied tactile tile modules where indicated on drawings.

1.03 QUALITY ASSURANCE

- A. Provide Surface Applied tactile tiles and accessories as produced by a single manufacturer.
- B. Installer's Qualifications: Engage an experienced Installer certified in writing by tactile manufacturer as qualified for installation, who has successfully completed tile installations similar in material, design and extent to that indicated for Project.
- C. Americans with Disabilities Act (ADA): Provide tactile warning surfaces which comply with the detectable warnings on walking surfaces section of the Americans with Disabilities Act (Title 49 CFR TRANSPORTATION, Part 37.9 STANDARDS FOR ACCESSIBLE TRANSPORTATION FACILITIES, Appendix A, Section 4.29.2 DETECTABLE WARNINGS ON WALKING SURFACES).
- D. Vitrified Polymer Composite (VPC) Surface Applied tiles shall be an epoxy polymer composition with an ultra violet stabilized coating employing aluminum oxide particles in the truncated domes. The tile shall incorporate an in-line dome pattern of truncated domes 0.2" in height, 0.9" diameter at the base, and 0.4" diameter at top of dome spaced 2.35" nominal as measured on a diagonal and 1.70" nominal as measured side by side. For wheelchair safety the field area shall consist of a non-slip surface with a minimum of 40 - 90° raised points 0.045" high, per square inch; "Armor-Tile" as manufactured by Engineered Plastics Inc., Tel: 800-682-2525, or approved equal.
 - 1. Dimensions: Tiles shall be held within the following dimensions and tolerances:
- E. Nominal Tile Size
 - 1. Length and Width: per drawings
 - 2. Face Thickness: $0.1875 \pm 5\%$ max.
- F. Warpage of Edge: $\pm 0.5\%$ max.
 - 1. Absorption of Tile when tested by ASTM-D 570 not to exceed 0.35%.
 - 2. Slip Resistance of Tile when tested by ASTM-C 1028 the combined wet/dry static co-efficient of friction not to be less than 0.80 on top of domes and field area.
 - 3. Compressive Strength of tile when tested by ASTM-D 695-91 not to be less than 18,000 psi.
 - 4. Tensile Strength of Tile when tested by ASTM-D 638-91 not to be less than 10,000 psi.
 - 5. Flexural Strength of Tile when tested by ASTM - C293-94 not to be less than 24,000 psi.
 - 6. Chemical Stain Resistance of Tile when tested by ASTM-D 543-87 to withstand without discoloration or staining - 1% hydrochloric acid, urine, calcium chloride, stamp pad ink, gum and red aerosol paint.
 - 7. Abrasive Wear of Tile when tested by BYK - Gardner Tester ASTM-D 2486* with reciprocating linear motion of $37 \pm$ cycles per minute over a 10" travel. The abrasive medium, a 40 grit Norton Metallite sand paper, to be fixed and leveled to a holder. The combined mass of the sled, weight and wood block to be 3.2 lb. Average wear depth shall not exceed 0.030 after 1000 abrasion cycles measured on the top surface of the dome representing the average of three measurement locations per sample.
 - 8. Fire Resistance: When tested to ASTM E84 flame spread be less than 25.
 - 9. Gardner Impact to geometry "GE" of the standard when tested by ASTM-D 5420-93 to have a mean failure energy expressed as a function of specimen thickness of not less than 450 in. lbf/in. A failure is noted if a hairline fracture is visible in the specimen.
 - 10. Accelerated Weathering of Tile when tested by ASTM-G26-95 for 2000 hours shall exhibit the following result - no deterioration, fading or chalking of surface of tile.

11. Vitrified Polymer Composite (VPC) Surface Applied tiles embedded in concrete shall meet or exceed the following test criteria:
 - a. Accelerated Aging and Freeze Thaw Test of Tile when tested to ASTM-D 1037 shall show no evidence of cracking, delamination, warpage, checking, blistering, color change, loosening of tiles or other defects.
 - b. Salt and Spray Performance of Tile and Adhesive System when tested to ASTM-B 117 not to show any deterioration or other defects after 100 hours of exposure.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Tiles shall be suitably packaged or crated to prevent damage in shipment or handling. Finished surfaces shall be protected by sturdy wrappings and tile type shall be identified by part number.
- B. Tiles shall be delivered to location at building site for storage prior to installation.

1.05 SITE CONDITIONS

- A. Environmental Conditions and Protection: Maintain minimum temperature of 40°F in spaces to receive tactile tiles for at least 48 hours prior to installations, during installation, and for not less than 48 hours after installation. Store tactile tile material in spaces where they will be installed for at least 48 hours before beginning installation. Subsequently, maintain minimum temperature of 40°F in areas where work is completed.
- B. The use of water for work, cleaning or dust control, etc. shall be contained and controlled and shall not be allowed to come into contact with the passengers or public. Provide barricades or screens to protect passengers or public.
- C. Disposal of any liquids or other materials of possible contamination shall be made in accordance with federal state and local laws and ordinances.
- D. Cleaning materials shall have code acceptable low VOC solvent content and low flammability if used on the site.

