	Fort Mill School District Addendum #2	Solicitation Number: #23-007
		Date Issued: December 15, 2023 Procurement Specialist: Kelly Keniston Phone: (803) 548-8202 E-Mail Address: kenistonk@fortmillschools.org

DESCRIPTION Springfield Middle School Cooler & Freezer Enclosure Replacement

SUBMIT YOUR SEALED OFFER ON-LINE or TO THE FOLLOWING ADDRESS:	
MAILING ADDRESS: Fort Mill School District 2233 Deerfield Dr Fort Mill, SC 29715	PHYSICAL ADDRESS: FORT MILL SCHOOL DISTRICT 2233 DEERFIELD DRIVE FORT MILL, SC 29715

QUESTION MUST BE RECEIVED BY: Wednesday, December 13, 2023 at 12:00 pm

SUBMIT OFFER BY (Opening Date/Time): Thursday, December 21, 2023 at 2:00 pm
 (see "Deadline for submission of offer" provision)

NUMBER OF COPIES TO BE SUBMITTED: One (1) original

CONFERENCE TYPE: Pre-Bid Meeting DATE & TIME: Wednesday, December 6, 2023 @ 2pm (As appropriate, see "Conferences-Pre-Bid/Proposal" & "Site Visit provisions")	LOCATION: Fort Mill School District 2232 Deerfield Dr Fort Mill, SC 29715
--	--

AWARD & AMENDMENTS	Award will be posted on or around December 22, 2023 . The award, this solicitation, any amendments, and any related notices will be posted at the following web address: http://www.fortmillschools.org/departments/procurement/
-------------------------------	---

You must submit a signed copy of this form with Your Offer. By submitting a bid or proposal, You agree to be bound by the terms of the Solicitation. You agree to hold Your Offer open for a minimum of thirty (30) calendar days after the Opening Date.
 (See "Signing Your Offer" and "Electronic Signature" provisions.)

NAME OF OFFEROR (full legal name of business submitting the offer)	Any award issued will be issued to, and the contract will be formed with, the entity identified as the Offeror. The entity named as the offeror must be a single and distinct legal entity. Do not use the name of a branch office or a division of a larger entity if the branch or division is not a separate legal entity, i.e., a separate corporation, partnership, sole proprietorship, etc.	
AUTHORIZED SIGNATURE (Person must be authorized to submit binding offer to contract on behalf of Offeror.)	TAXPAYER IDENTIFICATION NO. (See "Taxpayer Identification Number" provision)	
TITLE (business title of person signing above)		
PRINTED NAME (printed name of person signing above)	DATE SIGNED	STATE OF INCORPORATION (If you are a corporation, identify the state of incorporation.)

OFFEROR'S TYPE OF ENTITY: (Check one) <input type="checkbox"/> Sole Proprietorship <input type="checkbox"/> Partnership <input type="checkbox"/> Other _____ <input type="checkbox"/> Corporate entity (not tax-exempt) <input type="checkbox"/> Corporation (tax-exempt) <input type="checkbox"/> Government entity (federal, state, or local)	(See "Signing Your Offer" provision.)
--	---------------------------------------

Minority Participation: Are you a SC Certified Minority Vendor <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, SC Certification # _____ Are you a Non SC Certified Minority Vendor <input type="checkbox"/> Yes <input type="checkbox"/> No
--

PAGE TWO

(Return Page Two with Your Offer)

<p>HOME OFFICE ADDRESS (Address for offeror's home office / principal place of business)</p> 	<p>NOTICE ADDRESS (Address to which all procurement and contract related notices should be sent.) (See "Notice" clause)</p> <p>_____</p> <p>Area Code - Number - Extension Facsimile</p> <p>_____ E-</p> <p>mail Address</p>
---	---

<p>PAYMENT ADDRESS (Address to which payments will be sent.) (See "Payment" clause)</p> <p>_____ Payment Address same as Home Office Address</p> <p>_____ Payment Address same as Notice Address (check only one)</p>	<p>ORDER ADDRESS (Address to which purchase orders will be sent) (See "Purchase Orders and "Contract Documents" clauses)</p> <p>_____ Order Address same as Home Office Address</p> <p>_____ Order Address same as Notice Address (check only one)</p>
--	---

ACKNOWLEDGMENT OF AMENDMENTS
 Offerors acknowledges receipt of amendments by indicating amendment number and its date of issue. (See "Amendments to Solicitation" Provision)

Amendment No.	Amendment Issue Date	Amendment No.	Amendment Issue Date	Amendment No.	Amendment Issue Date	Amendment No.	Amendment Issue Date

<p>DISCOUNT FOR PROMPT PAYMENT (See "Discount for Prompt Payment" clause)</p>	<p>10 Calendar Days (%)</p>	<p>20 Calendar Days (%)</p>	<p>30 Calendar Days (%)</p>	<p>_____ Calendar Days (%)</p>
---	-----------------------------	-----------------------------	-----------------------------	--------------------------------

PREFERENCES - A NOTICE TO VENDORS (SEP. 2009): On June 16, 2009, the South Carolina General Assembly rewrote the law governing preferences available to in-state vendors, vendors using in-state subcontractors, and vendors selling in-state or US end products. This law appears in Section 11-35-1524 of the South Carolina Code of Laws. A summary of the new preferences is available at www.procurement.sc.gov/preferences. ***ALL THE PREFERENCES MUST BE CLAIMED AND ARE APPLIED BY LINE ITEM, REGARDLESS OF WHETHER AWARD IS MADE BY ITEM OR LOT. VENDORS ARE CAUTIONED TO CAREFULLY REVIEW THE STATUTE BEFORE CLAIMING ANY PREFERENCES. THE REQUIREMENTS TO QUALIFY HAVE CHANGED. IF YOU REQUEST A PREFERENCE, YOU ARE CERTIFYING THAT YOUR OFFER QUALIFIES FOR THE PREFERENCE YOU'VE CLAIMED. IMPROPERLY REQUESTING A PREFERENCE CAN HAVE SERIOUS CONSEQUENCES.*** [11-35-1524(E)(4)&(6)]

PREFERENCES - ADDRESS AND PHONE OF IN-STATE OFFICE: Please provide the address and phone number for your in-state office in the space provided below. An in-state office is necessary to claim either the Resident Vendor Preference (11-35-1524(C)(1)(i)&(ii)) or the Resident Contractor Preference (11-35-1524(C)(1)(iii)). Accordingly, you must provide this information to qualify for the preference. An in-state office is not required, but can be beneficial, if you are claiming the Resident Subcontractor Preference (11-35-1524(D)).

_____ In-State Office Address same as Home Office Address

_____ In-State Office Address same as Notice Address **(check only one)**

Addendum #2 is being issued to answer questions submitted by bidders and include additional information for the contract set of documents.

You must acknowledge this addendum on page #2 of solicitation and the bid form.

Please note, unless otherwise stated, all stipulations from the original solicitation apply.

ATTACHMENTS:

- 1.1 Revised Bid Form – Revision 1**
- 1.2 Substitution Request – Eco-Grip Flooring**
- 1.3 Specification Section 00 01 10 – Table of Contents – Revision 1**
- 1.4 Specification Section 01 21 13 – Cash Allowances (New)**
- 1.5 Specification Section 01 23 00 – Alternates (New)**
- 1.6 Specification Section 04 20 00 – Unit Masonry – Revision 1**
- 1.7 Specification Section 08 71 00 – Door Hardware – Revision 1**
- 1.8 Drawing A301 – Revision 1**
- 1.9 Drawing A302 – Revision 1**
- 1.10 Drawing S101 – Revision 1**

SUBSTITUTION REQUEST:

Eco Grip Flooring – In lieu of Quarry Tile (Dry Storage) and Sanisteel (Cooler/Freezer)

A: The Substitution Request has been Rejected.

LIST OF QUESTIONS:

Question #1

Please confirm the Aluminum product shown in Detail 4 on Sheet A301. There is no specification for aluminum panel within the specifications?

A: SOFFIT PANELS

- A. Soffit Panels: 22-gauge metal panels with where required with 12" coverage utilizing male/female-interlocking connection. Panels shall have smooth texture. Fasteners shall be concealed and approved by the manufacturer for use in the metal types. Finish shall be 70% flouropolymer, Kynar 500®. Color and trims shall be as selected by the Architect. Isolate dissimilar metals.
- B. Framing: Provide 7/8" Hat Channels on 2-1/2" Metal Studs at 16" o.c.

Question #2

Is there any available information regarding the original brick that can be provided in order to match the existing?

A: No information regarding the original brick manufacturer and/or color is available at this time. All Bidders were notified that brick selection should closely match the existing material and color. Actual color selection will be determined through Architect and Owner review of samples during submittal process.

Question #3

Please confirm the Brick Allowance noted within the specifications?

A: Spec Section 042000 – Unit Masonry, Item 1.03 – Price and Payment Procedures is noted as “Not Applicable to this Project” within the contract specifications. No Brick Allowance is required and all brick material / installation costs shall be included within the base bid amount. Refer to revised specification section 042000 – Unit Masonry attached to this addendum.

Question #4

There is no concrete sealer indicated within the specifications. If a new slab is required with Alternate #1, please specify a sealer within the specifications?

A: Please refer to Specification Section 03 33 00 – CAST-IN-PLACE CONCRETE, Item 2.7 – Curing Materials for additional information.

Question #5

The project NTP is January 1, 2024, and substantial completion is July 26, 2024. The school district’s school schedule has the last day of school as Monday, June 3, 2024. General Note #5 on Sheet A301 states that the GCs cannot perform the work until summer break. Does this mean the official job start going to be June 4, 2024? If so, then is the project contract going to be based off of only 8 weeks of actual field work (which may not be feasible)?

A: Last Day of school for students is May 31st, 2024 (which is a 1/2 day). As discussed during the Pre-Bid meeting, should contractors have an issue with the proposed 8-week duration field construction schedule, please notify LMG. No concerns were voiced during the Pre-Bid meeting.

There are alternative temporary options the Owner may pursue to allow an earlier start date should it be deemed necessary to complete the project prior to the Substantial Completion date of July 26th. These options will be further discussed with the winning party following award of the project and coordination of the construction schedule.

Question #6

Where are the GCs going to have laydown space for a jobsite trailer and port-a-jons? Where are the GC’s and subcontractors to park during construction?

A: Laydown and parking during the school year will be localized to the loading dock area. Upon the commencement date and following student dismissal on May 31st, the back parking lot will be vacant and can be utilized as needed by GC's for parking and laydown.

Question#7

Are the GCs providing their own temp power for the job?

A: Temporary power will not be required and existing available building power may be utilized throughout the construction duration.

Question #8

Per one of our refrigeration equipment contractors, there needs to be a 2” minimum gap surrounding the entire cooler/freezer enclosure. Per the Floor Plan on 2/A301, the unit is showing butting up against the school building, which it cannot do. Please advise?

A: The GC is responsible for proper coordination of placement of Cooler/Freezer to ensure all Manufacturer requirements are met.

Question #9

Floor Plan 2/A301 or Ceiling Plan 4/A301 does not provide a section detail to reference for the overhang above the 2 doors leading outside next to the new structure. There is no spec for this item either. It is also not clearly shown on the Front Elevation 1/A302. Please advise?

A: Please refer to the revised sheet A301 and the following specification information below for the Aluminum soffit panels.

ALUMINUM SOFFIT PANELS

A. Soffit Panels: 22 gauge metal panels with where required with 12" coverage utilizing male/female-interlocking connection. Panels shall have smooth texture. Fasteners shall be concealed and approved by the manufacturer for use in the metal types. Finish shall be 70% flouropolymer, Kynar 500®. Color and trims shall be as selected by the Architect. Isolate dissimilar metals.

Question#10

On the General Finish Notes on Sheet A302, have colors been selected by the architect yet?

A: No. Color selections will be performed by the Architect and Owner during the Submittal process.

Question#11

What flooring is needed on the concrete below the panels for the cooler/freezer? Do we need epoxy or another durable product like Eco-Grip?

A: The finish product shall be sealed concrete and require no additional finish prior to installation of Cooler & Freezer floor paneling. Please refer to Sheet A301 / Detail 2 note: “Install floor leveler as required so existing concrete floor flatness meets 1/8” per 10’-0” in Cooler & Freezer.” Floor flatness requirements must be met and shimming with asphalt shingles / etc. will not be permitted.

Question#12

Wall Sections 3/A302 seems to show the downspouts from the school roof connecting to the scuppers from the new cooler/freezer roof. That is not shown on the Roof Plan 3/A301. Are they to be installed to the drains similar to what is on the existing structure??

A: Please refer to the revised Sheet A301 / Detail 3 indicating the routing of the roof leaders from the upper roof to the new down spouts for the New Cooler & Freezer roof. These items are required to be piped across the new roof, similar to the existing installation.

Question#13

Do we know the manufacturer the existing wall panels we need to replace?

A: No Submittal information for the existing metal wall panels is available at this time. The GC will need to reuse or match existing materials as closely as possible.

Question#14

Are any as-builts available for the existing fire protection system for the sprinkler contractor to use for shop drawings??

A: No available As-Built or Submittal information for the original fire protection construction is available at this time.

Question#15

Where is the existing Fire Protection Main Riser?

A: The existing Fire Protection Main Riser is located adjacent to the Kitchen in Room F131. Room is located plan North of the Dishwashing Room and plan East of the Main Electrical Room.

Question#16

Is the existing Fly Fan to remain or be replaced?

A: The existing Fly Fan shall remain in place. Disconnection and Reconnection shall be included in the bid amount.

Question#17

Has the Fort Mill School District ordered the Freezer/Cooler? If so, can they provide the information on the unit? Does the Contractor need to install the unit by providing a lift/crane? When will it be ready to be installed?

A: During the pre-bid meeting, all bidders were informed the Cooler / Freezer shall be Contractor furnished and installed, in lieu of Owner furnished as indicated in specifications Table of Contents. This revision will be documented by Addendum. All associated costs to furnish and install the Cooler / Freezer system shall be included within the bid.

The Owner preferred Cooler / Freezer is manufactured by Thermal-Rite. Tom Johnson, with Southern Food Equipment, is the rep involved with the project. His contact information is:

Email: tom.johnson@southernreps.com

Phone: (803) 924-0581.

Question#18

There is no air barrier shown on the drawings for the exterior walls. Is this required?

A: No air barrier required as Closed Cell Foamed-in-Place Insulation is required.

GENERAL:

2.1 Bid Form

REPLACE Bid Form in its entirety. This version shall be submitted with Bid Package.

PROJECT MANUAL:

3.1 Specification Section 00 01 10 – Table of Contents

REPLACE the Table of Contents in its entirety.

3.2 Specification Section 01 21 13 – Cash Allowances

ADD the specification in its entirety.

3.3 Specification Section 01 23 00 – Alternates

ADD the specification in its entirety.

3.4 Specification Section 04 20 00 – Unit Masonry

REPLACE the Table of Contents in its entirety.

DELETE the item 1.03 – PRICE AND PAYMENT PROCEDURES in its entirety.

3.5 Specification Section 08 71 00 – Door Hardware

REPLACE the specification in its entirety.

DELETE the item 2.02 – KEY CONTROLS in its entirety.

3.6 Specification Section 10 14 00 – SIGNAGE

DELETE this specification section in its entirety. Any required room signage will be provided by Owner.

DRAWINGS:

4.1 A301 – Demo Floor Plan, Floor Plan, Roof Plan, & Ceiling Plan – Revision 1

REPLACE the sheet with the attached revised version.

4.2 A302 – Elevations, Sections, Door Schedule, & Finish Schedule

REPLACE the sheet with the attached revised version.

4.3 S101 – Structural Plans and Section

REPLACE the sheet with the attached revised version.

END OF ADDENDUM NO. 2

FORT MILL SCHOOLS

II. Bid Form – Revision I

SOLICITATION RFB# 23-007

SPRINGFIELD MIDDLE SCHOOL – COOLER / FREEZER ENCLOSURE REPLACEMENT

BIDDER NAME: _____

BIDDER PHONE: _____

BIDDER EMAIL: _____

FORT MILL SCHOOL DISTRICT
2233 DEERFIELD DR.
FORT MILL, SC 29715

SINGLE PRIME CONTRACT

All Parties:

Having carefully examined the Drawings and Specifications for the above noted project(s), as well as the premises and conditions affecting the work, the undersigned proposes to furnish all materials, labor, equipment, and services called for by them for a lump sum consideration of:

BASE BID: \$ _____ (NUMERICAL AMOUNT HERE)

_____ (WRITTEN DOLLARS HERE)

The above stated bid is based on the above-mentioned Drawings, Specifications, Pre-Bid Schedule and any Addenda issued subsequent to the basic Drawings and Specifications. (List all Addenda with dates of any issued. If no additional Addenda are issued, write the word "NONE".)

Addendum Number

Date

If any of the following Alternates are accepted, the above stated sum (base bid amount) will be altered by the amount(s) indicated below.

- a. If no Alternates are indicated, enter the term "NOT APPLICABLE" after the dollar (\$) sign.
- b. If Alternates are indicated, strike through completely either "add" or "deduct" in order to leave exposed the proper change to the base bid amount and indicate the amount of the change in numbers after the dollar (\$) sign.
- c. If Alternates are indicated, but there is no change to the base bid amount, enter the term "NO CHARGE" after the dollar (\$) sign.

Alternate No. 1: Demo and Replace Existing Slab on Grade

Base Bid: Existing slab on grade beneath the existing Cooler / Freezer to remain and perform on necessary demo as shown per the contract documents.

Alternate: Provide all necessary labor, materials, and equipment for the full demo of the existing slab on grade beneath the existing Cooler / Freezer and replace with 4" monolithic concrete slab reinforced with 6x6-W1.4xW1.4 over 4" granular fill and vapor barrier, per Structural Drawing S101.

ADD and/or DEDUCT \$ _____

Alternate No. 2: Roofing System

Base Bid: Modified Bitumen Roofing System

Alternate: TPO Membrane Roofing System – In lieu of Specified Modified Bitumen Roof System (See Alternate Specification 07 54 23 – Mechanically Attached TPO Membrane Roofing)

ADD and/or DEDUCT \$ _____

UNIT PRICES

Enter the requested unit prices below. The amount listed will be used for contract deductions in cases of credits and contract increases in cases of work scope additions. The amount listed should be fully inclusive of labor, material, equipment, taxes, insurance, overhead, profit, etc.

1. N/A

ADD and/or DEDUCT \$ _____

Listing Of Subcontractors:

In the below space, list the requested subcontractor(s), SC Contractor's License #, and the amount included in the **Base Bid** for this subcontractor(s):

Masonry: _____ Subcontract Amount: _____

SC Contractor's License #: _____

Roofing: _____ Subcontract Amount: _____

SC Contractor's License #: _____

Fire Sprinkler: _____ Subcontract Amount: _____

SC Contractor's License #: _____

Plumbing: _____ Subcontract Amount: _____

SC Contractor's License #: _____

HVAC: _____ Subcontract Amount: _____

SC Contractor's License #: _____

Electrical: _____ Subcontract Amount: _____

SC Contractor's License #: _____

If notified of the acceptance of this bid or any Alternate within one hundred twenty (120) days after the date fixed for the opening of the bid, the undersigned agrees to execute and deliver the specified Contract and Contractor's Bond within ten (10) days. The undersigned agrees, if awarded the Contract within one hundred twenty (120) days from the fixed date for opening of the bids, to faithfully and properly complete the whole work within the specified time, consistent with the best interest of the Owner, the safety of the public and in accordance with first-class workmanship.

The undersigned agrees that the Owner may retain the sum of money specified as "Liquidated Damaged" as indicated within the Contract Documents, from the amount of compensation to be paid the undersigned for each calendar day that work remains uncompleted and unaccepted after the maximum duration of time for the work to be completed. This amount is agreed upon as the proper measure of liquidated damages, which the Owner sustains per day by failure of the undersigned to complete the work in the stipulated time and is not to be construed in any sense as a penalty.

