BROOKE COUNTY COMMISSION
BROOKE COUNTY, WEST VIRGINIA

BROOKE COUNTY EMS FACILITY

ADDENDUM #3

APRIL 4, 2023

THRASHER PROJECT #T60-11009

TO WHOM IT MAY CONCERN:

A Pre-Bid Conference was held on Tuesday, March 7, 2023, for the Brooke County EMS Facility project. The following are clarifications and responses to questions posed by contractors for the above reference project.

A. GENERAL

1. **THE BID FORM HAS BEEN REVISED. YOU MUST USE THE REVISED BID FORM WHEN PREPARING YOUR BID PACKAGE FOR THIS PROJECT.**
2. **THE BID DATE FOR THE PROJECT HAS BEEN EXTENDED TO TUESDAY APRIL 18, 2023, AT 10:00AM.**

B. SPECIFICATIONS

1. ADDED: 012300 – Alternates
2. ADDED: 066550 – Simulated Wood Trim
3. ADDED: 074633 – Plastic Siding
4. ADDED: 096119 – Interior Concrete Stain
5. REVISED: 074293 – Metal Panels, article 2.2.B. Change solid soffit, to perforated soffit. Change Basis of Design Product to Dimensional Metals, Inc. FP10.
6. OMIT: 211313 – Wet-pipe Fire suppression Sprinklers.

C. DRAWINGS

1. OMIT sheet A1.01 and REPLACE with A1.01(R)
2. OMIT sheet A1.02 and REPLACE with A1.02(R)
3. OMIT sheet A1.03 and REPLACE with A1.03(R)
4. OMIT sheet A2.01 and REPLACE with A2.01(R)

5. OMIT sheet A3.01 and REPLACE with A3.01(R)
6. OMIT sheet A3.02 and REPLACE with A3.02(R)
7. OMIT sheet A3.03 and REPLACE with A3.03(R)
8. OMIT sheet A5.01 and REPLACE with A5.01(R)
9. OMIT sheet A5.02 and REPLACE with A5.02(R)
10. OMIT sheet A5.03 and REPLACE with A5.03(R)
11. OMIT sheet A6.01 and REPLACE with A6.01(R)
12. OMIT sheet C2.01 and REPLACE with C2.01(R)
13. OMIT all structural drawings dated 2/24/2023 (S0.01 through S5.02) and REPLACE with structural drawings dated 4/4/2023 (S0.01 through S5.02)
14. NEW: sheet A1.04 Attic Plan
15. NEW: sheet A4.04 Exterior Stairs
16. NEW: sheet SK-P3.
17. NEW: sheet SK-P4

D. QUESTIONS AND RESPONSES

Q1. 7/8" Plywood is hard to locate currently. Can there be a substitution?
A1. The Ambulance Bay roof trusses are changed in this addendum. Roof sheathing for the ambulance bay is to be 5/8-inch plywood sheathing.

Q2. I see on drawing S1.02 for Redbuilt Trusses are called for on the apparatus side of the building. I see no specifications for them. Can you clarify if they are metal, and do you have a manufacture for them?
A2. The Ambulance Bay roof trusses are changed in this addendum. See attached drawings.

Q3. Structural drawings mention alternate bids, but bid form is for one lump sum. Please advise.
A3. The Ambulance Bay roof trusses are changed in this addendum. There are no alternates required for the structure.

Q4. Are the Red Built "S" trusses alternates – Bid Alternate note says provide 2 bid alternates, what is the base bid?
A4. The Ambulance Bay roof trusses are changed in this addendum. There are no alternates required for the structure.

Q5. Can you verify the 7/8 roof sheathing. Lumber supplier cannot locate.
A5. See A1. This addendum.

Q6. Would a nailbase roof sheathing be acceptable?
A6. Roof insulation is changed per this addendum. See attached drawings: A3.01(R) and A5.03(R).

Q7. P1.01 – cold water line is sized as ¾" in kitchen (111), then appears to change to 1-1/2" in mechanical room (108) and then goes back down to ¾" for sink in ADA restroom (105). Is this correct?
A7. See SK-P3 this addendum.

Q8. Another item is A7.01R in addendum 2 calls for alternate #1 for resinous floor but no line item on bid form for any alternates?
A8. See Revised Bid Form in this addendum.

Q9. The room finish has RB for base in the bathrooms, but the specs mention both bullnose base cap and shluter dilex-ahk. Which should we use in our estimate?
A9. Bathrooms will have ceramic wall and floor tile. Use Schluter Dilex-AHK

Q10. Drawing C2.01 shows incoming power from transformer under front entrance and the meter is on the north wall of bays. Please clarify.
A10. Power will feed from the nearest pole to the location of meter on the north wall. See attached C2.01R.

Q11. Will Duralife Lockers and Tufftech Bench by Scranton Products be considered as an acceptable substitution for Lockers and benches specified in Section 105113?
A11. Yes.

Q12. Do you intend for the gas line to be above or below ground for the natural gas powered generator added in addendum #2?
A12. Gas line will be below ground.

Q13. Sheet S1.01 notes 1/2 inch plywood sheathing for the walls, Sheet A5.02 notes 5/8 inch plywood sheathing. Which is correct?
A13. Plywood wall sheathing should be 1/2 inch as noted on structural drawings.

Q14. Is the Flagpole on C2.01 under our scope? Is there more information or specification available?
A14. Yes. See specification Section 107516 Ground-set Flagpoles.

Q15. I see that the FP drawing calls out a WET fire sprinkler system for the building, however, there appears to be an attic area for both sections to be framed with wooden trusses. This requires fire sprinkler protection as well, please advise if these attic areas will be conditioned with adequate heat to prevent the WET sprinkler from freezing or should this be protected with a DRY fire sprinkler system?
A15. A Dry-Pipe Sprinkler System is required. Omit wet pipe sprinkler system and replace with dry-pipe sprinkler system. Provide dry-pipe valve trim complete with air compressor and all accessories for a complete system. Provide designated 20-amp 120v/1Ø circuit for air compressor. Connect pressure switch to fire alarm system.

Q16. In the specs. for the Metal Wall Panels, there is a sub section for Metal Liner Panels. You have MBCI listed as a Manufacturer, however, based on the specs. provided (36" width, 1/2" height, flat panel, 29g) - MBCI does not have have a match to that. Could you please advise which option you would prefer:
(1.PBD – this panel is 32” width, 5/8” height, ribbed, 26g)
(2. PBU – this panel is 36” width, ¾” height, ribbed, 26g)
(3. Artisan – This panel is 12” width, 1” height, flat, 24g)

A16. PBD - MBCI 32” W, 5/8” H is acceptable.

Q17. Door schedule calls for 1 3/8" door, but Door Specs. say 2" - please confirm.
A17. Overhead Sectional Doors should be 2” as described in the specifications.

Q18. R Value: 18.0deg F x h x sq. ft. / BTU?
A18. Overhead Sectional Doors should have an R-Value of R-18 as described in the specifications.

Q19. I have attached information for Haas Door Model 2014 and 616. Would it be possible to have them confirmed as an approved manufacturer?
A19. Haas Door Model CHT-2010 is acceptable.

Q20. The drawings call for a back-flow preventer on the 6" waterline, can a detail be provided for the vault that this needs to be installed in?
A20. Provide precast concrete vault with min. inside dimensions of 5’ wide, 8’ long, and 5’ deep with an 48”x48” access hatch.

Q21. Is 2" SDR21 or 2" SDR9 pipe acceptable for the exterior 2" waterline? C900 is listed in the specification but to our knowledge this does not exist.
A21. 2” SDR21 or 2” SDR9 is acceptable for the exterior 2” waterline.

E. CLARIFICATIONS

1. Sealed, stained concrete flooring is limited to room #’s: 101, 102, 103, 104, 106, 107, 108, 109, 110, 111, 116, 117, 118, 119. Room #’s: 112, 113, 114, 115 are to receive Ceramic Tile as shown on drawing A7.01/A7.01R.
2. Plywood Roof Sheathing is to be 5/8 inch thick.
3. Rigid Insulation located above the roof deck has been removed and Batt Insulation has added at the bottom chord of the roof trusses.
4. Attic Lighting: ADD (5) L30 fixtures approximately 16’-0” o.c. Circuit to spare 1p/20a circuit breaker A-28, switch at door and (2) occupancy sensors to cover area. Add X1 fixture above door with remote emergency egress fixture R1 to illuminate stairs.
   Attic Convenience Outlets: ADD a duplex receptacle below switch at door and at opposite end of attic space. Circuit to same circuit as lights A-28.
5. Ambulance Bay: Provide (4) occupancy sensors to provide coverage for the ambulance bays. Coordinate spacing with sensor supplier to insure coverage. Provide means to override in (on) position so that if work is being done inside vehicles lights will not time off.
6. Power for Exterior Signage on Rear Wall: Provide junction box and conduit on exterior rear wall for owner provided signage. Coordinate location with owner prior to rough-in. Circuit to spare 1p/20a circuit breaker A-30.
7. Conduit and Boxes for CCTV: Provide ¾” conduit and exterior rated junction boxes at all 5 exterior corners of building for owner supplied cameras. Coordinate mounting height and location of boxes prior to rough-in.

If you have any questions or comments, please feel free to contact me at your earliest convenience. As a reminder, bids will be received until 10:00 a.m. on Tuesday, April 18, 2023, at the Brooke County Courthouse, located at 632 Main Street, Wellsburg, WV. 26070. Good luck to everyone and thank you for your interest in the project.

Sincerely,

THE THRASHER GROUP, INC.

Philip M Freeman, AIA, NCARB, LEED Green Associate
Project Architect

BID FORM FOR CONSTRUCTION CONTRACT

The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

ARTICLE 1—OWNER AND BIDDER

1.01 This Bid is submitted to:

Brooke County Commission
632 Main St.
Wellsburg, WV 26070

1.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 2—ATTACHMENTS TO THIS BID

2.01 The following documents are submitted with and made a condition of this Bid:

A. Bid Opening Requirements

ARTICLE 3—BASIS OF BID—LUMP SUM BID AND UNIT PRICES

GENERAL

The Bidder shall take notice of and shall be responsible for any local or state taxes levied and applicable, and the cost for the same shall be included as part of the submitted Bid.

The total Bid cost stated includes a complete operating installation including furnishing and installation of any and all changes or additions in plans, piping, mechanical work, additional electrical work, accessories, controls, etc. necessary to accommodate alternative equipment systems or materials used in construction.

BID PROPOSAL

The Bidder agrees to perform all required Work described in the detailed Specifications and as shown on the Plans for the complete construction and placing in satisfactory operation for the Brooke County EMS Facility. The Project "Sequence of Construction" has been detailed in the Drawings and Specification Division 1, Project Summary, Section 011000. The Bidder agrees to perform all the Work proposed for the total of the following Bid prices.

3.01 *Lump Sum Bids*

A. Bidder will complete the Work in accordance with the Contract Documents for the lump sum (stipulated) price(s), shown in the bid schedule.

B. Lump Sum Bids may be one of the following:

1. Lump Sum Price (Single Lump Sum)

2. Lump Sum Price (Base Bid and Alternates)

3. Lump Sum Price (Sectional Lump Sum Bids)

C. All specified cash allowance(s) are included in the price(s) set forth in the bid schedule, and have been computed in accordance with Paragraph 3.8 of the General Conditions.

D. All specified contingency allowances are included in the price(s) set forth in the bid schedule, and have been computed in accordance with Paragraph 3.8 of the General Conditions.

BID SCHEDULE

PROPOSED
BROOKE COUNTY COMMISSION
FOR THE

BROOKE COUNTY EMS FACILITY
BROOKE COUNTY, WEST VIRGINIA

3.02 Total Bid Price Lump Sum

NOTE: Bid PRICE amounts are to be shown in both words and figures. In case of discrepancy, the amount shown in words will govern. Bids shall include sales tax and all other applicable taxes and fees.

Item #	Qty.	UNIT	DESCRIPTION	TOTAL PRICE
1	1	LS	*Provide all labor, materials, equipment, fees, bonds, insurance and taxes to perform the work as detailed in the plans and specifications and addenda.*	

TOTAL BID: _____
(Written in Words)

(Amounts are to be shown in both words and figures. In case of discrepancy, the amount shown in words will govern.)

ADDITIVE ALTERNATE #1

Item #	Qty.	UNIT	DESCRIPTION	TOTAL PRICE
1	1	LS	Resinous Flooring – in Room #'s 101, 102, 103, 104, 106, 107, 108, 109, 110, 111, 116, 117, 118, 119 as indicated on Drawing A7.01R Floor Finish Plan – Revision 2 and as specified in Section 096723 Resinous Flooring.	

TOTAL ADD ALTERNATE #1:

_____
(Written in Words)

3.02 *Method of Award*

Method of Award = Lowest Qualified Bidder (Regular)

If at the time this contract is to be awarded, the lowest total bid submitted by a qualified, responsive, responsible Bidder does not exceed the amount of funds then estimated by the Owner, as available to finance the contract, the construction contract will be awarded. If such bids exceeds such amount, the owner may reject all bids.

A. Unit prices have been computed in accordance with paragraph 13.03.A of the General Conditions.

B. Bidder acknowledges that estimated quantities are not guaranteed and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Bid items will be based on actual quantities, determined as provided in the Contract Documents.

~~**ARTICLE 4—BASIS OF BID—COST-PLUS FEE**~~

Deleted

~~**ARTICLE 5—PRICE-PLUS-TIME BID**~~

Deleted

ARTICLE 6—TIME OF COMPLETION

6.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with Article 8 of the General Conditions on or before the dates or within the number of calendar days indicated in the Agreement.

6.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 7—BIDDER'S ACKNOWLEDGEMENTS: ACCEPTANCE PERIOD, INSTRUCTIONS, AND RECEIPT OF ADDENDA

7.01 *Bid Acceptance Period*

A. This Bid will remain subject to acceptance for 90 days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

7.02 *Instructions to Bidders*

A. Bidder accepts all of the terms and conditions of the Instructions to Bidders, including without limitation those dealing with the disposition of Bid security.

7.03 *Receipt of Addenda*

A. Bidder hereby acknowledges receipt of the following Addenda:

Addendum Number	Addendum Date

ARTICLE 8—BIDDER'S REPRESENTATIONS AND CERTIFICATIONS

8.01 *Bidder's Representations*

A. In submitting this Bid, Bidder represents the following:

1. Bidder has examined and carefully studied the Bidding Documents, including Addenda.
2. Bidder has visited the Site, conducted a thorough visual examination of the Site and adjacent areas, and become familiar with the general, local, and Site conditions that may affect cost, progress, and performance of the Work.
3. Bidder is familiar with all Laws and Regulations that may affect cost, progress, and performance of the Work**.**
4. Bidder has carefully studied the reports of explorations and tests of subsurface conditions at or adjacent to the Site and the drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, with respect to the Technical Data in such reports and drawings.
5. Bidder has carefully studied the reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, with respect to Technical Data in such reports and drawings.
6. Bidder has considered the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Technical Data identified in the Supplementary Conditions or by definition, with respect to the effect of such information, observations, and Technical Data on (a) the cost, progress, and performance of the Work; (b) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, if selected as Contractor; and (c) Bidder's (Contractor's) safety precautions and programs.
7. Based on the information and observations referred to in the preceding paragraph, Bidder agrees that no further examinations, investigations, explorations, tests, studies, or data are necessary for the performance of the Work at the Contract Price, within the Contract Times, and in accordance with the other terms and conditions of the Contract.
8. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.
9. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and of discrepancies between Site conditions and the Contract Documents, and the written resolution thereof by Engineer is acceptable to Contractor.
10. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for performance and furnishing of the Work.
11. The submission of this Bid constitutes an incontrovertible representation by Bidder that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

8.02 *Bidder's Certifications*

A. The Bidder certifies the following:

1. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation.
2. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid.
3. Bidder has not solicited or induced any individual or entity to refrain from bidding.
4. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 8.02.A:
    a. Corrupt practice means the offering, giving, receiving, or soliciting of anything of value likely to influence the action of a public official in the bidding process.
    b. Fraudulent practice means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition.
    c. Collusive practice means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels.
    d. Coercive practice means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

BIDDER hereby submits this Bid as set forth above:

Bidder:

_____
(typed or printed name of organization)

By: _____
(individual's signature)

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Date: _____
(typed or printed)

If Bidder is a corporation, a partnership, or a joint venture, attach evidence of authority to sign.

Attest: _____
(individual's signature)

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Date: _____
(typed or printed)

Address for giving notices:

_____

_____

Bidder's Contact:

Name: _____
(typed or printed)

Title: _____
(typed or printed)

Phone: _____

Email: _____

Address:

_____

_____

_____

Bidder's Contractor License No.: (if applicable) _____

SECTION 012300 - ALTERNATES

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes administrative and procedural requirements for alternates.

1.2 DEFINITIONS

A. Alternate: An amount proposed by bidders and stated on the Bid Form for certain work defined in the bidding requirements that may be added to or deducted from the base bid amount if the Owner decides to accept a corresponding change either in the amount of construction to be completed or in the products, materials, equipment, systems, or installation methods described in the Contract Documents.

1. Alternates described in this Section are part of the Work only if enumerated in the Agreement.
2. The cost or credit for each alternate is the net addition to or deduction from the Contract Sum to incorporate alternates into the Work. No other adjustments are made to the Contract Sum.

1.3 PROCEDURES

A. Coordination: Revise or adjust affected adjacent work as necessary to completely integrate work of the alternate into Project.

1. Include as part of each alternate, miscellaneous devices, accessory objects, and similar items incidental to or required for a complete installation whether or not indicated as part of alternate.

B. Execute accepted alternates under the same conditions as other work of the Contract.

C. Schedule: A schedule of alternates is included at the end of this Section. Specification Sections referenced in schedule contain requirements for materials necessary to achieve the work described under each alternate.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF ALTERNATES

A. Alternate No. 1: Resinous Flooring.

1. Base Bid: Sealed, Stained Concrete Floor in Room #'s: 101, 102, 103, 104, 106, 107, 108, 109, 110, 111, 116, 117, 118, 119 as indicated on Drawing A7.01R Floor Finish Plan and as specified in Section 096119 "Interior Stained Concrete."

2. Alternate: Resinous Flooring in Room #'s: 101, 102, 103, 104, 106, 107, 108, 109, 110, 111, 116, 117, 118, 119 as indicated on Drawing A7.01R Floor Finish Plan – Revision 2 and as specified in Section 096723 "Resinous Flooring."

END OF SECTION 012300

SECTION 066550 – SIMULATED WOOD TRIM

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes
   1. Simulated Wood Trimboards.

1.2 RELATED SECTIONS

A. Section 061100 - Wood Framing.
B. Section 07910 - Joint Sealants.

1.3 REFERENCES

A. ASTM D 792 – Density and Specific Gravity of Plastics by Displacement.

B. ASTM D 570 – Water Absorption of Plastics.

C. ASTM D 638 – Tensile Property of Plastics.

D. ASTM D 790 – Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.

E. ASTM D 792 - Standard Test Methods for Density and Specific Gravity (Relative Density) of Plastics by Displacement.

F. ASTM D 1761- Mechanical Fasteners in Wood.

G. ASTM D 5420 – Standard Test Method for Impact Resistance of Flat, Rigid Plastic Specimen by means of a Striker Impacted by Falling Weight.

H. ASTM D 256 – Determining the Pendulum Impact Resistance of Plastics.

I. ASTM D 696 – Coefficient of Linear Thermal Expansion of Plastics Between -30 deg C and 30 deg C with a Vitreous Silica Dilatometer.

J. ASTM D 635 - Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position.

K. ASTM E 84 – Surface Burning Characteristics of Building Materials

L. ASTM D 648 – Deflection Temperature of Plastics Under Flexural Load in Edgewise Position.

M. ASTM 3679 – Standard Specification for Rigid Poly Vinyl Chloride (PVC) Siding.

1.4 SUBMITTALS

A. Submit under provisions of Section 013000.

B. Product Data: Manufacturer's data sheets on each product to be used, including:

1. Preparation instructions and recommendations.
2. Storage and handling requirements and recommendations.
3. Installation methods, including nailing patterns.

C. Verification Samples: For each finish profile specified, two samples, minimum size 6 inches long, representing actual product color and patterns finish.

D. Manufacturer's Certificates: Certify products meet or exceed specified requirements.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications: A minimum of 10 years in the manufacture of PVC products.

B. Installer Qualifications: A minimum of 3 years in the installation of PVC products.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.

B. Protect materials from exposure to moisture. Do not deliver until after wet work is complete and dry.

1.7 PROJECT CONDITIONS

A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.8 WARRANTY

A. Warranted to the original Owner under normal and proper use to be free of manufacturing defects for not less than a period of 25 years.

1.9 COORDINATION

A. Coordinate Work with other operations and installation of trim to avoid damage to installed materials.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. The Azek Company
   2. CertainTeed Corporation

B. Requests for substitutions will be considered in accordance with provisions of Section 016000.

2.2 MATERIAL

A. General: Free foam Cellular PVC that is homogenous and free of voids, holes, cracks, and foreign inclusions and other defects. Edges must be square and top and bottom surfaces shall be flat with no convex or concave deviation.

B. Physical Properties: Free foam cellular PVC material with a small-cell microstructure of 0.60 grams/cm3 in accordance with ASTM D 792 with the following physical and performance properties:
   1. Mechanical:
      a. Tensile Strength: ≥1250 psi when tested in accordance with ASTM D 638.
      b. Tensile Modulus: ≥79,450 psi when tested in accordance with ASTM D 638.
      c. Flexural Strength: ≥3325 psi when tested in accordance with ASTM D 790.
      d. Nail Hold: 35 lbf/in of penetration when tested in accordance with ASTM D 1761.
      e. Screw Hold: 590 lbf/in of penetration when tested in accordance with ASTM D 1761.
      f. Gardner Impact: 16 in-lbs when tested in accordance with ASTM D 4226.
      g. Charpy Impact (23 deg C): 4.5 ft-lbs/in when tested in accordance with ASTM D 256.
   2. Thermal:

a. Coefficient of Linear Expansion: 3.2 x10-5 in/in/deg F when tested in accordance with ASTM D 696.

b. Burning Rate: No burn when flame removed when tested in accordance with ASTM D 635.

c. Flame Spread Index: ≥25 when tested in accordance with ASTM E 84.

3. Manufacturing Tolerances:

a. Variation in component length: minus 0.00 plus 1.00 inch.

b. Variation in component width: plus or minus 1/16 inch.

c. Variation in component edge cut: plus or minus 2 degrees.

d. Variation in Density: minus 0 percent to plus 10 percent.

2.3 SIMULATED WOOD TRIM

A. General:

Provide paintable simulated wood trim to the following profiles and to the configurations indicated on the Drawings.

B. Trim Boards:

1. Nominal Thickness: 1 inch (3/4” actual).

2. Nominal Width:
   a. 4 inches.
   b. 6 inches.

3. Finish: Woodgrain Natural White.

C. One-Piece Corner Trim:

1. Nominal Thickness: 5/4 inches.

Nominal Size:

a. 6 inches (152 mm) by 6 inches (152 mm) by 10 feet (3.05 m) long.

2. Finish:

a. Woodgrain Natural White.

2.4 ACCESSORIES

A. Fasteners:

1. Use fasteners designed for wood trim and siding (thinner shank, blunt point, full round head).
2. Use a highly durable fastener such as stainless steel or hot dipped galvanized steel.
3. Staples, small brads and wire nails must not be used as fastening members.
4. Fasteners should be long enough to penetrate a solid wood substrate a minimum of 1-1/2 inch (38 mm).
5. The use of standard nail guns is acceptable.
6. Use two fasteners per every framing member for trimboard applications. Use additional fasteners for trimboards 12 inches (305 mm) or wider, as well as sheets.
7. Install fasteners no more than 2 inches (51 mm) from the end of the board.
8. Fasten trim into a flat, solid substrate. Fastening trim into hollow or uneven areas must be avoided.
9. Pre-drilling is typically not required unless a large fastener is used or product is being installed in low temperatures.