1.06 EXTRA STOCK

- A. Deliver extra stock to storage area designated by Construction Manager. Furnish new materials from same manufactured lot as materials installed and enclose in protective packaging with appropriate identification for Surface Applied tactile tiles. Furnish not less than two (2) % of the supplied materials for each type, color and pattern installed.

1.07 WARRANTY

- A. Surface Applied tactile tiles shall be guaranteed in writing for a period of five years from date of final completion. The guarantee includes defective work, breakage, deformation, and loosening of tiles.

PART 2 PRODUCTS

2.01 AVAILABLE MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the Work include, but are not limited to, the following:
- B. The Vitrified Polymer Composite (VPC) Surface Applied Tactile Tile specified is based on Armor-Tile manufactured by Engineered Plastics Inc. (800-682-2525), or approved equal. Existing engineered and field tested products which are subject to compliance with requirements, may be incorporated in the work and shall meet or exceed the specified test criteria and characteristics.
- C. Color: All tiles shall be Brick Red.

2.02 MATERIALS

- A. Fasteners: Color matched, corrosion resistant, flat head drive anchor: ¼" diameter x 1 ¾" long. Armor-Drive by Engineered Plastics or approved equal.
- B. Adhesive: Armor-Bond as supplied by Engineered Plastics Inc., or approved equal.
- C. Sealants: Armor-Seal as supplied by Engineered Plastics Inc., or approved equal.

