



Date: June 24, 2022

To: Joe Kinsey – McKnight Construction

From: Dr. Michael Chewning, AIA

Project Name: Byrnes High School Phase 2

Project Number: 020420.00

The specifications and drawings for the project noted above are amended as noted in this Addendum No. 2. The following clarifications, amendments, additions, deletions, revisions, and/or modifications are hereby made a part of the Contract Documents and change the original documents only in the manner and to the extent stated below.

Receipt of this addendum shall be acknowledged by inserting its number and date in the space provided in the Form of Proposal.

This addendum consists of (137) total sheets, (56) full size drawings, (81) 8 1/2" x 11" sheets, and (3) specification sections with narratives and attachments and is attached herein.

Sincerely,

Dr. Michael L. Chewning, AIA

General:

Item No.	Description
1	See the attached and revised Bid Package 3 - Concrete
2	See the attached and revised Bid Package 5 – Structural Steel
3	See the attached and revised Bid Package 6 - Roofing
4	See the attached and revised Bid Package 16 – Drywall, INS, AC, CFMF
5	See the attached and revised Bid Package 22 - Plaques
6	See the attached and revised Bid Package 28 Elevator
7	See the attached and revised Bid Package 32 – Electrical, Communications, and Electronic Safety & Security



Construction GMP RFI Log:

Item No.	RFI #	Description
8	30	<p>"The casework flume hood on the elevations is shown to be 48". On the casework legend the flume hood "R" is called to be 60"x84"x30 1/2". Can you please clarify the flume hood size."</p> <p>See revised architectural drawings in Addendum No. 2. Fume hoods to be 60"W x 56"T x 35 1/2"D by Air Master Corp, model EH-211-60 with ceiling enclosure.</p>
9	31	<p>"Slabs on deck call for 4x4 WWF along with a 40" #3 rebar 12"OC at the beams. Appears to be doubled reinforcement. Please advise if this is correct."</p> <p>This is not double reinforcement. It is negative bending moment reinforcement at the beams.</p>
10	32	<p>"At the loading dock, there is no wall called out at line 7. It is assumed that a wall is there due to the 5' elevation change. Please advise."</p> <p>C3/S111 shows a section through the loading dock, which also shows an 8" concrete retaining wall. This will be added to the retaining wall schedule. Also, Civil drawing CV3.1 shows an elevation change of 4' for the loading dock, not 5'.</p>
11	33	<p>"RFI 2 was not fully addressed in the addendum. Retaining wall plans do not match on the structural, civil, and architectural drawings."</p> <p>See revised structural drawings in Addendum No. 2.</p>
12	34	<p>"Would the following manufactures for millwork be accepted? Lab casework and fume hoods is ICI Scientific, out of Paris, TN Section 064116 Architectural Casework is TMI Systems, Dickinson, ND."</p> <p>Not accepted. Please use the manufacturers listed in the specifications.</p>
13	35	<p>"Plumbing drawings are missing acid waste and sanitary vent systems on both the floorplans and isometrics. Will these items be included in addendum 2?"</p> <p>See revised plumbing drawings in Addendum No. 2 for acid waste and sanitary vent systems.</p>



- 14 **36** "Can you please verify the height of the building letters. When scaled they are 28". Please verify as this is not a standard pattern height."

See revised drawing in Addendum No. 2 calling for letters to be 28" tall.
- 15 **37** "There are spec sections for both wood stair treads and risers, but they cannot be located within the plans. Please advise if they are applicable."

There are no wood stair treads or risers in the project.
- 16 **38** "Can you clarify if the cabinets are to have white melamine interiors or p-lam interiors? The sections at the Media Center (A710) note white melamine but the specs are calling for premium grade (p-lam interiors). Please clarify if cabinets are to be constructed with particleboard core or plywood."

**Yes, cabinets are to have white melamine interiors.
Cabinets are to be constructed with plywood cores.**
- 17 **39** "Please advise is there is a spec section for the folding partition shown on sheet A114."

See specification section 10 22 26 – Operable Panel Partitions included in Addendum No. 2.

Specifications:

Item No.	Section No.	Description
18	04 20 00 Unit Masonry	Replace specification section 04 20 00 Unit Masonry included with the GMP set with the attached 04 20 00 Unit Masonry – Addendum No. 2.
19	10 22 26 Operable Panel Partitions RFI #39	Incorporate specification section 10 22 26 Operable Panel Partitions – Addendum No. 2 into the table of contents and project manual.
20	22 00 01 Plumbing	Replace specification section 22 00 01 Plumbing included with the GMP set with the attached 22 00 01 Plumbing – Addendum No. 2.



Drawings:

Item No.	Drawing No.	Description
21	G001 Cover Sheet	Replace sheet G001 Cover Sheet included with Addendum No. 1 with the attached G001 Cover Sheet Addendum No. 2. Revised Drawing List Revision block for drawings issued in Addendum No. 2.
22	A116 – Phase 2 – 1100 Level – Floor Plan Area A	Replace sheet A116 Phase 2 – 1100 Level – Floor Plan Area A included with Addendum No. 1 with the attached A116 Phase 2 – 1100 Level – Floor Plan Area A Addendum No. 2.
	RFI #30	Revised Science Lab casework and fume hood size.
23	A117 Phase 2 – 1100 Level – Floor Plan Area B	Replace sheet A117 Phase 2 – 1100 Level – Floor Plan Area B included with Addendum No. 1 with the attached A117 Phase 2 – 1100 Level – Floor Plan Area B Addendum No. 2.
	RFI #30	Revised Science Lab casework and fume hood size.
24	A118 Phase 2 – 1100 Level – Floor Plan Area C	Replace sheet A118 Phase 2 – 1100 Level – Floor Plan Area C included with Addendum No. 1 with the attached A118 Phase 2 – 1100 Level – Floor Plan Area C Addendum No. 2.
	RFI #30	Revised Science Lab casework and fume hood size.
25	A300 Building Elevations – Overall	Replace sheet A300 Building Elevations - Overall included with Addendum No. 1 with the attached A300 Building Elevations – Overall Addendum No. 2.
	RFI #36	Revised note for dimensional lettering.
26	A353 Wall Sections – Area B	Replace sheet A353 Wall Sections – Area B included with Addendum No. 1 with the attached A353 Wall Sections – Area B Addendum No. 2. Various revisions
27	A357 Wall Sections – Miscellaneous	Replace sheet A357 Wall Sections – Miscellaneous included with Addendum No. 1 with the attached A357 Wall Sections – Miscellaneous Addendum No. 2. Various revisions



- | | | |
|----|---|---|
| 28 | A358 Wall Sections – Area A Sequence at B1/A358 | Replace sheet A358 Wall Sections – Area A Sequence at B1/A358 included with Addendum No. 1 with the attached A357 Wall Sections – Miscellaneous Addendum No. 2.

Revised column line spacing |
| 29 | A600 Plan Details – Areas A/B Basement | Replace sheet A600 Plan Details – Areas A/B Basement included with the GMP set with the attached A600 Plan Details – Areas A/B Basement Addendum No. 2.

Various revisions |
| 30 | A601 Plan Details – Areas A/B – Level 1000 | Replace sheet A601 Plan Details – Areas A/B – Level 1000 included with Addendum No. 1 with the attached A601 Plan Details – Areas A/B – Level 1000 Addendum No. 2.

Various revisions |
| 31 | A603 Plan Details – Areas A/B – Levels 1100 and 1200 | Replace sheet A603 Plan Details – Areas A/B – Levels 1100 and 1200 included with Addendum No. 1 with the attached A603 Plan Details – Areas A/B – Levels 1100 and 1200 Addendum No. 2.

Various revisions |
| 32 | A605 Plan Details – Areas A/B - Miscellaneous | Replace sheet A605 Plan Details – Areas A/B – Miscellaneous included with the GMP set with the attached A605 Plan Details – Areas A/B – Miscellaneous Addendum No. 2.

Various revisions |
| 33 | A614 Section Details | Replace sheet A614 Section Details included with Addendum No. 1 with the attached A614 Section Details Addendum No. 2.

Revised notes. |
| 34 | A700 Interior Elevations

RFI #30 | Replace sheet A700 Interior Elevations included with Addendum No. 1 with the attached A700 Interior Elevations Addendum No. 2.

Revised casework schedule type 'R'
Revised eyewash and emergency shower station on C3/A700.
Added casework schedule type 'Y' for deck mounted eyewash and horizontally mounted emergency shower. |



- | | | |
|----|---|---|
| 35 | A702 Interior Elevations | Replace sheet A702 Interior Elevations included with Addendum No. 1 with the attached A702 Interior Elevations Addendum No. 2. |
| | RFI #30 | Revised casework schedule type 'R'
Revised eyewash and emergency shower stations and fume hood sizes
Added casework schedule type 'Y' for deck mounted eyewash and horizontally mounted emergency shower. |
| 36 | S100B Foundation & S.O.G. Plan – Area 'B' Level 1000 | Replace sheet S100B Foundation & S.O.G. Plan – Area 'B' Level 1000 included with Addendum No. 1 with the attached S100B Foundation & S.O.G. Plan – Area 'B' Level 1000 Addendum No. 2.

Revised footing information |
| 37 | S101 Retaining Wall Plan | Replace sheet S101 Retaining Wall Plan included with Addendum No. 1 with the attached S101 Retaining Wall Plan Addendum No. 2.

Revised the retaining wall plan and schedule |
| 38 | S102 North Dock and Ramp Plan, Sections & Details | Replace sheet S102 North Dock and Ramp Plan, Sections & Details included with Addendum No. 1 with the attached S102 North Dock and Ramp Plan, Sections & Details Addendum No. 2.

Revised retaining wall information |
| 39 | S111 Foundation Sections & Details | Replace sheet S111 Foundation Sections & Details included with the GMP set with the attached S111 Foundation Sections & Details Addendum No. 2.

Revised notes on C3/S111 |
| 40 | S200 1000 Level Lintel Plan – Area 'A' | Replace sheet S200 1000 Level Lintel Plan – Area 'A' included with the GMP set with the attached S200 1000 Level Lintel Plan – Area 'A' Addendum No. 2.

Various revisions |
| 41 | S201 1000 Level Lintel Plan – Area 'B' | Replace sheet S201 1000 Level Lintel Plan – Area 'B' included with Addendum No. 1 with the attached S201 1000 Level Lintel Plan – Area 'B' Addendum No. 2.

Various revisions |
| 42 | S202 1100 Level Lintel Plan – Area 'A' | Replace sheet S202 1100 Level Lintel Plan – Area 'A' included with Addendum No. 1 with the attached S202 1100 Level Lintel Plan – Area 'A' Addendum No. 2.

Various revisions |



- | | | |
|----|---|---|
| 43 | S203 1100 Level Lintel Plan – Area ‘B’ | Replace sheet S203 1100 Level Lintel Plan – Area ‘B’ included with Addendum No. 1 with the attached S203 1100 Level Lintel Plan – Area ‘B’ Addendum No. 2.

Various revisions |
| 44 | S204 1100 Level Lintel Plan – Area ‘C’ | Replace sheet S204 1100 Level Lintel Plan – Area ‘C’ included with Addendum No. 1 with the attached S204 1100 Level Lintel Plan – Area ‘C’ Addendum No. 2.

Various revisions |
| 45 | S205 1200 Level Lintel Plan – Area ‘A’ | Replace sheet S205 1200 Level Lintel Plan – Area ‘A’ included with Addendum No. 1 with the attached S205 1200 Level Lintel Plan – Area ‘A’ Addendum No. 2.

Various revisions |
| 46 | S206 1200 Level Lintel Plan – Area ‘B’ | Replace sheet S206 1200 Level Lintel Plan – Area ‘B’ included with Addendum No. 1 with the attached S206 1200 Level Lintel Plan – Area ‘B’ Addendum No. 2.

Various revisions |
| 47 | S207 1200 Level Lintel Plan – Area ‘C’ | Replace sheet S207 1200 Level Lintel Plan – Area ‘C’ included with Addendum No. 1 with the attached S207 1200 Level Lintel Plan – Area ‘C’ Addendum No. 2.

Various revisions |
| 48 | S208 Lintel Sections & Details | Replace sheet S208 Lintel Sections & Details included with Addendum No. 1 with the attached S208 Lintel Sections & Details Addendum No. 2.

Revised A4/S208 |
| 49 | S209 Lintel Sections & Details | Replace sheet S209 Lintel Sections & Details included with the GMP set with the attached S209 Lintel Sections & Details Addendum No. 2.

Omit details A3/S209 and A4/S209 |
| 50 | S210 Stair Elevations & Sections | Replace sheet S210 Stair Elevations & Sections included with Addendum No. 1 with the attached S210 Stair Elevations & Sections Addendum No. 2.

Various revisions |



- | | | |
|----|---|--|
| 51 | S301A 1100 Level Framing Plan – Area ‘A’ | Replace sheet S301A 1100 Level Framing Plan – Area ‘A’ included with Addendum No. 1 with the attached S301A 1100 Level Framing Plan – Area ‘A’ Addendum No. 2.

Various revisions |
| 52 | S302A 1200 Level Framing Plan – Area ‘A’ | Replace sheet S302A 1200 Level Framing Plan – Area ‘A’ included with Addendum No. 1 with the attached S302A 1200 Level Framing Plan – Area ‘A’ Addendum No. 2.

Revised note |
| 53 | S310 Framing Sections & Details | Replace sheet S310 Framing Sections & Details included with Addendum No. 1 with the attached S310 Framing Sections & Details Addendum No. 2.

Various revisions |
| 54 | S311 Framing Sections & Details | Replace sheet S311 Framing Sections & Details included with Addendum No. 1 with the attached S311 Framing Sections & Details Addendum No. 2.

Various revisions |
| 55 | S400 Framing Elevations | Replace sheet S400 Framing Elevations included with Addendum No. 1 with the attached S400 Framing Elevations Addendum No. 2.

Revised elevations |
| 56 | S401 Framing Elevations | Replace sheet S401 Framing Elevations included with Addendum No. 1 with the attached S401 Framing Elevations Addendum No. 2.

Revised elevations |
| 57 | S402 Framing Elevations | Replace sheet S402 Framing Elevations included with Addendum No. 1 with the attached S402 Framing Elevations Addendum No. 2.

Revised elevations |
| 58 | P001 Plumbing Cover Sheet | Replace sheet P001 Plumbing Cover Sheet included with the GMP set with the attached P001 Plumbing Cover Sheet Addendum No. 2.

Revised symbols |
| 59 | P101 Basement Plumbing Plan | Replace sheet P101 Basement Plumbing Plan included with the GMP set with the attached P101 Basement Plumbing Plan Addendum No. 2.

General revision |



- 60 **P111 1000 Level – Plumbing Plan Area A** Replace sheet P111 1000 Level – Plumbing Plan Area A included with the GMP set with the attached **P111 1000 Level – Plumbing Plan Area A Addendum No. 2.**

Venting added and general revisions
- 61 **P112 1000 Level – Plumbing Plan Area B** Replace sheet P112 1000 Level – Plumbing Plan Area B included with the GMP set with the attached **P112 1000 Level – Plumbing Plan Area B Addendum No. 2.**

Venting added and general revisions
- 62 **P113 1000 Level – Overhead Plumbing Plan Area A** Replace sheet P113 1000 Level – Overhead Plumbing Plan Area A included with the GMP set with the attached **P113 1000 Level – Overhead Plumbing Plan Area A Addendum No. 2.**

Venting Added and general revisions
- 63 **P114 1000 Level – Overhead Plumbing Plan Area B** Replace sheet P114 1000 Level – Overhead Plumbing Plan Area B included with the GMP set with the attached **P114 1000 Level – Overhead Plumbing Plan Area B Addendum No. 2.**

Venting added and general revisions
- 64 **P121 1100 Level – Plumbing Plan Area A** Replace sheet P121 1100 Level – Plumbing Plan Area A included with the GMP set with the attached **P121 1100 Level – Plumbing Plan Area A Addendum No. 2.**

Venting added and general revisions
- 65 **P122 1100 Level – Plumbing Plan Area B** Replace sheet P122 1100 Level – Plumbing Plan Area B included with the GMP set with the attached **P122 1100 Level – Plumbing Plan Area B Addendum No. 2.**

Venting added and general revisions
- 66 **P123 1100 Level – Plumbing Plan Area C** Replace sheet P123 1100 Level – Plumbing Plan Area C included with the GMP set with the attached **P123 1100 Level – Plumbing Plan Area C Addendum No. 2.**

Venting added and general revisions
- 67 **P124 1100 Level – Overhead Plumbing Plan Area A** Replace sheet P124 1100 Level – Overhead Plumbing Plan Area A included with the GMP set with the attached **P124 1100 Level – Overhead Plumbing Plan Area A Addendum No. 2.**

Venting added and general revisions



- | | | |
|----|--|---|
| 68 | P125 1100 Level –
Overhead
Plumbing Plan
Area B | Replace sheet P125 1100 Level – Overhead Plumbing Plan Area B included with the GMP set with the attached P125 1100 Level – Overhead Plumbing Plan Area B Addendum No. 2.

Venting added and general revisions |
| 69 | P126 1100 Level –
Overhead
Plumbing Plan
Area C | Replace sheet P126 1100 Level – Overhead Plumbing Plan Area C included with the GMP set with the attached P126 1100 Level – Overhead Plumbing Plan Area C Addendum No. 2.

Venting added and general revisions |
| 70 | P131 1200 Level –
Plumbing Plan
Area A | Replace sheet P131 1200 Level – Plumbing Plan Area A included with the GMP set with the attached P131 1200 Level – Plumbing Plan Area A Addendum No. 2.

Venting added and general revisions |
| 71 | P132 1200 Level –
Plumbing Plan
Area B | Replace sheet P132 1200 Level – Plumbing Plan Area B included with the GMP set with the attached P132 1200 Level – Plumbing Plan Area B Addendum No. 2.

Venting added and general revisions |
| 72 | P133 1200 Level –
Plumbing Plan
Area C | Replace sheet P133 1200 Level – Plumbing Plan Area C included with the GMP set with the attached P133 1200 Level – Plumbing Plan Area C Addendum No. 2.

Venting added and general revisions |
| 73 | P201 Plumbing
Schedules &
Details | Replace sheet P201 Plumbing Schedules & Details included with the GMP set with the attached P201 Plumbing Schedules & Details Addendum No. 2.

Note added to fixture schedule |
| 74 | P202 Plumbing
Details | Replace sheet P202 Plumbing Details included with the GMP set with the attached P202 Plumbing Details Addendum No. 2.

Detail revised |
| 75 | M400 HVAC
Schedules | Replace sheet M400 HVAC Schedules included with the GMP set with the attached M400 HVAC Schedules Addendum No. 2.

Revised schedule |



76

**E118 Electrical
Site Plan**

Replace sheet E118 Electrical Site Plan included with Addendum No. 1 with the attached **E118 Electrical Site Plan Addendum No. 2.**

Revised the sheet name spelling

Byrnes HS Phase 2 Construction

Bid Package 3- Concrete

Division 3 & 7:

031000 Concrete Forming & Accessories, 032000 Concrete Reinforcing, 033000 Cast-In-Place-Concrete, 072616 Vapor Retarder Under-Slab

- Subcontractor to provide all labor, materials, tools, and equipment necessary to furnish and install all 031000, 032000, 033000 and 072616 for the entire project per the plans and the specs.
- Subcontractor to provide and install all necessary reinforcing materials for concrete per the plans and specs.
- Subcontractor will be responsible for all of its own layout.
- Concrete work includes all footings, slabs on grade, elevated slabs, stair pans, sidewalks, retaining walls, loading dock, and house keeping pads.
- Subcontractor should include concrete patches as shown on sheet A110.
- Subcontractor shall be responsible for curing of all concrete and layout and cutting of control joints.
- Subcontractor is responsible for rubbing all exposed wall.
- Subcontractor shall furnish and install all base materials.
- Subcontractor shall install all anchor bolts provided by other.
- Subcontractor shall provide pumps, light towers, etc. as required.
- Space and laydown area around the project are minimal. Subcontractor to plan deliveries, installation, and phasing accordingly. Subcontractor will be responsible for getting equipment and materials in and out of the site while other construction and school activities take place.
- Subcontractor will coordinate deliveries with suppliers and McKnight Construction's superintendent.
- Subcontractor agrees to work and provide manpower to fulfill project needs including working non-standard work week hours.
- Subcontractor is required to keep a full-time superintendent on site while their work is occurring.
- Subcontractor will be responsible for daily cleanup.
- Subcontractor to ensure their workforce will practice and perform all safety requirements per OSHA for said work.

- Subcontractor agrees to perform all punch list items within 20 days of substantial completion, or cost of completing punchwork will be deducted from subcontractor's retainage.
- Subcontractor to provide all warranties, as-builts, and closeout documents within 20 days of substantial completion.
- Subcontractor to provide submittals within 20 days of awarded contract.
- Mandatory Preparatory meetings will be held with McKnight's superintendent and subcontractor prior to each new phase of work.
- Subcontractor to include cost of bond in proposal.
- **Subcontractor to form and install trench in SOG as shown on sheet S112, detail D4. Subcontractor to install Balco TST Trench Cover (trench cover provided by others). (Addendum 1)**
- **Subcontractor to provide and install Simpson Titen HD Screw Anchors as shown on sheet S112, detail C4. (Addendum 1)**
- **Subcontractor to provide cooling tower piers as shown on sheet M204. (Addendum 2)**

Byrnes HS Phase 2 Construction

Bid Package 5- Structural Steel

Division 5:

051200 Structural Steel, 053100 Steel Decking, 055000 Metal Fabrications, 055113 Metal Stair Pans, 055214 Steel Pipe Handrails and Railings, **055218 Cable Railing System (Addendum 2)**.

- Subcontractor to provide all labor, materials, tools, and equipment necessary to furnish and install 051200, 053100, 055000, 055113, 055214, and **055218 (Addendum 2)** for the entire project per the plans and the specs.
- Subcontractor to furnish, layout, erect, and install all structural steel, steel decking, metal fabrications, metal stair pans, guardrails, and handrails (including stainless steel handrails) for the entire project.
- Subcontractor to provide the following items to be installed by others. Steel embeds, lintel beams, and brick lintels.
- Subcontractor to provide and install Lintels as shown on SD101 of the demolition drawing.
- Subcontractor to provide necessary equipment, lifts, cranes, welders, etc. to preform scope of work.
- Subcontractor to provide certified installers and welders as required by the specs.
- Space and laydown area around the project are minimal. Subcontractor to plan deliveries, installation, and phasing accordingly. Subcontractor will be responsible for getting equipment and materials in and out of the site while other construction and school activities take place. Reference CV3-1 as well as architectural plans for extents of staging area. The new building will be erected between the east and west sections of the existing school. The new addition has 3 stories in the rear and 2 stories in the front. These sections are separated by a concrete retaining wall. The road between the addition and the football stadium may be used, but it cannot be permanently blocked, as it must remain open for fire truck access. The road must also be cleared for all home football games. All of these must be factored in when creating and executing the erection plan. Erection may be required to be done from the new concrete slab for some areas due to limited site access. This will require a crane small enough to drive on the 4" slab without damaging it.
- An erection plan must be submitted to McKnight Construction for review and approval prior to executing a contract.
- Subcontractor shall inspect and approve of placement of anchor bolts prior to erecting steel columns.

- Subcontractor shall provide and install OSHA approved safety cabling on each level as the steel structure is erected.
- Subcontractor will coordinate deliveries with suppliers and McKnight Construction's superintendent.
- Subcontractor is responsible for receiving and unloading materials associated with your scope of work.
- Subcontractor agrees to work and provide manpower to fulfill project needs including working non-standard work week hours.
- Subcontractor is required to keep a full-time superintendent on site while their work is occurring.
- Subcontractor agrees to multiple mobilizations if necessary.
- Subcontractor will be responsible for daily cleanup.
- Subcontractor to ensure their workforce will practice and perform all safety requirements per OSHA for said work.
- Subcontractor agrees to perform all punch list items within 20 days of substantial completion, or cost of completing punchwork will be deducted from subcontractor's retainage.
- Subcontractor to provide all warranties, as-builts, and closeout documents within 20 days of substantial completion.
- Subcontractor to provide anchor bolt shop drawings within 20 days of awarded contract. Subcontractor to provide steel shop drawings within 60 days of awarded contract.
- Mandatory Preparatory meetings will be held with McKnight's superintendent and subcontractor prior to each new phase of work.
- Subcontractor to include cost of bond in proposal.
- **Subcontractor to provide steel beams for cooling tower as shown on sheet M204. (Addendum 2)**

Byrnes HS Phase 2 Construction

Bid Package 6- Roofing

Division 6 & 7:

075216 Modified Bituminous Membrane Roofing, 076200 Sheet Metal Flashing & Trim, 077129 Manufactured Roof Expansion Joints, 077200 Roof Accessories, 061053 Miscellaneous Rough Carpentry (ROOF BLOCKING ONLY), 061600 Sheathing (ROOF BLOCKING ONLY), **077601 Rooftop Concrete Pavers (Addendum 2).**

- Subcontractor to provide all labor, materials, tools, and equipment necessary to furnish and install 075216, 076200, 077129, 077200, 061053, 061600, **077601 (Addendum 2)** for the entire project per the plans and the specs.
- Subcontractor to furnish and install all roof wood blocking required for the installation of roof membrane, roof penetrations, and metal trim and flashing.
- Subcontractor to provide necessary equipment, lifts, cranes, welders, etc. to preform scope of work.
- Subcontractor to furnish and install all flashing, counter flashings, metal coping, gutter, downspouts, roof hatches, and walk pads.
- Subcontractor shall coordinate with McKnight Construction, HVAC, Electrical, and Plumbing subcontractors for roof penetrations, on size and placement of roof curbs, schedule, staging, and roof details.
- Space and laydown area around the project are minimal. Subcontractor to plan deliveries, installation, and phasing accordingly. Subcontractor will be responsible for getting equipment and materials in and out of the site while other construction and school activities take place.
- Subcontractor shall provide temporary roofing if necessary at building tie in locations prior to permanent roof being completed. Roofer will be responsible for water entering the building through the roof at tie in locations.
- Subcontractor will coordinate deliveries with suppliers and McKnight Construction's superintendent.
- Subcontractor is responsible for receiving and unloading materials associated with your scope of work.
- Subcontractor agrees to work and provide manpower to fulfill project needs including working non-standard work week hours.
- Subcontractor is required to keep a full-time superintendent on site while their work is occurring.
- Subcontractor will be responsible for daily cleanup.

- Subcontractor to ensure their workforce will practice and perform all safety requirements per OSHA for said work. This includes flagging on the roof.
- Subcontractor agrees to perform all punch list items within 20 days of substantial completion, or cost of completing punchwork will be deducted from subcontractor's retainage.
- Subcontractor to provide all warranties, as-builts, and closeout documents within 20 days of substantial completion.
- Subcontractor to provide submittals within 20 days of awarded contract.
- Mandatory Preparatory meetings will be held with McKnight's superintendent and subcontractor prior to each new phase of work.
- See Proposal form for Alternate regarding roofing.

Byrnes HS Phase 2 Construction

Bid Package 16- Drywall, Insulation, Acoustical Ceilings, Metal Framing

Divisions 5, 7, 8, & 9:

092216 Non-Structural Metal Framing, 092900 Gypsum Board, 095123 Acoustical Ceiling Tiles, 098433 Sounds Absorbing Wall Units, 083113 Access Doors & Frames, 072100 Thermal Insulation (Excluding Rigid Insulation), 054000 Cold Formed Metal Framing, **098436 Sound Absorbing Ceiling Units (Addendum 2)**.

- Subcontractor to provide all labor, materials, tools, and equipment necessary to furnish and install 092216, 092900, 095123, 098433, 083113, 072100, 054000, and **098436 (Addendum 2)** for the entire project per the plans and the specs.
- Subcontractor shall install all hollow metal frames in metal framed walls.
- Subcontractor to layout metal stud walls based on points and locations provided from steel, concrete, and masonry control points provided to the subcontractor.
- Subcontractor to top out all walls as shown on the drawings.
- Subcontractor to install necessary blocking as required for installation of cabinets, division 10 accessories, visual display boards, plumbing fixtures, etc.
- Subcontractor to provide and install exterior sheathing on metal studs as shown on the plans.
- Subcontractor to provide and install exterior soffit framing and gypsum board as shown on plans.
- Subcontractor to provide finish levels on walls and ceilings as shown on the plans and specs.
- Subcontractor will be responsible for its own equipment, lifts, and staging of materials in building.
- Subcontractor to provide materials, labor, and equipment needed to provide acoustical caulking at wall joints as required on the plans.
- Subcontractor is to install all ceiling tile around MEP and fire penetrations with the exception of sprinkler heads.
- Subcontractor to provide ceiling tiles for fire suppression subcontractor to use at sprinkler heads.
- Subcontractor to provide and install all ceiling hanger wire for lighting as required.
- Space and laydown area around the project are minimal. Subcontractor to plan deliveries, installation, and phasing accordingly. Subcontractor will be responsible for

getting equipment and materials in and out of the site while other construction and school activities take place.

- Subcontractor shall be present for 3rd party inspections and OSF inspections and shall make corrections as required by inspectors.
- Subcontractor will coordinate deliveries with suppliers and McKnight Construction's superintendent.
- Subcontractor is responsible for receiving and unloading materials associated with your scope of work.
- Subcontractor agrees to work and provide manpower to fulfill project needs including working non-standard work week hours.
- Subcontractor will be responsible for daily cleanup.
- Subcontractor to ensure their workforce will practice and perform all safety requirements per OSHA for said work.
- Subcontractor agrees to perform all punch list items within 20 days of substantial completion, or cost of completing punchwork will be deducted from subcontractor's retainage.
- Subcontractor to provide all warranties, as-builts, and closeout documents within 20 days of substantial completion.
- Subcontractor to provide submittals and shop drawings as listed in the specs within 20 days of awarded contract.
- Mandatory Preparatory meetings will be held with McKnight's superintendent and subcontractor prior to each new phase of work.
- Subcontractor to include cost of bond in proposal.

Byrnes HS Phase 2 Construction

Bid Package 22 - Plaques

Division 10:

101416 Plaques, **101419 Dimensional Letters (Addendum 2)**

- Subcontractor to provide all labor, materials, tools, and equipment necessary to furnish and install 101416 and **101419 (Addendum 2)** for the entire project per the plans and the specs.
- Spec Section 101423.16, Room-Identification Panel Sign is a project **Allowance** and is **NOT** included as part of this bid package.
- Subcontractor will coordinate deliveries with suppliers and McKnight Construction's superintendent.
- Subcontractor is responsible for receiving and unloading materials associated with your scope of work.
- Subcontractor agrees to work and provide manpower to fulfill project needs including working non-standard work week hours.
- Subcontractor will be responsible for daily cleanup.
- Subcontractor to ensure their workforce will practice and perform all safety requirements per OSHA for said work.
- Subcontractor agrees to perform all punch list items within 20 days of substantial completion, or cost of completing punchwork will be deducted from subcontractor's retainage.
- Subcontractor to provide all warranties, as-builts, and closeout documents within 20 days of substantial completion.
- Subcontractor to provide submittals and shop drawings within 20 days of awarded contract.
- Mandatory Preparatory meetings will be held with McKnight's superintendent and subcontractor prior to each new phase of work.

Byrnes HS Phase 2 Construction

Bid Package 28- Elevators

Division 14:

142400 Hydraulic Elevators (Addendum 2)

- Subcontractor to provide all labor, materials, tools, and equipment necessary to furnish and install **142400 (Addendum 2)** for the entire project per the plans and the specs.
- Subcontractor shall perform a pre-inspection prior to installation and the final state inspection.
- Subcontractor to schedule and attend final inspection with authority having jurisdiction over the elevator permit.
- Space and laydown area around the project are minimal. Subcontractor to plan deliveries, installation, and phasing accordingly. Subcontractor will be responsible for getting equipment and materials in and out of the site while other construction and school activities take place.
- Subcontractor will coordinate deliveries with suppliers and McKnight Construction's superintendent.
- Subcontractor is responsible for receiving and unloading materials associated with your scope of work.
- Subcontractor agrees to work and provide manpower to fulfill project needs including working non-standard work week hours.
- Subcontractor will be responsible for daily cleanup.
- Subcontractor to ensure their workforce will practice and perform all safety requirements per OSHA for said work.
- Subcontractor agrees to perform all punch list items within 20 days of substantial completion, or cost of completing punchwork will be deducted from subcontractor's retainage.
- Subcontractor to provide all warranties, as-builts, and closeout documents within 20 days of substantial completion.
- Subcontractor to provide submittals and shop drawings within 20 days of awarded contract.
- Mandatory Preparatory meetings will be held with McKnight's superintendent and subcontractor prior to each new phase of work.

Byrnes HS Phase 2 Construction

Bid Package 32- Electrical, Communications, and Electronic Safety & Security

Division 26, 27, 28:

260500 Common Work Results for Electrical, 260519 Low-Voltage Electrical Power Conductors and Cables, 260526 Grounding and Bonding for Electrical Systems, 260529 Hanger and Supports for Electrical Systems, 260533 Raceway and Boxes for Electrical Systems, 260536 Cable Trays for Low Voltage Systems, 260543 Underground Ducts and Raceways for Electrical Systems, 260553 Identification for Electrical Systems, 260913 Electrical Power Monitoring and Control, 260923 Lighting Control Devices, 262200 Low-Voltage Transformers, 262413 Switchboards, 262416 Panelboards, 262726 Wiring Devices, 262813 Fuses, 262816 Enclosed Switches and Circuit Breakers, 262913 Fuses, 263213 Engine Generators, 263600 Transfer Switches, 264313 TVSS for Low-Voltage Electrical Power Circuits, 265100 Interior Lighting, 265600 Exterior Lighting, 270500 Common Work Results for Communications, 271100 Communications Equipment Room Fittings, 271300 Communication Backbone Cabling, 271500 Communications Horizontal Cabling, **274716 Integrated Audio-Visual Production Equipment (Addendum 2)**, 276410 Radio Frequency BDA- Based Signal Booster System, 283111 Digital, Addressable Fire-Alarm Systems

- Subcontractor to provide all labor, materials, tools, and equipment necessary to furnish and install 260500, 260519, 260526, 260529, 260533, 260536, 260543, 260553, 260913, 260923, 262200, 262413, 262416, 262726, 262813, 262816, 262913, 263213, 263600, 264313, 265100, 265600, 270500, 271100, 271300, 271500, **274716 (Addendum 2)**, 276410, 283111 for a complete electrical system per the plans and specs.
- Subcontractor to provide all conduit, wire, devices, etc. required to complete the electrical scope of work.
- Subcontractor to coordinate electrical requirements for all electrical components provided by other trades.
- Subcontractor will be responsible for own layout.
- Subcontractor shall install temporary power and lighting to be used during construction.
- Subcontractor shall install temporary power for the jobsite office trailer.
- Subcontractor shall excavate, install, backfill, and tamp all underground utilities required adhering to the specs.
- Subcontractor shall coordinate with McKnight Construction and Duke on permanent power.
- Subcontractor shall provide layout for all equipment pads.
- Subcontractor shall coordinate all required inspections with McKnight Construction.

- Subcontract shall provide all testing of systems as required by the specs and 3rd party inspectors.
- Subcontractor shall be present at 3rd party above ceiling inspections.
- Subcontractor shall be present for OSF above ceiling and final inspections.
- Space and laydown area around the project are minimal. Subcontractor to plan deliveries, installation, and phasing accordingly. Subcontractor will be responsible for getting equipment and materials in and out of the site while other construction and school activities take place.
- Subcontractor will coordinate deliveries with suppliers and McKnight Construction's superintendent.
- Subcontractor is responsible for receiving and unloading materials associated with your scope of work.
- Subcontractor agrees to work and provide manpower to fulfill project needs including working non-standard work week hours.
- Subcontractor will be responsible for daily cleanup.
- Subcontractor to ensure their workforce will practice and perform all safety requirements per OSHA for said work.
- Subcontractor agrees to perform all punch list items within 20 days of substantial completion, or cost of completing punchwork will be deducted from subcontractor's retainage.
- Subcontractor to provide all warranties, as-builts, and closeout documents within 20 days of substantial completion.
- Subcontractor to provide submittals and shop drawings within 20 days of awarded contract.
- Mandatory Preparatory meetings will be held with McKnight's superintendent and subcontractor prior to each new phase of work.
- Subcontractor to include cost of bond in proposal.

SECTION 04 20 00 - UNIT MASONRY

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Building (common) brick.
2. Mortar and grout.
3. Steel reinforcing bars.
4. Masonry-joint reinforcement.
5. Ties and anchors.
6. Embedded flashing.
7. Miscellaneous masonry accessories.

B. Products Installed but not Furnished under This Section:

1. Steel lintels in unit masonry.
2. Steel shelf angles for supporting unit masonry.
3. Cavity wall insulation.

C. Related Requirements:

1. Section 05 12 00 "Structural Steel Framing" for installing anchor sections of adjustable masonry anchors for connecting to structural steel frame.
2. Section 07 19 00 "Water Repellents" for water repellents applied to unit masonry assemblies.
3. Section 07 21 00 "Thermal Insulation" for cavity wall insulation.
4. Section 07 62 00 "Sheet Metal Flashing and Trim" for sheet metal flashing and for furnishing manufactured reglets installed in masonry joints.
5. Section 08 95 16 "Wall Vents" for wall vents (brick vents).
6. Section 09 63 13 "Brick Flooring" for interior brick flooring.
7. Section 09 63 13.35 "Chemical-Resistant Brick Flooring" for chemical-resistant, interior brick flooring.
8. Section 09 75 19 "Stone Trim" for stone window stools.
9. Section 32 14 00 "Unit Paving" for exterior unit masonry paving.
10. Section 32 32 23 "Segmental Retaining Walls" for dry-laid, concrete unit retaining walls.

SECTION 04 20 00 - UNIT MASONRY

1.3 DEFINITIONS

- A. CMU(s): Concrete masonry unit(s).
- B. Reinforced Masonry: Masonry containing reinforcing steel in grouted cells.

1.4 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site .

1.5 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: For the following:
 - 1. Masonry Units: Show sizes, profiles, coursing, and locations of special shapes.
 - 2. Stone Trim Units: Show sizes, profiles, and locations of each stone trim unit required.
 - 3. Reinforcing Steel: Detail bending, lap lengths, and placement of unit masonry reinforcing bars. Comply with ACI 315. Show elevations of reinforced walls.
 - 4. Fabricated Flashing: Detail corner units, end-dam units, and other special applications.
- C. Samples for Initial Selection:
 - 1. Concrete face brick, in the form of small-scale units.
 - 2. brick , in the form of straps of five or more bricks.
 - 3. Glazed structural clay tile.
 - 4. Stone trim.
 - 5. Colored mortar.
 - 6. Weep holes/cavity vents.
- D. Samples for Verification: For each type and color of the following:
 - 1. Exposed CMUs.
 - 2. brick , in the form of straps of five or more bricks.
 - 3. Special brick shapes.
 - 4. Pigmented and colored-aggregate mortar. Make Samples using same sand and mortar ingredients to be used on Project.
 - 5. Weep holes and cavity vents.
 - 6. Accessories embedded in masonry.

1.6 INFORMATIONAL SUBMITTALS

- A. List of Materials Used in Constructing Mockups: List generic product names together with manufacturers, manufacturers' product names, model numbers, lot numbers,

batch numbers, source of supply, and other information as required to identify materials used. Include mix proportions for mortar and grout and source of aggregates.

1. Submittal is for information only. Receipt of list does not constitute approval of deviations from the Contract Documents unless such deviations are specifically brought to the attention of Architect and approved in writing.
- B. Qualification Data: For testing agency.
- C. Material Certificates: For each type and size of the following:
1. Masonry units.
 - a. Include data on material properties .
 - b. For brick, include size-variation data verifying that actual range of sizes falls within specified tolerances.
 - c. For exposed brick, include test report for efflorescence according to ASTM C67.
 - d. For surface-coated brick, include test report for durability of surface appearance after 50 cycles of freezing and thawing according to ASTM C67.
 - e. For masonry units, include data and calculations establishing average net-area compressive strength of units.
 2. Integral water repellent used in CMUs.
 3. Cementitious materials. Include name of manufacturer, brand name, and type.
 4. Mortar admixtures.
 5. Preblended, dry mortar mixes. Include description of type and proportions of ingredients.
 6. Grout mixes. Include description of type and proportions of ingredients.
 7. Reinforcing bars.
 8. Joint reinforcement.
 9. Anchors, ties, and metal accessories.
- D. Mix Designs: For each type of mortar and grout. Include description of type and proportions of ingredients.
1. Include test reports for mortar mixes required to comply with property specification. Test according to ASTM C109/C109M for compressive strength, ASTM C1506 for water retention, and ASTM C91/C91M for air content.
 2. Include test reports, according to ASTM C1019, for grout mixes required to comply with compressive strength requirement.
- E. Statement of Compressive Strength of Masonry: For each combination of masonry unit type and mortar type, provide statement of average net-area compressive strength of masonry units, mortar type, and resulting net-area compressive strength of masonry determined according to TMS 602/ACI 530.1/ASCE 6.
- F. Cold-Weather and Hot-Weather Procedures: Detailed description of methods, materials, and equipment to be used to comply with requirements.

1.7 QUALITY ASSURANCE

- A. Testing Agency Qualifications: Qualified according to ASTM C1093 for testing indicated.
- B. Sample Panels: Build sample panels to verify selections made under Sample submittals and to demonstrate aesthetic effects. Comply with requirements in Section 01 40 00 "Quality Requirements" for mockups.
1. Build sample panels for each type of exposed unit masonry construction in sizes approximately **48 inches** long by **36 inches** high.
 2. Build sample panels facing south.
 3. Where masonry is to match existing, build panels adjacent and parallel to existing surface.
 4. Clean exposed faces of panels with masonry cleaner indicated.
 5. Protect approved sample panels from the elements with weather-resistant membrane.
 6. Approval of sample panels is for color, texture, and blending of masonry units; relationship of mortar and sealant colors to masonry unit colors; tooling of joints; aesthetic qualities of workmanship; and other material and construction qualities specifically approved by Architect in writing.
 - a. Approval of sample panels does not constitute approval of deviations from the Contract Documents contained in sample panels unless Architect specifically approves such deviations in writing.
- C. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for materials and execution.
1. Build mockup of typical wall area as shown on Drawings.
 2. Build mockups for each type of exposed unit masonry construction in sizes approximately **48 inches** long by **36 inches** high by full thickness, including face and backup wythes and accessories.
 - a. Include a sealant-filled joint at least **16 inches** long in each exterior wall mockup.
 - b. Include lower corner of window opening at upper corner of exterior wall mockup. Make opening approximately **12 inches** wide by **16 inches** high.
 - c. Include through-wall flashing installed for a **24-inch** length in corner of exterior wall mockup approximately **16 inches** down from top of mockup, with a **12-inch** length of flashing left exposed to view (omit masonry above half of flashing).
 - d. Include metal studs, sheathing, water-resistive barrier sheathing joint-and-penetration treatment air barrier, veneer anchors, flashing, cavity drainage material, and weep holes in exterior masonry-veneer wall mockup.
 - e. Include on one face of interior unit masonry wall mockup.
 3. Where masonry is to match existing, erect mockups adjacent and parallel to existing surface.
 4. Clean exposed faces of mockups with masonry cleaner as indicated.
 5. Protect accepted mockups from the elements with weather-resistant membrane.

6. Approval of mockups is for color, texture, and blending of masonry units; relationship of mortar and sealant colors to masonry unit colors; tooling of joints; and aesthetic qualities of workmanship.
 - a. Approval of mockups is also for other material and construction qualities specifically approved by Architect in writing.
 - b. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
7. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Store masonry units on elevated platforms in a dry location. If units are not stored in an enclosed location, cover tops and sides of stacks with waterproof sheeting, securely tied. If units become wet, do not install until they are dry.
- B. Store cementitious materials on elevated platforms, under cover, and in a dry location. Do not use cementitious materials that have become damp.
- C. Store aggregates where grading and other required characteristics can be maintained and contamination avoided.
- D. Deliver preblended, dry mortar mix in moisture-resistant containers. Store preblended, dry mortar mix in delivery containers on elevated platforms in a dry location or in covered weatherproof dispensing silos.
- E. Store masonry accessories, including metal items, to prevent corrosion and accumulation of dirt and oil.

1.9 FIELD CONDITIONS

- A. Protection of Masonry: During construction, cover tops of walls, projections, and sills with waterproof sheeting at end of each day's work. Cover partially completed masonry when construction is not in progress.
 1. Extend cover a minimum of **24 inches** down both sides of walls, and hold cover securely in place.
 2. Where one wythe of multiwythe masonry walls is completed in advance of other wythes, secure cover a minimum of **24 inches** down face next to unconstructed wythe, and hold cover in place.
- B. Do not apply uniform floor or roof loads for at least 12 hours and concentrated loads for at least three days after building masonry walls or columns.
- C. Stain Prevention: Prevent grout, mortar, and soil from staining the face of masonry to be left exposed or painted. Immediately remove grout, mortar, and soil that come in contact with such masonry.

1. Protect base of walls from rain-splashed mud and from mortar splatter by spreading coverings on ground and over wall surface.
 2. Protect sills, ledges, and projections from mortar droppings.
 3. Protect surfaces of window and door frames, as well as similar products with painted and integral finishes, from mortar droppings.
 4. Turn scaffold boards near the wall on edge at the end of each day to prevent rain from splashing mortar and dirt onto completed masonry.
- D. Cold-Weather Requirements: Do not use frozen materials or materials mixed or coated with ice or frost. Do not build on frozen substrates. Remove and replace unit masonry damaged by frost or by freezing conditions. Comply with cold-weather construction requirements contained in TMS 602/ACI 530.1/ASCE 6.
1. Cold-Weather Cleaning: Use liquid cleaning methods only when air temperature is **40 deg F** and higher and will remain so until masonry has dried, but not less than seven days after completing cleaning.
- E. Hot-Weather Requirements: Comply with hot-weather construction requirements contained in TMS 602/ACI 530.1/ASCE 6.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Source Limitations for Masonry Units: Obtain exposed masonry units of a uniform texture and color, or a uniform blend within the ranges accepted for these characteristics, from single source from single manufacturer for each product required.
- B. Source Limitations for Mortar Materials: Obtain mortar ingredients of a uniform quality, including color for exposed masonry, from single manufacturer for each cementitious component and from single source or producer for each aggregate.

2.2 PERFORMANCE REQUIREMENTS

- A. Provide structural unit masonry that develops indicated net-area compressive strengths at 28 days.
 1. Determine net-area compressive strength of masonry from average net-area compressive strengths of masonry units and mortar types (unit-strength method) according to TMS 602/ACI 530.1/ASCE 6.
 2. Determine net-area compressive strength of masonry by testing masonry prisms according to ASTM C1314.

2.3 UNIT MASONRY, GENERAL

- A. Masonry Standard: Comply with TMS 602/ACI 530.1/ASCE 6, except as modified by requirements in the Contract Documents.
- B. Defective Units: Referenced masonry unit standards may allow a certain percentage of units to contain chips, cracks, or other defects exceeding limits stated. Do not use units where such defects are exposed in the completed Work.
- C. Fire-Resistance Ratings: Comply with requirements for fire-resistance-rated assembly designs indicated.
 - 1. Where fire-resistance-rated construction is indicated, units shall be listed and labeled by a qualified testing agency acceptable to authorities having jurisdiction.

2.4 CONCRETE MASONRY UNITS

2.5 BRICK

- A. General: Provide shapes indicated and as follows, with exposed surfaces matching finish and color of exposed faces of adjacent units:
 - 1. For ends of sills and caps and for similar applications that would otherwise expose unfinished brick surfaces, provide units without cores or frogs and with exposed surfaces finished.
 - 2. Provide special shapes for applications where stretcher units cannot accommodate special conditions, including those at corners, movement joints, bond beams, sashes, and lintels.
 - 3. Provide special shapes for applications requiring brick of size, form, color, and texture on exposed surfaces that cannot be produced by sawing.
 - 4. Provide special shapes for applications where shapes produced by sawing would result in sawed surfaces being exposed to view.
- B. Clay Face Brick: Facing brick complying with ASTM C216 .
 - 1. Color 1 Triangle Full Color Antique modular size
 - 2. Color 2 Taylor 320 Modular Wirecut
- C. Building (Common) Brick: ASTM C62, Grade SW .
 - 1. Unit Compressive Strength: Provide units with minimum average net-area compressive strength of **6200 psi** .
 - 2. Size: Match size of face brick.
 - 3. Size (Actual Dimensions): **3-5/8 inches** wide by **2-1/4 inches** high by **7-5/8 inches** long.
 - 4. Application: Use where brick is indicated for concealed locations. Face brick complying with requirements for grade, compressive strength, and size indicated for building brick may be substituted for building brick.

2.6 MORTAR AND GROUT MATERIALS

- A. Portland Cement-Lime Mix: Packaged blend of portland cement and hydrated lime containing no other ingredients.
- B. Masonry Cement: ASTM C91/C91M.
- C. Water: Potable.

2.7 REINFORCEMENT

- A. Reinforcing Bar Positioners: Wire units designed to fit into mortar bed joints spanning masonry unit cells and to hold reinforcing bars in center of cells. Units are formed from **0.148-inch** steel wire, hot-dip galvanized after fabrication. Provide units designed for number of bars indicated.
 - 1. **Manufacturers:** Subject to compliance with requirements, provide products by one of the following:
 - a. Heckmann Building Products, Inc.
 - b. Hohmann & Barnard, Inc.
 - c. Wire-Bond.
- B. Masonry-Joint Reinforcement, General: ASTM A951/A951M.
 - 1. Interior Walls: Hot-dip galvanized carbon steel.
 - 2. Exterior Walls: Hot-dip galvanized carbon steel.
 - 3. Wire Size for Side Rods: **0.148-inch** diameter.
 - 4. Wire Size for Cross Rods: **0.148-inch** diameter.
 - 5. Wire Size for Veneer Ties: **0.148-inch** diameter.
 - 6. Spacing of Cross Rods, Tabs, and Cross Ties: Not more than **16 inches** o.c.
 - 7. Provide in lengths of not less than **10 feet**, with prefabricated corner and tee units.
- C. Masonry-Joint Reinforcement for Single-Wythe Masonry: Ladder type with single pair of side rods.
 - 1. **Manufacturers:** Subject to compliance with requirements, provide products by one of the following:
 - a. Hohmann & Barnard, Inc.
 - b. Wire-Bond.
- D. Masonry-Joint Reinforcement for Multiwythe Masonry:
 - 1. **Manufacturers:** Subject to compliance with requirements, provide products by one of the following:
 - a. Heckmann Building Products, Inc.
 - b. Hohmann & Barnard, Inc.
 - c. Wire-Bond.

2. Adjustable (two-piece) type, either ladder or truss design, with one side rod at each face shell of backing wythe and with separate adjustable ties with pintle-and-eye connections having a maximum horizontal play of **1/16 inch** and maximum vertical adjustment of **1-1/4 inches**. Size ties to extend at least halfway through facing wythe but with at least **5/8-inch** cover on outside face. Ties have hooks or clips to engage a continuous horizontal wire in the facing wythe.

- E. Masonry-Joint Reinforcement for Veneers Anchored with Seismic Masonry-Veneer Anchors: Single **0.187-inch-** diameter, steel continuous wire.

2.8 TIES AND ANCHORS

- A. General: Ties and anchors shall extend at least **1-1/2 inches** into veneer but with at least a **5/8-inch** cover on outside face.

- B. Materials: Provide ties and anchors specified in this article that are made from materials that comply with the following unless otherwise indicated:

1. Mill-Galvanized, Carbon-Steel Wire: ASTM A82/A82M, with ASTM A641/A641M, Class 1 coating.
2. Hot-Dip Galvanized, Carbon-Steel Wire: ASTM A82/A82M, with ASTM A153/A153M, Class B-2 coating.
3. Stainless Steel Wire: ASTM A580/A580M, Type 304.
4. Galvanized-Steel Sheet: ASTM A653/A653M, Commercial Steel, **G60** zinc coating.
5. Steel Sheet, Galvanized after Fabrication: ASTM A1008/A1008M, Commercial Steel, with ASTM A153/A153M, Class B coating.
6. Stainless Steel Sheet: ASTM A240/A240M or ASTM A666, Type 304.
7. Steel Plates, Shapes, and Bars: ASTM A36/A36M.
8. Stainless Steel Bars: ASTM A276 or ASTM A666, Type 304.

- C. Adjustable Anchors for Connecting to Structural Steel Framing: Provide anchors that allow vertical or horizontal adjustment but resist tension and compression forces perpendicular to plane of wall.

1. Anchor Section for Welding to Steel Frame: Crimped **1/4-inch-** diameter, hot-dip galvanized steel wire.
2. Tie Section: Triangular-shaped wire tie made from **0.187-inch-** diameter, hot-dip galvanized steel wire.

- D. Adjustable Anchors for Connecting to Concrete: Provide anchors that allow vertical or horizontal adjustment but resist tension and compression forces perpendicular to plane of wall.

1. Tie Section: Triangular-shaped wire tie made from **0.187-inch-** diameter, hot-dip galvanized steel wire.

- E. Partition Top Anchors: **0.105-inch-** thick metal plate with a **3/8-inch-** diameter metal rod **6 inches** long welded to plate and with closed-end plastic tube fitted over rod that

allows rod to move in and out of tube. Fabricate from steel, hot-dip galvanized after fabrication .

F. Adjustable Masonry-Veneer Anchors:

1. General: Provide anchors that allow vertical adjustment but resist a **100-lbf** load in both tension and compression perpendicular to plane of wall without deforming or developing play in excess of **1/16 inch** .
2. Fabricate sheet metal anchor sections and other sheet metal parts from **0.105-inch-** thick steel sheet, galvanized after fabrication .
3. Fabricate wire ties from **0.25-inch-** diameter, hot-dip galvanized-steel wire unless otherwise indicated.
4. Seismic Masonry-Veneer Anchors: Connector section and rib-stiffened, sheet metal anchor section with screw holes top and bottom, with projecting tabs having slotted holes for inserting vertical leg of connector section. Connector section consists of a rib-stiffened, sheet metal bent plate with down-turned leg designed to fit in anchor section slot and with integral tabs designed to engage continuous wire.
 - a. **Manufacturers:** Subject to compliance with requirements, provide products by one of the following:
 - 1) Hohmann & Barnard, Inc.
 - 2) Wire-Bond.
5. Seismic Masonry-Veneer Anchors: Wire tie and a rib-stiffened, sheet metal anchor section with screw holes top and bottom, with projecting tabs having holes for inserting vertical legs of wire tie formed to fit anchor section. Wire tie has sheet metal clip welded to it with integral tabs designed to engage continuous wire.
6. Seismic Masonry-Veneer Anchors: Connector section and a gasketed sheet metal anchor section, **1-1/4 inches** wide by **6 inches** long, with screw holes top and bottom; top and bottom ends bent to form pronged legs of length to match thickness of insulation or sheathing; and raised rib-stiffened strap, **5/8 inch** wide by **6 inches** long, stamped into center to provide a slot between strap and base for inserting connector section. Self-adhering, modified bituminous gasket fits behind anchor plate and extends beyond pronged legs. Connector section consists of a triangular wire tie and rigid PVC extrusion with snap-in grooves for inserting continuous wire. Fabricate wire connector sections from **0.25-inch-** diameter, hot-dip galvanized, carbon steel wire.

2.9 EMBEDDED FLASHING MATERIALS

A. Metal Flashing: Provide metal flashing complying with SMACNA's "Architectural Sheet Metal Manual" and as follows:

1. Stainless Steel: ASTM A240/A240M or ASTM A666, Type 304, **0.016 inch** thick.
2. Copper: ASTM B370, Temper H00, cold-rolled copper sheet, **16-oz./sq. ft.** weight or **0.0216 inch** thick or ASTM B370, Temper H01, high-yield copper sheet, **12-oz./sq. ft.** weight or **0.0162 inch** thick.

3. Fabricate continuous flashings in sections **96 inches** long minimum, but not exceeding **12 feet** . Provide splice plates at joints of formed, smooth metal flashing.
 4. Fabricate through-wall metal flashing embedded in masonry from stainless steel , with ribs at **3-inch** intervals along length of flashing to provide an integral mortar bond.
 - a. **Manufacturers:** Subject to compliance with requirements, provide products by one of the following:
 - 1) Cheney Flashing Company.
 - 2) Hohmann & Barnard, Inc.
 - 3) Keystone Flashing Company, Inc.
 5. Fabricate through-wall flashing with snaplock receiver on exterior face where indicated to receive counterflashing.
 6. Fabricate through-wall flashing with drip edge unless otherwise indicated. Fabricate by extending flashing **1/2 inch** out from wall, with outer edge bent down 30 degrees and hemmed.
 7. Fabricate through-wall flashing with sealant stop unless otherwise indicated. Fabricate by bending metal back on itself **3/4 inch** at exterior face of wall and down into joint **1/4 inch** to form a stop for retaining sealant backer rod.
 8. Fabricate metal drip edges and sealant stops for ribbed metal flashing from plain metal flashing of same metal as ribbed flashing and extending at least **3 inches** into wall with hemmed inner edge to receive ribbed flashing and form a hooked seam. Form hem on upper surface of metal so that completed seam sheds water.
 9. Solder metal items at corners.
- B. Application: Unless otherwise indicated, use the following:
1. Where flashing is indicated to receive counterflashing, use metal flashing.
 2. Where flashing is indicated to be turned down at or beyond the wall face, use metal flashing.
 3. Where flashing is partly exposed and is indicated to terminate at the wall face, use metal flashing with a drip edge with a sealant stop .
 4. Where flashing is fully concealed, use metal flashing .
- C. Solder and Sealants for Sheet Metal Flashings: As specified in Section 07 62 00 "Sheet Metal Flashing and Trim."
1. Solder for Stainless Steel: ASTM B32, Grade Sn60 , with acid flux of type recommended by stainless steel sheet manufacturer.
 2. Elastomeric Sealant: ASTM C920, chemically curing urethane sealant; of type, grade, class, and use classifications required to seal joints in sheet metal flashing and remain watertight.
- D. Adhesives, Primers, and Seam Tapes for Flashings: Flashing manufacturer's standard products or products recommended by flashing manufacturer for bonding flashing sheets to each other and to substrates.
- E. Termination Bars for Flexible Flashing: Stainless steel bars .

2.10 MISCELLANEOUS MASONRY ACCESSORIES

- A. Compressible Filler: Premolded filler strips complying with ASTM D1056, Grade 2A1; compressible up to 35 percent; of width and thickness indicated; formulated from neoprene .
- B. Preformed Control-Joint Gaskets: Made from styrene-butadiene-rubber compound, complying with ASTM D2000, Designation M2AA-805 and designed to fit standard sash block and to maintain lateral stability in masonry wall; size and configuration as indicated.
- C. Bond-Breaker Strips: Asphalt-saturated felt complying with ASTM D226/D226M, Type I (No. 15 asphalt felt).
- D. Weep/Cavity Vent Products: Use the following unless otherwise indicated:
 - 1. Rectangular Plastic Weep/Vent Tubing: Clear butyrate, **3/8 by 1-1/2 by 3-1/2 inches** long.
- E. Cavity Drainage Material: Free-draining mesh, made from polymer strands that will not degrade within the wall cavity.
 - 1. **Manufacturers:** Subject to compliance with requirements, provide products by one of the following:
 - a. Hohmann & Barnard, Inc.
 - b. Keene Building Products.
 - c. Mortar Net Solutions.
 - d. Wire-Bond.
 - 2. Configuration: Provide one of the following:
 - a. Strips, full depth of cavity and **10 inches** high, with dovetail-shaped notches **7 inches** deep that prevent clogging with mortar droppings.

2.11 MASONRY CLEANERS

- A. Proprietary Acidic Cleaner: Manufacturer's standard-strength cleaner designed for removing mortar/grout stains, efflorescence, and other new construction stains from new masonry without discoloring or damaging masonry surfaces. Use product expressly approved for intended use by cleaner manufacturer and manufacturer of masonry units being cleaned.

2.12 MORTAR AND GROUT MIXES

- A. General: Do not use admixtures, including pigments, air-entraining agents, accelerators, retarders, water-repellent agents, antifreeze compounds, or other admixtures unless otherwise indicated.
 - 1. Do not use calcium chloride in mortar or grout.
 - 2. Use portland cement-lime masonry cement mortar unless otherwise indicated.

3. For exterior masonry, use portland cement-lime masonry cement mortar.
 4. For reinforced masonry, use portland cement-lime masonry cement mortar.
 5. Add cold-weather admixture (if used) at same rate for all mortar that will be exposed to view, regardless of weather conditions, to ensure that mortar color is consistent.
- B. Preblended, Dry Mortar Mix: Furnish dry mortar ingredients in form of a preblended mix. Measure quantities by weight to ensure accurate proportions, and thoroughly blend ingredients before delivering to Project site.
- C. Mortar for Unit Masonry: Comply with ASTM C270, Proportion Specification. Provide the following types of mortar for applications stated unless another type is indicated or needed to provide required compressive strength of masonry.
1. For masonry below grade or in contact with earth, use Type M.
 2. For reinforced masonry, use Type S .
 3. For mortar parge coats, use Type S .
 4. For exterior, above-grade, load-bearing and nonload-bearing walls and parapet walls; for interior load-bearing walls; for interior nonload-bearing partitions; and for other applications where another type is not indicated, use Type N.
 5. For interior nonload-bearing partitions, Type O may be used instead of Type N.
- D. Colored-Aggregate Mortar: Produce required mortar color by using colored aggregates and natural color or white cement as necessary to produce required mortar color.
1. Mix to match Architect's sample.
 2. Application: Use colored-aggregate mortar for exposed mortar joints with the following units:
 - a. Cast-stone trim units.
- E. Grout for Unit Masonry: Comply with ASTM C476.
1. Use grout of type indicated or, if not otherwise indicated, of type (fine or coarse) that will comply with TMS 602/ACI 530.1/ASCE 6 for dimensions of grout spaces and pour height.
 2. Proportion grout in accordance with ASTM C476, Table 1 .
 3. Provide grout with a slump of **8 to 11 inches** as measured according to ASTM C143/C143M.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
1. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance of the Work.

2. Verify that foundations are within tolerances specified.
 3. Verify that reinforcing dowels are properly placed.
 4. Verify that substrates are free of substances that impair mortar bond.
- B. Before installation, examine rough-in and built-in construction for piping systems to verify actual locations of piping connections.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

- A. Thickness: Build cavity and composite walls and other masonry construction to full thickness shown. Build single-wythe walls to actual widths of masonry units, using units of widths indicated.
- B. Build chases and recesses to accommodate items specified in this and other Sections.
- C. Leave openings for equipment to be installed before completing masonry. After installing equipment, complete masonry to match construction immediately adjacent to opening.
- D. Use full-size units without cutting if possible. If cutting is required to provide a continuous pattern or to fit adjoining construction, cut units with motor-driven saws; provide clean, sharp, unchipped edges. Allow units to dry before laying unless wetting of units is specified. Install cut units with cut surfaces and, where possible, cut edges concealed.
- E. Select and arrange units for exposed unit masonry to produce a uniform blend of colors and textures. Mix units from several pallets or cubes as they are placed.
- F. Matching Existing Masonry: Match coursing, bonding, color, and texture of existing masonry.
- G. Wetting of Brick: Wet brick before laying if initial rate of absorption exceeds **30 g/30 sq. in.** per minute when tested according to ASTM C67. Allow units to absorb water so they are damp but not wet at time of laying.

3.3 TOLERANCES

- A. Dimensions and Locations of Elements:
1. For dimensions in cross section or elevation, do not vary by more than plus **1/2 inch** or minus **1/4 inch**.
 2. For location of elements in plan, do not vary from that indicated by more than plus or minus **1/2 inch**.
 3. For location of elements in elevation, do not vary from that indicated by more than plus or minus **1/4 inch** in a story height or **1/2 inch** total.

B. Lines and Levels:

1. For bed joints and top surfaces of bearing walls, do not vary from level by more than **1/4 inch in 10 feet** , or **1/2-inch** maximum.
2. For conspicuous horizontal lines, such as lintels, sills, parapets, and reveals, do not vary from level by more than **1/8 inch in 10 feet** , **1/4 inch in 20 feet** , or **1/2-inch** maximum.
3. For vertical lines and surfaces, do not vary from plumb by more than **1/4 inch in 10 feet** , **3/8 inch in 20 feet** , or **1/2-inch** maximum.
4. For conspicuous vertical lines, such as external corners, door jambs, reveals, and expansion and control joints, do not vary from plumb by more than **1/8 inch in 10 feet** , **1/4 inch in 20 feet** , or **1/2-inch** maximum.
5. For lines and surfaces, do not vary from straight by more than **1/4 inch in 10 feet** , **3/8 inch in 20 feet** , or **1/2-inch** maximum.
6. For vertical alignment of exposed head joints, do not vary from plumb by more than **1/4 inch in 10 feet** or **1/2-inch** maximum.
7. For faces of adjacent exposed masonry units, do not vary from flush alignment by more than **1/16 inch** except due to warpage of masonry units within tolerances specified for warpage of units.

C. Joints:

1. For bed joints, do not vary from thickness indicated by more than plus or minus **1/8 inch** , with a maximum thickness limited to **1/2 inch** .
2. For exposed bed joints, do not vary from bed-joint thickness of adjacent courses by more than **1/8 inch** .
3. For head and collar joints, do not vary from thickness indicated by more than plus **3/8 inch** or minus **1/4 inch** .
4. For exposed head joints, do not vary from thickness indicated by more than plus or minus **1/8 inch** . Do not vary from adjacent bed-joint and head-joint thicknesses by more than **1/8 inch** .
5. For exposed bed joints and head joints of stacked bond, do not vary from a straight line by more than **1/16 inch** from one masonry unit to the next.

3.4 LAYING MASONRY WALLS

- A. Lay out walls in advance for accurate spacing of surface bond patterns with uniform joint thicknesses and for accurate location of openings, movement-type joints, returns, and offsets. Avoid using less-than-half-size units, particularly at corners, jambs, and, where possible, at other locations.
- B. Bond Pattern for Exposed Masonry: Unless otherwise indicated, lay exposed masonry in bond pattern indicated on Drawings; do not use units with less-than-nominal **4-inch** horizontal face dimensions at corners or jambs.
- C. Lay concealed masonry with all units in a wythe in running bond or bonded by lapping not less than **4 inches** . Bond and interlock each course of each wythe at corners. Do not use units with less-than-nominal **4-inch** horizontal face dimensions at corners or jambs.

- D. Stopping and Resuming Work: Stop work by stepping back units in each course from those in course below; do not tooth. When resuming work, clean masonry surfaces that are to receive mortar, remove loose masonry units and mortar, and wet brick if required before laying fresh masonry.
- E. Built-in Work: As construction progresses, build in items specified in this and other Sections. Fill in solidly with masonry around built-in items.
- F. Fill space between steel frames and masonry solidly with mortar unless otherwise indicated.
- G. Where built-in items are to be embedded in cores of hollow masonry units, place a layer of metal lath, wire mesh, or plastic mesh in the joint below, and rod mortar or grout into core.
- H. Fill cores in hollow CMUs with grout **24 inches** under bearing plates, beams, lintels, posts, and similar items unless otherwise indicated.
- I. Build nonload-bearing interior partitions full height of story to underside of solid floor or roof structure above unless otherwise indicated.
 - 1. Install compressible filler in joint between top of partition and underside of structure above.
 - 2. Fasten partition top anchors to structure above and build into top of partition. Grout cells of CMUs solidly around plastic tubes of anchors and push tubes down into grout to provide **1/2-inch** clearance between end of anchor rod and end of tube. Space anchors **48 inches** o.c. unless otherwise indicated.
 - 3. Wedge nonload-bearing partitions against structure above with small pieces of tile, slate, or metal. Fill joint with mortar after dead-load deflection of structure above approaches final position.
 - 4. At fire-rated partitions, treat joint between top of partition and underside of structure above to comply with Section 07 84 43 "Joint Firestopping."

3.5 MORTAR BEDDING AND JOINTING

- A. Lay as follows:
 - 1. Bed face shells in mortar and make head joints of depth equal to bed joints.
 - 2. Bed webs in mortar in all courses of piers, columns, and pilasters.
 - 3. Bed webs in mortar in grouted masonry, including starting course on footings.
 - 4. Fully bed entire units, including areas under cells, at starting course on footings where cells are not grouted.
 - 5. Fully bed units and fill cells with mortar at anchors and ties as needed to fully embed anchors and ties in mortar.
- B. Lay solid masonry units with completely filled bed and head joints; butter ends with sufficient mortar to fill head joints and shove into place. Do not deeply furrow bed joints or slush head joints.

- C. Lay structural clay tile as follows:
1. Lay vertical-cell units with full head joints unless otherwise indicated. Provide bed joints with full mortar coverage on face shells and webs.
 2. Lay horizontal-cell units with full bed joints unless otherwise indicated. Keep drainage channels, if any, free of mortar. Form head joints with sufficient mortar so excess will be squeezed out as units are placed in position. Butter both sides of units to be placed, or butter one side of unit already in place and one side of unit to be placed.
 3. Maintain joint thicknesses indicated except for minor variations required to maintain bond alignment. If not indicated, lay walls with **1/4- to 3/8-inch-** thick joints.
- D. Set firebox brick in full bed of refractory mortar with full head joints. Form joints by buttering both surfaces of adjoining brick and sliding it into place. Make joints just wide enough to accommodate variations in size of brick, approximately **1/8 inch**. Tool joints smooth on surfaces exposed to fire or smoke.
- E. Install clay flue liners to comply with ASTM C1283. Install flue liners ahead of surrounding masonry. Set clay flue liners in full bed of refractory mortar **1/16 to 1/8 inch** thick. Strike joints flush on inside of flue to provide smooth surface. Maintain expansion space between flue liner and surrounding masonry except where surrounding masonry is required to provide lateral support for flue liners.
- F. Rake out mortar joints at to a uniform depth of **1/4 inch** and point with epoxy mortar to comply with epoxy-mortar manufacturer's written instructions.
- G. Tool exposed joints slightly concave when thumbprint hard, using a jointer larger than joint thickness unless otherwise indicated.
1. For glazed masonry units, use a nonmetallic jointer **3/4 inch** or more in width.
- H. Cut joints flush for masonry walls to receive plaster or other direct-applied finishes (other than paint) unless otherwise indicated.
- I. Cut joints flush where indicated to receive waterproofing cavity wall insulation air barriers unless otherwise indicated.

3.6 CAVITY WALLS

- A. Bond wythes of cavity walls together as follows:
1. Individual Metal Ties: Provide ties as shown installed in horizontal joints, but not less than one metal tie for of wall area spaced not to exceed **16 inches** o.c. horizontally and **16 inches** o.c. vertically. Stagger ties in alternate courses. Provide additional ties within **12 inches** of openings and space not more than **36 inches** apart around perimeter of openings. At intersecting and abutting walls, provide ties at no more than **24 inches** o.c. vertically.

- a. Where bed joints of wythes do not align, use adjustable-type (two-piece-type) ties.
 - b. Where one wythe is of clay masonry and the other of concrete masonry, use adjustable-type (two-piece-type) ties to allow for differential movement regardless of whether bed joints align.
 2. Masonry-Joint Reinforcement: Installed in horizontal mortar joints.
 - a. Where bed joints of both wythes align, use ladder-type reinforcement extending across both wythes .
 - b. Where bed joints of wythes do not align, use adjustable-type (two-piece-type) reinforcement with continuous horizontal wire in facing wythe attached to ties.
 - c. Where one wythe is of clay masonry and the other of concrete masonry, use adjustable-type (two-piece-type) reinforcement with continuous horizontal wire in facing wythe attached to ties to allow for differential movement regardless of whether bed joints align.
 3. Masonry-Veneer Anchors: Comply with requirements for anchoring masonry veneers.
- B. Bond wythes of cavity walls together using bonding system indicated on Drawings.
- C. Keep cavities clean of mortar droppings and other materials during construction. Bevel beds away from cavity, to minimize mortar protrusions into cavity. Do not attempt to trowel or remove mortar fins protruding into cavity.
- D. Parge cavity face of backup wythe in a single coat approximately **3/8 inch** thick. Trowel face of parge coat smooth.
- E. Installing Cavity Wall Insulation: Place small dabs of adhesive, spaced approximately **12 inches** o.c. both ways, on inside face of insulation boards, or attach with plastic fasteners designed for this purpose. Fit courses of insulation between wall ties and other confining obstructions in cavity, with edges butted tightly both ways. Press units firmly against inside wythe of masonry or other construction as shown.
1. Fill cracks and open gaps in insulation with crack sealer compatible with insulation and masonry.

3.7 ANCHORED MASONRY VENEERS

- A. Anchor masonry veneers to wall framing and concrete and masonry backup with seismic masonry-veneer anchors to comply with the following requirements:
1. Fasten seismic anchors to concrete and masonry backup with metal fasteners of type indicated. Use two fasteners unless anchor design only uses one fastener.
 2. Embed connector sections and continuous wire in masonry joints.
 3. Locate anchor sections to allow maximum vertical differential movement of ties up and down.
 4. Space anchors as indicated, but not more than **18 inches** o.c. vertically and horizontally. Install additional anchors within **12 inches** of openings and at intervals, not exceeding **24 inches** , around perimeter.

- B. Provide not less than **2 inches** of airspace between back of masonry veneer and face of insulation.
 - 1. Keep airspace clean of mortar droppings and other materials during construction. Bevel beds away from airspace, to minimize mortar protrusions into airspace. Do not attempt to trowel or remove mortar fins protruding into airspace.

3.8 MASONRY-JOINT REINFORCEMENT

- A. General: Install entire length of longitudinal side rods in mortar with a minimum cover of **5/8 inch** on exterior side of walls, **1/2 inch** elsewhere. Lap reinforcement a minimum of **6 inches**.
 - 1. Space reinforcement not more than **16 inches** o.c.
 - 2. Space reinforcement not more than **8 inches** o.c. in foundation walls and parapet walls.
 - 3. Provide reinforcement not more than **8 inches** above and below wall openings and extending **12 inches** beyond openings in addition to continuous reinforcement.
- B. Interrupt joint reinforcement at control and expansion joints unless otherwise indicated.
- C. Provide continuity at wall intersections by using prefabricated T-shaped units.
- D. Provide continuity at corners by using prefabricated L-shaped units.
- E. Cut and bend reinforcing units as directed by manufacturer for continuity at corners, returns, offsets, column fireproofing, pipe enclosures, and other special conditions.

3.9 ANCHORING MASONRY TO STRUCTURAL STEEL AND CONCRETE

- A. Anchor masonry to structural steel and concrete, where masonry abuts or faces structural steel or concrete, to comply with the following:
 - 1. Provide an open space not less than **1 inch** wide between masonry and structural steel or concrete unless otherwise indicated. Keep open space free of mortar and other rigid materials.
 - 2. Anchor masonry with anchors embedded in masonry joints and attached to structure.
 - 3. Space anchors as indicated, but not more than **24 inches** o.c. vertically and **36 inches** o.c. horizontally.

3.10 CONTROL AND EXPANSION JOINTS

- A. General: Install control- and expansion-joint materials in unit masonry as masonry progresses. Do not allow materials to span control and expansion joints without provision to allow for in-plane wall or partition movement.

- B. Form control joints in concrete masonry using one of the following methods:
1. Fit bond-breaker strips into hollow contour in ends of CMUs on one side of control joint. Fill resultant core with grout, and rake out joints in exposed faces for application of sealant.
 2. Install preformed control-joint gaskets designed to fit standard sash block.
 3. Install interlocking units designed for control joints. Install bond-breaker strips at joint. Keep head joints free and clear of mortar, or rake out joint for application of sealant.
 4. Install temporary foam-plastic filler in head joints, and remove filler when unit masonry is complete for application of sealant.
- C. Form expansion joints in brick as follows:
1. Build flanges of metal expansion strips into masonry. Lap each joint **4 inches** in direction of water flow. Seal joints below grade and at junctures with horizontal expansion joints if any.
 2. Build flanges of factory-fabricated, expansion-joint units into masonry.
 3. Build in compressible joint fillers where indicated.
 4. Form open joint full depth of brick wythe and of width indicated, but not less than **3/8 inch** for installation of sealant and backer rod specified in Section 07 92 00 "Joint Sealants."
- D. Provide horizontal, pressure-relieving joints by either leaving an airspace or inserting a compressible filler of width required for installing sealant and backer rod specified in Section 07 92 00 "Joint Sealants," but not less than **3/8 inch**.
1. Locate horizontal, pressure-relieving joints beneath shelf angles supporting masonry.

3.11 FLASHING, WEEP HOLES, AND CAVITY VENTS

- A. General: Install embedded flashing and weep holes in masonry at shelf angles, lintels, ledges, other obstructions to downward flow of water in wall, and where indicated. Install cavity vents at shelf angles, ledges, and other obstructions to upward flow of air in cavities, and where indicated.
- B. Install flashing as follows unless otherwise indicated:
1. Prepare masonry surfaces so they are smooth and free from projections that could puncture flashing. Where flashing is within mortar joint, place through-wall flashing on sloping bed of mortar and cover with mortar. Before covering with mortar, seal penetrations in flashing with adhesive, sealant, or tape as recommended by flashing manufacturer.
 2. At multiwythe masonry walls, including cavity walls, extend flashing through outer wythe, turned up a minimum of **8 inches**, and **1-1/2 inches** into the inner wythe.
 3. At lintels and shelf angles, extend flashing a minimum of **6 inches** into masonry at each end. At heads and sills, extend flashing **6 inches** at ends and turn up not less than **2 inches** to form end dams.

4. Interlock end joints of ribbed sheet metal flashing by overlapping ribs not less than **1-1/2 inches** or as recommended by flashing manufacturer, and seal lap with elastomeric sealant complying with requirements in Section 07 92 00 "Joint Sealants" for application indicated.
 5. Install metal drip edges and sealant stops with ribbed sheet metal flashing by interlocking hemmed edges to form hooked seam. Seal seam with elastomeric sealant complying with requirements in Section 07 92 00 "Joint Sealants" for application indicated.
 6. Install metal drip edges beneath flexible flashing at exterior face of wall. Stop flexible flashing **1/2 inch** back from outside face of wall, and adhere flexible flashing to top of metal drip edge.
 7. Install metal flashing termination beneath flexible flashing at exterior face of wall. Stop flexible flashing **1/2 inch** back from outside face of wall, and adhere flexible flashing to top of metal flashing termination.
 8. Cut flexible flashing off flush with face of wall after masonry wall construction is completed.
- C. Install single-wythe CMU flashing system in bed joints of CMU walls where indicated to comply with manufacturer's written instructions. Install CMU cell pans with upturned edges located below face shells and webs of CMUs above and with weep spouts aligned with face of wall. Install CMU web covers so that they cover upturned edges of CMU cell pans at CMU webs and extend from face shell to face shell.
- D. Install reglets and nailers for flashing and other related construction where they are shown to be built into masonry.
- E. Install weep holes in exterior wythes and veneers in head joints of first course of masonry immediately above embedded flashing.
1. Use specified weep/cavity vent products to form weep holes.
 2. Use wicking material to form weep holes above flashing under brick sills. Turn wicking down at lip of sill to be as inconspicuous as possible.
 3. Space weep holes **24 inches** o.c. unless otherwise indicated.
 4. Space weep holes formed from plastic tubing **16 inches** o.c.
 5. Cover cavity side of weep holes with plastic insect screening at cavities insulated with loose-fill insulation.
- F. Place cavity drainage material in cavities to comply with configuration requirements for cavity drainage material in "Miscellaneous Masonry Accessories" Article.
- G. Install cavity vents in head joints in exterior wythes at spacing indicated. Use specified weep/cavity vent products to form cavity vents.
1. Close cavities off vertically and horizontally with blocking in manner indicated. Install through-wall flashing and weep holes above horizontal blocking.

3.12 REINFORCED UNIT MASONRY

- A. Temporary Formwork and Shores: Construct formwork and shores as needed to support reinforced masonry elements during construction.
 - 1. Construct formwork to provide shape, line, and dimensions of completed masonry as indicated. Make forms sufficiently tight to prevent leakage of mortar and grout. Brace, tie, and support forms to maintain position and shape during construction and curing of reinforced masonry.
 - 2. Do not remove forms and shores until reinforced masonry members have hardened sufficiently to carry their own weight and that of other loads that may be placed on them during construction.
- B. Placing Reinforcement: Comply with requirements in TMS 602/ACI 530.1/ASCE 6.
- C. Grouting: Do not place grout until entire height of masonry to be grouted has attained enough strength to resist grout pressure.
 - 1. Comply with requirements in TMS 602/ACI 530.1/ASCE 6 for cleanouts and for grout placement, including minimum grout space and maximum pour height.
 - 2. Limit height of vertical grout pours to not more than **60 inches** .

3.13 FIELD QUALITY CONTROL

- A. Testing and Inspecting: Owner will engage special inspectors to perform tests and inspections and prepare reports. Allow inspectors access to scaffolding and work areas as needed to perform tests and inspections. Retesting of materials that fail to comply with specified requirements shall be done at Contractor's expense.
- B. Inspections: Special inspections according to Level B in TMS 402/ACI 530/ASCE 5.
 - 1. Begin masonry construction only after inspectors have verified proportions of site-prepared mortar.
 - 2. Place grout only after inspectors have verified compliance of grout spaces and of grades, sizes, and locations of reinforcement.
 - 3. Place grout only after inspectors have verified proportions of site-prepared grout.
- C. Testing Prior to Construction: One set of tests.
- D. Testing Frequency: One set of tests for each **5000 sq. ft.** of wall area or portion thereof.
- E. Clay Masonry Unit Test: For each type of unit provided, according to ASTM C67 for compressive strength.
- F. Concrete Masonry Unit Test: For each type of unit provided, according to ASTM C140 for compressive strength.
- G. Mortar Aggregate Ratio Test (Proportion Specification): For each mix provided, according to ASTM C780.

- H. Mortar Test (Property Specification): For each mix provided, according to ASTM C780. Test mortar for mortar air content and compressive strength.
- I. Grout Test (Compressive Strength): For each mix provided, according to ASTM C1019.
- J. Prism Test: For each type of construction provided, according to ASTM C1314 at 7 days and at 28 days.

3.14 PARGING

- A. Parge exterior faces of below-grade masonry walls, where indicated, in two uniform coats to a total thickness of **3/4 inch** . Dampen wall before applying first coat, and scarify first coat to ensure full bond to subsequent coat.
- B. Use a steel-trowel finish to produce a smooth, flat, dense surface with a maximum surface variation of **1/8 inch per foot** . Form a wash at top of parging and a cove at bottom.
- C. Damp-cure parging for at least 24 hours and protect parging until cured.

3.15 REPAIRING, POINTING, AND CLEANING

- A. Remove and replace masonry units that are loose, chipped, broken, stained, or otherwise damaged or that do not match adjoining units. Install new units to match adjoining units; install in fresh mortar, pointed to eliminate evidence of replacement.
- B. Pointing: During the tooling of joints, enlarge voids and holes, except weep holes, and completely fill with mortar. Point up joints, including corners, openings, and adjacent construction, to provide a neat, uniform appearance. Prepare joints for sealant application, where indicated.
- C. In-Progress Cleaning: Clean unit masonry as work progresses by dry brushing to remove mortar fins and smears before tooling joints.
- D. Final Cleaning: After mortar is thoroughly set and cured, clean exposed masonry as follows:
 - 1. Remove large mortar particles by hand with wooden paddles and nonmetallic scrape hoes or chisels.
 - 2. Test cleaning methods on sample wall panel; leave one-half of panel uncleaned for comparison purposes. Obtain Architect's approval of sample cleaning before proceeding with cleaning of masonry.
 - 3. Protect adjacent stone and nonmasonry surfaces from contact with cleaner by covering them with liquid strippable masking agent or polyethylene film and waterproof masking tape.
 - 4. Wet wall surfaces with water before applying cleaners; remove cleaners promptly by rinsing surfaces thoroughly with clear water.

5. Clean brick by bucket-and-brush hand-cleaning method described in BIA Technical Notes 20.
6. Clean concrete masonry by applicable cleaning methods indicated in NCMA TEK 8-4A.
7. Clean masonry with a proprietary acidic cleaner applied according to manufacturer's written instructions.
8. Clean stone trim to comply with stone supplier's written instructions.
9. Clean limestone units to comply with recommendations in ILI's "Indiana Limestone Handbook."

3.16 MASONRY WASTE DISPOSAL

- A. Salvageable Materials: Unless otherwise indicated, excess masonry materials are Contractor's property. At completion of unit masonry work, remove from Project site.
- B. Waste Disposal as Fill Material: Dispose of clean masonry waste, including excess or soil-contaminated sand, waste mortar, and broken masonry units, by crushing and mixing with fill material as fill is placed.
 1. Crush masonry waste to less than **4 inches** in each dimension.
 2. Mix masonry waste with at least two parts of specified fill material for each part of masonry waste. Fill material is specified in Section 31 20 00 "Earth Moving."
 3. Do not dispose of masonry waste as fill within **18 inches** of finished grade.
- C. Masonry Waste Recycling: Return broken CMUs not used as fill to manufacturer for recycling.
- D. Excess Masonry Waste: Remove excess clean masonry waste that cannot be used as fill, as described above or recycled, and other masonry waste, and legally dispose of off Owner's property.

END OF SECTION 04 20 00

SECTION 10 22 26 - OPERABLE PANEL PARTITIONS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Manually operated, paired panel partitions.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
 - 1. Concrete floor tolerances are specified in Division 3 Section "Cast-in-Place Concrete."
 - 2. Metal framing and supports are specified in Division 5 Section "Metal Fabrications."
 - 3. Wood framing and supports are specified in Division 6 Section "Miscellaneous Carpentry."

1.3 SYSTEM PERFORMANCE REQUIREMENTS

- A. Acoustical Performance: Provide operable panel partitions tested by a qualified independent testing agency for the following acoustic properties according to following test method:
 - 1. Sound Transmission Requirements: Operable panel partition assembly tested in a full-scale opening (168 by 108 inches) for laboratory sound transmission loss performance according to ASTM E 90, determined by ASTM E 413 and rated for an STC plus or minus 1 as follows:
 - a. Sound Transmission Class (STC): 50.
 - 2. Noise Reduction Requirements: Operable panel partition assembly tested by a qualified independent agency for compliance with ASTM C 423 and rated for an NRC as follows:
 - a. Noise Reduction Coefficient (NRC): 0.50.

1.4 SUBMITTALS

- A. General: Submit the following according to the Conditions of the Contract and Division 1 Specification Sections.
- B. Product data on physical characteristics, durability, and surface-burning characteristics for each type of operable panel partition and accessory specified.
- C. Shop drawings showing location and extent of operable panel partitions. Include plans, elevations, large-scale details of anchorages, and accessory items. Indicate unit conditions at openings, location and installation requirements for hardware, and direction of travel.
- D. Template drawings prepared by manufacturer showing location of items supported or anchored by permanent construction.
- E. Samples for initial selection purposes in the form of manufacturer's color charts showing a full range of colors, textures, and patterns available for each type panel finish face indicated.
 - 1. Include similar samples of material for panel edges and accessories involving color selection.
- F. Samples for verification purposes of each type of panel finish face indicated; in sets for each color, texture, and pattern specified, showing a full range of variations expected in these characteristics.
 - 1. Finish Face Vinyl: Full-width sample, not less than 36 inches long, with specified treatments applied. Show complete pattern repeat.
 - 2. Panel Finish Face: Manufacturer's standard size unit, not less than 3 inches square.
 - 3. Panel Edge Material: Manufacturer's standard size unit, not less than 3 inches square.
- G. Product certificates signed by manufacturers of operable panel partitions certifying that their products comply with specified requirements.
- H. Maintenance data for panel finish face to include in the "Operating and Maintenance Manual" specified in Division 1.
 - 1. Precautions for cleaning materials and methods that could be detrimental to finishes and performance.
 - 2. Instructions for restretching sagging or distorted finish face.
- I. Acoustical test reports from and based on tests performed by a qualified independent testing agency certifying that the product and materials furnished comply with specified requirements.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Engage an experienced Installer who is certified in writing by the operable panel partition manufacturer as qualified to install the manufacturer's partition systems.
- B. Testing Agency Qualifications: To qualify for acceptance, an independent testing agency must demonstrate to the Architect's satisfaction, based on an evaluation of agency-submitted criteria conforming to ASTM E 699, that it has the experience and capability to satisfactorily conduct the testing indicated without delaying progress of the Work.
- C. Surface-Burning Characteristics: Provide panel finish face with the following surface-burning characteristics as determined by testing identical products per ASTM E 84 by UL or other testing and inspecting agencies acceptable to authorities having jurisdiction.
 - 1. Flame Spread: 25 or less.
 - 2. Smoke Developed: 450 or less.
- D. Substitute Requests For A Specified Entity
 - 1. See Division 1.

1.6 EXTRA MATERIALS

- A. Extra Materials: Furnished from same production run as materials installed. Package materials with protective covering and identify with labels describing contents. Deliver extra materials to Owner.
 - 1. Finish Face Material: Furnish quantity of full-width, equal to 5 percent of linear yards installed.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Hufcor/AirWall.
 - 2. Moderco
 - 3. Modernfold, Inc.
 - 4. Panelfold, Inc.
 - 5. Holcomb and Hoke

2.2 OPERABLE PANEL PARTITIONS

A. Panel Configuration: Operable panels as follows:

1. Manually operated. The following panel configurations are listed to indicate expected quality, style, and design. Equal products by one of the other listed manufacturers may be submitted for review. Refer to the drawings for panel configuration and select the type panel from the following:
 - a. Hufcor Classic 631 series Classic 632 series
 - b. Moderco 8600 series Signature 8500 series
 - c. Modernfold Encore

B. Panel Construction: Top reinforcing as required to support suspension components and as follows:

1. Frame: Steel Channel, not less than 0.0478 inch thick.
2. Face Sheets: Gypsum laminated to 18 or 20 gauge steel sheet as required to meet specified STC rating. Panels shall be trimless design.
3. Panel Thickness: 4 inches.
4. Panel Weight: approximately 10 psf.
5. Hardware: Manufacturer's standard, finished to match exposed hardware on partition.

2.3 SUSPENSION SYSTEMS

- A. Carriers: Steel trolley system as required for type, size, and weight of partition for ease of operation.
- B. Suspension Tracks: Steel with overhead supports of adjustable steel hanger rods designed for size and type of operable panel partition assembly indicated. Track deflection shall be no more than 0.10 inch between bracket supports.
- C. Materials: Full height and width dry-erase markerboard with trimless panels.

2.4 SEALS

- A. Vertical Seals: Deep nesting, interlocking astragals mounted on each edge of panel with continuous vinyl acoustical seal.
- B. Horizontal Top Seals: Continuous-contact extruded vinyl or mechanical retractable vinyl-faced seal exerting consistent pressure on track when extended.
- C. Horizontal Bottom Seals: Retractable seal exerting positive pressure downward ensuring horizontal and vertical sealing and resisting panel movement.
 1. Extension/retraction of bottom seal by operating handle or built-in operating mechanism. Clearance between retracted seal and floor finish shall be not less than 1/2 inch.

- D. Final Closure: Positive lever activated mechanical closure expanding from panel edge to create a positive acoustical seal and secure panels in closed position.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine flooring, structural support, and opening for compliance with requirements for installation tolerances and other conditions affecting performance of operable panel partitions.
- B. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Install operable panel partitions and accessories complying with ASTM E 557 after other finishing operations including painting, have been completed.
- B. Install operable panel partitions that conform to Drawings and approved shop drawings and in strict compliance with manufacturer's written installation instructions.
- C. Match operable panel partitions for color and pattern by installing partitions from cartons in same sequence as manufactured and packaged, if so numbered. Broken, cracked, chipped, or deformed panels are not acceptable.

3.3 ADJUSTING

- A. Lubricate bearings and sliding parts; adjust to ensure smooth, easy operation.
- B. Adjust pass doors and storage pocket doors to operate smoothly and easily, without binding or warping. Check and readjust operating hardware. Confirm
- C. Adjust lock/latch mechanism for easy smooth make and brake. No lifting up or pushing down shall be required to latch panels.

END OF SECTION 10 22 26

SECTION 22 00 01 – PLUMBING
TABLE OF CONTENTS

CONTRACTOR QUALIFICATIONS	2
GENERAL PROVISIONS	3
SHOP DRAWINGS	4
RECORD DRAWINGS	4
SUBSTITUTE EQUIPMENT	4
ACCEPTANCE AND COMPLETION	5
GUARANTEE	5
ELECTRICAL	5
STERILIZATION	5
PERMITS AND FEES	6
PHASING	6
CODE	6
ANCHOR BOLTS	6
CUTTING AND PATCHING	6
PAINTING	6
SEWER AND WATER MAIN CONNECTIONS	6
CONCEALED PIPE	7
UNDERGROUND PIPE	7
SEWER AND WATER SEPARATION	7
EXCAVATION AND BACKFILLING	7
UTILITY PIPING IDENTIFICATION	7
LEAD FREE (POTABLE WATER)	7
PIPING MATERIALS	8
___ Underground Drain, Sewer, & Vents (PVC)	8
___ Underground Drain, Sewer, & Vents (Cast Iron)	8
___ Above Ground Drain, Sewer, & Vents (Cast Iron)	8
___ Outside Sewer	9
___ Potable Water Piping (copper)	9
___ Gas Piping	9
___ Acid Waste	10
___ Acid Waste – CPVC Option	10
PIPE JOINTS	11
___ Cast Iron Pipe	11
___ Copper Pipe	11
___ PVC Pipe (Drain and Waste)	11
___ Acid Waste	12
___ Existing or Dissimilar Materials DWV Pipe Connections	12
PIPE TESTING	12
___ Inside Drainage and Vent System	12
___ Potable Water Piping (Copper)	13
___ Outside Sewer	13
___ Gas Piping	13

___ Sewer Camera Test	13
PIPING VALVES	13
PIPE LABELS	14
SHOCK ABSORBERS	14
REDUCERS	14
ROOF OPENINGS AND FLASHINGS	15
PIPE SLEEVES AND PLATES.....	15
FIRE STOPPING	15
HANGERS AND SUPPORTS	15
ANTI-FREEZE WALL HYDRANTS.....	16
ROOF HYDRANTS	16
HOSE BIBB.....	16
PRESSURE REDUCING VALVES.....	17
BACKFLOW PROTECTION VALVES	17
CLEANOUTS	17
GAS WATER HEATERS.....	18
HOT WATER CIRCULATOR.....	18
FLOOR DRAINS	18
FLOOR DRAIN TRAP PROTECTION	19
ICE MACHINE SUPPLY BOX	20
WASHING MACHINE SUPPLY AND DRAIN BOX.....	20
AIR ADMITTANCE VALVES	20
SUMP PUMPS	20
ROOF DRAINS	21
STORM DRAINAGE SYSTEM.....	22
INSULATION.....	22
DIELECTRIC UNIONS	23
VALVE BOX.....	23
DRAINS	23
KITCHEN EQUIPMENT	23
LAB EQUIPMENT	24
HOT WATER MIXING VALVE.....	24
PLUMBING FIXTURES.....	25

SECTION 22 00 01 – PLUMBING

CONTRACTOR QUALIFICATIONS:

All Plumbing Contractors shall meet the following minimum criteria. This criteria shall be part of the contract bid documents.

1. Contractors shall have been in business a minimum of five (5) years from the duration of the project consecutively under their current name and current registration with the SC Secretary of State.
2. Contractors shall have experience in the construction of school projects in the State of SC and Greenville County Schools. A list of at least five (5) completed SC schools

SECTION 22-00-01- PLUMBING

projects of similar scope and size, which shall be submitted before issuance of a purchase order.

3. Contractors shall be individually bondable in the state of South Carolina by a surety in accordance with AIA-201.
4. Contractors, its principal operators, license holders, or corporate shareholders shall not have been involved in bankruptcy proceedings in the contracting business within the last ten (10) years or be involved in pending actions concerning bankruptcy in the contracting business.

GENERAL PROVISIONS:

The Instructions to Bidders, General Requirements, General Conditions of the Contract and the Supplementary General Conditions shall form a part of the specifications for this work insofar as they apply to these Plumbing Specifications.

- A. The scope of work to be provided under these specifications includes the furnishing, delivering, unloading, handling, erection, adjusting, and testing of all materials, equipment and apparatus which are required for the completion and correct operation in all respects of the plumbing system as indicated on the drawings and specified herein.
- B. Certified vendor shop drawings shall be utilized for dimensions, connections, etc. of all equipment. Contractor shall refer to architectural drawings for exact building dimensions, construction details, etc.
- C. The Contractor shall be responsible for coordination with all disciplines at the job site to insure proper installation of the system with no interferences and with proper clearance. The progress of the work shall conform with and not delay the work of other trades. The entire installation shall be completed as soon as the condition of the building will permit.
- D. All equipment shall be installed in strict accordance with manufacturer's recommendations and instructions unless noted otherwise. These instructions shall be considered as a part of these specifications.
- E. Full opportunity shall be given to the Architect/Engineer to make any inspections as desired, of all phases of construction and equipment. Any work which is being improperly installed may be rejected as specified in the General Conditions.
- F. All plumbing equipment and materials delivered and accepted for subject job, shall become the responsibility of the contractor. He shall be liable in the event of theft, loss, destruction, etc. All materials shall be properly protected from weather, moisture, or damage in any way.

- G. Pipe routing shall conform as close as possible to locations as indicated on the contract drawings. Additional offsets, fittings, etc., required due to conflicts with trades and /or to meet field conditions shall be furnished and installed as necessary.
- H. All bidders shall visit the job site and familiarize themselves with existing job conditions, as no extra cost will be allowed because of additional work necessitated or changes in plans required by job conditions, unless same is brought to the attention of the Architect prior to receipt of bids.
- I. **Quality of the Work:**
With the installation of all aboveground piping and all accessories, the fit and finish shall be in accordance with a high standard of skilled craftsmanship, and with established standards of the traders and shall be neatly mounted square and plumb to the building surfaces and structures.
- J. Unless indicated otherwise on the plans, all above ground piping and accessories shall be installed concealed in the walls or above ceilings. Any wall mounted piping and accessories indicated to be exposed shall have an approved sheet metal cover, painted to match the adjacent surfaces.
- K. At any connections to existing piping systems, contractor shall verify invert and location of connections prior to routing any pipe.

SHOP DRAWINGS:

After award of the contract, the successful contractor shall submit shop drawings of all items of equipment. They shall be submitted as noted under the General Requirements section of these specifications. Except under special permission, orders shall not be placed until shop drawings have been reviewed by the Engineer. Shop drawings shall be project specific; generic submittals shall not be accepted.

An electronic PDF will be acceptable, but must also have at least one paper copy submitted to the engineer. Electronic copy alone is unacceptable. Paper copy must be prepared and printed by the submitting vendor.

Where required by local code officials, provide manufacturer's equipment installation literature.

RECORD DRAWINGS:

Mark any changes in pipe routing, equipment, or deviations from Contract Drawings on clean set of prints; deliver to Architect for transmittal to Owner at completion of contract.

SUBSTITUTE EQUIPMENT:

- A. In the event the Contractor substitutes any equipment or materials in lieu of that indicated on the drawings and specified: any change in service connections (electrical, structural, piping, controls, drains, fire protection, etc.) or any related items, shall require the Contractor to make all necessary coordination changes. The

Contractor shall insure that the changes do not alter the system functions as intended with original equipment.

- B. The substitute manufacturers listed in these specifications shall be acceptable substitutes if they meet the specifications in all respects.
- C. All materials and equipment shall be new and shall conform to the grade, quality, and standards of those specified.
- D. Design of the system is based on installation of specified materials and equipment. Other materials and equipment may be used if approval is secured from the Engineer prior to bidding. Approvals granted will be issued by addenda to specifications. Such requests for consideration must be made ten (10) days prior to bid date.

ACCEPTANCE AND COMPLETION:

- A. Upon completion of the job, the contractor shall furnish to the owner, in a ring binder, three complete sets of all equipment instructions, including: guarantees, operation, maintenance, and installation data. Contractor shall also provide the information listed above in electronic PDF format, on a portable flash drive.
- B. The job shall not be considered complete until all systems have been shown to the satisfaction of the Architect/Engineer to function properly and consistently.
- C. All equipment and material shall be thoroughly cleaned and spot painted as required.

GUARANTEE:

The Contractor shall guarantee the entire system for one full year from date of substantial completion. This guarantee shall include all materials and labor as required to correct any deficiencies or maintain any equipment. The cost of said guarantee shall be a part of the original contract bid and shall not bear any extra expense to the Owner. Any adjustments or corrections made within the year of guarantee shall be equal to the quality of materials and workmanship originally called for and shall be subject to inspection and acceptance by the Architect/Engineer.

ELECTRICAL:

Power wiring to all motors, water heaters, and electric water coolers shall be provided by other divisions. Starters shall be furnished by the Plumbing Contractor (see electrical drawings for power service required); all control wiring by Plumbing Contractor.

STERILIZATION:

The completed water system shall be sterilized by filling the entire system beginning at the meter connection with a solution of 50 PPM Chlorine, allowing the solution to flow through the system until a residual is established at all water taps. Allow the solution to remain in the system a minimum of twenty-four (24) hours. Completely flush the system with city water prior to placing in operation. Final approval shall not be issued until two

water samples taken 24 hours apart are analyzed and approved by a South Carolina Dept. of Health and Environmental Control certified laboratory. Lab fees shall be paid for by the Plumbing Contractor.

PERMITS AND FEES:

The Contractor shall obtain and pay for all permits required, give all legal notices and pay all fees for utility connections, for inspections, for back flow protection certification or as otherwise required for the work.

PHASING:

Refer to construction phase schedule requirement in section 1010 for schedule of the work.

CODE:

The entire Plumbing System shall be installed in accordance with the standards prescribed by the SC Office of School Facilities Planning and Construction Guide, International Plumbing Code, International Fuel Gas Code, and other applicable local codes. System shall comply with all requirements of the S.C. Department of Health and Environmental Control. Where specified materials and methods exceed minimum Code requirements, the drawings and specifications shall supersede the Code.

ANCHOR BOLTS:

Provide all necessary anchor bolts for placing in form work before concrete is poured. Bolts shall be of suitable type for load and purpose and shall be accurately spaced.

CUTTING AND PATCHING:

The Contractor shall do all necessary cutting of walls, floors, partitions, roof, etc., to properly install his work. Care should be exercised in cutting to avoid unnecessary damage. Cutting shall be accomplished with sawing and drilling actions, not hammer and chisel. Some cutting may be executed by the General Contractor; see architectural drawings for extent of General Contractor cutting.

PAINTING:

Any exposed metal installed by this contractor (except where concealed above the ceiling or located in a mechanical mezzanine) which is not insulated, galvanized or previously painted shall be properly prepared and cleaned and given a zinc rich prime coat and a final coat of black protective enamel.

Unless noted otherwise, all gas pipe (regardless of location) shall be painted as indicated above except the color shall be yellow.

SEWER AND WATER MAIN CONNECTIONS:

Sewer: Connect to the existing sewer mains provided by the civil contract, as indicated on plumbing plans.

Water: Connect to the 4" service line 5' outside the building as indicated on the plumbing plans.

Storm Drainage: Connect to site storm drains 5' outside of the building. Continuation shall be by other divisions.

CONCEALED PIPE:

In general, all piping in floors, ceilings, and walls of finished spaces shall be run concealed. Cooperate with other trades in layout of chases and concealment of piping. Chases will be provided as the building progresses. This Contractor shall designate required chases, and failure to designate chases shall require this Contractor to cut and patch same.

UNDERGROUND PIPE:

Underground pipe shall be at depth to avoid action of freezing and frost, and not less than 30" deep, or as directed by Architect. Pipe under floors shall not undermine footings.

SEWER AND WATER SEPARATION:

Sewer and water separation on outside water and sewer piping shall be 10' horizontally or 18" vertically.

EXCAVATION AND BACKFILLING:

Contractor shall execute all excavation of trenches required for the work specified herein and after the work is in place shall backfill, with clay or sand first and black earth on top. Thoroughly tamp all earth.

All surplus earth shall be removed by Contractor from building and disposed of on site as directed by Architect. Provide necessary shoring for protection of trenches.

Trench backfill shall be compacted to 90% in non-traffic areas and 95% in traffic, floor slabs, and paved areas, based on Standard Proctor Test (ASTM 698). Backfill shall be tamped in a maximum of 12" layers.

UTILITY PIPING IDENTIFICATION:

For all outside underground piping; one foot (1 ft.) below grade and directly above each underground pipe, lay a polyethylene marking tape in the trench during the backfill. The tape shall be inscribed with a warning of "caution, underground piping below". Additionally, adjacent to each plastic pipe and at the same elevation as the pipe, lay a single strand, 14 gauge, copper wire for signal location. Terminate the wire (from both directions) at the building foundation and at the entrance to the valve pit so that it will be accessible for connection to signal generator.

LEAD FREE (POTABLE WATER):

All piping, fitting, valves, accessories, and materials in use for domestic potable water service shall meet the definition of "lead-free" as defined by the Safe Water Drinking Act,

Section 1417. Lead content shall not be more than 0.25% of the wetted surface material.

PIPING MATERIALS:

- A. Underground Drain, Sewer, & Vents (PVC) (except drains serving water heaters, boilers, and kitchens shall be cast iron, where noted on the plumbing drawings):

All underground sanitary drains, vents, and storm drains shall be PVC, Schedule 40, plastic DWV piping and fittings. Pipe shall conform to ASTM D-2665 or D-1785, Standards and shall bear NSF seal of approval. Solvent cement shall conform to ASTM standard D-2564-88 and with purple primer ASTM F656. Pipe shall be installed per ASTM-2321.

- B. Underground Drain and Sewer, & Vents (Cast Iron): (Where noted on the plumbing drawings for underground drains serving boilers, water heaters, and kitchens):
All underground sanitary drains, vents, and storm drains shall be service weight, cast iron pipe and fittings. Pipe and fittings shall be asphaltum dipped, both inside and out.

Pipe shall conform to ASTM-A-888 and CISPI-301 standards with latest revisions. All pipe and fittings shall be made in the United States, marked with the collective trademark of the Cast Iron Soil Pipe Institute and listed by NSF International.

Cast iron below grade shall be bell and spigot. Pipe shall conform to ASTM-A-74 and A112.5.1 with latest revisions.

Pipe shall be manufactured by Charlotte, Tyler or ABI.

- C. Above Ground Drain and Vents (Cast Iron):

All above ground sanitary drains, vents, downspouts, and storm drains shall be service weight, cast iron pipe and fittings. Pipe and fittings shall be asphaltum dipped, both inside and out.

Cast iron above grade shall be No-Hub pipe and fittings. Pipe shall conform to ASTM-A-888 and CISPI-301 standards with latest revisions. All pipe and fittings shall be made in the United States, marked with the collective trademark of the Cast Iron Soil Pipe Institute and listed by NSF International.

All sanitary drains and vents 1¼" and smaller, shall be Type "L" copper with sweat joints and wrought fittings (ASTM - F1476, ASTM - 1548).

Pipe shall be manufactured by Charlotte, Tyler or ABI.

D. Outside Sewer:

Outside underground sewer and waste pipe, from a point 5' outside of the building, shall be Schedule 40 PVC DWV pipe conforming to ASTM D-2665 and ASTM D-1785.

Pipe shall be installed per ASTM D-2321.

E. Potable Water Piping (copper):

Water pipe shall be copper unless noted otherwise:

Unless noted otherwise, water piping below grade or under the concrete floor slab shall be Type "K" hard copper tubing with wrought sweat fittings.

All water piping within the building and above ground shall be Type "L" hard copper tubing with wrought sweat fittings.

Fittings and tubing shall conform to ASTM B 88.

F. Gas Piping:

Provide schedule 40 PVC conduit for any underground pipe below the floor slab.

Paint all exposed gas piping. See PAINTING section of these specifications.

Pipe:

1. Aboveground:

Pipe Schedule 40, steel pipe complying with ANSI Standard B36.10-1970, ASTM A-53 or A106

2" and smaller:

inside the building; socket welded joints

outside the building; threaded and screwed joints

2 1/2" and above:

inside and outside the building; welded and flanged joints

2. Underground:

All pipe sizes shall be medium density, polyethylene ASTM #D-2513, (natural gas rated). Joints shall be heat fused socket or butt welded. Pipe shall be provided by the local gas utility if available.

All pipe, fittings, couplings, and accessories shall meet the requirements of the local gas utility authorities as well as building code officials.

Valves:

1. General Service: 400 pound WOG, full port, bronze body, screwed end, rated for natural gas service, U.S. made: Crane, Hammond, Grinnell, Nibco, Stockham, Milwaukee, Apollo

2. Pressure Reducing Valves (or valve assemblies) shall comply with ANSI Z21.18 (appliance regulators) or ANSI Z21.80 (line regulators). Provide overpressure protection device (OPD) as required by ANSI Z21.18 or ANSI A21.80. Where vents are required, pipe to the outside.

Pressure Reducing valves shall be sized for 1 psi inlet pressure for 2 psi meter systems or 1.5 psi inlet pressure for 5 psi meter systems.

Appliance Connections:

At each appliance, provide a 6" dirt leg, strainer, and a service valve. Provide pressure regulators (where required).

Testing:

Refer to Pipe Testing section of these specifications.