B. Adhesives:

1. Glue all trim joints (scarf or miter) with a cellular PVC cement/adhesive such as TrimTight or Extreme PVC TrimWelder.
2. Glue joints should be secured with a fastener and/or fastened on each side of the joint to allow adequate bonding time.
3. Surfaces to be glued should be smooth, clean and in complete contact with each other.
4. Various adhesives may be used. Consult adhesive manufacturer to determine suitability.

C. Sealants:

1. Use sealants recommended by the manufacturer.

PART 3 EXECUTION

3.1 EXAMINATION

A. Do not begin installation until substrates have been properly prepared.

B. Prior to installation, verify governing dimensions of and condition of substrate.

C. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Examine, clean, and repair as necessary any substrate conditions that would be detrimental to proper installation.

C. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

A. Install in accordance with manufacturer's instructions.

1. Comply with all terms necessary to maintain warranty coverage.
2. Use trim details indicated on Drawings.
3. Touch up all field cut edges before installing.

B. Cutting:

1. Use carbide tipped blades designed to cut wood. Do not use fine-tooth metal-cutting blades or plywood blades.
2. Avoid rough edges from cutting caused by: excessive friction, poor board support, worn saw blades or badly aligned tools.

C. Drilling:

1. Drill with standard woodworking drill bits.
2. Do not use bits made for rigid PVC.
3. Avoid frictional heat build-up and remove shavings from the drill hole frequently.

D. Milling:

1. Mill using standard milling machines used to mill lumber.
2. Relief angle 20 to 30 degrees.
3. Cutting speed to be optimized with the number of knives and feed rate.

E. Routing:

1. Use sharp carbide tipped router bits.

F. Edge Finishing:

1. Use machine edging, sanding, grinding, or filling to finish edges.

G. Nail Location:

1. Refer to fastening schedule and diagrams in the most current version of the manufacturer's installation manual for recommended fastener spacing.
2. Install fasteners no more than 3/4 inches (19 mm) from the end of each board.

H. Thermal Expansion and Contraction:

1. Expansion and contraction will occur with changes in temperature.
2. When properly fastened, allow 1/4 inch (6 mm) per 18 foot (5.49 m) for expansion and contraction.
3. Joints between pieces should be glued to eliminate joint separation. When gaps are glued on a long run, allow for expansion and contraction at the end of the runs.

I. Finishing.

1. Correct dents and gouges before applying final coating.
2. Prepare surfaces and paint materials as recommended by the molding manufacturer.
3. If moldings get dirty during installation, clean with a soft bristle brush and a bucket of soapy water. For stubborn stains, mold or mildew, use a cleaner suitable for PVC products.

3.4 PROTECTION

A. Protect installed products until completion of project.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

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SECTION 074633 - PLASTIC SIDING

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes vinyl siding.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. For vinyl siding, include VSI's official certification logo printed on Product Data.

B. Samples: For vinyl siding including related accessories.

1.3 INFORMATIONAL SUBMITTALS

A. Qualification Data: For vinyl siding Installer.

B. Product certificates.

C. Research/evaluation reports.

D. Sample warranty.

1.4 CLOSEOUT SUBMITTALS

A. Maintenance data.

1.5 QUALITY ASSURANCE

A. Vinyl Siding Installer Qualifications: A qualified installer who employs a VSI-certified Installer on Project.

1.6 WARRANTY

A. Special Warranty: Manufacturer agrees to repair or replace products that fail in materials or workmanship within specified warranty period.

1. Warranty Period: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 POLYPROPYLENE SIDING

A. Polypropylene Siding: Integrally colored product complying with ASTM D3679.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   a. Alside Exterior Building Products.
   b. Azek Building Products
   c. CertainTeed; SAINT-GOBAIN.
   d. Gentek Building Products, Inc.
   e. ProVia.

B. Shingle Pattern: 48-inch- wide, straight-edge notched with 5 inch exposure

C. Texture: Wood grain.

D. Minimum Profile Depth (Butt Thickness): 1/2 inch.

E. Nailing Hem: Double thickness.

F. Finish: Wood-grain print with clear protective coating containing not less than 70 percent PVDF.

1. Colors: As selected by Architect from manufacturer's full range of colors.

2.2 ACCESSORIES

A. Siding Accessories, General: Provide starter strips, edge trim, outside and inside corner caps, and other items as recommended by siding manufacturer for building configuration.

1. Provide accessories made from same material as matching color and texture of adjacent siding unless otherwise indicated.

B. Vinyl Accessories: Integrally colored vinyl accessories complying with ASTM D3679 except for wind-load resistance.

1. Texture: Wood grain.

C. Colors for Decorative Accessories: Match adjacent siding.

D. Flashing: Provide aluminum flashing at window and door heads and where indicated.

1. Finish for Aluminum Flashing: High-performance organic finish, same color as siding.

E. Fasteners:

1. For fastening to wood, use siding nails of sufficient length to penetrate a minimum of 1 inch into substrate.

2. For fastening vinyl, use hot-dip galvanized fasteners. Where fasteners are exposed to view, use prefinished aluminum fasteners in color to match item being fastened.

PART 3 - EXECUTION

3.1 INSTALLATION

A. General: Comply with manufacturer's written installation instructions applicable to products and applications indicated unless more stringent requirements apply.

1. Center nails in elongated nailing slots without binding siding to allow for thermal movement.

B. Install PVC siding and related accessories according to ASTM D4756.

1. Install fasteners for horizontal vinyl siding no more than 16 inches o.c.
2. Install fasteners for vertical vinyl siding no more than 12 inches o.c.

C. Install joint sealants as specified in Section 079200 "Joint Sealants" and to produce a weathertight installation.

3.2 ADJUSTING AND CLEANING

A. Remove damaged, improperly installed, or otherwise defective materials and replace with new materials complying with specified requirements.

B. Clean finished surfaces according to manufacturer's written instructions and maintain in a clean condition during construction.

END OF SECTION 074633

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SECTION 096119 – INTERIOR STAINED CONCRETE

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes:

1. Water-based reactive stained concrete floor finish.

B. Related Sections:

1. Section 033000 “Cast-In-Place Concrete” for general concrete applications.
2. Section 079200 “Joint Sealants” for colored sealant installed in paving joints.

1.2 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1.3 REFERENCES

A. ASTM International (ASTM):

1. ASTM C 171: Standard Specification for Sheet Materials for Curing Concrete.
2. ASTM C 309: Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete.

B. International Concrete Repair Institute (ICRI):

1. ICRI Technical Guidelines: Series 300 - Concrete, Designation 310 - Surface Preparation.

1.4 SUBMITTALS

A. Product Data: Manufacturer’s technical data, including Safety Data Sheet (SDS) and installation instructions, for each product specified.

B. Samples for Initial Selection: Manufacturer’s color charts showing full range of colors available.

C. Qualification Data: For manufacturer and Installer.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications: Minimum 10 years of documented experience in the production, sales, and technical support of the specified products.

B. Installer Qualifications: Minimum 3 years of documented experience with work of similar scope and complexity required by this Project and acceptable to, or certified by, concrete stain manufacturer.

C. Material Source Limitations: Obtain each specified material from the same source.

D. Notification: Give a minimum 7 calendar days' notice to manufacturer's authorized field representative before date established for commencement of concrete stain work.

E. Concrete Stain Mockups:

1. Construct a 6 foot by 6 foot mockup at location selected by Architect.
2. Provide individual mockups for each color required.
3. Construct mockup using materials, processes, and techniques required for the work, including curing procedures. Incorporate representative control, construction, and expansion joints according to Project requirements. Installer for the work to construct mockup.
4. Mockup to be stained and sealed by the Installer who will actually perform the work for the Project. Record the amount of chemical stain needed per square foot of application to establish coverage rates for the work.
5. Notify Architect and Owner a minimum of seven calendar days in advance of the date scheduled for each mockup construction.
6. Obtain the Architect's and Owner's acceptance of each mockup prior to commencement of the work.
7. Each mockup to remain until completion of the work to serve as a quality control standard for the work. Provide suitable protections to preclude damage to mockup.
8. Approved mockup area must be refinished as required to become part of the completed work

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver products in original factory unopened, undamaged packaging bearing identification of product, manufacturer, batch number, and expiration date as applicable.

B. Store products in a location protected from damage, construction activity, and adverse environmental conditions, and away from combustible materials and sources of heat, according to manufacturer's printed instructions and current recommendations.

C. Handle products according to manufacturer's printed instructions.

1.7 PROJECT CONDITIONS

A. Environmental Conditions: Maintain an ambient temperature between 50 deg F and 90 deg F during application and at least 48 hours after application.

PART 2 - PRODUCTS

2.1 WATER BASED INTERIOR CONCRETE STAIN

A. Basis of Design Product
   1. H & C Decorative Concrete Products
      a. Infusion – Water Based Semi-Transparent Stain

B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. Sika Corporation
   2. SureCrete LLC
   3. Americrete, LLC

2.2 MATERIALS

1. Color(s): As selected by Architect from manufacturer’s full range.
2. UV Resistant
3. VOC: > 50 g/L

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and conditions under which the concrete stain work will be performed and identify conditions detrimental to the proper and timely completion of the work. Do not proceed until unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. New Concrete: Comply with the following:

1. Concrete shall be as specified in Section 033000. Minimum cure time is 28 days.
2. Clean surfaces thoroughly, in accordance with manufacturer's instructions.
3. Prepare concrete surface in accordance with manufacturer's instructions.
4. Protection:
   a. Protect walls and surrounding surfaces not to receive concrete floor stain.
   b. Do not allow stain to come in contact with wood or metal surfaces.

3.3 CONCRETE STAIN APPLICATION

A. Apply concrete stains at the coverage rate recommended by the manufacturer and use application equipment according to the concrete stain manufacturer’s instructions.

B. Control depth of color by adjusting volume of stain applied

C. Apply 2 coats of stain. Do not scrub clean between coats.

D. Allow to completely dry prior to sealing.

3.4 SEALER APPLICATION

A. After the final penetrating stain application has dried sufficiently, normally 8 to 24 hours at 75 degrees F and 50 percent relative humidity, remove all contaminants from surfaces by dry mopping if required.

B. Conduct a moisture vapor emission test prior to applying any coating. Refer to the specific sealers Technical Data Bulletin for acceptable MVER.

C. Apply sealer according the sealer manufacturer's printed instructions at a rate of 300 to 400 square feet per gallon per coat, maintaining a wet edge at all times. Two coats are required. Maintain a wet edge at all times.

D. Allow sealer to completely dry before applying additional coats.

E. Apply second coat of sealer at 90 degrees to the direction of the first coat using the same application method and rates.

F. Seal horizontal joints in areas subject to pedestrian.

3.5 PROTECTION

B. The General Contractor is responsible for using Temporary Floor Protection throughout the project to safeguard the surface quality of concrete slabs before and after application of decorative finishes or installations of other materials.

C. All concrete floors that will be not be covered by other materials will be protected throughout the project. The concrete slab must be treated as a finished floor at all times during construction.

D. Temporary Floor Protection will be removed only while finish work to the concrete is being performed and will be replaced after the final finish has cured sufficiently.

E. Do not apply the heavy duty seaming tape to bare or finished floors or wall surfaces at any time.

3.6 MAINTENANCE

A. Maintain water-based reactive stained and sealed floors by sweeping. Clean spills when they occur and rinse dirt off with water. Wet-clean heavily soiled areas by mopping or by scrubbing with a rotary floor machine equipped with a scrubbing brush and a suitable, high quality commercial detergent. Maintain interior floors that require polishing by using a compatible, premium-grade, emulsion-type, commercial floor polish, according to manufacturer's printed instructions and safety requirements.

END OF SECTION 033619

SECTION 074293 - SOFFIT PANELS (R)

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Metal soffit panels.

1.2 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: Include fabrication and installation layouts of metal panels; details of edge conditions, joints, panel profiles, corners, anchorages, attachment system, trim, flashings, closures, and accessories; and special details.

C. Samples: For each type of metal panel indicated.

1.4 INFORMATIONAL SUBMITTALS

A. Product test reports.

B. Warranties: Samples of special warranties.

1.5 CLOSEOUT SUBMITTALS

A. Maintenance data.

1.6 WARRANTY

A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of metal panel systems that fail in materials or workmanship within specified warranty period.

1. Warranty Period: Two years from date of Substantial Completion.

B. Special Warranty on Panel Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace metal panels that show evidence of deterioration of factory-applied finishes within specified warranty period.

1. Finish Warranty Period: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Structural Performance: Provide metal panel systems capable of withstanding the effects of the following loads, based on testing according to ASTM E1592:

1. Wind Loads: As indicated on Drawings.
2. Other Design Loads: As indicated on Drawings.
3. Deflection Limits: For wind loads, no greater than 1/240 of the span.

B. Air Infiltration: Air leakage of not more than 0.06 cfm/sq. ft. when tested according to ASTM E283 at the following test-pressure difference:

1. Test-Pressure Difference: 1.57 lbf/sq. ft..

C. Water Penetration under Static Pressure: No water penetration when tested according to ASTM E331 at the following test-pressure difference:

1. Test-Pressure Difference: 2.86 lbf/sq. ft..

D. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes by preventing buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.

1. Temperature Change (Range): 120 deg F, ambient; 180 deg F, material surfaces.

2.2 METAL SOFFIT PANELS

A. Provide metal soffit panels designed to be installed by lapping and interconnecting side edges of adjacent panels and mechanically attaching through panel to supports using concealed fasteners in side laps. Include accessories required for weathertight installation.

B. Flush-Profile Metal Soffit Panels: Perforated panels formed with vertical panel edges and a flat pan between panel edges; with flush joint between panels.

1. Basis of Design Product:
   a. Dimensional Metals, Inc.,
      1) FP10

2. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

    a. Dimensional Metals, Inc.
    b. Englert, Inc.
    c. MBCI, Cornerstone Building Brands, Inc.
    d. McElroy Metal, Inc.
    e. Metal Sales Manufacturing Corporation.
    f. PAC-CLAD; Petersen Aluminum Corporation; a Carlisle company.

3. Material: Same material, finish, and color as metal roof panels.
4. Metallic-Coated Steel Sheet: Zinc-coated (galvanized) steel sheet complying with ASTM A653/A653M, G90 coating designation, or aluminum-zinc alloy-coated steel sheet complying with ASTM A792/A792M, Class AZ50 coating designation; structural quality. Prepainted by the coil-coating process to comply with ASTM A755/A755M.

    a. Nominal Thickness: 24 gauge.
    b. Exterior Finish: Two-coat fluoropolymer.
    c. Color: As selected by Architect from manufacturer's full range.

5. Panel Coverage: 12 inches.
6. Panel Height: 1 inch.

2.3 MISCELLANEOUS MATERIALS

A. Panel Accessories: Provide components required for a complete, weathertight panel system including trim, clips, flashings, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of metal panels unless otherwise indicated.

1. Closure Strips: Closed-cell, expanded, cellular, rubber or crosslinked, polyolefin-foam or closed-cell laminated polyethylene; minimum 1-inch-thick, flexible closure strips; cut or premolded to match metal panel profile. Provide closure strips where indicated or necessary to ensure weathertight construction.

B. Flashing and Trim: Provide flashing and trim formed from same material as metal panels as required to seal against weather and to provide finished appearance. Finish flashing and trim with same finish system as adjacent metal panels.

C. Panel Fasteners: Self-tapping screws designed to withstand design loads. Provide exposed fasteners with heads matching color of metal panels by means of plastic caps or factory-applied coating. Provide EPDM or PVC sealing washers for exposed fasteners.

D. Panel Sealants: Provide sealant types recommended by manufacturer that are compatible with panel materials, are nonstaining, and do not damage panel finish.

1. Sealant Tape: Pressure-sensitive, 100 percent solids, gray polyisobutylene compound sealant tape with release-paper backing; 1/8 inch thick.
2. Joint Sealant: ASTM C920; as recommended in writing by metal panel manufacturer.
3. Butyl-Rubber-Based, Solvent-Release Sealant: ASTM C1311.

2.4 FABRICATION

A. Fabricate and finish metal panels and accessories at the factory, by manufacturer's standard procedures and processes, as necessary to fulfill indicated performance requirements demonstrated by laboratory testing. Comply with indicated profiles and with dimensional and structural requirements.

B. Provide panel profile, including major ribs and intermediate stiffening ribs, if any, for full length of panel.

C. Fabricate metal panel joints with factory-installed captive gaskets or separator strips that provide a weathertight seal and prevent metal-to-metal contact, and that minimize noise from movements.

D. Sheet Metal Flashing and Trim: Fabricate flashing and trim to comply with manufacturer's recommendations and recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, metal, and other characteristics of item indicated.

2.5 FINISHES

A. Panels and Accessories:

1. Two-Coat Fluoropolymer: AAMA 621. Fluoropolymer finish containing not less than 70 percent polyvinylidene fluoride (PVDF) resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.
2. Concealed Finish: White or light-colored acrylic or polyester backer finish.

PART 3 - EXECUTION

3.1 PREPARATION

A. Miscellaneous Supports: Install subframing, furring, and other miscellaneous panel support members and anchorages according to ASTM C754 and metal panel manufacturer's written recommendations.

3.2 INSTALLATION

A. Metal Soffit Panels: Fasten metal panels to supports with fasteners at each lapped joint at location and spacing recommended by manufacturer.

1. Apply panels and associated items true to line for neat and weathertight enclosure.
2. Provide metal-backed washers under heads of exposed fasteners bearing on weather side of metal panels.

3. Locate and space exposed fasteners in uniform vertical and horizontal alignment. Use proper tools to obtain controlled uniform compression for positive seal without rupture of washer.
4. Install screw fasteners with power tools having controlled torque adjusted to compress washer tightly without damage to washer, screw threads, or panels. Install screws in predrilled holes.

B. Watertight Installation:

1. Apply a continuous ribbon of sealant or tape to seal lapped joints of metal panels, using sealant or tape as recommend by manufacturer on side laps of nesting-type panels and elsewhere as needed to make panels watertight.
2. Provide sealant or tape between panels and protruding equipment, vents, and accessories.
3. At panel splices, nest panels with minimum 6-inch end lap, sealed with sealant and fastened together by interlocking clamping plates.

C. Accessory Installation: Install accessories with positive anchorage to building and weathertight mounting, and provide for thermal expansion. Coordinate installation with flashings and other components.

D. Flashing and Trim: Comply with performance requirements, manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, and set units true to line and level as indicated. Install work with laps, joints, and seams that are permanently watertight.

3.3 CLEANING

A. Remove temporary protective coverings and strippable films, if any, as metal panels are installed unless otherwise indicated in manufacturer's written installation instructions. On completion of metal panel installation, clean finished surfaces as recommended by metal panel manufacturer. Maintain in a clean condition during construction.

END OF SECTION 074293

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GENERAL NOTES:

1. INTERIOR DIMENSIONS SHOWN ON THESE PLANS ARE FROM FACE OF FINISHED WALL TO FACE OF FINISHED WALL UNLESS NOTED OTHERWISE.

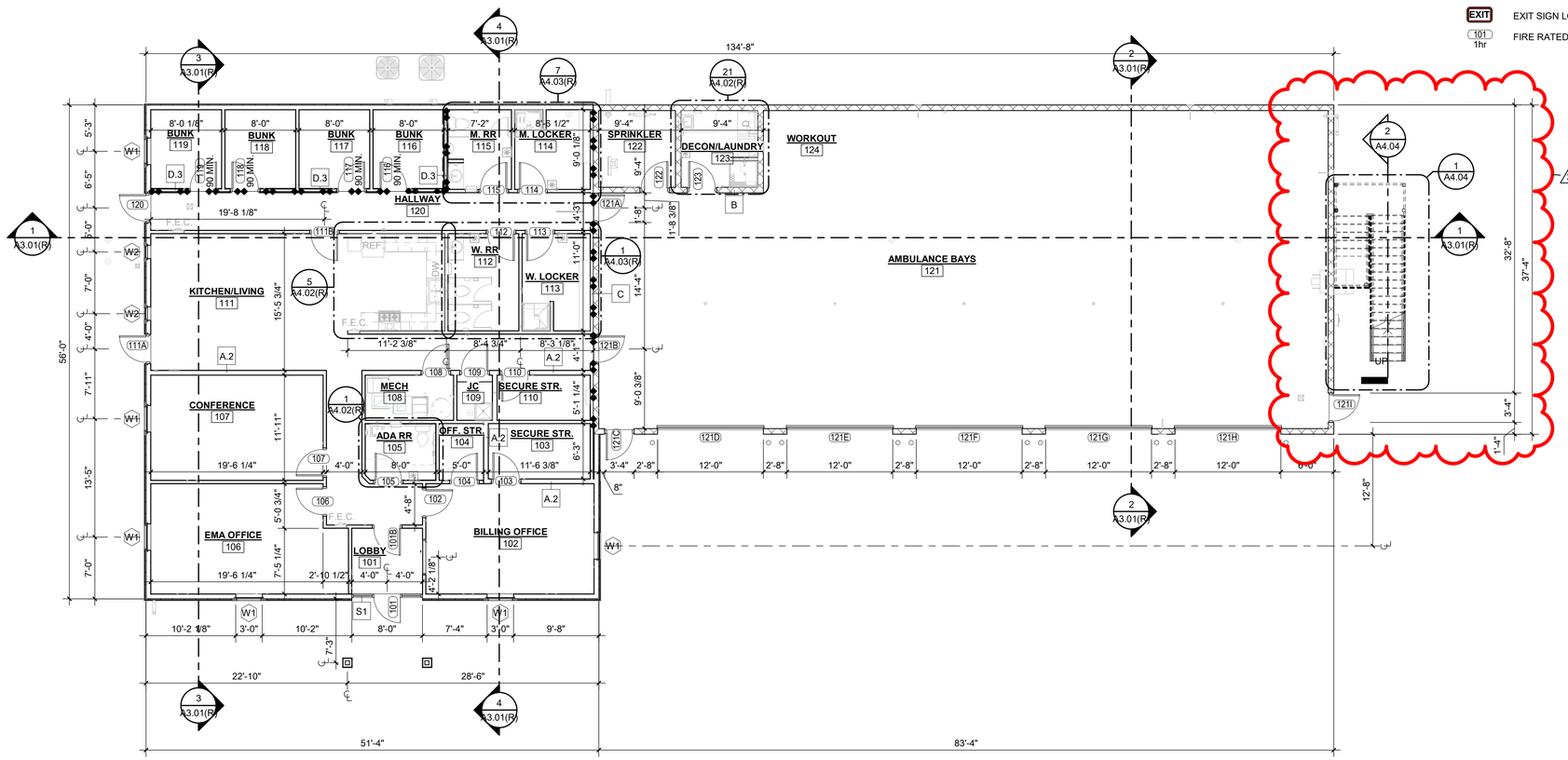
2. EXTERIOR DIMENSIONS ARE FROM FACE OF SHEATHING TO FACE OF SHEATHING, AND FROM FACE OF MASONRY TO FACE OF MASONRY.