PART 3 EXECUTION

3.01 INSTALLATION

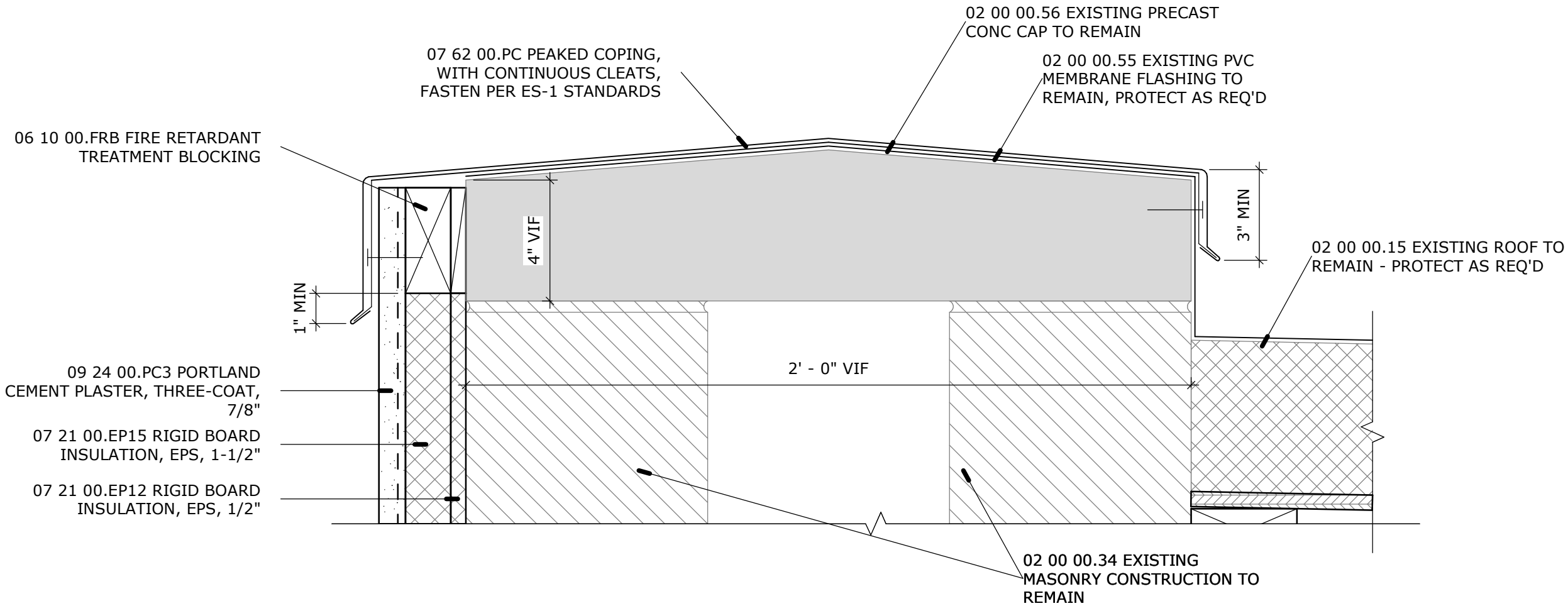
- A. During all surface preparation and tile installation procedures, ensure adequate safety guidelines are in place and that they are in accordance with the applicable industry and government standards.
- B. The application of all tile, adhesives, mechanical fasteners, and caulking shall be in strict accordance with the guidelines set by their respective manufacturers.
- C. Work with the Contractor or Construction Manager to ensure that the surfaces being prepared and fabricated to receive the tiles are constructed correctly and adequately for tile installation. Review design drawings with the Contractor prior to the construction and refer any and all discrepancies to the Construction Manager.
- D. Set the tile true and square to the curb ramp area as detailed in the design drawings, so that its location can be marked on the concrete surface. Cut angles along tile edges where curved curb lines require such. Remove tile when done marking its location.
- E. The surface to receive the detectable warning surface tile is to be mechanically cleaned with a diamond cup grinder or shot blaster to remove any dirt or foreign material. This cleaning and roughening of the surface should include the cross pattern established by the corresponding areas on the backside of the tile. Those same areas should then be cleaned with a rag soaked in Acetone.
- F. Immediately prior to installing the detectable warning surface tile, the concrete surfaces must be inspected to ensure that they are clean, dry, free of voids, curing compounds, projections, loose material, dust, oil, grease, sealers and determined to be structurally sound and cured for a minimum of 30 days.
- G. Using Acetone, wipe the backside of the tile around the perimeter and along the internal cross pattern, to remove any dirt or dust particles from the area to receive the adhesive.
- H. Apply the adhesive on the backside of the tile, following the perimeter and internal cross pattern established by the tile manufacturer. Sufficient adhesive must be placed on the prescribed areas to have full coverage across the 2" width of the adhesive locator.
- I. Set the tile true and square to the curb ramp area as detailed in the design drawings.
- J. Standing with both feet applying pressure around the molded recess provided in the tile, drill a hole true and straight to a depth of 3½" using the recommended diameter bit. Drill through the tile without hammer option until the tile has been successfully penetrated, and then with hammer option to drill into the concrete.
- K. Immediately after drilling each hole, and while still applying foot pressure, vacuum, brush or blow away dust and set the mechanical fastener as described below, before moving on to the next hole.
- L. Mechanically fasten tiles to the concrete substrate using a hammer to set the fasteners. Ensure the fastener has been placed to full depth in the dome, straight, and flush to the top of dome. Drive the pin of the fastener with the hammer, taking care to avoid any inadvertent blows to the truncated dome or tile surface. A plastic deadblow or leather hammer is recommended.
- M. Working in a sequence which will prevent buckles in the tile, proceed to drill and install all fasteners in the tile's molded recesses.
- N. Following the installation of the tiles, the perimeter caulking sealant should be applied. Use caulks color to match tiles or adjacent concrete (to be approved by Project Manager). Follow the perimeter caulking sealant manufacturer's recommendations when applying. Tape all perimeter edges of the tile and also tape the adjacent concrete back 1/2" from the tile's perimeter edge. Tool the perimeter caulking with a plastic applicator or spatula to create a straight edge in a cove profile between the tile and adjacent concrete. Remove tape immediately after tooling perimeter caulking sealant.
- O. Do not allow foot traffic on installed tiles until the perimeter caulking sealant has cured sufficiently to avoid tracking.
- P. If installing adjacent tiles, note the orientation of each tile. Careful attention will reveal that one of the long edges of the tile is different than the other, in regard to the tiny dotted texture. You may also note a larger perimeter margin before the tiny dotted texture pattern begins. Consistent orientation of each tile is required in order that the truncated domes on adjacent tiles line up with each other.

- Q. In order to maintain proper spacing between truncated domes on adjacent tiles, the tapered edge should be trimmed off using a continuous rim diamond blade in a circular saw or mini-grinder. The use of a straightedge to guide the cut is advisable. All cuts should be made prior to installation of the tiles.
- R. If installing adjacent tiles, care should be taken to leave a 1/8 inch gap between each.
- S. If tiles are custom cut to size, and if pre-molded recesses (to receive fasteners) are removed by the cut, then any truncated dome can be center-drilled with a 1/4 inch through hole, and countersunk with a suitable bit, to receive mechanical fasteners. New holes should be created no closer to the edge of the tile than any of the other perimeter fastener pre-molded recesses. Care should be taken to not countersink too deeply. Fasteners should be flush with the top of the truncated dome when countersunk properly.
- T. Adhesive or caulking on the surface of the tile can be removed with Acetone.

3.02 CLEANING AND PROTECTION

- A. Protect tiles against damage during construction period to comply with tactile tile manufacturer's specification.
- B. Protect tiles against damage from rolling loads following installation by covering with plywood or hardwood.
- C. Clean tactile tiles not more than four days prior to date scheduled for inspection intended to establish date of substantial completion in each area of project. Clean tactile tile by method specified by tactile tile manufacturer.