G. Acid Waste:

- 1) Polypropylene (underground and waste risers):

All acid waste piping and fittings shall be schedule 40 polypropylene, Type II, ASTM D2843 and ASTM F1412 and D4101, with heat fused joints below ground and mechanical or heat fused joints above ground. At connections to standard sewer pipe provide an acid "Y" in the main run, connected with heavy duty no-hub connector couplings.

Aboveground pipe shall be flame retardant.

Approved Manufacturers: IPEX Enfield (electrofusion) or Labline (mechanical joint), GSR "FUSESEAL", Orion, Zurn

- 2) Polyvinylidene Fluoride (PVDF) (above ceiling vent piping):

Above ceiling acid waste and venting will be PVDF. Joints shall be heat fused or mechanical joints. Mechanical joints shall have stainless steel bands, bolts, nuts, and washers.

PVDF resin shall meet ASTM D3222. Pipe shall meet UL 723, and be rated per ASTM E-84 for flame (5) and smoke (35).

Approved manufacturers: Orion, Zurn, GSR, GF Fusesseal, IPEX Plenumline

H. Acid Waste – CPVC Option:

At the contractors option, underground and above ground acid waste piping may be plenum rated, CPVC piping.

Drainage systems for corrosive chemical or acid waste shall be manufactured from CPVC Type IV, minimum ASTM Cell Classification 23447. System pipe and fittings shall be manufactured in accordance with ASTM F 2618 and certified by NSF

International for use in corrosive waste drainage systems. Pipe and fittings tested dry shall be Listed by ICC-ES PMG to ASTM E84/UL723 having a flame spread of less than 25 and smoke developed index of less than 50 and Listed by Underwriters Laboratories of Canada to CAN/ULC S102.2 having a flame spread of less than 25 and smoke developed index of less than 50 as designated on the pipe marking or fitting package labeling. All pipe markings shall be accompanied by a yellow stripe for identification as CPVC chemical waste drainage system. All fittings shall be CPVC drainage patterns meeting the applicable requirements of ASTM D 3311 or the manufacturer's specifications.

Joining method for pipe and fittings shall be solvent cement welding. Solvent cement shall be a "one-step" primerless type CPVC cement specially formulated for resistance to corrosive chemicals and manufactured in accordance with ASTM F 2618 and F 493. All pipe, fittings, and cement shall be supplied together as a complete system with a Lifetime Warranty

Approved Manufacturers: Spears "LabWaste", or prior approved equal.

PIPE JOINTS:

A. Cast Iron Pipe:

Underground: Joints shall be secured with electrometric compression gaskets. Gasket joints shall be made with neoprene seal with hub and spigot pipe. Gaskets shall meet ASTM C 564 and Cast Iron Soil Pipe Institute Standards.

Above Ground Sewer and Vent: Joints shall be made with No-Hub neoprene gaskets and stainless steel retaining sleeves. Gaskets and sleeves shall meet

ASTM C 564, ASTM C 1277, CISPI 310, and Cast Iron Soil Pipe Institute Standards. Couplings shall bear the NSF trademark.

Downspouts: Joints shall be made with heavy duty No-Hub couplings. Clamps, straps, and shields shall be 304 stainless steel. Coupling shall comply with ASTM-1540, 1277, and 540, and shall be tested at 15psi minimum pressure. Couplings shall be by Mission, Ideal, Clamp-all or Husky.

B. Copper Pipe:

Shall be cut true and square. Shall be reamed inside and ends shall be polished outside with emery cloth where it enters fittings. All fittings shall be polished inside and coated with a flux as recommended by the solder manufacturer. All solder shall be lead free.

C. PVC Pipe (Drain and Waste):

Pipe shall be assembled with solvent joints in accordance with ASTM 2855 latest revisions. Solvent cement shall conform to ASTM Standard D 2564-88, and with purple primer ASTM F656.

D. Acid Waste

Polypropylene:

Underground joints shall be electric heat fused with an internal resistance wire coil. The electrical power unit shall have automatic timing controls and coil continuity check.

Above ground joints shall have stainless steel, No-Hub couplings or mechanical joint no-hub couplings provided by the manufacturer.

PVDF:

Grooved ends with No-Hub clamps. Joints shall have stainless steel couplings provided by the manufacturer.

- E. Existing or Dissimilar Materials DWV Pipe Connections: Connections to existing sewer, or connections between dissimilar pipe materials shall be made with extra-heavy duty No-Hub couplings. Clamps, straps, and shields shall be 304 stainless steel. Shields shall be 28 ga. minimum. Coupling shall comply with ASTM-1540, 1277, and 540, and shall be rated at 27 psi minimum test pressure (6"dia.), and torqued to 80 in.-lbs. or above.

Couplings shall be Fernco 5000 RC Strong Back, Clamp-All 120, or Husky 4000.

PIPE TESTING:

The entire sanitary, drainage, vent, and water systems shall be tested by the Contractor in the presence of and to the satisfaction of the local Plumbing Inspector and representative of the Architect/Engineer, in compliance with the State and Local Code regulations.

Contractor shall make all necessary preliminary tests to be sure that the piping system are tight, then he shall notify the Architect that the tests are ready for inspection. The Architect/Engineer will then advise the Contractor when the test is to be demonstrated for approval. No work shall be covered until approved by the local plumbing inspector and/or Architect/Engineer.

Do not pressure test any portion of any existing system with the new system.

- A. Inside Drainage and Vent System – The drainage and vent system shall be tested to a 10' head of water above the top fixture of a fixture group. The water shall be kept in the system, or in the portion under test, for at least 15 minutes before the inspection starts; the system shall be tight at all points.

Final Drainage and Vent Test: The final test on the drainage and vent system shall be a visual smoke test using a pungent smoke. Prior to the smoke test, all fixtures must be installed and all traps filled with liquid. Once the drainage and vent system is filled with smoke, the vent outlets shall be closed and the system shall be pressurized to 1" water column for at least 15 minutes. Once pressurized, a visual

inspection shall be performed on the system to verify no smoke is visible inside the building.

- B. Potable Water Piping (Copper):
Copper Piping - Shall be tested to 150 psi by hydrostatic pressure before they are covered, and shall remain absolutely tight for a period of at least (2) hours.
- C. Outside Sewer – Test outside sewer pipe for leakage when required by DHEC officials.
- D. Gas Piping – Shall be tested as required by the International Gas Code, but not less than 60 psi for 2 hours. Contractor shall furnish a letter certifying that all gas piping has been installed and tested in accordance with the International Gas Code.

Provide a letter to the engineer certifying that all gas pipe has been tested in accordance with the Standard Gas Code. The letter shall include date tested, pressure, duration, and witnesses.

- E. Sewer Camera Test:
Plumbing contractor shall contract with a third party testing agency approved by the owner to record the condition of the sewer mains, after backfill and compaction, but prior to the pouring of the concrete floor slab. The sewer mains to be tested shall be as indicated on the Camera Test Detail on the plumbing plans.

Camera inspection shall include color videotape with audio commentary. Sewer mains shall be flushed with water before testing to remove all debris. Water shall be running through the pipe during testing. Any damage, obstructions, water pooling, or other deficiencies shall be noted by audio on the tape with the pipe position noted. At the beginning and ending of each sewer main test the camera sensor locator shall be used to note the vertical position. The videotape and a summary sheet shall be submitted to the owner noting each sewer main test (keyed to the camera test detail), beginning vertical position, ending vertical position, distance traveled, and any objects or damage to pipe and their location.

PIPING VALVES:

All valves shall be of the brass, lead free, 125 lb. W.S.P. class. Valves shall be installed with handles turned up where possible and not below the horizontal position.

All above ceiling service valves shall have the location indicated on the ceiling tile directly below the valve with a $\frac{3}{4}$ " diameter red dot.

General service valves shall be ball type.

Ball Valves shall be 600 lbs. WOG, two-piece full port:
Milwaukee, Crane, Apollo, Nibco, Stockham, Hammond, Grinnell, Kitz

Gate Valves:

Stockham B-100 or B-108, Nibco T-111 or S-111, Crane #428 or #1334
Hammond #IB640 or IB635, Milwaukee #148 or 149, Grinnell #3010
Apollo #101T, Kitz #807

Throttling valves shall be globe type:

Stockham B-22 or B-24, Nibco T-235-Y or S-235-Y, Crane #7 or #1310
Hammond #IB413T or #IB423, Milwaukee #590 or 1590, Kitz #811 or #812
Grinnell #3240, Apollo #121T

Check valves shall be:

Stockham B-319 or B-320, Nibco T-413-B or S-413-B, Crane #37 or #1342
Hammond #IB940 or IB941, Milwaukee #509 or 1509, Grinnell #300
Apollo #161T, Kitz #822T or 823T

PIPE LABELS: Provide a color coded name tag for each pipe system. In mechanical room labels shall be 25'o.c.; above ceilings, pipe labels shall be 75'o.c. Pipe labels shall be as follows:

- a. Potable hot water
- b. Potable hot water return
- c. Potable cold water

SHOCK ABSORBERS:

Provide water hammer arrestors at each water closet or group of water closets and elsewhere as noted on the drawings. Arrestors shall be certified per P.D.I. Standard WH-201 or ASSE 1010.

Arrestors shall be sized as follows:

- 1-3 Flush valves – Size "B"
- 4-6 Flush valves – Size "C"
- 7-11 Flush valves – Size "D"
- 12-15 Flush valves – Size "E"
- 16-33 Flush valves – Size "F"

Specified: Sioux Chief

Substitute: Josam, Zurn, Wade, Smith, PPP

REDUCERS:

Changes in pipe sizes shall be made with reducer or reducer fittings. No bushing shall be used, except where specifically called for, or with special permission. Changes from bell and spigot cast iron pipe to screw pipe shall be made with cast iron threaded reducers, caulked into hub.

ROOF OPENINGS AND FLASHINGS:

Flashings for plumbing vent stacks through the built-up roof shall be made up from 4 lb. sheet lead, extending 18" away from outside of pipe and up to top of stack, with not less than 1" turned down into top of stack.

Single ply roofs shall have flashing furnished by the roofing manufacturer.

Flashings for plumbing vent stacks through the metal roof shall be "DEK-tite" by American Buildings Co. flexible seals furnished by this division but installed by the roofing contractor.

Vent stacks shall extend 8" above the roof line.

Do not install a vent within 10 ft. of an air intake device.

PIPE SLEEVES AND PLATES:

Water piping passing through walls, ceilings, floors, in or under concrete slabs, beams, or any portion of the building structure, shall be free to expand and contract and shall not be embedded in plaster, concrete or masonry. Such piping shall be provided with steel sleeves or thimbles when passing through concrete or masonry walls, ceilings, floors or beams, and such sleeves or thimbles shall be at least three-eighths (3/8) inch larger than the outside diameter of the pipe plus the insulation. Annular spaces between sleeves and pipes in the floor slab shall be filled or caulked with a non-hardening mastic.

Sleeves for insulated pipe shall be of sufficient size to allow the insulation to continue through the partition.

Exposed pipes shall be fitted with chrome plated steel escutcheon plates.

FIRE STOPPING:

1. All pipe penetrations of a fire rated wall, partition or floor shall be secured against the passage of smoke and fire with a UL listed assembly.
2. Steel piping which is not subject to expansion and contraction shall be grouted solid into the wall (UL Fire Resistance Directory, 1996, System #CAJ1001). This piping shall include storm drains, waste, sewer and venting.
3. Steel and copper piping which is subject to expansion and contraction because of carrying a fluid, under pressure, of varying temperatures shall be protected with a steel sleeve (schedule 10) around the pipe grouted solid into the wall, floor or partition and also sealed with UL approved fire stop materials. The firestop method shall not lock the insulation or pipe against movement. See details on the drawings.

HANGERS AND SUPPORTS:

All piping, whether exposed or concealed, shall be substantially supported and made secure. Refer to Code and to pipe manufacturer's recommendations for hanger intervals. For acid pipe refer to manufacturer recommendations for hanger interval.

All cold and hot water piping shall be suspended by means of iron rods and hangers similar to Anvil Fig. CT-69, CT-65, or 260 with insulation saddles. Drain, waste, and steel vent piping shall be supported by iron rods and wrought iron hangers similar to Anvil Fig. 260.

Piping underground shall be installed on firm footing and be well supported as not to sag from settling of earth backfill.

Plumbing Contractor shall provide angle iron between joists where required for attachment of hanger rods.

Hanger attachments to fire protected steel shall be mounted prior to spray application of the fire protection.

ANTI-FREEZE WALL HYDRANTS:

Hydrants shall be self-draining, with vacuum breaker, 3/4" size, with rough chrome plated face and loose key. Hydrant shall meet ASSE 1052 standards. Supply line to be concealed in wall on the warm side of the insulation and roughed-in as concrete block is laid. Hydrants shall be set 18" above finished grade. Each shall have a key secured to the hydrant with an 8" long brass chain.

Specified: Woodford Model 67
Substitute: Zurn, Josam, Mifab, Watts, Prier

ROOF HYDRANTS:

Hydrants shall be self-draining, 1" inlet size, double check backflow, integral vent, with lockable handle and 1/8" drain. Hydrant shall meet ASSE 1052 standards.

Provide hydrant with roof mounting system to include hydrant support, under-deck flange kit, wet seals at hydrant support, EPDM boot covers. Provide factory shims as required to match roof slope.

Hydrant shall automatically drain when shut off, even with hose attached.

Specified: Woodford Model RHY2-MS
Substitute: Zurn, Josam, Mifab, Watts, Prier

HOSE BIBB:

Shall be loose key type, chrome plated finish, with vacuum breaker and hose connection.

Specified: Woodford Model 24
Substitute: Chicago No. 293, Nibco, T& S Brass, Chicago, Prier

PRESSURE REDUCING VALVES:

Valves shall be bronze body to 2", coated iron body for 3" & 4" renewable stainless steel seat, all working parts stainless steel or bronze, 300 psi rated up to 2" & 175 psi for 3" & 4", ASSE Std. 1003. Provide upstream strainer at each valve. Provide a low volume 3/4" reducing valve at each 3" valve.

Install pressure reducing valves where site water pressure exceeds 80 psi.

Specified: Watts #223

Substitute: Wilkins

BACKFLOW PROTECTION VALVES:

Valves shall be either double check or reduced pressure double check, as indicated on the plans. Valves 2" and smaller shall be all bronze body, 3" and larger shall be epoxy coated cast iron (inside and out). All valves shall have replaceable seats and discs and rated to 175 psi supply water pressure.

Reduced pressure valves mounted inside the building shall be mounted against a wall 4' AFF and shall have a funnel drain attached to the valve body and shall be piped to the nearest floor drain. Valves shall conform to ASSE std. 1013, AWWA C511-97 & 1APMO PS31 standards.

Domestic water double check assemblies shall conform to ASSE 1015, AWWA C510-97 & 1APMO PS31 standards.

All valves are subject to approval of the local water districts served and it shall be the vendor's responsibility to confirm same. Provide a test certificate where required by the local water district.

Specified: Watts

Substitute: Wilkins, Febco, Conbraco, Ames

CLEANOUTS:

Floor cleanouts on interior horizontal lines shall be Smith Series 4020, or 4031 cast iron with tapered thread bronze or plastic plugs and Nikaloy finish round access plate secure with countersunk brass screw. In carpeted areas, provide a chrome plated brass carpet marker.

Cleanouts in terrazzo floors shall be Smith Series 4180 or 4191 cast iron with tapered thread bronze or plastic plugs, Nikaloy finish round access plate with countersunk brass screw, and terrazzo recess. (Coordinate terrazzo material fill with G.C.)

Cleanouts on vertical lines and/or horizontal lines through wall shall be Smith Series 4472 with bronze or plastic plug and stainless steel round access plate secure to plug with countersunk brass screws. Install in a cast iron tapped tee.

Cleanouts outside of building shall be a recessed plug in a threaded hub, flush in 18"x18"x4" or 18" diameter x 4" concrete pad. Concrete pad shall be formed and poured with top flush with finish grade by the Plumbing Contractor.

Cleanouts outside of building in driveways or sidewalks shall be Smith Series 4250 or 4261 cast iron with recessed plug in a threaded hub. Cleanout shall have double flanged housing with heavy duty cast iron cover. At contractor's option, cleanouts in driveways or sidewalks may be recessed plug in threaded hub with US Foundry #7610 heavy duty cast iron valve box with removable 7" diameter lid.

All cleanouts shall have lubricated plugs with an anti-seize grease.

Specified: Jay R. Smith
Substitute: Wade, Zurn, Josam, Watts, Mifab

GAS WATER HEATERS:

The water heater shall have the storage capacity and gas heating capacity as indicated on the schedule. It shall be design certified by CSA International (formerly the AGA/CGA) for 180°F (82°C) application, either with or without a separate storage tank. A digital LCD display shall be integrated into the front control box, and the control shall be an adjustable electronic thermostat to any temperature up to 180°F (85°C) must have an automatic re-set Energy Cut-off (E.C.O), which shuts off all gas in an event of a overheat condition. The tank shall be lined with Vitraglass vitreous enamel and shall have a bolted hand hole cleanout. The tank shall have three extruded magnesium anode rods installed in separate head couplings and extended to within three inches of the bottom. The heater shall be insulated with not less than 2" of non-CFC foam insulation.

In addition to the primary control system the heater shall be equipped with CSA design certified automatic gas shut-off. Heaters shall be ASME constructed and labeled and shall come equipped with an ASME rated T&P relief valve. Water heater shall be provided with induced draft blower with a flue damper at the blower outlet.

Specified: Bradford White
Alternate: None

HOT WATER CIRCULATOR:

Provide an all-bronze or all stainless-steel, wet-rotor circulator with high-efficiency, electronically commutated, permanent magnet motor; multi-speed settings; sized as noted on the drawings. Motor shall be non-overloading. Provide starter with magnetic contactor for remote start-stop.

Specified: B&G
Substitute: Grundfos or Taco

FLOOR DRAINS:

Refer to floor plan for location and type of special floor drains.

Unless noted otherwise, all other floor drains shall be Smith Series 2005A or 2010-A with medium duty reinforced nickel bronze grid strainer, trap primer tapping (where noted on drawings), Nikaloy finish with clamping ring. Strainer to be 5" diameter for 2" drains, and 7" diameter for 3" and 4" drains.

Floor drains located in floors with sheet membrane covering shall be Smith #2051, with surface membrane flashing clamp.

Floor sinks shall be Smith #3150-12, 12"x 12" x 8" deep cast iron body with porcelain enameled finish, nickel bronze rim, cast iron drainage flange, ½ grate or full grate as noted.

Trough drains shall be Smith 2010, 3" or 4" drain with a "G" round dome strainer. Trough shall be constructed by the General Contractor.

Laundry floor sink shall be Smith #3482-C, 24" x 12" x 17" deep with dome strainer and with acid resistant coated grate with 6" diameter funnel. Provide with stainless steel sediment bucket.

Pre-sloped trench drain shall be 6" wide Zurn Z886-HD with standard duty heavy duty frame assembly. Trench shall high density polyethylene with 0.75% slope to drain. Provide with Class E ductile iron, heel proof grate. Bottom outlet shall have dome strainer.

Mechanical room drains shall be Smith #2120 cast iron floor drain with bronze grate and inside caulk.

Areaway drains shall be Smith #2250 large capacity 14" diameter cast iron body drain with 5" deep removable sediment bucket.

All floor drains shall have deep seal traps. As indicated on plans, provide additional protection as specified in the "FLOOR DRAIN TRAP PROTECTION" section of these specifications.

Specified: Jay R. Smith
Substitute: Wade, Zurn, Josam, Watts, Mifab

FLOOR DRAIN TRAP PROTECTION:

All floor drains, trough drains, and hub drains shall have deep seal traps. Additional protection shall be provided as indicated on the floor plans as follows:

Provide a flexible trap sealer insert. Insert shall be tested in accordance with ASSE 1072. Sealer shall be installed in drain without caulking, sealing, or glue.

Trap sealers shall not be installed in drains until after final cleaning has been completed.

Specified: Smith “Quad Close – Trap Seal”;
Substitute: RectorSeal “SureSeal”, IPS “Green Drain”; Mifab “Mi-Guard”

Trap sealer inserts shall not be installed in drains until all final cleaning has been completed.

ICE MACHINE SUPPLY BOX:

Ice machine box shall be ABS construction and have 1/4" compression outlet, 1/2" sweat supply, integral service valve, and water hammer arrestor. Arrestor shall be certified to ASSE 1010 and shall be UPC listed. Unit shall allow mounting with supply line from top, bottom, or side.

Specified: Sioux Chief "Ox Box" 696 Series

WASHING MACHINE SUPPLY AND DRAIN BOX:

Supply box shall be ABS construction and have double hose bib outlet connections. Unit shall be provided with integral service valves and water hammer arrestor. Arrestor shall be certified to ASSE 1010 and shall be UPC listed. Unit shall allow mounting with supply line from top or bottom. Provide with separate ABS construction drain box. Provide wall flanges for both the supply and drain box.

Specified: Sioux Chief - "Ox Box" 696 Series

AIR ADMITTANCE VALVES:

Standard Air admittance valves shall be ABS with silicon membrane and NSF 14 / ASSE 1051 listed.

Plenum-rated Air admittance valves shall be constructed of flame-retardant polycarbonate resin with elastomeric membrane. Valves shall be classified in accordance with UL2043 for installation in plenums and ASSE 1051 listed.

Air admittance valves serving science sinks shall be constructed of flame-retardant, acid-resistant polypropylene (ASTM D-4101) with EDPM O-ring. Valve shall be designed for use in non-neutralized chemical waste systems. Valve shall be listed to NSF 14 and ASSE 1049.

Air admittance valves shall be installed per manufacturer's installation instructions.

Specified: Studor "MINI-VENT" or "MAXI-VENT" (standard)
Studor "TEC-VENT" (plenum application)
Studor "CHEM-VENT" (acid resistant)

Substitute: By prior approval.

SUMP PUMPS:

Each submersible pumps shall be rated at the motor hp, voltage, and performance noted on the drawings. The castings shall be constructed of class 25 cast iron. The motor

housing shall be oil filled to dissipate heat. All mating parts shall be machined and sealed with a Buna-N o-ring. All fasteners exposed to the liquid shall be stainless steel. The motor shall be protected on the top side with sealed cord entry plate with molded pins to conduct electricity eliminating the ability of water to enter internally through the cord. The motor shall be protected on the lower side with a unitized ceramic/carbon seal with stainless steel housings and spring or engineered double lip seal with stainless steel springs. The pump shall be furnished with stainless steel handle. The exterior of the casting shall be protected with powder coat paint. The pump shall have cast iron support legs, enabling it to be a free standing unit.

The submersible pump shall be supplied with a multi-conductor power cord which is a maximum of 50 feet in length and shall be capable of continued exposure to the pumped liquid. The power cord shall be sized for the rated full load amps of the pump in accordance with the National Electric Code. The power cable shall conduct electricity to the motor by means of a water tight compression fitting cord plate assembly, with molded pins to conduct electricity.

Single phase motors shall be oil filled, capacitor start, class B insulated NEMA B design, rated for continuous duty. At maximum load the winding temperature shall not exceed 135 degrees C, unsubmerged. Motors shall have an integral thermal overload switch in the windings for motor protection.

Pump shall have both upper and lower single ball/race type ball bearings. All bearings shall be permanently lubricated by the oil, which fills the motor housing. The motor shaft shall be made of 300 or 400 series stainless steel. The pump shall have a unitized carbon /ceramic seal with stainless steel housings and spring, or engineered double lip seal with stainless steel springs. The motor plate / housing interface shall be sealed with a Buna-N o-ring. The impeller shall be vortex style made of an engineered polymer, with pump out vanes on the back shroud. Impeller shall be threaded to the motor shaft.

The control unit has three probes and a float ball switch. The pump will activate when the middle probe contacts water, and will remain on until the first, longest probe no longer is in contact with water. A high water alarm is activated when third or shortest probe contacts water. The system will ignore a small film of oil, however larger volumes of oil will be detected when the alarm probe does not detect water and the float ball activates. The system will continue to operate, removing water not oil from the vault even when oil has been detected.

Specified: Bell & Gossett
Substitute: Liberty, Zoeller

ROOF DRAINS:

Roof drain and overflow assembly shall consist of a single, combination unit, with the primary and overflow drain mounted on a common deck plate. Roof drains shall have a cast iron body with adjustable extension, reversible collar, under-deck clamp, membrane clamp and flange, aluminum dome, bottom outlet no-hub pipe connection, and 16 gauge

galvanized sump receiver. Overflow drain shall have adjustable height, internal stand pipe.

Built up roofs shall have a 4" high stainless steel gravel stop.
Coordinate roof drain/overflow accessories and installation with general contractor and roofing contractor.

Specified: Smith #1800
Substitute: Zurn, Wade, Josam, Mifab F

STORM DRAINAGE SYSTEM:

Plumbing Contractor shall provide and connect to roof drains and provide inside downspout and storm drain piping to continue outside building. Plumbing contractor shall connect to main outfalls 5' outside of the building. Beyond 5' shall be by other divisions.

Gutter downspouts shall be provided by other divisions.

INSULATION:

Insulation on services under this section of work shall be installed by workmen regularly engaged in insulation installation.

Test, inspect, and clean surfaces on piping before applying the insulation.

Sectional insulation for copper tubing shall be sized for the outside diameter of the tubing.

Insulated pipe shall have 18" length of high density, 25/50 rated, 19 psi compressive strength, isocyanurate (or 25/50 rated, 80 psi compressive strength calcium silicate) at each pipe hanger for pipes 4" and larger. Pipes less than 4" shall have a 12" long insert. Pipes 1" and smaller shall not require insert.

Insulation shall be installed in accordance with Manufacturer's recommendations.

Provide firestop at all penetrations of fire rated floors and partitions. Refer to detail on drawings.

Types of insulation for the various services shall be as follows:

1. Cold Water Lines Above Grade: Shall be insulated with factory applied self-sealing pressure sensitive seams or glued elastomeric rubber based pipe insulation. Fittings shall be insulated with same material. The insulation shall have a 25/50 flame spread and smoke developed rating per ASTM E85-75 test method. Cold water piping shall have 1/2" thickness.

Specified: Armaflex
Substitute: K-Flex, Aeroflex

2. Hot Water Lines Above Grade: Hot water risers in walls shall be insulated with 1” thick Armaflex. All other hot water above grade shall be insulated with high density, 1” thick fiberglass pipe insulation with all service jacket and self-sealing lap joints. Insulate fittings with same material and jacket with Zeston or Speedline P.V.C. pre-moulded fitting covers.
3. Downspouts: Shall be insulated with high density, 1” thick fiberglass pipe insulation with all service jacket and self-sealing lap joints. Only horizontal downspout lines from drain to and over elbow at top of risers shall be insulated. Insulate fittings with same material and jacket with Zeston P.V.C. pre-moulded fitting covers.
4. Roof Drains: Insulate the base of each roof drain with 1” thick sheet applied with adhesive; Armaflex, K-Flex, or Aeroflex.
5. Condensate Waste: Overhead drains receiving HVAC condensate shall be insulated with a ½ inch thick Armaflex, K-Flex, or Aeroflex.

DIELECTRIC UNIONS:

Furnish and install dielectric union or couplings at all connections of dissimilar metals and electrical operated devices.

VALVE BOX:

Valve boxes shall be two piece cast iron with a minimum 5” diameter shaft and cast iron cover marked appropriately (“WATER” or “GAS”). Locate top of the valve box level with finished grade.

Specified: Sigma VB-46
Substitute: By prior approval

DRAINS:

All water piping shall be run free of traps, slightly pitched and so arranged that it will drain to low points of the system. These points shall be provided with accessible drain valve for the complete drainage of the system.

KITCHEN EQUIPMENT:

All kitchen equipment shall be furnished and set in place by other divisions. Plumbing contractor shall rough for and make all final connections to equipment. Traps for equipment shall be provided by plumbing contractor. Faucets on sinks and strainers shall be furnished with equipment. All waste piping below sinks in kitchen shall be type “L” copper with sweat joints. Install unions, ½” risers, and ½” gate valve stops at water pipe connections to all kitchen equipment. Refer to kitchen plans and roughing drawings for exact dimensions and equipment details.

At any appliance with a potable water connection but without an air gap for backflow protection, i.e., disposal, waste compactor, hose reel, etc., provide either a Watts #U7 double check valve or a vacuum breaker.

LAB EQUIPMENT:

All lab equipment, lab sinks, and faucets shall be furnished by other divisions. The plumbing contractor shall rough for and make all final connections to equipment. Traps for equipment shall be furnished by the plumber. All traps for science labs shall be acid resistant (see piping specification). Install stops for all water and gas service at each fixture.

Final connections from roughing to faucets shall be completed with 3/8" O.D. type "L" soft copper: compression or sweat joints for water, flared or brazed joints for gas.

Refer to lab equipment plans of roughing drawings for exact dimensions and equipment.

HOT WATER MIXING VALVES:

Hot water mixing valve shall provide constant domestic water temperature supply water with a thermostatic sensing element. Valve shall control accurately with discharge temperature between 85°F and 120°F. Refer to drawings for sizes and installation details.

1. Master Mixing Valve:

Valve shall meet ASSE Standard 1017. Unit shall have integral check stops. The hot water mixing valve shall control the water temperature @ 3°F +/- @ a water flow of 1 GPM and with inlet water temperature fluctuation. Valve and piping assembly shall be provided with check stops, strainer, 3" dial thermometer, volume control supply shut-off valve, and unions.

Specified: Symmons "Temp Control"

Alternate: Powers, Leonard, Lawler, Armstrong/Rada, Acorn

2. Fixture Mixing Valve:

Valve shall meet ASSE 1070 or CSA B125.3 standards, and shall have minimum flow rate of 0.5 GPM and +/- 7°F. Unit shall have brass body, stainless steel internal components, and inlet strainers.

Specified: Symmons Maxline

Substitute: Leonard, Powers, Lawler, Armstrong/Rada, Acorn

3. Emergency Shower:

Provide thermostatic mixing valve with integral cold water bypass for emergency shower. Valve shall have check valves, limit stop (set for 80°F), and shall comply with ANSI Z358.1. Valve shall supply 20 GPM (minimum) @ 30 psi pressure drop.

Specified: Guardian Model G3600 (eyewash) or G3700 (shower)
Substitute: Symmons, Leonard, Powers, Lawler, Acorn

PLUMBING FIXTURES:

Fixtures and accessories shall be as follows:

Fixtures:	Kohler, American Standard, Zurn, Ceco (lavatory only)
Faucets:	Chicago, T&S Brass, Zurn, Moen, Delta (“Cer-Teck” Series) or by fixture manufacturer
Flush Valves:	Sloan, Zurn, Kohler
Seats:	Beneke, Bemis, Church, Centoco, or by fixture manufacturer
Electric Water Coolers:	Oasis, Elkay, Halsey Taylor, Sunroc, Haws, Murdock
Sinks:	Elkay, Just
Emergency Wash:	Bradley, Western, Acorn, Gardian, Sheldon, Water Saver
Hand Wash Basin:	Bradley, Willoughby
Shower Units:	Clarion, Aquaglass, Aquarius
Precast Basin:	Stern-Williams, Fiat, Florestone, Acorn
Stops & Accessories:	Brasscraft, McGuire, EBC, Zurn, Keeney, or by fixture manufacturer

Submit shop drawings on all fixtures and accessories, including stops and traps.

All fixtures shall be first quality of their respective makes and shall be properly handled, carefully uncrated, erected and set in place. On completion, all fixtures shall be properly cleaned and adjusted and left in readiness for use. The Contractor shall assume all responsibility for the proper protection of all fixtures to insure that same shall be in good condition for acceptance.

Exposed metal parts of all fittings, unless otherwise noted, shall be polished chromium finish on nickel, plated brass. All cast iron enameled fixtures shall be in ACID RESISTING enamel.

All fixtures shall have individual cut-off stops on cold and hot water lines where same are not specified as part of the fixture, they shall be installed in supply lines as close to fixture as possible.

All P-traps shall be cast brass with cleanout, 17 gauge tubing outlet, and cast brass nuts.

Supply stops shall have screw or sweat connections and have brass body and stem and chrome plated. Connect to roughing with chromed nipples or supply stop with extension tube and chrome plated copper pipe risers (stainless steel braided hose connections are acceptable where concealed). Stops to exposed lines shall be key operated and concealed stops shall have hand wheel.

Refer to Architectural drawings and to the Fixture Schedule for roughing heights.

On masonry walls, wall hung fixtures shall be installed by thru-bolting the hanger brackets to the wall with 3/8" toggle type anchors and washers. On stud wall construction, provide 2" thick by 8" wood blocking between studs and anchor hangers into the blocking with 3/8" diameter lag bolts and washers. Floor mounted water closets shall be secured with solid brass closet bolts. Wall hung water closets shall have heavy duty steel/ductile iron carriers, minimum 500 lb load rating. Coordinate carrier dimensions with available chase size.

Connections of fixtures to piping shall be complete and substantial, using proper bolts, anchors, screws, etc., for supporting of all fixtures to avoid strain on connections. Determine the exact finished floor and wall surface before installing pipes, etc.

Complete connections for all fixtures, traps, wastes, vents, hot and cold water, etc., shall be provided.

All fixtures for the handicapped shall meet A.D.A. requirements. Water closet flush valve handles shall be right or left hand, to match the wide side of the handicapped stall. Coordinate flush valve height above floor with ADA grab bars locations. Lavatories shall have offset tail piece and trap (where required for ADA accessibility compliance) and preformed white foam covers.

All fixtures shall have the joint between the fixture and the mounting surface caulked with white silicone caulk/sealant.

Sink and lavatory faucets shall have ceramic cartridges.

All toilet seats shall have self-sustaining hinges with stainless steel posts and nuts.

All prefab shower units shall be set in a wet grout base for rigidity and leveling. See manufacturer's recommendations.

All tank type water closets and water closet/flush valve combinations shall meet current MaP performance ratings for public restrooms with a rating of not less than 1000GmPF.

P-1 Water Closet (ADA) (floor mount, flush valve): Kohler "Highcliff" #K-96057 vitreous china, 1.6 gal/flush, siphon jet, 16 1/2" high elongated bowl toilet with "lustra" K-4666C

extra heavy duty white open front toilet seat with self-sustaining hinge. Furnish with a Zurn Z-6000, 1.6 GPF flush valve with a YK pipe support and a cast brass escutcheon with set screw.

P-2 Water Closet: Kohler “Wellcomme” #K-96053 vitreous china, 1.6 gal/flush siphon jet, elongated bowl toilet with “lustra” #K-4666C extra heavy duty white open front toilet seat with self-sustaining hinge. Furnish with a Zurn Z-6000, 1.6 GPF flush valve with a YK pipe support and a cast brass escutcheon with set screw.

P-3 Water Closet (ADA) (wall hung, flush valve): Kohler “Kingston”, #K-84325, wall hung, vitreous china, siphon jet, elongated bowl toilet with “lustra” #K-4666 C extra heavy duty, white, open front toilet seat with self-sustaining hinge. Furnish with a Zurn Z-6000, 1.6 GPF flush valve with a YK pipe support and a cast brass escutcheon with set screw. Provide wall carrier, see “A” drawings for chase size.

P-4 Urinal: Kohler #K-4991-ET “Bardon” vitreous china washout urinal with Zurn 1.0 GPF Z6003WSI flush valve and with a YK pipe support, Beehive strainer, and a cast brass escutcheon with a set screw.

P-5 Urinal (ADA): Kohler #K-4991-ET “Bardon” vitreous china washout urinal with Zurn 1.0 GPF Zurn Z6003WSI flush valve and with a YK pipe support, Beehive strainer, and a cast brass escutcheon with a set screw.

P-6 Lavatory (ADA): Kohler “Hudson” #K-2805 enameled cast iron 19”x 17” lavatory with Chicago #730 faucet with a lever handle and #327 perforated strainer. Lavatory shall have a single hole drilling. See “A” drawings for mounting height. Where required for ADA accessibility compliance, provide with McGuire 155w.c. offset trap and tail piece assembly.

P-7 Lavatory (ADA): Kohler “Hudson” #K-2861 enameled cast iron 19”x 17” lavatory with #K-7404-5A, Triton hot and cold water mixing faucet with lever handles and with #K-7129-A perforated strainer. See “A” drawings for mounting height. Where required for ADA accessibility compliance, provide with McGuire 155w.c. offset trap and tail piece assembly.

P-8 Sink (ADA): Just #DL-ADA-1933-A-GR stainless steel, 18 gauge, 19”x 33”x 6 ½” deep, double compartment sink. Furnish with a Chicago #1102 eight inch high swing spout faucet with hand spray and with aerator. Furnish with Just #J35 STP basket strainer. Provide offset trap and tail piece assembly.

P-9 Sink (ADA): Just #SL-ADA-1921-A-GR, ADA compliant, single compartment, 18 gauge, stainless steel, 19”x 21”x 6-1/2” deep sink, with rear drain outlet. Furnish with Chicago #50 hot and cold water mixing faucets with gooseneck and lever handles, 8” high, swing spout with aerator. Furnish with Just #J35SSF perforated rear drain. Where required for ADA accessibility compliance, provide with McGuire 155w.c. offset trap and tail piece assembly.

P-10 Nurse's Shower (ADA): Symmons Temptrol Model S-96-500-B30-L-V pressure-balanced, ASSE 1016, scald-guard mixing, single lever mixing faucet with integral stops and with temperature limit stop (set for 105°F). Provide a wall supply fitting connecting to a hand held adjustable spray personal shower and 5' long flexible metal clad hose, diverting valve, and wall mounted brass ball joint shower head. Hand held shower head shall mount to a 30" long adjustable height slide bar wall hook. Furnish with a 17-gauge chromed brass shower rod. Shower enclosure shall be a Comfort Design #XSS36382BF acrylic 42"x 37" fiberglass unit with floor, wall reinforcing, and 5/8" barrier free threshold. Shower shall have grab bars and folding seat and shall meet ANSI A117.1, Z124.2, and ADA standards. Provide with collapsible threshold kit.

P-11 Electric Water Cooler (ADA): Halsey Taylor #HAC8F-Q wall hung water cooler for the handicapped with front push bar control, 7.8 GPH delivery at 50°F chilled water and 80°F entering water, 120V with plug-in connection and with color selected by the Architect. Water cooler shall be ADA compliant.

P-12 Electric Water Cooler (Bottle Filler, ADA): Halsey Taylor #HTHB-HAC8 wall hung water cooler for the handicapped with front push bar control, touchless bottle filling station, 7.8 GPH delivery at 50°F chilled water and 80°F entering water, 120V with plug-in connection and with color selected by the Architect. Water cooler shall be ADA compliant.

P-13 Janitors Basin: Stern-Williams "Corlow" #SBC-1725 precast terrazzo mop basin, 32"x 32"x 12" high, corner arrangement, with drop front and stainless steel threshold strip. Furnish with a Chicago #305-VB-R faucet with vacuum breaker, integral stops, hose connection, pail hook. Provide a 4' long hose selection.

P-14 Emergency Shower/Eyewash: ADA compliant emergency shower (Water Saver #ES643, or equal) and Eyewash (Water Saver #EW822, or equal) to be provided by other divisions. Eyewash and shower installation and all final connections shall be by plumbing contract. Provide an antiscald mixing valve, mounted above ceiling on inside cabinet, to serve shower and eyewash.

P-15 Science Sink: Provided by other divisions. Make all final connections.

P-16 Science Instructor's Sink: Provided by other divisions. Make all final connections.

P-17 Student Table Sink: Provided by other divisions. Make all final connections.

P-18 Science Instructor's Sink: Provided by other divisions. Make all final connections.

P-19 Student Table Sink: Provided by other divisions. Make all final connections.

P-20 Fume Hood: Provided by other divisions. Make all final connections.

McMillan Pazdan Smith Architecture
MPS Project No. 020420.00
CBE Job # 2037
06/24/22; GMP Addendum-2

Spartanburg District Five
James F. Byrnes High School
Phase 2 – Academic Wing Addition
Duncan, South Carolina

END OF SECTION

GENERAL NOTES

- COORDINATE ALL CEILING WITH ELECTRICAL AND MECHANICAL DWGS. INFORM ARCHITECT OF ANY DISCREPANCIES PRIOR TO INSTALLATION.
- INSTALL CEILING PER MANUFACTURERS REQUIREMENTS. COORDINATE WITH ARCHITECT AND ENGINEERS.
- ALL CEILING PLAN TAG DIMENSIONS ARE FROM ABOVE FINISHED FLOOR.



CONSULTANT LOGO

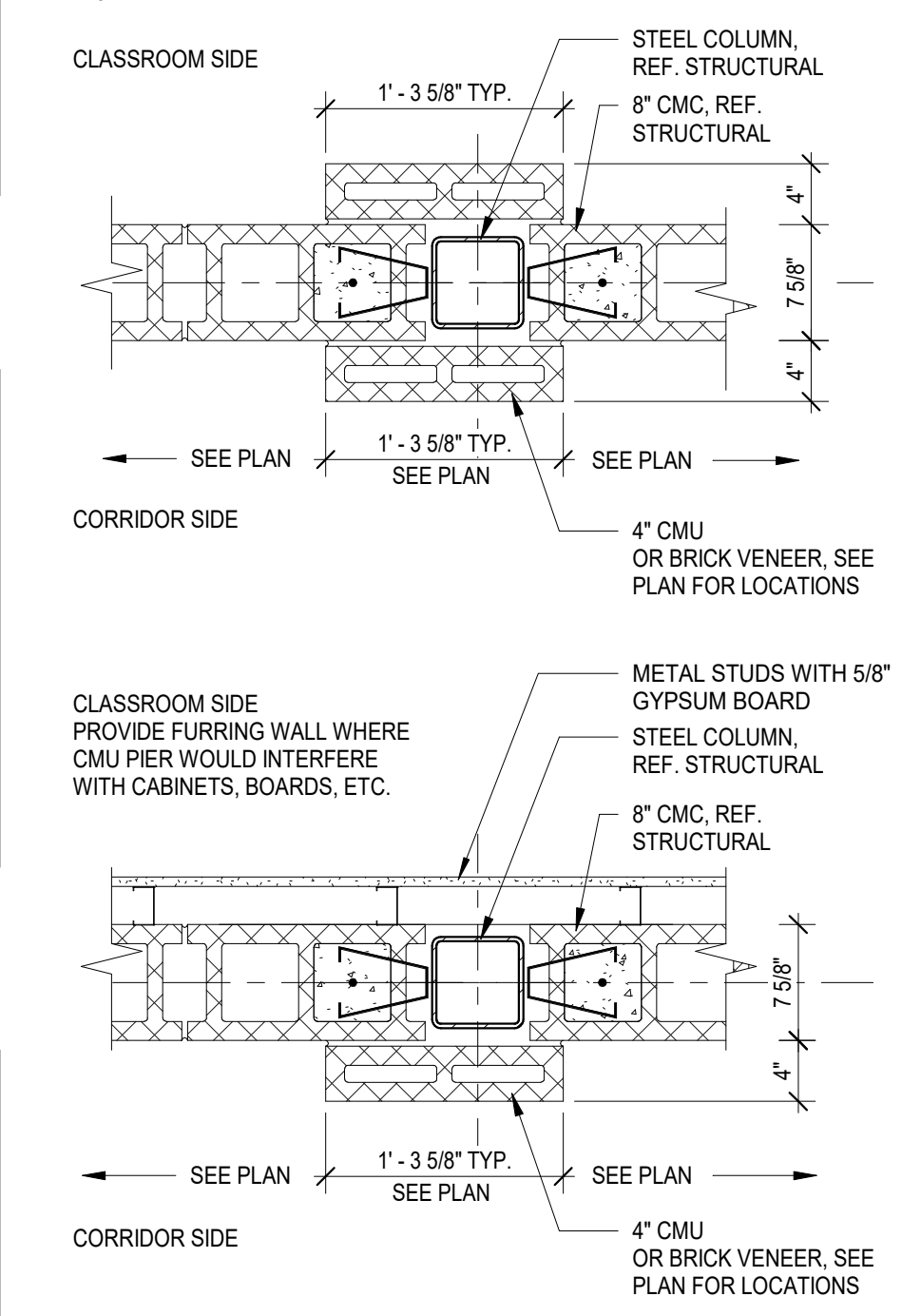
SEALS

LEGEND

- 45 MIN. FORTY-FIVE MINUTE RATED DOOR & FRAME
- 90 MIN. ONE AND ONE HALF HOUR RATED DOOR & FRAME
- 3 HR THREE HOUR RATED DOOR & FRAME
- EW/C / EWC ADA ELECTRIC WATER COOLER/ACCESSIBLE ELECTRIC WATER COOLER + BOTTLE FILLER
- SMOKE PARTITION (SMOKE TIGHT)
- RATED - 1 HOUR
- RATED - 2 HOUR
- RATED - 3 HOUR
- FEC RECESSED OR SEMI-RECESSED FIRE EXTINGUISHER CABINET

SHEET KEYNOTES

TYP. COLUMN WRAP DETAILS - CMU



SHEET ISSUE:

NO.	DATE	DESCRIPTION	BY
B	02/28/22	DD PRICING	MLC
C	06/01/22	CMR SET	MLC
D	06/20/22	ADDENDUM NO. 1	MLC
E	06/24/22	ADDENDUM NO. 2	MLC

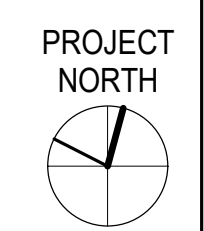
ADDENDUM NO. 2 06/24/22

PRINCIPAL IN CHARGE: MLC
PROJECT ARCHITECT: RPC
DRAWN BY: RPC, CM

SHEET TITLE:
**PHASE 2 - 1100 LEVEL
- FLOOR PLAN AREA A**

SHEET NO. PROJ. NO. 020420.00

A116



ALL DRAWINGS, SPECIFICATIONS AND NOTES ARE THE PROPERTY OF MCMILLAN PAZDAN SMITH ARCHITECTURE AND SHALL REMAIN THE PROPERTY OF MCMILLAN PAZDAN SMITH ARCHITECTURE. THESE DRAWINGS ARE TO BE USED ONLY WITHIN THE PROJECT AND SITE SPECIFICALLY IDENTIFIED THEREIN. NO PART OF THESE DRAWINGS OR ANY INFORMATION CONTAINED HEREIN IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF MCMILLAN PAZDAN SMITH ARCHITECTURE.

NOT FOR CONSTRUCTION
FOR PRICING ONLY

GENERAL NOTES

- COORDINATE ALL CEILINGS WITH ELECTRICAL AND MECHANICAL DWGS. INFORM ARCHITECT OF ANY DISCREPANCIES PRIOR TO INSTALLATION.
- INSTALL CEILINGS PER MANUFACTURERS REQUIREMENTS. COORDINATE WITH ARCHITECT AND ENGINEERS.
- ALL CEILING PLAN TAG DIMENSIONS ARE FROM ABOVE FINISHED FLOOR.



CONSULTANT LOGO

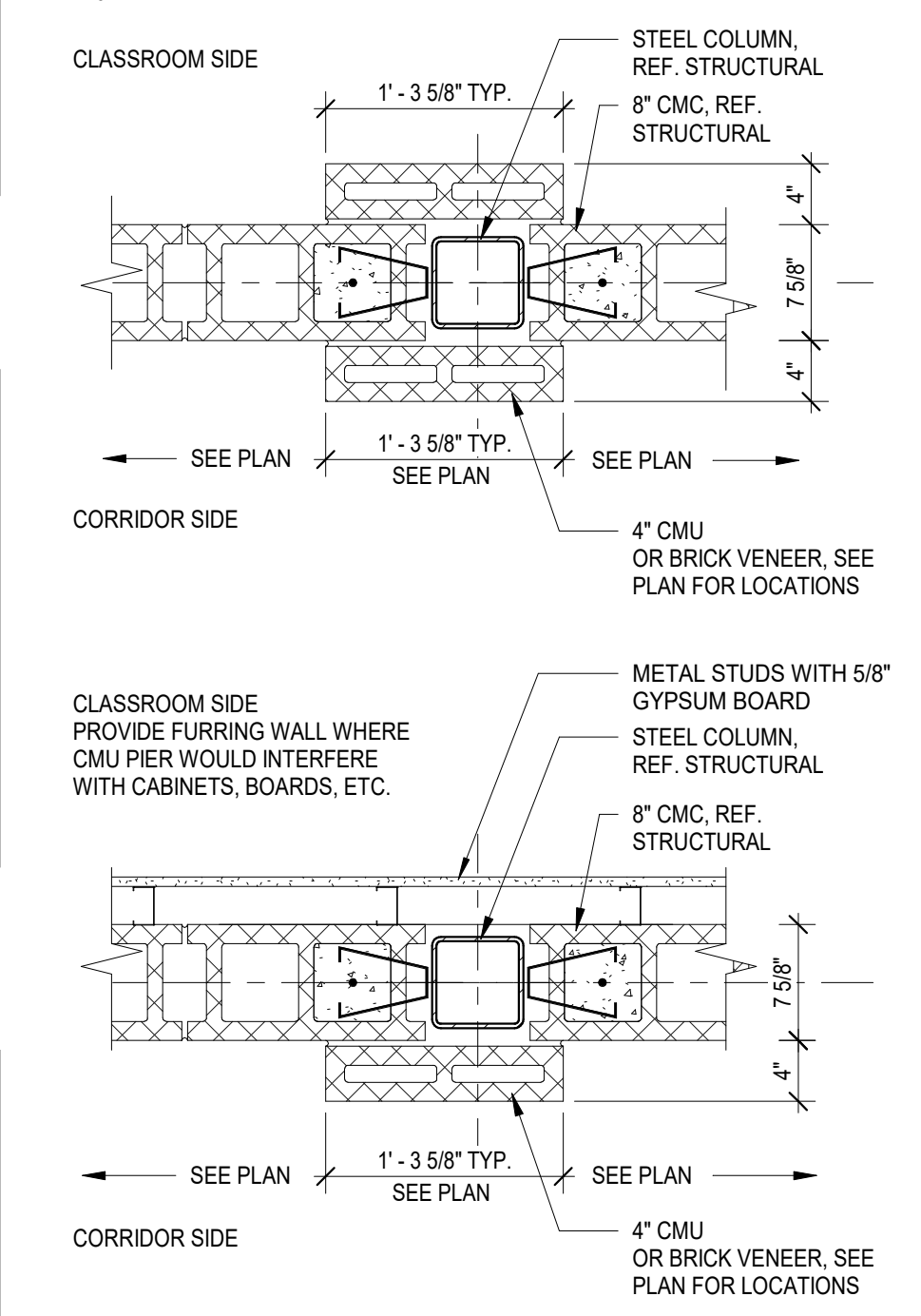
SEALS

LEGEND

- 45 MIN. FORTY-FIVE MINUTE RATED DOOR & FRAME
- 90 MIN. ONE AND ONE HALF HOUR RATED DOOR & FRAME
- 3 HR THREE HOUR RATED DOOR & FRAME
- EWC / EWC ADA ELECTRIC WATER COOLER/ACCESSIBLE ELECTRIC WATER COOLER + BOTTLE FILLER
- SMOKE PARTITION (SMOKE TIGHT)
- RATED - 1 HOUR
- RATED - 2 HOUR
- RATED - 3 HOUR
- FEC RECESSED OR SEMI-RECESSED FIRE EXTINGUISHER CABINET

SHEET KEYNOTES

TYP. COLUMN WRAP DETAILS - CMU



SHEET ISSUE:

NO.	DATE	DESCRIPTION	BY
B	02/28/22	DD PRICING	MLC
C	06/01/22	CMR SET	MLC
D	06/20/22	ADDENDUM NO. 1	MLC
E	06/24/22	ADDENDUM NO. 2	MLC

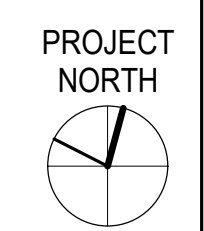
ADDENDUM NO. 2

DATE	BY
06/24/22	MLC
	RPC
	RPC, CM

PHASE 2 - 1100 LEVEL - FLOOR PLAN AREA B

SHEET NO. PROJ. NO. 020420.00

A117



SPARTANBURG SCHOOL DISTRICT FIVE
 JAMES F. BYRNES HIGH SCHOOL
 PHASE 2 ACADEMIC WING ADDITION
 150 E. MAIN STREET
 DUNCAN, SC 29504



PHASE 2 1100 LEVEL ENLARGED FLOOR PLAN AREA B

1/8" = 1'-0"

GENERAL NOTES

- COORDINATE ALL CEILINGS WITH ELECTRICAL AND MECHANICAL DWGS. INFORM ARCHITECT OF ANY DISCREPANCIES PRIOR TO INSTALLATION.
- INSTALL CEILINGS PER MANUFACTURERS REQUIREMENTS. COORDINATE WITH ARCHITECT AND ENGINEERS.
- ALL CEILING PLAN TAG DIMENSIONS ARE FROM ABOVE FINISHED FLOOR.



CONSULTANT LOGO

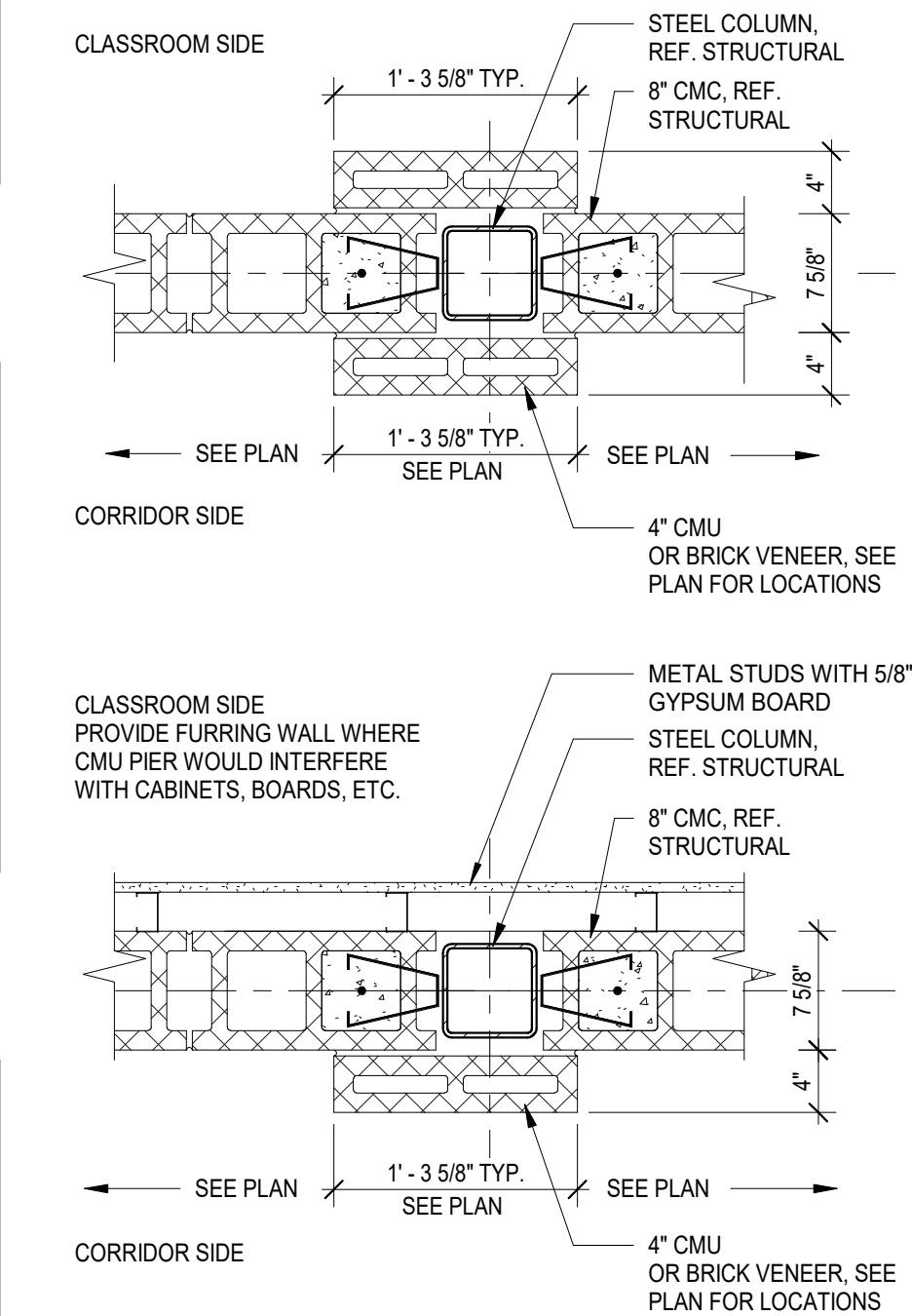
SEALS

LEGEND

- 45 MIN. FORTY-FIVE MINUTE RATED DOOR & FRAME
- 90 MIN. ONE AND ONE HALF HOUR RATED DOOR & FRAME
- 3 HR. THREE HOUR RATED DOOR & FRAME
- EW/C / EW/ ADA ELECTRIC WATER COOLER/ACCESSIBLE ELECTRIC WATER COOLER + BOTTLE FILLER
- SMOKE PARTITION (SMOKE TIGHT)
- RATED - 1 HOUR
- RATED - 2 HOUR
- RATED - 3 HOUR
- FEC RECESSED OR SEMI-RECESSED FIRE EXTINGUISHER CABINET

SHEET KEYNOTES

TYP. COLUMN WRAP DETAILS - CMU



SPARTANBURG SCHOOL DISTRICT FIVE
JAMES F. BYRNES HIGH SCHOOL
PHASE 2 ACADEMIC WING ADDITION

150 E. MAIN STREET
DUNCAN, SC 29504

SHEET ISSUE:

NO.	DATE	DESCRIPTION	BY
B	02/28/22	DD PRICING	MLC
C	06/01/22	CMR SET	MLC
D	06/29/22	ADDENDUM NO. 1	MLC
E	06/24/22	ADDENDUM NO. 2	MLC

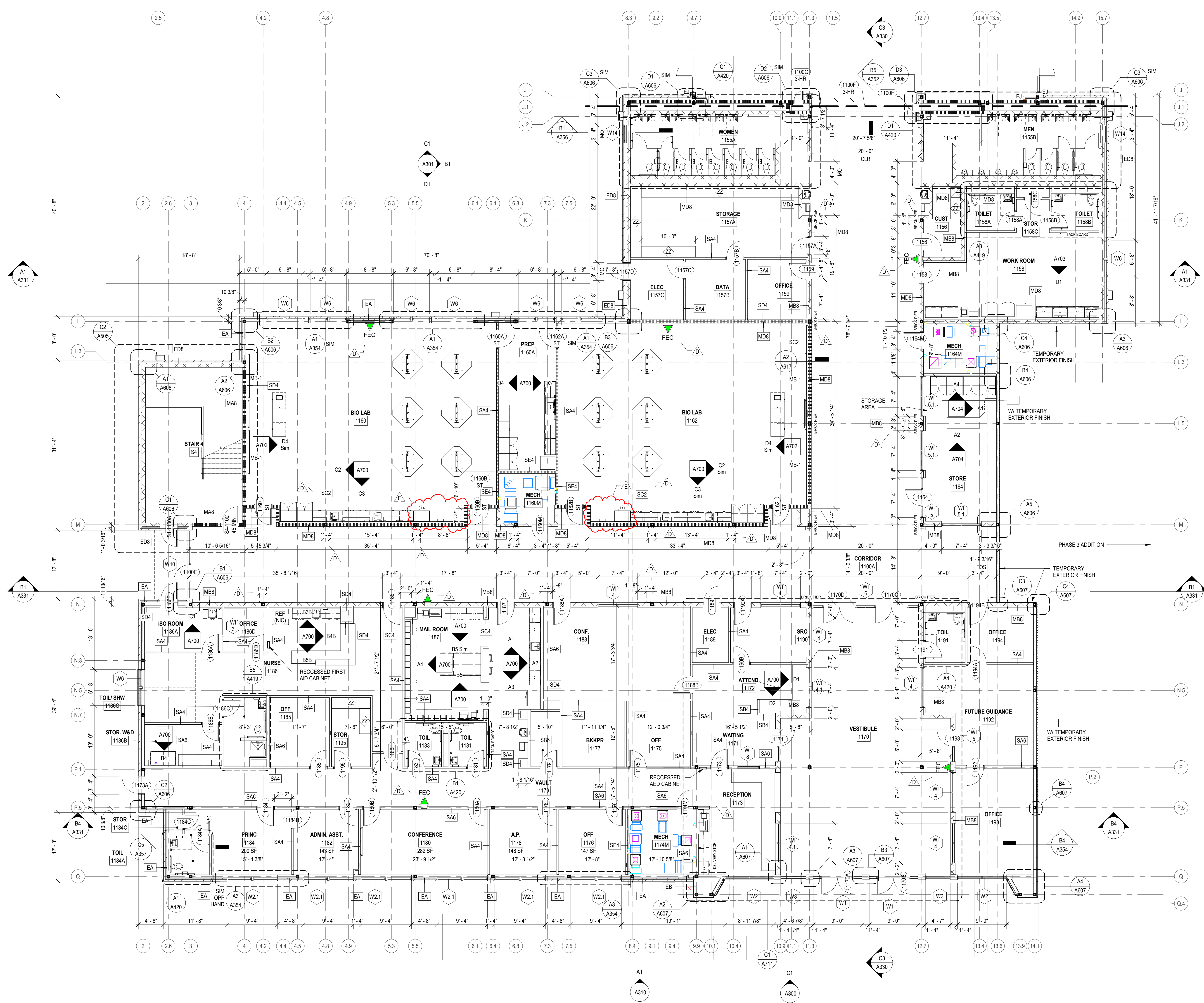
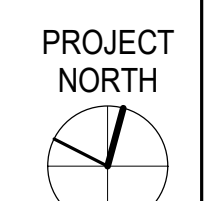
ADDENDUM NO. 2 06/24/22

PRINCIPAL IN CHARGE: MLC
PROJECT ARCHITECT: RPC
DRAWN BY: CM

SHEET TITLE:
PHASE 2 - 1100 LEVEL
- FLOOR PLAN AREA C

SHEET NO. PROJ. NO. 02040.00

A118



PHASE 2 - 1100 LEVEL - ENLARGED FLOOR PLAN AREA C

A1a
A118
1/8" = 1'-0"

SHEET ISSUE:

NO.	DATE	DESCRIPTION	BY
B	02/28/22	DD PRICING	MLC
C	06/01/22	CMR SET	MLC
D	06/20/22	ADDENDUM NO. 1	MLC
E	06/24/22	ADDENDUM NO. 2	MLC

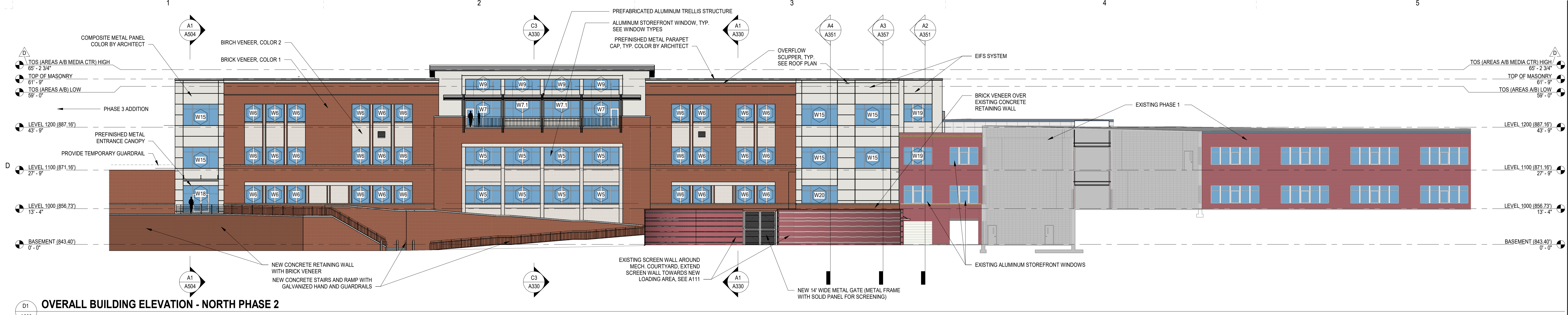
ADDENDUM NO. 2

PRINCIPAL IN CHARGE:	PROJECT ARCHITECT:	DRAWN BY:

SHEET TITLE:
BUILDING ELEVATIONS - OVERALL

SHEET NO.	PROJ. NO.
A300	020420.00

A300



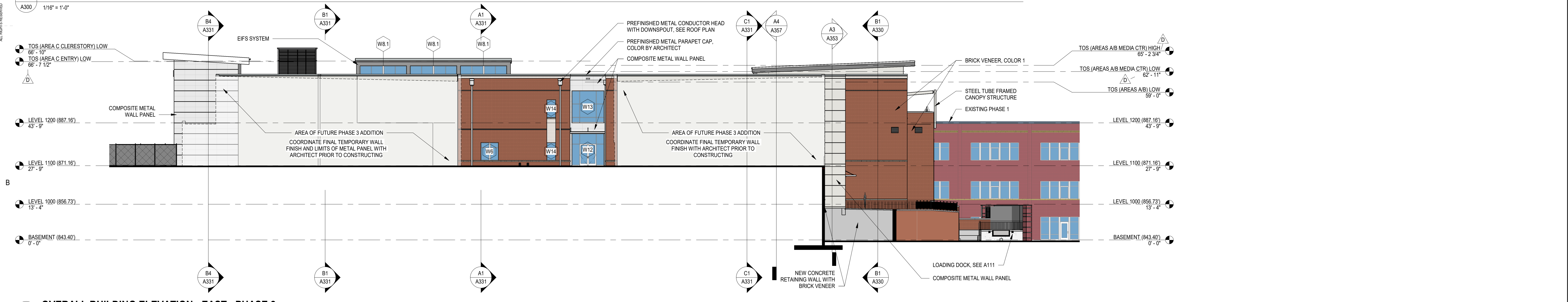
OVERALL BUILDING ELEVATION - NORTH PHASE 2

A300 1/16" = 1'-0"



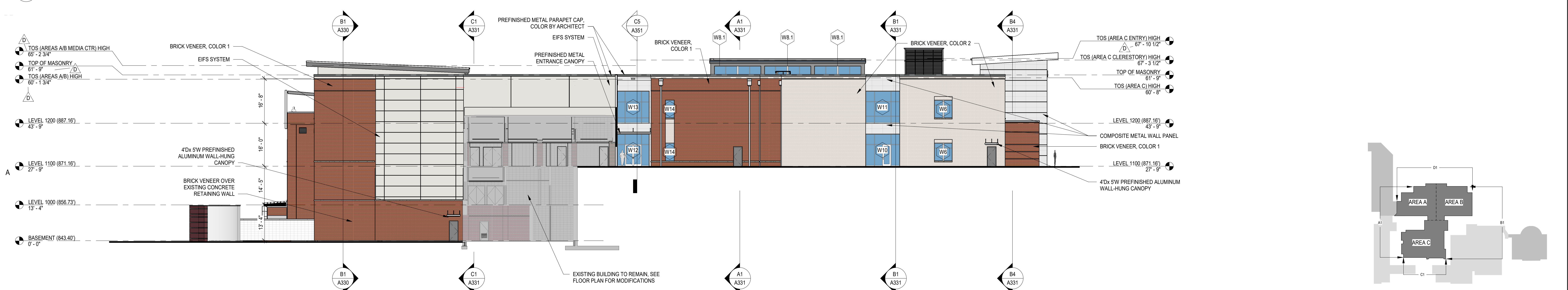
OVERALL BUILDING ELEVATION - SOUTH PHASE 2

A300 1/16" = 1'-0"



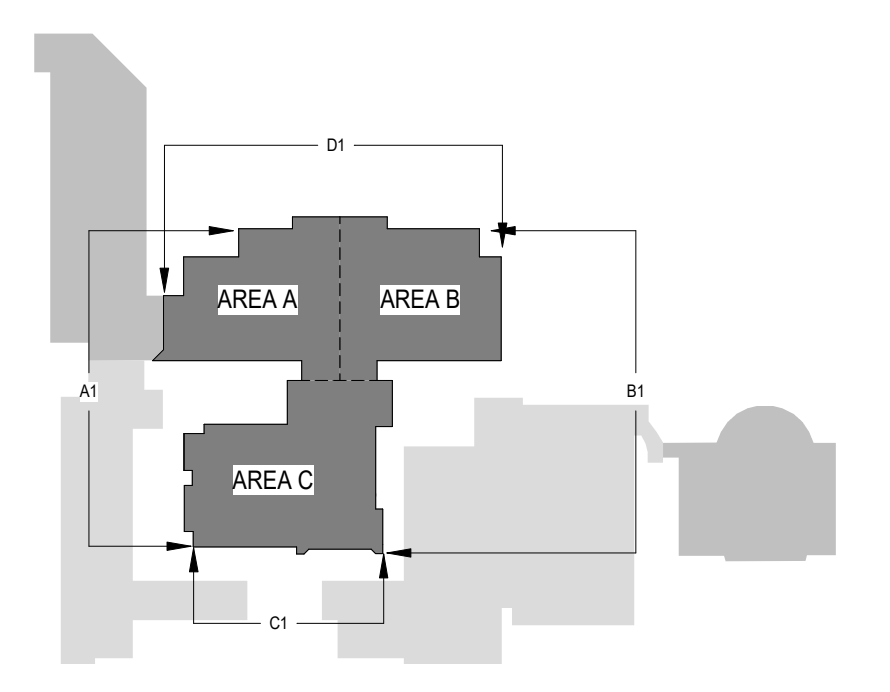
OVERALL BUILDING ELEVATION - EAST - PHASE 2

A300 1/16" = 1'-0"



OVERALL BUILDING ELEVATION - WEST - PHASE 2

A300 1/16" = 1'-0"



NOT FOR CONSTRUCTION
FOR PRICING ONLY

SPARTANBURG SCHOOL DISTRICT FIVE
JAMES F. BYRNES HIGH SCHOOL
PHASE 2 ACADEMIC WING ADDITION

150 E. MAIN STREET
DUNCAN, SC 29504

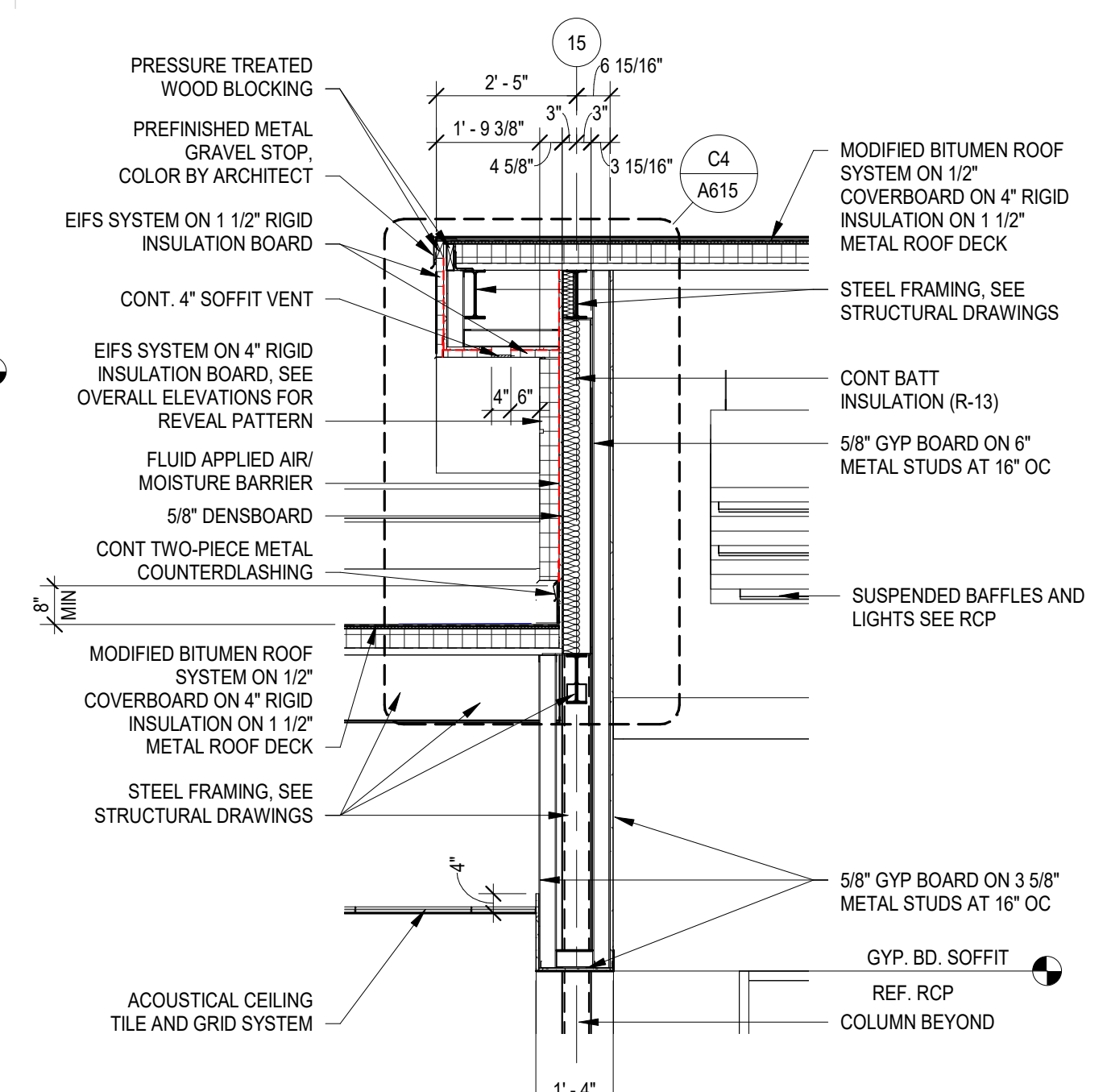
SHEET ISSUE:			
NO.	DATE	DESCRIPTION	BY
B	02/28/22	DD PRICING	MLC
C	06/01/22	CMR SET	MLC
D	06/02/22	ADDENDUM NO. 1	MLC
E	06/24/22	ADDENDUM NO. 2	MLC

ADDENDUM NO. 2 06/24/22

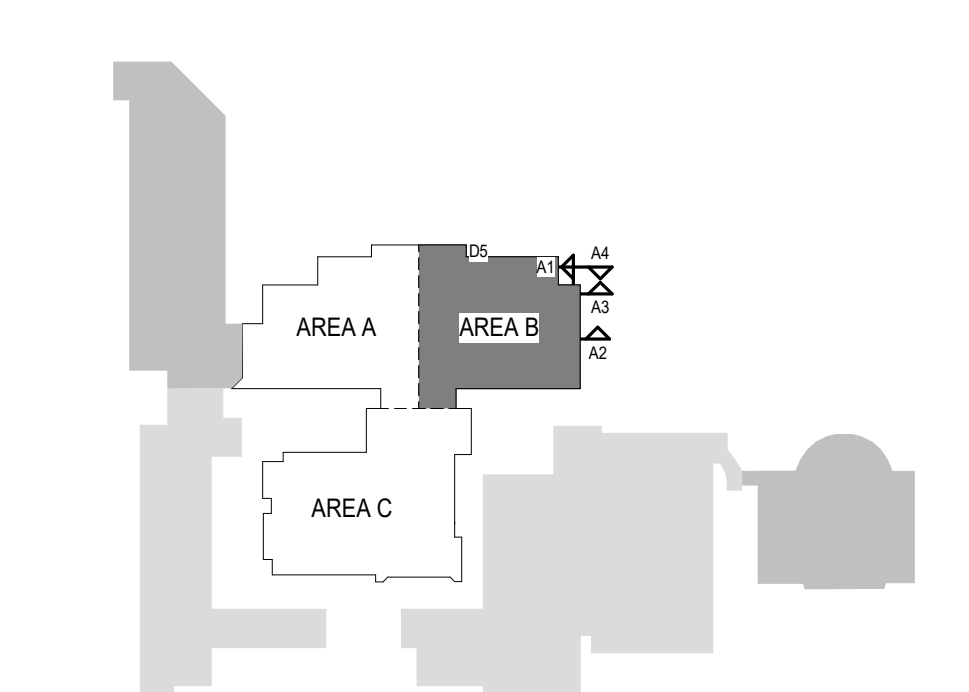
PRINCIPAL IN CHARGE: APPROVED
PROJECT ARCHITECT: CHECKED
DRAWN BY: AUTHOR

SHEET TITLE:
WALL SECTIONS -
AREA B

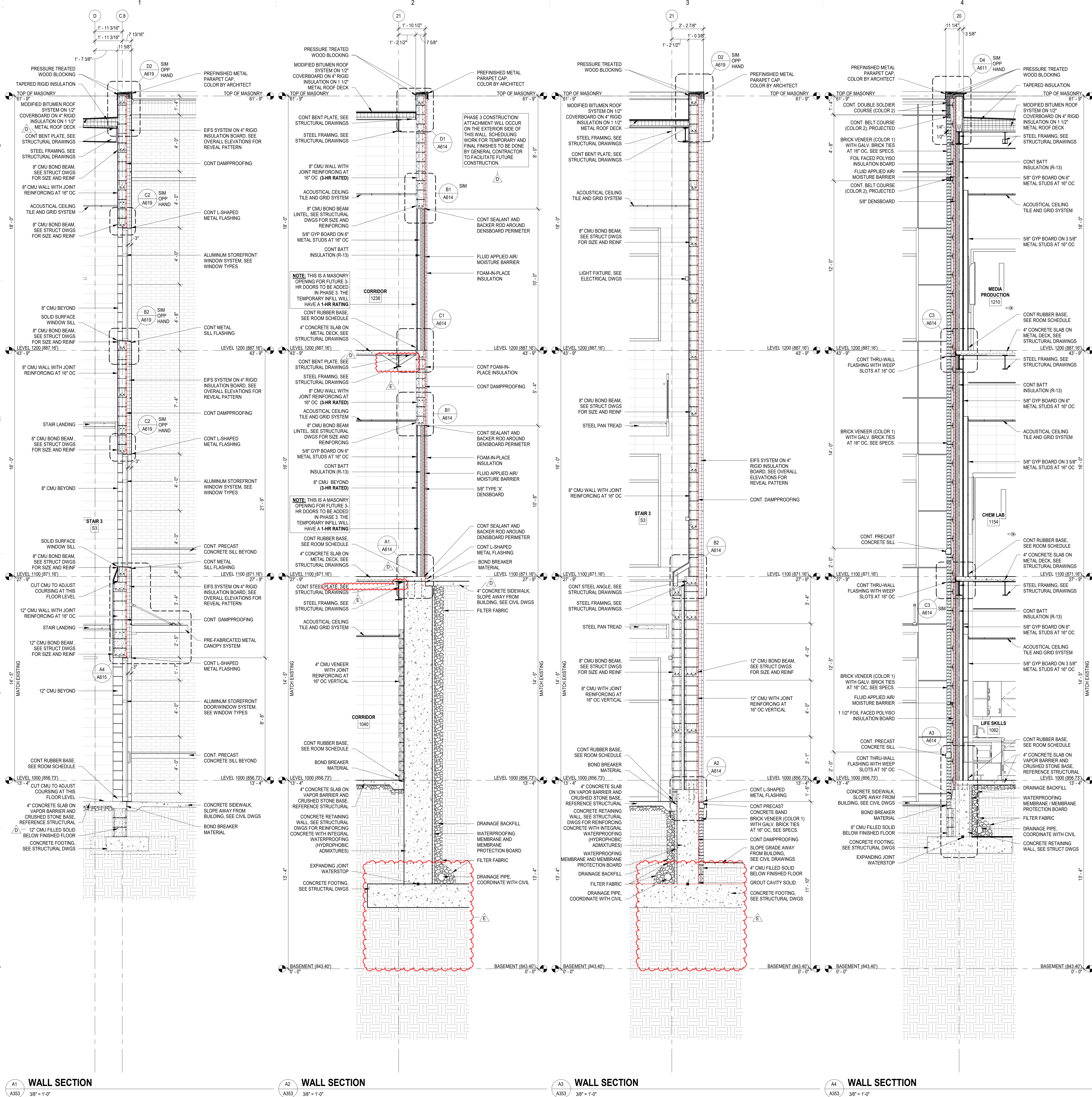
SHEET NO. PROJ. NO.
A353 0204.00



WALL SECTION
A353 3/8" = 1'-0"



NOT FOR CONSTRUCTION
FOR PRICING ONLY

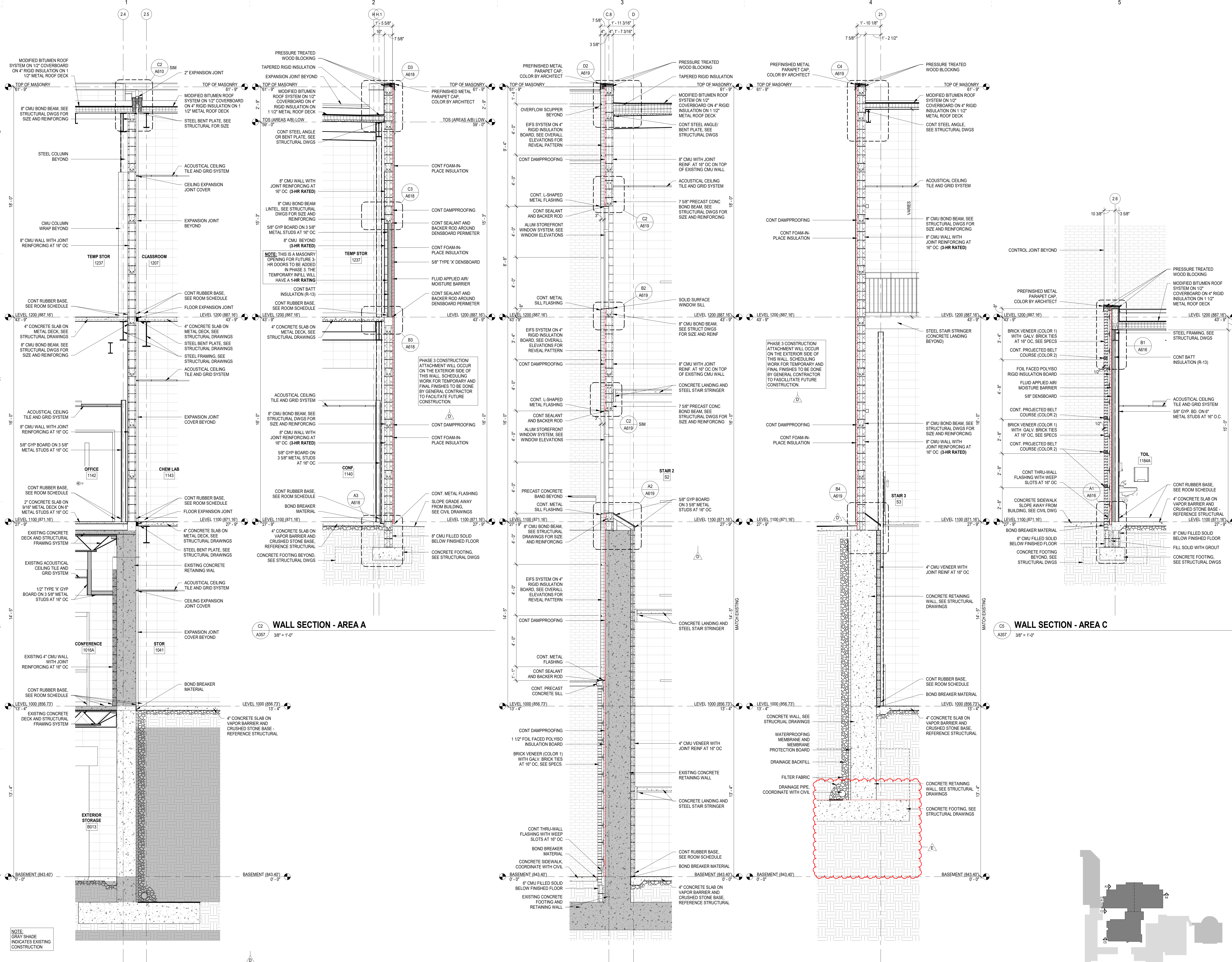


A1 WALL SECTION A353 3/8" = 1'-0"
A2 WALL SECTION A353 3/8" = 1'-0"
A3 WALL SECTION A353 3/8" = 1'-0"
A4 WALL SECTION A353 3/8" = 1'-0"
A5 WALL SECTION A353 3/8" = 1'-0"

ALL DRAWINGS, SPECIFICATIONS AND NOTES ARE THE PROPERTY OF MCMILLAN PAZDAN SMITH ARCHITECTURE. THESE DRAWINGS ARE TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED. THE USER ASSUMES ALL LIABILITY FOR ANY OTHER PROJECTS. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND REGULATORY REQUIREMENTS. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND REGULATORY REQUIREMENTS. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND REGULATORY REQUIREMENTS. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND REGULATORY REQUIREMENTS.

SPARTANBURG SCHOOL DISTRICT FIVE
JAMES F. BYRNES HIGH SCHOOL
PHASE 2 ACADEMIC WING ADDITION

150 E. MAIN STREET
DUNCAN, SC 29504



A1 WALL SECTION - AREA A 38' x 1'-0"
A2 WALL SECTION - AREA B 38' x 1'-0"
A3 WALL SECTION - AREA A 38' x 1'-0"
A4 WALL SECTION - AREA B 38' x 1'-0"
A5 WALL SECTION - AREA C 38' x 1'-0"

SHEET ISSUE:

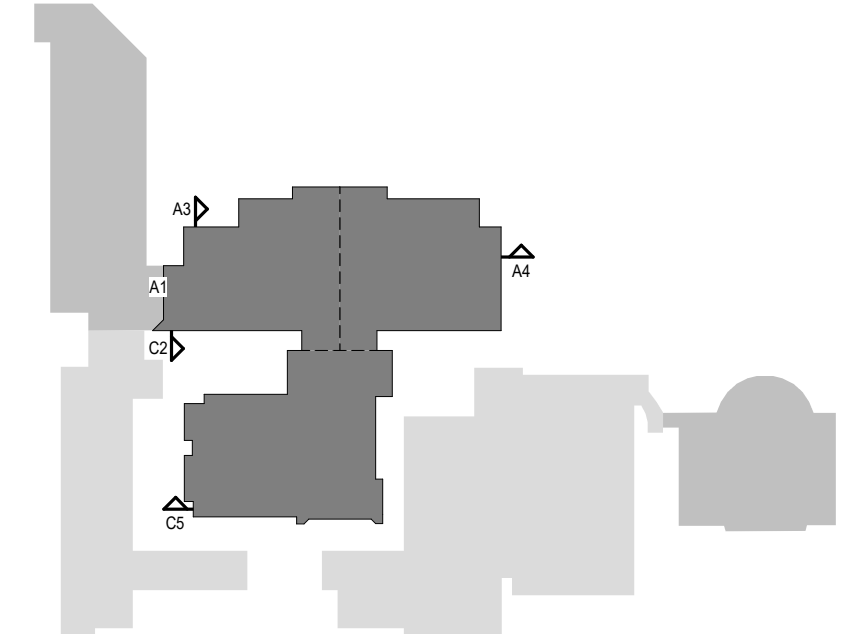
NO.	DATE	DESCRIPTION	BY
C	06/01/22	GMP SET	MLC
D	06/20/22	ADDENDUM NO. 1	MLC
E	06/24/22	ADDENDUM NO. 2	MLC

ADDENDUM NO. 2 06/24/22
 PRINCIPAL IN CHARGE: MLC
 PROJECT ARCHITECT: RPC
 DRAWN BY: CBM

SHEET TITLE:
WALL SECTIONS - MISCELLANEOUS

SHEET NO. PROJ. NO.
 A357 02040.00

NOT FOR CONSTRUCTION
 FOR PRICING ONLY



NOTE:
 GRAY SHADE
 INDICATES EXISTING
 CONSTRUCTION

SPARTANBURG SCHOOL DISTRICT FIVE
JAMES F. BYRNES HIGH SCHOOL
PHASE 2 ACADEMIC WING ADDITION
150 E. MAIN STREET
DUNCAN, SC 29534

NO.	DATE	DESCRIPTION	BY
C	06/01/22	GMP SET	MLC
D	06/24/22	ADDENDUM NO. 1	MLC
E	06/24/22	ADDENDUM NO. 2	MLC

ADDENDUM NO. 2 06/24/22

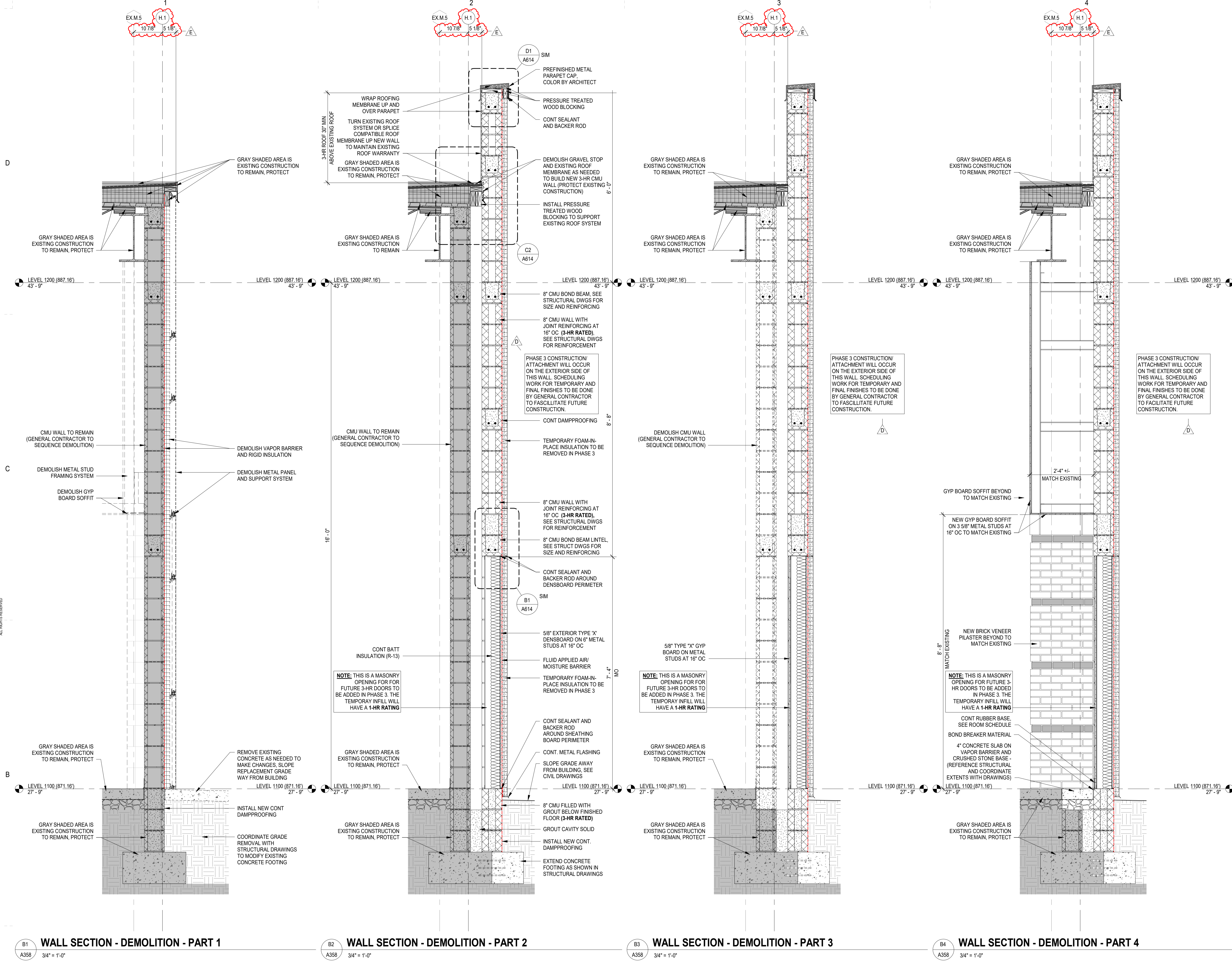
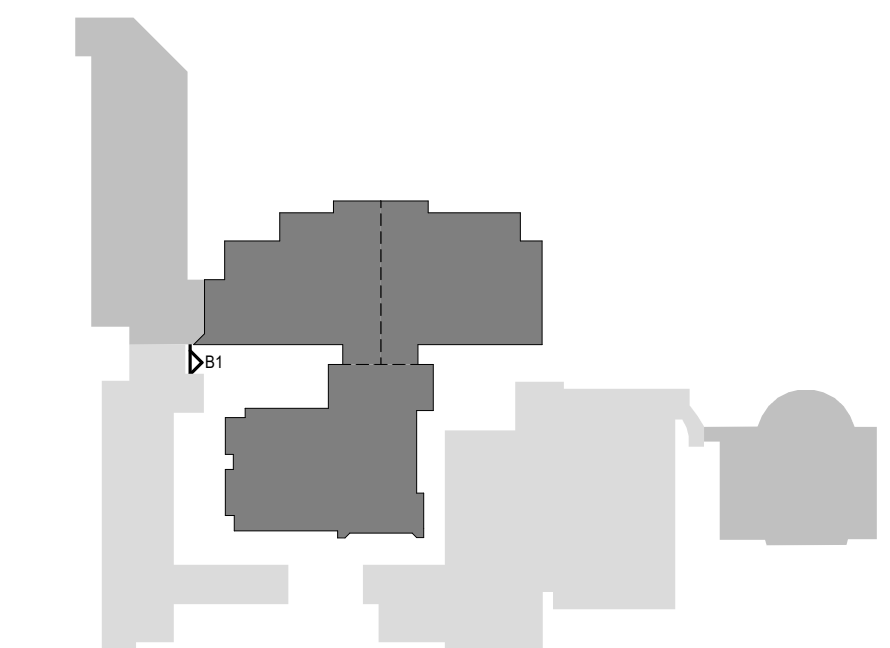
PRINCIPAL IN CHARGE: MLC
PROJECT ARCHITECT: RPC
DRAWN BY: PS

SHEET TITLE:
WALL SECTIONS -
AREA A SEQUENCE
AT B1/A358

SHEET NO. PROJ. NO.
020420.00

A358

NOT FOR CONSTRUCTION
FOR PRICING ONLY



ALL DRAWINGS, SPECIFICATIONS AND COPIES THEREOF FURNISHED BY MCMILLAN PAZDAN SMITH ARCHITECTURE ARE AND SHALL REMAIN THE PROPERTY OF MCMILLAN PAZDAN SMITH ARCHITECTURE. THESE DRAWINGS ARE TO BE USED ONLY WITHIN THE PROJECT AND SITE SPECIFICALLY IDENTIFIED THEREIN. THE PROJECT ARCHITECT'S LIABILITY IS LIMITED TO THE DESIGN AND CONSTRUCTION OF THE PROJECT. SUBMITTALS AND REVISIONS SHALL BE MADE IN ACCORDANCE WITH THE PROJECT MANUAL AND THE ARCHITECT'S STANDARD SPECIFICATIONS. THE PROJECT ARCHITECT'S LIABILITY IS LIMITED TO THE DESIGN AND CONSTRUCTION OF THE PROJECT. SUBMITTALS AND REVISIONS SHALL BE MADE IN ACCORDANCE WITH THE PROJECT MANUAL AND THE ARCHITECT'S STANDARD SPECIFICATIONS. THE PROJECT ARCHITECT'S LIABILITY IS LIMITED TO THE DESIGN AND CONSTRUCTION OF THE PROJECT. SUBMITTALS AND REVISIONS SHALL BE MADE IN ACCORDANCE WITH THE PROJECT MANUAL AND THE ARCHITECT'S STANDARD SPECIFICATIONS.

ALL DRAWINGS, SPECIFICATIONS AND NOTES ARE THE PROPERTY OF MCMILLAN PAZDAN SMITH ARCHITECTURE AND SHALL REMAIN THE PROPERTY OF MCMILLAN PAZDAN SMITH ARCHITECTURE. THESE DRAWINGS ARE TO BE USED ONLY WITH THE PROJECT AND NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM. WITHOUT THE WRITTEN PERMISSION OF MCMILLAN PAZDAN SMITH ARCHITECTURE, NO PART OF THESE DRAWINGS MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM.

CONSULTANT LOGO

SEALS

SPARTANBURG SCHOOL DISTRICT FIVE
 JAMES F. BYRNES HIGH SCHOOL
 PHASE 2 ACADEMIC WING ADDITION
 150 E. MAIN STREET
 DUNCAN, SC 29534

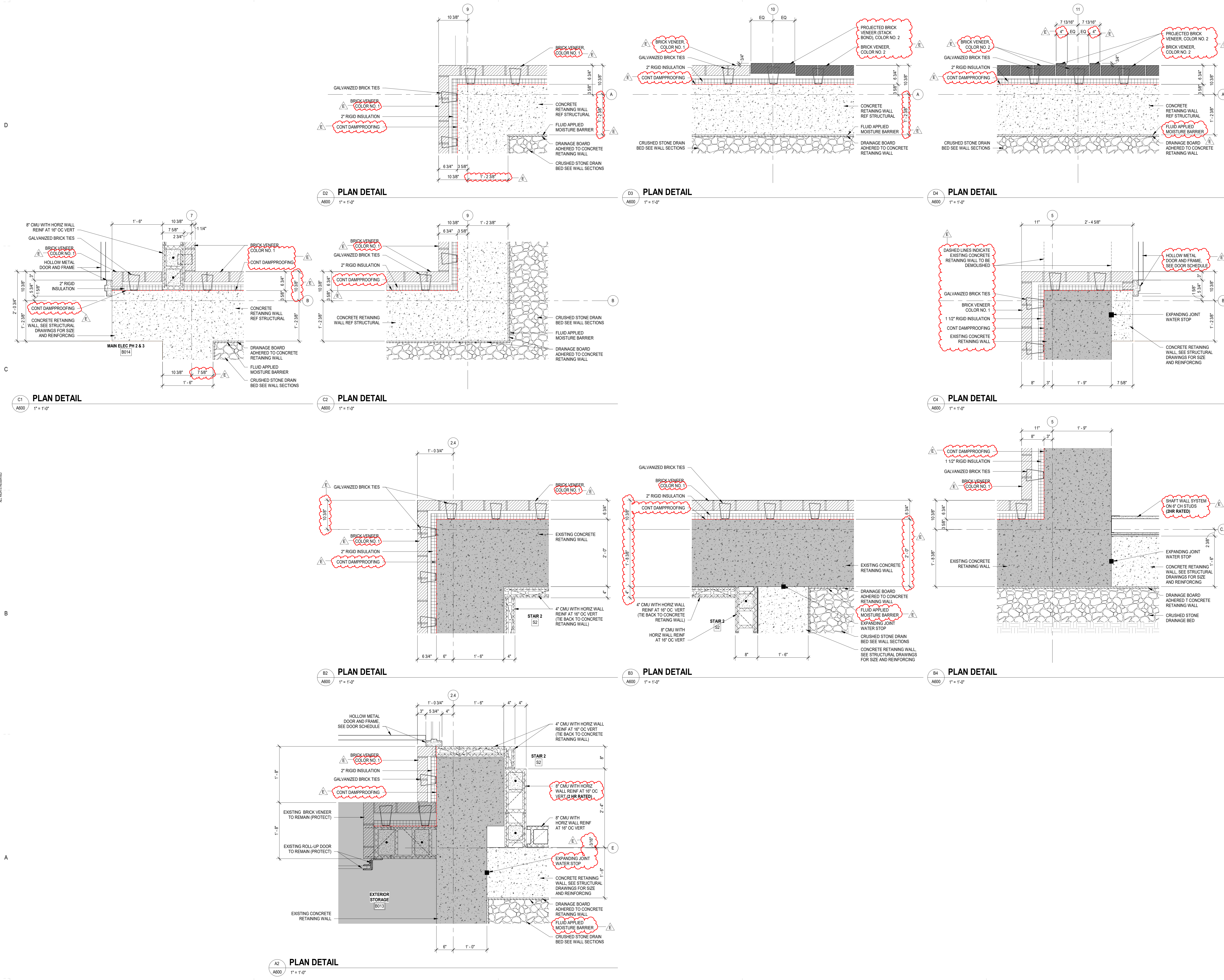
SHEET ISSUE:			
NO.	DATE	DESCRIPTION	BY
C	06/01/22	GMP SET	MLC
E	06/24/22	ADDENDUM NO. 2	MLC

ADDENDUM NO. 2 06/24/22
 PRINCIPAL IN CHARGE: MLC
 PROJECT ARCHITECT: RPC
 DRAWN BY: DC

SHEET TITLE:
**PLAN DETAILS -
 AREAS A/B -
 BASEMENT**

SHEET NO. PROJ. NO.
020420.00

A600



NOT FOR CONSTRUCTION
 FOR PRICING ONLY

NO.	DATE	DESCRIPTION	BY
C	06/01/22	GMP SET	MLC
D	06/20/22	ADDENDUM NO. 1	MLC
E	06/24/22	ADDENDUM NO. 2	MLC

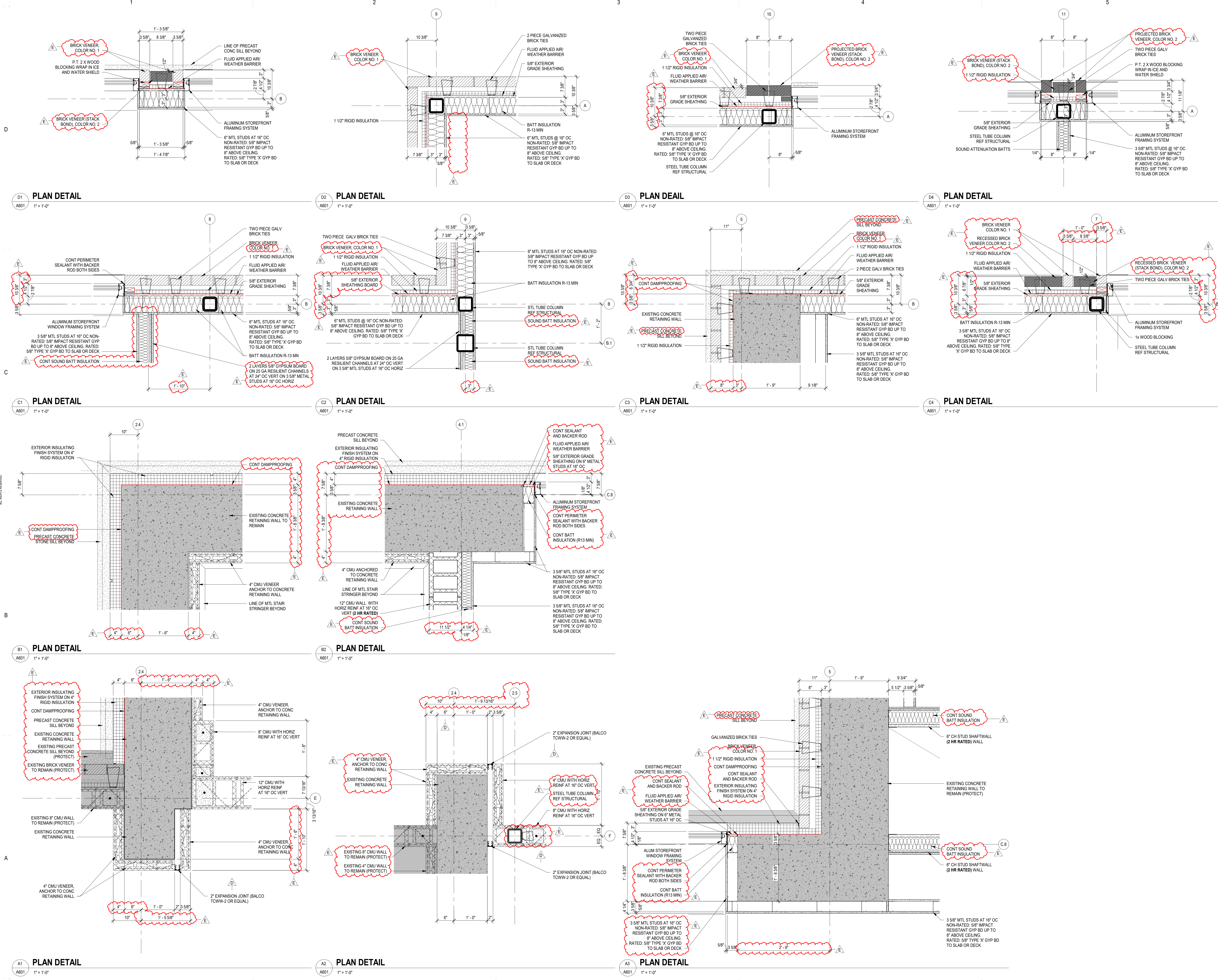
ADDENDUM NO. 2 06/24/22

PRINCIPAL IN CHARGE: MLC
PROJECT ARCHITECT: RLC
DRAWN BY: DC

SHEET TITLE:
PLAN DETAILS -
AREAS A/B - LEVEL
1000

SHEET NO. PROJ. NO.
A601 020420.00

A601



ALL DRAWINGS, SPECIFICATIONS AND NOTES HEREOF FURNISHED BY MCMILLAN PAZDAN SMITH ARCHITECTURE INC. AND SHALL REMAIN THE PROPERTY OF MCMILLAN PAZDAN SMITH ARCHITECTURE INC. NO PART OF THIS DOCUMENT IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF MCMILLAN PAZDAN SMITH ARCHITECTURE INC. THE PROJECT ARCHITECT'S RESPONSIBILITY IS LIMITED TO THE DESIGN AND CONSTRUCTION OF THE PROJECT AS SHOWN ON THESE DRAWINGS. THE PROJECT ARCHITECT IS NOT RESPONSIBLE FOR THE DESIGN OR CONSTRUCTION OF ANY OTHER PROJECTS OR FOR THE DESIGN OR CONSTRUCTION OF ANY OTHER PROJECTS THAT MAY BE RELATED TO THIS PROJECT. THE PROJECT ARCHITECT'S RESPONSIBILITY IS LIMITED TO THE DESIGN AND CONSTRUCTION OF THE PROJECT AS SHOWN ON THESE DRAWINGS. THE PROJECT ARCHITECT IS NOT RESPONSIBLE FOR THE DESIGN OR CONSTRUCTION OF ANY OTHER PROJECTS OR FOR THE DESIGN OR CONSTRUCTION OF ANY OTHER PROJECTS THAT MAY BE RELATED TO THIS PROJECT.

NOT FOR CONSTRUCTION
FOR PRICING ONLY

SHEET ISSUE:		
NO.	DATE	DESCRIPTION
C	06/01/22	GMP SET
D	06/20/22	ADDENDUM NO. 1
E	06/24/22	ADDENDUM NO. 2

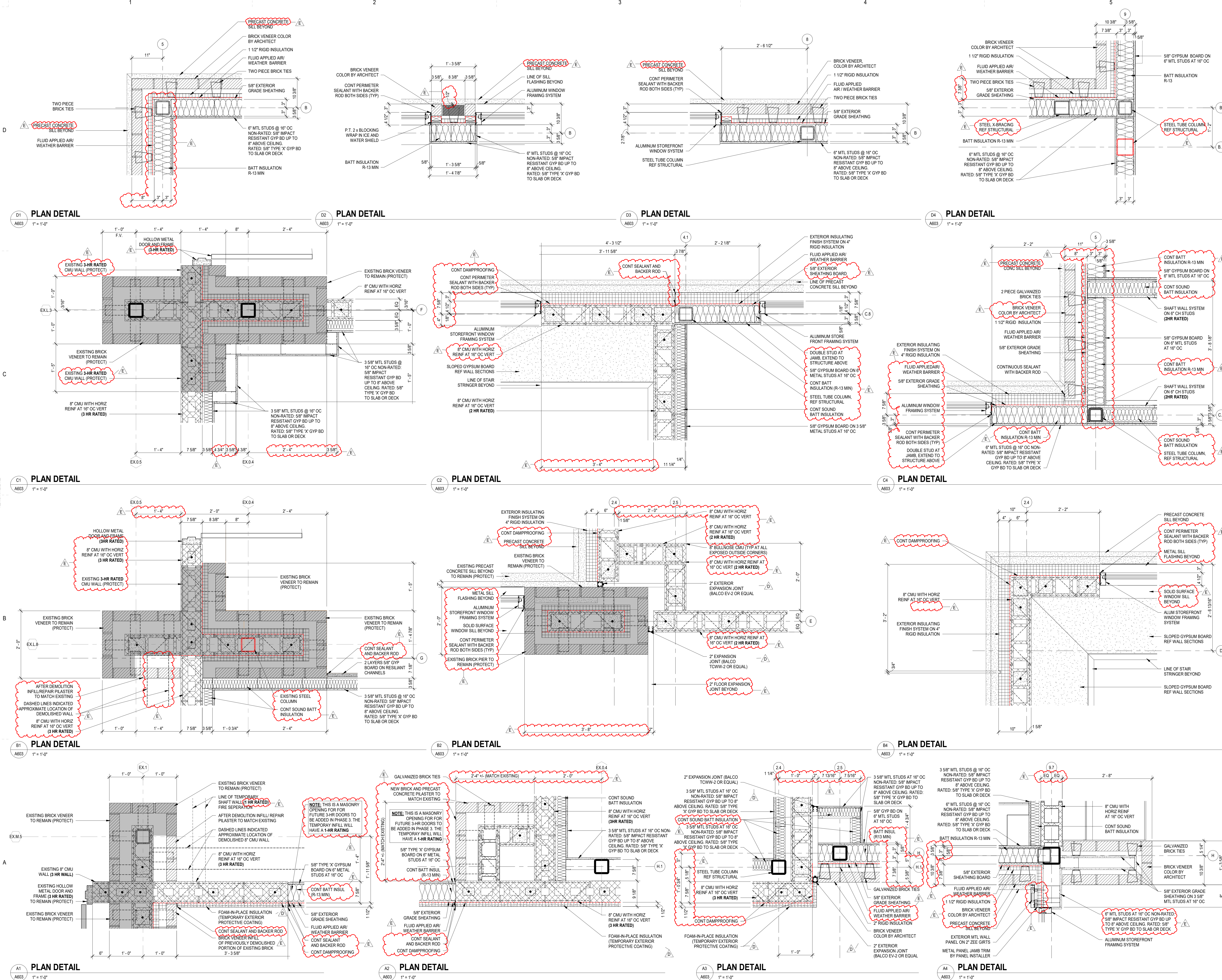
ADDENDUM NO. 2		06/24/22
PRINCIPAL IN CHARGE:	MPC	
PROJECT ARCHITECT:	MLC	
DRAWN BY:	RPC	DC

SHEET TITLE:
PLAN DETAILS -
AREAS A/B - LEVELS
1100 AND 1200

SHEET NO. PROJ. NO.
A603 020400

A603

NOT FOR CONSTRUCTION
FOR PRICING ONLY



ALL DRAWINGS, SPECIFICATIONS AND NOTES HEREBY FORWARDED BY MCMILLAN PAZDAN SMITH ARCHITECTURE ARE THE PROPERTY OF MCMILLAN PAZDAN SMITH ARCHITECTURE. THESE DRAWINGS AND NOTES ARE TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED THEREIN. ANY REUSE OF THESE DRAWINGS OR NOTES FOR ANY OTHER PROJECT OR SITE WITHOUT THE WRITTEN CONSENT OF MCMILLAN PAZDAN SMITH ARCHITECTURE IS STRICTLY PROHIBITED. THE PROJECT ARCHITECT SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED TO MCMILLAN PAZDAN SMITH ARCHITECTURE. MCMILLAN PAZDAN SMITH ARCHITECTURE SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED TO MCMILLAN PAZDAN SMITH ARCHITECTURE.

