

**ADDENDUM NO. 01  
LEGRANDE ELEMENTARY SCHOOL ADDITION AND RENOVATION  
SCB PROJECT NO. 2210**

TO: All Plan Holders

FROM: Sherman Carter Barnhart Architects  
144 Turner Commons Drive, Suite 110  
Lexington, Kentucky 40508

DATE: August 22, 2023

The purpose of this Addendum is to clarify further the requirements of the plans and specifications. The bidders are governed by the information in this Addendum as if included in the plans and specifications. This Addendum does hereby become a part of the Contract Documents. Each bidder shall acknowledge receipt of this Addendum in the space provided in the Bid Form.

This Addendum consists of one hundred thirty (130) pages.

**A. Project Manual**

1. 004114 - Form of Proposal (KDE 702 KAR 4:160). **REPLACE** with **attached**.
2. 012300 – Alternates. **REPLACE** with **attached**.
3. Volume 2, Table of Contents. **REPLACE** with **attached**.
4. 023200 – Geotechnical Investigation and Report. **REPLACE** with **attached**.
5. 024116 – Structure Demolition, Item 1.6 - Informational Submittals; **DELETE** 1.6-B – “Engineering Survey ...”. ALSO, Item 3.1 – Examination; **DELETE** 3.1-C – “Engage a professional Engineer ...”.
6. 074213.13- Preformed Metal Wall Panels. **DELETE** in entirety.
7. 074213.19- Insulated Metal Wall Panels, **DELETE** in entirety.
6. 093000 – Tiling, Item 2.2 Tile Products, **REPLACE** with the following:
  - A. Tile Type: Field Tile at walls and flooring.
    1. Basis-of-Design Product: Subject to compliance with requirements, provide Crossville “Java Joint” or comparable product by one of the following:
      - a. Florida Tile
      - b. Daltile
    2. Composition: Porcelain.
    3. Module Size: 12 inches by 24 inches.
    4. Surface: Slip-resistant, with abrasive admixture.
    5. Tile Color and Pattern: Color to be selected from full range of color, installed in Running Bond Pattern. (2 colors, one on walls and one on floors)
    6. Grout Color: Basis of Design, TEC "934 Delorean Gray" 3/16" joints.
    7. Cut Base: 6” high cut base with cove trim, Basis of Design Schluter DILEX-AHK-AE or equal.

- B. Tile Type: Accent Tile 6" High accent wall tile (all walls scheduled for tile).
1. Basis-of-Design Product: Subject to compliance with requirements, provide Crossville "Glass Blox" or comparable product by one of the following.
    - a. Daltile
    - b. Florida Tile, Inc.
  2. Composition: Glass
  3. Face Size: Module 2" x 4"
  4. Tile Color and Pattern: Provide 1 accent color per restroom in Running Bond Pattern
  5. Grout Color: Basis of Design TEC "934 Delorean Gray" with 1/8" joints.
  6. Provide required buildout for glass tile to align flush with surrounding wall tile.
- C. Tile Type: Quarry Tile where indicated in drawings and in freezer/ cooler units.
1. Basis-of-Design Product: Subject to compliance with requirements, provide American Olean "Quarry Naturals Flash Series" or comparable product by one of the following:
    - a. American Olean; a division of Dal-Tile Corporation.
    - b. Daltile
    - c. Florida Tile, Inc.
    - d. Summitville Tiles, Inc.
  2. Face Size: 6 inches x 6 inches
  3. Grout Color: Basis of Design TEC, color to be selected from full range of standard colors.

7. 087100 – Door Hardware. **REPLACE** with attached.
8. 102113 – Toilet Compartments. **ADD**; see attached.
9. 114000 – Food Service Equipment. **ADD**; see attached.

## **B. Construction Drawings**

1. Sheet S0.1 – Structural Notes. **REPLACE** with attached.
2. Sheet S1.1 – Foundation Plan. **REPLACE** with attached.
3. Sheet S2.1 – Roof Framing Plan. **REPLACE** with attached.
4. Sheet S3.1 – Sections & Details. **REPLACE** with attached.
5. Sheet S4.1 – Sections & Details. **REPLACE** with attached.
6. Sheet D1.0 – Demolition Plan, Details & Notes. **REPLACE** with attached.
7. Sheet A0.0 – Abbreviations, Symbol Legend, General Notes and Partition Types. **REPLACE** with attached.
8. Sheet A1.0 – Floor Plan Overall. **REPLACE** with attached.
9. Sheet A.1.1 – Enlarge Plan and Details. **REPLACE** with attached.
10. Sheet A1.2 – Enlarged Plan and Details. **REPLACE** with attached.
11. Sheet A1.3 – Roof Plan and Details. **REPLACE** with attached.
12. Sheet A2.1 – Building Elevations & Sections. **REPLACE** with attached.
13. Sheet A3.1 – Reflected Ceiling Plans and Details. **REPLACE** with attached.
14. Sheet A4.1 – Door Schedule and Door And Frame Elevations. **REPLACE** with attached.

## **C. Pre-Bid Meeting Minutes:**

1. Meeting Minutes of August 17, 2023, **ADD**; see attached.

**End of Addendum**

BG No. 23-277

Date: \_\_\_\_\_ To: (Owner) Hart County Board of Education

Project Name: LeGrande Elementary School Addition and Renovation Bid Package No. \_\_\_\_\_

City, County: Horse Cave, Hart

Name of Contractor: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

Business Address: \_\_\_\_\_ Telephone: \_\_\_\_\_

Having carefully examined the Instructions to Bidders, Contract Agreement, General Conditions, Supplemental Conditions, Specifications, and Drawings, for the above referenced project, the undersigned bidder proposes to furnish all labor, materials, equipment, tools, supplies, and temporary devices required to complete the work in accordance with the contract documents and any addenda listed below for the price stated herein.

Addendum \_\_\_\_\_ (Insert the addendum numbers received or the word "none" if no addendum received.)

**BASE BID:** For the construction required to complete the work, in accordance with the contract documents, I/We submit the following lump sum price of:

\_\_\_\_\_ Use Figures

\_\_\_\_\_ Dollars & \_\_\_\_\_ Cents

Use Words for both dollars and cents

**ALTERNATE BIDS:** (If applicable and denoted in the Bidding Documents)

For omission from or addition to those items, services, or construction specified in Bidding Documents by alternate number, the following lump sum price will be added or deducted from the base bid.

Alternate Bid No.	Alternate Description	+ (Add to the Base Bid)	- (Deduct from the Base Bid)	No Cost Change (from the Base Bid)
Alt. Bid No. 1	Cafeteria flooring to be premium vinyl tile and base (not terrazzo)			
Alt. Bid No. 2	Provide Owner-preferred Slone auto-flush valves to water closets			
Alt. Bid No. 3	Provide Owner-preferred Best locks for door hardware			
Alt. Bid No. 4	Provide Owner-preferred Reliable Controls by Automated Building Concepts for controls.			
Alt. Bid No. 5	Provide new spray foam roofing over existing modified bitumen roofing.			
Alt. Bid No. 6				
Alt. Bid No. 7				
Alt. Bid No. 8				
Alt. Bid No. 9				
Alt. Bid No. 10				

A maximum of 10 Alternate Bids will be acceptable with each Base Bid. Do not add supplemental sheets for Alternate Bids to this document.

**LIST OF PROPOSED SUBCONTRACTORS:**

List on the lines below each major branch of work and the subcontractor involved with that portion of work. If the branch of work is to be done by the Contractor, so indicate.

The listing of more than one subcontractor in a work category shall invalidate the bid.

The listing of the bidder as the subcontractor for a work category certifies that the bidder has in current employment, skilled staff and necessary equipment to complete that category. The architect/engineer will evaluate the ability of all listed subcontractors to complete the work and notify the owner. Listing of the bidder as the subcontractor may invalidate the bid should the architect's review indicate bidder does not have skilled staff and equipment to complete the work category at the time the bid was submitted.

A maximum of 40 subcontractors will be acceptable with each bid. Do not add supplemental sheets for subcontractors to this document.

The bidder shall submit the list of subcontractors with the bid.

	<b><u>BRANCH OF WORK</u></b> (to be filled out by the Architect)	<b><u>SUBCONTRACTOR</u></b> (to be filled out by the contractor)
1.	Excavation	
2.	Termite Control	
3.	Masonry	
4.	Structural Concrete	
5.	Steel Erection	
6.	Miscellaneous Metals	
7.	Metal framing and Gypsum Board	
8.	Wall Insulation	
9.	Silicone-Coated Polyurethane Foam Roof System	
10.	Sheet Metal (Fascia / Gutters / Downspouts / Trim	
11.	Coiling Shutter	
12.	Aluminum Storefronts and Entrance Systems	
13.	HM Doors and Frames	
14.	Wood Doors	
15.	Door Hardware	
16.	Suspended Acoustical Ceiling Systems	

17.	Terrazzo Flooring and Base	
18.	VCT Flooring and Base	
19.	Painting	
20.	Manufactured Casework and Countertops	
21.	Toilet Partitions	
22.	Toilet Accessories	
23.	Signage	
24.	Food Service Equipment	
25.	Site Concrete (Sidewalks / Ramps / Platforms / Retaining Walls / Cheekwalls / Steps	
26.	Fencing and Gates	
27.	Asphaltic Paving	
28.	Plumbing Demolition	
29.	Plumbing	
30.	Plumbing Insulation	
31.	Mechanical Demolition	
32.	Mechanical Piping	
33.	HVAC Sheet Metal	
34.	Mechanical Insulation	
35.	Air & Hydronic Balance	
36.	BAS Controls	
37.	Fire Protection	
38.	Electrical Demolition	
39.	Electrical	
40.	Voice / Data	
41.	Access Controls	
42.	Intercom	

**LIST OF PROPOSED SUPPLIERS AND MANUFACTURERS:**

List on the lines below each major material category for this project and the suppliers and manufacturers involved with that portion of work. Listing the supplier below means the Contractor is acknowledging authorization from the Supplier to include the Supplier in this bid.

The listing of more than one supplier or manufacturer in a material category shall invalidate the bid.

**A maximum of 40 suppliers and manufacturers will be acceptable with each bid. Do not add supplemental sheets for suppliers to this document.**

**The bidder shall submit the list of suppliers and manufacturers within one (1) hour of the bid.**

	<b><u>MATERIAL DESCRIPTION BY SPECIFICATION DIVISION AND CATEGORY</u></b> (to be filled out by the Architect or Contractor)	<b><u>SUPPLIER</u></b> (to be filled out by the Contractor)	<b><u>MANUFACTURER</u></b> (to be filled out by the Contractor)
1.	Termite Control		
2.	Concrete		
3.	CMU		
4.	Face Brick		
5.	Water Repellents		
6.	Steel Beams		
7.	Steel Joists		
8.	Steel Decking		
9.	Silicone-Coated Polyurethan Foam Roof System		
10.	Roof Walkway Pads		
11.	Rigid Roof Insulation		
12.	Canopies		
13.	Roof Ladders		
14.	Metal Framing		
15.	Gypsum Board		
16.	Wall Insulation		
17.	Coiling Shutter		
18.	Aluminum Storefronts and Entrance Systems		

	<p><b><u>MATERIAL DESCRIPTION BY SPECIFICATION DIVISION AND CATEGORY</u></b> (to be filled out by the Architect or Contractor)</p>	<p><b><u>SUPPLIER</u></b> (to be filled out by the Contractor)</p>	<p><b><u>MANUFACTURER</u></b> (to be filled out by the Contractor)</p>
19.	HM Doors and Frames		
20.	Wood Doors		
21.	Door Hardware		
22.	Interior and Exterior Glass and Glazing		
23.	Shades (Between Glass in Vision Lights of Doors)		
24.	Suspended Acoustical Ceiling Systems		
25.	Terrazzo Flooring and Base		
26.	VCT Flooring and Base		
27.	Interior Painting		
28.	Exterior Painting		
29.	Fire Extinguishers and Cabinets		
30.	Manufactured Casework and Countertops		
31.	Tack Boards and Marker Boards		
32.	Toilet Partitions		
33.	Toilet Accessories		
34.	Signage		
35.	Food Service Equipment		
36.	Exterior Railings		
37.	Fencing and Gates		
38.	Kitchen Hood		
39.	Plumbing Fixtures (Provide Complete Listing)		
40.	Plumbing (Provide Complete Listing)		

**UNIT PRICES:**

Indicate on the lines below those unit prices to determine any adjustment to the contract price due to changes in work or extra work performed under this contract. The unit prices shall include the furnishing of all labor and materials, cost of all items, and overhead and profit for the Contractor, as well as any subcontractor involved. These unit prices shall be listed in units of work.

**A maximum of 40 unit prices will be acceptable with each bid. Do not add supplemental sheets for unit pricing to this document.**

**The bidder shall submit the list of unit prices within one (1) hour of the bid.**

	<b><u>WORK</u></b> (to be filled out by the Architect)	<b><u>PRICE / UNIT</u></b> (to be filled out by the Contractor)	<b><u>UNIT</u></b> (to be filled out by the Contractor)
1.	DGA		/ton
2.	#57 Stone		/ton
3.	#2 KYTC Stone		/ton
4.	Mass Earth		/cy
5.	12"PE Storm Piping (6' Deep)		/lf
6.	Downspout Boot		/ea
7.	6 oz. Non-Woven Filter Fabric		/syd
8.	4" Concrete Slab with 6x6 – 8/8 W.W.F.		/sf
9.	4" Concrete Sidewalks (Including Prep & Stone)		/sy
10.	Asphalt Paving Including Store – Light Duty		/sy
11.	Asphalt paving including stone – heavy duty		/sy
12.	Pipe Bollard		/ea
13.	Chain Link Fence		/lf
14.	VCT Flooring		/sf
15.	VCT Base		/lf
16.	Suspended Acoustical Ceiling System (Type A)		/sy
17.	Interior Painting		/sf
18.	3/4" EMT Conduit, Installed		/lf
19.	1" EMT Conduit, Installed		/lf



	<b><u>WORK</u></b> (to be filled out by the Architect)	<b><u>PRICE / UNIT</u></b> (to be filled out by the Contractor)	<b><u>UNIT</u></b> (to be filled out by the Contractor)
20.	3 #12 Conductor, Installed		/lf
21.	Duplex Receptacle, Installed		/ea
22.	GFI Receptacle, Installed		/ea
23.	Quad Receptacle, Installed		/ea
24.	120 Volt, 20 Amp, Single Pole Circuit Breaker, Installed		/ea
25.	Fire Alarm A/V Unit, Installed		/ea
26.	Fire Alarm Pull Station, Installed		/ea
27.	Duct Mounted Smoke Detector, Installed		/ea
28.	Light Fixture, Installed (Provide Complete Listing)		/ea
29.	Exit Sign, Installed		/ea
30.	Voice / Data Outlet with 2 Category 6A RJ-45 Jacks, Installed		/ea
31.	Category 6A UTP Cable, Installed in Conduit		/lf
32.			
33.			
34.			
35.			
36.			
37.			
38.			
39.			
40.			

**DIRECT MATERIAL PURCHASES:**

Indicate on the lines below those materials to be purchased directly by the Owner with a Purchase Order to be issued by the Owner to the individual suppliers. The value of the direct Purchase Order cannot be less than \$5,000. Following the approval of bids, the Contractor shall formalize this list by completing and submitting the electronic Purchase Order Summary Form provided by KDE. Listing the supplier below means the Contractor is acknowledging authorization from the Supplier to include the Supplier in this bid.

**A maximum of 50 POs will be acceptable with each bid. Do not add supplemental sheets for additional POs to this document.**

**The bidder shall submit the list of Purchase Orders within four (4) days of the bid.**

	<b><u>SUPPLIER</u></b> (to be filled out by the Contractor)	<b><u>PURCHASE ORDER DESCRIPTION</u></b> (to be filled out by the Contractor)	<b><u>PURCHASE ORDER AMT.</u></b> (to be filled out by the Contractor)
1.	Stone		
2.	Concrete		
3.	Termiticide		
4.	Water Repellent		
5.	Masonry		
6.	Structural Steel		
7.	Steel Decking		
8.	Metal Fabrications		
9.	Rigid Roof Insulation		
10.	Dampproofing		
11.	Self-Adhering Sheet Waterproofing		
12.	Vapor Retarder		
13.	Thermal Insulation		
14.	Silicone-Coated Polyurethane Foam Roofing System		
15.	Metal Framing		
16.	Gypsum Board		
17.	Sealants		
18.	Wall and Floor Tile		
19.	Sheet Metal		

	<b><u>SUPPLIER</u></b> (to be filled out by the Contractor)	<b><u>PURCHASE ORDER DESCRIPTION</u></b> (to be filled out by the Contractor)	<b><u>PURCHASE ORDER AMT.</u></b> (to be filled out by the Contractor)
20.	Canopies		
21.	Roof Access Ladders		
22.	Coiling Shutter		
23.	Aluminum Storefronts and Entrance Systems		
24.	HM Doors and Frames		
25.	Wood Doors		
26.	Door Hardware		
27.	Suspended Acoustical Ceiling Systems		
28.	Terrazzo Flooring and Base		
29.	VCT Flooring and Base		
30.	Painting		
31.	Fire Extinguishers and Cabinets		
32.	Manufactured Casework and Countertops		
33.	Tack Boards and Marker Boards		
34.	Toilet Partitions		
35.	Toilet Accessories		
36.	Signage		
37.	Dedication Plaque		
38.	Wall Protection		
39.	Metal Lockers		
40.	Laminate Casework and Countertops		
41.	Food Service Equipment		
42.	Railings		
43.	Fencing and Gates		
44.	Asphaltic Paving		

	<b><u>SUPPLIER</u></b> (to be filled out by the Contractor)	<b><u>PURCHASE ORDER DESCRIPTION</u></b> (to be filled out by the Contractor)	<b><u>PURCHASE ORDER AMT.</u></b> (to be filled out by the Contractor)
45.	Plumbing		
46.			
47.			
48.			
49.			
50.			

**TIME LIMIT FOR EXECUTION OF CONTRACT DOCUMENTS:**

In the event that a bidder's proposal is accepted by the Owner and such bidder should fail to execute the contract within ten (10) consecutive days from the date of notification of the awarding of the contract, the Owner, at his option, may determine that the awardee has abandoned the contract. The bidder's proposal shall then become null and void, and the bid bond or certified check which accompanied it shall be forfeited to and become the property of the Owner as liquidated damages for failure to execute the contract.

The bidder hereby agrees that failure to submit herein above all required information and/or prices can cause disqualification of this proposal.

Submitted by:

NAME OF CONTRACTOR / BIDDER: \_\_\_\_\_

AUTHORIZED REPRESENTATIVE'S NAME: \_\_\_\_\_

Signature

AUTHORIZED REPRESENTATIVE'S NAME(printed): \_\_\_\_\_

AUTHORIZED REPRESENTATIVE'S TITLE: \_\_\_\_\_

**NOTICE: Bid security must accompany this proposal if the Base Bid price is greater than ~~of \$25,000.~~ \$100,000. (change effective June 3, 2019.)**

**This form shall not be modified.**

## SECTION 012300 - ALTERNATES

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. Section includes administrative and procedural requirements for alternates.

#### 1.3 DEFINITIONS

- A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the bidding requirements that may be added to or deducted from the base bid amount if Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.
  - 1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
  - 2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternate into the Work. No other adjustments are made to the Contract Sum.

#### 1.4 PROCEDURES

- A. Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.
  - 1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.
- B. Notification: Immediately following award of the Contract, notify each party involved, in writing, of the status of each alternate. Indicate if alternates have been accepted, rejected, or deferred for later consideration. Include a complete description of negotiated revisions to alternates.
- C. Execute accepted alternates under the same conditions as other work of the Contract.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

1. Alternate No. 01: Cafeteria flooring to be premium vinyl tile and base (not terrazzo).
2. Alternate No. 02: Provide Owner-preferred Sloan auto-flush valves.
3. Alternate No. 03: Provide Owner-preferred Best Locks for door hardware.
4. Alternate No. 04: Provide Owner-preferred Reliable Controls by Automated Building Concepts for controls.
5. Alternate No. 05: Provide new spray foam roofing over existing modified bitumen roofing.

End of Section 012300

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**VOLUME 2 OF 3**  
**LEGRANDE ELEMENTARY SCHOOL ADDITION AND RENOVATION**  
**SCB PROJECT NO. 2210 / BG #23-277**

*Unless noted otherwise, the following shall apply to all manufacturers listed herein. Subject to compliance with Contract Documents, manufactures listed are approved as a manufacturer only. This does not imply that specific products supplied by such manufacturers have been reviewed and comply with requirements. It shall be the manufacturer's / contractor's responsibility to ensure that all requirements of the Contract Documents are met.*

**Facility Construction Subgroup**

<b>DIVISION 02</b>	<b>EXISTING CONDITIONS</b>
023200	- Geotechnical Investigation and Report
024100	- Site Demolition
024116	- Structure Demolition
024119	- Selective Demolition
<b>DIVISION 03</b>	<b>- CONCRETE</b>
033000	- Concrete Work
	- Attachment 1 - Concrete Mix Design Submittal Form
	- Attachment 2 – Concrete Installer Qualifications Form
<b>DIVISION 04</b>	<b>- MASONRY</b>
042000	- Unit Masonry
<b>DIVISION 05</b>	<b>- METALS</b>
051200	- Structural Steel
052100	- Steel Joists
053100	- Metal Deck
055000	- Metal Fabrications
<b>DIVISION 06</b>	<b>- WOOD, PLASTICS, AND COMPOSITES</b>
061053	- Miscellaneous Rough Carpentry
061600	- Sheathing
<b>DIVISION 07</b>	<b>- THERMAL AND MOISTURE PROTECTION</b>
071110	- Bituminous Dampproofing
071326	- Self-Adhering Sheet Waterproofing System
072100	- Thermal Insulation
072600	- Under-Slab Vapor Retarder
075700	- Coated Foam Roofing
076200	- Sheet Metal Flashing and Trim
079200	- Joint Sealants
079219	- Acoustical Joint Sealants



- DIVISION 08 - OPENINGS**
- 081113 - Hollow Metal Doors and Frames
  - 081416 - Flush Wood Doors
  - 083313 - Coiling Counter Doors
  - 084113 - Aluminum-Framed Entrances and Storefronts
  - 087100 - Door Hardware
  - 088000 - Glazing

- DIVISION 09 - FINISHES**
- 092216 - Non-Structural Metal Framing
  - 092900 - Gypsum Board
  - 093000 - Tiling
  - 095113 - Acoustical Panel Ceilings
  - 096513 - Resilient Base and Accessories
  - 096518 - Luxury Vinyl Tile
  - 096519 - Resilient Tile Flooring
  - 096623 - Resinous Matrix Terrazzo Flooring
  - 099113 - Exterior Painting
  - 099123 - Interior Painting

- DIVISION 10 - SPECIALTIES**
- 101100 - Visual Display Units
  - 101416 - Plaques
  - 101419 - Dimensional Letter Signage
  - 101423 - Panel Signage
  - 102113 - Toilet Compartments
  - 102600 - Wall Protection
  - 102800 - Toilet, Bath, and Laundry Accessories
  - 104413 - Fire Protection Cabinets
  - 104416 - Fire Extinguishers
  - 105113 - Metal Lockers
  - 105300 - Aluminum Protective Canopies

- DIVISION 11 - EQUIPMENT**
- 114000 - Food Service Equipment

- DIVISION 12 - FURNISHINGS**
- 123216 - Laminate Clad Casework

- DIVISION 13 - SPECIAL CONSTRUCTION- N/A**

- DIVISION 14 - CONVEYING EQUIPMENT – N/A**

# **SOLID GROUND**

CONSULTING ENGINEERS, PLLC

Engineering Innovation; Providing Solutions to Your Challenges.

## **REPORT OF GEOTECHNICAL EXPLORATION**



### **Proposed Legrande Elementary School Development**

Horse Cave, Hart County, Kentucky

Prepared for: Daniel Hawkins

Hart County Public Schools

Munfordville, Kentucky

August 16, 2023

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## APPENDICES

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**SOLID GROUND**  
CONSULTING ENGINEERS, PLLC  
Engineering Innovation; Providing Solutions to Your Challenges.

August 16, 2023

Daniel Hawkins, Director of Pupil Personnel and Maintenance  
Hart County Board of Education  
25 Quality Street  
Munfordville, Kentucky 42765

Subject: **Report of Geotechnical Exploration  
Proposed Legrande Elementary School Addition Development  
Horse Cave, Hart County, Kentucky  
Solid Ground Project No.: 23-358**

Mr. Hawkins,

Solid Ground Consulting Engineers, PLLC (Solid Ground) is pleased to present our Report of Geotechnical Exploration. This report is for the proposed Legrande Elementary School Addition development to be located in Horse Cave, Kentucky. The geotechnical exploration was conducted in general accordance with the scope of work agreed upon in Solid Ground Proposal dated May 15, 2023.

This report contains our findings and recommendations for the referenced project detailed above. Once completed, it is recommended that Solid Ground have the opportunity to review plans and specifications. In addition, it is recommended that Solid Ground be retained to perform observations during earthwork, foundations, and slab-on-grade construction. Solid Ground will not be held responsible for interpretations and field observations made by others.

We appreciate the opportunity to provide our consulting services to you. We look forward to working with you on this and future projects.

Sincerely,

**SOLID GROUND CONSULTING ENGINEERS, PLLC**



Beck Smith, PE  
Senior Engineer  
Kentucky License Number 37415

Caitlin Vaught  
Project Geologist

## **1.0 Executive Summary**

Solid Ground Consulting Engineers performed a geotechnical exploration in support of the proposed Legrande Elementary School development located at 70 Legrande School Road, Horse Cave, Hart County, Kentucky. The approximate coordinates of the site are 37.170994°N, -85.795141°W.

### **1.1 Summary of Findings**

Solid Ground conducted a total of three (3) soil test borings, all being located within the approximate development boundaries.

Soil overburden generally consisted of a layer of gravel underlain by natural soils described as fat clay (CH), silty lean clay (CL-ML), and silt (ML) to auger refusal/termination depths. Borings B-1 and B-2 were terminated at a depth of 16.5 feet. Boring B-3 encountered auger refusal at a depth of 6.9 feet.

The finished floor elevation (FFE) is unknown at the time of this report but is expected to match that of the existing building. It is anticipated that some site grading will be required to achieve the finished grade.

## **2.0 Project Information**

### **2.1 Purpose and Scope of Services**

The purpose of this subsurface exploration was to prepare recommendations for design and construction of foundations and floor slabs for the proposed development. Our scope of work included the following:

- ▲ A discussion of site surface conditions.
- ▲ A discussion of subsurface conditions encountered as well as a discussion of the published geologic conditions at the site.
- ▲ A summary of field and laboratory testing results including a brief review our test procedures.
- ▲ Boring logs and laboratory tests will be summarized in the report and included in the appendices.
- ▲ A discussion of specific geotechnical conditions and concerns which may affect the design or construction of the project.
- ▲ Recommendations for site preparation and construction of compacted fills.

- ▲ Recommended general design and construction criteria for the project foundations.
- ▲ Recommended general design and construction criteria for the pavement and concrete pad areas.
- ▲ Recommendations for design and construction of below grade walls and/or retaining walls.
- ▲ A recommendation for seismic site class according to International Building Code which was adopted by the 2018 Kentucky Building Code (KBC).
- ▲ Pavement evaluation per ASTM D6433.

## 2.2 Project Description

The project consists of a 5,940 sf, one-story addition to the Legrande Elementary School. The approximate site location is depicted below in Figure 1.



**Figure 1: Approximate Site Location**

## **2.3 Site Conditions**

Solid Ground personnel visited the site throughout the geotechnical exploration to observe existing conditions, to help interpret the subsurface data, and to detect conditions which could affect recommendations.

The site is located at 70 Legrande School Road, Horse Cave, Hart County, Kentucky. The development area is currently covered with gravel.

## **2.4 Structural Loading Information**

Anticipated maximum column loading of 50 kips and wall loading of 4 kips per linear foot.

## **2.5 Site Grading and Topography**

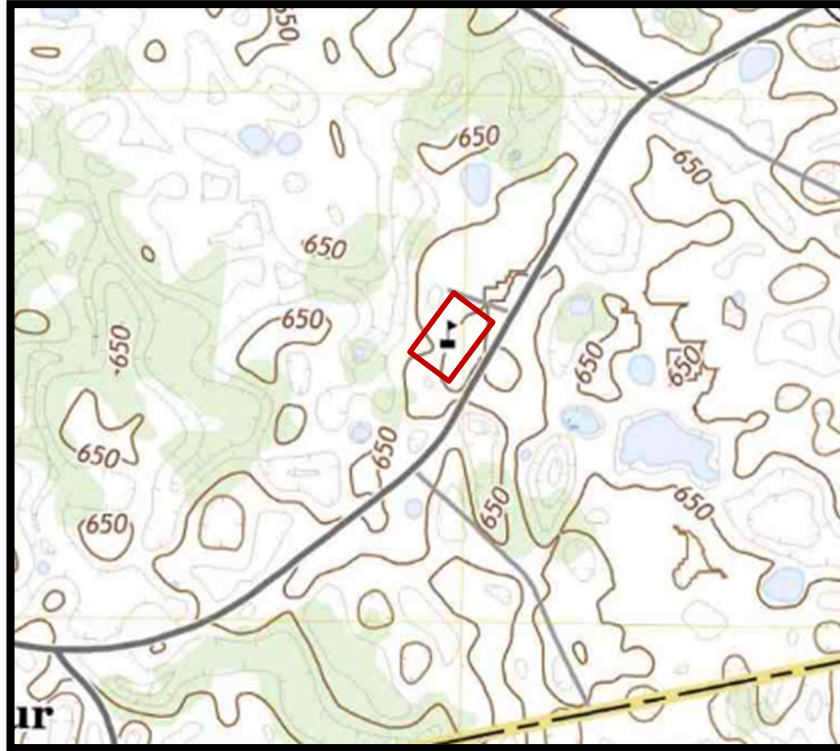
The proposed finished floor elevation (FFE) for the building is unknown at the time of this report but is expected to match that of the existing building. Based on existing topography, site grading is anticipated to be minor.

### **3.0 Subsurface Findings and Encountered Conditions**

#### **3.1 Review of Previous Site Development and Historical Information**

Based on review of historical maps provided by the United States Geological Survey (USGS) (Figures 2 & 3) and historical imagery provided by Google Earth (Figures 4 & 5), it appears the site is relatively unchanged in recent years.





**Figure 2: 2022 USGS Topographic Map of Park Quadrangle**



**Figure 3: 1954 USGS Topographic Map of Park Quadrangle**



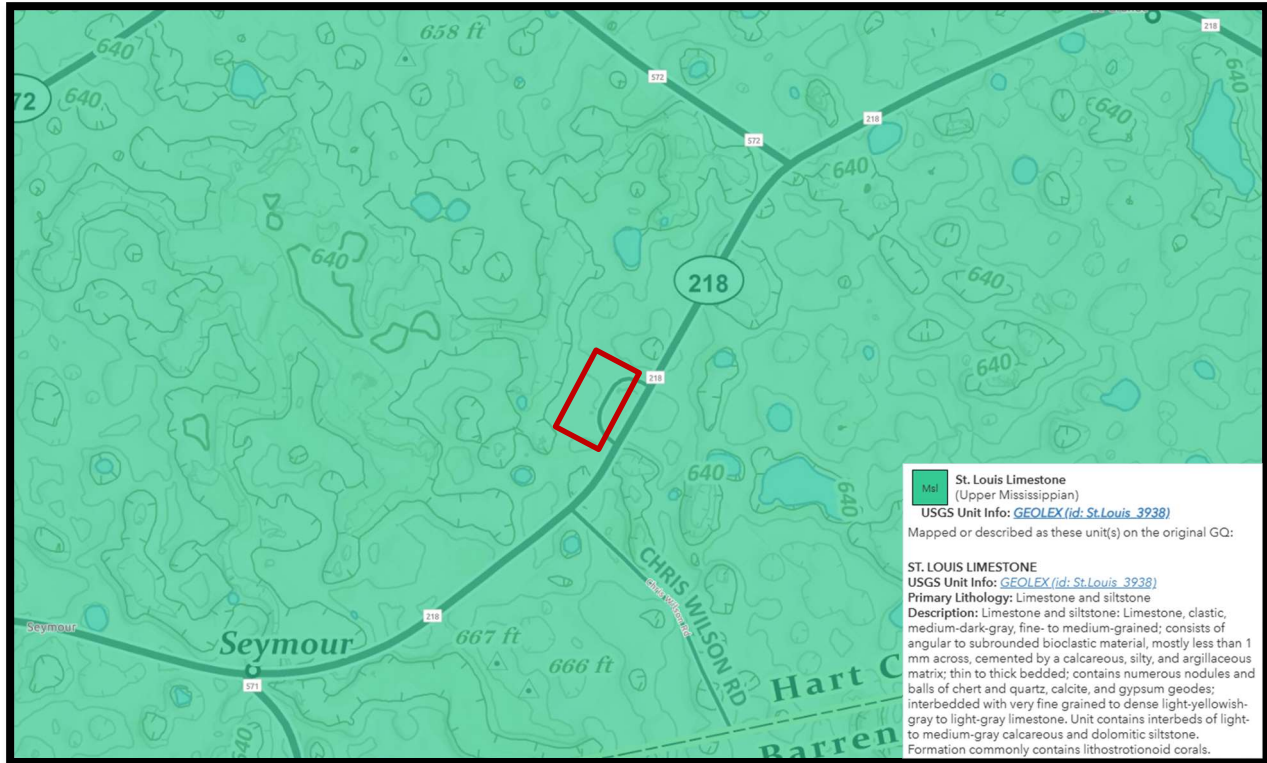
**Figure 4: 2022 Google Earth Imagery**



**Figure 5: 1997 Google Earth Imagery**

### **3.2 Published Geologic Information**

Geologic information was referenced from the Kentucky Geological Survey (KGS), geologic maps of the Park Quadrangle, Hart County, Kentucky (Figure 6). The site is underlain by the St. Louis Limestone. Locally, the unit is described as interbedded limestone and siltstone, Upper Mississippian in age.



**Figure 6: KGS Geologic Mapping**

The KGS mapping indicates that the underlying rock unit has intense karst potential, with several mapped sinkholes within the vicinity of the site. Solid Ground should be contacted if any karst activity is encountered in construction for remediation recommendations.

### 3.3 Subsurface Exploration Program

Solid Ground conducted a total of three (3) soil test borings, all borings being located within the approximate development boundaries. Borings were located as close to the proposed development as site conditions allowed.

Boring surface elevations were estimated utilizing ArcGIS and LiDAR data. Therefore, the locations and surface elevations should be considered approximate. It should be noted that the subsurface conditions will vary between borings and the representative profile is based upon the number of borings drilled during the field operations. Boring locations are shown in Figure 7 below.



**Figure 7: Approximate Boring Locations**

### 3.4 Subsurface Conditions

The soil samples were visually classified by Solid Ground personnel according to the Unified Soil Classification System (USCS ASTM D2488; USCS ASTM 2487 for select samples). A description of each soil layer is as follows.

**Surficial Materials** – The borings encountered a surficial layer of gravel (1.5 to 2.5 feet). It should be noted that thicknesses of these materials may vary across the site. The thicknesses presented in this report should be considered approximate.

**Natural Soils** - The borings encountered natural soils underlying the surficial materials or fill materials layer described as fat clay (CH), lean clay (CL), and silt (ML) sometimes with rock fragments and/or iron oxide inclusions, to auger refusal/termination depths. The SPT N-values ranged from 2 to 13 blows per foot, with consistencies of very soft to stiff.

**Auger Refusal** – Borings B-1 and B-2 were terminated at a depth of 16.5 feet. Boring B-3 encountered auger refusal at a depth of 6.9 feet.

Detailed descriptions and strength characteristics are included on the boring logs in Appendix A.

**Groundwater** – Groundwater was not encountered within the borings. Free groundwater levels fluctuate with seasonal weather conditions and may vary. Therefore, the borings may not be representative of the actual free water levels. To achieve an accurate measurement of free groundwater levels, water wells or piezometers should be installed.

Solid Ground should be contacted if groundwater is encountered during earthwork operations. Please note, the groundwater table can fluctuate significantly which could have an impact on the subsurface soils. Table 1 summarizes our findings.

Boring Number	Approximate Surface Elevation (ft)	Refusal Depth (ft)	Final Elevation (ft)
B-1	647.0	16.5	630.5
B-2	648.2	16.5	631.7
B-3	648.0	6.9*	641.1

*\*Indicates Auger Refusal*

#### **4.0 Geotechnical Concerns and Construction Considerations**

Based on the results of the subsurface exploration and our experience with similar projects, we believe the project site is generally suitable for the proposed development. However, some concerns exist with the subsurface conditions as discussed below.

##### **4.1 Surficial Materials**

Based on the information gathered from the soil borings, the site has a surficial layer of gravel (1.5 to 2.5 feet). These thicknesses are representative of conditions encountered at the boring locations only, thickness and aerial extent of the strata may vary across the site. Construction plans should adequately address stripping and the disposal of these materials prior to earthwork operations. Topsoil should only be used as fill in landscaping areas.

## 4.2 Construction in Cut/Fill Areas

Cut areas have the potential to be overcut, disturbing the in-situ soils to depths below proposed finished grade. Areas to receive fill are stripped of topsoil and are also sometimes disturbed to depths deeper than intended. Both cut and fill areas should be proof rolled prior to construction taking place. Soft, loose, or wet areas should be identified and remediated in accordance with the recommendations provided in the “5.1 Earthwork” section of this report.

## 4.3 Construction During Wet Conditions

It is understood that potential development could occur during wet conditions. Based on experience with construction projects during wet conditions, subgrade remediation is often required. In addition, delays of earthwork/foundation operations could occur. Clays swell and silts break down when high moisture conditions are present. To stabilize the subgrade materials, drying and recompacting could be required. During wet conditions, the on-site materials may become saturated and are unable to dry in a timely manner.

Typically, remediation methods consist of undercutting soft and/or saturated soils, moisture conditioning, and recompacting or replacing with a granular stone that is “capped” with dense graded aggregate (DGA). The extent and depth of the undercut is on a case-by-case basis depending on the soil conditions. We recommend contracting Solid Ground to observe earthwork operations and foundation and slab-on-grade construction. In addition, we recommend that the earthwork contractor and the design team adequately budget for remediation repairs.

## 4.4 Preliminary Liquefaction Potential and Settlement

Liquefaction is the phenomenon where saturated soils develop high pore-water pressures during seismic shaking and lose their strength characteristics. This phenomenon generally occurs in areas of high seismicity where groundwater is shallow. Liquefaction can produce excessive settlement, ground rupture, lateral spreading, or failure of shallow spread foundations.

Three conditions are generally required for liquefaction to occur:

1. The soil must be saturated (relatively shallow groundwater)
2. The soil must be loosely packed (low density)
3. Ground shaking of sufficient intensity must occur to function as a trigger mechanism.

Based on our recommendations for the foundation the soils should be considered to have low liquefaction potential.

#### **4.5 Site and Foundation Drainage**

Experience has shown that the onsite materials are prone to degradation during wet periods of the year and/or under heavy traffic. Surface and ground water should be controlled while the subgrade fill materials are exposed and use only enough compactive effort to achieve stability and job site requirements for compaction. In addition, it is recommended that foundation concrete, or a concrete bearing medium, be placed the same day that foundation excavation is performed.

The final grade should be sloped away from the structure and pavements a minimum of two percent to promote positive drainage. Roof drains and foundation drains should be installed and should discharge surface runoff away from the structure to provide positive site drainage. It should be noted that drainage should be designed and constructed without impacting neighboring properties. Drainage design is beyond our scope of work.

It is imperative that dewatering be maintained during construction and after development. If positive dewatering methods are not continually applied and maintained, the potential of remedial subgrade measures and long-term settlement is greatly increased.

#### **4.6 Underground Utilities**

Design and Construction plans should adequately address the concern of potential settlement of underground utilities. Please note, all excavations should adhere to applicable codes such as OSHA.

#### **4.7 Off Site Borrow Material**

We anticipate fill material may be required to achieve the FFE. Offsite borrow material could be required. Construction plans should include this consideration as well as ensure the offsite borrow material meets the recommendations detailed in this report.

#### **4.8 Soil Compaction Equipment**

The soil compaction equipment should be selected by the type of fill anticipated for the site. Smooth drum rollers should be utilized for clean sands and silts, while clays may be



compacted utilizing sheepsfoot rollers. We anticipate utilizing a sheepsfoot roller for the soil at this site and a plate compactor for gravel backfill within the building footprint.

#### **4.9 Silty Material**

The silty material observed on site is prone to breaking down under high moisture and repeated traffic. Care should be taken to not allow water to pond on the site and to reduce the construction traffic across the building pad and paving areas. Failure to do so will result in delays to both the project budget and schedule.

#### **4.10 Development within a Karst Region**

Solution activity in areas underlain by limestone generally results from a slow process of dissolving the underlying rock units by surface runoff or rainwater. Sinkholes at the ground surface are caused from either a general raveling failure within the soil unit or by rock collapse. Either phenomenon typically result in depressions at the ground surface, which, if large enough, can be identified on topographic maps. In addition to the natural causes of sinkhole development previously discussed, sinkholes may form as a result from water leaking from subsurface piping and drainage systems such as buried water and sewer pipes, septic lateral fields, and roof drains beneath the building and floor slabs.

As previously stated, the Kentucky Geological Survey rates the site with an intense potential for karst development. It is not possible to remove all risk associated with construction over known sinkholes or in karst areas. Our experience indicates that the limestone formations mapped underlying the site pose a high risk for solution activity and sinkhole formation. The natural rising and lowering of the ground water table and surface water migration downward through the subsurface soils can create the risk of continued soil migration into solution voids in the underlying limestone.

There is potential for sinkholes to be encountered during construction, especially in the drilled shafts and cut areas. Solid Ground should be contacted if a solution feature or other karst feature is encountered during construction. Repair methods of sinkholes and other karst features exist. When sinkholes are encountered, the common practice is to excavate the soil from within the solution feature down to hard bedrock. The two most common methods of remediation are a concrete plug or an inverted filter.

We believe the risk with this development is no greater than for similar developments in the area. To further reduce the risk of unidentified sinkholes at the site would require the

implementation of more sophisticated and expensive geotechnical exploration methods including borings or test pits on a tightly spaced grid or geophysical methods.

### **5.0 Confirmation-Dependent Recommendations**

The following recommendations are based on the information gathered and subsurface conditions encountered during this limited exploration. We have developed these recommendations under the assumption that our sampling performed on the site accurately portrays conditions that are not immediately visible due to earth, rock, water, or time. **It should be noted that Solid Ground cannot be held liable for fill placed or performance of the subgrade without observations to confirm that conditions in the field are consistent with inferences from the samples we obtained.**

Please note, if earthwork construction begins during wet weather conditions there is a likelihood that the schedule will be prolonged and extensive remediation, or a more robust geotechnical recommendation will be required.

## **5.1 Earthwork**

### **5.1.1 Site Preparation**

- ▲ Topsoil and other surficial materials should be stripped to prepare the site for construction.
  - In-place density testing should be performed to check that the previously recommended compaction criteria have been achieved.
  - Fill placement should be monitored on a full-time basis by Solid Ground during site grading.
  - Fill placement should extend to a minimum of 10 feet beyond the building footprint.

### **5.1.2 Structural Fill Placement**

Final grades had yet to be established at the time of this report, however we anticipate fill placement to be minor. Backfill materials for structural fill placement may consist of soil or durable crushed stone. The following steps are recommended for fill placement within the building pad. **The onsite soils are expected to meet the requirements for structural fill. Off-site borrow material is not anticipated but cannot be ruled out without a review of the site grading plan.**

Structural fill material, if required, is defined as the following:

- ▲ Inorganic natural soil with maximum particle sizes of 3 inches.
- ▲ Plasticity Index of no greater than 30 percent and liquid limit less than 50.
- ▲ Solid Ground should observe the material to confirm the soils meet applicable standards for structural fill.
- ▲ Other sources of structural fill should be verified by Solid Ground.
  - If other sources of structural fill are anticipating, Solid Ground should collect a bulk sample for standard Proctor testing.

The following are recommendations for placement of soil structural fill:

- ▲ Structural fill should be placed in 6-inch to no greater than 8-inch-thick layers.
- ▲ Structural fill should be compacted to at least 98 percent of the soil's maximum dry density as determined by the standard Proctor compaction test (ASTM D698).
- ▲ The moisture content of the fill material should be maintained at about 2 percent (above or below) of its standard Proctor optimum moisture content.
- ▲ In-place density testing should be performed to determine if the previously recommended compaction criteria have been achieved.
- ▲ Fill placement should be monitored on a full-time basis by Solid Ground during site grading.
- ▲ Fill placement should extend to a minimum of 10 feet beyond the building footprint.

The following are recommendations for placement of open graded stone structural fill within the building footprint:

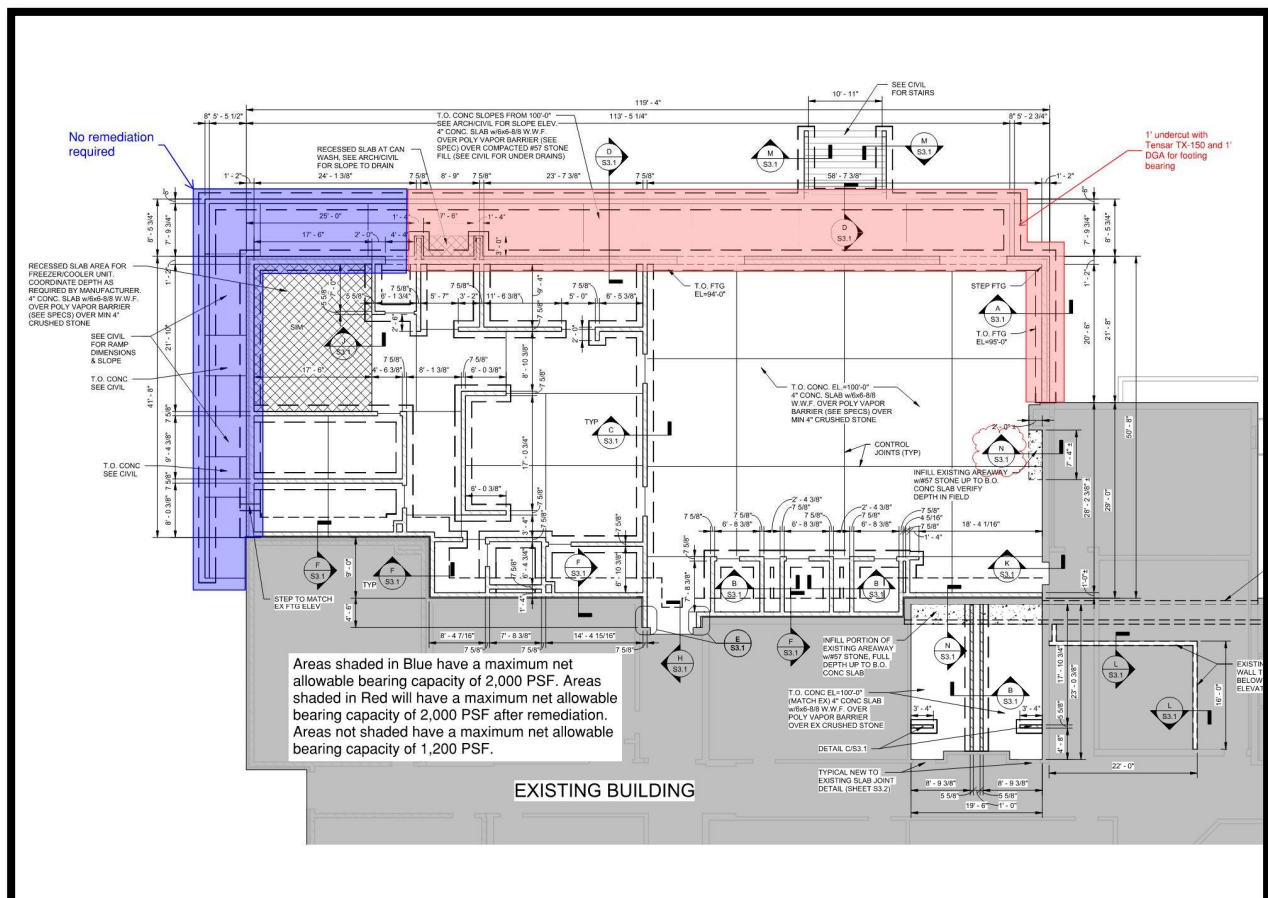
- ▲ Structural fill should be placed in maximum 6-inch-thick layers if consolidated by a plate compactor and maximum 8-inch-thick layers if consolidated by a smooth drum roller.
- ▲ Open graded stone fill should be consolidated by 1 pass of the compactor in all areas and 2 passes in areas where interior foundations will bear on all lifts.
- ▲ The open graded stone should have a moisture content of at least saturated surface dry (SSD) condition.
- ▲ Fill placement should be monitored on a full-time basis by Solid Ground during site grading.

Solid Ground should be contacted if any unexpected subsurface conditions are encountered during earthwork construction. It is important that Solid Ground observe earthwork construction.

## 5.2 Foundations

### 5.2.1 Discussion

Based on the subsurface conditions encountered, information gathered during this exploration, and past knowledge of the site's development, we recommend that foundations be designed as shallow spread footings. The bearing capacities and bearing conditions will differ based on the anticipated loading and results from the subsurface exploration. Figure 8 outlines the different bearing conditions and capacities.



**Figure 8: Bearing Conditions and Capacities**

Areas shaded in blue in Figure 8 require no remediation and have a maximum net allowable bearing capacity of **2,000 PSF** (pounds per square foot). Areas shaded in red in Figure 8 require a 1 foot undercut then a layer of Tensar TX-150 (or similar) geogrid and a 1-foot section of properly placed DGA (place as engineered fill in line with recommendation in Section 5.1.2 of this report) and have a maximum net allowable bearing capacity of **2,000 PSF**. All areas not shaded require no remediation and have a maximum net allowable bearing capacity of **1,200 PSF**.

A detailed settlement analysis was beyond the scope of this report. Based on the assumed structural loads, the available site grading information, the recommended bearing pressure, knowledge of the site's development and empirical correlation for the subsurface conditions encountered beneath the proposed structure, we estimate the total settlement of the foundation to be about 1 inch or less and differential settlement of the foundation to be about ½ inch or less.

Once the design is finalized, we recommend allowing Solid Ground the opportunity to review the plans and specifications.

### **5.2.2 Construction Considerations**

The following typical construction considerations are recommended:

- ▲ Column footings and strip footings should be at least 24 inches wide and 12 inches thick.
- ▲ All exterior footing bottoms should be at least 24 inches below the lowest adjacent exterior grade for protection against frost penetration.
- ▲ Clean the foundation bearing area so it is nearly level and is free of ponded water and loose material.
- ▲ Dewatering methods may be necessary if the foundation excavation takes place during wet weather.
- ▲ Solid Ground should be on site while the foundation construction is performed.
- ▲ Dynamic Cone Penetrometer (DCP) testing should be performed on each spread footing and every 20 feet within each strip footing as a check on the soil bearing capacity.
- ▲ Once fill operations are completed and foundation excavations begin, it is important that the foundation excavations be protected from wet weather conditions by

placement of concrete or bearing medium immediately after. Please note, providing positive site drainage is critical to the performance of the foundations.

- ▲ There is a possibility that during foundation excavations that perched water may be encountered. If perched water is encountered, it is recommended to dewater the site. This may be achieved by constructing “bleeders” or trenches from the site to an area with lower elevation and allow water to be gravity directed away from site.

### 5.3 Slab-on-Grade

We assume that the slab-on-grade will be utilized for light loads of 150 pounds per square foot maximum. If this assumption is incorrect, Solid Ground should be contacted to modify recommendations.

- ▲ It should be noted that if the site soils are exposed to wet weather conditions or continuous construction traffic, the soils have potential to degrade and will lose their strength. This could require a more robust subgrade improvement design.
- ▲ It is imperative that dewatering be continuous and construction traffic be controlled away from the building pad.
- ▲ It should be noted that the means and methods of construction that will be performed by others will heavily dictate the suitability and sustainability of the site conditions and building service life during and after construction.

The following recommendations should be followed:

- ▲ Solid Ground should observe the finished subgrade once grading is completed. Typical remediation methods consist of undercutting the unsuitable soil and placing recompacted soil or granular material.
- ▲ If construction is to take place during wet periods of the year, there is a potential that remediation methods will be required to stabilize the soil subgrade. Solid Ground should be consulted to assist in selecting the method most appropriate for site conditions. These methods may consist of any or combination of the following:
  - Tensar geogrid reinforcement.
  - “Walking” No. 2 stone into the soft subgrade.
  - Application of consolidated No. 57 stone.
- ▲ It is imperative that quality control be performed specifically for the slab-on-grade to ensure that moisture contents, as well as compaction efforts, are within optimum.

- ▲ It is recommended that the floor slab be constructed with an open graded stone base of a minimum of **6 inches** in thickness. The floor slab should be constructed with a minimum of **4 inches** of reinforced concrete.
- ▲ A subgrade modulus,  $k$ , of 70 pounds per cubic inch (PCI) for design of the floor slab supported by granular material.
- ▲ Control joints should be placed per the most recent ACI standards and guidance.
- ▲ The floor slab should be fully ground-supported. This will reduce the possibility of cracking and displacement of the floor slab due to differential settlement.

***It is recommended to perform proof rolling prior to placing stone to serve as the slab working base, and again immediately prior to constructing the slab.***

#### **5.4 Seismic Site Classification**

The Seismic Site Classification assumes that shallow strip footings will be utilized. This classification is based on the seismic standards and design values from the 2009 NEHRP Recommended Seismic Provisions and the 2010 ASCE-7 Standard. Based on the results of our exploration and the geology of the area, we assign a site seismic classification of “D”.

#### **5.5 Below Grade Walls**

Based on our understanding of the project, we anticipate below grade walls will be required.

##### *Equivalent Fluid Pressures (EFP)*

We do not recommend undrained conditions. If undrained conditions are deemed to be designed, we should be contacted to provide additional recommendation. The following table presents EFP for at-rest, passive and active conditions. For the drainage granular backfill, these values assume that a “full” wedge of the material is present behind the wall. The wedge is defined as 2 feet from the base of the wall to a 1:2 (H:V) slope upward. It should be noted that surcharge loads generated by construction equipment and adjacent structures and infrastructure must also be considered in the design. In addition, a factor of safety should also be included as part of the design. Both the factor of safety and surcharge loads are not accounted for in the scope of this study. A coefficient of friction between gravel and concrete of 0.35 can be utilized and a coefficient of friction between clay soil and concrete of 0.30 can be utilized.

We are assuming the majority of the retaining walls are lightly loaded and will be supported by soil bearing shallow foundations. It is recommended that the below grade wall

foundations utilize foundation recommendations as detailed in our report in Section 5.2. Table 2 details the EFP for two different backfill conditions.

**Table 2: Equivalent Fluid Pressures**

Backfill Material	At Rest (PCF) Drained Condition	Active (PCF) Drained Condition	Passive (PCF) Drained Condition
Anticipated Well Graded Gravel sloping towards the wall ( $\Phi = 38^\circ$ )	52	32	566

Free Drainage Granular Material

A free drainage backfill material should preferably be "GW" as classified by the USCS, so that it will be free draining and exhibit an angle of shear resistance of 38 degrees or more. The material should have less than 3 percent passing the No. 200 sieve and less than 30 percent passing the No. 40 sieve. The No. 40 sieve material should be non-plastic.

Wall drainage systems should consist of a filtered granular backfill (No. 57 size crushed stone) by use of geotextile fabric. The drainage backfill should extend to within 2 feet of the ground surface. Compacted structural fill should be placed over the drainage backfill to prevent direct surface water inflow.

Compaction within five feet of walls should be accomplished by using hand compaction equipment.