A Performance and Payment Bond, executed on AIA Document A312, will be required in the amount of one hundred percent (100%) of the Contract amount. Cost of bonds shall be included in the bid.

Please indicate any applicable preferences being claimed in this solicitation, please note, preferences are not applicable for bids over \$500,000.

It is agreed that the undersigned has completed and/or will comply with all requirements concerning licensing and with all other local, state, and national laws and that no legal requirement has been or will be violated in making or accepting this proposal, in awarding the Contract to him and/or in the performance of the Work required there under.

By submission of this bid, the undersigned declares that the person or persons signing this proposal is/are authorized to sign the proposal on behalf of the firm listed and to fully bind the firm listed to all the conditions and provisions thereof. Furthermore, each person signing on behalf of any bidder certifies, under penalty of perjury that, to the best of its knowledge and belief, each bidder is not on the list created pursuant to Section 11-57-310 of the South Carolina Code of Laws.

Respectfully submitted this _____ day of _____, 2023.

(Name of Firm)

(S.C. Contractor's License)

(Address)

By _____
(Title)

Minority Owned/Operated Contractor/Business? Yes ___ No ___ Certificate Number _____

***** Be sure to include this page in your proposal *****

SUBSTITUTION REQUEST FORM

TO: [Jay Gaither, Leitner Management Group, LLC](#)

PROJECT: **SPRINGFIELD MIDDLE SCHOOL – COOLER/FREEZER ENCLOSURE**

We hereby submit for your consideration the following product instead of the specified item for the above project:

<u>Drawing</u>	<u>Spec. Sect. No.</u>	<u>Paragraph</u>	<u>Specified Item</u>
A301, A302, S101	Freezer/Cooler 09 3000	First Paragraph, Part A 2.02D	Sanisteel floor panels in Cooler/Freezer Quarry Tile floors in Dry Storage

Proposed Substitution:

Attach complete information on changes to Drawings and/or Specifications which proposed substitution will require for its proper installation.

Submit with request all necessary samples and substantiating data to prove equal quality and performance to that which is specified. Clearly mark manufacturer's literature to indicate equality in performance.

Fill in blanks below:

A. Does the substitution affect dimensions shown on the Drawings?

Yes ___ No X

If yes, clearly indicate the changes:

B. Will the undersigned pay for changes to the building design, including engineering and detailing costs caused by the requested substitution? Yes X No ___

C. What effect does substitution have on other Contracts or other Trades?

[Will reduce multiple subs for floor work](#)

D. What effect does substitution have on construction schedule?

[None](#)

E. Manufacturer's warranties of the proposed and specified items are:

Same X Different ___ (Explain on attachment.)

F. Reason for request:

[To reduce multiple subs for floor work by adding a product that will exceed specs for both the sanisteel flooring and quarry tile.](#)

[Also, Eco Grip company's corporate office is in Charlotte, NC, and manufacturing is done in South Carolina.](#)

G. Itemized comparison of specified item(s) with the proposed substitution; list significant variations:
Eco Grip is monolithic via liquid welds - Quarry Tile and Sanisteel flooring have gaps at connections where water, etc. can penetrate through over time.

Eco Grip will bond to substrate and covers up the wall 6" - Quarry Tile and Sanisteel have the same issues listed above.

H. Accurate cost date comparing proposed substitution with product specified:

Will provide alternate pricing at time of bid if this product is approved.
This flooring can be installed in 1-2 days max when substrate is ready.

I. Designation of maintenance services and sources:
(Attach additional sheets if required)

See attached sheets

**CERTIFICATE OF EQUAL PERFORMANCE
AND ASSUMPTION OF LIABILITY FOR
EQUAL PERFORMANCE**

For Use By Architect:

The undersigned states that the function, appearance and quality are equivalent or superior to the specified item.

Accepted Accepted as Noted
 Not Accepted Received Too Late

Submitted By:

Holly Roby Precon Manager
Signature Title

By: [Signature]
Date: 12/15/2023

Andrew Roby SC LLC

Remarks: _____

Firm

2000 W Morehead Street, Charlotte, NC
~~Address~~

This substitution request has been
rejected and the Owner prefers to have the
specified floor finishes per the contract
documents.

(704) 334-5477 12/13/2023
Telephone Date

Signature shall be by person having authority to legally bind his firm to the above terms. Failure to provide legally binding signature will result in rejection of proposed substitution.

VOLUME 1

DIVISION 00 PROCUREMENT AND CONTRACT DOCUMENTS

00 0101	Table of Contents
00 0107	Seals Page
00 2610	Submittal of Substitutions
00 4325	Substitution Request Form

DIVISION 01 GENERAL REQUIREMENTS

01 1100	Summary of Work
01 2113	Cash Allowances
01 2300	Alternates
01 2653	Proposal Request
01 2973	Schedule of Values
01 2976	Progress Payment Procedures
01 3119	Project Meetings
01 3300	Submittal Procedures
01 3300A	Electronic File Agreement
01 4000	Quality Requirements
01 4001	Chapter 1 and Chapter 17 Special Inspections
01 4002	Contractor's Statement of Responsibility Form
01 4200	References
01 6000	Product Requirements
01 7329	Cutting and Patching
01 7400	Cleaning & Waste Management
01 7700	Closeout Procedures
01 7839	Project Record Documents

DIVISION 03 CONCRETE

03 3000	Cast-In-Place Concrete
---------	------------------------

DIVISION 04 MASONRY

04 2000	Unit Masonry
04 2300	Reinforced Unit Masonry

DIVISION 05 METALS

05 1200	Structural Steel Framing
05 2100	Steel Joist Framing
05 3100	Steel Decking
05 4000	Cold-Form Metal Framing

DIVISION 06 WOOD, PLASTICS, AND COMPOSITES

06 1000	Rough Carpentry
---------	-----------------

DIVISION 07 THERMAL AND MOISTURE PROTECTION

07 1300	Sheet Waterproofing
07 2119	Closed-Cell Formed-In-Place Insulation System
07 2216	Roof Insulation
07 5216	Modified Bitumen Roofing
07 5423	Mechanically Attached TPO Membrane Roofing (Alternate One)
07 6200	Sheet Metal Flashing and Trim
07 7200	Roof Accessories
07 9005	Joint Sealers

DIVISION 08 OPENINGS

08 1113 Hollow Metal Doors Frames
08 7100 Door Hardware

DIVISION 09 FINISHES

09 2116 Gypsum Board Assemblies
09 3000 Tile
09 5123 Acoustical Tile Ceilings
09 9123 Interior Paint

DIVISION 11 EQUIPMENT

11 4000 Cooler & Freezer

VOLUME 2

DIVISION 21 FIRE SUPPRESSION

21 0010 General Provisions, Fire Protection
21 0500 Fire Protection

DIVISION 23 HEATING, VENTILATING AND AIR CONDITIONING (HVAC)

23 0010 General Provisions, Heating, Ventilation and Air Conditioning
23 0500 HVAC
23 0700 HVAC Insulation

DIVISION 26 ELECTRICAL

26 0500 Electrical Basic Materials and Methods
26 0510 Electrical Submittals
26 0529 Seismic

APPENDIX 'A'

ASHRAE 90.1-2007 COMcheck Mechanical Systems (HVAC) & Water Heating Compliance

APPENDIX 'B'

ASHRAE 90.1-2007 COMcheck Lighting Compliance Certificate

APPENDIX 'C'

ASHRAE 90.1-2007 COMcheck Envelope Compliance Certificate

END OF SECTION

PART 1 GENERAL

1.01 WORK INCLUDED

- A. To provide adequate budget and bonding to cover items not precisely determined by Owner prior to advertising for bids, allow within the proposed contract amount the sums described below.

1.02 RELATED WORK DESCRIBED ELSEWHERE

- A. Documents affecting work of this section include, but are not necessarily limited to, the contract documents, addenda and General Conditions.

1.03 ESTABLISHED METHODS

- A. When a cash allowance is set for certain items or materials, it is understood that any savings under such allowance shall accrue to the Owner and if the material purchased costs more than the Allowance, such additional cost shall be borne by the Owner.

1.04 UNDESCRIBED ALLOWANCES

- A. Allowances and provisions not further described in these specifications will be specified and bid at a later date.
- B. Allowance shall include purchase and installation, delivery cost to the job, unloading, sales tax and overhead & profit to the General Contractor.
- C. After receipt of bids, as above mentioned, the successful subcontract shall become part of the scope of work of the general contractor at no additional cost to the Owner, except for the stipulated cash allowance as adjusted.
- D. This method established to allow general contractor to control scheduling of subcontractor so as to meet established completion date.

1.05 OWNER PURCHASED ITEMS

- A. The responsibilities of the Contractor vary from item to item. Overall, the Contractor is responsible for coordination and scheduling of all items to be installed. On certain specific items he is responsible for installation and protection of the finished product. On others, he is responsible for coordination of all rough-in. For items purchased by the Owner and installed by the successful bidder that require electrical, mechanical, and plumbing connections, the Contractor is responsible for coordinating the necessary provisions.
- B. The Owner is responsible for furnishing the agreed upon items in a timely fashion. The names of all successful bidders shall be provided to the contractor. The Contractor and successful bidders shall be responsible for scheduling and delivery of all Owner furnished items.

PART 2 PRODUCTS

2.01 SINGLE PRIME CONTRACT

1. **General Contingency** **\$50,000**
2. Unit Price Allowances – N/A

NOTE: The unused portion of all allowances, including overhead and profit, will be credited back to the owner through a deductive change order.

PART 3 EXECUTION

3.01 PROCEDURE

- A. After receipt of bids, as above mentioned, the successful subcontractor shall become part of the scope of work of general contractor at no additional cost to the Owner, except for the stipulated cash allowance as adjusted.
- B. Mark up of Allowance items (equipment, rental, labor, subcontracts or other) will not be allowed by the Contractor at the time of Allowance use. This includes the assignment of contracts or change requests (change conditions) whether initiated by the Owner, Contractor or any other party. The Contractor should include markup of the Allowance with the lump sum bid.**
- C. This method is established to allow contractors to control scheduling of subcontractors in order to meet established completion date.

END OF SECTION

PART 1 - GENERAL

1.1 SUMMARY

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

1.2 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. 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.

1.3 PROCEDURES

- A. Coordination: Modify 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 modifications to alternates.
- C. Execute accepted alternates under the same conditions as other work of the Contract.
- D. Schedule: A Schedule of Alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

- A. Alternate No. 1: Demo and Replace Existing Slab on Grade
Base Bid: Existing slab on grade beneath the existing Cooler / Freezer to remain and perform on necessary demo as shown per the contract documents.

Alternate: Provide all necessary labor, materials, and equipment for the full demo of the existing slab on grade beneath the existing Cooler / Freezer and replace with 4" monolithic concrete slab reinforced with 6x6-W1.4xW1.4 over 4" granular fill and vapor barrier, per Structural Drawing S101.

- B. Alternate No. 2: Roofing System
Base Bid: Modified Bitumen Roofing System

Alternate: TPO Membrane Roofing System – In lieu of Specified Modified Bitumen Roof System (See Alternate Specification 07 54 23 – Mechanically Attached TPO Membrane Roofing)

END OF SECTION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Concrete Block.
- B. Concrete Brick.
- C. Clay Facing Brick.
- D. Mortar and Grout.
- E. Reinforcement and Anchorage.
- F. Lintels.
- G. Accessories.

1.02 RELATED REQUIREMENTS

- A. Section 04 2300 - Reinforced Unit Masonry: Additional requirements for reinforced load-bearing masonry.
- B. Section 05 5000 - Metal Fabrications: Loose steel lintels.
- C. Section 06 1000 - Rough Carpentry: Nailing strips built into masonry.
- D. Section 07 2119 – Closed Cell Foamed-in-Place Insulating System: Weather barrier for masonry surfaces and membrane flashings.
- E. Section 07 1900 - Water Repellents: Masonry waterproofing.
- F. Section 07 2100 - Thermal Insulation: Insulation for cavity spaces.
- G. Section 07 9005 - Joint Sealers: Backing rod and sealant at control and expansion joints.

1.03 PRICE AND PAYMENT PROCEDURES (Not applicable to this project)

1.04 REFERENCE STANDARDS

- A. ACI 216.1/TMS 0216.1 - Standard Method for Determining Fire Resistance of Concrete and Masonry Construction Assemblies
- B. ACI 530/ASCE 5/TMS 402 - Building Code Requirements for Masonry Structures; American Concrete Institute International; 2008.
- C. ACI 530.1/ASCE 6/TMS 602 - Specification for Masonry Structures; American Concrete Institute International; 2008.
- D. ASTM A 82/A 82M - Standard Specification for Steel Wire, Plain, for Concrete Reinforcement; 2007.
- E. ASTM A 153/A 153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2009.
- F. ASTM A 615/A 615M - Standard Specification for Deformed and Plain Billet-Steel Bars for Concrete Reinforcement; 2009b.
- G. ASTM C 33 - Standard Specification for Concrete Aggregates, 2007.
- H. ASTM C 55 - Standard Specification for Concrete Brick; 2009.
- I. ASTM C 67 - Standard Test Methods for Sampling and Testing Brick and Structural Clay Tile;

2009.

- J. ASTM C 90 - Standard Specification for Load bearing Concrete Masonry Units; 2009.
- K. ASTM C 91 - Standard Specification for Masonry Cement; 2005.
- L. ASTM C 128 - Standard Test Method for Density, Relative Density (Specific Gravity), and Absorption of Fine Aggregate.
- M. ASTM C 140 - Standard Test Methods of Sampling and Testing Concrete Masonry Units and Related Units; 2010.
- N. ASTM C 144 - Standard Specification for Aggregate for Masonry Mortar; 2004.
- O. ASTM C 150 - Standard Specification for Portland Cement; 2007.
- P. ASTM C 207 - Standard Specification for Hydrated Lime for Masonry Purposes; 2006.
- Q. ASTM C 216 - Standard Specification for Facing Brick (Solid Masonry Units Made from Clay or Shale); 2007a.
- R. ASTM C 270 - Standard Specification for Mortar for Unit Masonry; 2008a.
- S. ASTM C330 - Standard Specification for Lightweight Aggregates for Structural Concrete.
- T. ASTM C 331 - Standard Specification for Lightweight Aggregates for Concrete Masonry Units; 2005.
- U. ASTM C 404 - Standard Specification for Aggregates for Masonry Grout; 2007.
- V. ASTM C 476 - Standard Specification for Grout for Masonry; 2009.
- W. ASTM C 780 - Standard Test Method for Preconstruction and Construction Evaluation of Mortars for Plain and Reinforced Unit Masonry; 2009.
- X. ASTM C 1634 - Standard Specification for Concrete Facing Brick; 2009.
- Y. ASTM D 226 - Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing; 2006.
- Z. UL (FRD) - Fire Resistance Directory; Underwriters Laboratories Inc.; current edition.

1.05 SUBMITTALS

- A. See Section 01 3300 - Submittal Procedures, for submittal procedures.
- B. Product Data: Provide data for masonry units, fabricated wire reinforcement, mortar, and masonry accessories.
- C. Samples: Submit four full-size samples of facing brick and each type of concrete block units to illustrate color, texture, and extremes of color range.
- D. Manufacturer's Certificate: Certify that masonry units meet or exceed specified requirements.
 - 1. The producer of the concrete masonry units shall furnish a letter of certification stating that all aggregates used conform to the specifications as noted herein and ASTM standards. Certificate shall indicate the type of aggregates that are used in the mix design.
 - a. Certificate shall include ACI 216 fire resistance certification.
 - b. Certificate shall include UL fire resistance certification.
 - c. Certificate shall include ASTM C90 certification.
 - d. Certificate shall certify that lightweight aggregate complies with ASTM C331 with 6% to 10% absorption when tested in accordance with ASTM C128.
 - e. Certificate by independent testing facility that the lightweight aggregates are 100% recycled material.
 - f. Certificate stating minimum STC rating of each type block and that block meet specified sound transmission requirements.

- g. Test Report showing stain index per ASTM C641 =0.
- h. Test Report showing organic impurities per ASTM C40 < 1.
- 2. Brick test reports shall show:
 - a. Compressive strength.
 - b. 24 - hr. cold water absorption.
 - c. 5 - hr. boil absorption.
 - d. Saturation coefficient.
 - e. Initial rate of absorption (suction).
- 3. Provide certificates for each type of fire rated masonry.
- E. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 - 1. See Section 01 6000 - Product Requirements, for additional provisions.
- F. Contractor shall provide the Owner with one cube (1,000 brick) of utility brick for each color used on the project upon project completion. Deliver to storage location as directed by Owner.

1.06 QUALITY ASSURANCE

- A. Comply with provisions of ACI 530/ASCE 5/TMS 402 and ACI 530.1/ASCE 6/TMS 602, except where exceeded by requirements of the contract documents.
- B. Fire Rated Assemblies: Conform to applicable code and UL requirements for fire rated masonry construction as noted on drawings.
- C. All membrane wall and flashings around building openings are to be installed by an established and qualified waterproofing contractor.

1.07 EXTERIOR WALL ASSEMBLY MOCK-UP (Facing the sun)

- A. Construct a masonry wall as a mock-up panel sized 6 feet long by 5 feet high; include mortar and accessories, structural backup, flashings, and each type of unit as directed by Architect, including cast stone masonry units, Aluminum Window System (with glazing and sillpans) and all other components as detailed and specified in the mock-up. Coordinate with all building envelope trades as conditions at ALL adjacent construction are to be included.
 - 1. Mock-up panel shall show the complete and full range of exposed texture and color to be expected in the work and shall indicate materials, bond, joint tooling and workmanship to be expected in the final work.
- B. Erect mock up panel in 'cut away' stages to allow for proper review.
- C. Locate where directed.
- D. Mock-up may not remain as part of the Work.
 - 1. Retain panel during construction as standard for judging completed masonry work. Do not alter, move or destroy panel until work is completed and accepted.

1.08 COLOR SELECTION PANELS (Facing the sun)

- A. A minimum of (1) 3' x 4' panels will be required to be constructed for the purposes of selecting exterior masonry and mortar colors. (Match existing exterior colors)
- B. Following color selections by the architect; the exterior wall assembly mock up panel is to be constructed in the selected colors. (Contractor to provide samples matching existing exterior colors)

1.09 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, handle, and store masonry units by means that will prevent mechanical damage and contamination by other materials.
- B. Handle and store masonry units in protective cartons or trays. Do not remove from protective packaging until ready for installation. Stored units shall remain covered until installed.

C. Units shall be handled to avoid breakage and chipping. Any chips outside of the requirements of specified ASTM standards shall not be placed in the finished wall. Units placed in the wall will be the responsibility of the installer and damaged units shall be replaced as directed by the Architect.

D. Protect reinforcement from elements

1.10 JOB CONDITIONS:

A. Protection of Work:

1. During erection, cover top of wall with strong waterproof membrane at end of each day or shutdown. Cover partially completed walls when work is not in progress. Extend cover minimum of 24 in. (610 mm) down both sides. Hold cover securely in place.
2. Protect door jambs and corners from damage during construction.

B. Load Application:

1. Do not apply uniform floor or roof loading for at least 12 hours after building masonry columns or walls.
2. Do not apply concentrated loads for at least 3 days after building masonry columns or walls.

C. Staining:

1. Prevent grout or mortar from staining the face of masonry to be left exposed or painted. Remove excess grout or mortar immediately that is in contact with face of masonry. Protect all sills, ledges and projections from droppings of mortar.
2. Protect the base of all walls from rain, mud and mortar splashes with straw or sand.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Acceptable Manufacturers:

1. Adams Products Company; www.adamsproducts.com
2. Johnson Concrete Products; www.johnsoncmu.com
3. Southeastern Concrete Products; www.seconcreteproducts.net
4. Substitutions: See Section 01 60 00 Product Requirements.