SPARTANBURG SCHOOL DISTRICT FIVE
JAMES F. BYRNES HIGH SCHOOL
PHASE 2 ACADEMIC WING ADDITION

150 E. MAIN STREET
DUNCAN, SC 29534

NO.	DATE	DESCRIPTION	BY
C	06/01/22	GMP SET	MLC
E	06/24/22	ADDENDUM NO. 2	MLC

ADDENDUM NO. 2 06/24/22

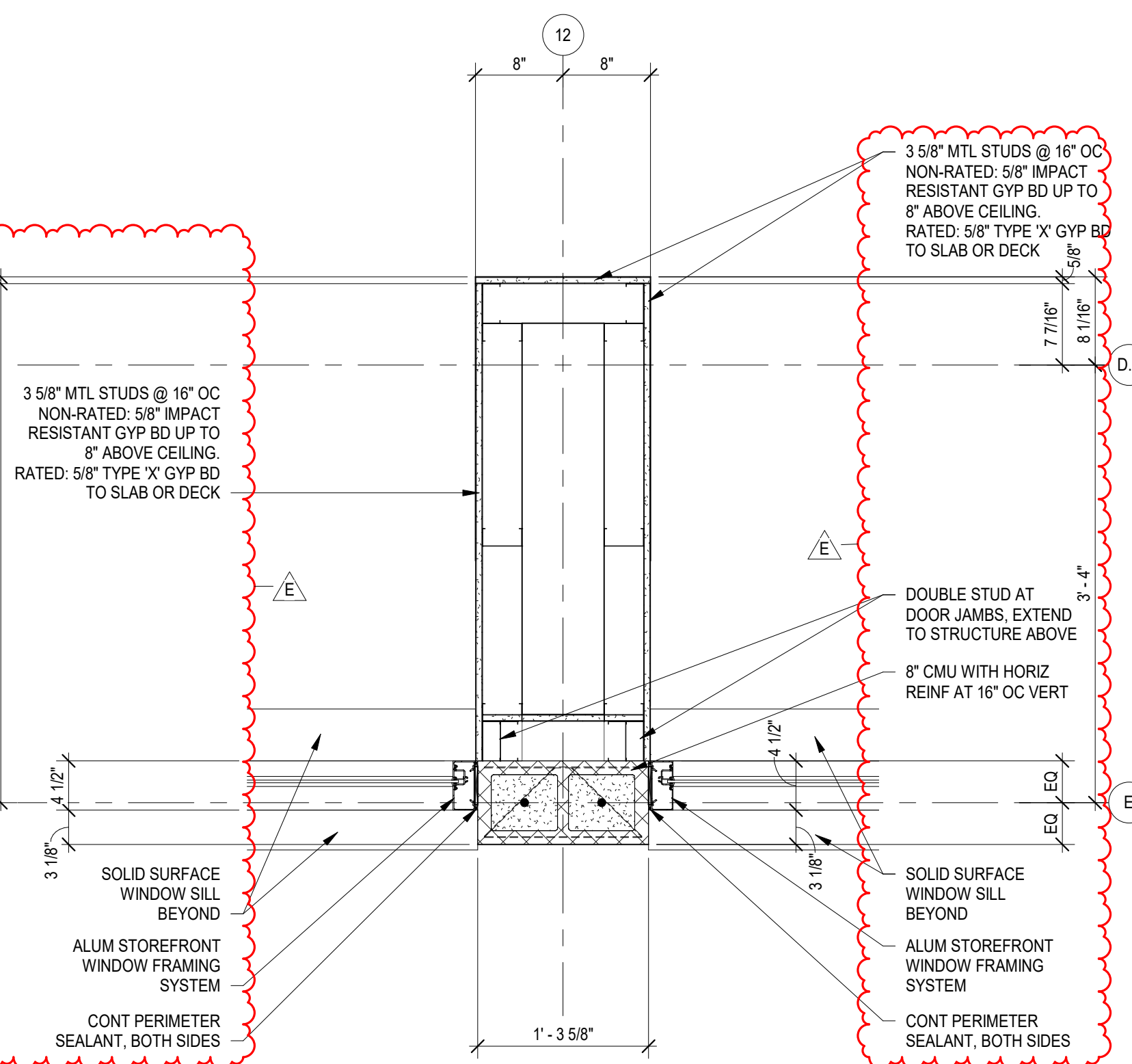
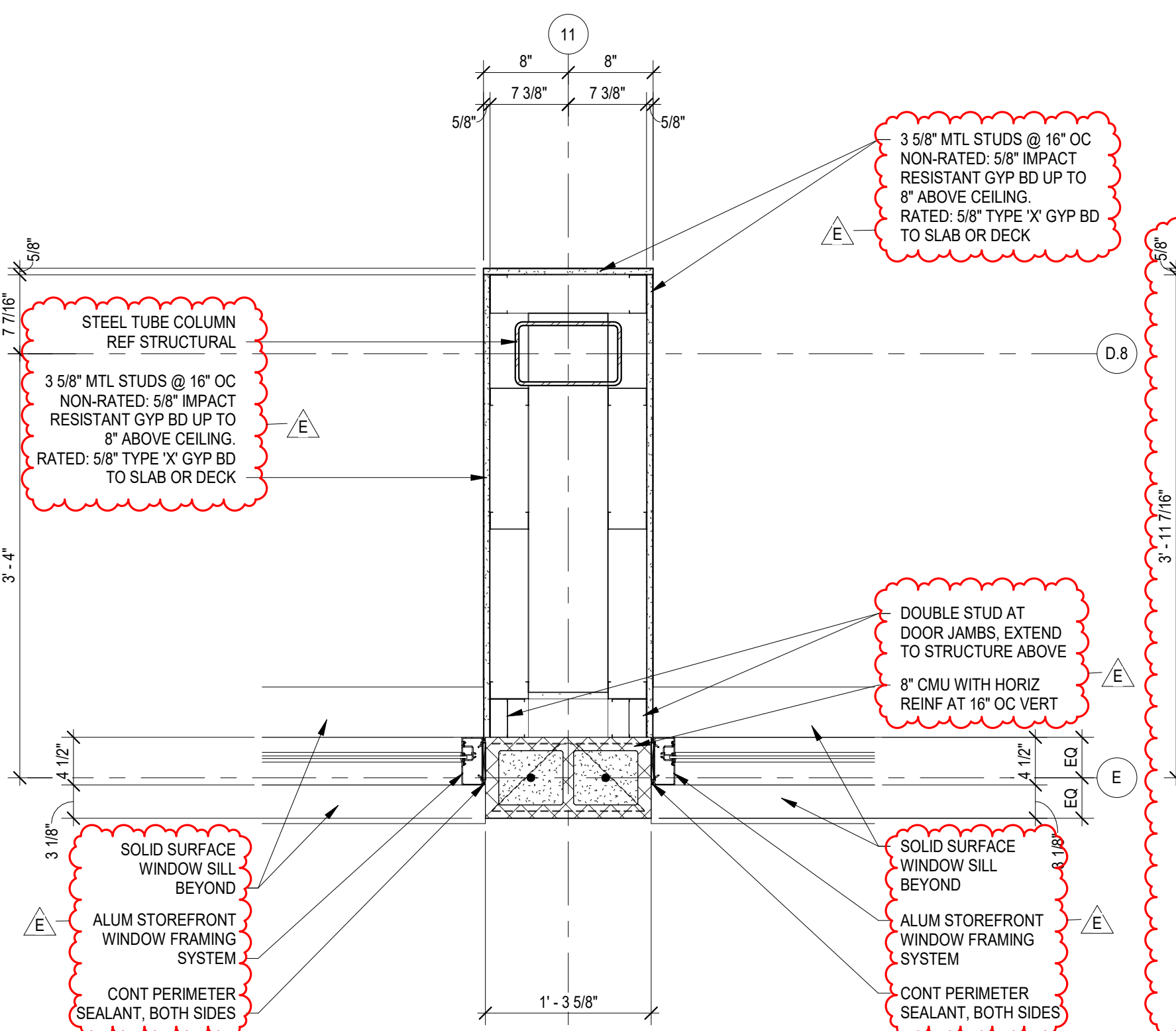
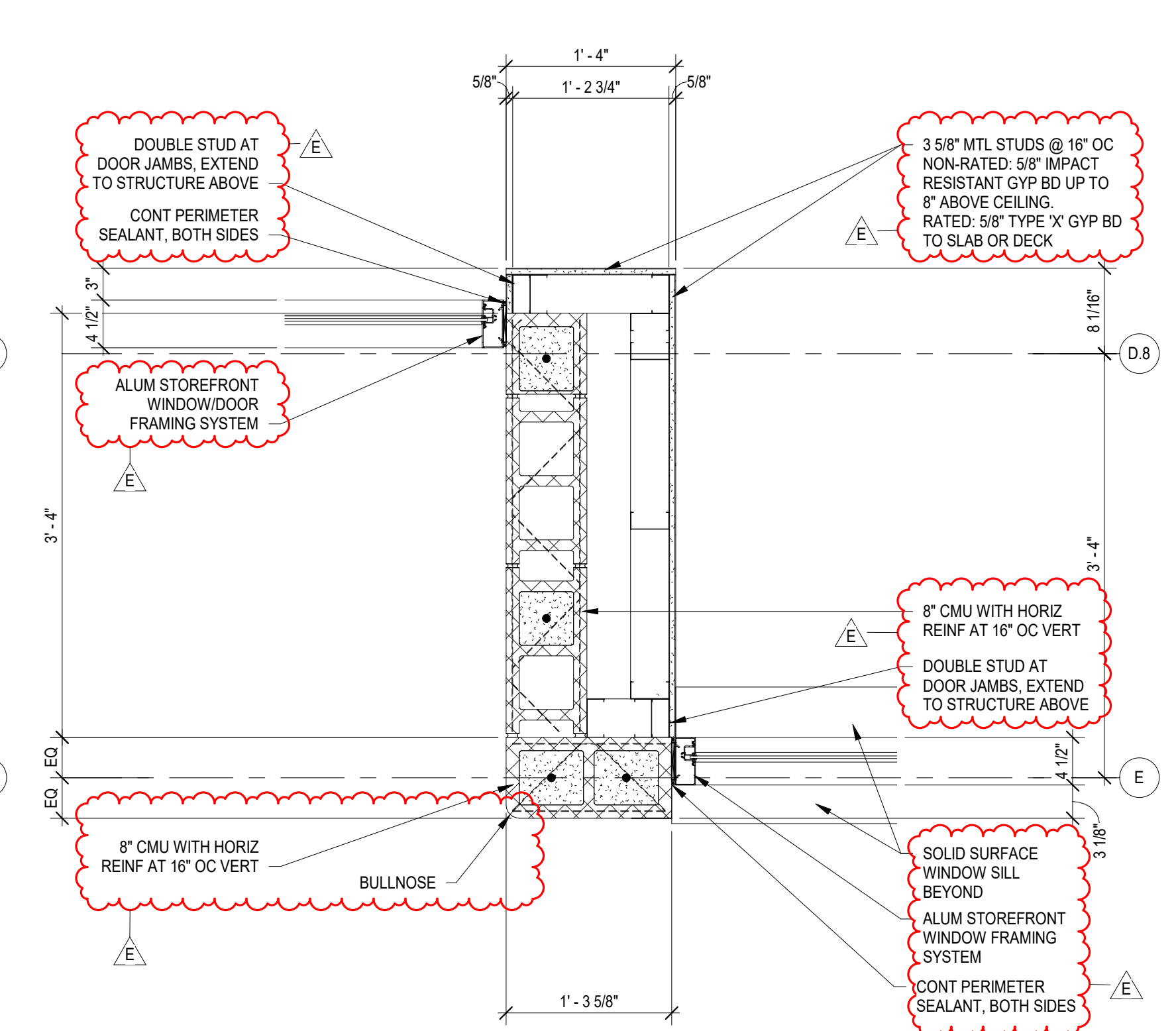
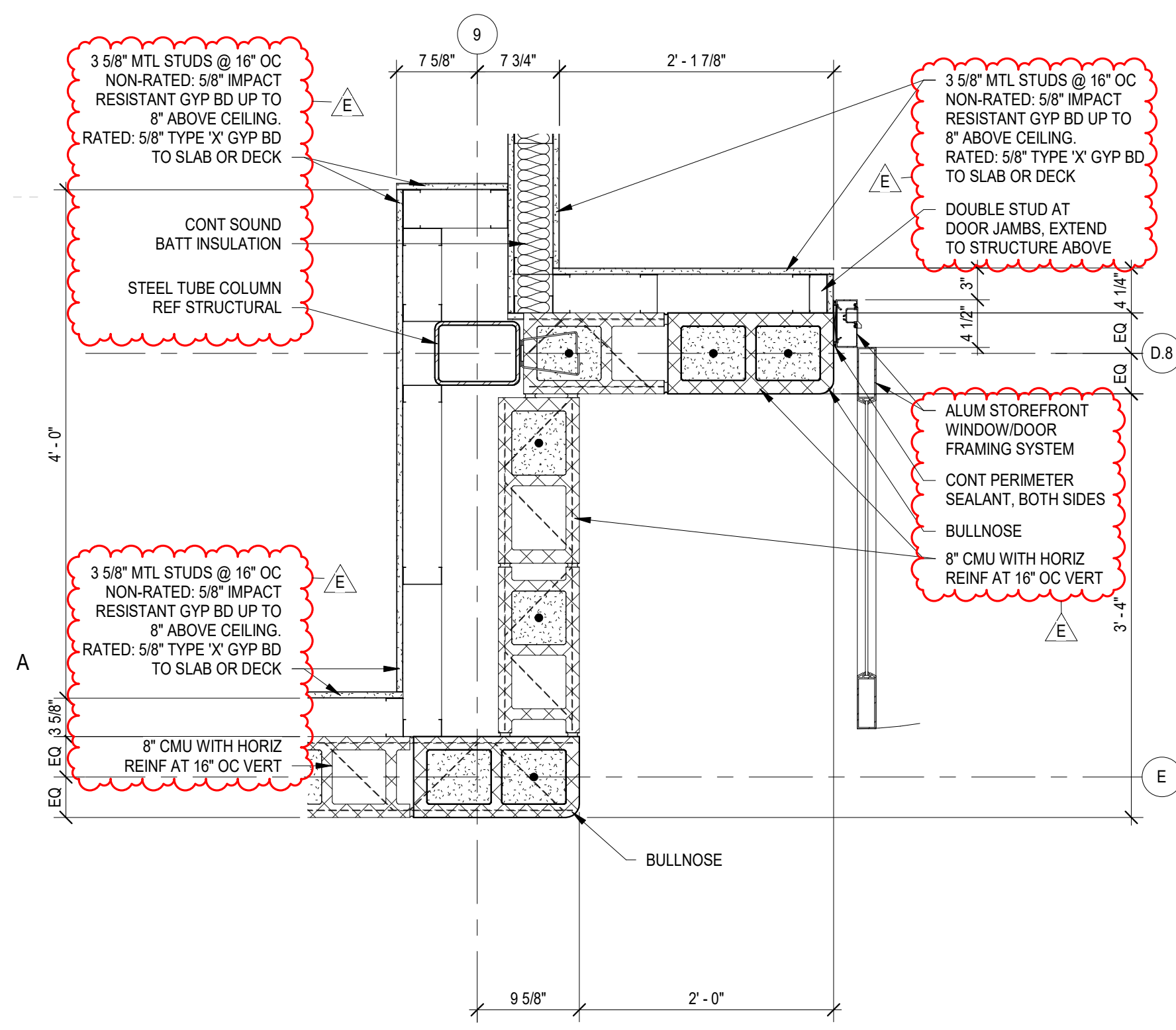
PRINCIPAL IN CHARGE: MLC
PROJECT ARCHITECT: RPC
DRAWN BY: RPC

SHEET TITLE:
PLAN DETAILS -
AREAS A/B -
MISCELLANEOUS

SHEET NO. PROJ. NO.
A605 020420.00

A605

ALL DRAWINGS, SPECIFICATIONS AND NOTES THEREOF FURNISHED BY MCMILLAN PAZDAN SMITH ARCHITECTURE ARE AND SHALL REMAIN THE PROPERTY OF MCMILLAN PAZDAN SMITH ARCHITECTURE. THESE DRAWINGS ARE TO BE USED ONLY WITHIN THE PROJECT AND NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF MCMILLAN PAZDAN SMITH ARCHITECTURE. ANY UNAUTHORIZED USE OF THESE DRAWINGS IS PROHIBITED. MCMILLAN PAZDAN SMITH ARCHITECTURE ASSUMES NO LIABILITY FOR ANY DAMAGE OR INJURY TO PERSONS OR PROPERTY ARISING FROM THE USE OF THESE DRAWINGS. THE USER OF THESE DRAWINGS SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR OBTAINING ALL NECESSARY INFORMATION FROM THE APPROPRIATE AGENCIES. THE USER OF THESE DRAWINGS SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY INFORMATION FROM THE APPROPRIATE AGENCIES. THE USER OF THESE DRAWINGS SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY INFORMATION FROM THE APPROPRIATE AGENCIES.



NOT FOR CONSTRUCTION
FOR PRICING ONLY

GENERAL NOTES

1. ALL CASEWORK IN SCIENCE LABS AND NURSE CLINIC TO BE LOCKABLE AND OF SAME SPECIES AND FINISH ACCORDING TO THE SPECIFICATIONS



CONSULTANT LOGO

CASEWORK LEGEND

- A (WIDTH SHOWN ON ELEVATIONS) x 12" DEEP x (HEIGHT SHOWN ON ELEVATIONS) WALL CABINET W/ 2 DOORS AND ADJUSTABLE SHELF
- AA (WIDTH SHOWN ON ELEVATIONS) x 12" DEEP x (HEIGHT SHOWN ON ELEVATIONS) WALL CABINET W/ 2 DOOR
- AB (WIDTH SHOWN ON ELEVATIONS) x 23" DEEP WALL CABINET W/ 2 DOORS AND ADJUSTABLE SHELF
- B (WIDTH SHOWN ON ELEVATIONS) x 23" DEEP BASE CABINET W/ 2 DOORS, 2 DRAWERS AND ADJUSTABLE SHELF. ALL CASEWORK IN SCIENCE LABS AND NURSE CLINIC TO BE LOCKABLE.
- BB (WIDTH SHOWN ON ELEVATIONS) x 23" DEEP BASE CABINET W/ 1 DOOR, 1 DRAWER
- C (WIDTH SHOWN ON ELEVATIONS) x 23" DEEP x (HEIGHT SHOWN ON ELEVATIONS) BASE CABINET W/ 4 DRAWERS. ALL CASEWORK IN SCIENCE LABS TO BE LOCKABLE.
- D (WIDTH SHOWN ON ELEVATIONS) x 12" DEEP x 30" HIGH BOOKSHELF W/ 2 ADJUSTABLE SHELVES
- E (WIDTH SHOWN ON ELEVATIONS) x 12" DEEP x (HEIGHT SHOWN ON ELEVATIONS) OPEN WALL CABINET
- EA (WIDTH SHOWN ON ELEVATIONS) x 23" DEEP x (HEIGHT SHOWN ON ELEVATIONS) OPEN WALL CABINET
- EE (WIDTH SHOWN ON ELEVATIONS) x 12" DEEP x (HEIGHT SHOWN ON ELEVATIONS) OPEN WALL CABINET W/ ADJUSTABLE SHELF
- F 36"W x 24"D x 84"H GENERAL STORAGE (PROVIDE FILLER AT BACK TO MATCH 30"D CABINETS AS REQUIRED) W/ TWO HINGED DOORS W/ LOCK, FIXED VERTICAL DIVIDER, FIVE ADJUSTABLE SHELVES EACH SIDE. ALL CASEWORK IN SCIENCE LABS TO BE LOCKABLE.
- FF 36"W x 24"D x 84"H TEACHER'S WARDROBE (PROVIDE FILLER AT BACK TO MATCH 30"D CABINETS AS REQUIRED) W/ TWO HINGED DOORS W/ LOCK, FIXED VERTICAL DIVIDER, TWO ADJUSTABLE SHELVES, TWO FIXED SHELVES, CLOSET ROD, ONE LEGAL SIZE FILE DRAWER, MIRROR, PIN TRAY.
- G (WIDTH SHOWN ON ELEVATIONS) x 23" D x 33" H SINK CABINET, TWO HINGED DOORS AND REMOVABLE SPLIT BACK. ALL CASEWORK IN SCIENCE LABS AND NURSE CLINIC TO BE LOCKABLE.
- H 72" TALL x 24" DEEP x 36" WIDE METAL SHELVING SYSTEM
- J (WIDTH SHOWN ON ELEVATIONS) x 23" D x (HEIGHT SHOWN ON ELEVATIONS) SLOPED ADA SINK CABINET W/ REMOVABLE FRONT PANEL.
- K (WIDTH SHOWN ON ELEVATIONS) x 23" D x (HEIGHT SHOWN ON ELEVATION) BASE CABINET, TWO HINGED DOORS
- L (WIDTH SHOWN ON ELEVATIONS) x 12" D x (HEIGHT SHOWN ON ELEVATIONS) BOOK CASE W/ ONE, TWO OR FOUR ADJUSTABLE SHELVES (DEPENDS ON HEIGHT) BACK AND PLASTIC LAMINATE TOP INCLUDED.
- M (WIDTH SHOWN ON ELEVATIONS) x (DEPTH SHOWN ON PLAN) x (HEIGHT SHOWN ON ELEVATIONS) FILE CABINET W/ TWO LEGAL SIZE DRAWERS.
- MM (WIDTH SHOWN ON ELEVATIONS) x (DEPTH SHOWN ON PLAN) x (HEIGHT SHOWN ON ELEVATIONS) FILE CABINET W/ TWO LOCKABLE LEGAL SIZE DRAWERS.
- N (WIDTH SHOWN ON ELEVATIONS) x 23" DEEP OPEN BASE CABINET W/ ADJUSTABLE SHELF
- O 18"W x 30" H HEIGHT SHOWN ON ELEVATIONS) BASE CABINET WITH TWO 6" DRAWERS AND ONE
- OO 18"W x 23"D x (HEIGHT SHOWN ON ELEVATIONS) BASE CABINET WITH TWO LOCKABLE 6" DRAWERS AND ONE LOCKABLE 12" DRAWER
- P (WIDTH SHOWN ON ELEVATIONS) x 23" DEEP BASE CABINET W/ 2 DOORS, 2 DRAWERS AND ADJUSTABLE SHELF
- Q (WIDTH SHOWN ON ELEVATIONS) x 20" D x (HEIGHT SHOWN ON ELEVATIONS) 12" CLEAR WOOD MAIL CUBES
- R DOUBLE FACED DEMONSTRATION FUME HOOD, 60"W x 56"H x 35 1/2"D AND CEILING ENCLOSURE. INCLUDE ONE COLD WATER GOOSENECK FAUCET, ONE DOUBLE GAS COOK, TWO DUPLEX (GRC) RECEPTACLES, ONE VAPOR TIGHT INCANDESCENT LAMP AND SWITCH, ONE EPOXY RESIN SINK, 12" x 8" x 6", WITH 1" THICK EPOXY RESIN TOP. SIDES ARE SOLID FOR INSTALLATION BETWEEN ROOMS. EXHAUST BY HVAC CONTRACTOR. AIR MASTER SYSTEMS CORP EH-211-60 ON DOUBLE FACED BASE CABINET WITH TWO LOCKABLE HINGED DOORS. ALL CASEWORK IN SCIENCE LABS TO BE LOCKABLE.
- S 44" TALL x 45" WIDE x 18" DEEP ACID CABINET W/ 1 ADJUSTABLE SHELF
- T 12" DEEP LOCKABLE GLASS DOOR WALL CABINET W/ ADJUSTABLE SHELVES
- V 24" WIDE WALL CABINET W/ SAFETY GLASSES STORAGE
- W 12" DEEP WALL CABINET - FIRST AID
- X CORNER WALL CABINET
- XX BASE CORNER CABINET
- Y 28"W x 27"D x 84"H EMERGENCY SAFETY CENTER, ADA COMPLIANT W/ REMOVABLE ACCESS PANEL, ONE FIXED SHELF, ONE STAINLESS STEEL DECK MOUNTED EYEWASH FOUNTAIN, ONE EMERGENCY SHOWER HEAD W/ CALL CHAIN, PROVIDED AND INSTALLED BY CASEWORK PROVIDER.
- ZZ (WIDTH SHOWN ON PLANS) x (DEPTH SHOWN ON PLANS) x 84"H SHELVING UNIT W/ SIX ADJUSTABLE SOLID PINE SHELVES W/ METAL EDGES

MARKER BOARD LEGEND

TAG	DESCRIPTION	TOTAL IN PROJECT
MB-1	6'-0" W X 4'-0" H MARKER BOARD W/ MARKER TRAY	84
MB-2	6'-0" W X 4'-0" H MARKER BOARD W/ MARKER TRAY	27

NOTE:
1. ALL BOTTOM OF MARKER BOARDS MOUNTED AT 2'-5" AFF UNO.
2. ALL TOPS OF MARKER BOARDS LOCATED IN CORRIDORS TO BE MOUNTED AT 7'-4" AFF UNO.

TACK BOARD LEGEND

TAG	DESCRIPTION	TOTAL IN PROJECT
TB-1	6'-0" W X 4'-0" H TACK BOARD	7

NOTE:
1. ALL BOTTOM OF TACK BOARDS MOUNTED AT 2'-5" AFF UNO.
2. ALL TOPS OF TACK BOARDS LOCATED IN CORRIDORS TO BE MOUNTED AT 7'-4" AFF UNO.

SPARTANBURG SCHOOL DISTRICT FIVE

JAMES F. BYRNES HIGH SCHOOL
PHASE 2 ACADEMIC WING ADDITION

150 E. MAIN STREET
DUNCAN, SC 29504

SHEET ISSUE:

NO.	DATE	DESCRIPTION	BY
B	02/28/22	DD PRICING	MLC
C	06/01/22	GMP SET	MLC
D	06/20/22	ADDENDUM NO. 1	MLC
E	06/24/22	ADDENDUM NO. 2	MLC

ADDENDUM NO. 2 06/24/22

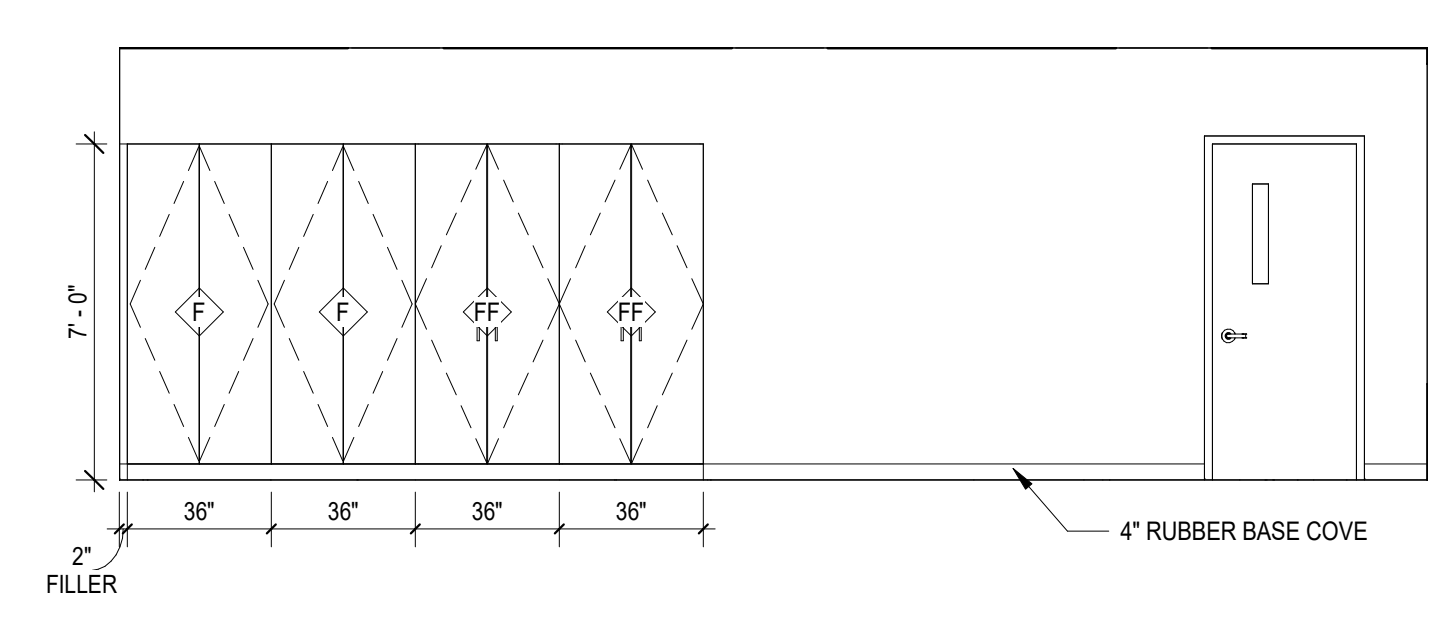
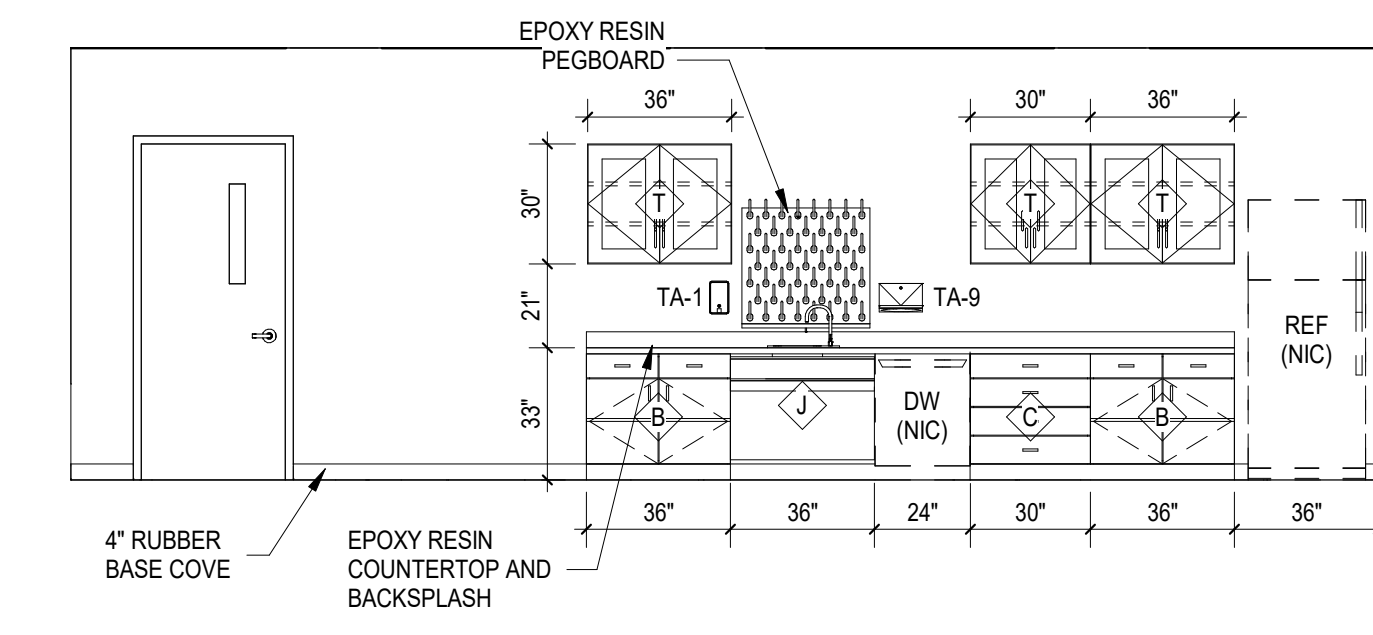
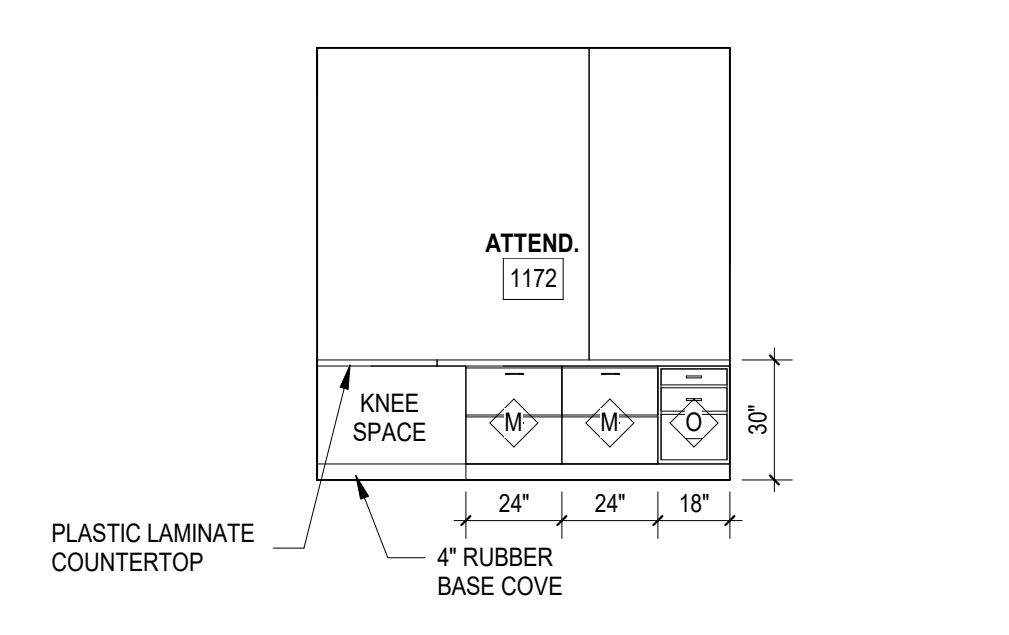
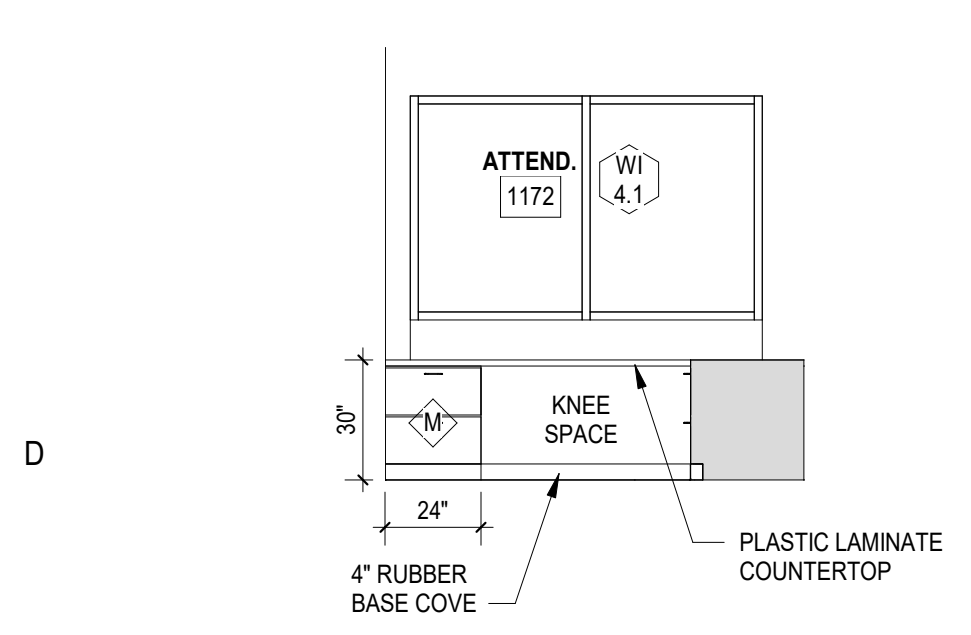
PRINCIPAL IN CHARGE: MLC
PROJECT ARCHITECT: RPC
DRAWN BY: SEA

SHEET TITLE:
INTERIOR ELEVATIONS

SHEET NO. PROJ. NO. 020420.00

A700

NOT FOR CONSTRUCTION
FOR PRICING ONLY

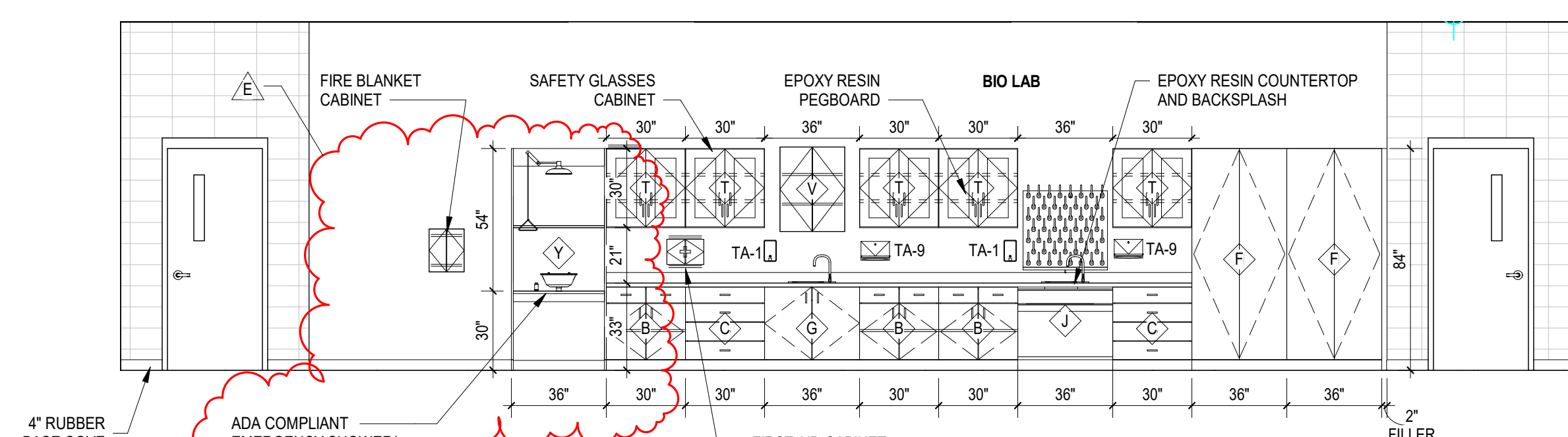
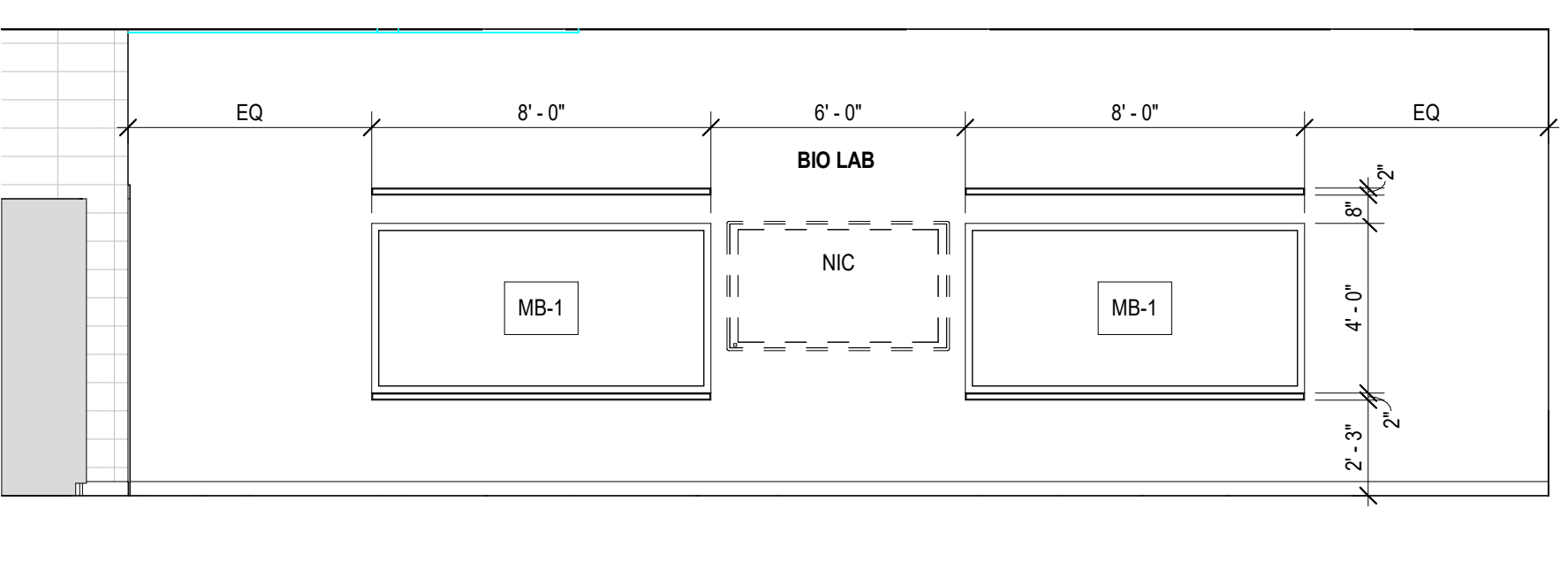
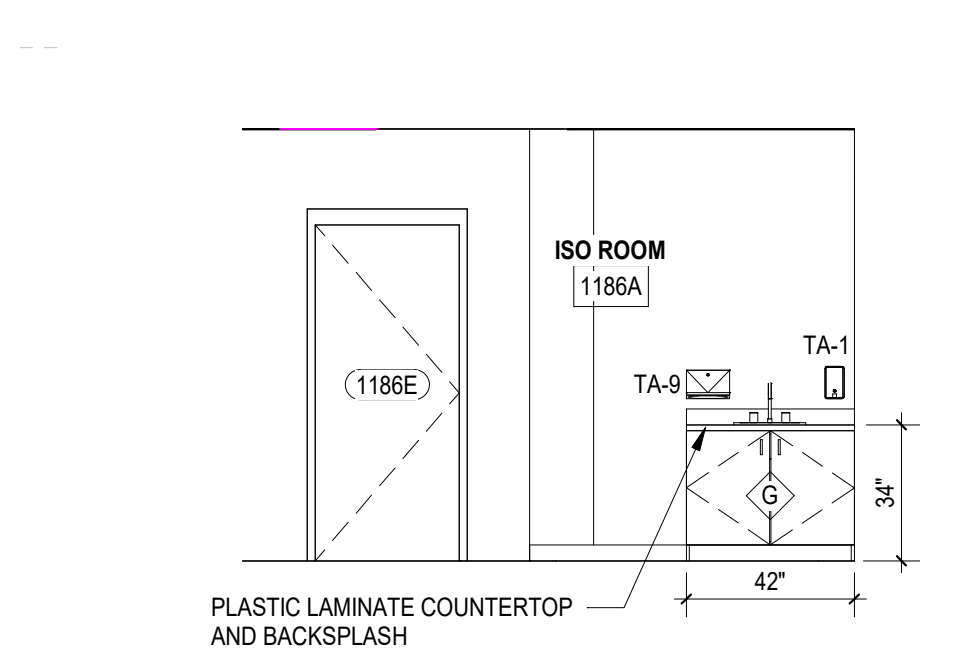


D1 1100 LEVEL - ATTENDANCE 1172 - EAST
A700 1/4" = 1'-0"

D2 1100 LEVEL - ATTENDANCE 1172 - SOUTH
A700 1/4" = 1'-0"

D3 1100 LEVEL - BIO PREP - TYPICAL ELEVATION EAST
A700 1/4" = 1'-0"

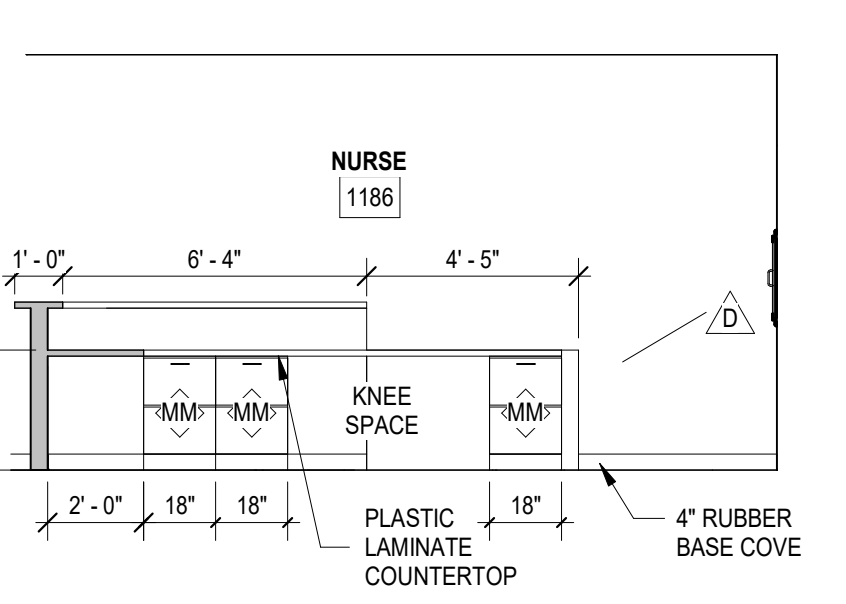
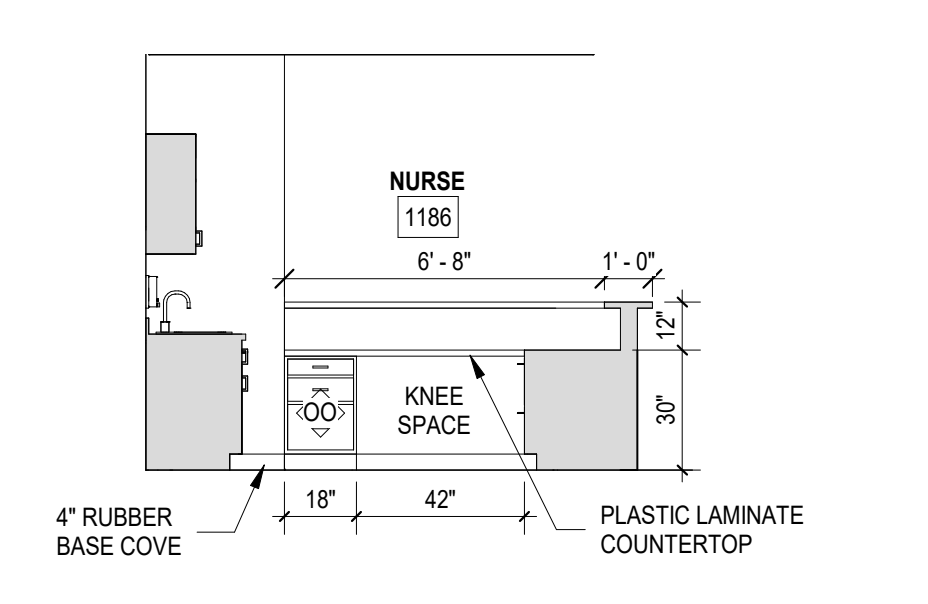
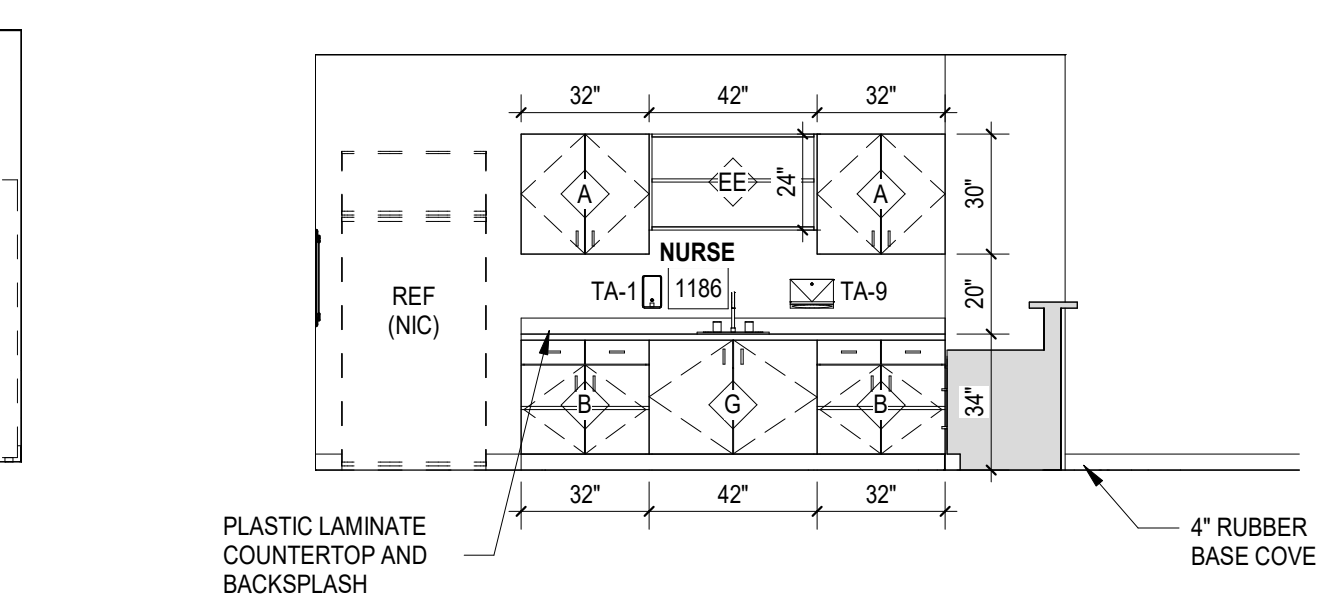
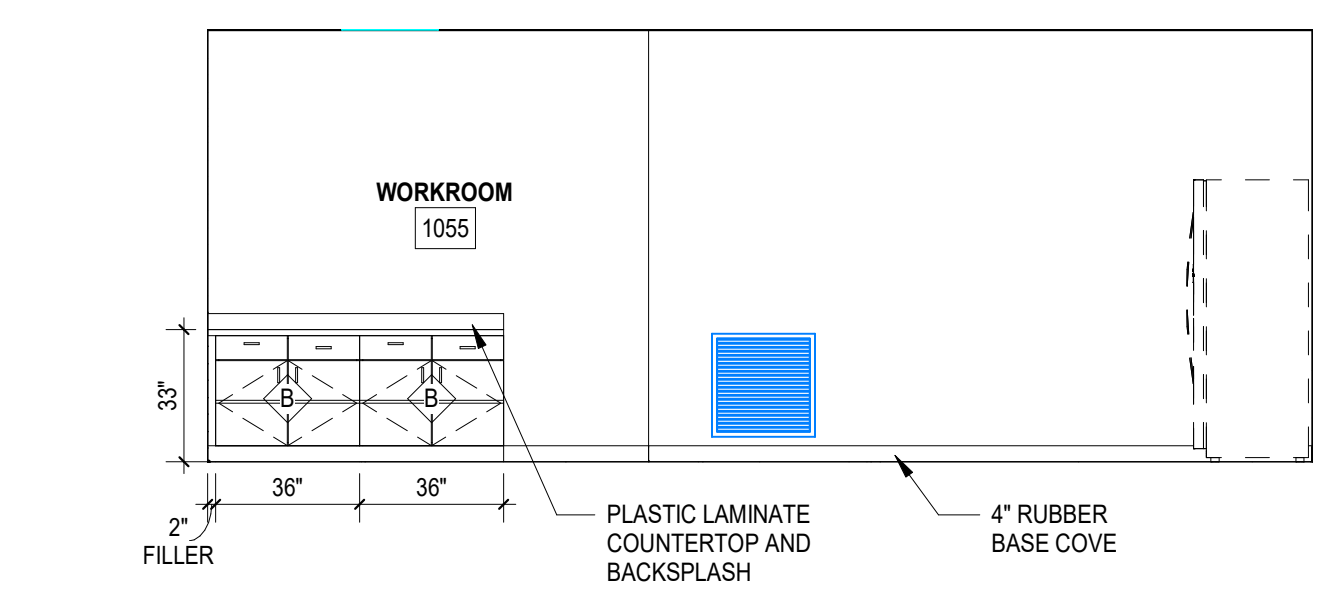
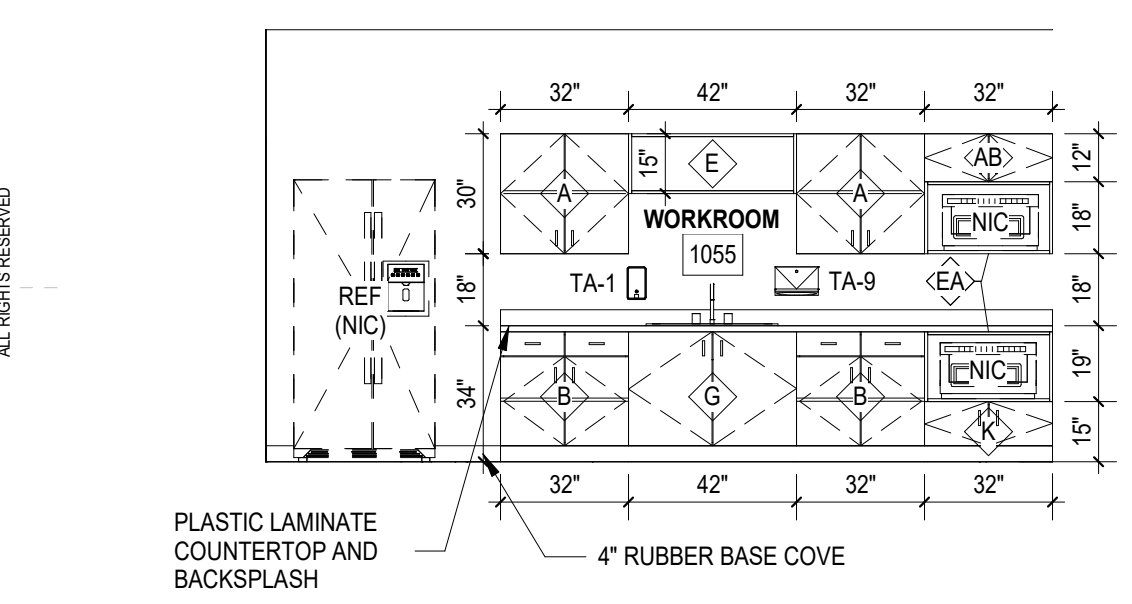
D4 1100 LEVEL - BIO PREP - TYPICAL ELEVATION WEST
A700 1/4" = 1'-0"



C1 1100 LEVEL - ISO 1186A
A700 1/4" = 1'-0"

C2 1100 LEVEL - BIO LAB TEACHING WALL - TYPICAL ELEVATION
A700 1/4" = 1'-0"

C3 1100 LEVEL - BIO LAB - TYPICAL ELEVATION
A700 1/4" = 1'-0"



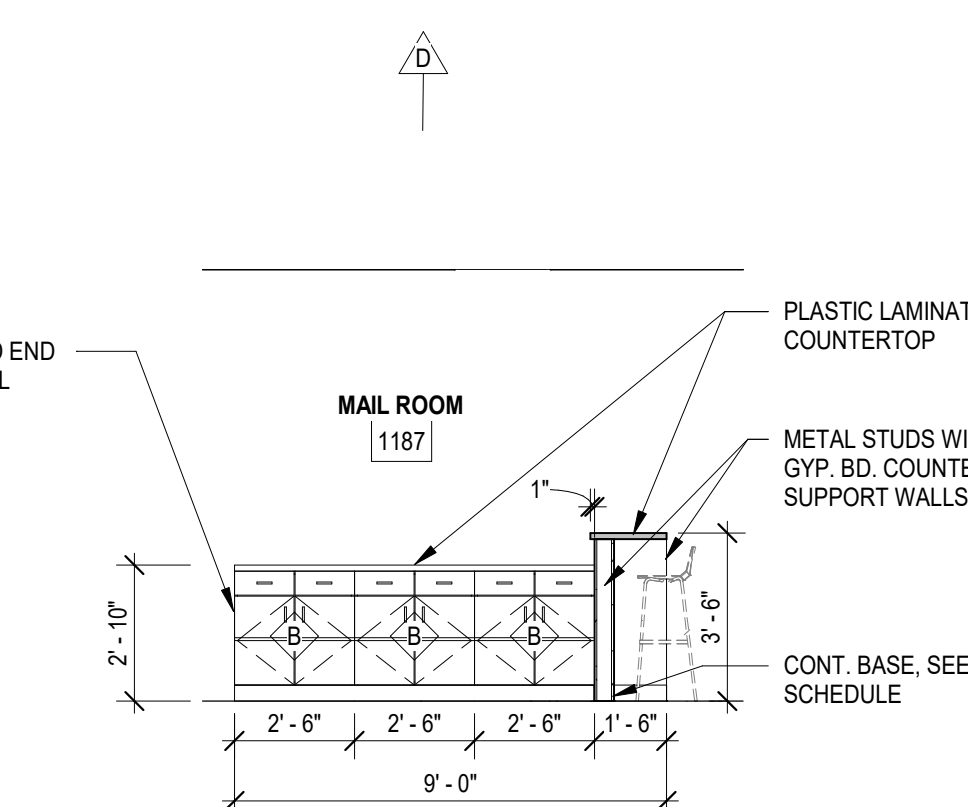
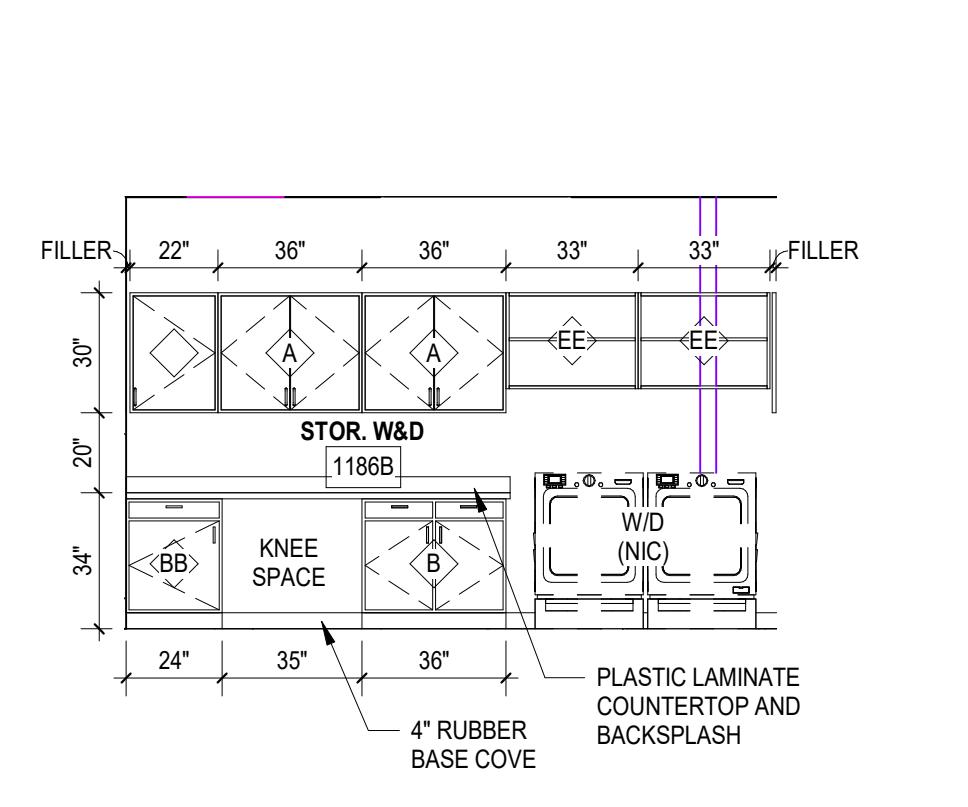
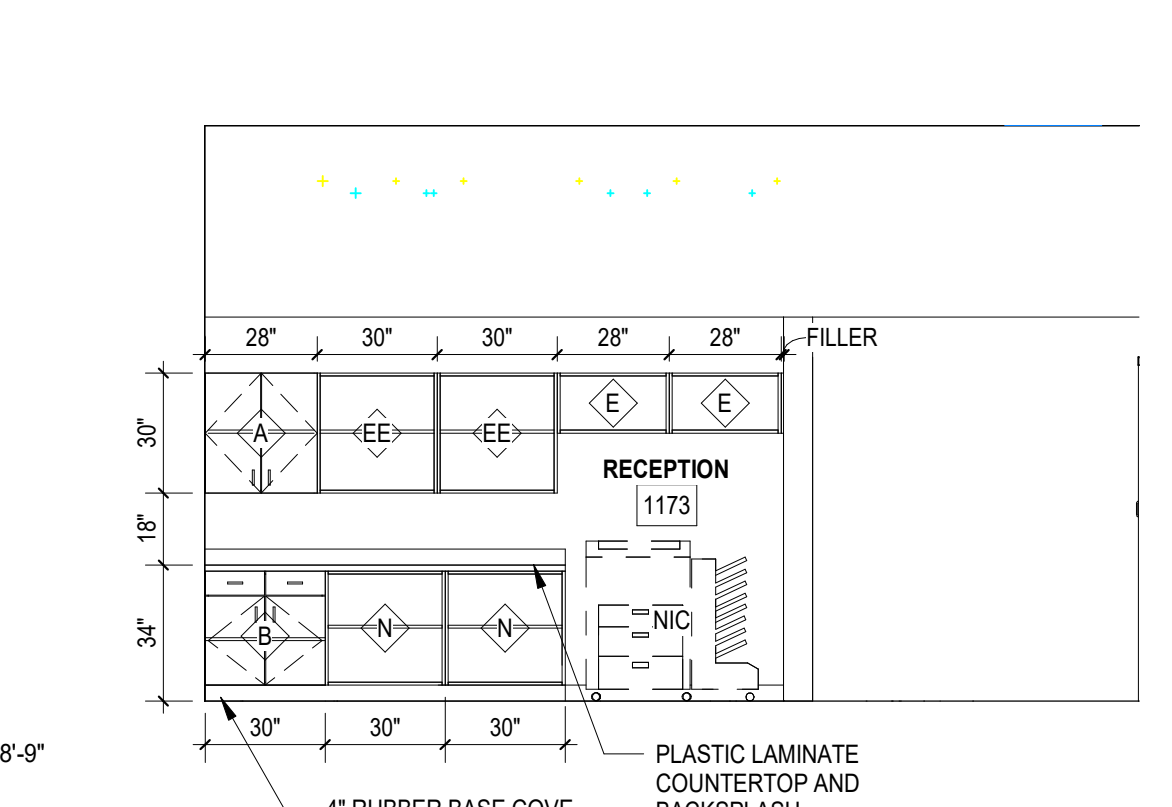
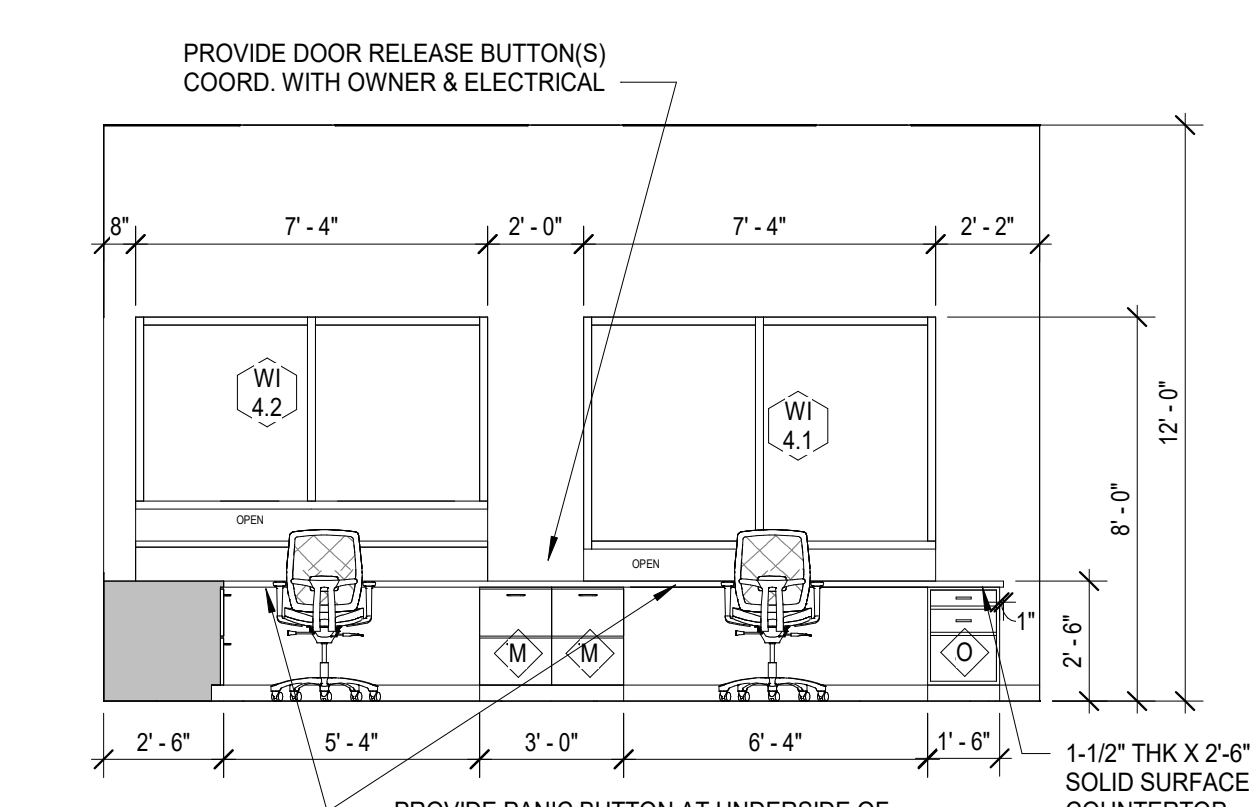
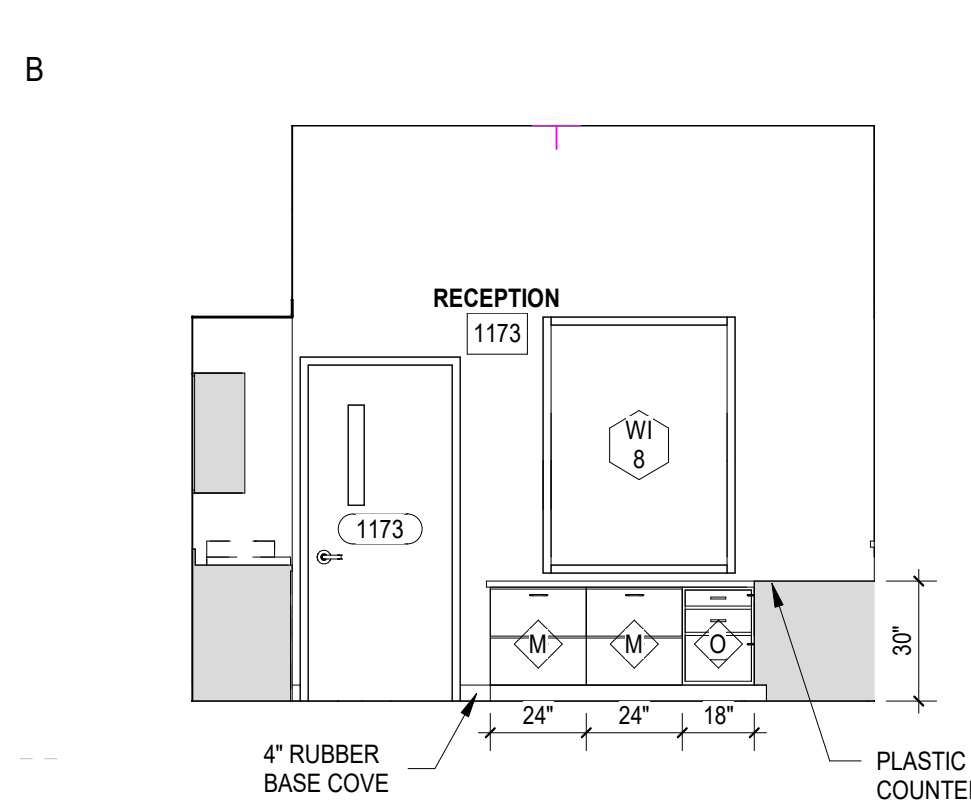
B1B 1000 LEVEL - WORKROOM 1055 - NORTH
A700 1/4" = 1'-0"

B2B 1000 LEVEL - WORKROOM 1055 - EAST
A700 1/4" = 1'-0"

B3B 1100 LEVEL - NURSE 1186 - NORTH
A700 1/4" = 1'-0"

B4B 1100 LEVEL - NURSE 1186 - EAST
A700 1/4" = 1'-0"

B5B 1100 LEVEL - NURSE 1186 - SOUTH
A700 1/4" = 1'-0"



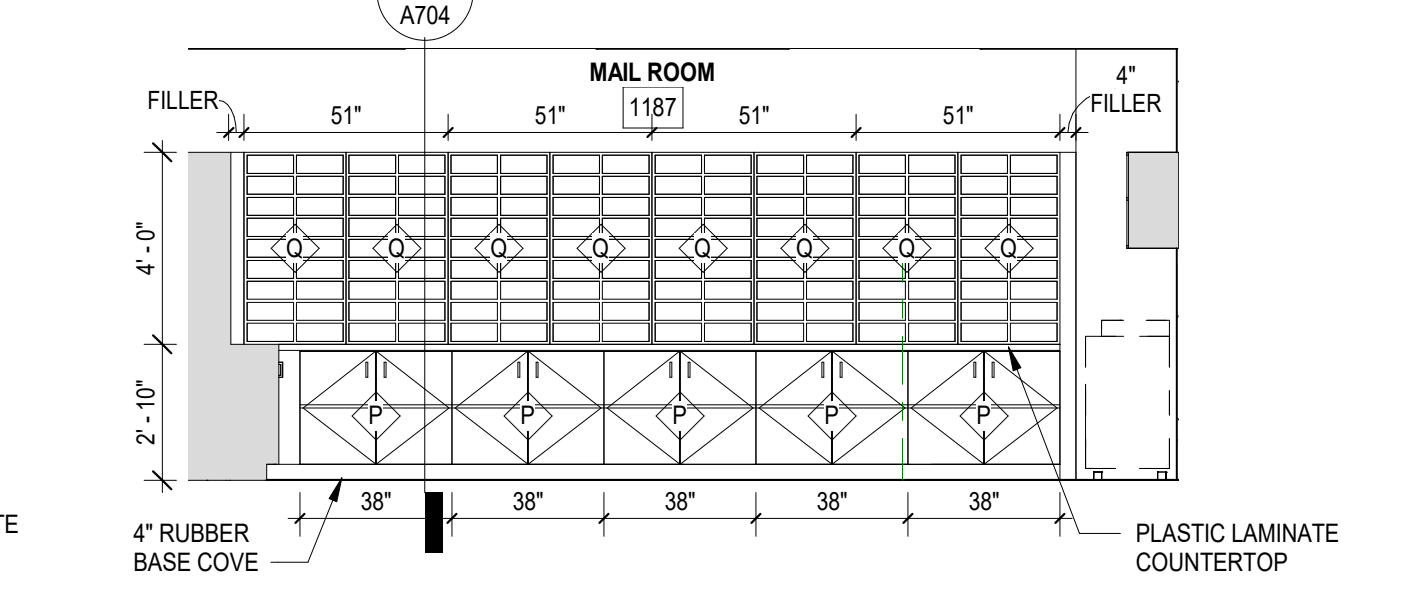
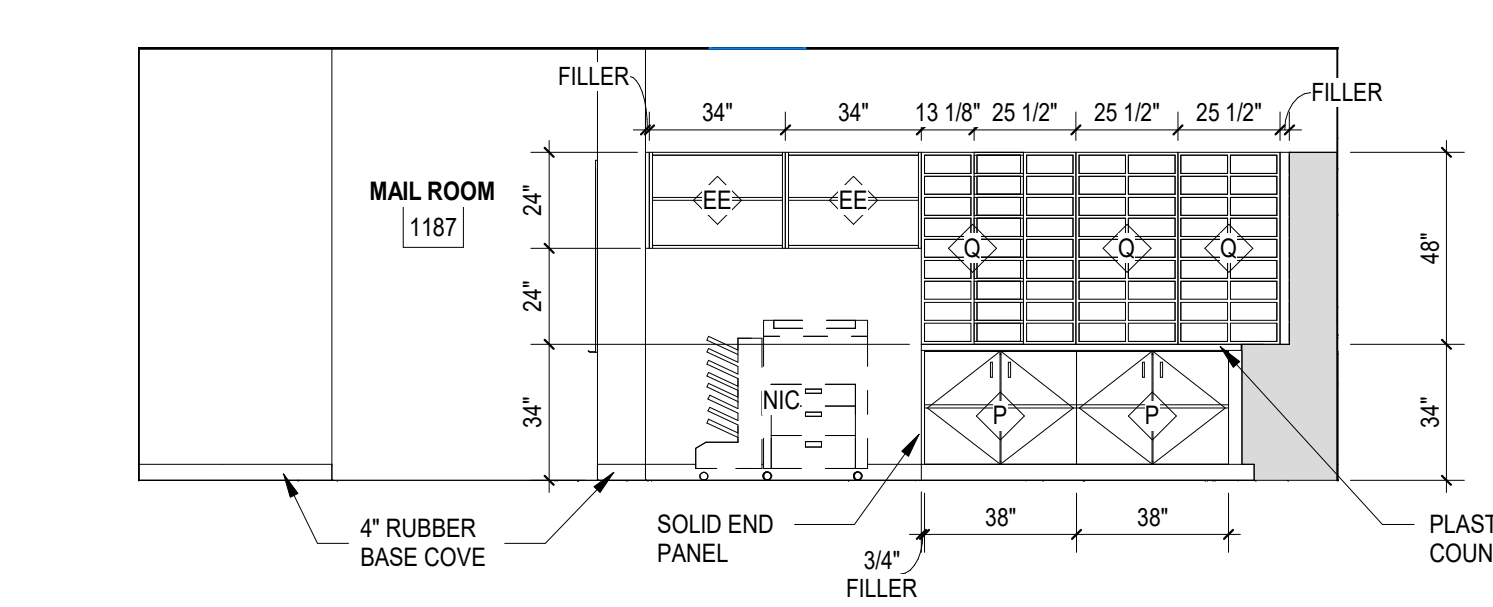
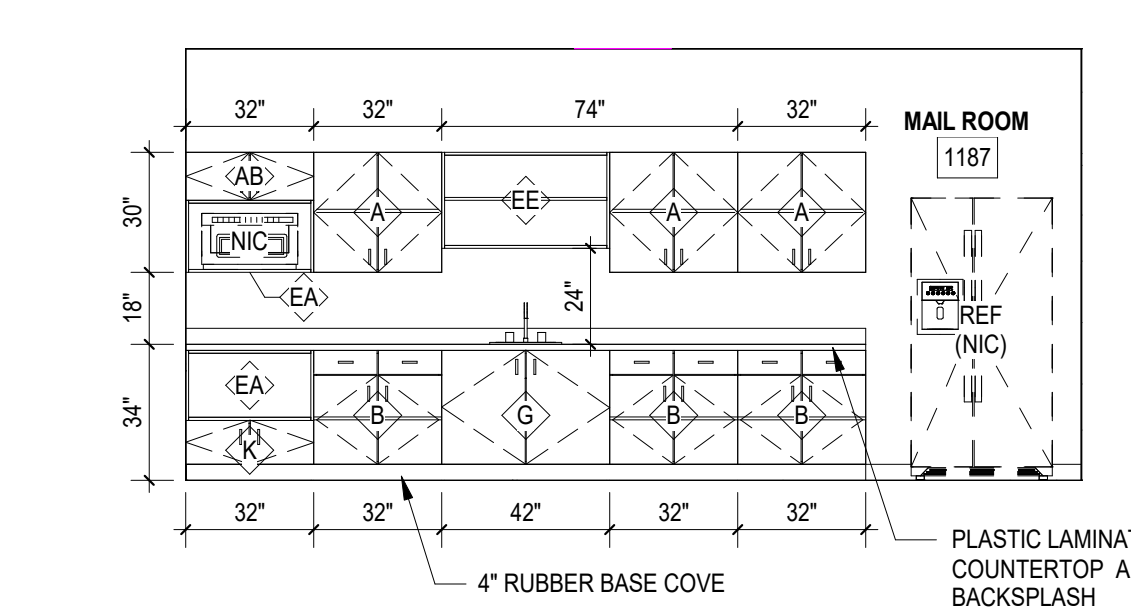
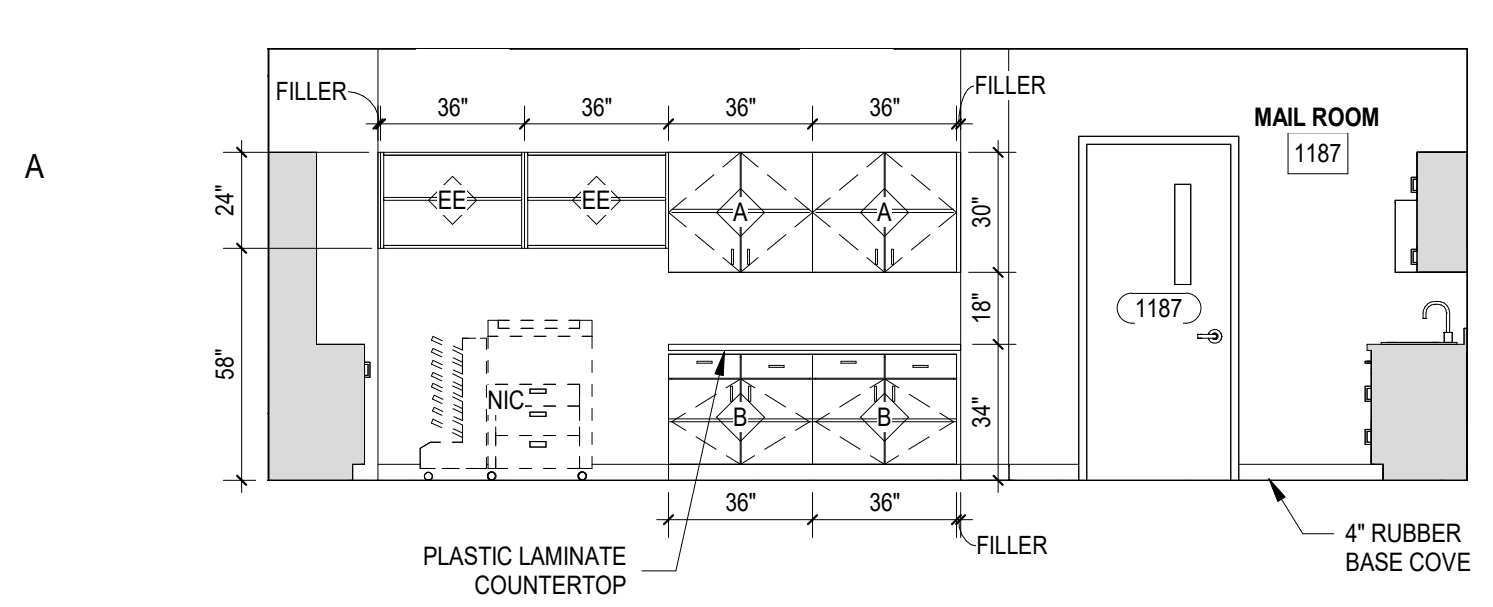
B1A 1100 LEVEL - RECEPTION 1173 - NORTH
A700 1/4" = 1'-0"

B2 1100 LEVEL - RECEPTION DESK - EAST
A700 1/4" = 1'-0"

B3A 1100 LEVEL - RECEPTION 1173 - WEST
A700 1/4" = 1'-0"

B4 1100 LEVEL - STORAGE & W/D 1186B - SOUTH
A700 1/4" = 1'-0"

B5 MAIL ROOM ISLAND ELEVATION
A700 1/4" = 1'-0"



A1 1100 LEVEL - MAILROOM 1187 - NORTH
A700 1/4" = 1'-0"

A2 1100 LEVEL - MAILROOM 1187 - EAST
A700 1/4" = 1'-0"

A3 1100 LEVEL - MAILROOM 1187 - SOUTH
A700 1/4" = 1'-0"

A4 1100 LEVEL - MAILROOM 1187 - WEST
A700 1/4" = 1'-0"

GENERAL NOTES

1. ALL CASEWORK IN SCIENCE LABS AND NURSE CLINIC TO BE LOCKABLE AND OF SAME SPECIES AND FINISH ACCORDING TO THE SPECIFICATIONS

CASEWORK LEGEND

- A (WIDTH SHOWN ON ELEVATIONS) x 12" DEEP x (HEIGHT SHOWN ON ELEVATIONS) WALL CABINET W/ 2 DOORS AND ADJUSTABLE SHELF
- AA (WIDTH SHOWN ON ELEVATIONS) x 12" DEEP x (HEIGHT SHOWN ON ELEVATIONS) WALL CABINET W/ 2 DOOR
- AB (WIDTH SHOWN ON ELEVATIONS) x 23" DEEP WALL CABINET W/ 2 DOORS AND ADJUSTABLE SHELF
- B (WIDTH SHOWN ON ELEVATIONS) x 23" DEEP BASE CABINET W/ 2 DOORS, 2 DRAWERS AND ADJUSTABLE SHELF. ALL CASEWORK IN SCIENCE LABS AND NURSE CLINIC TO BE LOCKABLE
- BB (WIDTH SHOWN ON ELEVATIONS) x 23" DEEP BASE CABINET W/ 1 DOOR, 1 DRAWER
- C (WIDTH SHOWN ON ELEVATIONS) x 23" DEEP x (HEIGHT SHOWN ON ELEVATIONS) BASE CABINET W/ 4 DRAWERS. ALL CASEWORK IN SCIENCE LABS TO BE LOCKABLE.
- D (WIDTH SHOWN ON ELEVATIONS) x 12" DEEP x 38" HIGH BOOKSHELF W/ 2 ADJUSTABLE SHELVES
- E (WIDTH SHOWN ON ELEVATIONS) x 12" DEEP x (HEIGHT SHOWN ON ELEVATIONS) OPEN WALL CABINET
- EA (WIDTH SHOWN ON ELEVATIONS) x 23" DEEP x (HEIGHT SHOWN ON ELEVATIONS) OPEN WALL CABINET
- EE (WIDTH SHOWN ON ELEVATIONS) x 12" DEEP x (HEIGHT SHOWN ON ELEVATIONS) OPEN WALL CABINET W/ ADJUSTABLE SHELF
- F 38"W x 24"D x 84"H GENERAL STORAGE (PROVIDE FILLER AT BACK TO MATCH 30"D CABINETS, WHERE NECESSARY W/ TWO HINGED DOORS WITH LOCKS, FIXED VERTICAL DIVIDER, FIVE ADJUSTABLE SHELVES EACH SIDE. ALL CASEWORK IN SCIENCE LABS TO BE LOCKABLE.
- FF 38"W x 24"D x 84"H TEACHERS WARDROBE (PROVIDE FILLER AT BACK TO MATCH 30"D CABINETS AS REQUIRED W/ TWO HINGED DOORS W/ LOCK, FIXED VERTICAL DIVIDER, TWO ADJUSTABLE SHELVES, TWO FIXED SHELVES, CLOSET ROD, ONE LEGAL SIZE FILE DRAWER, MIRROR, PIN TRAY.
- G (WIDTH SHOWN ON ELEVATIONS) x 27" D x 33" H SINK CABINET, TWO HINGED DOORS AND REMOVABLE SPLIT BACK. ALL CASEWORK IN SCIENCE LABS AND NURSE CLINIC TO BE LOCKABLE.
- H 12" TALL x 24" DEEP x 36" WIDE METAL SHELVING SYSTEM
- J (WIDTH SHOWN ON ELEVATIONS) x 23" D x (HEIGHT SHOWN ON ELEVATIONS) SLOPED ADA SINK CABINET W/ REMOVABLE FRONT PANEL.
- K (WIDTH SHOWN ON ELEVATIONS) x 23" D x (HEIGHT SHOWN ON ELEVATIONS) BASE CABINET, TWO HINGED DOORS
- L (WIDTH SHOWN ON ELEVATIONS) x 12" D x (HEIGHT SHOWN ON ELEVATIONS) BOOK CASE W/ ONE, TWO OR FOUR ADJUSTABLE SHELVES (DEPENDS ON HEIGHT) BACK AND PLASTIC LAMINATE TOP INCLUDED.
- M (WIDTH SHOWN ON ELEVATIONS) x (DEPTH SHOWN ON PLAN) x (HEIGHT SHOWN ON ELEVATIONS) FILE CABINET W/ TWO LEGAL SIZE DRAWERS.
- MM (WIDTH SHOWN ON ELEVATIONS) x (DEPTH SHOWN ON PLAN) x (HEIGHT SHOWN ON ELEVATIONS) FILE CABINET W/ TWO LOCKABLE LEGAL SIZE DRAWERS.
- N (WIDTH SHOWN ON ELEVATIONS) x 23" DEEP OPEN BASE CABINET W/ ADJUSTABLE SHELF
- O 18"W x 30"D (HEIGHT SHOWN ON ELEVATIONS) BASE CABINET WITH TWO 6" DRAWERS AND ONE
- OO 18"W x 23"D (HEIGHT SHOWN ON ELEVATIONS) BASE CABINET WITH TWO LOCKABLE 6" DRAWERS AND ONE LOCKABLE 12" DRAWER
- P (WIDTH SHOWN ON ELEVATIONS) x 23" DEEP BASE CABINET W/ 2 DOORS, 2 DRAWERS AND ADJUSTABLE SHELF
- Q (WIDTH SHOWN ON ELEVATIONS) x 20"D x (HEIGHT SHOWN ON ELEVATIONS) 12" DEEP WOOD WALL CUBICLES
- R DOUBLE FACED DEMONSTRATION FUME HOOD, 60"W x 36" T x 35 1/2" D AND CEILING ENCLOSURE. INCLUDE ONE COLD WATER GOOSENECK FAUCET, ONE DOUBLE GAS COOK, TWO DUPLEX (GFCI) RECEPTACLES, ONE VAPOR TIGHT INCANDESCENT LAMP AND SWITCH, ONE EPOXY RESIN SINK, 12" x 8" x 6", WITH 1" THICK EPOXY RESIN TOP. SIDES ARE SOLID FOR INSTALLATION BETWEEN ROOMS. EXHAUST BY HVAC CONTRACTOR. AIR MASTER SYSTEMS CORP EHV-211-60 ON DOUBLE FACED BASE CABINET WITH TWO LOCKABLE HINGED DOORS. ALL CASEWORK IN SCIENCE LABS TO BE LOCKABLE.
- S 44" TALL x 43" WIDE x 18" DEEP ACID CABINET W/ 1 ADJUSTABLE SHELF
- T 12" DEEP LOCKABLE GLASS DOOR WALL CABINET W/ ADJUSTABLE SHELVES
- V 24" WIDE WALL CABINET W/ SAFETY GLASSES STORAGE
- W 12" DEEP WALL CABINET - FIRST AID
- X CORNER WALL CABINET
- XX BASE CORNER CABINET
- Y 36"W x 23"D x 84"H EMERGENCY SAFETY CENTER, ADA COMPLIANT W/ REMOVABLE ACCESS PANEL, ONE FIXED SHELF, ONE STAINLESS STEEL DECK MOUNTED EYEWASH FOUNTAIN, ONE EMERGENCY SHOWER HEAD W/ FULL CHAIN, PROVIDED AND INSTALLED BY CASEWORK PROVIDER.
- ZZ (WIDTH SHOWN ON PLANS) x (DEPTH SHOWN ON PLANS) x 84"H SHELVING UNIT W/ SIX ADJUSTABLE SOLID PINE SHELVES W/ METAL EDGES

MARKER BOARD LEGEND

TAG	DESCRIPTION	TOTAL IN PROJECT
MB-1	8'-0"W X 4'-0"H MARKER BOARD W/ MARKER TRAY	84
MB-2	6'-0"W X 4'-0"H MARKER BOARD W/ MARKER TRAY	27

NOTE:
 1. ALL BOTTOM OF MARKER BOARDS MOUNTED AT 2' - 5" AFF UNO.
 2. ALL TOPS OF MARKER BOARDS LOCATED IN CORRIDORS TO BE MOUNTED AT 7' - 4" AFF UNO.

TACK STRIP LEGEND

TAG	DESCRIPTION	TOTAL IN PROJECT
TS-1	8'-0" LONG TACK STRIP	96
TS-2	6'-0" LONG TACK STRIP	32

TACK BOARD LEGEND

TAG	DESCRIPTION	TOTAL IN PROJECT
TB-1	6'-0"W X 4'-0"H TACK BOARD	7

NOTE:
 1. ALL BOTTOM OF TACK BOARDS MOUNTED AT 2' - 5" AFF UNO.
 2. ALL TOPS OF TACK BOARDS LOCATED IN CORRIDORS TO BE MOUNTED AT 7' - 4" AFF UNO.

SHEET ISSUE:

NO.	DATE	DESCRIPTION	BY
C	06/01/22	GMP SET	MLC
D	06/20/22	ADDENDUM NO. 1	MLC
E	06/24/22	ADDENDUM NO. 2	MLC

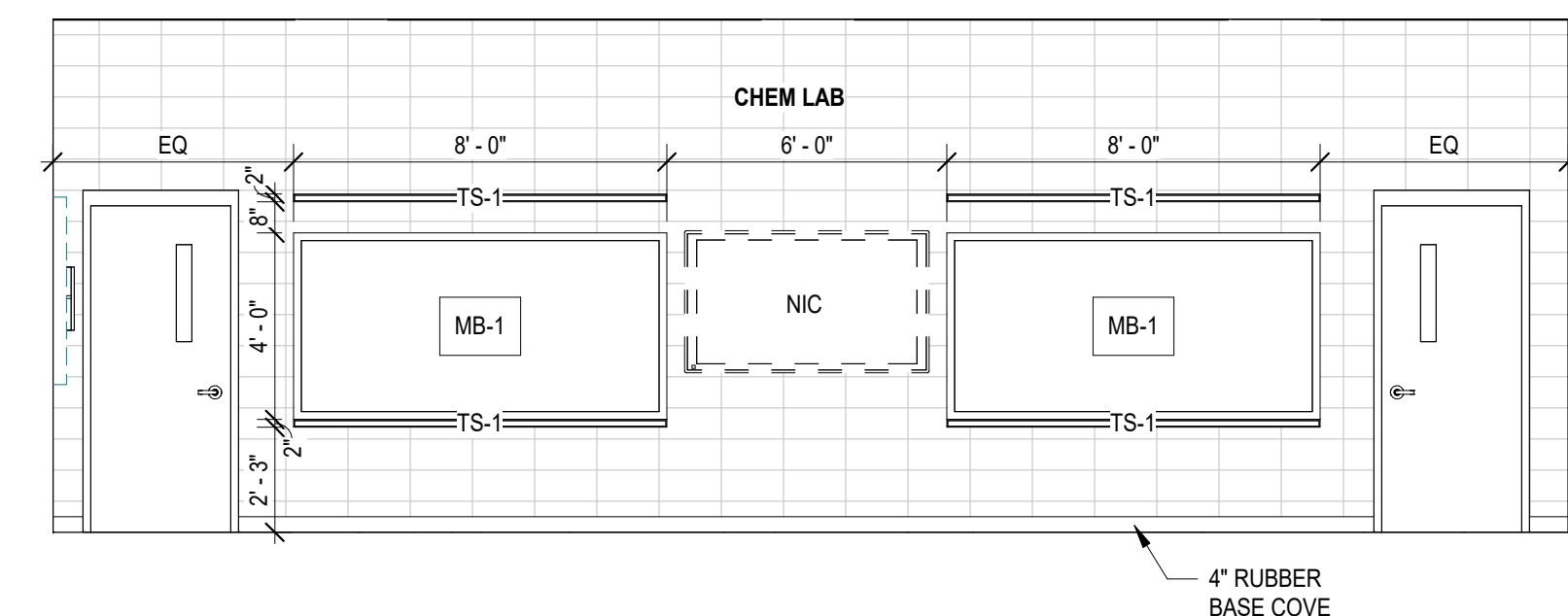
ADDENDUM NO. 2
 06/24/22

PRINCIPAL IN CHARGE: MLC
 PROJECT ARCHITECT: RPC
 DRAWN BY: SEA

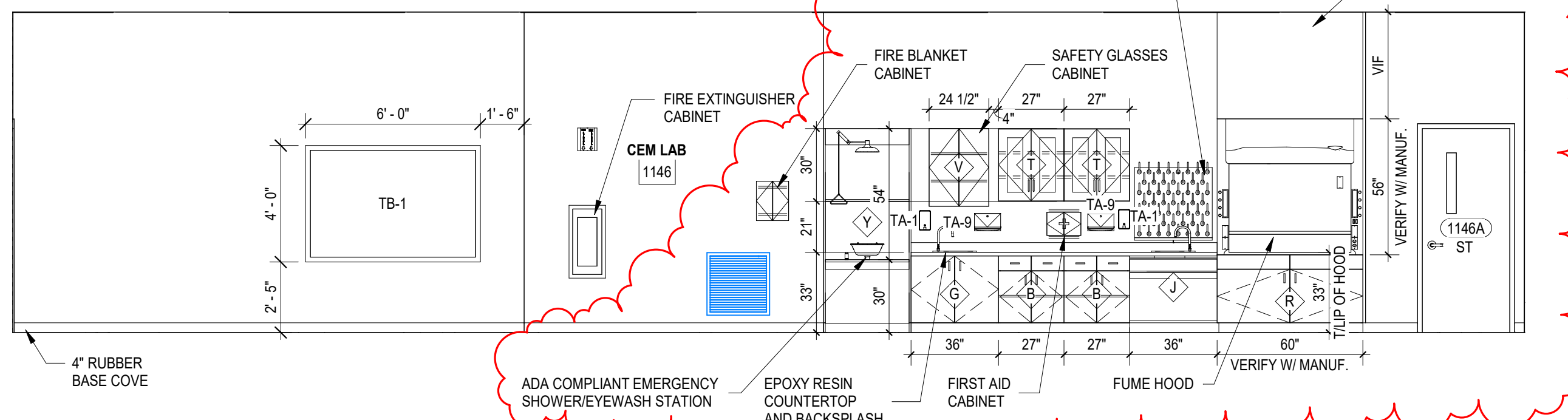
SHEET TITLE: INTERIOR ELEVATIONS

SHEET NO. PROJ. NO. 020420.00

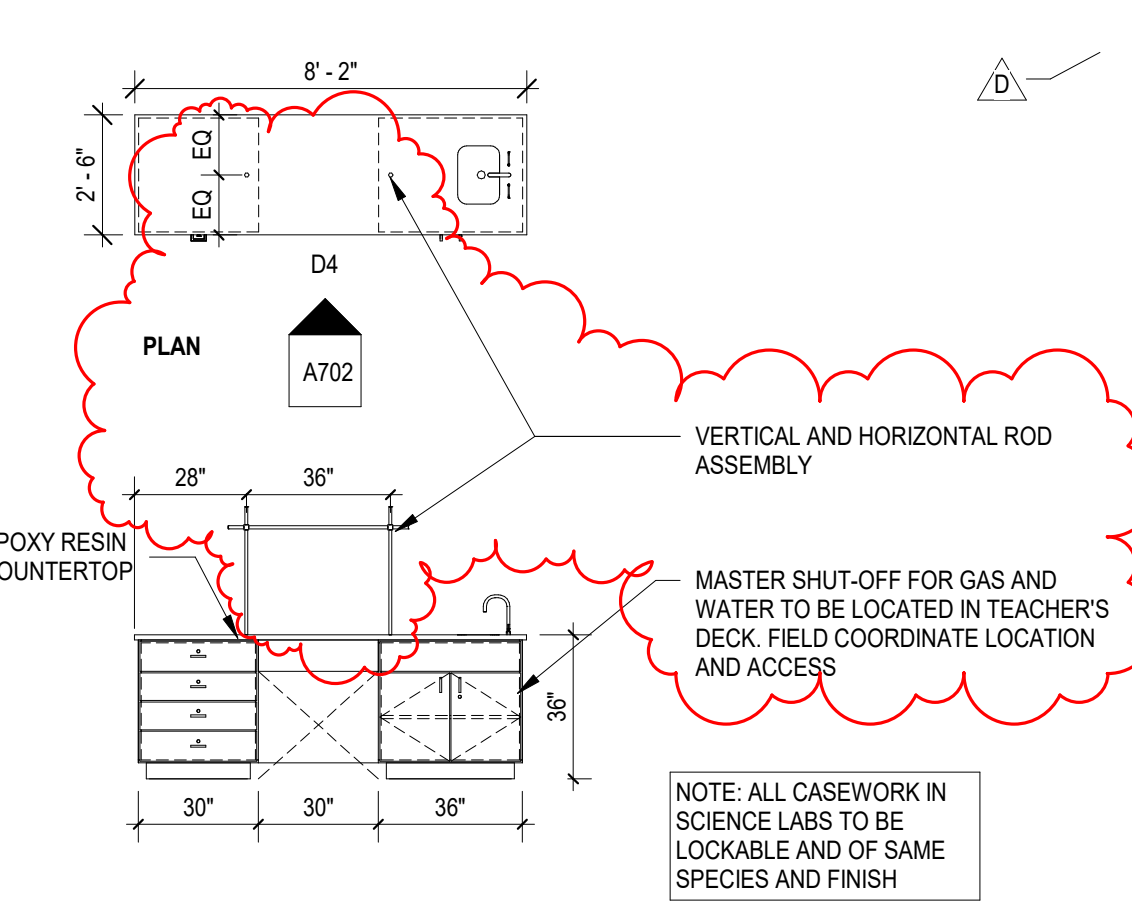
A702



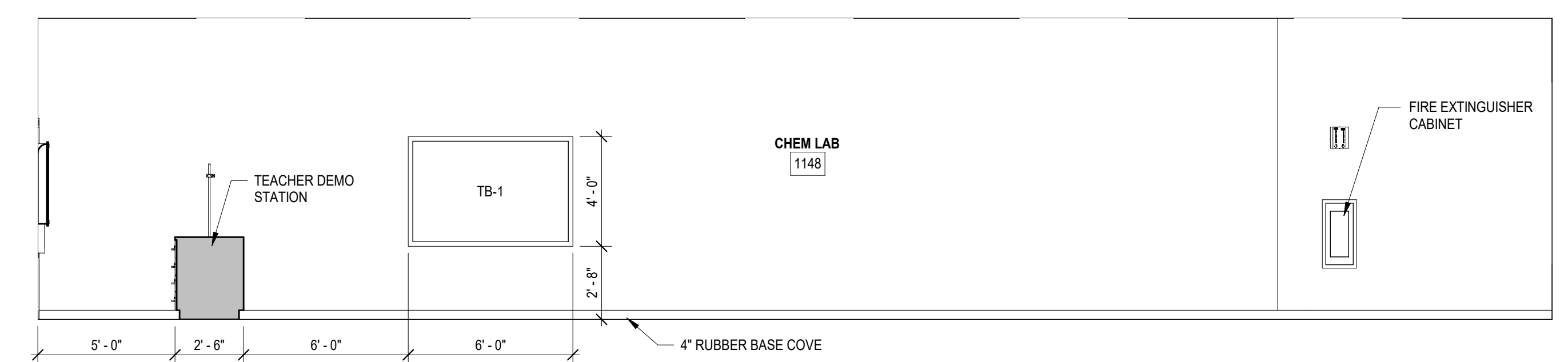
D1 CHEM LAB TEACHING WALL - TYPICAL ELEVATION
 A702 1/4" = 1'-0"



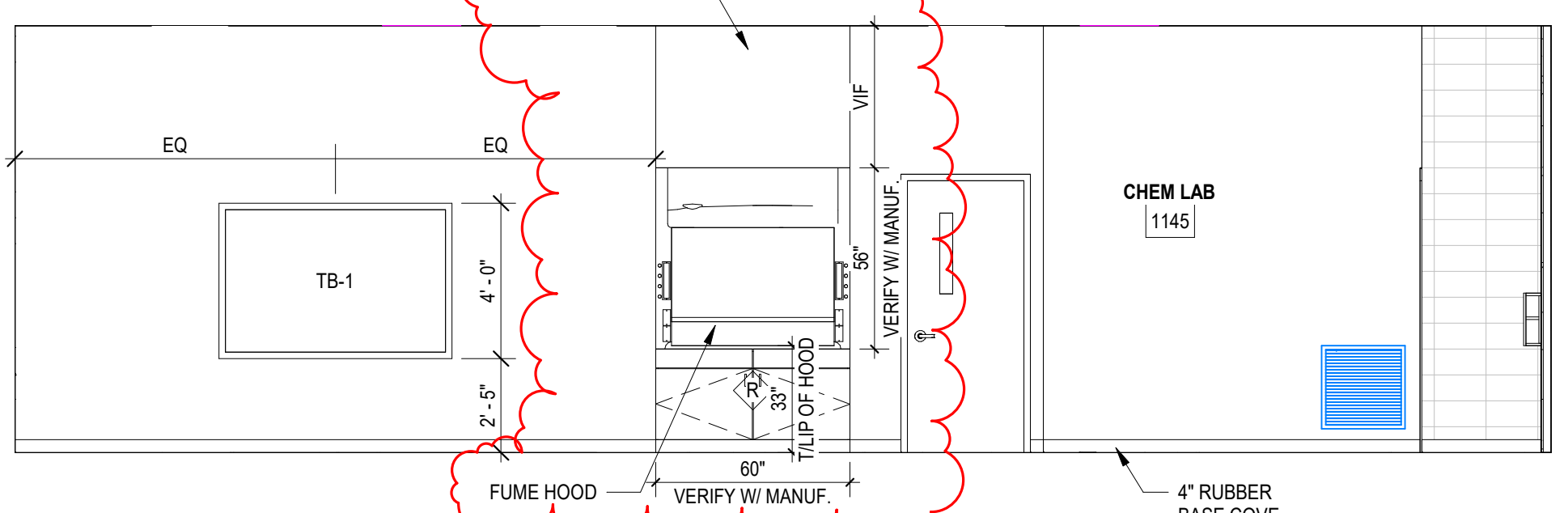
D3 1100 LEVEL - CHEM LAB 1146 ELEVATION - WEST
 A702 1/4" = 1'-0"



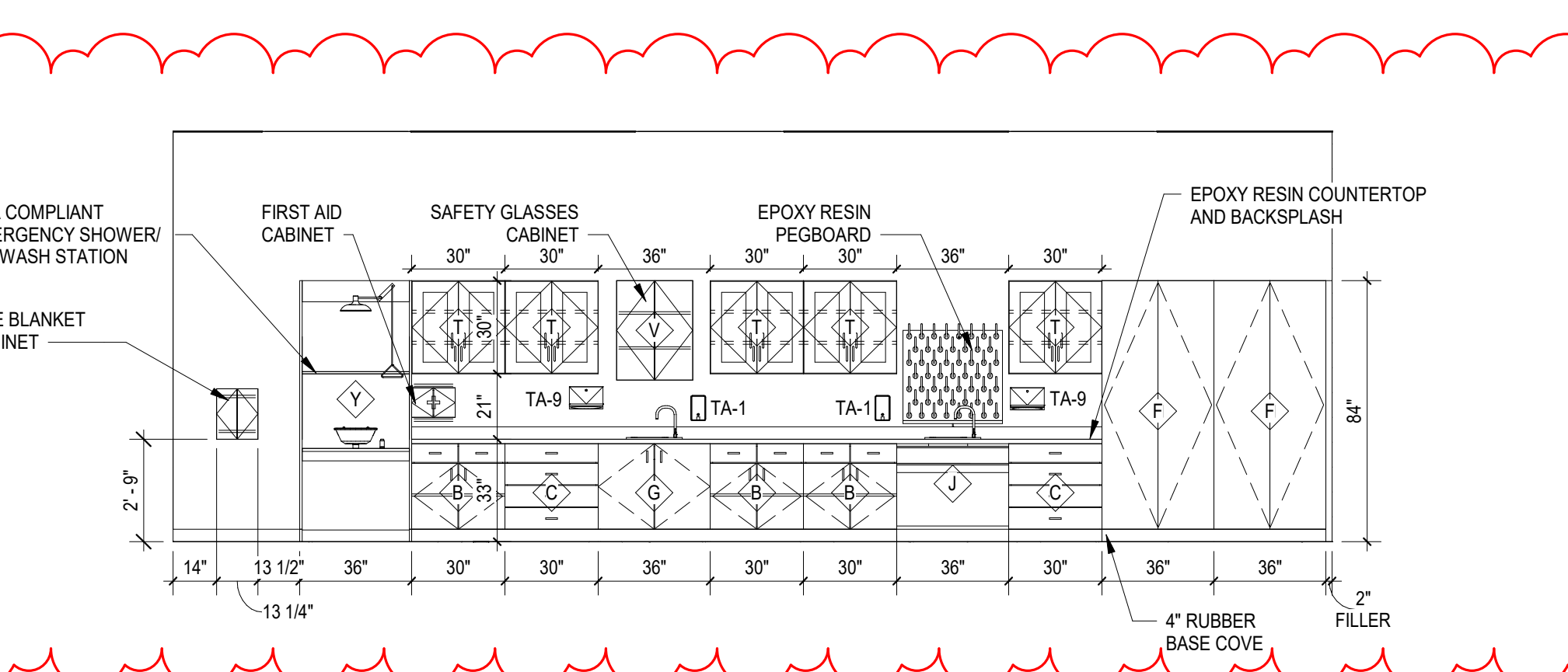
D4 TEACHER DEMO STATION TYP PLAN & ELEVATION
 A702 1/4" = 1'-0"



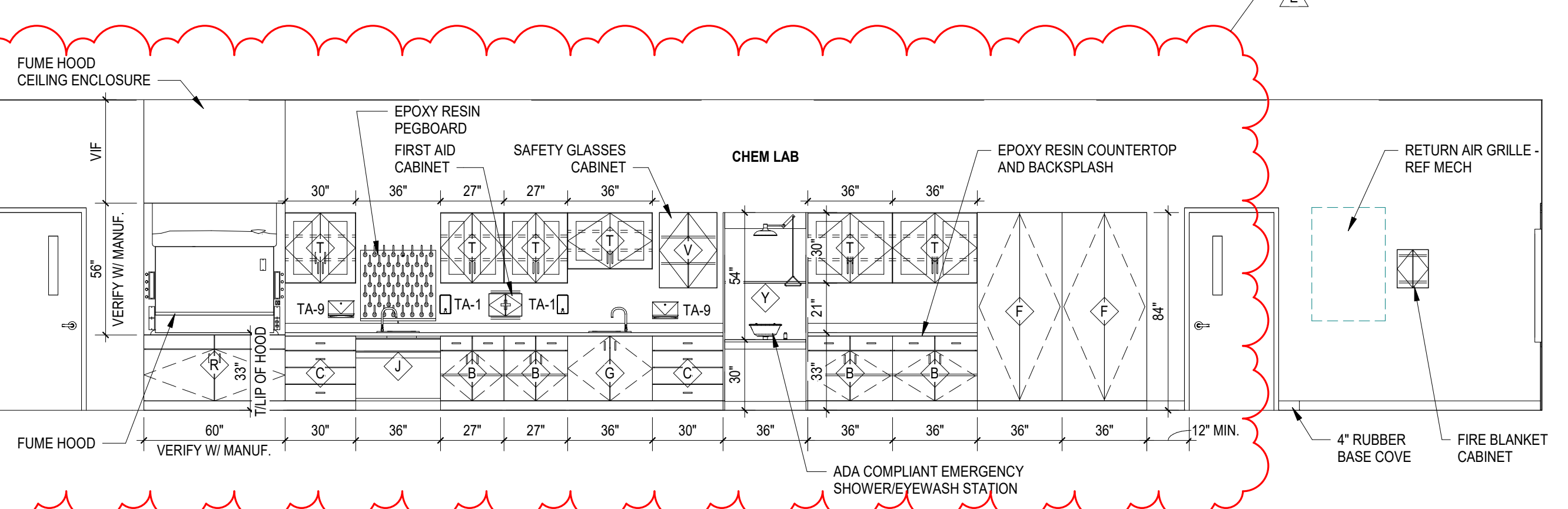
C1 CHEM LAB - TYPICAL ELEVATION 5
 A702 1/4" = 1'-0"