Drainage Requirements

In order to achieve the "drained" condition, an outlet drain at the base of the wall in conjunction with a collector pipe that drains the water away from the structure should be constructed. The drains should be filtered and protected against potential erosion. **Please note, we highly recommend drainage behind the wall.** To provide drainage behind the wall, construct a vertical section of crushed stone or gravel approximately 18 inches wide behind the wall with perforated drainpipe located at the foundation level. The granular wall backfill material should be capped with 12 to 24 inches of low plasticity clay to minimize infiltration of surface water runoff behind below grade walls. As with any drainage system,

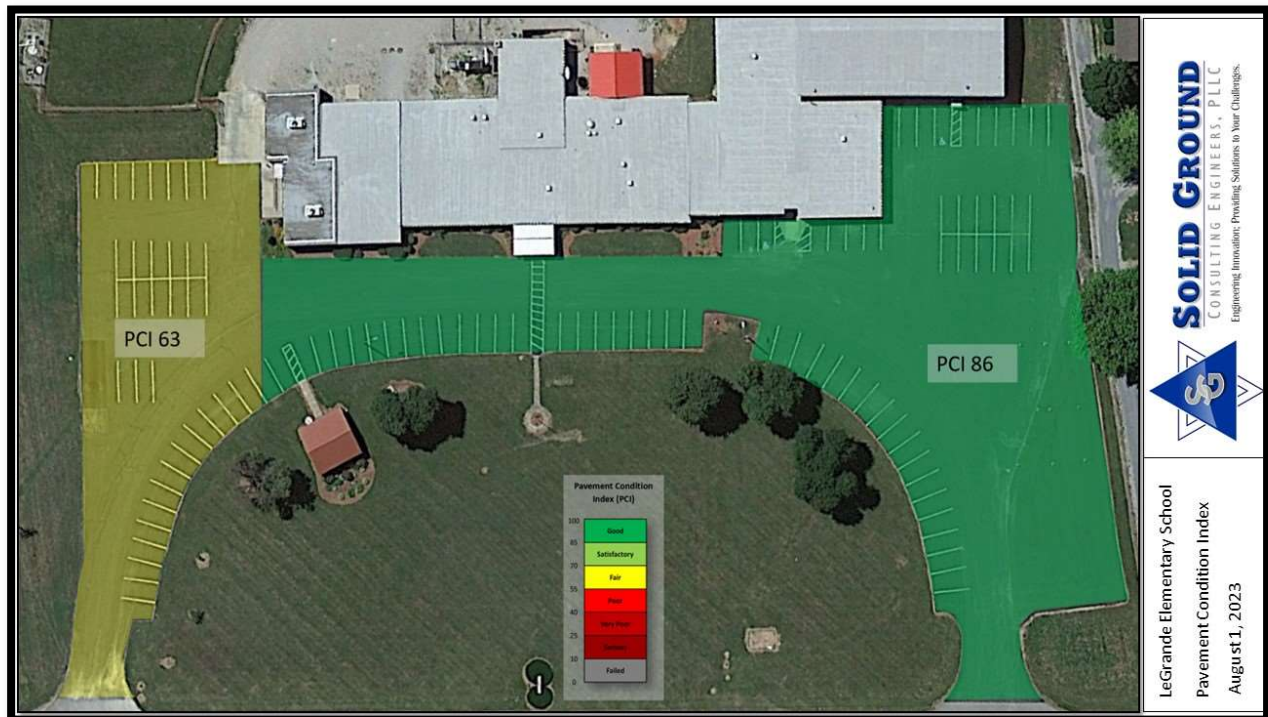


the built-up water will need to be conveyed from behind the wall through a gravity drain or sump pump system.

If drained conditions cannot be achieved, we should be contacted immediately to provide additional recommendations.

## 5.6 Pavement Evaluation

The existing pavement was evaluated per ASTM D6433 “Standards for Roads and Parking Lots Pavement Condition Index Surveys.” This evaluation resulted in a Pavement Condition Index (PCI) score of 63 for the south side of the parking lot and an 86 for the north and central side of the parking lot, indicating a Fair to Good condition pavement. Figure 9 shows the parking lot areas evaluated. **Based on the results from the PCI survey, we recommend a total replacement of the south side pavements. We recommend sealing the north side and central pavements within the next two years.**



## 5.7 Pavement Recommendations

### 5.7.1 General

Based on our experience with similar traffic loading (assumed) and subsurface conditions, the subgrade soils are assumed to have a CBR of 2.0 for the pavement analysis based on SPT correlation. American Association of State Highway and Transportation Officials (AASHTO) Guide for Design of Pavement Structures (1993) was used for the analysis. The assumptions are listed below for the pavement analysis.

***If the following assumptions are incorrect, Solid Ground should be contacted to provide additional recommendations.***

- ▲ Initial Serviceability of 4.2
- ▲ Resilient Modulus of 3,000
- ▲ Terminal Serviceability of 2.0
- ▲ Reliability of 80%
- ▲ Life of 20 years
- ▲ Maximum Estimated Equivalent Single Axle Load (ESAL's) of 30,000 for Light Duty with following assumptions:
  - 20 Package Delivery Vehicles per day
  - 500 Passenger Cars per day
- ▲ Maximum Estimated Equivalent Single Axle Load (ESAL's) of 150,000 for Heavy Duty, with following assumptions:
  - 2 Garbage trucks per week
  - 3 Tractor Trailers per week
  - 20 Package Delivery Vehicles per day
  - 500 Passenger Cars per day
  - 20 Class D School Buses per day

### 5.7.2 Flexible Asphalt Pavements

Based on the design assumptions detailed above, we recommend the following asphalt pavement sections in Tables 3 and 4:

**Table 3: Light Duty Asphalt Pavement Section**

Material	Light Duty Thickness (Inches)
Asphalt Surface Course	1.5
Asphalt Base Course	2.0
Compacted Crushed Stone Base	8.0

**Table 4: Heavy Duty Asphalt Pavement Section**

Material	Heavy Duty Thickness (Inches)
Asphalt Surface Course	2.0
Asphalt Base Course	2.5
Compacted Crushed Stone Base	10.0

### 5.7.3 Rigid Concrete Pavements

Based on the assumptions given in Section 5.7.1, the following concrete pavement sections are recommended in Table 5:

**Table 5: Heavy Duty Rigid Concrete Pavement**

Material	Heavy Duty Thickness (Inches)	Designed Compressive Strength (psi)
Concrete	7.0	4,000
Compacted Crushed Stone Base	8.0	

We recommend the dumpster pad be constructed of concrete:

- ▲ The dumpster pad apron should extend the entire length of the garbage truck beyond the face of the dumpster.

### 5.8 Plan Review

To better assure conformance of the final design documents with the recommendations contained in this report, and to better comply with the building department's requirements, Solid Ground should review the completed project plans prior to construction. The plans should be made available for our review as soon as possible after completion so that we can better assist in keeping your project schedule on track.

We recommend that the following project-specific note be added to the architectural, structural, and civil plans: “The geotechnical aspects of the project, including site grading, utility and foundation excavations, slab on grade construction, placement and compaction of engineered fill, installation of site drainage should be performed in accordance with the recommendations of the *“Geotechnical Report prepared by Solid Ground Consulting Engineers, PLLC, dated August 16, 2023.”*”

## 5.9 Construction Monitoring and Observations

Based on past experience, in order to obtain the Certificate of Occupancy for this development, you will be required to directly contract a qualified and certified inspection firm to provide special inspection items consisting of observing the following:

- ▲ Soil Construction
- ▲ Foundation Construction
- ▲ Concrete Placement
- ▲ Reinforcement Placement
- ▲ Masonry Construction
- ▲ Steel Construction

**It is advantageous to the owner to contract with Solid Ground to provide construction monitoring and observations for this project.** Some of those benefits are as follows:

- ▲ As the Geotechnical Engineer of Record (GER) for this project, we will provide confirmation that subsurface conditions exposed during construction are substantially the same as those interpolated from our limited subsurface exploration, on which the analysis and design were based.
- ▲ The recommendations in this report are based on limited subsurface information. The nature and extent of variation across the site may not become evident until construction. If variations are then exposed, it will be necessary to re-evaluate our recommendations. In the event that subsurface conditions differ from those anticipated, we as the GER will provide recommendations if deemed necessary.

## **6.0 Report Limitations**

This report has been prepared for the exclusive use of Mr. Daniel Hawkins and Hart County Public Schools for specific application to the project site. Our recommendations have been

prepared using generally accepted standards of geotechnical engineering practice in the Commonwealth of Kentucky. No other warranty is expressed or implied.

The recommendations provided are based on the subsurface information and other findings obtained by Solid Ground as well as information provided by you. If there are revisions to the plans for this project or if subsurface conditions detailed in this report are encountered during construction that are different than our exploration, we should be notified immediately to modify the foundation recommendations if deemed necessary. We cannot be held responsible for the impact of those conditions on the project if those impacts are not made known to us.

The scope of services did not include an environmental assessment for determining the presence or absence of wetlands or hazardous or toxic materials. Any statements in this report or on the boring logs regarding odors, colors, and unusual or suspicious items or conditions are strictly for informational purposes.

### **7.0 Associated Geotechnical Risks**

The analytical tools which are used by the geotechnical engineer in this area are generally empirical and must be used in conjunction with professional engineering judgment and experience. Therefore, the recommendations presented in this geotechnical exploration should not be considered risk-free and are not a guarantee that the proposed structure will perform as planned. The engineering recommendations presented in this are based on the information gathered during the subsurface exploration, information provided by you and past experience with similar projects.

**APPENDICES**

**APPENDIX A – BORING LOGS**

**APPENDIX B – LAB RESULTS**



**APPENDIX A – BORING LOGS**



# Soil Boring: B-1



**SOLID GROUND**

Project: LeGrande Elementary School  
 Location: 70 Legrande School Rd, Horse Cave, KY  
 Project Number: 23-358

Date Started: 07/18/2023	Date Completed: 07/18/2023	Lat/Long: 37.171073 / -85.795456
Location Accuracy: Surveyed	Hammer Type: Auto	Method: Auger

Elevation (ft)	Depth (Feet)	Graphic Log	Rig Type Tooling Surface Elevation	Samples			
				Depth of Sample	Blow Counts	Uncorrected N-Value	Sample Type
			647'				
Visual Classification and Remarks							
645			Gravel				
				2.5	2.5'	2-3-2	5
	5		Soft to firm, red, moist, <b>Fat Clay</b> (CH), gravel				
				5.0	5'	1-2-3	5
640					7.5'	2-2-2	4
	10				10'	2-3-4	7
635							
	15				15'	4-3-3	6
630			Auger Termination at 16.5'				

REMARKS

**Water Levels**

▽ - \_\_\_\_\_  
 \_\_\_\_\_  
 ▽ - \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_



# Soil Boring: B-2



**SOLID GROUND**

Project: LeGrande Elementary School  
 Location: 70 LeGrande School Rd, Horse Cave, KY  
 Project Number: 23-358

Date Started: 07/18/2023	Date Completed: 07/18/2023	Lat/Long: 37.170925 / -85.795552
Location Accuracy: Surveyed	Hammer Type: Auto	Method: Auger

Elevation (ft)	Depth (Feet)	Graphic Log	Rig Type Tooling Surface Elevation 648.2'	Samples				
				Depth of Sample	Sample Number	Blow Counts	Uncorrected N-Value	Sample Type
			Visual Classification and Remarks					
			<b>Gravel</b>					
				1.5				
			Firm, red, moist, <b>Silty Clay (CL-ML)</b>					
645				2.5'		3-3-3	6	X
	5			5.0				
			Very soft to soft, brown, moist <b>Silt (ML)</b> , trace rock fragments					
				7.5		2-1-1	2	X
640				7.5				
			Soft to firm, reddish brown, moist, <b>Silty Clay (CL-ML)</b>					
				10.0		2-2-3	5	X
	10			10.0				
			Firm to stiff, reddish brown, moist, <b>Fat Clay (CH)</b>					
				15		3-4-5	9	X
635				15				
			Auger Termination at 16.5'			3-4-6	10	X

REMARKS

Water Levels

- \_\_\_\_\_  
 - \_\_\_\_\_  
 - \_\_\_\_\_  
 - \_\_\_\_\_

# Soil Boring: B-3



**SOLID GROUND**

Project: LeGrande Elementary School  
 Location: 70 LeGrande School Rd, Horse Cave, KY  
 Project Number: 23-358

Date Started: 07/18/2023	Date Completed: 07/18/2023	Lat/Long: 37.170785 / -85.795623
Location Accuracy: Surveyed	Hammer Type: Auto	Method: Auger

Elevation (ft)	Depth (Feet)	Graphic Log	Rig Type Tooling Surface Elevation	Samples				
				Depth of Sample	Sample Number	Blow Counts	Uncorrected N-value	Sample Type
			648'					
Visual Classification and Remarks								
			<b>Gravel</b>					
			1.5					
645			Firm to stiff, red, moist, <b>Fat Clay</b> (CH), trace iron oxides, some chert fragments	2.5'		4-5-7	12	<input checked="" type="checkbox"/>
	5			5'		5-6-7	13	<input checked="" type="checkbox"/>
			Auger Refusal at 6.9'					
640								
	10							
635								
	15							

REMARKS

**Water Levels**

- \_\_\_\_\_  
 \_\_\_\_\_  
 - \_\_\_\_\_  
 \_\_\_\_\_

## APPENDIX B – LAB RESULTS



# REPORT OF ATTERBERG LIMIT TESTING - ASTM D4318

Project Name LeGrande Elementary Project # 23-358

Sample # \_\_\_\_\_ Depth B1 5.0-6.5

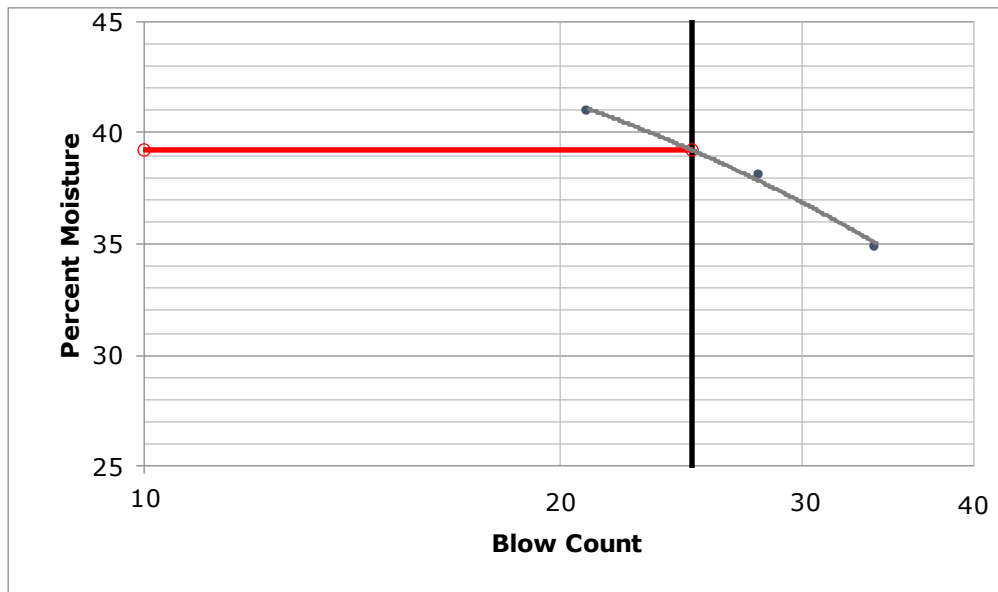
Soil Description Fat clay, red Prep. Method Dry

Date Sample Received 7/20/2023 Date Tested 7/28/2023

## LIQUID LIMIT

Run Number	1	2	3	4	5	6
Tare Number	53	55	3			
Tare + Wet Soil	20.2	19.7	22.3			
Tare + Dry Soil	18.3	18.1	20.0			
Weight of Water	1.9	1.6	2.3			
Weight of Tare	13.7	13.9	13.4			
Weight of Dry Soil	4.6	4.2	6.6			
Water Content	40.9	38.1	34.8			
Number of Blows	21	28	34			

Liquid limit test was performed using manual device and metal grooving tool



LL 39

PL 21

PI 18

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PLASTICITY  
CHART

CL

Minus #200

85.83

USCS

LEAN CLAY

## PLASTIC LIMIT

Run Number	1	2	3	4	5	Natural Moisture
Tare Number	39	128				
Tare + Wet Soil	20.1	18.1				
Tare + Dry Soil	18.9	17.4				
Weight of Water	1.2	0.7				
Weight of Tare	13.8	13.8				
Weight of Dry Soil	5.1	3.6				
Water Content	23.5	19.4				
Plastic Limit	21.49					

Plastic limit test specimens were hand rolled

# Report of Percent Passing No. 200 Sieve ASTM D1140

Project Name LeGrande Elementary Project # 23-358

Sample # \_\_\_\_\_ Depth B1 5.0-6.5

Soil Description Fat clay, red Method A or B B

Date Sample Received 7/20/2023 Date Tested 7/27/2023

Boring/Sample No.	B1					
Depth (From-To)	5.0-6.5					

<b>#200 DATA</b>						
Tare Number	Lg. RP					
Wet Soil + Tare, g	859.1					
Dry Soil + Tare, g	482.2					
Wt. of Tare	433.3					
Wt. of Dry Soil, g	48.9					
Soak Time, hours	24					

<b>% MOISTURE DATA</b>						
Tare Number	39	3				
Wet Soil + Tare, g	76.8	77.0				
Dry Soil + Tare, g	64.9	64.9				
Wt of Water	11.9	12.1				
Wt of Tare	13.8	13.4				
Wt. of Dry Soil, g	51.1	51.5				
% Moisture	23.3	23.5				

<b>CALCULATIONS</b>						
Dry Wt. Before, g	345.08					
Dry Wt. After, g	48.90					
% Retained	14.2					
% Passing	85.8					



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## SECTION 087100 – DOOR HARDWARE

## PART 1 GENERAL

## 1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. This is a renovation project. Field modifications to existing doors and frames will be required. Existing openings must be verified by the contractor. Modifications shall be new in appearance.

## 1.02 SUMMARY

- A. This Section includes furnishing items known commercially as finish or door hardware that are required for swing, sliding, and folding doors, except special types of unique hardware specified in the same sections as the doors and door frames on which they are installed.
  - 1. Butt Hinges
  - 2. Continuous Hinges
  - 3. Cylinders
  - 4. Flushbolts and Strikes
  - 5. Locks and Latches
  - 6. Closers
  - 7. Push and Pull Plates
  - 8. Protection Plates
  - 9. Door Stops

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10. Thresholds,Weatherstripping,Gasketing,Auto.Door Bottoms.

11. Magnetic Holders

12. Silencers

B. Related Sections: The following Sections contain requirements that relate to this Section:

- |    |                   |  |
|----|-------------------|--|
| 1. | Division 1        | ORGANIZATIONS & SERVICES   |
|    | a. Section 01300  | Administrative Requirements  |
|    | b. Section 01400: | Quality Requirements   |
|    | c. Section 01500  | Temporary Facilities and Controls                                  |
| 2. | Division 3        | CONCRETE   |
|    | a. Section 03400  | Precast Concrete, installation of door frames.                     |
| 3. | Division 4        | MASONRY  |
|    | a. Section 04400  | Concrete Masonry Units, installation of door frames.               |
| 4. | Division 6        | WOOD & PLASTICS  |
|    | a. Section 06100  | Rough Carpentry, blocking for finish hardware.                     |
|    | b. Section 06400  | Architectural Woodwork, installation of doors and finish hardware. |
| 5. | Division 7        | THERMAL & MOISTURE PROTECTION                                      |
|    | a. Section 07900  | Caulks and Sealants.   |
| 6. | Division 8        | DOORS and WINDOWS  |
|    | a. Section 08110  | Standard Hollow Metal Doors and Frames                             |
|    | b. Section 08210  | Flush Wood Doors.  |
| 7. | Division 9        | FINISHES   |
|    | a. Section 09900  | Paintings and Coatings   |



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- C. Alternate #3.- Refer to Section to Section 011230. Provide owners preferred door hardware. Locksets, door closers and cylinders by Best. Exit devices by Precision.

## 1.03 REFERENCES

- A. Applicable publications: The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by the basic designation only.
- B. American National Standards Institute (ANSI)
  1. ANSI A117.1-1998, Providing Accessibility and Usability for Physically Handicapped People
  2. ANSI/BHMA A156.1-1997, Butts and Hinges
  3. ANSI/BHMA A156.4-1992, Door Controls-Closers
  4. ANSI/BHMA A156.6-2001, Architectural Door Trim
  5. ANSI/BHMA A156.7-1997, Template Hinge Dimensions
  6. ANSI/BHMA A156.13-1994, Locks & Latches, Mortise
  7. ANSI/BHMA A156.18-1993, Materials and Finishes
  8. ANSI/BHMA A156.21-1996, Thresholds
  9. ANSI/BHMA A156.22-1996, Door Gasketing Systems
- C. American Society for Testing and Materials (ASTM)
  1. ASTM E 283-84 Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls and Doors
  2. ASTM-E2074-2001 Standard Test Method for Fire Tests of Door Assemblies, Including Positive Pressure Testing of Side-Hinged and Pivoted Swinging Door Assemblies
- D. Americans with Disabilities Act Accessibility Guidelines(ADAAG)

1. ICC/ANSI A117.1, JULY 1998
  
- E. Door and Hardware Institute (DHI)
  1. Keying Systems and Nomenclature, 1989 edition.
  2. Hardware for Labeled Fire Doors, January 1996 edition.
  3. Sequence and Format for the Hardware Schedule, January 1996 edition.
  4. Abbreviations and Symbols, September 1983 edition.
  
- F. National Fire Protection Association (NFPA)
  1. NFPA 80 Standard for Fire Doors and Windows, 1999 edition.
  2. NFPA 101 Life Safety Code, 2003 edition.
  3. NFPA 105 Recommended Practice for the Installation of Smoke-Control Door Assemblies, 1999 edition.
  4. NFPA 252 Standard Methods of Fire Tests of Door Assemblies, 1995 edition.
  
- G. Steel Door Institute (SDI)
  1. SDI 100 Recommended Specifications for Standard Steel Doors and Frames, 1998 edition.
  
- H. Underwriter's Laboratories, Inc. (UL) - UL Standards for Safety:
  1. UL 10C-Positive Pressure Fire Tests of Door Assemblies
  2. UL 228 Door Closer-Holders, With or Without Integral Smoke Detectors
  3. UL 1784-90 Air Leakage Tests of Door Assemblies

#### 1.04 SUBMITTALS

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- A. General: Each requirement listed under headings below shall be submitted in relation to all items specified in this section. The submittal for each heading shall be compiled by the Contractor and submitted complete and in its entirety.
- B. Shop Drawings: Submit binder with label on the front cover and spine indicating job name, date, Contractor's name and the title "DOOR HARDWARE". Binder shall contain all of the door hardware shop drawings with largest sheets 11" x 17" (279 x 432 mm). Punch and fold largest sheets to fit in binder. Separate items in binder with tabbed reinforced index sheets indicating contents in each section. Use door references same as contract documents. Highlight items on shop drawings in question with yellow marker for Architect's review and response. Submit complete hardware schedule, catalog cut sheets, templates, and specifications for all hardware set items.
1. Final Hardware Schedule Content: Based on hardware indicated, organize schedule in vertical format "hardware sets" indicating complete designations of every item required for each door or opening. Hardware schedule to be in the DHI vertical format as per DHI publication Sequence and Format for the Hardware Schedule. Use specification Heading numbers with any variations suffixed a, b, etc. Include the following information:
- a) Type, style, function, size, hand, and finish of each hardware item.
  - b) Name and manufacturer of each item.
  - c) Fastenings and other pertinent information.
  - d) Location of each hardware set cross-referenced to indications on Drawings both on floor plans and in door and frame schedule.
  - e) Index and explanation of all abbreviations, symbols, and codes contained in schedule.
  - f) Mounting locations for hardware.
  - g) Door and frame sizes and materials.
  - h) Keying information.
  - i) Cross-reference numbers used within schedule deviating from those specified.
    - 1) Column 1: State specified item and manufacturer.
    - 2) Column 2: State prior approved substituted item and its manufacturer.
2. Production and Delivery Schedule: Submit a production and delivery schedule as well as all templates to be forwarded to other trades involved in hardware preparation work.

3. Templates: Templates for doors, frames, and other work specified to be factory prepared for the installation of door hardware. Check shop drawings of other work to confirm that adequate provisions are made for locating and installing door hardware to comply with indicated requirements.
  
4. Operations and Maintenance Data: The manufacturer shall furnish the owner a OPERATIONS AND MAINTENANCE MANUAL. Information shall be bound in a 3-ring loose-leaf binder with project name and address on the front cover and spine. Submit in accordance with Section 01770 Closeout Procedures. In this manual are to be one copy of each of the following:
  - a. Name, address, phone and fax for the Finish Hardware supplier.
  - b. Name, address, phone and fax number for the local manufacturers representative for each manufacturers who's products have been used on this project.
  - c. Specification Section 08710 Finish Hardware.
  - d. "AS BUILT" Door and Frame Schedule.
  - e. "AS BUILT" Finish Hardware schedule.
  - f. "AS BUILT" Keying Schedule.
  - g. Hardware manufacturers maintenance instructions, if any.
  - h. Fully executed Warranty(s) for finish hardware.
  - i. Specifications for related sections.
  
5. Abbreviations: Use abbreviations per DHI publication Abbreviations and Symbols.

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6. Keying Schedule: Keying schedule is to be formatted as per DHI publication Keying Systems and Nomenclature. Supplier shall submit a keying schedule after meeting with Owner and Architect as specified.

## 1.05 QUALITY ASSURANCE

- A. Manufacturers Requirements: Repair or replace damaged or defective materials prior to shipment. If product is repaired it is to meet all QA requirements for said product.
- B. Supplier Qualifications: A recognized architectural door hardware supplier, with office and warehousing facilities in the Project's vicinity, that has a record of successful in-service performance for supplying door hardware similar in quantity, type, and quality to that indicated for this Project and that employs an experienced architectural hardware consultant (AHC), or a person with equivalent experience, who is available to Owner, Architect, and Contractor, at reasonable times during the course of the Work, for consultation. Supplier to be a regular authorized distributor of the products he or she intends to furnish. Supplier to meet with Owner to finalize keying requirements and to obtain final instructions in writing. Supplier to meet with installer prior to beginning of installation of door hardware to answer any questions concerning installation.
- C. Regulatory Requirements: Comply with requirements of NFPA 80, NFPA101 and NFPA 252 in providing hardware for fire rated openings.
- D. Product Standards:
1. Hinges, Mortise Locks and Latches, Closers, Thresholds, Trim, Finishes and other miscellaneous hardware: Complying with requirements of ANSI A156 standards for quality, construction, performance and operation applicable for specified hardware.
- E. Substitutions: **Submit requests for substitution no less than ten days prior to bid date and accordance with the requirements set fourth in Division 1.**

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- F. Pre-Installation Conference: Require attendance for the GC project manager & superintendant, material supplier, installer, and manufacturer's representative. Notify all participants of the meeting at least one week before the meeting. No hardware is to be installed prior to this meeting. Installer shall not proceed with installation, until installer has performed the correct and satisfactory installation of an exit device, closer, and mortise lockset. All parties shall agree before proceeding.
- G. Keying Meeting: The supplier will be responsible for scheduling, coordinating and documenting a keying meeting to establish requirements for the project.
- H. **Fully Functional Openings: It is understood by submitting a bid and upon receiving a purchase order that hardware required for a fully functional opening that complies with all local, state and national codes is the responsibility of the successful bidder rather specified in the hardware sets or not. No change orders will be accepted for additional hardware.**

## 1.06 DELIVERY AND STORAGE

- A. Tag each item or package according to the approved finish hardware schedule, and include manufacturers installation instructions with each item or package.
- B. Deliver hardware in manufacturers original packaging.
- C. Inventory door hardware jointly with representatives of hardware supplier and hardware installer until each is satisfied that count is correct.
- D. Deliver individually packaged door hardware items to the jobsite according to the progress of construction. No drop shipments will be accepted.
- E. Provide secure lock-up for door hardware delivered to the Project, but not yet installed. Control handling and installation of hardware items that are not immediately replaceable so that completion of the Work will not be delayed by hardware losses both before and after installation.

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- F. Store Finish Hardware per manufacturers recommendations.

1.07 WARRANTY

- A. Warranty to comply with requirements set fourth in Division 1. Warranty to commence at date of acceptance. Furnish manufacturers' limited warranty covering defects in materials and workmanship for the minimum periods indicated below:

Continuous Hinges: Lifetime

Door Closers: Minimum Ten years

Locksets: Minimum Ten years

Exit Devices: Minimum Ten years

All other hardware: Minimum One year

1.08 MAINTENANCE

- A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware. These tools are limited to tools that are manufactured by the hardware manufacturers for the products used on this project .ie spanner wrenches, closer adjustment tools.
- B. Extra Materials: The following is a list of parts and materials that shall be furnished:
1. Furnish 2 screw packages, or fasteners, for each hardware item.
  2. Furnish 20 keys cut at the owner's requests.
  3. Furnish 1 storeroom function mortise locks.
  4. Furnish 1 spring stop closers with cover, arm, and fasteners.

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5. Furnish 1 rim exit device with lockable lever trim.

## PART 2 PRODUCTS

## 2.01 MANUFACTURERS

- A. Manufacturers listed have products specified in this section. Only the manufacturers' products specifically listed are acceptable, subject to meeting or exceeding the requirements specified.
- B. Acceptable manufacturers listed as follows are referred to in this section hereinafter by their first or common trade names:
1. **Best Hinges**
  2. **Best**
  3. **Dorma**
  4. Hager
  5. LCN
  6. McKinney
  7. National Guard Products, Inc.
  8. Norton
  9. Precision
  10. **Reese Enterprises, Inc.**
  11. Rockwood Mfg. Co.
  12. Sargent Mfg. Corp.
  13. Schlage
  14. **Trimco**
  15. Von Duprin

Note: Hardware sets written in bolded manufacturers.



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2.02 HINGES

A. Full Mortise Butt Hinges:

Provide templated hinges. Furnish flathead screws with each hinge. Finish screw heads to match surface of hinges. Provide steel threaded, to the head, wood screws. Provide out-swing exterior doors with non-removable pins. Out-Swing Corridor Doors with locks with non-removable pins, and interior door with non-rising pins. All hinges to have flat button and matching plug. Size hinges in accordance with specified manufacturer’s published recommendations. Furnish one pair of hinges for all doors up to 5'0" high. Furnish one hinge for each additional 2-1/2 feet or fraction thereof. Furnish heavy weight hinges for doors over 3’-4”, or doors that are frequently used such as: locker rooms, rest rooms, vestibule, and the main office door. Furnish non-ferrous hinges on exterior doors, doors in wet areas, and in areas where doors that are exposed to heavy corrosion. Furnish stainless steel spring hinges on toilet compartment doors, in conjunction, with a three knuckle stainless steel standard weight hinge where specified.

1. Acceptable manufacturers and products:

a. Steel Five Knuckle Full Mortise Butt Hinges:

MFG.	STD.WT.	HEAVY WT.	SPRING HNG.
MCKINNEY	TA2714	T4A3786	1552
Hager	BB1279	BB1168	1250
<b>Best</b>	<b>FBB179</b>	<b>FBB168</b>	<b>2060R</b>

2.03 CONTINUOUS HINGES

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A. Geared Aluminum Continuous Hinges:

1. **Full Mortise:** Provide heavy duty geared aluminum continuous hinges. Continuous hinges to be manufactured from 6063-T6. Hinges will comply with ANSI/BHMA Standard A156.26-2000. Hinges will be certified Grade 1-300, and cycle for a minimum of 1.5 million cycles without failure. Anodizing to be applied after gearing the hinge. Hinges will be non-handed. Hinges to carry a lifetime warranty.

2. Acceptable products and manufacturers:

<u>Manufacturer</u>	<u>Product</u>
McKinney	MCK-12HD, MCK-14HD
<b>ABH</b>	<b>A240HD, A110HD</b>
Best	664HD, 662HD

2.04 KEY CYLINDERS AND KEYING

- A. Key Cylinders: Provide six-pin removable core cylinders meeting ANSI Grade 1 Security. Furnish the cylinders with a patent keyway. Supply manufacturer's standard size cylinder as required to accommodate specified hardware. Include security cylinder rings, extensions and collars as required to accommodate installation. Provide factory original keys of nickel silver. Provide only one outside cylinder at banks of doors.

B. Acceptable manufacturers and products:

**BEST CORMAX, no substitution.**

C. Keying:

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1. Key Systems: Furnish a grand master key system for this project to tie into the owners existing system.
2. Key Quantities: Provide number of keys indicated. Quantities indicated shall be used as the basis for adjustments, if required, after keying is established with Owner.
  - a. Provide 3 each Change Keys per lock.
  - b. Provide 4 each Master Keys
  - c. Provide 4 each Grand Master Keys
3. Key Control: Hardware manufacturer shall produce pinning chart. All keys shall be accounted for at all times and delivered to the designated personnel as directed by Owner. Index, tag and deliver keys in sealed containers; shipped direct to Owner by prepaid registered mail or other secure method acceptable to Owner. All keys assigned to Contractor shall be surrendered to Owner upon completion of the project. The Owner will provide a receipt for all keys received. If at any time a key cannot be accounted for, the lock cylinder shall be re-keyed, or the entire lock replaced if re-keying is not possible, at no additional cost to the Owner.
4. Key Identification: Each key shall be stamped or engraved with the key set per the approved key schedule in addition to the manufacturer’s standard markings.

2.05 MORTISE LOCK AND LATCH SETS:

- A. Mortise Locks and Latches: Provide mortise sets that conform to ANSI/BHMA A156.13-1994, Locks & Latches, Mortise. Mortise locksets to be Operational Grade 1 Series 1000. Lockset functions to be manufactured in a single sized case formed from 12 gauge steel. The case shall be closed on all sides. The lockset shall have a backset of 2-3/4” and a one piece 3/4” throw anti-friction stainless steel latchbolt. Where deadbolts are specified within the mortise lock; the deadbolts shall have a full 1” throw made of stainless steel and have two hardened steel roller inserts. Furnish knurled outside levers for all mechanical and electrical rooms. Furnish a Grade 1 extra-heavy duty cylindrical privacy on toilet compartment doors as specified. Furnish a keyless, battery powered, stand alone, pushbutton lockset at the Records Room.

B. Acceptable manufacturers and product series:

<u>Manufacturer</u>	<u>Lock Series</u>	<u>Pushbutton Lock</u>
Schlage	L9000-17A	Cobra

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Sargent	8200-LNP	KP8277
<b>Best</b>	<b>45H-14H</b>	E2031

2.06 EXIT DEVICES/TRIM/AND MULLIONS

A. Provide exit devices with “UL” listing for life safety and with “UL” labels for “Fire Exit Hardware” unless noted otherwise. At any non-rated applications indicated, provide key cylinder control of latch dogging. All exit devices mounted on labeled wood doors shall be mounted on the door per the door manufacturer’s requirements. All trim shall be thru-bolted to the lock stile case. Provide glass bead conversion kits to shim exit devices on doors with raised glass beads as required. All exit devices shall be one manufacturer. No deviation will be considered. Lever trim shall be solid case material with a free wheeling feature to limit damage to the unit from vandalism. Hardware to comply with ANSI A156.3, Grade 1 requirements. Mount all exit devices at 40” centerline. Furnish key removable mullions with stabilizer kits on pairs of doors where specified. Furnish steel mullions on fire-rated openings where specified.

B. Acceptable manufacturers and products:

<u>MFG.</u>	<u>LEVER TRIM</u>	<u>MULLIONS</u>
Sargent 80 Series	ETP	L980/L980A
Precision 2100 Series	49D	KR822
<b>Dorma 9000 Series</b>	<b>LC</b>	<b>F1300KR</b>
Von Duprin	17	KR4954

2.07 DOOR CLOSERS

FINISH HARDWARE

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- A. Door closers shall have fully hydraulic, full rack and pinion action. Closers shall be one piece cast aluminum. Furnish a universal closer body where all arms are interchangeable with the same body. All closers shall utilize a stable all weather fluid without seasonal adjustment of closer speed to properly close the door. Closers for fire-rated doors shall be provided with temperature stabilizing fluid that complies with standards UBC 7-2 (1997) and UL 10C, as required. Closers shall be multi sized 1 thru 6, and non-handed. Provide full closer cover. Stake or captivate all closer adjustment valves. Closers to be installed to allow door swing as shown on plans. Doors swinging into exit corridors shall provide for corridor clear width as required by code. Where possible, mount closers inside rooms. Provide closer variants conforming to ADA ANSI-A117.1. Furnish the necessary brackets and spacers for the correct operation of the closer rather specified or not. Furnish heavy duty thumb turn hold open arms at vestibule locations.
- B. Acceptable manufacturers and products:

<u>Manufacturer</u>	<u>Heavy Duty</u>
Best	HD8000 Series
<b>Dorma</b>	<b>8900 Series</b>
LCN	4040 Series
Sargent	351 Series

## 2.08 DOOR BOLTS/DUST PROOF STRIKES/COORDINATORS

- A. Furnish 12" manual top and bottom flushbolts for non-rated doors. Furnish automatic flushbolts for fire-rated doors.
- B. Furnish a dust proof strike for the bottom flushbolt where specified in the hardware sets.

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- C. Furnish a door coordinator with automatic flushbolts; allowing the inactive leaf door to close before the active leaf. Furnish the correct size according to the width of the opening. Use filler plates where needed. Furnish special mounting brackets for stop mounted hardware.

Acceptable manufacturers and products:

<u>Manufacturer</u>	<u>Manual Flushbolts</u>	<u>Dust Proof Strike</u>	<u>Automatic Flushbolts</u>	<u>Coordin.</u>
Rockwood	555	570	1942	1672
<b>Trimco</b>	<b>3917</b>	<b>3910</b>	<b>3815</b>	<b>3094B2</b>

2.09 PUSH PLATES, PULLS AND PULL PLATES

- A. Pulls: Material to be 1” solid stainless steel. Pulls to be 10” Center to Center. Provide spanner type thru-bolt back to back fasteners at common ends and button tip spanner thru-bolts at free ends.
- B. Furnish 6 X 16 push plates wherever possible, except when the stile on the door will not allow you to do so. In these cases, furnish 4 X 16 push plates.
- C. Furnish 4 X 16 pull plates where specified in the hardware sets.
- D. Plates to be furnished with .050 thick. Furnish back to back mounting wherever possible, and metal screws for metal doors and wood screws for wood doors. Plates shall be CuVerro anti-microbial base metal. Coatings are unacceptable. Acceptable finish is 710CU.
- E. Acceptable manufacturers and products:

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<u>Manufacturer</u>	<u>Push Plates</u>	<u>Pull Plates</u>	<u>Offset Pulls</u>
<b>Trimco</b>	<b>1001-9</b>	<b>1018-3B</b>	<b>AP423E 18"</b>

## 2.10 PROTECTIVE PLATES

Protective plates to be .050" thick (U.S. 18 gage) stainless steel. Counter sink for mechanical fasteners. Fasten with pan head oval stainless steel sheet metal screws provided by protective plate manufacturer. Bevel all four sides.

- A. Kick Plates: Kick plates are to be mounted on push side of door and to be 8" in height and 2" LDW, unless otherwise specified. Where the bottom rail will not allow for the full 8" in height, furnish the maximum height that will protect the bottom rail.
- B. Acceptable manufacturers and products:

<u>Manufacturer</u>	<u>Kick Plate</u>
Rockwood	K1050
<b>Trimco</b>	<b>K0050</b>

## 2.11 WALL STOPS

- A. Wall Stops: Provide convex wall stops with concealed combo pack fasteners. Use toggle fasteners in drywall and machine screws and rawl plugs in masonry and concrete walls.
- B. Acceptable manufacturers and products:

<u>Manufacturer</u>	<u>Wall</u>	<u>Wall/Holder</u>
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HORSECAVE , KENTUCKY

<b>Trimco</b>	<b>1278CX</b>	<b>1283-6S</b>
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2.12 DOOR SEALS/GASKETING/THRESHOLDS/AUTO.DOOR BOTTOMS

Aluminum extrusions to be T-6063 or T-6463 with a minimum hardness of T-5. Provide mechanical fasteners. Use only manufacturer supplied fasteners.

A. Door Seals and Gasketing:

Fasteners shall be stainless steel sheet metal screws. Furnish UL listed gasketing for all fire-rated doors.

1. Perimeter Seals:

Provide bulb seal at head and jambs. Seal to be polyurethane. Fasten with manufacturer’s recommended and supplied fasteners.

2. Thresholds & Automatic Door Bottoms:

Furnish thresholds 4” longer than the door width. Provide only manufacturer supplied fasteners. Secure thresholds with stainless steel wood screws and plastic anchors. Secure automatic door bottoms with stainless steel sheet metal screws.

- a. Thresholds: Provide .125” thick material for ¼” rise saddle thresholds and .200” material for ½” rise saddle thresholds.
- b. Furnish thresholds with anti-slip surface similar to “PemKote”
- c. Acceptable manufacturers and products:

Manufacturer	Weatherstrip	½” Rise x ADA Panic	½” Rise Saddle	Gasket	Auto.Door Bottoms
NGP	162S	896SIA	425SIA	5050	335N
Pemko	297AS	2005AT	171AK	S88D	411ARL



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<b>Reese</b>	<b>762A</b>	<b>S483A SRS</b>	<b>S425A</b>	<b>797B</b>	<b>370A</b>
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2.13 SILENCERS

- A. Provide punch in silencers. Manufactured of rubber, neoprene or silicone types of pneumatic design for mounting to metal door frames. Silencers to meet the requirements of ANSI A156.16.
- B. Acceptable manufacturers and products:

<u>Manufacturer</u>	<u>Open Section Frame</u>	<u>Closed Section Frame</u>
Rockwood	608	608
<b>Trimco</b>	<b>1229A</b>	<b>1229A</b>

- C. Provide three for each single doors; two for pairs of doors.

2.14 MATERIALS AND FABRICATION

- A. Base Metals: Produce hardware units of basic metal and forming method indicated, using manufacturer's standard metal alloy, composition, temper, and hardness, but in no case of lesser (commercially recognized) quality than specified for applicable hardware units by applicable ANSI/BHMA A156 series standards for each type of hardware item and with ANSI/BHMA A156.18 for finish designations indicated. Do not furnish "optional" materials or forming methods for those indicated, except as otherwise specified.
- B. Fasteners: Provide hardware manufactured to conform to published templates, generally prepared for machine screw installation.

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1. Do not provide hardware that has been prepared for self-tapping sheet metal screws, except as specifically indicated.
2. Furnish screws for installation with each hardware item. Provide Phillips flat-head screws except as otherwise indicated. Finish exposed (exposed under any condition) screws to match hardware finish or, if exposed in surfaces of other work, to match finish of this other work as closely as possible including "prepared for paint" surfaces to receive painted finish.
3. Provide concealed fasteners for hardware units that are exposed when door is closed except to the extent no standard units of type specified are available with concealed fasteners.
4. Do not use thru-bolts or sex bolts for installation where bolt head or nut on opposite face is exposed in other work unless their use is the only means of adequately fastening the hardware, or otherwise found in Headings. Coordinate with wood doors and metal doors and frames where thru-bolts are used as a means of reinforcing the work, provide sleeves for each thru-bolt or use sex screw fasteners.

## 2.15 HARDWARE FINISHES

- A. Match items to the manufacturer's standard color and texture finish for the latch and lock sets (or push-pull units if no latch or lock sets). **Match existing finishes.**

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- B. Provide finishes that match those established by ANSI or, if none established, match the Architect's sample.
- C. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware.
- D. **Provide compatible finishes for the aluminum storefront doors and frames.**
- E. The designations used to indicate hardware finishes are those listed in ANSI/BHMA A156.18, "Materials and Finishes," including coordination with the traditional U.S. finishes shown by certain manufacturers for their products.

1.	Continuous Hinges (Exterior)	Aluminum/match the door and frame.
2.	Hinges (Interior)	652
3.	Locks	626
4.	Exit Devices	630
5.	Door Closers	689
6.	Protective Plates	630
7.	Door Stops	626/630 as specified
8.	Thresholds/Weatherstripping	Mill Finish Aluminum

## PART 3 EXECUTION

## 3.01 INSTALLATION

- A. USE ONLY MANUFACTURER SUPPLIED FASTENERS. USE OF ANY OTHER FASTENERS WILL VOID LABEL AND WARRANTY.**

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- B. Install hardware per manufacturers instructions and in compliance with:
1. NFPA-80
  2. NFPA-101
  3. NFPA-105
  4. NFPA-252
  5. ANSI A117.1
  6. Local building code requirements
  7. Approved Shop Drawings
  8. Approved Finish Hardware Schedule
- C. Install each hardware item in compliance with the manufacturer's instructions and recommendations. Where cutting and fitting is required to install hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation or application of surface protection with finishing work specified in the Division 9 Sections. Do not install surface-mounted items until finishes have been completed on the substrates involved.
- D. Set units level, plumb, and true to line and location. Adjust and reinforce the attachment substrate as necessary for proper installation and operation.
- E. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors in accordance with industry standards.
- F. Set thresholds for exterior doors in full bed of butyl-rubber or polyisobutylene mastic sealant complying with requirements specified in Division 7 Section "Joint Sealers".
- G. Weatherstripping and Seals: Comply with manufacturer's instructions and recommendations to the extent installation requirements are not otherwise indicated.

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## 3.02 FIELD QUALITY CONTROL

- A. Contractor to employ an Architectural Hardware Consultant (AHC), certified by DHI to inspect hardware after installation and before final acceptance in order to ensure that hardware has been properly installed. If there are any discrepancies the consultant is to provide the Architect, General Contractor, and Owner with a written report detailing discrepancies. Discrepancies are to be corrected prior to final acceptance unless otherwise directed by the Owner.
- B. Re-use existing hardware where existing doors are schedule to be relocated or re-installed as indicated on the drawings. Finish the necessary modifications to the frames and doors where new hardware is installed on existing frames and doors. Furnish cover plates. Protect, clean, and re-install hardware, so the appearance of the hardware is like new.

## 3.03 ADJUSTING, CLEANING, AND DEMONSTRATING

- A. Adjusting: Hardware installer to adjust and check each operating item of hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate freely and smoothly or as intended for the application made.
  - 1. Where door hardware is installed more than one month prior to acceptance or occupancy of a space or area, return to the installation during the week prior to acceptance or occupancy and make final check and adjustment of all hardware items in such space or area. Clean operating items as necessary to restore proper function and finish of hardware and doors. Adjust door control devices to function properly with final operation of heating and ventilating equipment.
- B. Cleaning: General Contractor to:
  - 1. Clean adjacent surfaces soiled by hardware installation.

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2. Clean finish hardware per manufacturers instructions after installer makes final adjustments and prior to final acceptance. Remove all mortar, dry wall mud, paint over spray and foreign materials from hardware. Replace at no cost to owner items that can not be cleaned to manufacturers level of finish quality.

C. Demonstrating: Prior to final acceptance, the Door Hardware Supplier and Hardware Installer shall:

1. Conduct a training class for the building maintenance personnel in the adjustment, operation and maintenance of mechanical and electrified finish hardware. At the start of this class the installer is to turn over all special tools for finish hardware, that were provided with hardware, by the hardware manufacturer, to the building maintenance supervisor.

3.04 HARDWARE SCHEDULE

Hardware Set #1	102B,
3ea. Hinges	Re-use existing
1ea. Lockset	45H7D14J
1ea. Deadlock	83T7S w/thimble strike
1ea. Electric Strike	ES96 FSV LM
1ea. Power Supply	PS210
1ea. Card Reader	By Electrical
1ea. Controller	By Electrical
1ea. Door Position Switch	By Eelctrical
1ea. Remote Push Button	By Electrical
1ea. Closer	Re-use existing
1ea. Kickplate	Re-use existing
3ea. Silencers	1229A

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NOTES: USE 83TD5 DRIVE IN LATCH BOLT FOR WOOD DOORS. PROVIDE A THIMBLE STRIKE. MODIFY DOOR AND FRAME.

OPERATION DESCRIPTION: **DURING SCHOOL HOURS**, DOOR IS LOCKED FROM RECEPTION SIDE. EGRESS BY REMOTE RELEASE, CARD READER, OR MECHANICAL KEY. IMMEDIATE INGRESS AT ALL TIMES, **AFTER HOURS**, DOOR IS LOCKED FROM BOTH SIDES. CORRIDOR SIDE IS LOCKED BY DEADLOCK.

Hardware Set #2	102C,
3ea. Hinges	Re-use existing
1ea. Lockset	45H7D14J
1ea. Electric Strike	ES96 FSV LM
1ea. Power Supply	PS210
1ea. Card Reader	By Electrical
1ea. Controller	By Electrical
1ea. Door Position Switch	By Electrical
1ea. Remote Push Button	Use 2-button console from Set #1
1ea. Closer	Re-use existing
1ea. Kickplate	Re-use existing
3ea. Silencers	1229A

NOTES: MODIFY DOOR AND FRAME.

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OPERATION DESCRIPTION: DOOR IS LOCKED FROM VESTIBULE SIDE. INGRESS  
 BY REMOTE RELEASE, CARD READER OR MECHANICAL KEY. IMMEDIATE  
 EGRESS AT ALL TIMES.

Hardware Set #3	104,156,
3ea. Hinges	FBB179 4.5 X 4.5
1ea. Lockset	45H7T14J
1ea. Kickplate	KO050
1ea. Wall Stop	1278CXCP
1ea. Gasketing	797B
1ea. Auto.Door Bottom	370A

Hardware Set #4	115,116,
3ea. Hinges	FBB179 4.5 X 4.5
1ea. Push Plate	1001-9 710CU
1ea. Pull Plate	1018-3B 710CU
1ea. Closer	8916 ISH
1ea. Kickplate	KO050
1ea. Wall Stop	1278CXCP
3ea. Silencers	1229A

Hardware Set #5	155,159,168,
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3ea. Hinges	FBB179 4.5 X 4.5
1ea. Lockset	45H7T14H
1ea. Kickplate	KO050
1ea. Wall Stop	1278CXCP
3ea. Silencers	1229A

Hardware Set #6	157,
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3ea. Hinges	FBB179 4.5 X 4.5
1ea. Lockset	45H7R14H
1ea. O.H. Stop	4413
3ea. Silencers	1229A

Hardware Set #7	160,
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3ea. Hinges	FBB191 4.5 X 4.5
1ea. Privacy	45HOL14H VIB
1ea. O.H. Stop	4423
1ea. Kickplate	KO050
1ea. Mop plate	KO050 4"

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3ea. Silencers	1229A
Hardware Set #8	162,163,178
3ea. Hinges	FBB179 4.5 X 4.5
1ea. Lockset	45H7D14H
1ea. Kickplate	KO050
1ea. Wall Stop	1278CXCP
3ea. Silencers	1229A
Hardware Set #9	164A,
3ea. Hinges	FBB168 4.5 X 4.5
1ea. Lockset	45H7D14H
1ea. Closer	8916 SDS
1ea. Kickplate	KO050
1ea. Gasketing	797B
Hardware Set #10	164B,
6ea. Hinges	FBB168 4.5 X 4.5
1ea. Power Transfer	PT1000
1ea. Exit Device	2103 MLR 4903D
1ea. Exit Device	2102 LD 4902D
1ea. Rem.Mullion	KR822 MCS822 ST989

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2ea. Cylinders	12E72RP
1ea. Power Supply	PS210
1ea. Card Reader	By Electrical
1ea. Controller	By Electrical
1ea. Door Position Switch	By Eelctrical
1ea. Remote Panic Button	By Electrical
2ea. Closer	8916 EMF PT FC
2ea. Kickplate	KO050
2ea. Lock Down Hdw	LDH100 PHI
1ea. Gasketing	797B
1ea. Mullion Seal	628

OPERATION DESCRIPTION: DOORS ARE ALWAYS LOCKED. INGRESS BY CARD READER OR MECHANICAL KEY. DOORS CAN BE HELD OPEN BY ELECTRICAL CLOSERS, WHICH ARE TIED TO A PANIC BUTTON AND WILL CLOSE UPON ACTIVATION. IMMEDIATE EGRESS AT ALL TIMES.

Hardware Set #11	165,165A,166
3ea. Hinges	FBB191 4.5 X 4.5
1ea. Privacy	45H7HJ14J VIB
1ea. Cylinder	1E74RP3-C258
1ea. Kickplate	KO050
1ea. Mop plate	KO050 4"
1ea. Wall Stop	1278CXCP
3ea. Silencers	1229A

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Hardware Set #12            169,

3ea. Hinges                FBB191 4.5 X 4.5

1ea. Privacy                45HOL14H VIB

1ea. Kickplate             KO050

1ea. Mop plate             KO050 4"

1ea. Wall Stop             1278CXCP

3ea. Silencers             1229A

Hardware Set #13           165B,166A,

3ea. Hinges                FBB179 4.5 X 4.5

1ea. Lockset                45H7D14J

1ea. Kickplate             KO050

1ea. O.H. Stop             4421

3ea. Silencers             1229A

Hardware Set #14           167A,

1ea. Cylinders             1E74RP3

Hardware Set #15           167B,167C

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3ea. Hinges	FBB168 5 X 5
1ea. Lockset	45H7D14H
1ea. Closer	8916 SPA
1ea. Kickplate	KO050
1ea. Wall Stop/Holder	1283-6S
3ea. Silencers	1229A

Hardware Set #16                      167D,

3ea. Hinges	FBB168 5 X 4.5
1ea. Exit Device	2108 CD 4908D
2ea. Cylinders	1E74RP3 X 12E72RP
1ea. Closer	8916 SPA
1ea. Armour plate	KA050 34" x 2"LDW
1ea. Wall Stop/Holder	1283-6S
3ea. Silencers	1229A

Hardware Set #17                      171,

3ea. Hinges	FBB179 4.5 X 4.5
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1ea. Lockset	45H7D14H
1ea. Closer	8916 AF
1ea. Kickplate	KO050
1ea. Wall Stop	1278CXCP
1ea. Gasketing	797B
Hardware Set #18	172,
3ea. Hinges	FBB179 4.5 X 4.5
1ea. Lockset	45H7D14H
1ea. Closer	8916 AF
1ea. Kickplate	KO050
1ea. Wall Stop	1278CXCP
1ea. Auto.Door Bottom	372A Brush
Hardware Set #19	E164A,
2ea. Cont.Hinges	A110HD PT
1ea. Power Transfer	PT1000
1ea. Exit Device	2103 LD MLR CA03
1ea. Exit Device	2102 LD
1ea. Rem.Mullion	KR822 MCS822 ST989
2ea. Cylinders	12E72RP
1ea. Power Supply	PS210
1ea. Card Reader	By Electrical

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1ea. Controller	By Electrical
2ea. Door Position Switch	By Electrical
1ea. Rem.Mullion	1340KR
2ea. Closer	8916 SDS TB
2ea. Pulls	AP423E 18" 710CU
1ea. Threshold	S424A SRS
1ea. Mullion Seal	628

OPERATION DESCRIPTION: DOORS ARE LOCKED AT ALL TIMES. INGRESS VIA AUTHORIZED CREDENTIAL, OR MECHANICAL KEY, OR CARD READER CAN BE PROGRAMMED TO KEEP ONE DOOR UNLOCKED. FREE EGRESS AT ALL TIMES.

Hardware Set #20	E164B,
2ea. Cont.Hinges	A110HD
1ea. Exit Device	2103 LD CA03
1ea. Exit Device	2102 LD
1ea. Rem.Mullion	KR822 MCS822 ST989
2ea. Cylinders	12E72RP
1ea. Rem.Mullion	1340KR
2ea. Closer	8916 SDS TB
2ea. Pulls	AP423E 18" 710CU
1ea. Threshold	S424A SRS
1ea. Mullion Seal	628

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Hardware Set #21	E167,
1ea. Cont.Hinges	A110HD PT
1ea. Power Transfer	PT1000
1ea. Exit Device	2103 LD MLR CA03
1ea. Cylinders	12E72RP
1ea. Power Supply	PS210
1ea. Card Reader	By Electrical
1ea. Controller	By Electrical
1ea. Door Bell	By Electrical
1ea. Flashing Light	By Electrical
1ea. Door Position Switch	By Electrical
1ea. Closer	8916 SDST
1ea. Pulls	AP423E 18" 710CU
1ea. Threshold	S425A SRS
1ea. Weatherstripping	769A
1ea. Door Bottom	772A

OPERATION DESCRIPTION: DOOR IS LOCKED AT ALL TIMES. INGRESS VIA AUTHORIZED CREDENTIAL, OR MECHANICAL KEY, OR CARD READER CAN BE PROGRAMMED TO KEEP ONE DOOR UNLOCKED, OR DOOR CAN HELD OPEN BY DOOR CLOSER.. FREE EGRESS AT ALL TIMES.

END OF SECTION 087100



## SECTION 102113 - TOILET COMPARTMENTS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. Section Includes:

- 1. Phenolic-core toilet compartments configured as toilet enclosures and urinal screens.

- B. Related Sections:

- 1. Section 061035 "Miscellaneous Rough Carpentry" for blocking.
  - 2. Section 102800 "Toilet, Bath, and Laundry Accessories" for toilet tissue dispensers, grab bars, purse shelves, and similar accessories.