3. INTERIOR PARTITIONS ARE TYPE A.1 UNLESS NOTED OTHERWISE. SEE A4.01 FOR PARTITION TYPES.

4. INSTALL WOOD BLOCKING IN NEW WALLS TO RECEIVE WALL-MOUNTED ITEMS. WOOD BLOCKING SHALL BE FIRE RETARDANT TREATED.

LIFE SAFETY LEGEND

- 2 HOUR FR
- COMMON PATH OF TRAVEL
- TRAVEL DISTANCE
- FIRE EXTINGUISHER - CABINET
- FIRE EXTINGUISHER - WALL MOUNT
- EXIT SIGN LOCATION
- 101 1hr — FIRE RATED DOOR TAG



1 A1.01(R) FIRST FLOOR PLAN — 1/8" = 1'-0"

0' 5' 10' 20'

2 HOUR FR

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NO.	BY	DATE	DESCRIPTION
3		Date 3	ADDENDUM NO.3

BROOKE COUNTY EMS
BROOKE COUNTY COMMMISSION
3031 PLEASANT AVE, WELLSBURG WV 26070
FEBRUARY 24, 2023
CONSTRUCTION DOCUMENTS

DRAWN: MS/DS DATE: 02/24/2022
CHECKED: PMF DATE: 02/24/2022

PROJECT No.
T60-11009.00

FLOOR PLAN

SHEET No.
A1.01(R)

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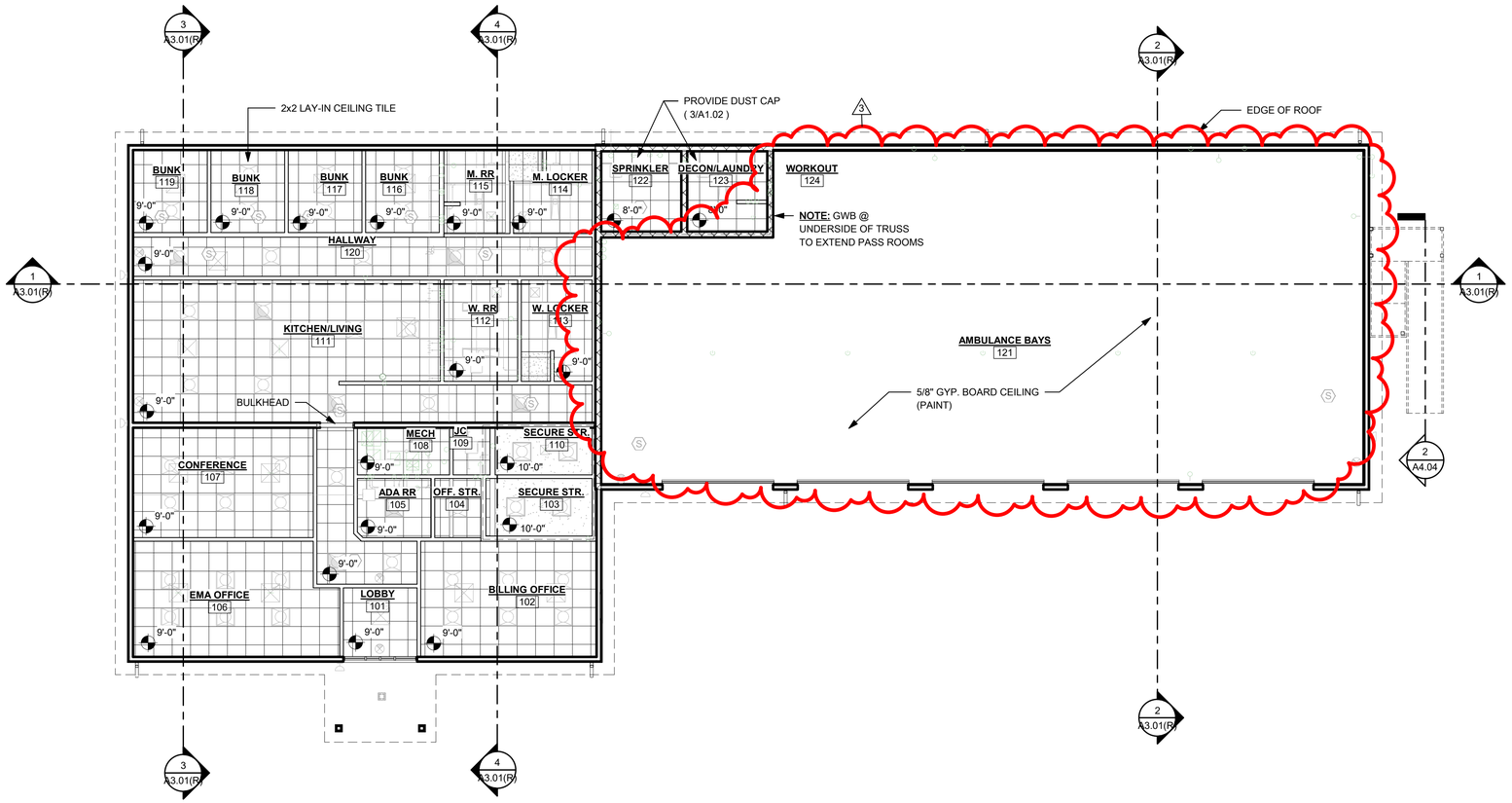
REFLECTED CEILING PLAN LEGEND

NOTE: *CONTRACTOR TO COORDINATE RCP BETWEEN ARCHITECTURAL AND MEP DRAWINGS*

- 2'x2' LAY-IN CEILING TILE
- 2'x4' LAY-IN CEILING TILE
- 2'x2' LAY-IN CEILING TILE - TYPE 2
- 2'x4' LIGHT FIXTURE
- 2'x2' LIGHT FIXTURE
- 2'x4' EMERGENCY LIGHT FIXTURE
- 2'x2' EMERGENCY LIGHT FIXTURE
- EXIT SIGN
- SMOKE DECTECTOR
- GYPSUM BOARD CEILING
- DIFFUSERS
- RETURN GRILL
- EXHAUST GRILL
- BULK HEAD
- WALLS BELOW
- RECESSED DOWN LIGHT
- O.T.A. OPEN TO ABOVE
- SPEAKER



1 A1.02(R) FIRST FLOOR RCP
1/8" = 1'-0"

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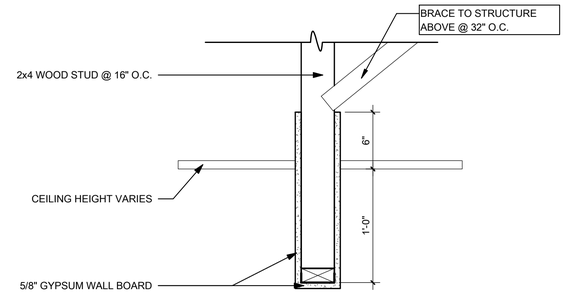

2 A1.02(R) CEILING DETAIL - TYPICAL BULKHEAD DETAIL
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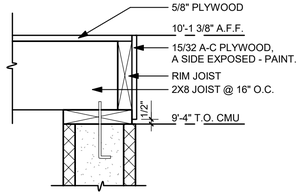

3 A1.02(R) DETAIL - DUST CAP
1 1/2" = 1'-0"

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NO.	BY	DATE	DESCRIPTION
3	Date 3		ADDENDUM NO.3

BROOKE COUNTY EMS
BROOKE COUNTY COMMISSION
3031 PLEASANT AVE, WELLSBURG WV 26070
FEBRUARY 24, 2023
CONSTRUCTION DOCUMENTS

DRAWN: DS DATE: 02/24/2023
CHECKED: PMF DATE: 02/24/2023

PROJECT No.
T60-11009.00

REFLECTED CEILING PLAN

SHEET No.
A1.02(R)

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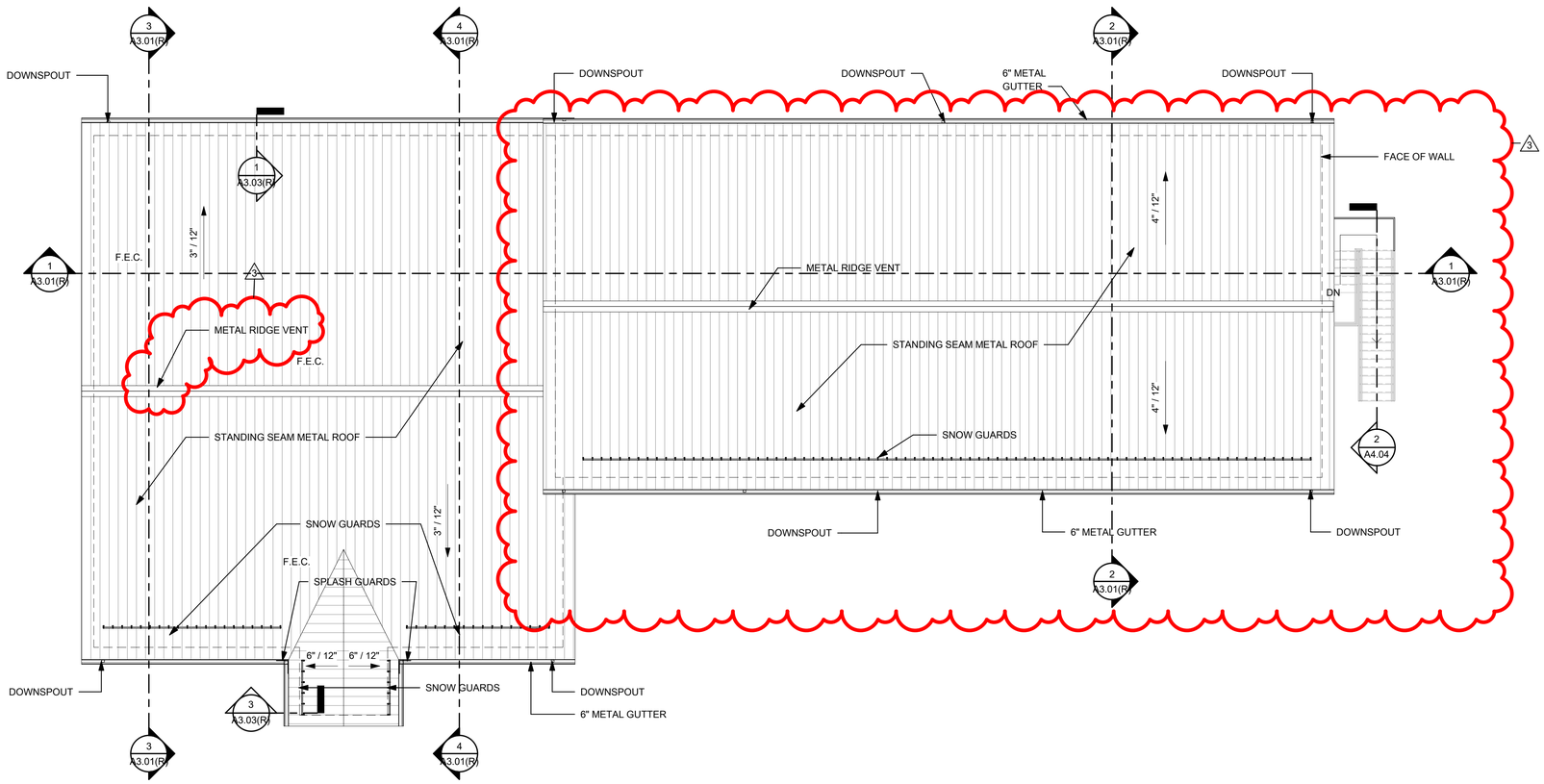

1 A1.03(R) ROOF PLAN
1/8" = 1'-0"
0' 5' 10' 20'

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NO.	BY	DATE	DESCRIPTION
3		Date 3	ADDENDUM NO 3

BROOKE COUNTY EMS
BROOKE COUNTY COMMMISSION
3031 PLEASANT AVE, WELLSBURG WV 26070
FEBRUARY 24, 2023
CONSTRUCTION DOCUMENTS

DRAWN: DS DATE: 02/24/2023
CHECKED: PMF DATE: 02/24/2023

PROJECT No.
T60-11009.00

ROOF PLAN

SHEET No.
A1.03(R)

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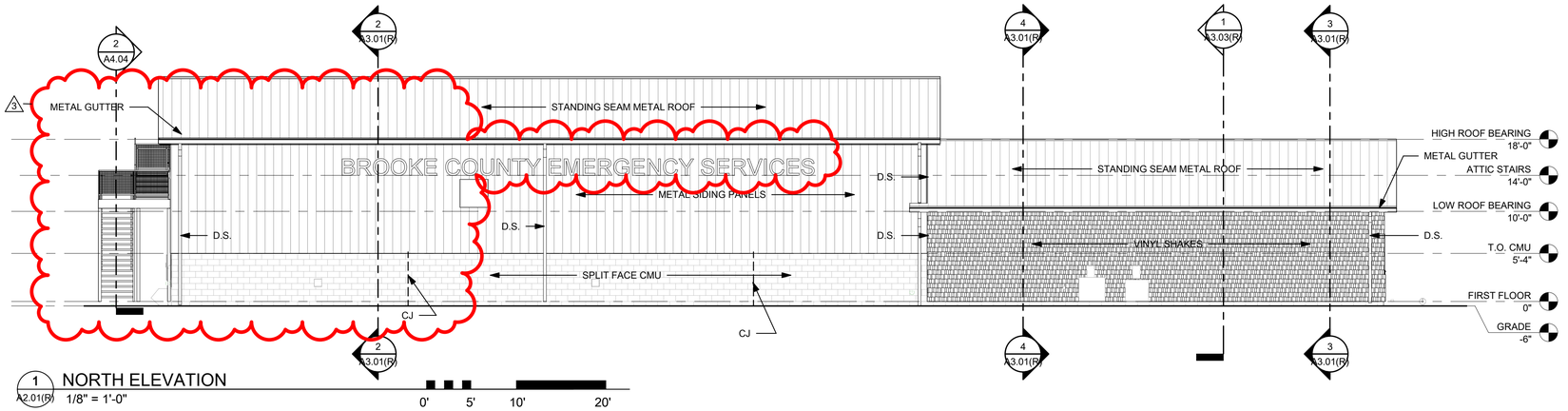

1 A2.01(R) NORTH ELEVATION
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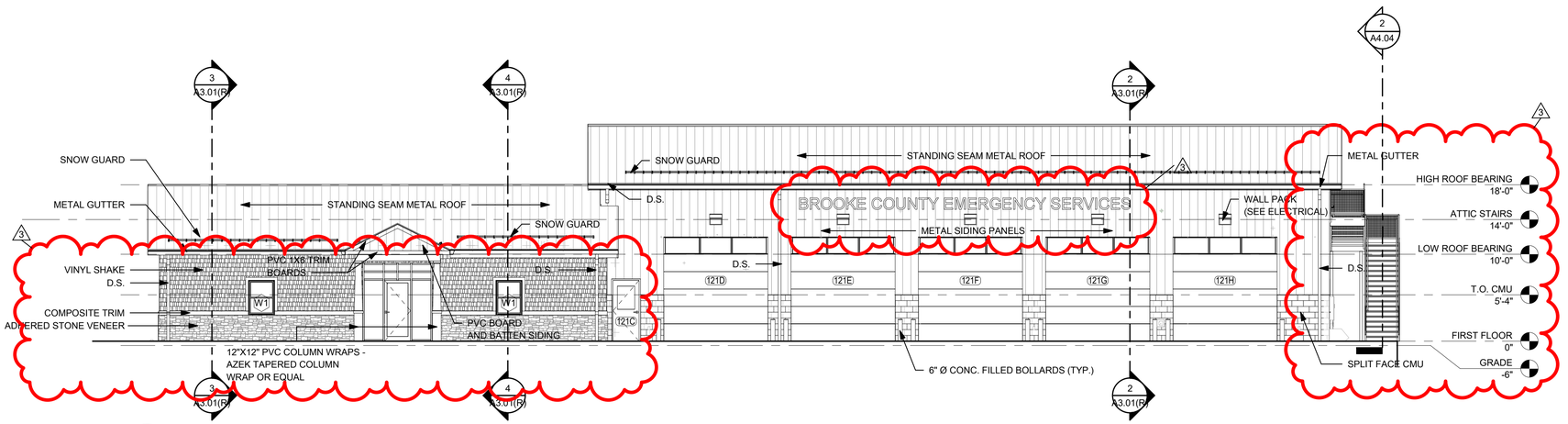

2 A2.01(R) SOUTH ELEVATION
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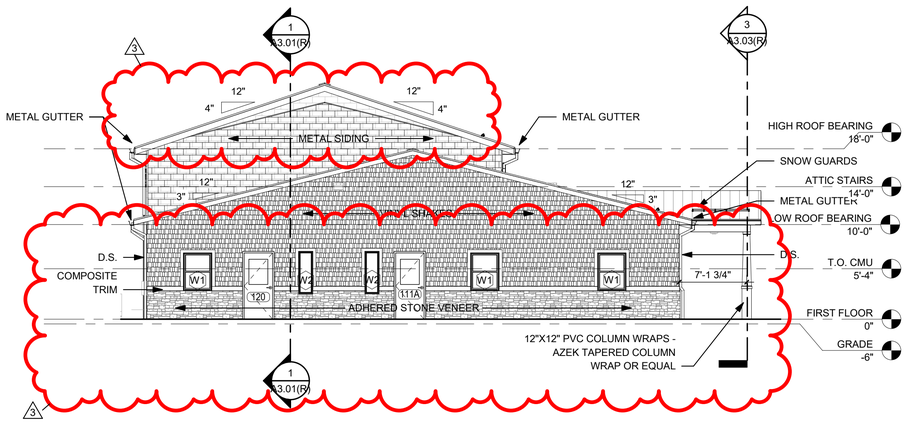
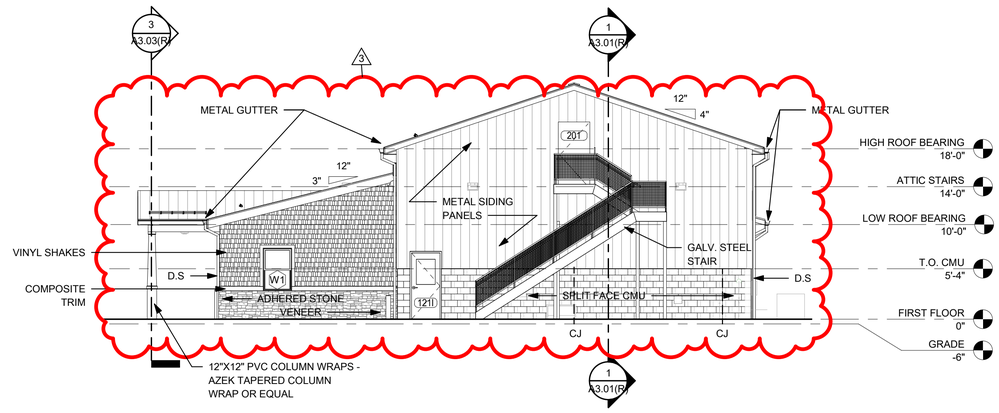


3 A2.01(R) WEST ELEVATION
1/8" = 1'-0"
0' 5' 10' 20'



4 A2.01(R) EAST ELEVATION
1/8" = 1'-0"
0' 5' 10' 20'

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NO.	BY	DATE	DESCRIPTION
3		Date 3	ADDENDUM NO.3

BROOKE COUNTY EMS
BROOKE COUNTY COMMISSION
3031 PLEASANT AVE, WELLSBURG WV 26070
FEBRUARY 24, 2023
CONSTRUCTION DOCUMENTS

DRAWN: DS DATE: 02/24/2023
CHECKED: PMF DATE: 02/24/2023

PROJECT No.
T60-11009.00

BUILDING ELEVATIONS

SHEET No.
A2.01(R)

LAYOUT TAB: BUILDING ELEVATIONS
CAD FILE: E:\T60\T60-11009.00 Brooke EMS-Brooke County Commission\Drawing\Revit\20230324_Brooke EMS_CDS_2022.rvt
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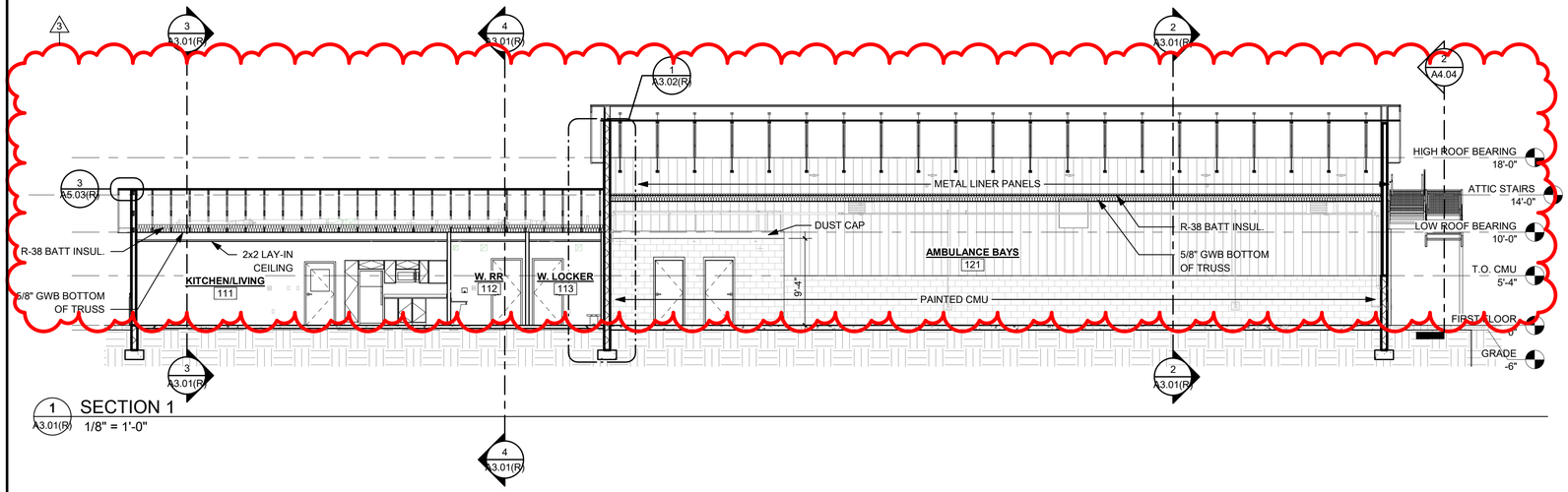
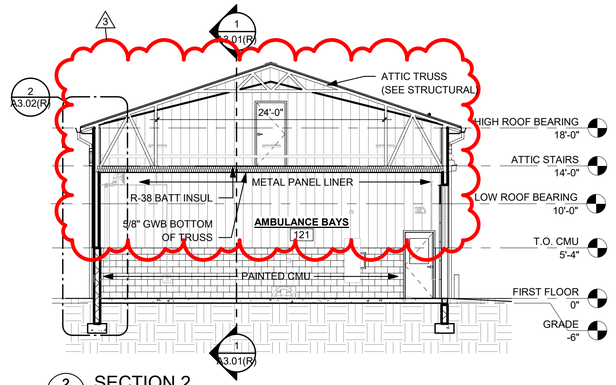
USER: DS

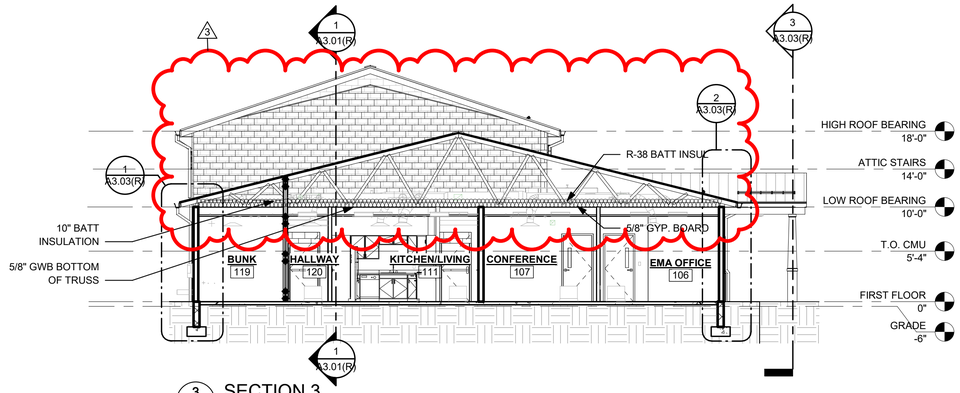
Revised: Addendum 3 - April 4, 2023



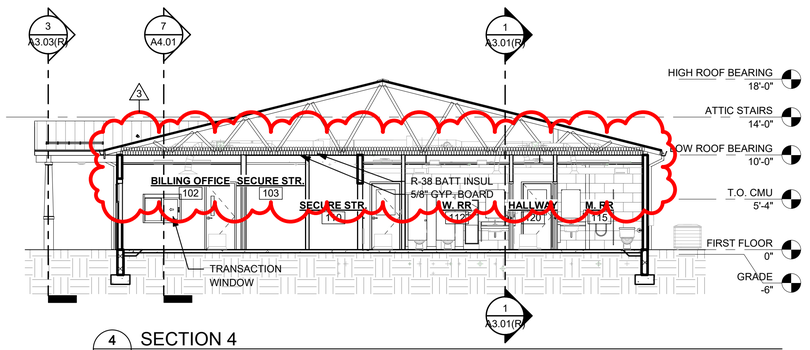
1 A3.01(R) SECTION 1
1/8" = 1'-0"