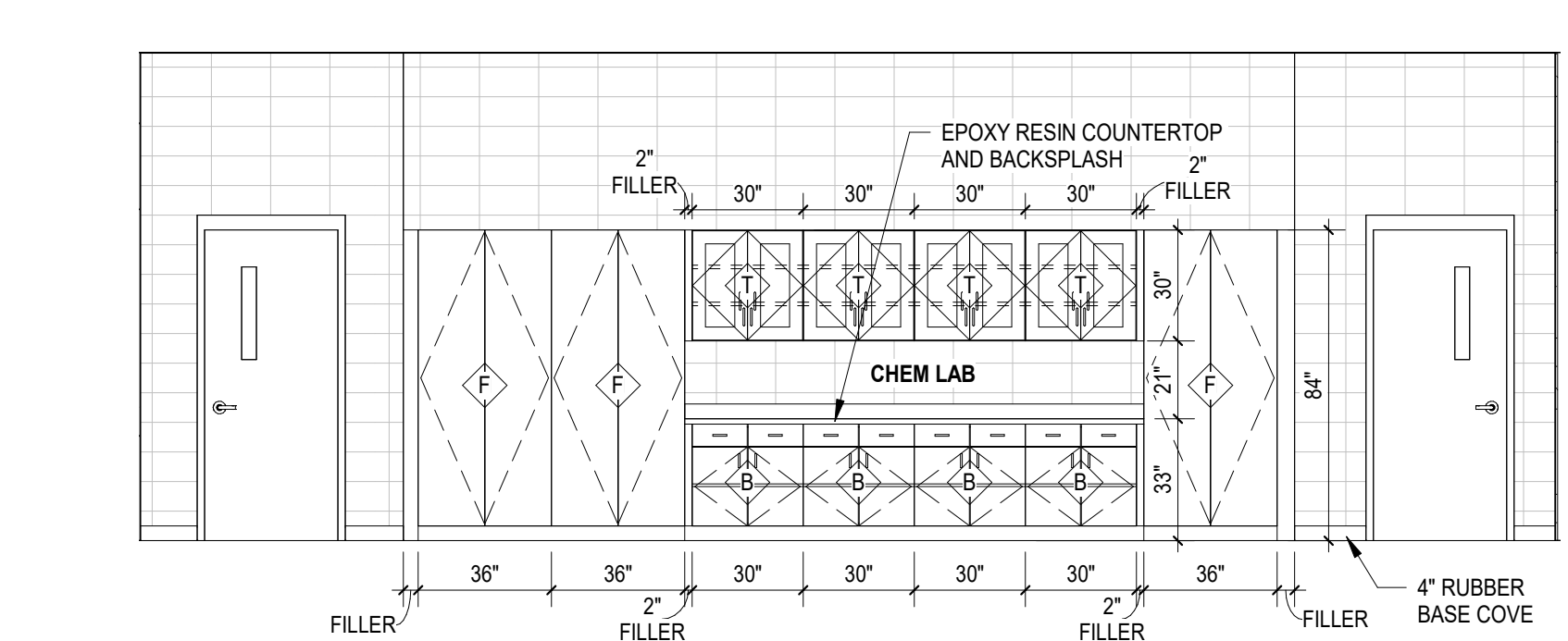
C3 CHEM LAB TYPICAL ELEVATION 6
 A702 1/4" = 1'-0"



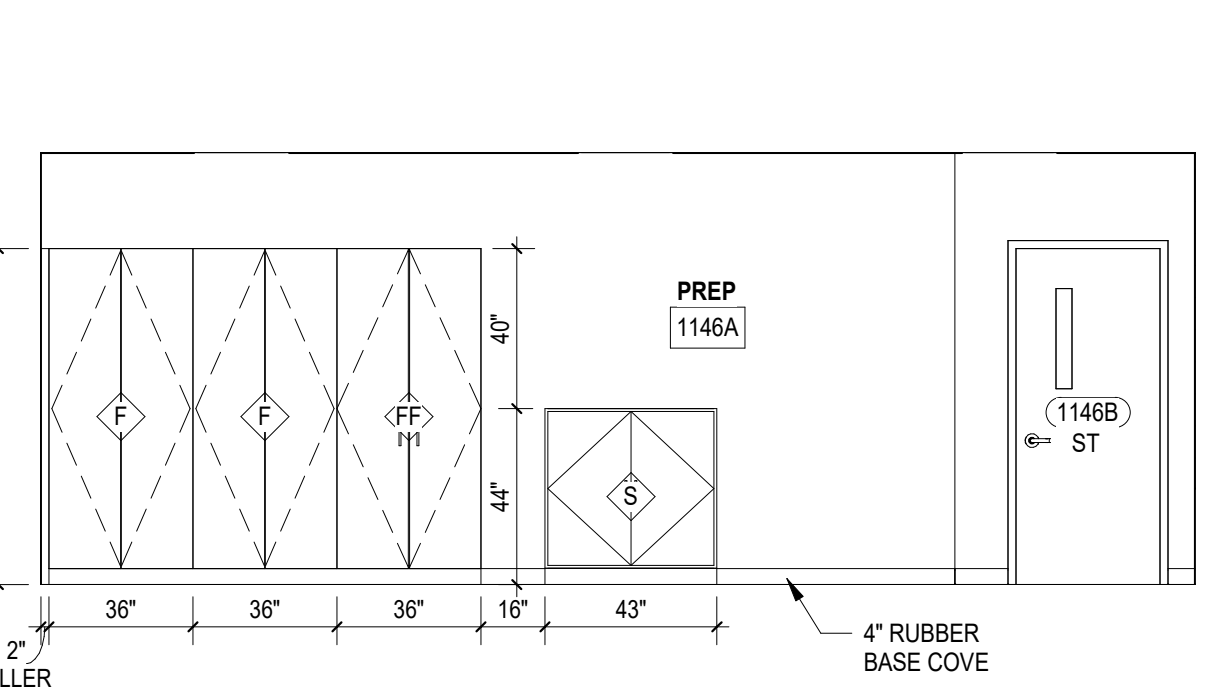
B1 CHEM LAB - TYPICAL ELEVATION 3
 A702 1/4" = 1'-0"



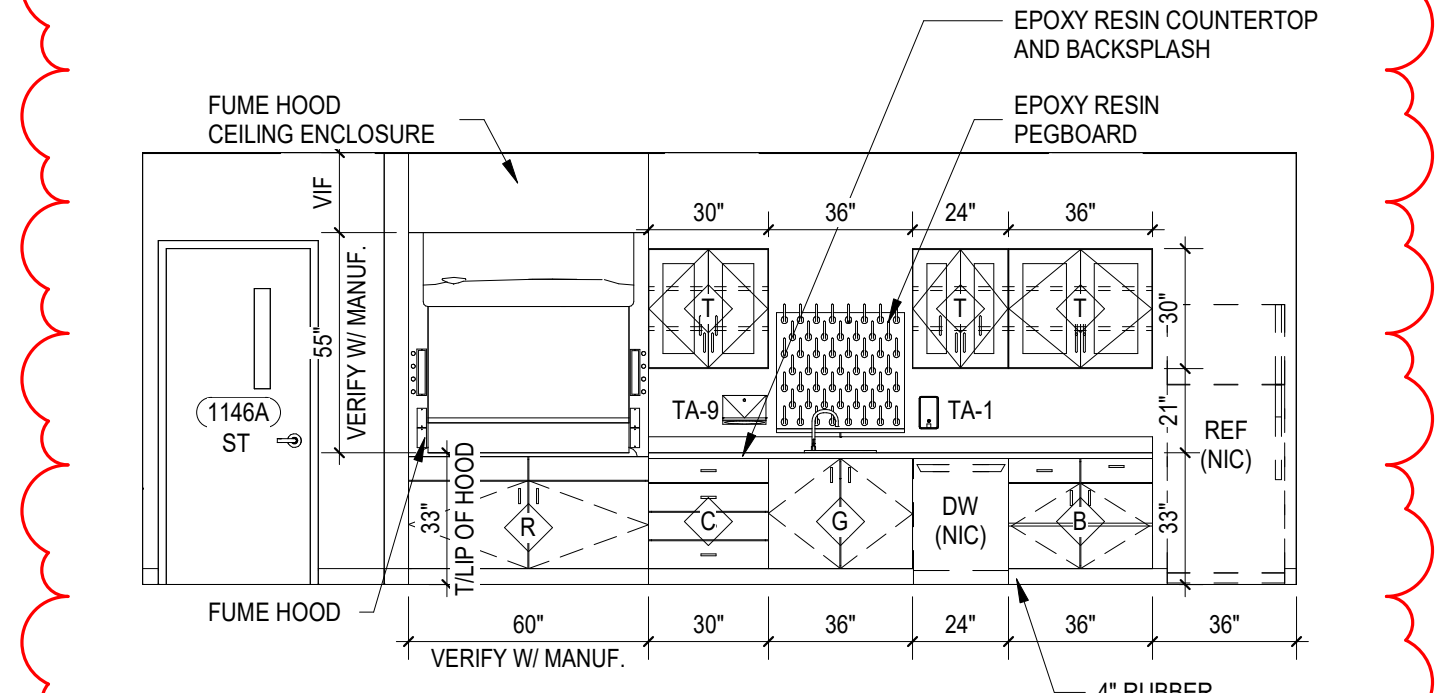
B3 CHEM LAB - TYPICAL ELEVATION 4
 A702 1/4" = 1'-0"



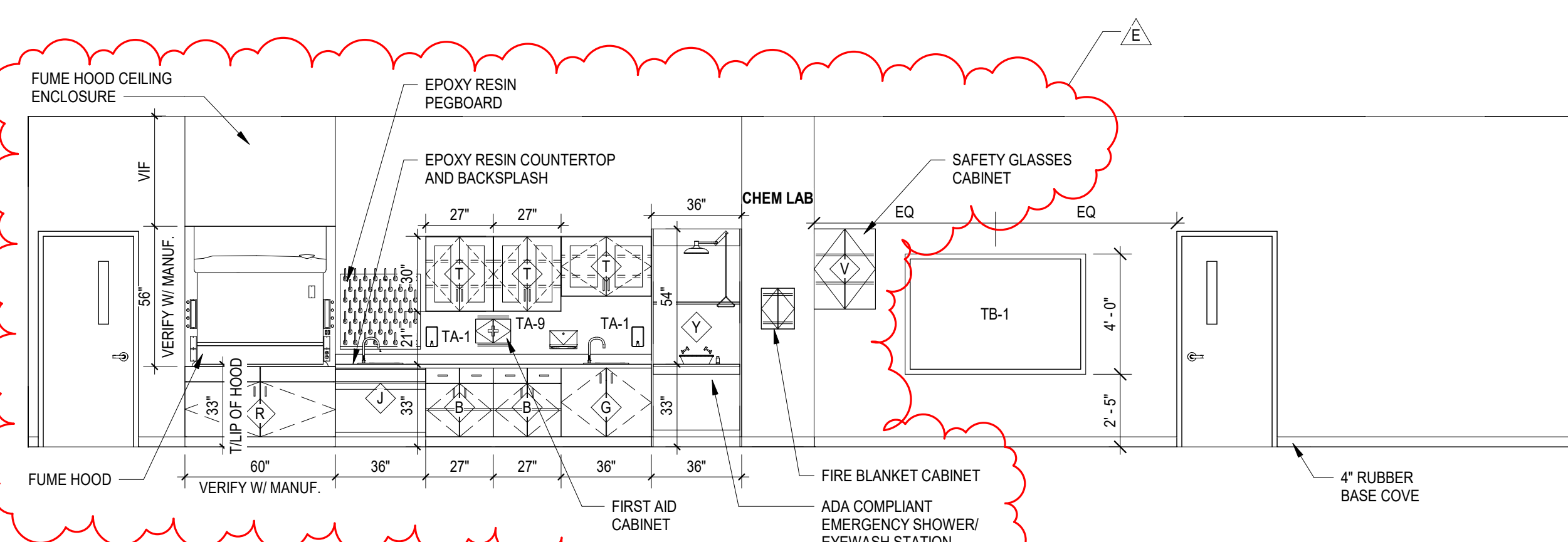
A1B CHEM LAB - TYPICAL ELEVATION 2
 A702 1/4" = 1'-0"



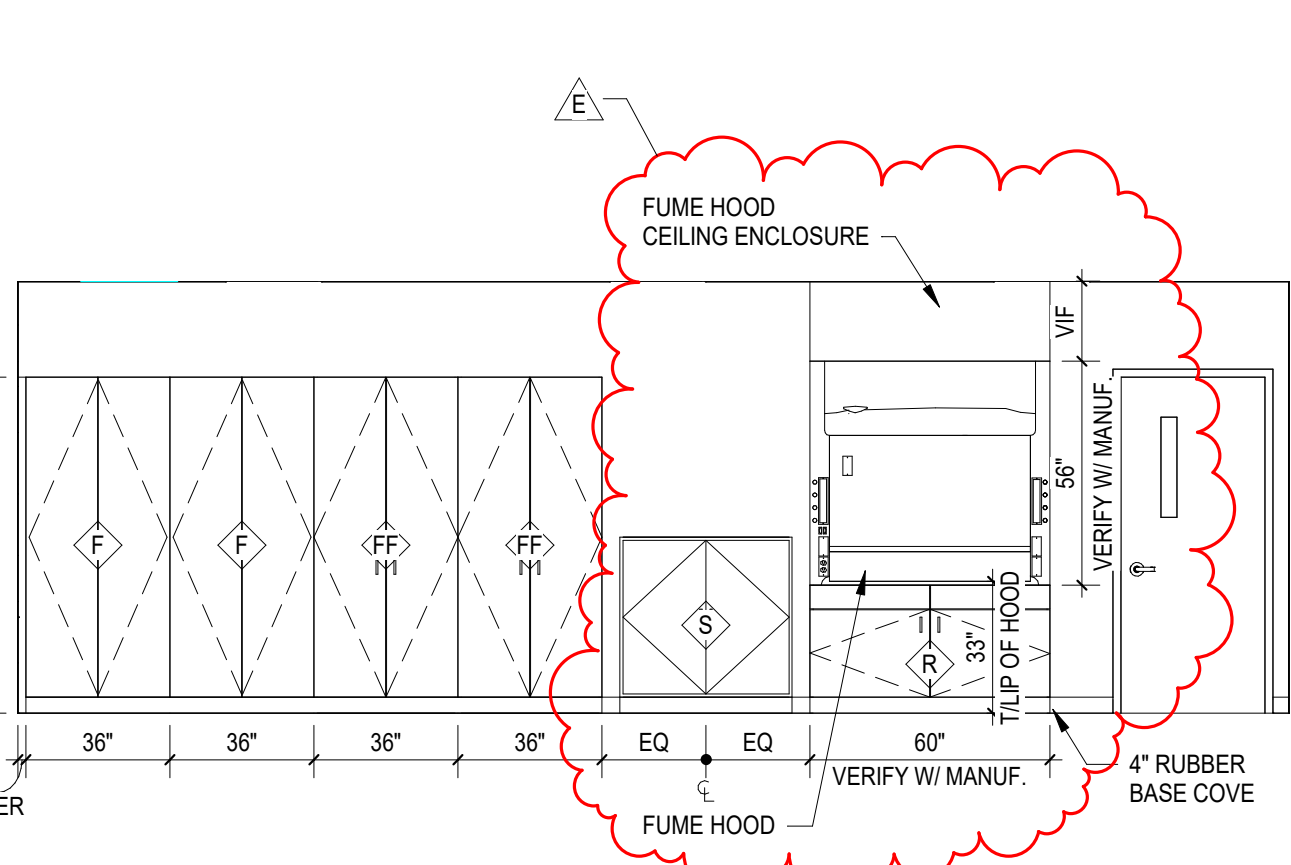
A3B PREP 1146A - ELEVATION - WEST
 A702 1/4" = 1'-0"



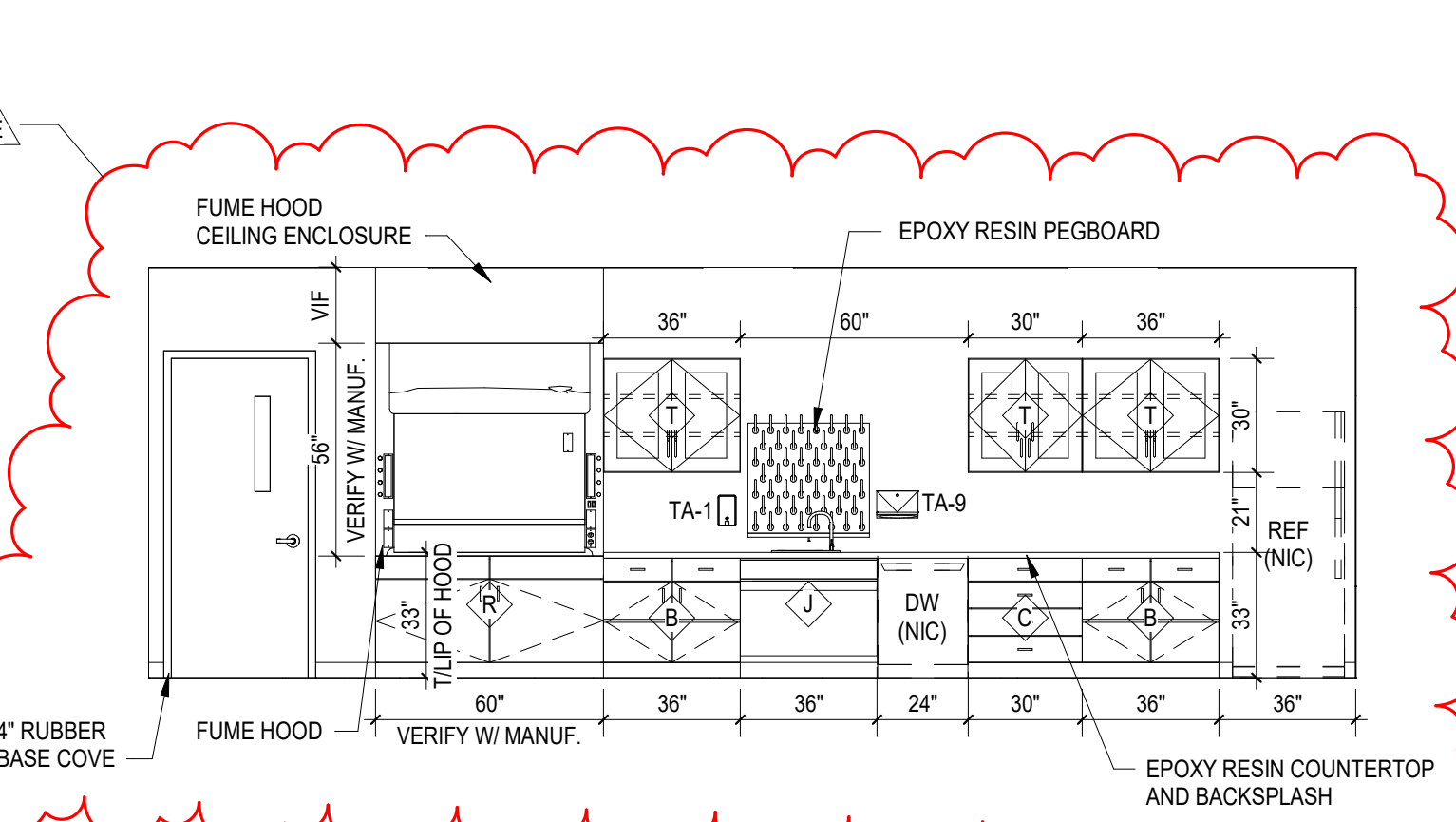
A4B PREP 1146A - ELEVATION - EAST
 A702 1/4" = 1'-0"



A1 CHEM LAB - TYPICAL ELEVATION 1
 A702 1/4" = 1'-0"



A3 CHEM PREP A - TYPICAL ELEVATION 1
 A702 1/4" = 1'-0"



A4 CHEM PREP A - TYPICAL ELEVATION 2
 A702 1/4" = 1'-0"

ALL DRAWINGS, SPECIFICATIONS AND NOTES ARE THE PROPERTY OF MCMILLAN PAZDAN SMITH ARCHITECTURE, INC. AND SHALL REMAIN THE PROPERTY OF MCMILLAN PAZDAN SMITH ARCHITECTURE, INC. ANY REUSE OR REPRODUCTION OF ANY PART OF THIS DOCUMENT WITHOUT THE WRITTEN PERMISSION OF MCMILLAN PAZDAN SMITH ARCHITECTURE, INC. IS STRICTLY PROHIBITED. THE USER OF THIS DOCUMENT ASSUMES ALL LIABILITY FOR ANY AND ALL DAMAGES, INCLUDING REASONABLE ATTORNEY'S FEES, ARISING FROM ANY AND ALL REUSE OR REPRODUCTION OF ANY PART OF THIS DOCUMENT WITHOUT THE WRITTEN PERMISSION OF MCMILLAN PAZDAN SMITH ARCHITECTURE, INC.

- FOUNDATION & MASONRY NOTES:**
- FOR GENERAL NOTES SEE DWG. S001, S002, S003 & S004.
 - SEE ARCH. DRAWINGS FOR INTERIOR WALL LOCATIONS & FOR WALL OPNG. LOCATIONS.
 - INTERIOR VERTICAL WALL REINFORCING: #5 @ 48" O.C. FOR INTERIOR WALLS U.N.O. (SEE "CONCRETE MASONRY" NOTES ON DWG. S001 FOR TYP. JAMB STEEL).
 - 3 HR. FIRE WALLS & CMU LOAD BEARING WALLS SHALL BE REINFORCED W/ #6 @ 32" UNLESS NOTED OTHERWISE. IN PLAN, STAIR TOWER WALLS & ELEVATOR SHAFT WALLS SHALL BE REINFORCED WITH #8 @ 16" O.C. AND WITH BOND BEAMS AT 4' - 0" O.C. UNLESS NOTED OTHERWISE.
 - ALLOWABLE SOIL BEARING PRESSURE = 3000 PSF.
 - COORDINATE SIZE & LOCATION OF ALL REQ'D. FLOOR DRAINS, SUMP, SLOPES, & TROUGHS & FLOOR OUTLETS WITH ARCH. & ME&P DWGS.
 - G.C. COORDINATE STEPS IN FOOTING WITH M.E.&P PER DETAIL B1/S110
 - FINISH FLOOR ELEVATIONS FOR ALL AREAS ARE SHOWN ON PLANS.
 - G.C. TO VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DIMENSIONS.
 - REINFORCE ALL FOOTING "BUMP-OUTS" W/ #5 @ 12" O.C. E.W. @ 3" CLEAR FROM BOTTOM OF FOOTING.
 - 8"x24" DP. B.B. OR 12"x24" DP B.B. FOR 12" CMU WALLS W/ (4) #5x6-8" (TOP & BOTTOM REIN.) CENTERED UNDER ALL WF BEAM BEARING POINTS WITH A B.P. DESIGNATION. VERTICAL WALL REIN. REQUIRED #6 @ 16" O.C. EACH SIDE OF BEAM OR COLUMN BEARING POINT FOR THE 8'-8" DISTANCE.
 - SEE D1/S113 FOR TYPICAL MASONRY CORNER REINFORCING DETAIL.
 - ALL FOUNDATION & T/STL ELEVATIONS ARE RELATIVE TO BASEMENT F.FLOOR = 0' - 0" TYP. UNO

- FOUNDATION AND SLAB - ON - GRADE LEGEND:**
- T.D. = TURN DOWN SLAB SEE DETAIL, A2/S111
 - VWA = INDICATES VERIFY W/ ARCHITECTURAL.
 - C.J. = CONTROL JOINT IN SLAB-SUGGESTED LOCATION. MAX. SPACING = 12'-0" SEE DET. B4/S110
 - - - = A STEP IN FTG. ELEVATION SEE DETAIL B1/S110
 - 20'-2'-0" = TYPE 20 FDN. WITH T/FTG. @ 2' - 0" FROM BASEMENT LEVEL FIN FLR ELEV. = 843.40' = 0'-0"
 - BP# = BASE PLATE TYPE #. SEE DETAILS ON S112.
 - F.B. = FACE OF BRICK
 - M.E. = MATCH EXISTING
 - T/FTG = TOP OF FOOTING
 - 3 HR RATED FIRE WALL, SEE ARCH.
 - #57 STONE RETAINING WALL BACKFILL
 - STA-LITE RETAINING WALL BACKFILL
 - WCJ = WALL CONSTRUCTION JOINT. SEE DETAIL A4/S114
 - WP = WALL CONTROL JOINT (WEAKENED PLANE) SEE DETAIL A5/S114

TYPE	PLAN DIMENSION	THICKNESS	REINFORCING	REMARKS
20	2'-0" x CONT.	1'-0"	(3) #5 CONT. & #4 @ 18" TRANSVERSE BOT.	CENTER FTG. UNDER WALL
30	3'-0" x CONT.	1'-0"	(4) #5 CONT. & #4 @ 18" TRANSVERSE BOT.	CENTER FTG. UNDER WALL
44	4'-0" x 4'-0"	1'-2"	(4) #5 @ 12" O.C. EW - BOTTOM LAYER	CENTER UNDER COL.
55	5'-0" x 5'-0"	1'-2"	(5) #6 @ 12" O.C. EW - BOTTOM LAYER	CENTER UNDER COL.
66	6'-0" x 6'-0"	1'-4"	(6) #6 @ 12" O.C. EW - BOTTOM LAYER	CENTER UNDER COL.
77	7'-0" x 7'-0"	1'-6"	(7) #6 @ 12" O.C. EW - BOTTOM LAYER	CENTER UNDER COL.
88	8'-0" x 8'-0"	1'-8"	(8) #7 @ 12" O.C. EW - BOTTOM LAYER	CENTER UNDER COL.
99	9'-0" x 9'-0"	1'-8"	(9) #7 @ 12" O.C. EW - BOTTOM LAYER	CENTER UNDER COL.
1010	10'-0" x 10'-0"	1'-8"	(10) #7 @ 12" O.C. EW - BOTTOM LAYER	CENTER UNDER COL.

SPARTANBURG COUNTY SCHOOL DISTRICT FIVE
JAMES F. BYRNES HIGH SCHOOL
PHASE 2 ACADEMIC WING ADDITION
150 E. MAIN STREET
DUNCAN, SC 29504

SHEET ISSUE:

NO.	DATE	DESCRIPTION	BY
B	2/28/22	DD PRICING	ATR
C	06/01/22	GMP SET	PGG
D	06/20/22	ADDENDUM NO. 1	ATR
E	06/27/22	ADDENDUM NO. 2	ATR

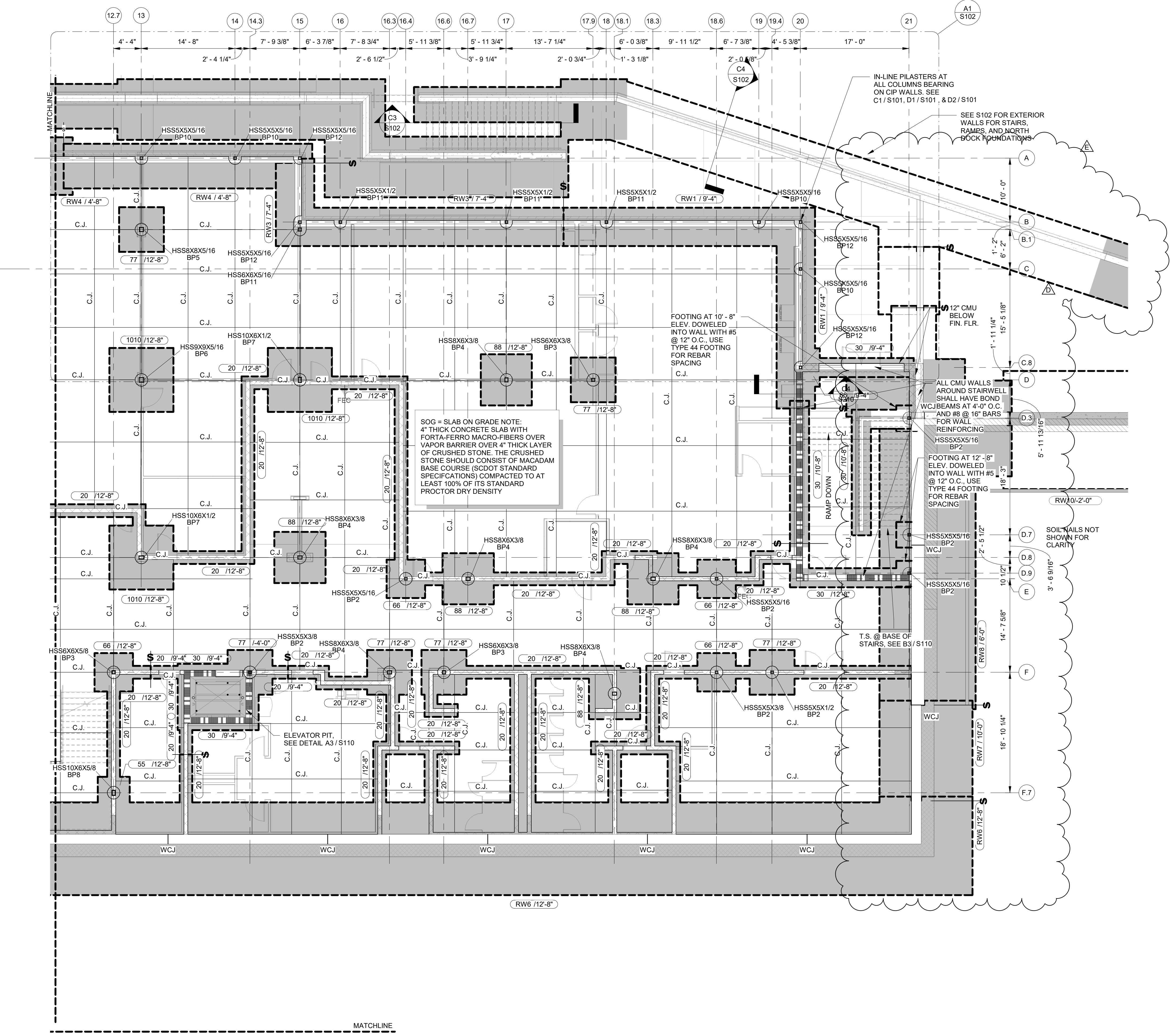
ADDENDUM NO. 2 06/27/22

PRINCIPAL IN CHARGE: PGG
PROJECT ENGINEER: ATR
DRAWN BY: JSD,BH,JG,ATR

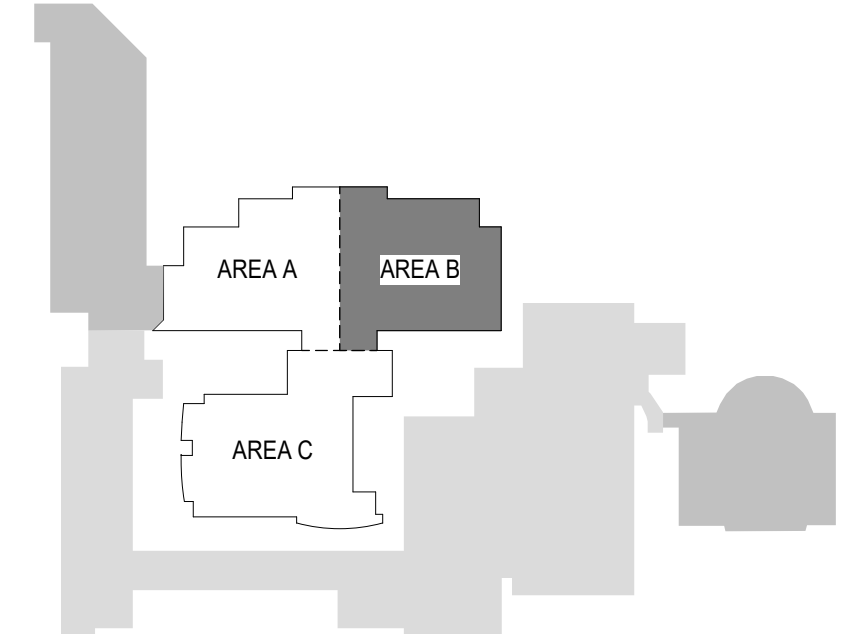
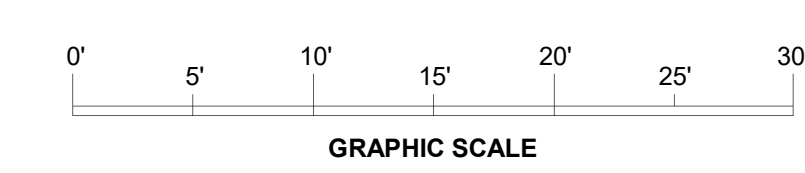
SHEET TITLE:
**FOUNDATION &
S.O.G. PLAN - AREA
'B' LEVEL 1000**

SHEET NO. PROJ. NO.
S100B 20242

S100B

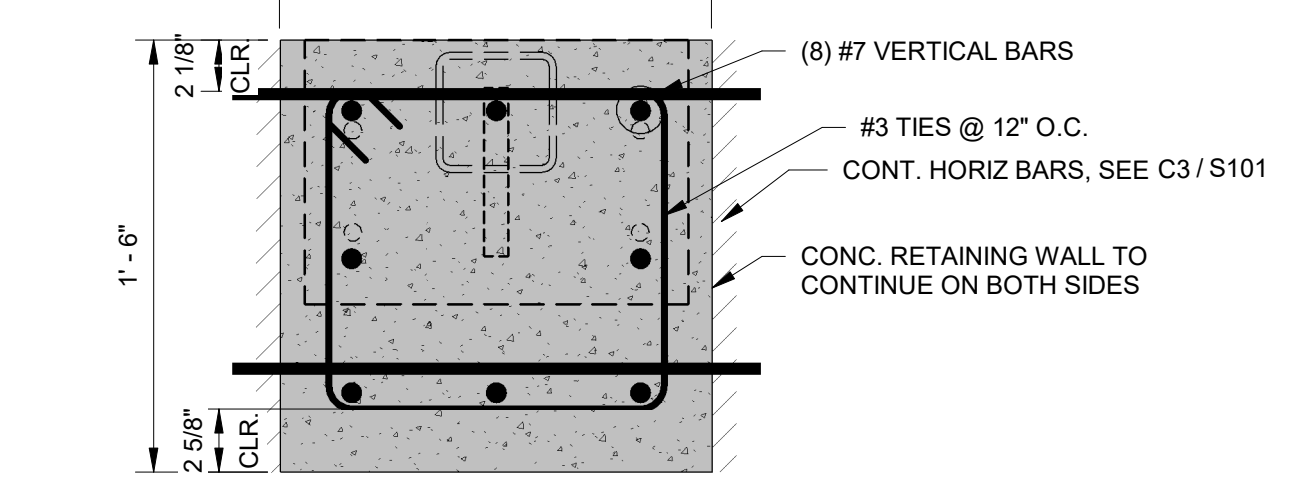
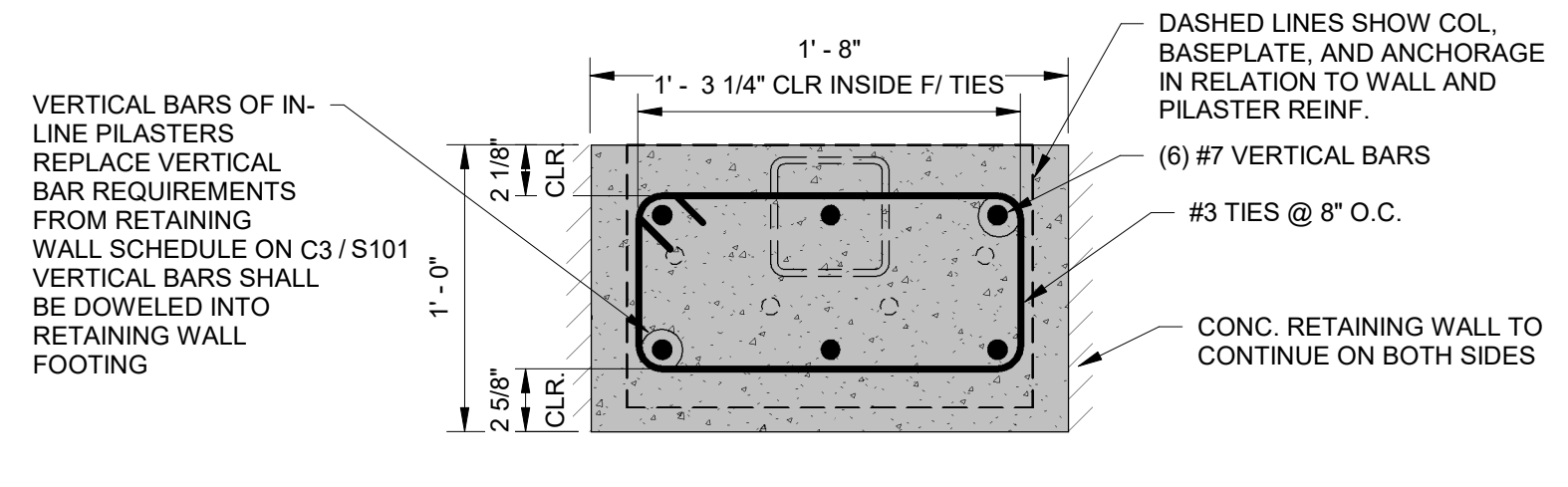


A1 FOUNDATION & S.O.G. PLAN - AREA 'B' LEVEL 1000 (F. FLR. ELEV. = 856.73' = +13'-4")
18" = 1'-0"



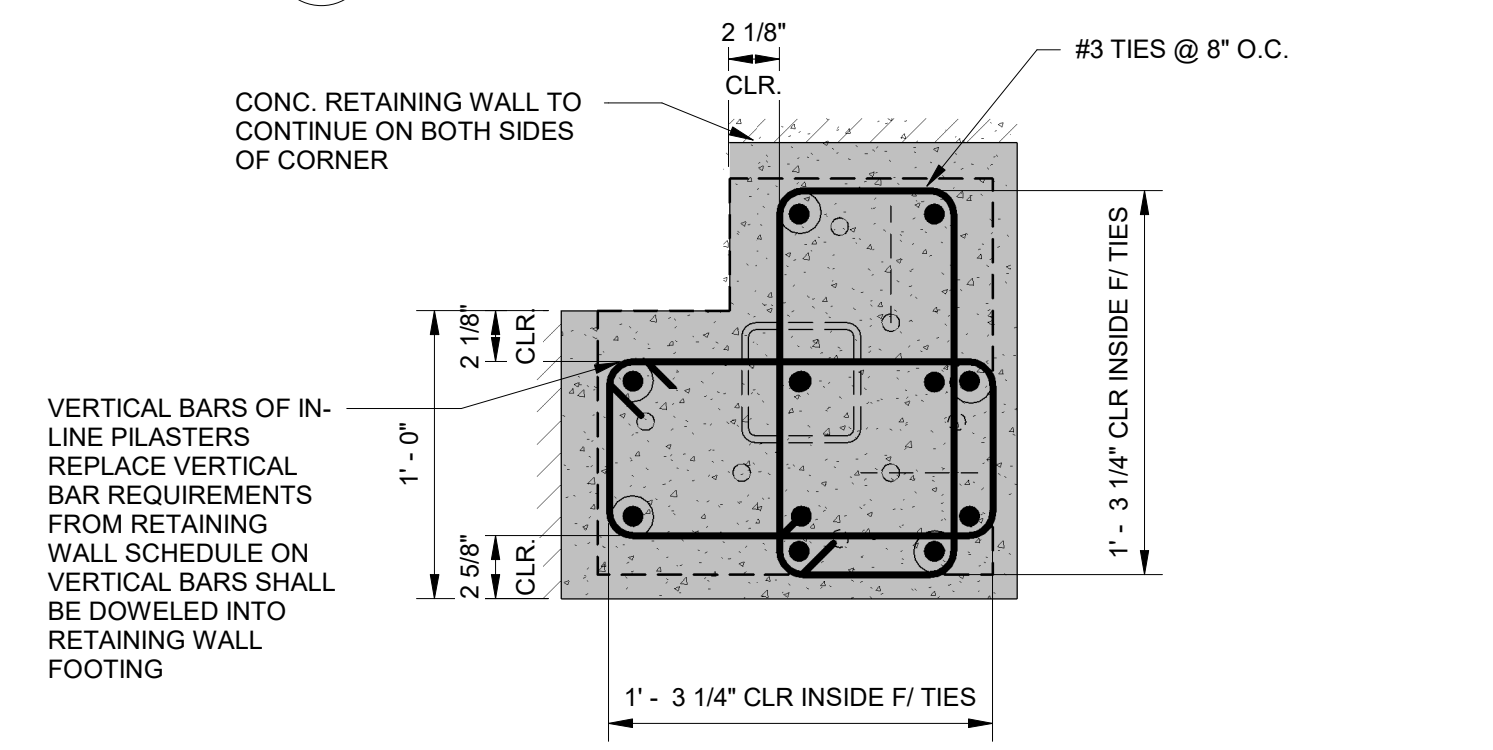
NOT FOR CONSTRUCTION
FOR PRICING ONLY

THIS DRAWING IS AN INSTRUMENT OF SERVICE. IT IS THE PROPERTY OF THE ENGINEER. ENGINEERING DRAWINGS ARE PROTECTED BY THE U.S. GOVERNMENT COPYRIGHT LEGISLATION. COPYRIGHT 2022, Bailey and Son Engineering, Inc. ALL RIGHTS RESERVED.

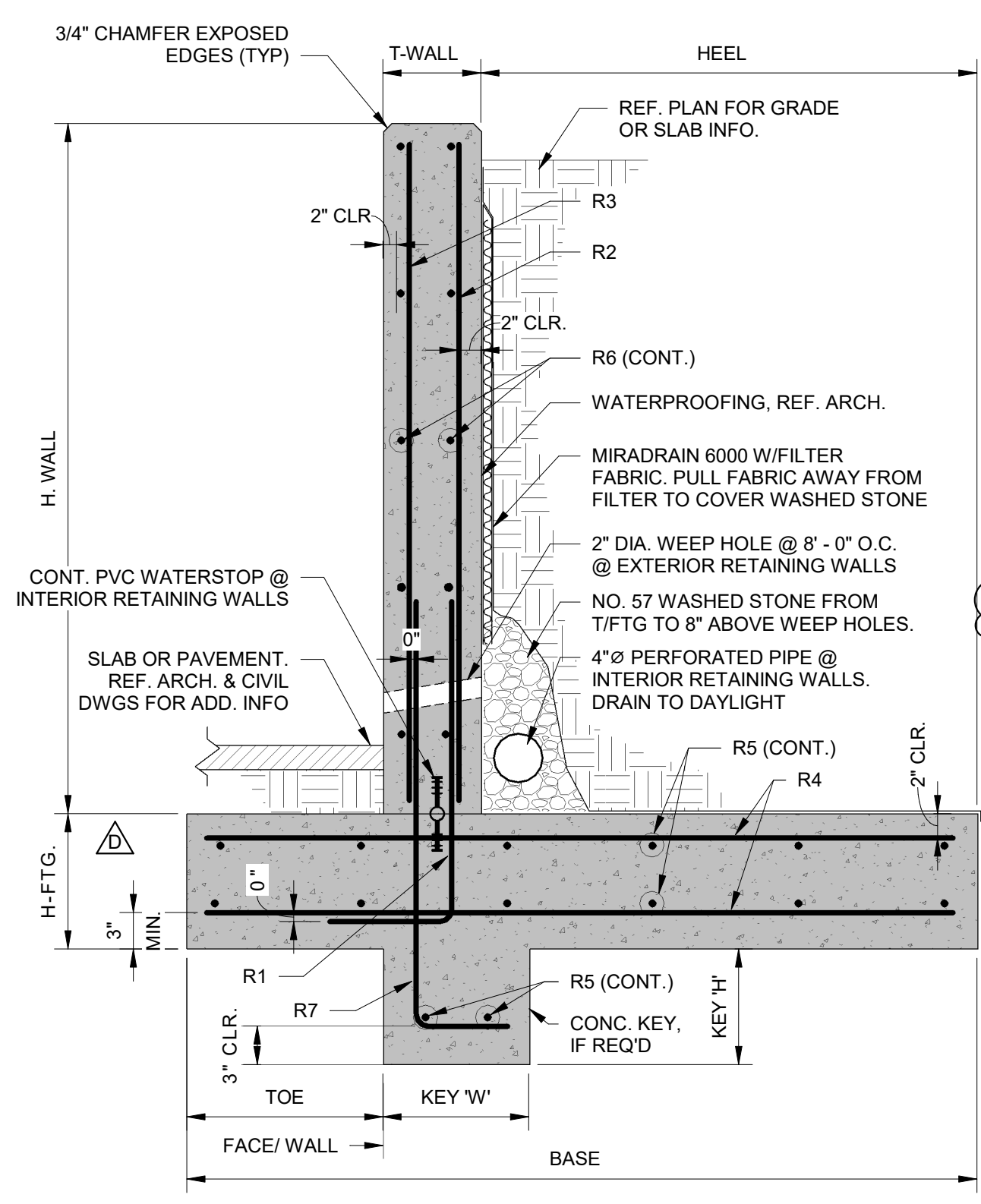


D1 1'-0" IN-LINE PILASTER DETAIL
S101 1 1/2" = 1'-0"

D2 1'-6" IN-LINE PILASTER DETAIL
S101 1 1/2" = 1'-0"



C1 1'-0" IN-LINE PILASTER AT WALL CORNERS
S101 1 1/2" = 1'-0"

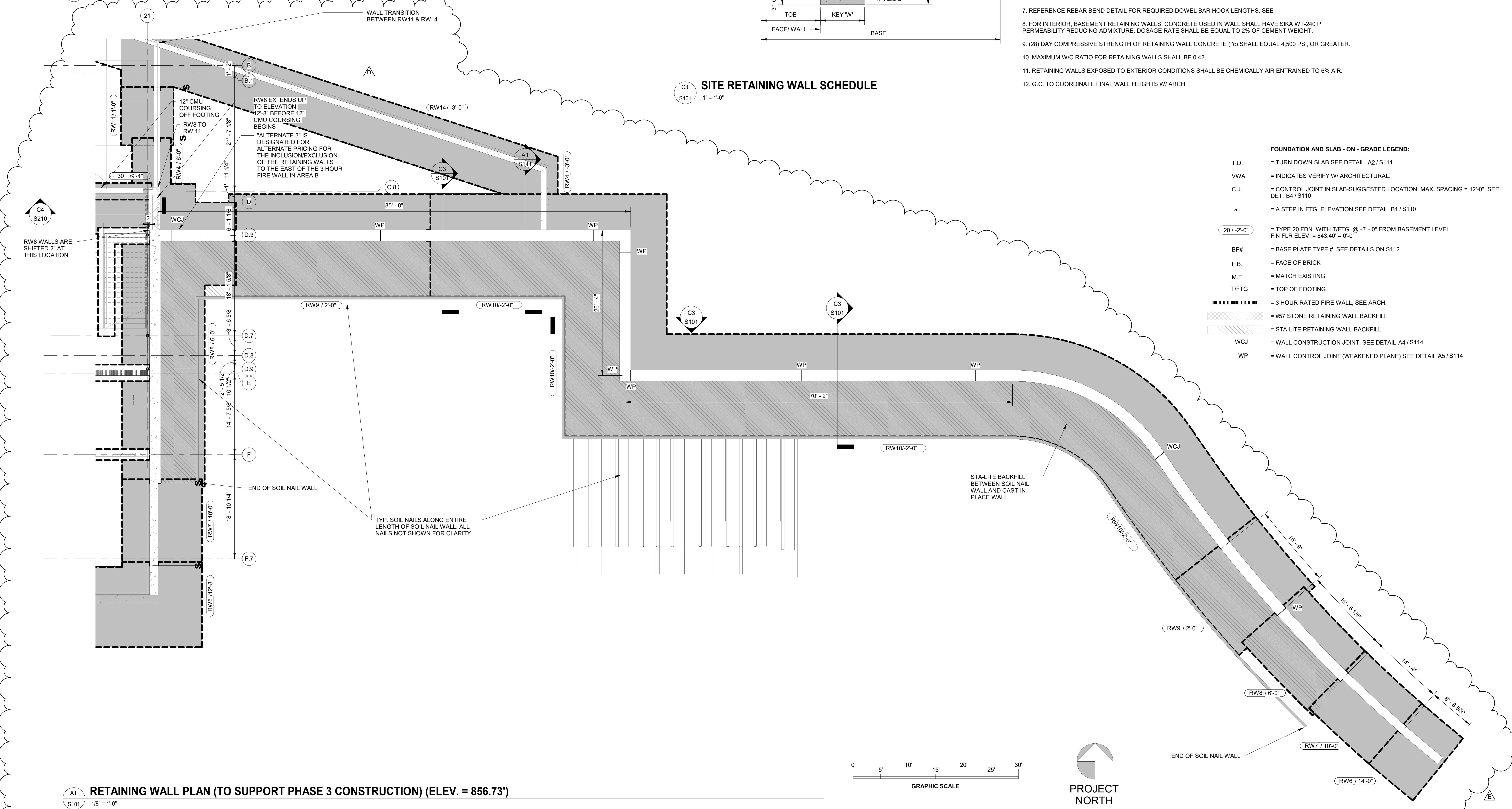


RETAINING WALL SCHEDULE														
WALL TYPE	BACKFILL	EXPOSURE CLASS	H WALL	BASE	HEEL	T WALL	H FTG.	KEY H"XW"	R1	R2	R3	R4	R5	R7
RW1	SOIL	F2	3'-8"	6'-0"	3'-0"	12'	12'	N/A	#4 @ 9"	N/A	#4 @ 12"	#5 @ 12"	#5 @ 12"	#4 @ 12"
RW2	SOIL	F2	3'-8"	7'-0"	3'-6"	12'	15'	N/A	#4 @ 9"	N/A	#4 @ 12"	#5 @ 12"	#5 @ 12"	#4 @ 12"
RW3	SOIL	F2	5'-8"	6'-0"	3'-0"	12'	12'	N/A	#4 @ 9"	N/A	#4 @ 12"	#5 @ 12"	#5 @ 12"	#4 @ 12"
RW4	SOIL	F2	8'-4"	7'-0"	4'-0"	12'	12'	12" X 16"	#6 @ 12"	N/A	#5 @ 12"	#5 @ 12"	#5 @ 12"	#4 @ 12"
RW5	SOIL	F2	10'-0"	9'-0"	5'-0"	12'	15'	12" X 16"	#6 @ 6"	#6 @ 12"	#6 @ 12"	#6 @ 12"	#5 @ 12"	#4 @ 12"
RW6	SOIL	F2	15'-0"	14'-0"	8'-0"	18'	18'	12" X 16"	#7 @ 6"	#7 @ 12"	#7 @ 12"	#7 @ 12"	#6 @ 12"	#4 @ 12"
RW7	SOIL	F2	17'-5"	14'-6"	8'-0"	18'	20'	12" X 16"	#8 @ 10"	#7 @ 10"	#7 @ 10"	#8 @ 16"	#6 @ 12"	#4 @ 8"
RW8	STA-LITE	F2	21'-5"	15'-0"	8'-0"	24'	26'	N/A	#9 @ 12"	#9 @ 12"	#9 @ 12"	#8 @ 16"	#6 @ 12"	#4 @ 8"
RW9	STA-LITE	F2	25'-9"	18'-6"	10'-0"	24'	26'	N/A	#9 @ 12"	#9 @ 12"	#9 @ 12"	#8 @ 16"	#6 @ 12"	#4 @ 8"
RW10	STA-LITE	F2	29'-11"	18'-6"	10'-0"	24'	26'	N/A	#6 @ 6"	#6 @ 12"	#6 @ 12"	#6 @ 12"	#5 @ 12"	N/A
RW11	SOIL	F2	14'-0"	9'-6"	6'-0"	12'	18'	16" X 16"	#6 @ 6"	#6 @ 12"	#6 @ 12"	#6 @ 12"	#5 @ 12"	#4 @ 8"
RW12	SOIL	F2	VARIES	7'-0"	4'-3"	12'	15'	N/A	#6 @ 6"	#6 @ 12"	#6 @ 12"	#6 @ 12"	#5 @ 12"	#4 @ 8"
RW13	SOIL	F2	VARIES	7'-0"	4'-3"	12'	15'	N/A	#6 @ 6"	#6 @ 12"	#6 @ 12"	#6 @ 12"	#5 @ 12"	#4 @ 8"
RW14	SOIL	F2	14'-0"	9'-6"	6'-0"	12'	18'	48" X 18" CENTERED ON FTG.	#6 @ 6"	#6 @ 12"	#6 @ 12"	#6 @ 12"	#5 @ 12"	#4 @ 8"

- RETAINING WALL NOTES:**
- FOR WALLS WHERE R2 SHOWS "N/A" DOWEL BARS (R1, R7) SHALL EXTEND TO TOP OF RETAINING WALL MINUS MIN. CLEAR DISTANCE
 - SEE DETAILS C1/S102 & C4/S102 AND THEIR REFERENCED LOCATION ON PLAN WHERE WEEPHOLES ARE REQUIRED.
 - SEE PLAN FOR RETAINING WALL JOINT LOCATIONS.
 - HEIGHT OF WALL INDICATED IN CHART ABOVE (H. WALL) DOES NOT INCLUDE SLAB TIE IN AT TOP (WHERE REQUIRED). THEREFORE, HEIGHT OF WALL DOES NOT EXTEND TO FINISHED FLOOR LEVEL. WALL HEIGHTS SHOWN ARE TYPICAL BUT CAN VARY FROM WHAT IS SHOWN IN TABLE. SEE ARCH FOR FINAL WALL HEIGHTS.
 - DOWEL BAR R7 SHALL EXTEND INTO FOOTING KEY AS SHOWN. WHEN KEY IS NOT PROVIDED, IT SHALL BE HOOKED INTO THE FOOTING AS SHOWN FOR DOWEL BAR R1.
 - BACKFILL IS AS INDICATED ON THE RETAINING WALL SCHEDULE U.N.O. ON FOUNDATC2 AS110.G. PLANS
 - REFERENCE REBAR BEND DETAIL FOR REQUIRED DOWEL BAR HOOK LENGTHS. SEE
 - FOR INTERIOR, BASEMENT RETAINING WALLS, CONCRETE USED IN WALL SHALL HAVE SIKAWT-240 P PERMEABILITY REDUCING ADMIXTURE. DOSAGE RATE SHALL BE EQUAL TO 2% OF CEMENT WEIGHT.
 - (28) DAY COMPRESSIVE STRENGTH OF RETAINING WALL CONCRETE (f'c) SHALL EQUAL 4,500 PSI, OR GREATER.
 - MAXIMUM W/C RATIO FOR RETAINING WALLS SHALL BE 0.42.
 - RETAINING WALLS EXPOSED TO EXTERIOR CONDITIONS SHALL BE CHEMICALLY AIR ENTRAINED TO 6% AIR.
 - G.C. TO COORDINATE FINAL WALL HEIGHTS W/ ARCH

C3 SITE RETAINING WALL SCHEDULE
S101 1" = 1'-0"

- FOUNDATION AND SLAB - ON - GRADE LEGEND:**
- T.D. = TURN DOWN SLAB SEE DETAIL A2/S111
 - VWA = INDICATES VERIFY W/ ARCHITECTURAL
 - C.J. = CONTROL JOINT IN SLAB-SUGGESTED LOCATION. MAX. SPACING = 12'-0" SEE DET. B4/S110
 - #-#-# = A STEP IN FTG. ELEVATION SEE DETAIL B1/S110
 - 201-2-0" = TYPE 20 FDN. WITH T/FTG. @ -2'-0" FROM BASEMENT LEVEL FIN FLR ELEV. = 843.40 = 0'-0"
 - BP# = BASE PLATE TYPE #. SEE DETAILS ON S112.
 - F.B. = FACE OF BRICK
 - M.E. = MATCH EXISTING
 - T/FTG. = TOP OF FOOTING
 - 3 HOUR RATED FIRE WALL, SEE ARCH.
 - #57 STONE RETAINING WALL BACKFILL
 - STA-LITE RETAINING WALL BACKFILL
 - WCJ = WALL CONSTRUCTION JOINT. SEE DETAIL A4/S114
 - WP = WALL CONTROL JOINT (WEAKENED PLANE) SEE DETAIL A5/S114



A1 RETAINING WALL PLAN (TO SUPPORT PHASE 3 CONSTRUCTION) (ELEV. = 856.73')
S101 1/8" = 1'-0"

SHEET ISSUE:

NO.	DATE	DESCRIPTION	BY
B	2/28/22	DD PRICING	ATR
C	06/01/22	GMP SET	PGC
D	06/20/22	ADDENDUM NO. 1	ATR
E	06/27/22	ADDENDUM NO. 2	ATR

ADDENDUM NO. 2 06/27/22
PRINCIPAL IN CHARGE: PGC
PROJECT ENGINEER: ATR
DRAWN BY: JSD,BH,JG,ATR

SHEET TITLE:
RETAINING WALL PLAN

SHEET NO. PROJ. NO. 20242

S101

NOT FOR CONSTRUCTION FOR PRICING ONLY

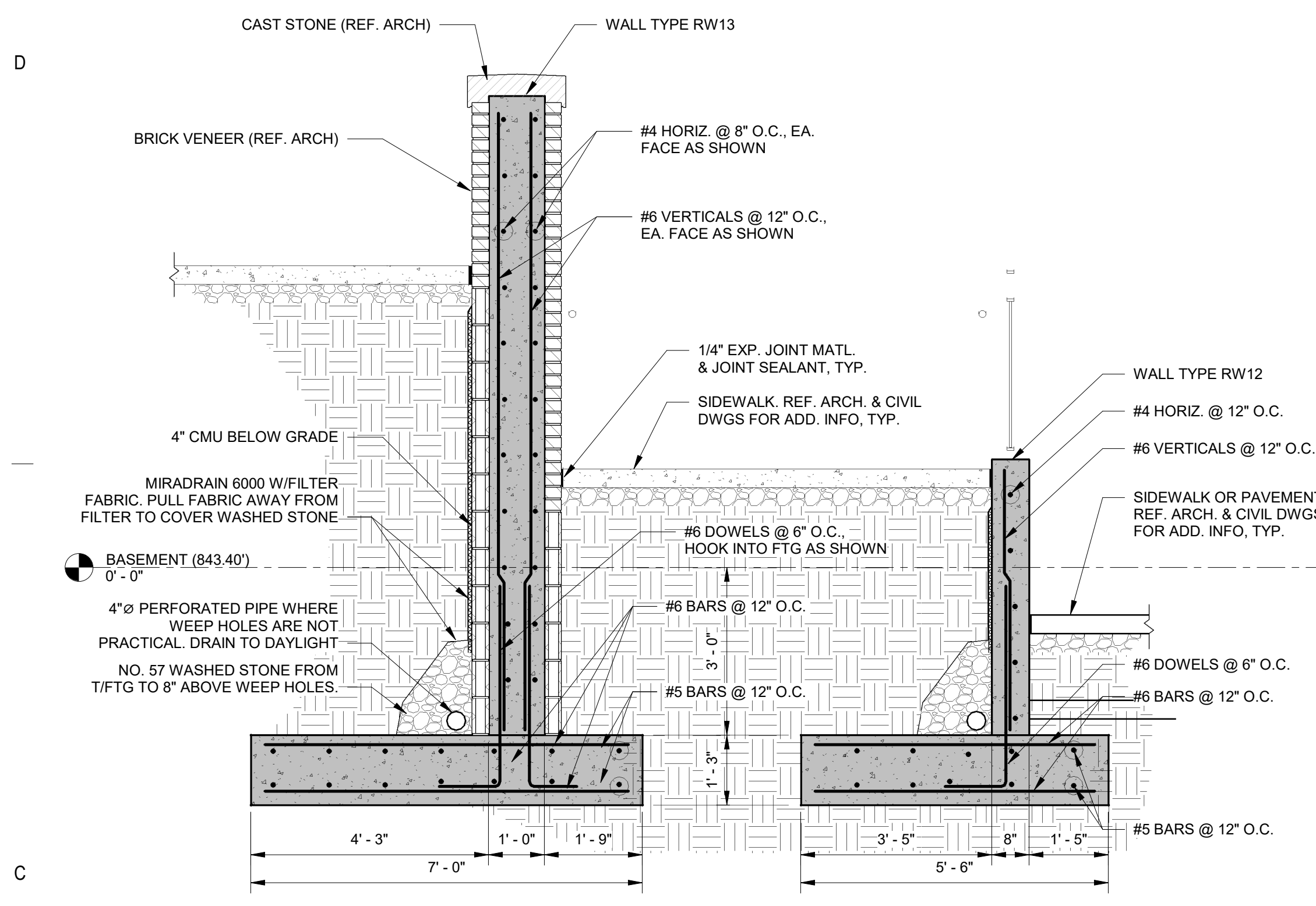
THIS DRAWING IS AN INSTRUMENT OF SERVICE. IT SHALL NOT BE REPRODUCED, ALTERED OR USED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER. ENGINEERING DRAWINGS ARE PROTECTED BY THE U.S. GOVERNMENT COPYRIGHT LEGISLATION. COPYRIGHT 2022, Bailey and Son Engineering, Inc. All Rights Reserved.

NO.	DATE	DESCRIPTION	BY
C	06/01/22	GMP SET	PGG
D	06/20/22	ADDENDUM NO. 1	ATR
E	06/27/22	ADDENDUM NO. 2	ATR

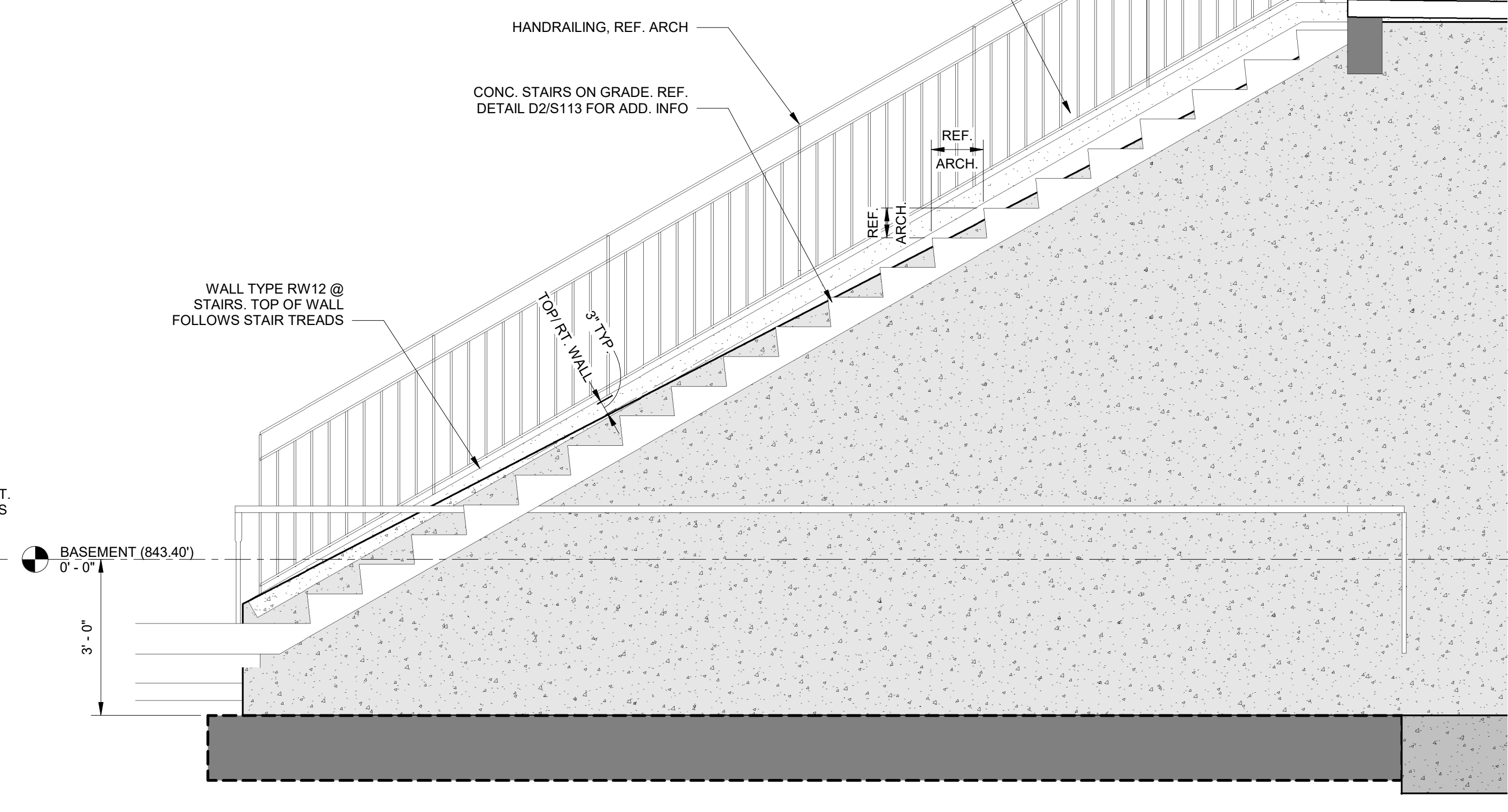
ADDENDUM NO. 2
06/27/22
PRINCIPAL IN CHARGE: PGG
PROJECT ENGINEER: ATR
DRAWN BY: JSD,BH,JG,ATR

SHEET TITLE:
**NORTH DOCK AND
RAMP PLAN,
SECTIONS &
DETAILS**
PROJ. NO.
20242

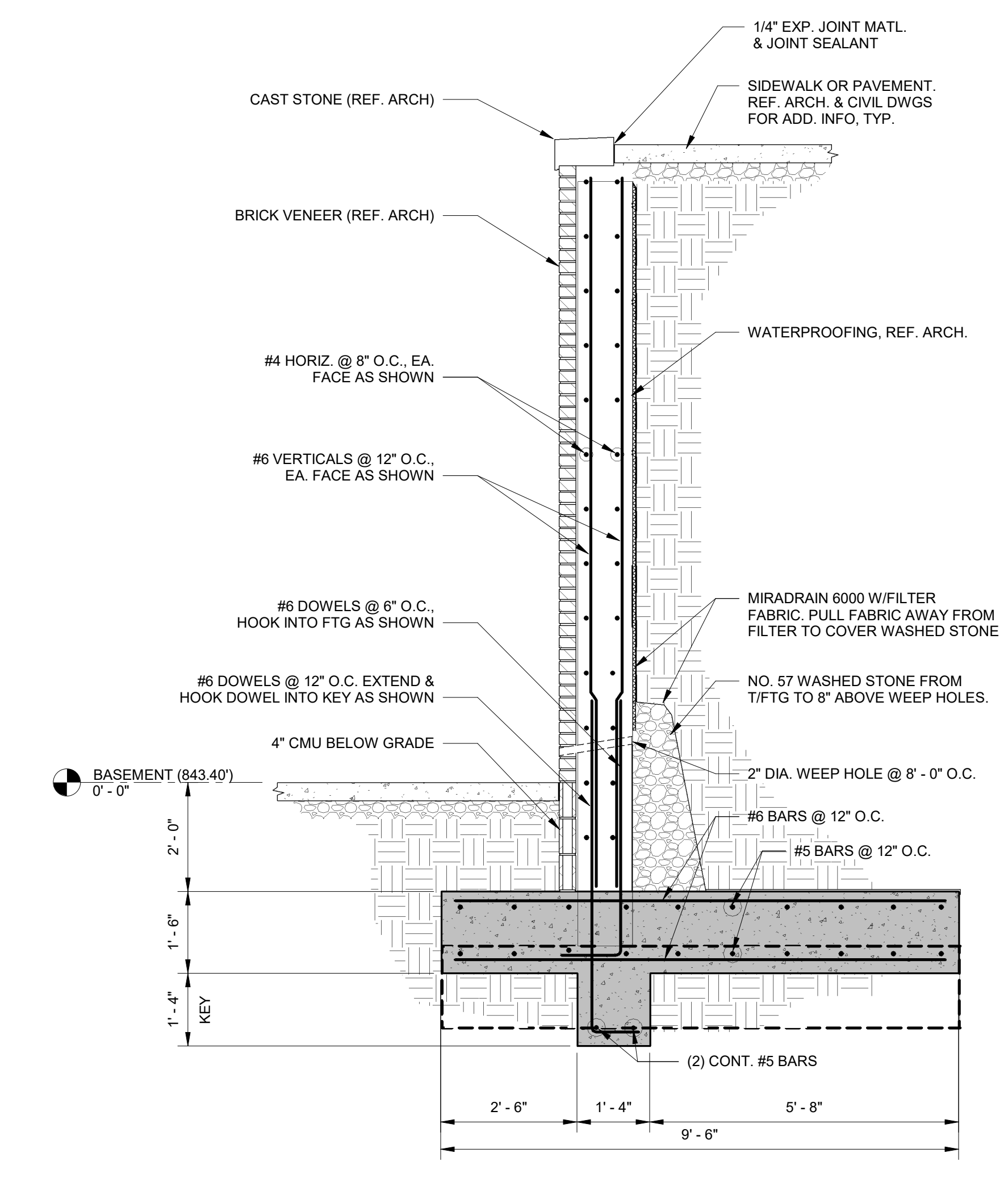
S102



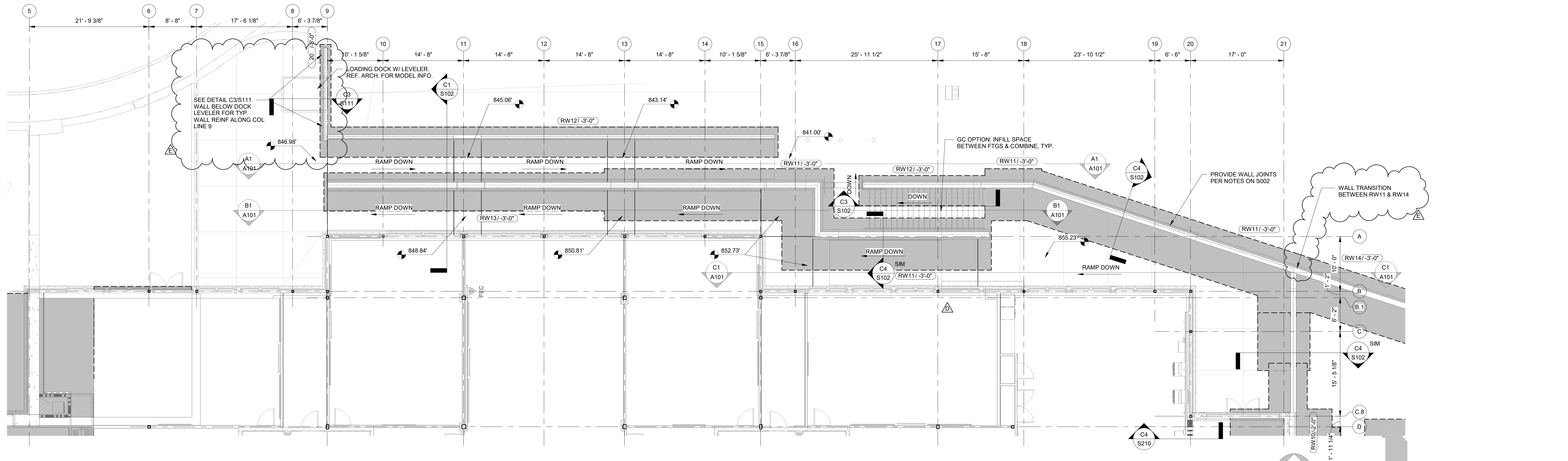
C1 SECTION @ NORTH RAMP LOOKING WEST
1/2" = 1'-0"



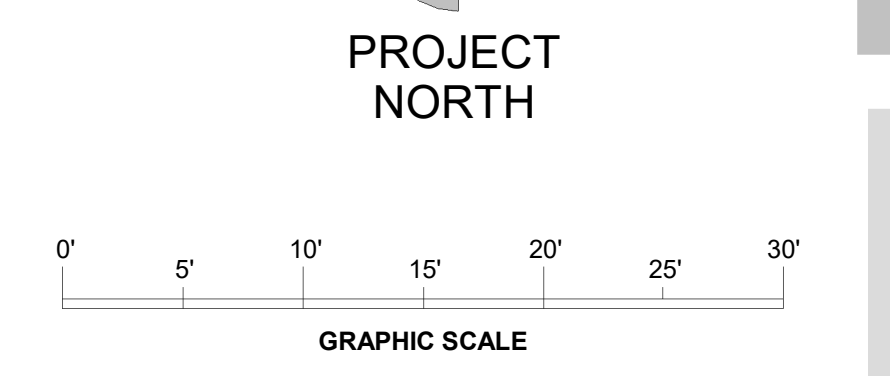
C3 SECTION THRU STAIRS
1/2" = 1'-0"



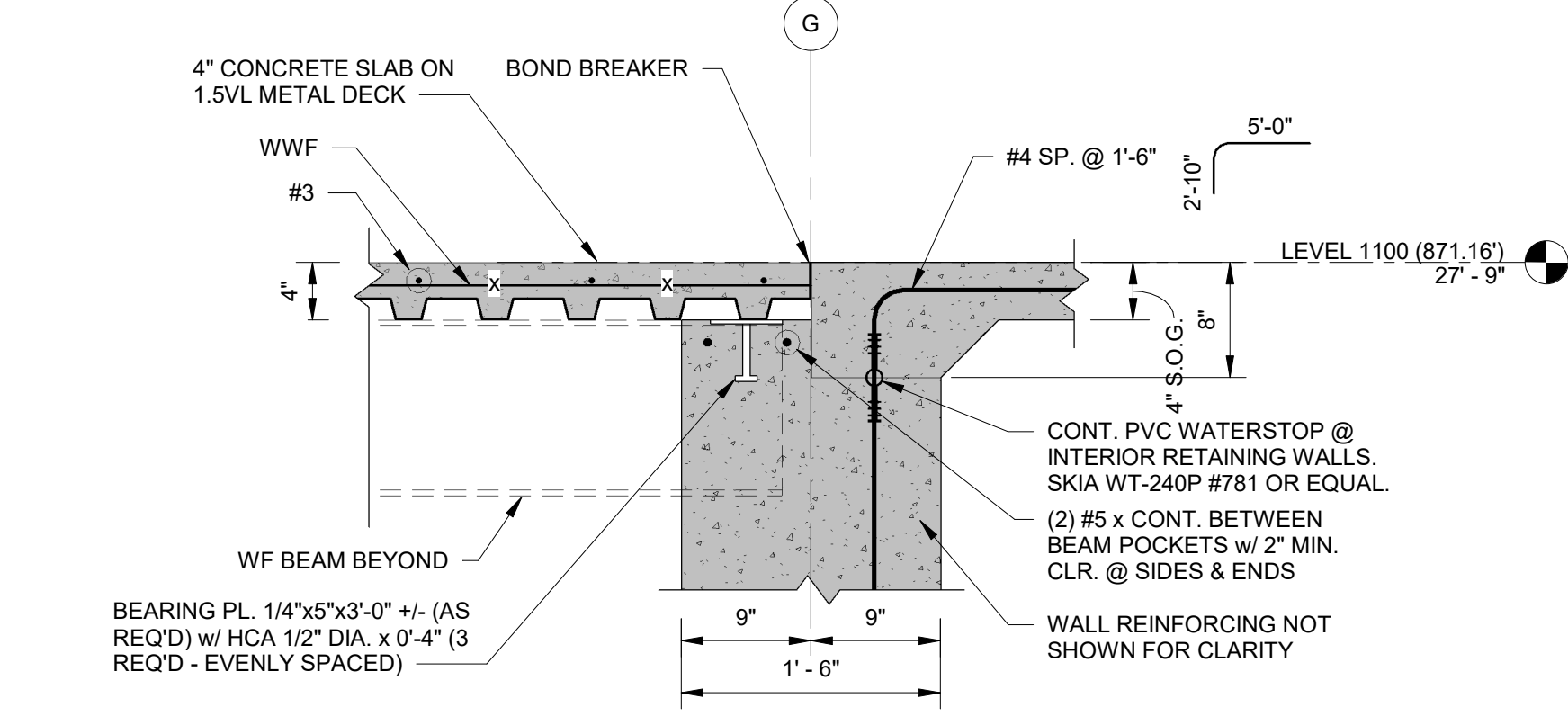
C4 SECTION THRU RW11
1/2" = 1'-0"



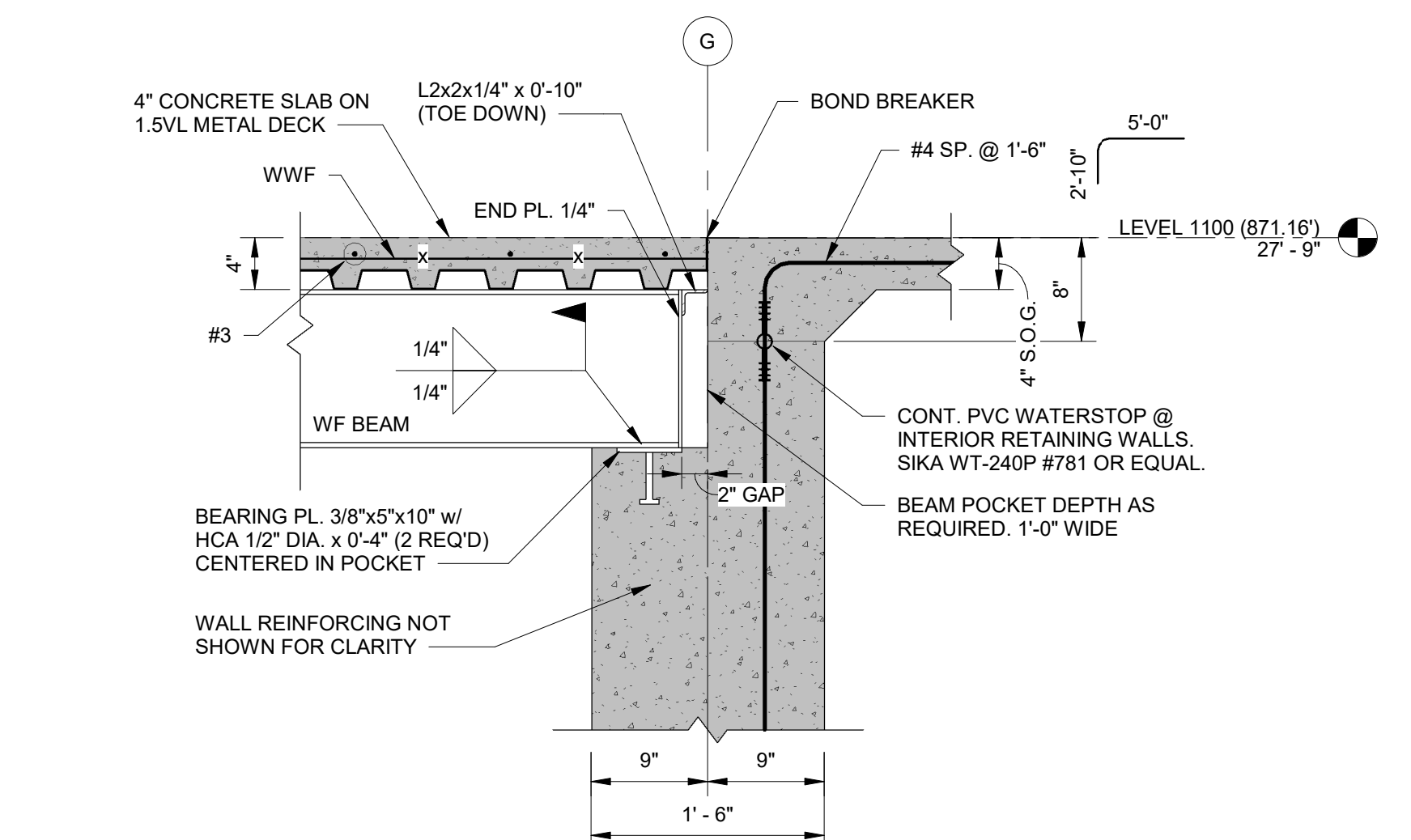
A1 NORTH RAMP AND DOCK PLAN
1/8" = 1'-0"



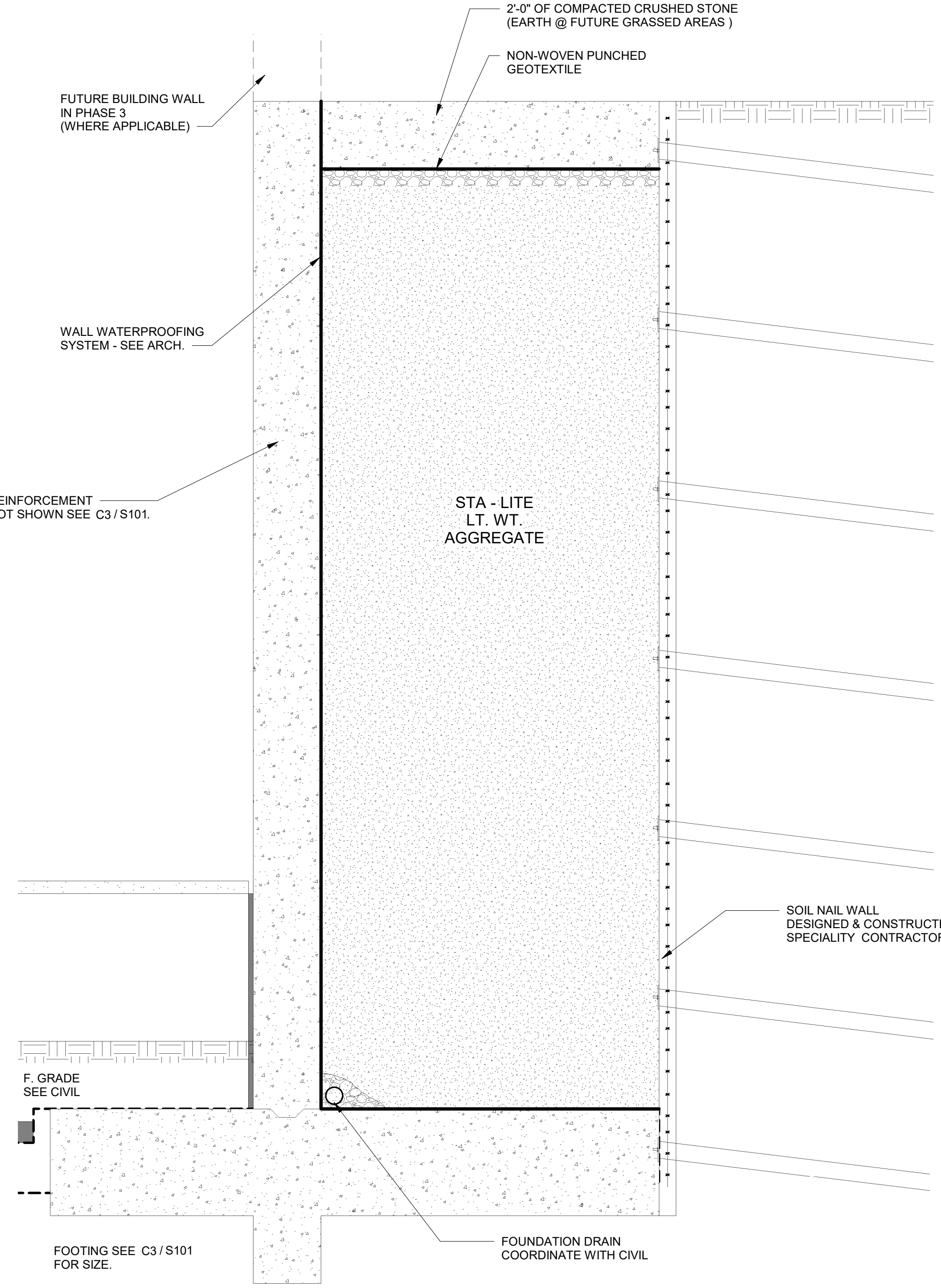
NOT FOR CONSTRUCTION
FOR PRICING ONLY



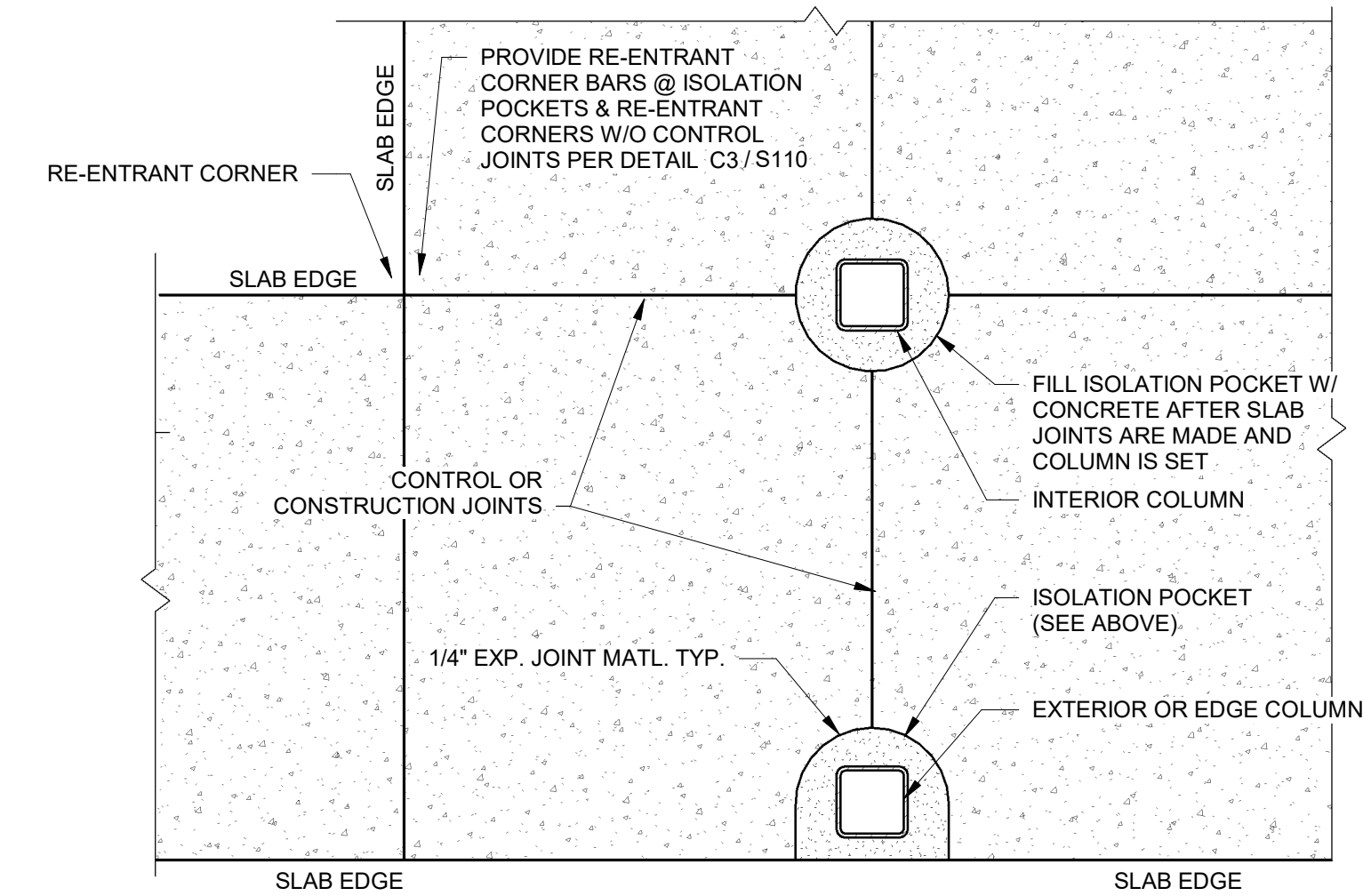
D1 DETAIL @ SLAB BEARING BETWEEN BEAM POCKETS (COL. LINE G)
S111 1" = 1'-0"



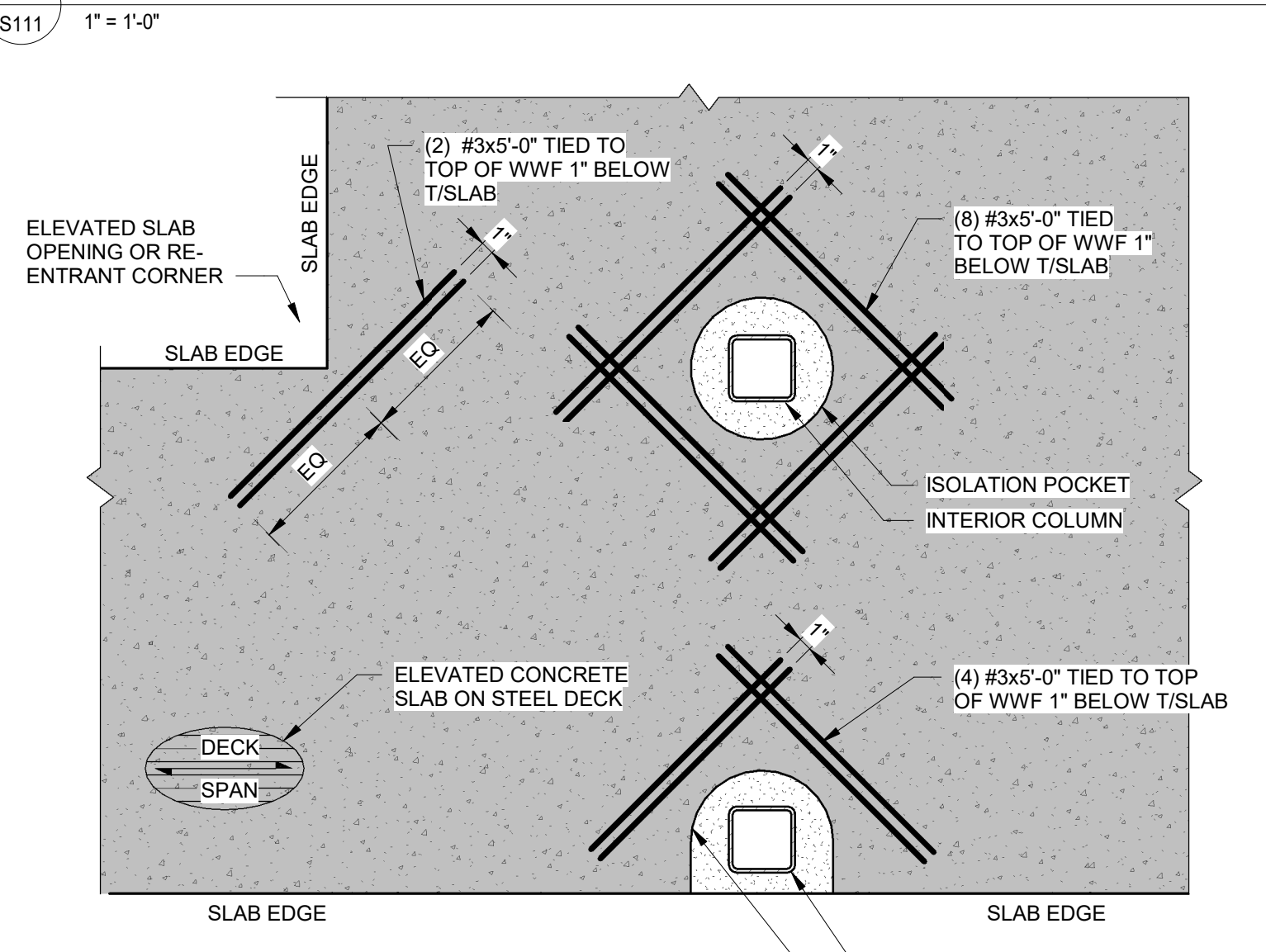
C1 DETAIL @ BEAM BEARING ON RETAINING WALL (COL. LINE G)
S111 1" = 1'-0"



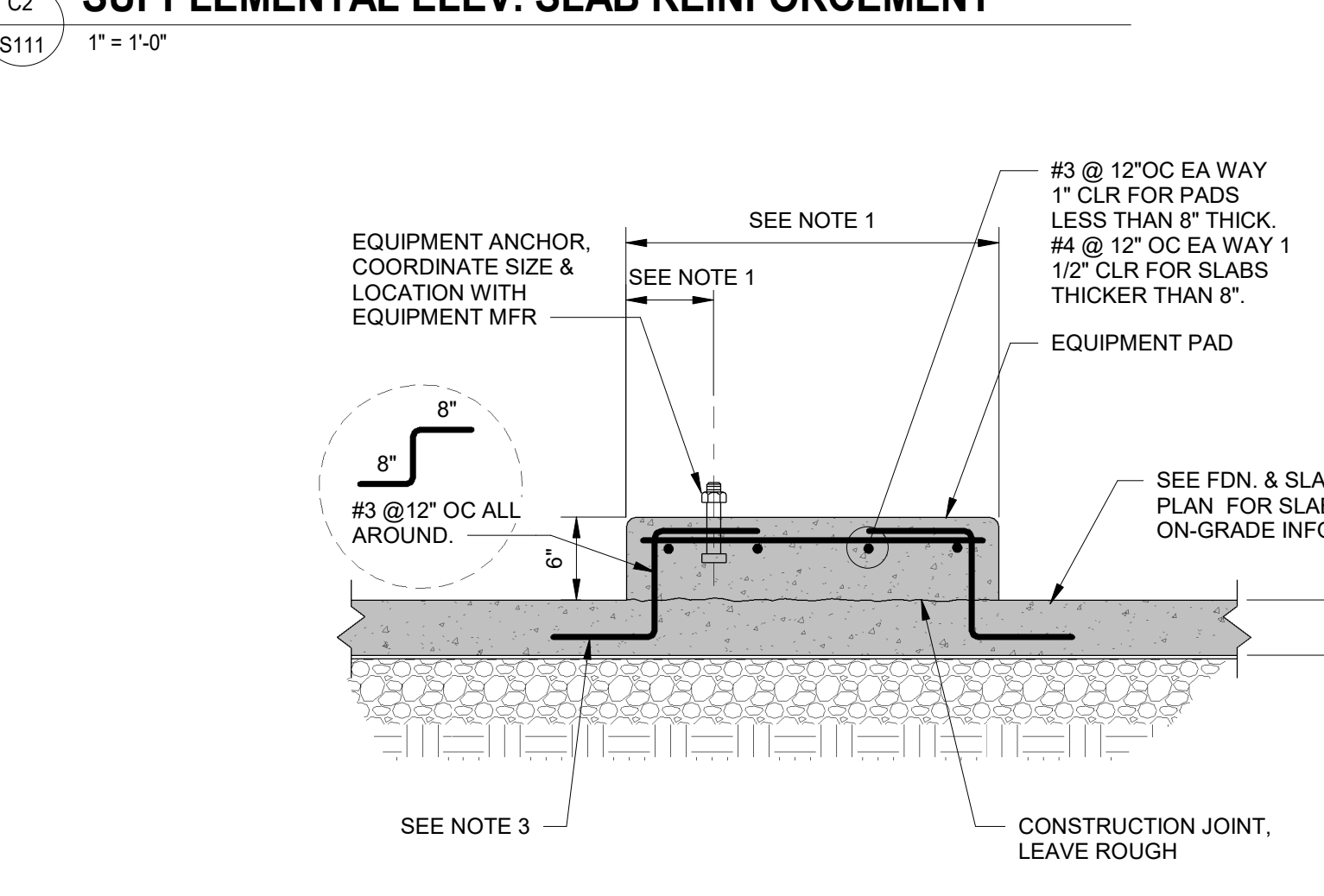
A1 RETAINING WALL
S111 3/8" = 1'-0"



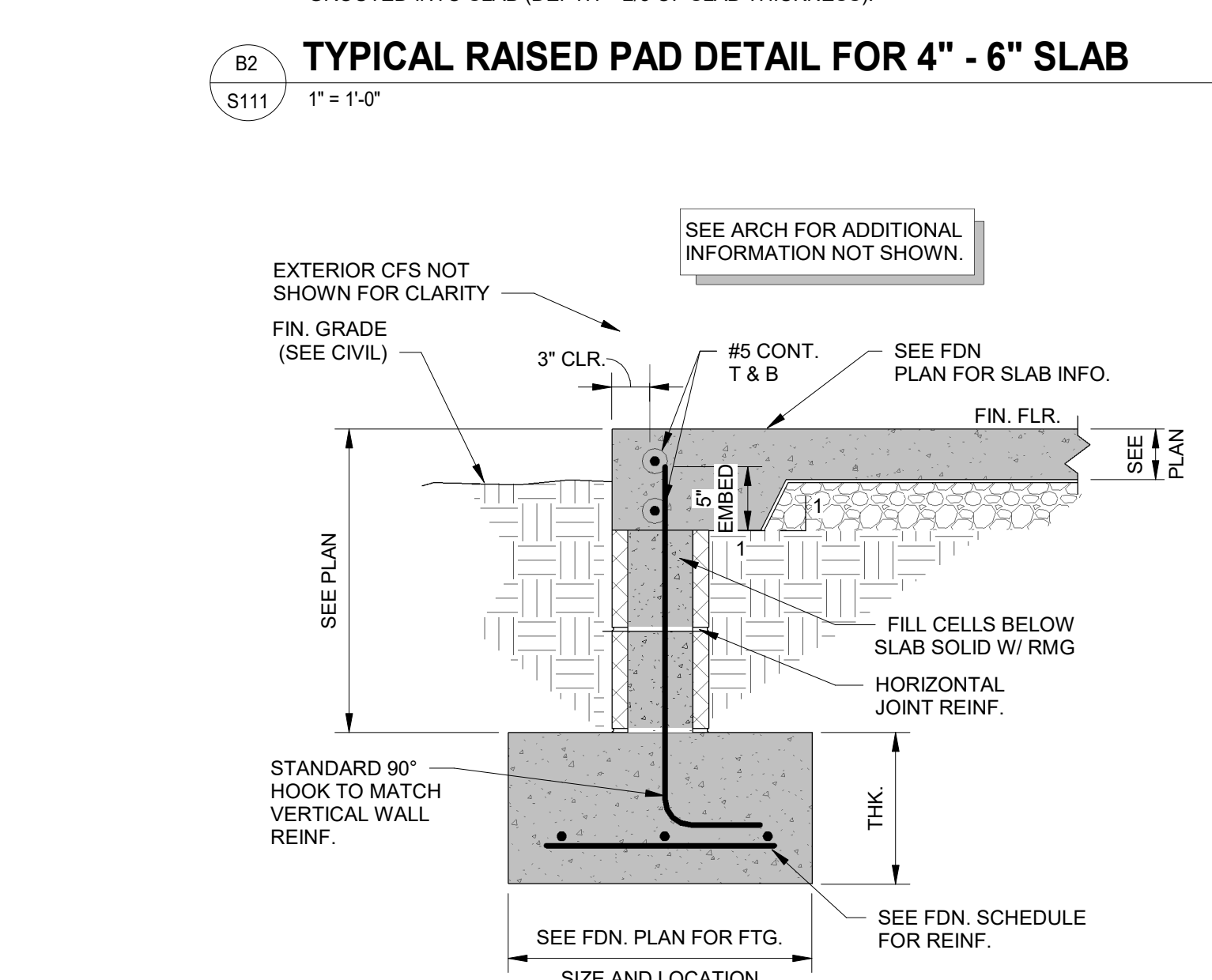
D2 SLAB-ON-GRADE ISOLATION DETAIL
S111 1" = 1'-0"



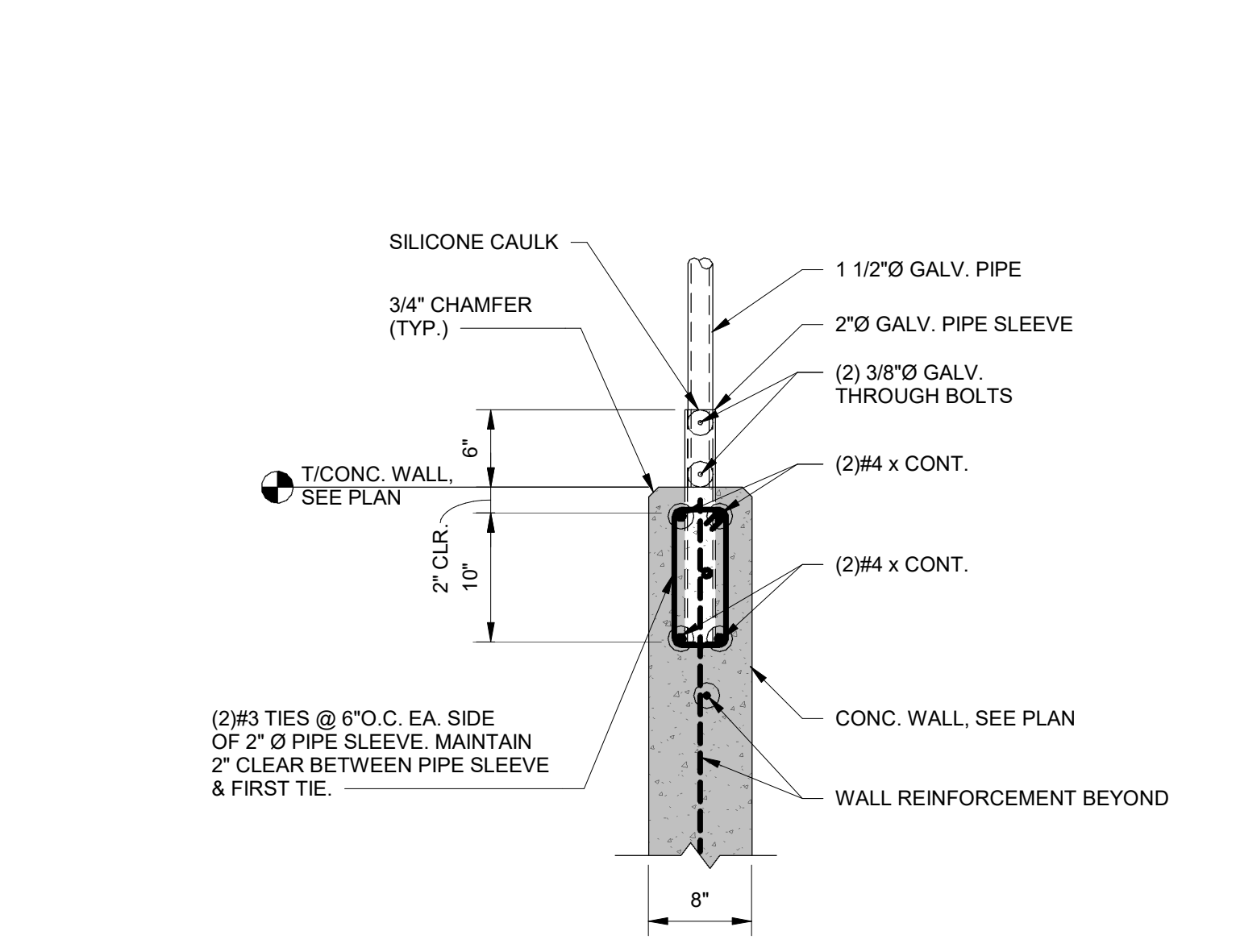
C2 SUPPLEMENTAL ELEV. SLAB REINFORCEMENT
S111 1" = 1'-0"



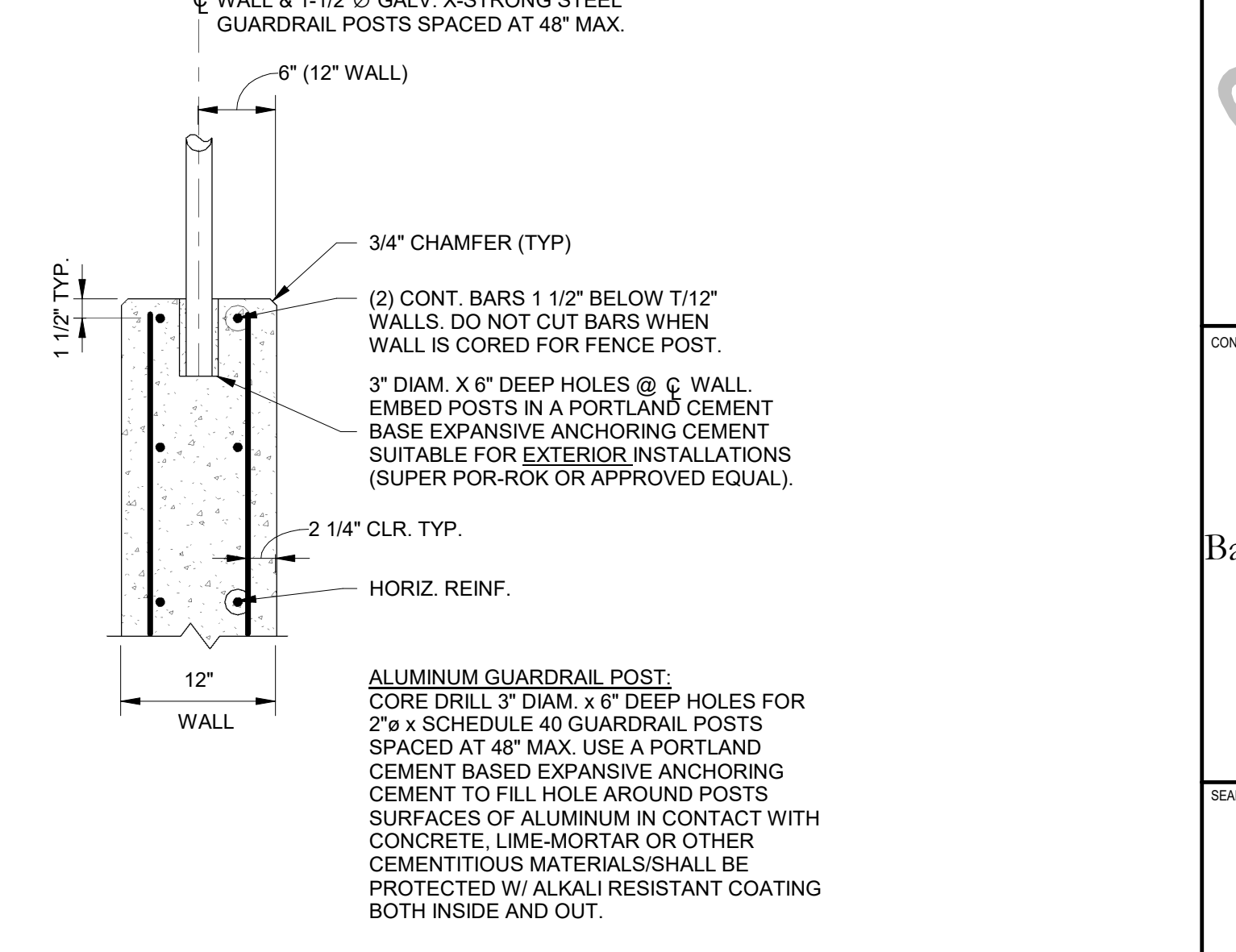
B2 TYPICAL RAISED PAD DETAIL FOR 4" - 6" SLAB
S111 1" = 1'-0"



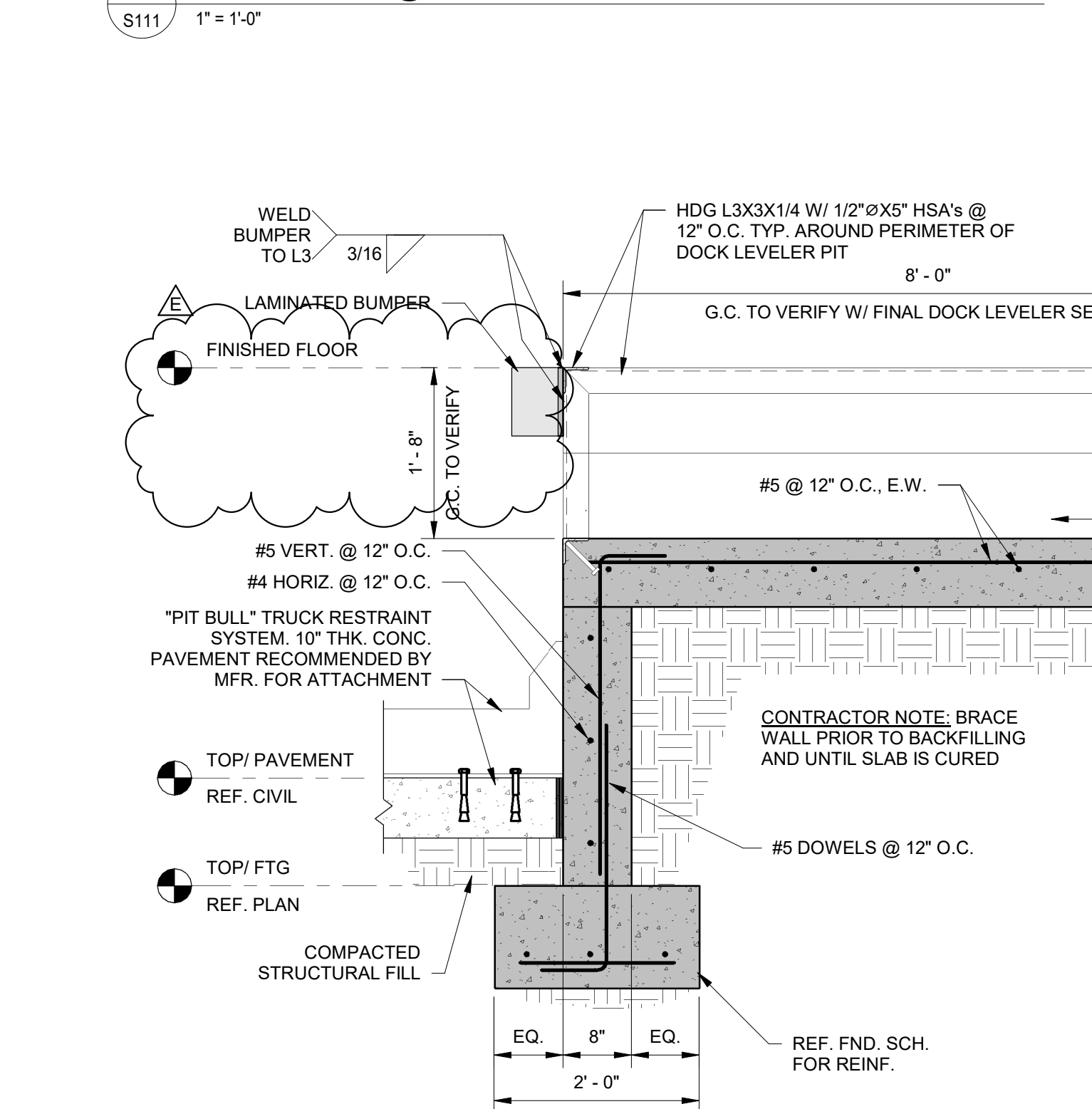
A2 TYP. TURNED DOWN SLAB DETAIL
S111 1" = 1'-0"



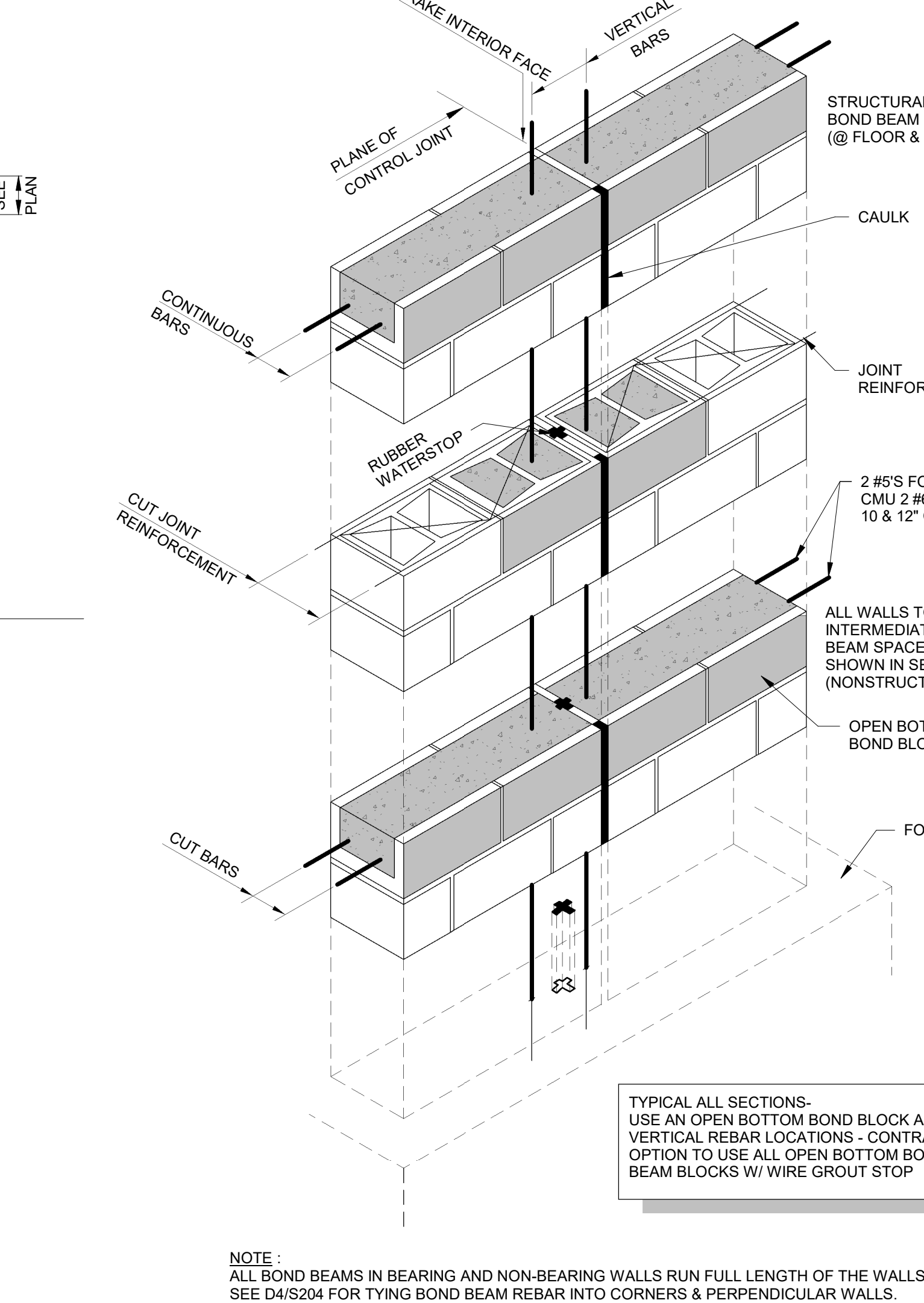
D4 GUARDRAIL @ T/CONC. WALL - REMOVABLE
S111 1" = 1'-0"



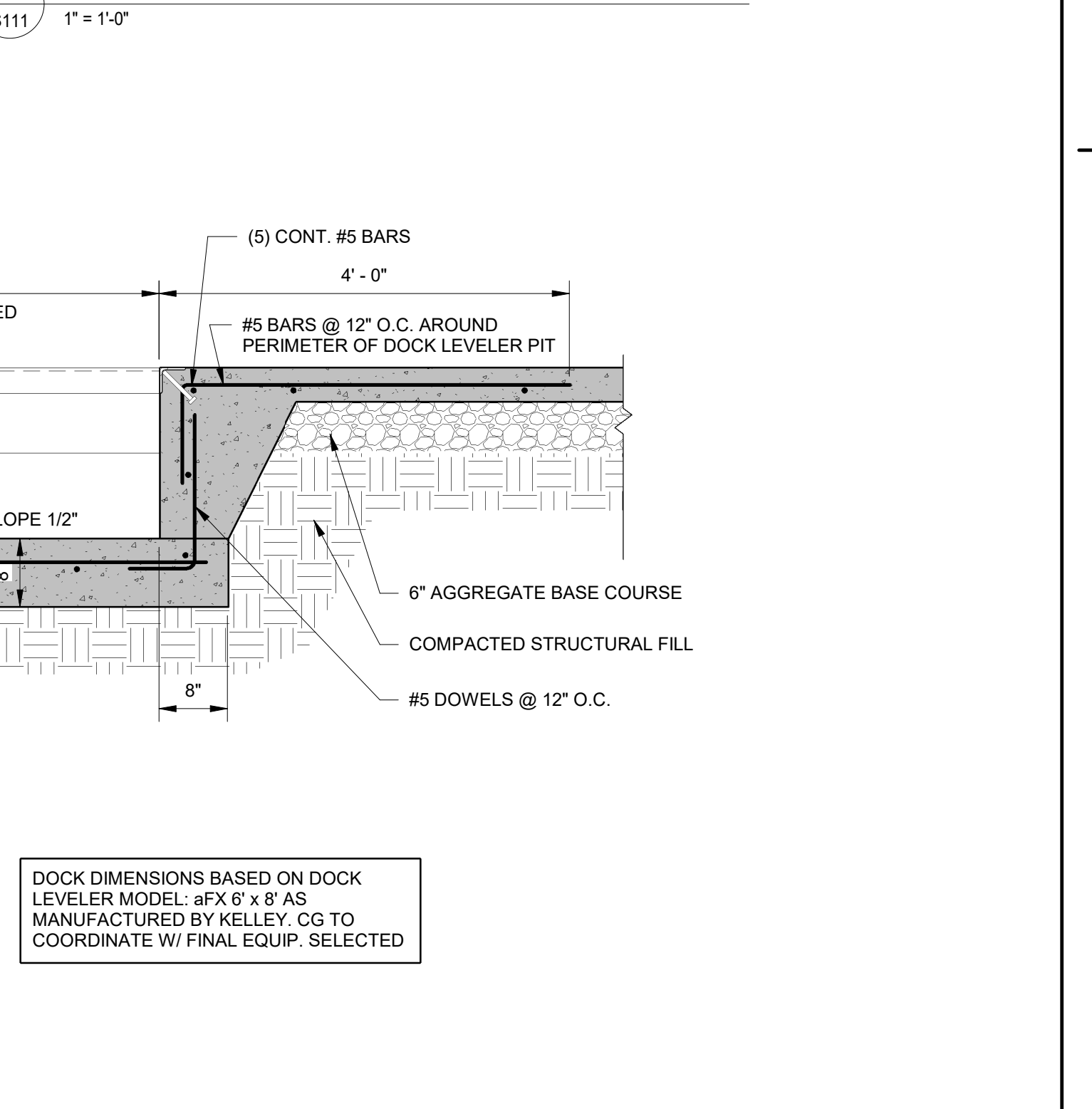
D5 GUARD RAIL EMBEDMENT POST 12" WALL
S111 1" = 1'-0"



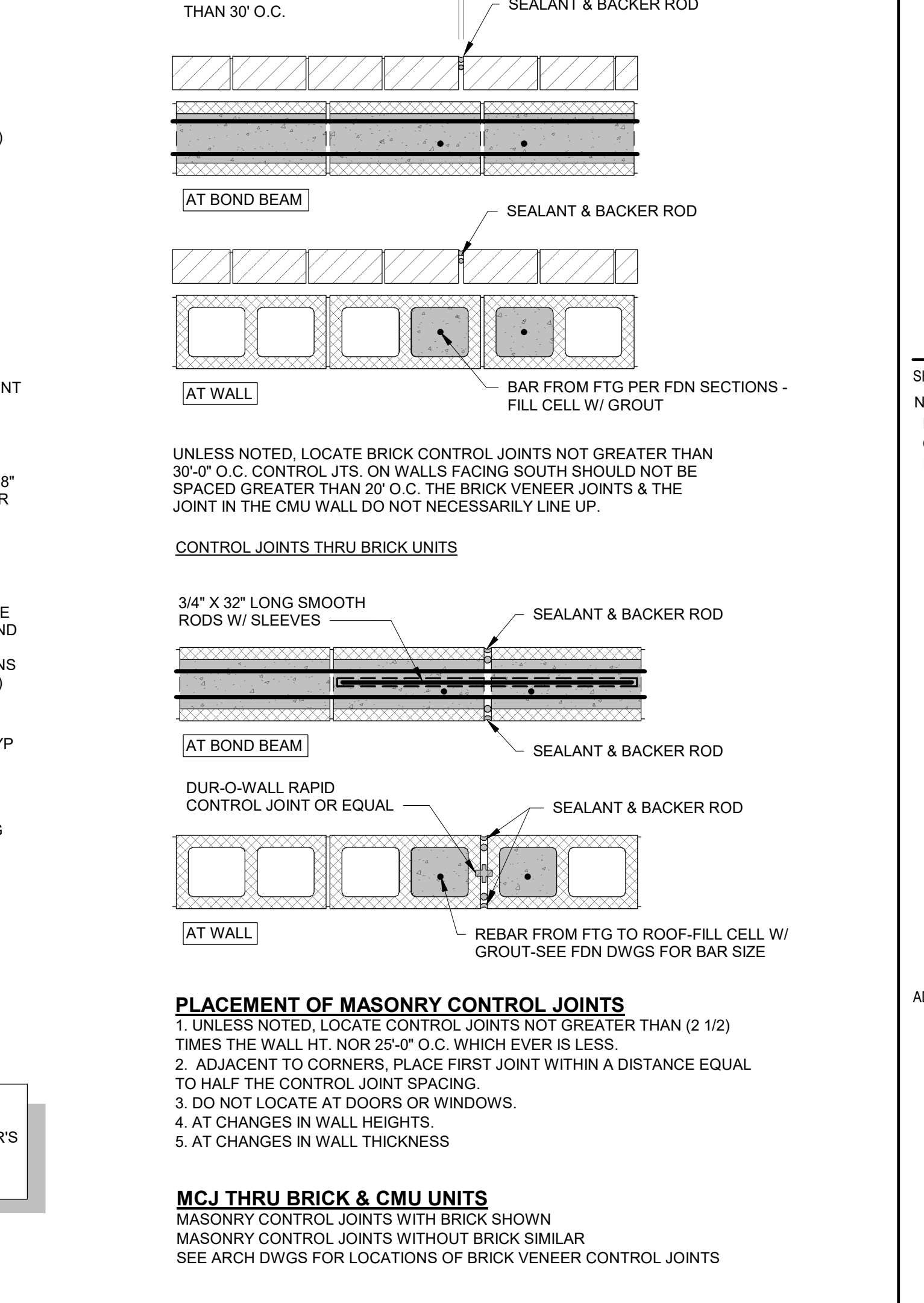
C3 SECTION THRU DOCK LEVELER
S111 3/4" = 1'-0"



A3 TYPICAL MASONRY CONTROL JOINT DETAIL (MCJ)
S111 1" = 1'-0"



B3 PLACEMENT OF MASONRY CONTROL JOINTS
S111 1" = 1'-0"



A4 MCJ THRU BRICK & CMU UNITS
S111 1" = 1'-0"

mcmillan pazardan smith
ARCHITECTURE

CONSULTANT LOGO

Base

Bailey and Son Engineering, Inc.