#### 1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
- B. Shop Drawings: For toilet compartments. Include plans, elevations, sections, details, and attachments to other work.
  - 1. Show locations of cutouts for compartment-mounted toilet accessories.
  - 2. Show locations of reinforcements for compartment-mounted grab bars.
  - 3. Show locations of centerlines of toilet fixtures.
- C. Samples for Initial Selection: For each type of unit indicated. Include Samples of hardware and accessories involving material and color selection.

#### 1.4 INFORMATIONAL SUBMITTALS

- A. Product Certificates: For each type of toilet compartment, from manufacturer.

#### 1.5 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For toilet compartments to include in maintenance manuals.

#### 1.6 QUALITY ASSURANCE

- A. Comply with requirements in GSA's CID-A-A-60003, "Partitions, Toilets, Complete."

- B. Surface-Burning Characteristics: As determined by testing identical products according to ASTM E 84, or another standard acceptable to authorities having jurisdiction, by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

- 1. Flame-Spread Index: 30.

- C. Regulatory Requirements: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA) and Architectural Barriers Act (ABA) Accessibility Guidelines for Buildings and Facilities" and ICC/ANSI A117.1 for toilet compartments designated as accessible.

## 1.7 PROJECT CONDITIONS

- A. Field Measurements: Verify actual locations of toilet fixtures, walls, columns, ceilings, and other construction contiguous with toilet compartments by field measurements before fabrication.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. Aluminum Castings: ASTM B 26/B 26M.
- B. Aluminum Extrusions: ASTM B 221 (ASTM B 221M).
- C. Brass Castings: ASTM B 584.
- D. Steel Sheet: Commercial steel sheet for exposed applications; mill phosphatized and selected for smoothness.
  - 1. Electrolytically Zinc Coated: ASTM A 879/A 879M, 01Z (03G).
  - 2. Hot-Dip Galvanized: ASTM A 653/A 653M, either hot-dip galvanized or galvanized.
- E. Stainless-Steel Sheet: ASTM A 666, Type 304, stretcher-leveled standard of flatness.
- F. Stainless-Steel Castings: ASTM A 743/A 743M.
- G. Zamac: ASTM B 86, commercial zinc-alloy die castings.
- H. Particleboard: ANSI A208.1, Grade M-2 with 45-lb (20.4-kg) density.
- I. Plastic Laminate: NEMA LD 3, general-purpose HGS grade, 0.048-inch (1.2-mm) nominal thickness.

### 2.2 PHENOLIC-CORE UNITS.

- A. Basis-of-Design Product: Subject to compliance with requirements, provide Bradley Corporation; Series 400 or comparable product by one of the following:
  - 1. American Sanitary Partition Corporation.
  - 2. Ampco Products, LLC.
  - 3. Bobrick Washroom Equipment, Inc.

4. Bradley Corporation; Mills Partitions.
- B. Toilet-Enclosure Style: Overhead braced Floor Anchored.
  - C. Urinal-Screen Style: Wall hung.
  - D. Door, Panel, and Pilaster Construction: Solid phenolic-core panel material with melamine facing on both sides fused to substrate during panel manufacture (not separately laminated), and with eased and polished edges. Provide minimum 3/4-inch-(19-mm-) thick doors and pilasters and minimum 1/2-inch-(13-mm-) thick panels.
  - E. Pilaster Shoes and Sleeves (Caps): Fabricated from stainless-steel sheet, not less than 0.031-inch (0.79-mm) nominal thickness and 3 inches (76 mm) high, finished to match hardware.
  - F. Brackets (Fittings):
    1. Full-Height (Continuous) Type: Manufacturer's standard design; aluminum.
  - G. Phenolic-Panel Finish:
    1. Facing Sheet Finish: One color and pattern in each room.
    2. Color and Pattern: As selected by Architect from manufacturer's full range, with manufacturer's standard through-color core matching face sheet.

## 2.3 ACCESSORIES

- A. Hardware and Accessories: Manufacturer's standard design, heavy-duty operating hardware and accessories.
  1. Material: Clear-anodized aluminum.
  2. Hinges: Manufacturer's standard continuous, cam type that swings to a closed or partially open position.
  3. Latch and Keeper: Manufacturer's standard surface-mounted latch unit designed for emergency access and with combination rubber-faced door strike and keeper. Provide units that comply with regulatory requirements for accessibility at compartments designated as accessible.
  4. Coat Hook: Manufacturer's standard combination hook and rubber-tipped bumper, sized to prevent in-swinging door from hitting compartment-mounted accessories.
  5. Door Bumper: Manufacturer's standard rubber-tipped bumper at out-swinging doors.
  6. Door Pull: Manufacturer's standard unit at out-swinging doors that complies with regulatory requirements for accessibility. Provide units on both sides of doors at compartments designated as accessible.
- B. Anchorages and Fasteners: Manufacturer's standard exposed fasteners of stainless steel or chrome-plated steel or brass, finished to match the items they are securing, with theft-resistant-type heads. Provide sex-type bolts for through-bolt applications. For concealed anchors, use stainless steel, hot-dip galvanized steel, or other rust-resistant, protective-coated steel.

## 2.4 FABRICATION

- A. Overhead-Braced Units: Provide manufacturer's standard corrosion-resistant supports, leveling mechanism, and anchors at pilasters to suit floor conditions. Provide shoes at pilasters to conceal supports and leveling mechanism.

- B. Door Size and Swings: Unless otherwise indicated, provide 24-inch-(610-mm-) wide, in-swinging doors for standard toilet compartments and 36-inch-(914-mm-)wide, out-swinging doors with a minimum 32-inch-(813-mm-)wide, clear opening for compartments designated as accessible.

## PART 3 - EXECUTION

### 3.1 INSTALLATION

- A. General: Comply with manufacturer's written installation instructions. Install units rigid, straight, level, and plumb. Secure units in position with manufacturer's recommended anchoring devices.
  - 1. Maximum Clearances:
    - a. Pilasters and Panels: 1/2 inch (13 mm).
    - b. Panels and Walls: 1 inch (25 mm).
  - B. Overhead-Braced Units: Secure pilasters to floor and level, plumb, and tighten. Set pilasters with anchors penetrating not less than 1-3/4 inches (44 mm) into structural floor unless otherwise indicated in manufacturer's written instructions. Secure continuous head rail to each pilaster with no fewer than two fasteners. Hang doors to align tops of doors with tops of panels, and adjust so tops of doors are parallel with overhead brace when doors are in closed position.

### 3.2 ADJUSTING

- A. Hardware Adjustment: Adjust and lubricate hardware according to hardware manufacturer's written instructions for proper operation. Set hinges on in-swinging doors to hold doors open approximately 30 degrees from closed position when unlatched. Set hinges on out-swinging doors to return doors to fully closed position.

END OF SECTION 102113

## SECTION 114000 – FOOD SERVICE EQUIPMENT

### 1. SCOPE

General provisions of Contract, General and Supplemental Conditions, and General Requirements apply to this section. And, this section shall be governed by alternates insofar as they affect this work. This includes, but is not limited to jobsite measurements, trade coordination and supplying equipment as specified.

### 2. DESCRIPTION

#### A. Related work specified elsewhere:

1. Instructions to bidders, general and supplementary conditions.
2. Drawings and project data.
3. Mechanical and electrical work.

#### B. "Food Equipment Contractor" or the abbreviation FEC, or the term bidder, means the person, company or corporation that will contract for the work specified in this section.

#### C. Food Equipment Contractor's Work includes:

1. All labor, materials and equipment necessary for complete installation of the food service and related equipment as indicated in these documents.
2. Delivery, unloading, storing, assembly and setting in place of the specified equipment, ready for final connections by others.
3. Delivery of all loose fittings to other trades and coordination of same, (faucets, valves, etc.)
4. Reasonable protection of all equipment from damage until owner acceptance.
5. Inspection to see that all rough-ins and connections to all mechanical, electrical, ventilation, and refrigeration equipment are made according to the intent of these specifications. If FEC drawings and other submittals are in conflict with the engineering and architectural bid documents, work should not proceed until clarified by the architect.
6. Mechanical work by FEC:
  - a. remote refrigeration lines
  - b. furnish faucets and wastes and overflows as specified for installation by mechanical contractor
7. Electrical work by FEC:
  - a. All combination starter/junction boxes where required per rules, regulations and codes and where part of the equipment and/or as specified with direction for installation.
  - b. All electrically operated equipment; all wiring terminating in junction boxes, combination starters and/or control panels ready for final connection by Electrical Contractor.
  - c. Receptacles specified as part of equipment and all required cords and plugs as specified.

### 3. QUALITY ASSURANCE

#### A. Qualifications: Bidder shall have engineering personnel and facilities to design, detail and fabricate quality food facilities equipment of type and size used on this project.

#### B. Requirements of Regulatory Agencies:

1. Comply with and bear seal of National Sanitation Foundation, Underwriter's Laboratories, and/or National Board of Fire Underwriters
2. O.S.H.A.

#### 4. SUBMITTALS

##### A. General Procedures:

1. Shop and Rough-in Drawings for approval, four (4) sets of prints; 8 copies for distribution after approval OR number as directed by the architect or general contractor.
  2. Maintenance manuals: Three (3) bound sets.
- B. Shop Drawings for custom fabricated equipment are to consist of a plane view, elevation, and section view of each item of equipment. Drawings shall be at a minimum scale of  $\frac{3}{4}'' = 1'-0''$ .
- C. Rough-in Drawings are to consist of the following sheet respectively. Floor plan showing equipment and item number, drawn at  $\frac{1}{4}'' = 1'-0''$  scale. All wall line dimensions are to be taken from architect's drawing to insure exact wall line dimensions. Should discrepancies occur, note these to Architect when submitted.
- D. Equipment Brochures are to contain all information as listed below and assembled with the Item specification sheet [manufacturer's cut sheet] with all accessory items and mechanical requirements underlined or highlighted.
- E. Maintenance Manuals: Instructions for maintenance of food equipment, including the following:
- a. Care of finished surfaces
  - b. Material Safety Data sheets
  - c. Period of warranty and list of service agencies responsible for each item of equipment.

#### 6. SUBSTITUTIONS

- A. Equipment items specified have been chosen for size, specific mechanical, physical and maintenance advantages. In all possible cases, there have been three brands listed as approved. It is the intent that these minimum requirements be met. If substitutions are proposed, they must be submitted and approved ten (10) days prior to bid date, and listed on an addendum provided to all contractors of record. All requests for approval of submitted items must be submitted as follows:
1. Submittal must be in writing and be in possession of owner's agent prior to ten (10) working days of bid date. Submittal request must contain mechanical and electrical information (connected loads and points of connection). No consideration will be given to substitution requests without this information.
  2. Approvals for substituted items will be listed in an addendum and sent to bidders of record. Items substituted, but not listed on addendum will be cause for rejection of bid.

#### 7. WARRANTY

- A. FEC shall warranty all equipment furnished under this contract against defects in material and workmanship for a minimum period of one (1) year, UNLESS specifically specified or if the standard factory warranty is longer than one year. All buy-out equipment shall have a factory warranty covering one year parts and labor. Warranty shall go into effect on date of substantial completion or date put into use by Owner, whichever is sooner.
- B. Sealed refrigeration units shall be warranted for five (5) years.
- C. Owner is not responsible for and expenses involved in servicing of any item furnished under this contract unless it can be shown that said items were misused by Owner or that service call was not necessary.

- D. The owner will ask only the FEC for any warranty service or repair and shall not be expected to direct any calls to any other agency for the FEC. Owner calls to other sources may void factory warranties and such costs may be borne by the owner.
- E. Owner shall have continued use of defective equipment until replacement is delivered.

## 9. PRODUCTS

### A. Materials

- 1. Sheet Metal (all U.S. Standard Gauges):
  - a. Stainless Steel, type 302/304 (Type 430 not acceptable) Minimum finish, #3 or 100 grit.
  - b. Galvanized Steel, tight coat galvanized copper nearing steel.
- 2. Sound Deadening: 1/8" thick mastic painted with aluminum paint under all tops. Mastic equal to 3M – E.C. coating #1000.
- 3. Sealant: Silicone type, standard clear.  
(Dow Corning 781 or General Electric approved for use in foodservice)

### B. Faucets, Spray Units and Accessories shall be T&S Brass, Fisher Faucets, Chicago Faucets or equal

- 1. Chrome plated, heavy duty brass, equipped with removable seals and with removable aerators.
- 2. All pre-rinse units mounted on table top to be equipped with wall mounting bracket on riser pipe and secured to wall with screw or bolts.
- 3. All vacuum breakers to be chrome plated above table in backsplash.

### C. Fabrication

- 1. General: Where fabrication disturbs the original finish, material shall be polished to match original finish and all corners formed or welded on minimum 1/2" radius.
- 2. Welding- All welds shall be nonporous and free from any imperfections, homogeneous with material itself. Welds shall be radius type ground smooth, integral and polished.
- 3. Legs, cross rails, gussets and feet on open base tables and sinks, material as specified, 1-5/8" O.D. tubing 16 gauge minimum including crossbraces.
- 4. Table/Counter Tops.
  - a. All tops shall be of 14 gauge stainless steel one (1) piece construction with all seams and corners welded.
  - b. All intersections of three (3) or more planes covered.
  - c. Reinforced with 4" x 1" inverted 14 gauge galvanized steel channels with 1" flanges, stud welded to underside of tops. There shall be two channels running lengthwise under tops up to 30" wide, and one (1) channel running front to rear at legs and/or not more than 6'-0" on center.
  - d. Tops and backsplashes free of screws, rivets and/or bolts.
  - e. All open corners of edges welded in bull-nose roll.
- 5. Sink Section Tops - Identical to table tops, Paragraph D with the following exceptions:
  - 1. Tops shall slope to sinks, troughs and drainboards a minimum of 1/8" per foot.
  - 2. Backsplashes and table edges shall be level.
  - 3. All sinks, disposer cones, sumps, chutes or trough shall be integrally welded with top to give one (1) piece appearance.
- 6. Drawers - 20" x 20" x 5" deep, 18 gauge stainless steel removable pans, easily removable without removing frame.

7. Elevated Shelves – Constructed with minimum 14 gauge stainless, unless otherwise specified. Shelves shall be level and plumb, underbraced same as tops herein before specified.
8. Sink Bowls, Sink Sections,
  - a. 14 gauge stainless steel all welded, size and shape, as shown.
  - b. Backs, bottoms and fronts are to be formed of one continuous sheet of stainless steel with ends welded.
  - c. Intersections coved and welded.
  - d. Shall have integral welded backsplash.
  - e. Waste, as specified in itemized specifications.
  - f. Drainboards shall be integral with sinks of same material, mounted on two legs and slope to sinks, minimum 1/8" per ft.
  - g. Depth of sink bowls shall refer to distance between intersection of top of sink to drainboard surface and bottom of sink, excluding slope to drain.

## 10. REFRIGERATION

- A. General. Provide refrigeration condensing units of size and capacities as indicated, consisting of compressors, condensers, receivers, motors, mounting bases, vibration isolators, refrigeration components, safety devices, electrical controls, refrigerant and protective controls, ALL FACTORY ASSEMBLED and tested.
  1. Refrigerant: Charge units with refrigerant. Refrigerant to be most current type that is approved for use under the Montreal Protocol, and in accordance with the 2009 EPA Federal Clean Air Act and 2009 revised guidelines of the EPA pertaining to new walk-in cooler and freezer construction after January 1, 2009. R-12 and R-502 will not be acceptable. Condensing units shall be semi-hermetic or scroll construction, capable of being field converted to newer types of refrigerant as they are developed.
  2. Outdoor Mounting. Provide weather-tight housing, and low ambient controls for all units located outdoors.
- B. Equip each compartment with the necessary lighting to provide a minimum of twenty (20) foot candles of light at any point thirty inches above the floor. Lights are to be mounted on the interior of each compartment. For extra lights specified or required, provide all hardware and deliver to the electrical contractor for installation.
- C. Provide digital or two inch diameter chrome-plated dial thermometer, flush mounted on the exterior wall with sensor bulb mounted and protected in an appropriate design location, unless otherwise specified.
- D. Doors shall be complete with stops, piston-actuated self-closing mechanisms, inside safety releases and key-locking devices. Provide full perimeter door heaters on freezer doors, including under factory-manufactured sills. Where building floor becomes the walk-in floor or is level with it, doors shall be hung on chrome-plated, camlift hinges such that the doors shall be self-closing from all angles.
- E. All interior corners and intersections shall be coved for easy cleaning.
- F. Provide timed, programmable defrost controls for freezer coils.
- G. Condensate drain lines shall be furnished and installed by the FEC. Insulate all drain lines with 3/4" pre-molded foamed insulation. Provide heater coil or tape on all freezer drain lines, pre-wired with effective shelving design. Use hard copper for all drain lines, sized and sloped as required for good drainage, complete with traps over exterior drains.
- H. Refrigerant piping shall be Type ACR hard temper copper tubing with wrought fittings and silver solder joints. Insulate all suction lines with 3/4" pre-molded foam insulation.



- I. Provide all control wiring between condensing unit and coil. The electrical contractor shall make final connections from the disconnect to the condensing unit.
- J. Provide all specialty parts for dryer, filters and pump down controls for a proper installation.

## 11. EXECUTION

### A. Inspection

- 1. Inspect all submittals to see that they do not conflict with documents published by Consultant/Architect/Owner.
- 2. The FEC is responsible for verifying all dimensions, quantities, construction details, finished, sizes, etc.
- 3. Field check locations and sizes of all rough-ins prior to installation of finished floors, walls and ceilings to verify that said rough-ins are in correct position and where shown on FEC's drawings.

### B. Specifications for other contractors to make final electrical, water, waste and ventilating connections, unless otherwise specified.

- 1. The duties of the FEC in relation to other trades: The FEC shall coordinate all information relating to FEC's equipment required by other trades.
- 2. All equipment resting against walls, floors, ceilings, masonry bases and/or other equipment shall be sealed with silicone sealer, as specified.
- 3. The FEC is responsible during the progress of the project for protection of his equipment against fire, theft, damage, etc., until date of final acceptance by Architect.

### C. Testing, Demonstration, Instruction

- 1. After utility connections have been made to all equipment, FEC shall conduct final tests of equipment in the presence of the Consultant/Owner and/or their duly authorized representatives to insure that all equipment will be ready for Owner operation when required.
- 2. The FEC shall thoroughly instruct Owner and/or Owner's duly authorized representative in the operation of all equipment, item by item, including fabricated equipment.
  - a. Instruction shall include the care and cleaning of all equipment and a complete demonstration of operation.
  - b. The FEC's installation supervisor is required to be at the project during normal working hours the first day of complete Owner operation to assist Owner in complete operation.
- 3. The FEC shall deliver three (3) sets of maintenance manuals as specified to Owner or Owner's duly authorized representative and shall thoroughly instruct owner in the complete contents of said manuals.

### D. Cleaning

- 1. All trash material caused by FEC's installation shall be removed by the FEC from the project site daily.
- 2. Before final inspection and Owner operation of facility, the FEC shall remove all protective coverings from his equipment and thoroughly clean and service all items.

## Specification Section

Please note that the following brands and model numbers have been specifically selected to serve a specific purpose on this project and conform to established utility requirements. Do not provide any alternate brands unless specifically approved in writing. Provide quantity of items as shown in the drawing or mentioned specifically in the written descriptions.

### **ITEM 1 - CASH REGISTER STAND (1 REQ'D)**

#### **Low Temp Industries**

##### **Model 36-CSE**

SpecLine Cashier Station, single end station, 36-3/8"W x 30"D x 36"H, 14ga stainless steel top, specify base, 5" casters all with brakes, UL, cUL, UL EPH

- 1 ea. Molded fiberglass
- 1 ea. Custom color
- 1 ea. (AA) Line up lock
- 1 ea. 3" Knock-out on top
- 1 ea. (DD) flush mount outlet
- 1 ea. (A) Solid tray slide with (2) inverted "V" ridges on surface, stainless steel

All serving line components shall be the same manufacturer.

Delfield and Multiteria will be accepted as an equal manufacturer provided the provided the product conforms to the dimensions, construction, design, capacity, and function of the basis of design.

### **ITEM 2 - SERVING COUNTER, UTILITY (1 REQ'D)**

#### **Low Temp Industries**

##### **Model 36-ST**

SpecLine Solid Utility Food Table, 14ga stainless steel top, 36-3/8"W x 30"D x 36"H, specify base, rear storage opening, 5" casters all with brakes, UL, cUL, UL EPH

- 1 ea. Molded fiberglass
- 1 ea. (AA) Line up lock
- 1 ea. Custom color
- 1 ea. (A) Solid tray slide with (2) inverted "V" ridges on surface, stainless steel
- 1 ea. (D) Cutting board, stainless steel

All serving line components shall be the same manufacturer.

Delfield and Multiteria will be accepted as an equal manufacturer provided the provided the product conforms to the dimensions, construction, design, capacity and function of the basis of design.

### **ITEM 3 - SERVING COUNTER, COLD FOOD (1 REQ'D)**

#### **Low Temp Industries**

##### **Model 60-CFMA**

SpecLine TempestAir Cold Serving Counter, 60-3/8"W x 30"D x 36"H, 14ga stainless steel top with (1) 51"W x 20"D x 9" deep stainless-steel cold well, accommodates (4) full size 6" deep flush mounted food pans, forced air refrigeration with (2) fans, specify base, 5" casters all with brakes, 1/3 HP, UL, cUL, UL EPH

- 1 ea. 120v/60/1-ph
- 1 ea. Molded fiberglass

- 1 ea. Custom color (one charge for entire serving line)
- 1 ea. (AA) Line up lock
- 1 ea. (A) Solid tray slide with (2) inverted "V" ridges on surface, stainless steel
- 1 ea. (D) Cutting board, stainless steel
- 1 ea. (CP) Crystal Clear convertible protector
- 1 ea. Model CCSB60 CrystalClear Single Buffet Protector, self-service, one section 57-3/4" long, 3/8" tempered glass with penciled edges & bumped corners, tubular supports and LED lights
- 1 ea. Sheet pan recess

All serving line components shall be the same manufacturer.

Architect may select a Custom RAL color for body finish.

Body shall have a 5-year manufactures Construction Warranty  
2-year parts and labor and a 5-year compressor warranty

Delfield and Multiteria will be accepted as an equal manufacturer provided the provided the product conforms to the dimensions, construction, design, capacity and function of the basis of design.

**ITEM 4 -HOT FOOD SERVING COUNTER / TABLE (1 REQ'D)**

**Low Temp Industries**

**Model 84-EFS5-CPA**

SpecLine Hot Food Serving Counter, 84-3/8"W x 30"D x 36"H, (5) 12" x 20" hot wells, wet & dry operation, individual digital controls, 14ga stainless steel top, specify base, rear storage openings, (6) 5" locking swivel casters, UL, cUL, UL EPH Classified

- 1 ea. 120/208v/60/1-ph,
- 1 ea. Molded fiberglass
- 1 ea. Custom color
- 1 ea. (Z) Hot food drains
- 1 ea. (AA) Line up lock
- 1 ea. (A) Solid tray slide with (2) inverted "V" ridges on surface, stainless steel
- 1 ea. (D) Cutting board, stainless steel
- 1 ea. (CP) Crystal Clear convertible protector
- 1 ea. Model CCSB84OF CrystalClear Single Buffet Protector, self-service, 81-3/4" long divided into two sections (47-7/8" & 33-7/8" bays), 3/8" tempered glass with penciled edges & bumped corners, tubular supports.
- 1 ea. Sheet pan recess
- 1 ea. 5" Casters

All serving line components shall be the same manufacturer.

Architect may select a Custom RAL color for body finish.

Body shall have a 5-year manufactures Construction Warranty  
2-year parts and labor and a 5-year compressor warranty

Delfield and Multiteria will be accepted as an equal manufacturer provided the provided the product conforms to the dimensions, construction, design, capacity, and function of the basis of design.

**ITEM 5 - MILK COOLER (1 REQ'D)**

**Beverage Air**

**Model SM58HC-S**

School Milk Cooler, cold wall, normal temperature, 58"W x 30-5/8"D x 41-1/8"H, 22.63 cu. ft., single access, flat top carton capacities, (16) 13" x 13" x 11" or (10) 19" x 13" x 11" case capacity, self-latching doors/lids with safety bumpers, cylinder lock, wire floor racks, floor drain, electronic control, manual defrost, stainless steel interior & exterior, R290 Hydrocarbon refrigerant, 1/3 HP, cULus, UL EPH Classified, UL-Sanitation, Made in USA

- 1 ea. 3 years parts & labor warranty (excludes maintenance items)
- 1 ea. Self-Contained refrigeration
- 1 ea. Additional 4 years compressor warranty (part only), standard
- 1 ea. 115v/60/1-ph, 2.2 amps, cord with NEMA 5-15P
- 1 ea. 4" Heavy duty casters, (2) with brakes, standard

TRUE and TRAUlsen will be accepted as equal manufacturers provided the product conforms to the dimensions, construction, design, capacity, and function of the basis of design.

#### **ITEM 6 - FLATWARE & TRAY CART (1 REQ'D)**

##### **Lakeside Manufacturing**

##### **Model 213**

Tray & Silver Cart, tubular U-frame with lower platform tray storage & top rack, accepts ten (10) flatware cylinders (not included), for (130) 16" x 22" trays, 500 lb. load capacity, 5" non-marking cushion tread casters, all stainless-steel construction, Made in USA

CADDY and IMC TEDDY will be accepted as equal manufacturers provided the product conforms to the dimensions, construction, design, capacity and function of the basis of design.

#### **ITEM 7 - DISHTABLE, SOILED "L" SHAPED (1 REQ'D)**

##### **LTI INC**

##### **Model: Custom**

Provide shape and size per drawing, High Top - 14 ga. Stainless Steel with Backsplash, Sound Deadening Spray On & Paint, 3" High Rolled Rim Edge, Backsplash "Z" Clips, 3" High Rolled Rim Corner Turn, Backsplash Corner Turn, stainless steel Underbracing, 1-5/8 Inch Stainless Steel Leg and Gusset on stainless Channel, Adjustable S/S Bullet Feet, 18 Gauge Fixed Undershelf 21" x 21" x 5" Deep Integrally Welded Pre-Rinse Sink With Weld-In Disposer Ring, Stainless Steel Rack Guides over Pre-Rinse Sink, Pass thru window-sill with inverted "V" outer edge with Jamb and Header, Dishwasher Lip, (1) T&S Brass B-0133-B Pre-Rinse Unit, (1) B-0230-K Installation Kit,

All custom fabrication shall be the same manufacturer.

Missouri Equipment Company, Commercial Stainless and IMC Teddy, will be accepted as an equal manufacturer provided the provided the product conforms to the dimensions, construction, design, capacity, and function of the basis of design.

#### **ITEM 8 - DISPOSER (1 REQ'D)**

##### **InSinkErator**

##### **Model SS-200-7-CC101**

SS-200™ Complete Disposer Package, sink mount system, 6-5/8" diameter inlet, with #7 collar adaptor for sink installation, 2 HP motor, stainless steel construction, includes syphon breaker, solenoid valve, flow control valve, programmable CC-101 control center, auto reversing, timed run, post flush, adjustable leg kit.

- 1 ea. (1) year parts & labor warranty from date of installation (standard)
- 1 ea. Standard height disposer body
- 1 ea. 208v/60/3-ph, 3.6 amps
- 1 ea. T&S BRASS B-01455

SALVAJOR and MASTER DISPOSER will be accepted as equal manufacturers provided the product conforms to the dimensions, construction, design, capacity, and function of the basis of design.

**ITEM 9 - HOSE REEL (1 REQ'D)**

**T&S Brass**

**Model B-7222-C01XS1E**

Hose Reel Assembly, enclosed, 3/8" x 30 ft. hose with high flow blue spray valve with swivel (EB-0107), 8" wall mount mixing faucet, quarter-turn Eterna compression cartridges with spring checks, lever handles with color coded indexes, continuous pressure vacuum breaker, 3/8" NPT x 36" flexible water hose connector with stainless steel quick disconnect, ratcheting system, multi-fit bracket & adjustable hose bumper, (2) 2-3/8" wall brackets, EasyInstall 16" & rigid 40" risers, epoxy coated steel hose reel, polished chrome-plated brass faucet body, 1/2" NPT female inlets

- 1 ea. 1-year limited warranty, standard
- 1 ea. 1-year limited warranty for hose, standard
- 1 ea. 2-year limited warranty for hose reel, standard
- 1 kt Model B-0230-K Installation Kit, (2) 1/2" NPT nipples, lock nuts & washers, (2) short "EII" 1/2" NPT female x male

FISHER and KROWNE will be accepted as equal manufacturers provided the product conforms to the dimensions, construction, design, capacity and function of the basis of design.

**ITEM 10 - DISHWASHER, CONVEYOR TYPE (1 REQ'D)**

**Hobart**

**Model CL44EN**

Conveyor Dishwasher, single tank, (202) racks/hour, insulated hinged doors, .62 gallon/rack, stainless steel enclosure panels, microprocessor controls with low temperature & dirty water indicators, NSF Pot & Pan mode, programable de-lime notification, ENERGY STAR®, factory startup.

- 1 ea. Standard warranty - 2-Year parts and Labor
- 1 ea. Model CL44EN-BASHTE15K Electric tank heat 15kW
- 1 ea. Model CL44EN-BASERH30K 30kW electric booster
- 1 ea. Dual Point (2) service connection standard
- 1 ea. Model CL44EN-BASELE0AX 208v/60/3-ph
- 1 ea. Model CL44EN-BASHGTHTS Higher than standard
- 1 ea. Model CL44EN-BASDIR0RL Right to left operation.
- 1 ea. Model CL44EN-BASFETSTD Standard feet
- 2 ea. Model VNTHD/E-ADJ E-series vent hood domestic (adjustable)
- 1 ea. Model CLE/TBL-SWITCH Table limit switch CLE-Series

MEIKO and CHAMPION will be accepted as equal manufacturers provided the product conforms to the dimensions, construction, design, capacity, and function of the specified Basis of Design.

**ITEM 11 - DISHTABLE, CLEAN (1 REQ'D)**

**LTI INC**

Provide shape and size per drawing, High Top - 14 ga. Stainless Steel, Backsplash, Sound Deadening Spray On & Paint, 3" High Rolled Rim Edge, Backsplash, "Z" Clips, 3" High Rolled Rim Stainless Steel Underbracing, 1-5/8 Inch Stainless Steel Leg and Gusset on Galv. Channel Adjustable S/S Bullet Feet, 16 Gauge Fixed Undershelf, Limit Switch Provisions, Dishwasher Lip

All custom fabrication shall be the same manufacturer.

Missouri Equipment Company, Commercial Stainless and IMC Teddy, will be accepted as an equal manufacturer provided the provided the product conforms to the dimensions, construction, design, capacity, and function of the basis of design.

**ITEM 12 - SINK, (3) THREE COMPARTMENT (1 REQ'D)**

**LTI INC**

**Model: Custom**

Refer to Drawings approx. 114" x 30" x 36" High Pot Sink- with 2" 45 degree Return splash and 3" High Rolled Rim, Pot Sink-Drain Boards, Pot Sink Back Splash w/ bracing, Pot Sink-Drain Board under Bracing Galvanized, 1 5/8 inch Stainless Steel Sink Leg and Gusset on galvanized plate, 1-5/5 inch Stainless Steel Drain board leg and gusset on galvanized channel, Sound deaden sink bowls with spray on mastic and paint, Sound deaden drain board with spray on mastic and paint, Pot Sink-Standard Partition, Backsplash "Z" Clips, Adjustable S/S Bullet Feet, 1-5/8" Dia. Stainless Steel Cross Rails, 18 Gauge Fixed Undershef, Lever waste With Overflow. (2) T&S BRASS B-0290-01 Big-Flo Mixing Faucet, wall mount, 8" adjustable centers, 16" swing nozzle with plain end outlet, lever handles with color coded indexes, low-lead, 3/4" female NPT, ANSI, NSF, ADA Complaint

- 1 ea. T&S Brass Model B-0133-01 EasyInstall Pre-Rinse Unit
- 1 ea. T&S Brass Model B-0231-EE Sink Mixing Faucet

All custom fabrication shall be the same manufacturer.

Missouri Equipment Company, Commercial Stainless and IMC Teddy, will be accepted as an equal manufacturer provided the provided the product conforms to the dimensions, construction, design, capacity, and function of the basis of design.

**ITEM 13 - ICE MAKER, CUBE-STYLE (1 REQ'D)**

**Manitowoc**

**Model IYT0450A**

Indigo NXT™ Series Ice Maker, cube-style, air-cooled, self-contained condenser, 30"W x 24"D x 21-1/2"H, production capacity up to 490 lb/24 hours at 70°/50° (378 lb AHRI certified at 90°/70°), easyTouch display with 13 different language options, date/time stamp display, automatic reminder/alert icon, one touch asset information, automatic detection of accessories, continuous operating status, programmable production options (time, weight, day or night), one touch cleaning with displayed instructions, Alpha-San anti-microbial protection, acoustical ice sensing probe, self-diagnostic technology, DuraTech™ exterior, half-dice size cubes, R410A refrigerant, NSF, cULus, CE, ENERGY STAR®

- 1 ea. Model WARRANTY-ICE-SC 3-year parts & labor (Machine), 5-year parts & labor (Evaporator), 5-year parts & 3 years labor (Compressor)
- 1 ea. Model SFA292 Vending Ice Dispenser with Built-In Water Valve, touchless lever, floor model,
- 1 ea. Model WARRANTY-BIN/DISP 3-year parts & labor warranty.
- 1 ea. 3M Purification Model ICE125-S (5616004) 3M™ Water Filtration Products Water Filter System, with gauge

SCOTSMAN and HOSIHZAKI will be accepted as equal manufacturers provided the product conforms to the dimensions, construction, design, capacity, and function of the basis of design.

**ITEM 14 - FLOOR DRAIN (1 REQ'D)**

**IMC/Teddy**

**Model FDSS-1212-SGAS**

FDSS Floor Drain Sump Sink, 12"W x 12"D x 4" deep, 16/304 stainless steel, with drain & (SGAS) anti-slip subway grating, delivered to Plumbing Contractor for installation.

CUSTOM FABRICATORS will be accepted as an equal manufacturer provided the provided the product conforms to the dimensions, construction, design, capacity and function of the basis of design.

**ITEM 15 - BUSSING UTILITY TRANSPORT CART, METAL (4 REQ'D)**

**Lakeside Manufacturing**

**Model 244**

Utility Cart, 3-shelf with 36"W x 22"D x 40-5/8"H, shelf size 33"W x 21"D, stainless steel tubular U-frame, 20-gauge stainless steel shelves with reinforced edges, 500 lb. capacity, 10-3/4" shelf clearance, push handle on each short side, 5" non-marking cushion thread swivel casters, NSF (ships fully assembled), Made in USA

4 ea. Casters, 5", all swivel, No-Mark, cushion tread, standard

CADDY and STEROSIL will be accepted as equal manufacturers provided the product conforms to the dimensions, construction, design, capacity and function of the basis of design.

**ITEM 16 - MOBILE HEATED CABINET (2 REQ'D)**

**Winston Foodservice**

**Model HOV5-14UV**

CVap® Holding Cabinet, mobile, full-size, insulated, convection holding, accommodates (14) 18" x 26" sheet pans or (28) 13" x 18" sheet pans or (28) 12" x 20" hotel pans, load limit 65 lbs (29.25 kg) per rack, (2) field reversible hinged solid dutch doors, magnetic door handle, C-Touch control with processor, HACCP temperature downloads, USB & audio ports, manual water fill, stainless steel interior & exterior, CE, UL EPH ANSI/NSF4, cUL, UL-Sanitation

2 ea. 1-year warranty  
2 ea. 120v/60/1-ph,  
2 ea. Second set of doors on back of cabinet, windows in all doors  
2 ea. Right hand hinging front  
2 ea. Left hand hinging rear.

CRESCOR and ALTO SHAM will be accepted as an equal manufacturer provided the provided the product conforms to the dimensions, construction, design, capacity and function of the basis of design.

ITEM 17 - WORKATBLE, STAINLESS STEEL (1 REQ'D)

LTI INC

**ITEM 18 - PASS-THRU REFRIGERATOR (1 REQ'D)**

**Traulsen**

**Model AHT232WPUT-FHS**

Spec-Line Refrigerator, Pass-thru, two-section, self-contained refrigeration, StayClear™ Condenser, stainless steel exterior, aluminum interior, standard depth, wide full-height door or doors with Santoprene® EZ-Clean Gaskets, (3) adjustable wire shelves per section, microprocessor controls, 6" adjustable stainless-steel legs, 5/8 HP, cULus, NSF

1 ea. 6-year parts & labor and 7-year compressor  
1 ea. 115v/60/1-ph, 8.6 amps, with cord & NEMA 5-15P, standard  
1 ea. Standard refrigerant, standard  
1 ea. Full height solid door, standard  
1 ea. Full height solid door, standard

- 1 ea. Full height solid door, standard
- 1 ea. Full height solid door, standard
- 1 ea. Thermometer side: Left door hinged left/right hinged right.
- 1 ea. Rear: Left door hinged left/right hinged right.
- 28 ea. Universal tray slide - per pair

UTILITY and DELFIELD will be accepted as equal manufacturers provided the product conforms to the dimensions, construction, design, capacity and function of the basis of design.

**ITEM 19 - EXHAUST HOOD SYSTEM (1 REQ'D)**

**KTECH**

**Model 6014080**

By Others

**ITEM 20 - COMBI OVEN, ELECTRIC (1 REQ'D)**

**RATIONAL**

**Model ICP 6-FULL ON 10-FULL E**

One (1) (CC1ERRA.0000218) iCombi Pro® 6-Full Size Combi Oven on one (1) (CE1ERRA.0000221) iCombi Pro® 10-Full Size Combi Oven, double stack, electric, (16) 18" x 26" sheet pan or (32) 12" x 20" steam pan or (16) 2/1 GN pan capacity, (8) stainless steel grids included, intelligent cooking system with (4) assistants; iDensityControl, iCookingSuite, iProductionManager, & iCareSystem, (6) operating modes, (5) cooking methods, (3) manual operating modes, 85° to 572°F temperature range, quick clean, care control, eco mode, 6-point core temperature probe, retractable hand shower, Ethernet interface, Wi-Fi enabled, 208/240v/60/3-ph, 22.4/37.4 kW, CE, IPX5, UL, cULus, NSF, ENERGY STAR-®

- 1 kt Model 60.74.725 Combi-Duo Stacking Kit
- 1 ea. 2 years parts and labor, 5 years steam generator warranty
- 1 ea. Model CAP Chef Assistance Program, a RATIONAL certified Chef conducts 4 hours/location specialized application training with personnel,
- 2 ea. Model 9999.2100 Commissioning
- 2 ea. Installation kits - One (1) for each iCombi is required.
- 1 ea. Model 8720.1563US Installation Kit
- 1 ea. Model 8720.1554US Installation Kit,
- 1 ea. Model 1900.1150US Water Filtration Double Cartridge System, for full-size Combi-Duos
- 2 ea. Model 56.01.535 Active Green Cleaner Tabs, for all iCombi Pro/Classic, 150 pieces/bucket
- 2 ea. Model 56.00.562 Care Tabs, bucket of 150 packets
- 8 ea. Model 6010.2101 Gastronorm Grid Shelf, 2/1 size, 25-5/8" x 20-7/8", stainless steel.
- 12 ea. Model 6019.1150 CombiFry Basket, 1/1 GN, 12-3/4" x 20-7/8"

CONVOTHERM and ALTO SHAM will be accepted as equal manufacturers provided the product conforms to the dimensions, construction, design, capacity and function of the basis of design.

**ITEM 21 - SPARE NO.**

**ITEM 22 - MICROWAVE OVEN (1 REQ'D)**

**ACP**

**Model HDC182**



Amana® Commercial Microwave Oven, 0.6 cu. ft. capacity, 1800 watts, heavy volume, 4-stage cooking, (11) power levels, (100) memory settings, 60-minute max cooking time, LED display, touch control, interlock safety switch, ADA-compliant Braille touch pads, audible end of cycle signal, side hinged door with tempered glass, sealed ceramic interior shelf, lighted interior, stainless steel exterior & interior, 208-240v/60/1-ph, 14.4 amps, 20 MCA, 3000 watts (total), NEMA 6-20P, cETLus, ETL-Sanitation  
1 ea                    3-year full warranty, standard

PANASONIC and VOLLRATH will be accepted as equal manufacturers provided the product conforms to the dimensions, construction, design, capacity and function of the basis of design.

**ITEM 23 - HOT WATER DISPENSER (1 REQ'D)**

**BUNN**

**Model 26300.0001**

26300.0001 H10X Hot Water Dispenser, up 24 gallons/per hour, 212°F temperature setting, upper faucet, includes dry-plug prevention, stainless steel, 208v/50/60/1-ph, 38.7 amps, 8,050 watts, UL, NSF

HATCO and BLOOMFIELD will be accepted as equal manufacturers provided the product conforms to the dimensions, construction, design, capacity and function of the basis of design.

**ITEM 24 - WORKTABLE, STAINLESS STEEL (1 REQ'D)**

LTI INC

Refer to drawings Approx. 30" x 30" x 34" High, Top - 14 ga. Stainless Steel, Pitched Marine Edge, Sound Deadening Spray On & Paint, Pitched Marine Corner Turn, Galv. Underbracing, 1-5/8 Inch Stainless Steel Leg and Gusset on Galv. Channel, 5 Inch Locking Casters, 18 Gauge Fixed Undershef,

All custom fabrication shall be the same manufacturer.

Missouri Equipment Company, Commercial Stainless and IMC Teddy, will be accepted as an equal manufacturer provided the provided the product conforms to the dimensions, construction, design, capacity, and function of the basis of design.

**ITEM 25 - CONVECTION OVEN, ELECTRIC (1 REQ'D)**

Vulcan Model VC55ED Dimensions: 68.6(h) x 40.1(w) x 40(d)

Convection Oven, electric, double-deck, standard depth, solid state controls, 5-hour timer with digital display enhancement, 150° to 500°F temperature range, (5) oven racks per deck, independently operated removable doors with double pane windows, porcelain on steel interior, interior light, stainless steel front, top, & sides, painted 8"H legs, (2) 1/2 HP blower motors, 25.0kW, NSF, UL, ENERGY STAR®

1 ea                    2-year limited parts & labor warranty,  
2 ea                    (2) 208v/60/3-ph, standard

GARLAND and SOUTHBEND will be accepted as equal manufacturers provided the product conforms to the dimensions, construction, design, capacity, and function of the basis of design.

**ITEM 26 - KETTLE, ELECTRIC, COUNTERTOP (1 REQ'D)**

**Cleveland Range**

**Model TKET12T**

Tilting Kettle, electric, twin unit, countertop, 12-gallon (45L each) capacity each, 2/3 steam jacket design, self-contained, lever style-tilting, anti-drip pour spout, IPX6 water protection controls, self-locking marine style safety latch, reinforced rolled rim, center support console, stainless steel construction with 316 series stainless steel liner, 50 PSI

1 ea.                    2-year parts & labor warranty, standard

- 1 ea. 10-Year Hemispheric Bottom Warranty
- 1 ea. Performance start-up
- 1 ea. Standard wattage
- 1 ea. 208v/60/3-ph, 19.6kW, 54.5 amps, standard
- 1 ea. Model MS12 Measuring Strip, 12 gallons.
- 2 ea. Model LCHE-12 Kettle Lift-Off Cover Holder, for 12-gallon kettles, per each kettle
- 2 ea. Model CL12 Lift-Off Cover, 12 gallons, per each kettle
- 1 ea. Model FS12 Food Strainer, 12 gallons, for direct steam & electric series kettles, stainless steel
- 1 ea. Model DPK27 Double Pantry Faucet and Bracket Kit
- 1 ea. Model ST55T Equipment Stand, open base with sliding drain drawer & splash screen, 55" x 20", 18" high, stainless-steel top and legs, allows unit to be hard piped to a floor drain.
- 1 ea. Model SG28 (2) Retractable splash guard/pan shelves, for drain drawer, for ST55 (requires (2) SG28 drawers)

GROEN and SOUTHBEND will be accepted as equal manufacturers provided the product conforms to the dimensions, construction, design, capacity, and function of the basis of design.

**ITEM 27 -RANGE, 24", 4 FRENCH HOT PLATES (1 REQ'D)**

**Vulcan**

**Model EV24S-4FP208**

Restaurant Range, electric, 24", (4) 2.0 kW French hotplates, 9-1/2" solid cast iron, infinite controls, standard oven, (1) rack, stainless steel front, sides, single-deck high shelf & 6" legs, 208v

- 1 ea. 1-year limited parts & labor warranty, standard
- 1 ea. 208v/50-60/3-ph, 13.0kW, 37.5 amps, direct wire, standard
- 1 ea. Single deck stainless steel high shelf, standard

GARLAND and SOUTHBEND will be accepted as equal manufacturers provided the product conforms to the dimensions, construction, design, capacity, and function of the basis of design.

**ITEM 28 - FOOD PROCESSOR, BENCHTOP / COUNTERTOP (1 REQ'D)**

**Hobart**

**Model FP150-1B**

Food Processor, angled continuous feed design, full-size hopper, 14 lb per/min production cap., 420 rpm, stainless steel cutting surfaces, planetary gear transmission, triple safety interlocks, aluminum housing, rubber feet, 15PLTSS-6PACK, 120/60/1, 1/2 HP, 4.8 amps, UL, NSF

GLOBE and ROBOT COUPE will be accepted as equal manufacturers provided the product conforms to the dimensions, construction, design, capacity, and function of the basis of design.

**ITEM 29 - WORKTABLE STAINLESS STEEL (4 REQ'D)**

**LTI INC**

Refer to drawings, Top - 14 ga. Stainless Steel, Backsplash Up 6" High, Sound Deadening Spray On & Paint, Backsplash "Z" Clips, Backsplash Corner Turn, Rolled Edge Corner Turn, Rolled Edge, Galv, Underbracing, 1-5/8 Inch Stainless Steel Leg and Gusset on Galv. Channel, Adjustable S/S Bullet Feet, 18 Gauge Fixed Undershelf, (2) - 20 x 20 Utility Drawer With S/S Liner, Drawer Locks

All custom fabrication shall be the same manufacturer.

Missouri Equipment Company, Commercial Stainless and IMC Teddy, will be accepted as an equal manufacturer provided the provided the product conforms to the dimensions, construction, design,

capacity, and function of the basis of design.

**ITEM 30 - DISPOSER (1 REQ'D)**

**InSinkErator**

**Model SS-200-5-CC101**

SS-200™ Complete Disposer Package, sink mount system, with #5 adaptor for 3.5" to 4" sink opening, 2 HP motor, stainless steel construction, includes syphon breaker, solenoid valve, flow control valve, programmable CC-101 control center, auto reversing, timed run, post flush, adjustable leg kit

- 1 ea. (1) year parts & labor warranty from date of installation (standard)
- 1 ea. Standard height disposer body
- 1 ea. 208v/60/3-ph, 3.6 amps
- 1 ea. Model SYPHON STD Syphon breaker standard, 1/2" (11477)

SALVAJOR and MASTER DISPOSER will be accepted as equal manufacturers provided the product conforms to the dimensions, construction, design, capacity, and function of the basis of design.

**ITEM 31 -SINK, (2) TWO COMPARTMENT (1 REQ'D)**

**LTI INC**

**Model: Custom**

Refer to Drawings for sizes, Top - 14 ga. Stainless Steel, Pitched Marine Edge, Backsplash, Sound Deadening Spray On & Paint, Pitched Marine Corner Turn, Galv. Underbracing, 1-5/8 Inch Stainless Steel Leg and Gusset on Galv. Channel, Adjustable S/S Bullet Feet, 18 Gauge Fixed Undershelf, (2) - 20 x 20 Utility Drawer With S/S Liner, Drawer Locks, 20" x 20" x 7" Deep Integrally Welded Sink, 20" x 20" x 12" Deep Integrally Welded Sink, Lever waste With Overflow, , 14GA. S/S Control Bracket, 10" Shelf 16 gauge On Table Mounted Brackets, T&S Brass Model B-0133-01 Pre-Rinse Unit

All custom fabrication shall be the same manufacturer.

Missouri Equipment Company, Commercial Stainless and IMC Teddy, will be accepted as an equal manufacturer provided the provided the product conforms to the dimensions, construction, design, capacity, and function of the basis of design.

**ITEM 32 - MIXER, VERTICAL CUTTER VCM (1 REQ'D)**

Hobart Model HCM450+BUILDUP Dimensions: 62.5(h) x 36.13(w) x 21.5(d)

Hobart Cutter Mixer with 45 qt capacity stainless steel bowl, a 5 hp motor, see-through high impact plastic lid, removable mixing baffle arm includes built in scraper, tilts 90° for product removal, three modes of operation; jog, run, or timed (5 minute adjustable timer), electric interlocks prevent operation when the lid is unlatched or the bowl is tilted, strainer basket included, two agitators included, cut-mix blade has two stainless steel cutting blades for cutting & chopping, knead-mix attachment has two plastic blades & pulls, stretches, & mixes products, includes 6' power cord, UL, NSF

- 1 ea Standard warranty: 1-Year parts and labor
- 1 ea Model HCM450-61 200/60/3 Cutter Mixer; includes Cut-Mix attachment, Knead-Mix attachment, Strainer Basket, & Mixing Baffle arm

GLOBE and DOYON will be accepted as equal manufacturers provided the product conforms to the dimensions, construction, design, capacity, and function of the basis of design

**ITEM 33 - FLOOR TROUGH (1 REQ'D)**

**IMC/Teddy**

**Model FT-1224-SGAS**

FT Floor Trough, 24"W x 12"D, 4" deep receptacle, (1) 6-1/2" waste outlet with perforated waste basket & 4" OD tailpiece, includes anchor straps, 14/304 stainless steel construction, brushed satin finish, (SGAS) anti-slip subway grating, NSF, Made in USA

CUSTOM FABRICATORS will be accepted as an equal manufacturer provided the provided the product conforms to the dimensions, construction, design, capacity and function of the basis of design.

**ITEM 34 -SINK, (1) ONE COMPARTMENT (1 REQ'D)**

**LTI INC**

**Model: Custom**

Refer to Drawings for sizes, Top - 14 ga. Stainless Steel, Pitched Marine Edge, Backsplash, Sound Deadening Spray On & Paint, Pitched Marine Corner Turn, Galv. Underbracing, 1-5/8 Inch Stainless Steel Leg and Gusset on Galv. Channel, Adjustable S/S Bullet Feet, 18 Gauge Fixed Undershelf, (1) - 20 x 20 Utility Drawer With S/S Liner, Drawer Locks, 20" x 20" x 12" Deep Integrally Welded Sink, Lever waste With Overflow, 10" Shelf 16 gauge On Table Mounted Brackets, 8" o.c. Faucet hole provisions

All custom fabrication shall be the same manufacturer.

Missouri Equipment Company, Commercial Stainless and IMC Teddy, will be accepted as an equal manufacturer provided the provided the product conforms to the dimensions, construction, design, capacity, and function of the basis of design.

**ITEM 35 -FAUCET, WITH SPRAY HOSE (1 REQ'D)**

**T&S Brass**

**Model B-0175**

Spray Assembly, wall mount mixing faucet with 8" adjustable centers, EasyInstall add-on faucet, 12" swing nozzle with stream regulator outlet (062X), quarter-turn Eterna cartridges with spring checks, lever handles with color coded indexes, 90° swivel adapter arm, 104" flexible stainless-steel hose with heat-resistant gray handle & hold down ring, 1.15 GPM angled spray valve (B-0107-035), wall hook, polished chrome-plated brass faucet body, 1/2" NPT female inlets, CSA

1 kt Model B-0230-K Installation Kit, (2) 1/2" NPT nipples, lock nuts & washers, (2) short "EII" 1/2" NPT female x male

FISHER and KROWNE will be accepted as equal manufacturers provided the product conforms to the dimensions, construction, design, capacity, and function of the basis of design.

**ITEM 36 -BUN / SHEET PAN RACK (4 REQ'D)**

**Cambro**

**Model UPR1826FP20580**

Ultimate Sheet Pan Rack, 25-7/16"W x 33-3/8"L x 72-3/8"H, full size unit, 3" rail spacing, molded positioning ribs, (20) full-size Camtray® (1826) or (40) half-size Camtray® (1318) capacity, temperature range -36°F (-38°C) to 190°F (88°C), 55 lbs. per shelf/350 lbs. per rack, (4) 5" total locking non-marking thermoplastic rubber swivel casters, composite plastic, brushed graphite

2 ea. 1 yr. standard warranty

2 ea Lifetime warranty against rust and corrosion

NEWAGE AND CRESCOR will be accepted as equal manufacturers provided the product conforms to the dimensions, construction, design, capacity, and function of the basis of design.

**ITEM 37 - SPARE NO.**

**ITEM 38 -FOOD SLICER, ELECTRIC (1 REQ'D)**

Hobart Model HS7-1 Dimensions: 27.25(h) x 24.63(w) x 30.31(d)

Heavy Duty Meat Slicer, automatic, 13" CleanCut™ removable knife with removal tool, burnished finish, (3) stroke lengths, & (4) stroke speeds, removable meat grip assembly, removable ring guard cover, single action top mounted sharpener with Borazon™ stones, manual lift lever, 1/2 hp motor, 5.6amps, 120v/60hz/1-ph, NSF cETLus

1 ea Standard warranty - 1-Year parts, labor & travel time during normal working hours within the USA

1 ea Model HS-CHUTE Food chute for HS series slicers

GLOBE and BIZERBA will be accepted as equal manufacturers provided the product conforms to the dimensions, construction, design, capacity, and function of the basis of design.

**ITEM 39 - PLASTIC SHELVING UNIT (1 LOT REQ'D)**

**Cambro**

**Model ESU24XX72V4580**

Camshelving® Elements Stationary Starter Unit, 24"W x L x 72"H, 4-tier, withstands temperature from -36°F (-38°C) to 190°F (88°C), includes: (4) vented reinforced polypropylene shelf plates with Camguard® antimicrobial protection, (4) composite posts with leveling feet installed, pre-assembled post connectors & wedges, (8) stationary traverses & (4) bags of 8 count dovetails (16 each A & B), 800 lbs. capacity per shelf /2,000 lbs. max capacity, brushed graphite, NSF

All shelving to be by same manufacture.

METRO and QUANTUM will be accepted as equal manufacturers provided the product conforms to the dimensions, construction, design, capacity, and function of the basis of design

**ITEM 40 -DUNNAGE RACK (1 LOT REQ'D)**

**Cambro Model DRSXXX480**

S-Series Dunnage Rack, slotted top, 3000 lb. load capacity, 21"D x W x 12"H, polypropylene, one-piece, seamless double wall construction, includes (1) Camlink®, 4" square legs, speckled gray, NSF

All shelving to be by same manufacture.

METRO and QUANTUM will be accepted as equal manufacturers provided the product conforms to the dimensions, construction, design, capacity, and function of the basis of design.

**ITEM 41 -DRY STORAGE SHELVING (1 LOT REQ'D)**

**Cambro**

**Model ESU24XX72S4580**

Camshelving® Elements Stationary Starter Unit, 24"W x "L x 72"H, 4-tier, withstands temperature from -36°F (-38°C) to 190°F (88°C), includes: (4) solid reinforced polypropylene shelf plates with Camguard® antimicrobial protection, (4) composite posts with leveling feet installed, pre-assembled post connectors & wedges, (8) stationary traverses & (4) bags of 8 count dovetails (16 each A & B), 800 lbs. capacity per shelf /2,000 lbs. max capacity, brushed graphite, NSF

1 ea Model EDS24H6580 Camshelving® Elements Dunnage Support, 24"W x 6-1/2"H, recommended for units 54" or longer with weight loads over 600 lbs., brushed graphite, NSF listed components.

All shelving to be by same manufacture.

METRO and QUANTUM will be accepted as equal manufacturers provided the product conforms to the dimensions, construction, design, capacity, and function of the basis of design.

**ITEM 42 – WALK IN COOLER/FREEZER (1 REQ'D)**

**Make: Louisville Cooler Manufacturing**

**Model: Custom**

See drawings for sizes (1) Cooler/Freezer – floored combination approx. 22'- x 17'

Cooler wall panels shall be 4" thick foamed in place urethane insulation.

Freezer wall panels shall be 5" thick foamed in place urethane insulation.

Ceiling panels shall be 5" thick.

Interior walls and ceilings shall be 24ga Embossed white Galvalume, Unexposed front exterior shall be Embossed white Galvalume, both compartments shall have an integral treadplate floor, (2) 36" x 80" hinged walk-in doors, Doors equipped with three self-closing hinges, latch and door closer.