2.02 CONCRETE MASONRY UNITS

A. Concrete Block: Comply with referenced standards and as follows:

1. LEED requirements:
 - a. Regional Materials - Concrete Masonry Units shall be manufactured within 500 miles of Project site from aggregates and cement that have been extracted, harvested, or recovered, as well as manufactured, within 500 miles of Project site.
 - b. Concrete block walls consisting of 8" x 8" x 16" units shall meet STC rating of 45 or more.
 - c. Recycled Content of Lightweight Aggregate: Postconsumer recycled content plus one-half of pre-consumer recycled content not less than 50 percent.
 - d. Lightweight aggregates shall be certified by an independent testing facility that lightweight aggregates meet all qualifications of 100% recycled material.
2. Size: Standard units shall be modular with nominal face dimensions of 16 x 8 inches and nominal depths as indicated on the drawings for specific locations.
 - a. Units shall be sound, free from cracks, chipped edges and other defects and have a uniform fine texture.
 - b. Units shall be delivered to the project site in an air-dried condition.
3. Aggregates: All units shall be free of organic impurities that will cause rusting, staining or pop outs, and shall contain no combustible matter.
 - a. Lightweight Aggregate: ASTM C331 and C330; Lightweight aggregate shall be 100%

- expanded shale Stalite material produced by the rotary kiln process with 6% to 10% absorption when tested in accordance with ASTM C128 and shall be graded to assure constant texture.
- b. Normal weight Aggregate: ASTM C33
 - c. THE USE OF COAL CINDER AGGREGATE/BOTTOM ASH OR SIMILAR WASTE PRODUCTS OR OTHER IMPURITIES WILL NOT BE ALLOWED.
4. All 8-inch deep or larger units shall meet ACI 216 requirements for 2 hour or greater fire resistance.
 5. Special Shapes: Provide non-standard blocks configured for square corners, lintels, headers, control joint edges, bond beams, and other detailed conditions.
 - a. Provide radius corners.
 6. Load-Bearing Units: ASTM C 90, lightweight. (25 lb block minimum with STC rating 45 minimum for 8" and 12" units)
 - a. Hollow block.
 - b. Exposed faces: Manufacturer's standard color and texture where indicated.
 - c. 2 & 3-hour fire resistance rating certified by UL.
 7. Fire Resistance: Provide units that comply with fire rating indicated as shown. Fire-rated units shall be manufactured to comply with the minimum equivalent thickness required for the fire resistance indicated and the type of aggregate used.
 - a. Provide 2 & 3-hour fire resistance rating certified by UL.
- B. Concrete Brick:
1. For architectural and paver use, ASTM C 1634 (or ASTM C 55-03 Grade N), non-cored (solid), medium weight.
 2. For other uses, ASTM C 55, medium weight.
 3. Size: As indicated on drawings.

2.03 CLAY BRICK UNITS

- A. LEED requirements:
1. Regional Materials: Brick shall be manufactured within 500 miles of Project site from materials that have been extracted, harvested, or recovered, as well as manufactured, within 500 miles of Project Site.
- B. Facing Brick: ASTM C 216, Type FBS, Grade SW.(MATCH EXISTING)
1. Color and texture:
 - a. Brick Color #1 (Field): Utility Brick, 4 x 4 x 12 (Nominal)
 2. Nominal size: Utility - 3-5/8" high x 11-5/8" wide x 3-1/2" deep;
Closure brick – 3-5/8" high x 7-5/8" wide x 3-1/2" deep
 3. Special shapes: Molded units as required by conditions indicated, unless standard units can be sawn to produce equivalent effect.
 4. Compressive strength: 8,000 psi, measured in accordance with ASTM C 67.
 5. Provide brick similar in texture and physical properties to those available for inspection at the Architect/Engineer's office.
 6. Do not exceed variations in color and texture of samples accepted by the Architect/Engineer.
- C. Facing Brick shall have the full range of brick colors mixed throughout in a uniform percentage of colors. All brick to be delivered to the site shall match throughout the project. Provide solid units, closure units, corner units and special shapes as required for the work. See drawings for special shapes required in the work.
- D. Basis of Design by Palmetto Brick Company:
1. Brick Color #1 (Field): Utility & Closure (**MATCH EXISTING**)
- E. Other acceptable manufacturers with equal products and subject to architect's approval prior to bidding are as follows:

1. US Brick
2. Meridian

2.04 MORTAR AND GROUT MATERIALS

- A. LEED Requirements:
 1. Regional Materials - Aggregate for mortar and grout, cement, and lime shall be manufactured within 500 miles of Project site from aggregates and cement that have been extracted, harvested, or recovered, as well as manufactured, within 500 miles of Project site.
- B. Masonry Cement: ASTM C 91, Type S load bearing and below ground masonry. Type N for all other masonry including masonry veneer and cast stone masonry.
 1. Mortar color shall be standard gray for CMU (unless otherwise indicated), and shall match for the duration of the project.
- C. Portland Cement: ASTM C 150, Type I; color as required to produce approved color sample.
 1. Hydrated Lime: ASTM C 207, Type S.
 2. Mortar Aggregate: ASTM C 144.
 3. Grout Aggregate: ASTM C 404.
 - a. Sand: White, washed masonry sand. UNWASHED SAND WILL NOT BE ALLOWED AND WILL BE CAUSE FOR REJECTION OF WORK.
- D. Water: Clean and potable.
- E. Moisture-Resistant Admixture: Water repellent compound designed to reduce capillarity.

2.05 REINFORCEMENT AND ANCHORAGE

- A. Manufacturers of Joint Reinforcement and Anchors:
 1. Dur-O-Wal: www.dur-o-wal.com.
 2. Hohmann & Barnard, Inc: www.h-b.com.
 3. Masonry Reinforcing Corporation of America: www.wirebond.com.
 4. Substitutions: See Section 01 25 00 - Substitution Procedures.
- B. Reinforcing Steel: ASTM A 615/A 615M Grade 60 (420) deformed billet bars; galvanized.
- C. Single Wythe Joint Reinforcement: Ladder type; ASTM A 82/A 82M steel wire, hot dip galvanized after fabrication to ASTM A 153/A 153M, Class B; 0.1483-inch side rods with 0.1483-inch cross rods; width as required to provide not more than 1 inch and not less than 1/2 inch of mortar coverage on each exposure.
- D. Multiple Wythe Joint Reinforcement: Ladder type; ASTM A 82/A 82M steel wire, hot dip galvanized after fabrication to ASTM A 153/153M, Class B; 0.1483-inch side rods with 0.1483-inch cross rods; width as required to provide not more than 1 inch and not less than 1/2 inch of mortar coverage on each exposure.
- E. Adjustable Multiple Wythe Joint Reinforcement: Ladder type with adjustable ties or tabs spaced at 16 in on center ASTM A 82/A 82M steel wire, hot dip galvanized after fabrication to ASTM A 153/153M, Class B; 0.1875 inch side rods with 0.1483 inch cross rods and adjustable components of 0.1875 inch wire; width of components as required to provide not more than 1 inch and not less than 1/2 inch of mortar coverage from each masonry face.
 1. Vertical adjustment: Not less than 3-1/2 inches.
 2. Seismic Feature: Provide lip, hook, or clip on extended leg of wall ties to engage or enclose not less than one continuous horizontal joint reinforcement wire of 0.1483-inch diameter.
 3. Insulation Clips: Provide clips at tabs or ties designed to secure insulation against outer face of inner wythe of masonry.
- F. Flexible Anchors: 2-piece anchors that permit differential movement between masonry and building frame, sized to provide not more than 1 inch and not less than 1/2 inch of mortar

coverage from masonry face.

1. Steel frame: Crimped wire anchors for welding to frame, 0.25-inch thick, with trapezoidal wire ties 0.1875-inch-thick, hot dip galvanized to ASTM A 153/A 153M, Class B.

2.06 FLASHINGS

- A. Metal Flashing Materials: Shall be as specified in Section 07 6200.
- B. Thru-wall Membrane Flashing Materials: Textroflash by Hohmann & Barnard; 40 mil thick thru-wall flashing/surface-mounted composite membrane flashing with an adhesive backing factory-laminated to a rugged, polyethylene sheeting, yielding a flexible membrane suitable for use on masonry, concrete, steel, gypsum and wood. Apply Primer-SA Hohmann & Barnard's water-based primer for self-adhering flashing on all surfaces to receive this membrane flashing. Apply in strict accordance per the membrane manufacturer's written instructions. UV resistance is for up to 120 days. The masonry contractor is to coordinate with the waterproofing contractor well in advance for the installation ALL membrane flashing.

2.07 ACCESSORIES

- A. Preformed Control Joints: Rubber material. Provide with corner and tee accessories, fused joints.
- B. Joint Filler: Closed cell polyvinyl chloride; oversized 50 percent to joint width; self-expanding; 3-inch-wide x by maximum lengths available.
- C. Cavity Mortar Control: Semi-rigid polyethylene or polyester mesh panels, sized to thickness of wall cavity, and designed to prevent mortar droppings from clogging weeps and cavity vents and allow proper cavity drainage.
 1. Airspace Maintenance and Drainage Material: Polymer mesh panels for fitting between masonry ties to loosely fill masonry cavity. Installed continuous at all sills, heads, and all other horizontal conditions. Drainage Mat shall be 16" in height.
 - a. Manufacturers:
 - 1) CavClear/Archovations, Inc; CavClear Masonry Mat: www.cavclear.com.
 - 2) Substitutions: See Section 01 6000 - Product Requirements.
- D. Building Paper: ASTM D 226, Type I ("No.15") asphalt felt.
- E. Weeps: Molded PVC grilles, insect resistant.
 1. Manufacturers:
 - a. Wire-Bond; Product - #3601 Cell Vent for weep holes. Color as selected by architect, jumbo size.
 - b. Williams Products, Inc.; Product - Williams-Goodco brick vent for cavity walls
 - c. Substitutions: See Section 01 6000 - Product Requirements.
- F. Cavity Vents: Molded PVC grilles, insect resistant.
 1. Manufacturers:
 - a. Wire-Bond; Product - #3601 Cell Vent for weep holes. Color as selected by architect, jumbo size.
 - b. Williams Products, Inc.; Product - Williams-Goodco brick vent for cavity walls:
 - c. Substitutions: See Section 01 6000 - Product Requirements.
- G. Cleaning Solution: Non-acidic, not harmful to masonry work or adjacent materials.

2.08 LINTELS

- A. See Structural Drawings.

2.09 MORTAR AND GROUT MIXES

- A. Mortar for Unit Masonry: ASTM C 270, using the Proportion Specification.
 1. Masonry below grade and in contact with earth: Type S.
 2. Exterior, loadbearing masonry: Type S.

3. Exterior, non-loadbearing masonry: Type N.
 4. Interior, loadbearing masonry: Type N.
 5. Interior, non-loadbearing masonry: Type N.
- B. Colored Mortar: Proportion selected pigments and other ingredients to match Architect's sample, without exceeding manufacturer's recommended pigment-to-cement ratio. Submit samples to Architect for selection.
1. Brick #1 Mortar Color – Color as selected by Architect.
- Note: Mortar Color for Brick #1 shall be Argos “Khaki” for bidding purposes. Final mortar colors will be determined upon completion of the exterior wall assembly mock-up.
3. Cast Stone Mortar Color – Color as selected by Architect to match cast stone components.

Mortar shall be selected from the following mortar manufacturers:

1. Holcim (US) Inc.
 2. LaFarge North America Inc.
- C. Grout: ASTM C 476. Consistency required to fill completely volumes indicated for grouting; fine grout for spaces with smallest horizontal dimension of 2 inches or less; coarse grout for spaces with smallest horizontal dimension greater than 2 inches.
- D. Mixing: Use mechanical batch mixer and comply with referenced standards.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field conditions are acceptable and are ready to receive masonry.
- B. Verify that related items provided under other sections are properly sized and located.
- C. Verify that built-in items are in proper location, and ready for roughing into masonry work.

3.02 PREPARATION

- A. Direct and coordinate placement of metal anchors supplied for installation under other sections.
- B. Provide temporary bracing during installation of masonry work. Maintain in place until building structure provides permanent bracing.
- C. Cleaning Reinforcement: Before being placed, remove loose rust, ice and other coatings from reinforcement.
- D. Wet brick with absorption rates in excess of 30 g./30 sq. in./min. (30 g./194 cm²/min.) determined by ASTM C 67, so that rate of absorption when laid does not exceed this amount.

3.03 COLD AND HOT WEATHER REQUIREMENTS

- A. Comply with requirements of ACI 530.1/ASCE 6/TMS 602 or applicable building code, whichever is more stringent.
- B. Remove all masonry deemed frozen or damaged.
- C. Do not use wet or frozen CMW units.

3.04 COURSING

- A. Establish lines, levels, and coursing indicated. Protect from displacement.
- B. Maintain masonry courses to uniform dimension. Form vertical and horizontal joints of uniform thickness (3/8").

- C. Concrete Masonry Units:
 - 1. Bond: Running Bond
 - 2. Coursing: One unit and one mortar joint to equal 8 inches.
 - 3. Mortar Joints: “Concave” Joint.
- D. Brick Units:
 - 1. Bond: 1/3 Running Bond
 - 2. Coursing: Two units and two mortar joints to equal 8 inches.
 - 3. Mortar Joints: “Concave”.

3.05 PLACING AND BONDING

- A. Layout walls in advance for accurate spacing of surface bond patterns with uniform joint widths and to properly locate openings, movement-type joints, returns and offsets. Avoid the use of less-than-half-size units at corners, jambs and wherever possible at other locations.
 - 1. Face Brick: Mix brick from several pallets at a time during installation.
- B. Layup walls plumb and true and with courses level, accurately spaced and coordinated with other work.
- C. Lay in fire rated walls with masonry units that comply with fire rating shown.
- D. Lay solid masonry units in full bed of mortar, with full head joints, uniformly jointed with other work.
- E. Lay hollow masonry units with face shell bedding on head and bed joints.
- F. Buttering corners of joints or excessive furrowing of mortar joints is not permitted.
- G. Remove excess mortar and mortar smears as work progresses.
- H. Interlock intersections and external corners.
- I. Do not shift or tap masonry units after mortar has achieved initial set. Where adjustment must be made, remove mortar and replace.
- J. Stop off horizontal run of masonry by racking back 1/2 length of unit in each course. Tothing is not permitted except upon written acceptance of the Architect/Engineer.
- K. Perform job site cutting of masonry units with proper tools to provide straight, clean, unchipped edges. Prevent broken masonry unit corners or edges.
- L. Cut mortar joints flush where wall tile is scheduled and other concealed locations.
- M. Provide radius corner at all outside corners in the interior of the building, except first course above finish floor and top course at ceiling line shall have square corners for joints at wall base and ceiling suspension system.
- N. Isolate masonry partitions from vertical structural framing members with a control joint.
- O. Isolate top joint of masonry partitions from horizontal structural framing members and slabs or decks with compressible joint filler.

3.06 MORTAR BEDDING AND JOINTING:

- A. Lay brick and other solid masonry units with complete filled bed and head joint; and shove into place. Do not slush head joints.
- B. Lay hollow concrete masonry units with full mortar coverage on horizontal and vertical face shells; also, bed webs in mortar in starting course on footing and foundation walls and in all courses of piers, columns and pilasters and where adjacent to cells or cavities to be reinforced or to be filled with concrete or grout.
- C. Remove masonry units disturbed after laying; clean and relay in fresh mortar. Do not pound corners at jambs to fit stretcher units which have been set in position. If adjustments are

required, remove units, clean off mortar and reset in fresh mortar.

- D. Joints: Maintain joint widths shown, except for minor variations required to maintain bond alignment. Rake out mortar where applicable in preparation for application of caulking or sealants.
- E. Tool all masonry joints on exposed faces. ALSO, TOOL ALL JOINTS ON OUTSIDE FACE OF THE INTERIOR WYTHE OF MASONRY WITHIN CAVITY TO RECEIVE FLUID-APPLIED AIR BARRIER MEMBRANE. JOINTS SHALL BE COMPLETELY FILLED AND TOOLED WITHOUT VOIDS.
- F. Thoroughly clean all excess mortar droppings off brick ties and CMU faces prior to application of the fluid-applied air barrier membrane.
- G. All surfaces will be inspected by the waterproofing contractor for acceptance prior to application of the fluid-applied air barrier membrane. Any areas or conditions of non-compliance must be corrected at the mason's expense.

3.07 WEEPS/CAVITY VENTS

- A. Install weep in veneer and cavity walls at 24 inches on center horizontally above through-wall flashing, above shelf angles and lintels, and at bottom of walls. Weeps must be installed directly on top of flashing to avoid damming.
- B. Install cavity vents in veneer and cavity walls at 32 inches on center horizontally below shelf angles and lintels, and near top of walls.

3.08 CAVITY MORTAR CONTROL

- A. Do not permit mortar to drop or accumulate into cavity air space or to plug weep/cavity vents.
- B. For cavity walls, build inner wythe ahead of outer wythe to accommodate accessories.
- C. Install cavity mortar control panels continuously throughout exterior masonry cavities during construction of exterior wythe, complying with manufacturer's installation instructions. Verify that airspace width is no more than 3/8 inch greater than panel thickness. Install horizontally between joint reinforcement. Stagger end joints in adjacent rows. Fit to perimeter construction and penetrations without voids.

3.09 REINFORCEMENT AND ANCHORAGE - GENERAL

- A. Unless otherwise indicated on drawings or specified under specific wall type, install horizontal joint reinforcement 16 inches on center.
- B. Place masonry joint reinforcement in first and second horizontal joints above and below openings. Extend minimum 16 inches each side of opening.
- C. Place continuous joint reinforcement in first and second joint below top of walls.
- D. Lap joint reinforcement ends minimum 6 inches.
- E. Horizontal Reinforcement: Fully embed longitudinal side rods in mortar for their entire length with a minimum cover of 3/4" on exterior side of walls and 1/2" at other locations. Provide continuity at corners and wall intersections by use of prefabricated "L" and "T" sections. Cut and bend units as directed by manufacturer for continuity at returns, offsets, column fireproofing, pipe enclosures and other special conditions.
- F. Fasten anchors to structural framing and embed in masonry joints as masonry is laid. Unless otherwise indicated on drawings or closer spacing is indicated under specific wall type, space anchors at maximum of 36 inches horizontally and 24 inches vertically.

3.10 REINFORCEMENT AND ANCHORAGE - SINGLE WYTHE MASONRY

- A. Install horizontal joint reinforcement 16 inches on center.
- B. Place masonry joint reinforcement in first and second horizontal joints above and below openings. Extend minimum 16 inches each side of opening.
- C. Place continuous joint reinforcement in first and second joint below top of walls.
- D. Lap joint reinforcement ends minimum 6 inches.

3.11 REINFORCEMENT AND ANCHORAGE - MASONRY VENEER

- A. Install horizontal joint reinforcement 16 inches on center.
- B. Place masonry joint reinforcement in first and second horizontal joints above and below openings. Extend minimum 16 inches each side of opening.
- C. Place continuous joint reinforcement in first and second joint below top of walls.
- D. Lap joint reinforcement ends minimum 6 inches.
- E. Seismic Reinforcement: Connect veneer anchors with continuous horizontal wire reinforcement before embedding anchors in mortar.

3.12 REINFORCEMENT AND ANCHORAGES - CAVITY WALL MASONRY

- A. Install horizontal joint reinforcement 16 inches on center.
- B. Place masonry joint reinforcement in first and second horizontal joints above and below openings. Extend minimum 16 inches each side of openings.
- C. Place continuous joint reinforcement in first and second joint below top of walls.
- D. Lap joint reinforcement ends minimum 6 inches.
- E. Fasten anchors to structural framing and embed in masonry joints as masonry is laid. Space anchors at maximum of 24 inches horizontally and 24 inches vertically.
- F. Keep cavity clean of mortar droppings during construction. Strike joints facing cavity flush.