124 EDINBURGH COURT
SUITE 209
GREENVILLE, SC 29607
PH (864) 232-1284
WWW.BASE91.COM JOB# 20242

SPARTANBURG COUNTY SCHOOL DISTRICT FIVE

JAMES F. BYRNES HIGH SCHOOL
PHASE 2 ACADEMIC WING ADDITION

160 E. MAIN STREET
DUNCAN, SC 29534

SHEET ISSUE:

NO.	DATE	DESCRIPTION	BY
B	2/28/22	DD PRICING	ATR
C	06/01/22	GMP SET	PGG
E	09/27/22	ADDENDUM NO. 2	ATR

ADDENDUM NO. 2 06/27/22

PRINCIPAL IN CHARGE: PGG
PROJECT ENGINEER: ATR
DRAWN BY: JSD,BHJ,ATR

SHEET TITLE: FOUNDATION SECTIONS & DETAILS

SHEET NO. PROJ. NO. 20242

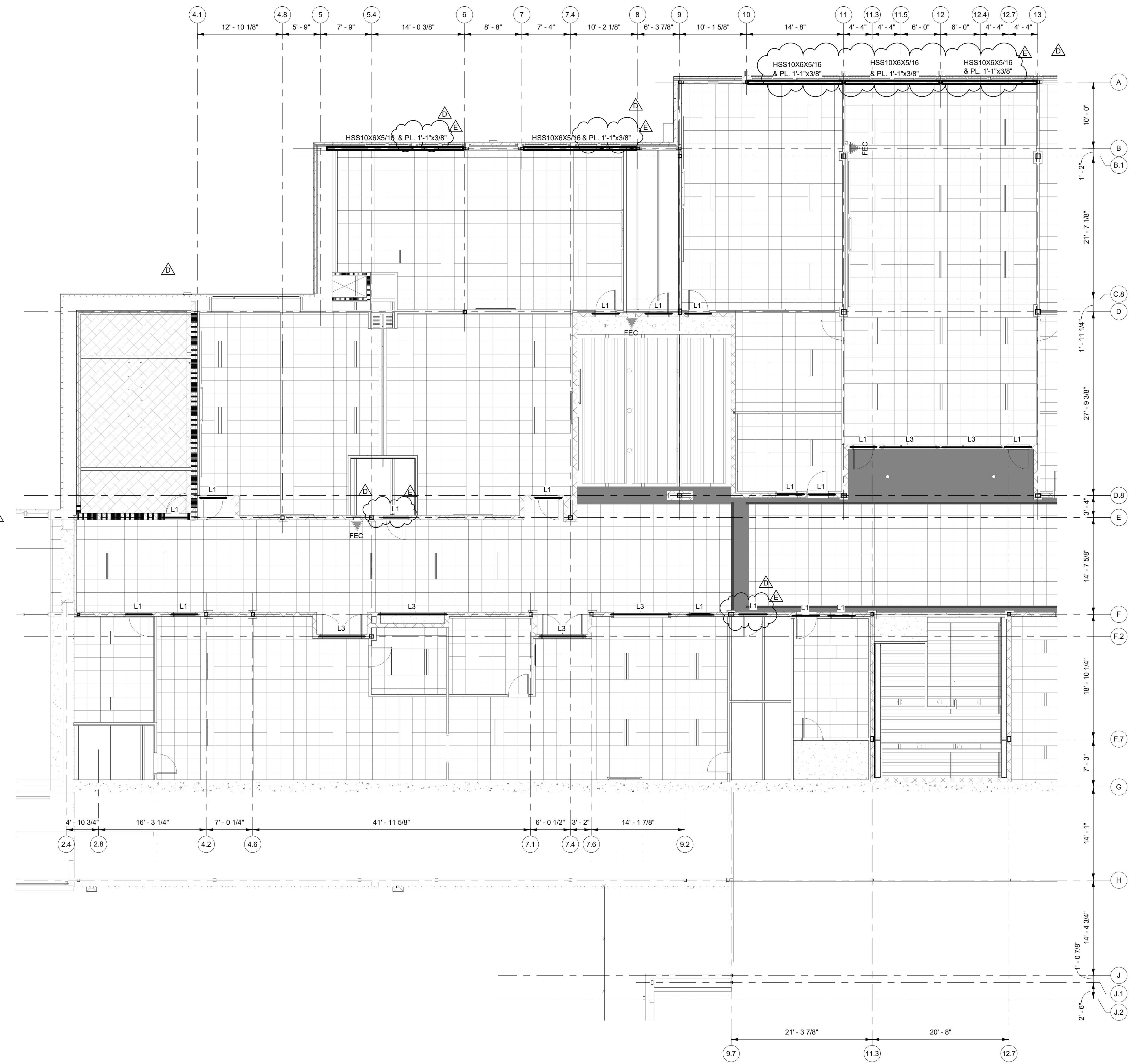
S111

NOT FOR CONSTRUCTION FOR PRICING ONLY

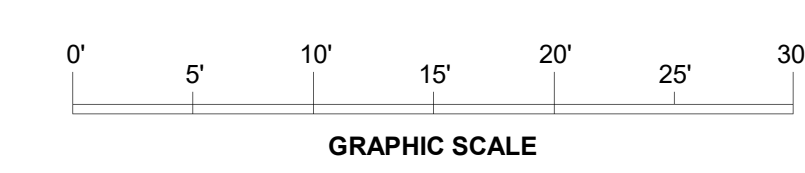
LINTEL NOTES:

- DO NOT PLACE VERTICAL JOINTS WITHIN 16" OF ANY OPENING IN CMU BLOCK WALLS. SEE ARCHITECTURAL DRAWINGS FOR BRICK VENEER CONTROL JOINTS.
- ONLY LINTELS IN MASONRY WALL CONSTRUCTION ARE SHOWN.
- COLD FORMED STEEL LINTELS BY OTHERS. SEE D3/S208 & S403 FOR SUGGESTED FRAMING.
- REFERENCE DETAIL A3/S208 FOR TYPICAL LINTEL SCHEDULE.
- FOR CONTINUOUS BOND BEAM AT EXTERIOR AND INTERIOR LOAD BEARING WALLS REFERENCE DETAIL D1/S208.
- L7 DENOTES STEEL LINTEL WITH BRICK VENEER, SEE DETAIL A1/S208.
- L8 DENOTES STEEL LINTEL, SEE DETAIL A2/S208.
- L9 DENOTES STEEL LINTEL IN EXISTING CMU WITH BRICK VENEER, SEE DETAIL A3/S208.
- L10 DENOTES STEEL LINTEL IN EXISTING CMU, SEE DETAIL A4/S208.
- L# DENOTES USE CMU TO MATCH 3 HR. RATED FIREWALL CONSTRUCTION.
- HSS10X6S/16 & ANGLE OR BENT PLAT INDICATES CONNECTED MEMBERS. SEE A4/S208 FOR ANGLE AND TUBE STEEL CONNECTION AND ANGLE POSITION.

THIS DRAWING AS AN INSTRUMENT OF SERVICE SHALL NOT BE REPRODUCED, ALTERED OR REUSED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER. ENGINEERING DRAWINGS ARE PROTECTED BY THE U.S. GOVERNMENT COPYRIGHT LEGISLATION. COPYRIGHT 2022, Bailey and Son Engineering, Inc. ALL RIGHTS RESERVED.



LEVEL 1000 LINTEL PLAN - AREA 'A'
A1
S200
1/8" = 1'-0"



SPARTANBURG COUNTY SCHOOL DISTRICT FIVE
JAMES F. BYRNES HIGH SCHOOL
PHASE 2 ACADEMIC WING ADDITION
150 E. MAIN STREET
DUNCAN, SC 29534

SHEET ISSUE:

NO.	DATE	DESCRIPTION	BY
C	06/01/22	GMP SET	PGG
D	06/20/22	ADDENDUM NO. 1	ATR
E	06/27/22	ADDENDUM NO. 2	ATR

NOT FOR CONSTRUCTION
FOR PRICING ONLY

ADDENDUM NO. 2
06/27/22
PRINCIPAL IN CHARGE: PGG
PROJECT ENGINEER: ATR
DRAWN BY: JSD,BH,JG,ATR

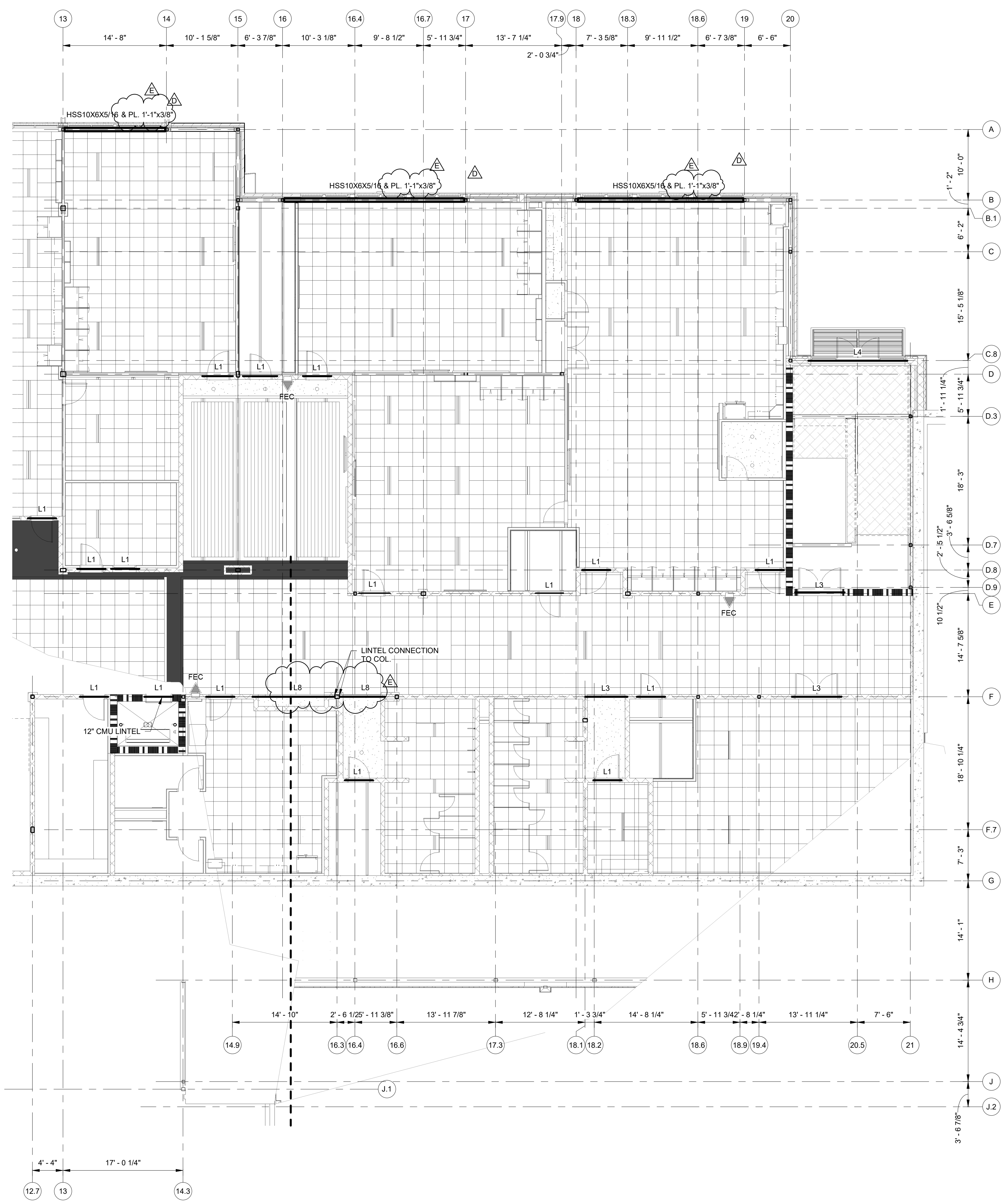
SHEET TITLE:
**1000 LEVEL LINTEL
PLAN - AREA 'A'**

SHEET NO. PROJ. NO.
20242

S200

- LINTEL NOTES:**
- DO NOT PLACE VERTICAL JOINTS WITHIN 16" OF ANY OPENING IN CMU BLOCK WALLS. SEE ARCHITECTURAL DRAWINGS FOR BRICK VENEER CONTROL JOINTS.
 - ONLY LINTELS IN MASONRY WALL CONSTRUCTION ARE SHOWN.
 - COLD FORMED STEEL LINTELS BY OTHERS. SEE D3/S208 & S403 FOR SUGGESTED FRAMING.
 - REFERENCE DETAIL A3/S208 FOR TYPICAL LINTEL SCHEDULE.
 - FOR CONTINUOUS BOND BEAM AT EXTERIOR AND INTERIOR LOAD BEARING WALLS REFERENCE DETAIL D1/S208.
 - L7 DENOTES STEEL LINTEL WITH BRICK VENEER. SEE DETAIL A1/S208.
 - L8 DENOTES STEEL LINTEL. SEE DETAIL A2/S208.
 - L9 DENOTES STEEL LINTEL IN EXISTING CMU WITH BRICK VENEER. SEE DETAIL A3/S209.
 - L10 DENOTES STEEL LINTEL IN EXISTING CMU. SEE DETAIL A4/S209.
 - L11 DENOTES USE CMU TO MATCH 3 HR. RATED FIREWALL CONSTRUCTION.
 - HSS10X6/5/16 & ANGLE OR BENT PLAT INDICATES CONNECTED MEMBERS. SEE A4/S208 FOR ANGLE AND TUBE STEEL CONNECTION AND ANGLE POSITION.

THIS DRAWING AS AN INSTRUMENT OF SERVICE SHALL NOT BE REPRODUCED, ALTERED OR REUSED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER. ENGINEERING DRAWINGS ARE PROTECTED BY THE U.S. GOVERNMENT COPYRIGHT LEGISLATION. COPYRIGHT 2022, Bailey and Son Engineering, Inc. ALL RIGHTS RESERVED.



A1 LEVEL 1000 LINTEL PLAN - AREA 'B'
S201 1/8" = 1'-0"

SPARTANBURG COUNTY SCHOOL DISTRICT FIVE
JAMES F. BYRNES HIGH SCHOOL
PHASE 2 ACADEMIC WING ADDITION
150 E. MAIN STREET
DUNCAN, SC 29534

SHEET ISSUE:

NO.	DATE	DESCRIPTION	BY
C	06/01/22	GMP SET	PGG
D	06/20/22	ADDENDUM NO. 1	ATR
E	06/27/22	ADDENDUM NO. 2	ATR

NOT FOR CONSTRUCTION
FOR PRICING ONLY

ADDENDUM NO. 2 06/27/22
PRINCIPAL IN CHARGE: PGG
PROJECT ENGINEER: ATR
DRAWN BY: JSD,BH,JG,ATR

SHEET TITLE:
**1000 LEVEL LINTEL
PLAN - AREA 'B'**

SHEET NO. PROJ. NO.
S201 20242

S201

THIS DRAWING IS AN INSTRUMENT OF SERVICE. IT SHALL NOT BE REPRODUCED, ALTERED OR USED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER. ENGINEERING DRAWINGS ARE PROTECTED BY THE U.S. GOVERNMENT COPYRIGHT LEGISLATION. COPYRIGHT 2022, Bailey and Son Engineering, Inc. ALL RIGHTS RESERVED.



- LINTEL NOTES:**
- DO NOT PLACE VERTICAL JOINTS WITHIN 16" OF ANY OPENING IN CMU BLOCK WALLS. SEE ARCHITECTURAL DRAWINGS FOR BRICK VENEER CONTROL JOINTS.
 - ONLY LINTELS IN MASONRY WALL CONSTRUCTION ARE SHOWN.
 - COLD FORMED STEEL LINTELS BY OTHERS. SEE D3/S208 & S403 FOR SUGGESTED FRAMING.
 - REFERENCE DETAIL A3/S208 FOR TYPICAL LINTEL SCHEDULE.
 - FOR CONTINUOUS BOND BEAM AT EXTERIOR AND INTERIOR LOAD BEARING WALLS REFERENCE DETAIL D1/S208.
 - L7 DENOTES STEEL LINTEL WITH BRICK VENEER. SEE DETAIL A1/S208.
 - L8 DENOTES STEEL LINTEL. SEE DETAIL A2/S208.
 - L9 DENOTES STEEL LINTEL IN EXISTING CMU WITH BRICK VENEER. SEE DETAIL A3/S208.
 - L10 DENOTES STEEL LINTEL IN EXISTING CMU. SEE DETAIL A4/S208.
 - L# DENOTES USE CMU TO MATCH 3 HR. RATED FIREWALL CONSTRUCTION.
 - HSS10x6/5/16 & ANGLE OR BENT PLAT INDICATES CONNECTED MEMBERS. SEE A4/S208 FOR ANGLE AND TUBE STEEL CONNECTION AND ANGLE POSITION.



CONSULTANT LOGO
BASE
 Bailey and Son Engineering, Inc.
 124 EDINBURGH COURT
 SUITE 209
 GREENVILLE, SC 29607
 PH (864) 232-1284
 WWW.BASE91.COM JOB# 20242

SPARTANBURG COUNTY SCHOOL DISTRICT FIVE
JAMES F. BYRNES HIGH SCHOOL
 PHASE 2 ACADEMIC WING ADDITION
 150 E. MAIN STREET
 DUNCAN, SC 29534

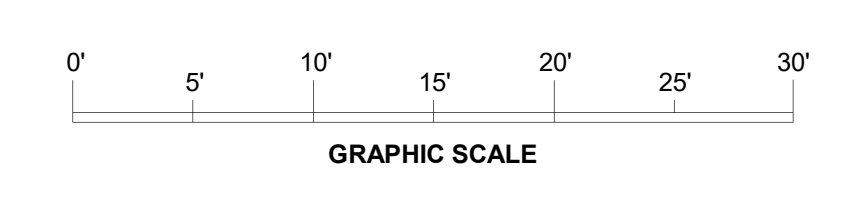
NO.	DATE	DESCRIPTION	BY
C	06/01/22	GMP SET	PGG
D	06/20/22	ADDENDUM NO. 1	ATR
E	06/27/22	ADDENDUM NO. 2	ATR

ADDENDUM NO. 2 06/27/22
 PRINCIPAL IN CHARGE: PGG
 PROJECT ENGINEER: ATR
 DRAWN BY: JSD,BH,JG,ATR

SHEET TITLE:
**1100 LEVEL LINTEL
 PLAN - AREA 'A'**

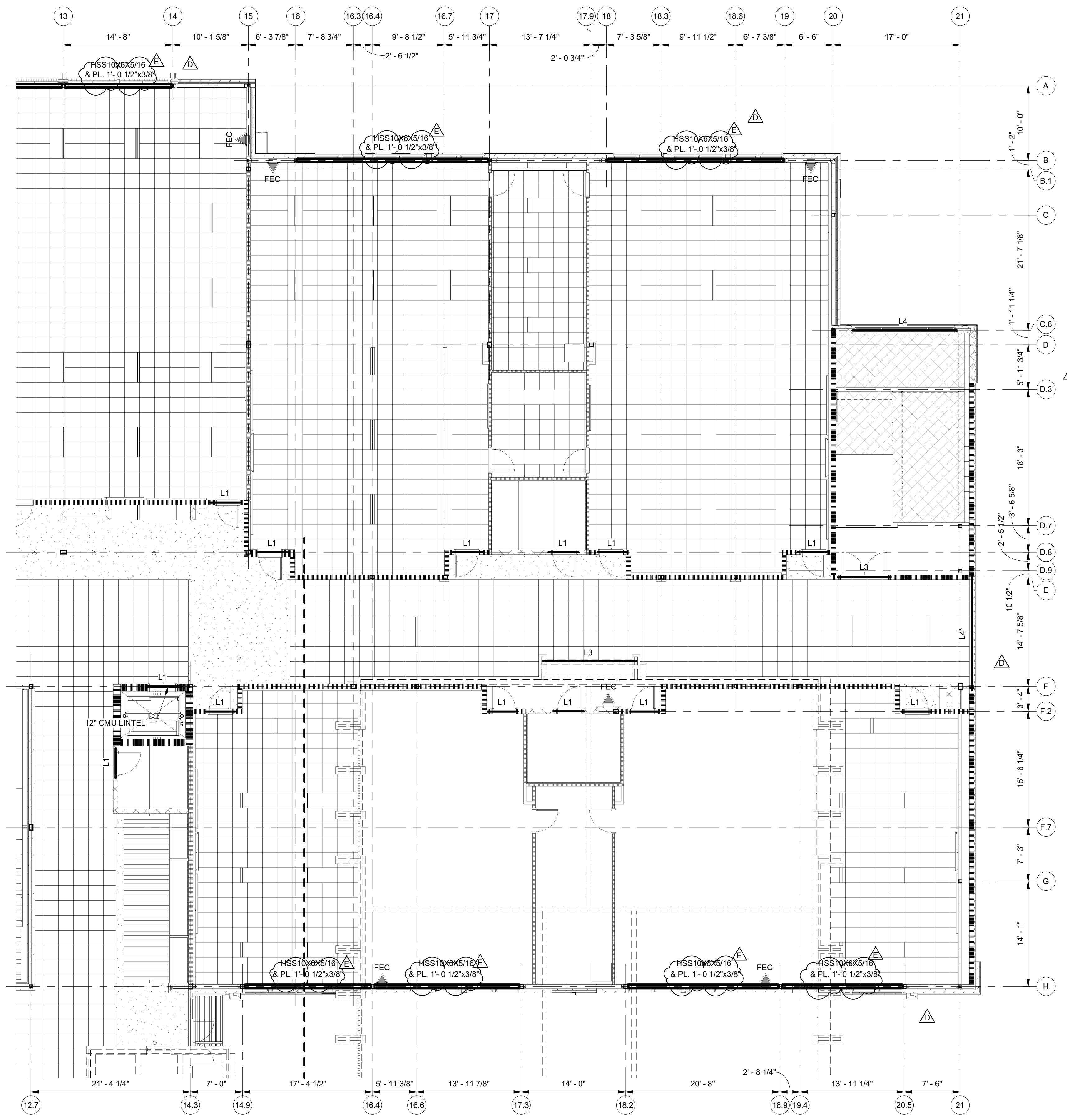
SHEET NO. PROJ. NO.
 S202 20242

S202



NOT FOR CONSTRUCTION
FOR PRICING ONLY

THIS DRAWING AS AN INSTRUMENT OF SERVICE SHALL NOT BE REPRODUCED, ALTERED OR REUSED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER. ENGINEERING DRAWINGS ARE PROTECTED BY THE U.S. GOVERNMENT COPYRIGHT LEGISLATION. COPYRIGHT 2022, Bailey and Son Engineering, Inc. ALL RIGHTS RESERVED.



A1
S203
LEVEL 1100 LINTEL PLAN - AREA 'B'
 1/8" = 1'-0"

LINTEL NOTES:

1. DO NOT PLACE VERTICAL JOINTS WITHIN 16" OF ANY OPENING IN CMU BLOCK WALLS. SEE ARCHITECTURAL DRAWINGS FOR BRICK VENEER CONTROL JOINTS.
2. ONLY LINTELS IN MASONRY WALL CONSTRUCTION ARE SHOWN.
3. COLD FORMED STEEL LINTELS BY OTHERS. SEE D3/S208 & S403 FOR SUGGESTED FRAMING.
4. REFERENCE DETAIL A3/S208 FOR TYPICAL LINTEL SCHEDULE.
5. FOR CONTINUOUS BOND BEAM AT EXTERIOR AND INTERIOR LOAD BEARING WALLS REFERENCE DETAIL D1/S208.
6. L7 DENOTES STEEL LINTEL WITH BRICK VENEER. SEE DETAIL A1/S208.
7. L8 DENOTES STEEL LINTEL. SEE DETAIL A2/S208.
8. L9 DENOTES STEEL LINTEL IN EXISTING CMU WITH BRICK VENEER. SEE DETAIL A3/S208.
9. L10 DENOTES STEEL LINTEL IN EXISTING CMU. SEE DETAIL A4/S208.
10. L11 DENOTES USE CMU TO MATCH 3 HR. RATED FIREWALL CONSTRUCTION.
11. HSS10X6/5/16 & ANGLE OR BENT PLAT INDICATES CONNECTED MEMBERS. SEE A4/S208 FOR ANGLE AND TUBE STEEL CONNECTION AND ANGLE POSITION.



CONSULTANT LOGO
BASE
 Bailey and Son Engineering, Inc.
 124 EDINBURGH COURT
 SUITE 209
 GREENVILLE, SC 29607
 PH (864) 232-1284
 WWW.BASE91.COM JOB# 20242

SPARTANBURG COUNTY SCHOOL DISTRICT FIVE
JAMES F. BYRNES HIGH SCHOOL
PHASE 2 ACADEMIC WING ADDITION
 150 E. MAIN STREET
 DUNCAN, SC 29534

SHEET ISSUE:			
NO.	DATE	DESCRIPTION	BY
C	06/01/22	GMP SET	PGG
D	06/20/22	ADDENDUM NO. 1	ATR
E	06/27/22	ADDENDUM NO. 2	ATR

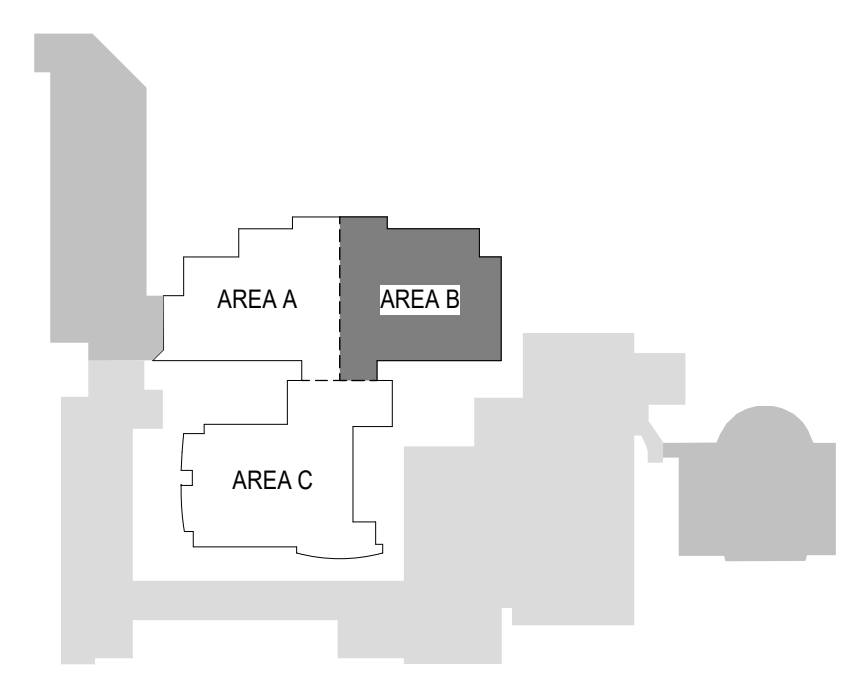
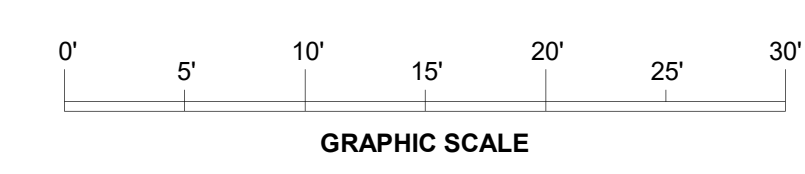
NOT FOR CONSTRUCTION
 FOR PRICING ONLY

ADDENDUM NO. 2
 06/27/22
 PRINCIPAL IN CHARGE: PGG
 PROJECT ENGINEER: ATR
 DRAWN BY: JSD,BH,JG,ATR

SHEET TITLE:
**1100 LEVEL LINTEL
 PLAN - AREA 'B'**

SHEET NO. PROJ. NO.
 20242

S203



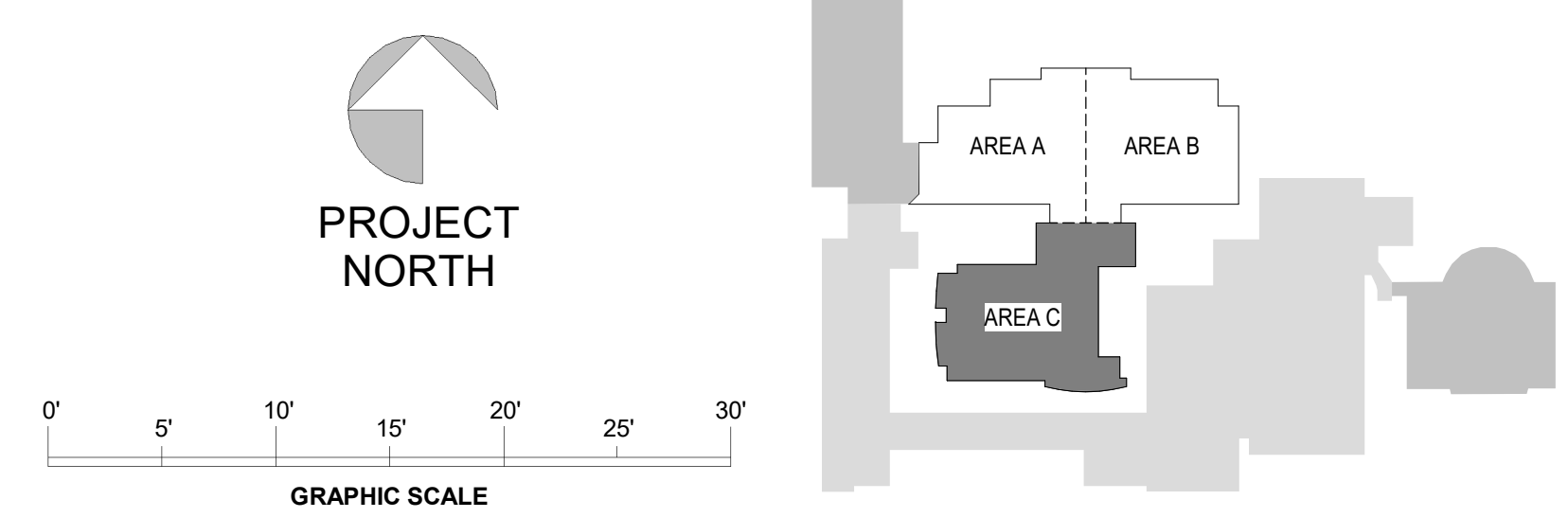
LINTEL NOTES:

- DO NOT PLACE VERTICAL JOINTS WITHIN 16" OF ANY OPENING IN CMU BLOCK WALLS. SEE ARCHITECTURAL DRAWINGS FOR BRICK VENEER CONTROL JOINTS.
- ONLY LINTELS IN MASONRY WALL CONSTRUCTION ARE SHOWN.
- COLD FORMED STEEL LINTELS BY OTHERS. SEE D3/S208 & S403 FOR SUGGESTED FRAMING.
- REFERENCE DETAIL A3/S208 FOR TYPICAL LINTEL SCHEDULE.
- FOR CONTINUOUS BOND BEAM AT EXTERIOR AND INTERIOR LOAD BEARING WALLS REFERENCE DETAIL D1/S208.
- L7 DENOTES STEEL LINTEL WITH BRICK VENEER. SEE DETAIL A1/S208.
- L8 DENOTES STEEL LINTEL. SEE DETAIL A2/S208.
- L9 DENOTES STEEL LINTEL IN EXISTING CMU WITH BRICK VENEER. SEE DETAIL A3/S208.
- L10 DENOTES STEEL LINTEL IN EXISTING CMU. SEE DETAIL A4/S208.
- L11 DENOTES USE CMU TO MATCH 3 HR. RATED FIREWALL CONSTRUCTION.
- HSS10XB6X5/16 & ANGLE OR BENT PLAT INDICATES CONNECTED MEMBERS. SEE A4/S208 FOR ANGLE AND TUBE STEEL CONNECTION AND ANGLE POSITION.

THIS DRAWING AS AN INSTRUMENT OF SERVICE SHALL NOT BE REPRODUCED, ALTERED OR REUSED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER. ENGINEERING DRAWINGS ARE PROTECTED BY THE U.S. GOVERNMENT COPYRIGHT LEGISLATION. COPYRIGHT 2022, Bailey and Son Engineering, Inc. ALL RIGHTS RESERVED.



A1 LEVEL 1100 LINTEL PLAN - AREA 'C'
S204 1/8" = 1'-0"



SPARTANBURG COUNTY SCHOOL DISTRICT FIVE
**JAMES F. BYRNES HIGH SCHOOL
PHASE 2 ACADEMIC WING ADDITION**
150 E. MAIN STREET
DUNCAN, SC 29504

SHEET ISSUE:			
NO.	DATE	DESCRIPTION	BY
C	06/01/22	GMP SET	PGG
D	06/20/22	ADDENDUM NO. 1	ATR
E	06/27/22	ADDENDUM NO. 2	ATR

NOT FOR CONSTRUCTION
FOR PRICING ONLY

ADDENDUM NO. 2 06/27/22
PRINCIPAL IN CHARGE: PGG
PROJECT ENGINEER: ATR
DRAWN BY: JSD,BH,JG,ATR

SHEET TITLE:
1100 LEVEL LINTEL
PLAN - AREA 'C'

SHEET NO. PROJ. NO.
20242

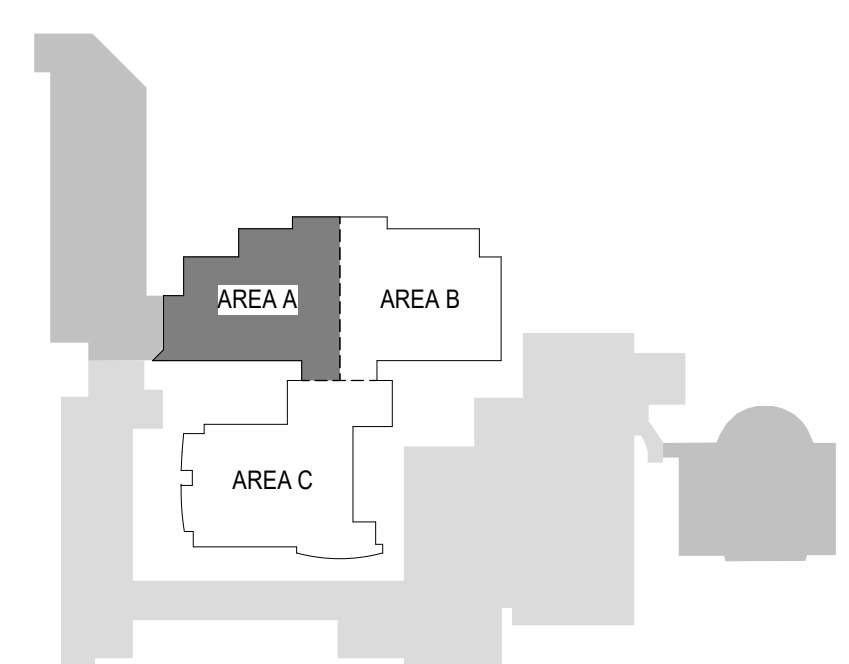
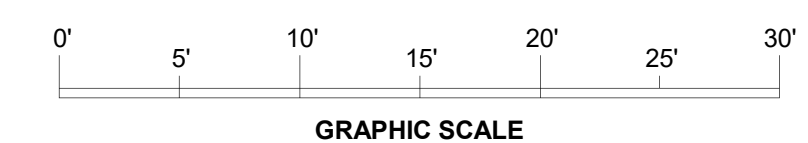
S204

- LINTEL NOTES:**
- DO NOT PLACE VERTICAL JOINTS WITHIN 16" OF ANY OPENING IN CMU BLOCK WALLS. SEE ARCHITECTURAL DRAWINGS FOR BRICK VENEER CONTROL JOINTS.
 - ONLY LINTELS IN MASONRY WALL CONSTRUCTION ARE SHOWN.
 - COLD FORMED STEEL LINTELS BY OTHERS. SEE D3/S208 & S403 FOR SUGGESTED FRAMING.
 - REFERENCE DETAIL A3/S208 FOR TYPICAL LINTEL SCHEDULE.
 - FOR CONTINUOUS BOND BEAM AT EXTERIOR AND INTERIOR LOAD BEARING WALLS REFERENCE DETAIL D1/S208.
 - L7 DENOTES STEEL LINTEL WITH BRICK VENEER. SEE DETAIL A1/S208.
 - L8 DENOTES STEEL LINTEL. SEE DETAIL A2/S208.
 - L9 DENOTES STEEL LINTEL IN EXISTING CMU WITH BRICK VENEER. SEE DETAIL A3/S208.
 - L10 DENOTES STEEL LINTEL IN EXISTING CMU. SEE DETAIL A4/S208.
 - L# DENOTES USE CMU TO MATCH 3 HR. RATED FIREWALL CONSTRUCTION.
 - HSS10X6X5/16 & ANGLE OR BENT PLAT INDICATES CONNECTED MEMBERS. SEE A4/S208 FOR ANGLE AND TUBE STEEL CONNECTION AND ANGLE POSITION.

THIS DRAWING IS AN INSTRUMENT OF SERVICE SHALL NOT BE REPRODUCED, ALTERED OR REUSED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER. ENGINEERING DRAWINGS ARE PROTECTED BY THE U.S. GOVERNMENT COPYRIGHT LEGISLATION. COPYRIGHT 2022, Bailey and Son Engineering, Inc. ALL RIGHTS RESERVED.



A1
S205
LEVEL 1200 LINTEL PLAN - AREA 'A'
1/8" = 1'-0"



SPARTANBURG COUNTY SCHOOL DISTRICT FIVE
JAMES F. BYRNES HIGH SCHOOL
PHASE 2 ACADEMIC WING ADDITION
150 E. MAIN STREET
DUNCAN, SC 29534

SHEET ISSUE:

NO.	DATE	DESCRIPTION	BY
C	06/01/22	GMP SET	PGG
D	06/20/22	ADDENDUM NO. 1	ATR
E	06/27/22	ADDENDUM NO. 2	ATR

NOT FOR CONSTRUCTION
FOR PRICING ONLY

ADDENDUM NO. 2
06/27/22
PRINCIPAL IN CHARGE: PGG
PROJECT ENGINEER: ATR
DRAWN BY: JSD,BH,JG,ATR

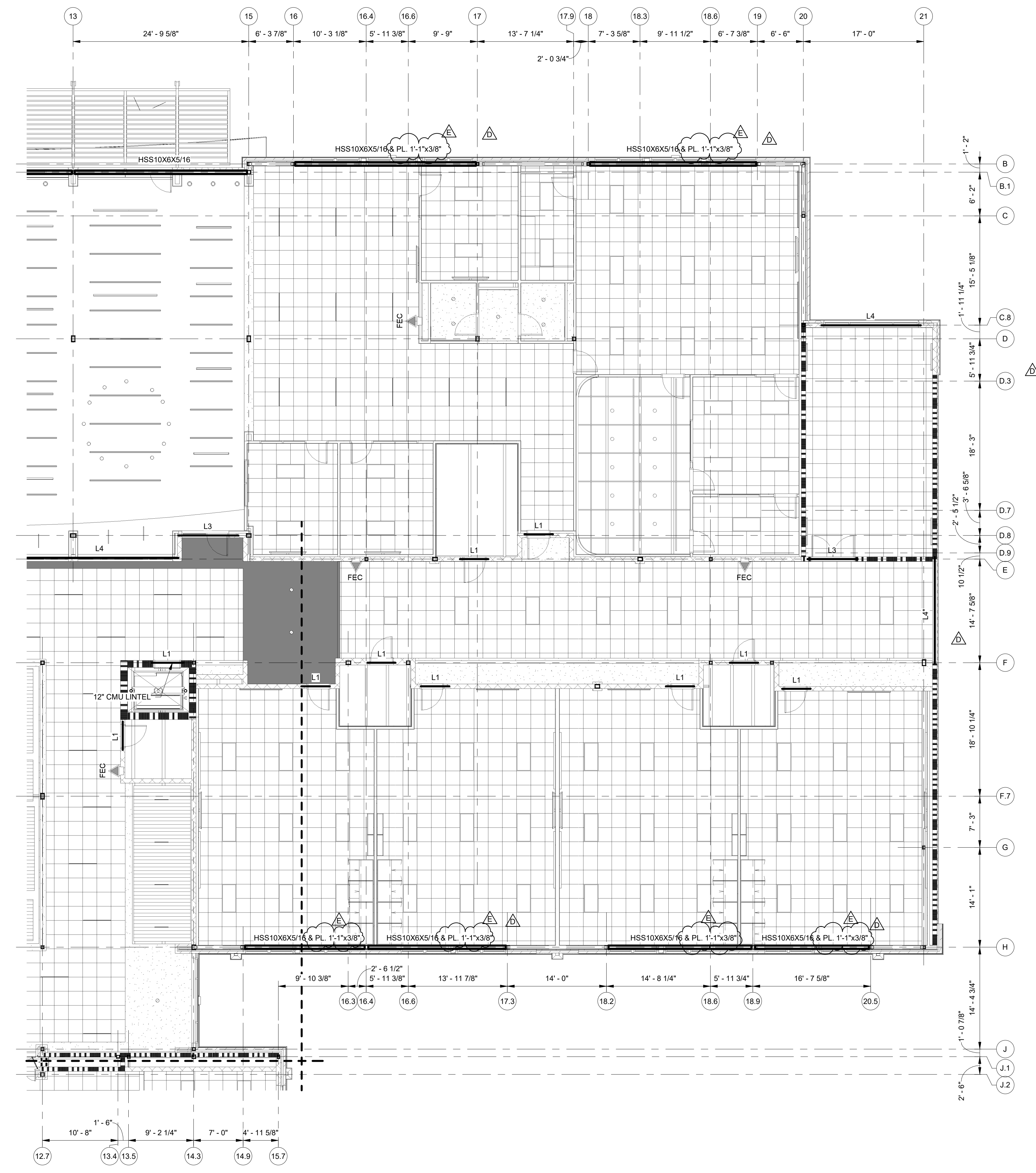
SHEET TITLE:
**1200 LEVEL LINTEL
PLAN - AREA 'A'**

SHEET NO. PROJ. NO.
S205 20242

S205

- LINTEL NOTES:**
1. DO NOT PLACE VERTICAL JOINTS WITHIN 16" OF ANY OPENING IN CMU BLOCK WALLS. SEE ARCHITECTURAL DRAWINGS FOR BRICK VENEER CONTROL JOINTS.
 2. ONLY LINTELS IN MASONRY WALL CONSTRUCTION ARE SHOWN.
 3. COLD FORMED STEEL LINTELS BY OTHERS. SEE D3/S208 & S403 FOR SUGGESTED FRAMING.
 4. REFERENCE DETAIL A3/S208 FOR TYPICAL LINTEL SCHEDULE.
 5. FOR CONTINUOUS BOND BEAM AT EXTERIOR AND INTERIOR LOAD BEARING WALLS REFERENCE DETAIL D1/S208.
 6. L7 DENOTES STEEL LINTEL WITH BRICK VENEER. SEE DETAIL A1/S208.
 7. L8 DENOTES STEEL LINTEL. SEE DETAIL A2/S208.
 8. L9 DENOTES STEEL LINTEL IN EXISTING CMU WITH BRICK VENEER. SEE DETAIL A3/S208.
 9. L10 DENOTES STEEL LINTEL IN EXISTING CMU. SEE DETAIL A4/S209.
 10. L11 DENOTES USE CMU TO MATCH 3 HR. RATED FIREWALL CONSTRUCTION.
 11. HSS10X8S/16 & ANGLE OR BENT PLAT INDICATES CONNECTED MEMBERS. SEE A4/S208 FOR ANGLE AND TUBE STEEL CONNECTION AND ANGLE POSITION.

THIS DRAWING AS AN INSTRUMENT OF SERVICE SHALL NOT BE REPRODUCED, ALTERED OR REUSED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER. ENGINEERING DRAWINGS ARE PROTECTED BY THE U.S. GOVERNMENT COPYRIGHT LEGISLATION. COPYRIGHT 2022, Bailey and Son Engineering, Inc. ALL RIGHTS RESERVED.



A1
S206
LEVEL 1200 LINTEL PLAN - AREA 'B'
1/8" = 1'-0"

SPARTANBURG COUNTY SCHOOL DISTRICT FIVE
JAMES F. BYRNES HIGH SCHOOL
PHASE 2 ACADEMIC WING ADDITION
150 E. MAIN STREET
DUNCAN, SC 29534

NO.	DATE	DESCRIPTION	BY
C	06/01/22	GMP SET	PGG
D	06/20/22	ADDENDUM NO. 1	ATR
E	06/27/22	ADDENDUM NO. 2	ATR

NOT FOR CONSTRUCTION
FOR PRICING ONLY

ADDENDUM NO. 2
06/27/22
PRINCIPAL IN CHARGE: PGG
PROJECT ENGINEER: ATR
DRAWN BY: JSD,BH,JG,ATR

SHEET TITLE:
**1200 LEVEL LINTEL
PLAN - AREA 'B'**

SHEET NO. PROJ. NO.
20242

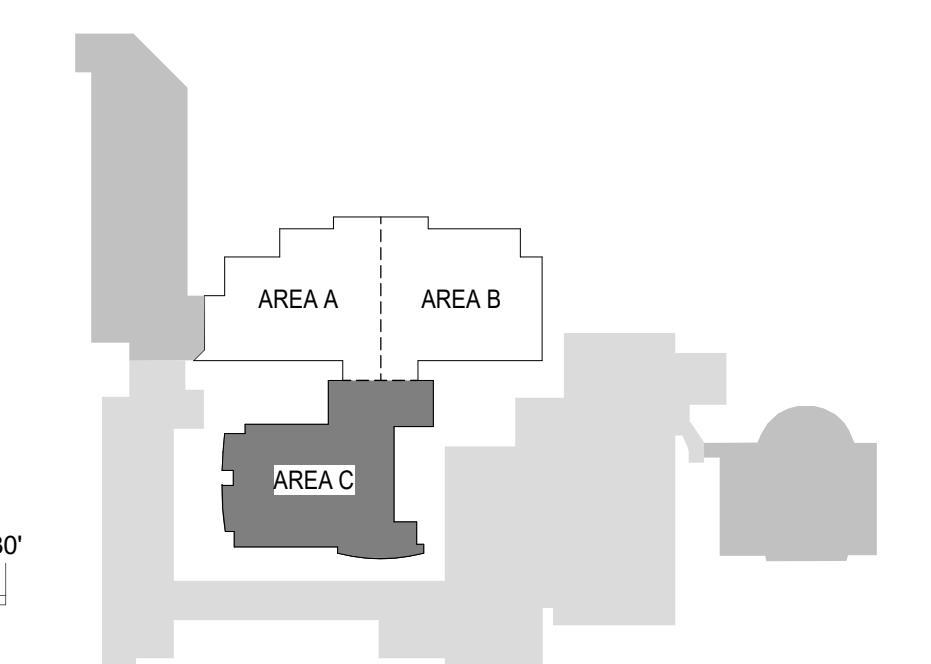
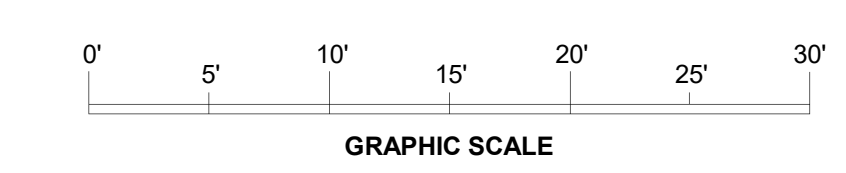
S206

- LINTEL NOTES:**
- DO NOT PLACE VERTICAL JOINTS WITHIN 16" OF ANY OPENING IN CMU BLOCK WALLS. SEE ARCHITECTURAL DRAWINGS FOR BRICK VENEER CONTROL JOINTS.
 - ONLY LINTELS IN MASONRY WALL CONSTRUCTION ARE SHOWN.
 - COLD FORMED STEEL LINTELS BY OTHERS. SEE D3/S208 & S403 FOR SUGGESTED FRAMING.
 - REFERENCE DETAIL A3/S208 FOR TYPICAL LINTEL SCHEDULE.
 - FOR CONTINUOUS BOND BEAM AT EXTERIOR AND INTERIOR LOAD BEARING WALLS REFERENCE DETAIL D1/S208.
 - L7 DENOTES STEEL LINTEL WITH BRICK VENEER. SEE DETAIL A1/S208.
 - L8 DENOTES STEEL LINTEL. SEE DETAIL A2/S208.
 - L9 DENOTES STEEL LINTEL IN EXISTING CMU WITH BRICK VENEER. SEE DETAIL A3/S208.
 - L10 DENOTES STEEL LINTEL IN EXISTING CMU. SEE DETAIL A4/S209.
 - L4* DENOTES USE CMU TO MATCH 3 HR. RATED FIREWALL CONSTRUCTION.
 - HSS10X6X5/16 & ANGLE OR BENT PLAT INDICATES CONNECTED MEMBERS. SEE A4/S208 FOR ANGLE AND TUBE STEEL CONNECTION AND ANGLE POSITION.



THIS DRAWING AS AN INSTRUMENT OF SERVICE SHALL NOT BE REPRODUCED, ALTERED OR REUSED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER. ENGINEERING DRAWINGS ARE PROTECTED BY THE U.S. GOVERNMENT COPYRIGHT LEGISLATION. COPYRIGHT 2022, Bailey and Son Engineering, Inc. ALL RIGHTS RESERVED.

A1
S207
LEVEL 1200 LINTEL PLAN - AREA 'C'
1/8" = 1'-0"



SPARTANBURG COUNTY SCHOOL DISTRICT FIVE
JAMES F. BYRNES HIGH SCHOOL
PHASE 2 ACADEMIC WING ADDITION

150 E. MAIN STREET
DUNCAN, SC 29534

NO.	DATE	DESCRIPTION	BY
C	06/01/22	GMP SET	PGG
D	06/20/22	ADDENDUM NO. 1	ATR
E	06/27/22	ADDENDUM NO. 2	ATR

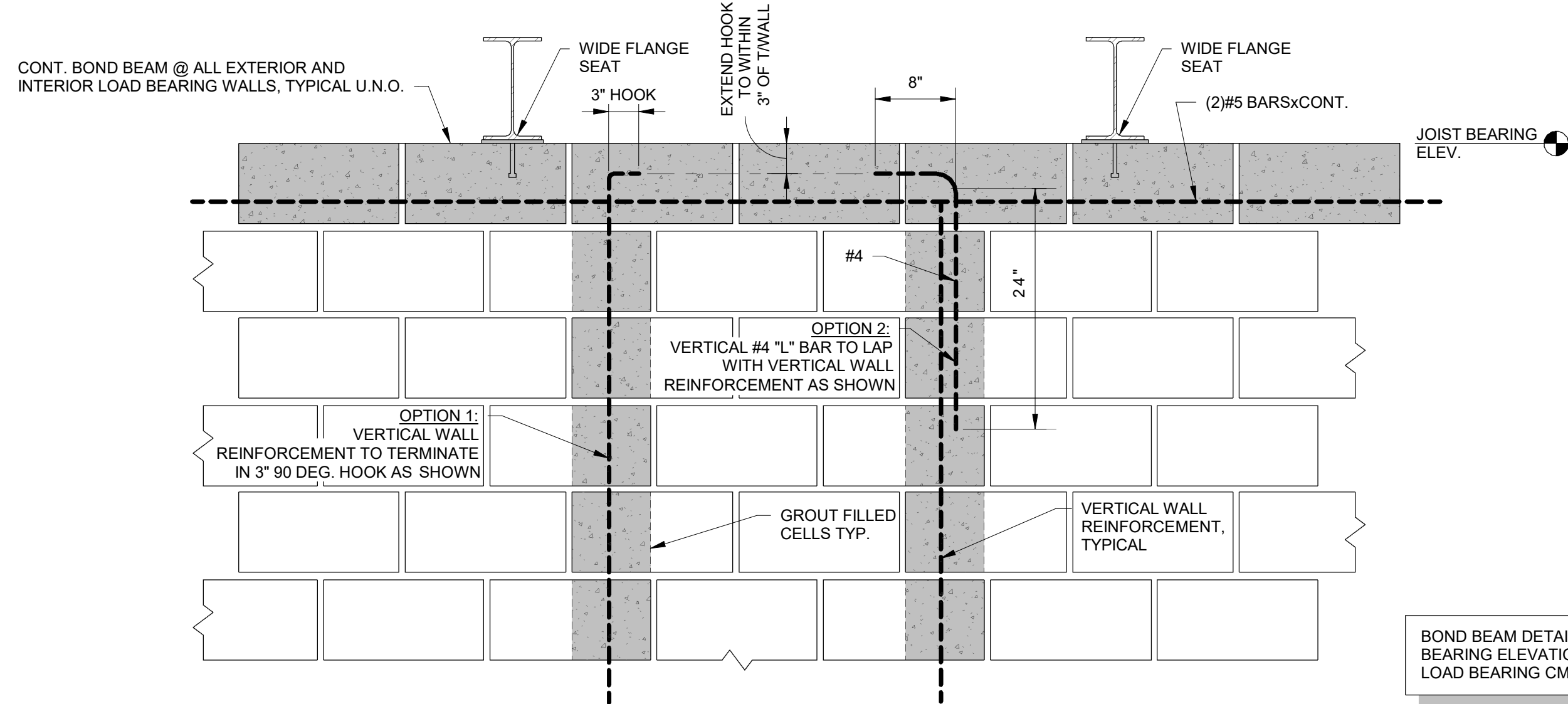
NOT FOR CONSTRUCTION
FOR PRICING ONLY

ADDENDUM NO. 2
06/27/22
PRINCIPAL IN CHARGE: PGG
PROJECT ENGINEER: ATR
DRAWN BY: JSD,BH,JG,ATR

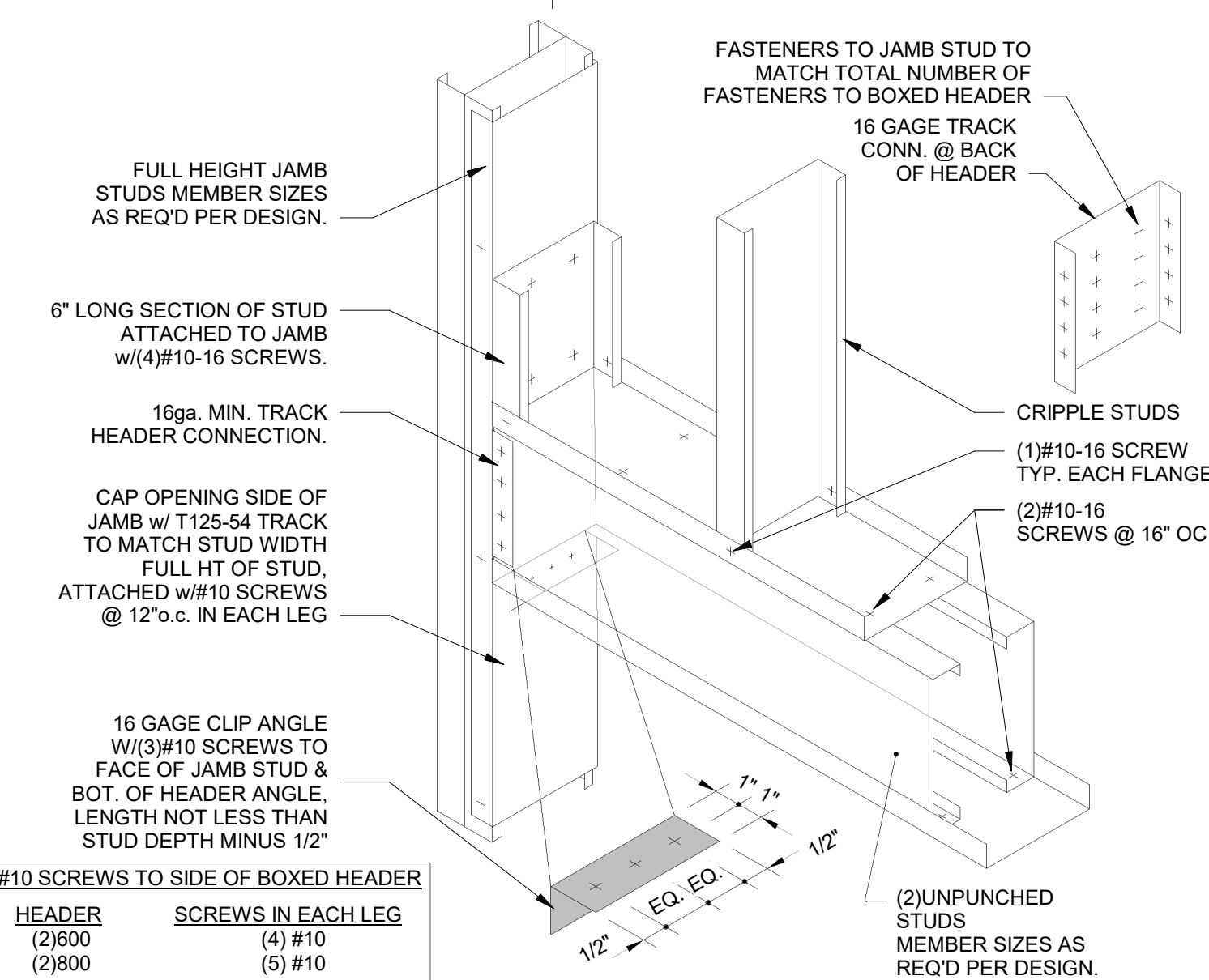
SHEET TITLE:
1200 LEVEL LINTEL
PLAN - AREA 'C'

SHEET NO. PROJ. NO.
20242

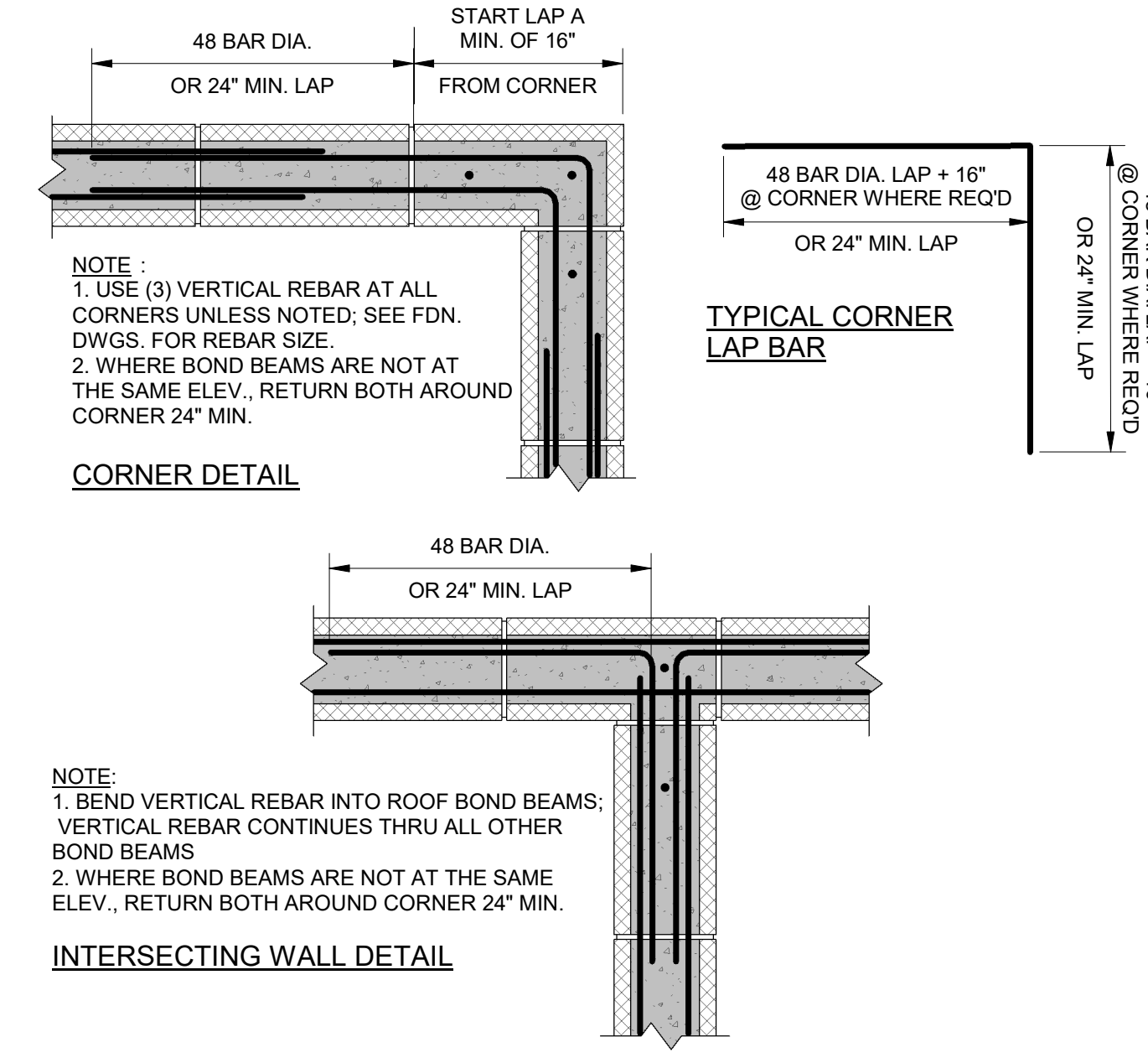
S207



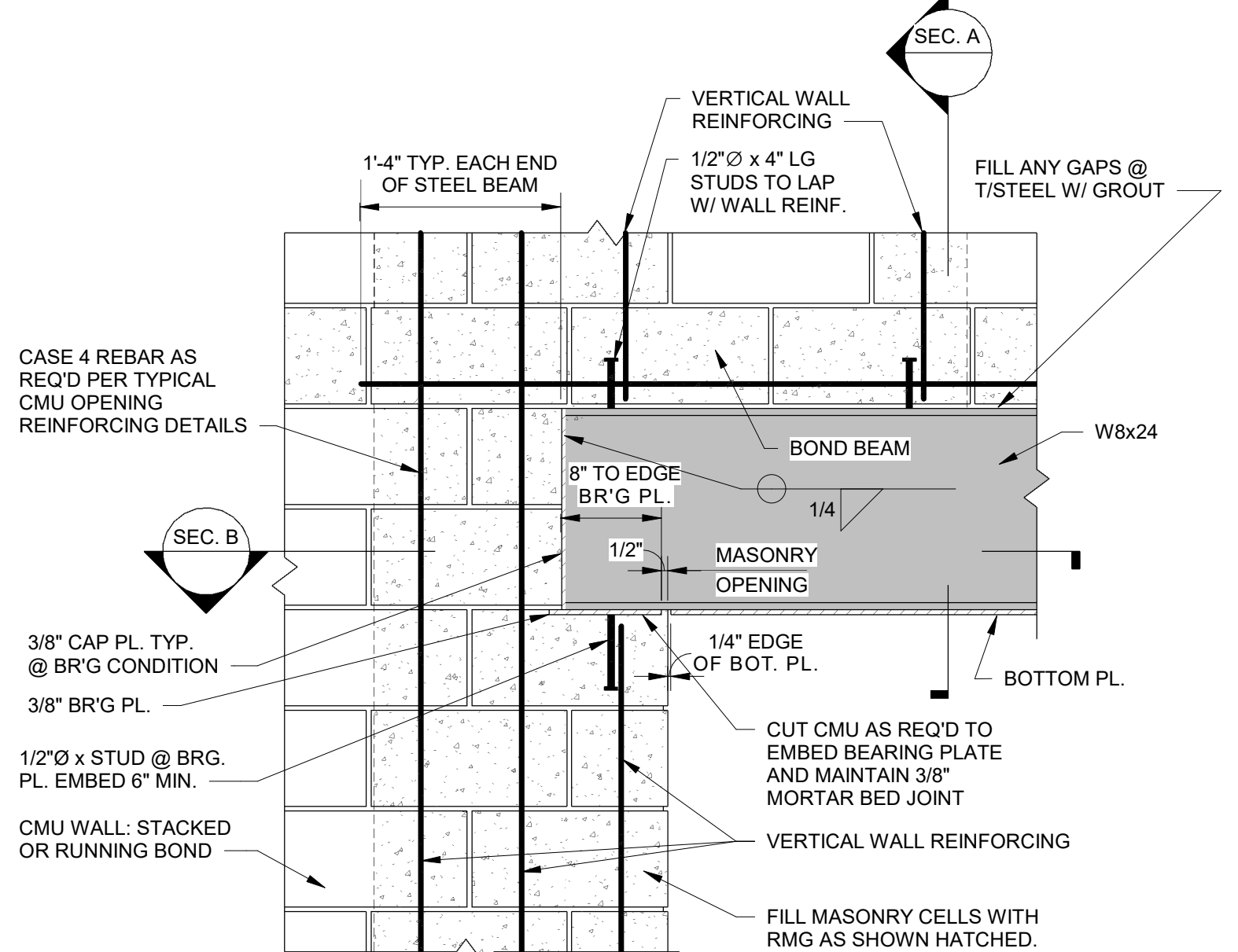
D1 BOND BEAM DETAIL W/ BEARING SEATS
S208 1" = 1'-0"



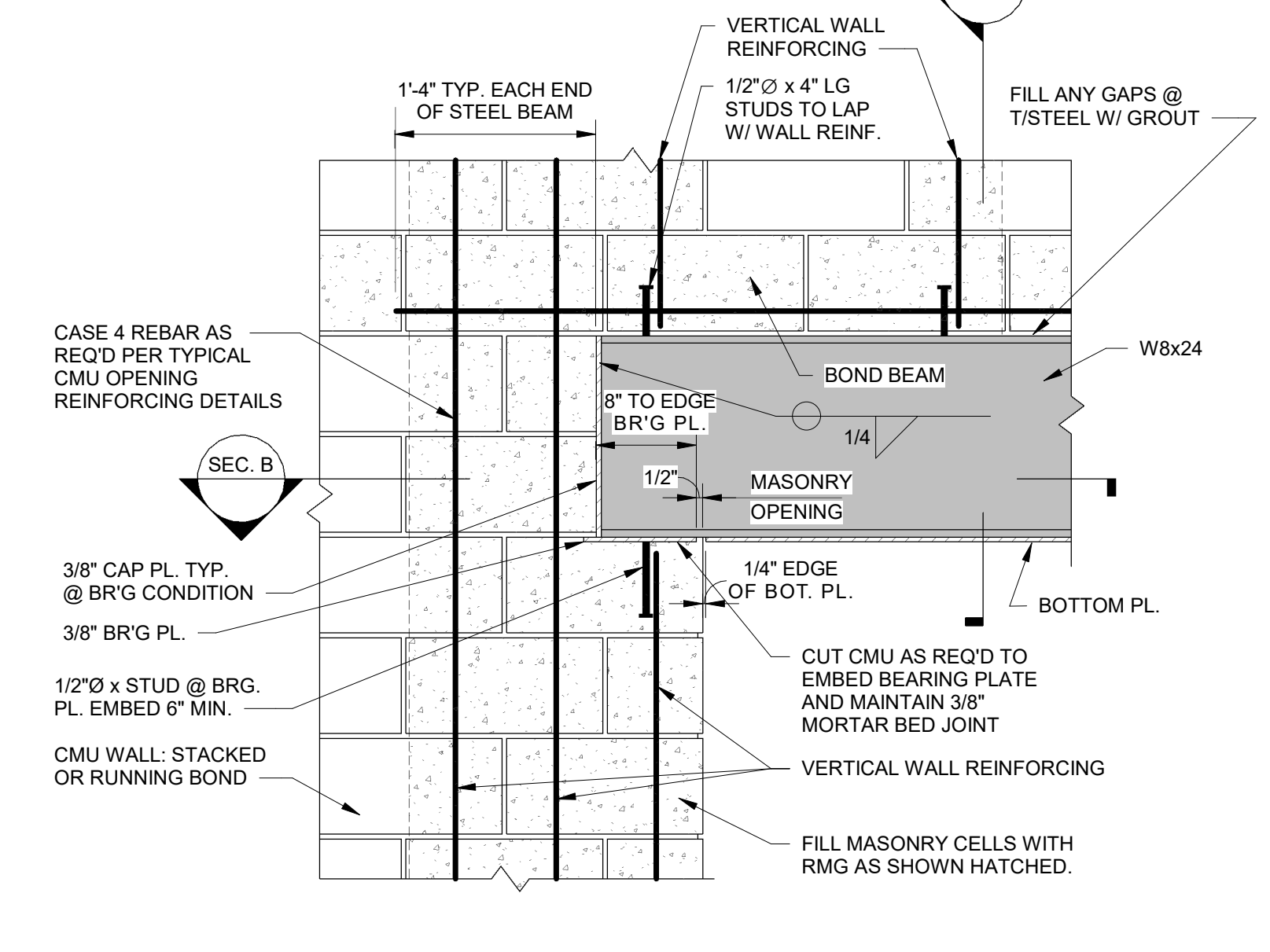
D3 CFS- BOXED HEADER DETAIL (SUGGESTED)
S208 1" = 1'-0"



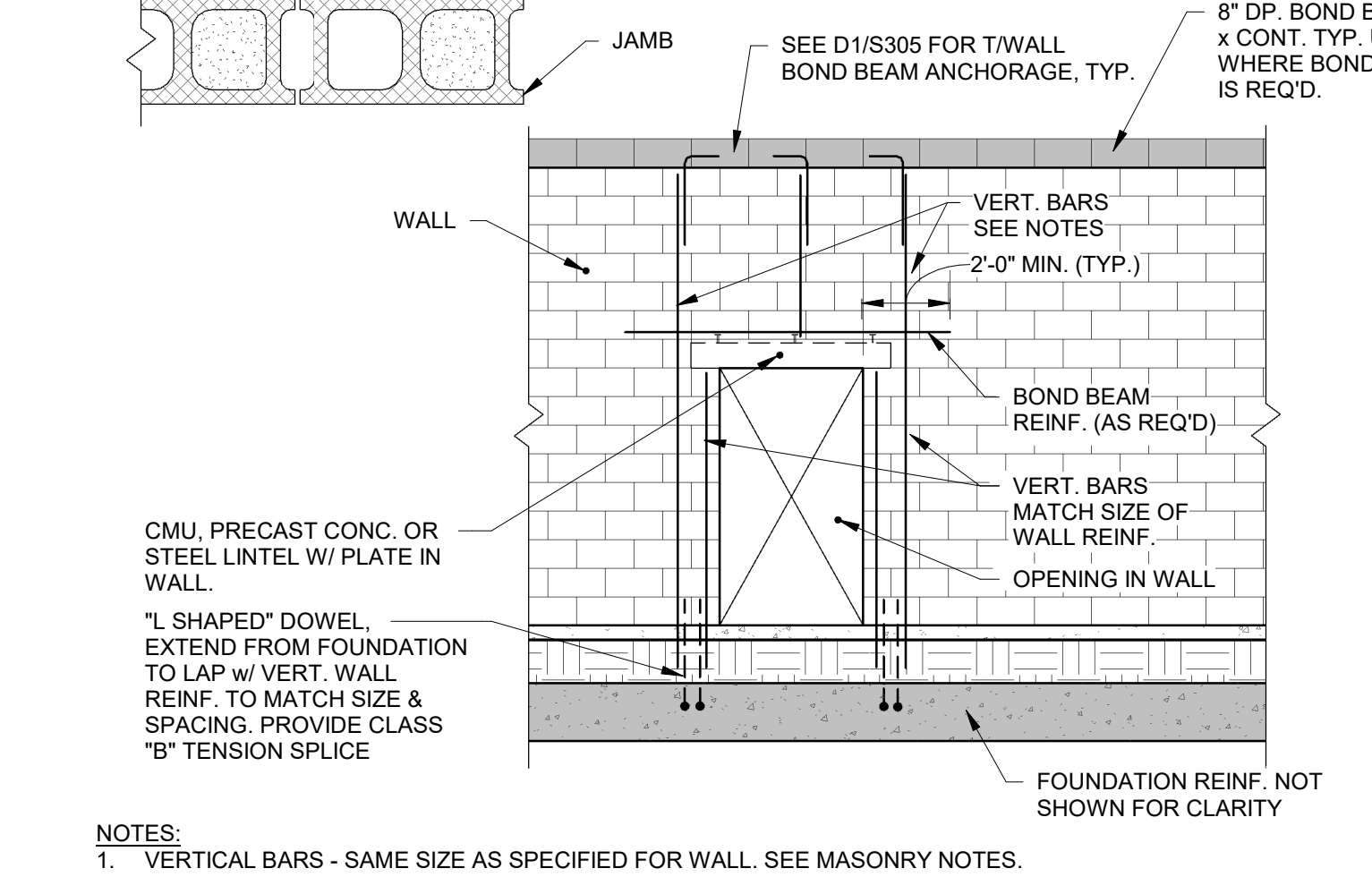
D4 TYP. REINF. AT BEARING & SHEAR WALL BOND BEAMS
S208 1" = 1'-0"



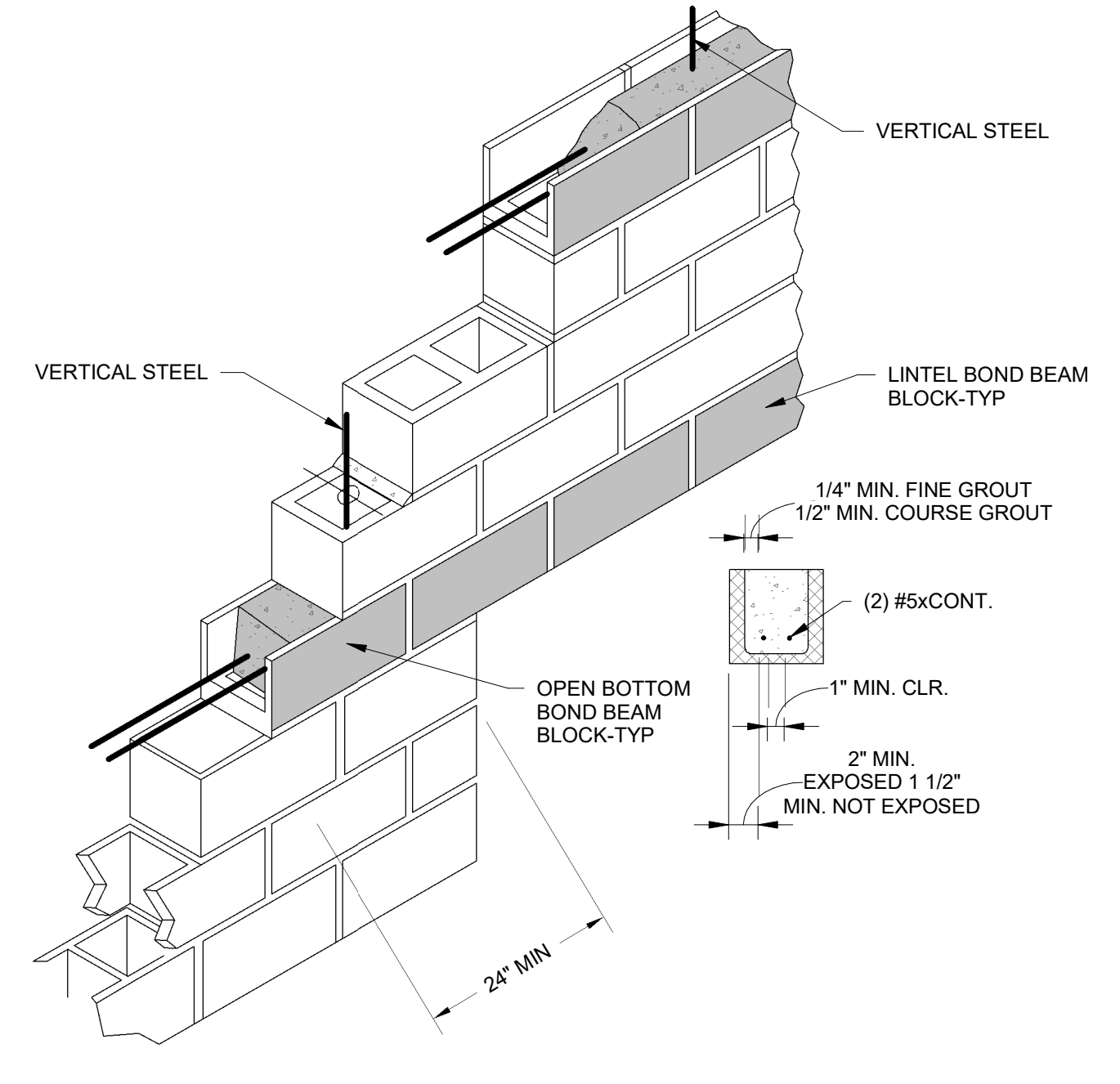
ELEVATION BRICK VENEER OMITTED FOR CLARITY



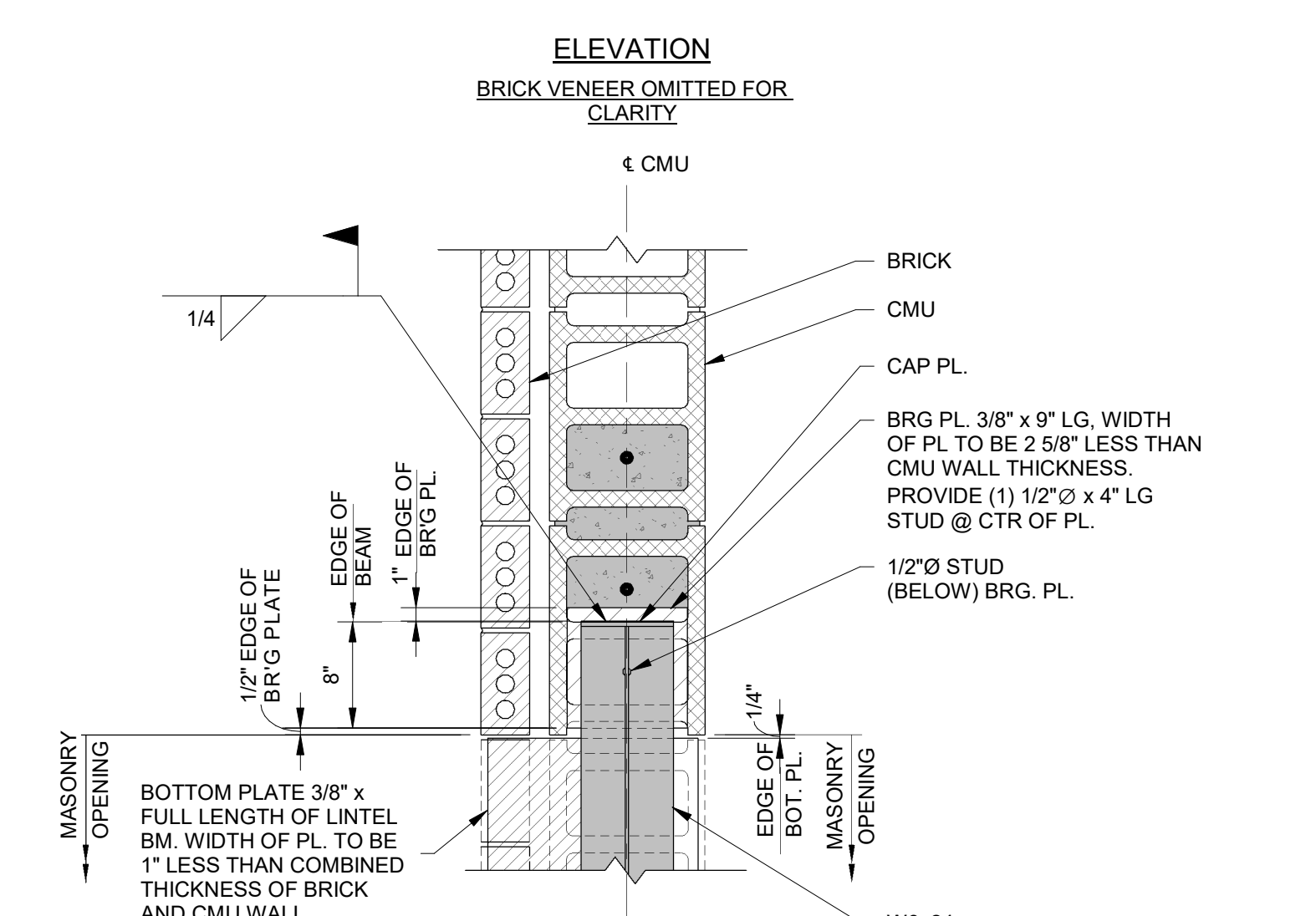
ELEVATION BLOCK IN-FILL ADJACENT TO WF BEAM OMITTED FOR CLARITY



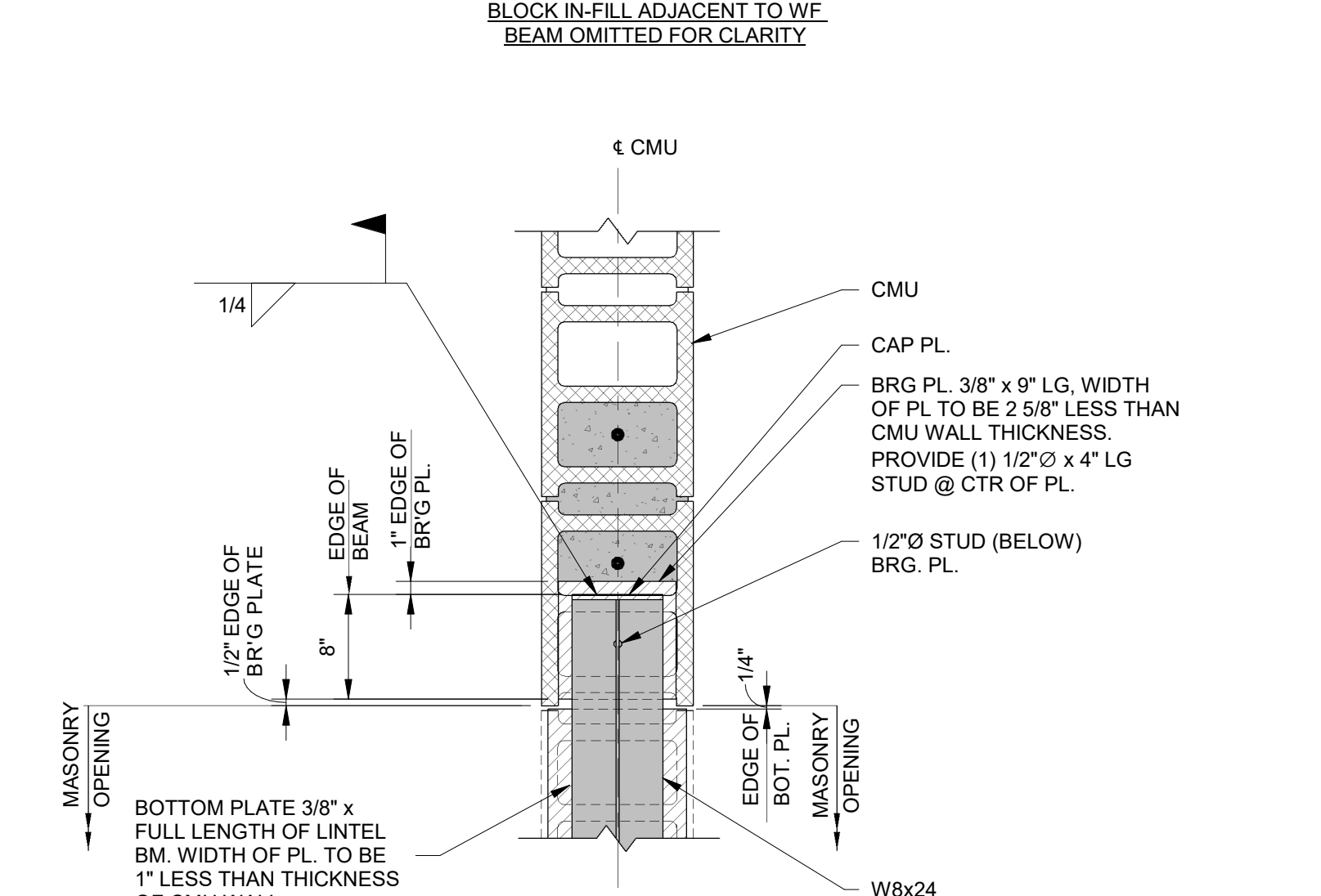
C3 TYP. DOOR & WINDOW OPENING REINFORCING DETAILS
S208 1" = 1'-0"



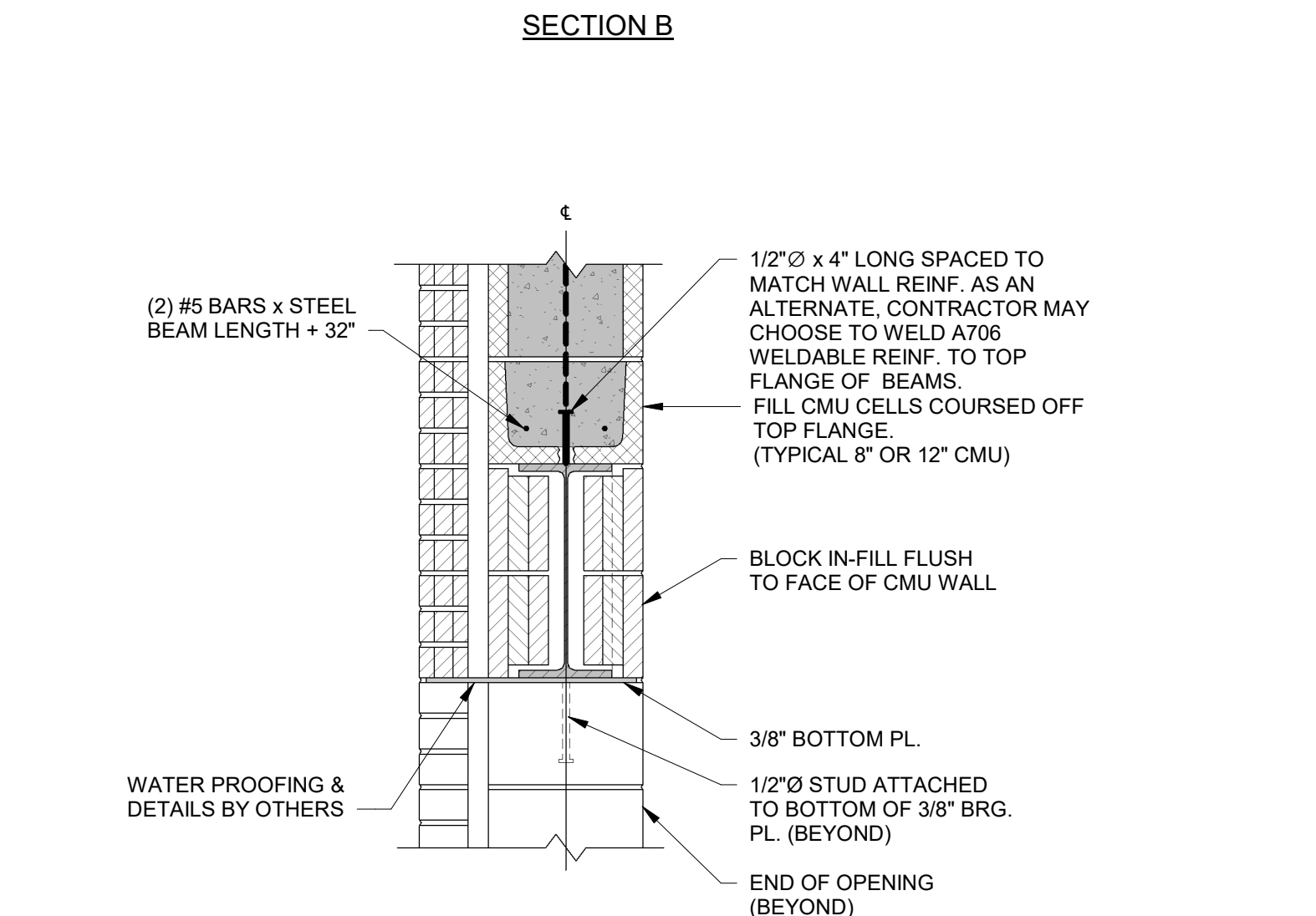
C4 MASONRY LINTEL DETAIL
S208 1" = 1'-0"



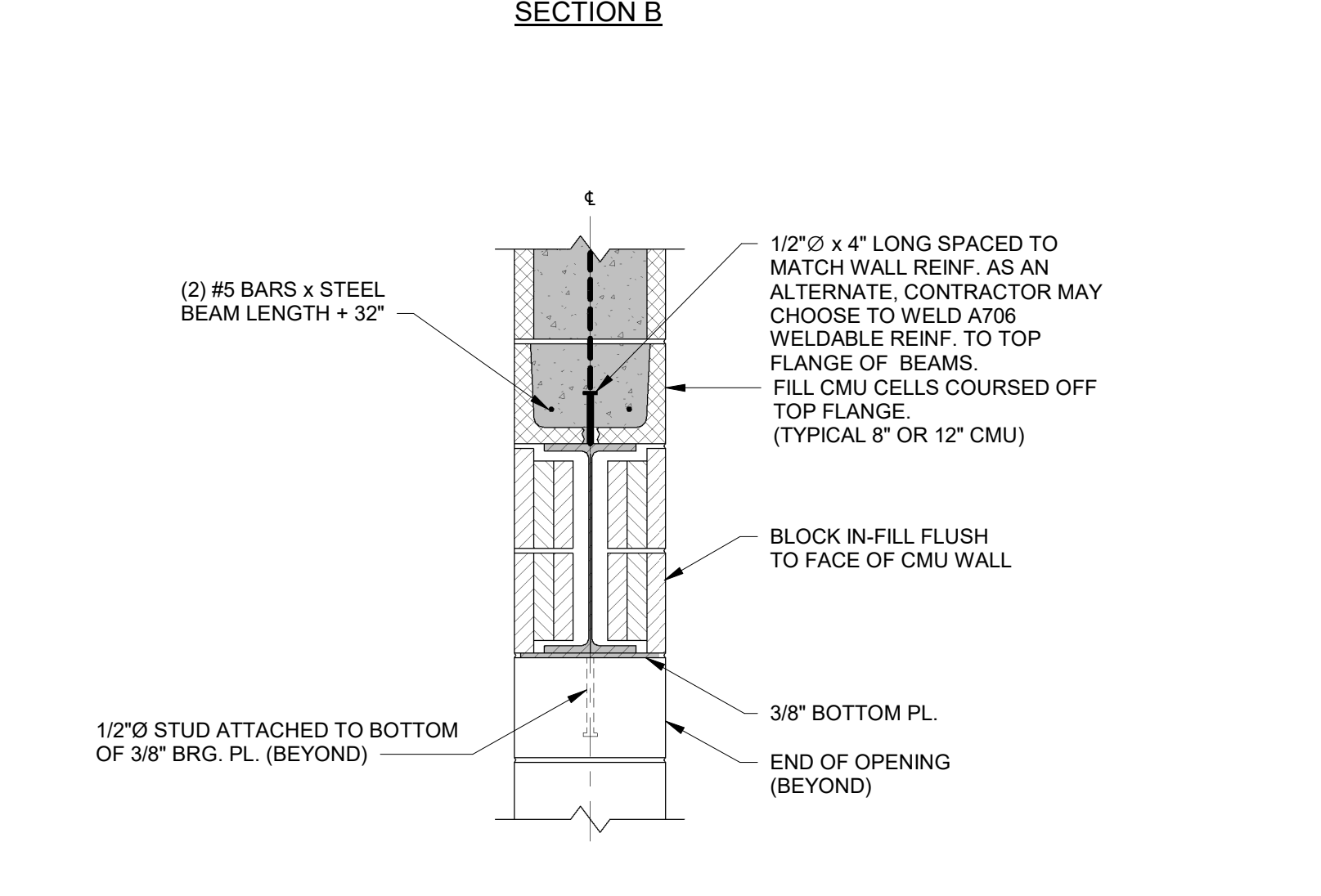
SECTION B



SECTION B



SECTION A



SECTION A

LINTEL SCHEDULE

ALL CMU LINTELS SHALL:

- LINTEL BLOCK SHALL HAVE A MIN OF 2000 PSI COMPRESSIVE STRENGTH.
- LINTEL BLOCK AND REBAR SHALL EXTEND A MIN. OF 24" PAST THE EDGE OF THE MASONRY OPENING. SEE C3/S208.
- BLOCK FILL SHALL BE GROUT WITH A MIN. STRENGTH OF 2600 PSI. MORTAR MIX WILL NOT BE ACCEPTABLE.
- ALL LINTELS MARKED W/ PREFIX AND/OR SUFFIX "F" SHALL HAVE ITS STEEL FIRE PROTECTED.
- ALL MASONRY OPENINGS SHOWN ON ARCH, STRUCT, MECH AND ELEC. DRAWINGS SHALL HAVE LINTELS. THE G.C. SHALL FURNISH A LINTEL FOR:

A. LOAD BEARING WALLS - THE G.C. SHALL SELECT A LINTEL SHOWN IN THIS SCHEDULE THAT MOSTLY SIMULATES THE LOADING CONDITION OF THE UNSHOWN LINTEL. THE LOADING CONDITION SHALL BE AT LEAST THE SAME MAGNITUDE OR GREATER THAN THAT OF THE MISSING LINTEL.

B. NON-LOAD BEARING WALLS - THE G.C. SHALL SELECT A LINTEL SHOWN IN THIS SCHEDULE OR THE MISCELLANEOUS LINTEL SCHEDULE SHOWN ON THIS DRAWING.

6. ALL EXTERIOR LINTELS W/ STEEL MEMBERS SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION, THEN TREATED, PRIMED AND GIVEN A FINISH COAT OF PAINT AS REQ'D IN DIV. 9.