2 A3.01(R) SECTION 2
1/8" = 1'-0"



3 A3.01(R) SECTION 3
1/8" = 1'-0"



4 A3.01(R) SECTION 4
1/8" = 1'-0"

2 HOUR FR

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NO.	BY	DATE	DESCRIPTION
3		Date 3	ADDENDUM NO 3

BROOKE COUNTY EMS
BROOKE COUNTY COMMISSION
3031 PLEASANT AVE, WELLSBURG WV 26070
FEBRUARY 24, 2023
CONSTRUCTION DOCUMENTS

DRAWN: DS DATE: 02/24/2023
CHECKED: PMF DATE: 02/24/2023

PROJECT No.
T60-11009.00

BUILDING SECTIONS

SHEET No.
A3.01(R)

LAYOUT TAB: BUILDING SECTIONS
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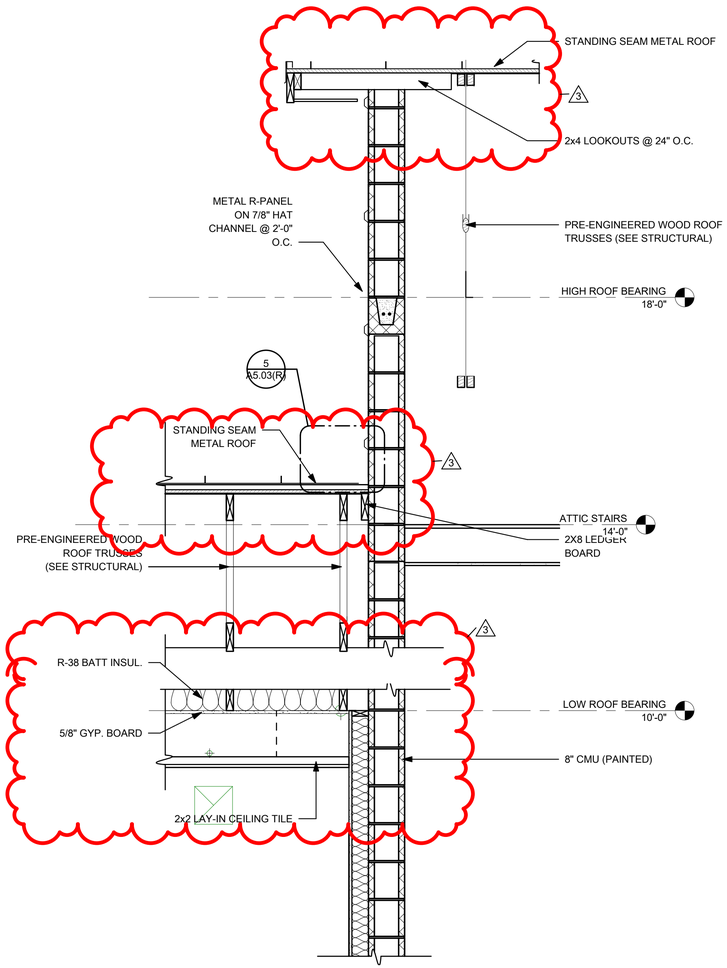
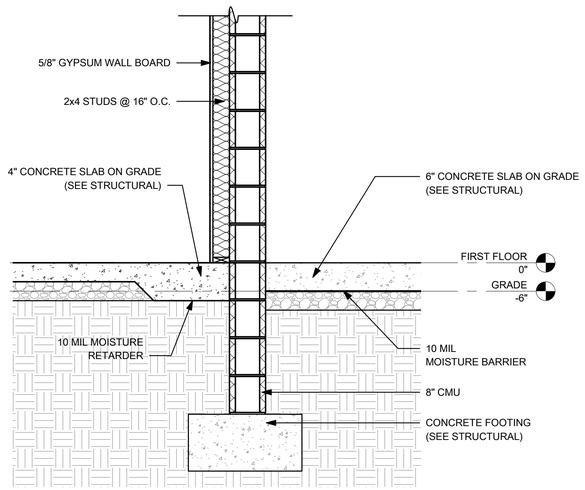
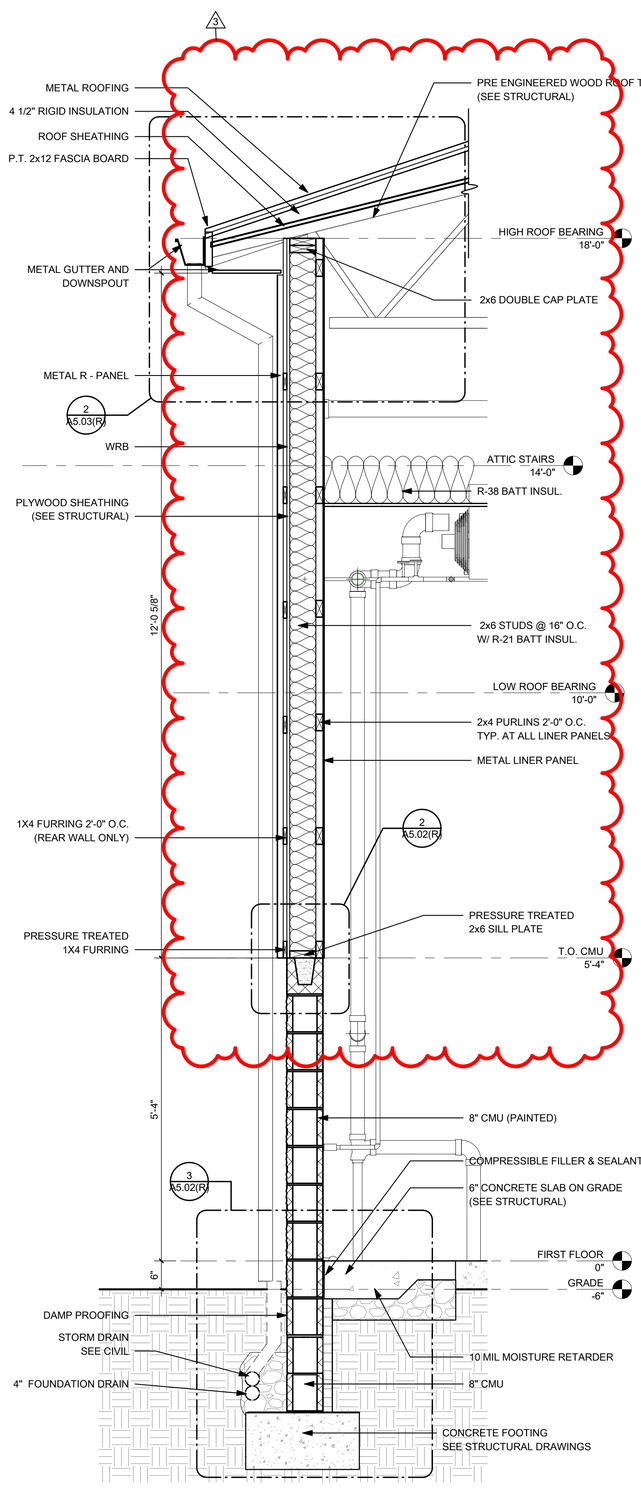




1 A3.02(R) WALL SECTION 1
3/4" = 1'-0"



2 A3.02(R) WALL SECTION 2
3/4" = 1'-0"

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3	Date 3		ADDENDUM NO.3

BROOKE COUNTY EMS
BROOKE COUNTY COMMISSION
3031 PLEASANT AVE. WELLSBURG WV 26070
FEBRUARY 24, 2023
CONSTRUCTION DOCUMENTS

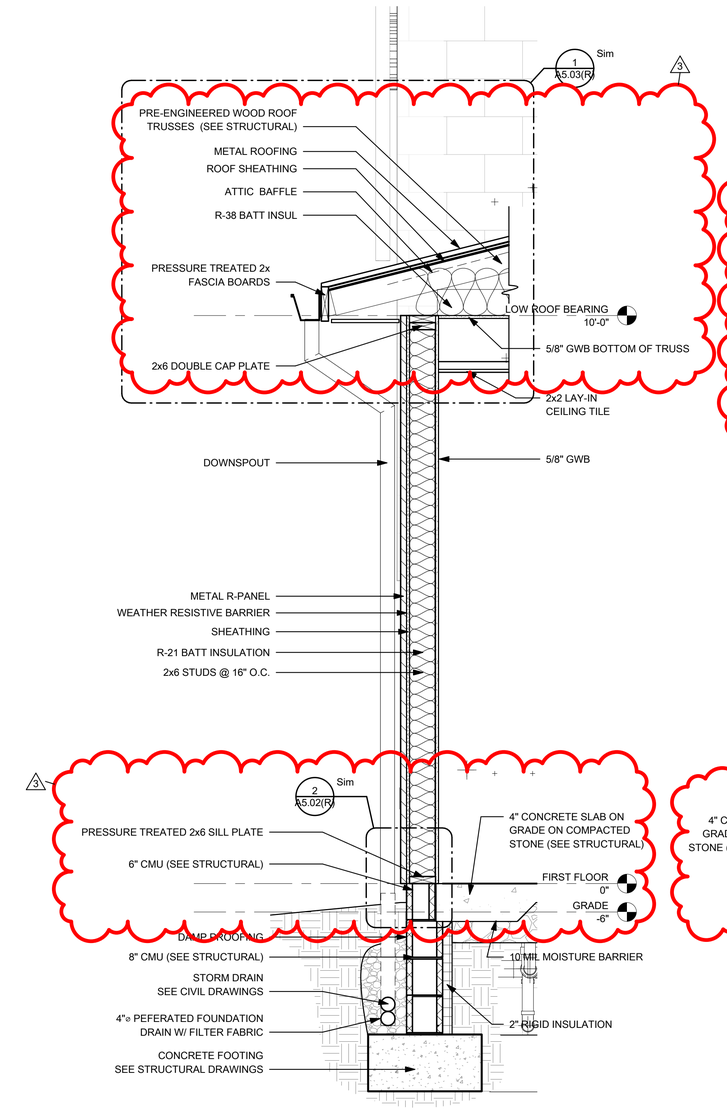
DRAWN: DS DATE: 02/24/2023
CHECKED: PMF DATE: 02/24/2023

PROJECT No.
T60-11009.00

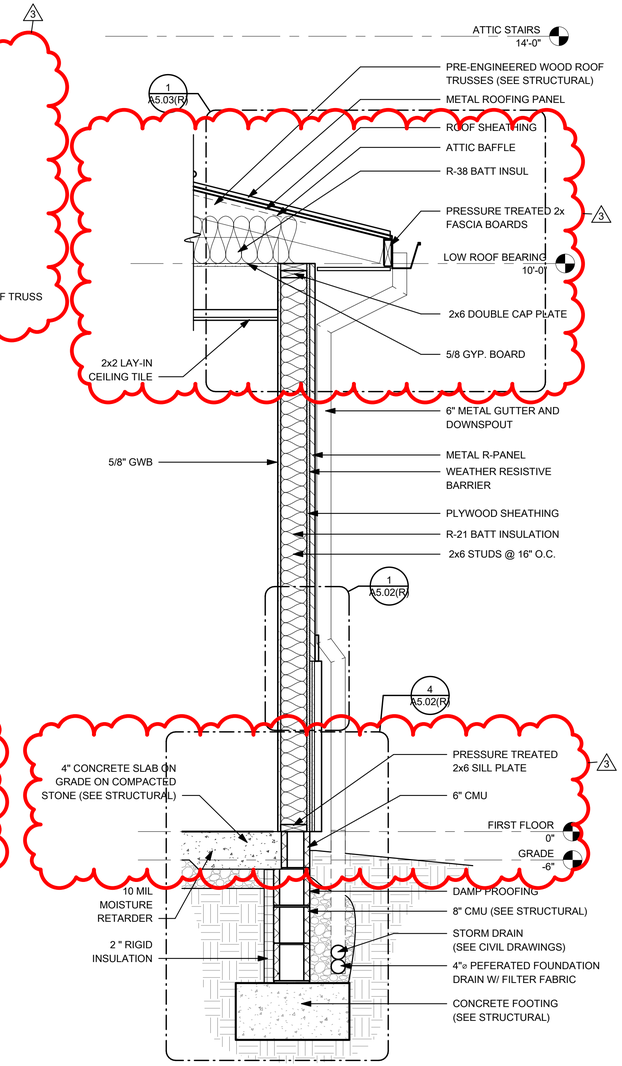
WALL SECTIONS

SHEET No.
A3.02(R)

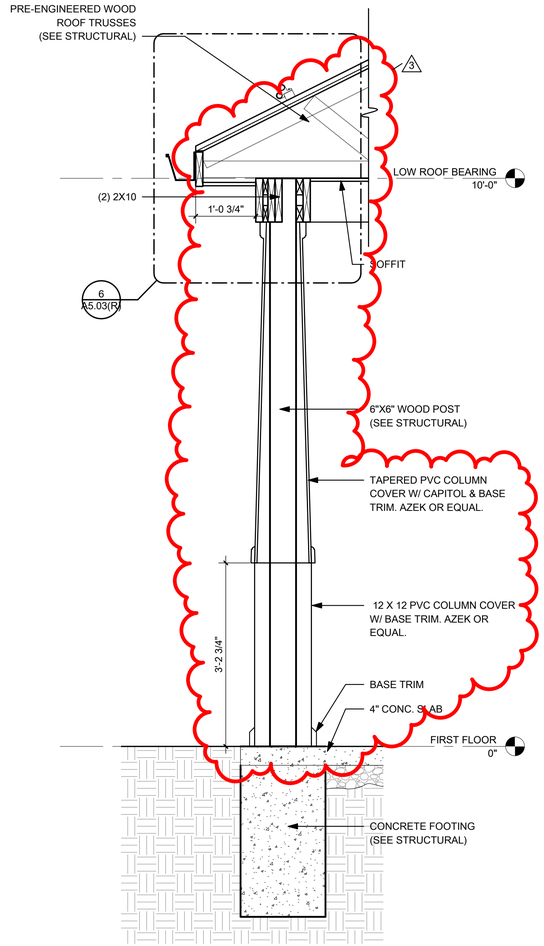
LAYOUT TAB: WALL SECTIONS USER: DS
CAD FILE: T:\60\00\11\009.00-Brooke EMS-Brooke County Commission\Drawing\Revit\20230330_Brooke EMS_CC_2021.rvt PLOT DATE/TIME: 4/4/2023 10:04:23 AM



1 A3.03(R) WALL SECTION 3
3/4" = 1'-0"



2 A3.03(R) WALL SECTION 4
3/4" = 1'-0"



3 A3.03(R) WALL SECTION 5
3/4" = 1'-0"

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NO.	BY	DATE	DESCRIPTION
3	Date 3		ADDENDUM NO.3

BROOKE COUNTY EMS
BROOKE COUNTY COMMISSION
3031 PLEASANT AVE, WELLSBURG WV 26070
FEBRUARY 24, 2023
CONSTRUCTION DOCUMENTS

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CHECKED: PMF DATE: 02/24/2023

PROJECT No.
T60-11009.00

WALL SECTIONS

SHEET No.
A3.03(R)

LAYOUT TAB: WALL SECTIONS
CAD FILE: T:\60\00\11\009.00-Brooke EMS-Brooke County Commission\Drawing\Revit\20200330_Brooke EMS_CD_2021.rvt
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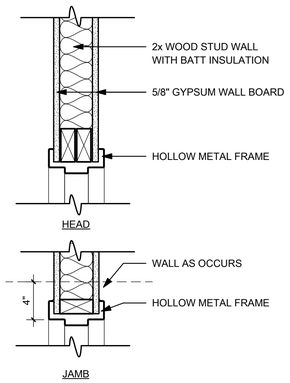
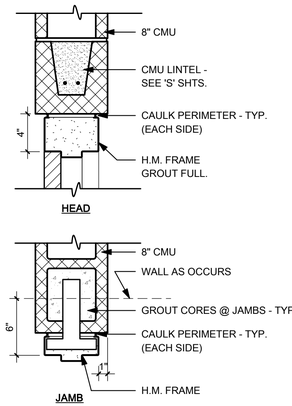
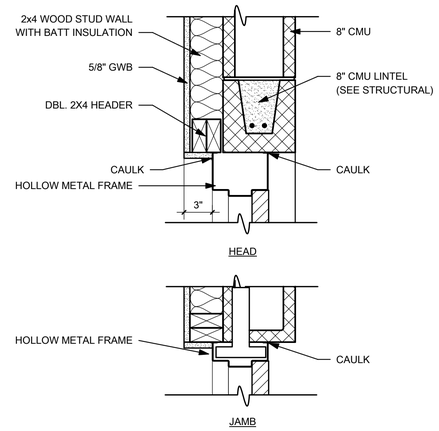


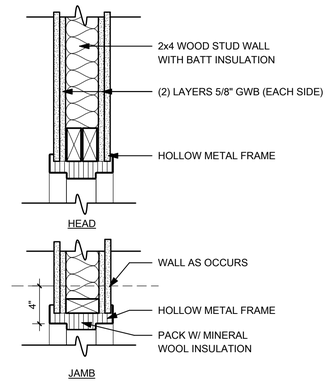
1 DOOR DETAIL - INT. - WALL TYPE A
A5.01(R) 1 1/2" = 1'-0"



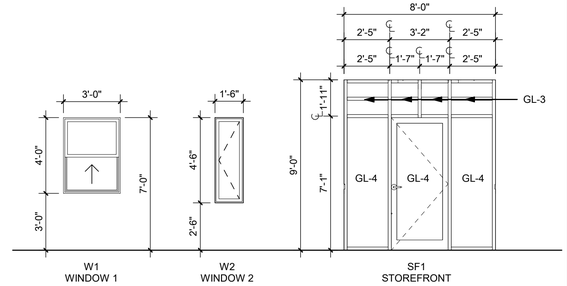
2 DOOR DETAIL - INT. - WALL TYPE B
A5.01(R) 1 1/2" = 1'-0"



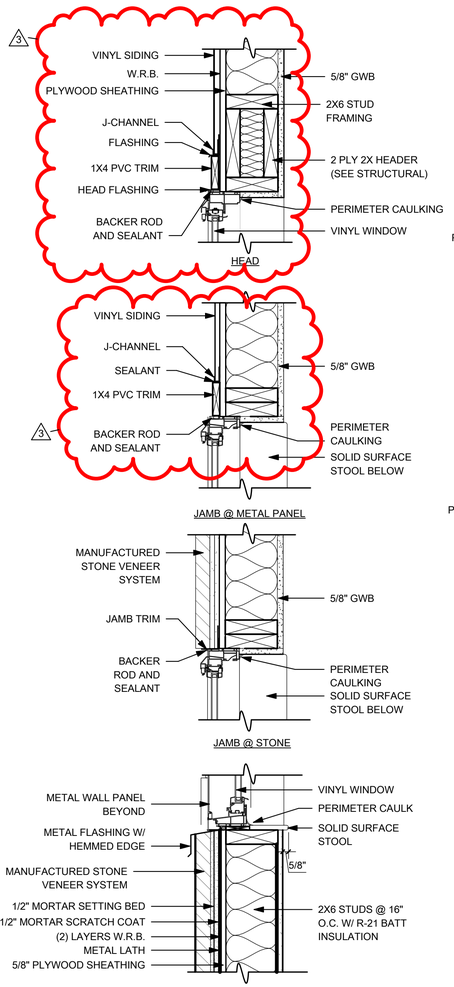
3 DOOR DETAIL - INT. - WALL TYPE C
A5.01(R) 1 1/2" = 1'-0"



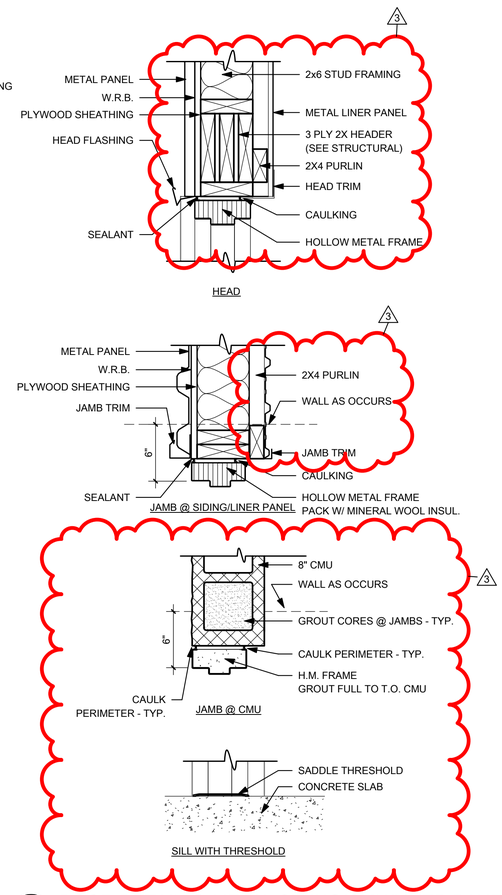
4 DOOR DETAIL - INT. - WALL TYPE D
A5.01(R) 1 1/2" = 1'-0"



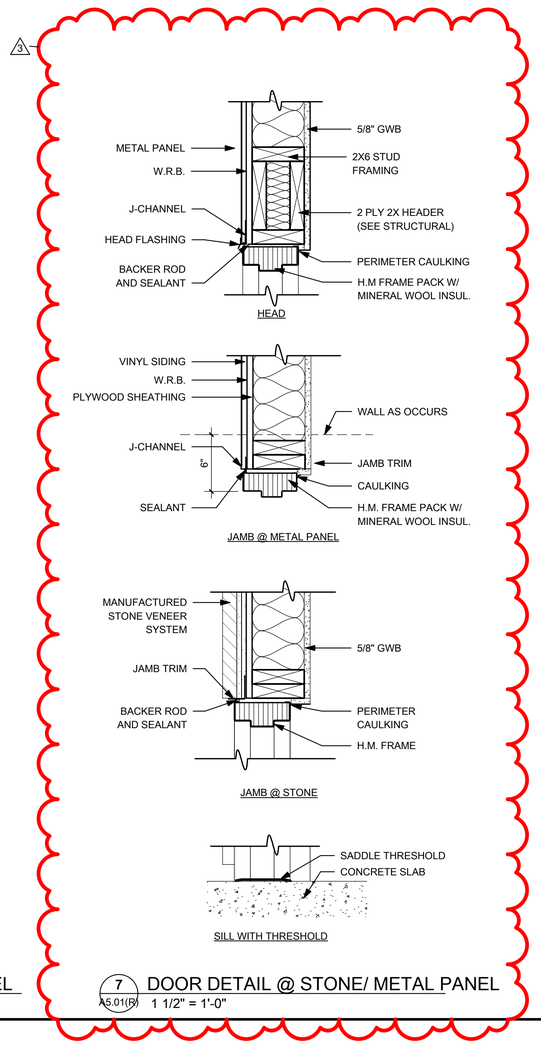
WINDOW TYPE LEGEND
1/4" = 1'-0"