3.13 MASONRY FLASHINGS

- A. Whether or not specifically indicated, install masonry flashing to divert water to exterior at all locations where downward flow of water will be interrupted. Coordinate with waterproofing contractor to ensure proper installation locations of membrane flashings on the substrate. The waterproofing contractor will install all membrane flashings on the substrates and the masonry contractor will continue the installation within the masonry veneer.
 - 1. Extend flashings full width at such interruptions and at least 8 inches into adjacent masonry or turn up at least 4 inches to form watertight pan at non-masonry construction.
 - 2. Remove or cover protrusions or sharp edges that could puncture flashings.
 - 3. Seal lapped ends and penetrations of flashing before covering with mortar.
- B. Extend metal flashings through exterior face of masonry and turn down to form drip. Install joint sealer below drip edge to prevent moisture migration under flashing.
- C. Extend laminated flashings to within 1/4 inch of exterior face of masonry.
- D. Lap end joints of flashings at least 4 inches and seal watertight with mastic or elastic sealant.
- E. Provide surface primer at all surfaces in strict accordance with membrane flashing manufacturer's written instructions.

3.14 LINTELS

- A. Install loose steel lintels over openings.

- B. Install reinforced unit masonry lintels over openings where steel or precast concrete lintels are not scheduled.
 - 1. Do not splice reinforcing bars.
 - 2. Support and secure reinforcing bars from displacement. Maintain position within 1/2 inch of dimensioned position.
 - 3. Place and consolidate grout fill without displacing reinforcing.
 - 4. Allow masonry lintels to attain specified strength before removing temporary supports.
- C. Maintain minimum 8-inch bearing on each side of opening.

3.15 GROUTED COMPONENTS

- A. Grout all CMU cells solid.
- B. Place reinforcement in bond beams and columns as shown on structural drawings.
- C. Lap splices minimum 24 bar diameters.
- D. Support and secure reinforcing bars from displacement. Maintain position within 1/2 inch of dimensioned position.
- E. Place and consolidate grout fill without displacing reinforcing.
- F. Grout all block cores at walls where noted on drawings.

3.16 CONTROL AND EXPANSION JOINTS

- A. Provide vertical expansion, control and isolation joints in masonry where shown. If not shown provide at a distance of 3 times the wall height not to exceed 35'-0" and 4'-0" off corners. In any case, consult architect before placement. Built-in related masonry accessory items as the masonry work progresses. Rake out mortar in preparation for application of sealant backing rod and sealant. Insert a built-in Styrofoam insulation board in vertical expansion joints where shown on plans. (The waterproofing contractor will install a 12" vertical strip of continuous 40 mil flash shall be placed on the cavity side of the interior wall and turned out below floor level). CMU control joints, if indicated, are to be used as a guide only. Contractor is to coordinate with all openings and position as required.
- B. Do not continue horizontal joint reinforcement through control and expansion joints.
- C. Form control joint with a sheet building paper bond breaker fitted to one side of the hollow contour end of the block unit. Fill the resultant core with grout fill. Rake joint at exposed unit faces for placement of backer rod and sealant.
- D. Install preformed control joint device in continuous lengths. Seal butt and corner joints in accordance with manufacturer's instructions.
- E. Size control joint in accordance with Section 07 90 05 for sealant performance.
- F. Form expansion joint as detailed.

3.17 BUILT-IN WORK

- A. As work progresses, install built-in metal door frames, glazed frames, anchor bolts, and plates and other items to be built into the work and furnished under other sections.
 - 1. Fill space between hollow metal frames and masonry solidly with mortar.
 - 2. Leave joints around outside perimeters of aluminum storefront exterior doors, window frames and other wall openings to receive joint sealant.
- B. Install built-in items plumb, level, and true to line.
- C. Bed anchors of metal door frames in adjacent mortar joints. Fill frame voids solid with grout.
 - 1. Fill adjacent masonry cores with grout minimum 12 inches from framed openings.
- D. Do not build into masonry construction organic materials that are subject to deterioration.

3.18 CUTTING AND FITTING

- A. Cut and fit for chases, pipes, conduit, sleeves, and ducts. Coordinate with other sections of work to provide correct size, shape, and location.
- B. Obtain approval prior to cutting or fitting masonry work not indicated or where appearance or strength of masonry work may be impaired.

3.19 FIELD QUALITY CONTROL

- A. An independent testing agency will perform field quality control tests, as specified in Section 01 4500.
- B. Clay Masonry Unit Tests: Test each variety of clay masonry in accordance with ASTM C 67 requirements, sampling 5 randomly chosen units for each 50,000 installed.
- C. Concrete Masonry Unit Tests: Test each variety of concrete unit masonry in accordance with ASTM C 140 for conformance to requirements of this specification.
- D. Mortar Tests: Test each type of mortar in accordance with ASTM C 780, testing with same frequency as masonry samples.
- E. Special inspections
 1. Verify all reinforcement placement, including required laps, before grouting.
 2. Verify that all grout placement complies with code and construction document provisions.
 3. No grouting of masonry to be performed until testing laboratory has inspected re-bar placement.
 4. Grout shall be sampled and tested for compressive strength per ASTM C1019.

3.20 CLEANING

- A. Remove excess mortar and mortar droppings.
- B. Replace defective mortar. Match adjacent work.
- C. Clean soiled surfaces with cleaning solution.
 1. Clean exposed CMU masonry by dry brushing at the end of each day's work and after final pointing to remove mortar spots and droppings. Remove efflorescence prior to final acceptance of the project.
 2. Clean architectural polished colored CMU masonry with clean, soft, damp rags. Wipe off at once all mortar smears and spatters. Do not allow hardening. Final clean down to be in strict accordance with block manufacturer's recommendations, including thorough rinsing. Damp-dry with clean, soft rags. Do not use acid, steel wood, or other abrasives.
 3. Clean exposed brick masonry surfaces as recommended by BIA Technical Notes "Cleaning Brick Masonry". Clean exposed masonry from top down. Chemical cleaners shall be mixed and applied in accordance with the manufacturer's recommended specifications. Use of muriatic acid is prohibited.
 4. BRICK: PRIOR TO APPLICATION OF CHEMICAL CLEANERS, THE EXPOSED FACE OF THE BRICK SHALL BE THOROUGHLY SATURATED WITH WATER. APPLY CHEMICAL CLEANERS IN CAREFUL ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. AFTER CLEANING OPERATIONS ARE COMPLETED, THOROUGHLY FLUSH THE FACE OF THE BRICK WITH WATER UNTIL ALL CLEANING RESIDUE HAS BEEN REMOVED.
 5. PROTECT ALL ADJACENT NON-MASONRY SURFACES FROM COMING INTO CONTACT WITH CHEMICAL CLEANERS. ANY DAMAGE TO ADJACENT SURFACES SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE.
- D. Use non-metallic tools in cleaning operations.

3.21 PROTECTION

- A. Without damaging completed work, provide protective boards at exposed external corners that are subject to damage by construction activities.

END OF SECTION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Hardware for wood, hollow steel, and aluminum doors.
- E. Lock cylinders for doors for which hardware is specified in other sections.
- F. Thresholds.
- G. Weatherstripping, seals and door gaskets.
- H. Hardware for integral doors of aluminum storefront system and curtain wall systems along with cylinders.

1.02 COORDINATION

- A. The General Contractor be responsible for hanging all doors and installation of hardware.
- B. Coordinate hardware for related trades such as metal doors, frames, millwork, etc.
- C. Coordinate approved shop drawings from any affected trades after receipt of final approved finish hardware schedule.
- D. Templates: The hardware supplier shall furnish, promptly, necessary templates and an approved hardware schedule to other trades requiring their use to enable the door manufacturers to make proper provision in their work to receive the architectural finish hardware. Other trades shall furnish to the hardware supplier such drawings and information that might be required in order that proper items of hardware be supplied. Provide only template produced units.

1.03 RELATED REQUIREMENTS

- A. Section 08 1113 - Hollow Metal Doors and Frames.
- B. Section 08 1416 - Flush Wood Doors.
- C. Section 08 3313 - Coiling Counter Doors: Lockable coiling counter doors. Hardware by door manufacturer, except cylinders.
- D. Section 08 3326 - Overhead Coiling Grilles: Lockable coiling grilles. Hardware by door manufacturer, except cylinders.
- E. Section 08 4110 - Aluminum-Framed Entrances and Storefronts: Heavy Duty Aluminum Wide Stile and Rail Doors. Hardware by door manufacturer if not listed in the Door Hardware Schedule at the end of this section, except cylinders.
- F. Section 08 4413 - Glazed Aluminum Curtain Walls: Hardware not listed in the Door Hardware Schedule at the end of this section, except lock cylinders; installation of cylinders

1.04 REFERENCE STANDARDS

- A. ANSI/ICC A117.1 - American National Standard for Accessible and Usable Buildings and Facilities; International Code Council; 2017.
- B. NFPA 80 - Standard for Fire Doors and Other Opening Protectives; 2010.
- C. UL (BMD) - Building Materials Directory; Underwriters Laboratories Inc.; current edition.

1.05 ADMINISTRATIVE REQUIREMENTS

- A. Coordinate the manufacture, fabrication, and installation of products onto which door hardware will be installed.
- B. Furnish templates for door and frame preparation to manufacturers and fabricators of products requiring internal reinforcement for door hardware. Coordinate schedule with Contractor in order to not delay project.
- C. Convey Owner's keying requirements to manufacturers.
- D. Preinstallation Meeting: Convene a preinstallation meeting one week prior to commencing work of this section; require attendance by all affected installers.
- E. Sequence installation to ensure efficient progress of the work is achieved in an orderly and expeditious manner. Building shall be lockable as soon as building is dried in.

1.06 SUBMITTALS

- A. See Section 01 33 00 - Submittal Procedures, for submittal procedures.
- B. LEED Submittals:
 - 1. Product Data for Credit MR 4: For products having recycled content, documentation indicating percentages by weight of postconsumer and preconsumer recycled content. Include statement indicating cost for each product having recycled content.
 - 2. Product Certificates for Credit MR 5: For product and materials required to comply with requirements for regional materials indicating location and distance from Project of material manufacturer and point of extraction, harvest, or recovery for each raw material. Include statement indicating cost for each regional material and the fraction by weight that is considered regional.
- C. Product Data: Submit manufacturers technical product data for each item of hardware, marked to clearly show products to be furnished for this project. Include whatever information may be necessary to show compliance with requirements, and include instructions for installation and for maintenance of operating parts and finish.
- D. Shop Drawings:
 - 1. Indicate locations and mounting heights of each type of hardware, schedules, catalog cuts, See Section 01 6000 - Product Requirements.
 - 2. Submit manufacturer's parts lists and templates.
- E. Schedule: The hardware supplier shall submit to the Architect for approval a complete hardware schedule ten days after the award of the hardware contract. Organize hardware schedule into hardware sets indicating complete designations of every item for each door opening. Include type, style, function, finish, manufacturer, location coordinated with door schedule on drawings, door and frame types and sizes, keying and mounting heights for all hardware.
- F. Samples: (If requested by Architect)
 - 1. Submit 1 sample of hinge, latchset, lockset, and closer illustrating style, color, and finish.
 - 2. Samples will be incorporated into the Work.
- G. Maintenance Data: Include data on operating hardware, lubrication requirements, and inspection procedures related to preventative maintenance.
 - 1. Submit manufacturer's parts lists and templates.
- H. Keys: Deliver with identifying tags to Owner by security shipment direct from hardware supplier.
- I. Warranty: Submit manufacturer's warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

1.08 QUALITY ASSURANCE

- B. Americans with Disabilities Act (ADA): Provide and install finish hardware in accordance with requirements of Americans with Disabilities Act (ADA).
- C. ANSI Standards for Physically Handicapped: Finish hardware shall comply with: "American National Standard for Buildings and Facilities - Providing Accessibility and Usability for Physically Handicapped People" (ANSI A117.1). latest edition, by American National Standards Institute, Inc.; New York, New York. Before installation of finish hardware, notify Architect of any Contract Documents requirements that are suspected to be in non-compliance with ANSI A117.1-2017.
- D. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.
- E. Hardware Supplier Qualifications: Company specializing in supplying commercial door hardware with five years of experience.
- F. Hardware Supplier Personnel: Employ an Architectural Hardware Consultant (AHC) to assist in the work of this section.
 - 1. The AHC shall have a minimum of five years of documented experience with similar type projects.
 - 2. A representative of the hardware supplier shall visit the job site a minimum of three (3) times during construction, and upon completion of the job shall inspect the hardware and submit a letter to the Architect in duplicate advising that the hardware has been properly installed and is operating properly.
 - 3. The hardware supplier shall be responsible for supplying the correct hardware to meet all local and state building, fire and accessibility codes.
- G. Installer Qualifications:
 - 1. All hardware shall be installed by tradesmen skilled in the application of commercial grade hardware.
 - 2. The installer must be approved by the Owner and Architect prior to the start of installation, and provide references of completed school projects. There will be no exceptions.
 - 3. Installation will be handled through the general contractor, not the hardware supplier.

1.09 SCHEDULING

- A. The hardware supplier shall coordinate with the General Contractor to establish dates for processing submittals, furnishing templates, delivering hardware, and installing the work of this section to meet construction progress schedule included in this Project Manual.

1.10 DELIVERY, STORAGE, AND HANDLING

- A. Package hardware items individually with the required fasteners for proper installation; label and identify each package with door opening code to match hardware schedule.
- B. Finish hardware shall be stored in a locked area and remain secured until installation.

1.11 WARRANTY

- A. See Section 01 7839 - Project Record Documents, for additional warranty requirements.
- B. Installer's Warranty: Installer shall guarantee in writing, that all materials specified in this section shall be free from all defects and shall perform satisfactorily for a period of one (1) year after substantial completion. Installer shall replace, at his own expense, including labor, any items of hardware which may prove defective within this period.
- C. Manufacturer's Warranty: Provide manufacturer's warranty against defects in materials and workmanship as follows:
 - 1. Locksets: 2 years
 - 2. Door Closers: 10 years

3. Exit Devices: 3 years
4. Other Hardware: 1 year

PART 2 PRODUCTS

2.01 DOOR HARDWARE - GENERAL

- A. Provide all hardware specified or required to make doors fully functional, compliant with applicable codes, and secure to the extent indicated.
- B. Provide all items of a single type of the same model by the same manufacturer.
- C. Provide products that comply with the following:
 1. Applicable provisions of federal, state, and local codes.
 2. ANSI/ICC A117.1, American National Standard for Accessible and Usable Buildings and Facilities, Latest Edition.
 3. Applicable provisions of 2015 International Building Code.
 4. Fire-Rated Doors: NFPA 80.
 5. Fire-Rated Doors: NFPA 80.
 6. All Hardware on Fire-Rated Doors: Listed and classified by UL as suitable for the purpose specified and indicated.
 7. Hardware for Smoke and Draft Control Doors (Indicated as "S" on Drawings): Provide hardware that enables door assembly to comply with air leakage requirements of the applicable code.
 8. Products Requiring Electrical Connection: Listed and classified by UL as suitable for the purpose specified and indicated.
- D. Electrically Operated and/or Controlled Hardware: Provide all power supplies, power transfer hinges, relays, and interfaces required for proper operation; provide wiring between hardware and control components and to building power connection.
- C. Hardware is to be provided as scheduled at the end of this section and per the following requirements:

1. Locks & Cylinders	Corbin Russwin NO SUBSTITUTIONS
2. Exit Devices	Von Duprin NO SUBSTITUTIONS
3. Closers	LCN NO SUBSTITUTIONS
4. Electronic Hardware & Related Components	Schlage Electronics NO SUBSTITUTIONS
5. Continuous Hinges	Select NO SUBSTITUTIONS

~~2.02 KEY CONTROLS~~

- ~~A. Facility Manager's Key Cabinet: Sheet steel construction, piano hinged door with key lock.~~
 - ~~1. Mounting: Wall-mounted.~~
 - ~~2. Capacity: Actual quantity of keys, plus 50 percent additional capacity.~~
 - ~~3. Horizontal metal hook strips with replaceable labels covered with clear plastic.~~
 - ~~4. Size key hooks to hold 6 keys each.~~
 - ~~5. Finish: Baked enamel, color as selected.~~
 - ~~6. Key cabinet lock to building keying system.~~
 - ~~7. Hardware Contractor shall set up key control system and place keys in cabinet.~~
 - ~~8. Locate cabinet in administration vault as coordinated with the architect & owner.~~

2.03 KEYING

- A. Door Locks: Great grand master keyed.
 1. Owner shall approve complete keying layout in writing prior to placing lock order with factory.

- B. Supply keys in the following quantities:
 - 1. 10 master keys for each master key group.
 - 2. 10 grand master keys.
 - 3. 10 great grand master keys.
 - 4. 10 construction keys.
 - 5. 10 control keys and 25 extra cylinder cores.
 - 6. 3 change keys for each lock.
- C. Provide schematic prepared by hardware supplier and instructions as to its use in design of the system.
- D. The master keys along with three (3) control keys shall be sent direct to the Owner's Representative by registered mail, return receipt requested.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that doors and frames are ready to receive work; labeled, fire-rated doors and frames are present and properly installed, and dimensions are as indicated on shop drawings.
- B. Verify that electric power is available to power operated devices and of the correct characteristics.

3.02 INSTALLATION

- A. Install hardware in accordance with manufacturer's instructions and applicable codes.
- B. Set units level, plumb and true to line and location.
- C. Set hardware accurately and securely anchor with attachment devices; set screws level, flush and draw up tight.
- D. Drill and countersink units which are not factory-prepared for anchorage fasteners. Space fasteners and anchors in accordance with industry standards.
- E. Do not install surface mounted items until finishes have been completed on the substrate.
- F. Use templates provided by hardware item manufacturer.
- G. Do not install surface mounted items until finishes applied to substrate are complete.
- H. Install hardware on fire-rated doors and frames in accordance with code and NFPA 80.
- I. Set thresholds for exterior doors in full bed of butyl - rubber or polyisobutylene mastic sealant.
- J. Mounting heights for hardware from finished floor to center line of hardware item:
 - 1. For steel doors and frames: See Section 08 1113.
 - 2. Wood doors: See Section 08 1416.
- K. Installer shall:
 - 1. Advise the hardware supplier before proceeding with door stop installation for possible replacement if door stop scheduled for an opening is not appropriate due to furniture layout or other reasons.
 - 2. Provide sex nuts and bolts for door closers.
 - 3. Provide 4-7/8-inch lock strikes unless otherwise noted on schedule.

3.03 FIELD QUALITY CONTROL

- A. Provide an Architectural Hardware Consultant to inspect installation and certify that hardware

and installation has been furnished and installed in accordance with manufacturer's instructions and as specified.

3.04 ADJUSTING

- A. Adjust hardware for smooth operation and leave clean, free from defects, paint, etc.
- B. Adjust gasketing for complete, continuous seal; replace if unable to make complete seal.
- C. Final Adjustment: Final adjustment shall be done during the week prior to acceptance or occupancy, and make final check and adjustment of all hardware items in project. Clean operating items as necessary to restore proper function and finish of hardware and doors. Adjust door control device to compensate for final operation of heating and ventilating equipment. Replace any hardware which cannot be adjusted to operate freely and smoothly as intended for the application at no expense to the Owner.

3.05 CLEANING

- A. Clean adjacent surfaces soiled by hardware installation. Clean finished hardware per manufacturer's instructions after final adjustments has been made. Replace items that cannot be cleaned to manufacturer's level of finish quality at no additional cost.
- B. Instruct Owner's personnel in proper adjustment and maintenance of hardware and hardware finishes, during the final adjustment of hardware.

3.06 PROTECTION

- A. Do not permit adjacent work to damage hardware or finish.
- B. Do not remove labels on lock or cylinders. This label has keying information necessary for Owner's use.