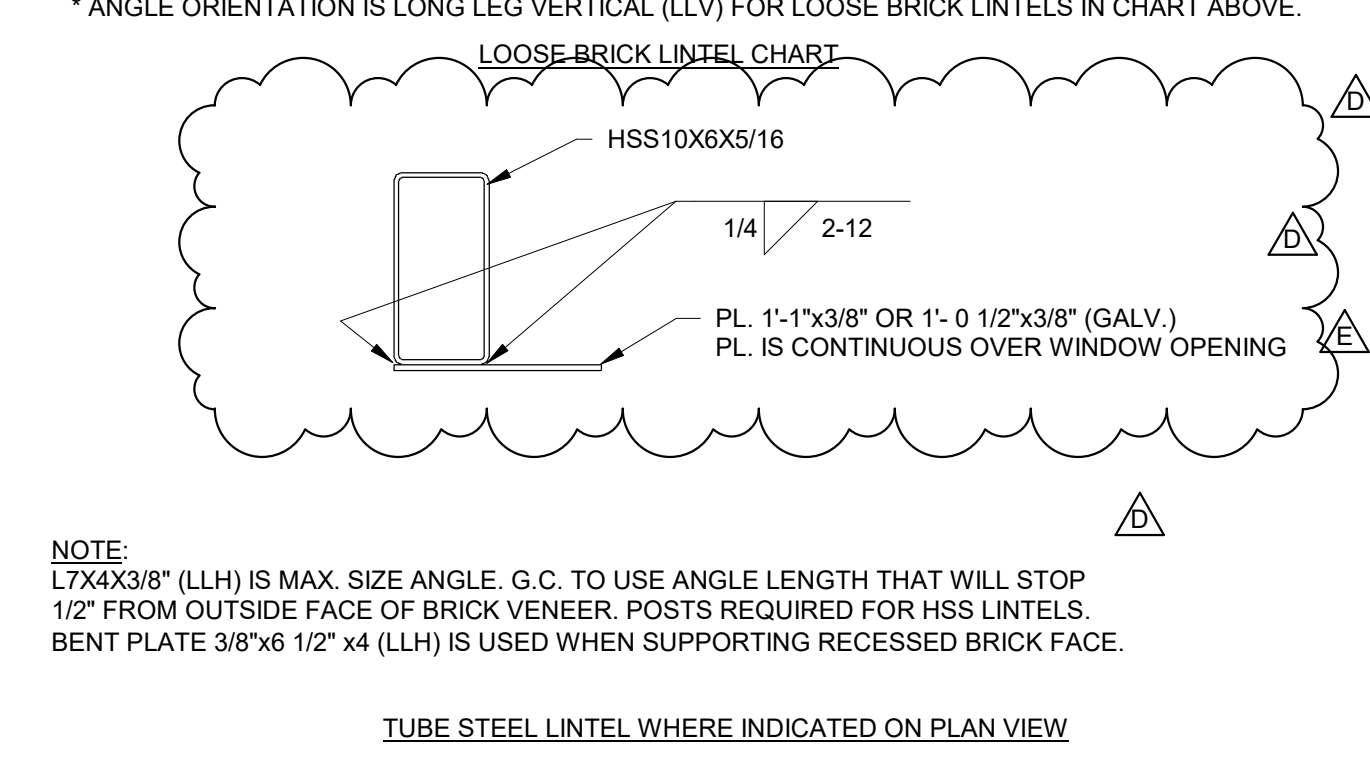
LINTEL NUMBER	SHAPE	STEEL REQUIREMENTS	REMARKS
L1	SEE SHAPE DESIGNATION BELOW	(2) #5	USE @ NON-BRG WALLS AS SHOWN ON THE FDN DWGS.
L2	SEE SHAPE DESIGNATION BELOW	(2) #5 TOP & BOT	USE @ BOTH LOW ENDS OF THE STRUCTURE
L3	SEE SHAPE DESIGNATION BELOW	(2) #5	USE @ WALLS AS SHOWN
L4	SEE SHAPE DESIGNATION BELOW	(2) #5 TOP & BOT	USE @ WALLS AS SHOWN
L5	SEE SHAPE DESIGNATION BELOW	L3x3x3/8" (LLV)	MIN. 8" BEARING EACH END, UNLESS NOTED SEE A4/S208
L6	SEE SHAPE DESIGNATION BELOW	L5x3x3/8" (LLV)	MIN. 8" BEARING EACH END, UNLESS NOTED SEE A4/S208
L7	SEE DETAIL A1/S208	-	-
L8	SEE DETAIL A2/S208	-	-
L9	SEE DETAIL A3/S208	-	-
L10	SEE DETAIL A4/S208	-	-

STEEL LOOSE ANGLE BRICK LINTEL - MAX. HT. (FT.) ALLOWED FOR SINGLE BRICK WYTHE (3-5/8" BRICK @ 36 psf (WALL SURFACE))											
CLEAR SPAN FOR OPENING											
ANGLE SIZE	WEIGHT	3'	4'	5'	6'	7'	8'	9'	10'	11'	12'
L3X3X1/4	5.0	25.5	13.7	7.0	4.0	2.4	1.6	1.1			
L3X3X5/16	6.0	16.7	8.5	4.8	3.0	1.9	1.3				
L3X3X3/8	7.0	19.5	9.9	5.6	3.5	2.3	1.5	1.1			
L3.5X3.5X1/4	5.8	11.4	6.5	4.0	2.6	1.9	1.3				
L3.5X3.5X5/16	7.2	13.8	7.9	4.9	3.2	2.2	1.6	1.1			
L3.5X3.5X3/8	8.5	16.2	9.3	5.8	3.8	2.6	1.8	1.3			
L4X3X1/4	6.0	15.7	9.0	5.6	3.7	2.6	1.8	1.3			
L4X3X5/16	7.0	11.0	6.9	4.5	3.1	2.2	1.6				
L4X3X3/8	8.0	12.9	8.0	5.3	3.7	2.6	1.9				
L4X3.5X1/4	6.2	9.5	5.9	3.9	2.7	1.9	1.4	1.0			
L4X3.5X5/16	7.7	11.6	7.2	4.8	3.3	2.3	1.7	1.3			
L4X3.5X3/8	9.1	13.6	8.5	5.6	3.9	2.7	2.0	1.5			
L5X3X1/4	7.0	16.7	10.5	7.0	4.8	3.5	2.6	1.9			
L5X3X5/16	8.0	12.8	8.5	5.9	4.3	3.1	2.4				
L5X3X3/8	10.0	15.1	10.0	7.0	5.0	3.7	2.8				
L5X3X3.5X1/4	7.0	11.1	7.3	5.1	3.7	2.7	2.0				
L5X3.5X5/16	8.7	13.5	9.0	6.2	4.5	3.3	2.5				
L5X3.5X3/8	10.4	16.0	10.6	7.4	5.3	3.9	2.9				
L6X4X1/4	10.0	15.7	10.9	7.9	5.9	4.4					
L6X4X3/8	12.0	18.5	12.9	9.3	6.9	5.3					

* ANGLE ORIENTATION IS LONG LEG VERTICAL (LLV) FOR LOOSE BRICK LINTELS IN CHART ABOVE.

LOOSE BRICK LINTEL CHART

TUBE STEEL LINTEL WHERE INDICATED ON PLAN VIEW



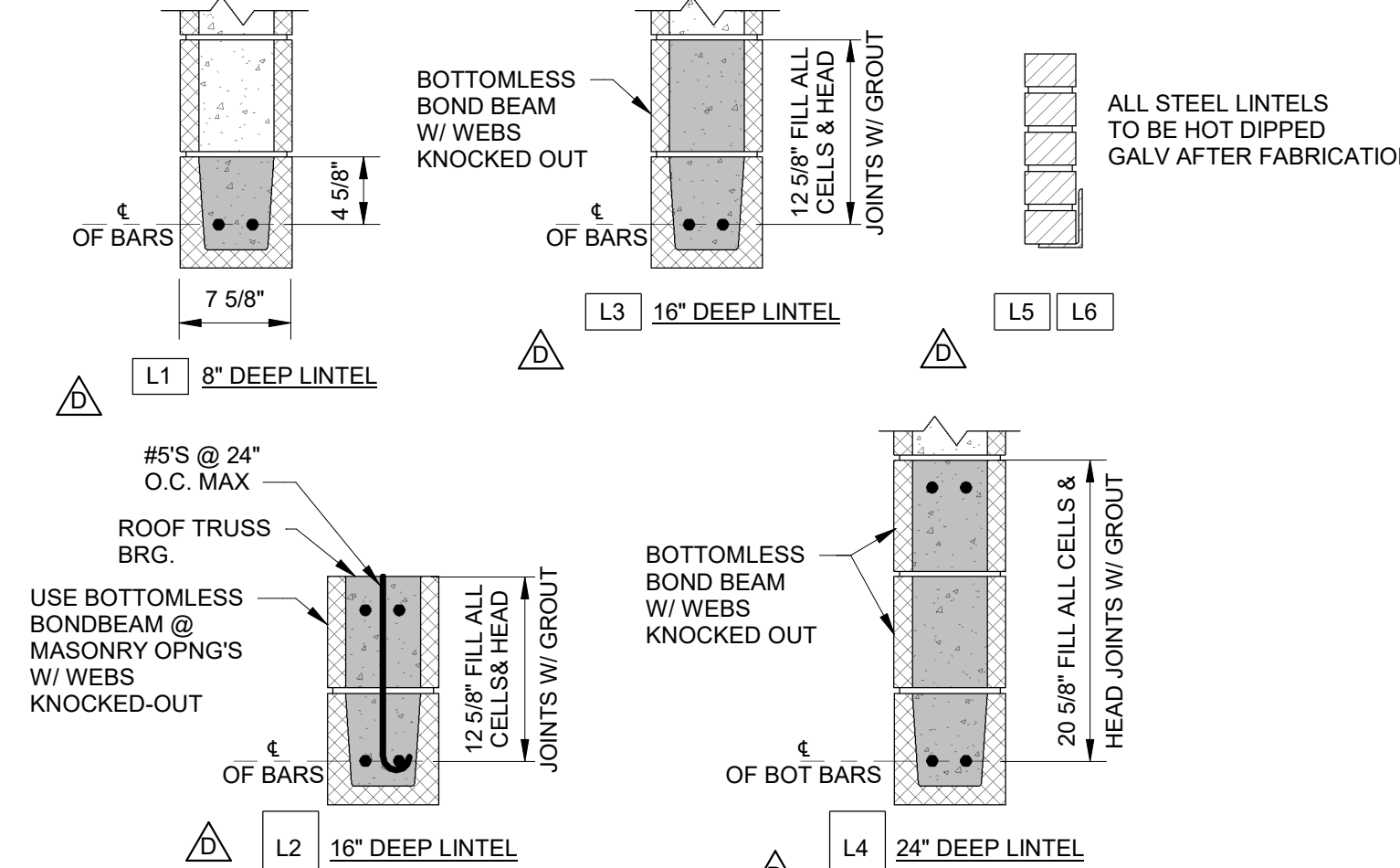
A4 BRICK LINTEL SECTION
S208 1" = 1'-0"

NOTES:
1. PROVIDE A STANDARD CONNECTION FOR ANY STEEL LINTEL THAT INTERFERES PERPENDICULAR WITH ANOTHER STEEL LINTEL.
2. DO NOT LOCATE A WALL CONTROL JOINT WITHIN 2 FEET OF BEAM BEARING.

A1 L7 STEEL LINTEL BEARING DETAIL @ CMU (WITH BRICK VENEER)
S208 1" = 1'-0"

NOTES:
1. PROVIDE A STANDARD CONNECTION FOR ANY STEEL LINTEL THAT INTERFERES PERPENDICULAR WITH ANOTHER STEEL LINTEL.
2. DO NOT LOCATE A WALL CONTROL JOINT WITHIN 2 FEET OF BEAM BEARING.

A2 L8 STEEL LINTEL BEARING DETAIL @ CMU (NO BRICK VENEER)
S208 1" = 1'-0"



A3 LINTEL SCHEDULE
S208 1" = 1'-0"

NOT FOR CONSTRUCTION
FOR PRICING ONLY

THIS DRAWING IS AN INSTRUMENT OF SERVICE SHALL NOT BE REPRODUCED, ALTERED OR USED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER. ENGINEERING DRAWINGS ARE PROTECTED BY THE U.S. GOVERNMENT COPYRIGHT LEGISLATION. COPYRIGHT 2022, Bailey and Son Engineering, Inc. ALL RIGHTS RESERVED.

NO.	DATE	DESCRIPTION	BY
C	06/01/22	GMP SET	PGG
E	06/27/22	ADDENDUM NO. 2	ATR

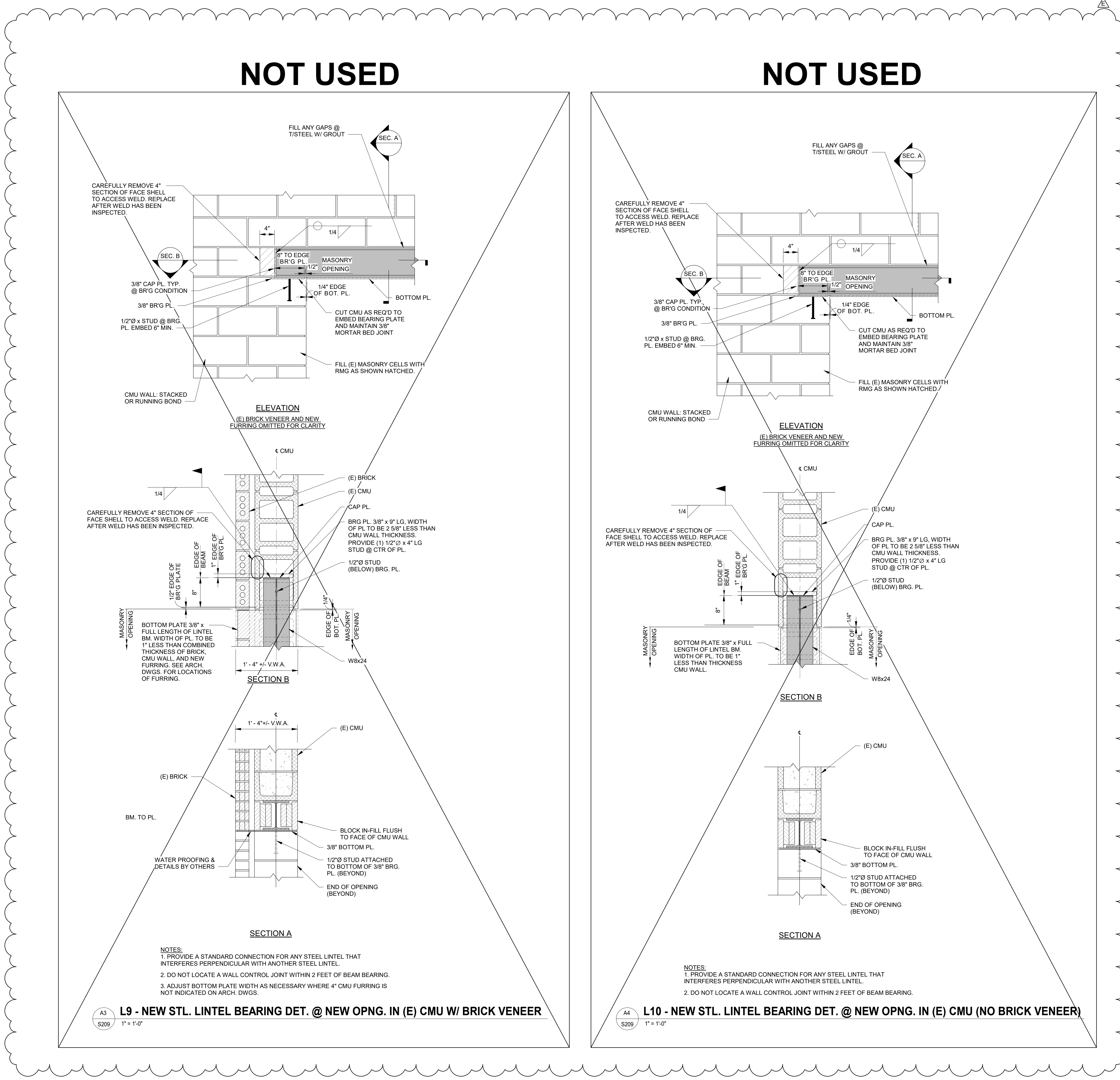
ADDENDUM NO. 2 06/27/22

PRINCIPAL IN CHARGE:	PGG
PROJECT ENGINEER:	ATR
DRAWN BY:	JSD,BH,JG,ATR

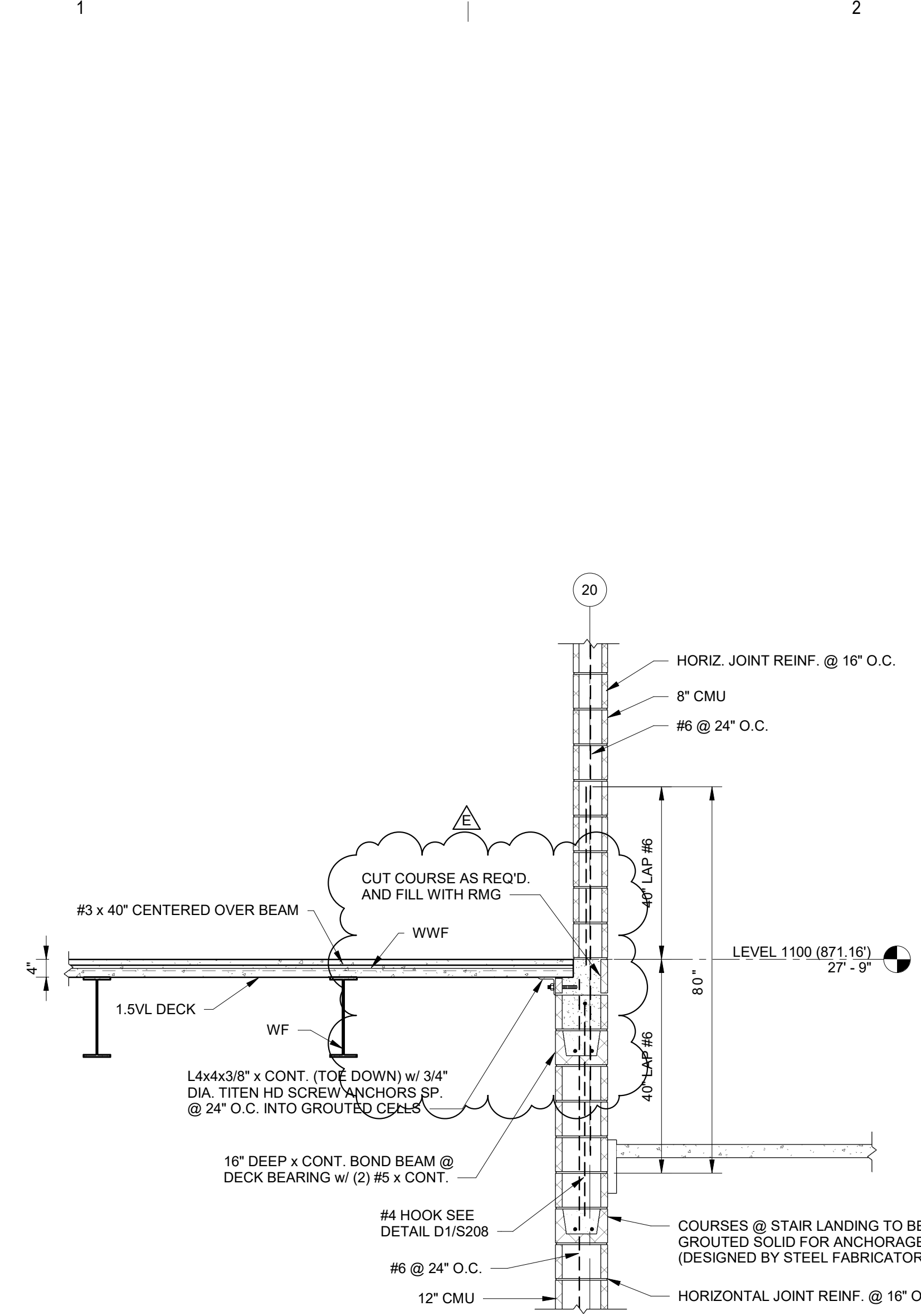
SHEET TITLE:
LINTEL SECTIONS & DETAILS

SHEET NO.	PROJ. NO.
S209	20242

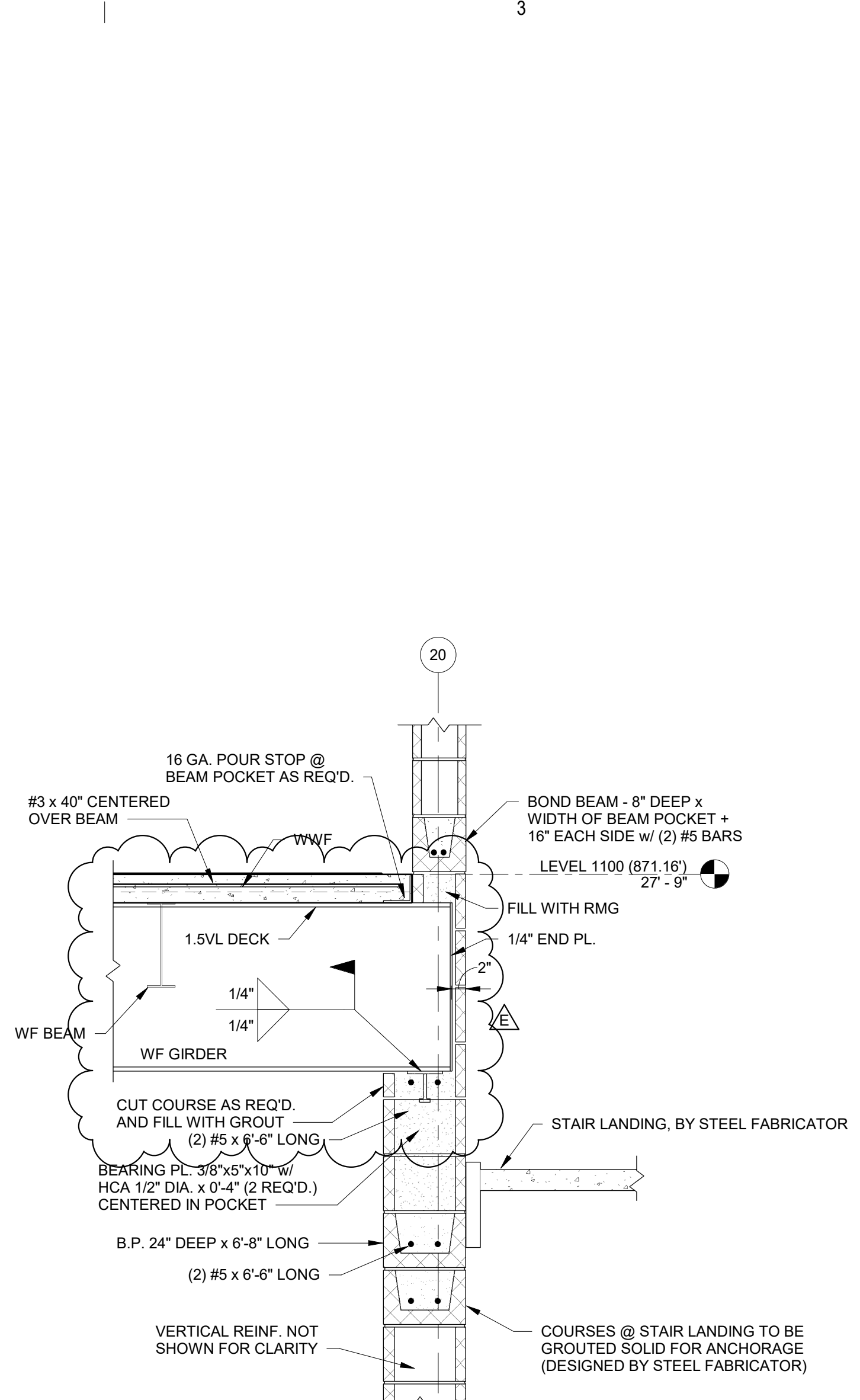
S209



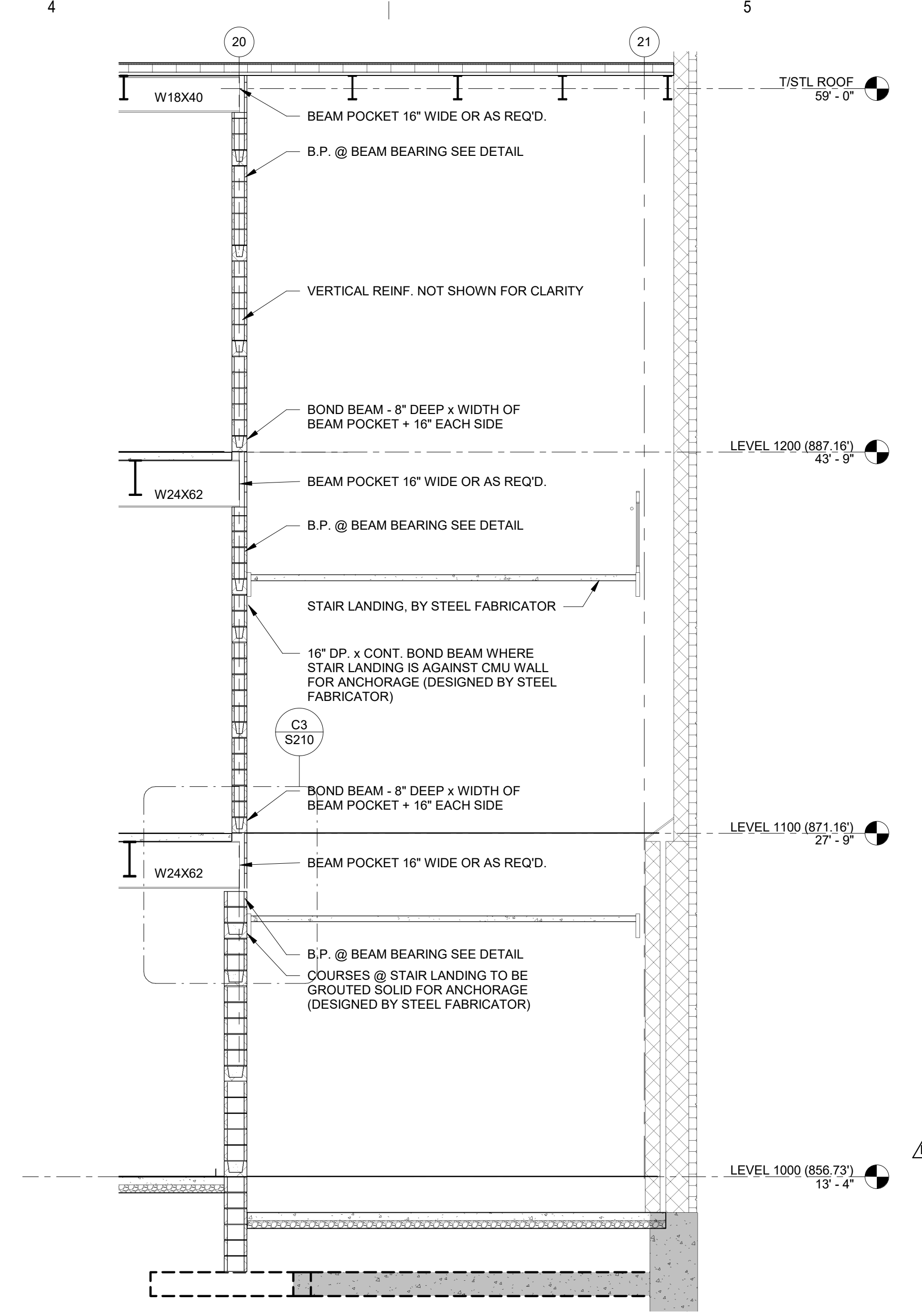
THIS DRAWING IS AN INSTRUMENT OF SERVICE SHALL NOT BE REPRODUCED, ALTERED OR USED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER. ENGINEERING DRAWINGS ARE PROTECTED BY THE U.S. GOVERNMENT COPYRIGHT LEGISLATION. COPYRIGHT 2022, Bailey and Son Engineering, Inc. All Rights Reserved.



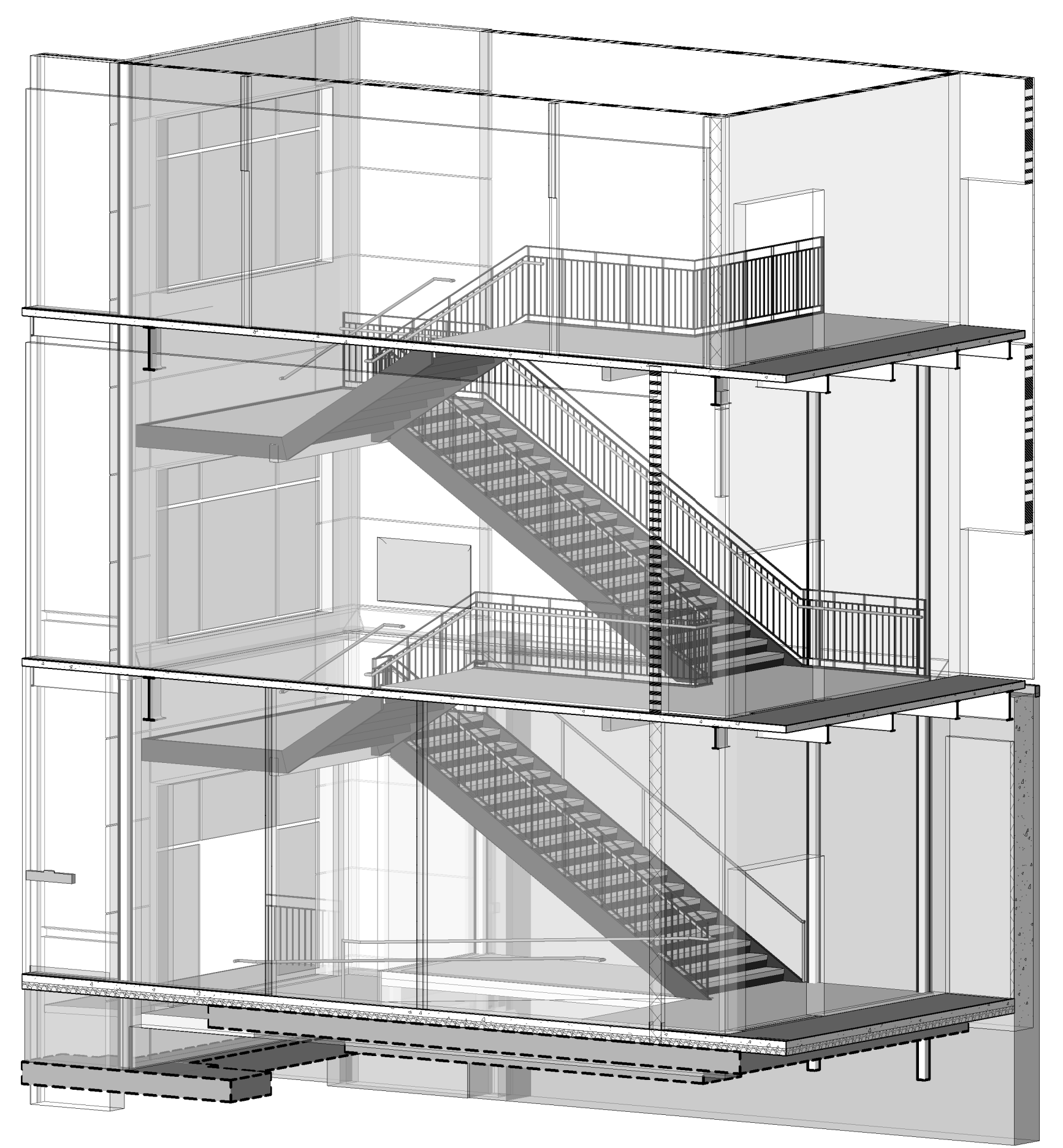
C1
S210
12" = 1'-0"



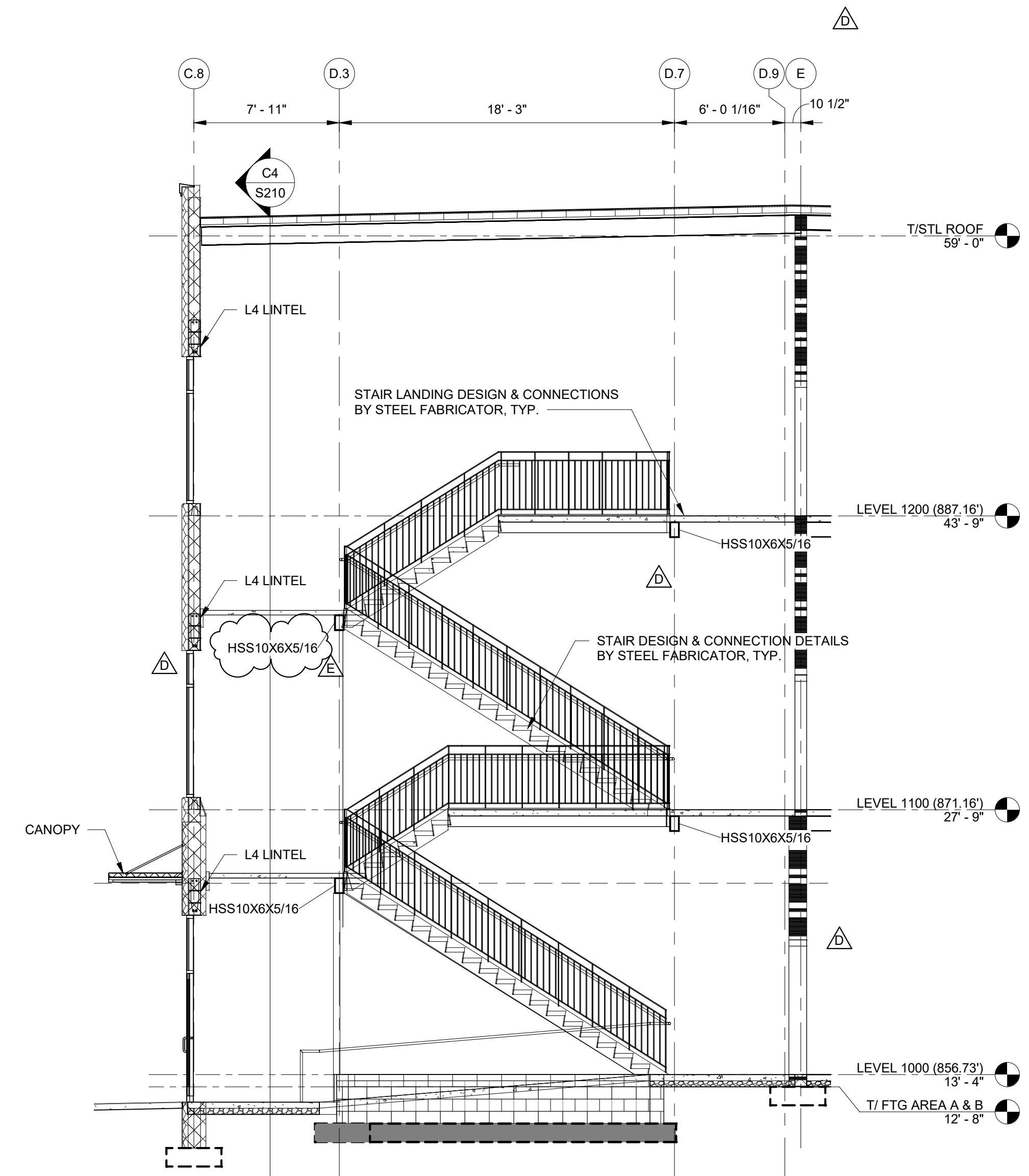
C3
S210
34" = 1'-0"



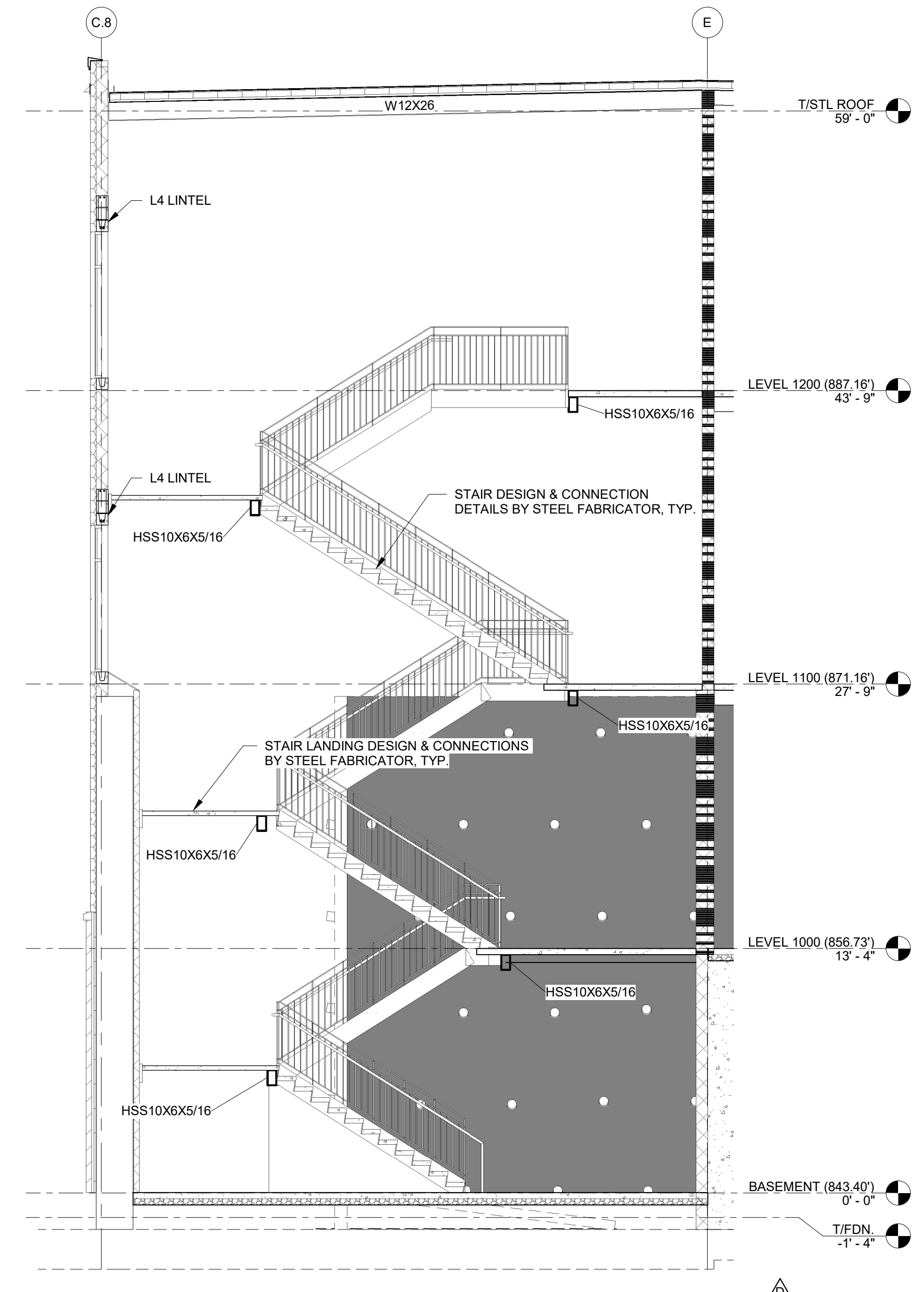
C4
S210
14" = 1'-0"



A1
S210
3D VIEW OF STAIRS @ AREA B FIREWALL



A4
S210
3/16" = 1'-0"



A5
S210
3/16" = 1'-0"

SHEET ISSUE:

NO.	DATE	DESCRIPTION	BY
C	06/01/22	GMP SET	PGG
D	06/20/22	ADDENDUM NO. 1	ATR
E	06/27/22	ADDENDUM NO. 2	ATR

ADDENDUM NO. 2
06/27/22
PRINCIPAL IN CHARGE: PGG
PROJECT ENGINEER: ATR
DRAWN BY: JSD,BH,JG,ATR

SHEET TITLE:
STAIR ELEVATIONS & SECTIONS

SHEET NO.
PROJ. NO.
20242

S210

NOT FOR CONSTRUCTION
FOR PRICING ONLY

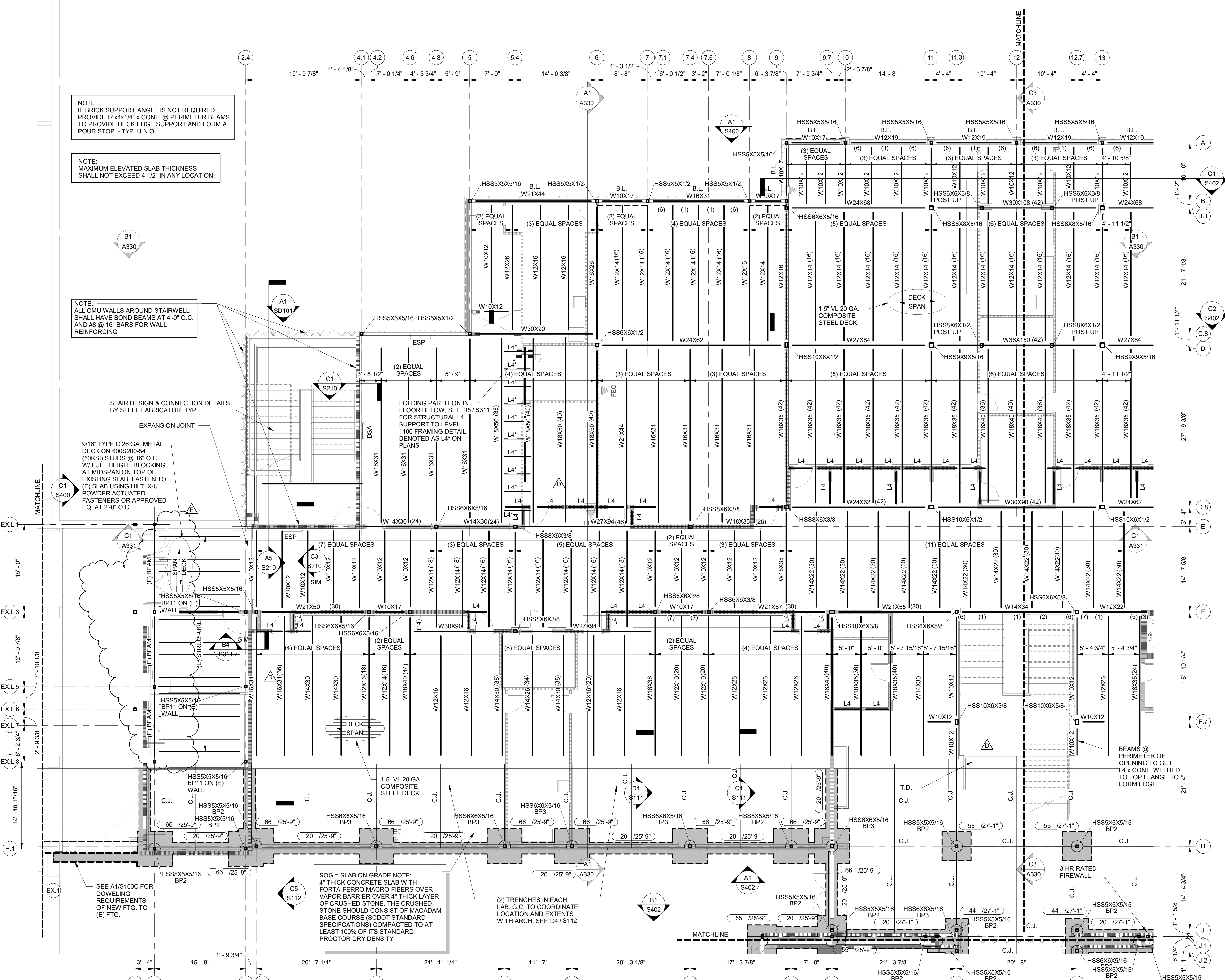
THIS DRAWING IS AN INSTRUMENT OF SERVICE. IT IS THE PROPERTY OF BAILEY AND SON ENGINEERING, INC. AND IS NOT TO BE REPRODUCED, ALTERED OR USED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER. ENGINEERING DRAWINGS ARE PROTECTED BY THE U.S. GOVERNMENT COPYRIGHT LEGISLATION. COPYRIGHT 2022, Bailey and Son Engineering, Inc. ALL RIGHTS RESERVED.

THIS DRAWING IS AN INSTRUMENT OF SERVICE. IT IS THE PROPERTY OF MCMILLAN PAZDAN SMITH ARCHITECTURE. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN. ANY REUSE OR MODIFICATION OF THIS DRAWING WITHOUT THE WRITTEN PERMISSION OF MCMILLAN PAZDAN SMITH ARCHITECTURE IS PROHIBITED. ALL RIGHTS RESERVED.

D

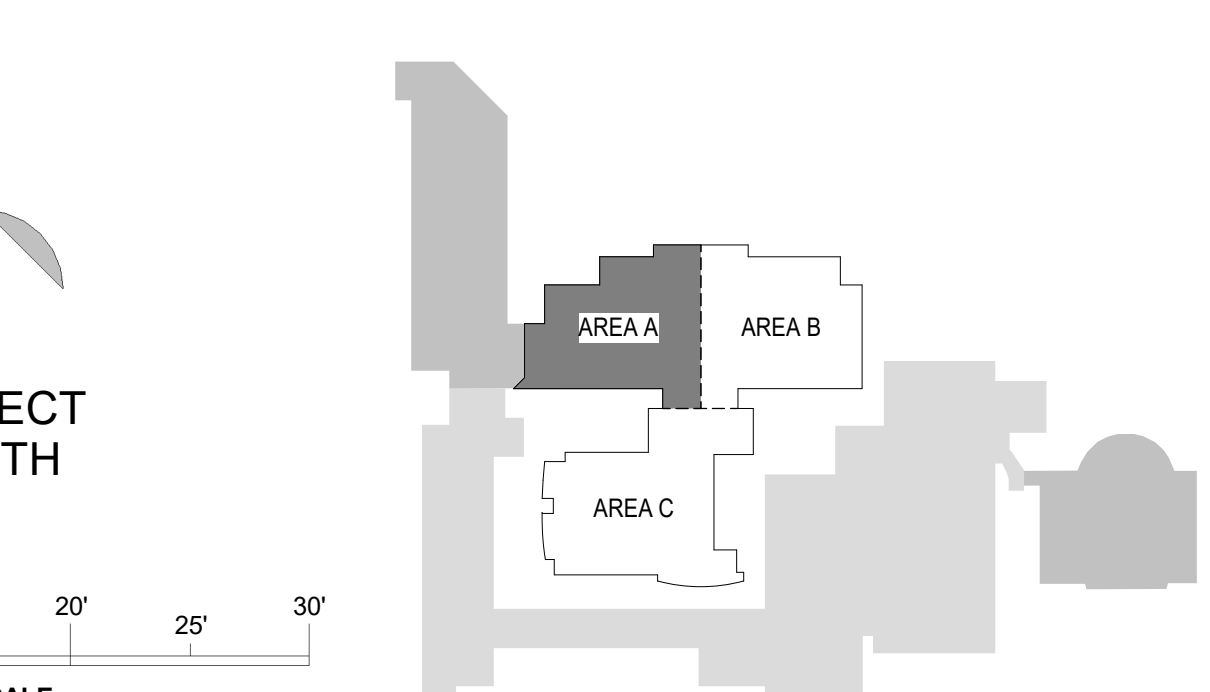
C

A



- FRAMING NOTES:**
- SEE DRAWINGS S001, S002, S003 & S004 FOR PROJECT NOTES AND DESIGN CRITERIA (UNO).
 - BEAM CONNECTIONS SHALL BE DESIGNED PER NOTE 4 UNDER "STRUCTURAL STEEL NOTES" ON DWG. S001
 - CONTRACTOR SHALL VERIFY DIMENSIONS SHOWN ON THIS PLAN WITH ARCHITECTURAL DRAWINGS PRIOR TO ANY FABRICATION OR CONSTRUCTION. FOR LOCATIONS, AND PLAN DIMENSIONS OF WALLS OTHERWISE NOT SHOWN, REFER TO ARCHITECTURAL DRAWINGS.
 - PROVIDE WALL BRACING FOR ALL INTERIOR CMU WALLS WHOSE PLAN DIMENSIONS AND CONFIGURATION CREATE A CLEAR UNBRACED LENGTH GREATER THAN 10'-0" BETWEEN INTERSECTING WALLS. SEE DET. A1/S310
 - SEE SECTION & DETAILS SHEETS FOR STANDARD DETAILS, UNLESS NOTED OTHERWISE.
 - ROOF DECK SHALL BE 1 1/2" DEEP, 22 GAUGE, WIDE RIB (TYPE B) GALV. W/G-90 COATING, UNLESS NOTED OTHERWISE. SEE B2/S310 FOR FLOOR DECK DIRECTION CHANGES. WHERE SPECIFIED, TYPE BA DECK IS TYPE B ACOUSTICAL DECK.
 - PROVIDE BEARING PL. 3/8 x 6 x 10" WITH (2) 1/2" x 4" LONG HEADED STUDS @ 6" O.C. TYPICALLY WHERE JOISTS, BEAMS, OR TRUSSES FRAME INTO 8" CMU WALLS. TYP. EL. = JOIST BRG. EL. (JBE) AS NOTED ON FRAMING PLANS. WHERE JBE IS NOT NOTED, LOCATE T/PL TO AGREE WITH JOIST SEAT. SIMILARLY, LOCATE T/PL TO AGREE WITH MEMBER DEPTH FOR BEAMS & GIRDERS.
 - PROVIDE BEARING PL. 3/8 x 6 x 10" WITH (4) 1/2" x 4" LONG HEADED STUDS @ 6" O.C. TYPICALLY WHERE JOISTS, BEAMS, OR TRUSSES FRAME INTO 8" CMU WALLS. TYP. EL. = JOIST BRG. EL. (JBE) AS NOTED ON FRAMING PLANS. WHERE JBE IS NOT NOTED, LOCATE T/PL TO AGREE WITH JOIST SEAT. SIMILARLY, LOCATE T/PL TO AGREE WITH MEMBER DEPTH FOR BEAMS & GIRDERS.
 - GENERAL CONTRACTOR SHALL PROVIDE 16 GAGE BENT PLATES ABOVE & BELOW DECK AT RIDGES, VALLEYS, HPS, AND EAVES AS NECESSARY TO PROVIDE CONTINUOUS SUPPORT FOR ENDS AND EDGES OF METAL DECK. PROVIDE RAKE ANGLE AT ALL GABLE END WALLS.
 - SEE DETAIL B4/S310 FOR DECK FASTENING PATTERN.
 - MECH. ROOF-TOP UNITS - SEE HVAC DRWGS. PROVIDE ADD'L SUPPORT FRAMING AS NEEDED. GENERAL CONTRACTOR SHALL COORDINATE UNIT DIMENSIONAL SUPPORT INFORMATION WITH STEEL FABRICATOR.
 - FOR FIRE-RATED WALLS SEE ARCH. DWGS.
 - GENERAL CONTRACTOR TO SUPPLY DIMENSIONS FOR ALL ROOF OPENINGS NOT SIZED TO STEEL FABRICATOR UPON PURCHASE OF EQUIPMENT.
 - G.C. TO VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DIMENSIONS.
 - G.C/M TO COORDINATE FINAL FRAMING LAYOUT SPACING REQUIREMENTS W/ FINAL SLAB/ROOF PENETRATIONS AS REQ'D BASED ON FINAL SELECTION OF MECHANICAL COMPONENTS.
 - DISCHARGE CONCRETE AS REQUIRED TO LIMIT DEPTH OF CONCRETE IN ANY AREA TO 4.5 INCHES.
 - STAIR FRAMING INCLUDING LANDINGS, STRINGERS, AND JOISTS SUPPORTING STAIRS, SHALL BE BY STAIR MANUFACTURER.
 - COLUMN SPLICES SHALL BE FULL PENETRATION WELDS U.N.O.
 - SEE D4/S310 FOR FALL AWAY CONNECTIONS WHICH ARE REQUIRED FOR ALL BEAMS ADJACENT TO 3-HOUR WALLS.

- FRAMING LEGEND:**
- = 3 HR. FIREWALL SEE DETAILS AS INDICATED ON PLAN & ARCH. FOR ADD'L INFO.
 - DSA = CONT. DECK SUPPORT ANGLE = L4x4x3/8"XCONT. (TOE DOWN) PIECE AROUND JOISTS AS REQ'D. ATTACH W/ 3/4" DIA. RODS SP. @ 24" O.C. AND EPOXY IN PLACE INTO GROUDED CELLS. DSA AT EXT. COLD-FORMED STUD WALLS SHALL BE TOE UP.
 - DSP = CONT. DECK SUPPORT PLATE = 1/4" PLATE WELDED TO THE TOP OF WIDE FLANGE BEAM. T/STL OF DSP = T/STL SHOWN ON FRAMING PLANS. SEE B2/S310.
 - B.P. = INDICATES PROVIDE BEARING PL. PER NOTE 7 UNDER "FRAMING NOTES" AND BEAR ON 6"x24" D.P. B.B. OR 12"x24" D.P. B.B. W/ (4) #5x6-8" (TOP & BOTTOM REIN.) CENTERED UNDER ALL WF BEAM BEARING POINTS. VERTICAL WALL REIN. REQUIRED #8 @ 16" O.C. EACH SIDE OF BEAM OR COLUMN BEARING POINT FOR THE 6-8" DISTANCE.
 - G.C/M TO COORDINATE FINAL FRAMING LAYOUT SPACING REQUIREMENTS W/ FINAL ROOF PENETRATIONS AS REQ'D BASED ON FINAL SELECTION OF MECHANICAL COMPONENTS.
 - L4 & L3 = L4 = L4x4x3/8 TOED DOWN (13K) & L3 = L3x3x3/8 TOED DOWN (10K). ATTACHMENT SHALL BE TO UNDERSIDE OF BEAM BOT. CHORD HORIZONTAL ANGLE LEG & TO UNDERSIDE OF DECA HORIZONTAL LEG. AT CONT. PLATE LOCATIONS, PROVIDE A HORIZ. L3x3x1/4x1'-0" (TOED DOWN) ATTACHED TO CMU ROND BEAM W/ (2) 3/4" DIA. HILTI HANE-ROD ON A 9" GAGE. INSTALLED WITH HILTI HIT HY150 ADHESIVE. (MIN. EMBED=6-5/8") INSTALL PER MFR'S WRITTEN INSTRUCTIONS.
 - B.E. = BEARING ELEVATION. IT IS THE G.C.'S RESPONSIBILITY TO DETERMINE WIDE FLANGE BEAM BEARING ELEVATIONS.
 - VWA = VERIFY W/ ARCHITECTURAL.
 - ESP = BENT PLATE 1/4"x4"x4"XCONT. (TOE UP) FOR CONTINUOUS DECK EDGE SUPPORT BETWEEN ALL JOISTS, BEAMS, & BETWEEN ALL TRUSSES. ATTACH W/ 3/4" DIA. RODS SP. @ 24" O.C. AND EPOXY IN PLACE TO GROUDED CELLS WHEN FASTENED TO CMU WALLS. IF APPROVED BY ARCHITECT, ESA MAY BE USED INSTEAD OF ESP.
 - ESA = CONTINUOUS DECK EDGE SUPPORT ANGLE BETWEEN ALL JOISTS AND BEAMS = L4x4x1/4" CONT. (TOE UP)
 - X-BRACING
 - B.O.D. = BOTTOM OF DECK.
 - D.B.E. = DECK BEARING ELEVATION B1/S310 C5/S311
 - B.L. = BRICK LEDGE, SEE DETAIL & A2/S310
 - F.P. = FLAT PLATE DECK SUPPORT. SEE



1100 LEVEL FRAMING PLAN - AREA 'A' (F. FLR. ELEV. = 871.16' = +27'-9" T/STL. = +27'-5" TYP. U.N.O.)

SHEET ISSUE:

NO.	DATE	DESCRIPTION	BY
B	2/28/22	DD PRICING	ATR
C	06/01/22	CMR SET	PGS
D	06/20/22	ADDENDUM NO. 1	ATR
E	06/27/22	ADDENDUM NO. 2	ATR

ADDENDUM NO. 2 06/27/22
PRINCIPAL IN CHARGE: PGG
PROJECT ENGINEER: ATR
DRAWN BY: JSD,BH,JG,ATR

SHEET TITLE: 1100 LEVEL FRAMING PLAN - AREA 'A'

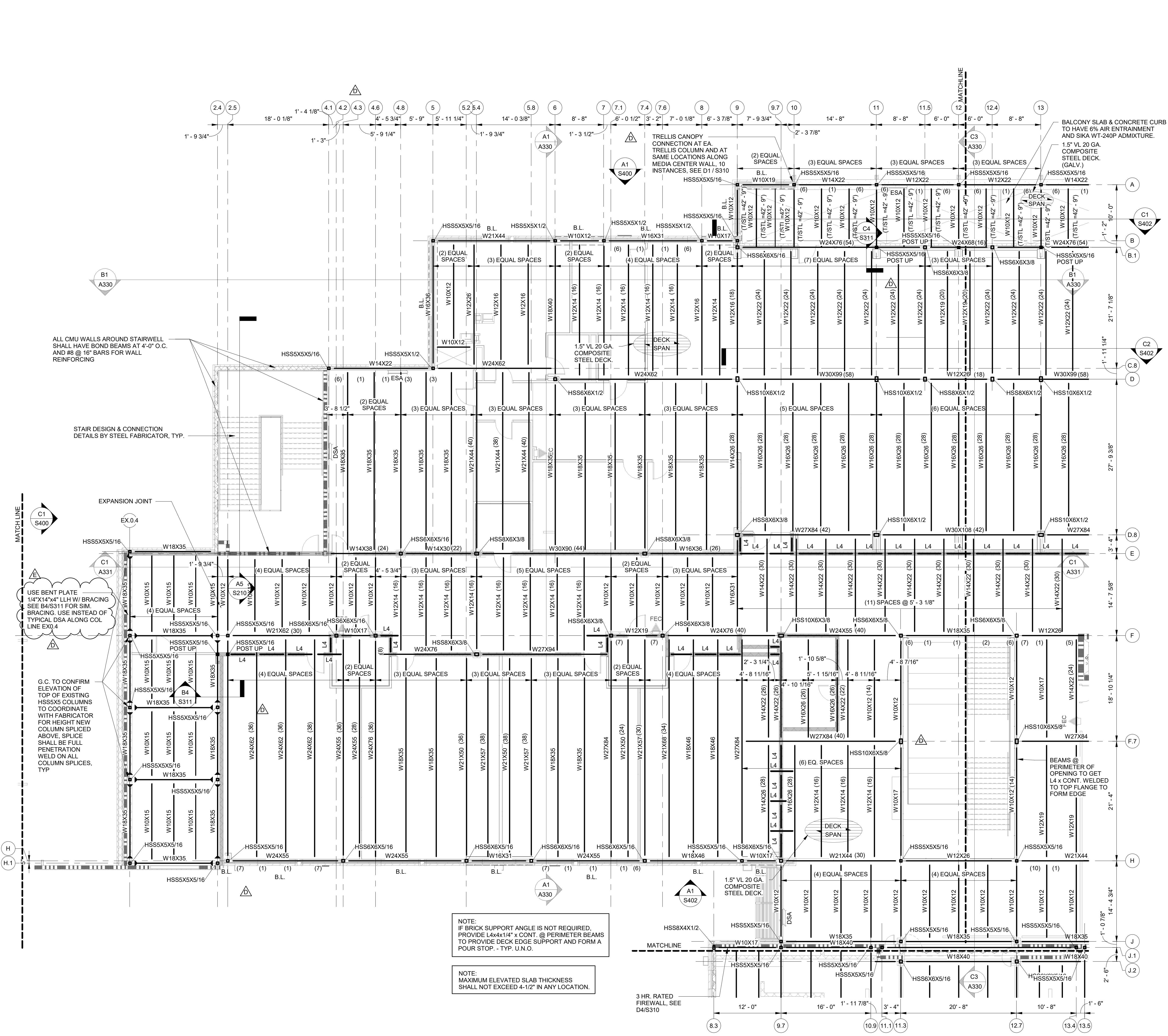
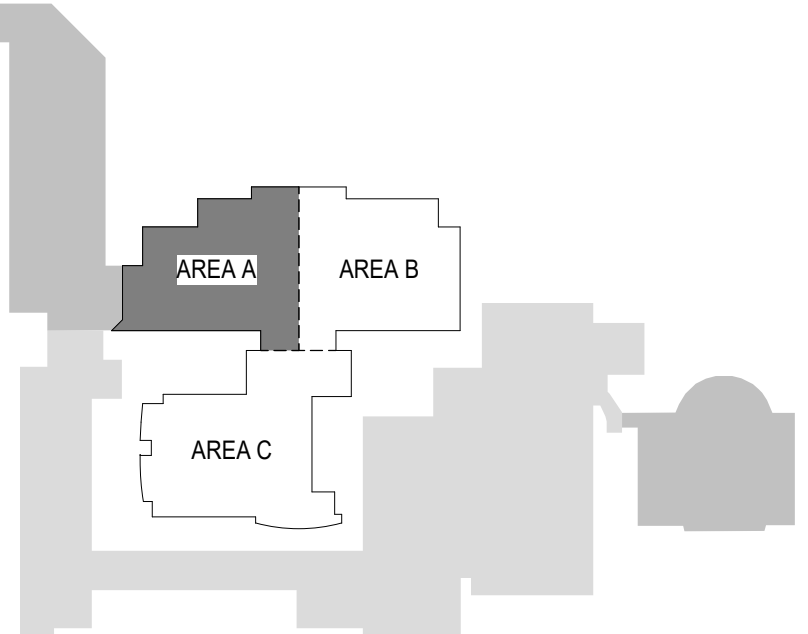
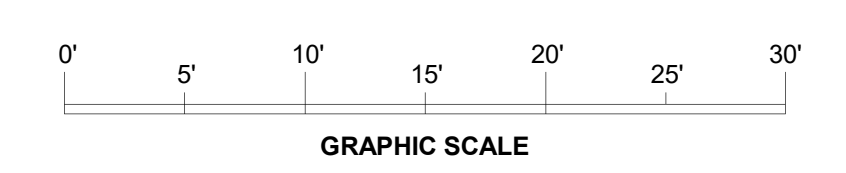
SHEET NO. PROJ. NO. 20242

S301A

NOT FOR CONSTRUCTION FOR PRICING ONLY

- FRAMING NOTES:**
- SEE DRAWINGS S001, S002, S003 & S004 FOR PROJECT NOTES AND DESIGN CRITERIA (UNO).
 - BEAM CONNECTIONS SHALL BE DESIGNED PER NOTE 4 UNDER "STRUCTURAL STEEL NOTES" ON DWG. S001
 - CONTRACTOR SHALL VERIFY DIMENSIONS SHOWN ON THIS PLAN WITH ARCHITECTURAL DRAWINGS PRIOR TO ANY FABRICATION OR CONSTRUCTION. FOR LOCATIONS AND PLAN DIMENSIONS OF WALLS OTHERWISE NOT SHOWN, REFER TO ARCHITECTURAL DRAWINGS.
 - PROVIDE WALL BRACING FOR ALL INTERIOR CMU WALLS WHOSE PLAN DIMENSIONS AND CONFIGURATION CREATE A CLEAR UNBRACED LENGTH GREATER THAN 10'-0" BETWEEN INTERSECTING WALLS. SEE DET A1 / S310
 - SEE SECTION & DETAILS SHEETS FOR STANDARD DETAILS, UNLESS NOTED OTHERWISE.
 - ROOF DECK SHALL BE 1 1/2" DEEP, 22 GAGE, WIDE RIB (TYPE B) GALV. W/G-90 COATING, UNLESS NOTED OTHERWISE. SEE B2 / S310 FOR FLOOR DECK DIRECTION CHANGES, WHERE SPECIFIED, TYPE BA DECK IS TYPE B ACoustICAL DECK.
 - PROVIDE BEARING PL. 3/8 x 10 x 10" WITH (2) 1/2" x 4" LONG HEADED STUDS @ 6" O.C. TYPICALLY WHERE JOISTS, BEAMS, OR TRUSSES FRAME INTO 8" CMU WALLS. TYP. EL. = JOIST BRG. EL. (JBE) AS NOTED ON FRAMING PLANS, WHERE JBE IS NOT NOTED, LOCATE TYP. TO AGREE WITH JOIST SEAT. SIMILARLY, LOCATE TYP. TO AGREE WITH MEMBER DEPTH FOR BEAMS & GIRDERS.
 - GENERAL CONTRACTOR SHALL PROVIDE 16 GAGE BENT PLATES ABOVE & BELOW DECK AT RIDGES, VALLEYS, HIPS, AND EAVES AS NECESSARY TO PROVIDE CONTINUOUS SUPPORT FOR ENDS AND EDGES OF METAL DECK. PROVIDE RAKE ANGLE AT ALL GABLE END WALLS.
 - SEE DETAIL B4 / S310 FOR DECK FASTENING PATTERN.
 - MECH. ROOF-TOP UNITS - SEE HVAC DRWGS. PROVIDE ADD'L SUPPORT FRAMING AS NEEDED. GENERAL CONTRACTOR SHALL COORDINATE UNIT DIMENSIONAL SUPPORT INFORMATION WITH STEEL FABRICATOR.
 - FOR FIRE-RATED WALLS SEE ARCH. DWGS.
 - GENERAL CONTRACTOR TO SUPPLY DIMENSIONS FOR ALL ROOF OPENINGS NOT SIZED TO STEEL FABRICATOR UPON PURCHASE OF EQUIPMENT.
 - G.C. TO VERIFY ALL DIMENSIONS WITH ARCHITECTURAL DIMENSIONS.
 - G/C/M TO COORDINATE FINAL FRAMING LAYOUT SPACING REQUIREMENTS W/ FINAL SLAB/ROOF PENETRATIONS AS REQ'D BASED ON FINAL SELECTION OF MECHANICAL COMPONENTS.
 - DISCHARGE CONCRETE AS REQUIRED TO LIMIT DEPTH OF CONCRETE IN ANY AREA TO 4.5 INCHES.
 - STAIR FRAMING INCLUDING LANDINGS, STRINGERS, AND JOISTS SUPPORTING STAIRS, SHALL BE BY STAIR MANUFACTURER.
 - COLUMN SPLICES SHALL BE FULL PENETRATION WELDS U.N.O.
 - SEE D4/S310 FOR FALL AWAY CONNECTIONS WHICH ARE REQUIRED FOR ALL BEAMS ADJACENT TO 3-HOUR WALLS.

- FRAMING LEGEND:**
- 3 HR. FIREWALL SEE DETAILS AS INDICATED ON PLAN & ARCH. FOR ADD'L INFO.
 - DSA = CONT. DECK SUPPORT ANGLE = L4x4x3/8" CONT. (TOE DOWN) PIECE AROUND JOISTS AS REQ'D. ATTACH W/ 3/4" RODS SP. @ 24" O.C. AND EPOXY IN PLACE INTO GROUDED CELLS. T/STL OF DSA = DECK BEARING ELEV. SEE ARCH. DSA AT EXT. COLD-FORMED STUD WALLS SHALL BE TOE UP.
 - DSP = CONT DECK SUPPORT PLATE = 1/4" PLATE WELDED TO THE TOP OF WIDE FLANGE BEAM. T/STL OF DSP = T/STL SHOWN ON FRAMING PLANS. SEE B5/S5.09
 - B.P. = INDICATES PROVIDE BEARING PL. PER NOTE 7 UNDER "FRAMING NOTES" AND BEAR ON 8"x24" D.P. B.B. OR 12"x24" D.P. B.B. W/ 4#x6x6" (TOP & BOTTOM REIN.) CENTERED UNDER ALL WF BEAM BEARING POINTS. VERTICAL WALL REIN. REQUIRED #8 @ 16" O.C. EACH SIDE OF BEAM OR COLUMN BEARING POINT FOR THE 6'-0" DISTANCE.
 - G/C/M TO COORDINATE FINAL FRAMING LAYOUT SPACING REQUIREMENTS W/ FINAL ROOF PENETRATIONS AS REQ'D BASED ON FINAL SELECTION OF MECHANICAL COMPONENTS.
 - L4 & L3
L4 = A L4x4x3/8 TOED DOWN (±13K), & A L3 = L3x3x3/8 TOED DOWN (±10K) ATTACHMENT SHALL BE TO UNDERSIDE OF BEAM BOT. CHORD HORIZONTAL ANGLE LEGS & TO UNDERSIDE OF DECK HORIZONTAL LEG. AT CONT. PLATE LOCATIONS, PROVIDE A HORIZ. L3x3x1/4x1'-0" (TOE DOWN) ATTACHED TO CMU BOND BEAM W/ (2) 3/4" HLTI HAS-E RODS ON A 9" GAGE INSTALLED WITH HLTI HIT HYDRO ADHESIVE. (MIN. EMBE-D-607) INST. ALL PER MFR'S WRITTEN INSTRUCTIONS.
 - B.E = BEARING ELEVATION. IT IS THE G.C.'S RESPONSIBILITY TO DETERMINE WIDE FLANGE BEAM BEARING ELEVATIONS.
 - VWA = VERIFY W/ ARCHITECTURAL.
 - ESP = BENT PLATE 1/4"x4"x4" CONT. (TOE UP) FOR CONTINUOUS DECK EDGE SUPPORT BETWEEN ALL JOISTS, BEAMS, & BETWEEN ALL TRUSSES. ATTACH W/ 3/4" DIA. RODS SP. @ 24" O.C. AND EPOXY IN PLACE TO GROUDED CELLS WHEN FASTENED TO CMU WALLS. IF APPROVED BY ARCHITECT, ESA MAY BE USED INSTEAD OF ESP.
 - ESA = CONTINUOUS DECK EDGE SUPPORT ANGLE BETWEEN ALL JOISTS AND BEAMS = L4x4x1/4" CONT. (TOE UP)
 - X-BRACING
 - B.O.D. = BOTTOM OF DECK.
 - D.B.E. = DECK BEARING ELEVATION. B1 / S310 C5 / S311
 - B.L. = BRICK LEDGE, SEE DETAIL B1 / S310 & A2 / S310
 - F.P. = FLAT PLATE DECK SUPPORT. SEE



1200 LEVEL FRAMING PLAN - AREA 'A' (F. FLR. ELEV. = 887.16' = +43'-9" T/STL. +43'-5" TYP. U.N.O.)
1/8" = 1'-0"

SHEET ISSUE:

NO.	DATE	DESCRIPTION	BY
B	2/28/22	DD PRICING	ATR
C	06/01/22	GMP SET	PGS
D	06/20/22	ADDENDUM NO. 1	ATR
E	06/27/22	ADDENDUM NO. 2	ATR

ADDENDUM NO. 2 06/27/22

PRINCIPAL IN CHARGE: PGG
PROJECT ENGINEER: ATR
DRAWN BY: JSD, BH, JG, ATR

SHEET TITLE:
**1200 LEVEL
FRAMING PLAN -
AREA 'A'**

SHEET NO. PROJ. NO.
S302A 20242

S302A

NOT FOR CONSTRUCTION
FOR PRICING ONLY

THIS DRAWING IS AN INSTRUMENT OF SERVICE. IT IS THE PROPERTY OF THE ENGINEER. ENGINEERING DRAWINGS ARE PROTECTED BY THE U.S. GOVERNMENT COPYRIGHT LEGISLATION. COPYRIGHT 2022, Bailey and Son Engineering, Inc. ALL RIGHTS RESERVED.

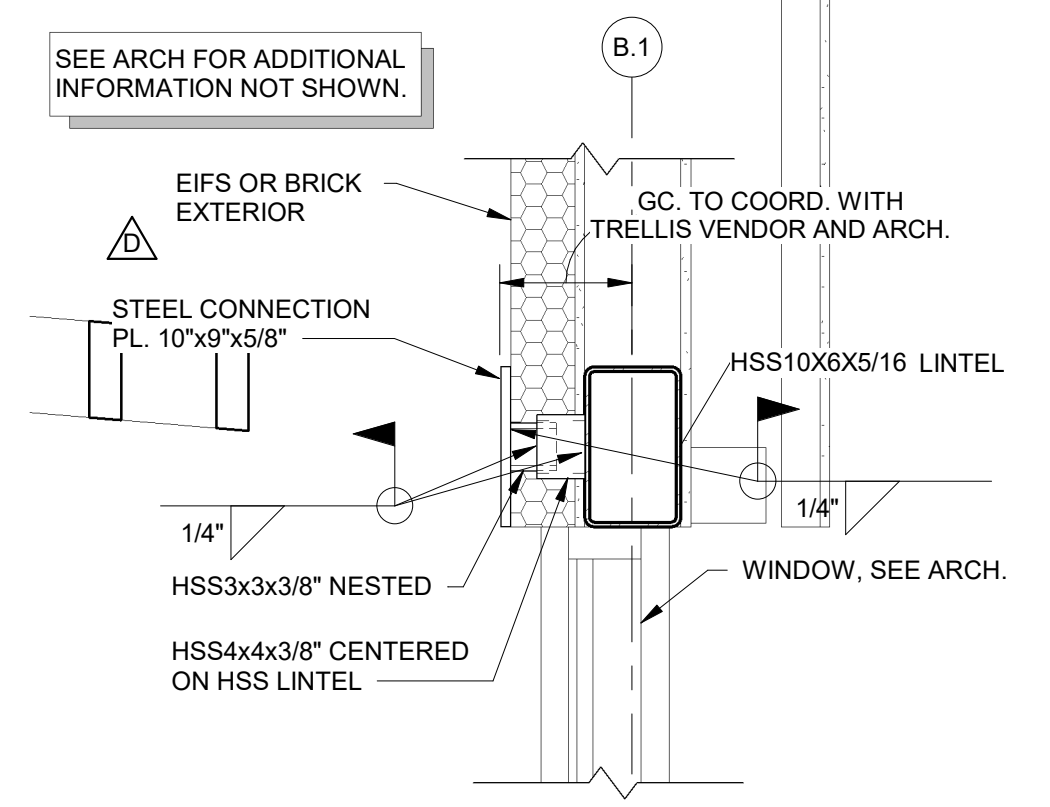
NO.	DATE	DESCRIPTION	BY
B	2/28/22	DD PRICING	ATR
C	06/01/22	GMP SET	PGG
D	06/20/22	ADDENDUM NO. 1	ATR
E	06/27/22	ADDENDUM NO. 2	ATR

ADDENDUM NO. 2
06/27/22
PRINCIPAL IN CHARGE: PGG
PROJECT ENGINEER: ATR
DRAWN BY: JSD,BH,JG,ATR

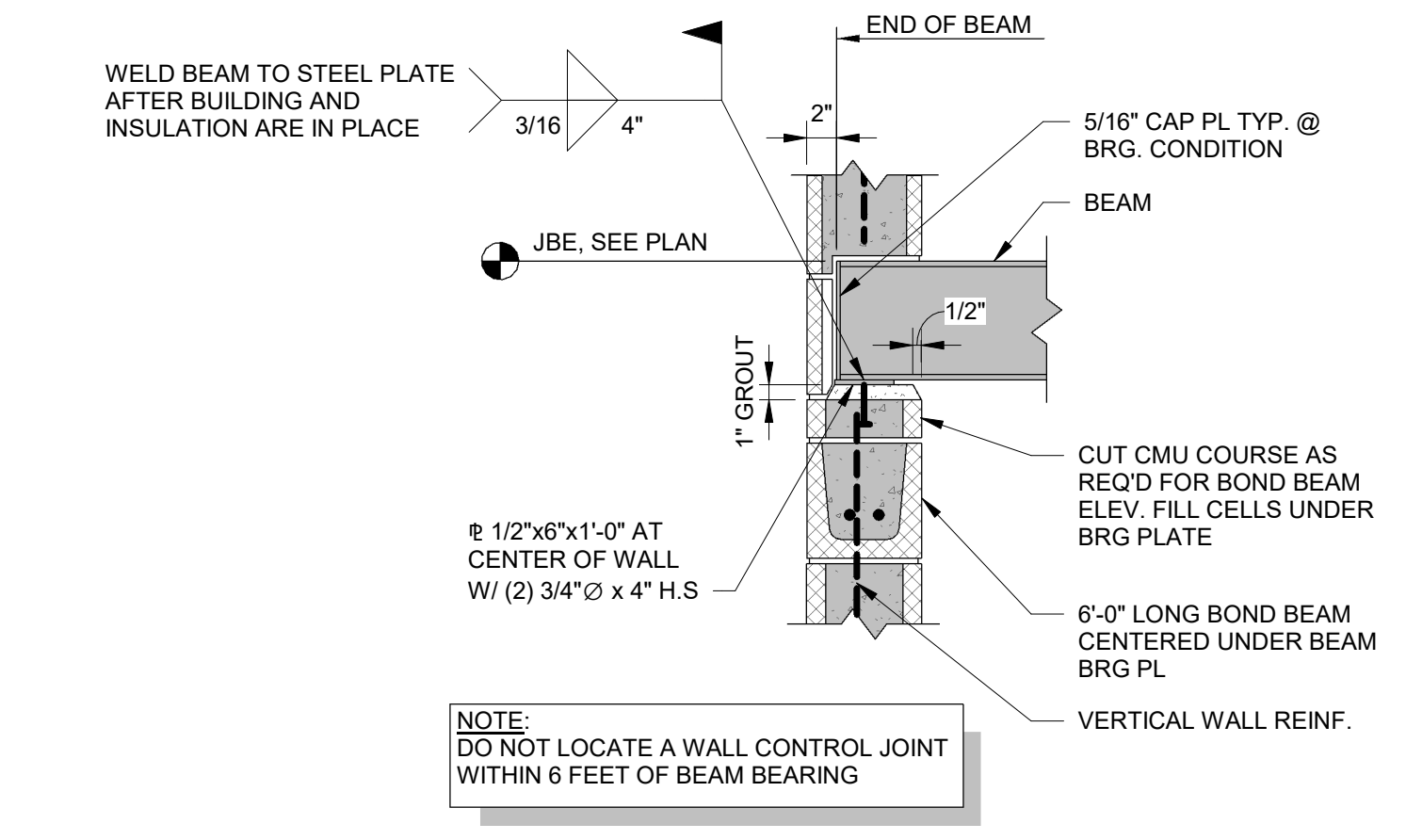
SHEET TITLE:
FRAMING SECTIONS & DETAILS

SHEET NO. PROJ. NO.
S310 20242

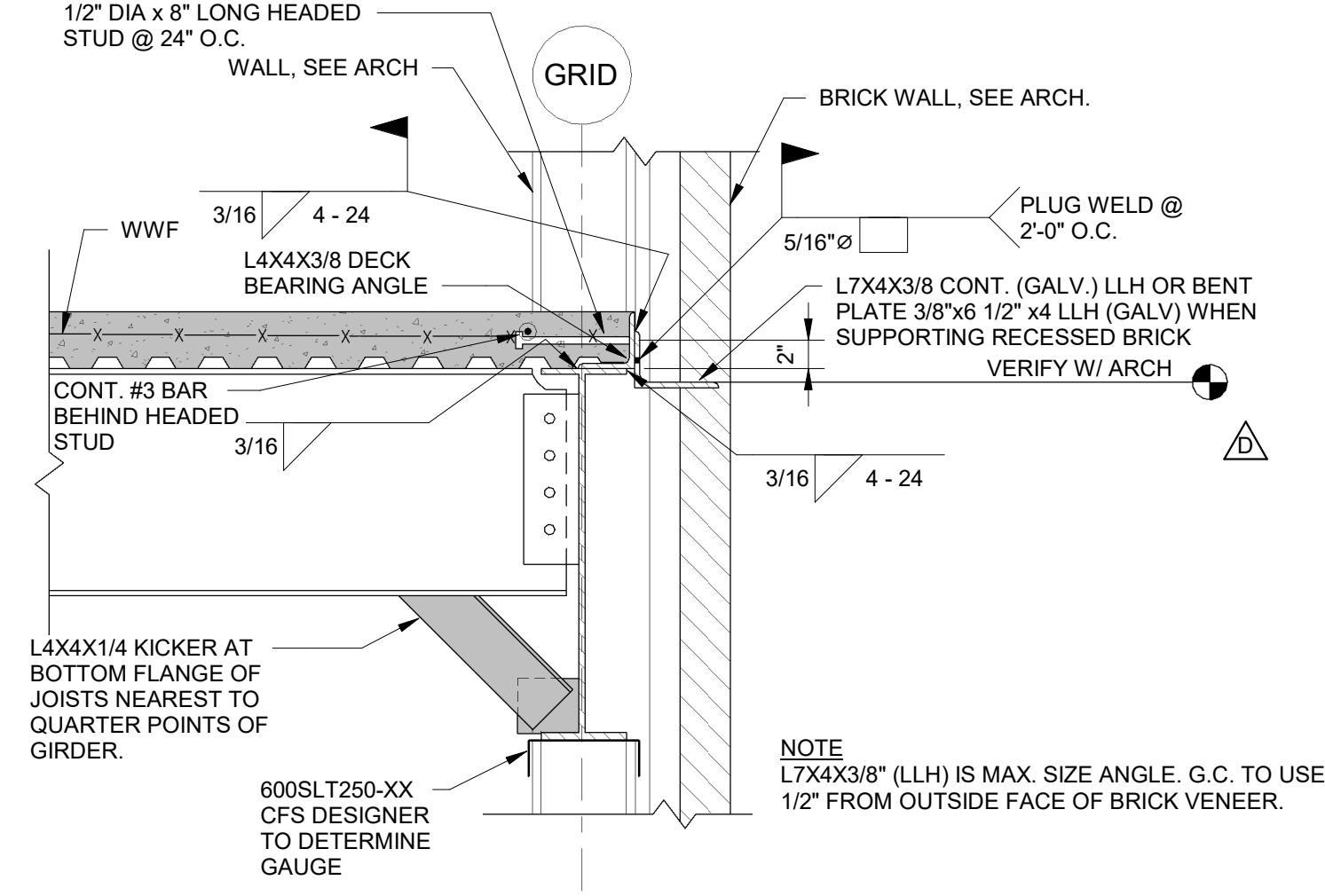
S310



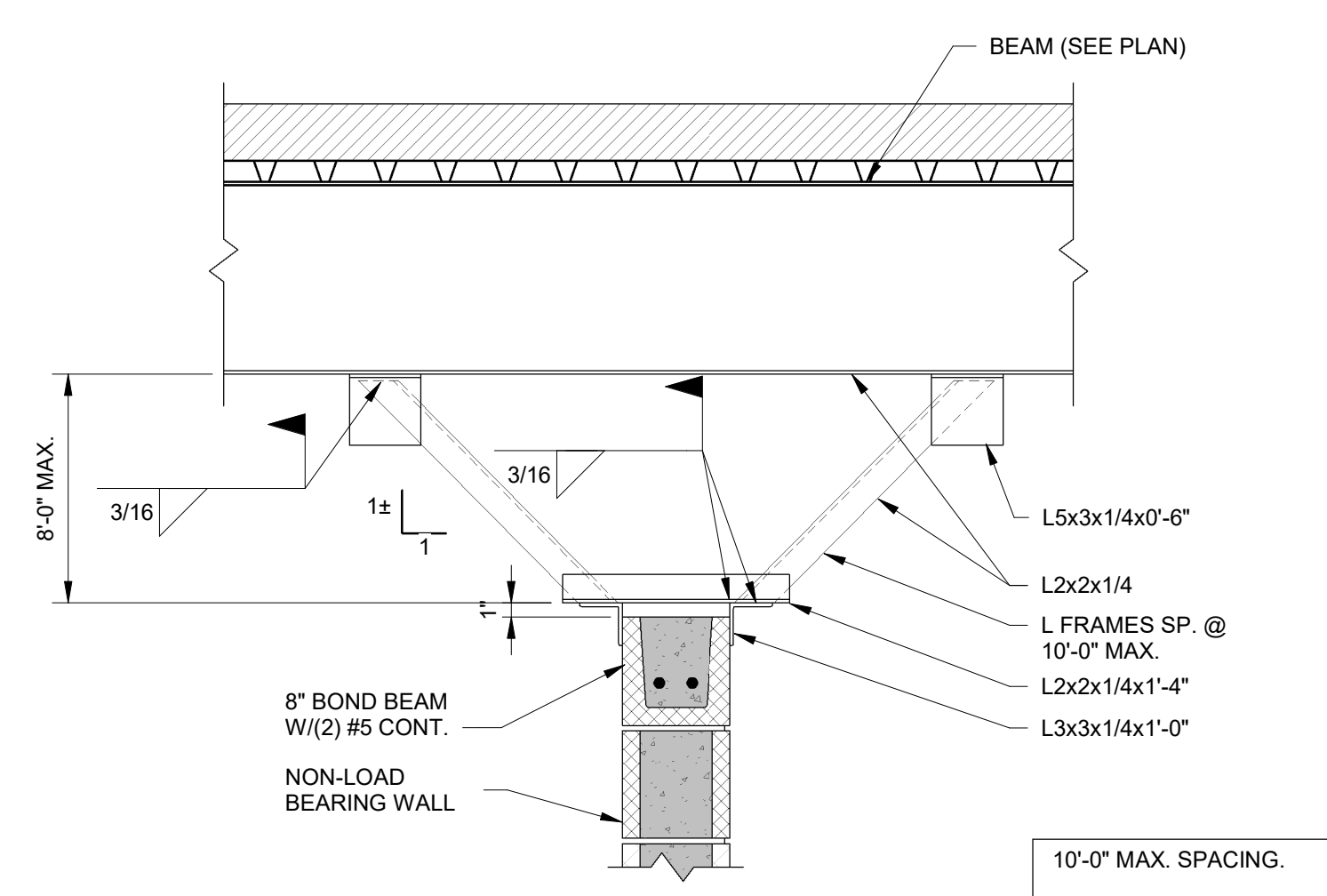
D1 TRELLIS ATTACHMENT DETAIL
S310 1" = 1'-0"



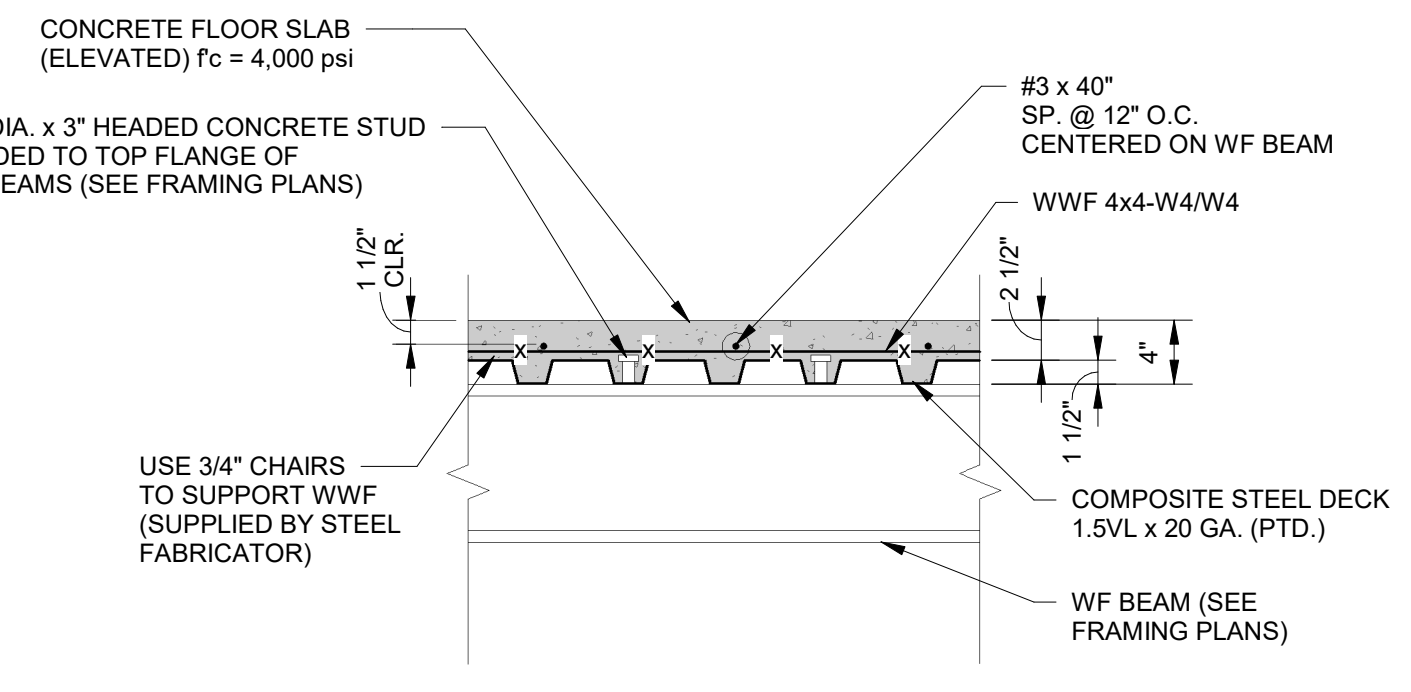
C1 TYP. BEAM BEARING POCKET @ CMU WALL
S310 1" = 1'-0"



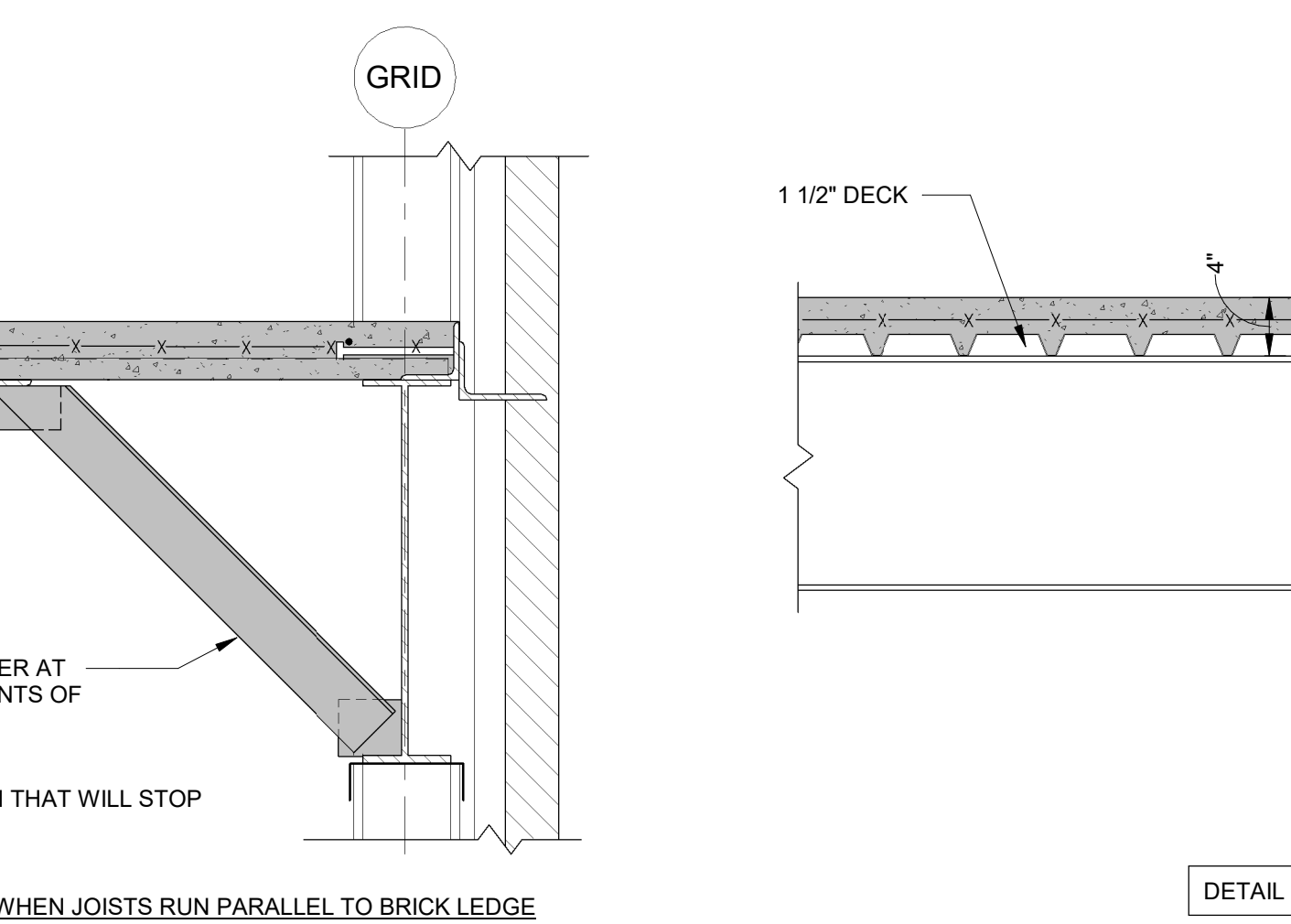
B1 BRICK LEDGE DETAIL PERPENDICULAR TO JOIST DIRECTION
S310 1" = 1'-0"



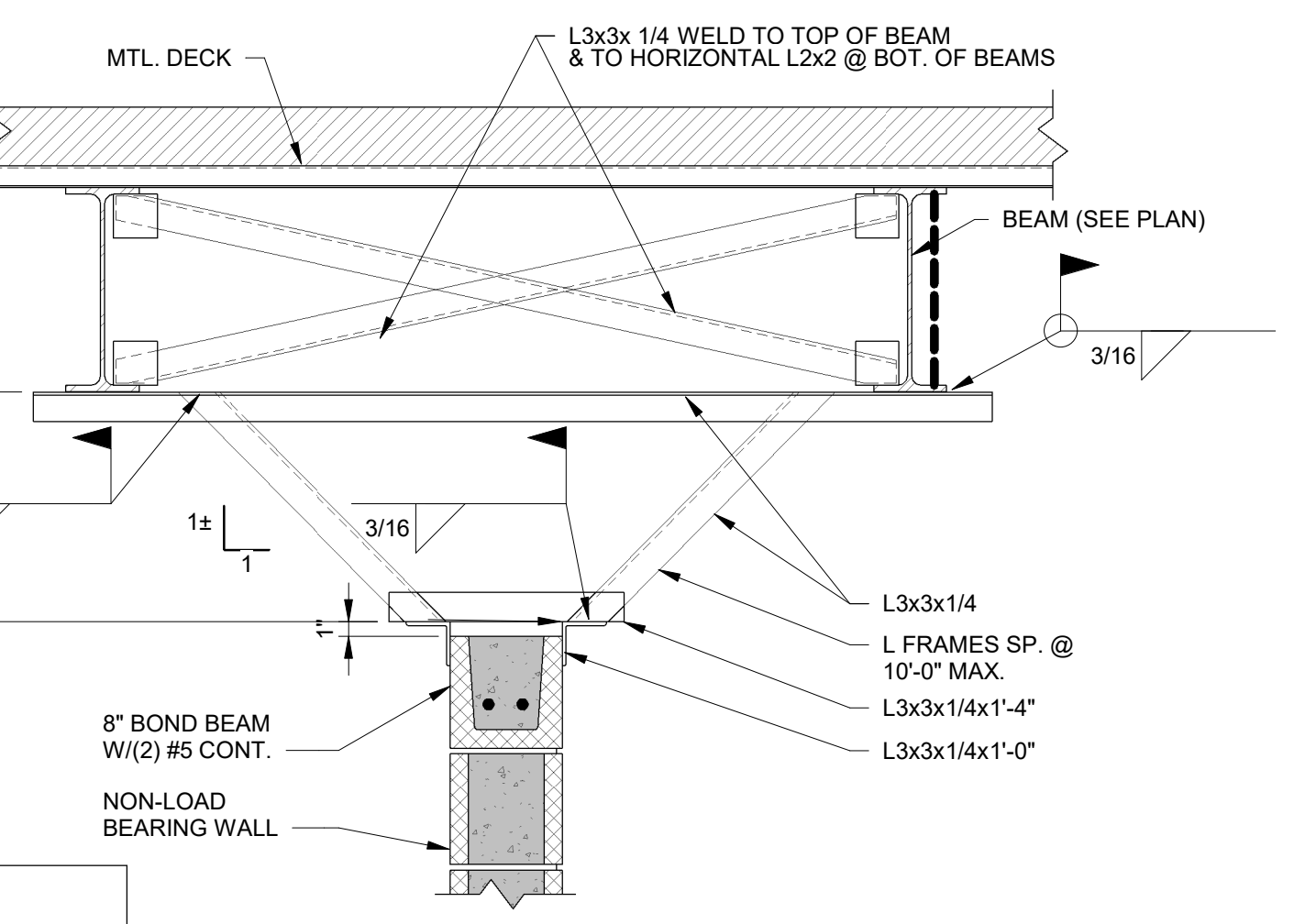
A1 TYPICAL CMU WALL BRACING DETAIL WHERE TOP OF WALL IS BELOW BOTTOM OF BEAM
S310 1" = 1'-0"



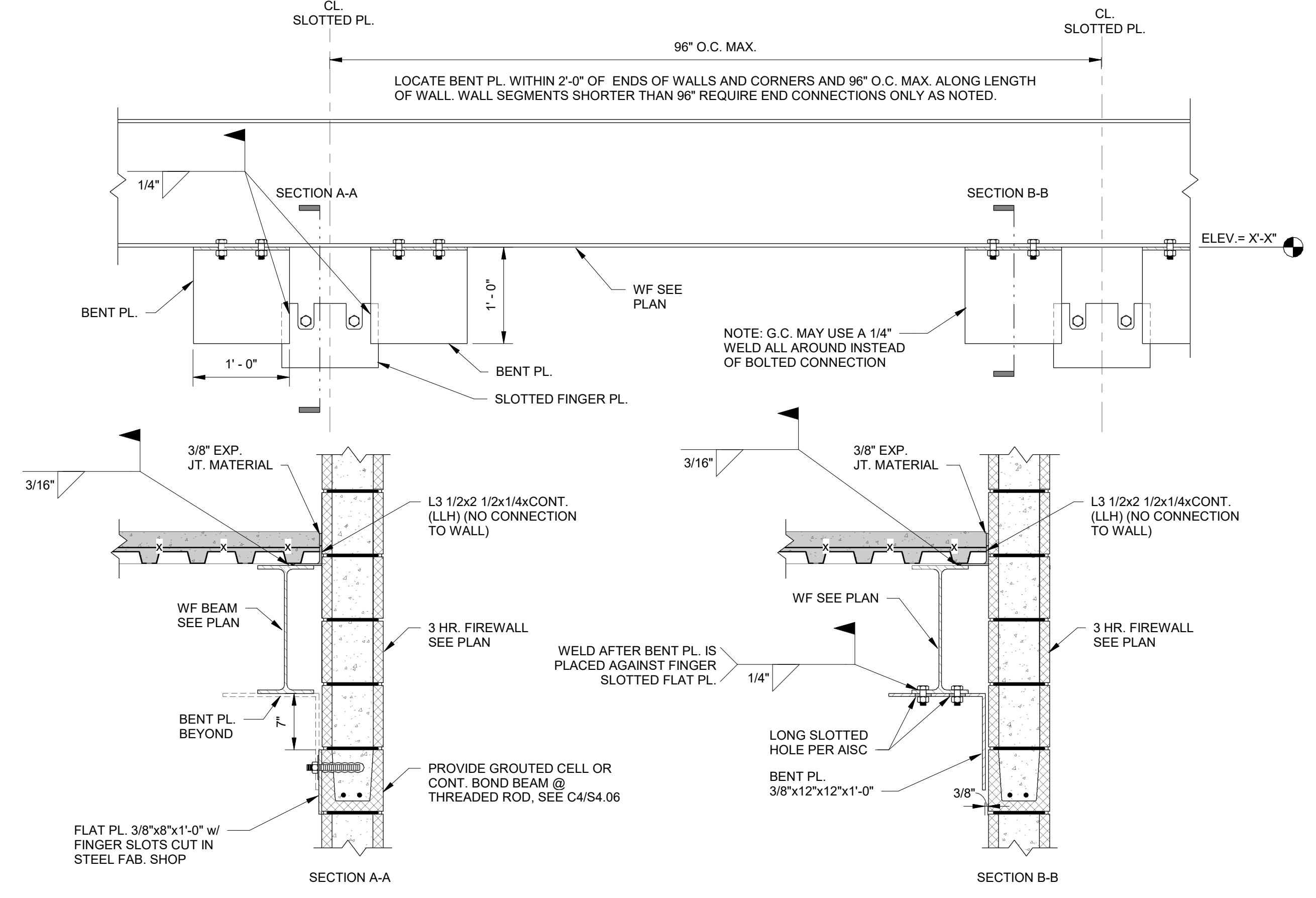
C2 COMPOSITE FLOOR
S310 1" = 1'-0"



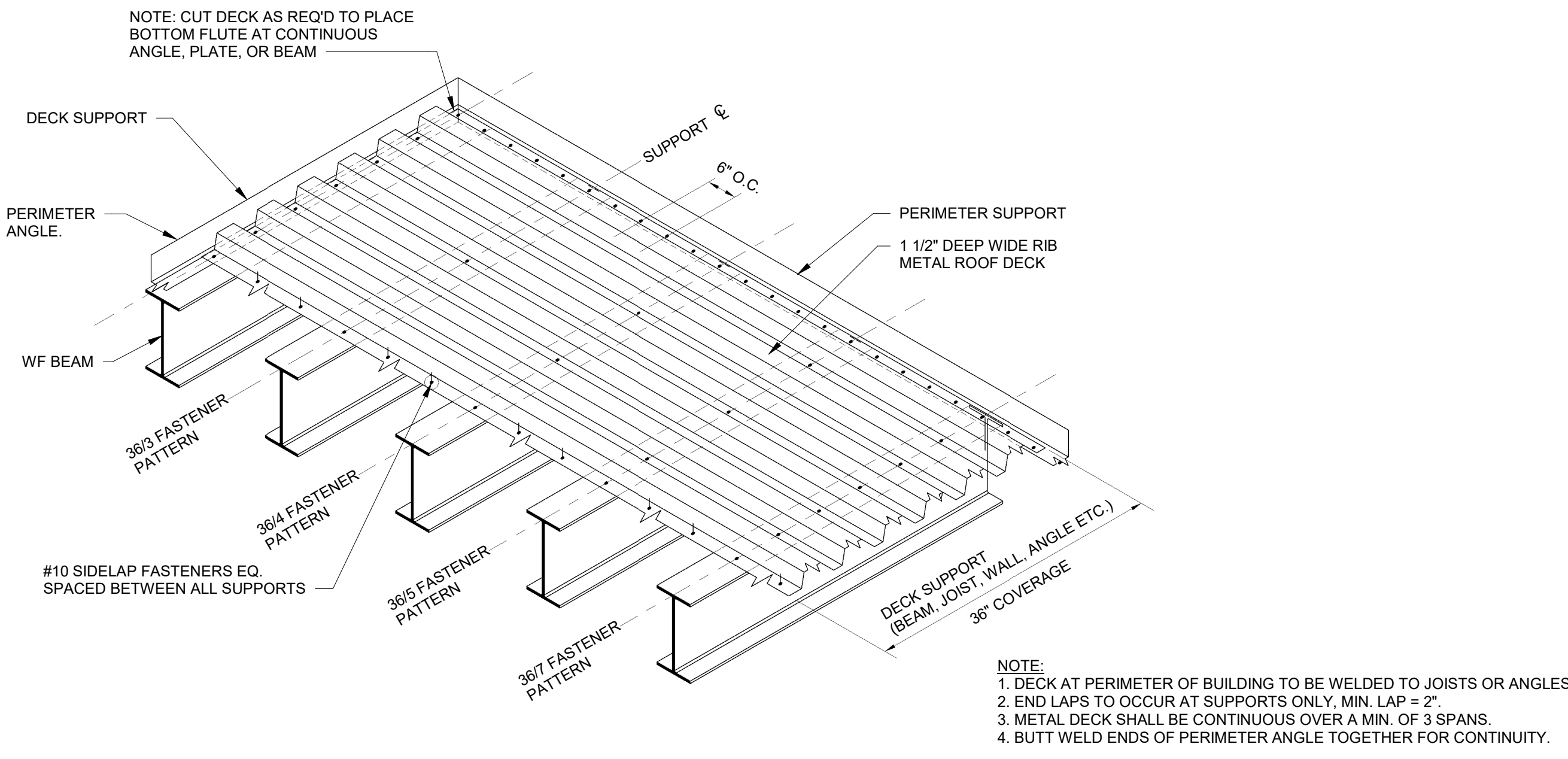
B2 DIRECTION CHANGE AT FLOOR FRAMING
S310 1" = 1'-0"



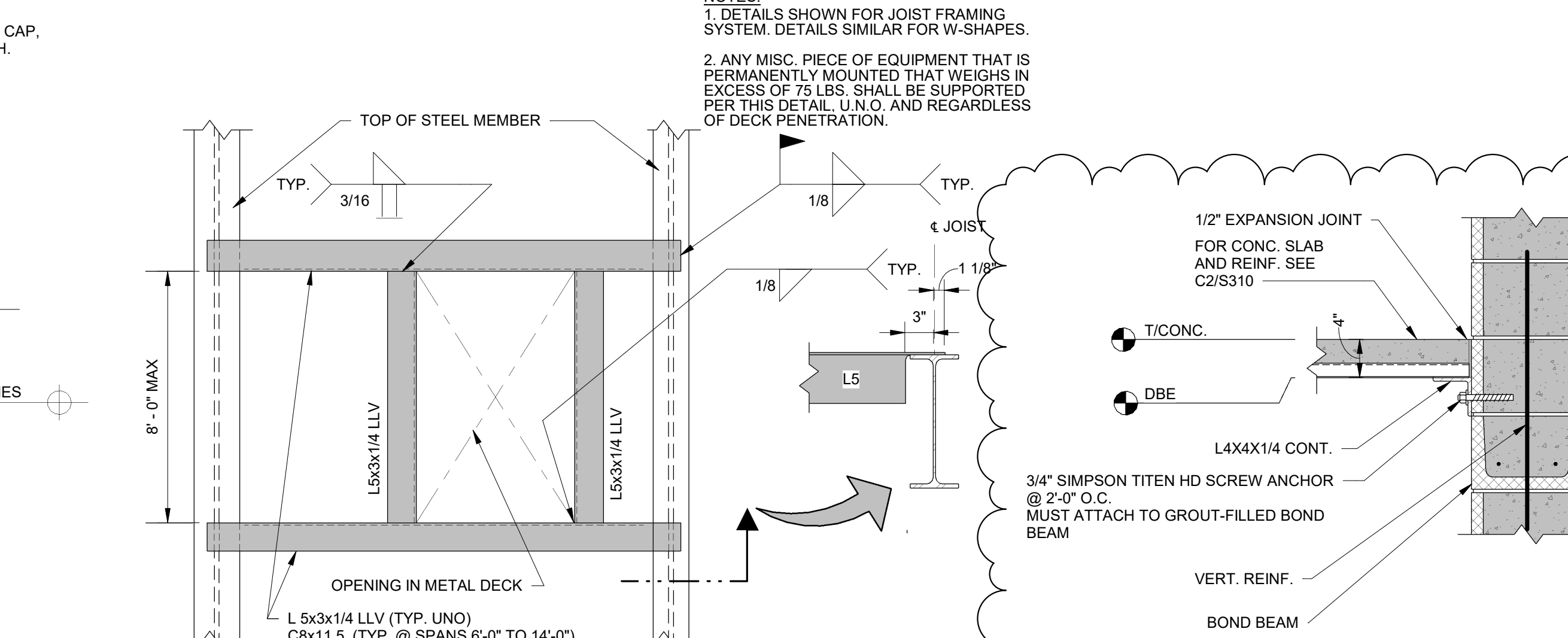
A2 PARAPET DETAIL
S310 1" = 1'-0"



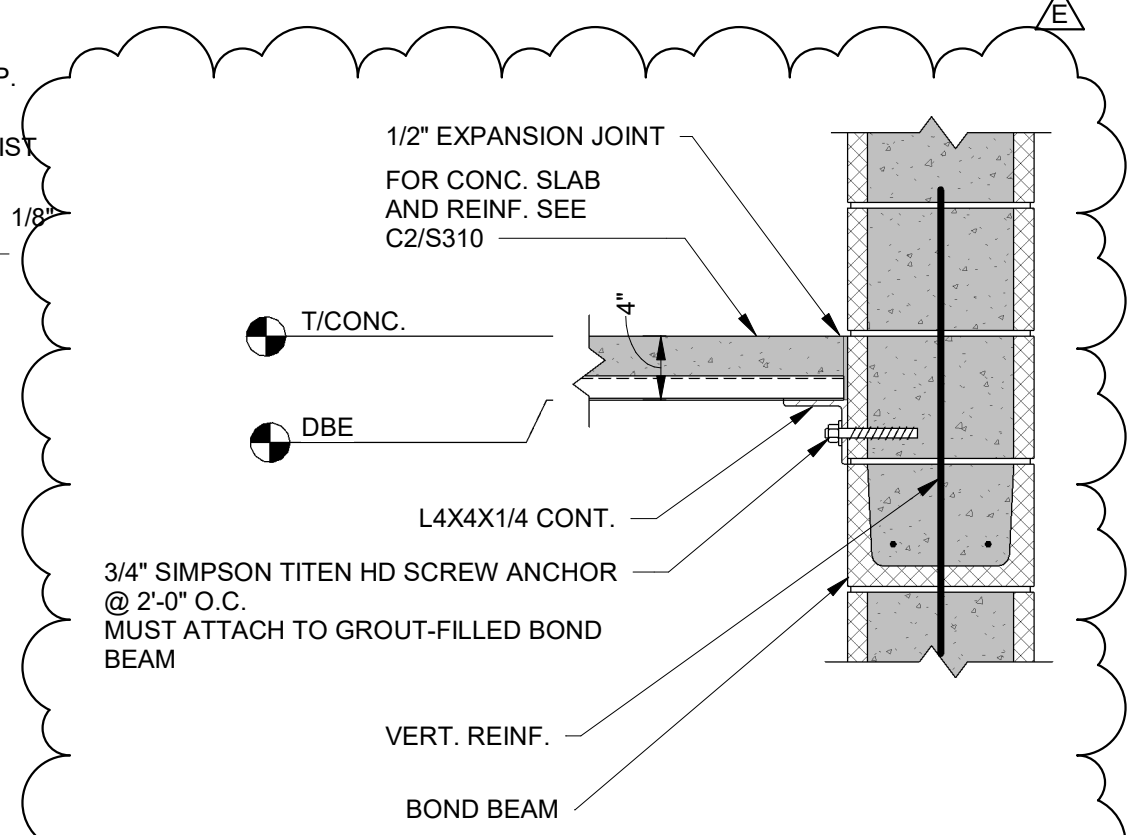
D4 WF BEAM @ 3HR. FIREWALL
S310 1" = 1'-0"



B4 1 1/2\"/>



A3 TYPICAL DECK OPENING - AUX. FRAMING
S310 1" = 1'-0"



M4 DECK EDGE SUPPORT DETAIL
S310 1" = 1'-0"

THIS DRAWING IS AN INSTRUMENT OF SERVICE SHALL NOT BE REPRODUCED, ALTERED OR BUILT UP IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER. ENGINEERING DRAWINGS ARE PROTECTED BY THE U.S. GOVERNMENT COPYRIGHT LEGISLATION. COPYRIGHT 2022, Bailey and Son Engineering, Inc. ALL RIGHTS RESERVED.