END OF SECTION



E1

PARAPET COPING

3" = 1'-0"

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LOS LUNAS SCHOOLS

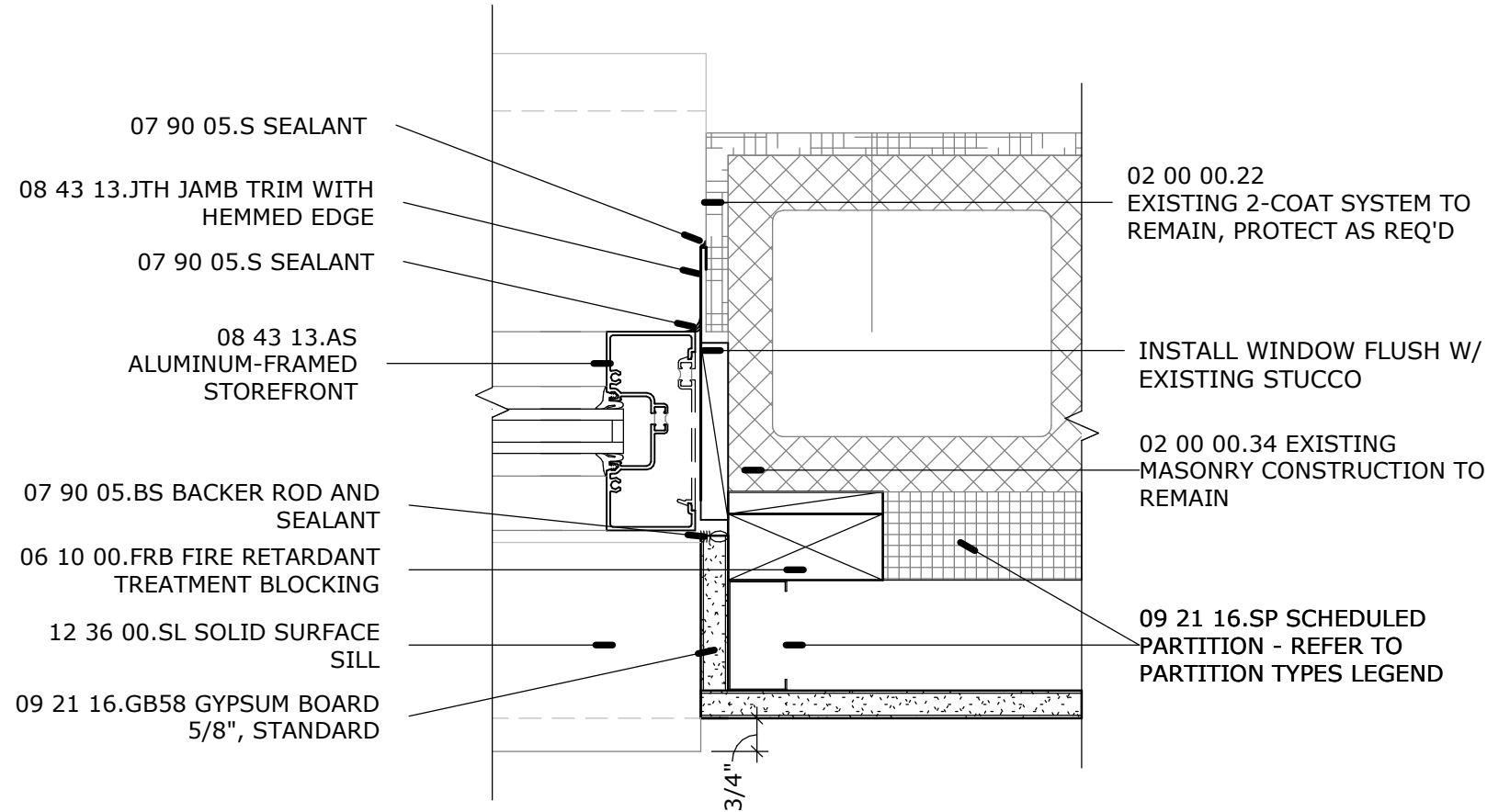
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REFERENCE WALL SECTION A3/A311