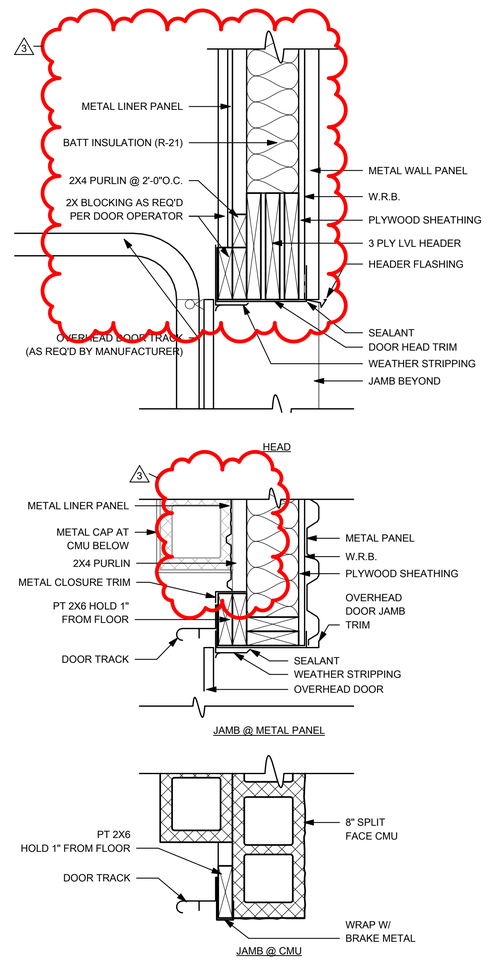
5 WINDOW DETAIL - EXT. (TYP.)
A5.01(R) 1 1/2" = 1'-0"



6 DOOR DETAIL @ METAL SIDING/CMU/LINER PANEL
A5.01(R) 1 1/2" = 1'-0"



7 DOOR DETAIL @ STONE/ METAL PANEL
A5.01(R) 1 1/2" = 1'-0"



8 DOOR DETAIL - OVERHEAD GARAGE DOOR HEAD AND JAMB DETAIL
A5.01(R) 1 1/2" = 1'-0"

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NO.	BY	DATE	DESCRIPTION
3	Date 3		ADDENDUM NO 3

BROOKE COUNTY EMS
BROOKE COUNTY COMMMISSION
3031 PLEASANT AVE, WELLSBURG WV 26070
FEBRUARY 24, 2023
CONSTRUCTION DOCUMENTS

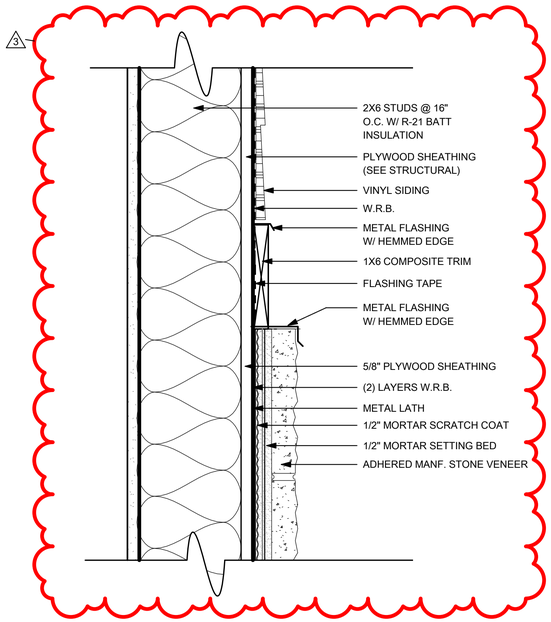
DRAWN: DS DATE: 02/24/2023
CHECKED: PMF DATE: 02/24/2023

PROJECT No.
T60-11009.00

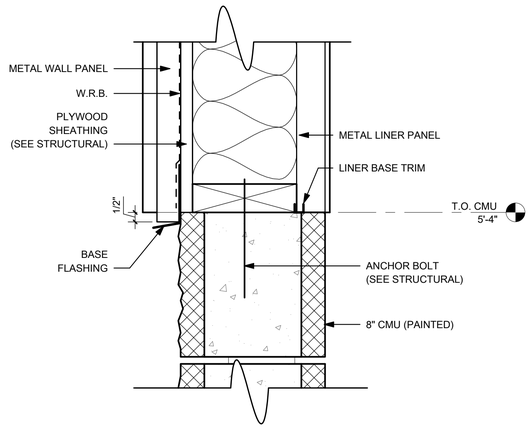
DOOR AND WINDOW DETAILS

SHEET No.
A5.01(R)

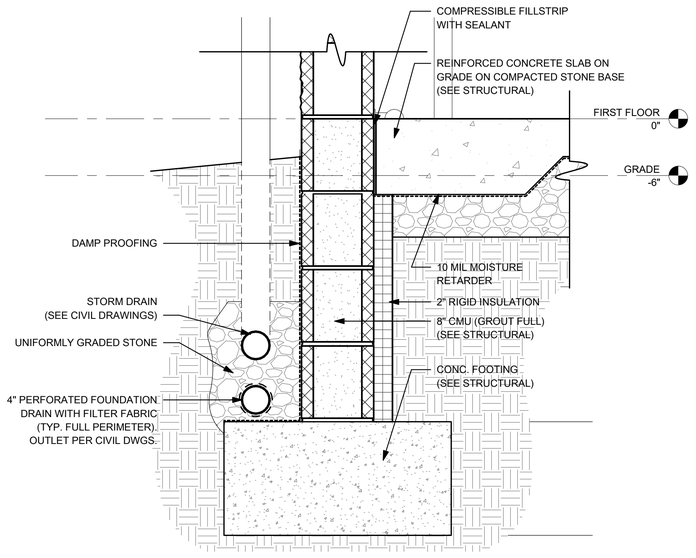
LAYOUT TAB: DOOR AND WINDOW DETAILS
CAD FILE: K:\60s\T60-11009.00\Brooke EMS-Brooke County Commission (Drawing)\Revit\20220824_Brooke EMS_CSD_22021.rvt
PLOT DATE/TIME: 4/4/2023 10:04:54 AM
USER: DS



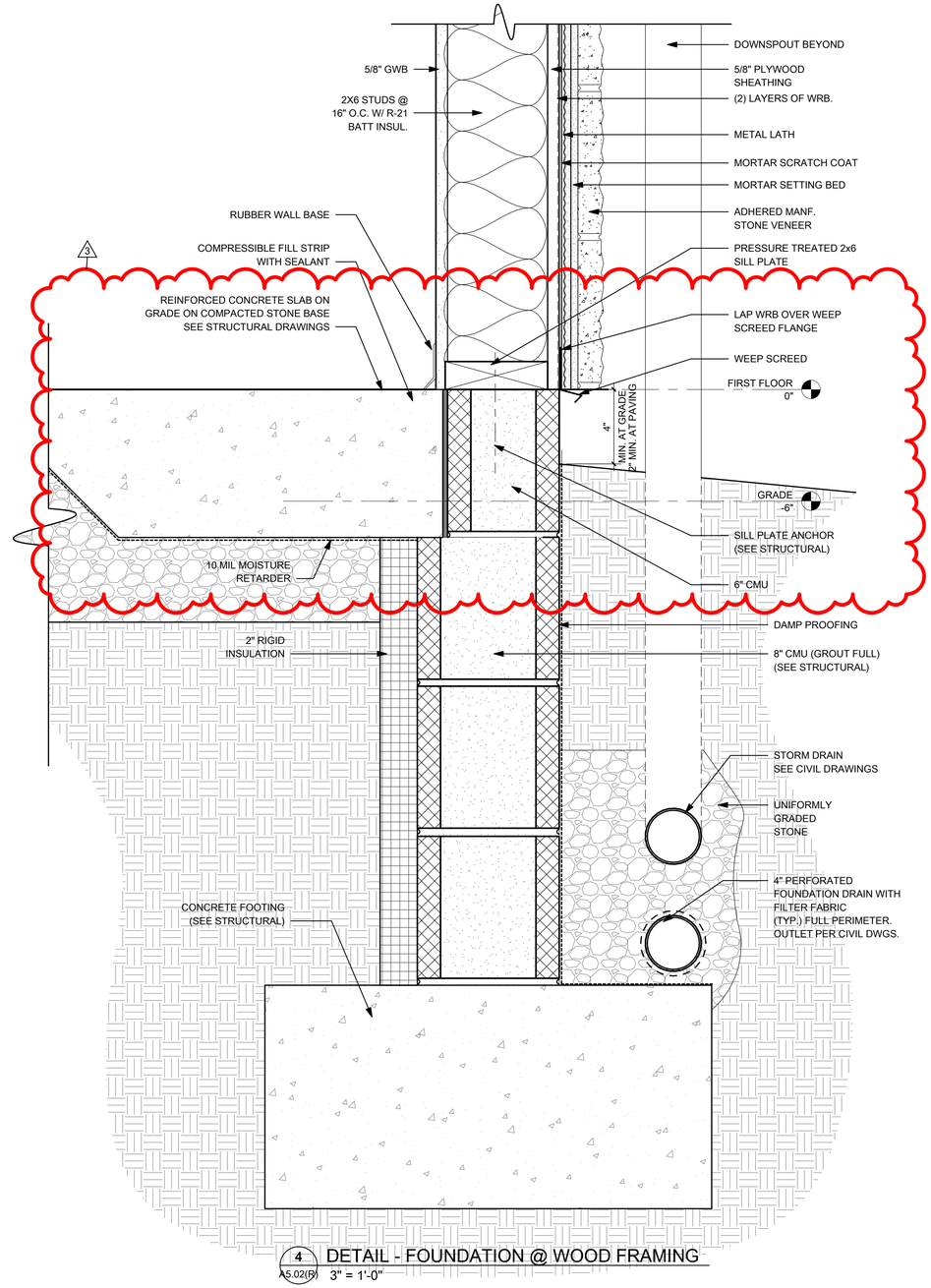
1 A5.02(R) DETAIL - METAL PANEL/ MSV
3" = 1'-0"



2 A5.02(R) DETAIL - METAL PANEL/CMU
3" = 1'-0"



3 A5.02(R) DETAIL - FOUNDATION @ CMU WALL
1 1/2" = 1'-0"



4 A5.02(R) DETAIL - FOUNDATION @ WOOD FRAMING
3" = 1'-0"

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NO.	BY	DATE	DESCRIPTION
3		Date 3	ADDENDUM NO 3

BROOKE COUNTY EMS
BROOKE COUNTY COMMISSION
3031 PLEASANT AVE, WELLSBURG WV 26070
FEBRUARY 24, 2023
CONSTRUCTION DOCUMENTS

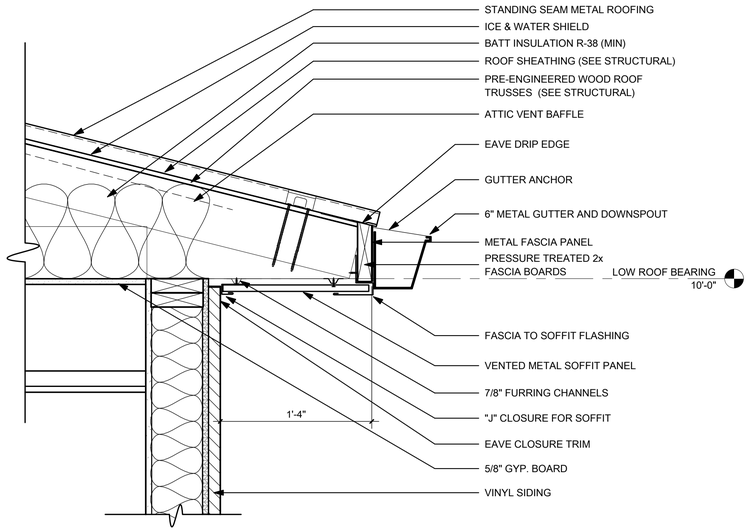
DRAWN: DS DATE: 02/24/2023
CHECKED: PMF DATE: 02/24/2023

PROJECT No.
T60-11009.00

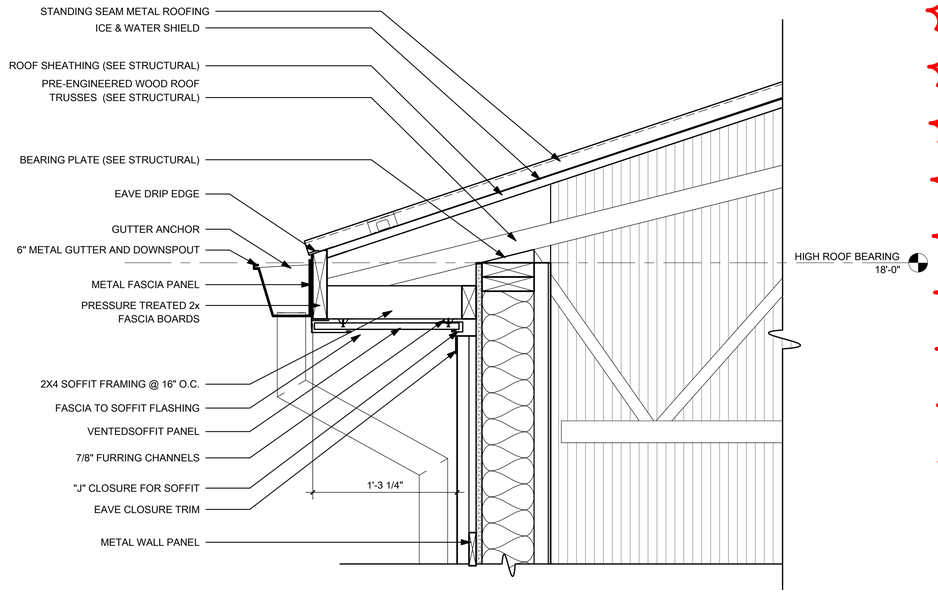
WALL DETAILS

SHEET No.
A5.02(R)

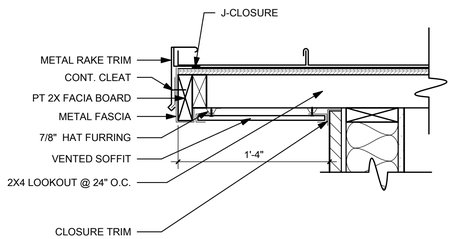
LAYOUT TAB: WALL DETAILS
CAD FILE: K:\60\T60-11009.00-Brooke EMS-Brooke County Commission (Drawing)\Revit\20230304_Brooke EMS_CO_23021.rvt
PLOT DATE/TIME: 4/4/2023 10:05:00 AM
USER: DS



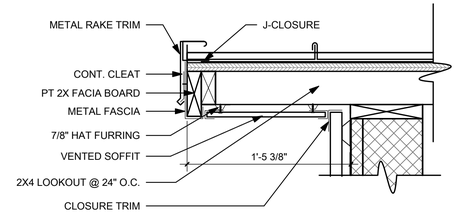
1 A5.03(R) DETAIL - ROOF EAVE @ ADMINISTRATION (TYP.)
1 1/2" = 1'-0"



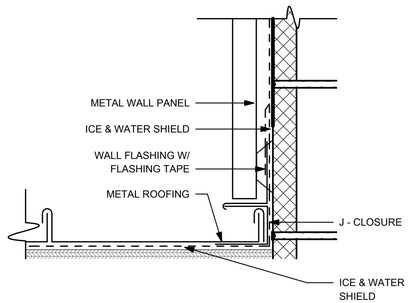
2 A5.03(R) DETAIL - ROOF EAVE @ GARAGE (TYP.)
1 1/2" = 1'-0"



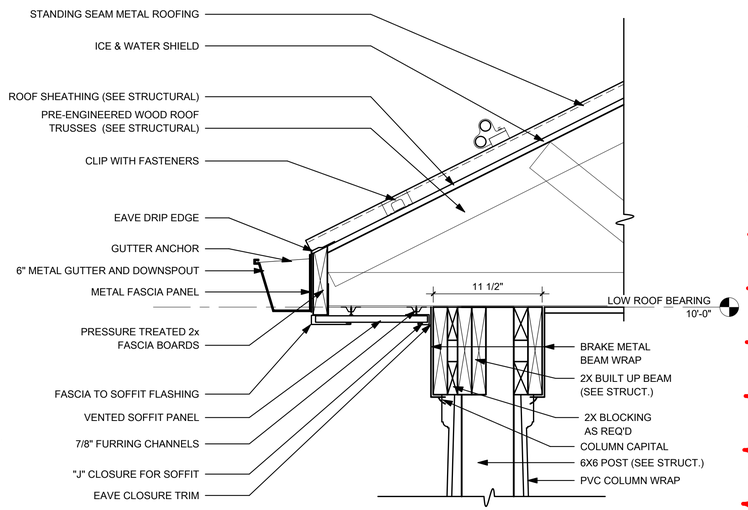
3 A5.03(R) DETAIL - RAKE @ METAL PANEL
1 1/2" = 1'-0"



4 A5.03(R) DETAIL - RAKE @ CMU
1 1/2" = 1'-0"



5 A5.03(R) DETAIL - ROOF/WALL
3" = 1'-0"



6 A5.03(R) DETAIL - COLUMN @ PORCH
1 1/2" = 1'-0"

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BROOKE COUNTY EMS
BROOKE COUNTY COMMMISSION
3031 PLEASANT AVE, WELLSBURG WV 26070
FEBRUARY 24, 2023
CONSTRUCTION DOCUMENTS

DRAWN: DS DATE: 02/24/2023
CHECKED: PMF DATE: 02/24/2023

PROJECT No.
T60-11009.00

ROOF DETAILS

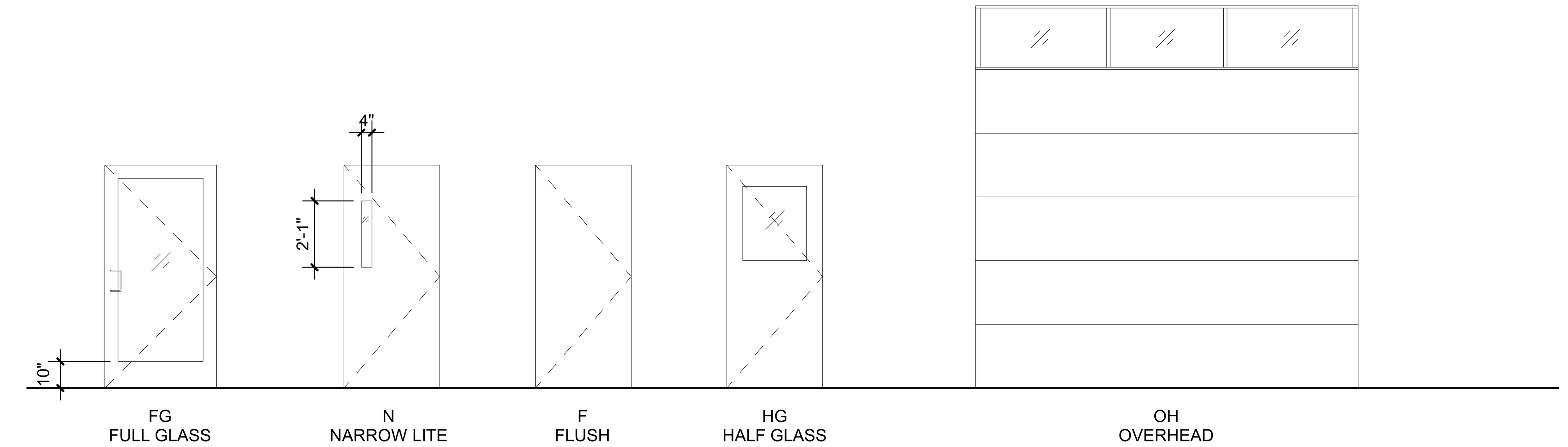
SHEET No.
A5.03(R)

USER: DS
PLOT DATE/TIME: 4/4/2023 10:05:06 AM
LAYOUT TAB: ROOF DETAILS
CAD FILE: R:\60\T60-11009.00 Brooke EMS-Brooke County Commission Drawings\Revit\2023\2024_Brooke EMS_CD_2023.rvt

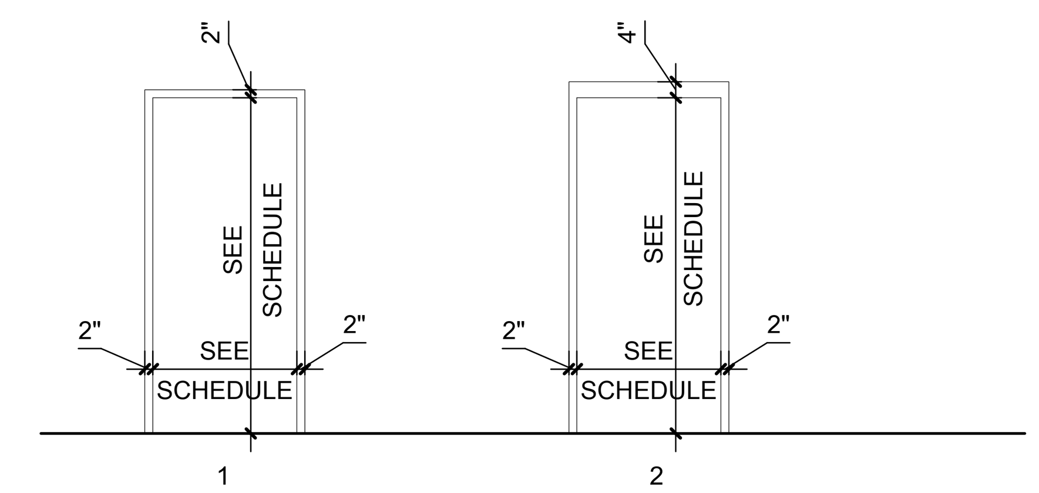
DOOR, FRAME, & HARDWARE SCHEDULE

#	DOOR						FRAME				ASSEMBLY		
	TYPE	WIDTH	HEIGHT	THICKNESS	MATERIAL	FINISH	FRAME TYPE	FRAME MATERIAL	FRAME FINISH	FIRE RATING	HARDWARE SET	ACCESS CONTROL	REMARKS
101	FG	3'-0"	7'-0"	1 3/4"	ALUM	FF	SF1	ALUM	FF		01		
101B	FG	3'-0"	7'-0"	1 3/4"	ALUM	FF	1	H.M.	P		02	Yes	
102	N	3'-0"	7'-0"	1 3/4"	HM	P	1	H.M.	P		15		
103	F	3'-0"	7'-0"	1 3/4"	HM	P	1	H.M.	P		17		
104	F	3'-0"	7'-0"	1 3/4"	HM	P	1	H.M.	P		17		
105	F	3'-0"	7'-0"	1 3/4"	HM	P	1	H.M.	P		12		
106	N	3'-0"	7'-0"	1 3/4"	HM	P	1	H.M.	P		15		
107	N	3'-0"	7'-0"	1 3/4"	HM	P	1	H.M.	P		14		
108	F	3'-0"	7'-0"	1 3/4"	HM	P	1	H.M.	P		05		
109	F	3'-0"	7'-0"	1 3/4"	HM	P	1	H.M.	P		06		
110	F	3'-0"	7'-0"	1 3/4"	HM	P	1	H.M.	P		17		
111A	HG	3'-0"	7'-0"	1 3/4"	HM	P	1	H.M.	P		07		
111B	HG	3'-0"	6'-8"	1 3/4"	HM	P	1	H.M.	P		03		
112	F	3'-0"	7'-0"	1 3/4"	HM	P	1	H.M.	P		11		
113	F	3'-0"	7'-0"	1 3/4"	HM	P	1	H.M.	P		13		
114	F	3'-0"	7'-0"	1 3/4"	HM	P	1	H.M.	P		13		
115	F	3'-0"	7'-0"	1 3/4"	HM	P	1	H.M.	P		11		
116	F	3'-0"	7'-0"	1 3/4"	HM	P	1	H.M.	P	90 MIN	18		
117	F	3'-0"	7'-0"	1 3/4"	HM	P	1	H.M.	P	90 MIN	18		
118	F	3'-0"	7'-0"	1 3/4"	HM	P	1	H.M.	P	90 MIN	18		
119	F	3'-0"	7'-0"	1 3/4"	HM	P	1	H.M.	P	90 MIN	18		
120	HG	3'-0"	7'-0"	1 3/4"	HM	P	1	H.M.	P		10	Yes	
121A	F	3'-0"	7'-0"	1 3/4"	HM	P	2	H.M.	P	90 MIN	08		
121B	F	3'-0"	7'-0"	1 3/4"	HM	P	2	H.M.	P	90 MIN	09		
121C	HG	3'-0"	7'-0"	1 3/4"	HM	P	1	H.M.	P		10	Yes	
121D	OH	12'-0"	12'-0"	1 3/8"	STL	FF					16		
121E	OH	12'-0"	12'-0"	1 3/8"	STL	FF					16		
121F	OH	12'-0"	12'-0"	1 3/8"	STL	FF					16		
121G	OH	12'-0"	12'-0"	1 3/8"	STL	FF					16		
121H	OH	12'-0"	12'-0"	1 3/8"	STL	FF					16		
121I	HG	3'-0"	7'-0"	1 3/4"	HM	P	1	H.M.	P		10	Yes	
122	F	3'-0"	7'-0"	1 3/4"	HM	P	2	H.M.	P		17		
123	F	[illegible]	[illegible]	1 3/4"	HM	P	2	H.M.	P		04		
201	F	3'-0"	6'-8"	1 3/4"	HM	P	1	H.M.	P		10	Yes	