NOT FOR CONSTRUCTION
FOR PRICING ONLY

NO.	DATE	DESCRIPTION	BY
C	06/01/22	GMP SET	PGG
D	06/29/22	ADDENDUM NO. 1	ATR
E	06/27/22	ADDENDUM NO. 2	ATR

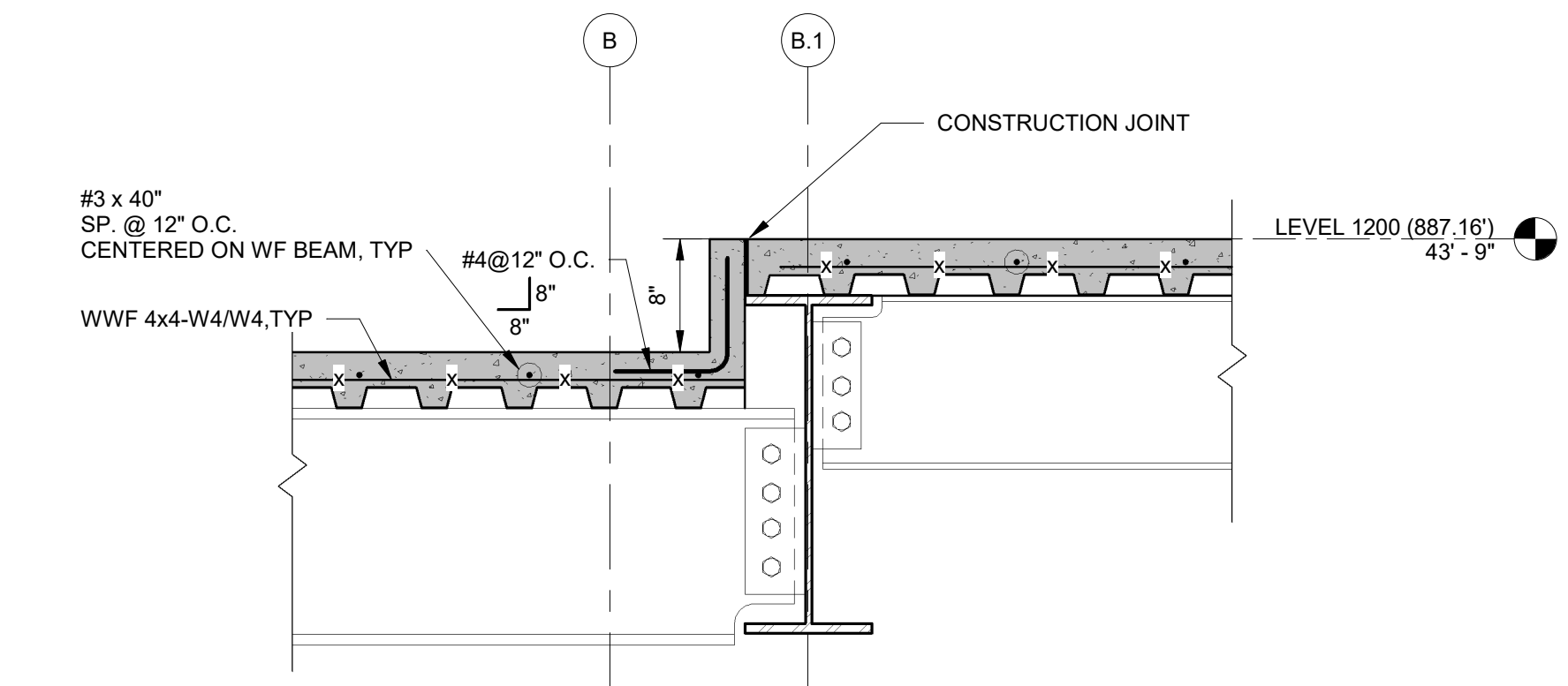
ADDENDUM NO. 2 06/27/22
PRINCIPAL IN CHARGE: PGG
PROJECT ENGINEER: ATR
DRAWN BY: JSD,BH,JG,ATR

SHEET TITLE:
**FRAMING
SECTIONS &
DETAILS**

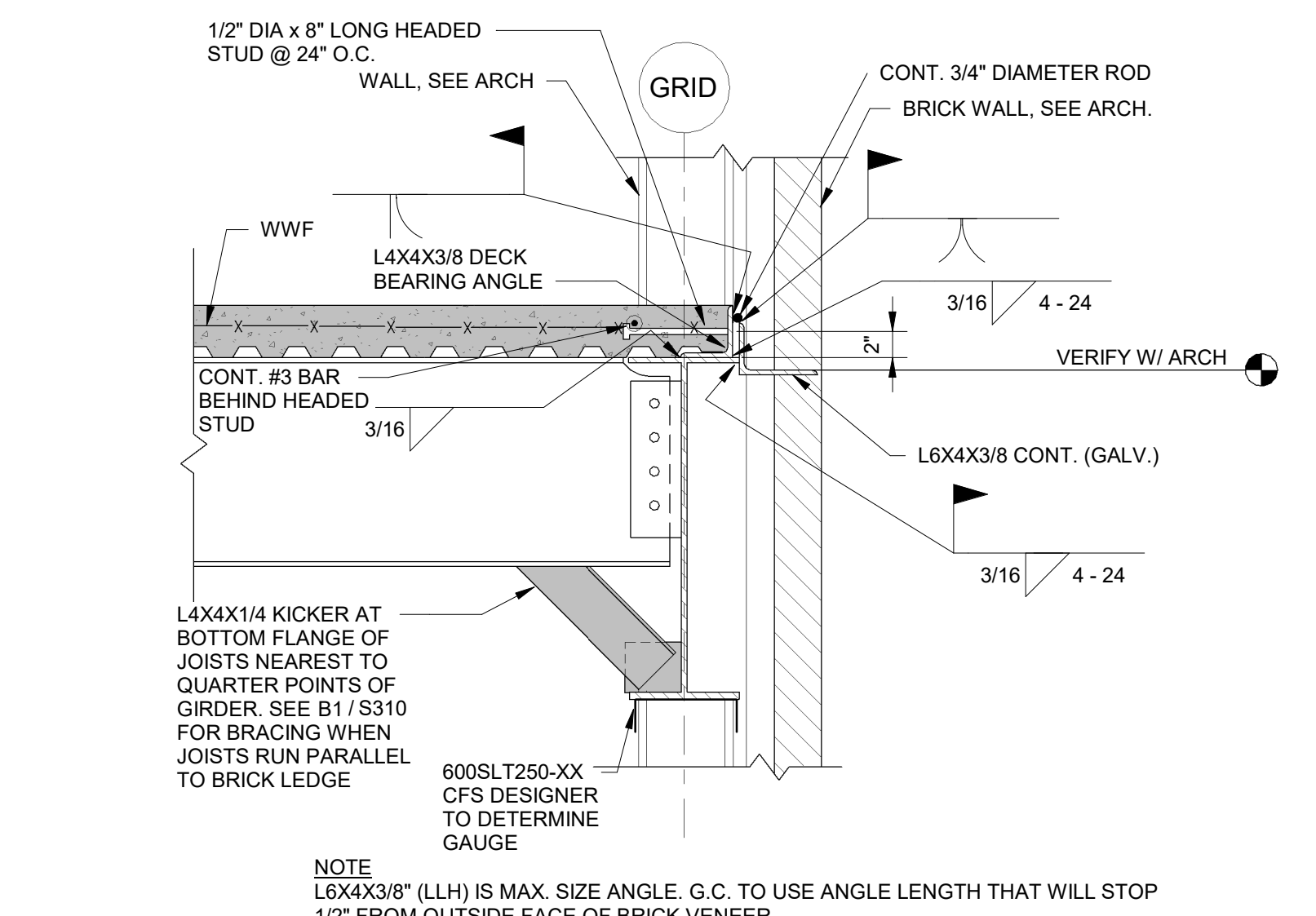
SHEET NO. PROJ. NO.
S311 20242

S311

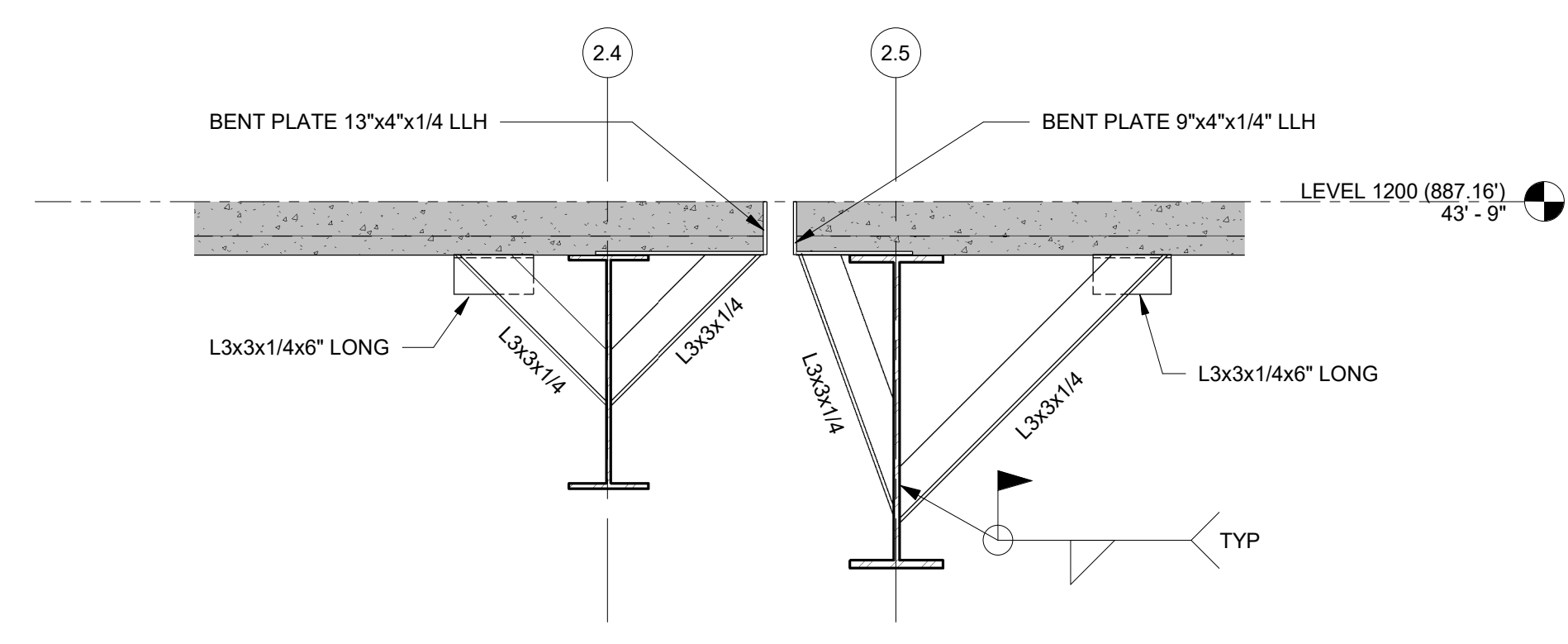
THIS DRAWING IS AN INSTRUMENT OF SERVICE SHALL NOT BE REPRODUCED, ALTERED OR REUSED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER. ENGINEERING DRAWINGS ARE PROTECTED BY THE U.S. GOVERNMENT COPYRIGHT LEGISLATION. COPYRIGHT 2022, Bailey and Son Engineering, Inc. ALL RIGHTS RESERVED.



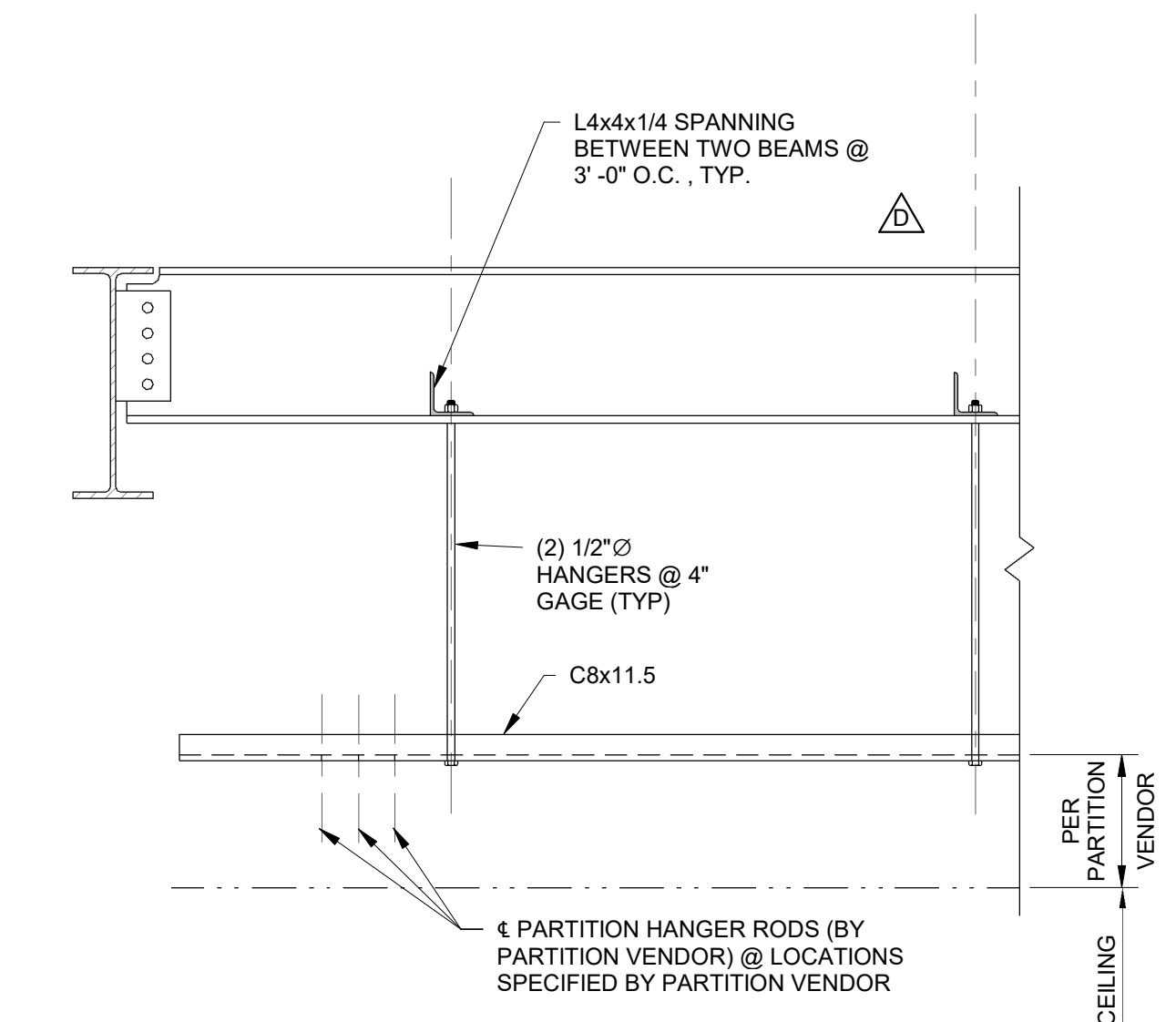
C4 CONCRETE CURB DETAIL
S311 1" = 1'-0"



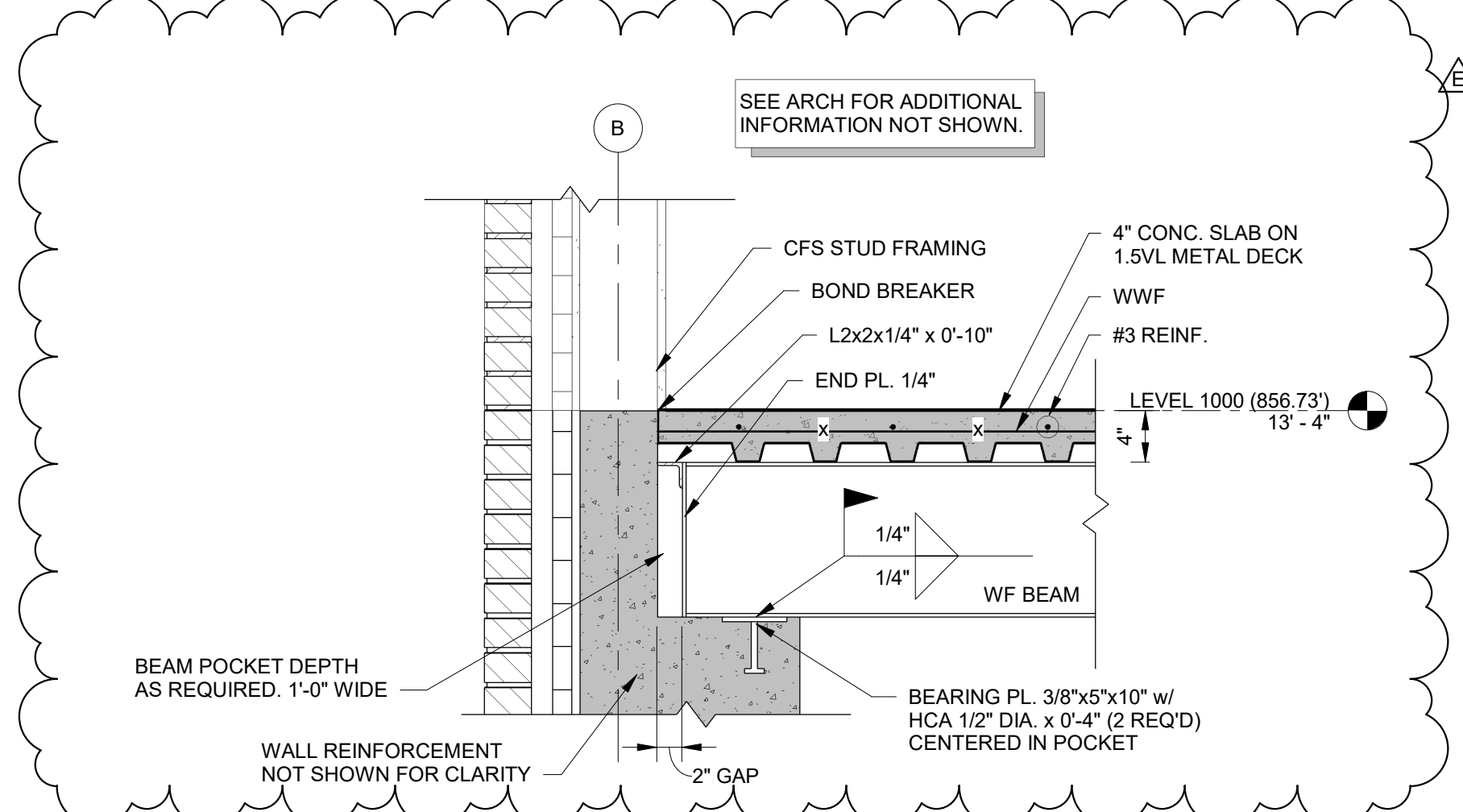
C5 BRICK LEDGE DETAIL W/ GAP PERPENDICULAR TO JOIST DIRECTION
S311 1" = 1'-0"



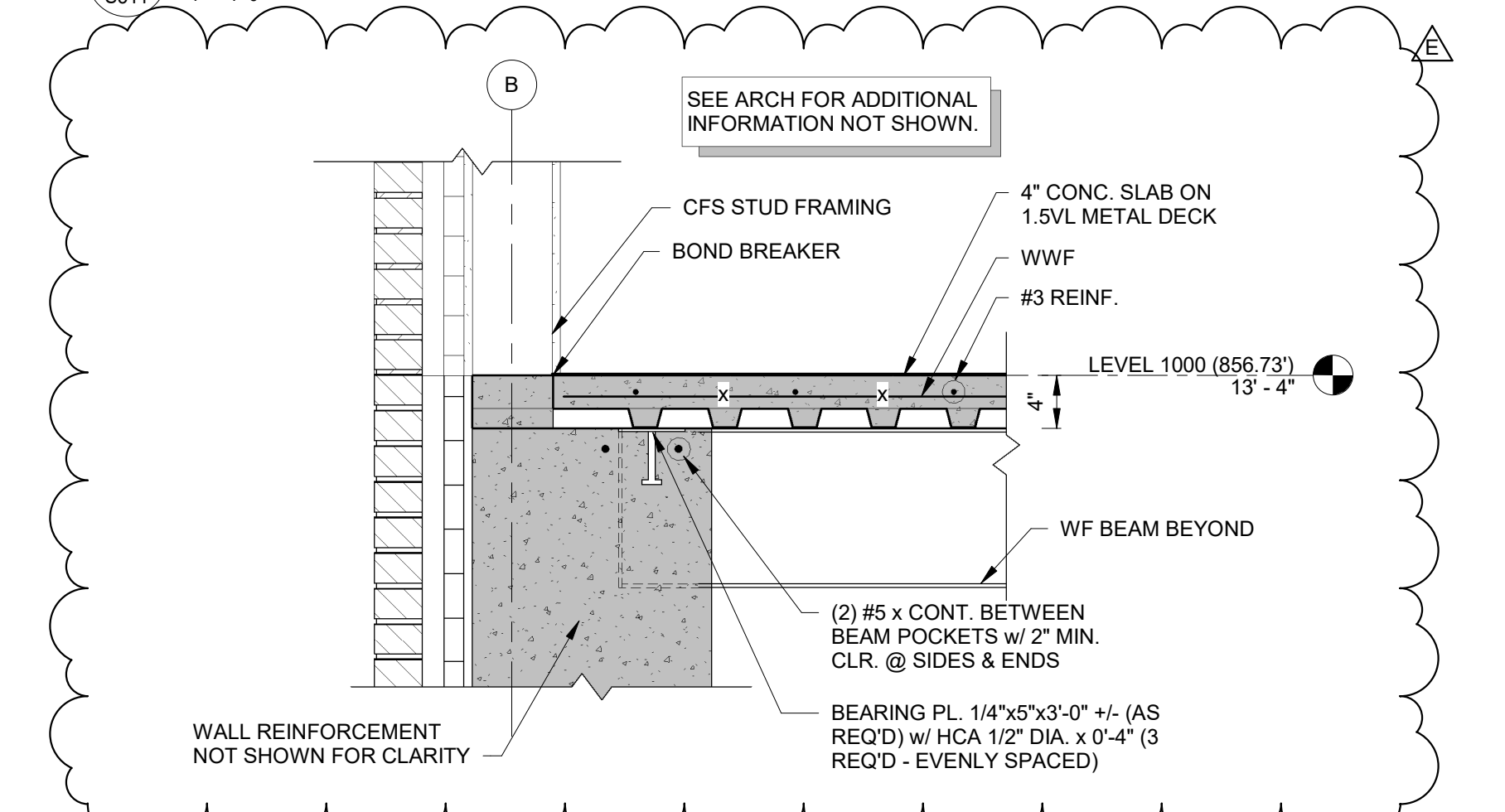
B4 BENT PLATE AND BRACING AT EXPANSION JOINT
S311 1" = 1'-0"



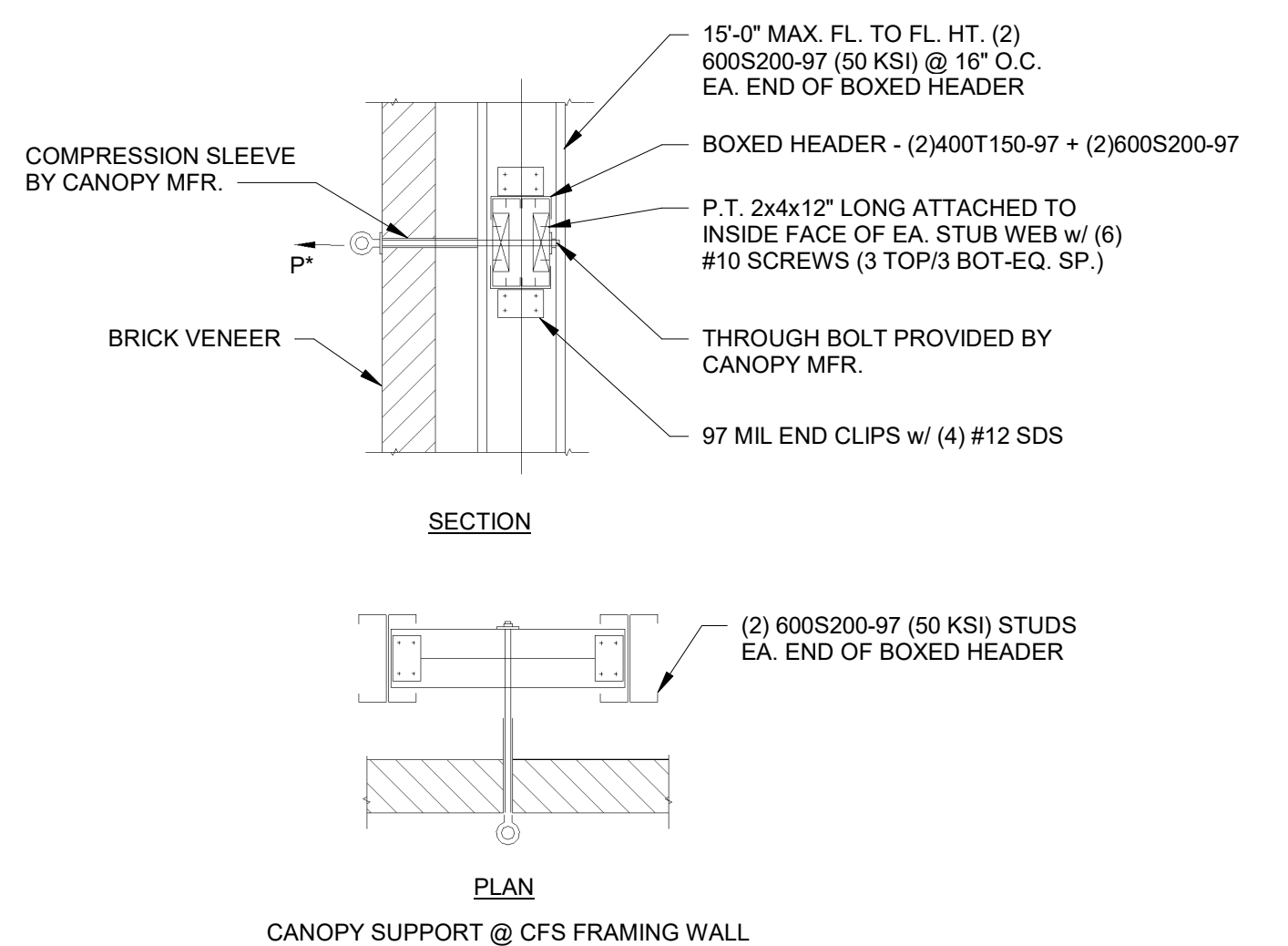
B5 FOLDING PARTITION DETAIL PARALLEL TO JOIST
S311 1" = 1'-0"



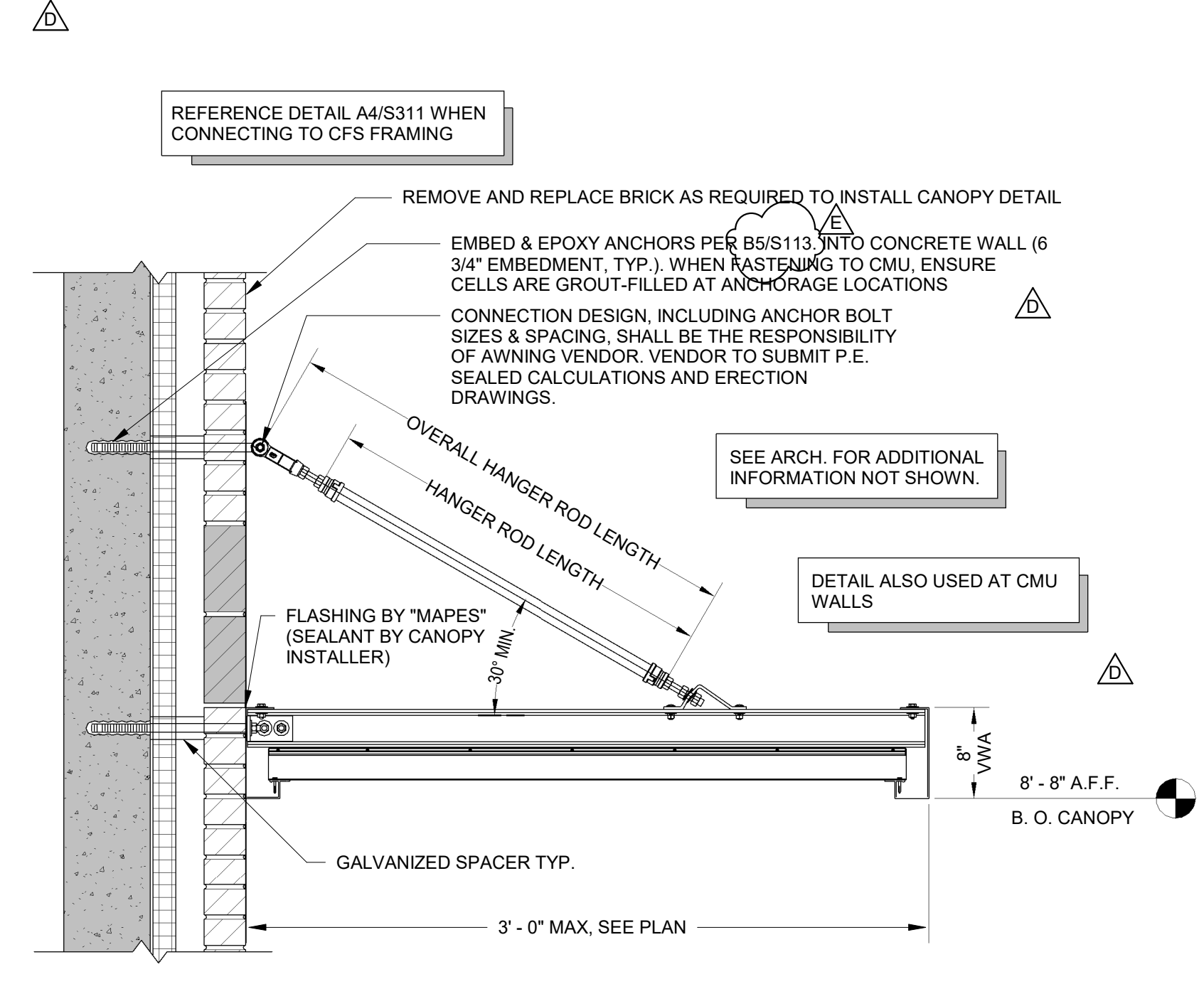
B2 DETAIL @ BEAM BEARING ON CONCRETE WALL (COL. LINE B)
S311 1" = 1'-0"



A2 DETAIL @ SLAB BEARING BETWEEN BEAM POCKETS (COL. LINE B)
S311 1" = 1'-0"

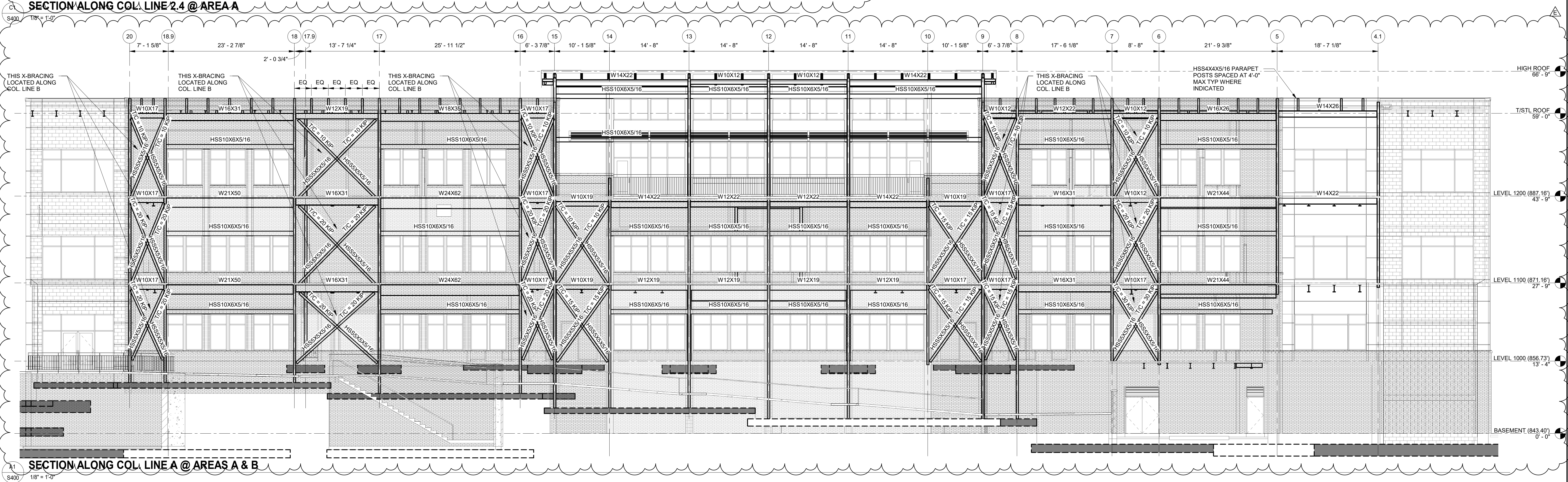
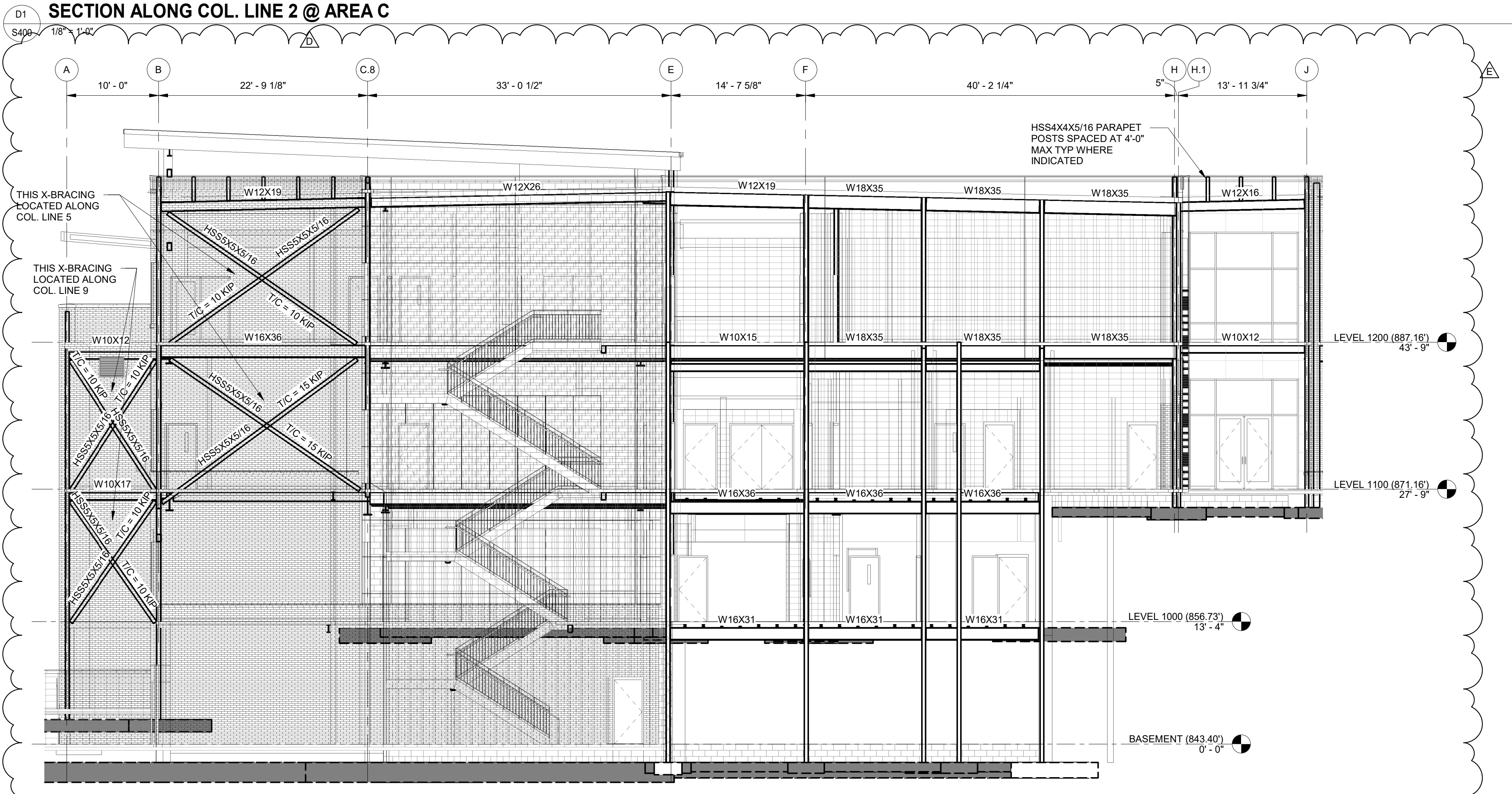
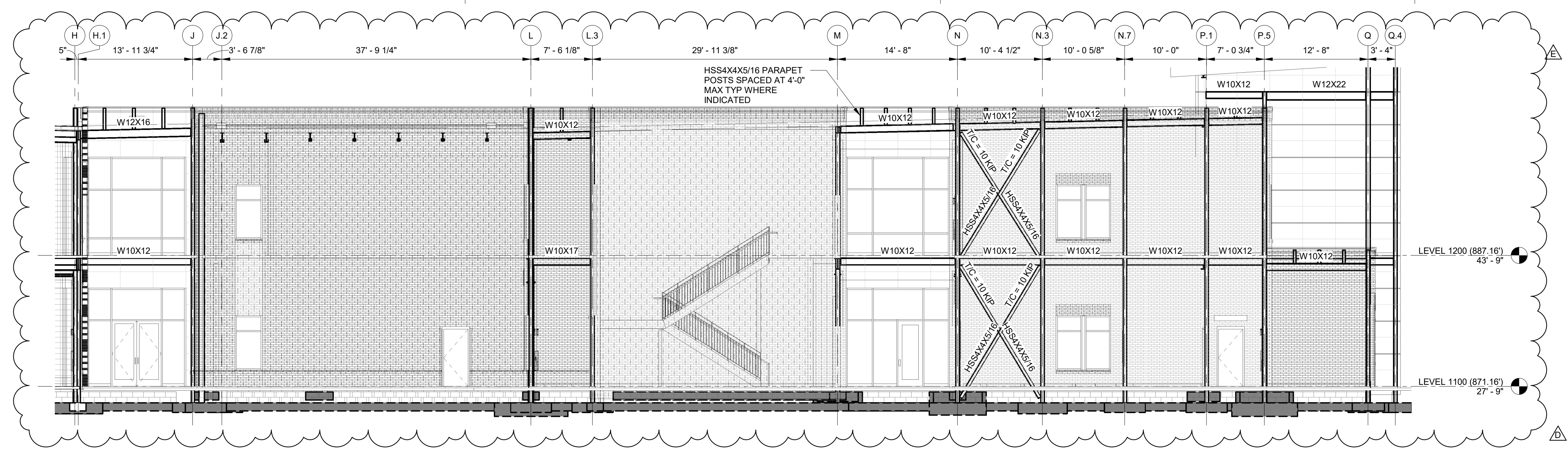


A4 CANOPY SUPPORT @ CFS FRAMING WALL
S311 1" = 1'-0"



A5 WALL HUNG CANOPY
S311 1" = 1'-0"

NOT FOR CONSTRUCTION
FOR PRICING ONLY



NO.	DATE	DESCRIPTION	BY
C	06/01/22	GMP SET	PGG
D	06/29/22	ADDENDUM NO. 1	ATR
E	06/27/22	ADDENDUM NO. 2	ATR

ADDENDUM NO. 2 06/27/22
PRINCIPAL IN CHARGE: PGG
PROJECT ENGINEER: ATR
DRAWN BY: JSD,BH,JG,ATR

SHEET TITLE:
**FRAMING
ELEVATIONS**

SHEET NO. PROJ. NO.
20242

S400

NOT FOR CONSTRUCTION
FOR PRICING ONLY

THIS DRAWING IS AN INSTRUMENT OF SERVICE. IT IS THE PROPERTY OF BAILEY AND SON ENGINEERING, INC. AND IS NOT TO BE REPRODUCED, ALTERED OR USED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER. ENGINEERING DRAWINGS ARE PROTECTED BY THE U.S. GOVERNMENT COPYRIGHT LEGISLATION. COPYRIGHT 2022, Bailey and Son Engineering, Inc. ALL RIGHTS RESERVED.

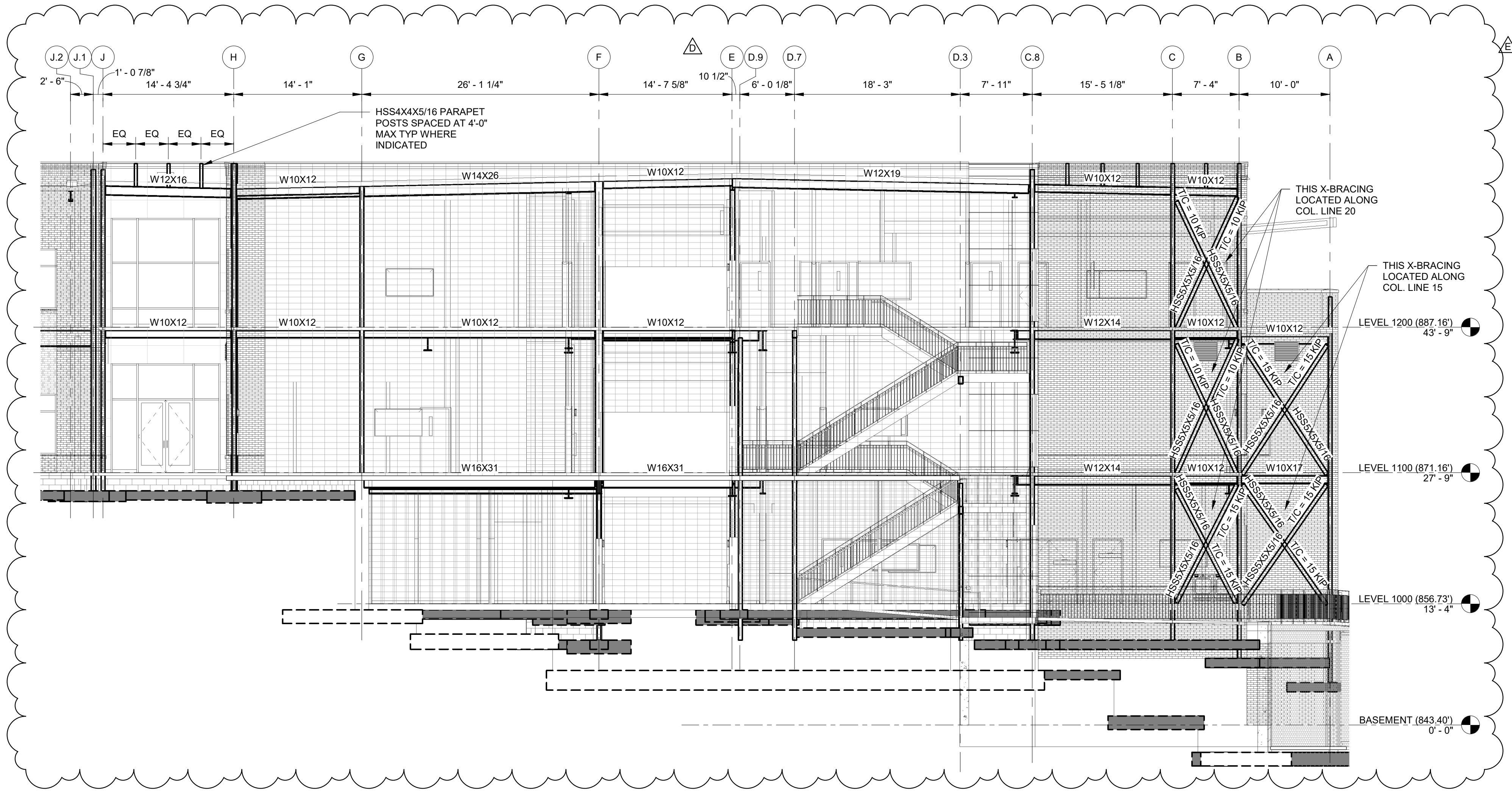
NO.	DATE	DESCRIPTION	BY
C	06/01/22	GMP SET	PGG
D	06/29/22	ADDENDUM NO. 1	ATR
E	06/27/22	ADDENDUM NO. 2	ATR

ADDENDUM NO. 2 06/27/22
PRINCIPAL IN CHARGE: PGG
PROJECT ENGINEER: ATR
DRAWN BY: JSD,BH,JG,ATR

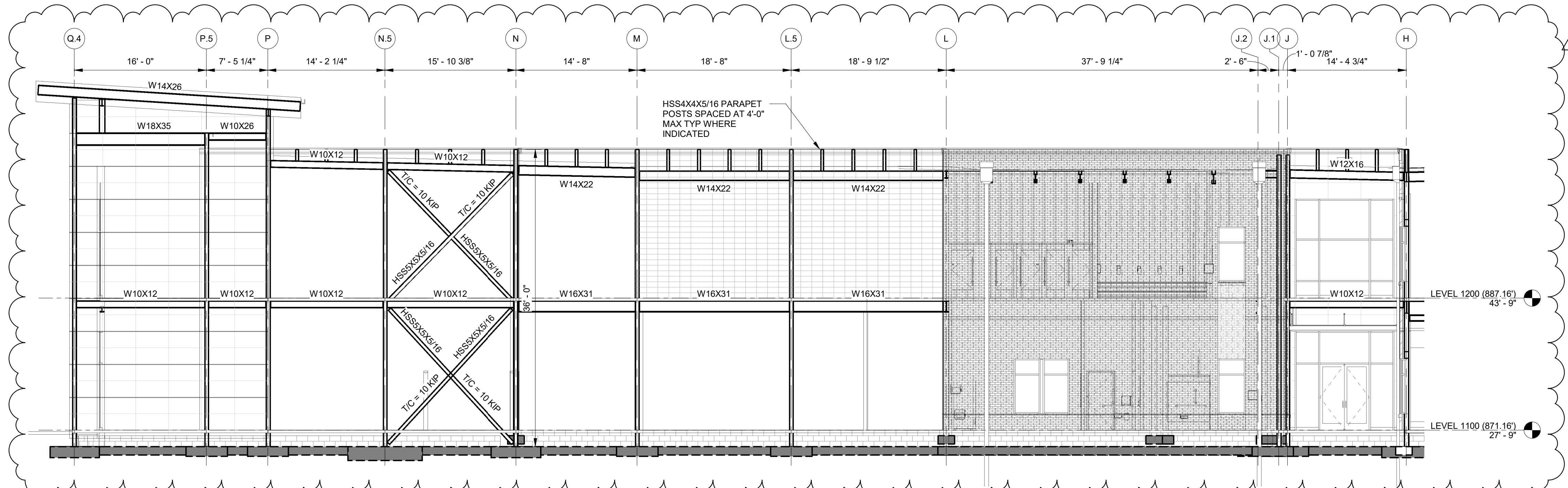
SHEET TITLE:
**FRAMING
ELEVATIONS**

SHEET NO. PROJ. NO.
20242

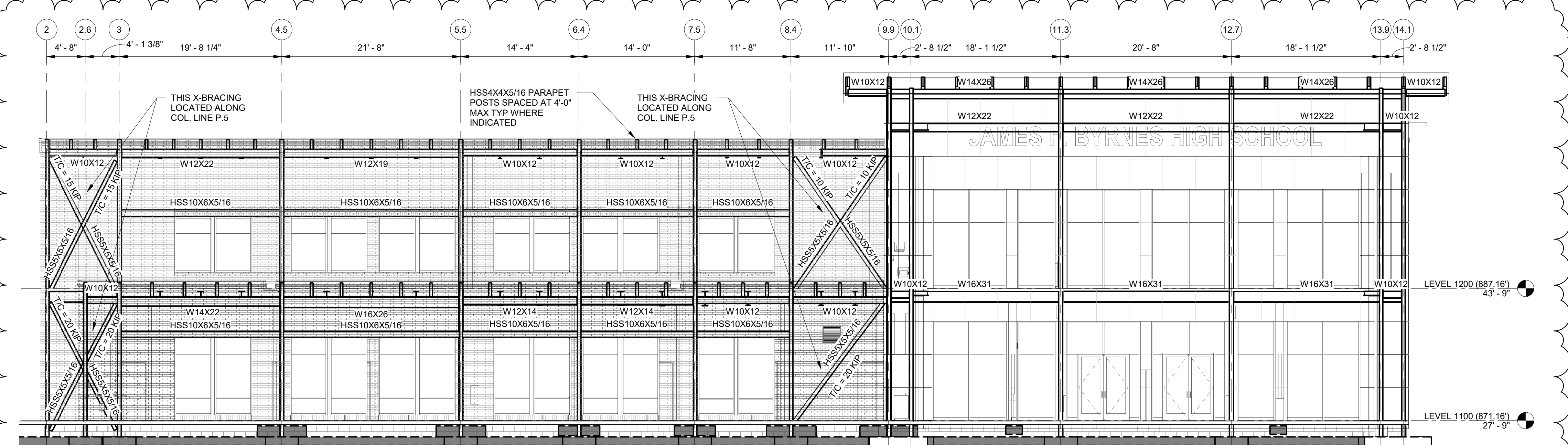
S401



D1 SECTION ALONG COL. LINE 21 @ AREA B
S401 1/8" = 1'-0"



C1 SECTION ALONG COL. LINE 15.7 @ AREA C
S401 1/8" = 1'-0"



A SECTION ALONG COL. LINE Q @ AREA C
S401 1/8" = 1'-0"

THIS DRAWING IS AN INSTRUMENT OF SERVICE SHALL NOT BE REPRODUCED, ALTERED OR USED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER. ENGINEERING DRAWINGS ARE PROTECTED BY THE U.S. GOVERNMENT COPYRIGHT LEGISLATION. COPYRIGHT 2022, Bailey and Son Engineering, Inc. ALL RIGHTS RESERVED.

NOT FOR CONSTRUCTION
FOR PRICING ONLY

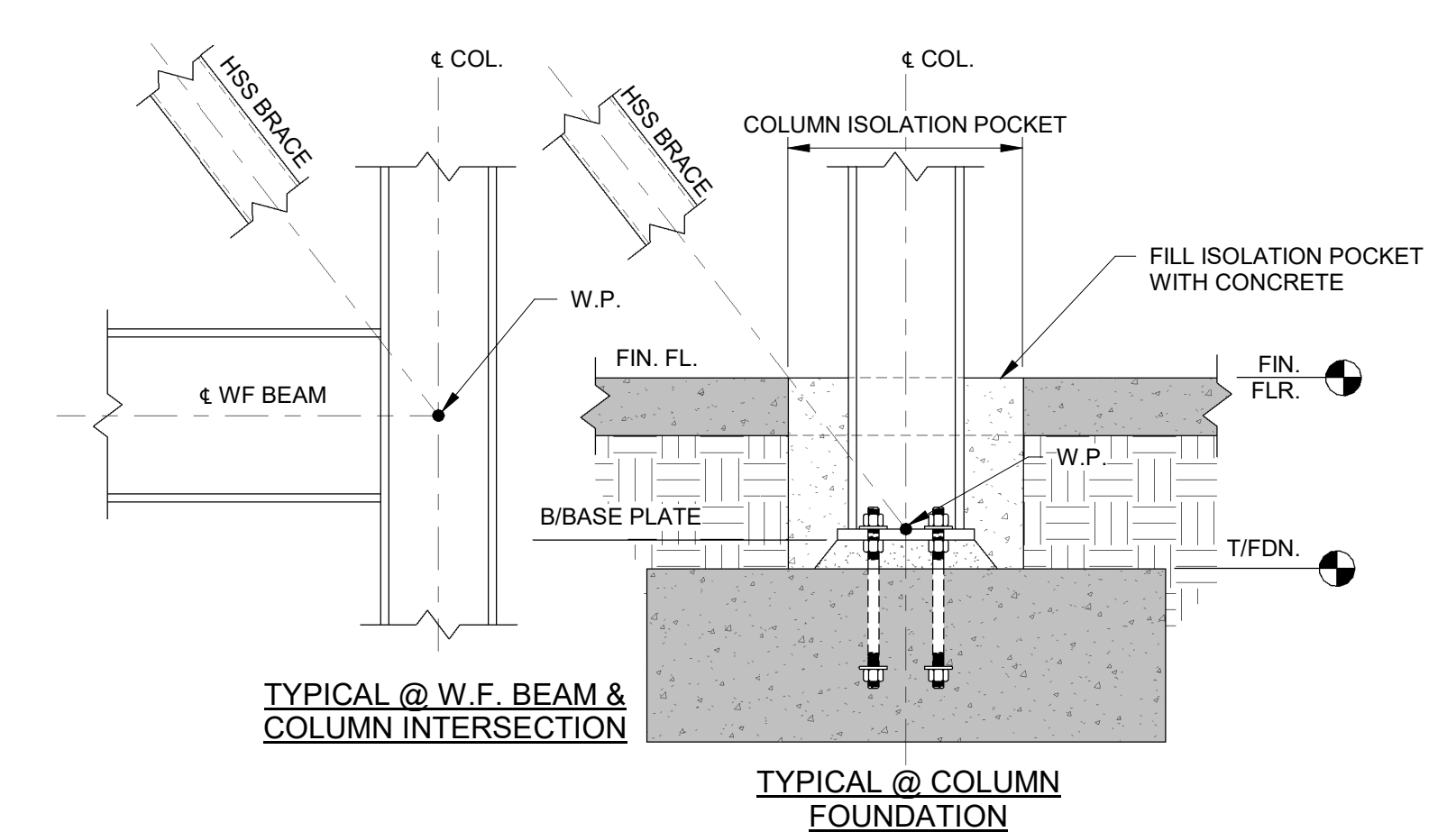
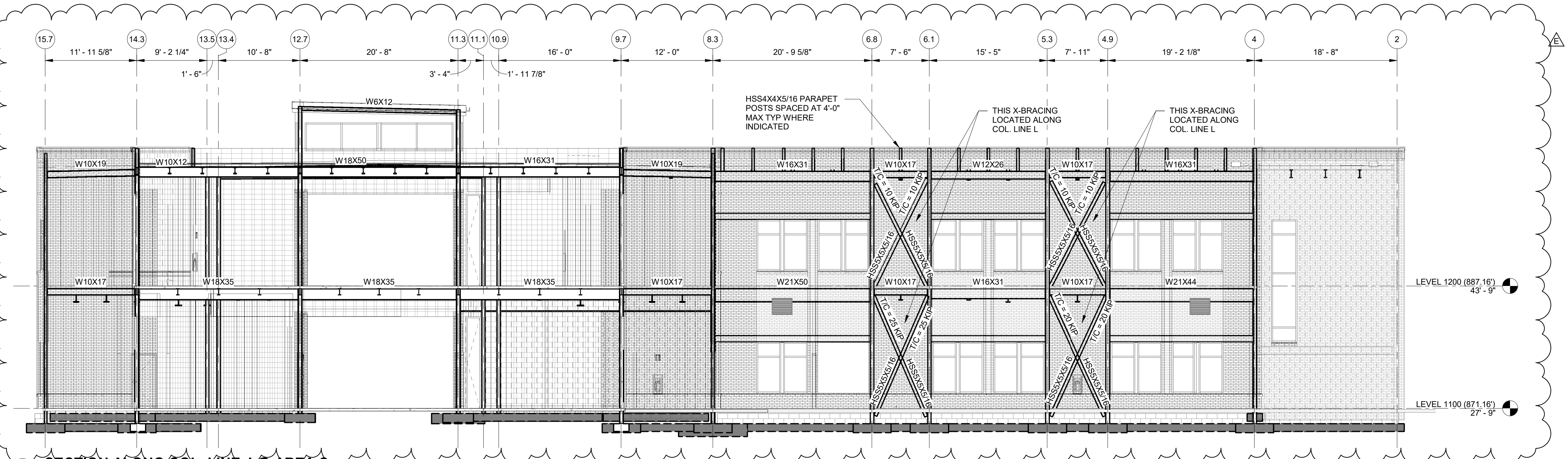
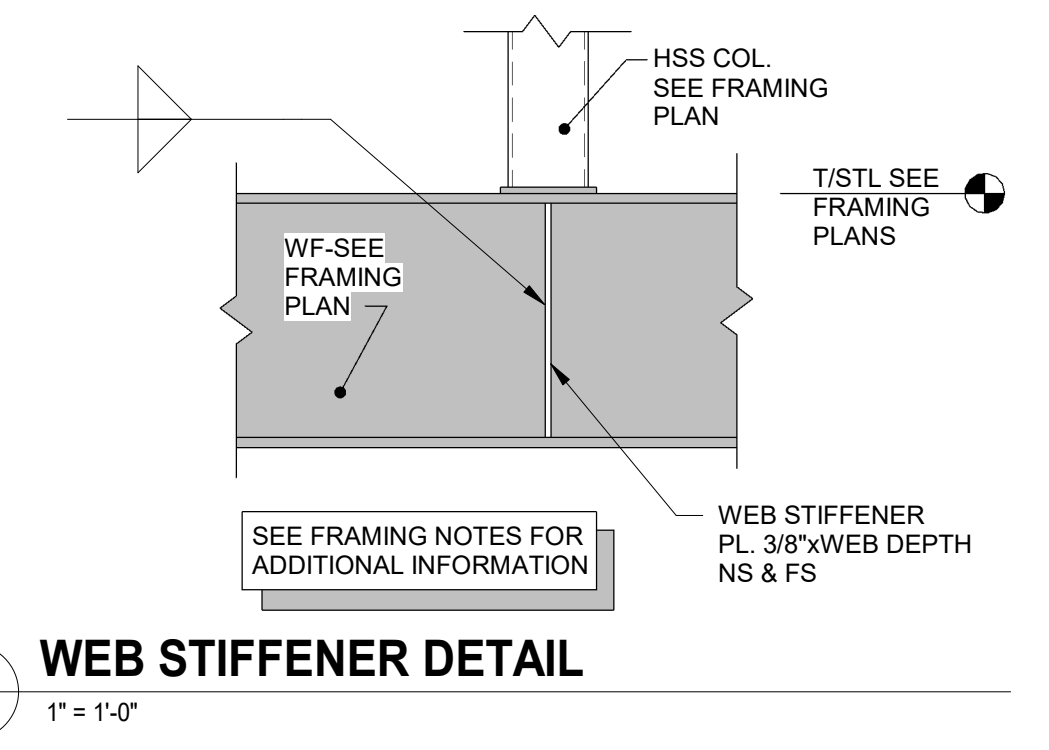
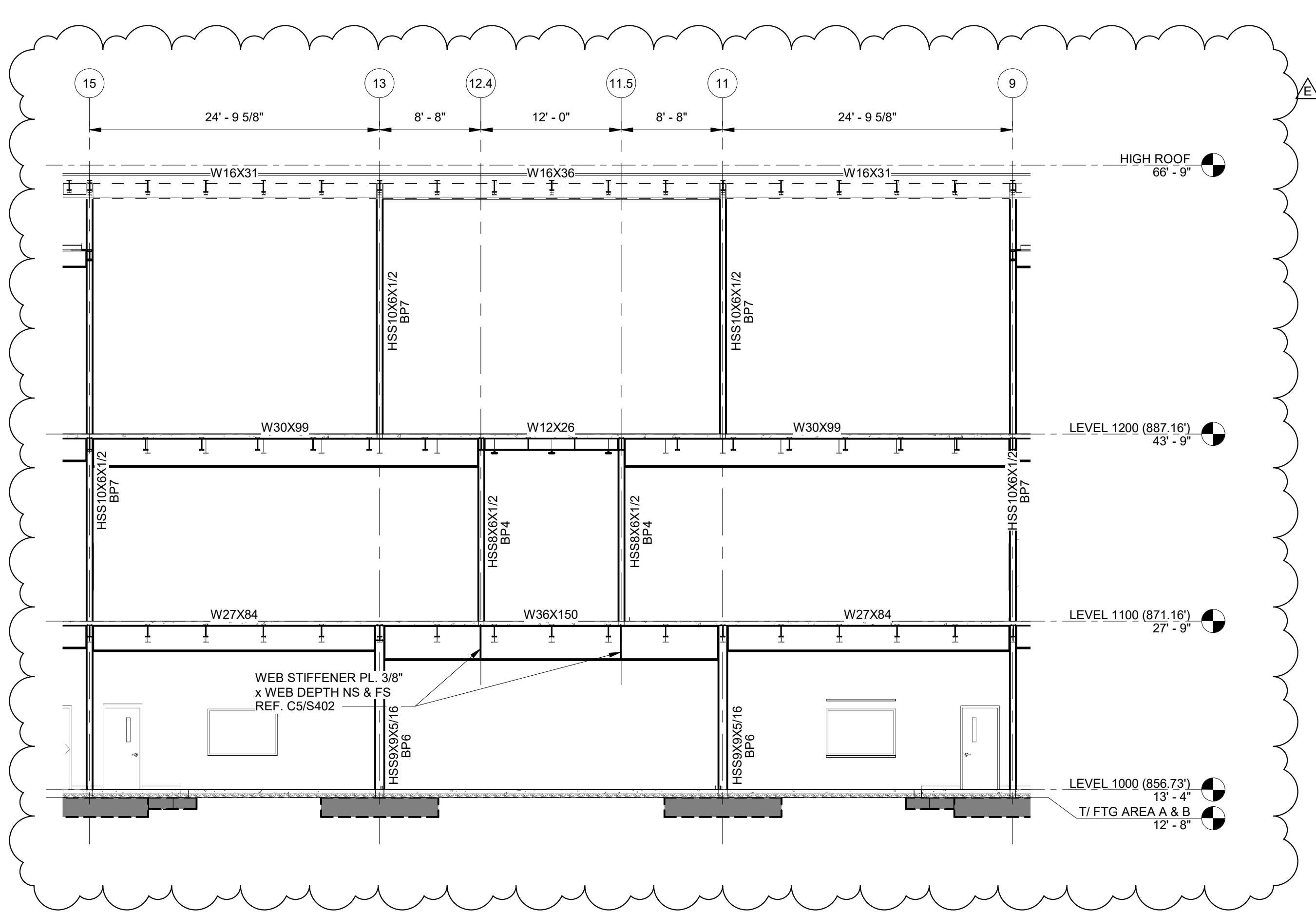
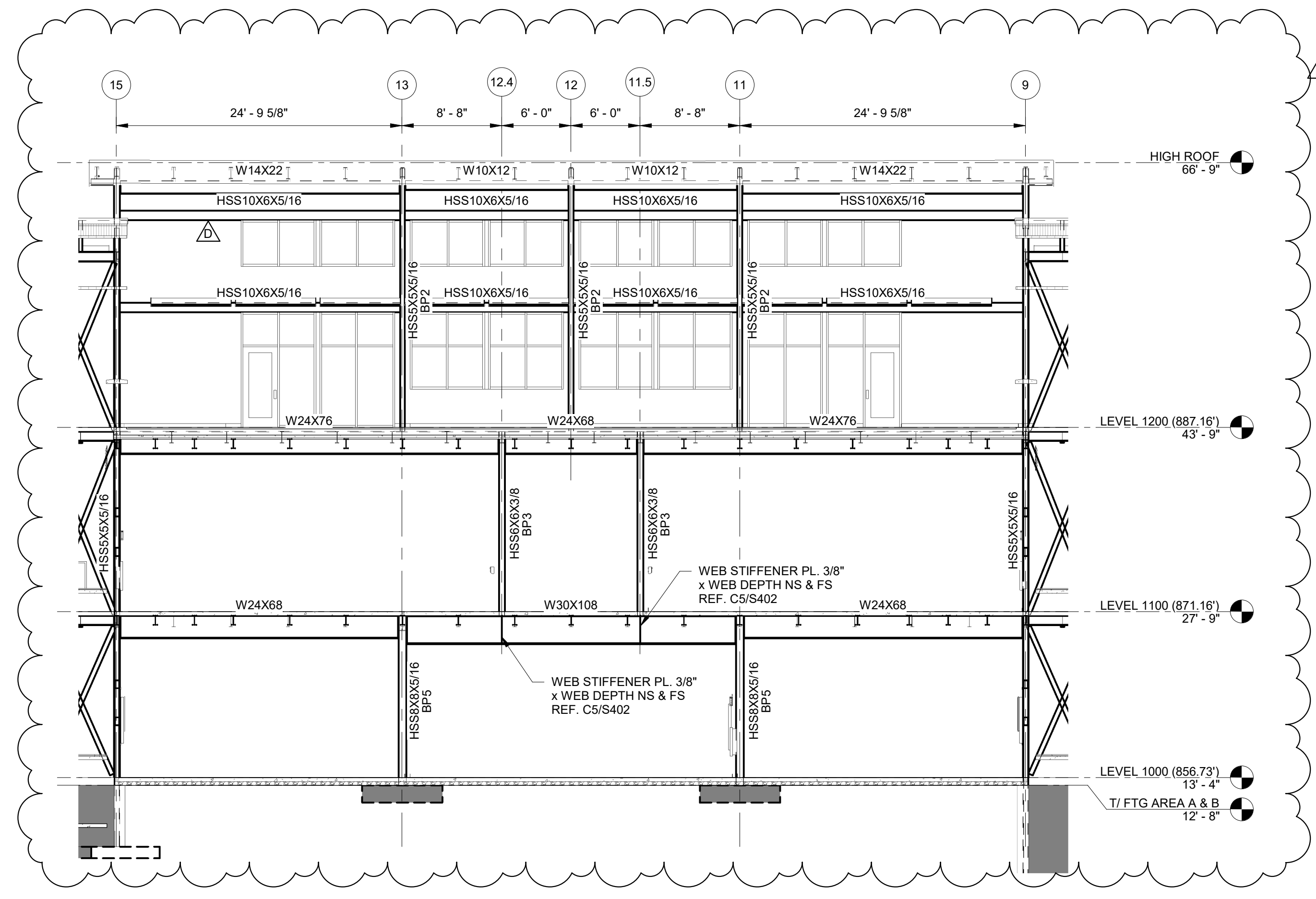
SHEET ISSUE:			
NO.	DATE	DESCRIPTION	BY
C	06/01/22	GMP SET	PGG
D	06/20/22	ADDENDUM NO. 1	ATR
E	06/27/22	ADDENDUM NO. 2	ATR

ADDENDUM NO. 2 06/27/22
PRINCIPAL IN CHARGE: PGG
PROJECT ENGINEER: ATR
DRAWN BY: JSD,BH,JG,ATR

SHEET TITLE:
**FRAMING
ELEVATIONS**

SHEET NO. PROJ. NO.
S402 20242

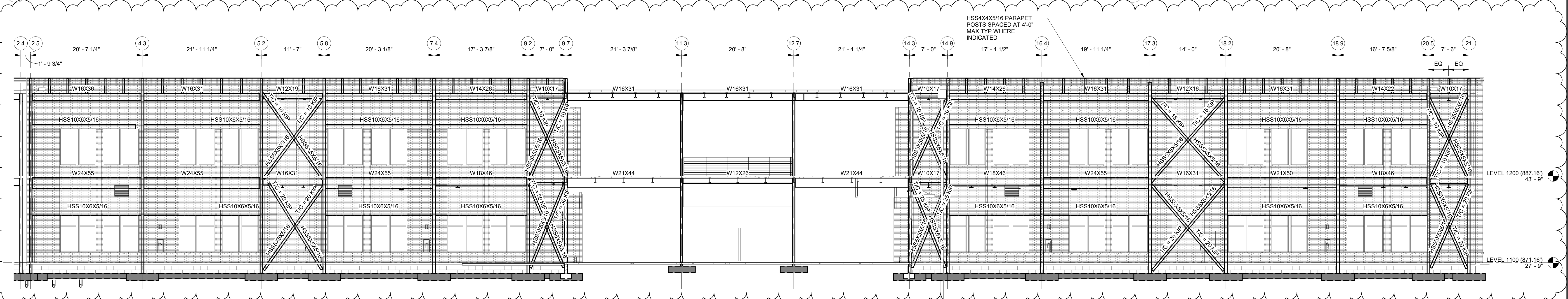
NOT FOR CONSTRUCTION
FOR PRICING ONLY



NOTE TO CONTRACTOR:
GC TO COORDINATE WITH STEEL FABRICATOR THE EXTENTS OF THE COLUMN ISOLATION POCKET REQUIRED TO ACCOMMODATE BASE PLATE, DIAGONAL BRACE, & GUSSET PLATE.

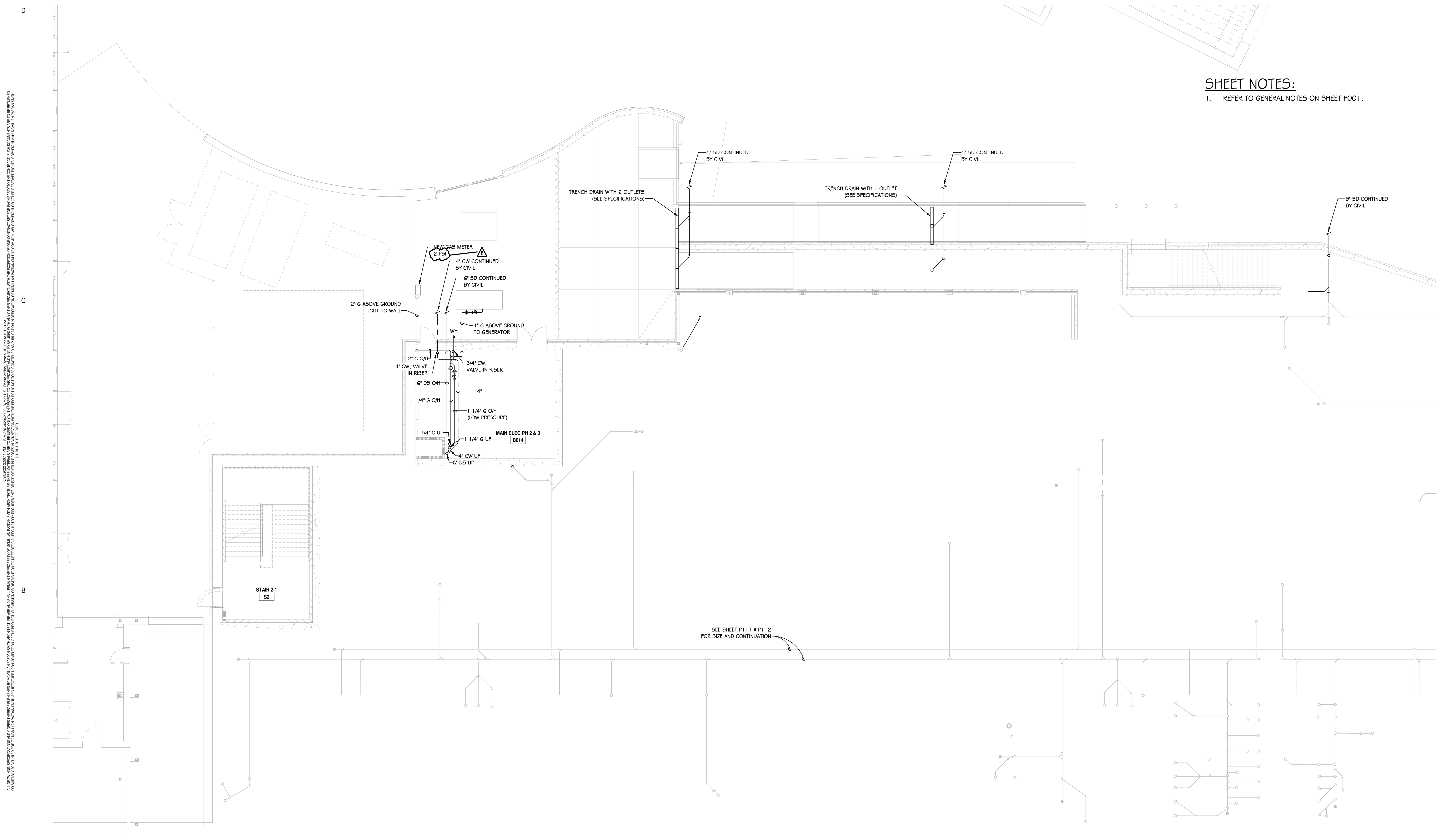
NOTE TO FABRICATOR:
STEEL FABRICATOR SHALL DESIGN HSS BRACING CONNECTIONS AS REQUIRED TO RESIST THE AXIAL FORCES INDICATED. NO REDUCTION IN FORCE OR INCREASE IN ALLOWABLE STRESSES IS ALLOWED.

SECTION B5
S402 1" = 1'-0"



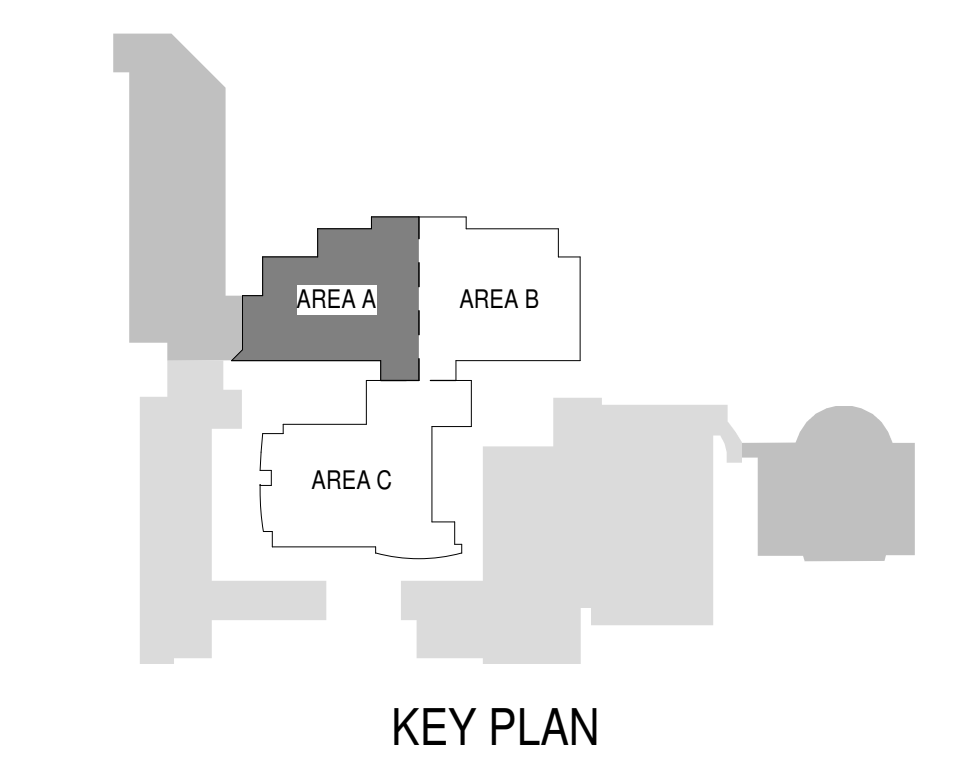
THIS DRAWING IS AN INSTRUMENT OF SERVICE. IT IS THE PROPERTY OF MCMILLAN PAZDAN SMITH ARCHITECTURE. IT IS TO BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN. ANY REUSE OR MODIFICATION OF THIS DRAWING WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER IS PROHIBITED. ENGINEERING DRAWINGS ARE PROTECTED BY THE U.S. GOVERNMENT COPYRIGHT LEGISLATION. COPYRIGHT 2022, Bailey and Son Engineering, Inc. ALL RIGHTS RESERVED.

SHEET NOTES:
1. REFER TO GENERAL NOTES ON SHEET P001.



ALL DIMENSIONS, SPECIFICATIONS AND NOTES UNLESS OTHERWISE SPECIFIED ARE THE PROPERTY OF MCMILLAN PAZDAN SMITH ARCHITECTURE. THESE DIMENSIONS, SPECIFICATIONS AND NOTES SHALL REMAIN THE PROPERTY OF MCMILLAN PAZDAN SMITH ARCHITECTURE. NO PARTS OF THIS DOCUMENT ARE TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM. WITHOUT THE WRITTEN PERMISSION OF MCMILLAN PAZDAN SMITH ARCHITECTURE.

BASEMENT LEVEL PLUMBING PLAN
1/8" = 1'-0"



SPARTANBURG SCHOOL DISTRICT FIVE
JAMES F. BYRNES HIGH SCHOOL
PHASE 2
150 E. MAIN STREET
DUNCAN, SC 29354

SHEET ISSUE:

NO.	DATE	DESCRIPTION	BY
C	06/01/22	GMP SET	STB
E	06/24/22	ADDENDUM NO. 2	STB

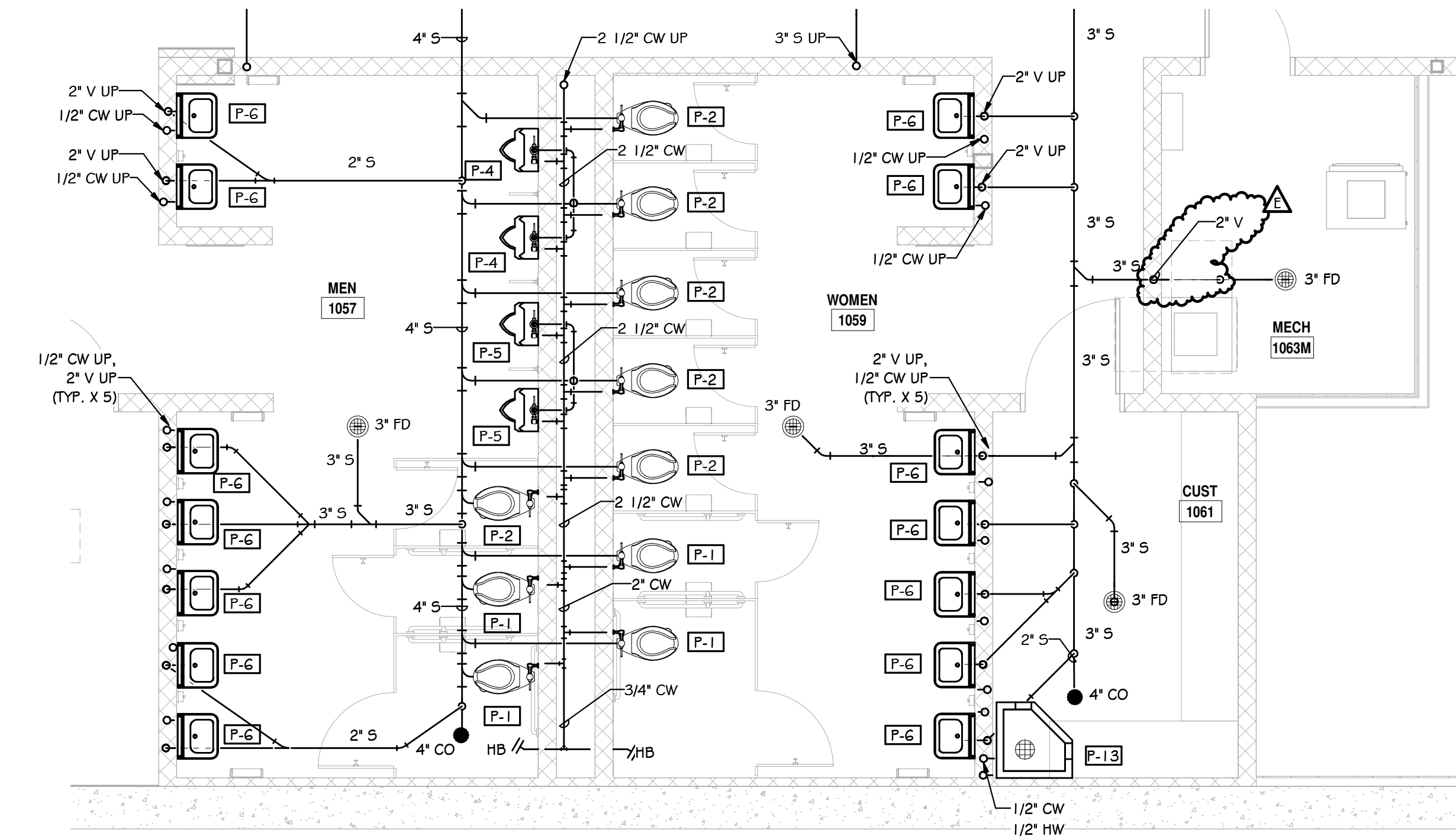
**NOT FOR CONSTRUCTION
FOR PRICING ONLY**

ADDENDUM NO. 2 06/24/22
PRINCIPAL IN CHARGE: STB
PROJECT ENGINEER: STB
DRAWN BY: HFC

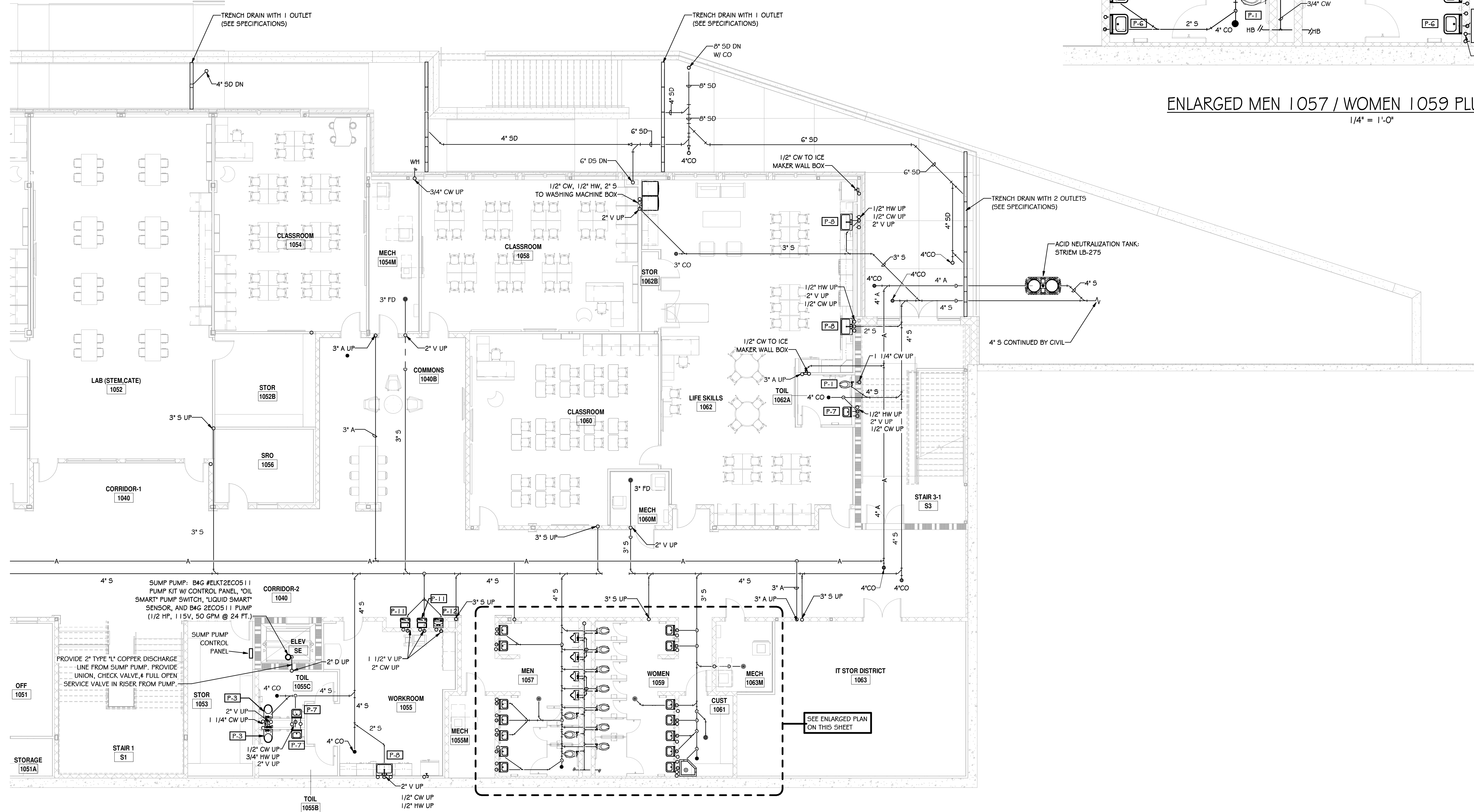
SHEET TITLE:
**BASEMENT PLUMBING
PLAN**

SHEET NO. CBE PROJ. NO.
2037

P101

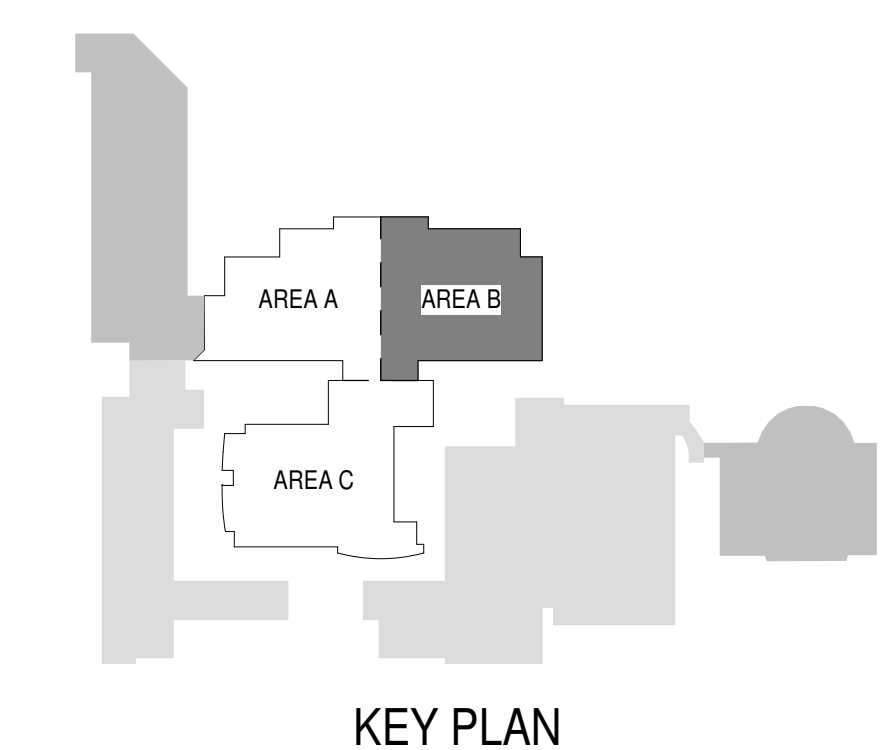


ENLARGED MEN 1057 / WOMEN 1059 PLUMBING PLAN
1/4" = 1'-0"



1000 LEVEL PLUMBING PLAN - AREA 'B'
1/8" = 1'-0"

SHEET NOTES:
1. REFER TO GENERAL NOTES ON SHEET P001.



KEY PLAN

SPARTANBURG SCHOOL DISTRICT FIVE
JAMES F. BYRNES HIGH SCHOOL
PHASE 2
150 E. MAIN STREET
DUNCAN, SC 29324

SHEET ISSUE:			
NO.	DATE	DESCRIPTION	BY
C	06/01/22	GMP SET	STB
E	06/24/22	ADDENDUM NO. 2	STB

ADDENDUM NO. 2
PRINCIPAL IN CHARGE: STB
PROJECT ENGINEER: STB
DRAWN BY: HFC

SHEET TITLE:
1000 LEVEL -
PLUMBING PLAN
AREA B

SHEET NO. CBE PROJ. NO.
2037

P112

ALL DRAWINGS, SPECIFICATIONS AND NOTES HEREOF FURNISHED BY MCMILLAN PAZDAN SMITH ARCHITECTURE ARE AND SHALL REMAIN THE PROPERTY OF MCMILLAN PAZDAN SMITH ARCHITECTURE. NO PART OF THIS DOCUMENT SHALL BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF MCMILLAN PAZDAN SMITH ARCHITECTURE. THE USER OF THIS DOCUMENT SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.

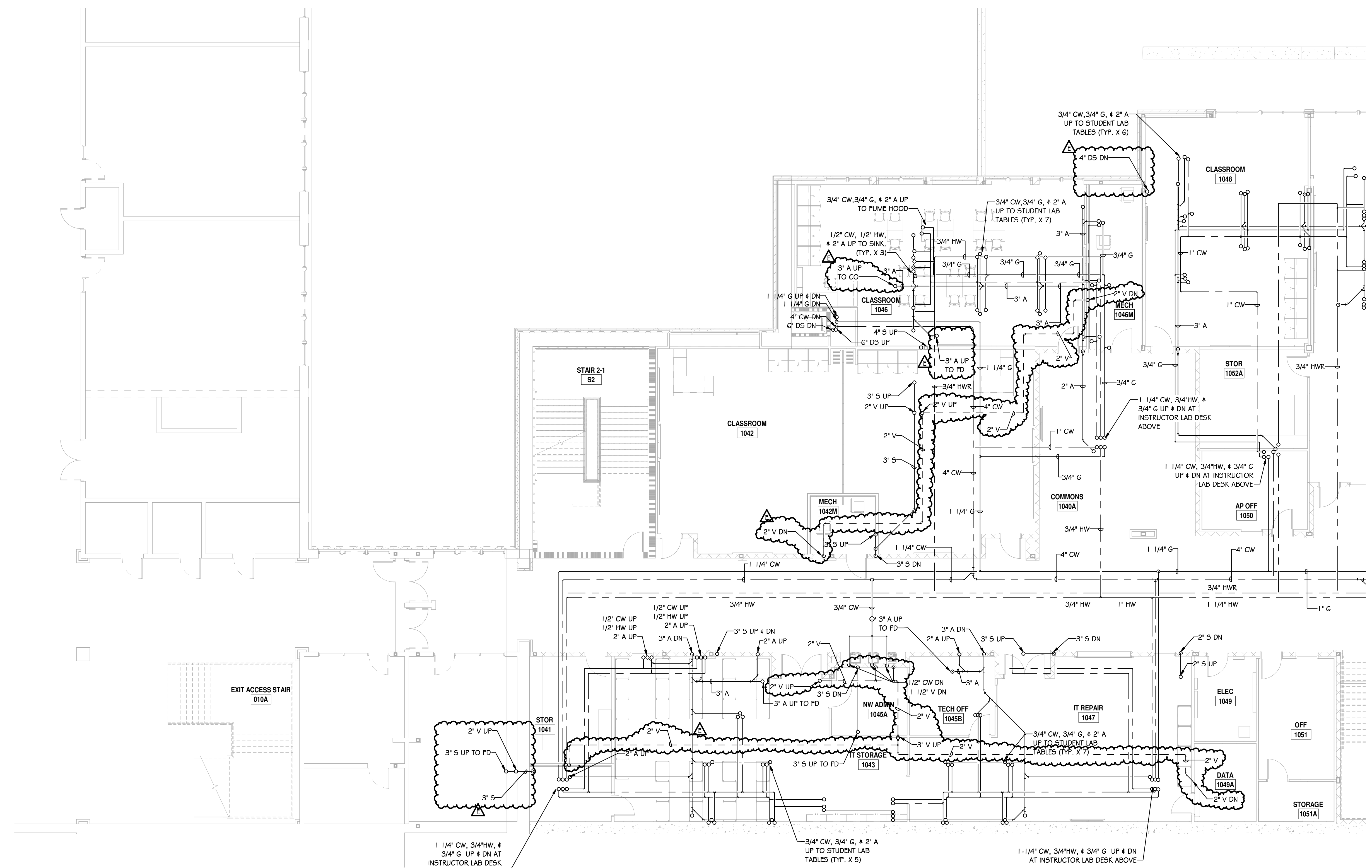
NO.	DATE	DESCRIPTION	BY
C	06/01/22	GMP SET	STB
E	06/24/22	ADDENDUM NO. 2	STB

ADDENDUM NO. 2	06/24/22
PRINCIPAL IN CHARGE:	STB
PROJECT ENGINEER:	STB
DRAWN BY:	HFC

SHEET TITLE:
**1000 LEVEL -
OVERHEAD PLUMBING
PLAN AREA A**

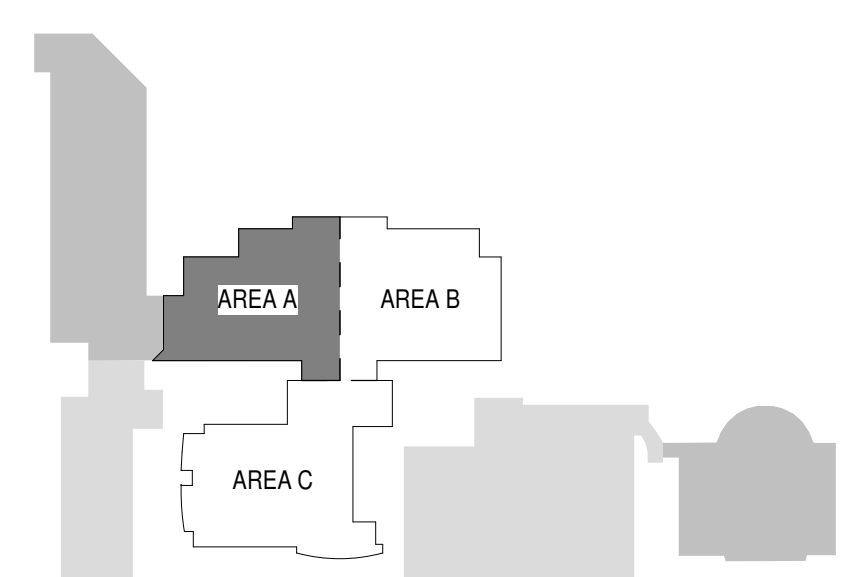
SHEET NO.	CBE PROJ. NO. 2037
-----------	-----------------------

P113



1000 LEVEL OVERHEAD PLUMBING PLAN - AREA 'A'
1/8" = 1'-0"

SHEET NOTES:
1. REFER TO GENERAL NOTES ON SHEET POOL 1.



KEY PLAN

NOT FOR CONSTRUCTION
FOR PRICING ONLY

ALL DIMENSIONS, SPECIFICATIONS AND NOTES UNLESS OTHERWISE SPECIFIED ARE THE PROPERTY OF MCMILLAN PAZDAN SMITH ARCHITECTURE. THESE DIMENSIONS, SPECIFICATIONS AND NOTES SHALL BE USED IN CONNECTION WITH THE CONTRACT. NO PART OF THIS DOCUMENT IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF MCMILLAN PAZDAN SMITH ARCHITECTURE. THIS DOCUMENT IS THE PROPERTY OF MCMILLAN PAZDAN SMITH ARCHITECTURE AND IS TO BE USED ONLY WITHIN THE PROJECT FOR WHICH IT WAS PREPARED. IT IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF MCMILLAN PAZDAN SMITH ARCHITECTURE. THIS DOCUMENT IS THE PROPERTY OF MCMILLAN PAZDAN SMITH ARCHITECTURE AND IS TO BE USED ONLY WITHIN THE PROJECT FOR WHICH IT WAS PREPARED. IT IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF MCMILLAN PAZDAN SMITH ARCHITECTURE.

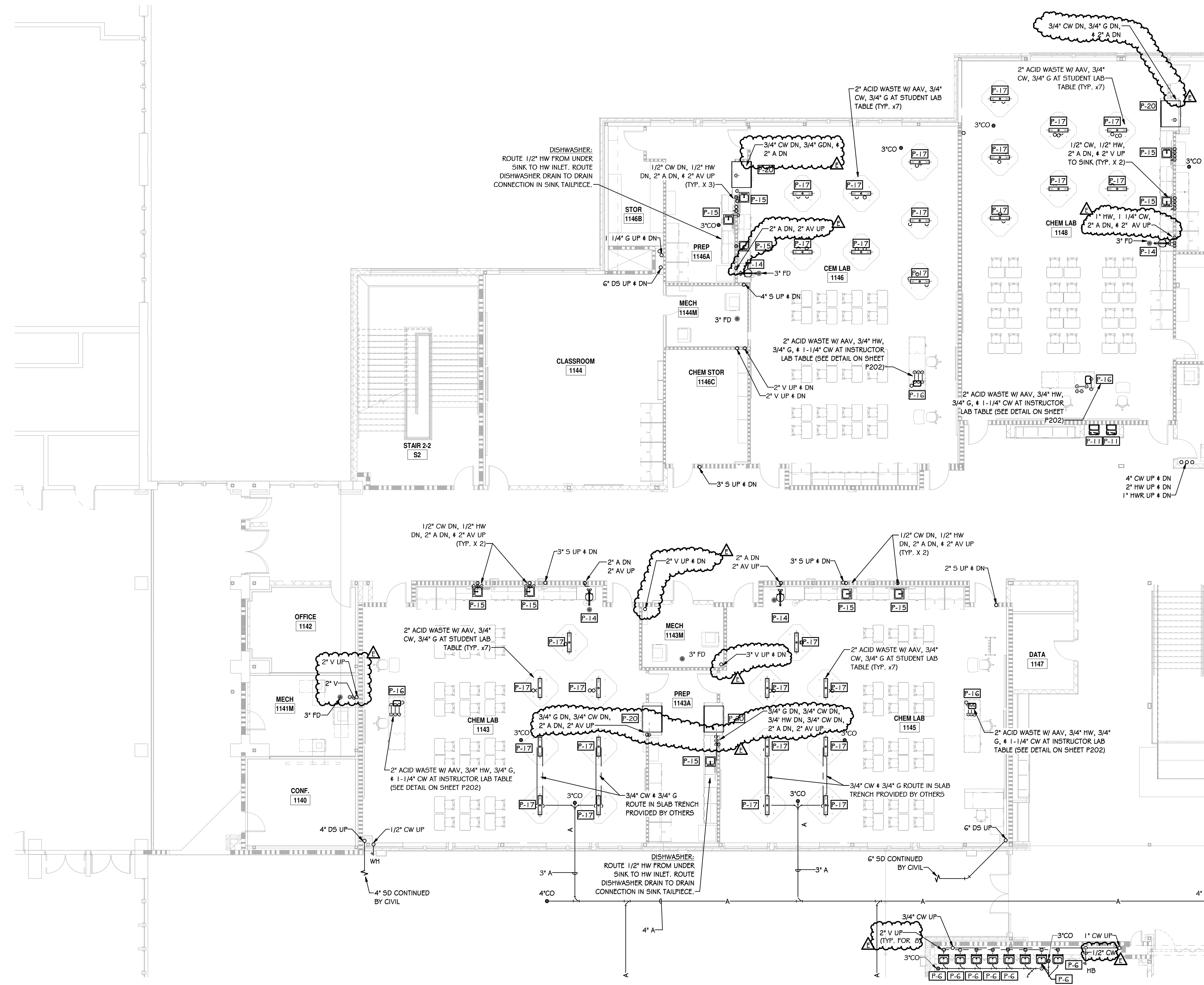
NO.	DATE	DESCRIPTION	BY
C	06/01/22	GMP SET	STB
E	06/24/22	ADDENDUM NO. 2	STB

ADDENDUM NO. 2	06/24/22
PRINCIPAL IN CHARGE:	STB
PROJECT ENGINEER:	STB
DRAWN BY:	HFC

SHEET TITLE:
**1100 LEVEL -
PLUMBING PLAN
AREA A**

SHEET NO. CBE PROJ. NO.
2037

P121



1100 LEVEL PLUMBING PLAN - AREA 'A'
1/8" = 1'-0"

SHEET NOTES:

- REFER TO GENERAL NOTES ON SHEET PO01.



KEY PLAN

NOT FOR CONSTRUCTION
FOR PRICING ONLY

ALL DRAWINGS, SPECIFICATIONS AND COPIES HEREOF FURNISHED BY MCMILLAN PAZDAN SMITH ARCHITECTURE ARE AND SHALL REMAIN THE PROPERTY OF MCMILLAN PAZDAN SMITH ARCHITECTURE. NO PART OF THIS DOCUMENT IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF MCMILLAN PAZDAN SMITH ARCHITECTURE. THE DESIGN AND CONSTRUCTION OF THIS PROJECT IS THE SOLE RESPONSIBILITY OF MCMILLAN PAZDAN SMITH ARCHITECTURE. THE CLIENT'S RESPONSIBILITY IS TO OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE CLIENT'S RESPONSIBILITY IS TO OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE CLIENT'S RESPONSIBILITY IS TO OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.

SPARTANBURG SCHOOL DISTRICT FIVE
JAMES F. BYRNES HIGH SCHOOL
PHASE 2
150 E. MAIN STREET
DUNCAN, SC 29334

NO.	DATE	DESCRIPTION	BY
C	06/01/22	GMP SET	STB
E	06/24/22	ADDENDUM NO. 2	STB

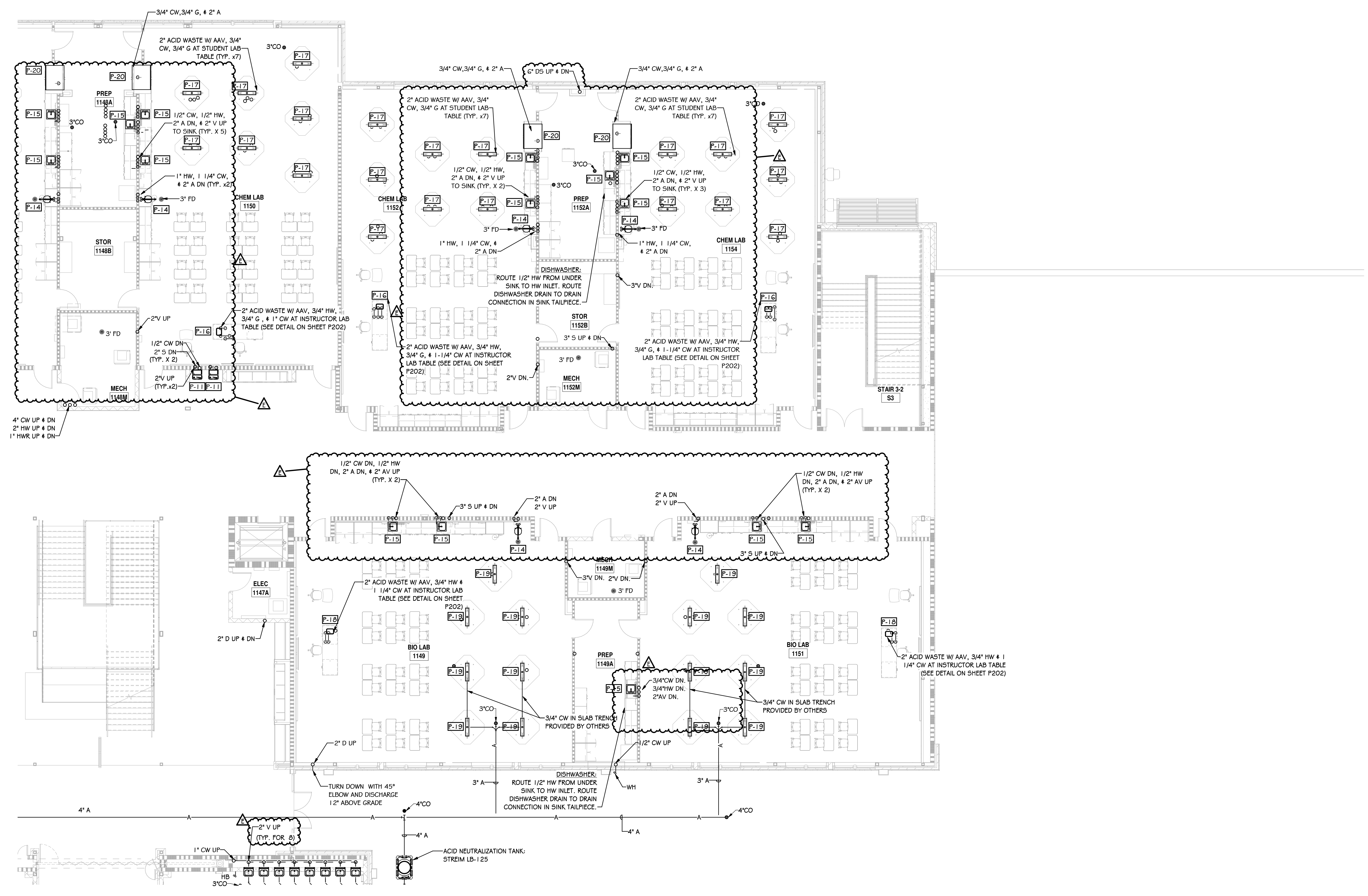
NOT FOR CONSTRUCTION
FOR PRICING ONLY

PRINCIPAL IN CHARGE:	STB
PROJECT ENGINEER:	STB
DRAWN BY:	HFC

SHEET TITLE:
1100 LEVEL -
PLUMBING PLAN
AREA B

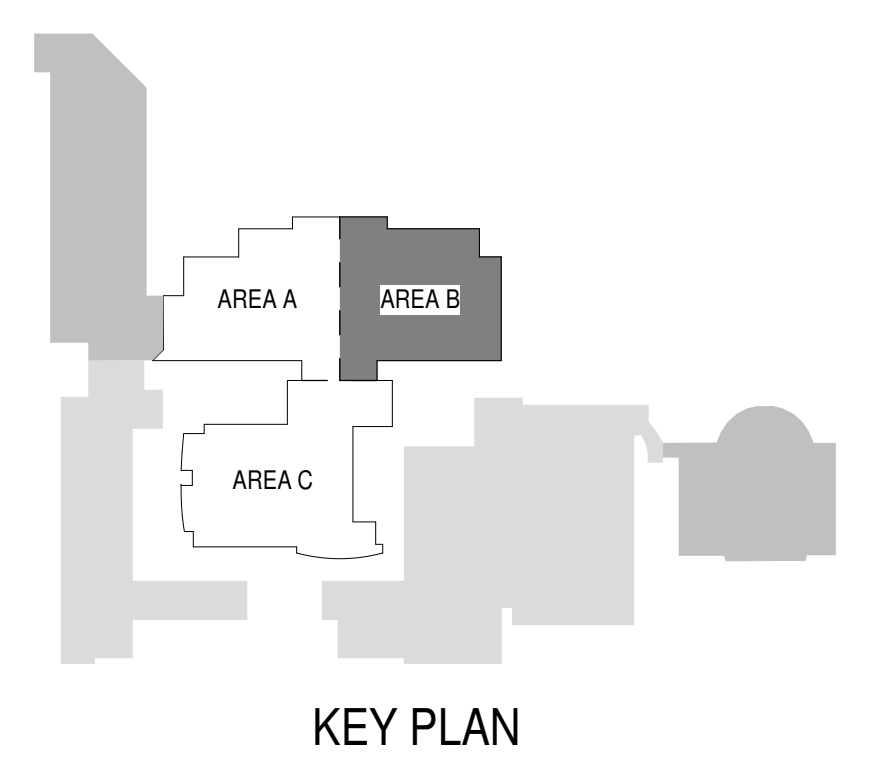
SHEET NO.	CBE PROJ. NO.
	2037

P122



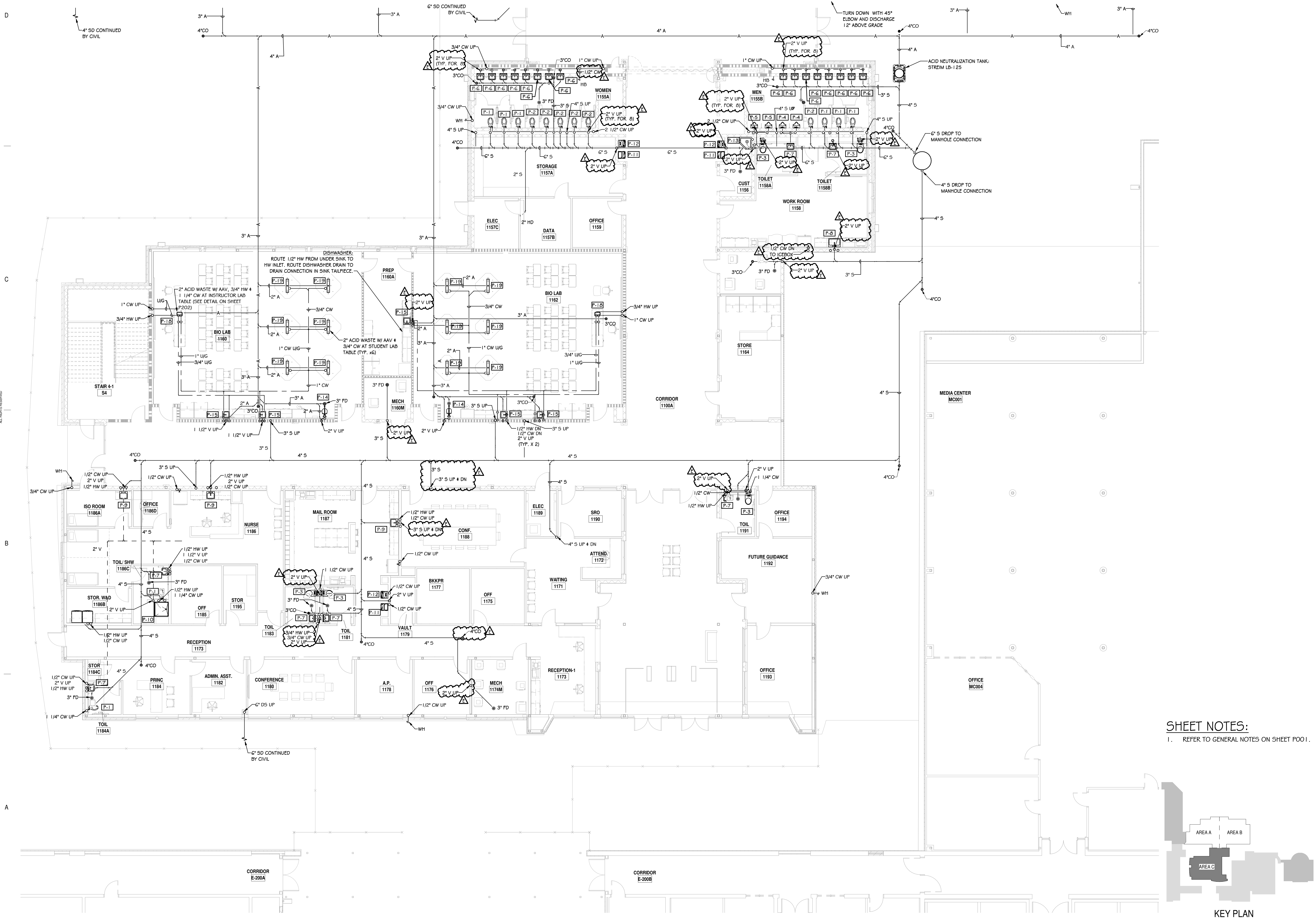
1100 LEVEL PLUMBING PLAN - AREA 'B'
1/8" = 1'-0"

SHEET NOTES:
1. REFER TO GENERAL NOTES ON SHEET P001.