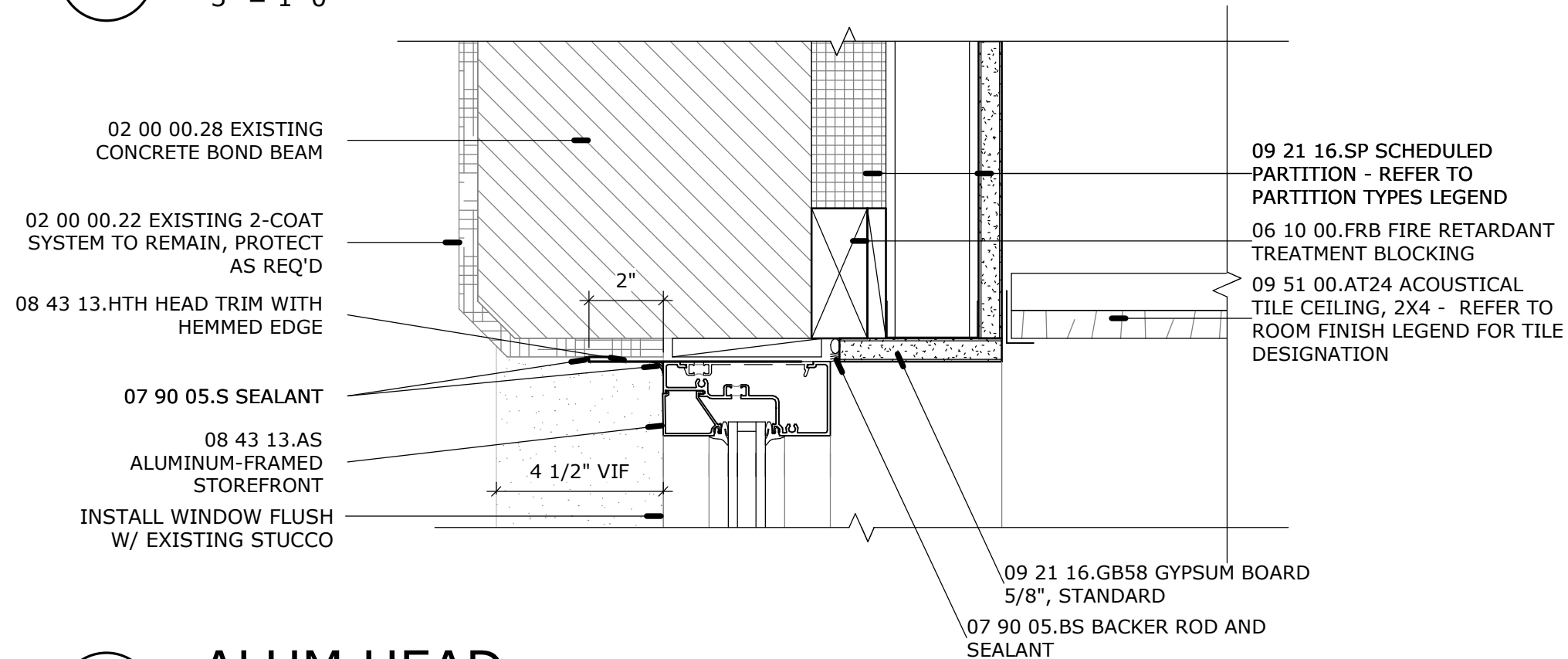
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E4 ALUM JAMB

3" = 1'-0"



C5 ALUM HEAD

3" = 1'-0"