3



DOOR TYPE LEGEND
1/4" = 1'-0"



FRAME TYPE LEGEND
1/4" = 1'-0"

THRASHER
600 WHITE OAKS BLVD.
P.O. BOX 940
BRIDGEPORT, WV 26330
P (304) 624-4108
F (304) 624-7831
www.thethrashergroup.com

NO.	BY	DATE	DESCRIPTION
3		Date 3	ADDENDUM NO 3

BROOKE COUNTY EMS
BROOKE COUNTY COMMMISSION
3031 PLEASANT AVE, WELLSBURG WV 26070
FEBRUARY 24, 2023
CONSTRUCTION DOCUMENTS

DRAWN: DS DATE: 02/24/2023
CHECKED: PMF DATE: 02/24/2023

PROJECT No.
T60-11009.00

SCHEDULES & DIAGRAMS

SHEET No.
A6.01(R)

LAYOUT TAB: SCHEDULES & DIAGRAMS
PLOT DATE/TIME: 4/4/2023 10:05:13 AM
USER: DS

REVISED: ADDENDUM 3, April 4, 2023

Structure Table		
Inlet Name	Inlet Details	Inlet Center Location
1-5	RIM = 692.93' 12" INV IN = 690.38'	N:655327.4849 E:1659404.6633
1-4	RIM = 693.38' 12" INV IN = 690.65' 12" INV OUT = 690.55'	N:655314.4948 E:1659434.5829
1-2	RIM = 694.02' 12" INV IN = 691.30' 12" INV OUT = 691.20'	N:655227.0688 E:1659449.7744
1-1	RIM = 694.05' 12" INV OUT = 691.50'	N:655186.6292 E:1659451.9642
1-3	RIM = 694.14' 12" INV IN = 691.03' 12" INV OUT = 690.93'	N:655257.3533 E:1659436.2111

Structure Table		
Inlet Name	Inlet Details	Inlet Center Location
EX-1	RIM = 694.13' 6" INV IN = 690.30' 8" INV OUT = 677.94'	N:655115.3997 E:1659417.9969
S-1	RIM = 694.18' 4" INV IN = 690.54' 4" INV IN = 690.54' 6" INV OUT = 690.44'	N:655120.7166 E:1659413.1250
S-2	RIM = 693.88' 4" INV IN = 691.50' 4" INV OUT = 691.50'	N:655171.9278 E:1659401.9636
S-3	RIM = 693.88' 4" INV IN = 691.50' 4" INV OUT = 691.50'	N:655171.8544 E:1659400.4000
S-4	RIM = 694.02' 4" INV IN = 691.07' 4" INV OUT = 690.97'	N:655129.5331 E:1659403.3973

NOTE:

1) SEE SITE PLAN ELECTRICAL(E-SITE) FOR PARKING LOT LIGHT POLES AND CONDUIT
2) SEE ELECTRICAL DETAILS FOR TRANSFORMER PAD

WV 2

NORTH

OVERHEAD ELECTRIC AND UNDERGROUND COMMUNICATION LINES RELOCATED

FOUNDATION DRAIN(TYP.) TIED INTO BASIN OR NEAREST INLET

ROCK OUTLET PROTECTION

SILT FENCE(TYP.)

PROPERTY LINE

LIGHT POLE(TYP.)

25 LF OF 8" HDPE

N: 655325.9976
E: 1659376.2434
ELEV: 692.00

N: 655177.9231
E: 1659385.0095
ELEV: 692.97

8"Ø RISER
TOP = 691.5
ORIFICE 4" = 688.6
OUT 8" = 688.6

MP-E
MP 207-51

N: 655130.5270
E: 1659396.5468
ELEV: 693.88

ROCK BANK PROTECTION

BASIN

OIL/WATER SEPARATOR
REFER TO P3.01

N: 655178.0433
E: 1659385.2687
ELEV: 694.50

N: 655312.5517
E: 1659378.8490
ELEV: 694.50

N: 655327.0566
E: 1659390.3645
ELEV: 688.60

N: 655320.0624
E: 1659410.3601
ELEV: 694.38

W.W. #1-5

N: 655332.0622
E: 1659410.5093
ELEV: 692.00

175' OF
(2)6" ELECTRICAL
(3)4" COMMUNICATION
CONDUITS

C.O. #S-4

4' OF 4" PVC

C.O. #S-3

8' OF 4" PVC

42' OF 4" PVC

C.O. #S-2

8' OF 4" PVC

52' OF 4" PVC

CURB

4' OF 4" PVC

7' OF 6" PVC

ADA PARKING
SIGN (TYP.)

N: 655237.3721
E: 1659425.8198
ELEV: 694.46

N: 655314.3315
E: 1659416.1399
ELEV: 694.50

½" IRF

4" CONDUIT

TRANSFORMER

BOLLARDS (TYP.)

N: 655113.4055
E: 1659415.3845
ELEV: 693.99

M.H. #S-1

M.H. #EX-1

N: 655131.3851
E: 1659414.5264
ELEV: 693.88

N: 655180.7130
E: 1659441.2051
ELEV: 694.50

CURB AND SIDEWALK TRANSITION
12:1 MAX SLOPE

DOWN SPOTS TIED INTO NEAREST INLET
OR DIRECTLY TO BASIN

INSTALL NEW
INV. AND
DROP IN EXISTING
MANHOLE

(2) 5" CONDUITS

CP 95/34

FLAG POLE

57' OF 12" HDPE

33' OF 12" HDPE

D.I. #1-3

D.I. #1-4

85' OF 3" GASLINE

N: 655115.1218
E: 1659451.3435
ELEV: 696.02

N: 655133.1013
E: 1659450.4854
ELEV: 695.90

N: 655157.0740
E: 1659449.3413
ELEV: 695.13

(2)4" CONDUITS

N: 655238.3075
E: 1659445.4183
ELEV: 694.36

½" IRF

PARKING
BLOCKS (TYP.)

D.I. #1-1

40' OF 12" HDPE

MP 207-52
CP 95/33

D.I. #1-2

2" PVC SDR-21 SERVICE
WATERLINE W/ WATER
METER BY CITY

LIMITS OF DISTURBANCE

6" FIRE PROTECTION
C-900 DR-18 PVC WATERLINE
W/BACK-FLOW PREVENTION
AND INDICATOR VALVE

HOT-TAP COMPLETE
EX WATERLINE

PLEASANT AVENUE

10' 0 10' 20'

THRASHER
THE THRASHER GROUP INC.
600 WHITE OAKS BLVD,
P.O. BOX 940
BRIDGEPORT, WV 26330

P (304) 624-4108
F (304) 624-7831

www.thethrashergroup.com

JEFFREY L. GOLA
REGISTERED
15621
STATE OF
PROFESSIONAL ENGINEER
2/24/23

NO.	BY	DATE	DESCRIPTION
1	BD	4-4-2023	ELECTRIC LOCATION AND WATERLINE TYPE CHANGES

BROOKE COUNTY EMS

BROOKE COUNTY COMMISSION
3031 PLEASANT AVE, WELLSBURG, WV 26070
02/24/2023
CONSTRUCTION DOCUMENTS

DRAWN: DATE:
CHECKED: DATE:
APPROVED: DATE:

PROJECT No.
T60-11009

SITE PLAN

SHEET No.
C2.01 R

CAD FILE: R:\060\T60-11009.00-Brooke EMS-Brooke County Commission-\Drawing\Civil\11009-SITE PLAN.dwg
PLOT DATE/TIME: 4/4/2023 10:45 AM
LAYOUT: C2.01-SITE PLAN
USER: bruce degroot

General Notes:

1. Design Code: International Building Code, 2018 Edition.

2. No provisions have been made for future horizontal or vertical expansion.

3. General Contractor shall verify all dimensions and conditions related to existing construction, existing services, and the site.

4. Construction loads shall not exceed design live loads. Shoring and re-shoring is the responsibility of the General Contractor.

5. The project is only stable in its completed form. The requirement for any and all bracing, shoring, or temporary supports and the planning sequences requiring them is the responsibility of the contractor.

Arrow Engineering's Scope of Services:
Arrow Engineering has been engaged as the structural engineer of record for this project. All modifications to the structure outside of what is explicitly shown herein, including interpretations of things not detailed on these drawings, must be reviewed by Arrow.

Design Data:

Wind:	
Basic Design Wind Speed: V	121 mph
Risk Category:	Risk Category IV
Wind exposure classification:	B
Internal Pressure Coefficient:	± 0.18
Exterior C&C Pressure	25 psf
Live Loads:	
Commercial:	
Assembly Areas and Common Spaces	100 psf
First Floor Corridors	100 psf
Fire Escapes	100 psf
Offices	50 psf
Typical Roof	20 psf
Light Storage	20 psf
Attic Space above Ambulance Bays	125 psf
Snow Load Data:	
Ground Snow Load: P_g	25 psf
Flat Roof Snow Load: P_f	24 psf (min)
Snow Exposure Factor: C_e	1.0
Thermal Factor: C_t	1.0
Snow Load Importance Factor: I_s	1.2
Slope Factor(s): C_s	1.0
Seismic Load Data:	
Risk Category:	Risk Category IV
Seismic Importance Factor: I_E	1.50
Mapped Spectral Response Accel. Parameters:	S_s = 0.091; S_1 = 0.047
Mapped Spectral Response Accel. Parameters:	S_{DS}= 0.097; S_{D1}= 0.075
Seismic Site Class:	D (assumed)
Seismic Design Class:	A
SFRS:	CF Shear Walls
Structure Weight:	210 kip
Response Modification Coefficient: R	6.5
Seismic Response Coefficient: Cs	0.022
Seismic Procedure Used:	ELFP
Rain Load Data:	
15-Minute Rainfall Intensity:	6.27 in./hr
60-Minute Rainfall Intensity:	3.22 in./hr
Flood Design Data:	
Flood Design Class:	
Bottom Elevation of lowest horiz. member (noncoastal):	~1100 ft

Construction Means & Methods:

1. Contractor assumes responsibility for job site conditions, including safety of all persons, property, and condition of materials, during the course of work and for the duration of the project. The contractor shall indemnify and hold Owner and Structural Engineer harmless from any and all liability, real or alleged, in connection with the performance of the work on this project, excepting for liability arising from the sole negligence of Owner or Structural Engineer.

2. The structural engineers work as presented in these documents represents the finished structure. Where deemed necessary to convey the intent of the structural engineer's design, information regarding the existing structure may be provided on these documents; however it is the responsibility of the contractor to verify all existing conditions and dimensions. The contractor shall provide all measures necessary to protect the new and existing structure during construction. Such measures shall include, but not be limited to: protection of subgrade from freezing conditions, bracing of elements, shoring for loads due to construction equipment, temporary structures, and partially completed work. The contractor shall also assume responsibility for all temporary shoring, falsework, or required bracing to accomplish this work.

3. Observation visits to the site by structural engineer shall not include inspection of any item and a third party inspector shall complete all required inspections of the site.

4. The means and methods of construction rest solely in the responsibility of the contractor and the structural engineer has no control over or charge of these items nor shall not be responsible in any way for construction means, methods, techniques, sequences, or procedures, or safety or safety precautions and programs in connection with any construction activities, since these are solely contractor's responsibility.

Construction Means & Methods (cont.):

5. The structural engineer will not be held responsible for the contractor's schedule or ability to carry out any construction activities in accordance with the contract documents or their own agreed upon timeline with the owner. Nor shall the structural engineer have control over or charge of actions of Contractor, Subcontractor, or any of their Agents, or employees, or any other persons performing portions of any construction activities. All inquiries to the engineer that arise during construction and all submittal reviews shall be allotted 14 days for responses.

Shop Drawing and Submittal Requirements:

1. The project manual shall govern all submittal requirements.

2. The general contractor shall review, check, and stamp "Approved" all shop drawings prior to submitting them to the Architect. Shop drawings which have not been stamped "Approved" by the General Contractor do not conform to the requirements of the Contract Documents and will be rejected.

3. The General Contractor shall provide a shop drawing submittal schedule for anticipated submittals at least two weeks prior to submittal of the first set of shop drawings.

4. Submittals including shop drawings must be approved prior to the start of fabrication. All parties proceed at their own risk without approval on submittals. The maximum turn-around time for shop drawings will be two weeks (ten working days) from the date of receipt to Arrow Engineering to the date of return delivery. The general contractor is encouraged to communicate with Arrow on the need for faster approval times or when larger amounts of submittals are anticipated. All efforts will be made to expedite approval when requested.

5. Reproducing Arrow's drawings in whole or in part for use in shop drawings is cause for rejection of the entire submittal. All shop drawings and details shall be original and complete.

6. Electronic copies of Arrow's drawings may be available on a case-by-case basis for an additional charge. Requests for files must be submitted with as much lead time as other submittals.

An outline summary of the expected submittals and shop drawings is provided below (the requirements of the project manual, if provided, govern):
- Concrete Mix Design
- Concrete Compressive Strength Test Results
- Rebar Shop Drawings
- Structural Steel Shop Drawings
- Wood Truss Drawings / Certification
- Exterior Stair Shop Drawings
- Railing Shop Drawings

Performance and Quality Requirements:

1. No provision of any referenced standard specification, manual or code (whether or not specifically incorporated by reference in the contract documents) shall be effective to change the duties and responsibilities of owner, contractor, engineer, supplier, or any of their consultants, agents, or employees from those set forth in the contract documents. Nor shall it be effective to assign to the structural engineer of record (or any of the structural engineer of record's consultants, agents, or employees) any duty or authority to supervise or direct the furnishing or performance of the work or any duty or authority to undertake responsibilities contrary to the provisions or the contract documents.

2. Contractor shall review the project site and contract documents and warrants that it has the capacity to complete the project as planned for the project budget and within the timeline allotted to the owner.

3. Contract documents include those which are published directly by Arrow Engineering including by not limited to, the structural documents (drawings and specifications). They do not include shop drawing, vendor drawings, or materials prepared and submitted by the contractor. Any acceptance of shop drawings or vendor supplied documents is for general conformance with Arrow's intent only.

4. Reference to standard specifications or any technical society, organization, or association or to codes of local or state authorities, shall mean the latest standard, code, specification or tentative specification adopted at the date of taking bids, unless specifically stated otherwise.

5. Where a conflict occurs within the contract documents to any recognizable material specification or building code, the strictest requirement shall govern.

6. Contractor shall obtain and coordinate edge of slab and roof deck edge dimensions with other disciplines (which may include vendor supplied information only available after bidding), opening locations and size, depressed slab locations and extents, slab slopes, curb locations, and non-structural wall locations. Architect/Structural engineer shall be notified of any discrepancy or omission. In the event of discrepancies, the non-structural architectural details shall govern.

7. The responsibility for all means, methods, sequences, techniques, and procedures used during construction is the responsibility of the contractor.

8. Contractor has sole responsibility to comply with all OSHA regulations.

9. The following list of items are not the responsibility of Arrow Engineering and have not been included in the scope of work (unless noted otherwise). These items are considered to be a delegated design under the responsibility of the contractors. All work for these items shall be completed under the direction of a licensed Professional Engineer in the state where the work is located and submitted to Arrow Engineering for approval prior to beginning work.

- Steel, concrete pan, or timber framed stairs and their connections
- Guardrail and handrail
- Cold formed metal framing
- Furnishing and finishes
- Storage or shelf systems
- Waterproofing or thermal envelope details below or above grade
- Elevator rail and hoist coordination requirements

Foundation and Footings:

1. Foundation design is based on assumptions of the existing site conditions. Without a geotechnical report, the owners accepts responsibility of unknown conditions below grade that may cause settlement or undesired movement of the building. Contractor is responsbile for verifying the conditions described below are accurate and can be achieved.

2. As excavation occurs on the project site, unforeseen conditions may become evident. Arrow Engineering reserves the right to redesign the foundations as required if unforeseen geotechnical conditions are discovered.

3. The foundations for this project are spread and/or continuous bearing footings. If suitable soil is not encountered (suitable being defined as soil of the type and characteristics of that which the foundation recommendations within the Geotechnical Report are based on), it is required that the contractor over excavate until such bearing can be assured - or as directed by the project's Geotechnical Engineer of Record - and a lean concrete pad be placed between the strata of suitable soil and the recommended bottom of footing elevation. Lean concrete used here shall have a minimum 28-day compressive strength of 3,000 PSI or better. The dimension of this pad shall be at least the same dimensions of the footing in question. **The spread foundations for this project were designed with an allowable bearing capacity of 2,000 PSF.**

4. Contractor is responsible for notifying Arrow Engineering of any unusual soil conditions that are in variance with the test borings which also includes ground water, substandard bearing material, or obstructions.

5. All below grade foundation walls are to be considered stable only when supported at the next floor level and backfilling against them until such framing is in place is prohibited unless otherwise noted. In lieu of connection to the framing above, temporary shoring or bracing may be utilized. The design of such shoring is the responsibility of the contractor and must be approved by Arrow Engineering prior to its conception. Any shoring used must be designed and sealed by a Professional Engineer in the state where the project is located and evidence of such submitted to Arrow for approval.

6. The backfill behind all foundation walls has been assumed to be 'dry' granular type with a maximum density of 75 pcf. A continuous foundation drain is required behind all below grade walls even if not shown on the structural drawings. Notify engineer if these assumptions are not followed.

7. "Wet setting" of reinforcing or anchor bolts is prohibited. All reinforcing or anchor bolts must be securely placed prior to pouring.

8. The subgrade under slabs-on-grade and foundations must be compacted to 98% of optimum laboratory density in accordance with ASTM D698 Standard Proctor Method. Place fill in 6" to 8" lifts and compact with vibratory tamping equipment. The provisions of the geotechnical report govern for any exceptions to this requirement.

9. Contractor shall locate all underground utilities prior to beginning excavation.

10. When excavations approach the ground water level, the water level shall be continuously lowered by an acceptable dewatering system so that the water level is maintained continuously a minimum of 2'-0" below the excavation.

Post-Installed Anchors:

1. Basis of design for all post-installed concrete anchors are Hilti HUS-EZ Screw Anchors or Hilti Kwik Bolt 3 Expansion Anchors (as specified) UNO. Basis of design of all masonry anchors are Hilti Kwik Bolt 3's UNO. Substitutions are acceptable provided it is approved by Arrow Engineer for each location requested. Request for substitution must include engineering data substantiating that the requested product matches these specifications signed and sealed by a licensed PE in the state where the project is located.

2. Post-installed anchors shall only be used where specified on these drawings. If additional locations are desired by the contractor, submit plan showing these locations to Arrow for review prior to beginning work.

3. Basis of design assumes all post-installed anchors set in fully cured concrete. If construction sequencing requires installation in non-fully cured concrete, notify Arrow for approval prior to beginning work.

4. Post-installed anchors may interfere with existing rebar. The contractor shall verify that placement of all bars in locations where post-installed anchors are specified is set in such a way as to not conflict and require cutting of bars. Where additional anchors are specified, non-destructive testing shall be used to locate bars prior to installing anchors unless notified by Arrow that the bars can be cut.

5. All holes for anchors shall be prepared per manufacturer's instructions.

6. All installers of post installed anchors must be qualified per the American Concrete Institute's (ACI) standard 318 "Building Code and Commentary".

1

Structural Concrete:

1. Cast-in-place concrete work shall conform to the American Concrete Institute 318-14. The minimum compressive strength of all concrete used in this project shall be **4,000 psi**.

2. The air content of all concrete exposed to freezing and thawing or where required to be watertight shall be 4.5%-7.5%. All other applications shall be 3%-4%.

3. The water to cement ratio for all concrete subjected to freezing and thawing in moist conditions or required to be watertight shall have a maximum water-cement ratio of 0.45. All reinforced concrete exposed to deicing salts, brackish water, seawater, or spray from these sources shall have a maximum water-cement ratio of 0.40. All water used in concrete mixes (including that which is added at the site) must be potable and accounted for in the mix design published by the supplier.

4. Maximum aggregate size shall be 1 1/2 ", well graded, well-shaped (not elongated, flat, or slippery), and free of clay, dirt, and excess fines, U.N.O. Aggregate composition shall consist of quartz, limestone, dolomite, granite, or feldspar.

5. All cement shall be type 1 unless noted.

6. The maximum slump of any concrete shall be less than 3" unless noted.

7. All reinforcing to be ASTM A615, Grade 60.

8. The welded wire fabric used in floor slabs shall be ASTM A185. All wire mesh must be supported adequately during pouring to prevent sag under the weight of concrete or construction personnel. Provide 6x6-w2.9xw2.9 welded wire fabric in all non-structural slabs on grade, unless otherwise noted.

9. All reinforcing shall be located a minimum amount of 'cover' from the surface according to the following:
   All bars cast against or exposed to earth ....3 inches
   No. 6 bars or larger exposed to weather..................2 inches
   No. 5 or smaller bars exposed to weather................1.5 inches
   No. 14 or larger bars in other applications................1.5 inches
   No. 11 or smaller bars in other applications............0.75 inches

10. Provide joints in all slabs-on-grade at a maximum spacing of 30 times the thickness of the slab. Control joints to be formed or cut to a depth of 1/5 the slab thickness. Control joints not required in footings or in elevated slabs unless otherwise noted.

11. Reinforcing bar lap splices and anchorage lengths shall conform with ACI 318-14. All splices shall be Type B.

12. Top layer of reinforcing steel in slabs and footings shall be considered top bars regardless of thickness of concrete below the bars.

13. Provide standard lap splice at all horizontal bars in corners and intersections.

14. Where not explicitly defined, all slabs and walls shall have minimum reinforcement per ACI 318-14 accounted for in their construction.

15. See architectural drawings for finish requirements including edge conditions. Curing practices may need to accommodate certain floor finishes which should be coordinated prior to pouring. Chamfer / tool any exposed edge of concrete with 1/2" chamfer unless otherwise noted.

16. Contractor shall coordinate the location of all embeds, conduits, anchor bolts, etc., with other disciplines prior to pouring any concrete in which these items are located.

17. The Contractor shall prepare shop drawings showing detail layouts of reinforcing, including dimensions, openings, and spacing, bending details, bar schedules, and similar items required for the proper construction of the work. Provisions for the connection of work by other trades shall be indicated on the shop drawings. The location of all embedded items shall be indicated by the contractor on the shop drawings. All shop drawings shall be submitted for approval in accordance with the requirements of the Contract Documents.

18. Preparing, curing, transporting, and testing concrete cylinders. For each class of concrete placed, at least four cylinders shall be taken for each 50 cubic yards, or fraction thereof, of each class of concrete placed each day. Cylinders are to be taken in accordance with ASTM C31 and results shall be submitted to the Architect/Engineer, Construction Manager and owner. Two cylinders will be tested at 7 days and two at 28 days.