Exterior door fronts and interior door pans shall be equipped with 34" high aluminum tread plate Kick-plates. Doors equipped with Chrome latch and safety inside releases. Two digital

thermometers. (2) 14"x14" view windows in doors-Heated for Freeze, (1) Pressure relief

ports(heated), (2) Bi-parting swing vinyl strip curtains, 48" Led Lights, 2" vinyl bumper guards with end caps spanning full length of exposed front, removable closer trim seals building

White Embossed Steel flashing and trim for exposed Exterior,

Refrigeration as follows:

Freezer:

Electric Defrost with QRC controls Freezer coil. (with EC motors) and Scroll Climate Control condensing units 448A refrigerant

Units complete with Liquid line Solenoid valves, Liquid line filters, Driers, and Reverse Acting Pressure Controls. Fused disconnect is NOT included. Five (5) year warranty on motor compressor.

Cooler:

air defrosts cooler coils with QRC controls (with EC motors) One Scroll Climate Control condensing units.

THERMAL KOOL and BALLY will be accepted as equal manufacturers provided the product conforms to the dimensions, construction, design, capacity and function of the basis of design.

**END OF SPECIFICATION**



600 South Court, Suite 200  
Lexington, KY 40505  
Phone: (606) 252-9024  
Fax: (606) 252-1200  
**POAGE**  
ENGINEERS  
& ASSOCIATES

LEGRANDE ELEMENTARY SCHOOL  
ADDITION AND RENOVATION  
BG # 23-277  
HART COUNTY BOARD OF EDUCATION  
HORSE CAYE, KY

STRUCTURAL NOTES

JOB NO.	23082
DATE	08.03.2023
DRAWN	HMM
CHECKED	BDS

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ARCHITECTS, PLLC

REVISIONS		
No.	Description	Date
1	ADDENDUM 1	08.18.23

SHEET

S0.1

CONCRETE MASONRY

1. Steel Shapes
2. Mortar: Walls below grade Type M  
Bearing Walls Type M or S
3. Coarse Grout: 3,000 psi. min. compressive strength conforming to ASTM C476.
  - 3.1 Grout solid bond beams, reinforced CMU cores, and CMU cores and wall cavities below grade.
  - 3.2 Masonry webs on each side of grouted cells shall be fully mortared.
4. Horizontal Joint Reinforcement: Two (2) No. 9 gage longitudinal wires at 16" vertically U.N.O. Provide accessories for corners, intersections, etc.
5. Provide open bottom beam block units with 3" deep minimum web openings at horizontal reinforcement locations. A minimum clear space of one bar diameter shall be provided between the reinforcing bars and the face of masonry units.
6. CMU has been designed assuming "running bond" placement. Do not use "stack bond" unless approved by Structural Engineer.
7. Submit written construction procedures prior to the start of masonry construction.
8. No chases, risers, conduits, or tooling of masonry shall occur in masonry walls within 18 inches of beam bearing centerline.
9. Lap splices in reinforcing to be 48 bar diameters.
10. In addition to spacing indicated on plans, provide vertical bars at all corners, ends, jams, intersections and both sides of control joints.
11. Extend all vertical reinforcement thru or into bond beams.
12. Provide dowels from supporting member (flooring, beam, or slab) for all reinforced walls same size, location and spacing as wall reinforcing.
13. Vertical reinforcement shall be centered in cells of masonry unit, unless otherwise noted.
14. Bar positioners shall be used to hold vertical and bond beam reinforcement in proper alignment.
15. Vertical bars shall be held in position at top and bottom and at intervals not exceeding 200 bars diameters or 8 feet.
16. Grouting of masonry lintels over openings shall be accomplished in one continuous operation.
17. Grouting shall be stopped 1 1/2" below the top of a course to form a key at the pour joint.
  - A. At structurally reinforced walls provide cleanout holes at each structural vertical reinforcing bar.
  - B. Cleanout closures shall be braced to resist grout pressures.
20. See architectural drawings for locations of vertical control joints.
21. At vertical control joints, bond beam reinforcement and joint reinforcement shall be discontinuous. Provide two 3/4" diameter smooth dowels by 1'-4" across each control joint. Grease one end.
22. Special Inspections are required for the masonry construction on this project. The inspections include but are not limited to continuous inspections during the grouting process. Refer to Chapter 17 of the Kentucky Building Code, current edition, for specific requirements.

STRUCTURAL STEEL

1. Steel Shapes
  - 1.1 W-Shapes: ASTM A992 (Grade 50)
  - 1.2 Angles, Channels, Plates, UNO: ASTM A36
  - 1.3 Square/Rectangular/Round Hollow Structural Sections (HSS): ASTM A500, Grade B
  - 1.4 Structural steel exposed to weather shall be galvanized.
2. Anchor Rods, Bolts, and Studs
  - 2.1 Anchor Rods: ASTM F1554, Grade 36. Headed Rods or threaded rods with plate washer and heavy hex nut.
  - 2.2 All bolts for structural steel joint fasteners shall be 3/4"Ø high strength structural bolts, ASTM A325, Torque Control (Tension Set), unless otherwise noted.
3. Post-Installed Anchors: The procedure listed below are the design basis for these project. Installation of expansion anchors shall be in accordance with the ICC ES report and manufacturer's instructions for the particular anchor.
  - 3.1 Expansion Anchors: Hilli Kwik Bolt TZ (ICC-ES ESR-1917), Simpson Strong-Tie Bolt 2 (ICC-ES ESR-3037), or Power-Struts SD2 (ICC-ES ESR-2502). Minimum embedment = 6 times anchor diameter, UNO.
  - 3.2 Adhesive Anchors
    - 3.2.1 All-thread steel anchor conforming to ASTM A307, Grade A or ASTM A36, zinc plated in accordance with ASTM B633.
    - 3.2.2 Adhesive conforming to Hilli HiR 500 SD (ICC-ES AC308), Simpson SET-XP Epoxy-Tie (ICC-ES ESR-2508), or Powers PE1000+ Epoxy Adhesive (ICC-ES ESR-2583), or Powers AC100+ Gold Adhesive (ICC-ES ESR-2582). Minimum embedment = 6 times anchor diameter, UNO.
    - 3.2.3 For hollow concrete masonry, use screen tube approved by manufacturer and an adhesive conforming to Simpson Strong-Tie SET (ICC-ES ESR-1772).
    - 3.3 Screw Anchors: Simpson Titan-HD (Concrete: ICC-ES ESR-2713; Grouted Masonry: ICC-ES ESR-1056) or Powers Wedge-Bolt+ (ICC-ES ESR-2526). Minimum Embedment = 6 times anchor diameter, UNO.
    - 3.4 Substitutions will only be considered for products have a code report recognizing the product for the appropriate application. The substitution request shall be accompanied by calculations that demonstrate the substituted product is capable of achieving the equivalent performance values of the design-basis product.
4. Structural steel shall be fabricated and erected according to the "Specification for Structural Steel Buildings" dated July 7, 2016 and the AISC "Code of Standard Practice for Steel Buildings and Bridges" dated June 15, 2016.
5. Connections shall be detailed based on the design information provided in the Structural Documents
  - 5.1 Standard Shear Connections: Details as bolted or welded double-angle, sible-plate, single-angle, or tee connections in accordance with the connection tables in the "Manual of Steel Construction", Thirteenth Edition.
    - 5.1.1 Shear connections not defined in the AISC Manual shall be designed by an Engineer licensed in the project state. This design service shall be included in the Contractor's scope of services. Shop drawings of such connections shall be sealed by the Engineer.
  - 5.2 Factored Design Forces/Reactions: As shown on the Structural Drawings or, if not shown, the factored design reaction shall be half of the "Maximum Total Uniform Load (LRFD)" tabulated in the "Manual of Steel Construction", Thirteenth Edition.
  - 5.3 Steel connections not specifically detailed in the Structural Drawings shall be designed by the Contractor. This design service shall be included in the Contractor's scope of services. Shop drawings of such connections shall be sealed by an Engineer licensed in the project state.
6. Shop Drawings: Submittal shall adequately depict structural members and connections.
7. All structural steel shall be fabricated and erected in accordance with the latest OSHA regulations regarding steel erection.

**OPEN WEB STEEL JOIST**

  1. Only the standards of the Steel Joist Institute will be acceptable. The manufacturer's design and method of fabrication must have been checked by and be acceptable to the Steel Joist Institute.
  2. Joist bridging shall be the size and spacing required by the Steel Joist Institute.
  3. All open web steel joists shall be handled and erected in accordance with the Steel Joist Institute's recommendations.
  4. All open web steel joists shall be handled and erected in accordance with the latest OSHA regulations regarding steel joists erection.

CONCRETE

1. All concrete shall conform and be designed, mixed, placed, tested, and cured in accordance with the provisions of the ACI Manual of Concrete Practice, (current edition). Special care shall be taken in curing floors, stairs, walls, and other exposed surfaces in accordance with the specifications.
2. All concrete shall develop 3,500 PSI compressive strength in 28 days.
  - a. W/C ratio, 0.45 for interior slabs and 0.46 for other concrete.
  - b. Flyash substitution is only permitted in slabs with a 15% max. content. Flyash substitution is NOT permitted in foundations.
  - c. Concrete structures and slabs exposed to freeze/thaw or subject to hydraulic pressure: air content 3% to 5%.
  - d. Other concrete, air content 2% to 4%
  - e. Slump limits (without a water reducer)
    - Ramps & sloping surfaces: no more than 3"
    - Reinforced foundations not less than 1" not more than 5"
    - Other concrete not less than 1" not more than 5"
3. Dropping the concrete in excess of 10 feet, depositing in a large quantity at any point and running or working it along the forms, or any method tending to cause segregation or separation of the aggregates will not be permitted.

REINFORCEMENT STEEL

1. Reinforcement steel shall have a minimum yield strength of 60,000 PSI and conform with material specifications for reinforcing bars, ASTM A615 thru A617; see manual of standard practice, Concrete Reinforcing Steel Institute.
2. Welded wire fabric shall conform to ASTM A185.
3. All rebars shall be securely tied and held in place with a minimum concrete protection cover to all steel as follows:

Walls, Columns, Beams, and Plasters	1 1/2"
Slabs	3/4"
Footings	3"
4. Reinforcing steel bends shall be made as per diagram, and/or in accordance with A.C.I. Code.
5. Lap all splices as specifically called for, but at least 38 bar diameters for bars less than or equal to #6, and 48 bar diameters for bars greater than #6, (always 12 in. minimum) unless noted otherwise. Lap all splices in masonry reinforcement a minimum of 48 bar diameters.

SHALLOW FOUNDATIONS ON SOIL

1. Any soils can lose strength if they become wet, so the foundation sub grades must be protected from exposure to water. Foundation construction the following procedures.
  - A. For soils that will remain exposed overnight or for an extended period of time, place a "lean" concrete mud-mat over the bearing areas. The concrete should be at least 4 inches thick. Flowable fill concrete or low-strength concrete is suitable for this cover, as conditions allow.
  - B. Disturbed soil must be removed prior to foundation concrete placement.
  - C. Foundation bearing conditions must be bench level.
  - D. Areas loosened by excavation operations must be recompacted prior to reinforcing steel placement.
  - E. Loose soil, debris, and excess surface water must be removed from the bearing surface prior to concrete placement.
  - F. The Special Inspector shall observe all foundation excavations and provide recommendations for treatment of any unsuitable conditions encountered.
  - G. The bearing conditions of foundation soils (stiff or better residual soil) shall be checked by means of portable dynamic cone penetration (DCP) testing at the direction of the special inspector.

GRADE SUPPORTED FLOOR SLABS

1. The following features are required as part of grade support slab construction:
  - A. Keep the crushed stone moist, but not wet, immediately prior to slab concrete placement to minimize curling of the slab due to differential curing conditions between the top and bottom of the slab.
  - B. The Special Inspector shall review the actual subgrade conditions prior to slab construction and to make recommendations for any unsuitable conditions encountered.
  - C. Slab subgrade conditions are also considered earthwork areas; thus, the recommendations contained in the Earthwork section of the report apply.

GENERAL

1. Reference to standards or specifications of technical societies, organizations, or associations, or to codes of local/state authorities, means the latest standard, specification, or code adopted by the date shown on the Drawings, unless specifically noted otherwise.
2. Material, workmanship, and design shall conform to the referenced Building Code.
3. For dimensions not shown in the Structural Drawings, see the Architectural Drawings.
4. Contractor responsibilities include, but are not limited to, the following:
  - 4.1 Coordinate the Structural Documents with the Architectural, Mechanical, Electrical, Plumbing, and Civil Documents. Architect/Structural Engineer shall be notified of any discrepancy or omission.
  - 4.2 The structure is stable only in its completed form. Temporary supports required for stability during all intermediate stages of construction shall be designed, furnished, and installed by the Contractor.
  - 4.3 Contractor has sole responsibility for job site safety and complying with all health and safety precautions as required by any regulatory agency. In performing construction observation visits to the job site, for the Contractor's means, methods, sequences, techniques, or procedures in performing the work.
  - 4.4 Contractor shall field verify all existing conditions, elevations, and site conditions prior to construction and fabrication. Contractor shall immediately notify Structural Engineer of any existing conditions that are in conflict with the Structural Documents.

SUBMITTALS

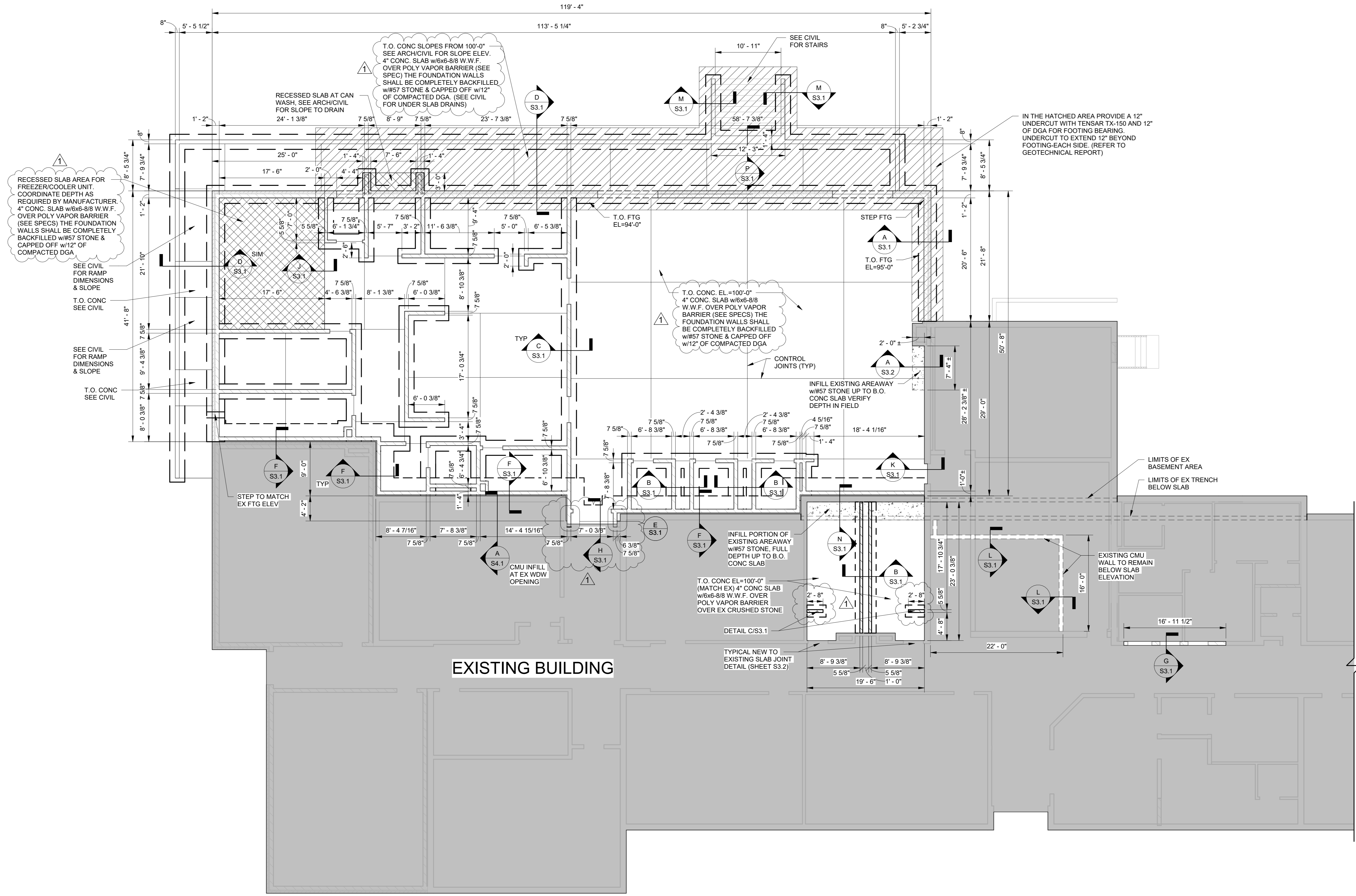
1. Shop Drawings and Submittals
  - 1.1 Reproduction of Structural Drawings for shop drawings is not permitted.
  - 1.2 Electronic drawing files will not be provided to the Contractor.
  - 1.3 Review of shop drawings will be for conformance with the Construction Documents.
2. Submittals  
Documents regarding arrangement and sizes of members and the Contractor's interpretation of the design loads, if applicable, and Construction Document details. Such review shall not relieve the Contractor of the full responsibility to comply with the Construction Documents.
  - 2.1 The Structural Quality Assurance Plan and Specifications identify the required submittals. Prior to (or with) the first submittal, Contractor shall submit a list of all required submittals for Engineer's review.
3. Deferred Submittals
  - 3.1 Deferred Submittals include those portions of the project that are furnished by the Contractor and designed by someone other than the Engineer of Record and are submitted at the time of the application. Deferred Submittals shall be submitted to the Building Official prior to fabrication and installation.
  - 3.2 Submittal documents for Deferred Submittals:
    - 3.2.1 Shall be included in the Contractor's scope of services and shall be sealed by an Engineer licensed in the project state. Design of Deferred Submittals shall be in accordance with the governing Building Code indicated above.
    - 3.2.2 Shall be submitted to the registered design professional in responsible charge who shall review them and forward them to the Building Official with a notation indicating the deferred submittal documents have been reviewed and that they have been found in general conformance with the design of the building. Deferred submittal items shall not be installed until the design and submittal documents have been approved by the Building Official.
  - 3.3 The following shall be considered Deferred Submittals:  
Precast Slab Units

NOTE TO CONTRACTOR:

The contractor shall coordinate the Structural Drawings with the Architectural, Mechanical, and Electrical Drawings and make certain all pipes, sleeves, ducts, inserts, and openings are located and in place before each concrete pour.

The Contractor shall verify all dimensions shown on the Structural Drawings with dimensions shown on the Architectural Drawings. The Contractor shall check and approve, with reasonable promptness, shop drawings and schedules for coordination of details, sizes, fitting tolerances, and dimensions. The Contractor shall stamp or sign these drawings and schedules with his approval and then submit them to the Architect for review.

No.	Description	Date
1	ADDENDUM 1	08.18.23



FOUNDATION PLAN

- NOTES:
- 1) DATUM ELEVATION = 100'-0" ASSUMED.
  - 2) FILL ALL CMU CELLS & VOIDS BELOW FINISHED FLOOR OR GRADE W/CONCRETE GROUT.
  - 3) REFER TO ARCH DWGS FOR LOCATIONS OF ALL INTERIOR NON-LOAD-BEARING WALLS NOT LOCATED ON STRUCTURAL DWGS.
  - 4) TYPICAL BRICK SEAT AT EL=100'-0" COORDINATE LOCATION OF CONTROL JOINTS W/ARCH.
  - 5) SAW CONTROL JOINTS IN THE CONCRETE SLAB IMMEDIATELY AFTER SET UP. REFER TO DWGS, BUT MAXIMUM SPACING SHALL BE 16'-0" IN EITHER DIRECTION (TYPICAL U.N.O.)
  - 6) PROVIDE THICKENED SLAB UNDER ALL WALLS WITHOUT FOOTINGS SHOWN.
  - 7) CONTRACTOR SHALL COORDINATE FLOOR DRAINS & DEPTHS W/MECH & PLUMBING. REFER TO ARCH FOR REQUIRED FLOOR SLOPE.



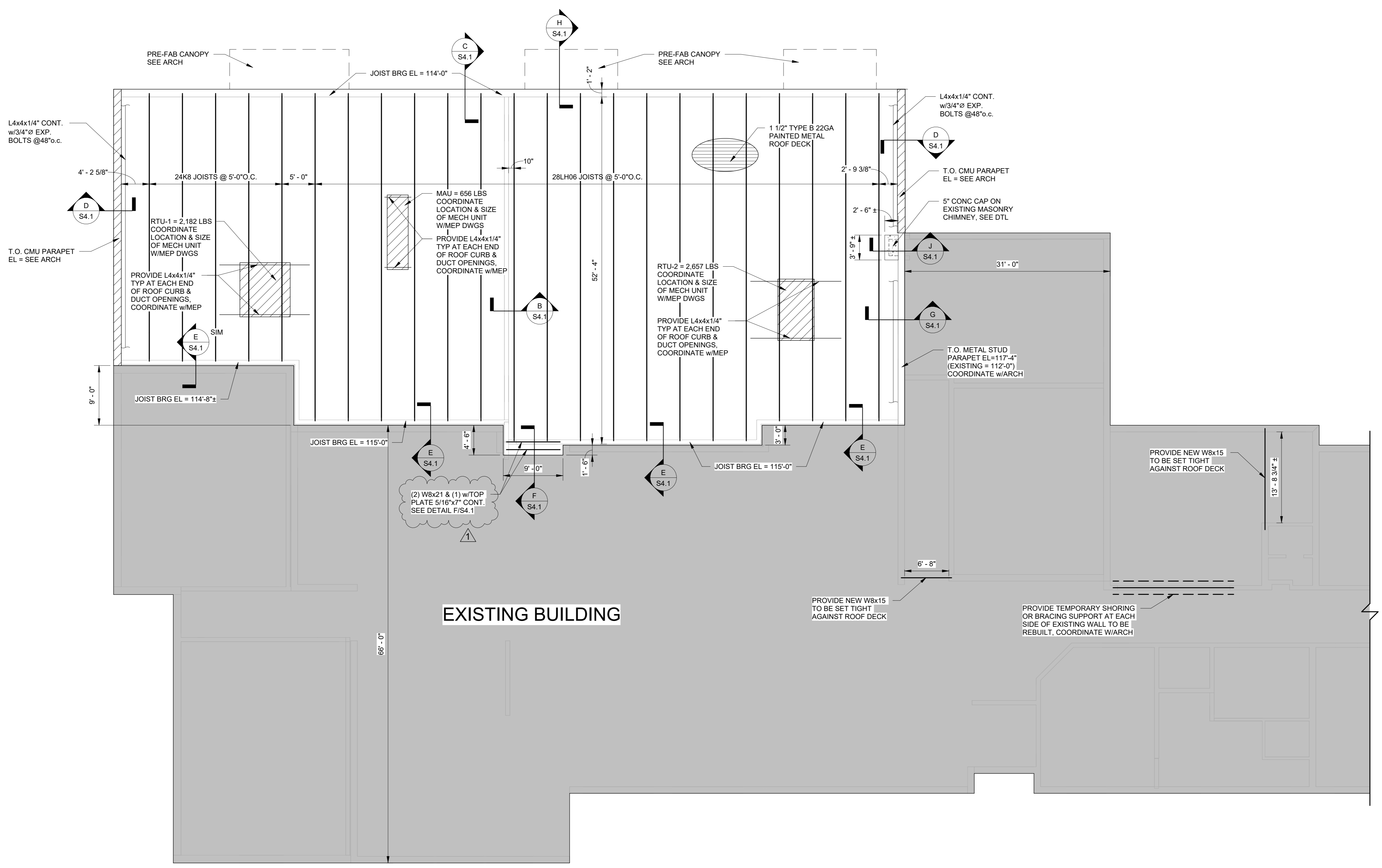


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CHECKED	BDS

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No.	Description	Date
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**ROOF FRAMING PLAN**

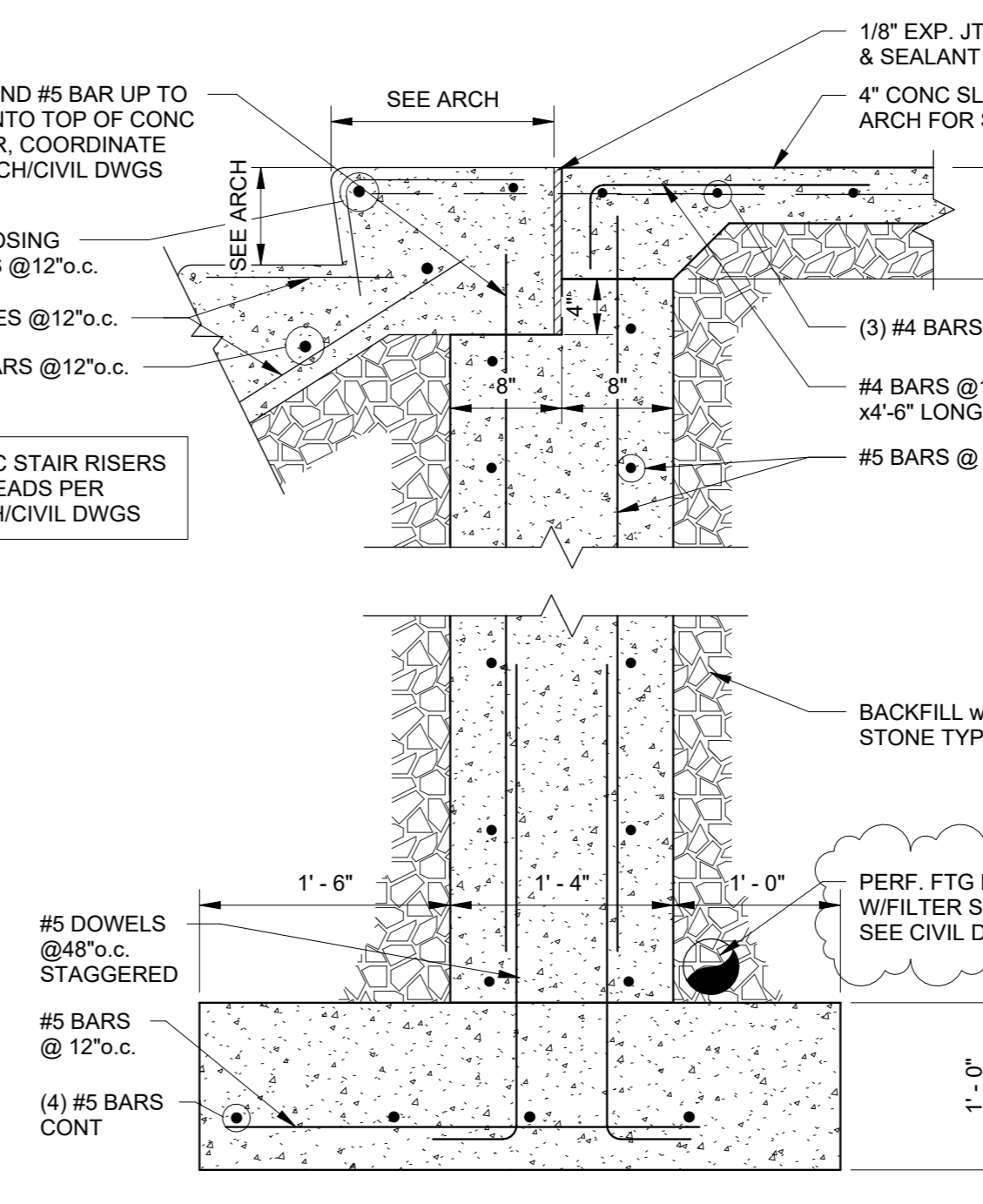
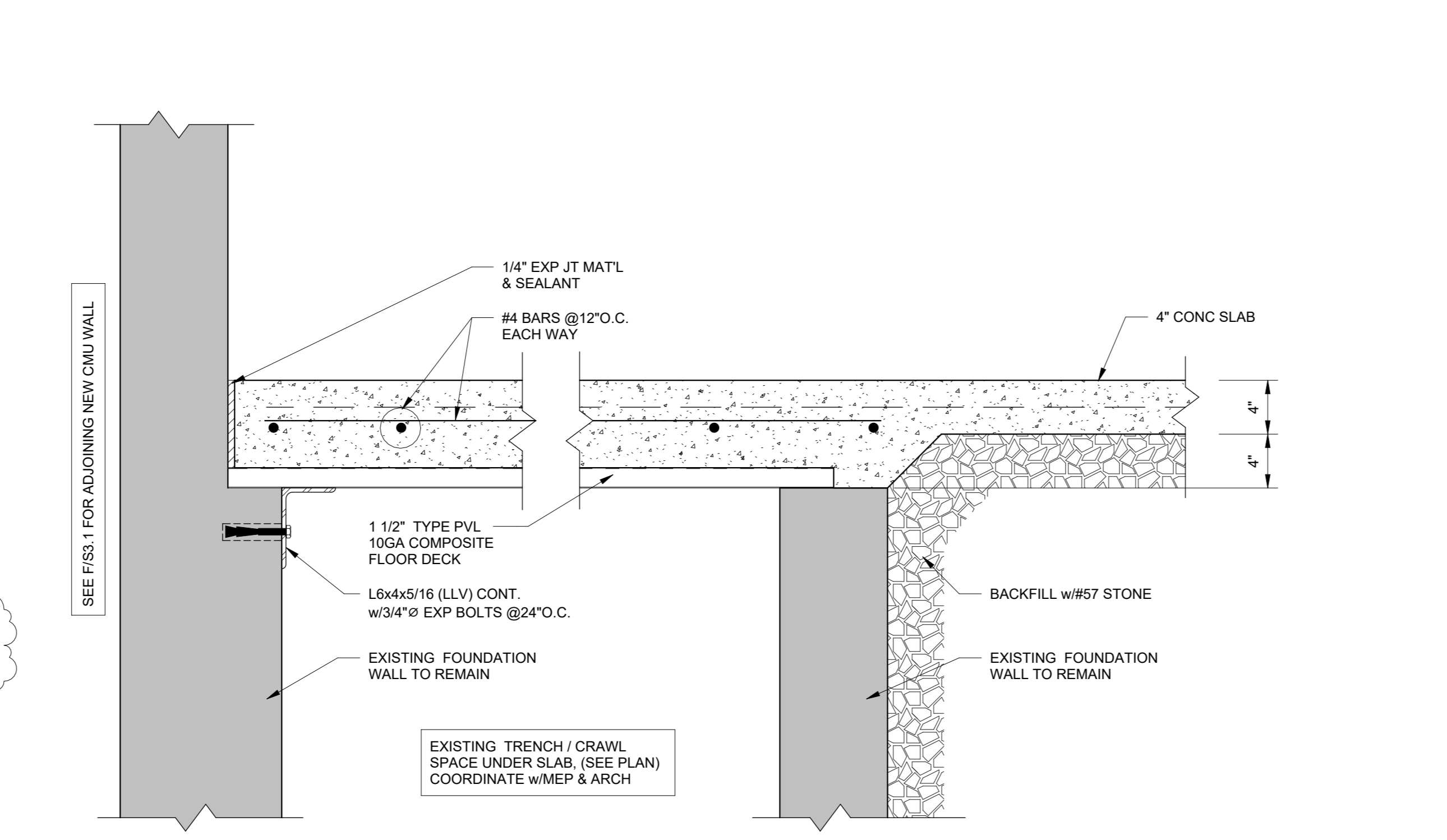
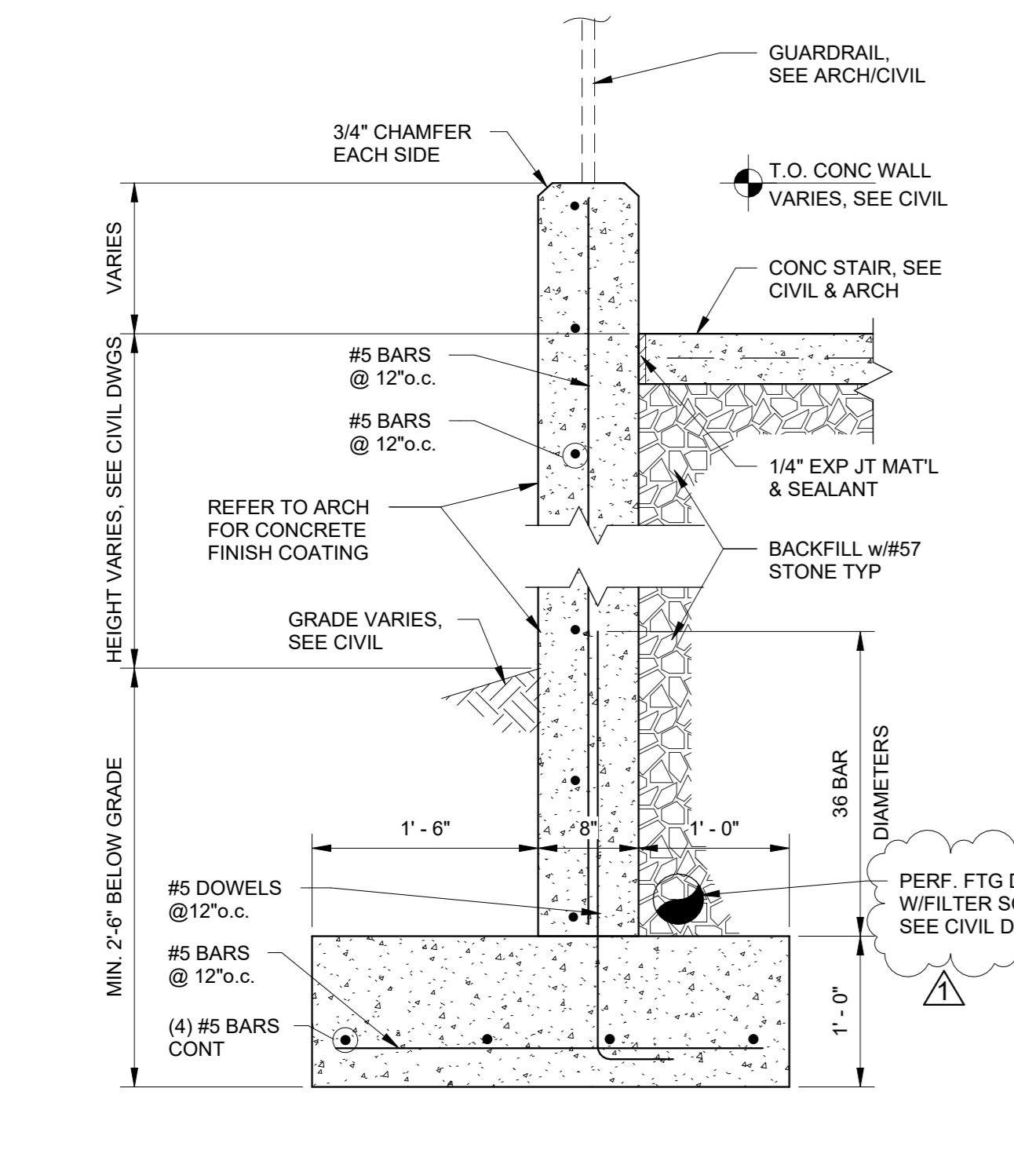
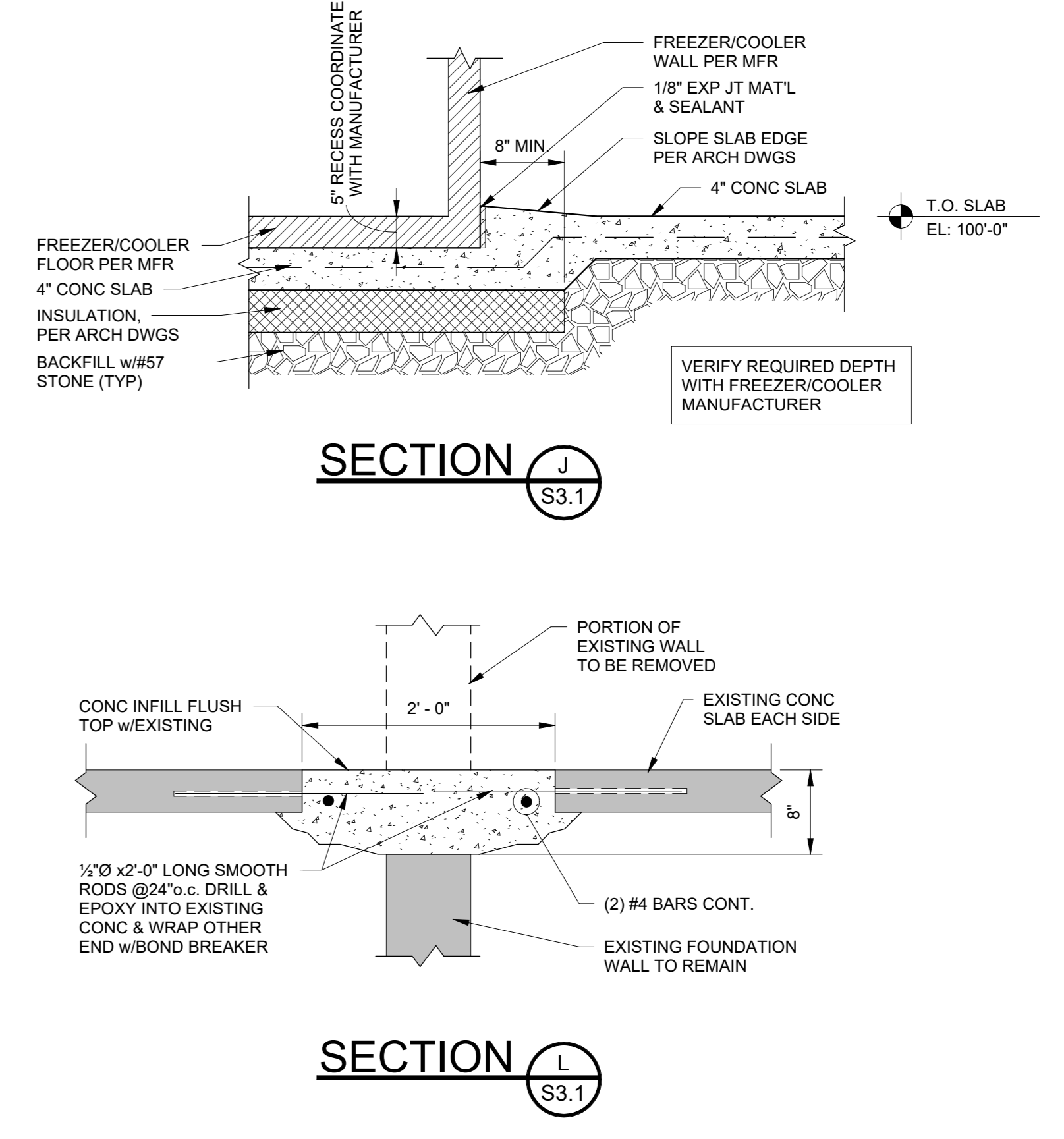
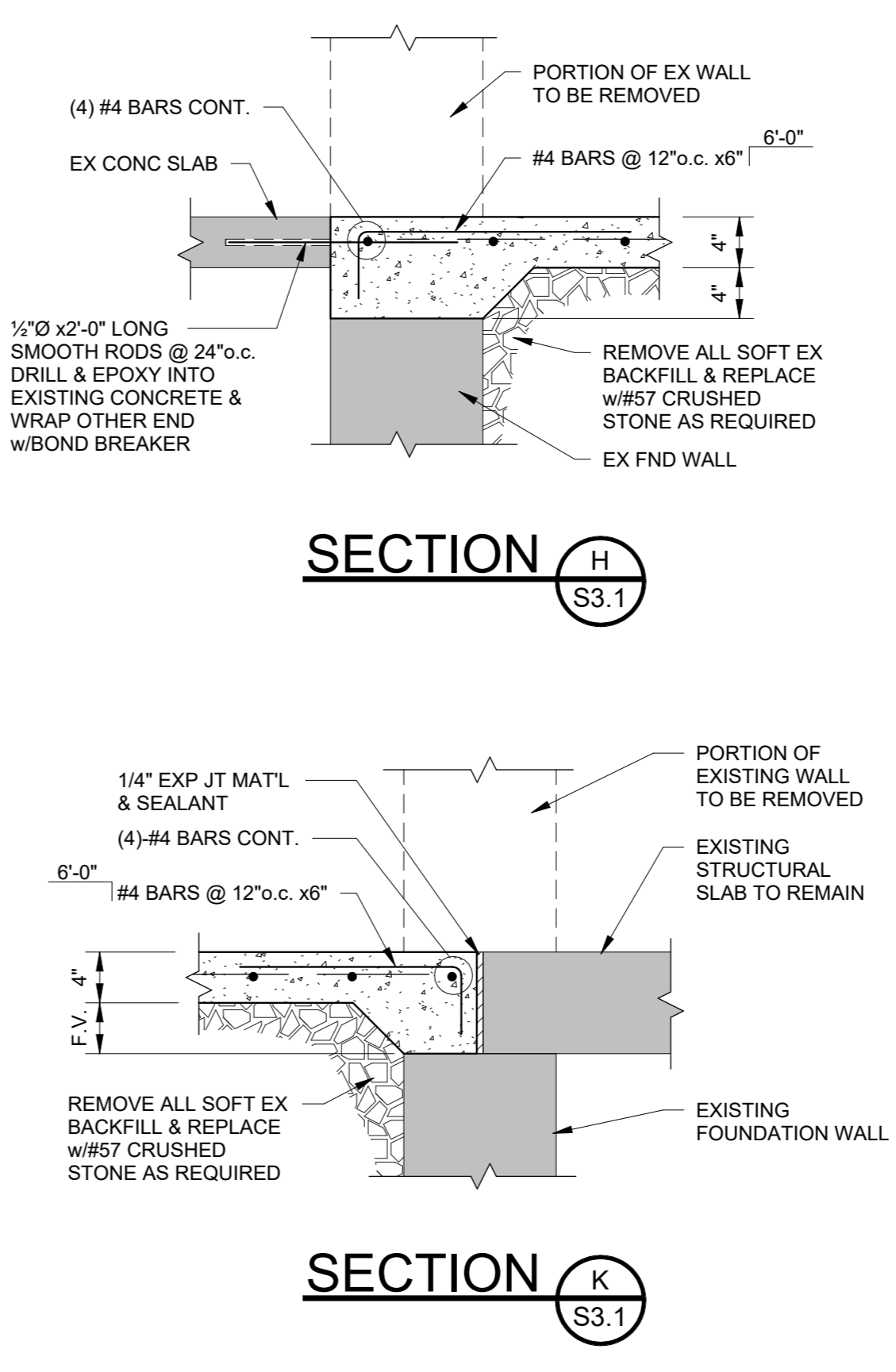
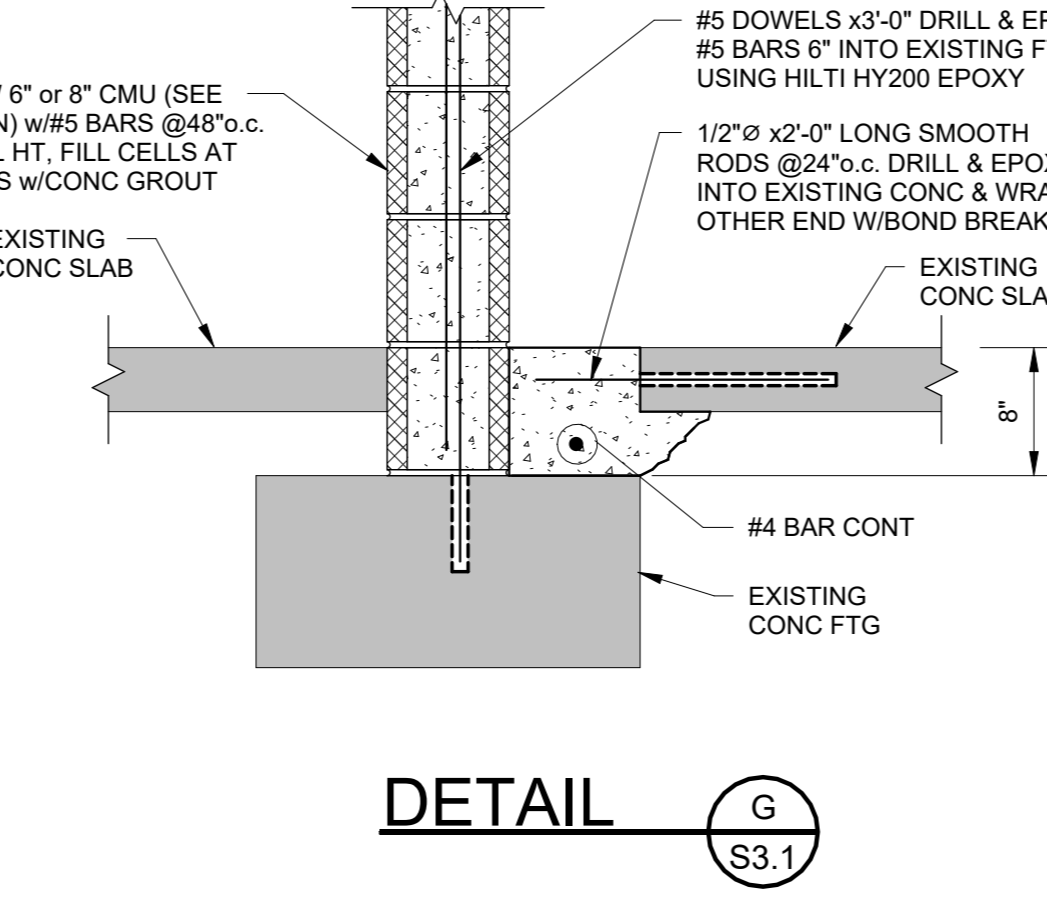
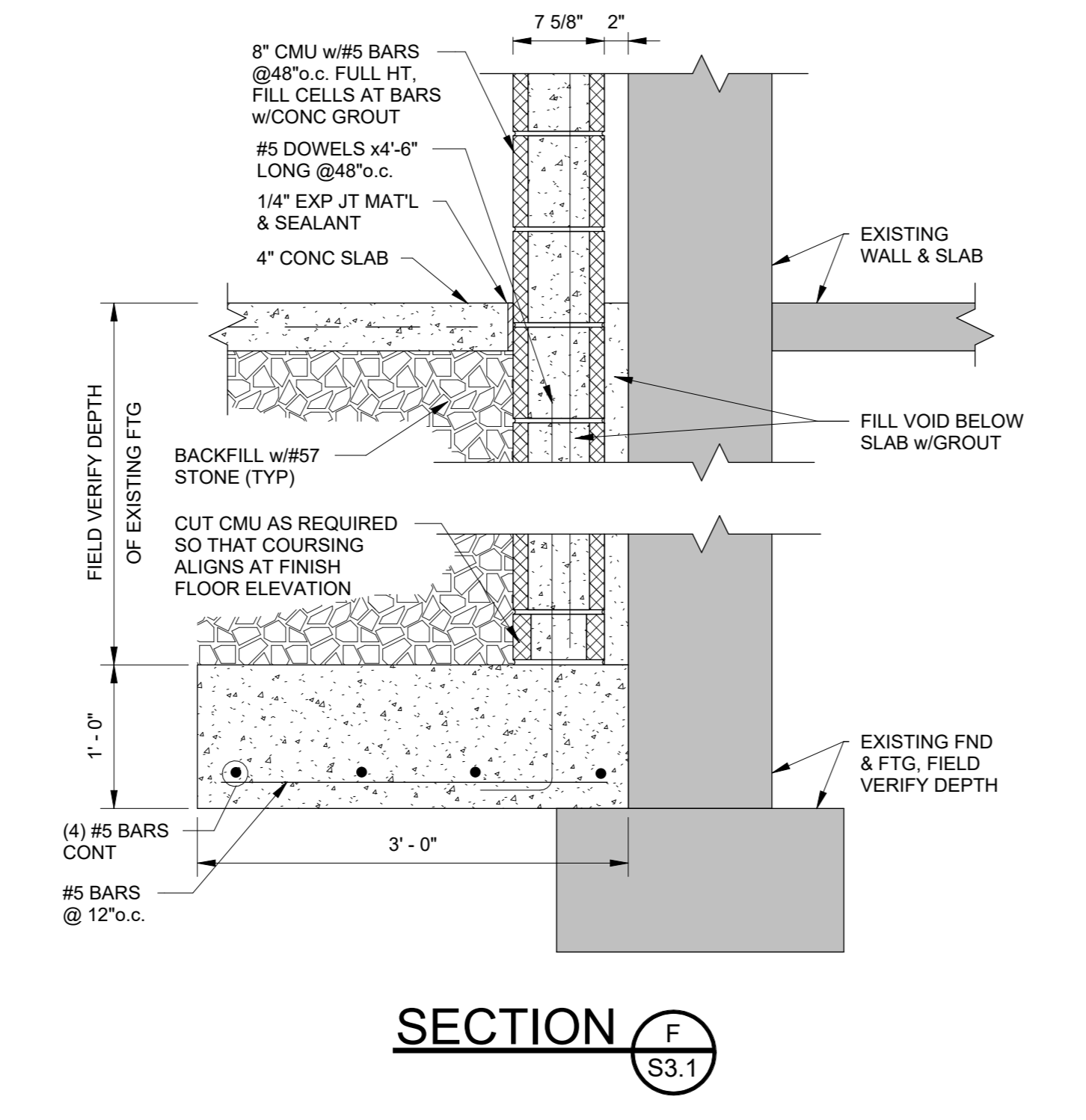
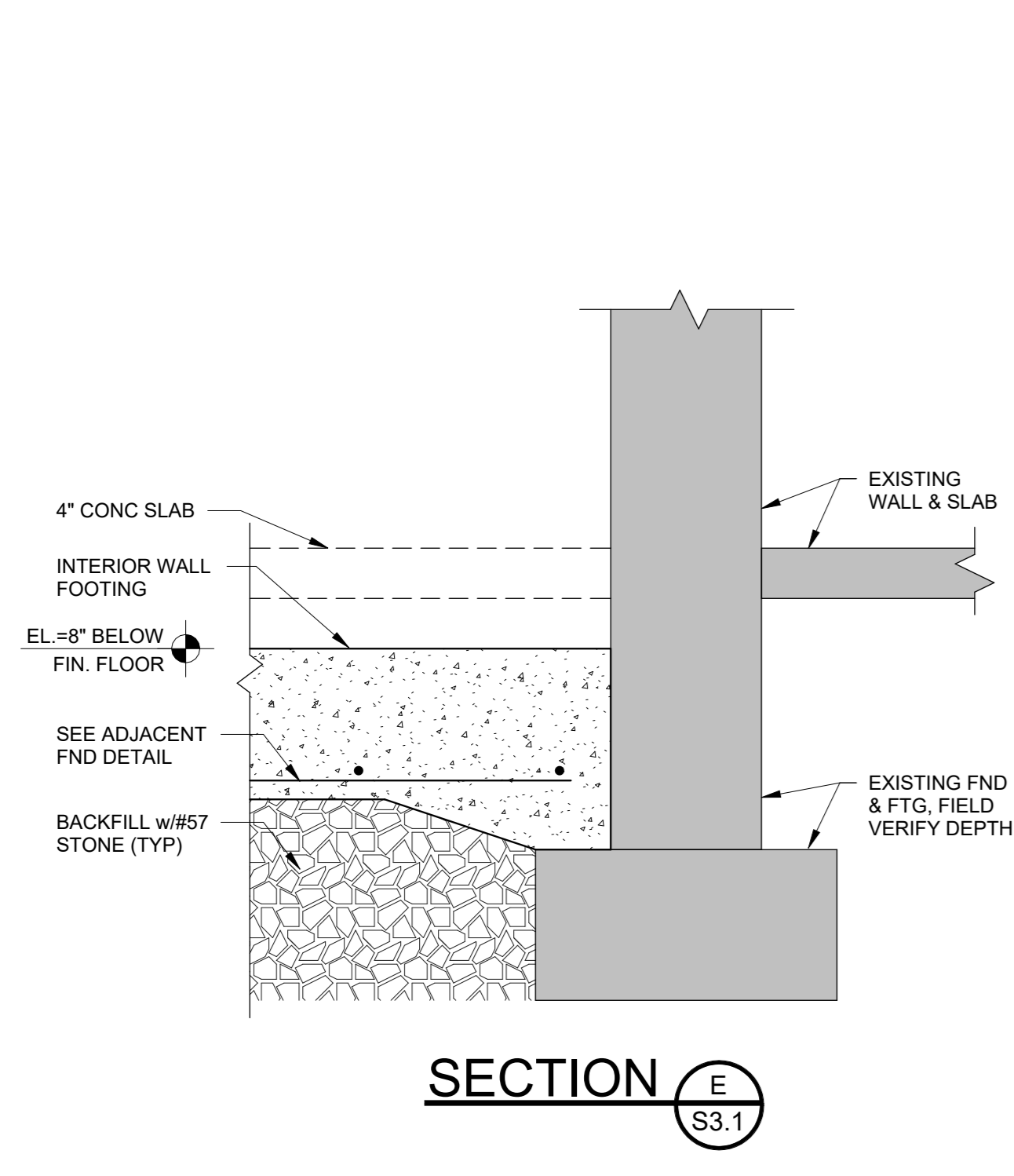
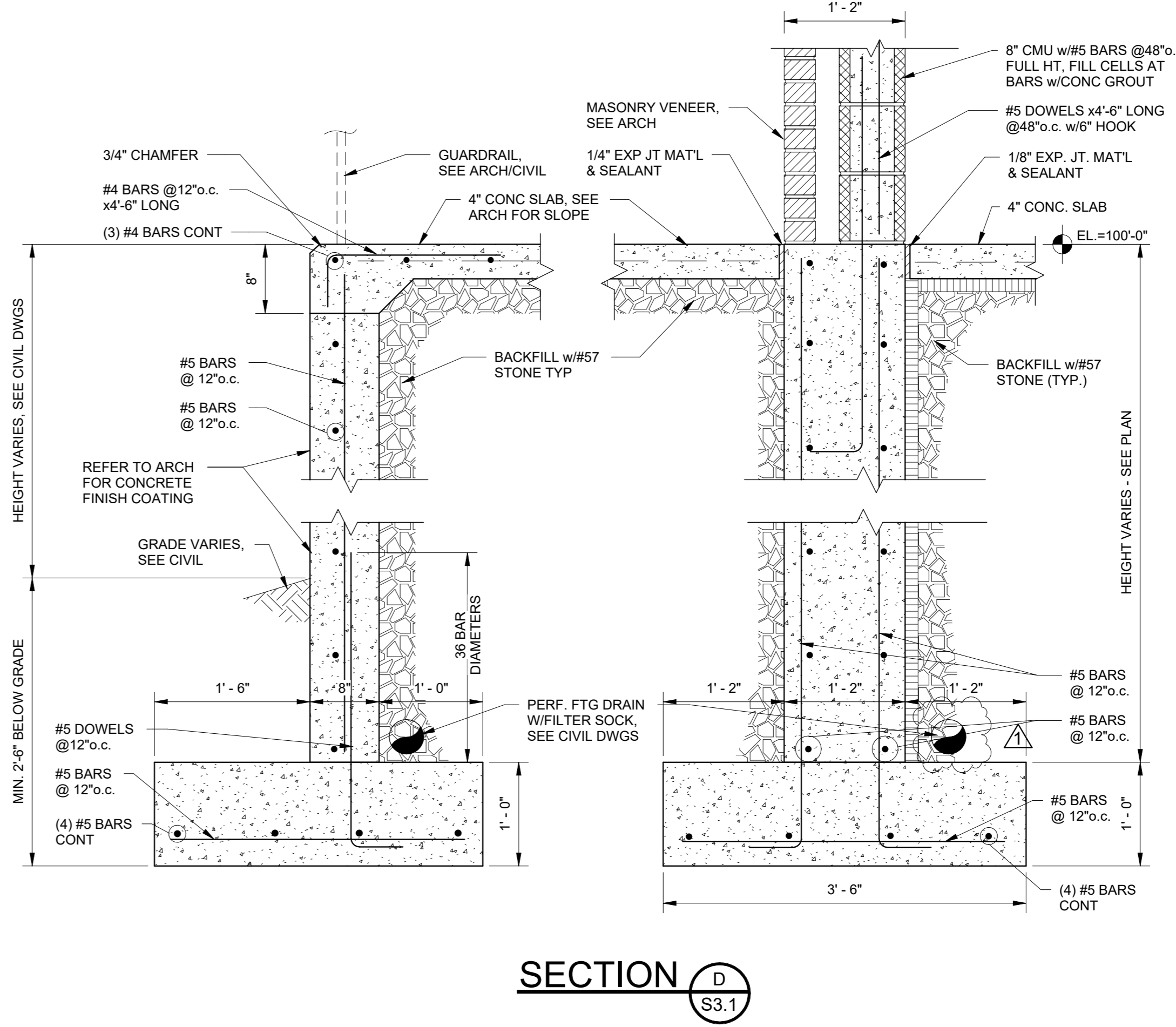
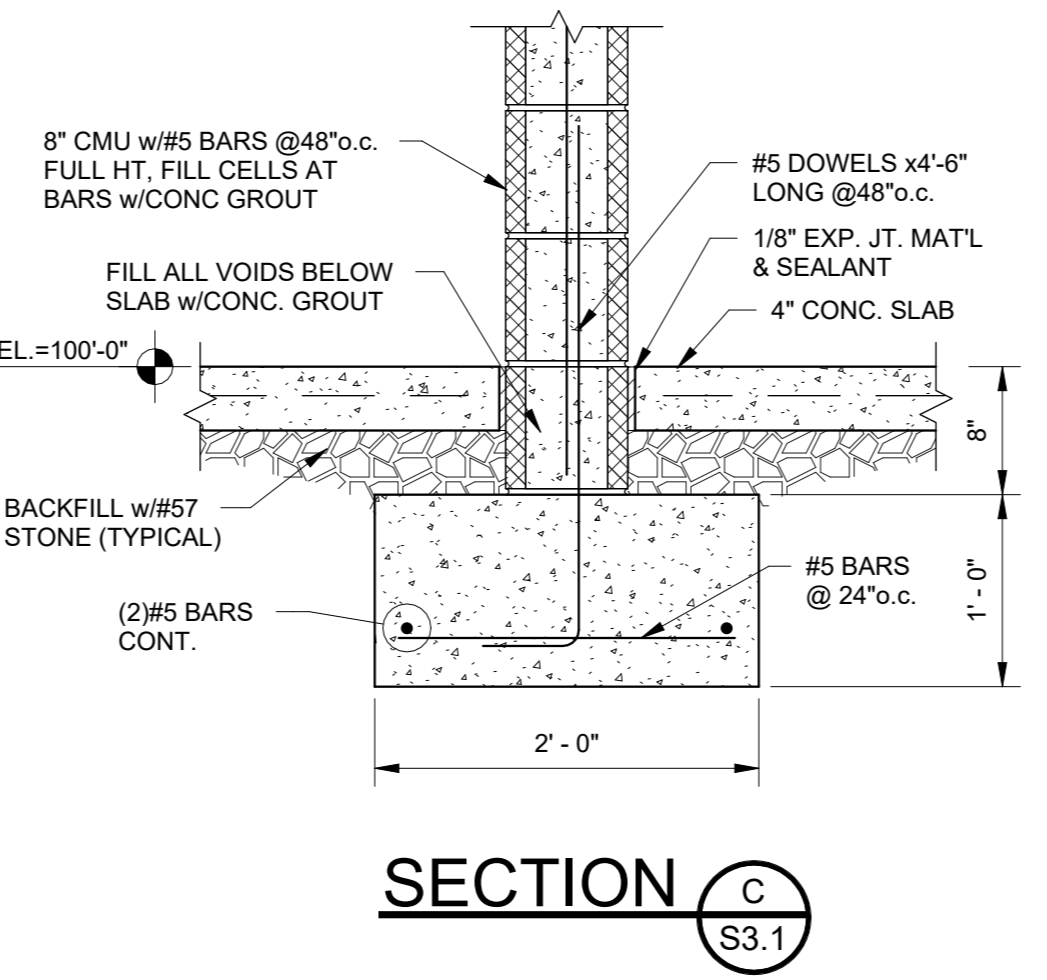
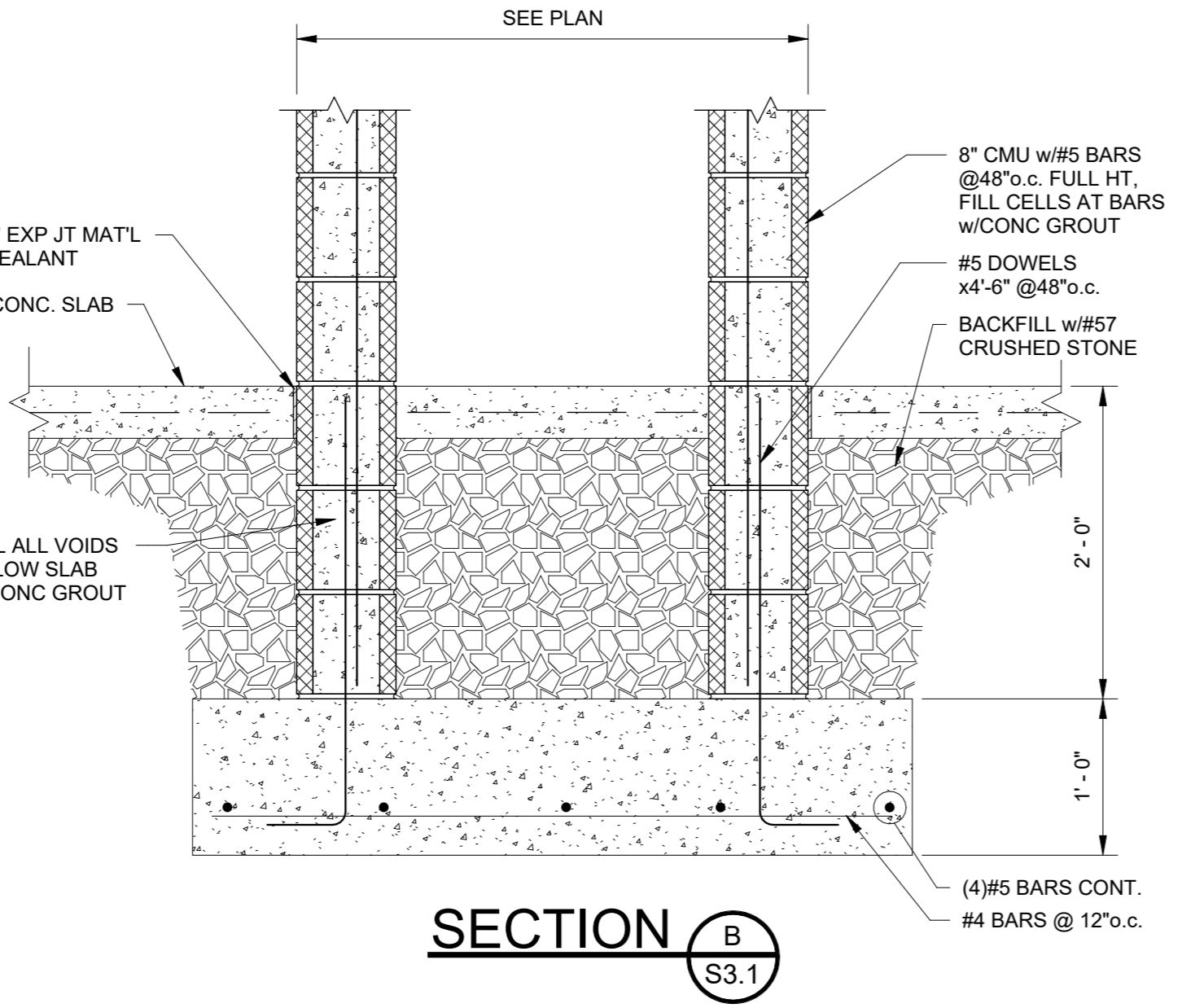
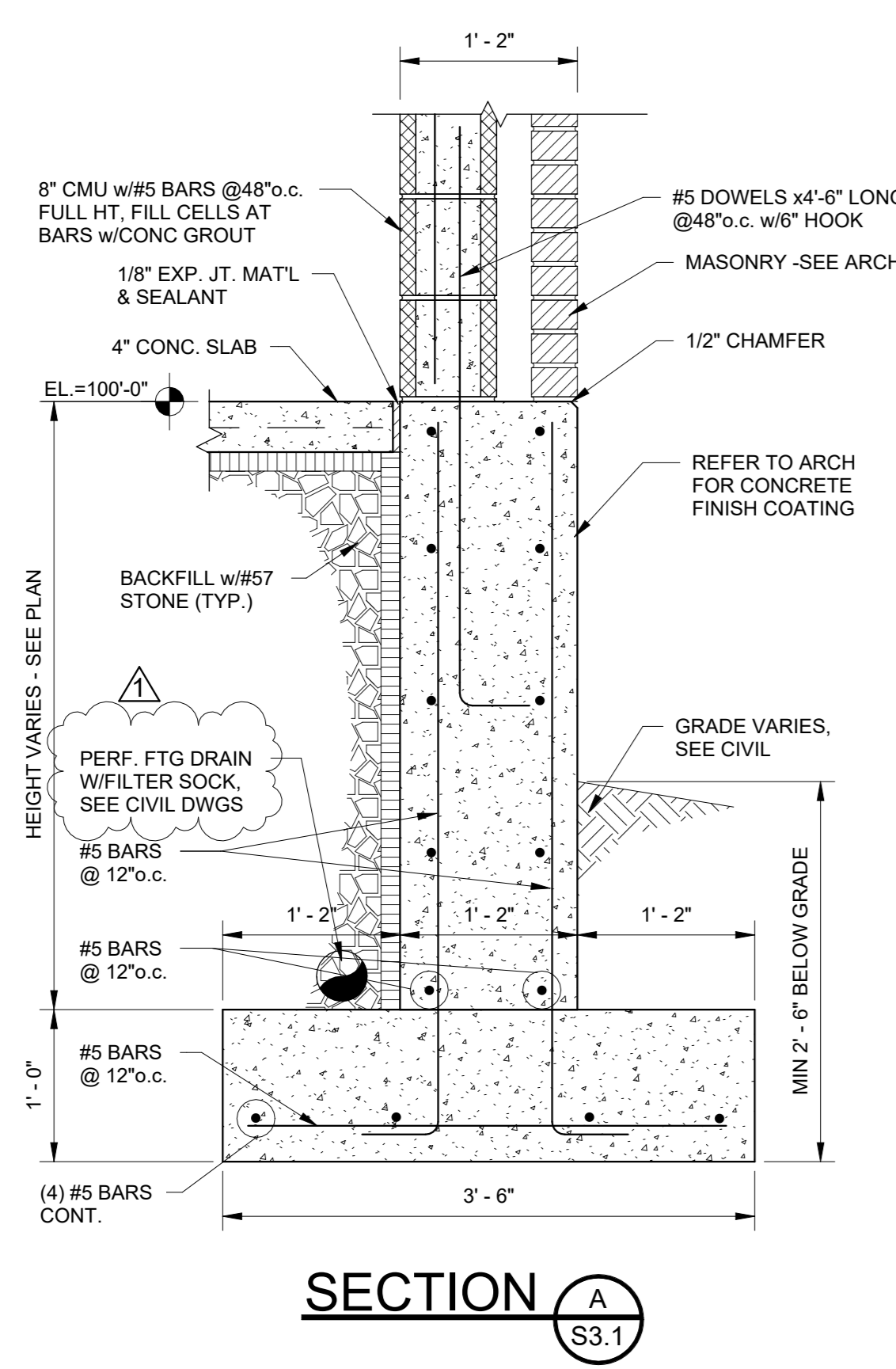
NOTES:  
1) MINIMUM JOIST SEAT IS 5" UNLESS OTHERWISE NOTED. BEARING ELEVATIONS AS NOTED ON FRAMING PLAN.  
2) ADDITIONAL ROOF SLOPE AS NEEDED AT UPPER WALL STEPS IS TO BE PROVIDED WITH INSULATION MATERIALS. COORDINATE WITH ARCHITECTURAL DRAWINGS.