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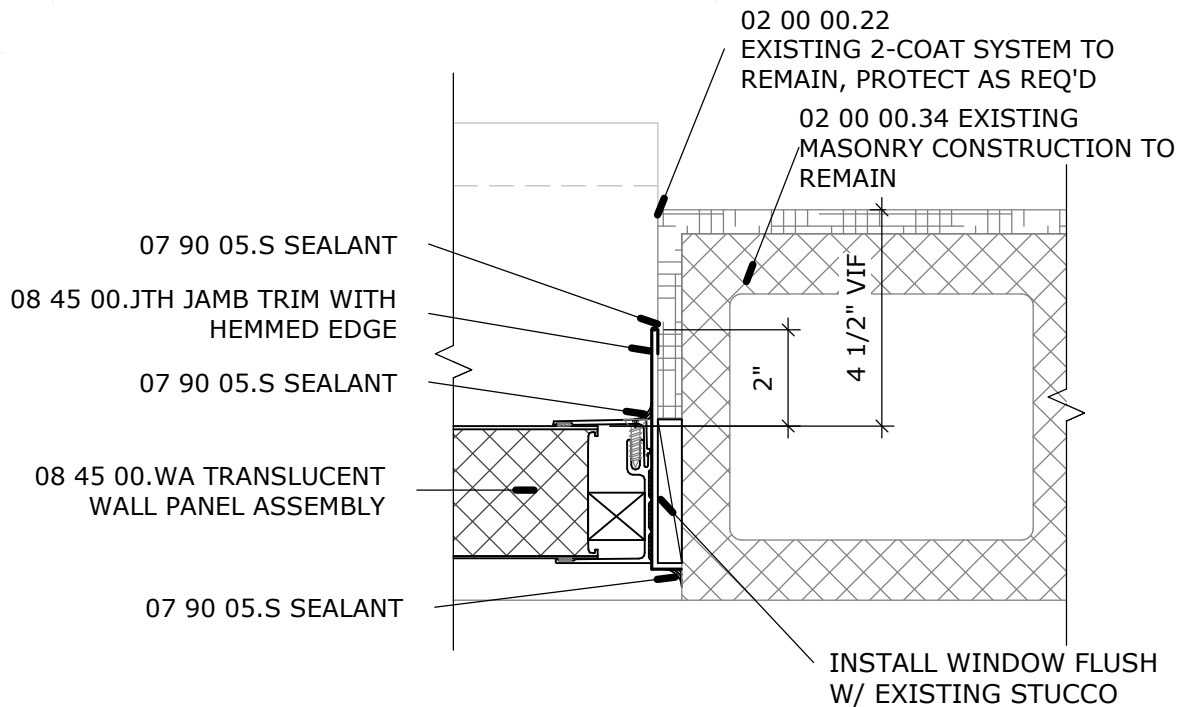
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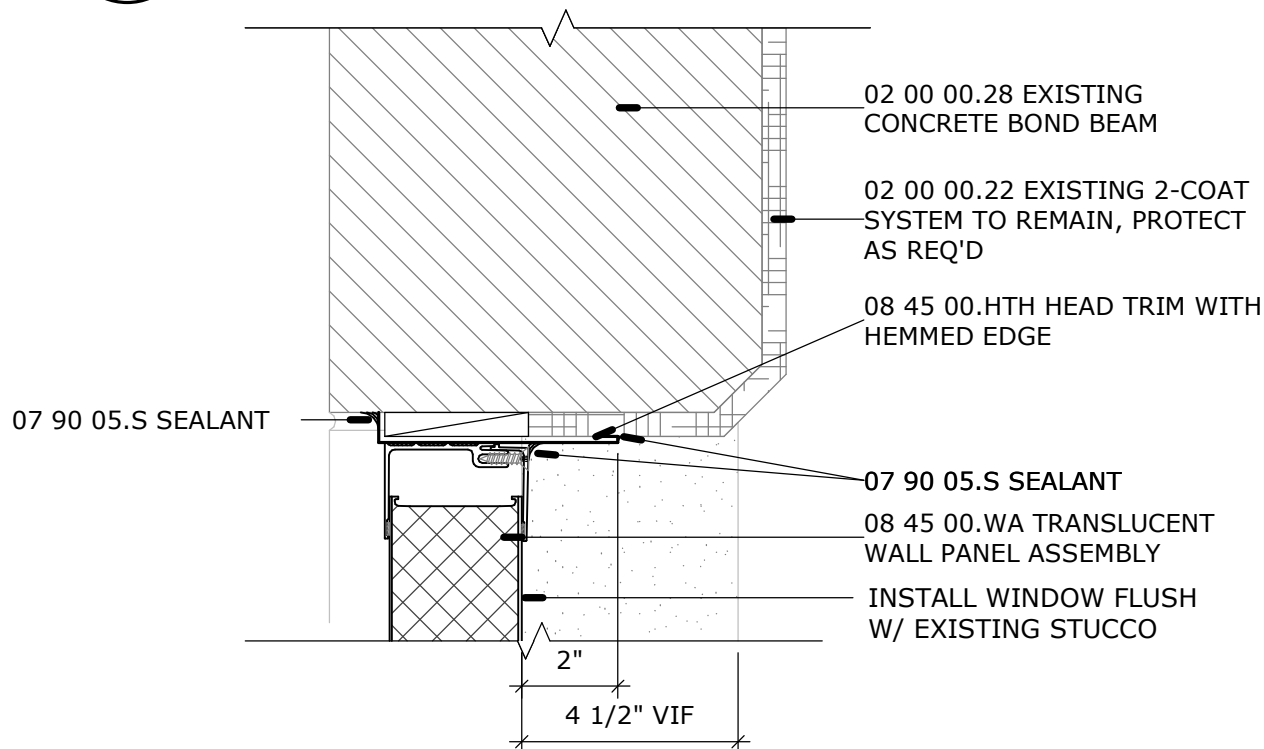
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REFERENCE SHEET A530

**E6****TRANSLUCENT JAMB**

3" = 1'-0"

**D6****TRANSLUCENT HEAD**

3" = 1'-0"