Hardware Sets

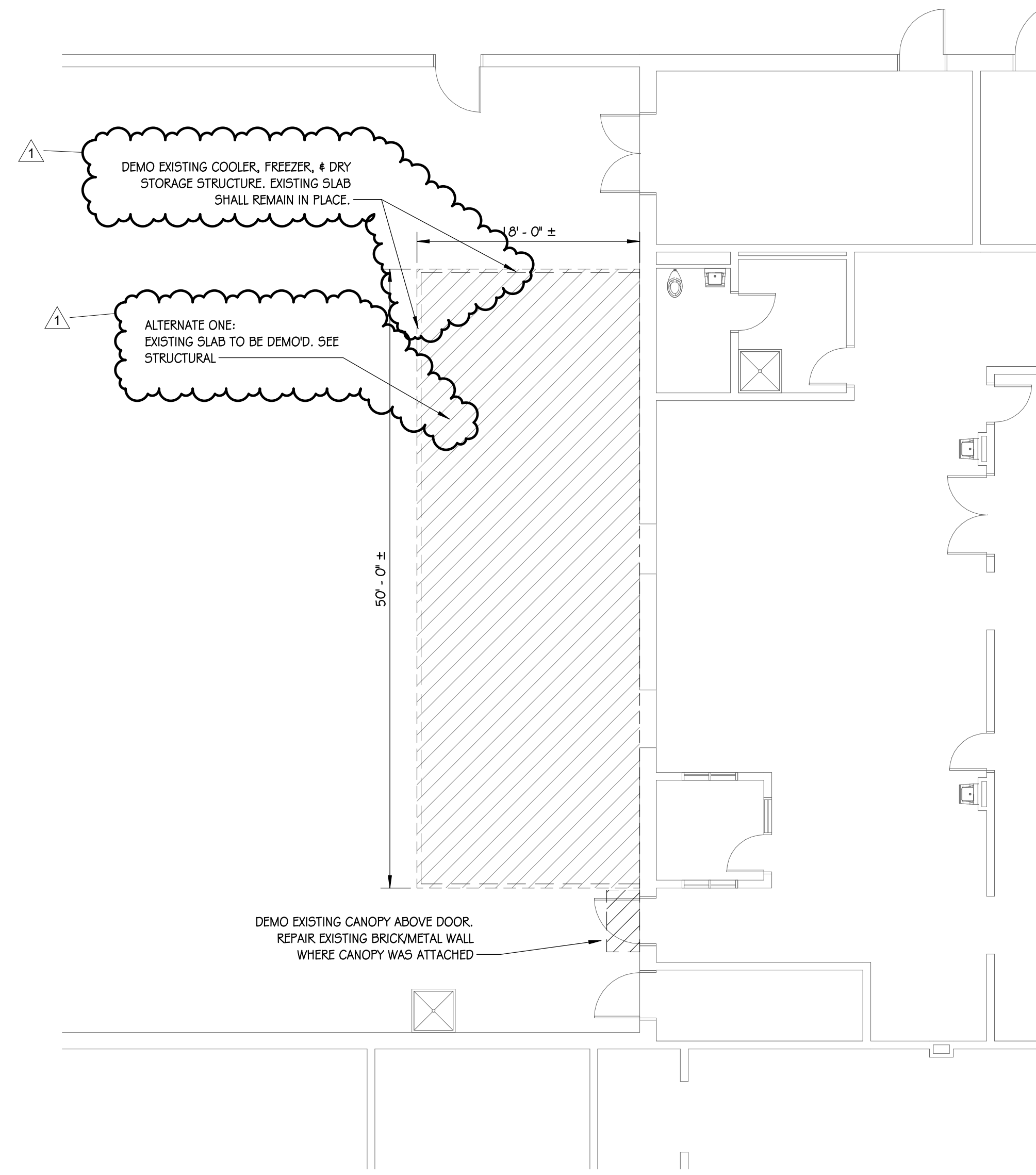
Set 1.0

Doors F129.A

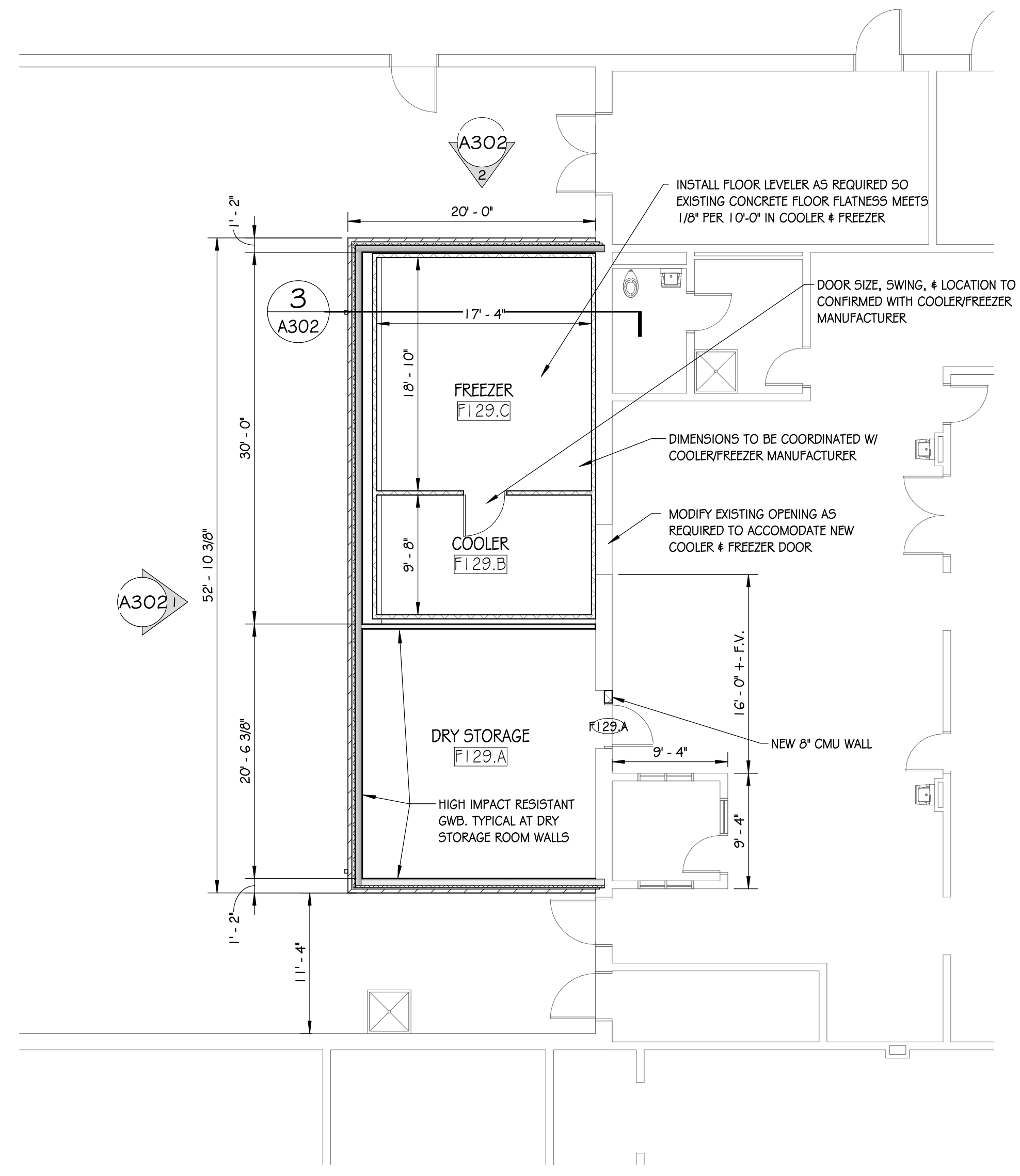
Description: (DRY STORAGE) - CLASSROOM - W/F STOP

Hinge, Full Mortise	TA2714	US26D	MK
Classroom Lock	ML2055 LWA CT6R	626	RU
Interchangeable Core	CR8000 KY3 MK N10 VKC2	626	RU
Wall Stop	403 (or) 441CU (As Required)	US26D	RO
Silencer	608		RO

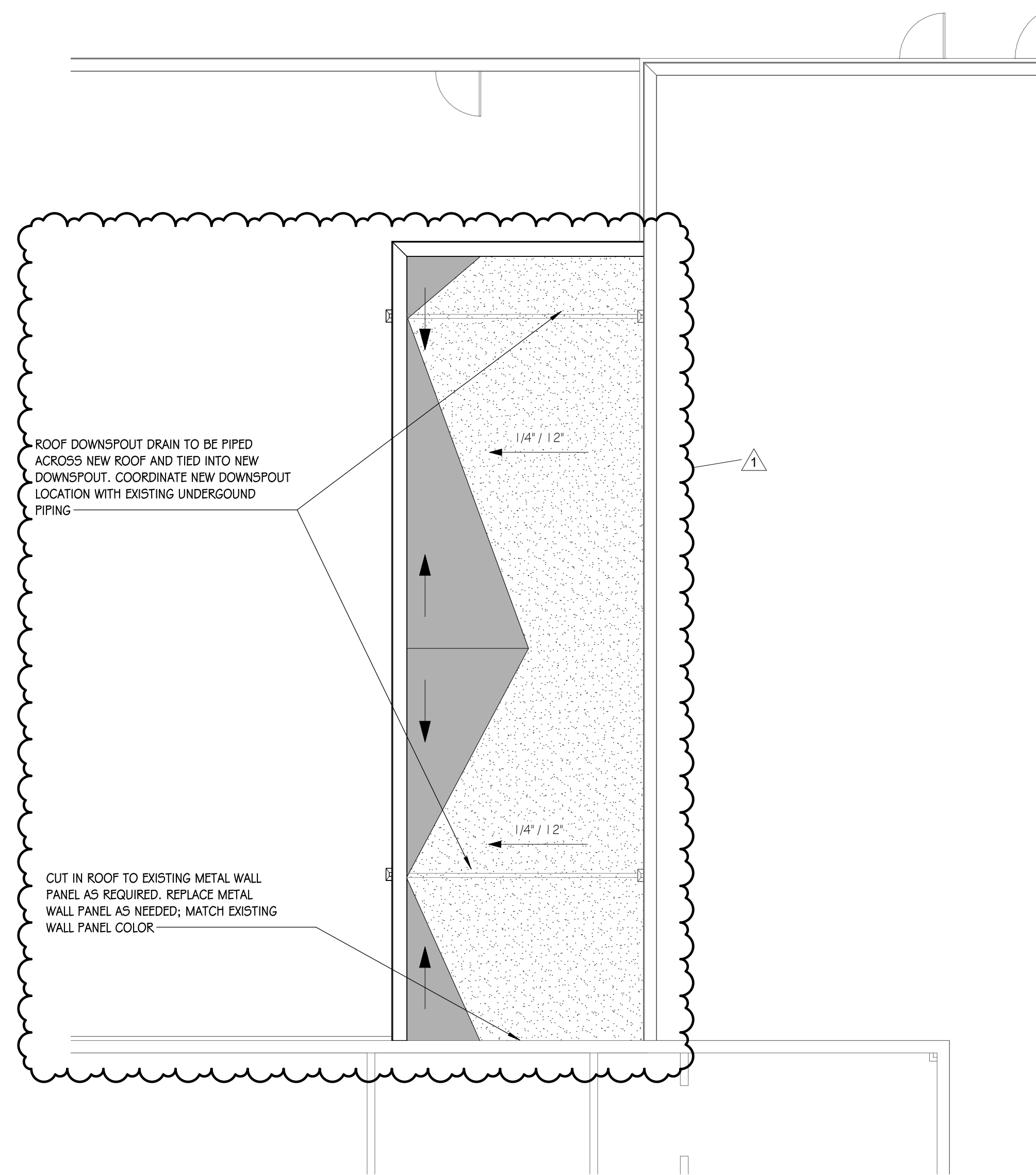
END OF SECTION



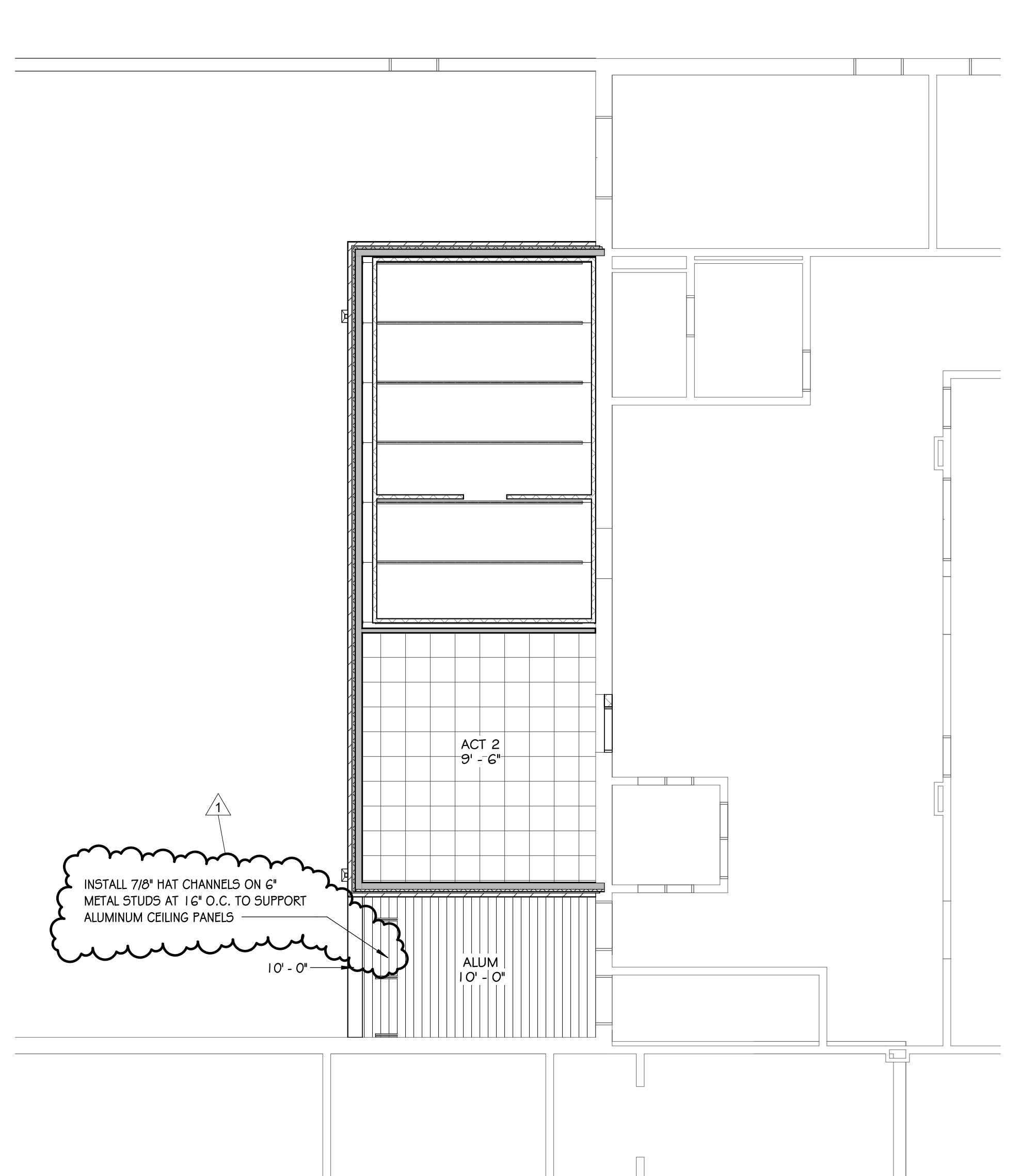
1 DEMO FLOOR PLAN
A30 1/8" = 1'-0"



2 FLOOR PLAN
A30 1/8" = 1'-0"



3 ROOF PLAN
A30 1/8" = 1'-0"



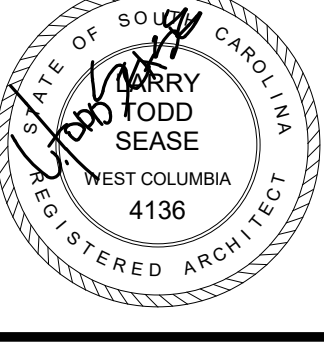
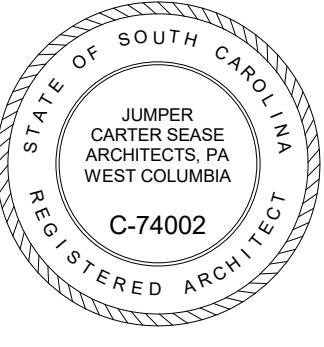
4 CEILING PLAN
A30 1/8" = 1'-0"

WALL LEGEND	
	3-5/8" METAL STUDS @ 16"oc WITH 5/8" HIGH IMPACT RESISTANT GWB EACH SIDE
	1'-2" EXTERIOR WALL WITH 6" METAL STUDS @ 16"oc WITH FACE BRICK AND 5/8" GWB ON INTERIOR SIDE. SEE WALL SECTIONS

- GENERAL NOTES**
- ALL OUTSIDE CORNERS OF INTERIOR MASONRY WALLS SHALL HAVE BULLNOSE RADIUS CMU, UNLESS SCHEDULED TO RECEIVE CERAMIC WALL TILE OR OTHER VENEER FINISH. THE FIRST CMU BLOCK ABOVE FINISH FLOOR IS TO BE SQUARE AND THE CMU BLOCK AT THE FINISH CEILING AND GWB SOFFITS/BULKHEADS ARE TO BE SQUARE. ALL CMU NOT 90° CORNERS MUST ALSO BE SPECIAL SHAPE AS SINGLE BLOCK WITH EXPOSED OUTSIDE CORNER BULLNOSE. SEE DETAIL ON MISC. DTL. SHT.
 - ALL MASONRY WALL INFILLS SHALL BE TOOTHED-IN.
 - C.J. = CONSTRUCTION JOINT AT CMU. SEE TYPICAL DETAILS. SPACE 40'-0" MAX. VERIFY LOCATIONS WITH ELEVATIONS OR ARCHITECT IF NOT SHOWN PRIOR TO INSTALLATION.
 - ALL MECHANICAL, PLUMBING, ELECTRICAL AND FIRE PROTECTION ROUGH-INS AT EXPOSED AREAS ARE TO BE REVIEWED WITH THE ARCHITECT PRIOR TO INSTALL. ALL CONDUITS AND PIPING MUST BE COORDINATED WITH OTHER TRADES AND CONCEALED. RELOCATION OF ROUGH-INS BY ANY TRADE AS DIRECTED BY THE ARCHITECT WILL BE AT NO COST TO OWNER WHEN CONTRACTOR FAILS TO COMPLY WITH THIS REQUIREMENT.
 - CONSTRUCTION WORK IS TO BE PERFORMED DURING THE SUMMER BREAK WHILE THE BUILDING IS UNOCCUPIED BY STUDENTS OR STAFF

**Jumper
Carter
Sease**

ARCHITECTS
412 Meeting Street
West Columbia
South Carolina



**SPRINGFIELD MIDDLE SCHOOL COOLER & FREEZER
ENCLOSURE REPLACEMENT
FORT MILL SCHOOL DISTRICT
1711 SPRINGFIELD PARKWAY, FORT MILL, SC**

BID DOCUMENTS

No	Description	Date
1	12/14/23	

DRAWN BY: **HS**

CHECKED BY: **TS**

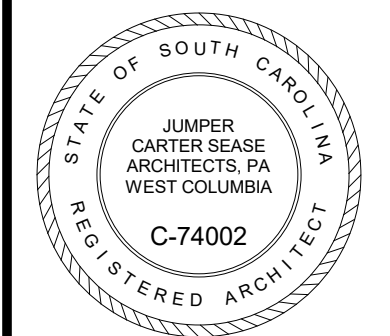
COMM NO: **22004**

DATE: **11/21/23**

SHEET TITLE:
**DEMO FLOOR PLAN,
FLOOR PLAN, ROOF
PLAN, & CEILING
PLAN**

SHEET NO:

A301



These drawings are the property of Jumper Carter Sease Architects, PA, and may not be reproduced, copied or used in whole or in part without written consent of the architect. Any infringement will be subject to legal action.