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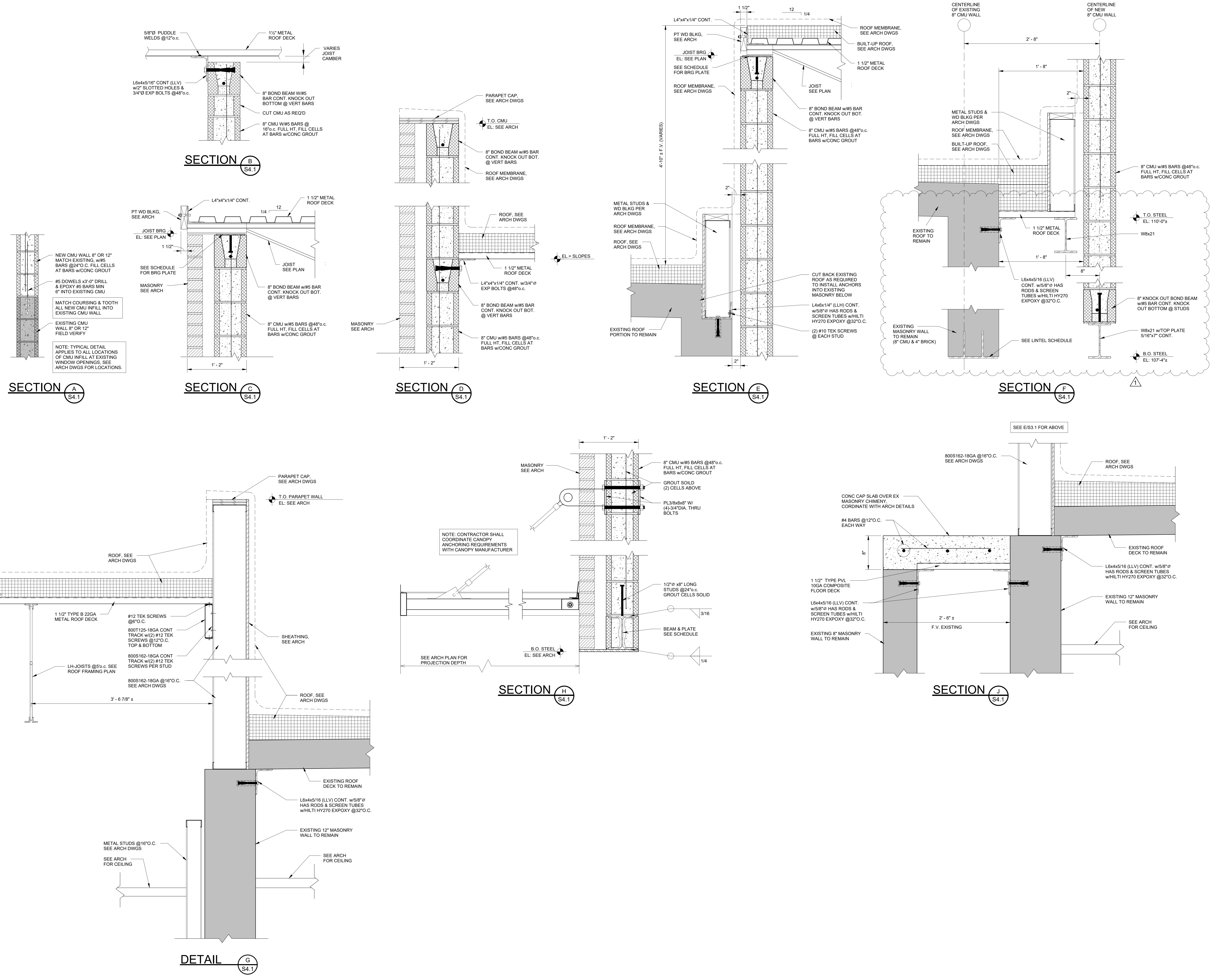
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SHEET

S4.1



SECTION B S4.1

SECTION C S4.1

SECTION D S4.1

SECTION E S4.1

SECTION F S4.1

SECTION H S4.1

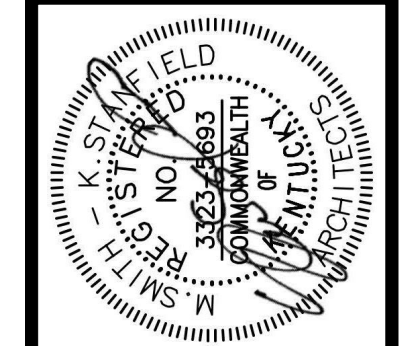
SECTION J S4.1

DETAIL C S4.1

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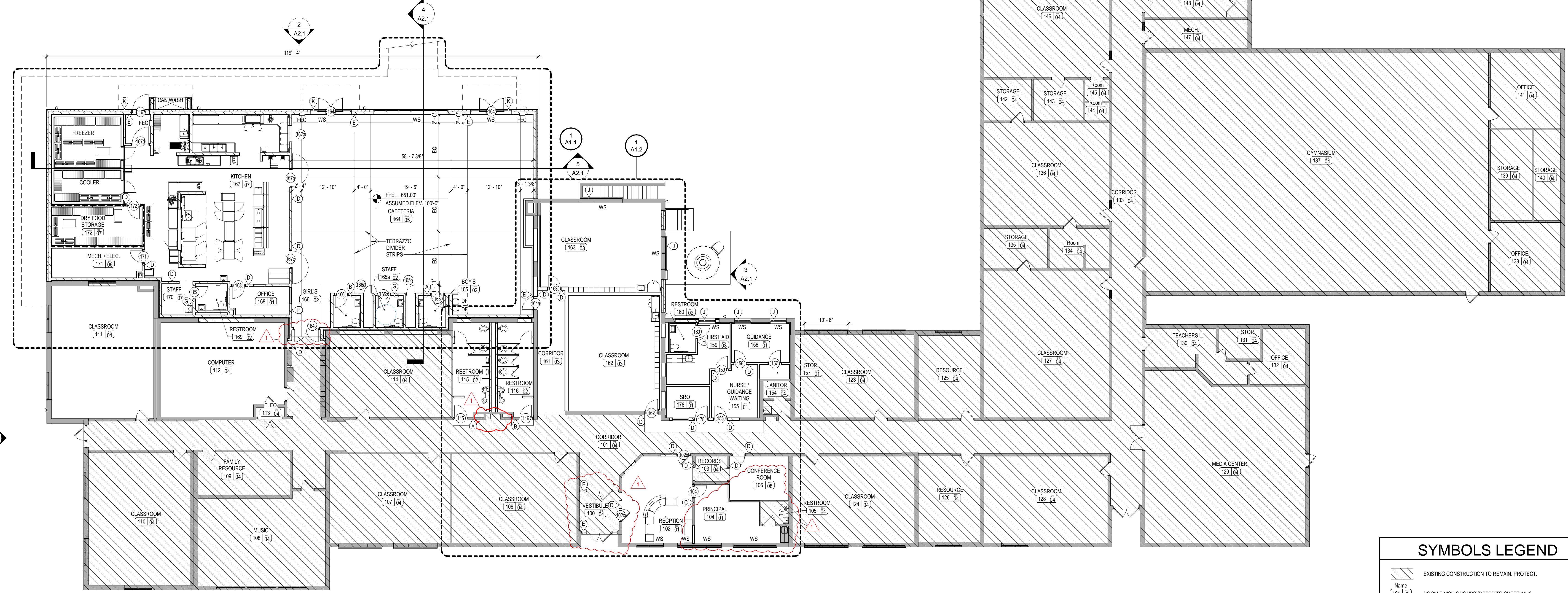


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DATE	08 / 03 / 23
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CHECKED	TSS / BKL

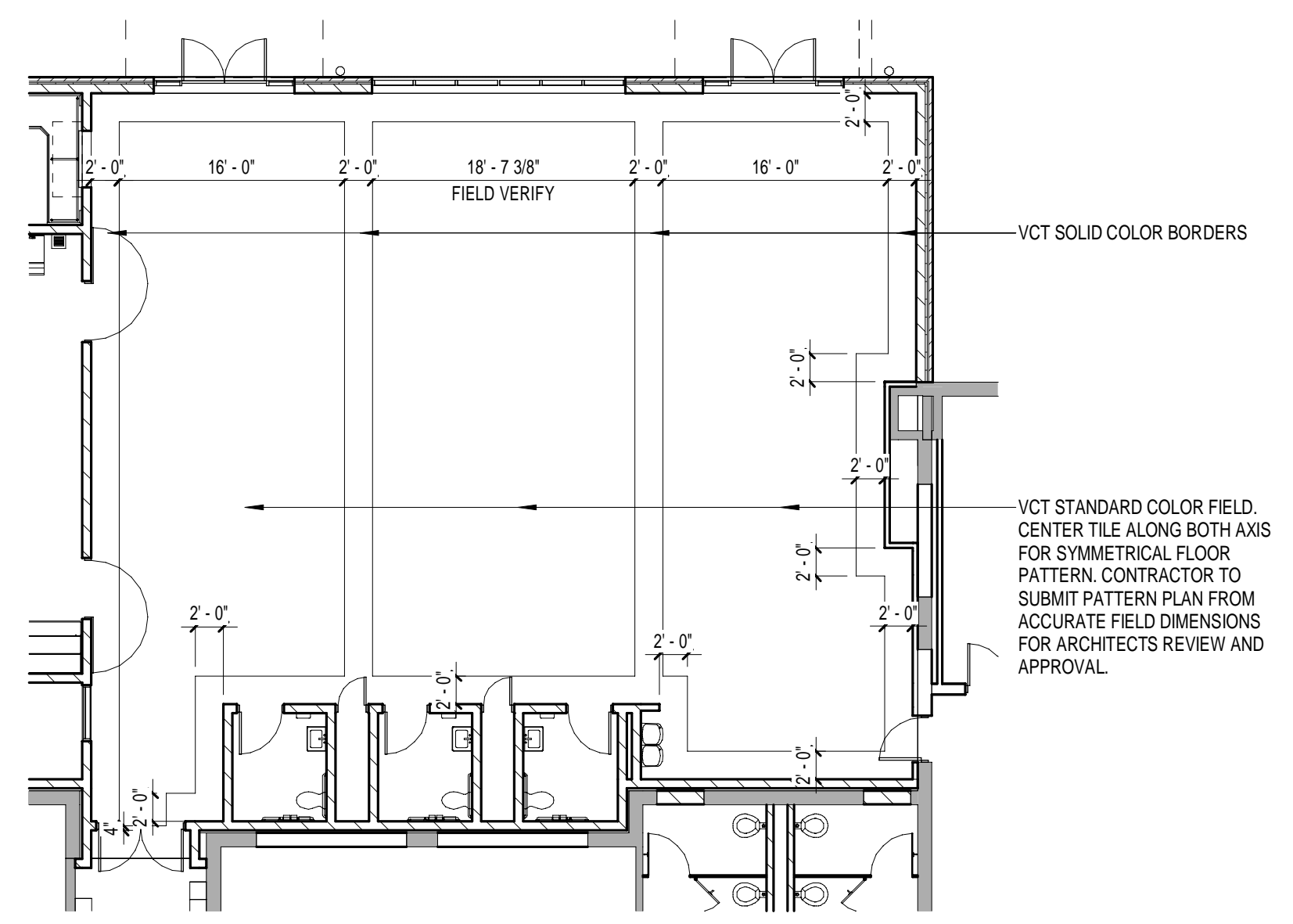
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No.	Description	Date
1	ADDENDUM #1	08-21-23

SHEET



**1 FLOOR PLAN - OVERALL**  
3/32" = 1'-0"

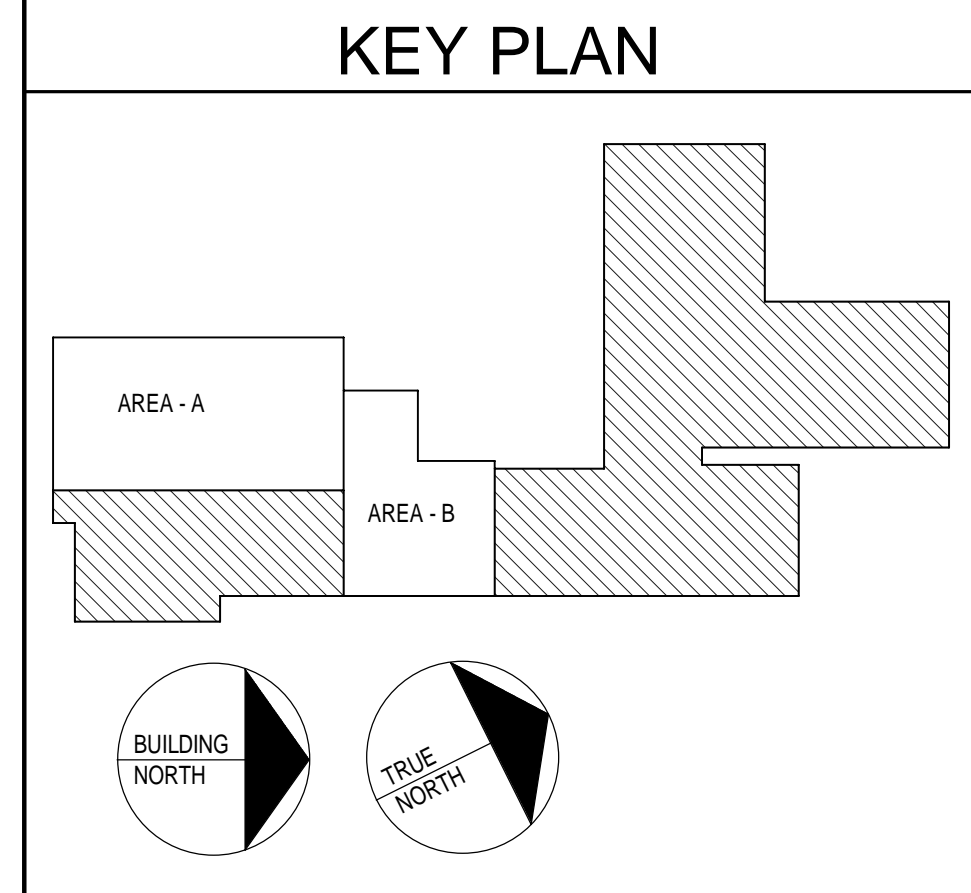


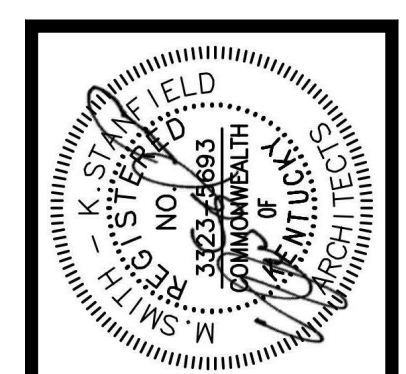
**2 ALTERNATE NO. 1 PLAN**  
3/32" = 1'-0"

NOTE: SEE PLAN THIS SHEET FOR TERRAZZO  
DIVIDER STRIPS OF TERRAZZO FLOORING  
AND BASE (BASE BID).

**SYMBOLS LEGEND**

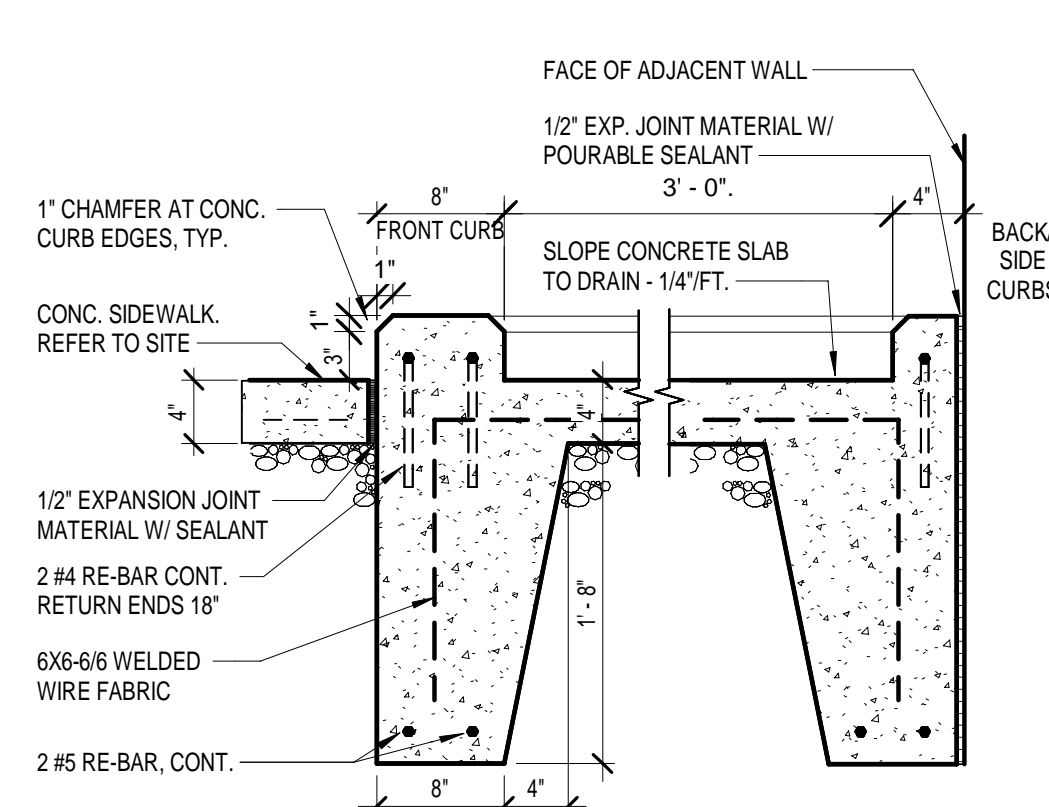
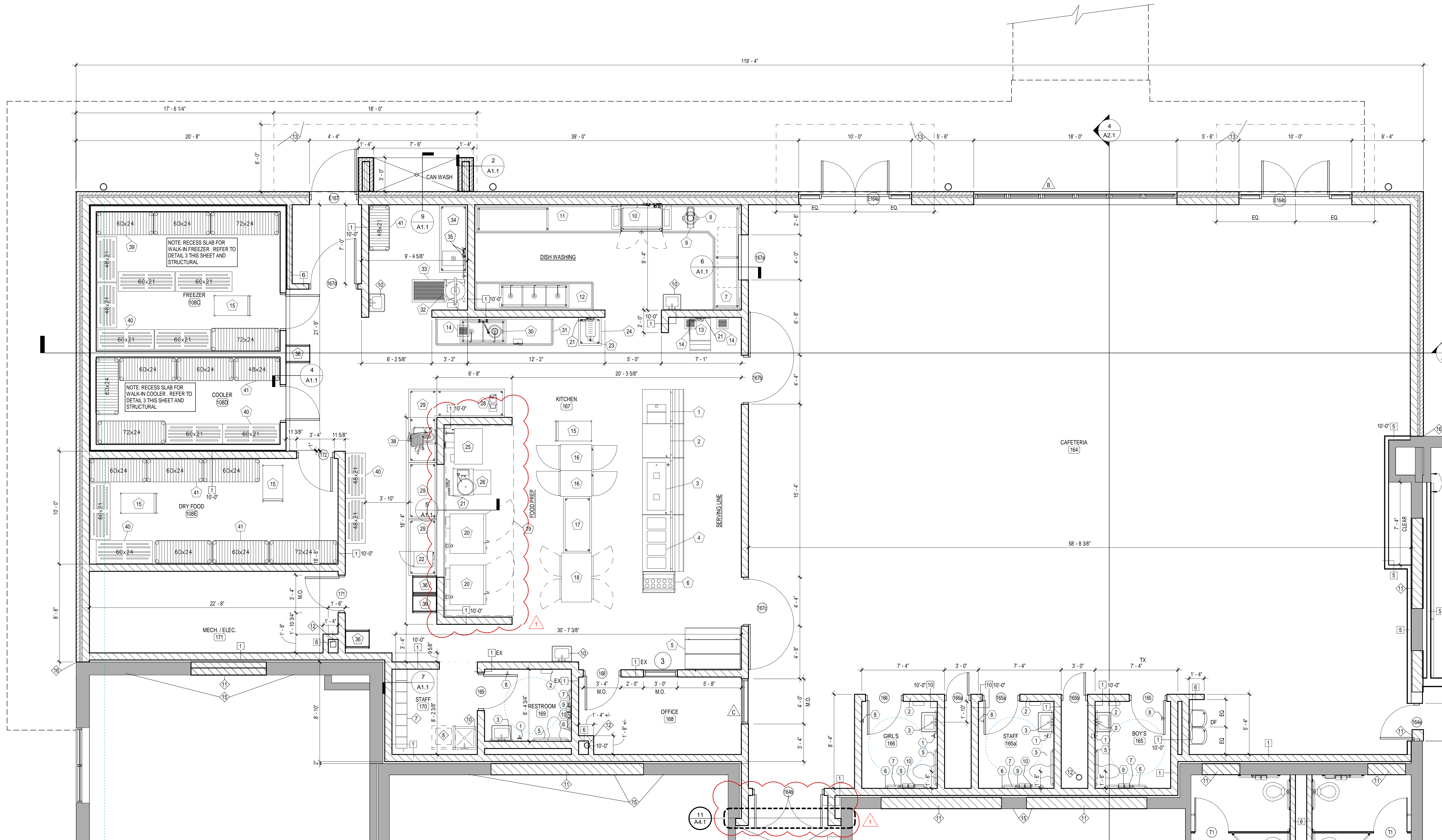
	EXISTING CONSTRUCTION TO REMAIN. PROTECT.
	ROOM FINISH GROUPS (REFER TO SHEET A0.0)
	ROOM NUMBER
	DOOR NUMBER (DOOR SCHEDULE SHEET A4.1)
	DEMOLITION WORK KEY NOTES (SHEET D1.0)
	NEW WORK KEY NOTES (SHEETS A1.1 - A1.2)
	WALL TYPE (SCHEDULE SHEET A0.0)
	ALUMINUM OR HOLLOW METAL WINDOW OR STOREFRONT TYPE (REFER TO FLOOR PLANS AND SCHEDULE SHEET A4.1)
	TOILET ACCESSORIES (SCHEDULE SHEET A1.1)
	ELEVATION KEY NOTE (SHEET A1.2)
	ROOF KEY NOTE (SHEET A1.3)
	CEILING PLAN KEY NOTE (SHEET A3.1)
	SIGNAGE KEY NOTE (SHEETS A0.0 AND A1.0)
	FIRE EXTINGUISHER CABINET, REFER TO DTLS. THIS SHEET.
	MARKER BOARD
	TACK BOARD
	CONTROL JOINT (SHEET A3.1)
	DRINKING FOUNTAIN
	WINDOW SHADES





REVISIONS

No.	Description	Date
1	ADDENDUM #1	08-21-23



9 CAN WASH DETAIL  
1" = 1'-0"

GENERAL NEW WORK NOTES

- REFER TO MECH./ELEC. DRAWINGS FOR SPECIFIC NOTES REGARDING MECH/ELEC ITEMS NOT SHOWN ON THIS SHEET.
- REFER TO ROOF PLAN AND MECH DRAWINGS FOR ADDITIONAL INFORMATION REGARDING WORK AT ROOF.
- REFER TO SHEET A0.0 FOR GENERAL NOTES AND PARTITION TYPES.
- REFER TO SHEET A1.1 FOR TOILET ACCESSORY SCHEDULE.
- REFER TO SHEET A1.1 FOR KITCHEN EQUIPMENT SCHEDULE.

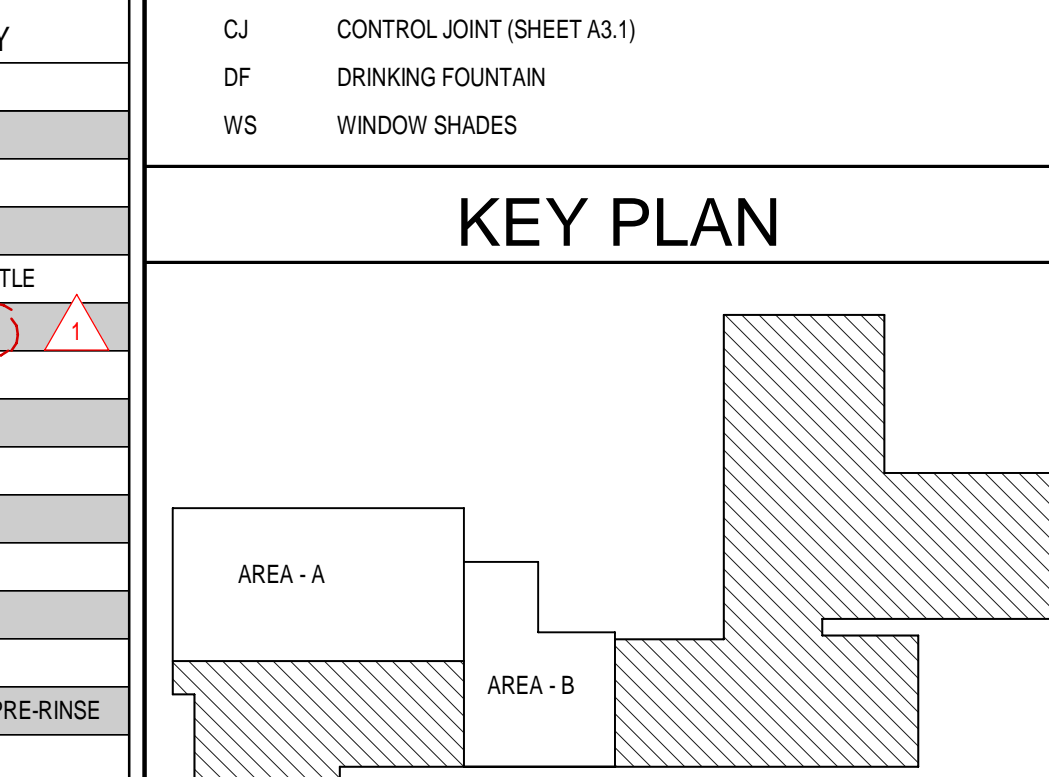
NEW WORK KEYNOTES

- NOTE: NOT ALL KEYNOTES MAY APPLY TO THIS SHEET.
- 1-4 NOT USED.
  - INFILL EXISTING GYP. BD. ON STUD WALL. MATCH EXISTING. PAINT ENTIRE WALL (INFILL AND EXIST) TO NEAREST CORNER, MATCH EXIST. COLOR.
  - INFILL EXISTING MASONRY OPENING WITH 4" CMU TOOTH-IN.
  - DOUBLE TIER METAL LOCKERS. ADD FILLER ENDS AS REQ'D FOR SYMMETRICAL INSTALLATION.
  - STACKED ADA COMPLIANT WASHER/DRYER BY OWNER.
  - TOILET PARTITION ASSEMBLY.
  - SINK. REFER TO PLUMBING.
  - INFILL EXISTING MASONRY OPENING WITH CMU TO MATCH ADJACENT. TOOTH-IN.
  - ROOF LEADER FROM ROOF DRAINS. PENETRATE WALLS AS NEEDED. CLOSE PENETRATIONS WITH BACKER ROD AND SEALANT.
  - CANOPY. REFER ROOF PLAN.
  - TOOTH-IN NEW CMU AT AREAS OF DEMOLITION.
  - PAINT ENTIRE WALL EXISTING AND NEW.
  - RAKE MORTAR BETWEEN NEW AND EXISTING MASONRY 3/8". PROVIDE BACKER ROD AND SEALANT AT BOTH INTERIOR AND EXTERIOR.
  - SECURE NEW CMU TO EXISTING WITH ISOLATION JOINT ANCHOR THAT ALLOWS INDEPENDENT MOVEMENT.
  - INFILL EXISTING MASONRY OPENING W/ CMU AND BRICK TO MATCH ADJACENT.
  - SOLID SURFACE WINDOW SILL (OVERHANG GYP. BD 1").
  - SALVAGED STONE SILL. CUT TO FIT.

SYMBOLS LEGEND

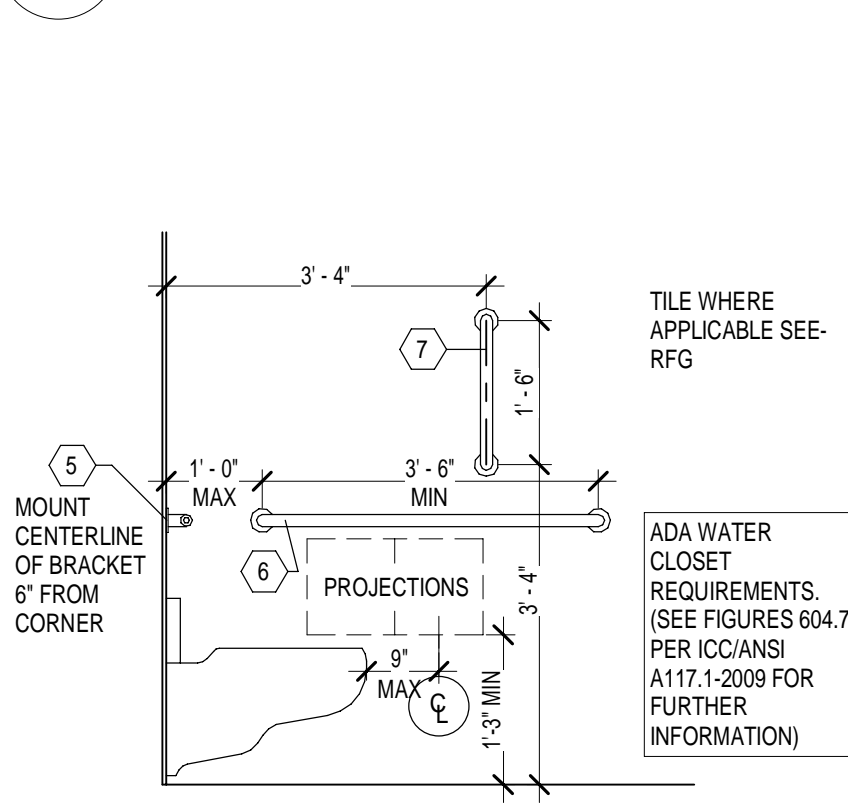
- EXISTING CONSTRUCTION TO REMAIN. PROTECT.
- ROOM FINISH GROUPS (REFER TO SHEET A0.0)
- ROOM NUMBER
- DOOR NUMBER (DOOR SCHEDULE SHEET A4.1)
- DEMOLITION WORK KEY NOTES (SHEET D1.0)
- NEW WORK KEY NOTES (SHEETS A1.1 - A1.2)
- WALL TYPE (SCHEDULE SHEET A0.0)
- ALUMINUM OR HOLLOW METAL WINDOW OR STOREFRONT TYPE (REFER TO FLOOR PLANS AND SCHEDULE SHEET A4.1)
- TOILET ACCESSORIES (SCHEDULE SHEET A1.1)
- ELEVATION KEY NOTE (SHEET A1.2)
- ROOF KEY NOTE (SHEET A1.3)
- CEILING PLAN KEY NOTE (SHEET A3.1)
- SIGNAGE KEY NOTE (SHEETS A0.0 AND A1.0)
- FIRE EXTINGUISHER CABINET, REFER TO DTLS. THIS SHEET.

KEY PLAN

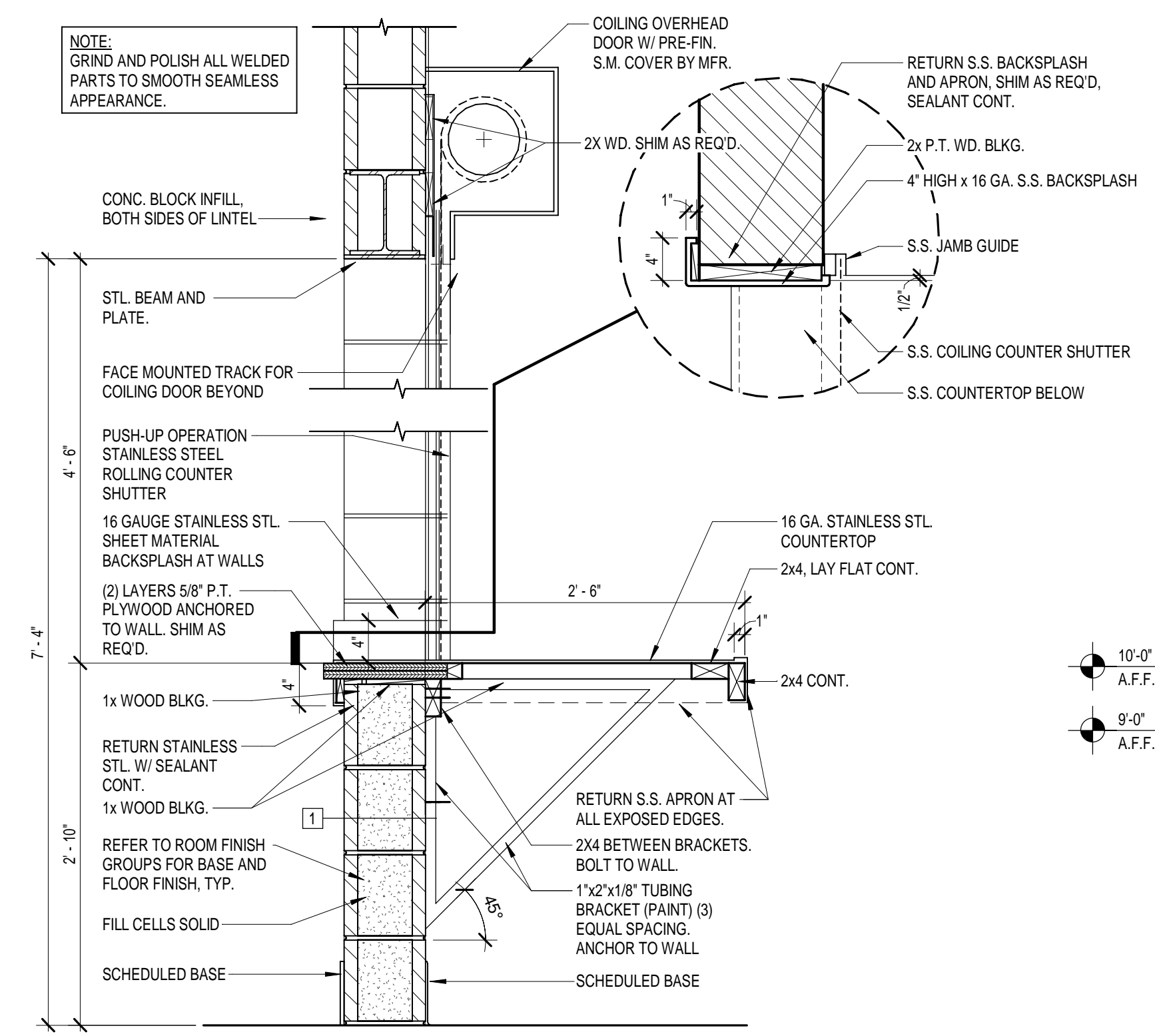


1 ENLARGED PLAN AREA-A  
1/4" = 1'-0"

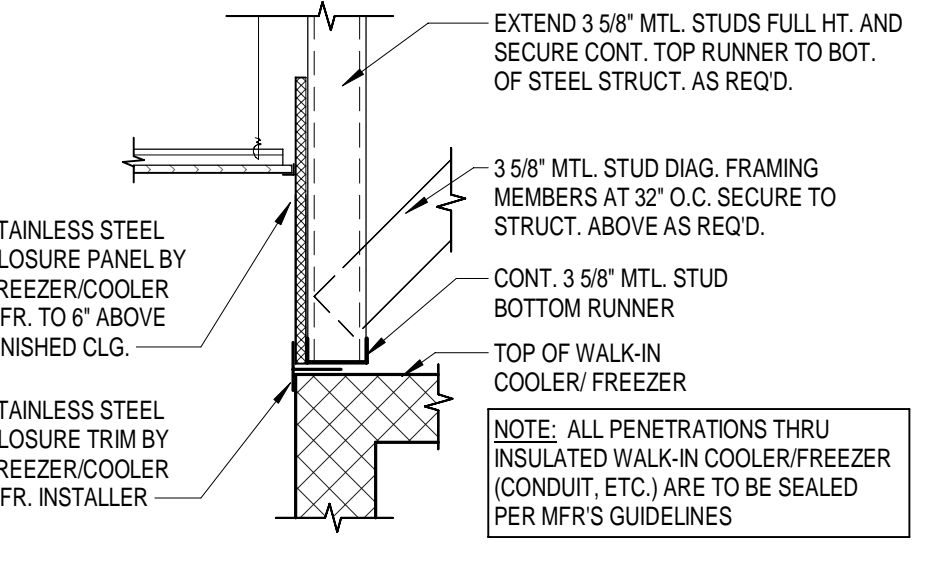
7 LOCKER BASE DETAIL  
1" = 1'-0"



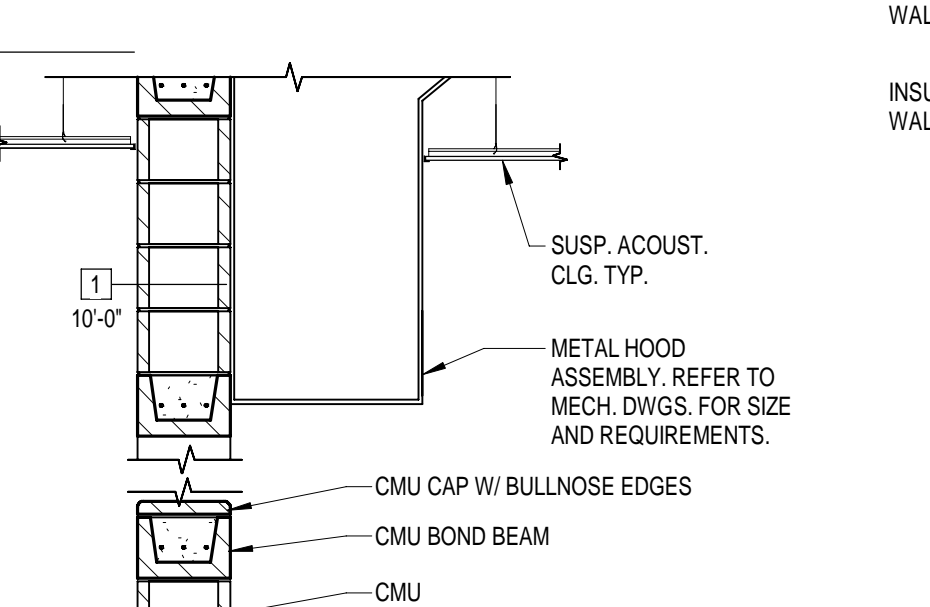
8 ADA GRAB BAR LAYOUT  
1/2" = 1'-0"



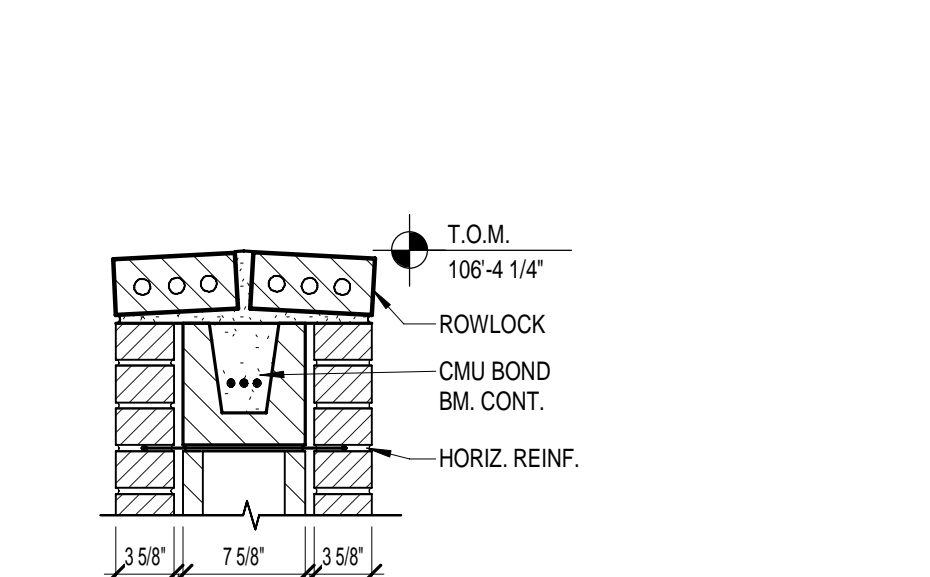
6 DISHWASH DETAIL  
1" = 1'-0"



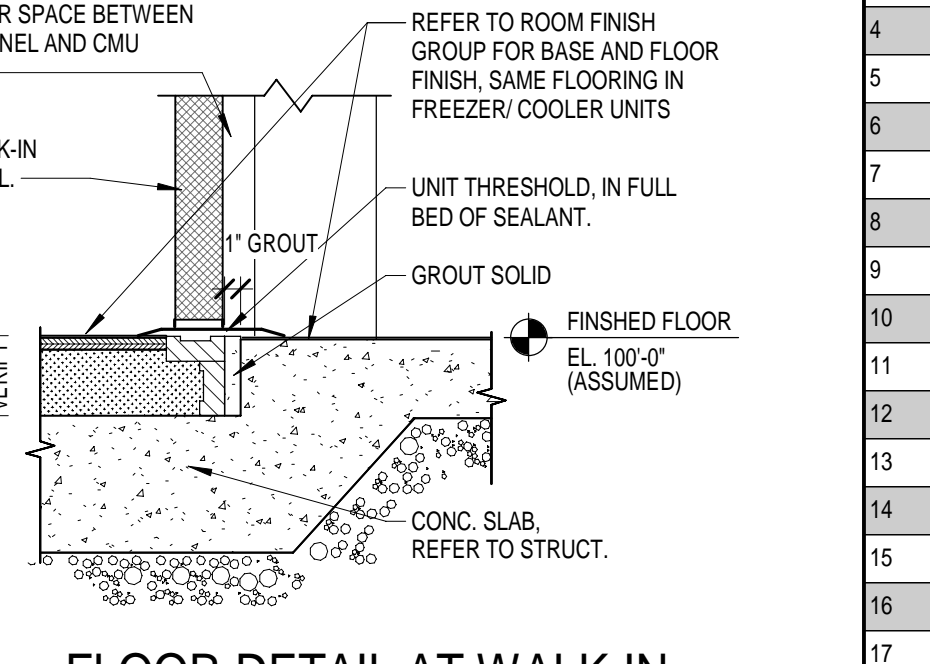
4 CEILING AT WALK-IN COOLER/FREEZER  
1" = 1'-0"



5 EXHAUST HOOD DETAIL  
1/2" = 1'-0"



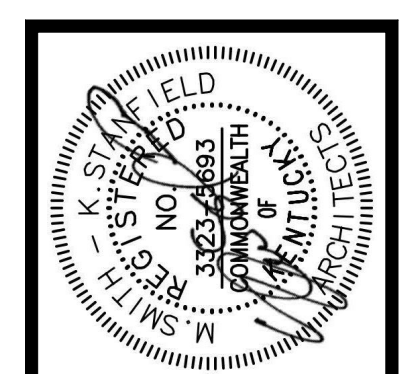
2 CAN WASH WALL  
1" = 1'-0"