REFERENCE SHEET A530



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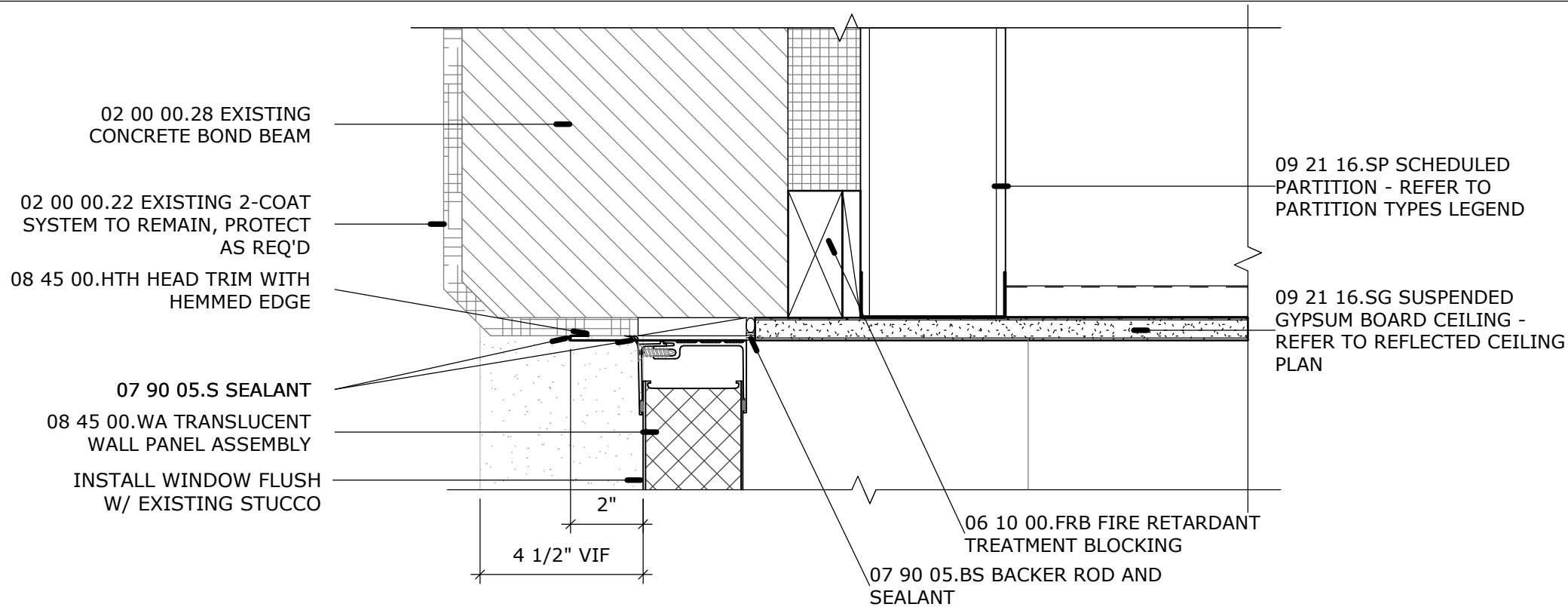
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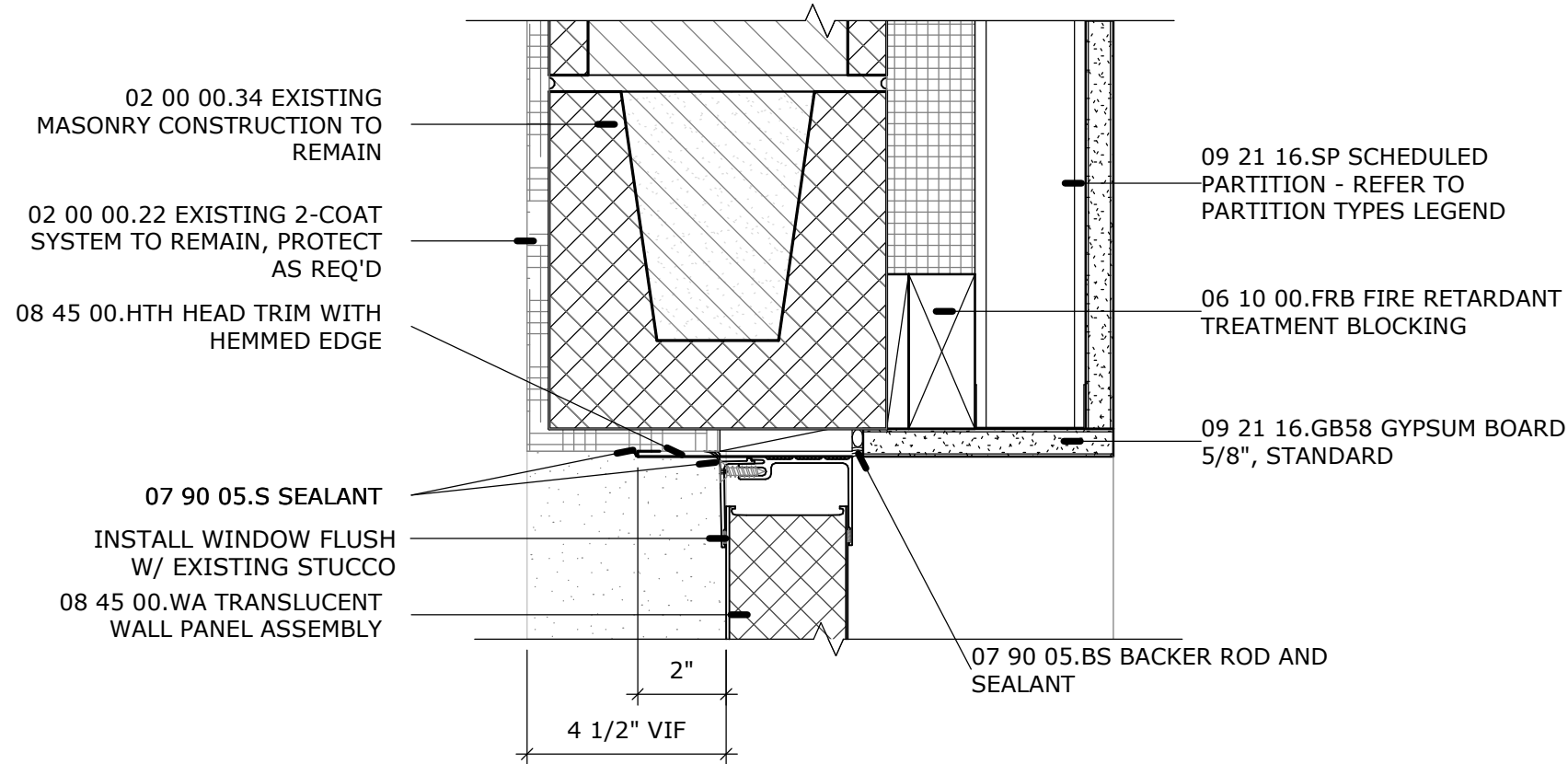
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B5 TRANSLUCENT HEAD