SPRINGFIELD MIDDLE SCHOOL COOLER & FREEZER ENCLOSURE REPLACEMENT
FORT MILL SCHOOL DISTRICT
1711 SPRINGFIELD PARKWAY, FORT MILL, SC

BID DOCUMENTS

No	Description	Date
1	12/14/23	

DRAWN BY: **HS**

CHECKED BY: **TS**

COMM NO: **22004**

DATE: **11/21/23**

SHEET TITLE:
ELEVATIONS, SECTIONS, DOOR SCHEDULE, & FINISH SCHEDULE

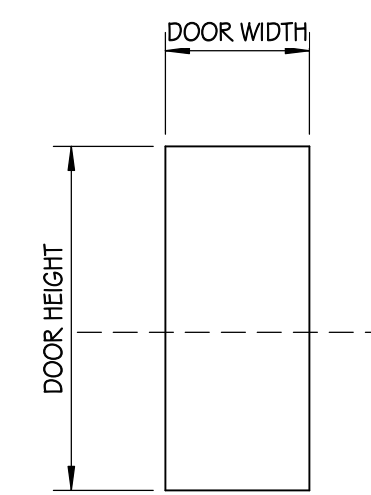
SHEET NO:

A302

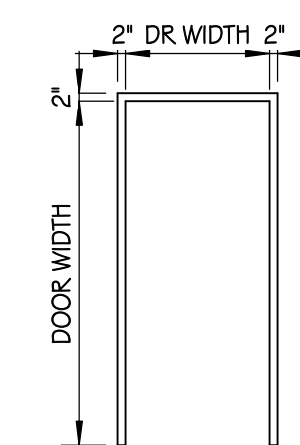
FINISH SCHEDULE ABBREVIATIONS	
ACT	ACOUSTICAL CEILING TILE
CONC	CONCRETE
QFT	QUARRY FLOOR TILE
QTB	QUARRY TILE BASE
PNT	PAINT

GENERAL FINISH NOTES APPLY TO ALL AREAS OR THOSE GENERAL FINISH NOTES NOT SPECIFICALLY NOTED ON SCHEDULE.

- SEE REFLECTED CEILING PLANS FOR CEILING TYPES AND HEIGHTS.
- ALL HOLLOW METAL FRAMES TO BE PAINTED. COLOR TO BE SELECTED BY ARCHITECT.
- EPOXY PAINT TO BE USED AT DRY STORAGE ROOM AND KITCHEN WALLS.
- ACT-2 = VINYL FACED OR MOISTURE RESISTANT TILE
- SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.
- QUARRY TILE IS TO HAVE EPOXY GROUT. COLOR TO BE SELECTED BY ARCHITECT.



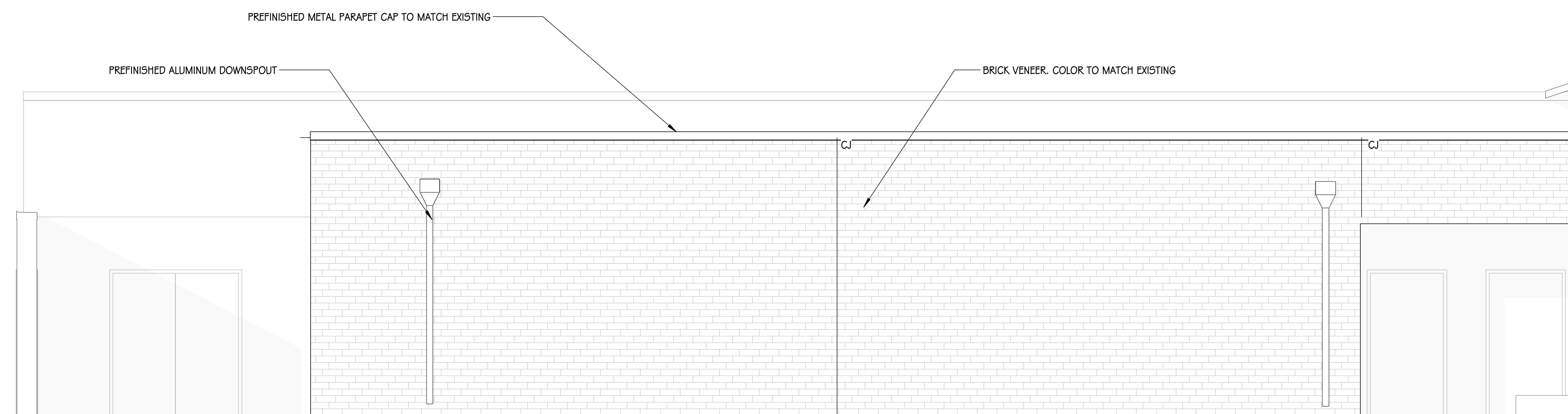
DOOR TYPES
1/4" = 1'-0"



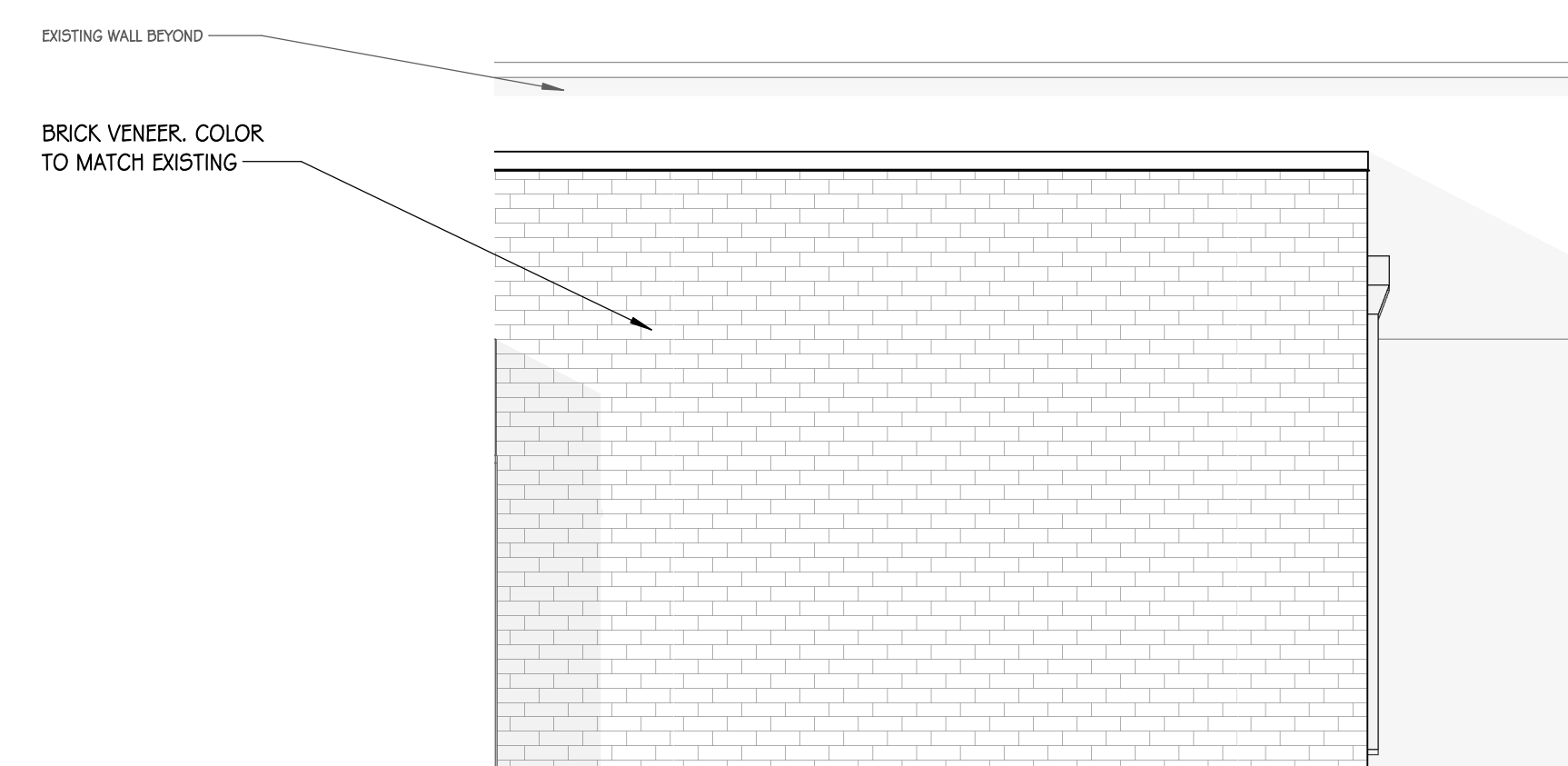
FRAME TYPES
1/4" = 1'-0"

DOOR SCHEDULE															
DOOR #	DOOR TYPE	DOOR WIDTH	DOOR HEIGHT	DOOR MATERIAL	DOOR FINISH	GLASS SIZE	GLASS TYPE	FRAME TYPE	FRAME MATERIAL	FRAME FINISH	HEAD	JAMB	SILL	RATING	REMARKS
F129.A	D	3'-4"	7'-2"	HM	PAINT			I	HM	PAINT	H-1	J-1			

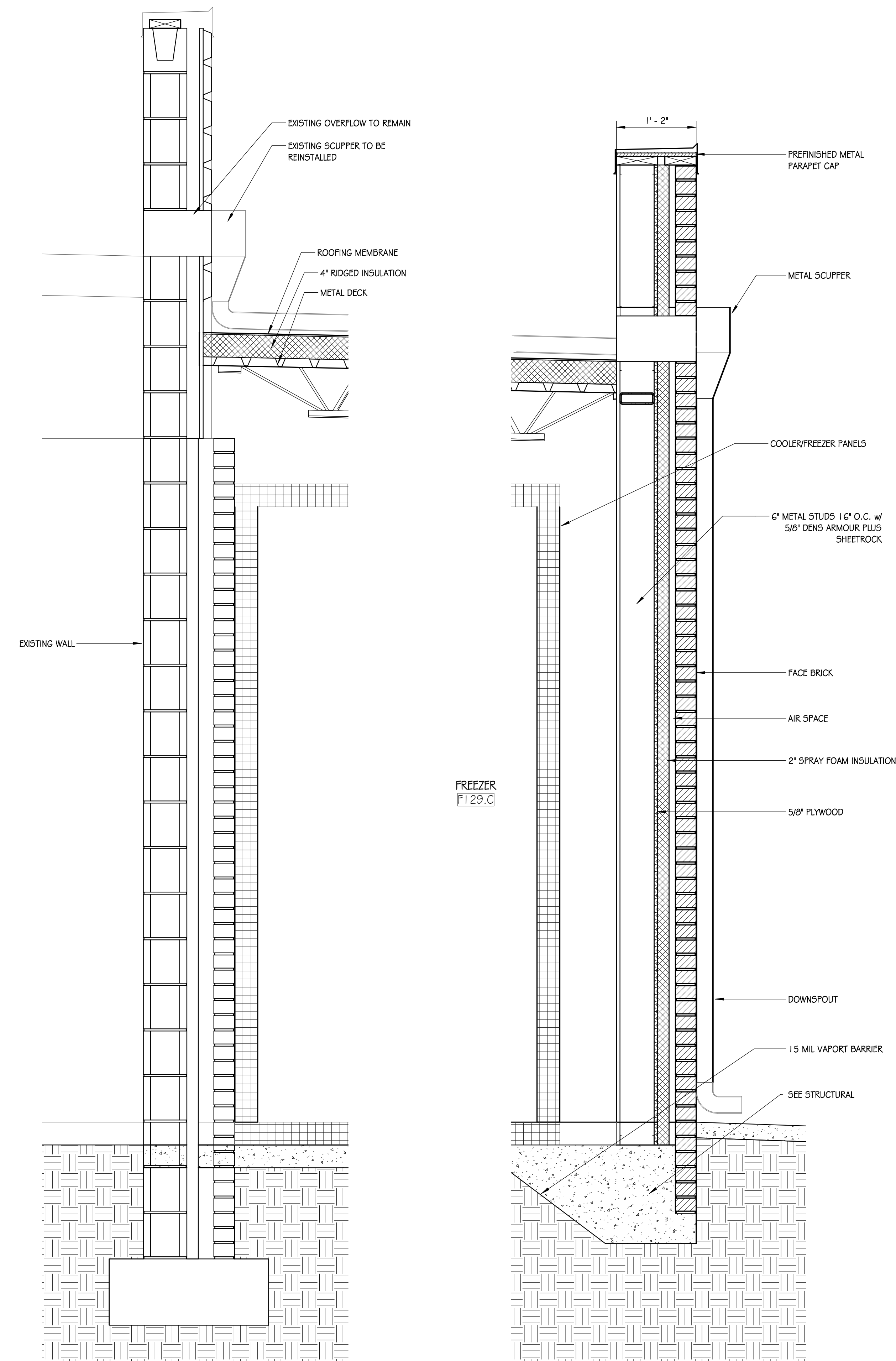
FINISH SCHEDULE								
ROOM #	ROOM NAME	FLOOR FINISH	BASE TYPE	WALL NORTH	WALL SOUTH	WALL EAST	WALL WEST	COMMENTS
F129.A	DRY STORAGE	QT	QTB	PAINT	PAINT	PAINT	PAINT	
F129.B	COOLER	PREFINISHED		PREFINISHED	PREFINISHED	PREFINISHED	PREFINISHED	
F129.C	FREEZER	PREFINISHED		PREFINISHED	PREFINISHED	PREFINISHED	PREFINISHED	



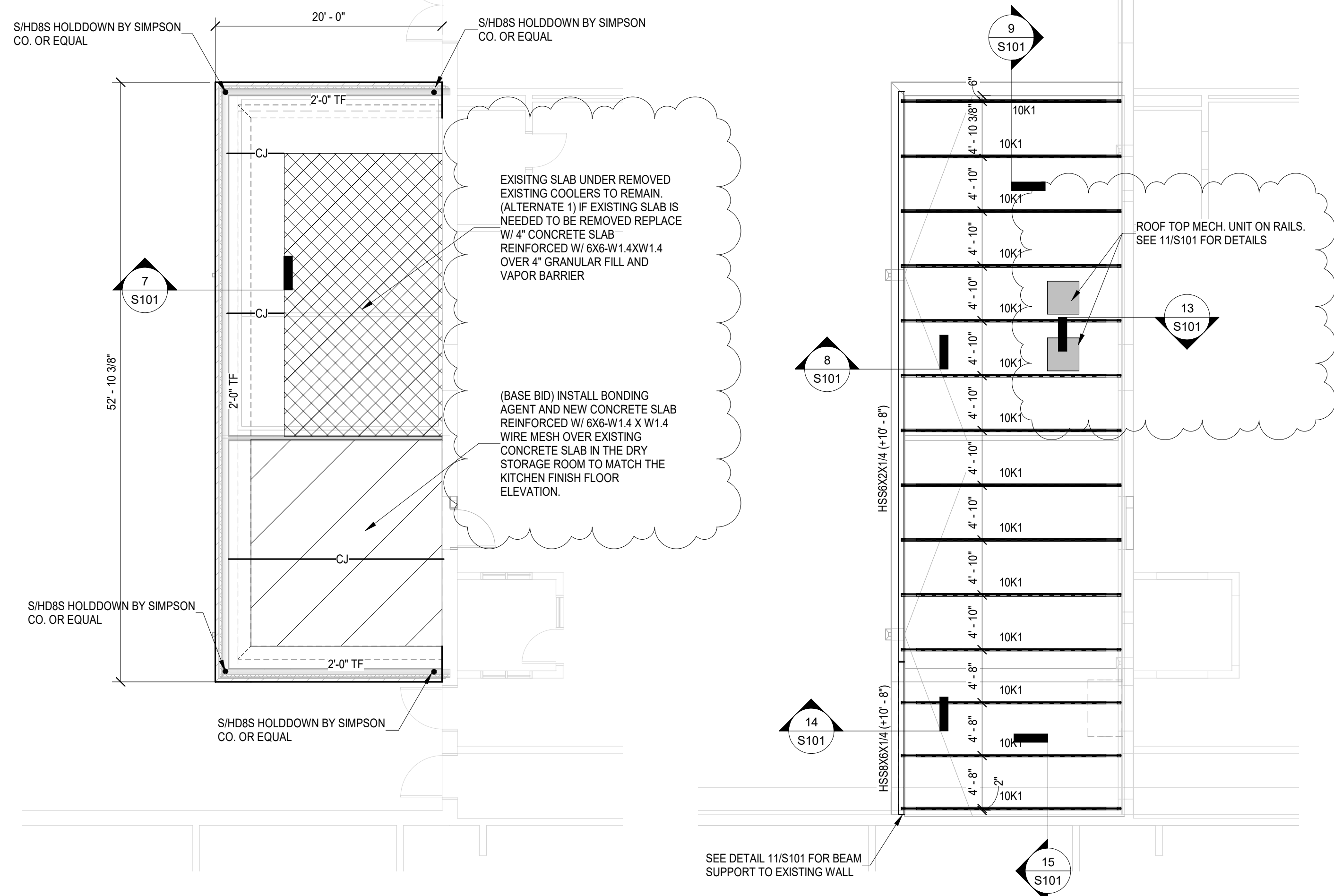
1 FRONT ELEVATION
1/4" = 1'-0"