3 FLOOR DETAIL AT WALK-IN COOLER/FREEZER  
1" = 1'-0"

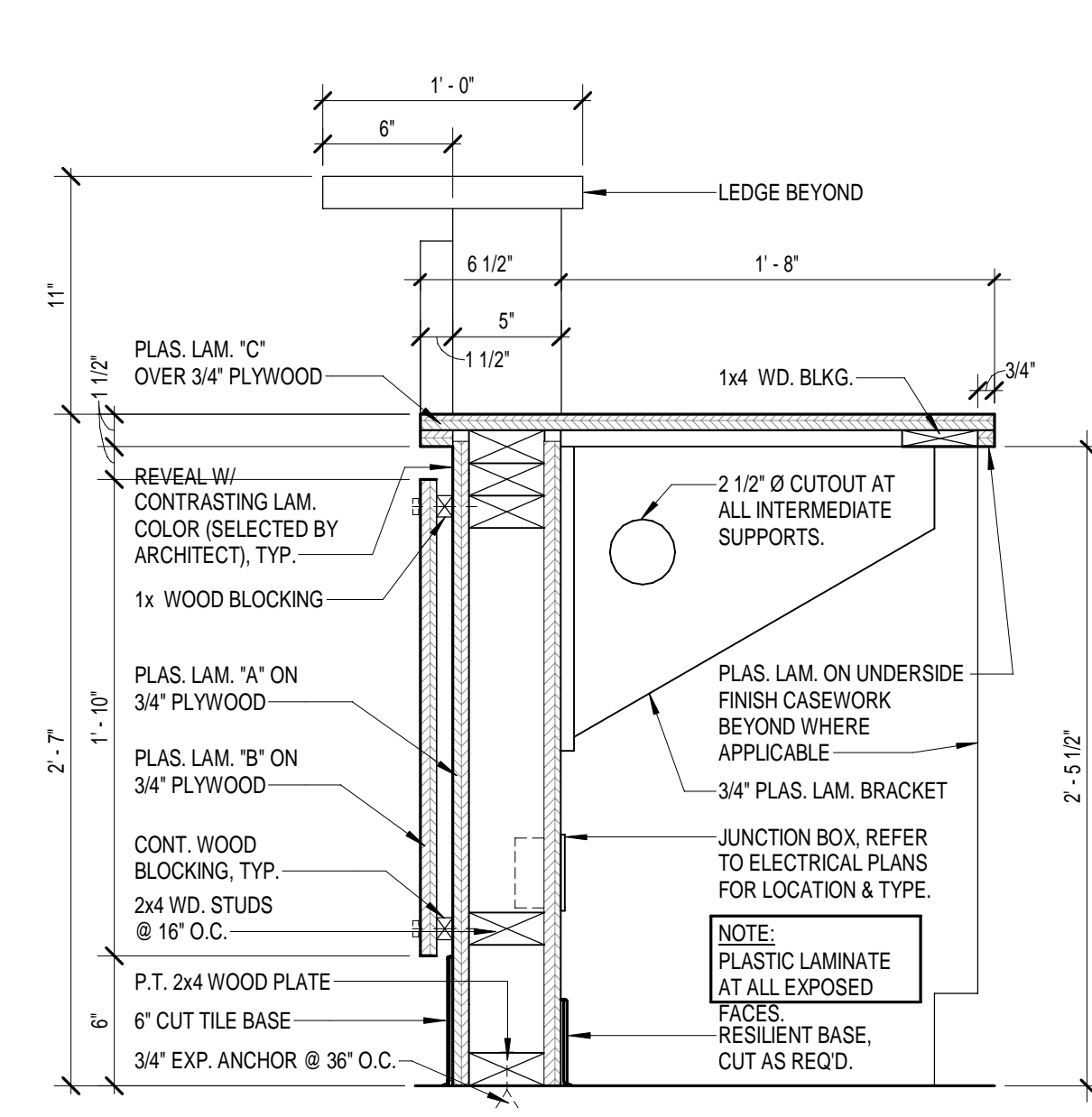
FOOD SERVICE EQUIPMENT SCHEDULE

ITEM NO.	EQUIPMENT CATEGORY	ITEM NO.	EQUIPMENT CATEGORY
1	CASHER COUNTER	22	OVEN, MICROWAVE
2	SOLID TOP COUNTER	23	HOT WATER DISPENSER
3	COLD FOOD COUNTER	24	WORK TABLE CUSTOM
4	HOT FOOD COUNTER	25	CONVECTION OVEN
5	MILK COOLER	26	12 GAL. STEAM JACKETED KETTLE
6	TRAY & SILVER CHART	27	ELECTRIC RANGE (NOT USED)
7	SOLED DISH TABLE	28	FOOD PROCESSOR
8	GARBAGE DISPOSER	29	WORK TABLE
9	HOSE REEL WITH SPRAY	30	GARBAGE DISPOSER
10	DISHWASHER	31	WORK TABLE W/ SINK
11	CLEAN DISH TABLE	32	CUTTER/MIXER, VERTICAL
12	THREE COMPARTMENT SINK	33	FLOOR TROUGH
13	ICE MAKER & BIN	34	WORK TABLE W/ SINK
14	FLOOR SINK	35	FALUCET, WALL MOUNT, WITH PRE-RINSE
15	UTILITY CARTS	36	RACK PAN
16	PASS THRU HOLDING/PROOFING CABINET	37	NOT USED
17	WORK TABLE	38	FOOD SLICER
18	PASS THRU REFRIGERATOR	39	WALK IN SHELVING
19	EXHAUST HOOD SYSTEM	40	DUNNAGE RACK
20	COMBI OVEN (DOUBLE STACK)	41	STORAGE SHELVING
21	WATER FILTER		

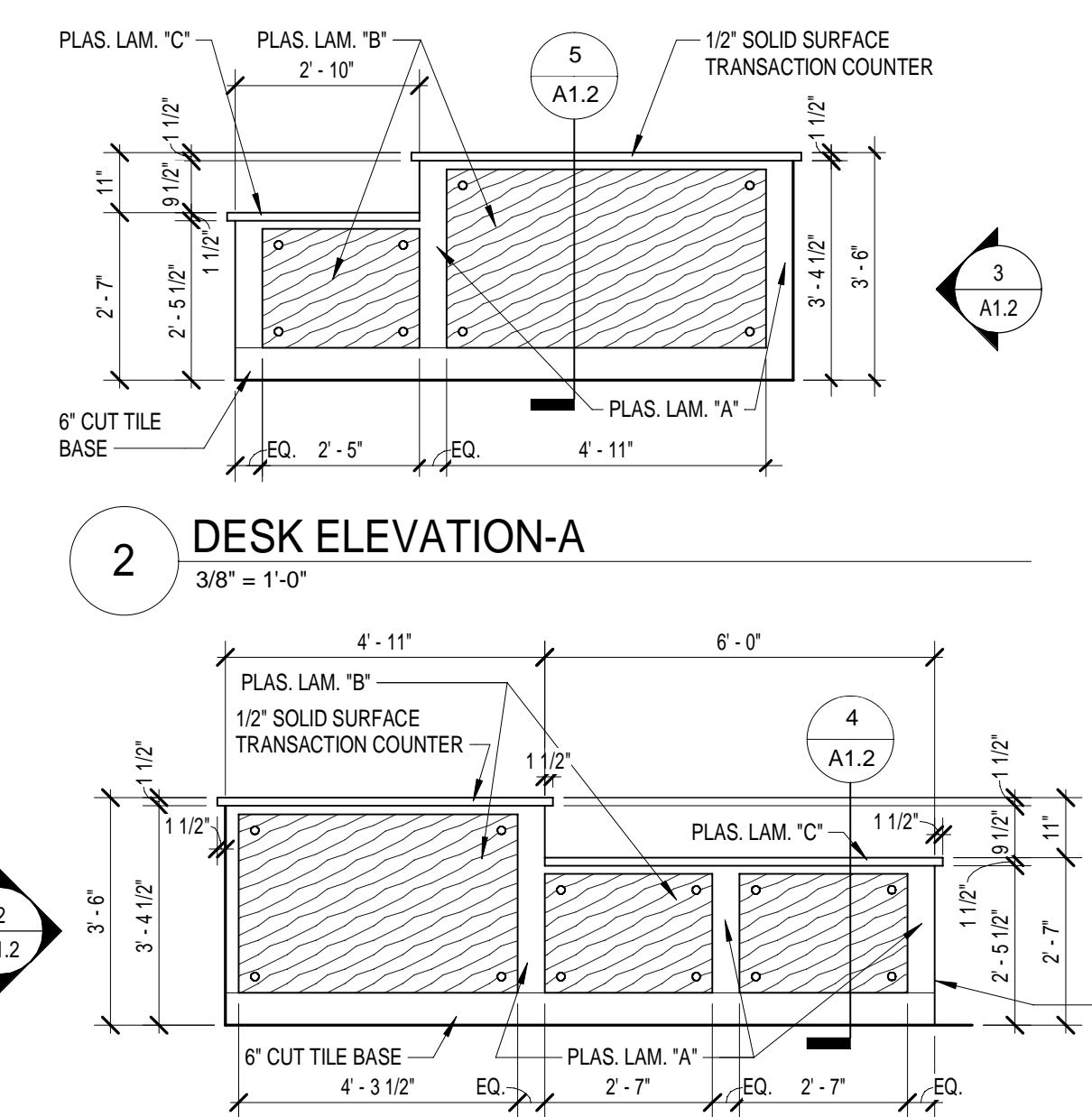


REVISIONS

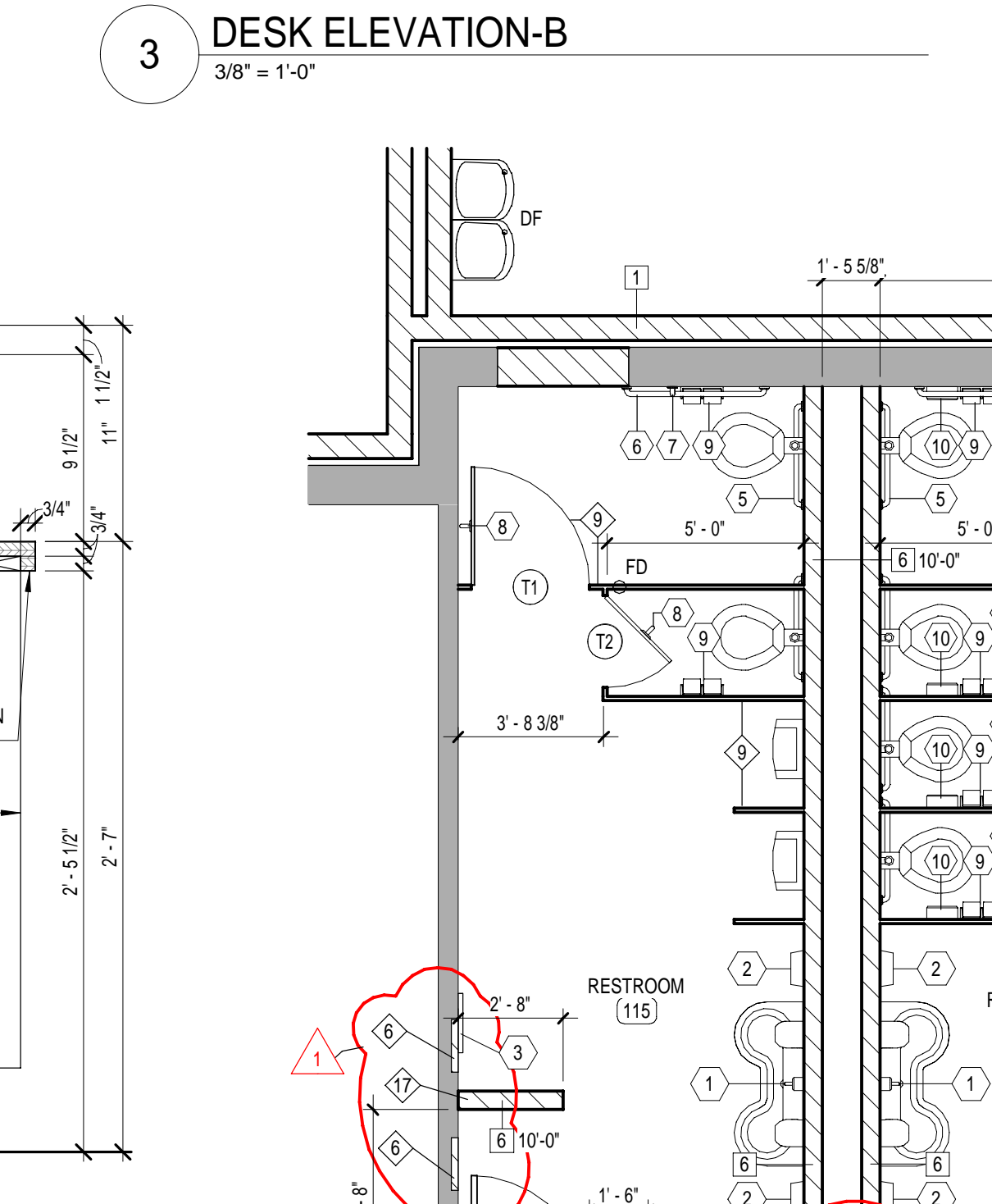
No.	Description	Date
1	ADDENDUM #1	08-21-23



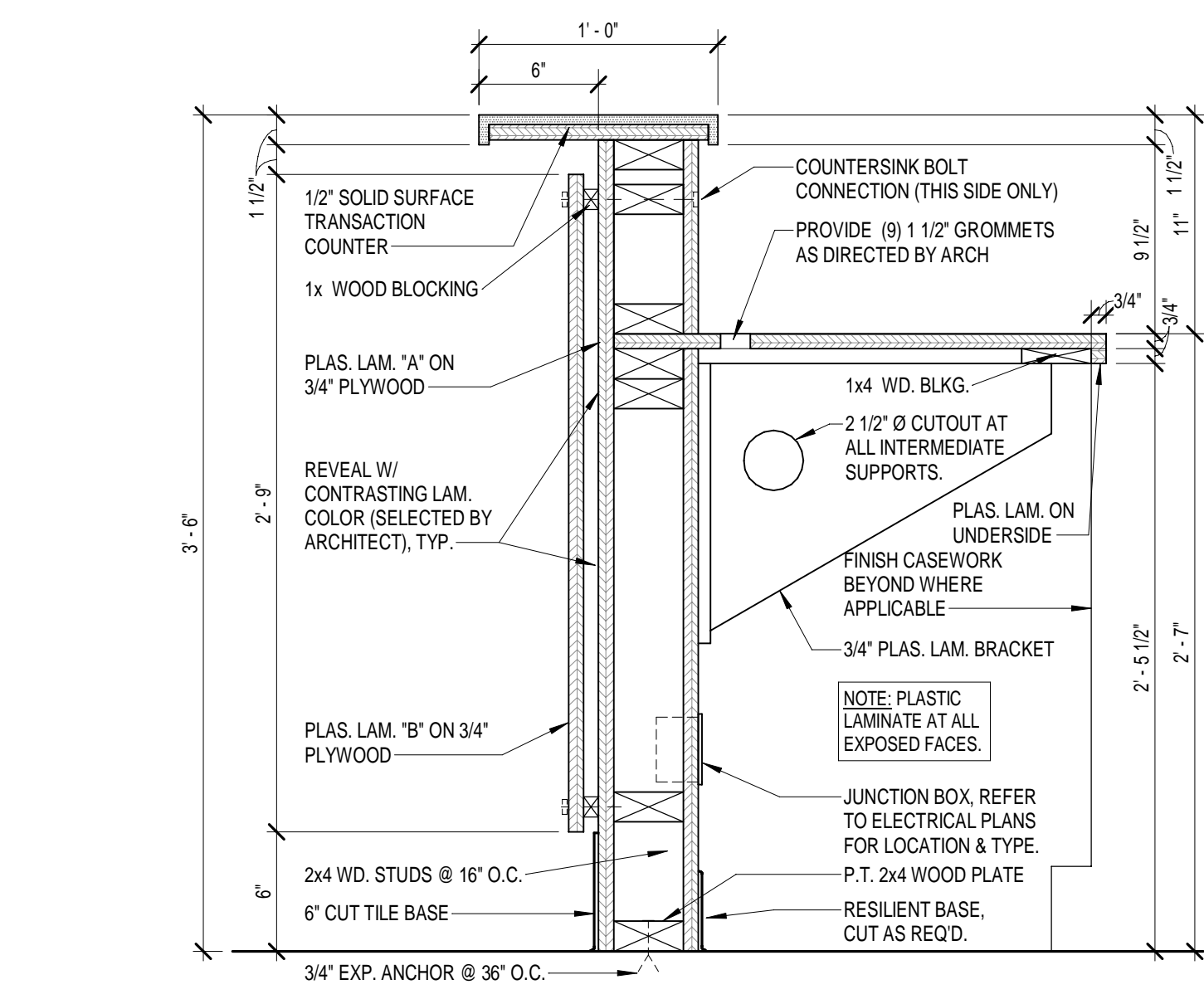
4 ADMIN DESK SECTION (B)  
1 1/2" = 1'-0"



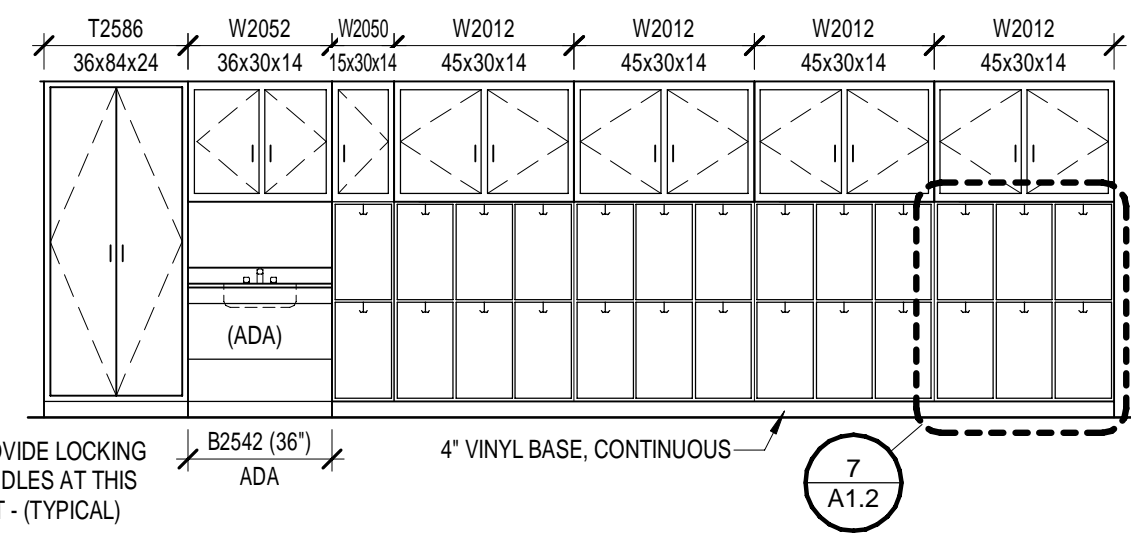
2 DESK ELEVATION-A  
3/8" = 1'-0"



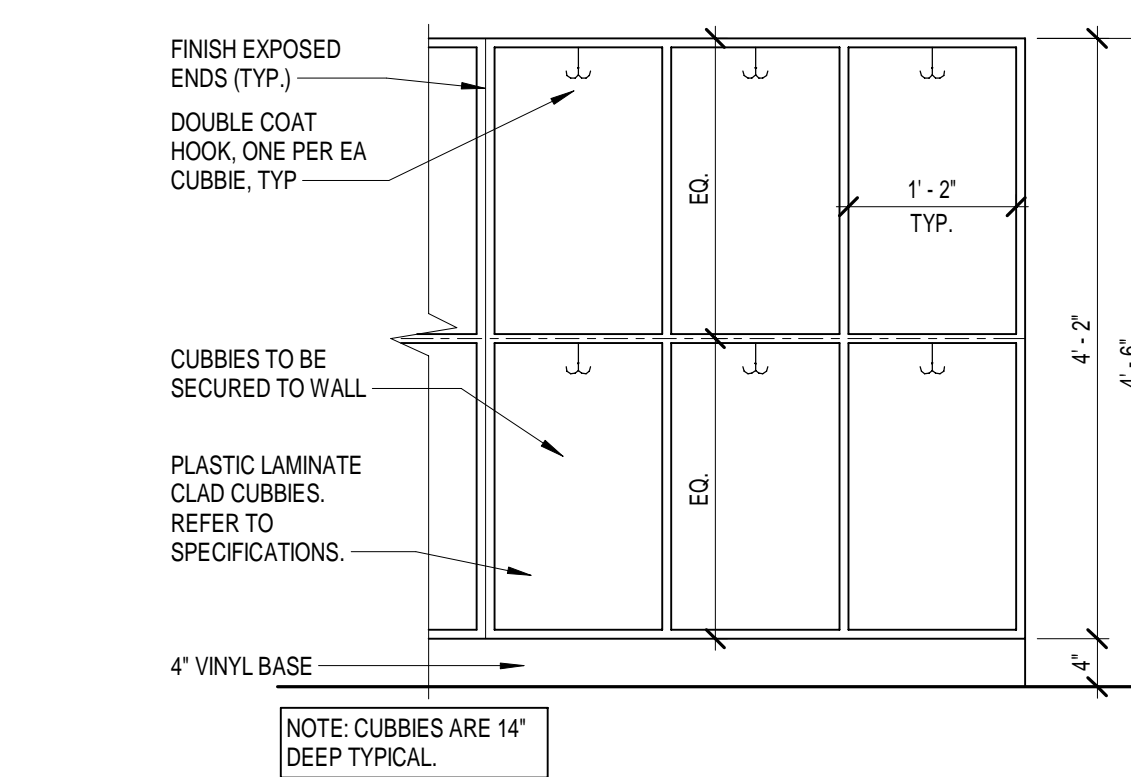
3 DESK ELEVATION-B  
3/8" = 1'-0"



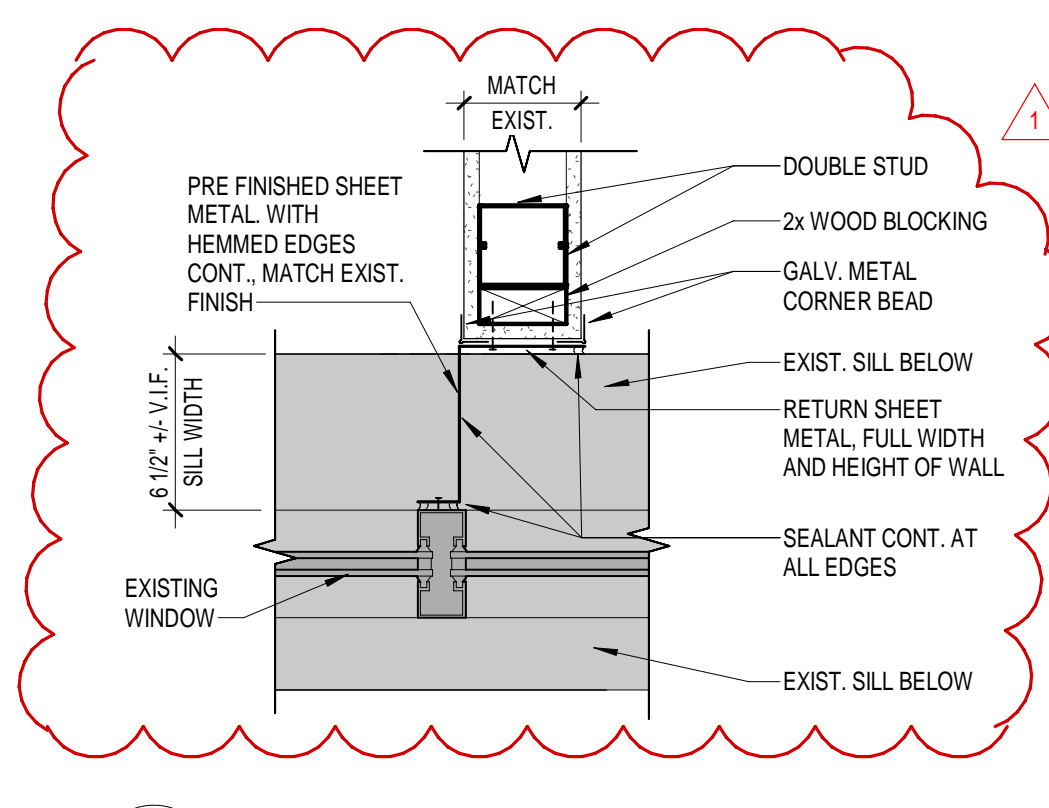
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1 1/2" = 1'-0"



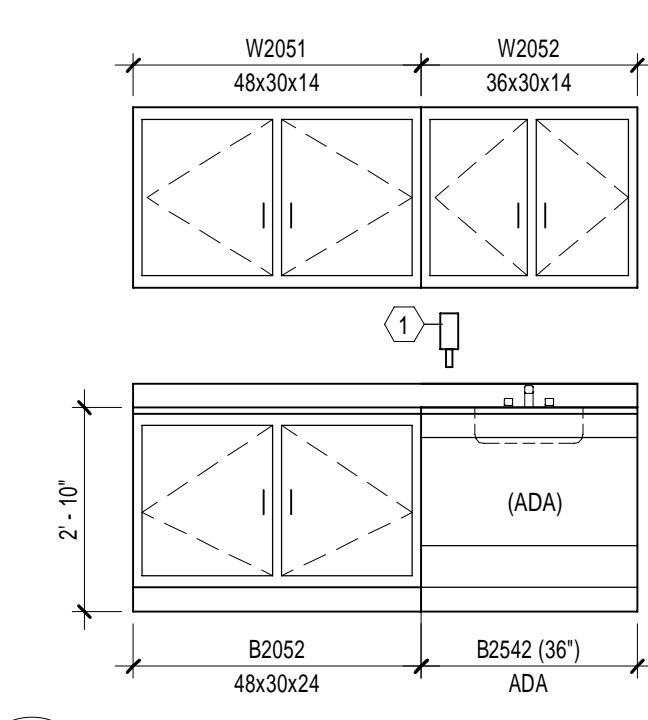
6 CUBBIE ELEVATION  
1/4" = 1'-0"



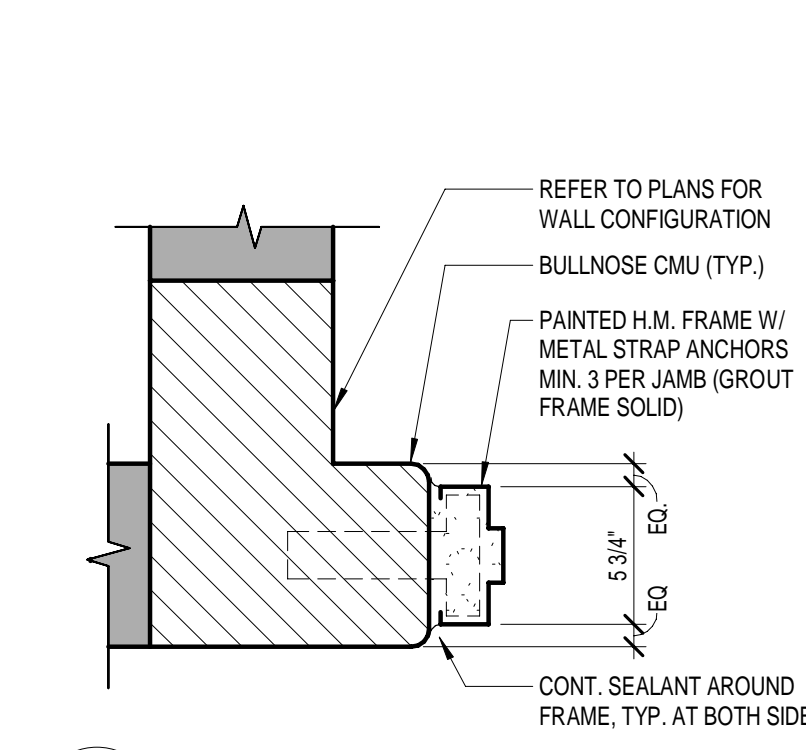
7 CUBBIE DETAIL  
3/4" = 1'-0"



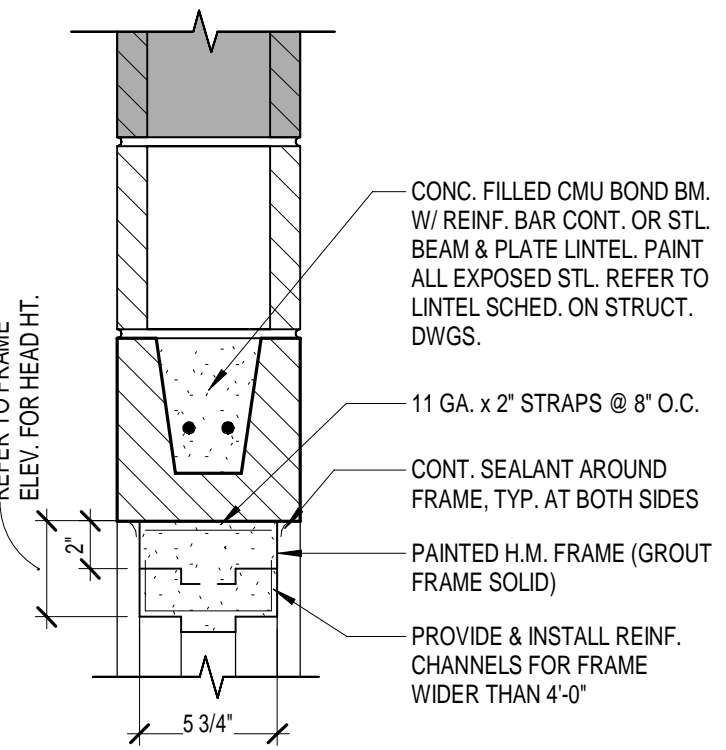
8 DETAIL  
1 1/2" = 1'-0"



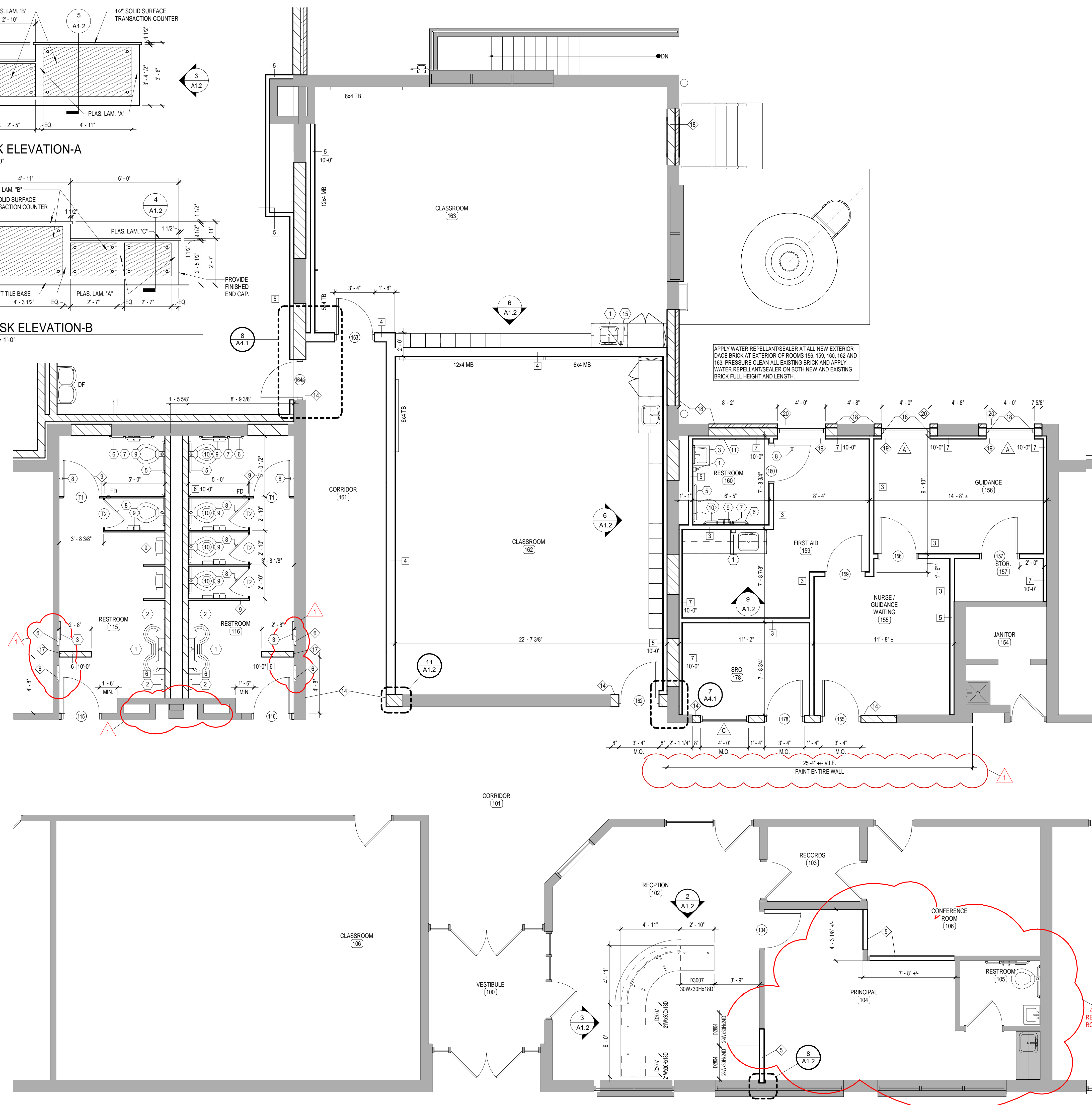
9 CASEWORK ELEVATION  
3/8" = 1'-0"



10 JAMB / HEAD DETAIL  
1 1/2" = 1'-0"



11 DETAIL  
1 1/2" = 1'-0"



1 ENLARGED PLAN AREA-B  
1/4" = 1'-0"

GENERAL NEW WORK NOTES

- REFER TO MECH./ELEC. DRAWINGS FOR SPECIFIC NOTES REGARDING MECH/ELEC ITEMS NOT SHOWN ON THIS SHEET.
- REFER TO ROOF PLAN AND MECH DRAWINGS FOR ADDITIONAL INFORMATION REGARDING WORK AT ROOF.
- REFER TO SHEET A0.0 FOR GENERAL NOTES AND PARTITION TYPES.
- REFER TO SHEET A1.1 FOR TOILET ACCESSORY SCHEDULE.
- REFER TO SHEET A1.1 FOR KITCHEN EQUIPMENT SCHEDULE.

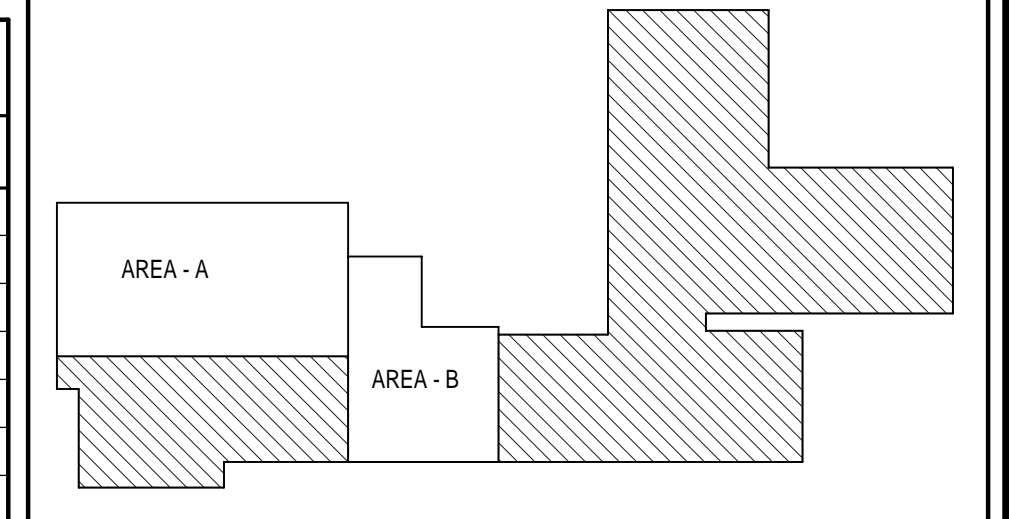
NEW WORK KEYNOTES

- NOTE: NOT ALL KEYNOTES MAY APPLY TO THIS SHEET.
- 1-4 NOT USED.
  - INFILL EXISTING GYP. BD. ON STUD WALL. MATCH EXISTING. PAINT ENTIRE WALL (INFILL AND EXIST) TO NEAREST CORNER/MATCH EXIST. COLOR.
  - INFILL EXISTING MASONRY OPENING WITH 4" CMU TOOTH-IN.
  - DOUBLE TIER METAL LOCKERS. ADD FILLER ENDS AS REQ'D FOR SYMMETRICAL INSTALLATION.
  - STACKED ADA COMPLIANT WASHER/DRYER BY OWNER.
  - TOILET PARTITION ASSEMBLY.
  - SINK, REFER TO PLUMBING.
  - INFILL EXISTING MASONRY OPENING WITH CMU TO MATCH ADJACENT. TOOTH-IN.
  - ROOF LEADER FROM ROOF DRAINS. PENETRATE WALLS AS NEEDED. CLOSE PENETRATIONS WITH BACKER ROD AND SEALANT.
  - CANOPY, REFER ROOF PLAN.
  - TOOTH-IN NEW CMU AT AREAS OF DEMOLITION.
  - PAINT ENTIRE WALL EXISTING AND NEW.
  - RAKE MORTAR BETWEEN NEW AND EXISTING MASONRY 3/8". PROVIDE BACKER ROD AND SEALANT AT BOTH INTERIOR AND EXTERIOR.
  - SECURE NEW CMU TO EXISTING WITH ISOLATION JOINT ANCHOR THAT ALLOWS INDEPENDENT MOVEMENT.
  - INFILL EXISTING MASONRY OPENING W/ CMU AND BRICK TO MATCH ADJACENT.
  - SOLID SURFACE WINDOW SILL (OVERHANG GYP. BD 1").
  - SALVAGED STONE SILL. CUT TO FIT.

SYMBOLS LEGEND

Name	Description
101	ROOM FINISH GROUPS (REFER TO SHEET A0.0)
102	ROOM NUMBER
103	DOOR NUMBER (DOOR SCHEDULE SHEET A4.1)
104	DEMOLITION WORK KEY NOTES (SHEET D1.0)
105	NEW WORK KEY NOTES (SHEETS A1.1 - A1.2)
106	WALL TYPE (SCHEDULE SHEET A0.0)
107	ALUMINUM OR HOLLOW METAL WINDOW OR STOREFRONT TYPE (REFER TO FLOOR PLANS AND SCHEDULE SHEET A4.1)
108	TOILET ACCESSORIES (SCHEDULE SHEET A1.1)
109	ELEVATION KEY NOTE (SHEET A1.2)
110	ROOF KEY NOTE (SHEET A1.3)
111	CEILING PLAN KEY NOTE (SHEET A3.1)
112	SIGNAGE KEY NOTE (SHEETS A0.0 AND A1.0)
FEC	FIRE EXTINGUISHER CABINET, REFER TO DTLs. THIS SHEET.
MB	MARKER BOARD
TB	TACK BOARD
CJ	CONTROL JOINT (SHEET A3.1)
DF	DRINKING FOUNTAIN
WS	WINDOW SHADES

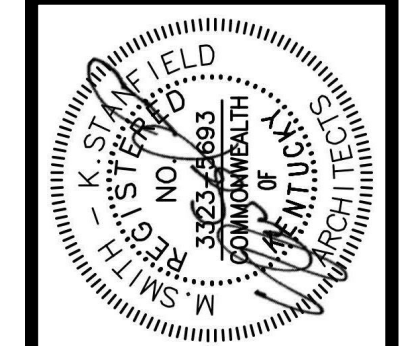
KEY PLAN



TOILET ACCESSORY SCHEDULE

ACCESSORY	MTG. HT.	MFR./MODEL #
1) S.S. SOAP DISPENSER	40" TO VALVE	N.I.C., OWNER FURNISHED, CONTRACTOR INSTALLED
2) SENSOR FACED ELECTRIC HAND DRYER (SURFACE MTD.)	PER MANUF. & ADA REQUIREMENTS	WORLD HAND DRYER Q-9744Z WHITE
3) MIRROR W/ S.S. FRAME - 18"x36"	40" TO BOTTOM	ASI 0200
4) NOT USED	NOT USED	NOT USED
5) 36" S.S. GRAB BAR (1-1/4")	33" TO CENTERLINE	ASI 3100 SERIES, REFER TO DETAIL 8 THIS SHEET
6) 42" S.S. GRAB BAR (1-1/4")	33" TO CENTERLINE	ASI 3100 SERIES, REFER TO DETAIL 8 THIS SHEET
7) 18" VERTICAL S.S. GRAB BAR (1-1/4")	REFER TO GRAB BAR LAYOUT 9A1.1	ASI 3100 SERIES
8) CLOTHES HOOK (SURFACE MOUNTED)	48" TO CENTER	ASI 8425
9) TOILET PAPER DISPENSER	23" TO CENTERLINE	N.I.C., OWNER FURNISHED, CONTRACTOR INSTALLED
10) SANITARY NAPKIN DISPOSAL	24" TO TOP	ASI 0852
11) PAPER TOWEL DISPENSER (SURFACE MOUNTED)	44" TO SLOT	ASI 0210





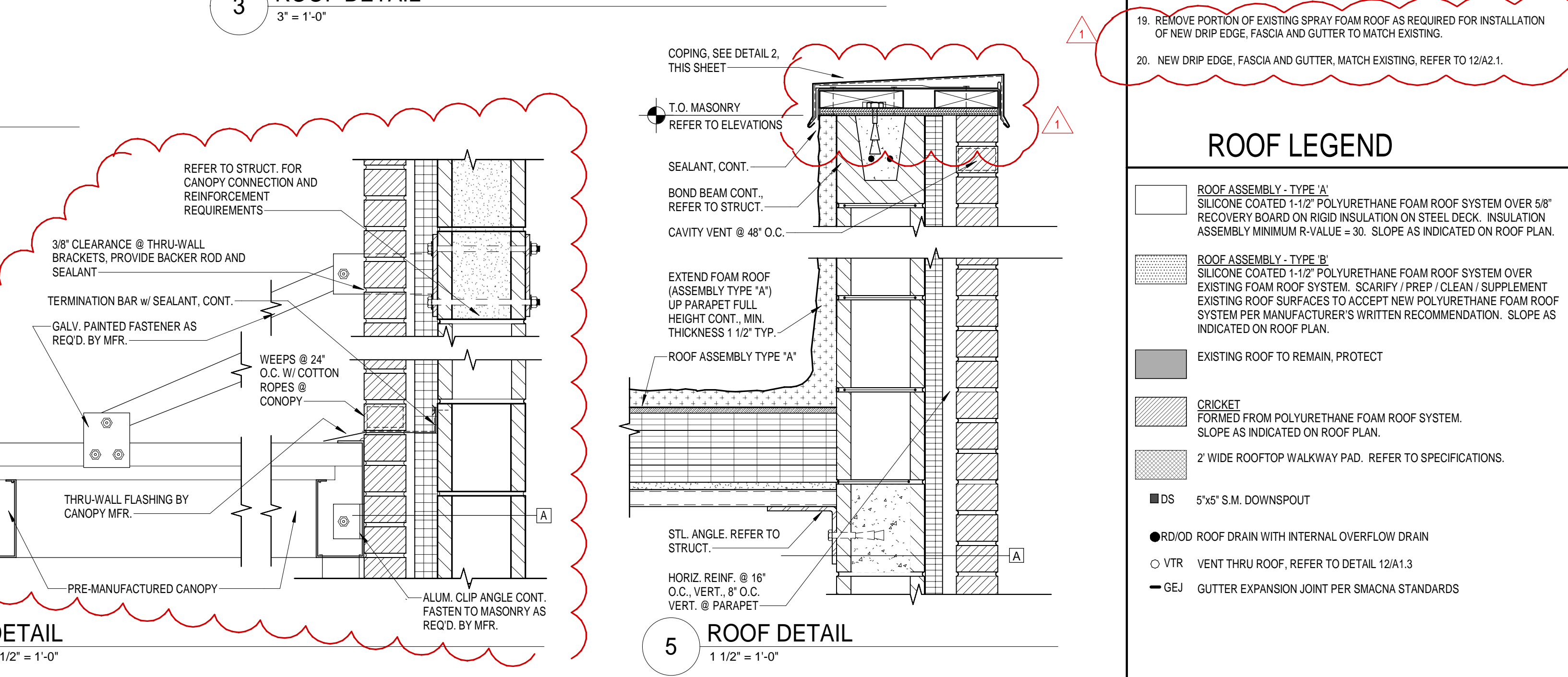
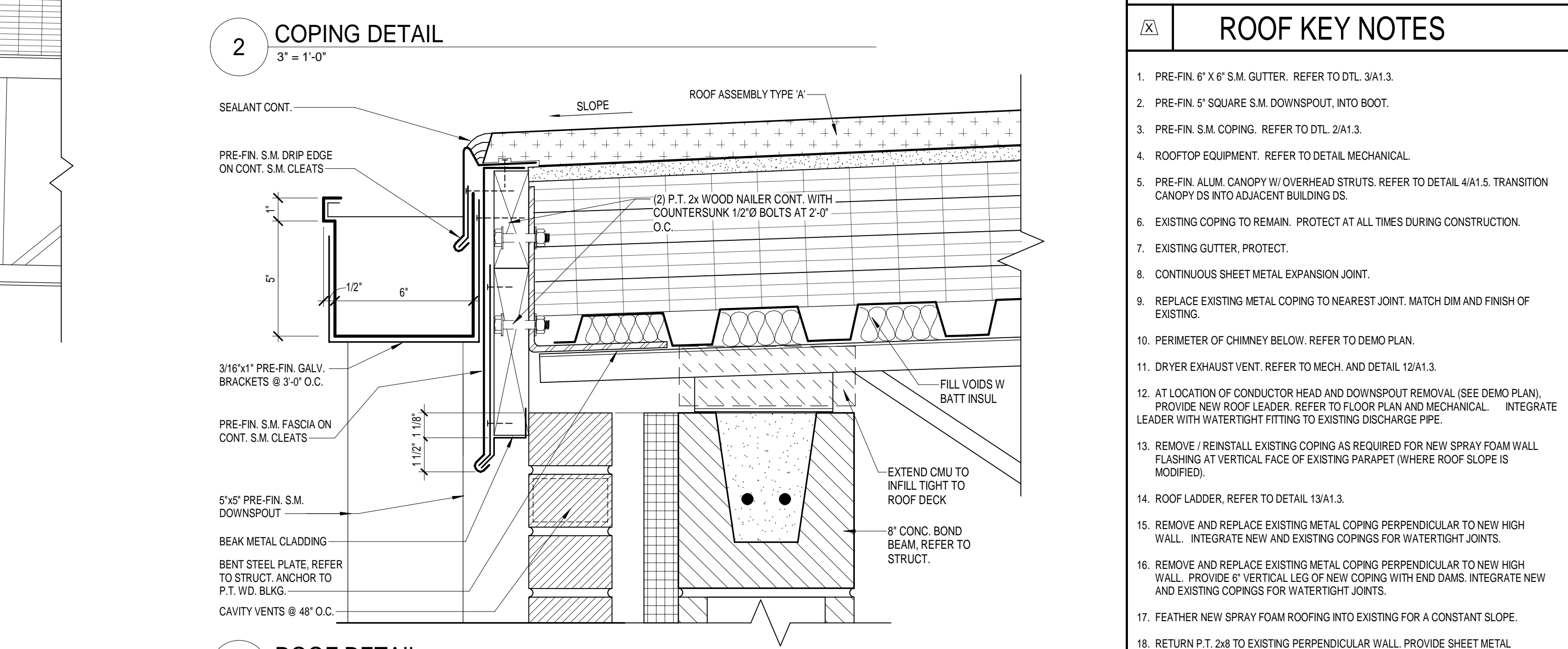
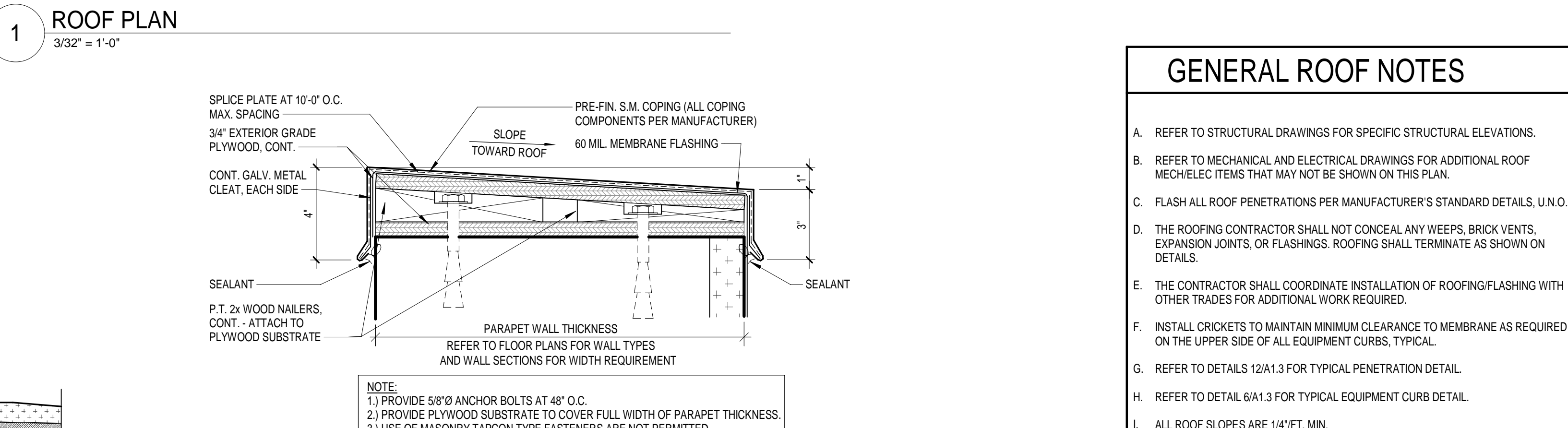
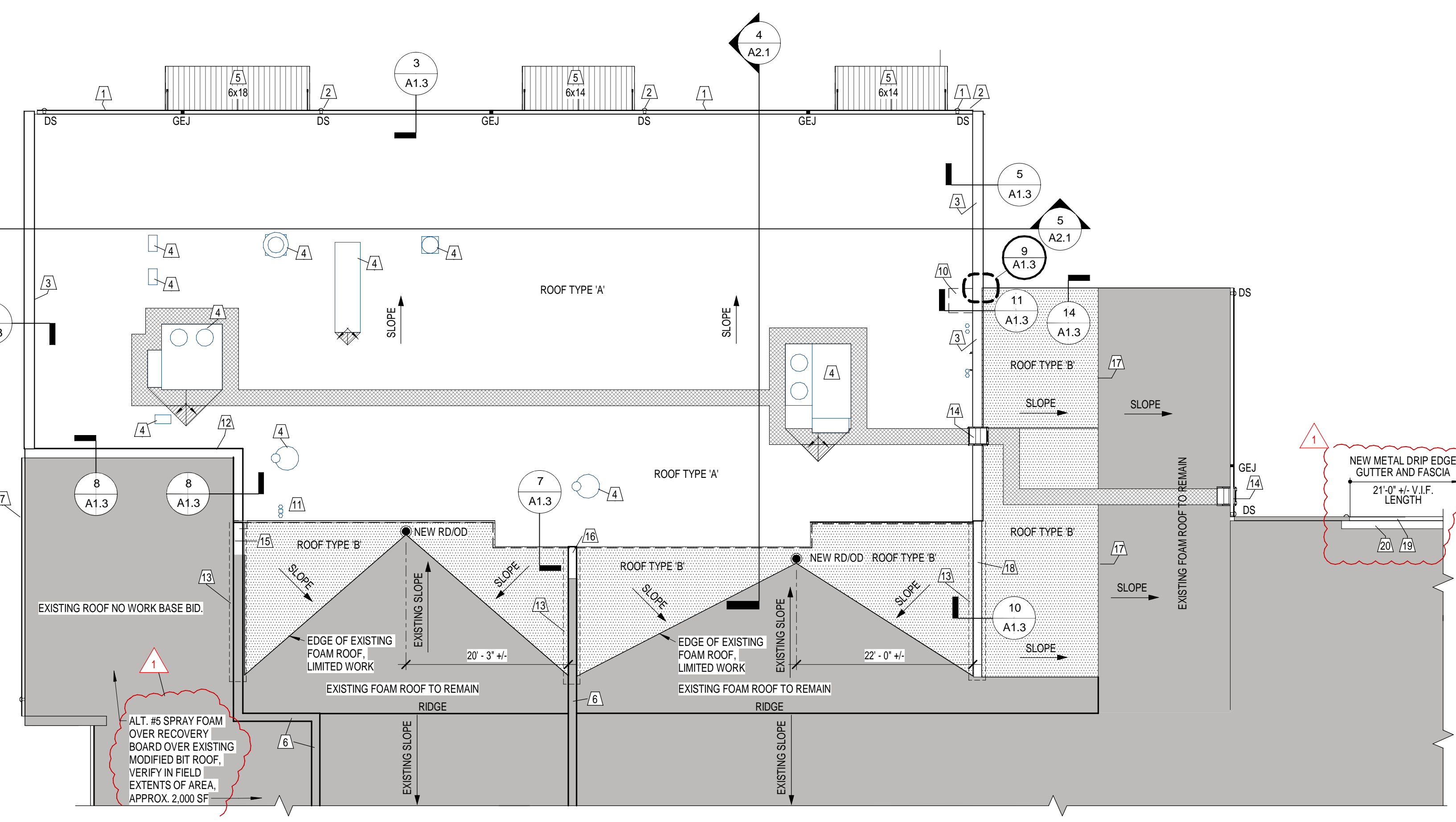
JOB NO.	2210
DATE	08/03/23
DRAWN	M.C. FMS
CHECKED	TSS/BKL

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REVISIONS		
No.	Description	Date
1	ADDENDUM #1	08-21-23

SHEET

**A1.3**



**GENERAL ROOF NOTES**

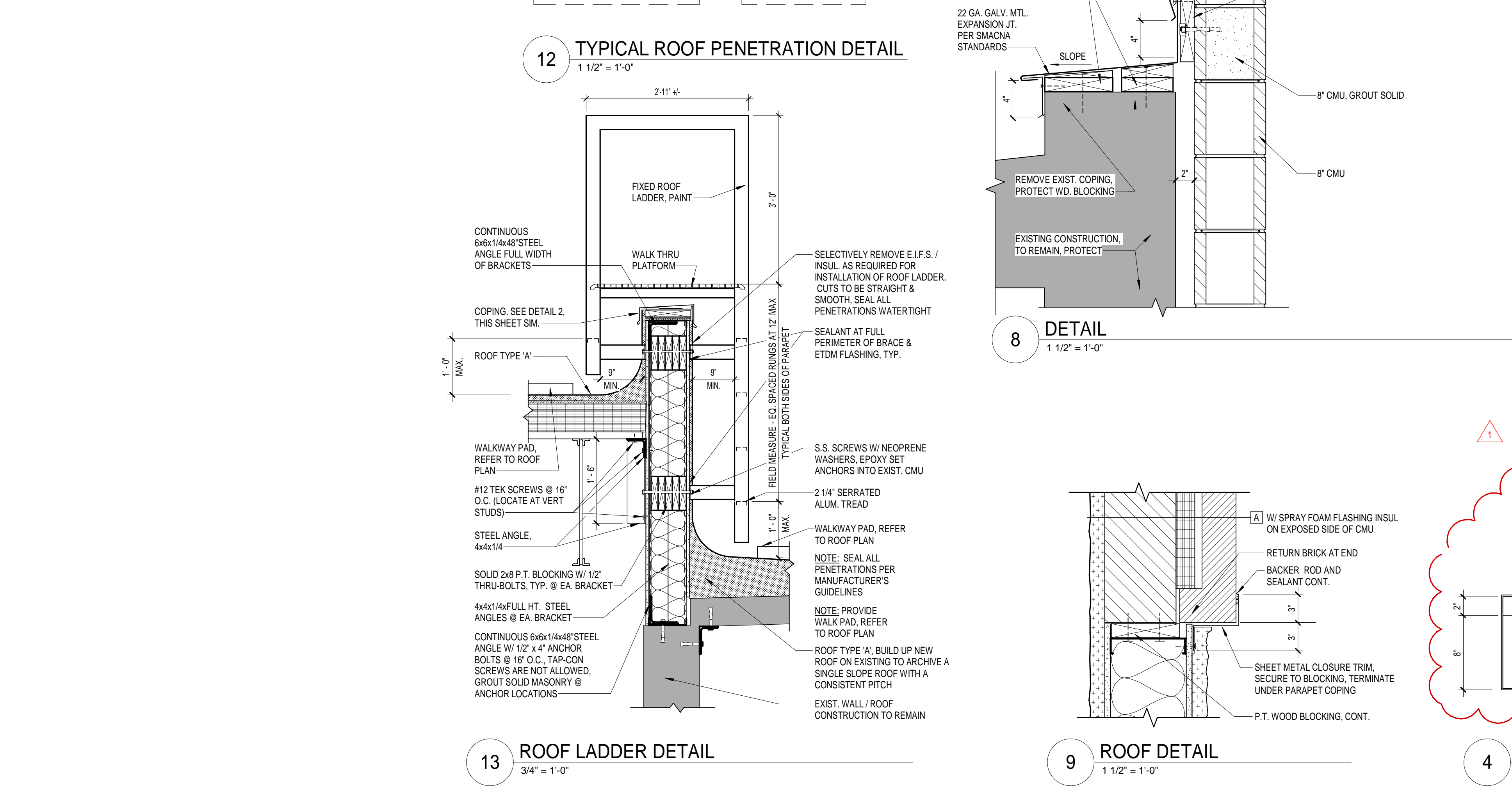
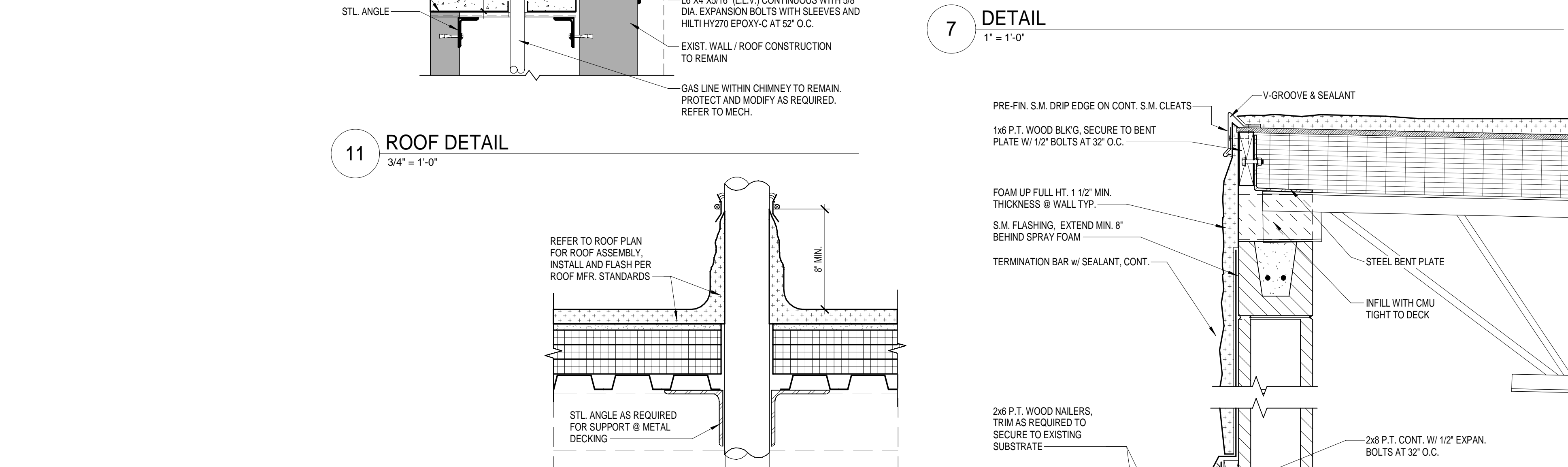
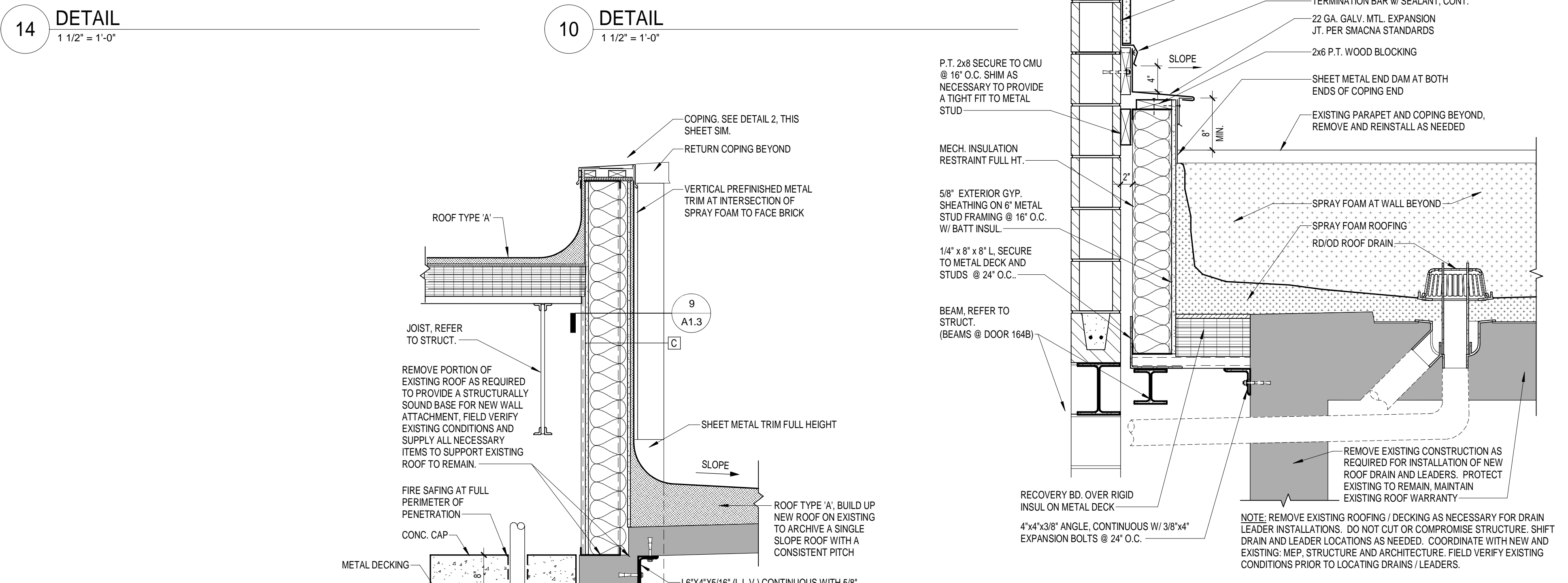
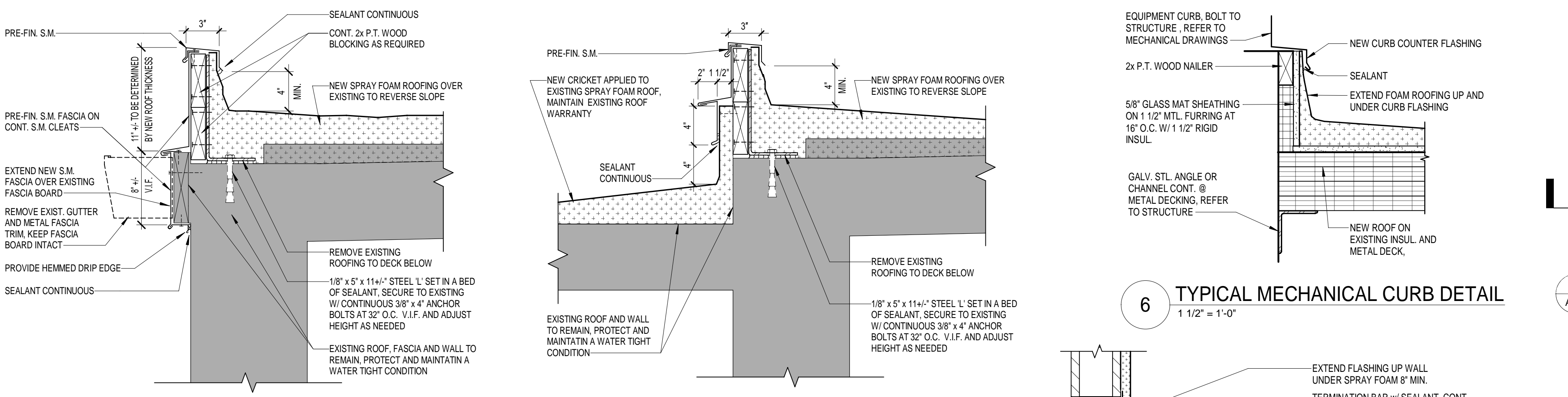
- REFER TO STRUCTURAL DRAWINGS FOR SPECIFIC STRUCTURAL ELEVATIONS.
- REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR ADDITIONAL ROOF MECH/ELEC ITEMS THAT MAY NOT BE SHOWN ON THIS PLAN.
- FLASH ALL ROOF PENETRATIONS PER MANUFACTURER'S STANDARD DETAILS, U.N.O.
- THE ROOFING CONTRACTOR SHALL NOT CONCEAL ANY WEEPS, BRICK VENTS, EXPANSION JOINTS, OR FLASHINGS. ROOFING SHALL TERMINATE AS SHOWN ON DETAILS.
- THE CONTRACTOR SHALL COORDINATE INSTALLATION OF ROOFING FLASHING WITH OTHER TRADES FOR ADDITIONAL WORK REQUIRED.
- INSTALL CRICKETS TO MAINTAIN MINIMUM CLEARANCE TO MEMBRANE AS REQUIRED ON THE UPPER SIDE OF ALL EQUIPMENT CURBS, TYPICAL.
- REFER TO DETAILS 12/A1.3 FOR TYPICAL PENETRATION DETAIL.
- REFER TO DETAIL 6/A1.3 FOR TYPICAL EQUIPMENT CURB DETAIL.
- ALL ROOF SLOPES ARE 1/4" FT. MIN.