19. Structural concrete shall meet a SOV Floor Flatness (Ff) of 25 and MLV Floor Levelness (Fl) of 20 unless otherwise noted.

20. Control joints should be placed within 12 hours of pour to prevent undesired internal cracks from forming.

Masonry:

1. Masonry work shall conform to the TMS 402/602-16 Building Code Requirements and Specifications for Masonry Structures, 2016 edition.

2. Maximum lateral deflection is to be limited to L/360.

3. Locate vertical control joints at 15 foot on center, maximum.

4. Mortar shall be ASTM C270, Type S, 2500 PSI minimum. Compressive strength of all masonry, unless otherwise noted, is 1,500 psi.

5. Grout shall conform to ASTM C476. Use fine grout for collar joints 1" wide or less and when grouting cells of hollow masonry units with or without vertical reinforcing. Use coarse grout when grouting bond beams.

6. Below load bearing beams / joists, provide a 32" x 16" section of solid masonry or solid grouted masonry. Below columns provide a 32" wide section of solid masonry or solid grouted masonry from bearing to foundation.

7. Horizontal reinforcing in all non-reinforced walls shall be truss type with 3/16" side rods and #9 gage cross rods. For all reinforced walls, ladder type 3/16 " side rods and #9 gage cross rods. Space reinforcing at 16" OC.

Masonry:

1

8. All reinforcing bars shall be ASTM A615, Grade 60.

9. Lay each block with full mortar coverage on head, bed (face shells), and webs, unless otherwise noted.

10. All masonry walls shall have a continuous bond beam course set at the top of each wall, at each intersecting floor level, or at 12' maximum spacing. Bond beam shall be comprised of (2) #4 continuous bars unless otherwise noted.

11. Grout solid all air spaces and the cells of all blocks below grade.

12. Any opening in masonry shall have a lintel placed at the top of it and bear a minimum of 4" on each side. All lintels over 24" long shall be steel or shall be engineered for the specific opening requirements. Do not place any openings within 36" of corners or closer than 8" to foundation or floor intersections.

13. Minimum quality assurance requirements shall be per Table1.15.2, ACI 530/ASCE5/TMS402.

14. Lap splices in masonry shall conform to TMS 402/ACI 530/ASCE 5 Section 2.1.9.7.1.1. The minimum length of lap splices for reinforcing bars in tension or compression, *ld,* shall be:

   #3 bar - 11"
   #4 bar - 18"
   #5 bar - 29"
   #6 bar - 41"
   #7 bar - 53"
   #8 bar - 72"
   #9 bar - 92"

15. All reinforcement welding shall conform to AWS D1.4. Welded splices shall be of ASTM A706 steel reinforcement. Reinforcement larger than No. 9 (M #29) shall be spliced using mechanical connections in accordance with section 2.1.9.7.3.

Structural Abbreviations:

@	AT	LBS	POUND
A.B.	ANCHOR BOLT	LL	LIVE LOAD
ADJ.	ADJACENT	LLV	LONG LEG VERTICAL
ALT.	ALTERNATE	LLH	LONG LEG HORIZONTAL
APPROX.	APPROXIMATE	LONG.	LONGITUDINAL
ARCH.	ARCHITECTURAL		
		MAX	MAXIMUM
B/ELEV	BOTTOM OF BEAM ELEVATION	MECH	MECHANICAL
BLDG.	BUILDING	MEZZ	MEZZANINE
B/O	BOTTOM OF	MFR.	MANUFACTURER
B.P.	BASE PLATE	MIN	MINIMUM
BRG.	BEARING	MISC	MISCELLANEOUS
BSMT.	BASEMENT		
		NIC	NOT IN CONTRACT
C-C	CENTER TO CENTER	NS	NEAR SIDE
C.G.	CENTER OF GRAVITY	NTS	NTS
C.J.	CONTROL JOINT	NO	NUMBER
CL	CENTERLINE		
COORD.	COORDINATE	OC	ON CENTER
CONT.	CONTINUOUS	O/F	OUTSIDE FACE
CTR.	CENTER		
		PERIM	PERIMETER
DTL.	DETAIL	PL	PLATE
DIA.	DIAMETER	PSF	POUNDS PER SQUARE
DIAG.	DIAGONAL	FOOT	
DIM.	DIMENSION	PSI	POUNDS PER SQUARE INCH
DF	DOUGLAS FIR	PIP	POURED IN PLACE
DL	DEAD LOAD		
DN	DOWN	QTY	QUANTITY
DWG.	DRAWING		
		RAD	RADIUS
EA	EACH	REF	REFERENCE
E.F.	EACH FACE	REINF	REINFORCED
ELEV.	ELEVATION	REQD	REQUIRED
EOS	EDGE OF SLAB	REV.	REVISION
EQ	EQUAL		
EQUIP	EQUIPMENT	SIM	SIMILAR
E.S.	EACH SIDE	SLV	SHORT LEG VERTICAL
E.W.	EACH WAY	SLH	SHORT LEG HORIZONTAL
EX.	EXISTING	SOG	SLAB ON GRADE
E.J.	EXPANSION JOINT	SP	SOUTHERN PINE
EXT.	EXTERIOR	SPA	SPACING
		SPEC.	SPECIFICATION
FNDN	FOUNDATION	SQ	SQUARE
F.F.	FINISH FLOOR	SQ. FT.	SQUARE FOOT
F.F.E.	FINISH FLOOR ELEVATION	SQ. IN.	SQUARE INCH
F.S.	FOOTING STEP	STD	STANDARD
FTG.	FOOTING	STL	STEEL
		STRUC	STRUCTURAL
GALV.	GALVANIZED	SYM	SYMMETRICAL
GR	GRADE		
		T/B	TOP AND BOTTOM
HORIZ	HORIZONTAL	T/ELEV	TOP OF BEAM ELEVATION
H.P.	HIGH POINT	T/O	TOP OF
HT	HEIGHT	THK.	THICKNESS
		TRANS	TRANSVERSE
I/F	INSIDE FACE	TYP	TYPICAL
IN	INCHES		
INT.	INTERIOR	UNO	UNLESS NOTED OTHERWISE
JST	JOIST	VERT	VERTICAL
JT	JOINT	VEF	VERTICAL EACH FACE
		VIF	VERTICAL INSIDE FACE
K*FT	KIP FEET	VIF	VERIFY IN FIELD
KLF	KIP PER LINEAL FOOT		
KSF	KIPS PER SQUARE FOOT	W/	WITH
KSI	KIPS PER SQUARE INCH	W/O	WITHOUT
		WL	WIND LOAD
		W.P.	WORK POINT
		WT	WEIGHT
		WWF	WELDED WIRE FABRIC

Structural and Miscellaneous Steel:

1. All structural steel work shall be done according to the "Specifications for the Design, Fabrication, and Erection of Structural Steel Buildings" (14th Edition) of the AISC.

2. Structural steel shall conform to the following:
   - Wide flange shapes and WT's: ASTM A992, Fy = 50 ksi
   - Channels, Angles, Plates: ASTM A36, Fy = 36 ksi
   - HSS Square Tubes: ASTM A500 Gr. C, Fy = 50 ksi
   - HSS Round Tubes: ASTM A500 Gr. C, Fy = 46 ksi
   - Pipe: ASTM A53, Fy = 35 ksi

3. For any connection not explicitly detailed on the drawings, the responsibility for connection design shall be delegated to the Connection Design Engineer employed by the fabricator or owner. The Connection Design Engineer (CDE) shall be a registered Professional Engineer in good standing licensed in the state where the project is located. The CDE shall be held in responsible charge for the design, detailing, and proper implementation and coordination of all such connections as part of fabricator's preparation of shop drawings. Where connection has not been detailed in these documents, reaction forces have been provided. Where reaction forces have not been provided, CDE shall design connections for shear per the table below. Where there is a conflict or non-specific condition, specific reaction forces will be provided via RFI at the CDE's request.

   Connection Shear Reaction Table:
   W8's = 10 kips
   W10's = 12 kips
   W12's = 16 kips
   W14's = 18 kips
   W16's = 20 kips
   W18's = 22 kips
   W21's = 24 kips
   W24's = 26 kips

4. Connections requiring axial reaction capacity shall be designed to develop the limiting axial capacity of the member in either compression or tension.

5. All bolts shall be ASTM A307 or ASTM A325 type per specified connection criteria of either slip-critical or bearing type. All bolts shall be matched with a nut and washer of the appropriate grade and size. Use slip critical connections for all wind bracing connections or connections subject to load reversal. Threads shall be included in the shear plane unless certified by Arrow Engineering or Connection Design Engineer.

6. The CDE shall submit to the EOR a copy of the sealed design calculations for all delegated connections with the fabricator's shop drawings for approval prior to the fabricator beginning any fabrication work. Shop drawings will not be reviewed if the CDE seal does not accompany the submittal if required.

7. All bolted connections shall be made according to the AISC Manual Part 9. All connections shall be a minimum of half the depth of the beam. Where beams frame into columns, a full depth connection shall be used. Minimum thickness of any connection plate or angle shall be 3/8" unless noted otherwise.

8. Calculations are not needed for simple shear connections if the method used to achieve those connections are pre-qualified from the tables found in Part 10 of the AISC Steel Construction Manual. The steel shop drawings should include all relevant and pertinent information for these connections related to this table including the reference / table number the connection is derived from. A CDE shall still provide a statement certifying compliance for all connections that fall into this category with the shop drawings submittal.

9. When the design of simple shear connections as noted above is required to meet minimum shear reaction loads for composite beam connections, the connection shall be designed for the following shear value:

   Beam depth > 21"......................... 1.5 x Reaction
   14" < Beam depth < 21"................2.0 x Reaction
   Beam depth < 14"......................... 2.5 x Reaction

10. Hangers, kickers, and miscellaneous equipment connections shall be shall be designed by CDE or equipment supplier to provide for the full allowable tensile capacity of the member or attachment to the equipment.

11. All welding shall be in strict accordance with the standards of the AWS D1.1 and the AISC Manual. Use E70XX electrodes.

12. All steel to be shop primed or galvanized. Do not paint steel where encased in concrete or at field weld areas. All exterior steel including that which is installed outside of the controlled building envelope is to be galvanized unless noted otherwise per ASTM A123 and A780.

13. No shop or field holes or cuts are to be placed in structural members unless indicated on the contract or shop drawings.

14. The structural steel fabricator shall field verify all dimensions prior to fabrication. Particularly for stairs, handrail systems, etc. or at connections to existing or previously constructed items. It is the contractor's responsibility to verify dimensions and conditions at the site which may affect installation or erection of steel members. Shop drawings shall include inclusion of field measurements.

15. The structural steel fabricator shall provide for vertical and horizontal adjustment of all support assemblies.

16. Anchor bolts must meet ASTM A1554 gr. 36 specifications and be 3/4" diameter (unless otherwise indicated). A minimum of (4) anchor bolts are required at each baseplate unless noted otherwise.

17. Additional miscellaneous structural steel may be required to support other elements specified on the contract drawings. The requirement, design, and inclusion of these members is the responsibility for the General Contractor to coordinate and may not be included on these drawings. This may include shoring or support for other structural materials, equipment supports, miscellaneous embeds, etc. GC to review all the drawing packages of all disciplines for the need of miscellaneous steel.

18. Unless directed by the owner with consideration from Arrow Engineering, the steel fabricator shall be certified under the AISC quality Certification Program.

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4-4-2023

NO.	BY	DATE	DESCRIPTION
1		4.4.2023	Addendum #3

BROOKE COUNTY EMS
BROOKE COUNTY COMMISSION
BROOKE COUNTY, WV
4.4.2023
Construction Drawings

DRAWN: PDB	DATE: 4/4/2023
CHECKED: PDB	DATE: 4/4/2023
APPROVED: MWH	DATE: 4/4/2023

PROJECT No.
T60-11009.00

GENERAL NOTES

SHEET No.
S0.01

LAYOUT TAB: GENERAL NOTES
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PLOT DATE/TIME: 4/4/2023 9:59:58 AM
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REQ'D FOR THIS PROJECT	MATERIAL/ACTIVITY	TYPE OF INSPECTION	REFERENCES	A / E	OWNER'S PROJ INSPECTOR	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION	FOOTNOTE #
	SPECIAL CASES							
	VARIES	VARIES- FOR WORK DEFINED BY THE BUILDING OFFICIAL AS "UNUSUAL IN ITS NATURE"	1705.1.1	X	X			1
	CONCRETE CONSTRUCTION							4
X	REINF. STEEL	REINFORCEMENT/ PRESTRESSING TENDONS. VERIFY PLACEMENT	1705.3, ACI 318: CH. 20, 25.2, 25.3, 26.6.1-26.6.3		X		X	
X	REINF. STEEL WELDS	WELD: VERIFY WELDABILITY OF REINF. BARS OTHER THAN ASTM A706	1705.3, AWS D1.4, ACI 318: 26.6.4		X		X	
X	REINF. STEEL WELDS	WELD: SINGLE-PASS FILLET WELDS MAX 5/16"	1705.3, AWS D1.4, ACI 318: 26.6.4		X		X	
X	REINF. STEEL WELDS	WELD: ALL OTHER WELDS	1705.3, AWS D1.4, ACI 318: 26.6.4		X	X		
X	CONC. CAST ANCHORS	ANCHORS CAST IN CONCRETE	1705.3, ACI 318: 17.8.2		X		X	
X	POST-INSTALLED ANCHORS IN HARDENED CC	INSPECT ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS	1705.3, ACI 318: 17.8.2.4		X	X		
X	POST-INSTALLED ANCHORS IN HARDENED CC	INSPECT ALL OTHER MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT LISTED IN DESCRIPTION ABOVE	1705.3, ACI 318: 17.8.2		X		X	
X	CC MIX	VERIFY USE OF REQ'D DESIGN MIX	1705.3, ACI 318: CH. 19, 26.4.3, 26.4.4		X		X	
X	CC MIX	PRIOR TO CC PLACEMENT, PERFORM STRENGTH TESTS: SLUMP AND AIR CONTENT. DETERMINE TEMP. OF CC	1705.3, ASTM C31, C172,ACI 318:26.5,26.12		X	X		
	CC	VERIFY CORRECT CC AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES	1705.3, ACI 318: 26.5		X	X		
	CC	VERIFY MAINTENANCE OF CURING TEMP/TECHNIQUES	1705.3, ACI 318: 26.5.3-26.5.5		X		X	
	MASONRY CONSTRUCTION							6
X	MASONRY	INSPECT/TEST GLASS UNIT MASONRY/MASONRY VENEEER ACCORDING TO SECTION 2110 OR CH. 14 WHERE THEY ARE PART OF A STRUCTURE CLASSIFIED AS RISK CATEGORY IV SHALL BE PERFORMED ACCORDING TO TMS 602 LEVEL 2.	1705.4		X			
X	MASONRY	VERTICAL MASONRY FOUNDATION ELEMENTS ACCORDING TO SECTION 1705.4	1705.4		X			
	SOILS							7
X	MATERIALS	VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS CAN ACHIEVE BEARING CAPACITY	1705.6		X		X	
X	MATERIALS	VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL	1705.6		X		X	
X	MATERIALS	CLASSIFY AND TEST COMPACTED FILL MATERIALS	1705.6		X		X	
X	MATERIALS	DURING FILL PLACEMENT, VERIFY USE OF PROPER MATERIALS AND PROCEDURES IN ACCORDANCE WITH THE PROVISIONS OF THE APPROVED GEOTECHNICAL REPORT. VERIFY DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL	1705.6		X	X		
X	MATERIALS	VERIFY PROPER SUBGRADE PRIOR TO PLACEMENT OF FILL	1705.6		X		X	
	FOUNDATIONS							
X	CAST-IN-PLACE	INSPECT DRILLING OPERATIONS AND MAINTAIN COMPLETE AND ACCURATE RECORDS FOR EACH ELEMENT	1705.8		X	X		
X	CAST-IN-PLACE	VERIFY PLACEMENT LOCATIONS/PLUMBNESS, ELEMENT DIAMETERS, LENGTHS, EMBEDMENT INTO BEDROCK AND ADEQUATE END-BEARING STRATA CAPACITY. RECORD CC/GROUT VOLUMES.	1705.8		X	X		
X	CAST-IN-PLACE, CC	PERFORM ADDITIONAL SPECIAL INSPECTIONS ACCORDING TO SEC. 1705.3	1705.8		X			
	FABRICATED ITEMS							
X	FABRICATED ITEMS	PERFORM ADDITIONAL SPECIAL INSPECTIONS ACCORDING TO SEC. 1704.2.5	1705.11		X			
	STEEL CONSTRUCTION							2,3
X	STR. STEEL ELEMENTS	VERIFY AISC 360 QUALITY ASSURANCE REQUIREMENTS ARE MET FOR BUILDING, STUCTURE, AND PORTIONS THEREOF	1705.2.1		X		X	
X	OW STEEL JOISTS/GIRDERS	END CONNECTIONS- WELDING OR BOLTED	1705.2.3, 2207.1		X		X	
X	OW STEEL JOISTS/GIRDERS	STANDARD BRIDGING	1705.2.3, 2207.1		X		X	
	WOOD CONSTRUCTION							
X	METAL-PLATE TRUSSES	VERIFY MEMBER BRACING AND TEMPORARY BRACING WAS INSTALLED ACCORDING TO APPROVED TRUSS SUBMITTAL PACKAGE.	1705.5.2		X			

1

FOOTNOTES:

1. SPECIAL CASES INCLUDE PROPOSED WORK THAT IS, IN THE OPINION OF THE BUILDING OFFICIAL, UNUSUAL IN ITS NATURE, SUCH AS, BUT NOT LIMITED TO THE FOLLOWING EXAMPLES: MATERIALS AND SYSTEMS THAT ARE ALTERNATIVES TO MATERIALS AND SYSTEMS PRESCRIBED BY THIS CODE, UNUSUAL DESIGN APPLICATIONS OF MATERIALS DESCRIBED IN THIS CODE, AND/OR MATERIALS AND SYSTEMS REQUIRED TO BE INSTALLED IN ACCORDANCE WITH ADDITIONAL MANUFACTURER'S INSTRUCTIONS THAT PRESCRIBE REQUIREMENTS NOT CONTAINED IN THIS CODE OR IN STANDARDS REFERENCED BY THIS CODE.

4. EXCEPTIONS: SPECIAL INSPECTIONS SHALL NOT BE REQUIRED FOR 1.) ISOLATED SPREAD CC FOOTINGS OF BUILDINGS 3 STORIES OR LESS ABOVE GRADE PLANE THAT ARE FULLY SUPPORTED ON EARTH OR ROCK. 2.) CONTINUOUS CC FOOTINGS SUPPORTING WALLS OF BUILDINGS 3 STORIES OR LESS ABOVE GRADE PLANE THAT ARE FULLY SUPPORTED ON EARTH OR ROCK WHERE THE FOOTINGS SUPPORT WALLS OF LIGHT-FRAME CONSTRUCTION, THE FOOTINGS ARE DESIGNED IN ACCORDANCE WITH T.1807.1.6.2, OR THE STRUCTURAL DESIGN OF THE FOOTING IS BASED ON THE SPECIFIED COMPRESSIVE STRENGTH NOT MORE THAN 2,500 PSI, REGARDLESS OF COMPRESSIVE STRENGTH SPECIFIED IN THE APPROVED CONSTRUCTION DOCS OR USED IN THE FOOTING CONSTRUCTION. 3.) NONSTRUCTURAL CC SLABS SUPPORTED DIRECTLY ON THE GROUND, INCLUDING PRESTRESSED SLABS ON GRADE, WHERE THE EFFECTIVE PRESTRESS IN THE CC IS LESS THAN 150 PSI. 4.) CC FOUNDATION WALLS CONSTRUCTED IN ACCORDANCE WITH T.1807.1.6.2. 5.) CC PATIOS, DRIVEWAYS AND SIDEWALKS, ON GRADE.

6. EXCEPTIONS: 1.) EMPIRICALLY DESIGNED MASONRY, GLASS UNIT MASONRY OR MASONRY VENEER DESIGNED IN ACCORDANCE WITH SECTION 2109, 2110 OR CH.14, RESPECTFULLY, WHERE THEY ARE PART OF A STRUCTURE CLASSIFIED AS RISK CATEGORY 1,2, OR 3. 2.) MASONRY FOUNDATION WALLS CONSTRUCTED IN ACCORDANCE WITH T.1807.1.6.3(1), 1807.1.6.3(2), 1807.1.6.3(3), OR 1807.1.6.3(4) 3.) MASONRY FIREPLACES, MASONRY HEATERS OR MASONRY CHIMNEYS INSTALLED OR CONSTRUCTED IN ACCORDANCE WITH SECTION 2111, 2112, OR 2113, RESPECTIVELY.

7. EXCEPTION: WHERE SECTION 1803 DOES NOT REQUIRE REPORTING OF MATERIALS AND PROCEDURES FOR FILL PLACEMENT, THE SPECIAL INSPECTOR SHALL VERIFY THAT THE IN-PLACE DRY DENSITY OF THE COMPACTED FILL IS NOT LESS THAN 90 PERCENT OF THE MAXIMUM DRY DENSITY AT OPTIMUM MOISTURE CONTENT DETERMINED IN ACCORDANCE WITH ASTM D1557.

8. THESE SPECIAL INSPECTIONS ARE REQUIRED FOR (UNLESS EXEMPTED BY THE EXEPTIONS IN SECTION 1704.2): BUILDINGS/STRUCTURES IN WIND EXPOSURE CATEGORY B WHERE V IS 150 MPH OR GREATER, OR IN WIND EXPOSURE CATEGORY C OR D WHERE V IS 140 MPH OR GREATER

10. SPECIAL INSPECTIONS ARE NOT REQUIRED FOR COLD-FORMED STEEL LIGHT FRAME SHEAR WALLS AND DIAPHRAGMS, INCLUDING SCREWING, BOLTING, ANCHORING AND OTHER FASTENING TO COMPONENTS OF THE WINDFORCE RESISTING SYSTEM, WHERE EITHER OF THE FOLLOWING APPLIES: 1.) THE SHEATHING IS GYPSUM OR FIBERBOARD 2.) THE SHEATHING IS WOOD STR. PANEL OR STEEL SHEETS ON ONLY ONE SIDE OF THE SHEAR WALL, SHEAR PANEL, OR DIAPHRAGM ASSEMBLY AND THE FASTENER SPACING OF THE SHEATHING IS MORE THAN 4 INCHES OC

11. EXCEPTION: SPECIAL INSPECTIONS ARE NOT REQUIRED FOR 1.) LIGHT FRAME CONSTRUCTION, WHERE THE DESIGN SPECTRAL RESPONSE ACCELERATION AT SHORT PERIODS DOES NOT EXCEED 0.5, AND THE BUILDING HEIGHT DOES NOT EXCEED 35 FT. 2.) THE SEISMIC FORCE RESISTING SYSTEM OF THE STRUCTURE CONSISTS OF REINFORCED MASONRY/CONCRETE, THE DESIGN RESPONSE ACCELERATION AT SHORT PERIODS DOES NOT EXCEED 0.5, AND BUILDING HEIGHT DOES NOT EXCEED 25 FT. 3.) THE STRUCTURE IS A DETACHED ONE OR TWO FAMILY DWELLING NOT EXCEEDING 2 STORIES ABOVE GRADE PLANE AND DOES NOT HAVE ANY OF THE FOLLOWING HORIZONTAL OR VERTICAL IRREGULARITIES IN ACCORDANCE WITH SECTION 12.3 OF ASCE 7: TORSIONAL OR EXTREME TORSIONAL IRREGULARITY, NONPARALLEL SYSTEMS IRREGULARITY, STIFFNESS-SOFT STORY OR STIFFNESS-EXTREME SOFT-STORY IRREGULARITY, DISCONTINUITY IN LATERAL STRENGTH-WEAK STORY IRREGULARITY.