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

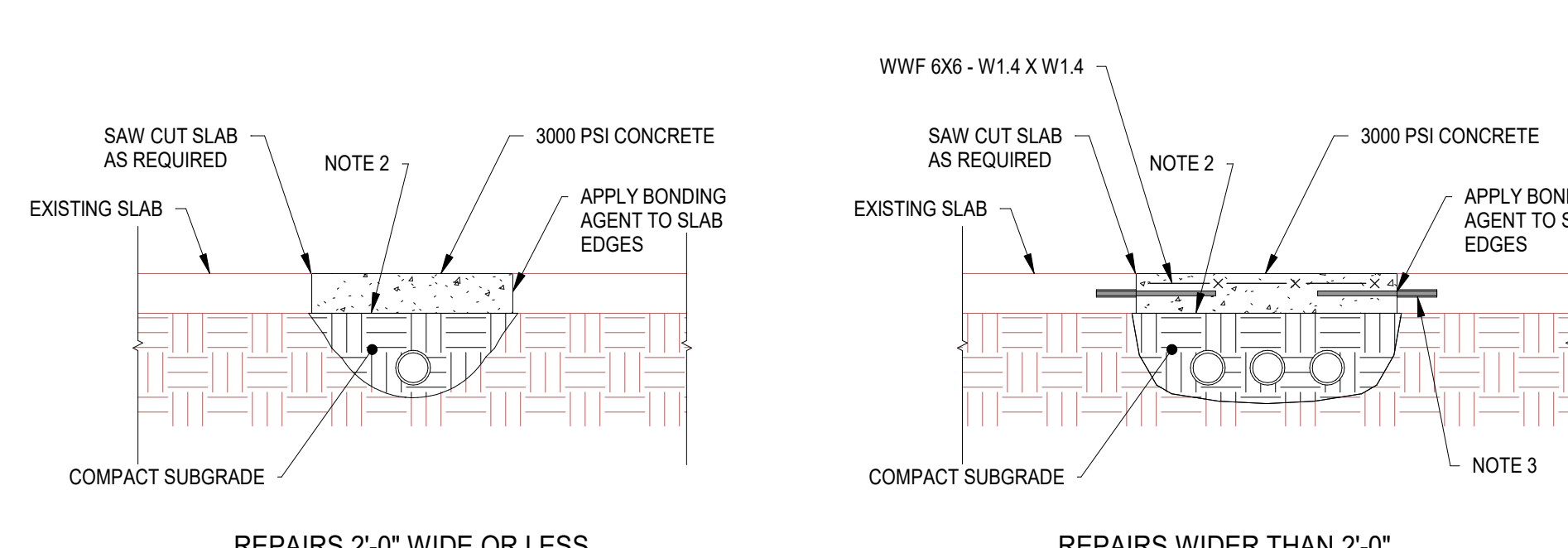


3 WALL SECTION - 01
1" = 1'-0"



1 FOUNDATION PLAN
S101 1/8" = 1'-0"

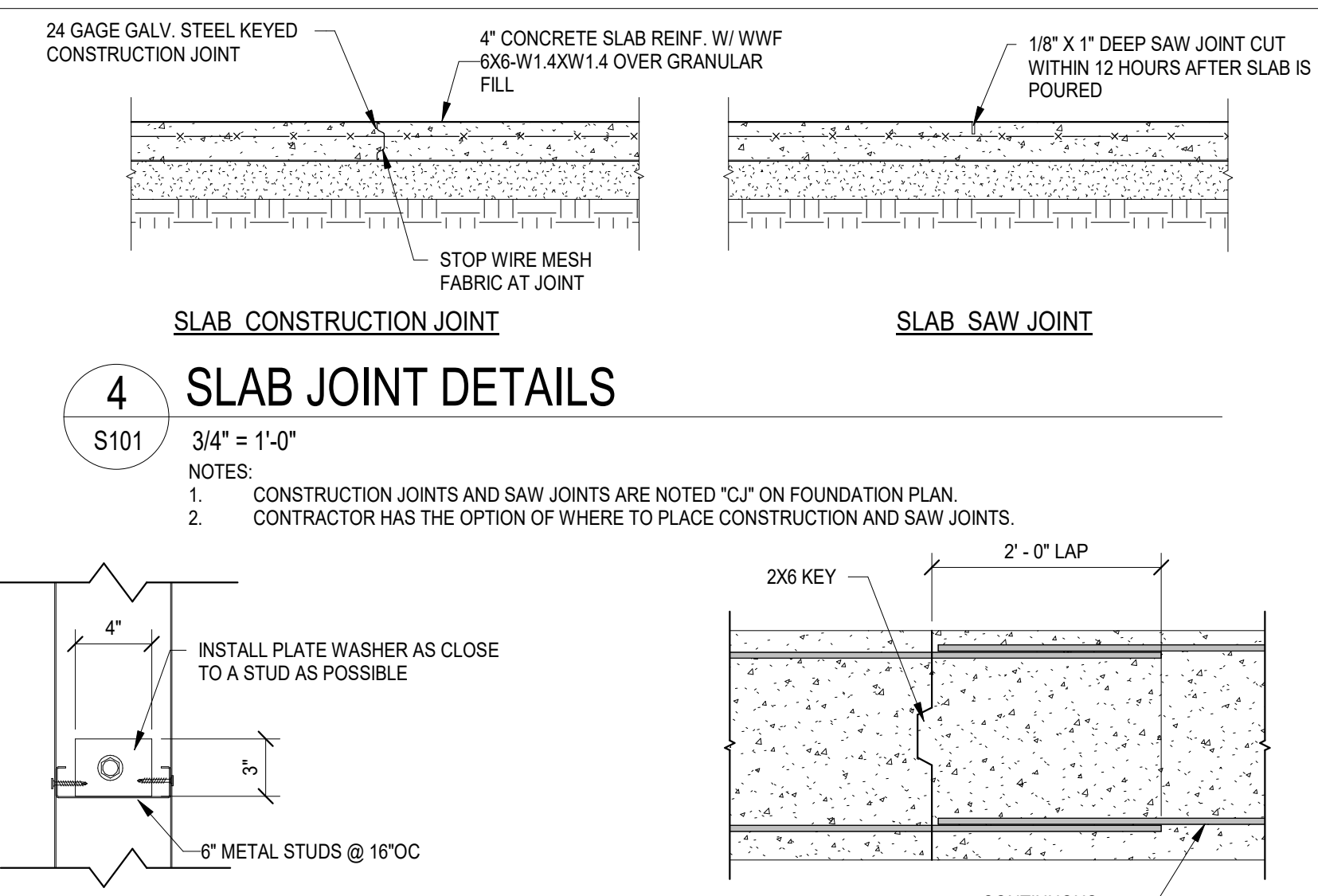
2 ROOF FRAMING PLAN
S101 1/8" = 1'-0"



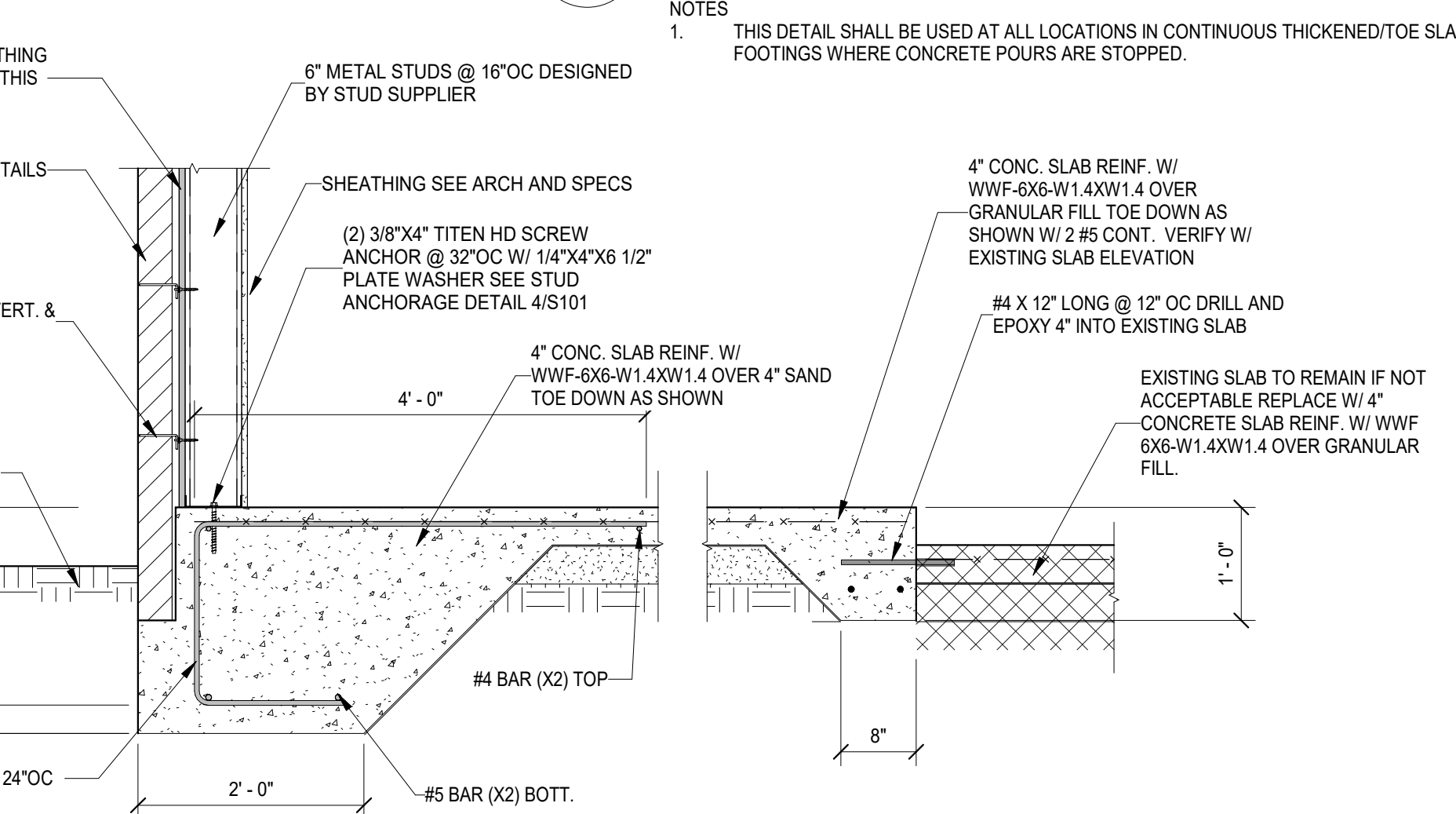
3 SLAB PATCH DETAILS
S101 3/4" = 1'-0"

MASONRY POST-INSTALLED ANCHOR TABLE					
TYPE	MANUFACTURER	PRODUCT	BASE MATERIAL	DIAMETER/SIZE	
SCREW ANCHOR	HLTI	KWIK HUS-EZ	GROUTED CONCRETE BLOCK	1/4" TO 3/4"	
	POWERS	WEDGE-BOLT+ w/ WEDGE BIT	GROUTED CONCRETE BLOCK	1/4" TO 3/4"	
	SIMPSON	TITEN HD	GROUTED CONCRETE BLOCK	3/8" TO 3/4"	
EXPANSION ANCHOR	HLTI	KWIK BOLT	GROUTED CONCRETE BLOCK	1/4" TO 3/4"	
	POWERS	POWER-STUD + SD1	GROUTED CONCRETE BLOCK	3/8" TO 5/8"	
	SIMPSON	WEDGE ALL	GROUTED CONCRETE BLOCK	3/8" TO 3/4"	
ADHESIVE ANCHOR	HLTI	HIT-HY 270	GROUTED CONCRETE BLOCK	ALL THREAD ROD	1/4" TO 3/4"
		HIT-HY 270	HOLLOW CONCRETE BLOCK (REQUIRES SCREEN TUBES)	REBAR	#4 TO #6
	POWERS	T308+	FULLY GROUTED	ALL THREAD ROD	3/4"
SIMPSON		SET	FULLY GROUTED	ALL THREAD ROD	1/2" TO 3/4"
		SET-XP	FULLY GROUTED	ALL THREAD ROD	5/8" AND 3/4"
			HOLLOW CONCRETE BLOCK (REQUIRES SCREEN TUBES)	ALL THREAD ROD	3/8" TO 5/8"

- NOTES:
 1. THIS SELECTION TABLE SHALL BE USED WHEN ANCHOR RODS OR REBARS WITH ANCHOR ADHESIVE, EXPANSION ANCHORS OR SCREW ANCHORS ARE CALLED OUT ON THE DRAWINGS. THE ADHESIVES SHOWN SHALL ALSO BE USED WHERE THE TERM "EPOXY" IS USED ON THE STRUCTURAL DRAWINGS.
 2. ADHESIVE ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTALLATION INSTRUCTIONS. (MP1)
 3. SCREW AND EXPANSION ANCHORS SHALL MEET THE EMBEDMENT DEPTHS AS SPECIFIED IN THE DRAWINGS BUT NOT LESS THAN THE MINIMUM OF 7 TIMES THE ANCHOR DIAMETER.
 4. ADHESIVE ANCHORS SHALL MEET THE EMBEDMENT DEPTHS AS SPECIFIED IN THE DRAWINGS. IF NO EMBEDMENT IS SPECIFIED, EMBED 12 TIMES THE ANCHOR DIAMETER.
 5. CONTACT THE ENGINEER OF RECORD FOR APPROVAL OF ANY OTHER ANCHOR TYPE OR DIAMETER PRIOR TO INSTALLATION.

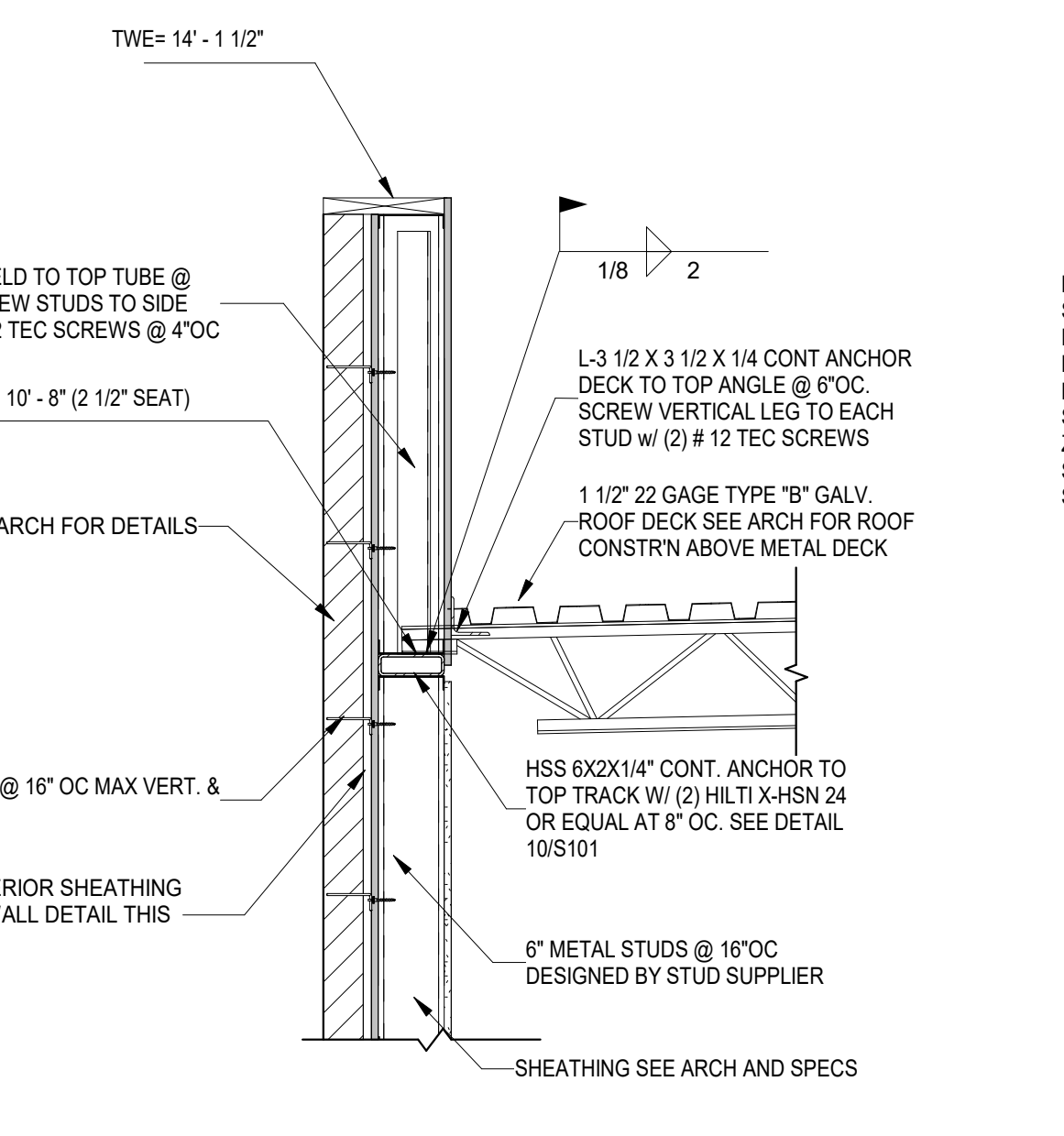


4 SLAB CONSTRUCTION JOINT
S101 3/4" = 1'-0"

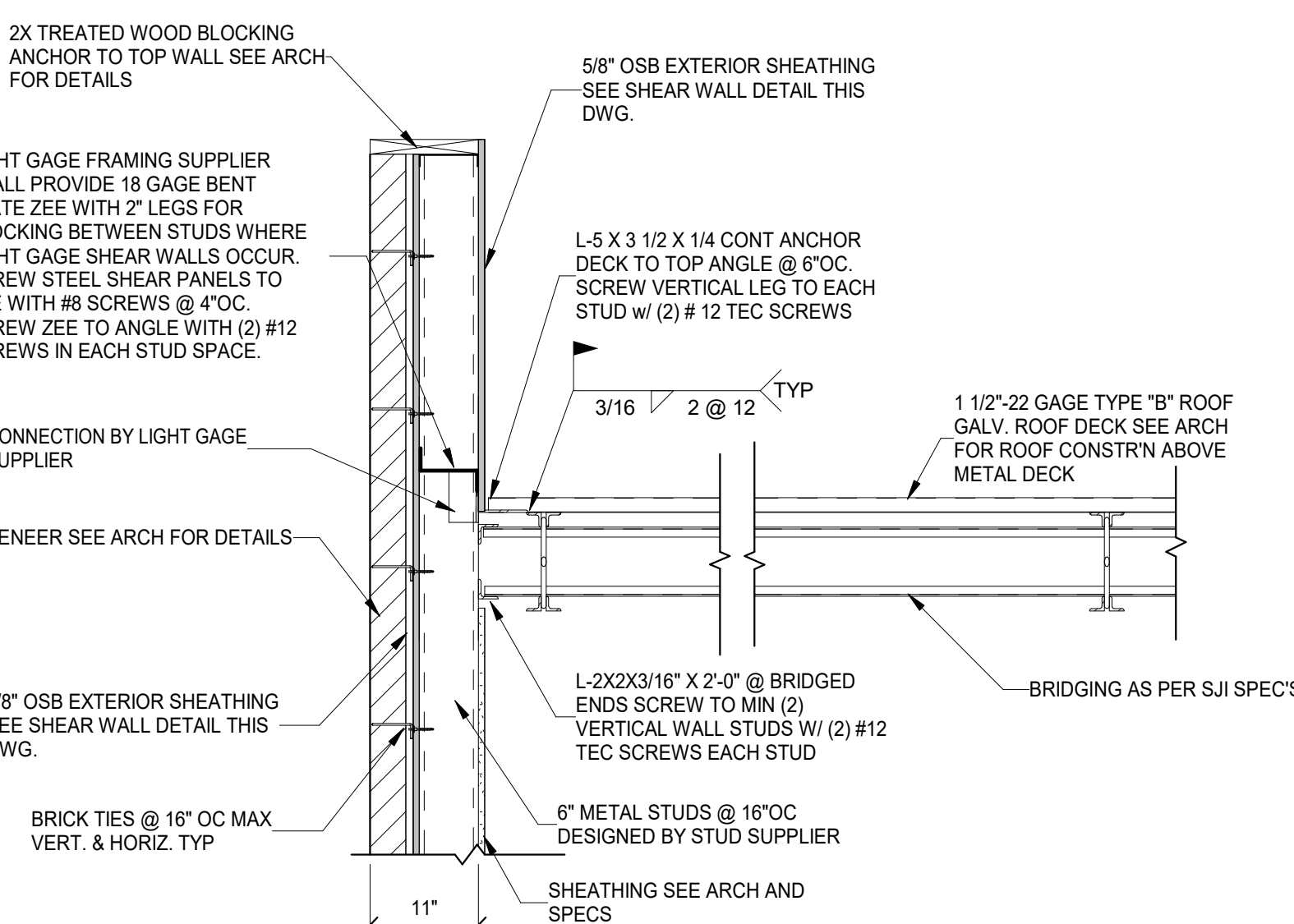


6 STUD ANCHORAGE DETAIL
S101 1 1/2" = 1'-0"

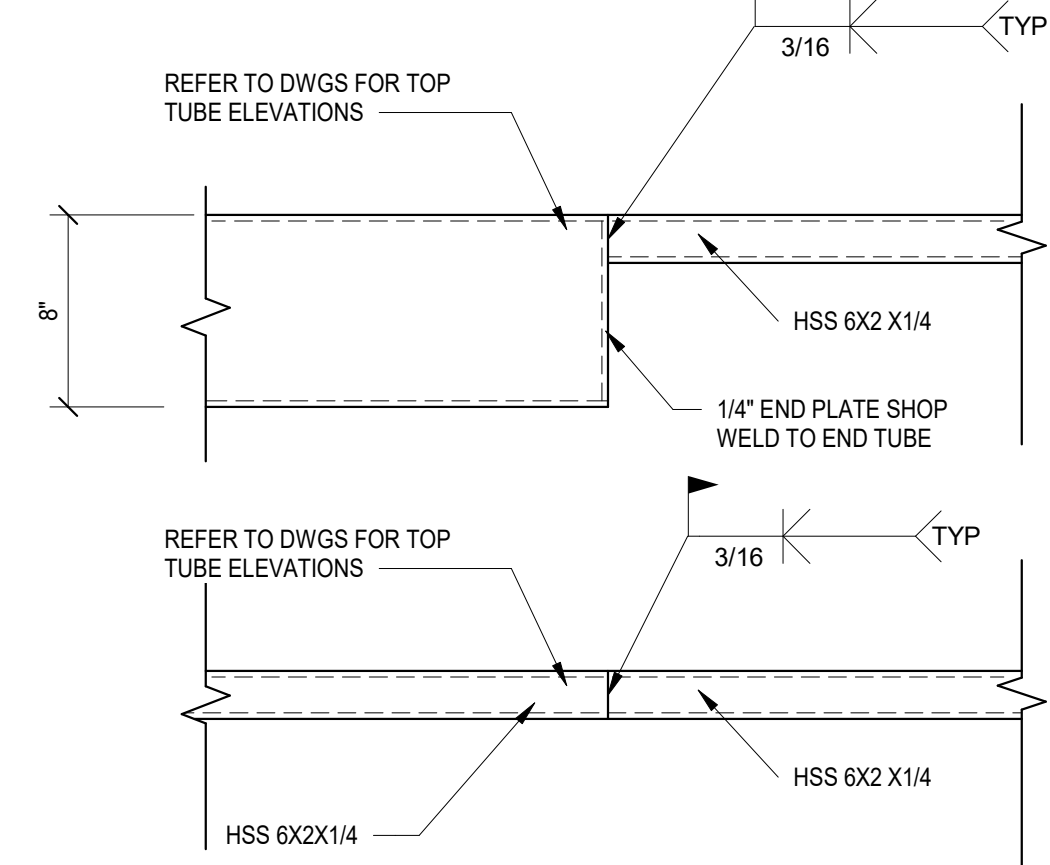
7 TOE FOOTING CONSTRUCTION JOINT
S101 3/4" = 1'-0"