**ROOF KEY NOTES**

- PRE-FIN. 6" X 6" S.M. GUTTER. REFER TO DTL. 3/A1.3.
- PRE-FIN. 9" SQUARE S.M. DOWNSPOUT, INTO ROOF.
- PRE-FIN. S.M. COPING. REFER TO DTL. 2/A1.3.
- ROOFTOP EQUIPMENT. REFER TO DETAIL MECHANICAL.
- PRE-FIN. ALUM. CANOPY W/ OVERHEAD STRS. REFER TO DETAIL 4/A1.5. TRANSITION CANOPY DS INTO ADJACENT BUILDING DS.
- EXISTING COPING TO REMAIN. PROTECT AT ALL TIMES DURING CONSTRUCTION.
- EXISTING GUTTER. PROTECT.
- CONTINUOUS SHEET METAL EXPANSION JOINT.
- REPLACE EXISTING METAL COPING TO NEAREST JOINT. MATCH DIM AND FINISH OF EXISTING.
- PERIMETER OF CHIMNEY BELOW. REFER TO DEMO PLAN.
- DRYER EXHAUST VENT. REFER TO MECH. AND DETAIL 12/A1.3.
- AT LOCATION OF CONDUCTOR HEAD AND DOWNSPOUT REMOVAL, (SEE DEMO PLAN), PROVIDE NEW ROOF LEADER. REFER TO FLOOR PLAN AND MECHANICAL. INTEGRATE LEADER WITH WATERTIGHT FITTING TO EXISTING DISCHARGE PIPE.
- REMOVE/REINSTALL EXISTING COPING AS REQUIRED FOR NEW SPRAY FOAM FLASHING AT VERTICAL FACE OF EXISTING PARAPET (WHERE ROOF SLOPE IS MODIFIED).
- ROOF LADDER. REFER TO DETAIL 13/A1.3.
- REMOVE AND REPLACE EXISTING METAL COPING PERPENDICULAR TO NEW HIGH WALL. INTEGRATE NEW AND EXISTING COPINGS FOR WATERTIGHT JOINTS.
- REMOVE AND REPLACE EXISTING METAL COPING PERPENDICULAR TO NEW HIGH WALL. PROVIDE 6" VERTICAL LEG OF NEW COPING WITH END DAMS. INTEGRATE NEW AND EXISTING COPINGS FOR WATERTIGHT JOINTS.
- FEATHER NEW SPRAY FOAM ROOFING INTO EXISTING FOR A CONSTANT SLOPE.
- RETURN P.T. 2x8 TO EXISTING PERPENDICULAR WALL. PROVIDE SHEET METAL FLASHING AND COUNTERFLASHING FOR WATERTIGHT JOINTS.
- REMOVE PORTION OF EXISTING SPRAY FOAM ROOF AS REQUIRED FOR INSTALLATION OF NEW DRIP EDGE, FASCIA AND GUTTER TO MATCH EXISTING.
- NEW DRIP EDGE, FASCIA AND GUTTER. MATCH EXISTING. REFER TO 12/A2.1.

**ROOF LEGEND**

- ROOF ASSEMBLY - TYPE 'A'  
 SILICONE COATED 1-1/2" POLYURETHANE FOAM ROOF SYSTEM OVER 5/8" RECOVERY BOARD ON RIGID INSULATION ON STEEL DECK. INSULATION ASSEMBLY MINIMUM R-VALUE = 30. SLOPE AS INDICATED ON ROOF PLAN.
- ROOF ASSEMBLY - TYPE 'B'  
 SILICONE COATED 1-1/2" POLYURETHANE FOAM ROOF SYSTEM OVER EXISTING FOAM ROOF SYSTEM. SCARIFY / PREP / CLEAN / SUPPLEMENT EXISTING ROOF SURFACES TO ACCEPT NEW POLYURETHANE FOAM ROOF SYSTEM PER MANUFACTURER'S WRITTEN RECOMMENDATION. SLOPE AS INDICATED ON ROOF PLAN.
- EXISTING ROOF TO REMAIN, PROTECT
- CRICKET  
 FORMED FROM POLYURETHANE FOAM ROOF SYSTEM. SLOPE AS INDICATED ON ROOF PLAN.
- 2" WIDE ROOFTOP WALKWAY PAD. REFER TO SPECIFICATIONS.
- DS 5"x5" S.M. DOWNSPOUT
- RD/OD ROOF DRAIN WITH INTERNAL OVERFLOW DRAIN
- VTR VENT THRU ROOF. REFER TO DETAIL 12/A1.3
- GEJ GUTTER EXPANSION JOINT PER SMACNA STANDARDS



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

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

**7 DETAIL**  
1" = 1'-0"

**11 ROOF DETAIL**  
3/4" = 1'-0"

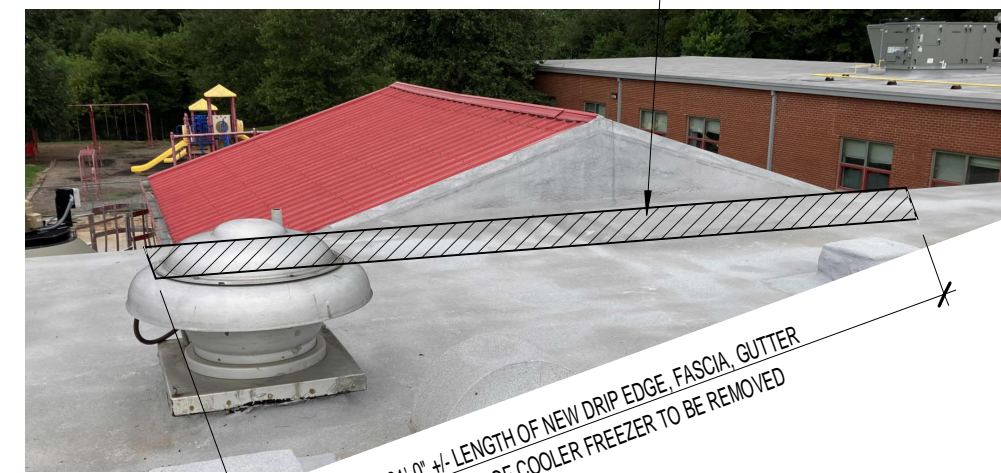
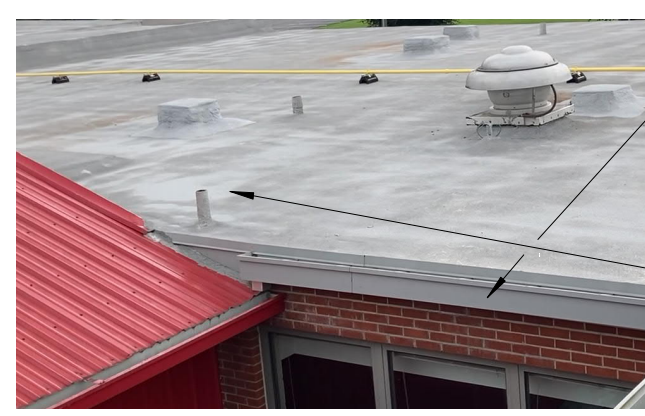
**12 TYPICAL ROOF PENETRATION DETAIL**  
1 1/2" = 1'-0"

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

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

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

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

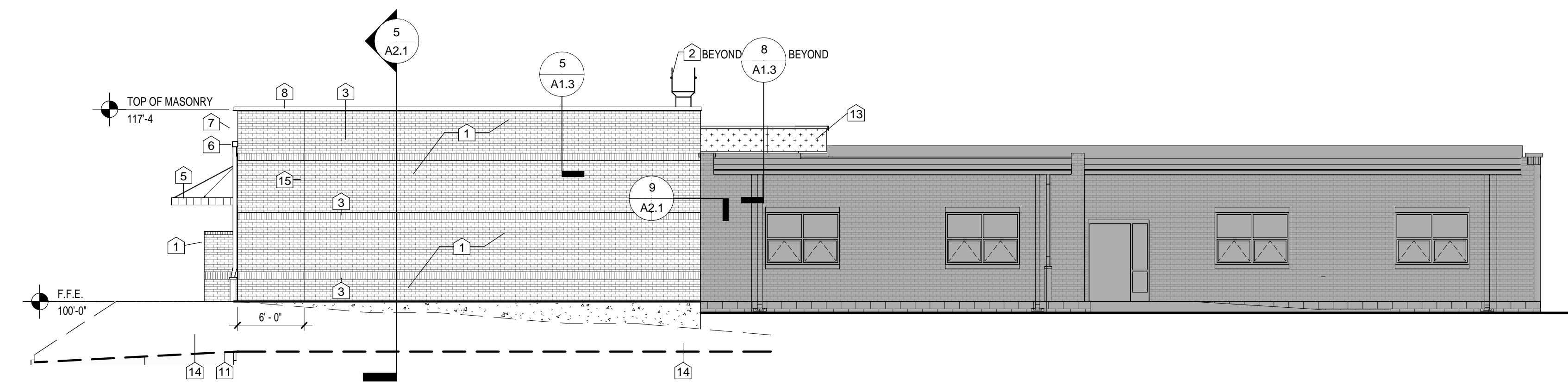


12 EXISTING PHOTOGRAPHS AT COOLER / FREEZER  
NTS

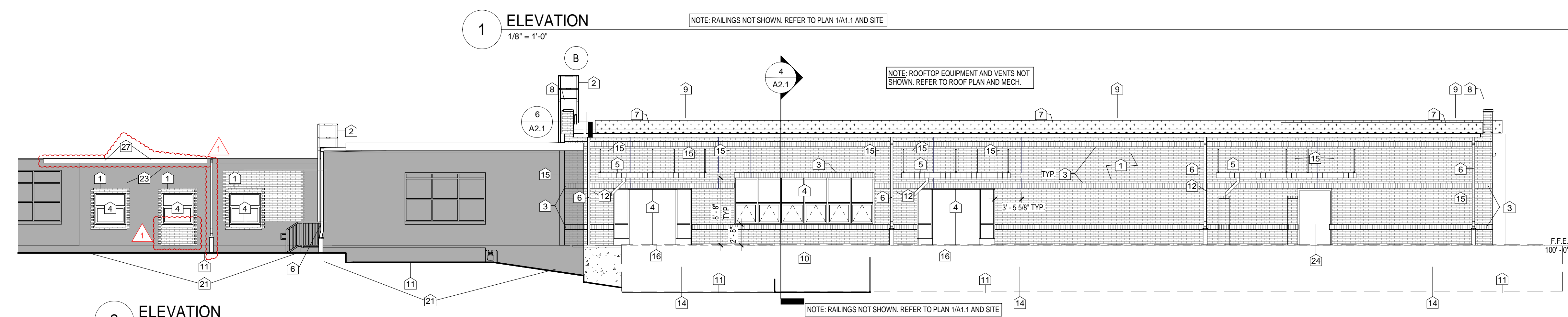
REMOVE PORTION OF EXISTING SPRAY FOAM ROOF AS REQUIRED FOR INSTALLATION OF NEW DRIP EDGE, FASCIA AND GUTTER TO MATCH EXISTING

2'-0" LENGTH OF NEW DRIP EDGE, FASCIA, GUTTER LENGTH OF COOLER FREEZER TO BE REMOVED

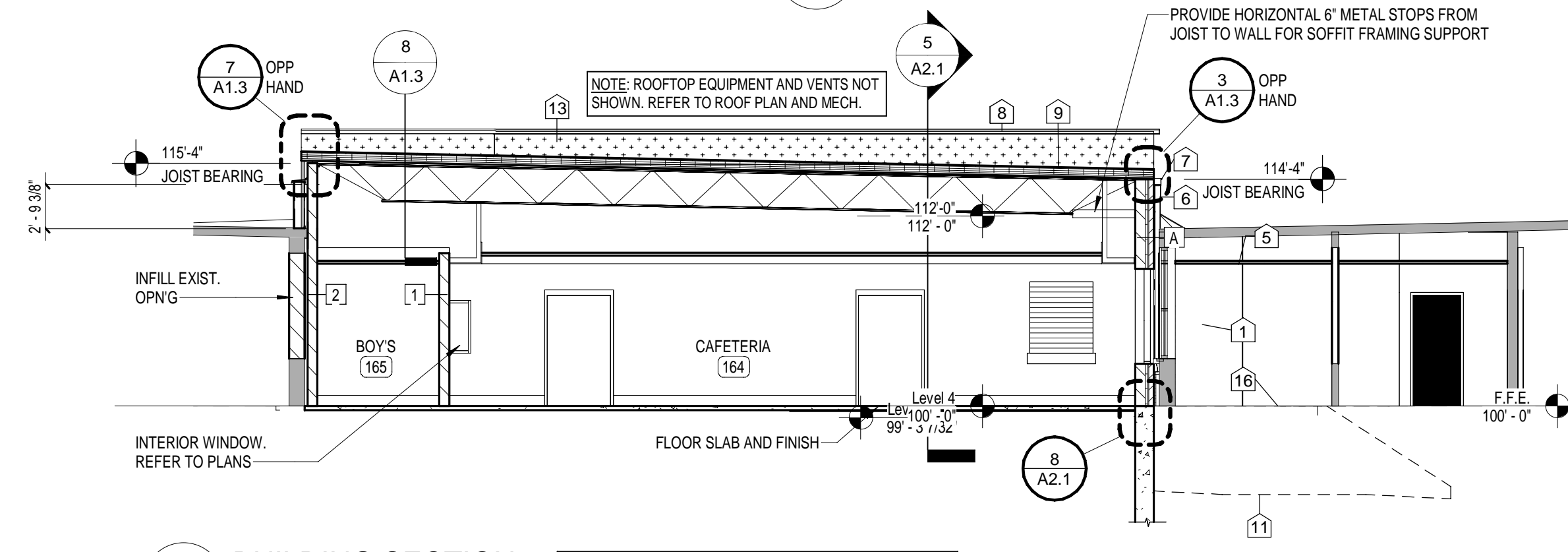
ALL NEW WORK TO BE PERFORMED IN COMPLIANCE WITH ROOFING MANUFACTURERS GUIDELINES AND MAINTAINING EXISTING ROOF WARRANTY



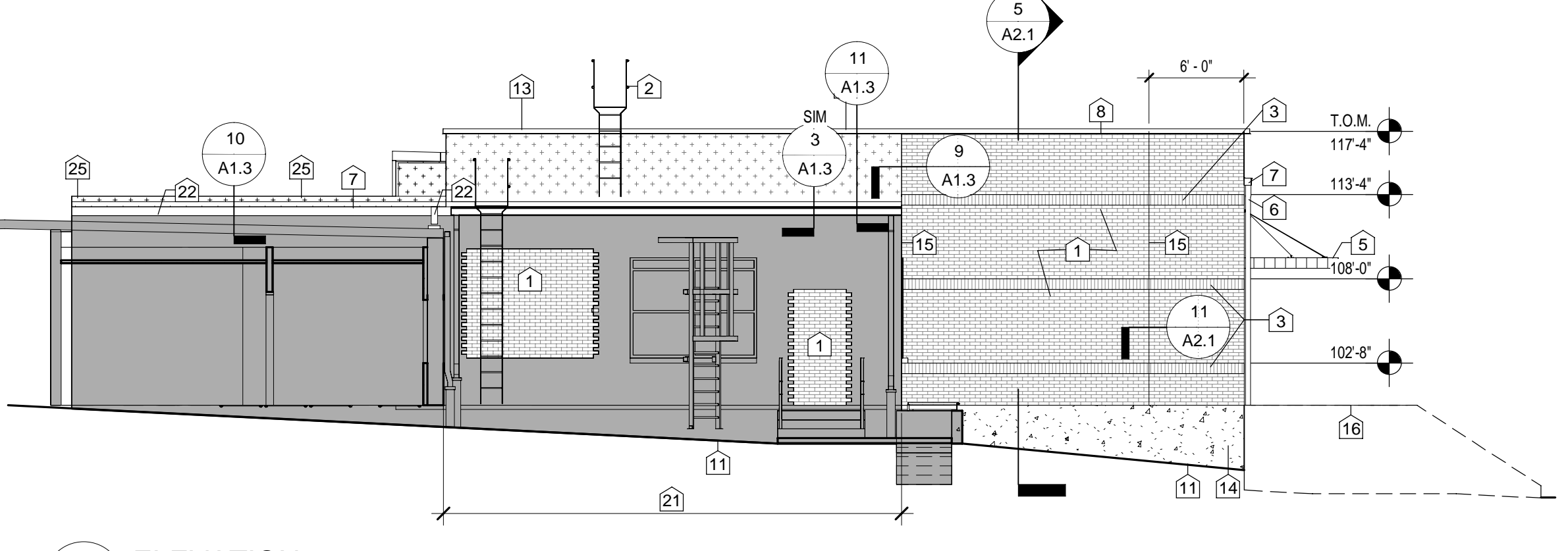
1 ELEVATION  
1/8" = 1'-0"



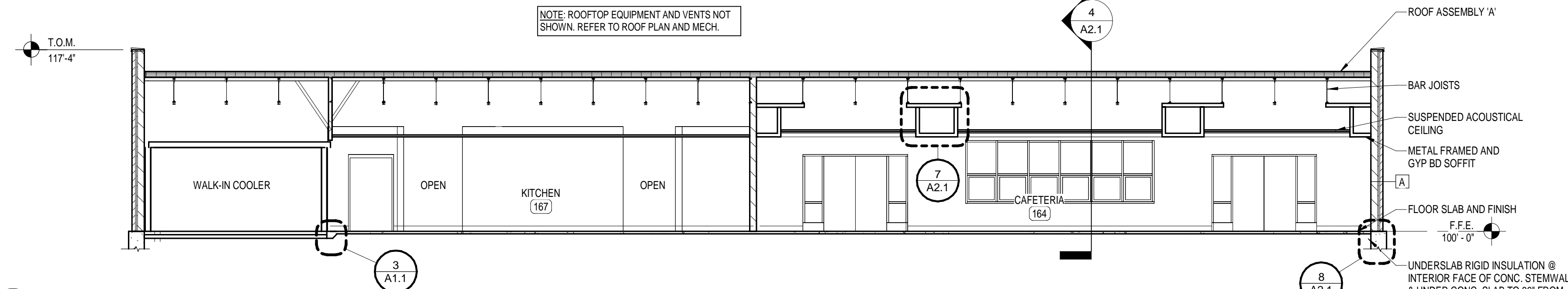
2 ELEVATION  
1/8" = 1'-0"



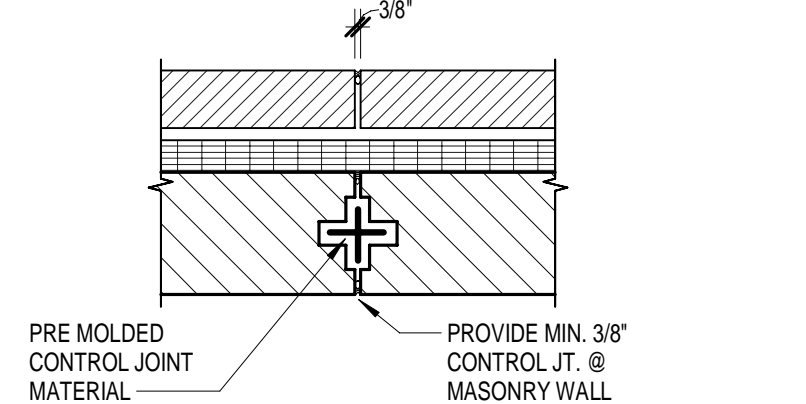
4 BUILDING SECTION  
1/8" = 1'-0"



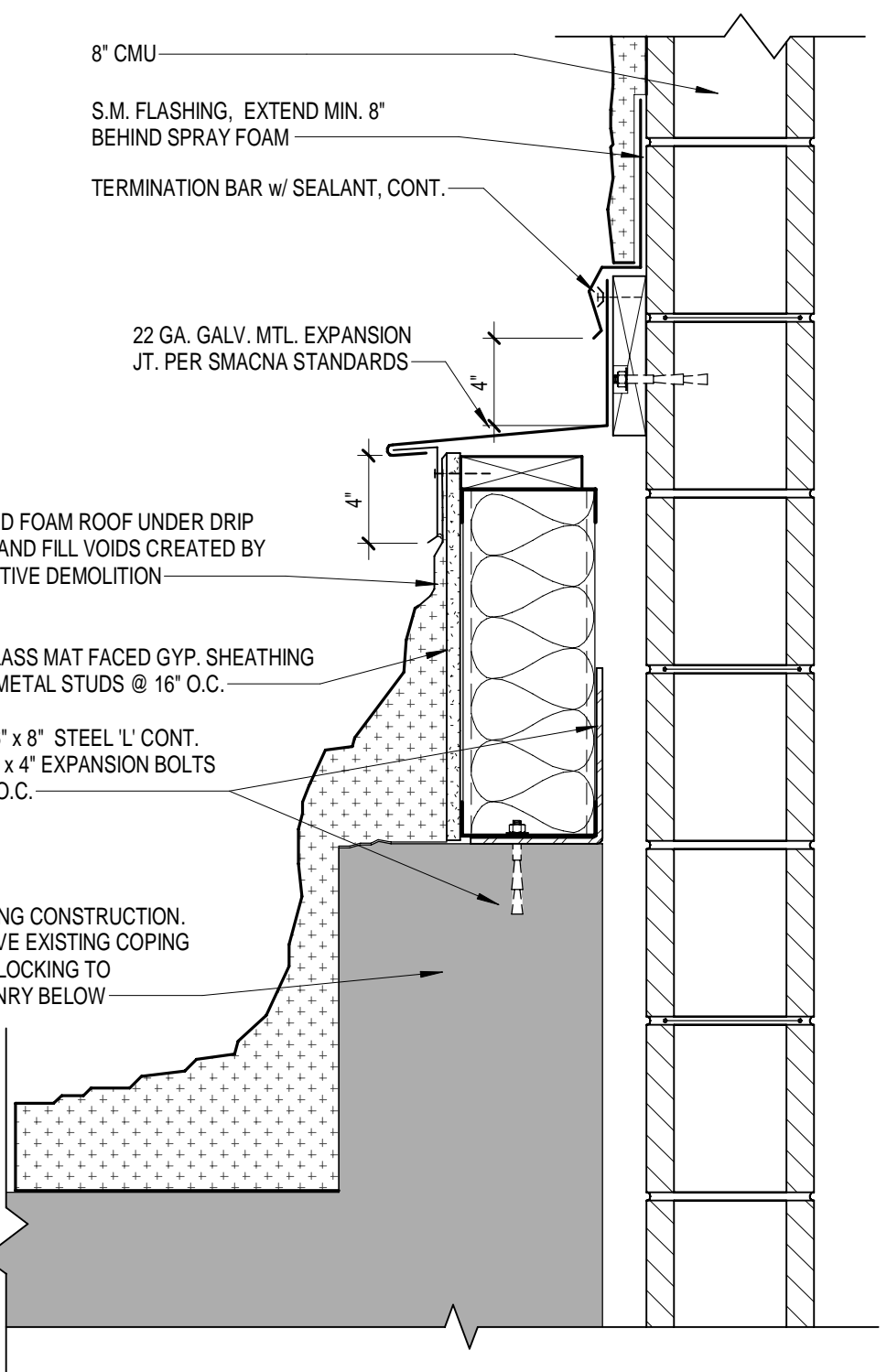
3 ELEVATION  
1/8" = 1'-0"



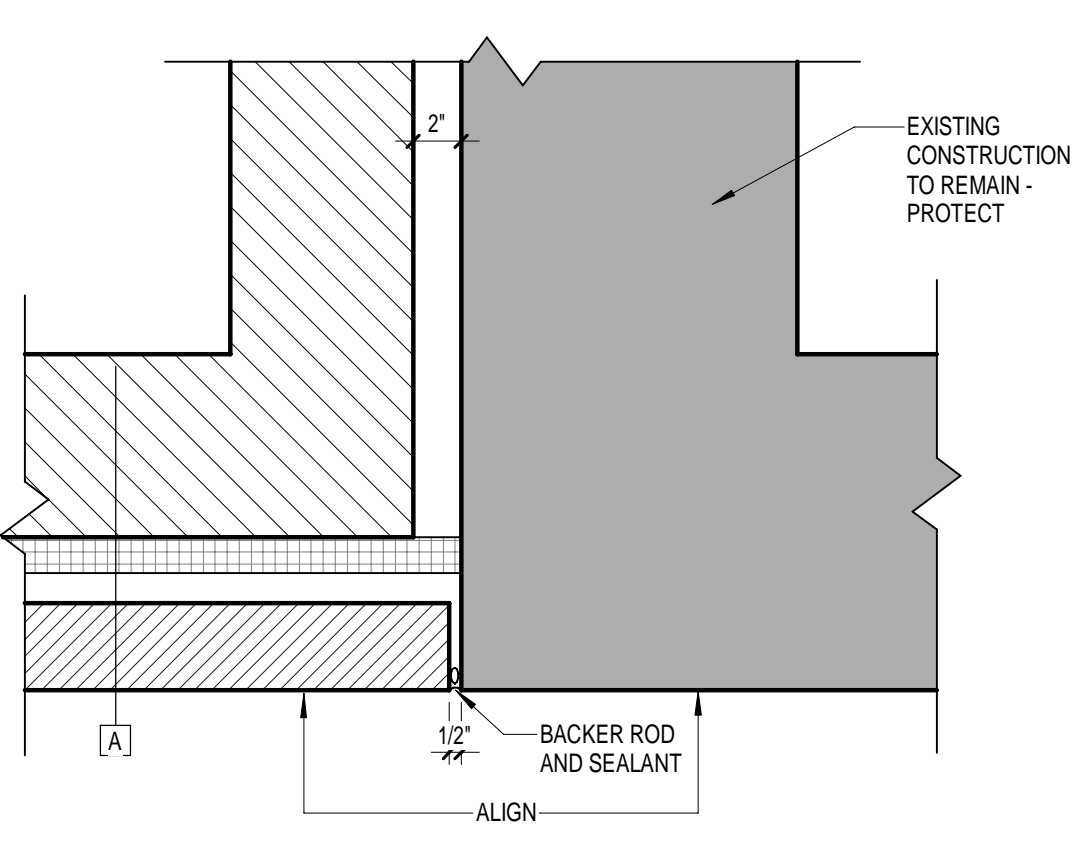
5 BUILDING SECTION  
1/8" = 1'-0"



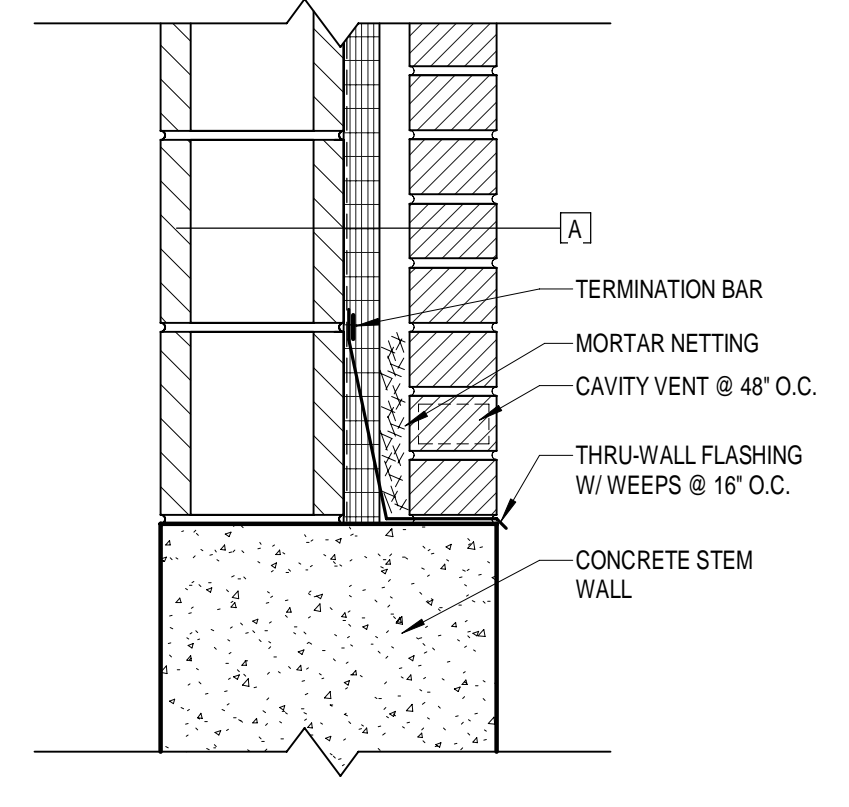
11 TYP. CONTROL/MASONRY EXPANSION JOINT (EXTERIOR)  
1" = 1'-0"



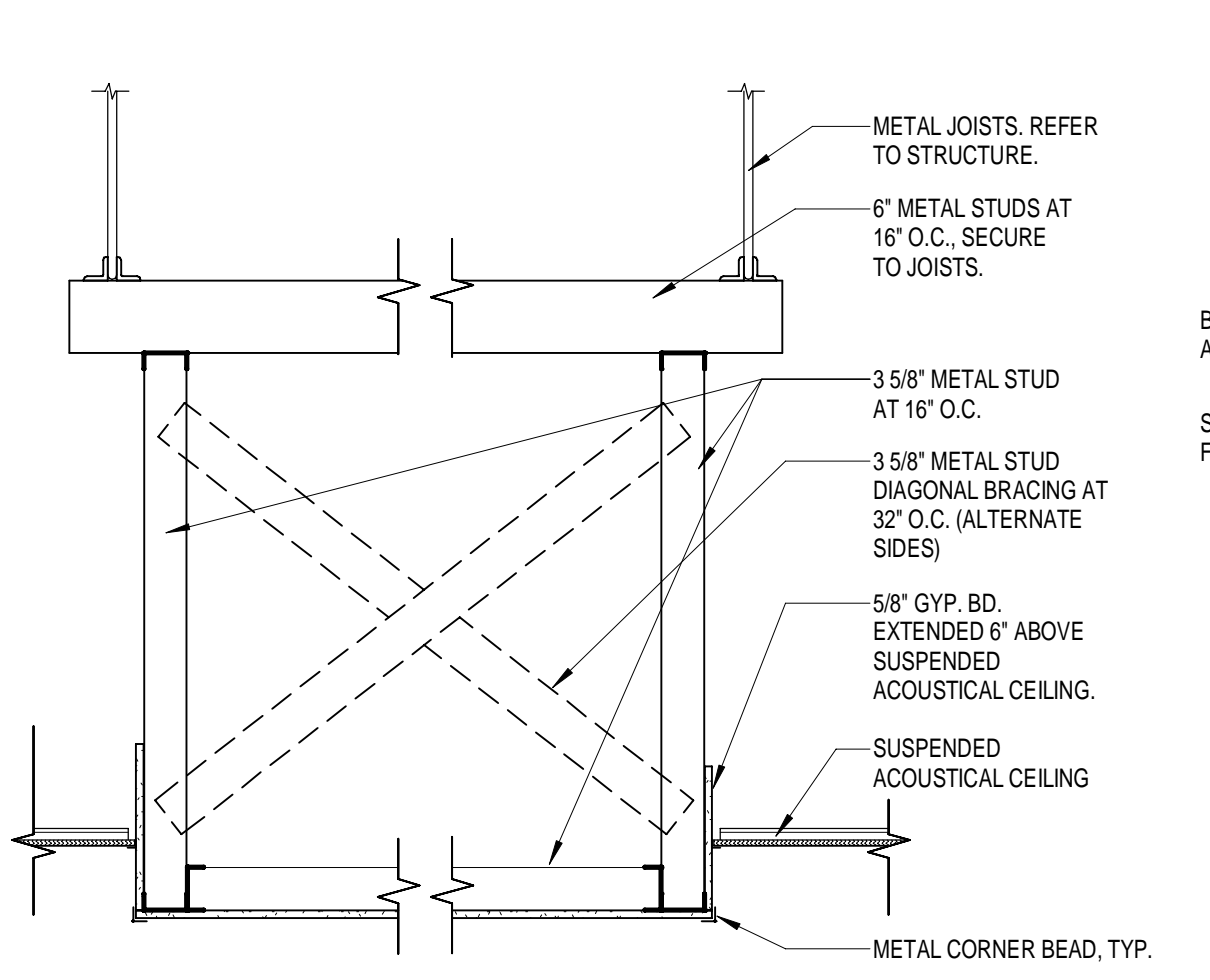
10 DETAIL  
1 1/2" = 1'-0"



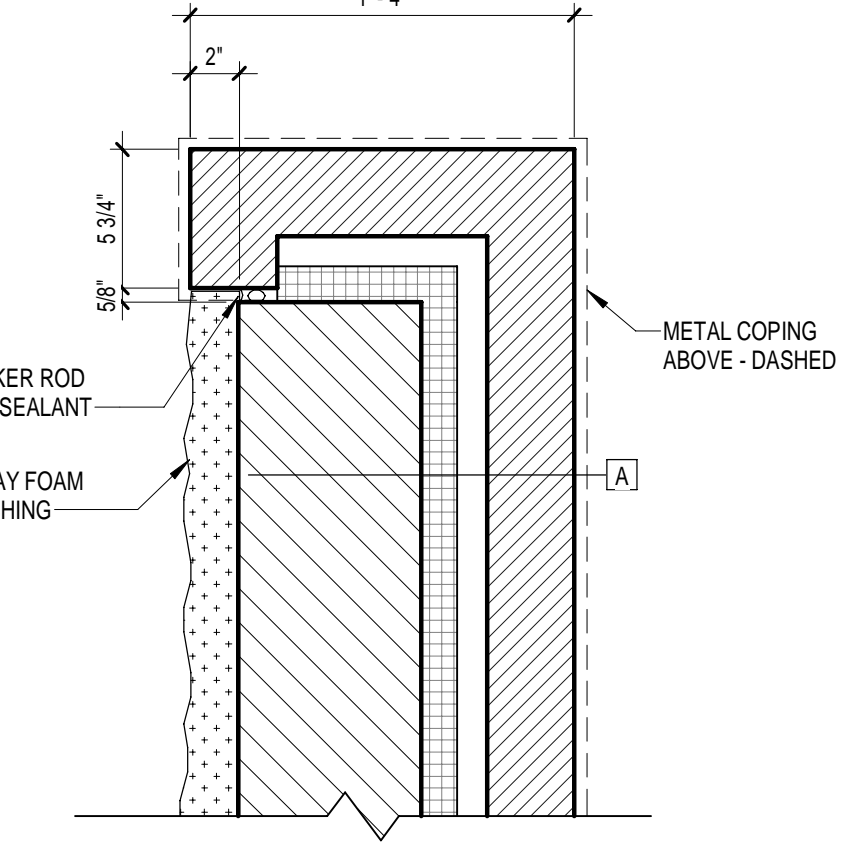
9 DETAIL  
1 1/2" = 1'-0"



8 DETAIL  
1 1/2" = 1'-0"



7 DETAIL  
3/4" = 1'-0"



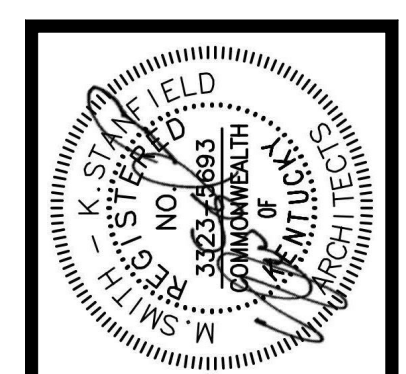
6 DETAIL  
1 1/2" = 1'-0"

GENERAL ELEVATION NOTES

- A. MATERIALS INDICATIONS AND DESCRIPTIONS, VERTICAL AND OTHER DIMENSIONS SHOWN ON ONE BUILDING ELEVATION APPLY TO OTHER BUILDING ELEVATIONS WHERE SHOWN UNLESS NOTED OTHERWISE.
- B. LINES REPRESENTING PAVING AND FINISH GRADES ARE APPROXIMATE AND ARE SHOWN FOR REFERENCE PURPOSES ONLY. REFER TO SITE PLANS FOR SPECIFIC GRADE AND SPOT ELEVATIONS AT EACH RESPECTIVELY.
- C. REFER TO FLOOR PLANS FOR LOCATION AND DOOR SCHEDULE FOR FULL EXTENT AND COMPLETE DESCRIPTION OF DOOR AND FRAME TYPES. PORTIONS OF WALLS, DOORS, AND HANDRAILS MAY BE CONCEALED BY OTHER BUILDING FEATURES SHOWN.
- D. REFER TO FLOOR PLANS FOR SPECIFIC ALUMINUM STOREFRONT TYPES AND WINDOW ELEVATIONS.
- E. LOCATIONS OF CONTROL/EXPANSION JOINTS IN MASONRY WALLS ARE SHOWN ON THIS DRAWING. SEE TYPICAL DETAILS ON SHEET A6.1 FOR SPECIFIC REQUIREMENTS AT RESPECTIVE LOCATIONS.
- F. ALL EXPOSED NEW EXTERIOR MASONRY SHALL RECEIVE APPLICATION OF SPECIFIED WATER REPELLENT.

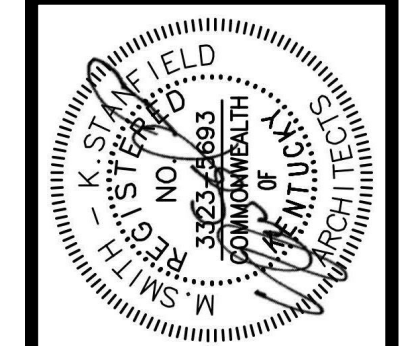
ELEVATION KEY NOTES

- 1. FACE BRICK, N RUNNING BOND PATTERN. ALIGN WITH ADJACENT EXISTING BRICK WHERE APPLICABLE.
- 2. LADDER TO ROOF. REFER TO ROOF PLAN.
- 3. SOLDIER COURSE BRICK BAND FLASH & ADJACENT. PROVIDE SOLID UNITS AT CORNERS.
- 4. ALUMINUM FRAME STOREFRONT SYSTEM. REFER TO SHEET A4.1.
- 5. MANUFACTURED CANOPY. REFER TO ROOF PLAN.
- 6. DOWNSPOUT. EXTEND TO BOOT. REFER TO ROOF PLAN AND SITE DEVELOPMENT DRAWINGS.
- 7. GUTTER. REFER TO ROOF PLAN.
- 8. COPING. REFER TO ROOF DETAILS.
- 9. ROOF ASSEMBLY TYPE 'A'.
- 10. CONCRETE STEPS. REFER TO SITE.
- 11. FINISH GRADE VARIES. REFER TO SITE DRAWINGS.
- 12. CANOPY DOWNSPOUT DISCHARGE INTO ADJACENT BUILDING DOWNSPOUT.
- 13. SPRAY FOAM ROOFING APPLIED TO VERTICAL WALL.
- 14. CONCRETE STEM WALL FOR PLATFORM / RAMP. REFER TO SITE.
- 15. MASONRY EXPANSION JOINTS. FULL HEIGHT. REFER TO DETAIL 11A/2.1.
- 16. CONCRETE PLATFORM / RAMP EDGE. REFER TO SITE.
- 17. ROOF EXPANSION BELLOWS. CONT.
- 18. MODIFY EXISTING ROOF SLOPE WITH NEW SPRAY FOAM ROOFING OVER PREPARED SURFACE OF EXISTING SPRAY FOAM ROOFING. REFER TO ROOF PLAN.
- 19. RAMP BEYOND. REFER TO SITE.
- 20. APPROXIMATE ROOF DRAIN LOCATION. REFER TO ROOF PLAN.
- 21. APPLY WATER REPELLENT SEALER AT ALL NOTED EXTERIOR BRICK, WHERE EXISTING OPENINGS RECEIVE NEW BRICK. CLEAN EXISTING MASONRY FULL LENGTH OF WALL FROM / TO NEAREST CORNER AND APPLY REPELLENT TO EXISTING BRICK ALSO.
- 22. DOWNSPOUT. DISCHARGE TO SPLASHBLOCK ON ROOF.
- 23. FILL ALL HOLES IN EXISTING EXTERIOR BRICK WALL AND CONCRETE STEM WALL RESULTANT FROM DEMOLITION OF STRUCTURE CONTAINING COOLER/FREEZER CORRIDOR WITH CUSTOM COLOR SEALANT & MATCH EXISTING. BROADCAST SAND IN INSTALLED SEALANT.
- 24. H.M. DOOR AND FRAME. PAINT.
- 25. SHEET METAL FASCIA. SEE DETAIL 10A1.3.
- 26. VERTICAL 2X2" SHEET METAL.
- 27. WHERE COOLER / FREEZER HAS BEEN REMOVED, NEW DRIP EDGE AND GUTTER TO BE INSTALLED TO MATCH EXISTING. NEW FASCIA AND BLOCKING AS REQUIRED. APPROXIMATE LENGTH 2'-0" +/- VERIFY IN FIELD. REMOVE EXISTING SPRAY FOAM ROOF AS REQUIRED. SEE PHOTOS 12 THIS SHEET. NEW DOWNSPOUT TIE INTO EXISTING GUTTER.



JOB NO.	2210
DATE	08 / 03 / 23
DRAWN	M.C., HH
CHECKED	TSS / BKL

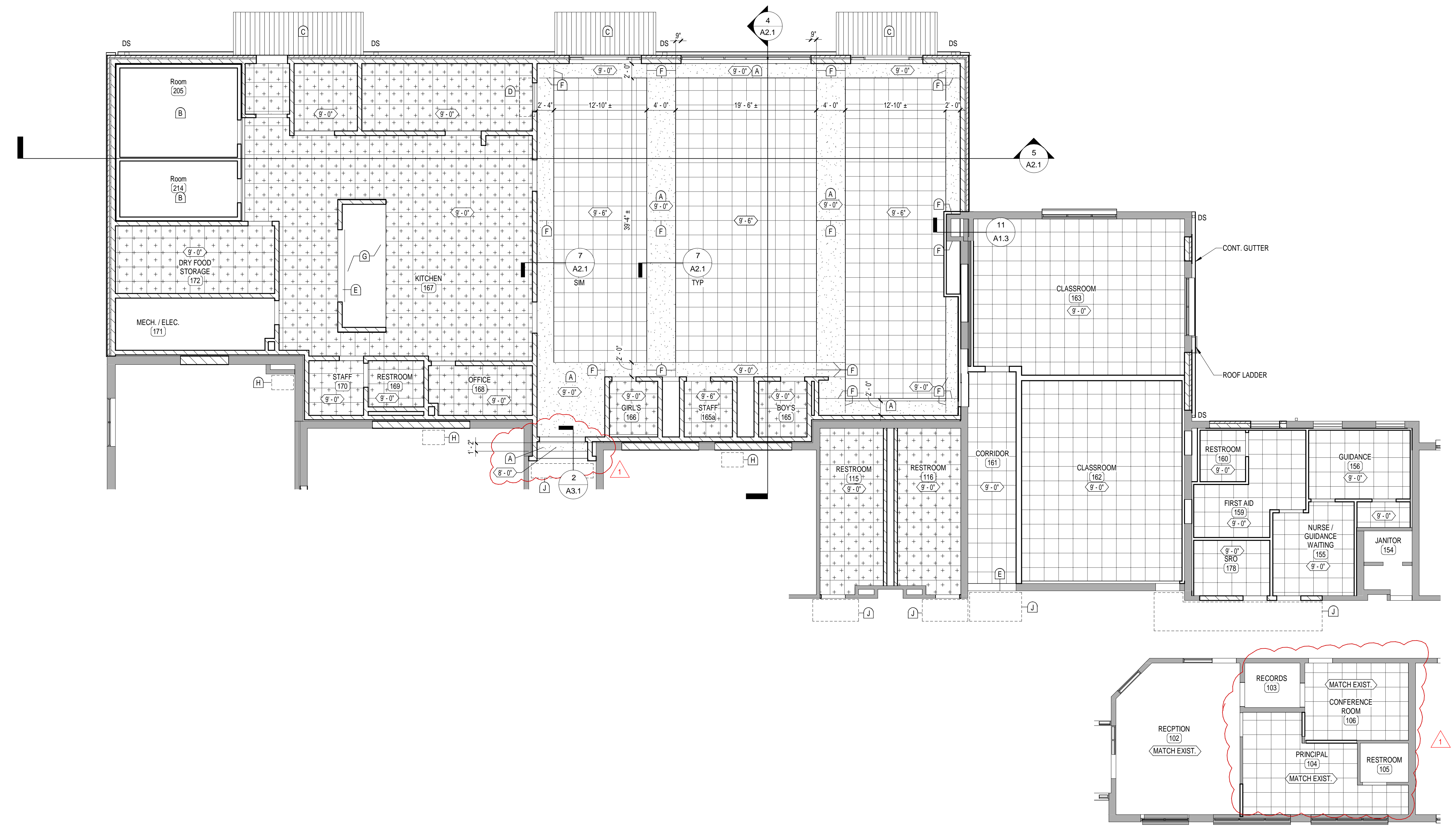
REVISIONS		
No.	Description	Date
1	ADDENDUM #1	09 / 21 / 23



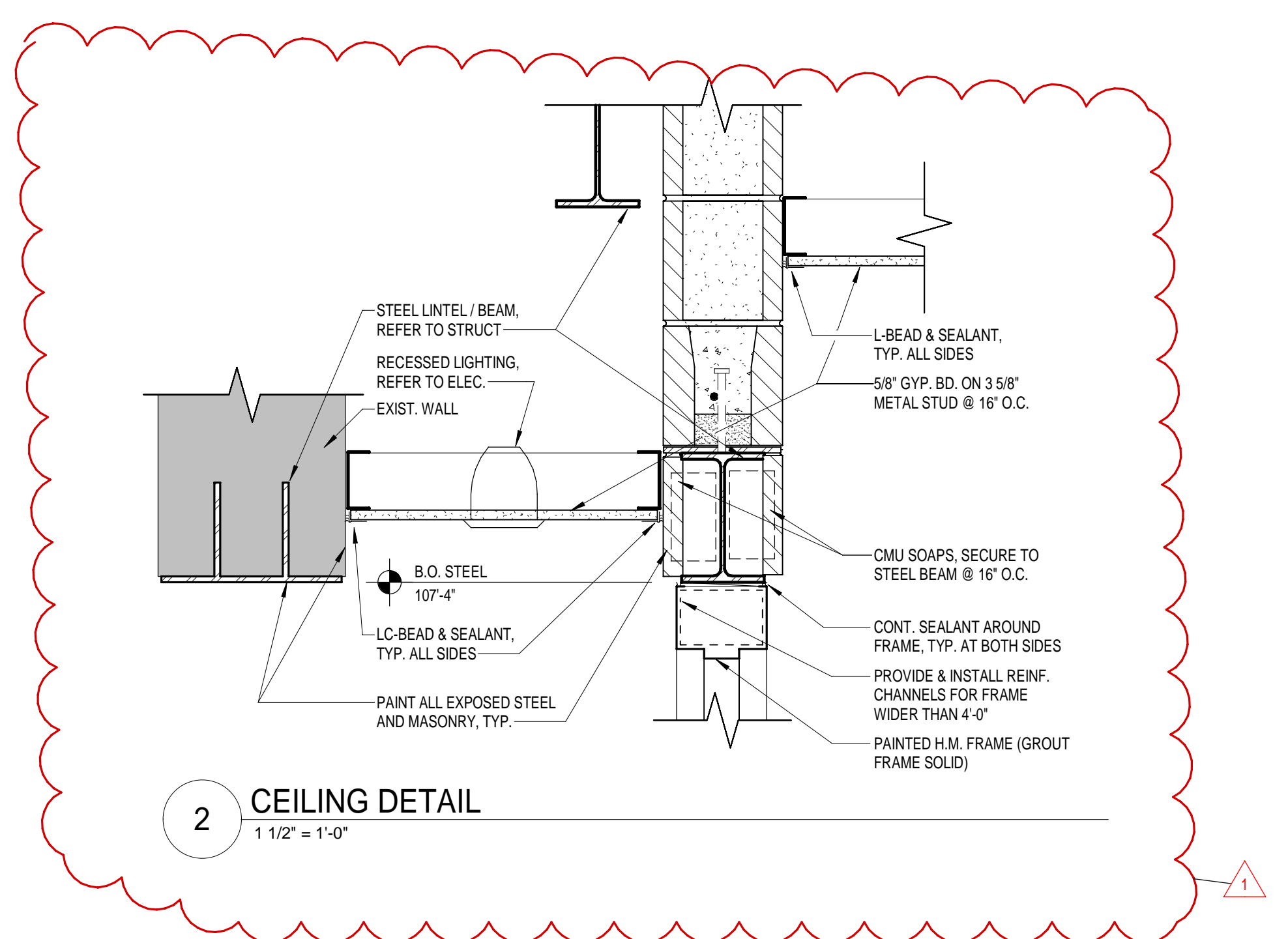
JOB NO.	2210	
DATE	08/03/23	
DRAWN	M.C., KL	
CHECKED	TSS/BKL	
COPYRIGHT © 2023 SHERMAN CARTER BARNHART ARCHITECTS, PLLC		
<b>REVISIONS</b>		
No.	Description	Date
1	ADDENDUM #1	08-21-23

SHEET

**A3.1**



**1 REFLECTED CEILING PLAN**  
1/8" = 1'-0"



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

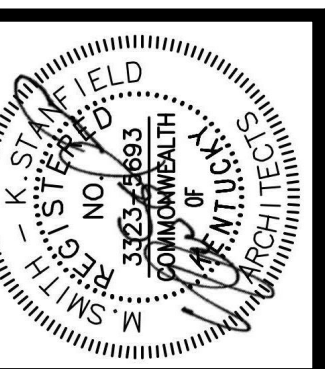
REFLECTED CEILING PLAN KEY NOTES	
NOTE: NOT ALL NOTES APPLY TO THIS SHEET.	
A.	GYP BD SOFFIT, PRIME AND PAINT.
B.	CEILING OF WALK-IN COOLER/FREEZER OPEN TO STRUCTURE ABOVE.
C.	CANOPY, REFER TO ROOF PLAN.
D.	OVERHEAD COILING SHUTTER, REFER TO PLANS.
E.	CMU BULKHEAD.
F.	CONTROL JOINT.
G.	KITCHEN RANGE HOOD, REFER TO MECH. DWGS.
H.	REMOVE AND REPLACE EXISTING ACOUSTICAL CEILING TILE AND SUSPENSION SYSTEM FOR PLACEMENT OF NEW ROOF DRAINS / LEADERS.
J.	REMOVE AND REPLACE EXISTING ACOUSTICAL CEILING TILE AND SUSPENSION SYSTEM AS REQ'D TO FACILITATE NEW MASONRY OPENINGS.