3" = 1'-0"



B3 TRANSLUCENT HEAD

3" = 1'-0"

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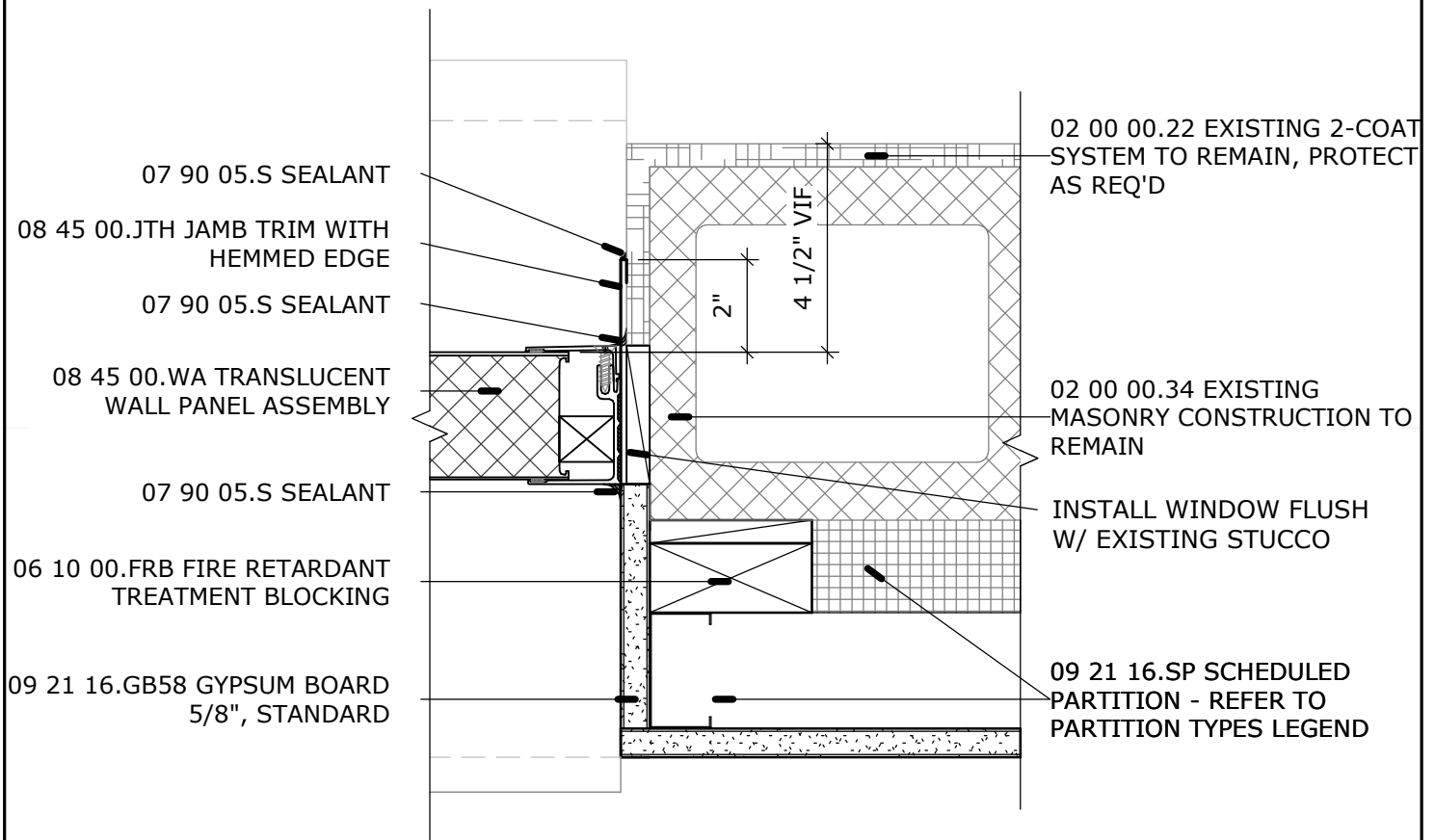
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C5

TRANSLUCENT JAMB

3" = 1'-0"

REFERENCE SHEET A531



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