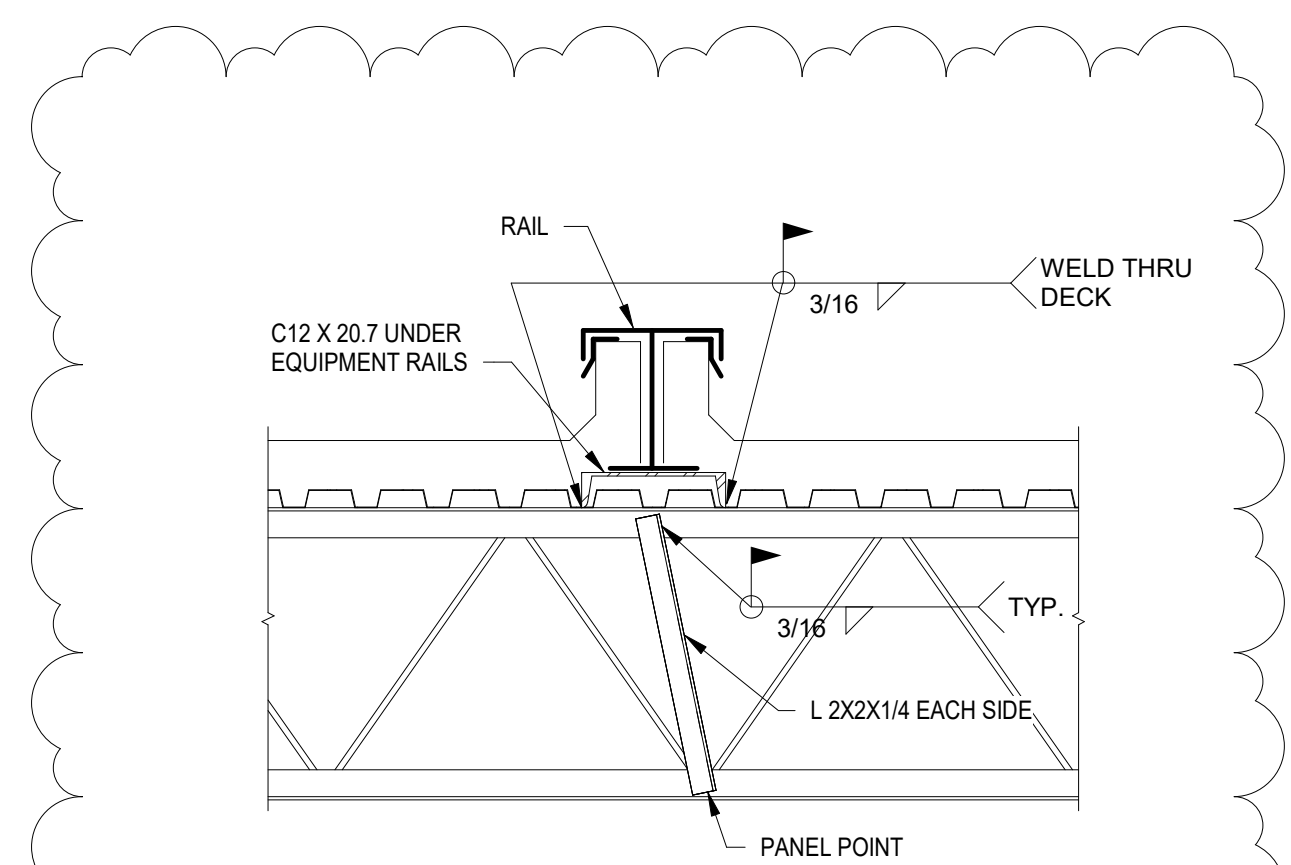
8 SECTION
S101 3/4" = 1'-0"



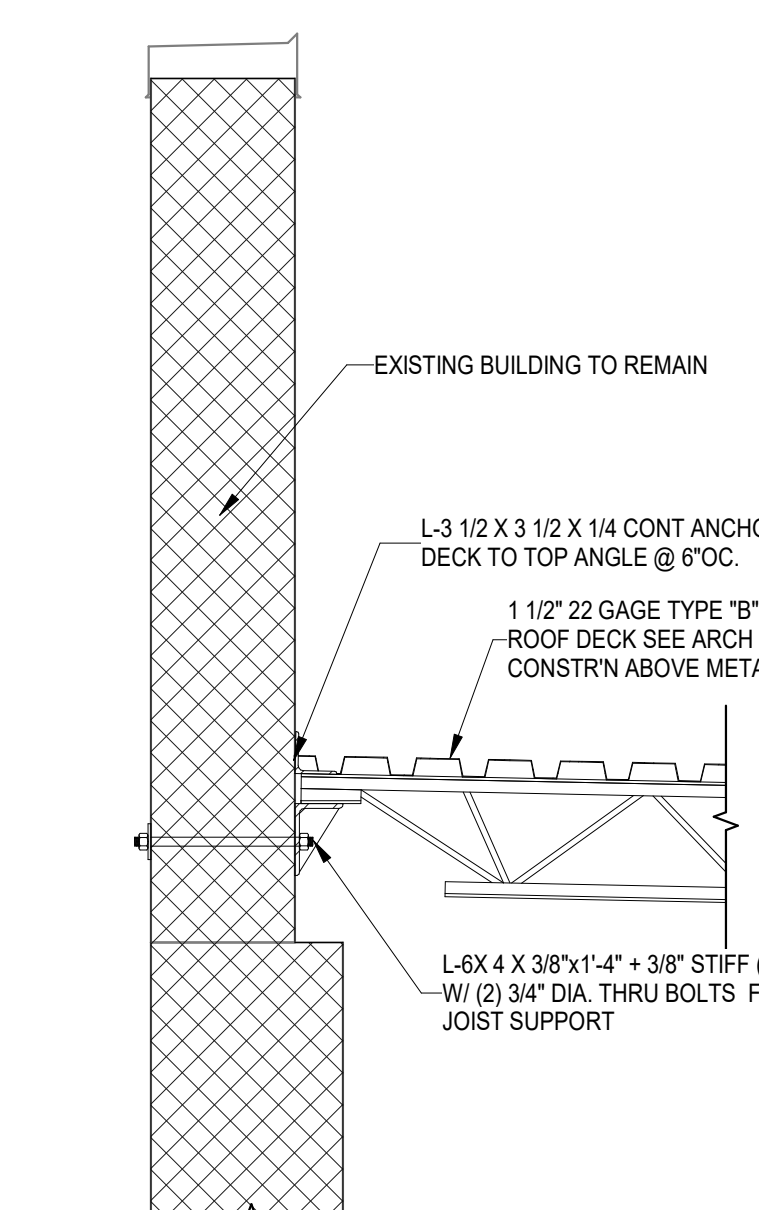
9 SECTION
S101 3/4" = 1'-0"



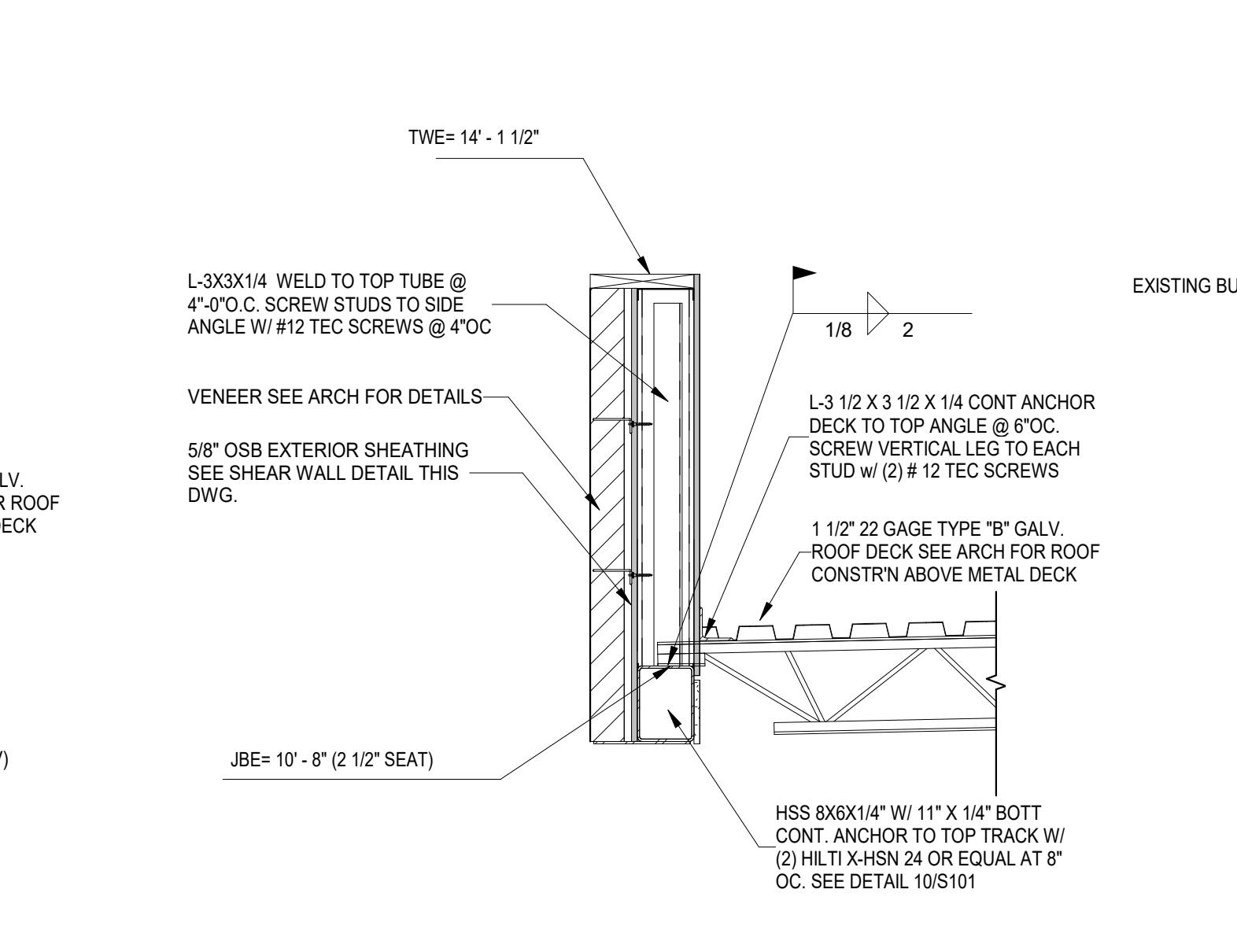
10 HSS TUBE SPLICE DETAIL
S101 1 1/2" = 1'-0"



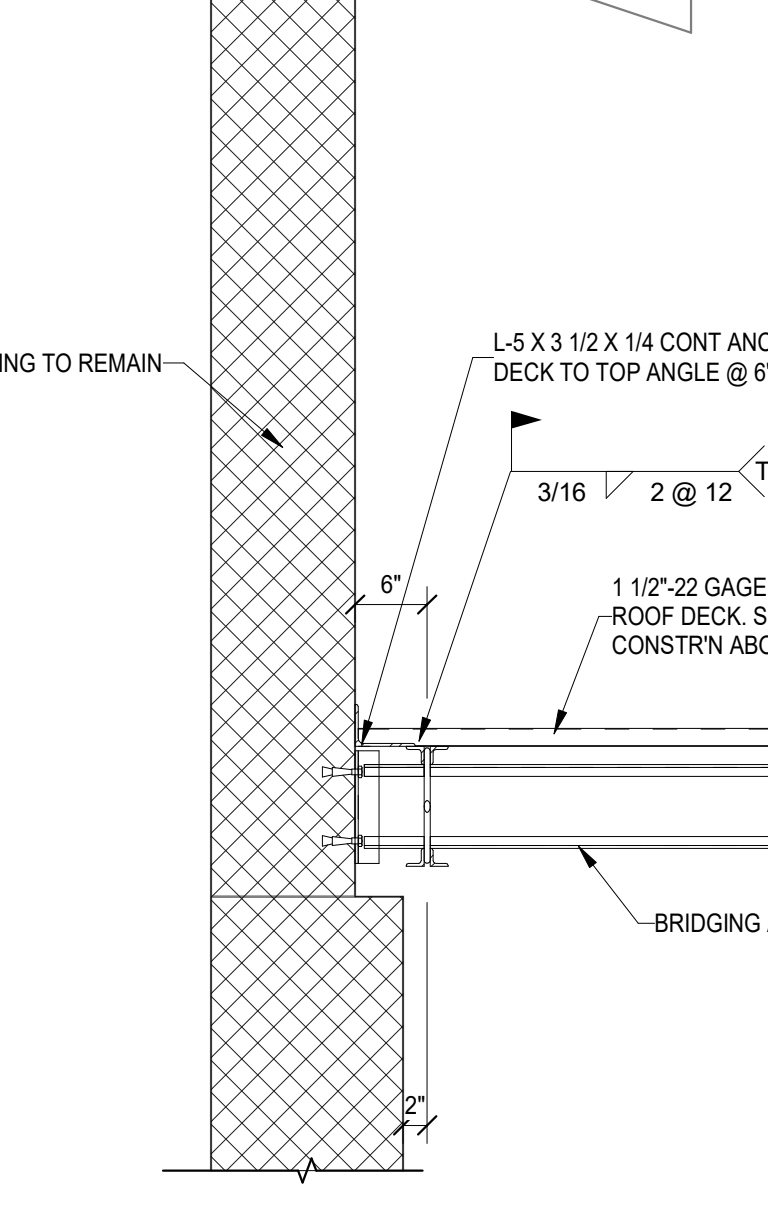
11 MECHANICAL UNIT ON RAILS
S101 3/4" = 1'-0"



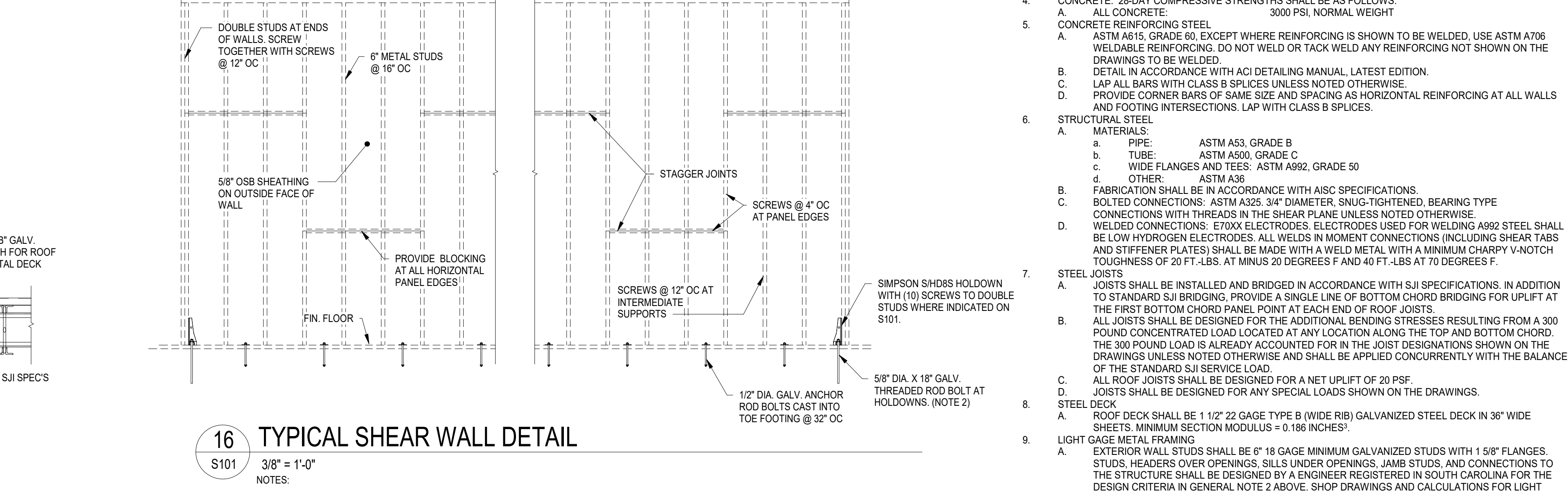
13 SECTION
S101 3/4" = 1'-0"



14 SECTION
S101 3/4" = 1'-0"

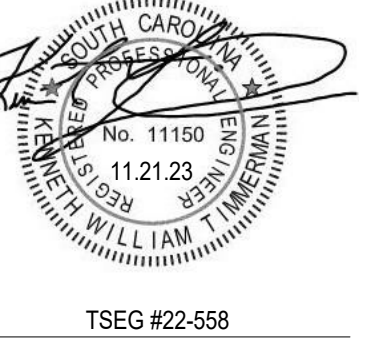
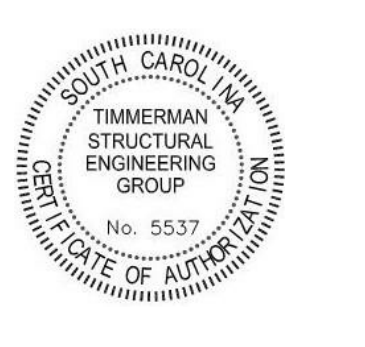


15 SECTION
S101 3/4" = 1'-0"



16 TYPICAL SHEAR WALL DETAIL
S101 3/8" = 1'-0"

- NOTES:
 1. AT EXTERIOR WALLS, INSTALL 5/8" OSB SHEATHING ON OUTSIDE FACE OF WALL.
 2. SCREWS ARE #8 MINIMUM MODIFIED TRUSS HEAD SCREWS.
 3. DOUBLE STUDS AT ENDS OF PANELS SHALL BE UNPINCHED.
 4. PROVIDE SIMPSON SHD88S HOLD-DOWN AT EACH END OF SHEAR PANELS. SCREW THROUGH BOTH WEBS OF BACK TO BACK STUDS.
 5. BOLT HOLD-DOWN TO CONCRETE AT EACH END OF SHEAR PANEL WITH 7/8" X 1/4" DIAMETER THREADED ROD ANCHOR BOLT. DRILL AND GROUT INTO CONCRETE WITH APPROVED EPOXY.



No	Description	Date
1	ADDENDUM 2	12.15.23

DRAWN BY: **LWK**
 CHECKED BY: **KWT**
 COMM NO: **22004**
 DATE: **11/21/23**
 SHEET TITLE: **STRUCTURAL PLANS AND SECTION**
 SHEET NO: **S101**