REFLECTED CEILING LEGEND	
	TYPE A 2x2 SUSPENDED ACOUSTICAL CEILING.
	TYPE B 2x2 VINYL FACED SUSPENDED ACOUSTICAL CEILING.
	GYP. BD. PRIME AND PAINT.
	OPEN TO STRUCTURE ABOVE.

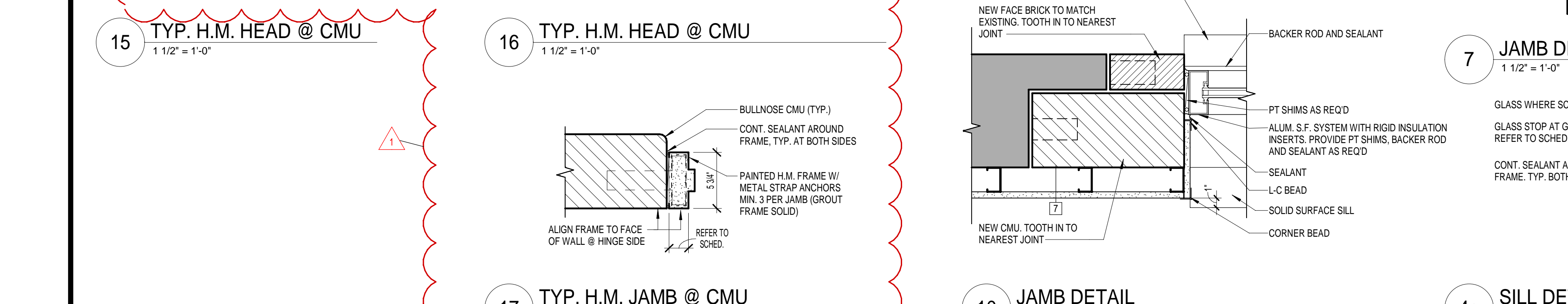
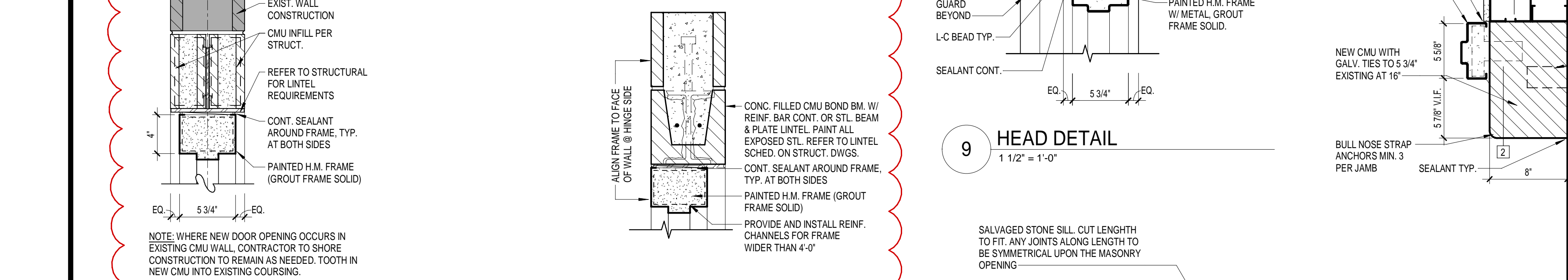
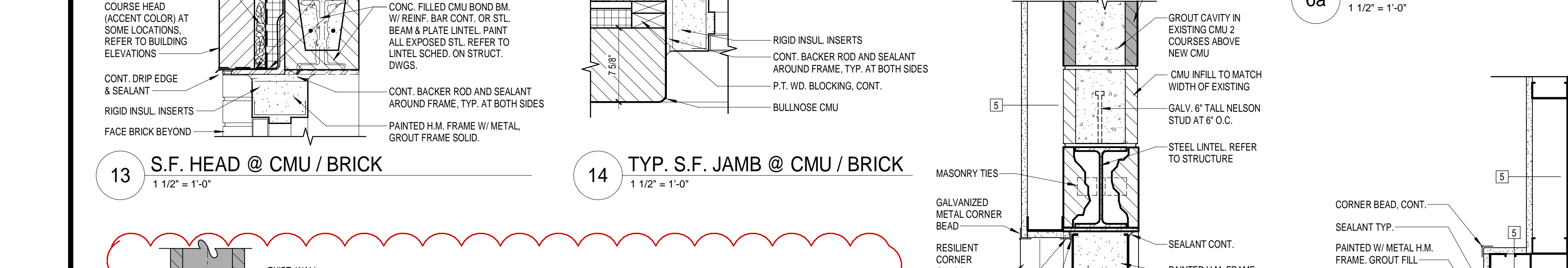
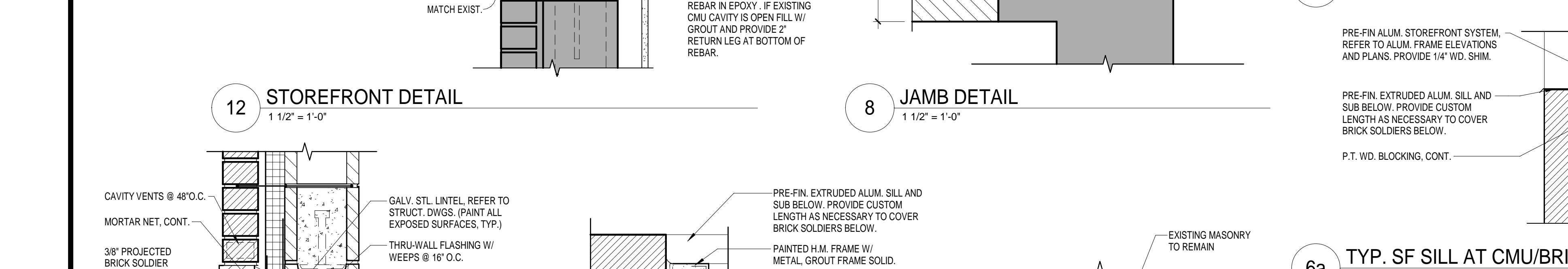
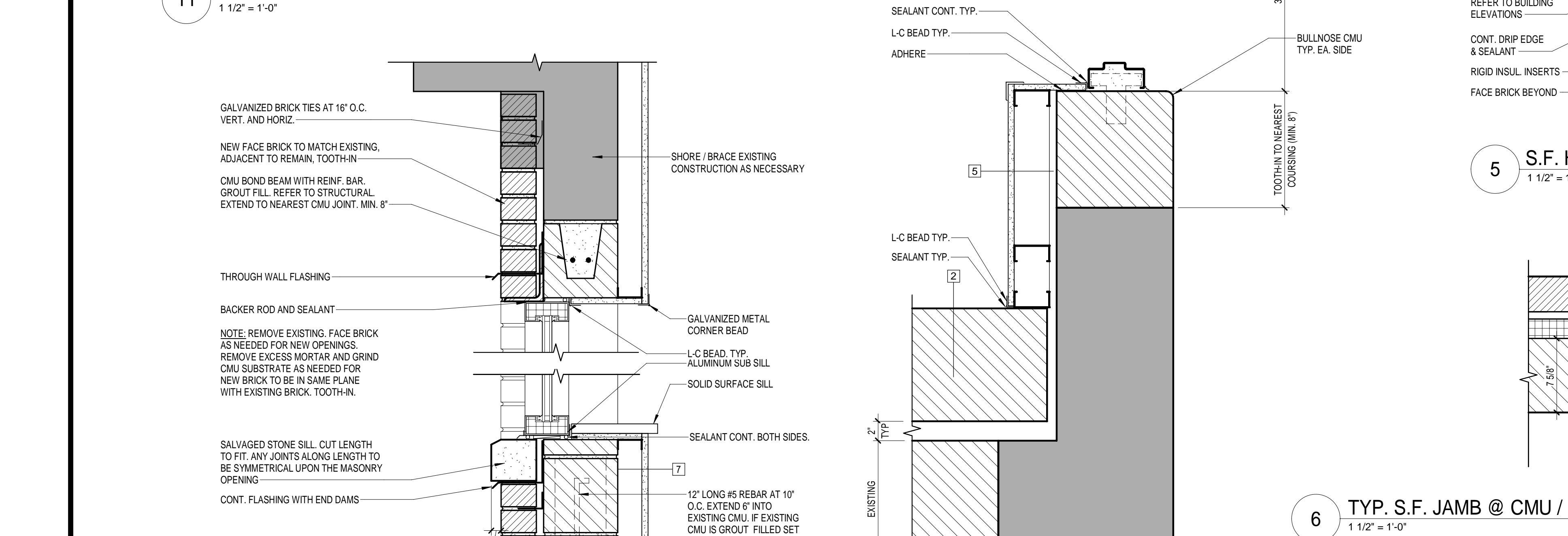
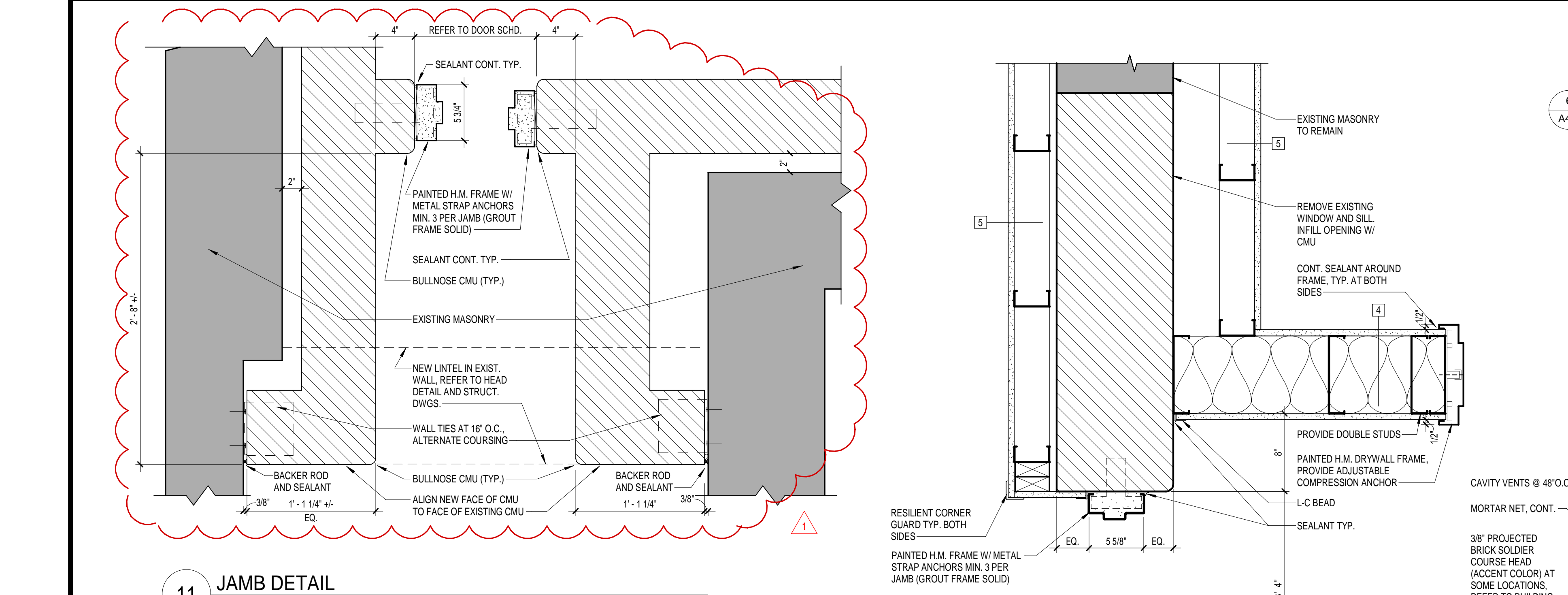
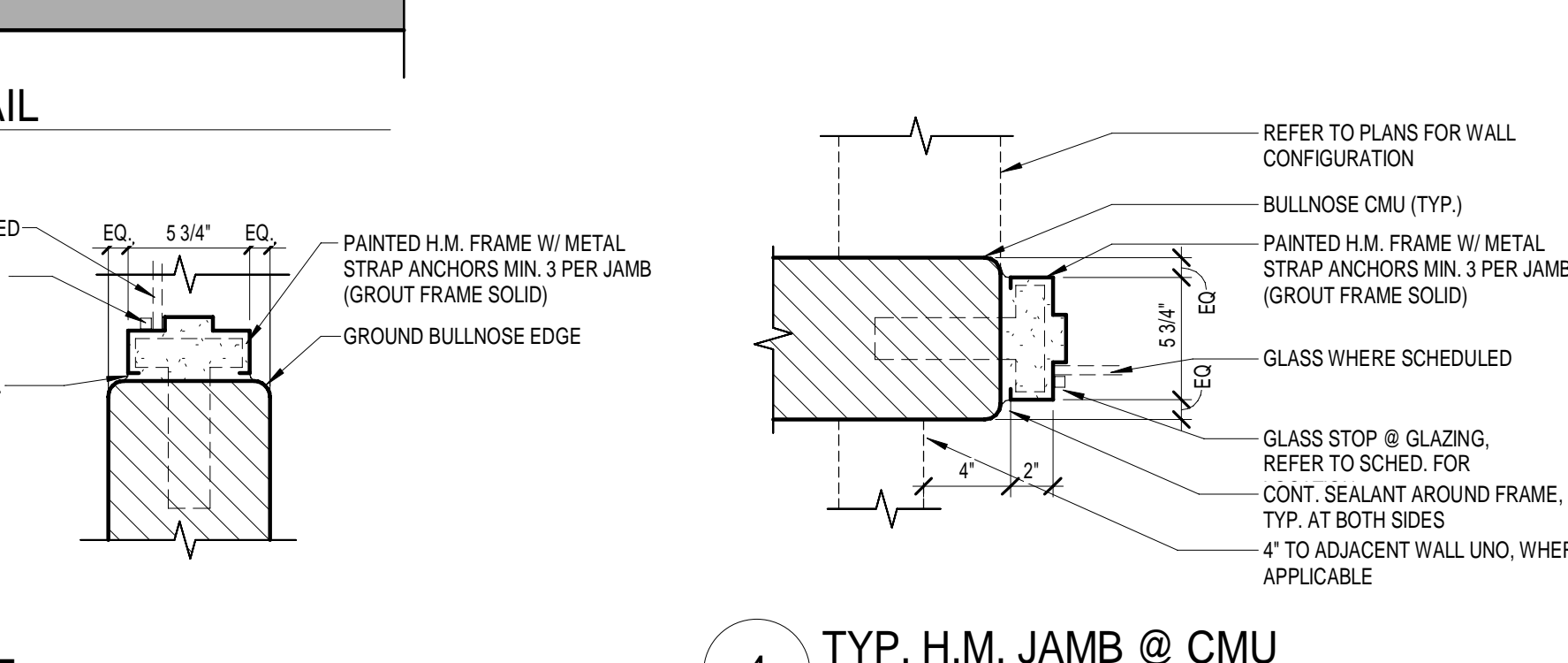
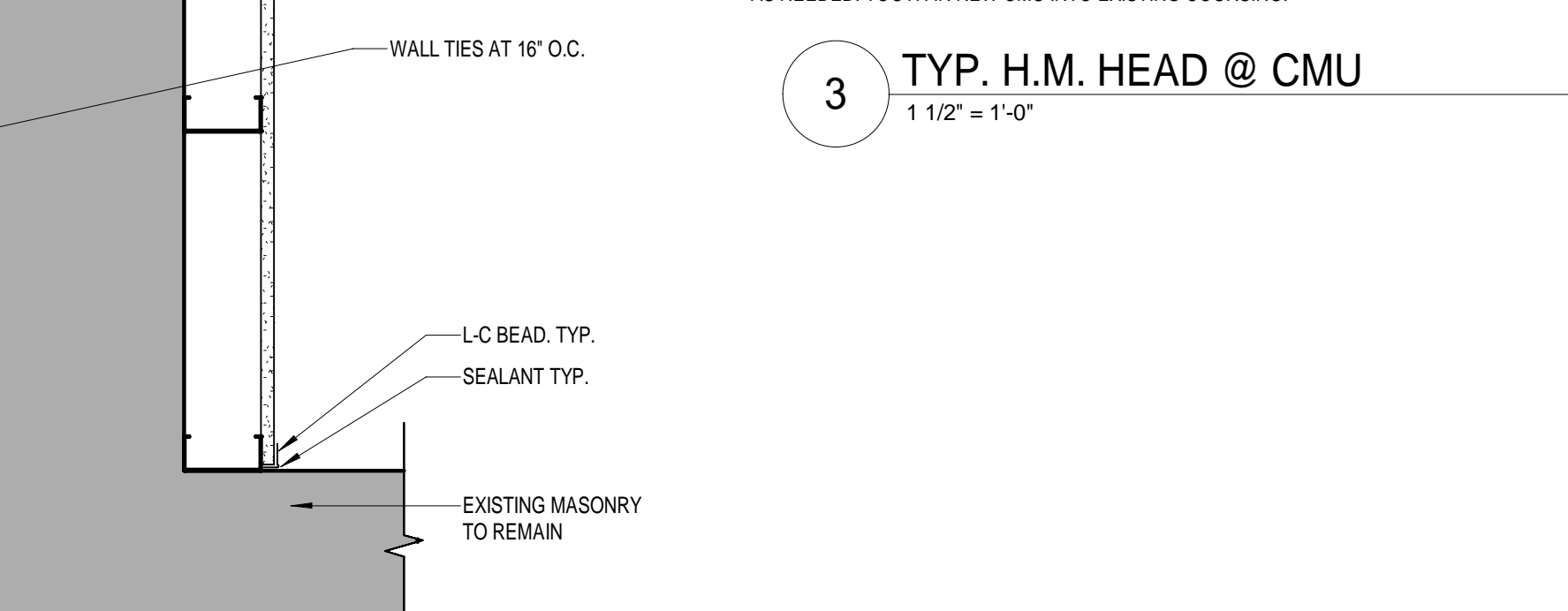
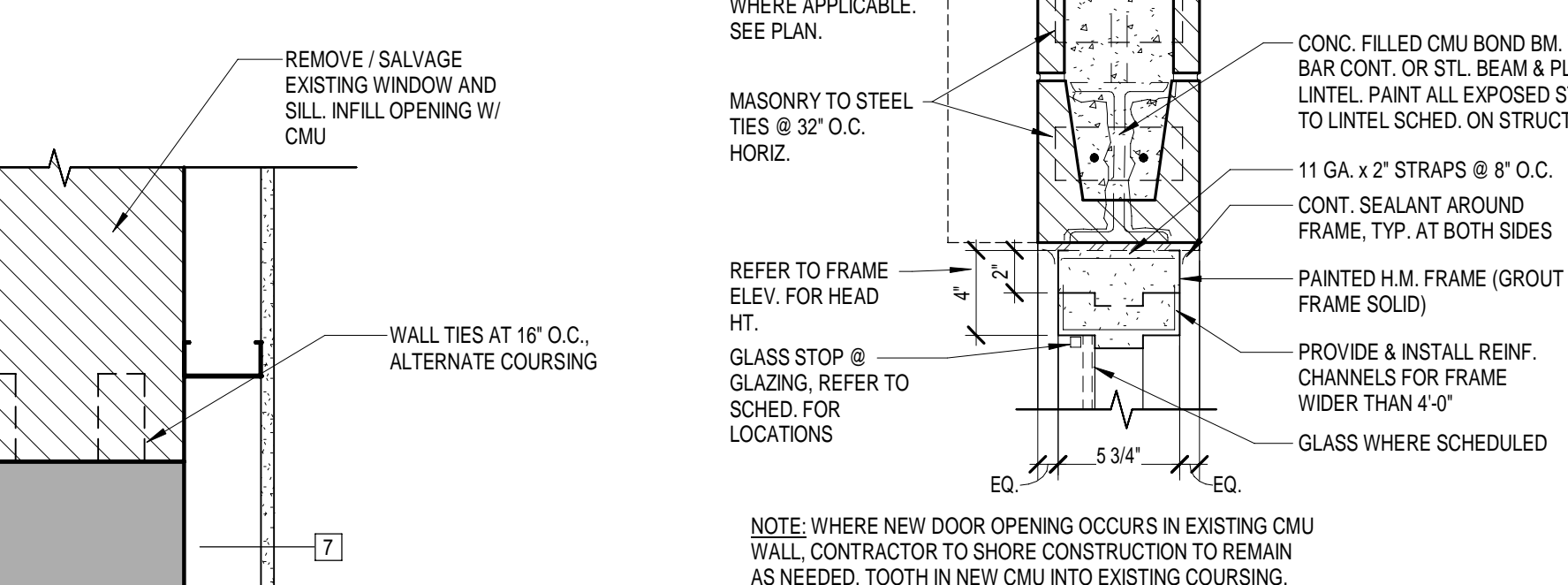
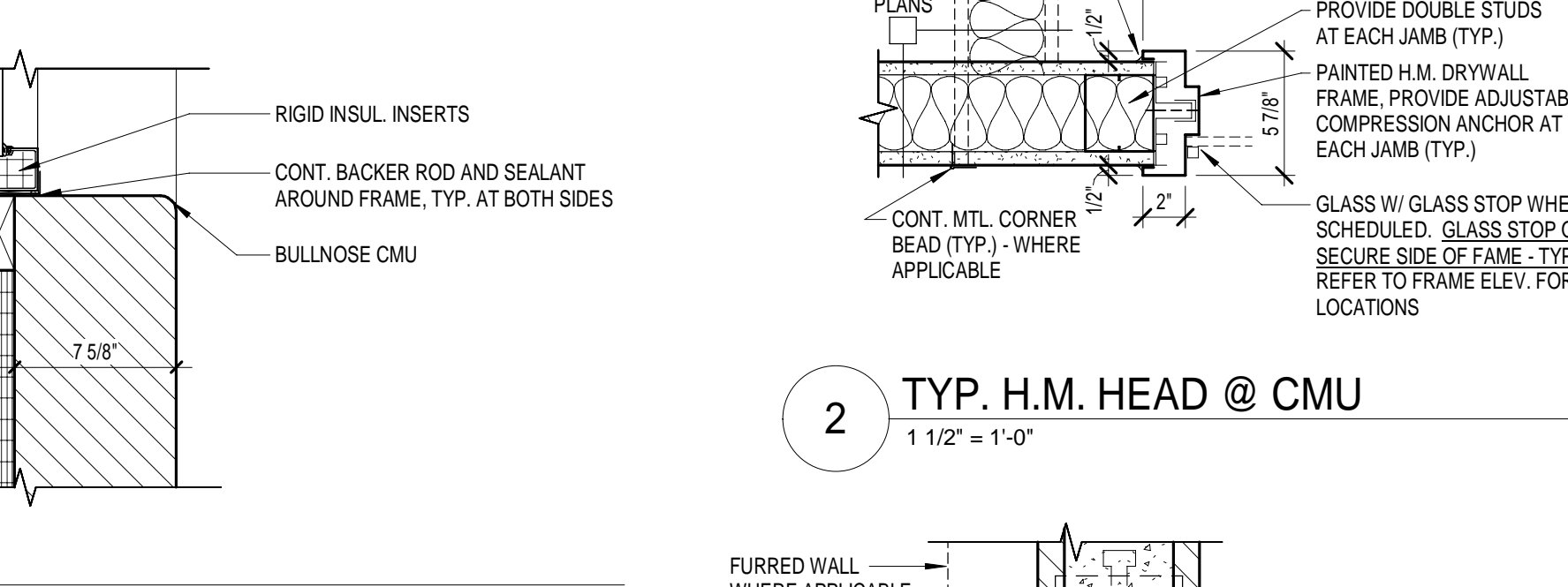
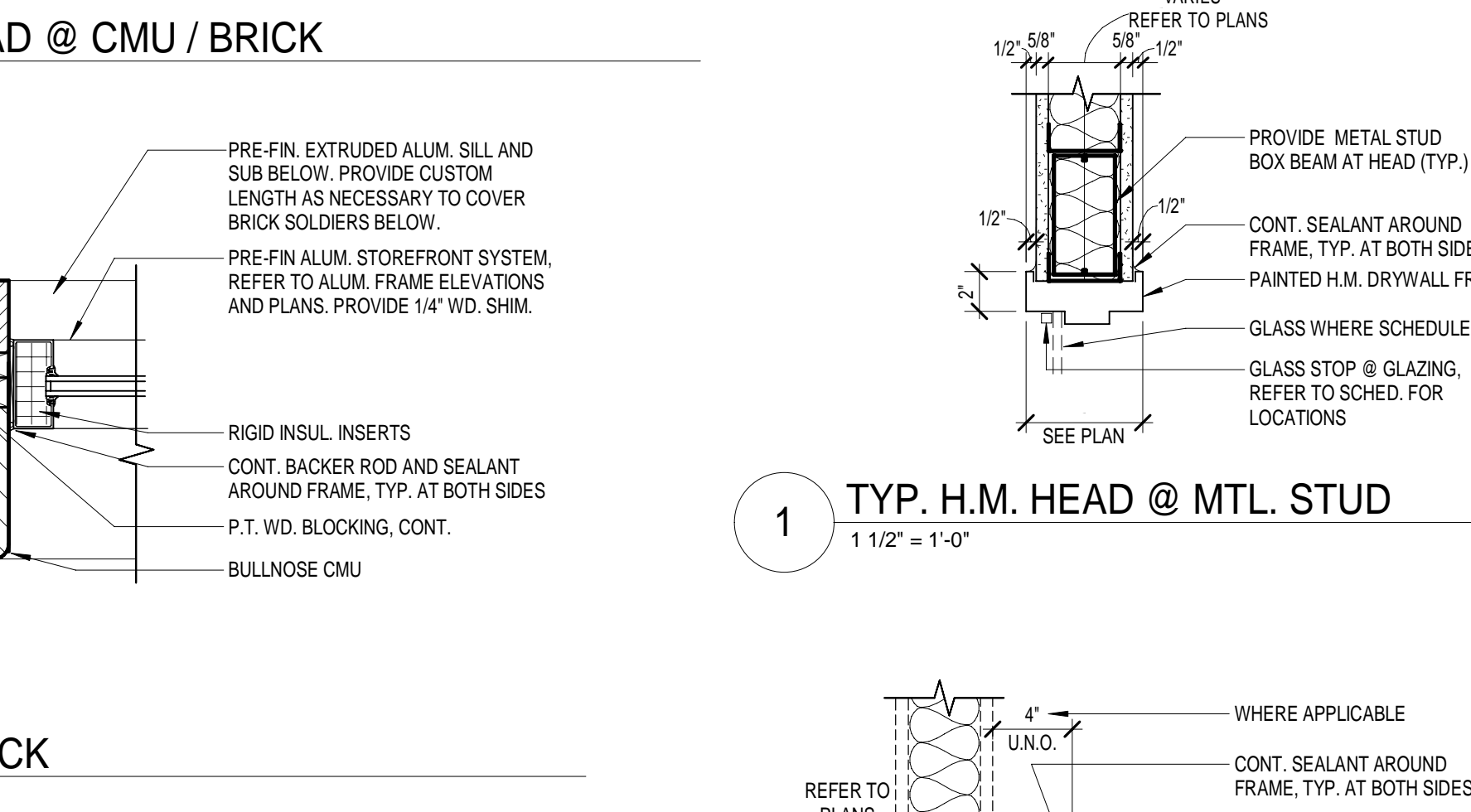
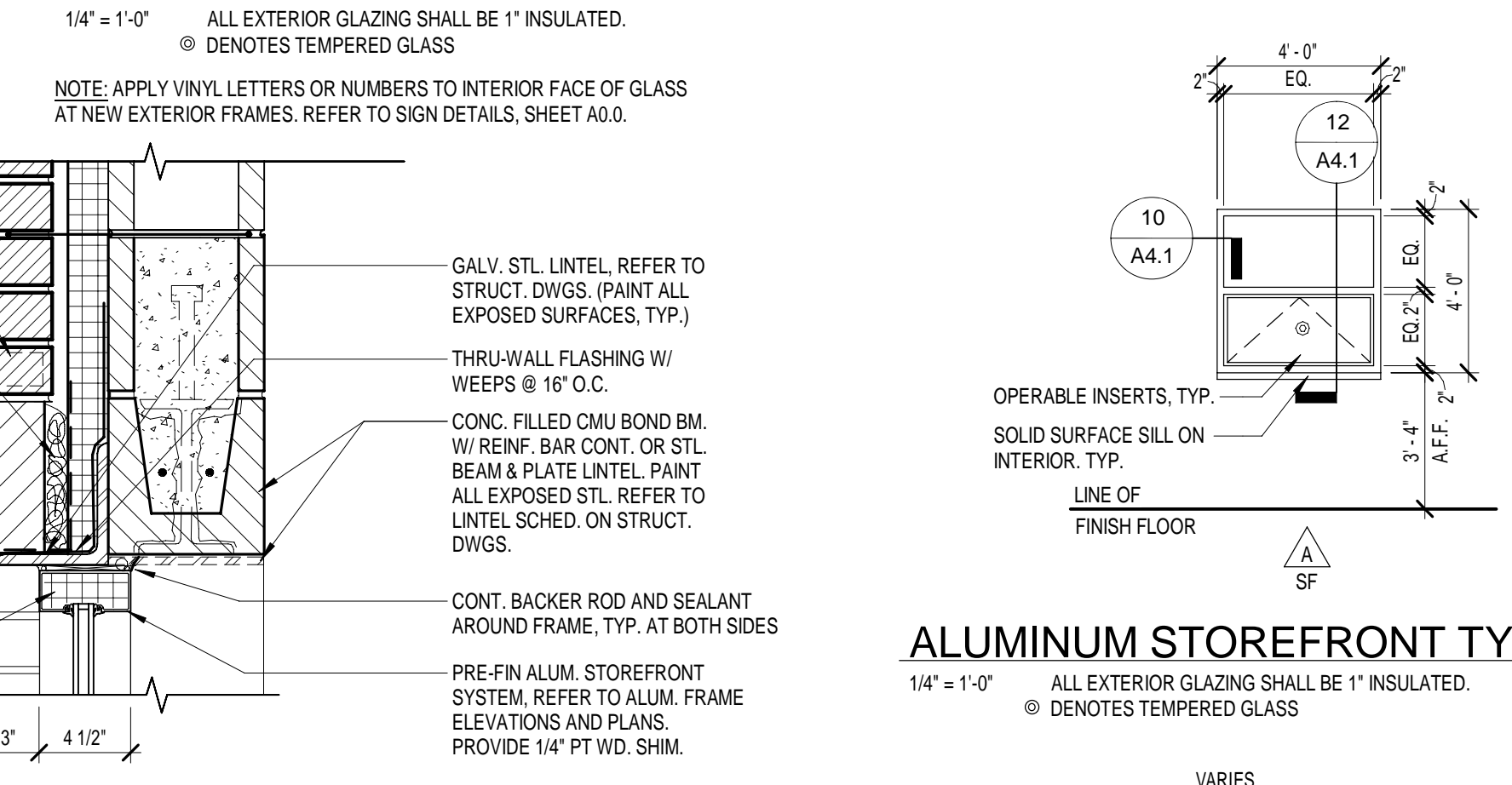
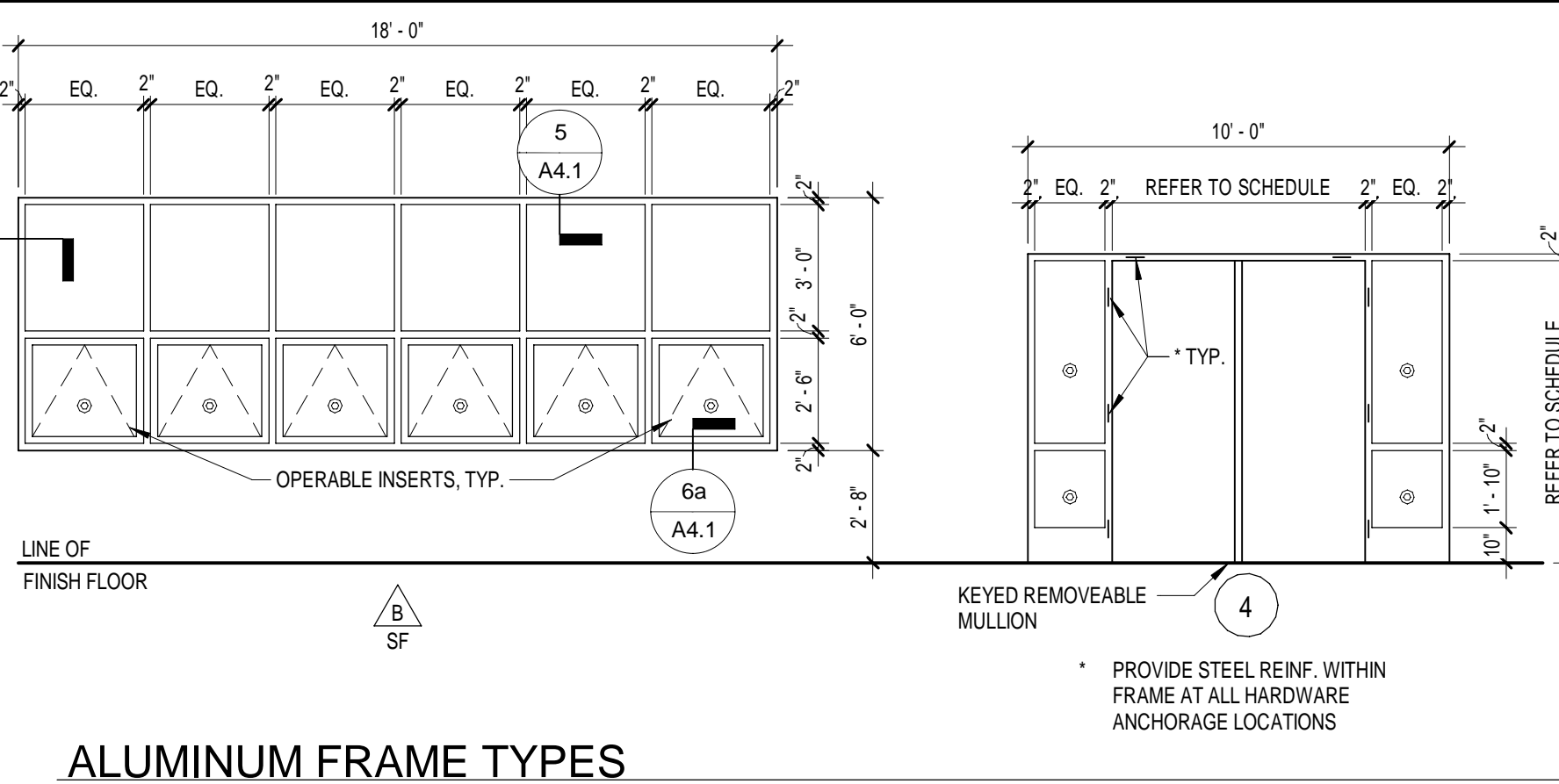
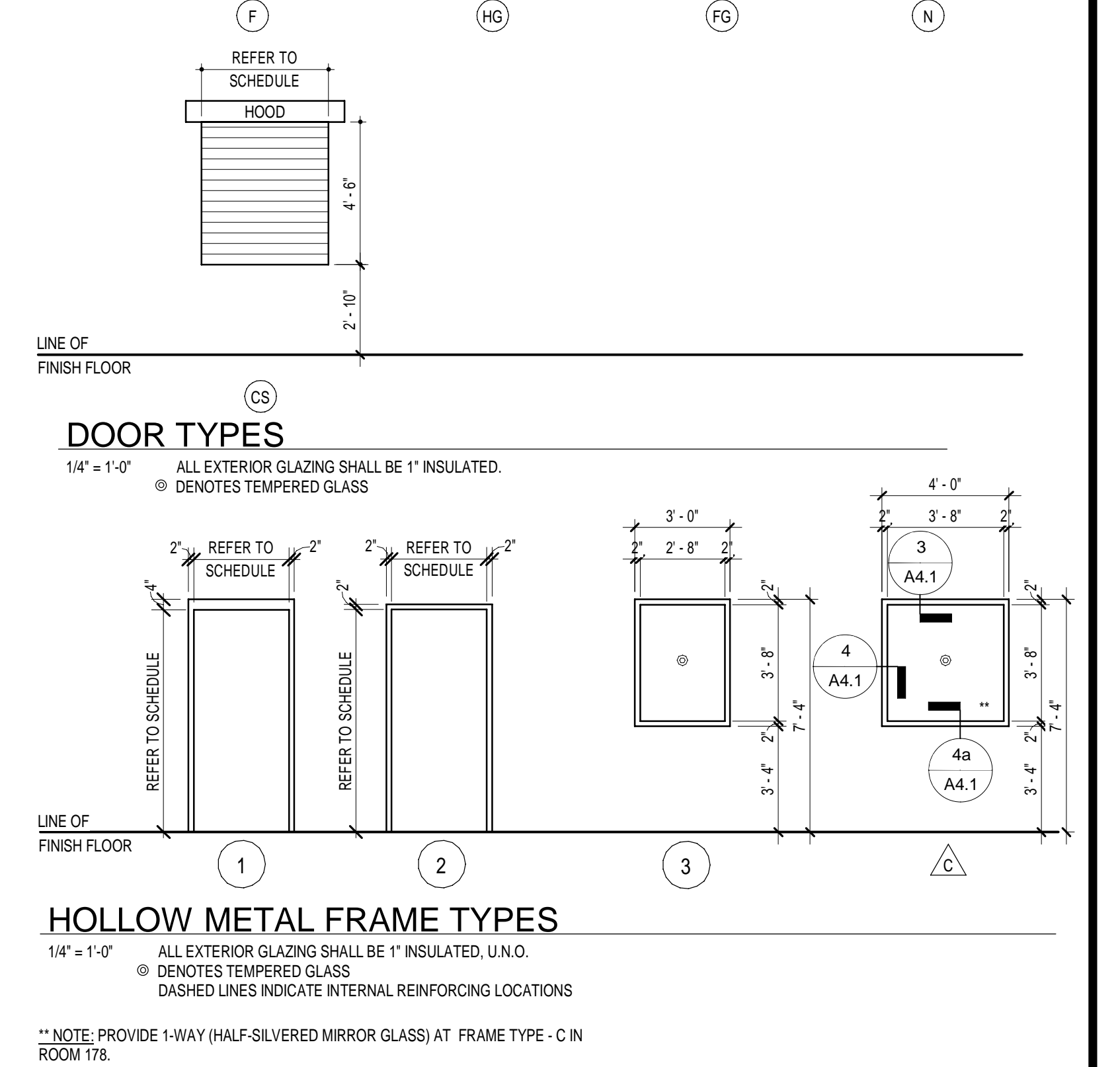
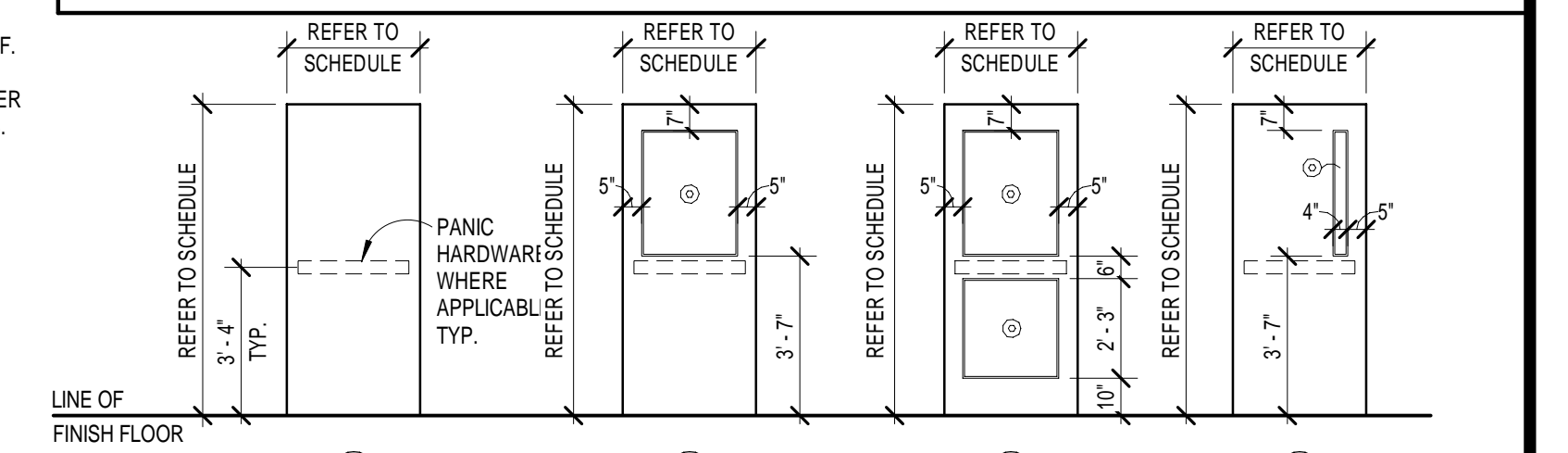
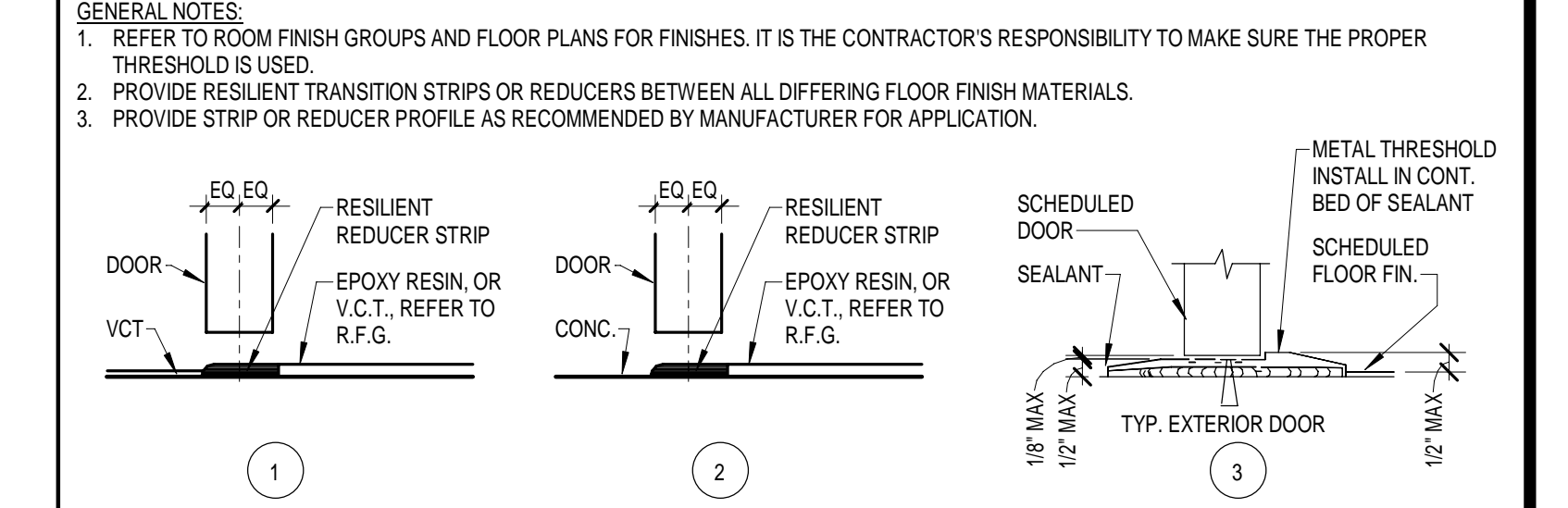
GENERAL CEILING NOTES	
1.	REFER TO MECHANICAL AND/OR ELECTRICAL DRAWINGS FOR TYPE, SIZE AND OTHER REQUIREMENTS PERTAINING SPECIFICALLY TO THE REFLECTED CEILING PLANS.
2.	REFER TO WALL PARTITION TYPES FOR DESCRIPTION OF WALLS EXTENDING (OR NOT) TO UNDERSIDE OF DECKING AND/OR STRUCTURE ABOVE.
3.	INSTALL SPRINKLER HEADS IN THE CENTER OF CEILING PANELS.
4.	CONTRACTOR TO SUBMIT FULL COORDINATION DRAWINGS FOR ALL CEILING ITEMS INCLUDING JOIST SPACING, LIGHTING, HVAC LAYOUT AND FIRE PROTECTION SYSTEMS.



DOOR SCHEDULE table with columns: NO., NO. LEAVES, LEAF WIDTH, HT., MATL., TYPE, GLAZING, FRAME, JAMB, DOOR FIRE RATING, CLOSER DEG., REMARKS

DOOR AND FRAME NOTES: HOLLOW METAL FRAME NOTES, DOOR NOTES, GLASS AND GLAZING NOTES, HARDWARE NOTES. Includes detailed notes on materials, finishes, and hardware.

THRESHOLD DETAIL CONDITIONS





August 17, 2023

## **PRE-BID MEETING MINUTES**

RE: LeGrande Elementary School Addition/ Renovation  
SCB Project No. 2210/ 23-277

DATE OF MEETING: August 17, 2023 at 2:00 pm Local Time

LOCATION: LeGrande Elementary School

The following is a summary of items to be discussed during the meeting:

### **1. Introductions and Responsibilities**

- a. Nathan Smith- Superintendent for the Hart County Board of Education
- b. Sherman Carter Barnhart Architects
- c. CMTA Engineers

### **2. Circulation of Sign-In Sheet – All parties are requested to sign the sign-in sheet. Refer to attached Sign-In Sheet.**

### **3. All meeting minutes generated from this meeting will be issued as part of Addendum No. 1.**

### **4. General**

- a. Project Scope: Scope includes construction of a kitchen and cafeteria and renovation within the building and to building systems and sanitary treatment facility.
- b. Review project bidding as related to general construction delivery method.
  1. Review the various bid forms and submittal requirements. Contractors are to closely review all submittal forms and sequence of bidding and bidding requirements as outlined in Division 0 and Division 1 of the Contract Documents.
- d. There are no prevailing wage scale requirements.
- e. The project sales tax exempt for all Owner direct purchased items. Refer to specifications.

**5. Sequence for Construction**

- a. Prior to construction, the Contractor shall erect a perimeter fence at the job site. The location of the fence shall be coordinated with the Owner with location of gates as indicated. The Owner shall be provided two keys for pad locks to the fenced areas.
- b. For all locked areas within the building being utilized by the Contractor for storage or construction usage, a key shall be provided to the Owner.
- c. The Contractor will have construction meetings with subcontractors every two weeks or more frequent if required, which will include all current critical subcontractors working on the project.
- d. The Contractor shall coordinate the site utilities with the Owner.
- e. The Contractor shall coordinate all inspections by local jurisdictions and State jurisdictions having authorization. The Contractor shall coordinate Owner/Architect inspections of below grade work, below slab, inside of walls and above ceiling. These observations shall occur prior to closing up or backfilling those areas.

**6. Work Restrictions**

- a. Limit use of premises to work in areas indicated. Confine operations to areas within contract limits indicated. Do not disturb portions of the site beyond the areas in which the Work is indicated.
- b. Workers shall abide by code of conduct to include wearing shirts at all times. Alcohol, smoking, drugs, firearms, foul language and fraternizing with students or staff is strictly prohibited. Employment of workers convicted of felony sec crimes is also prohibited consistent with the intent of KRS 160.380.
- c. Staff and students will be arriving at the school between the hours of 7:00 a.m. and 8:00 a.m. and leaving the school between the hours of 2:45 p.m. and 3:30 p.m.

**7. Critical Dates**

- a. Bid Date is **Tuesday August 29, 2023 at 2:00pm. (CT)** local time at the Hart County Board of Education,
- b. The Owner anticipates issuing the Notice to Proceed pending KDE approval on or about September 1, 2023.
- c. The dates of completion shall be as follows:
  - 1. **Substantial Completion** date will be as follows: **November 30, 2024**
  - 2. **Final Completion** date will be as follows: **30 Days after Substantial Completion. Liquidated Damages in the sum of \$500.00 for every consecutive calendar day until completion.**
  - 3. The start date for phases is noted on the site, architectural, and MEP phasing sheets.

## 8. Bidding Requirements

- a. All bids shall be sealed in an envelope with the following information addressed on the outside of the envelope.

**Bid Documents: LeGrande Elementary School Addition/ Renovation  
Hart County Board of Education  
Munfordville, Kentucky  
2:00pm. local time CT  
Tuesday, August 29, 2023**

- b. One copy of the signed and completed Form of Proposal will be required from each bidder. The successful, apparent low bidder(s) shall provide a second signed copy within **one hour** of notification of apparent low bidder.
- c. At time of bid submittal, bidders are required to submit the following portions the Form of Proposal:
1. KDE Department of Education Form of Proposal – 2013, Pages 1, 2, and 11 shall be submitted at time of bid.
  2. KDE Department of Education Form of Proposal – 2013, Pages 4 and 6 shall be submitted within 1 hour of bid.
  3. KDE Department of Education Form of Proposal – 2013, Pages 8, 9 and 10 shall be submitted within four days of bid.
- d. Form of Proposals not completed or incorrectly filled out will not be considered.
- e. Bid security in the amount of 5% for each proposal submitted must accompany each proposal. A certified check or bid bond is acceptable.
- f. The kitchen equipment bid will include a shop drawing submittal for the freezer/ cooler unit to be located in the existing Dry Food Storage Room.
- g. The General Contractor shall not list himself as a subcontractor unless he intends to complete the work.
- h. The successful bidder shall be required to provide 100% Performance and Payment Bond.
- j. Owner reserves the right to waive any or all bidding irregularities.

## 9. Interpretation and Correction to Bidding Documents

- a. The Architect and Engineers may take questions until **5:00 p.m. on Tuesday August 22, 2023.**
- b. Bidders and sub-bidders requiring clarifications or interpretations of bidding documents shall make a written request but shall reach the Architect prior to the above referenced date.
- c. Any interpretations and corrections that change the bidding documents will be made by addenda only. Interpretations, corrections and/or changes of the bidding documents made in any other manner will not be binding. Bidders shall not rely upon them.

- d. After the above referenced date, the contractor must bid the plans and specifications as they see or in the event of a conflict they must bid the most costly item.

**10. Obtaining Bidding Documents**

- a. Contract Documents are available from Lynn Imaging Company, 328 Old Vine Street, Lexington, Kentucky 40507, telephone number is (859) 255-1021. A non-refundable fee amount for each printed set is \$270.00 or electronic PDF sets are available for free. All checks shall be made payable to Lynn Imaging Company. Web site address is [www.lynnimaging.com](http://www.lynnimaging.com).

**11. Product Substitution**

- a. All requests for proposed substitutions shall be submitted in writing and accompanied with a complete description including drawings, performance and test data and all other information necessary for evaluation. The contractor is required to submit a completed and signed **Certificate of Product Compliance** in Specification Section 012500.

The Architect's decision of approval or disapproval of a proposed substitution shall be final. However, the contractor is still required to meet specifications. Any approved substitutions shall be set forth in an addendum.

**12. Review of Allowances and Scheduled Alternates**

A. Allowances:

Allowance No. 1: Soft Soil Allowances: Include an allowance based on the following work scope: The contractor shall include in the base bid, an allowance to remove and dispose off-site an additional 150 cy of unsuitable soil, which may be encountered below plan bottom depth. The allowance price shall include replacement with 150 cy of DGA placed and compacted in accordance with the project geotechnical report and on-site testing agency recommendations. Actual volumes in the allowance shall be measured by the on-site testing agency and the contract will be adjusted using unit prices.

Allowance No. 2: The contractor shall include in the base bid an allowance of \$1,000 per 1,000 face brick for work identified within the Construction Documents. The allowance sum includes tax, handling, shipping and any other costs. Installation and all necessary installation accessories are base bid.

B. Alternates No. 1 - 4:

- 1. Alternate No. 01: Cafeteria flooring to be premium vinyl tile and base (not terrazzo).
- 2. Alternate No. 02: Provide Owner-preferred Sloan auto-flush valves.
- 3. Alternate No. 03: Provide Owner-preferred Best Locks for door hardware.
- 4. Alternate No. 04: Provide Owner-preferred Reliable Controls by Automated Building Concepts for controls.

Refer to Specification Section 012300 Alternates.



**13. Contractor's Comments / Questions**

- a. No comments.

**14. Owner's Comments**

- a. No comments.

**15. Landscape Architect's Comments**

General

- Review topsoil stockpiling and placement, seeding, sodding, installation timing, maintenance and acceptance requirements
- Erosion Control / NOI / BMP – contractor's responsibility

Earthwork

- Unclassified – contractor's responsibility to plan bottom depth.

Owner's Geotechnical Testing Agent - Roles and responsibilities for site work

- Testing agent will make recommendation, contractor to price if required, Owner/Arch review and approval, then proceed with work.
- Obtain approval from engineer prior to utilizing allowances – do not act based on geotechnical testing agent recommendation alone – communication b/t testing agency, engineer, contractor and Owner is essential.

**16. Architect's Comments**

- a. Addendum No. 1 will include the Pre-Bid Meeting Minutes.
- b. LeGrande Elementary School will be available to contractors for a site visit after the Pre-Bid Meeting from 3:00-5:00 p.m. Additional visits shall be by appointment with the Owner only.

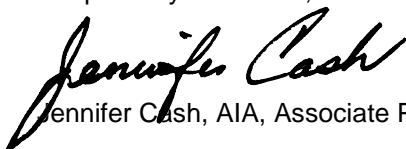
**17. CMTA (Mechanical / Electrical / Plumbing Comments)**

- a. No comments.

**18. Meeting Adjournment**

End of meeting minutes.

Respectfully submitted,

  
Jennifer Cash, AIA, Associate Principal



# PRE-BID MEETING SIGN-IN SHEET

Project LeGrande Elementary School Addition/ Renovation  
(IMPORTANT: PLEASE PRINT CLEARLY!)

Project No 2210 Date

August 17, 2023 @ 2:00pm local time

Name:	Company:	Phone #:	E-mail address:
Jared Miles	BCD Inc.	502-344-7305	Jamiles@handstown.com
JEFF ZUKOWITZ	J-E	270-765-9533	jzukunft@jenkinesss.com
ELIOTT DAVIS	J-E	270-844-4552	edavis@jenkinesss.com
Luke Sims	Scottys	270-202-3284	luke@scottyscontracting.com
Robert Miller	Kentock Commercial	270-268-8602	info@kyroofcoatings.com
Adam Cardwell	Kentucky Commercial	270-590-2187	cardwell436@gmail.com
TAVIS SNEELH	Parco	502-494-4727	Tavis@parcoconstruction.com
Steve Caven	HC Schools		
DALTON HADLEY	KOORSEN	502-594-6250	dalton.hadley@koorsen.com