KEY PLAN

ALL DIMENSIONS, SPECIFICATIONS AND NOTES UNLESS OTHERWISE SPECIFIED ARE THE PROPERTY OF MCMILLAN PAZDAN SMITH ARCHITECTURE. THESE DRAWINGS ARE THE PROPERTY OF MCMILLAN PAZDAN SMITH ARCHITECTURE AND SHALL REMAIN THE PROPERTY OF MCMILLAN PAZDAN SMITH ARCHITECTURE. NO PART OF THESE DRAWINGS SHALL BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF MCMILLAN PAZDAN SMITH ARCHITECTURE. THE PROJECT ARCHITECT SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED TO THE ARCHITECT. THE ARCHITECT SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED TO THE ARCHITECT. THE ARCHITECT SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED TO THE ARCHITECT. THE ARCHITECT SHALL BE RESPONSIBLE FOR THE ACCURACY OF THE INFORMATION PROVIDED TO THE ARCHITECT.



ALL DRAWINGS, SPECIFICATIONS AND COPIES THEREOF FURNISHED BY MCMILLAN PAZDAN SMITH ARCHITECTURE ARE AND SHALL REMAIN THE PROPERTY OF MCMILLAN PAZDAN SMITH ARCHITECTURE. THESE DRAWINGS SHALL NOT BE REPRODUCED, COPIED, REPRODUCED, TRANSMITTED, OR IN ANY MANNER DISCLOSED TO ANY OTHER PARTY WITHOUT THE WRITTEN CONSENT OF MCMILLAN PAZDAN SMITH ARCHITECTURE. ANY REPRODUCTION OR DISCLOSURE OF THESE DRAWINGS WITHOUT THE WRITTEN CONSENT OF MCMILLAN PAZDAN SMITH ARCHITECTURE IS STRICTLY PROHIBITED. THE USER OF THESE DRAWINGS SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.

SHEET NOTES:
1. REFER TO GENERAL NOTES ON SHEET P001.

SPARTANBURG SCHOOL DISTRICT FIVE
JAMES F. BYRNES HIGH SCHOOL
PHASE 2
150 E. MAIN STREET
DUNCAN, SC 29304

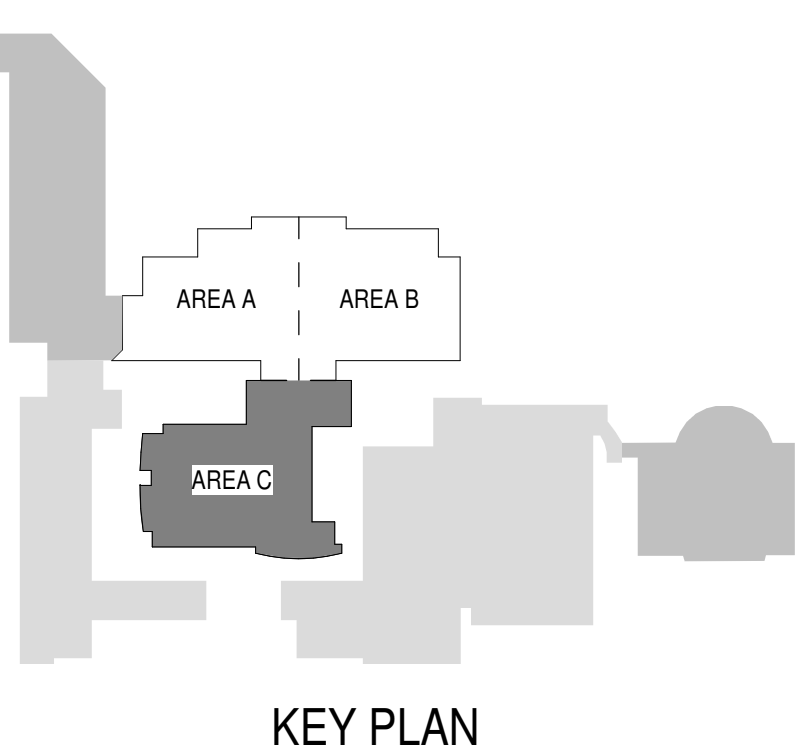
NO.	DATE	DESCRIPTION	BY
C	06/01/22	GMP SET	STB
E	06/24/22	ADDENDUM NO. 2	STB

ADDENDUM NO. 2
PRINCIPAL IN CHARGE: STB
PROJECT ENGINEER: STB
DRAWN BY: HFC

SHEET TITLE:
1100 LEVEL -
PLUMBING PLAN
AREA C

SHEET NO. CBE PROJ. NO. 2037

P123



1100 LEVEL PLUMBING PLAN - AREA 'C'
1/8" = 1'-0"

SPARTANBURG SCHOOL DISTRICT FIVE
JAMES F. BYRNES HIGH SCHOOL
PHASE 2
150 E. MAIN STREET
DUNCAN, SC 29334

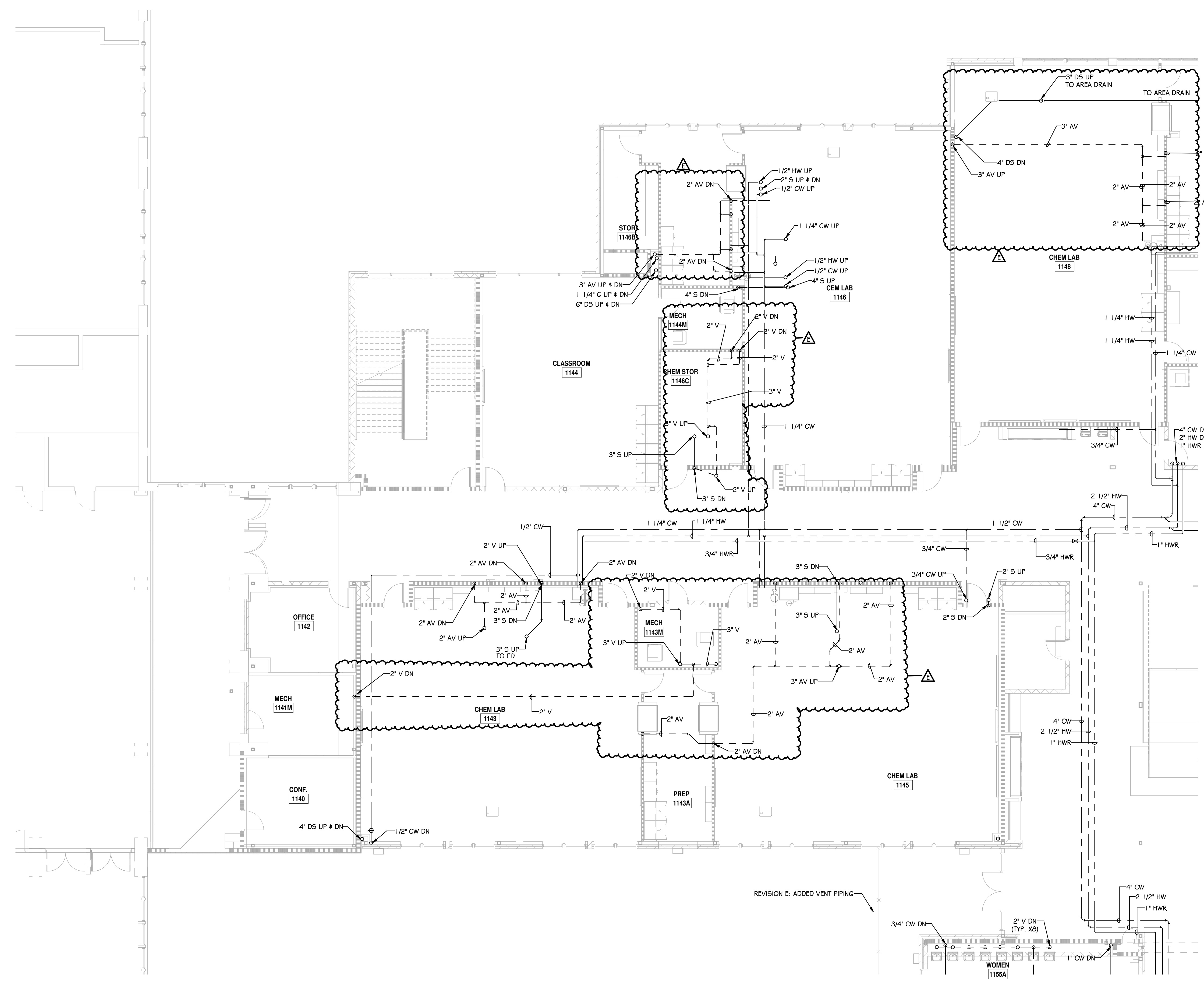
NO.	DATE	DESCRIPTION	BY
C	06/01/22	GMP SET	STB
E	06/24/22	ADDENDUM NO. 2	STB

ADDENDUM NO. 2	06/24/22
PRINCIPAL IN CHARGE:	STB
PROJECT ENGINEER:	STB
DRAWN BY:	HFC

SHEET TITLE:
1100 LEVEL -
OVERHEAD PLUMBING
PLAN AREA A

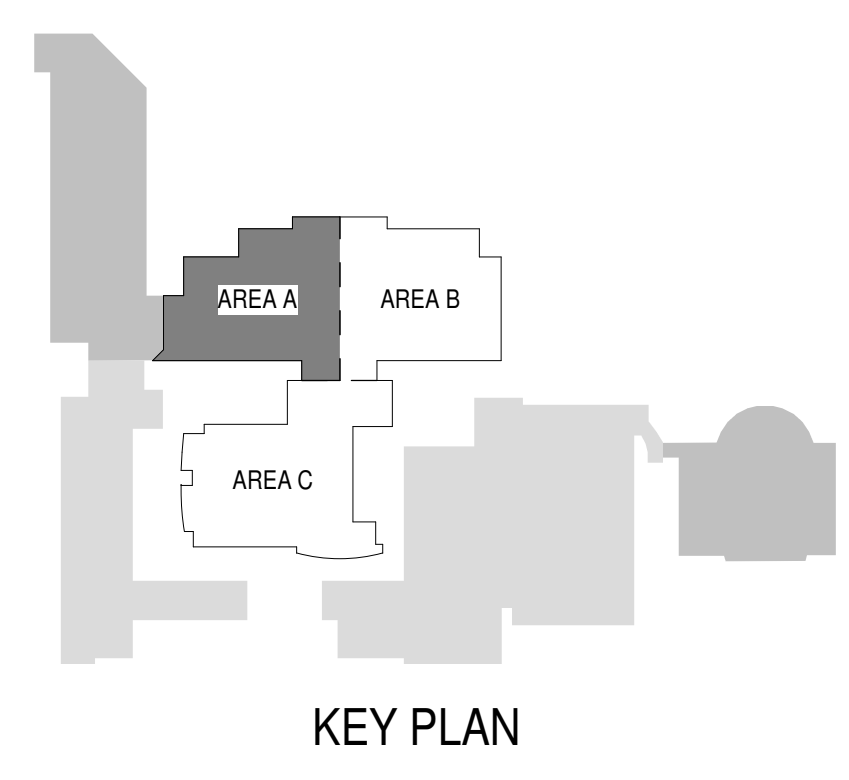
SHEET NO.	CBE PROJ. NO. 2037
-----------	-----------------------

P124



1100 LEVEL OVERHEAD PLUMBING PLAN - AREA 'A'
1/8" = 1'-0"

SHEET NOTES:
1. REFER TO GENERAL NOTES ON SHEET POOL 1.



NOT FOR CONSTRUCTION
FOR PRICING ONLY

ALL DRAWINGS, SPECIFICATIONS AND COPIES THEREOF FURNISHED BY MCMILLAN PAZDAN SMITH ARCHITECTURE ARE AND SHALL REMAIN THE PROPERTY OF MCMILLAN PAZDAN SMITH ARCHITECTURE. NO PART OF ANY DRAWING OR SPECIFICATION SHALL BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF MCMILLAN PAZDAN SMITH ARCHITECTURE. THIS DRAWING IS THE PROPERTY OF MCMILLAN PAZDAN SMITH ARCHITECTURE AND IS NOT TO BE COPIED, REPRODUCED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF MCMILLAN PAZDAN SMITH ARCHITECTURE.

SEALS

SPARTANBURG SCHOOL DISTRICT FIVE
JAMES F. BYRNES HIGH SCHOOL
PHASE 2
150 E. MAIN STREET
DUNCAN, SC 29344

SHEET ISSUE:

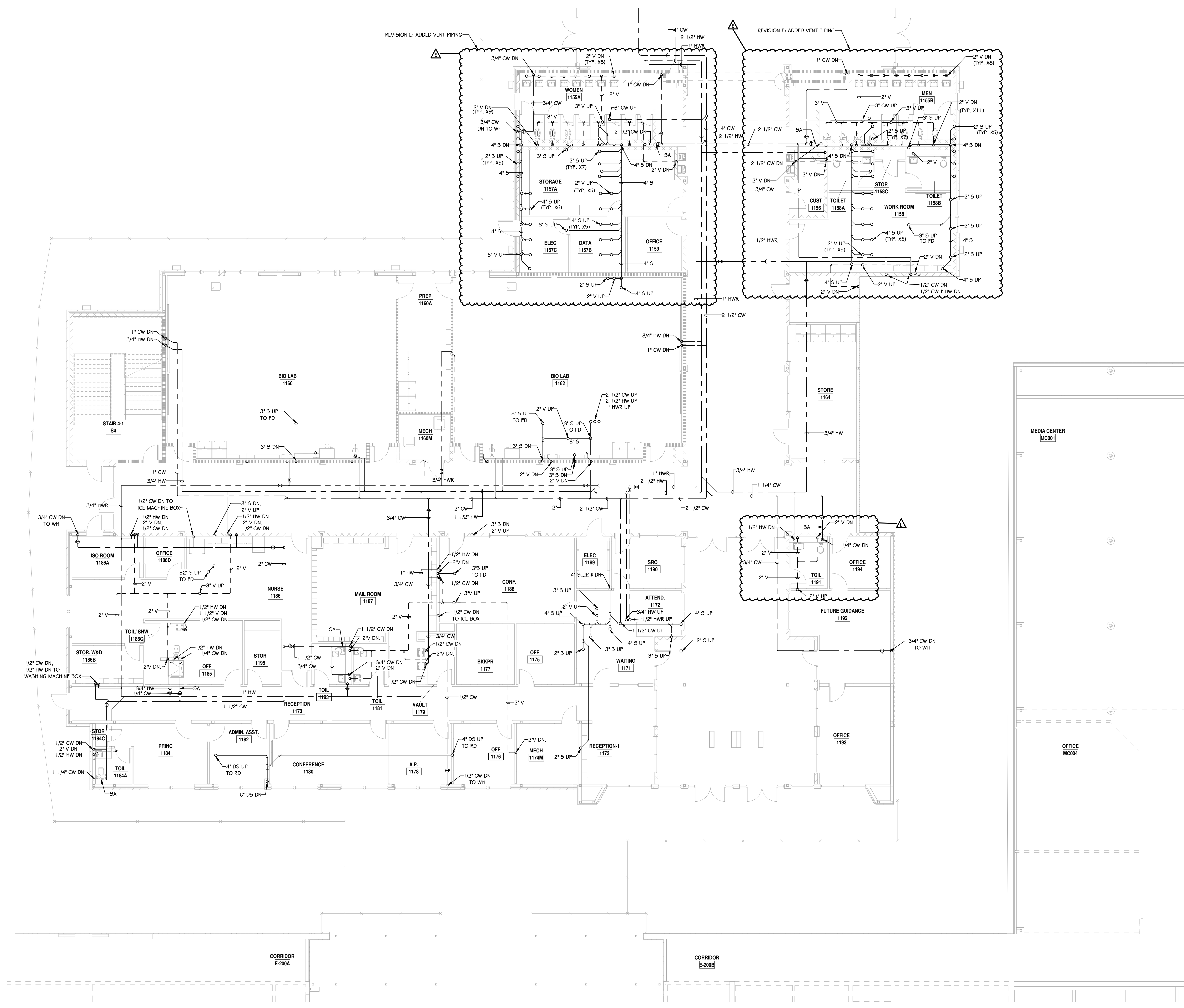
NO.	DATE	DESCRIPTION	BY
C	06/01/22	GMP SET	STB
E	06/24/22	ADDENDUM NO. 2	STB

ADDENDUM NO. 2	06/24/22
PRINCIPAL IN CHARGE:	STB
PROJECT ENGINEER:	STB
DRAWN BY:	HFC

SHEET TITLE:
1100 LEVEL -
OVERHEAD PLUMBING
PLAN AREA C

SHEET NO. CBE PROJ. NO.
2037

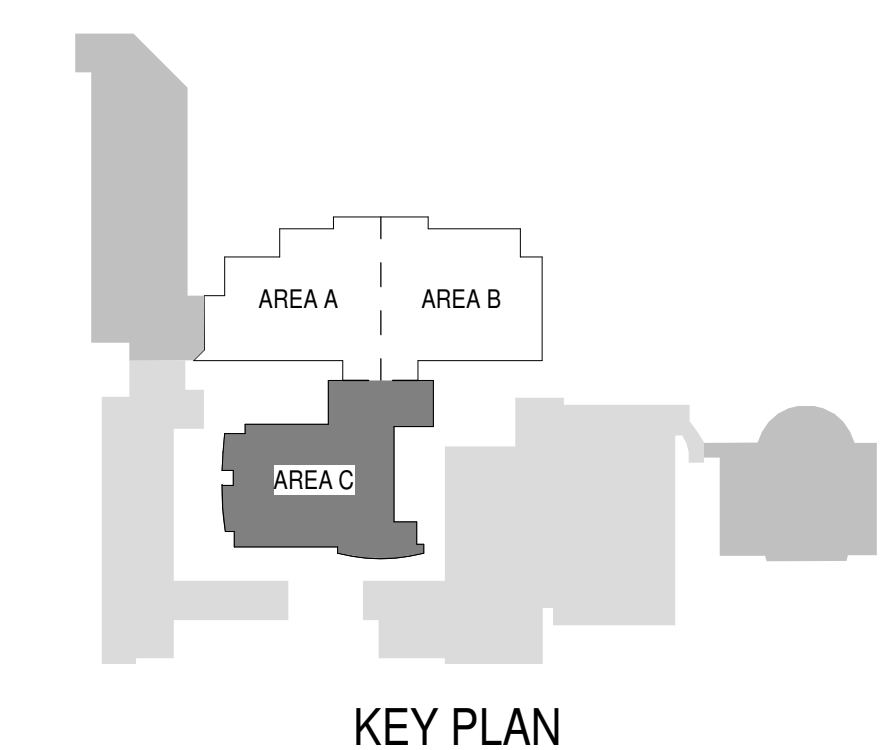
P126



SHEET - 1100 LEVEL OVERHEAD PLUMBING PLAN - AREA 'C'
1/8" = 1'-0"

SHEET NOTES:
1. REFER TO GENERAL NOTES ON SHEET POOL 1.

NOT FOR CONSTRUCTION
FOR PRICING ONLY



KEY PLAN

SPARTANBURG SCHOOL DISTRICT FIVE
JAMES F. BYRNES HIGH SCHOOL
PHASE 2
150 E. MAIN STREET
DUNCAN, SC 29324

NO.	DATE	DESCRIPTION	BY
C	06/01/22	GMP SET	STB
E	06/24/22	ADDENDUM NO. 2	STB

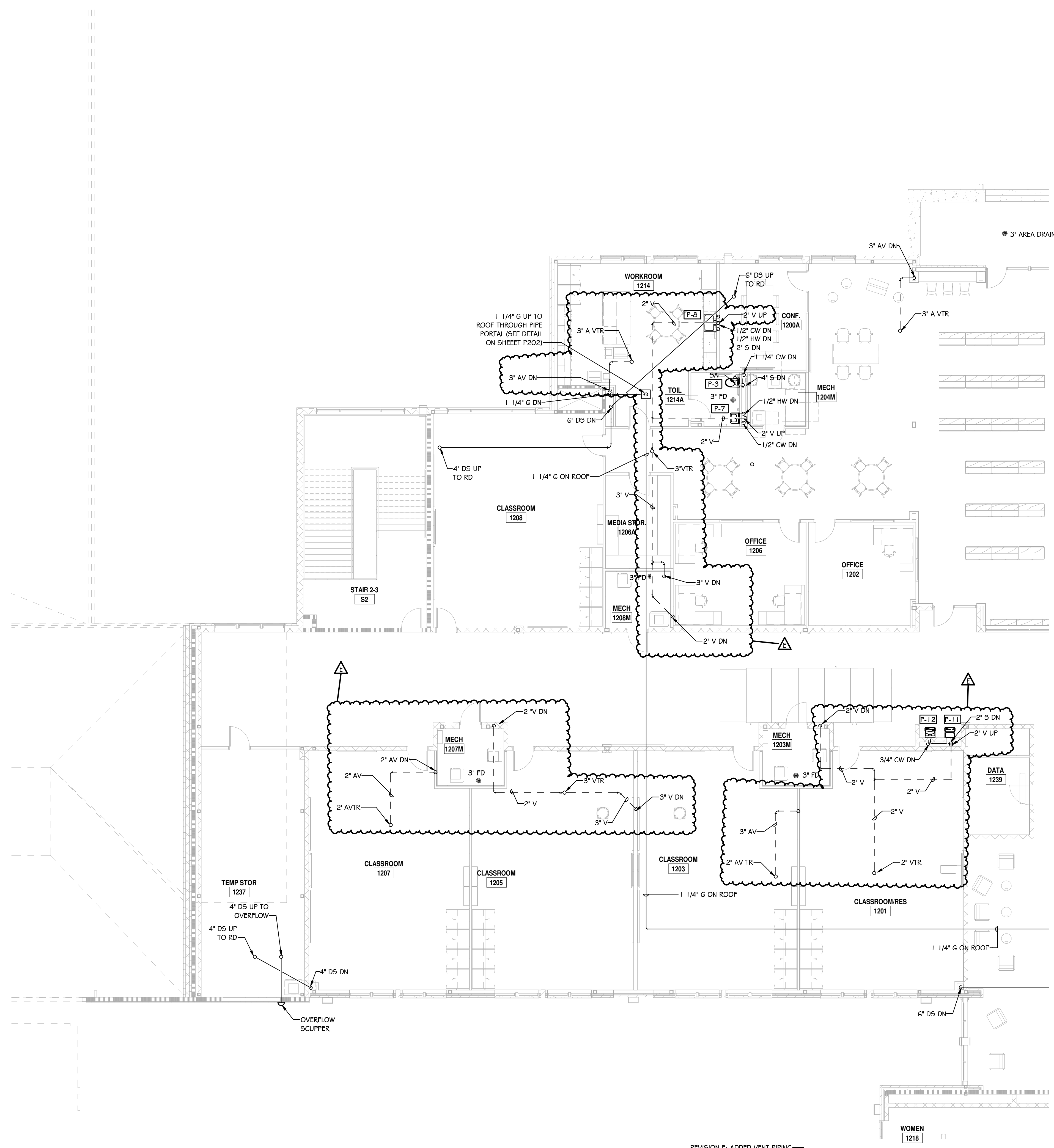
ADDENDUM NO. 2 06/24/22

PRINCIPAL IN CHARGE: STB
PROJECT ENGINEER: STB
DRAWN BY: HFC

SHEET TITLE:
1200 LEVEL -
PLUMBING PLAN
AREA A

SHEET NO. CBE PROJ. NO.
2037

P131



1200 LEVEL PLUMBING PLAN - AREA 'A'
1/8" = 1'-0"

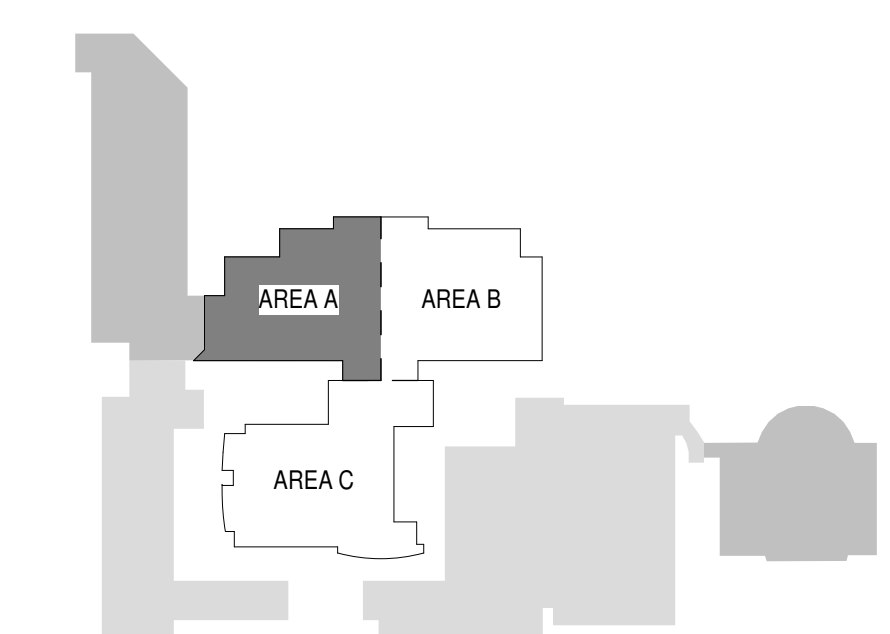
REVISION E: ADDED VENT PIPING

2" S DN
(TYP X 5)

HD

SHEET NOTES:

- 1. REFER TO GENERAL NOTES ON SHEET POO1.



KEY PLAN

NOT FOR CONSTRUCTION
FOR PRICING ONLY

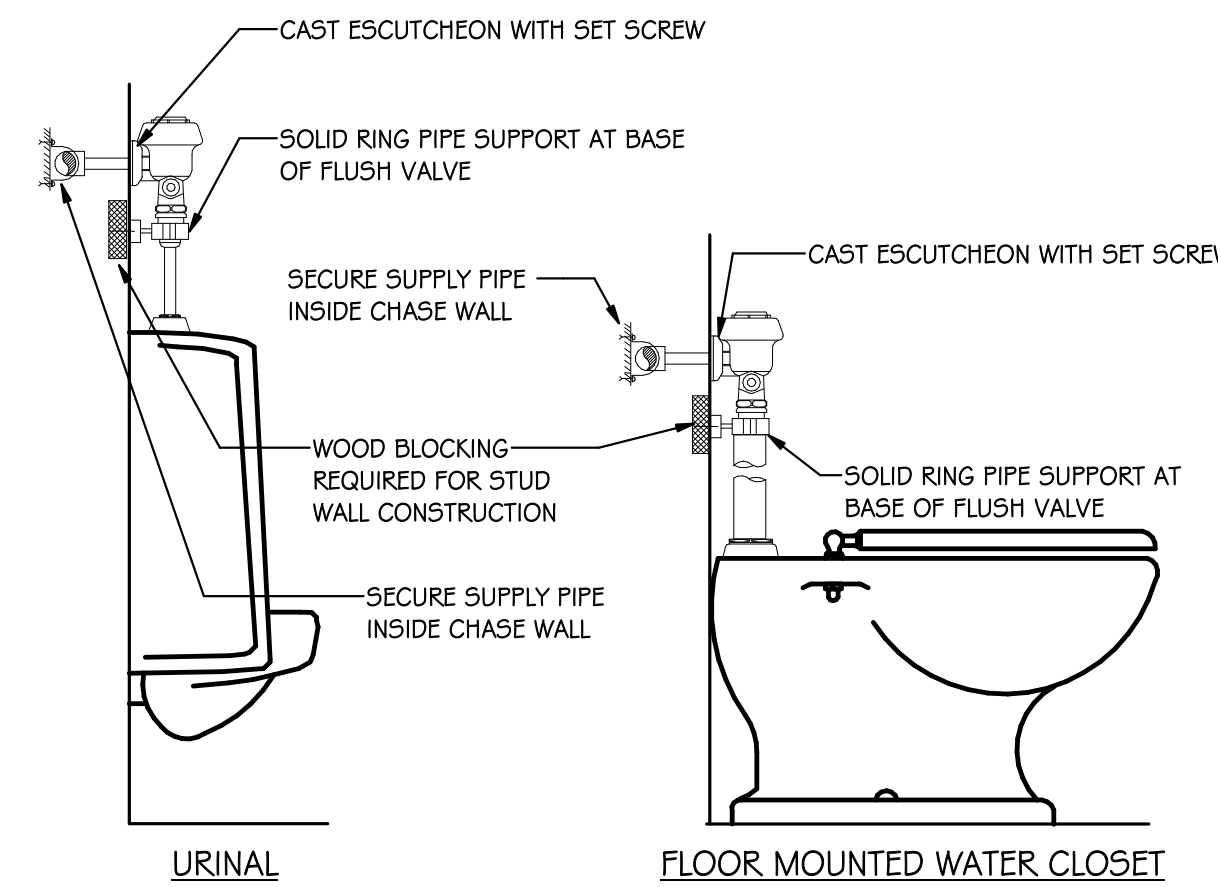
ALL DIMENSIONS, SPECIFICATIONS AND NOTES THEREOF FURNISHED BY MCMILLAN PAZDAN SMITH ARCHITECTURE ARE AND SHALL REMAIN THE PROPERTY OF MCMILLAN PAZDAN SMITH ARCHITECTURE. THESE DIMENSIONS AND NOTES SHALL BE USED ONLY WITHIN THE PROJECT FOR WHICH THEY WERE PREPARED. ANY REUSE OF THESE DIMENSIONS AND NOTES FOR ANY OTHER PROJECT WITHOUT THE WRITTEN CONSENT OF MCMILLAN PAZDAN SMITH ARCHITECTURE IS STRICTLY PROHIBITED. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. MCMILLAN PAZDAN SMITH ARCHITECTURE SHALL NOT BE RESPONSIBLE FOR ANY DAMAGE TO PERSONS OR PROPERTY CAUSED BY THE USE OF THESE DIMENSIONS AND NOTES FOR ANY OTHER PROJECT. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. MCMILLAN PAZDAN SMITH ARCHITECTURE SHALL NOT BE RESPONSIBLE FOR ANY DAMAGE TO PERSONS OR PROPERTY CAUSED BY THE USE OF THESE DIMENSIONS AND NOTES FOR ANY OTHER PROJECT.

WATER HEATER SCHEDULE														
TAG	CAPACITY (GAL)	GAS			ELECTRICAL		RECOVERY		MANUFACTURER	MODEL	CIRCULATOR PUMP	MIXING VALVE	REMARKS	
		INPUT	OUTPUT	EFF.	FUEL	VOLTAGE	PHASE	G.P.H.						TEMP. RISE
WH-1	80	725 MBH	580 MBH	80%	NAT. GAS	115	1	606	100°F	Bradford White Corporation	D-80T-725-3N(A)	B4G ECOCIRC 20-18 (70 W, 115V, 8 GPM, 20 FT HEAD)	LAWLER #802	ASME RATED

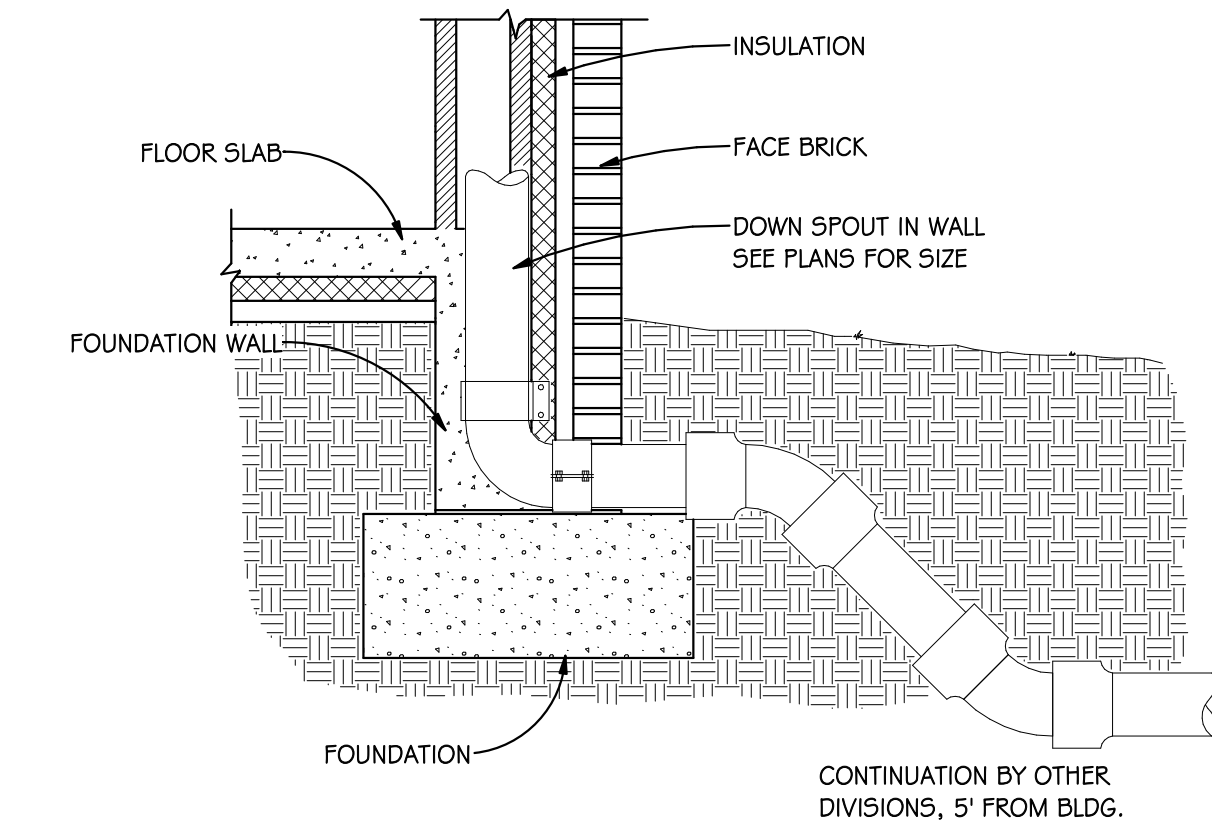
FIXTURE SCHEDULE							
TAG	FIXTURE	H.W.	C.W.	WASTE	TRAP	GAS	MTD. HEIGHT
P-1	WATER CLOSET (FLOOR MTD, ADA)	(A)	-	1-1/4"	4"	-	-
P-2	WATER CLOSET (FLOOR MTD)	(A)	-	1-1/4"	4"	-	-
P-3	WATER CLOSET (WALL MTD, ADA)	(A)	-	1-1/4"	4"	-	SEE "A" DWGS
P-4	URINAL	-	-	3/4"	2"	-	SEE "A" DWGS
P-5	URINAL (ADA)	-	-	3/4"	2"	-	SEE "A" DWGS
P-6	LAVATORY (WALL MTD, ADA, CW ONLY)	-	-	1/2"	2"	1-1/4"	SEE "A" DWGS
P-7	LAVATORY (WALL MTD, ADA, CW # HW)	1/2"	1/2"	2"	1-1/4"	-	SEE "A" DWGS
P-8	WORKROOM SINK	1/2"	1/2"	2"	1-1/2"	-	COUNTERTOP, SEE "A" DWGS
P-9	SINK	1/2"	1/2"	2"	1-1/2"	-	COUNTERTOP, SEE "A" DWGS
P-10	NURSE SHOWER	1/2"	1/2"	2"	2"	-	SEE "A" DWGS FOR SHOWER HEAD HEIGHT
P-11	ELEC WATER COOLER (ADA)	-	-	1/2"	2"	1-1/4"	SEE "A" DWGS
P-12	ELEC WATER COOLER (ADA, BOTTLE FILL)	-	-	1/2"	2"	1-1/4"	SEE "A" DWGS
P-13	JANITORS BASIN	1/2"	1/2"	3"	3"	-	-
P-14	EMERGENCY SHOWER	(B)	1"	1-1/4"	2"	1-1/4"	-
P-15	PERIMETER LAB SINK	(C)	1/2"	1/2"	2"	1-1/2"	COUNTERTOP, SEE "A" DWGS
P-16	INSTRUCTOR LAB SINK (GAS)	(C)	1/2"	1/2"	2"	1-1/2"	1/2" COUNTERTOP, SEE "A" DWGS
P-17	STUDENT LAB SINK (GAS)	(C)	-	1/2"	2"	1-1/2"	1/2" COUNTERTOP, SEE "A" DWGS
P-18	INSTRUCTOR LAB SINK (NO GAS)	(C)	1/2"	1/2"	2"	1-1/2"	COUNTERTOP, SEE "A" DWGS
P-19	STUDENT LAB SINK (NO GAS)	(C)	-	1/2"	2"	1-1/2"	COUNTERTOP, SEE "A" DWGS
P-20	LAB FUME HOOD	(C)	-	1/2"	2"	-	3/4" SEE "A" DWGS

FIXTURE NOTES:

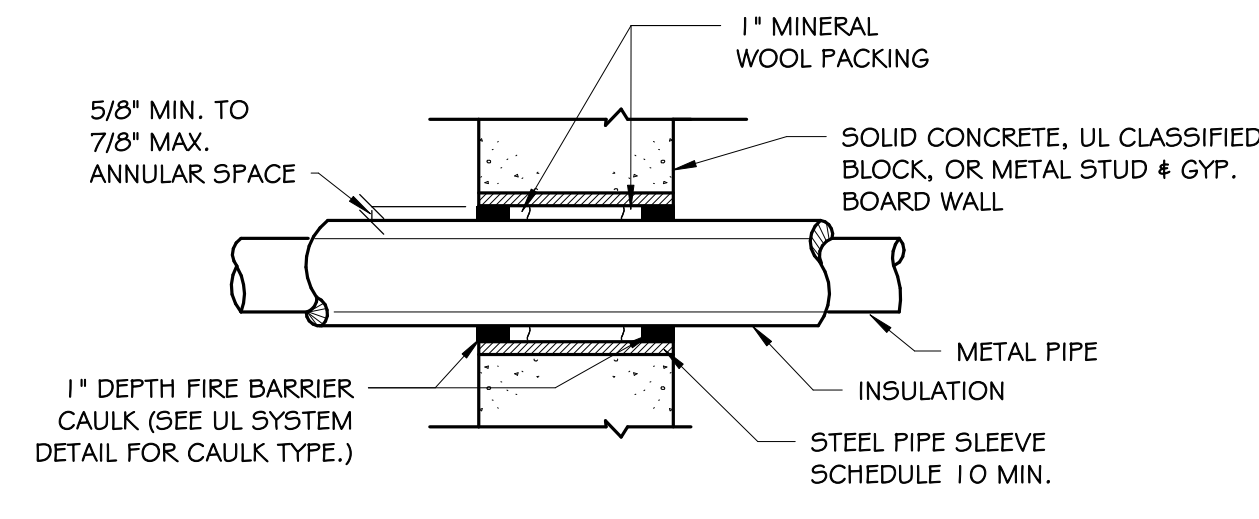
- (A) WATER CLOSET FLUSH VALVE HANDLES SHALL BE ON RIGHT OR LEFT SIDE, TO MATCH THE WIDE SIDE OF THE HANDICAPPED STALL.
- (B) PROVIDE WITH HOT WATER MIXING VALVE. CONNECT EYEWASH DRAIN TO ROUGH-IN INSIDE WALL.
- (C) LAB FIXTURES PROVIDED BY OTHERS. PLUMBER TO MAKE FINAL CONNECTIONS. PROVIDE WITH AIR ADMITTANCE VALVE. SEE LAB EQUIPMENT CUT SHEETS FOR EXACT LOCATIONS.



NOTE: HANDICAPPED WATER CLOSET FLUSH VALVE LEVER HANDLE SHALL BE ON THE WIDE SIDE OF THE STALL.
FLUSH VALVE ANCHOR DETAIL
NO SCALE

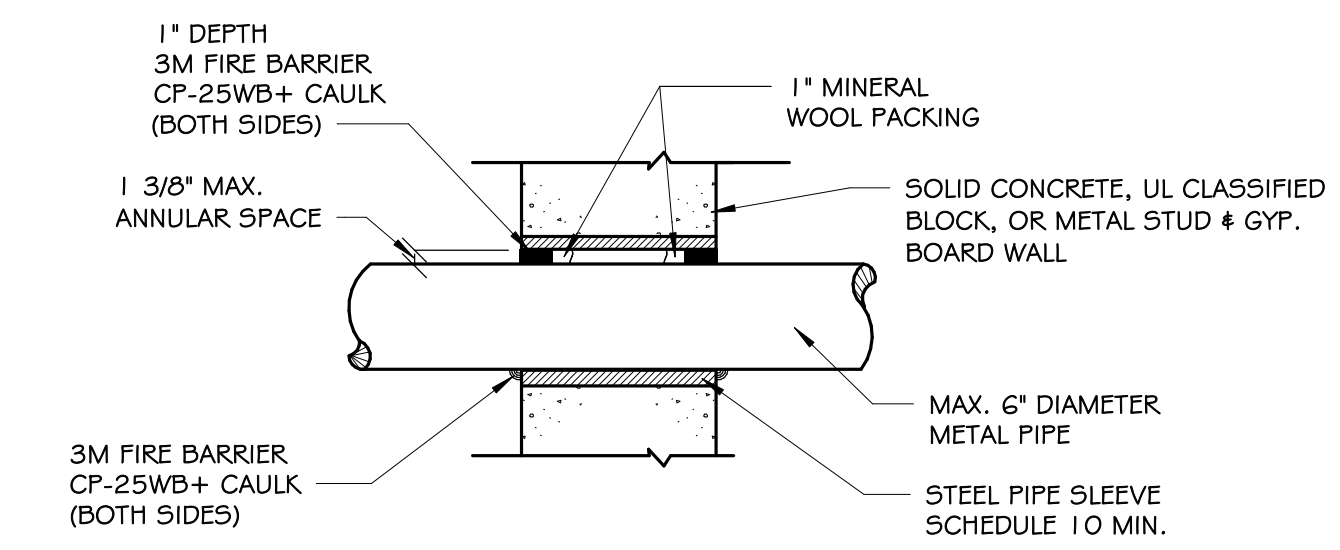


STORM DRAIN AT FOUNDATION
NO SCALE



- APPLICATION DETAILS
- INSTALL THE FIRESTOP SYMMETRICALLY ON BOTH SIDES OF THE WALL ASSEMBLY.
 - MINIMUM ANNULAR SPACE REQUIREMENT IS 5/8". MAXIMUM ANNULAR SPACE ALLOWABLE IS 7/8".
 - RECESS A NOMINAL 1" THICKNESS OF TIGHTLY PACKED MINERAL WOOL FIRE SAFING, 1" FROM THE WALL SURFACE.
 - FILL THE ANNULAR SPACE AROUND THE PIPE WITH A MINIMUM 1" DEPTH OF FIRE BARRIER CAULK. (SEE UL SYSTEM DETAIL FOR CAULK TYPE.)
- NOTE: FOR PIPE INSULATED WITH RUBBER BASED FLEXIBLE INSULATION, INSTALL A FIBERGLASS INSERT AT THE FIRE WALL PENETRATION IN LIEU OF THE FLEXIBLE RUBBER INSULATION. (THE FIBERGLASS INSERT SHALL BE THE SAME THICKNESS AS THE RUBBER BASED INSULATION.) THE FIBERGLASS INSERT SHALL EXTEND 6" (MIN.) ON EACH SIDE OF FIRE WALL.

INSULATED PIPE (1, 2, 3 OR 4 HR)
(UL SYSTEM #CBJ5002)
(FOR PIPING LARGER THAN 6" USE UL SYSTEM #CBJ5003)
DETAIL OF PIPE PENETRATION OF ALL FIRE RATED FLOORS & PARTITIONS
NO SCALE



- APPLICATION DETAILS
- INSTALL THE FIRESTOP SYMMETRICALLY ON BOTH SIDES OF THE WALL ASSEMBLY.
 - MINIMUM ANNULAR SPACE REQUIREMENT IS ZERO, POINT CONTACT. MAXIMUM ANNULAR SPACE ALLOWABLE IS 1 3/8".
 - RECESS A NOMINAL 1" THICKNESS OF TIGHTLY PACKED MINERAL WOOL FIRE SAFING, 1" FROM THE WALL SURFACE.
 - FILL THE ANNULAR SPACE AROUND THE PIPE WITH A MINIMUM 1" DEPTH OF 3M FIRE BARRIER CP-25WB+ CAULK.

UNINSULATED PIPE (1, 2, 3, OR 4 HR)
(UL SYSTEM #CAJ1044)
DETAIL OF PIPE PENETRATION OF ALL FIRE RATED FLOORS & PARTITIONS
NO SCALE

ALL DIMENSIONS, SPECIFICATIONS AND NOTES THEREOF FURNISHED BY MCMILLAN PAZDAN SMITH ARCHITECTURE ARE AND SHALL REMAIN THE PROPERTY OF MCMILLAN PAZDAN SMITH ARCHITECTURE. NO PART OF THIS DOCUMENT IS TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF MCMILLAN PAZDAN SMITH ARCHITECTURE. THIS DOCUMENT IS TO BE USED ONLY WITH THE PROJECT FOR WHICH IT WAS PREPARED. ANY OTHER USE IS STRICTLY PROHIBITED. MCMILLAN PAZDAN SMITH ARCHITECTURE ASSUMES NO LIABILITY FOR ANY ERRORS OR OMISSIONS IN THIS DOCUMENT. THE USER OF THIS DOCUMENT SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND FOR OBTAINING ALL NECESSARY INFORMATION FROM THE APPROPRIATE AGENCIES. THE USER OF THIS DOCUMENT SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY INFORMATION FROM THE APPROPRIATE AGENCIES. THE USER OF THIS DOCUMENT SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY INFORMATION FROM THE APPROPRIATE AGENCIES.

SPARTANBURG SCHOOL DISTRICT FIVE
 JAMES F. BYRNES HIGH SCHOOL
 PHASE 2
 150 E. MAIN STREET
 DUNCAN, SC 29546

NO.	DATE	DESCRIPTION	BY
C	06/01/22	GMP SET	STB
E	06/24/22	ADDENDUM NO. 2	STB

ADDENDUM NO. 2 06/24/22

PRINCIPAL IN CHARGE: STB
PROJECT ENGINEER: STB
DRAWN BY: HFC

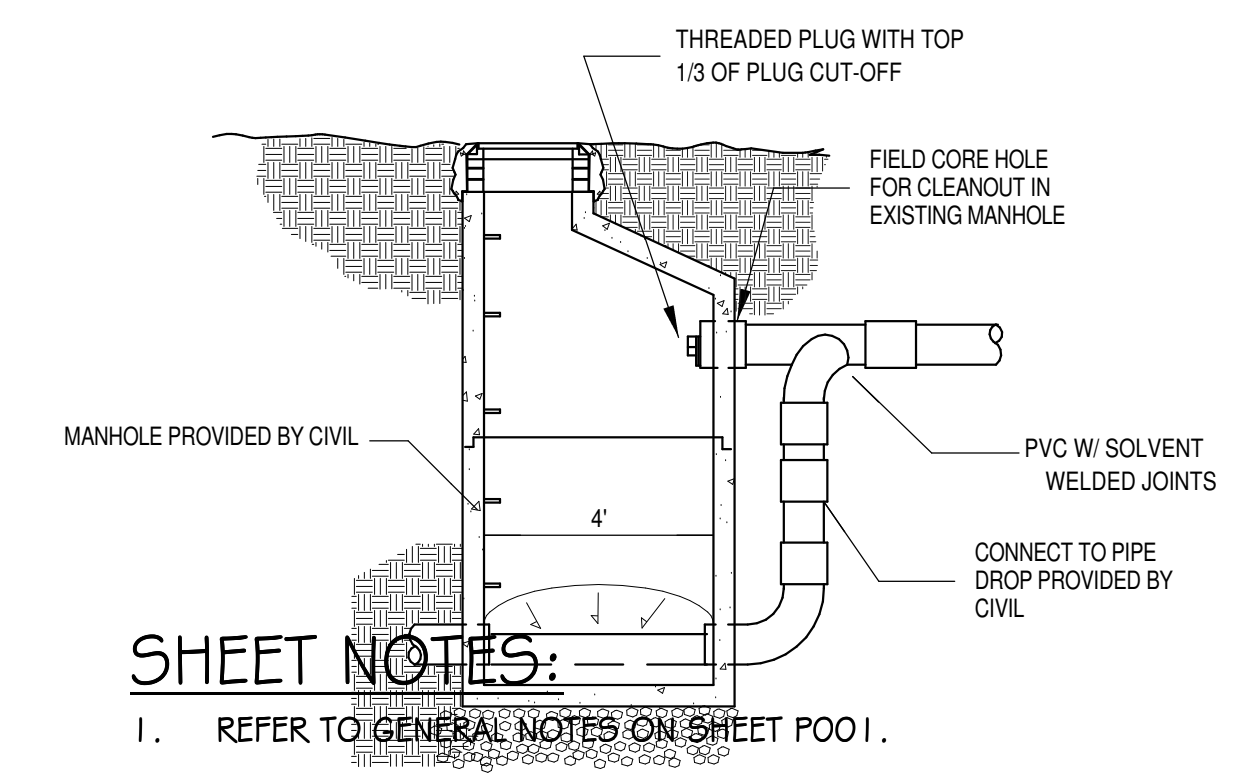
SHEET TITLE:
PLUMBING SCHEDULES & DETAILS

SHEET NO. CBE PROJ. NO. 2037

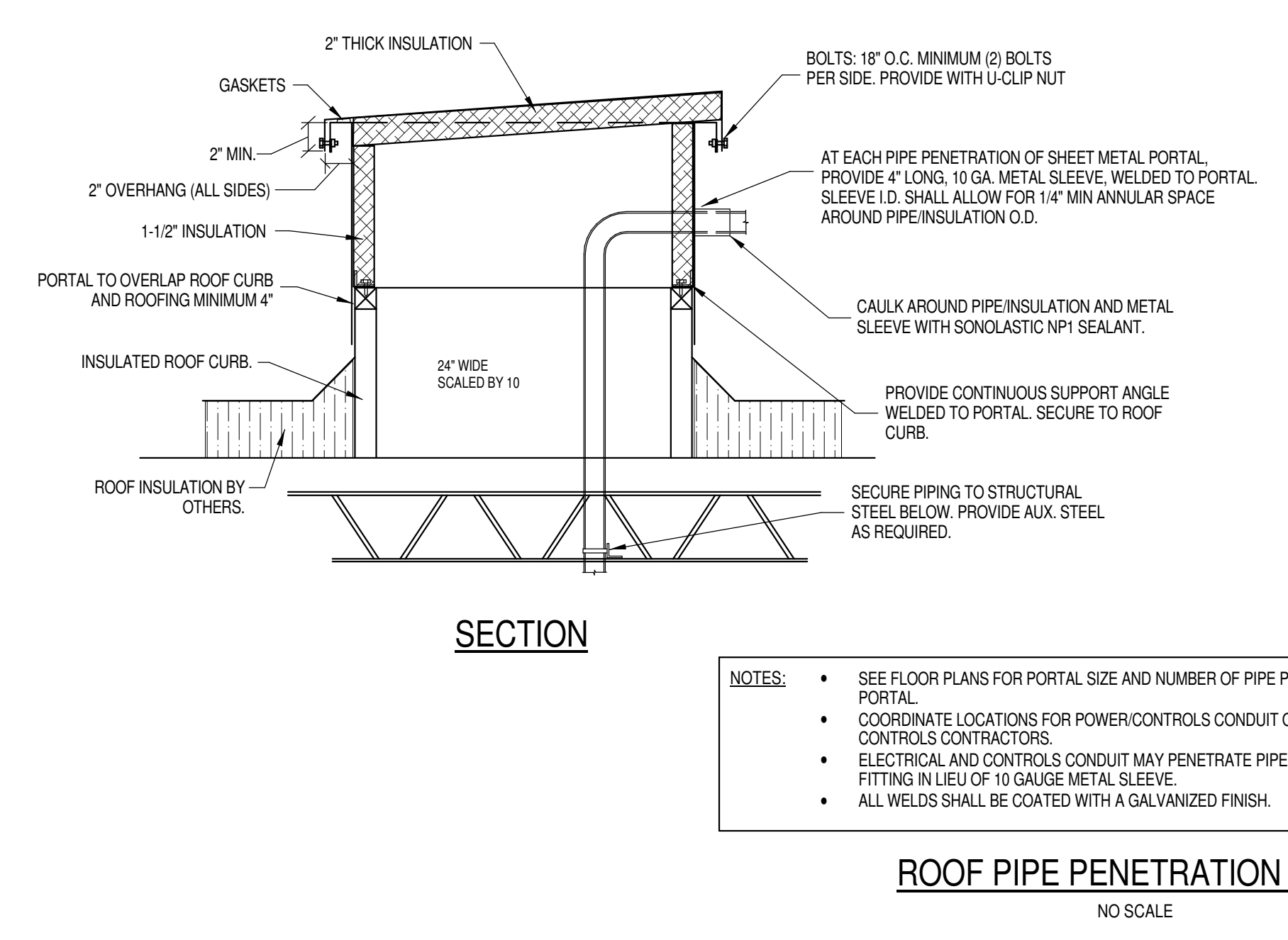
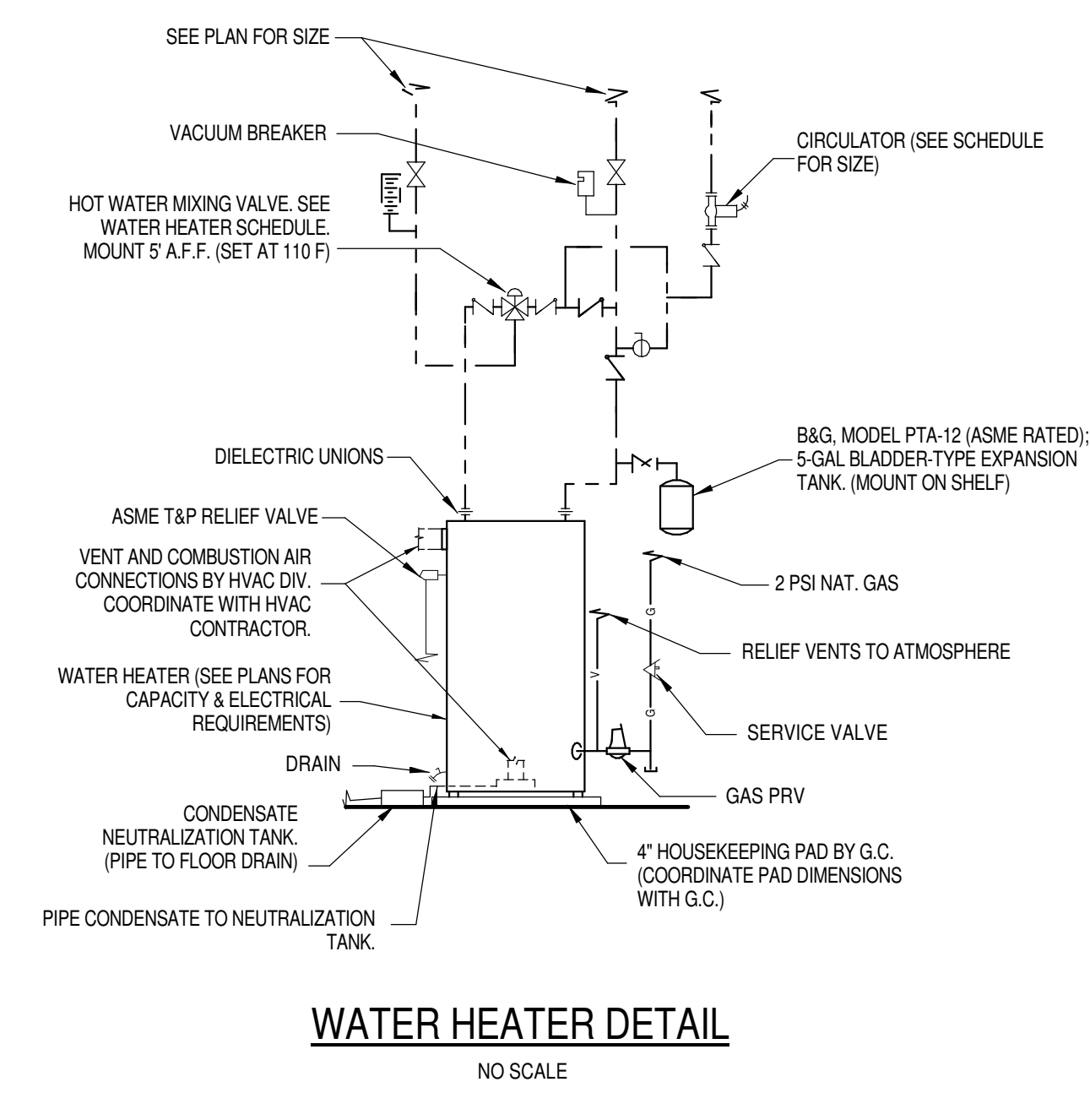
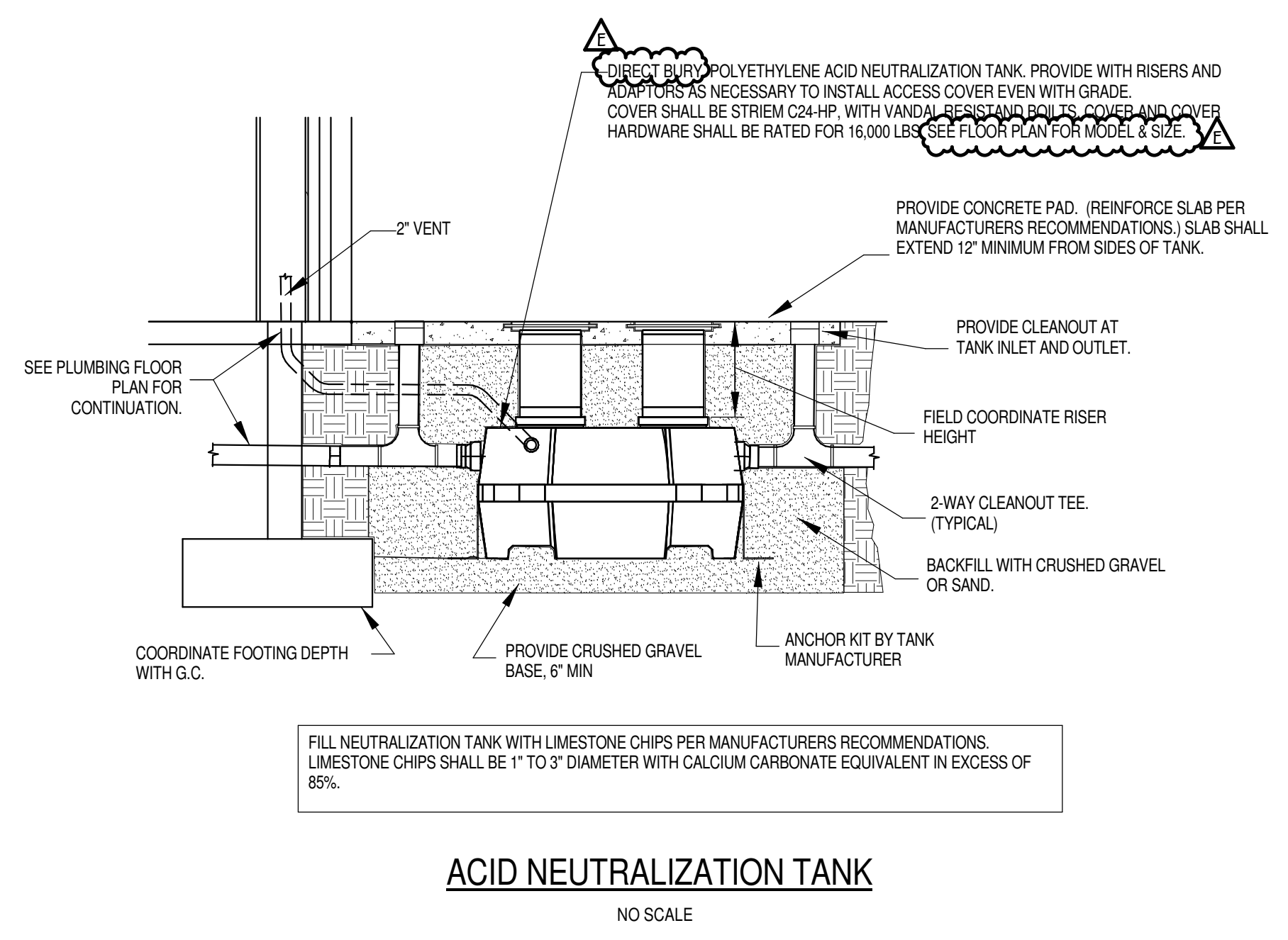
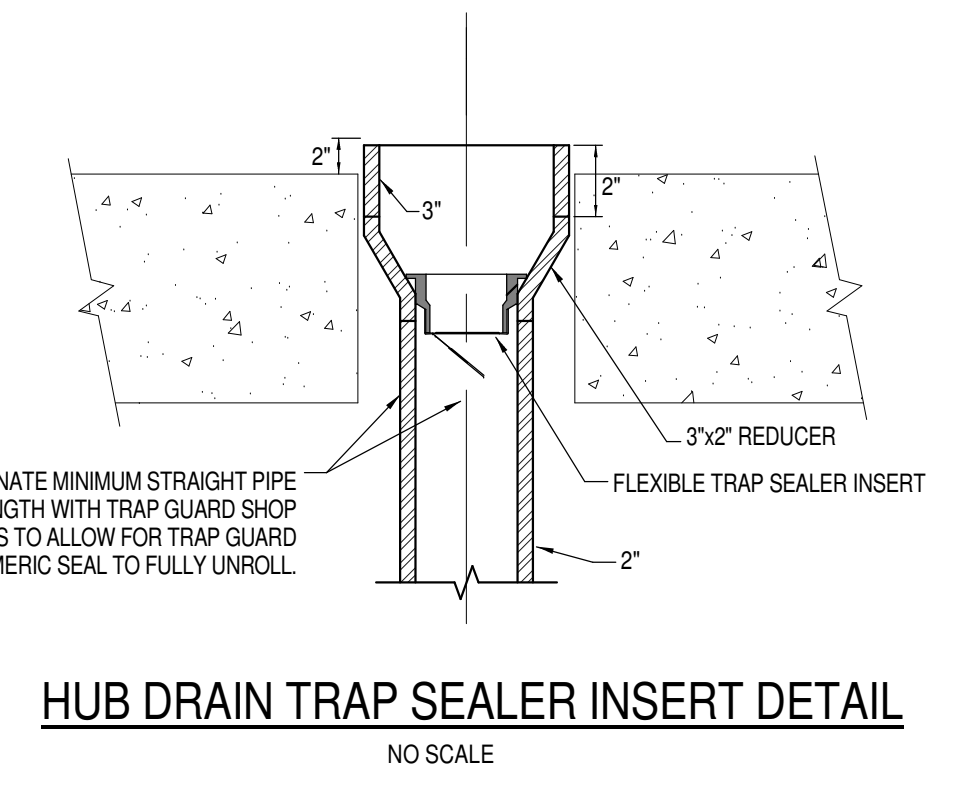
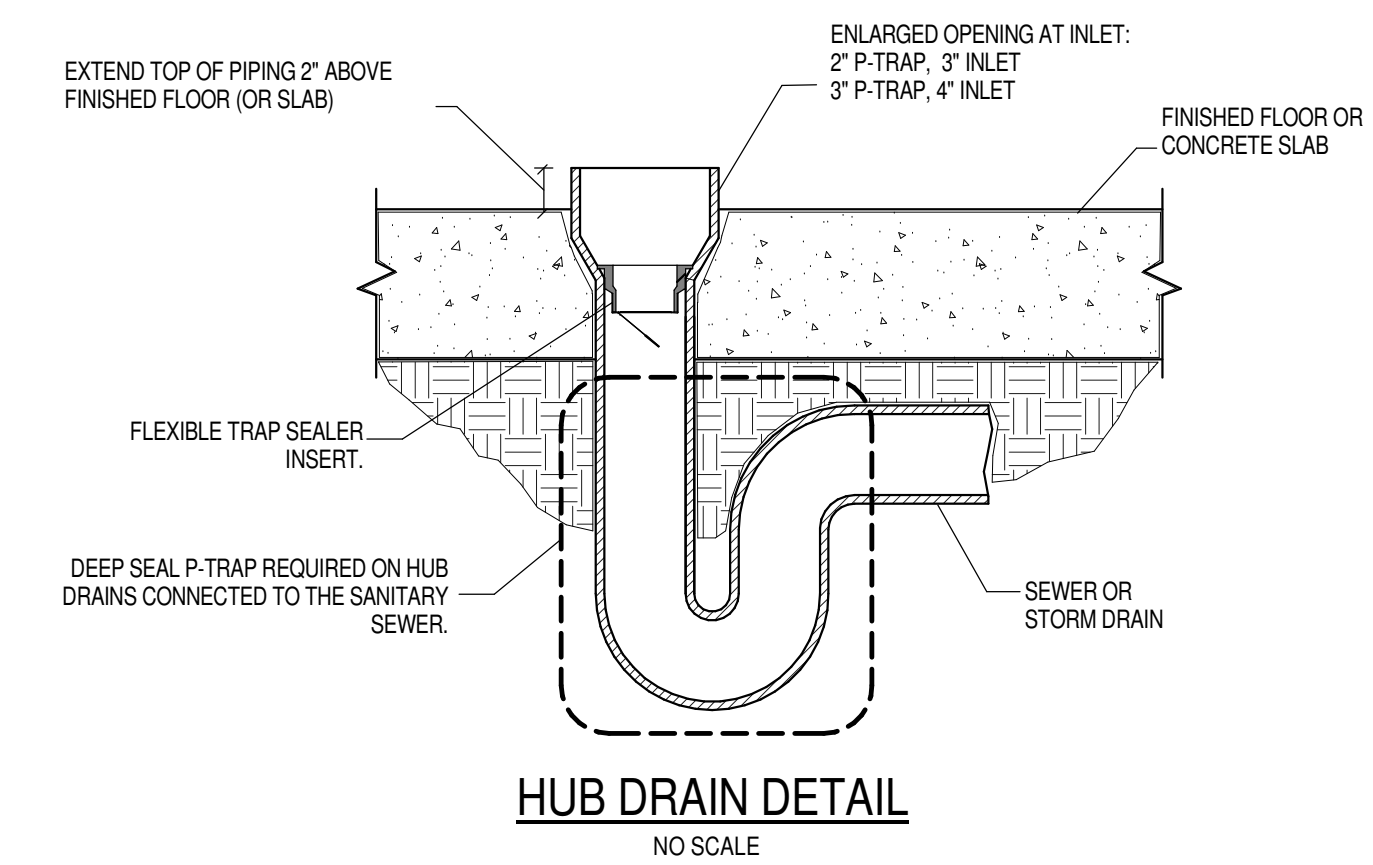
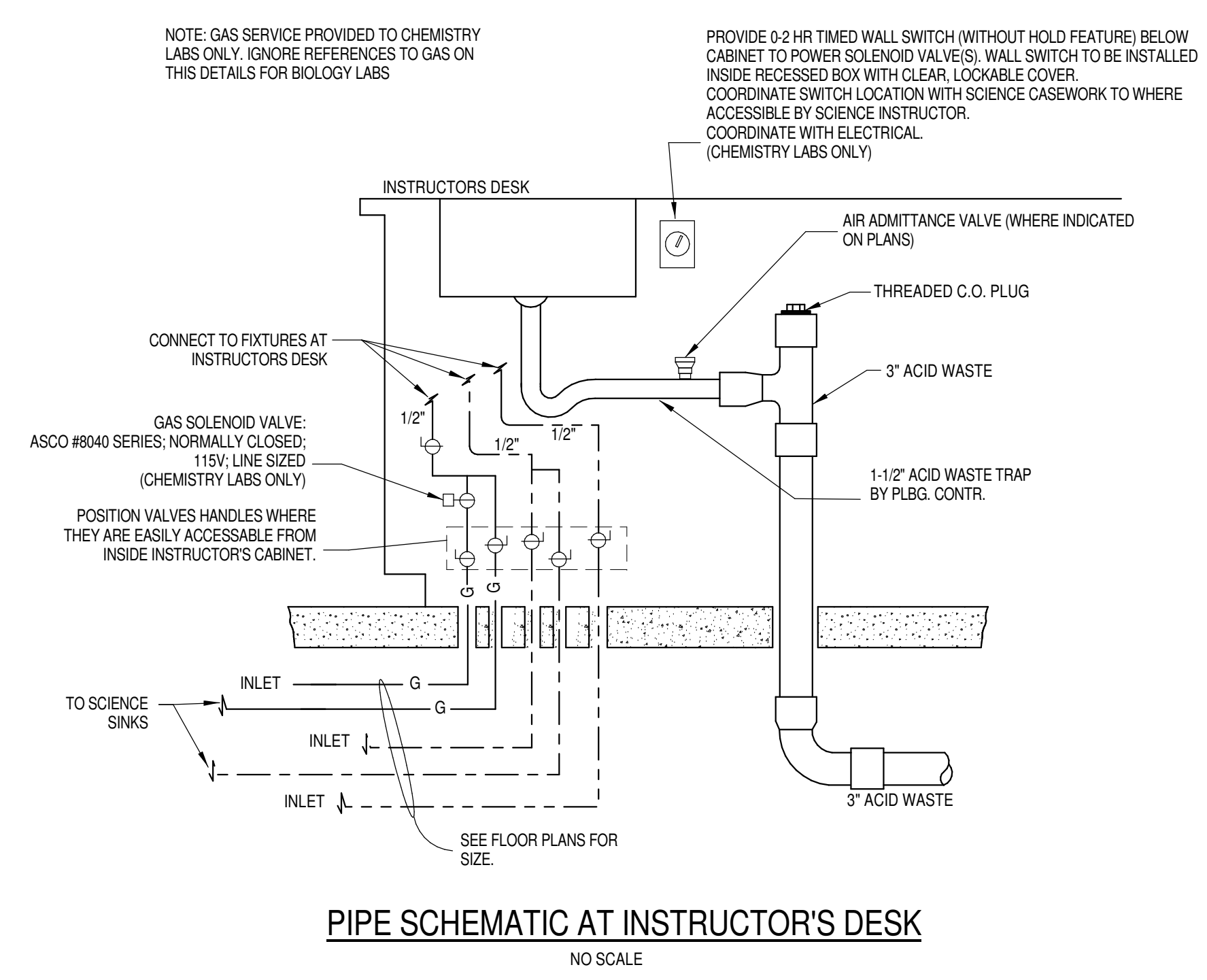
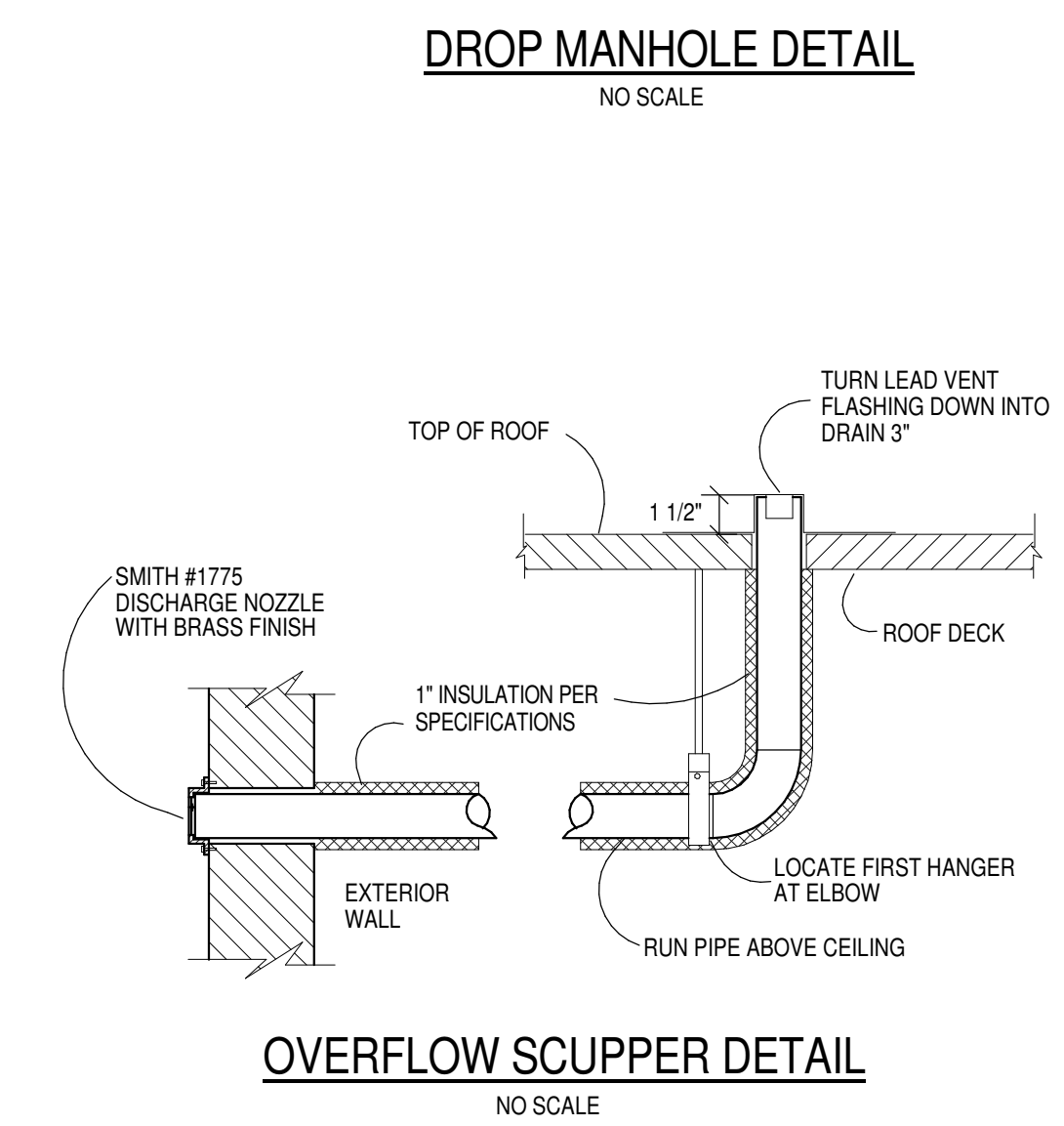
P201

NOT FOR CONSTRUCTION
 FOR PRICING ONLY

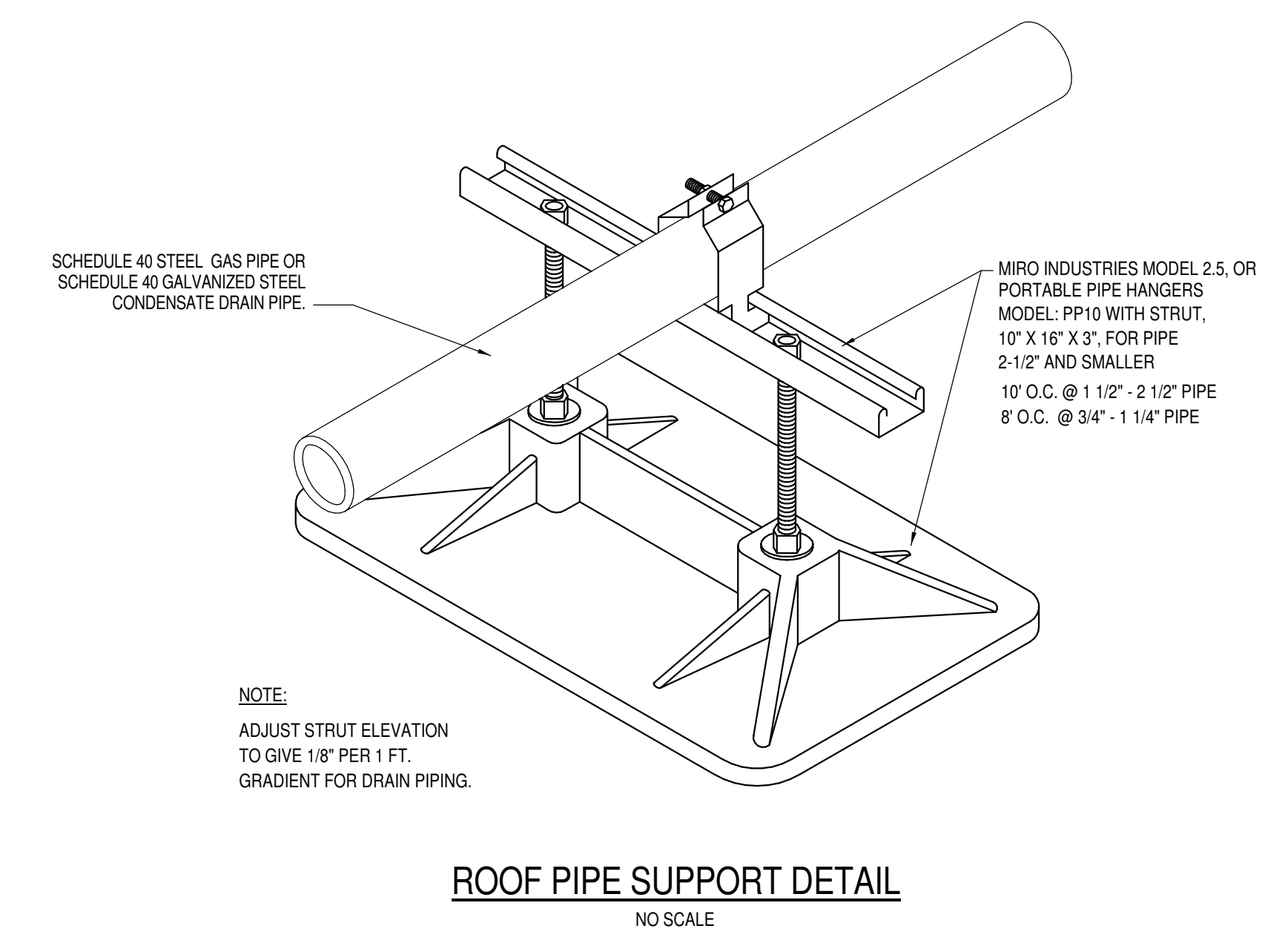
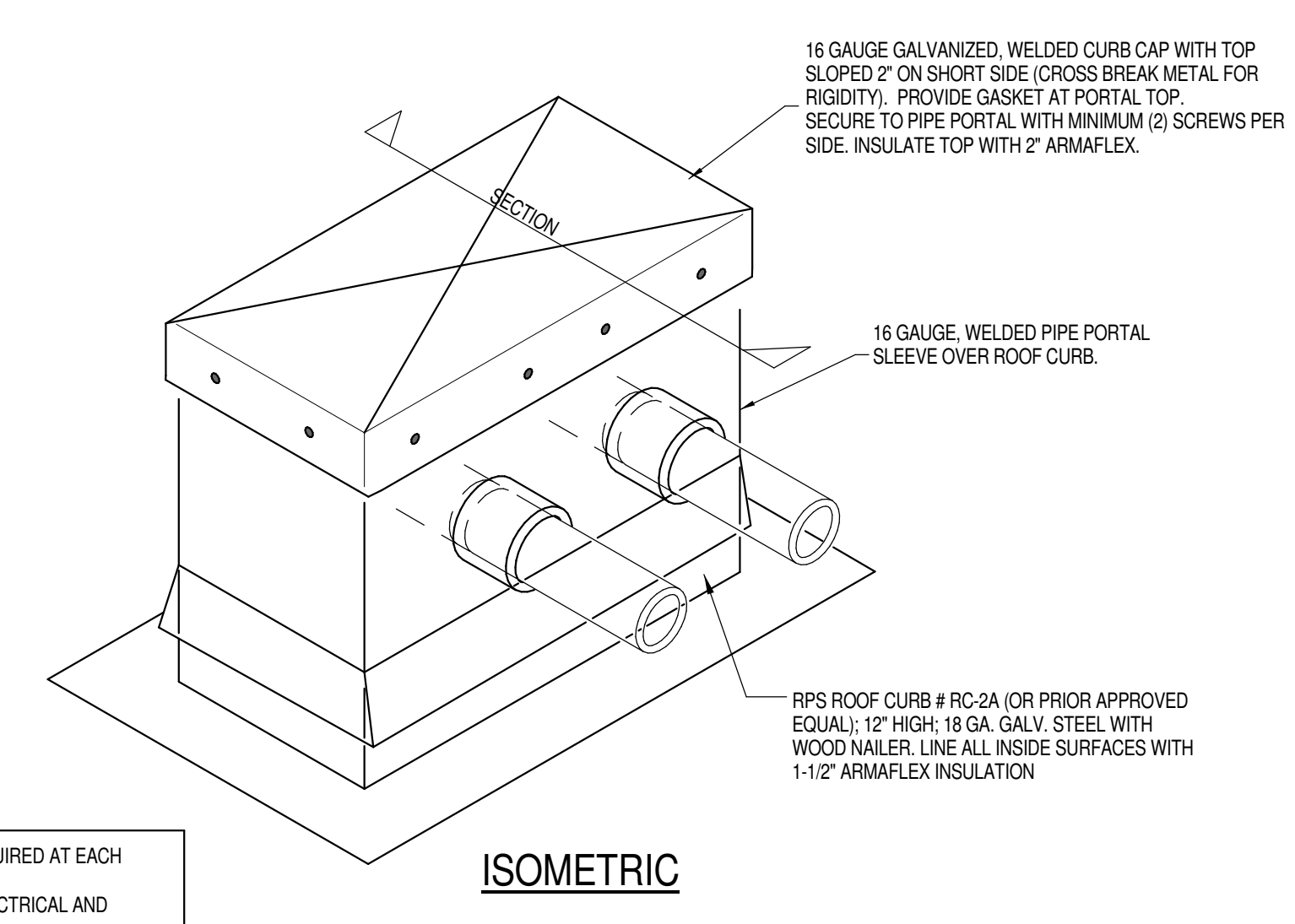
ALL DIMENSIONS, SPECIFICATIONS AND NOTES UNLESS OTHERWISE SPECIFIED ARE THE PROPERTY OF MCMILLAN PAZDAN SMITH ARCHITECTURE. THESE DRAWINGS SHALL BE USED ONLY WITHIN THE PROJECT FOR WHICH THEY WERE PREPARED. ANY REUSE OR MODIFICATION OF THESE DRAWINGS WITHOUT THE WRITTEN CONSENT OF MCMILLAN PAZDAN SMITH ARCHITECTURE IS STRICTLY PROHIBITED. THE CLIENT'S RESPONSIBILITY IS TO OBTAIN NECESSARY PERMITS AND APPROVALS FROM ALL APPLICABLE AGENCIES. THE ARCHITECT ASSUMES NO LIABILITY FOR ANY DAMAGE TO PERSONS OR PROPERTY ARISING FROM THE USE OF THESE DRAWINGS.



SHEET NOTES:
 1. REFER TO GENERAL NOTES ON SHEET P001.



- NOTES:**
- SEE FLOOR PLANS FOR PORTAL SIZE AND NUMBER OF PIPE PENETRATIONS REQUIRED AT EACH PORTAL.
 - COORDINATE LOCATIONS FOR POWER/CONTROLS CONDUIT OPENINGS WITH ELECTRICAL AND CONTROLS CONTRACTORS.
 - ELECTRICAL AND CONTROLS CONDUIT MAY PENETRATE PIPE PORTAL USING A LIQUIDTIGHT FITTING IN LIEU OF 10 GAUGE METAL SLEEVE.
 - ALL WELDS SHALL BE COATED WITH A GALVANIZED FINISH.



NOTE:
 ADJUST STRUT ELEVATION TO GIVE 1/8" PER 1 FT. GRADIENT FOR DRAIN PIPING.

SPARTANBURG SCHOOL DISTRICT FIVE
 JAMES F. BYRNES HIGH SCHOOL
 PHASE 2
 150 E. MAIN STREET
 DUNCAN, SC 29534

SHEET ISSUE:			
NO.	DATE	DESCRIPTION	BY
E	06/24/22	ADDENDUM NO. 2	STB

ADDENDUM NO. 2 06/24/22
 PRINCIPAL IN CHARGE: STB
 PROJECT ENGINEER: STB
 DRAWN BY: HFC

SHEET TITLE:
PLUMBING DETAILS

SHEET NO. CBE PROJ. NO.
 2037

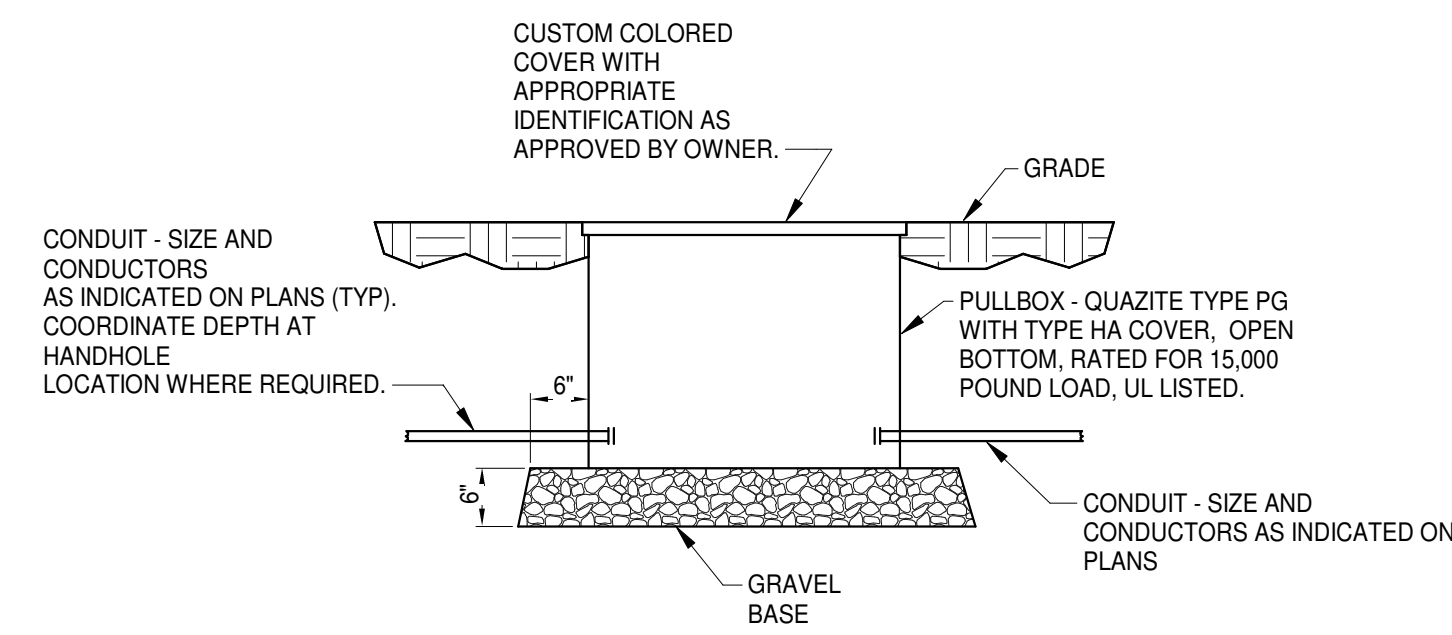
NOT FOR CONSTRUCTION
 FOR PRICING ONLY

WATER SOURCE HEAT PUMP SCHEDULE

Tag	Floor Level	Configuration	Manufacturer	Model	Air Flow CFM	Ventilation Air (CFM)	ESP (in WC)	Motor HP	Cooling EAT DB F	Cooling EAT WB F	Cooling EWT F	Cooling Total Capacity MBTUH	Cooling Sensible Capacity MBH	S/T Ratio	Latent MBH	Heat Reject. MBH	Cooling LAT F(C)	Cooling LWT F(C)	Stages	EER @ Design	EER @ AHR1	Heating EAT DB F(C)	Heating EWT F(C)	Heating Total Capacity MBH	Heat Extract. MBH	Heating LAT F	Heating LWT F	COP @ Design	COP @ AHR1	Flow Rate GPM	Pressure Drop FT/HD	Branch Pipe and Trim Size	Control Valve Press. Drop (PSI)	Voltage	Total Unit FLA	Min Circ Amp	Max Fuse / HACR	Filter Housing	Air Purification Unit	Remarks	Tag		
WSHP- A0.01	1000	Vertical	Water Furnace	NBV030	843.0	0	0.5	0.5	74.0	62.0	90.0	25.3	18.7	0.74	6.6	30.9	53.5	100.3	1	15.4	18.9	72.0	60.0	29.36	23.4	104.3	52.2	4.9	5.6	6.0	5.1	1	2 psi	460/60/3	5.7	6.6	10.15	24 x 24	GPS-FC48	1	24/240	10 W	WSHP- A0.01
WSHP- A0.02	1000	Vertical	Water Furnace	NBV030	843.0	0	0.5	0.5	74.0	62.0	90.0	25.3	18.7	0.74	6.6	30.9	53.5	100.3	1	15.4	18.9	72.0	60.0	29.36	23.4	104.3	52.2	4.9	5.6	6.0	5.1	1	2 psi	460/60/3	5.7	6.6	10.15	24 x 24	GPS-FC48	1	24/240	10 W	WSHP- A0.02
WSHP- A0.03	1000	Vertical	Water Furnace	NBV030	843.0	0	0.5	0.5	74.0	62.0	90.0	25.3	18.7	0.74	6.6	30.9	53.5	100.3	1	15.4	18.9	72.0	60.0	29.36	23.4	104.3	52.2	4.9	5.6	6.0	5.1	1	2 psi	460/60/3	5.7	6.6	10.15	24 x 24	GPS-FC48	1	24/240	10 W	WSHP- A0.03
WSHP- A0.04	1000	Vertical	Water Furnace	NBV030	843.0	0	0.5	0.5	74.0	62.0	90.0	25.3	18.7	0.74	6.6	30.9	53.5	100.3	1	15.4	18.9	72.0	60.0	29.36	23.4	104.3	52.2	4.9	5.6	6.0	5.1	1	2 psi	460/60/3	5.7	6.6	10.15	24 x 24	GPS-FC48	1	24/240	10 W	WSHP- A0.04
WSHP- A0.05	1000	Vertical	Water Furnace	NBV042	1179.0	0	0.5	1.0	74.0	62.0	90.0	37.6	27.5	0.73	10.1	45.4	52.4	100.09	1	16.5	18.6	72.0	60.0	39.63	31.3	103.1	53.04	4.7	5.8	9.0	5.8	1-1/4	2 psi	460/60/3	9.8	11.2	15.0	24 x 24	GPS-FC48	1	24/240	10 W	WSHP- A0.05
WSHP- A0.06	1000	Vertical	Water Furnace	UBV006	155.0	0	0.4	0.1	74.0	62.0	90.0	5.9	3.5	0.6	2.4	7.7	53.0	100.27	1	10.9	13.4	72.0	60.0	7.02	4.7	113.9	53.73	3.1	4.3	1.5	4.2	3/4	2 psi	265/60/1	3.3	4.0	10/15	24 x 24	GPS-FC48	1	24/240	10 W	WSHP- A0.06
WSHP- A0.07	1000	Vertical	Water Furnace	NBV024	720.0	0	0.5	0.5	74.0	62.0	90.0	22.4	16.7	0.75	5.7	27.7	52.6	99.23	1	14.3	17.0	72.0	60.0	27.05	21.1	106.8	52.97	4.6	5.3	6.0	8.5	1	2 psi	460/60/3	5.6	6.5	10.15	24 x 24	GPS-FC48	1	24/240	10 W	WSHP- A0.07
WSHP- A0.08	1000	Vertical	Water Furnace	UBV006	155.0	0	0.4	0.1	74.0	62.0	90.0	5.9	3.5	0.6	2.4	7.7	53.0	100.27	1	10.9	13.4	72.0	60.0	7.02	4.7	113.9	53.73	3.1	4.3	1.5	4.2	3/4	2 psi	265/60/1	3.3	4.0	10/15	24 x 24	GPS-FC48	1	24/240	10 W	WSHP- A0.08
WSHP- A0.09	1000	Vertical	Water Furnace	UBV006	155.0	0	0.4	0.1	74.0	62.0	90.0	5.9	3.5	0.6	2.4	7.7	53.0	100.27	1	10.9	13.4	72.0	60.0	7.02	4.7	113.9	53.73	3.1	4.3	1.5	4.2	3/4	2 psi	265/60/1	3.3	4.0	10/15	24 x 24	GPS-FC48	1	24/240	10 W	WSHP- A0.09
WSHP- A0.10	1000	Vertical	Water Furnace	NBV048	1603.0	0	0.5	1.0	74.0	63.0	90.0	44.6	33.0	0.74	11.6	55.3	55.0	102.29	1	14.2	16.3	72.0	60.0	52.36	41.4	102.2	50.8	4.8	5.4	9.0	4.3	1-1/4	2 psi	460/60/3	10.1	11.6	15.0	36 x 24	GPS-FC48	1	24/240	10 W	WSHP- A0.10
WSHP- A0.11	1000	Vertical	Water Furnace	UBV009	330.0	0	0.4	0.1	74.0	62.0	90.0	6.8	6.0	0.88	0.8	9.3	57.3	102.4	1	9.1	12.2	72.0	60.0	9.1	6.7	97.5	51.07	3.8	4.6	1.5	3.0	3/4	2 psi	265/60/1	4.9	6	10/15	24 x 24	GPS-FC48	1	24/240	10 W	WSHP- A0.11
WSHP- B0.01	1000	Vertical	Water Furnace	NBV030	843.0	0	0.5	0.5	74.0	62.0	90.0	25.3	18.7	0.74	6.6	30.9	53.5	100.3	1	15.4	18.9	72.0	60.0	29.36	23.4	104.3	52.2	4.9	5.6	6.0	5.1	1	2 psi	460/60/3	5.7	6.6	10.15	24 x 24	GPS-FC48	1	24/240	10 W	WSHP- B0.01
WSHP- B0.02	1000	Vertical	Water Furnace	NBV030	843.0	0	0.5	0.5	74.0	62.0	90.0	25.3	18.7	0.74	6.6	30.9	53.5	100.3	1	15.4	18.9	72.0	60.0	29.36	23.4	104.3	52.2	4.9	5.6	6.0	5.1	1	2 psi	460/60/3	5.7	6.6	10.15	24 x 24	GPS-FC48	1	24/240	10 W	WSHP- B0.02
WSHP- B0.03	1000	Vertical	Water Furnace	UBV006	155.0	0	0.4	0.1	74.0	62.0	90.0	5.9	3.5	0.6	2.4	7.7	53.0	100.27	1	10.9	13.4	72.0	60.0	7.02	4.7	113.9	53.73	3.1	4.3	1.5	4.2	3/4	2 psi	265/60/1	3.3	4.0	10/15	24 x 24	GPS-FC48	1	24/240	10 W	WSHP- B0.03
WSHP- B0.04	1000	Vertical	Water Furnace	NBV048	1603.0	0	0.5	1.0	74.0	63.0	90.0	44.6	33.0	0.74	11.6	55.3	55.0	102.29	1	14.2	16.3	72.0	60.0	52.36	41.4	102.2	50.8	4.8	5.4	9.0	4.3	1-1/4	2 psi	460/60/3	10.1	11.6	15.0	36 x 24	GPS-FC48	1	24/240	10 W	NOT USED
WSHP- B0.05	1000	Vertical	Water Furnace	NBV030	843.0	0	0.5	0.5	74.0	62.0	90.0	25.3	18.7	0.74	6.6	30.9	53.5	100.3	1	15.4	18.9	72.0	60.0	29.36	23.4	104.3	52.2	4.9	5.6	6.0	5.1	1	2 psi	460/60/3	5.7	6.6	10.15	24 x 24	GPS-FC48	1	24/240	10 W	WSHP- B0.05
WSHP- B0.06	1000	Vertical	Water Furnace	NBV042	1393.0	0	0.5	1.0	74.0	62.0	90.0	38.5	30.2	0.79	8.3	46.6	53.9	100.36	1	16.1	18.6	72.0	60.0	40.32	32.3	98.8	52.82	5.0	5.8	9.0	5.8	1-1/4	2 psi	460/60/3	9.8	11.2	15.0	24 x 24	GPS-FC48	1	24/240	10 W	WSHP- B0.06
WSHP- B0.07	1000	Vertical	Water Furnace	NBV030	843.0	0	0.5	0.5	74.0	62.0	90.0	25.3	18.7	0.74	6.6	30.9	53.5	100.3	1	15.4	18.9	72.0	60.0	29.36	23.4	104.3	52.2	4.9	5.6	6.0	5.1	1	2 psi	460/60/3	5.7	6.6	10.15	24 x 24	GPS-FC48	1	24/240	10 W	WSHP- B0.07
WSHP- B0.08	1000	Vertical	Water Furnace	NBV048	1603.0	0	0.5	1.0	74.0	63.0	90.0	44.6	33.0	0.74	11.6	55.3	55.0	102.29	1	14.2	16.3	72.0	60.0	52.36	41.4	102.2	50.8	4.8	5.4	9.0	4.3	1-1/4	2 psi	460/60/3	10.1	11.6	15.0	36 x 24	GPS-FC48	1	24/240	10 W	WSHP- B0.08
WSHP- B0.08	1000	Vertical	Water Furnace	NBV048	1603.0	0	0.5	1.0	74.0	63.0	90.0	44.6	33.0	0.74	11.6	55.3	55.0	102.29	1	14.2	16.3	72.0	60.0	52.36	41.4	102.2	50.8	4.8	5.4	9.0	4.3	1-1/4	2 psi	460/60/3	10.1	11.6	15.0	36 x 24	GPS-FC48	1	24/240	10 W	WSHP- B0.08
WSHP- B0.09	1000	Vertical	Water Furnace	NBV024	720.0	0	0.5	0.5	74.0	62.0	90.0	22.4	16.7	0.75	5.7	27.7	52.6	99.23	1	14.3	17.0	72.0	60.0	27.05	21.1	106.8	52.97	4.6	5.3	6.0	8.5	1	2 psi	460/60/3	5.6	6.5	10.15	24 x 24	GPS-FC48	1	24/240	10 W	WSHP- B0.09
WSHP- A1.01	1100	Vertical	Water Furnace	NBV030	843.0	0	0.5	0.5	74.0	62.0	90.0	25.3	18.7	0.74	6.6	30.9	53.5	100.3	1	15.4	18.9	72.0	60.0	29.36	23.4	104.3	52.2	4.9	5.6	6.0	5.1	1	2 psi	460/60/3	5.7	6.6	10.15	24 x 24	GPS-FC48	1	24/240	10 W	WSHP- A1.01
WSHP- A1.02	1100	Vertical	Water Furnace	NBV042	1179.0	0	0.5	1.0	74.0	62.0	90.0	37.6	27.5	0.73	10.1	45.4	52.4	100.09	1	16.5	18.6	72.0	60.0	39.63	31.3	103.1	53.04	4.7	5.8	9.0	5.8	1-1/4	2 psi	460/60/3	9.8	11.2	15.0	24 x 24	GPS-FC48	1	24/240	10 W	WSHP- A1.02
WSHP- A1.03	1100	Vertical	Water Furnace	NBV042	1179.0	0	0.5	1.0	74.0	62.0	90.0	37.6	27.5	0.73	10.1	45.4	52.4	100.09	1	16.5	18.6	72.0	60.0	39.63	31.3	103.1	53.04	4.7	5.8	9.0	5.8	1-1/4	2 psi	460/60/3	9.8	11.2	15.0	24 x 24	GPS-FC48	1	24/240	10 W	WSHP- A1.03
WSHP- A1.04	1100	Vertical	Water Furnace	NBV009	260.0	0	0.5	0.1	74.0	62.0	90.0	8.4	5.5	0.68	2.9	10.9	54.3	100.9	1	11.7	14.6	72.0	60.0	9.95	7.2	107.4	52.8	3.6	5.3	2.0	7.2	3/4	2 psi	265/60/1	5.24	6.3	10.15	24 x 24	GPS-FC48	1	24/240	10 W	WSHP- A1.04
WSHP- A1.05	1100	Vertical	Water Furnace	NBV009	260.0	0	0.5	0.1	74.0	62.0	90.0	8.4	5.5	0.68	2.9	10.9	54.3	100.9	1	11.7	14.6	72.0	60.0	9.95	7.2	107.4	52.8	3.6	5.3	2.0	7.2	3/4	2 psi	265/60/1	5.24	6.3	10.15	24 x 24	GPS-FC48	1	24/240	10 W	WSHP- A1.05
WSHP- A1.06	1100	Vertical	Water Furnace	NBV042	1179.0	0	0.5	1.0	74.0	62.0	90.0	37.6	27.5	0.73	10.1	45.4	52.4	100.09	1	16.5	18.6	72.0	60.0	39.63	31.3	103.1	53.04	4.7	5.8	9.0	5.8	1-1/4	2 psi	460/60/3									

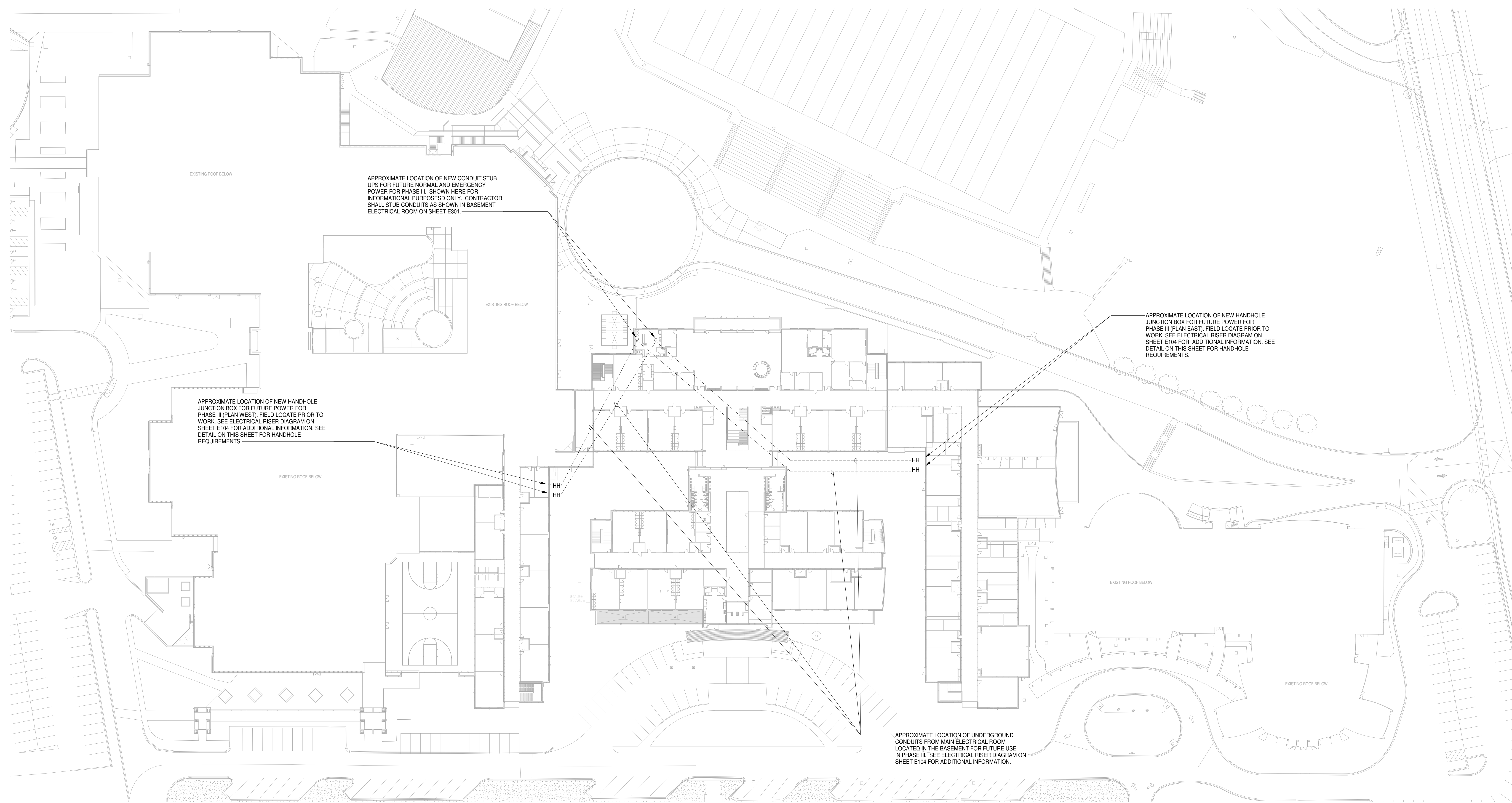
GENERAL SITE PLAN NOTES:

1. CONTRACTOR SHALL VERIFY SITE LAYOUT WITH ARCHITECTURAL, CIVIL, AND LANDSCAPE PLANS AND MAKE MINOR ADJUSTMENTS TO FIXTURE PLACEMENT TO ACCOMMODATE DRAINAGE, PLANTINGS, ETC.
2. INSTALL ALL CONDUIT AT DEPTHS AS SPECIFIED IN N.E.C. 300.5.
3. ALL EXPOSED CONDUITS SHALL BE RGC.
4. CONTRACTOR SHALL LOCATE ALL EXISTING UTILITY LINES PRIOR TO ANY UNDERGROUND DIGGING OR TRENCHING.
5. CONTRACTOR SHALL COORDINATE HEAVILY WITH ALL OTHER DISCIPLINES DURING SITE EXCAVATION TO INSURE THERE ARE NO CONFLICTS WITH UTILITY CONDUIT ROUTING.



2 HANDHOLE DETAIL
12" = 1'-0"

ALL DRAWINGS, SPECIFICATIONS AND NOTES HEREOF FURNISHED BY MCMILLAN PAZDAN SMITH ARCHITECTURE ARE AND SHALL REMAIN THE PROPERTY OF MCMILLAN PAZDAN SMITH ARCHITECTURE. THESE DRAWINGS ARE TO BE USED ONLY WITHIN THE PROJECT AND SITE SPECIFICALLY IDENTIFIED THEREON. ANY REUSE, REPRODUCTION, OR DISTRIBUTION OF THESE DRAWINGS WITHOUT THE WRITTEN PERMISSION OF MCMILLAN PAZDAN SMITH ARCHITECTURE IS STRICTLY PROHIBITED. THE PROJECT ARCHITECT SHALL BE RESPONSIBLE FOR THE ACCURACY OF ALL INFORMATION PROVIDED TO THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL INFORMATION PROVIDED TO THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL INFORMATION PROVIDED TO THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL INFORMATION PROVIDED TO THE CONTRACTOR.



1 ELECTRICAL SITE PLAN
1" = 40'-0"

SPARTANBURG COUNTY SCHOOL DISTRICT FIVE
JAMES F. BYRNES HIGH SCHOOL
PHASE 2 ACADEMIC WING ADDITION
150 E. MAIN STREET
DUNCAN, SC 29534

SHEET ISSUE:

NO.	DATE	DESCRIPTION	BY
D	06/20/22	ADDENDUM NO. 1	JDU
E	06/24/22	ADDENDUM NO. 2	JDU

NOT FOR CONSTRUCTION
FOR PRICING ONLY

PRINCIPAL IN ENGINEER: JDU
PROJECT ENGINEER: JDU
DRAWN BY: REALHO

SHEET TITLE:
ELECTRICAL SITE PLAN

SHEET NO. PROJ. NO.
020420.00

E118