CMU GROUT REQUIREMENTS:

Grout type a	Maximum grout pour height, ft (m)	Minimum clear width of grout space, in. (mm) b,c	Minimum clear grout space dimensions for grouting cells of hollow units, in. x in. (mm x mm) c,d,e
Fine	1 (0.30)	3/4 (19.1)	1 1/2 x 2 (38.1 x 50.8)
Fine	5.33 (1.63)	2 (50.8)	2 x 3 (50.8 x 76.2)
Fine	12.67 (3.86)	2 1/2 (63.5)	2 1/2 x 3 (63.5 x 76.2)
Fine	24 (7.32)	3 (76.2)	3 x 3 (76.2 x 76.2)
Coarse	1 (0.30)	1 1/2 (38.1)	1 1/2 x 3 (38.1 x 76.2)
Coarse	5.33 (1.63)	2 (50.8)	2 1/2 x 3 (63.5 x 76.2)
Coarse	12.67 (3.86)	2 1/2 (63.5)	3 x 3 (76.2 x 76.2)
Coarse	24 (7.32)	3 (76.2)	3 x 4 (76.2 x 102)

Notes:

a. Fine and coarse grouts are defined in ASTM C476.

b. For grouting between masonry wythes.

c. Minimum clear width of grout space and minimum clear grout space dimension are the net dimension of the space determined by subtracting masonry protrusions and the diameters of horizontal bars from the as-built cross-section of the grout space. Select the grout type and maximum grout pour height based on the minimum clear space.

d. Area of vertical reinforcement shall not exceed 6 percent of the area of the grout space.

e. Minimum grout space dimension for AAC masonry units shall be 3 in. (76.2 mm) x 3 in. (76.2 mm) or a 3 in. (76.2 mm) diameter cell.

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STATE OF WEST VIRGINIA
PROFESSIONAL ENGINEER
4-4-2023

NO.	BY	DATE	DESCRIPTION
1		4.4.2023	Addendum #3

BROOKE COUNTY EMS
BROOKE COUNTY COMMISSION
BROOKE COUNTY, WV
4.4.2023
Construction Drawings

DRAWN: PDB DATE: 4/4/2023
CHECKED: PDB DATE: 4/4/2023
APPROVED: MWH DATE: 4/4/2023

PROJECT No.
T60-11009.00

SPECIAL INSPECTIONS

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S0.02

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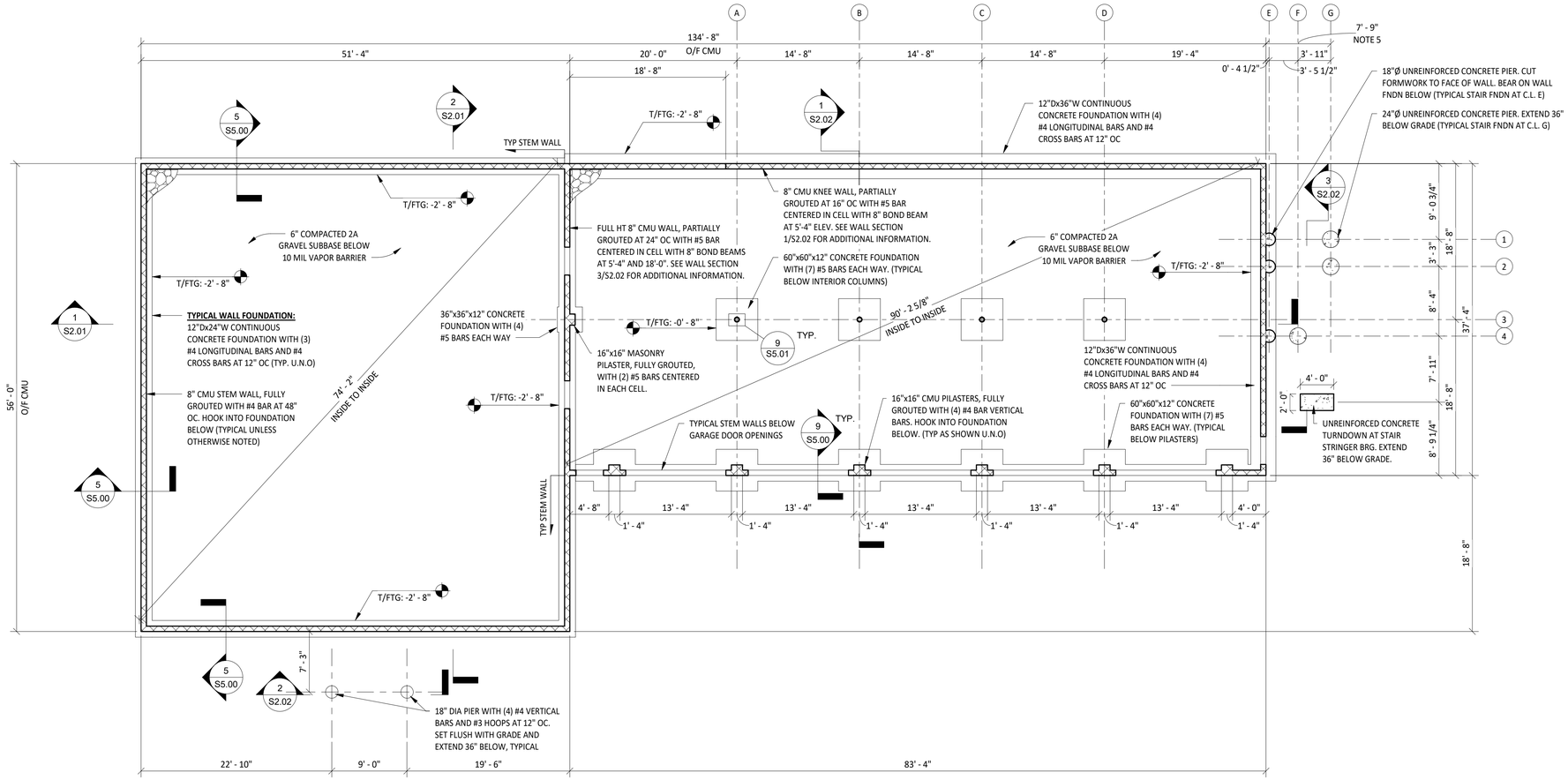

PLAN
NORTH

FOUNDATION PLAN

SCALE: 1/8" = 1'-0"

NOTES:
1) ALL DIMENSIONS REFERENCE OUTSIDE FACE OF CMU OR CENTERLINE OF PIER UNLESS OTHERWISE NOTED.
2) SEE ADDITIONAL NOTES ON S0.01 AND SPECIAL INSPECTIONS ON S0.02.
3) REFER TO DETAILS ON S5.00, S5.01, AND S5.02.
4) ALL ELEVATIONS REFERENCE FINISH FLOOR AS ELEV 0'-0".
5) COORDINATE EXTERIOR STAIR FOUNDATION LOCATIONS WITH STEEL SHOP DRAWINGS FOR FINAL DIMENSIONS.

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1	Addendum #3	4.4.2023	

BROOKE COUNTY EMS
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BROOKE COUNTY, WV
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Construction Drawings

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PROJECT No.
T60-11009.00

FOUNDATION PLAN

SHEET No.
1
S1.00

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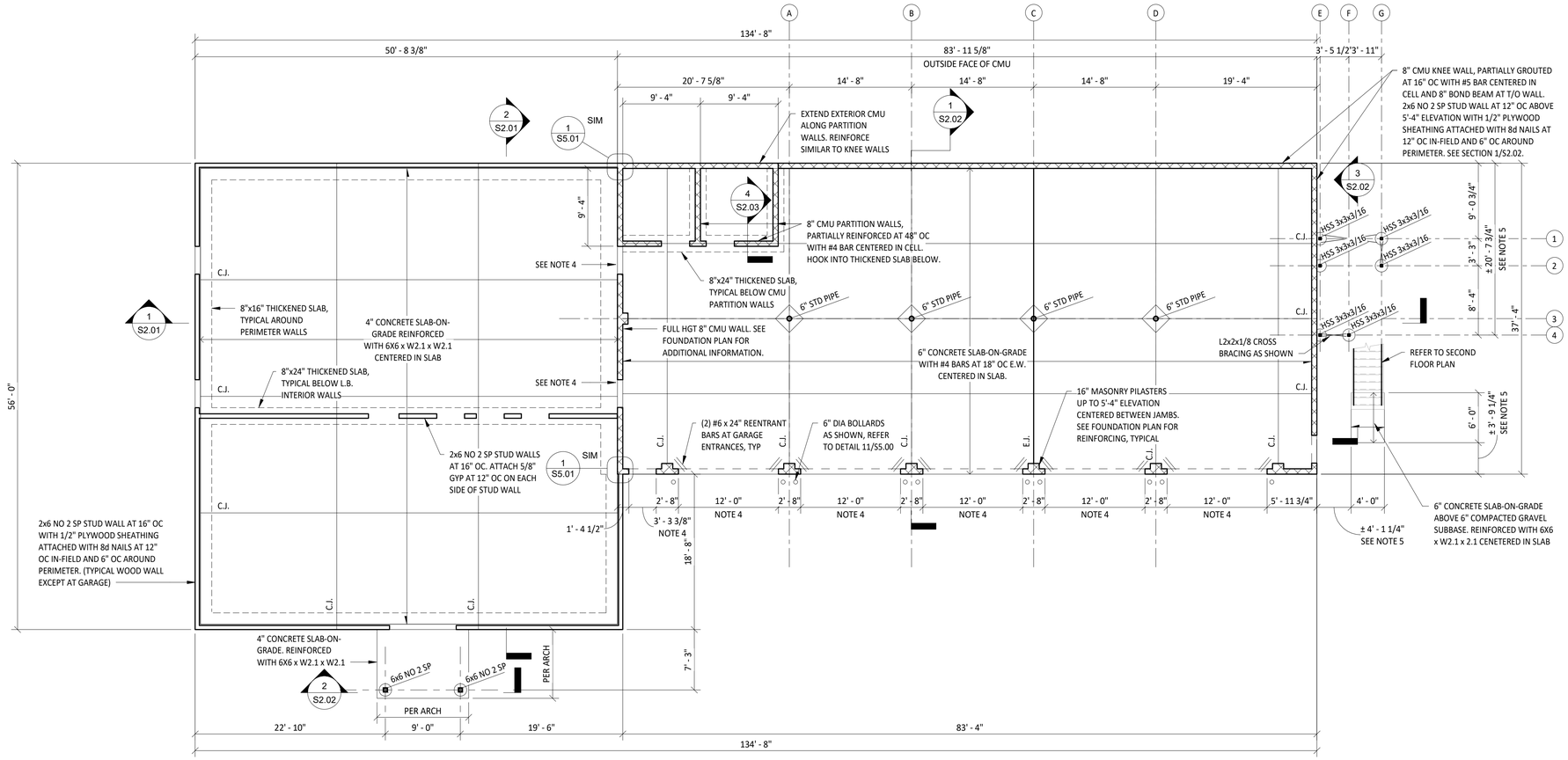

PLAN
NORTH

MAIN FLOOR SLAB PLAN

SCALE: 1/8" = 1'-0"

NOTES:
1) PROVIDE MINIMUM (2) 2x6 JACK STUDS AND (1) 2x6 KING STUD UNDER ALL BEAMS UNLESS NOTED OTHERWISE.
2) ALL INTERIOR CMU LINTELS SHALL BE 2L5x3.5x1/4 LLV UNLESS OTHERWISE NOTED.
3) ALL EXPOSED MASONRY IS INTENDED TO BE SPLIT-FACE. SEE ARCHITECTURAL DRAWINGS FOR MORE INFORMATION.
4) COORDINATE FINAL LAYOUT AND OPENING SIZES WITH DOOR MANUFACTURER AND ARCHITECTURAL DRAWINGS.
5) FINAL STAIR LAYOUT IS THE RESPONSIBILITY OF THE FABRICATOR. REFER TO ARCHITECTURAL DRAWINGS FOR DESIRED LAYOUT AND RISE/RUN. REFER TO S1.02 FOR STRINGER AND BEAM SIZES. FINAL CONNECTIONS TO BE DESIGNED BY FABRICATOR AND SUBMITTED FOR APPROVAL PRIOR TO FABRICATION.
6) SLOPE CONCRETE IN AMBULANCE BAY TO NEAREST DRAIN OR GARAGE OPENING.
7) SEE ADDITIONAL NOTES ON S0.01 AND SPECIAL INSPECTIONS ON S0.02.
8) REFER TO DETAILS ON S5.00, S5.01, AND S5.02.

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MAIN FLOOR SLAB PLAN

SHEET No.
1
S1.01

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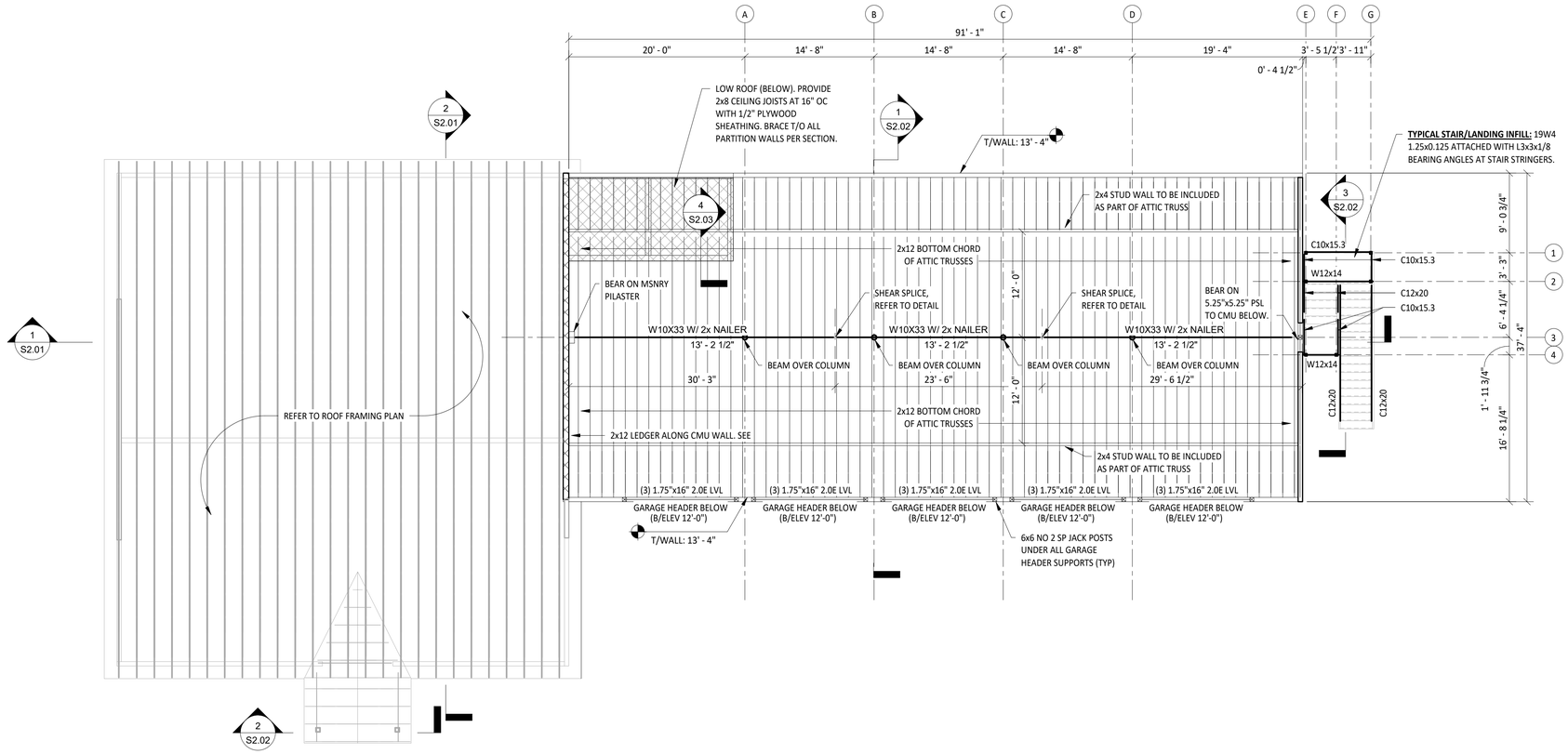

PLAN NORTH

SECOND FLOOR FRAMING PLAN

SCALE: 1/8" = 1'-0"

NOTES:
1) ALL INTERIOR STRUCTURAL STEEL SHALL BE SHOP PRIMED AND PAINTED PER ARCHITECTURAL DRAWINGS.
2) ALL EXTERIOR STEEL MEMBERS AND CONNECTIONS SHOULD BE HOT-DIPPED GALVANIZED.
3) FINAL STAIR LAYOUT AND DIMENSIONS ARE THE RESPONSIBILITY OF THE FABRICATOR. REFER TO ARCHITECTURAL DRAWINGS FOR DESIRED LAYOUT AND RISE/RUN. FINAL CONNECTIONS TO BE DESIGNED BY FABRICATOR AND SUBMITTED FOR APPROVAL PRIOR TO FABRICATION.
4) SEE ADDITIONAL NOTES ON S0.01 AND SPECIAL INSPECTIONS ON S0.02.
5) REFER TO DETAILS ON S5.00, S5.01, AND S5.02.

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MICHAEL W. HARRELL — 19837 — STATE OF WEST VIRGINIA — PROFESSIONAL ENGINEER — 4-4-2023

NO.	BY	DATE	DESCRIPTION
1		4.4.2023	Addendum #3

BROOKE COUNTY EMS
BROOKE COUNTY COMMISSION
BROOKE COUNTY, WV
4.4.2023
Construction Drawings

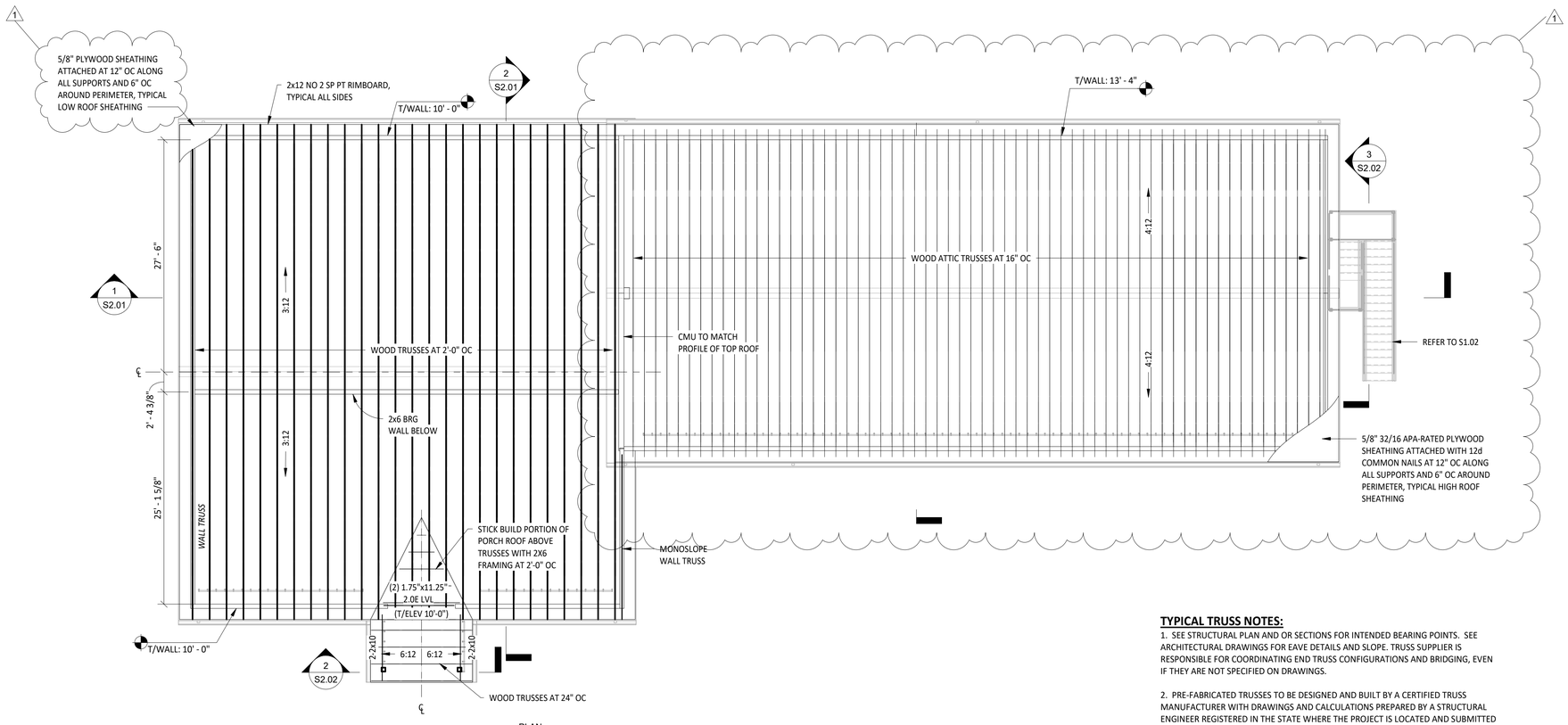
DRAWN: Author DATE: 4/4/2023
CHECKED: Checker DATE: 4/4/2023
APPROVED: Approver DATE: 4/4/2023

PROJECT No.
T60-11009.00

SECOND FLOOR FRAMING PLAN

SHEET No.
S1.02

LAYOUT TAB: SECOND FLOOR FRAMING PLAN
CAD FILE: J:\Projects\2022 Jobs_T\Harrell - Brooke EMS\S\Arw - Brooke EMS r22 (OWNER CHANGES).rvt
PLOT DATE/TIME: 4/4/2023 9:59:59 AM
USER: Author



PLAN
ROOF FRAMING PLAN
SCALE: 1/8" = 1'-0"
NORTH

NOTES:
1) PROVIDE MINIMUM (2) 2x6 JACK STUDS AND (1) 2x6 KING STUD UNDER ALL BEAMS UNLESS NOTED OTHERWISE.
2) ALL INTERIOR CMU LINTELS SHALL BE 2L5x3.5x1/4 LLV UNLESS OTHERWISE NOTED.
3) ALL EXPOSED MASONRY IS INTENDED TO BE SPLIT-FACE. SEE ARCHITECTURAL DRAWINGS FOR MORE INFORMATION.
4) SEE ADDITIONAL NOTES ON S0.01 AND SPECIAL INSPECTIONS ON S0.02.
5) REFER TO DETAILS ON S5.00, S5.01, AND S5.02.

TYPICAL TRUSS NOTES:

1. SEE STRUCTURAL PLAN AND OR SECTIONS FOR INTENDED BEARING POINTS. SEE ARCHITECTURAL DRAWINGS FOR EAVE DETAILS AND SLOPE. TRUSS SUPPLIER IS RESPONSIBLE FOR COORDINATING END TRUSS CONFIGURATIONS AND BRIDGING, EVEN IF THEY ARE NOT SPECIFIED ON DRAWINGS.

2. PRE-FABRICATED TRUSSES TO BE DESIGNED AND BUILT BY A CERTIFIED TRUSS MANUFACTURER WITH DRAWINGS AND CALCULATIONS PREPARED BY A STRUCTURAL ENGINEER REGISTERED IN THE STATE WHERE THE PROJECT IS LOCATED AND SUBMITTED FOR REVIEW PRIOR TO FABRICATION OF WOOD TRUSSES.

3. THE REQUIREMENTS OF THE TRUSS PLATE INSTITUTE HIB-91 "COMMENTARY AND RECOMENDATIONS FOR HANDLING, INSTALLING, AND BRACING OF METAL PLATE CONNECTED WOOD TRUSSES" SHALL GOVERN ALL BRACING, HANDLING, AND ERECTION OF TRUSSES.

4. TYPICAL ROOF TRUSS DESIGN LOADS (DOES NOT INCLUDE WEIGHT OF TRUSS):

TOP CHORD DEAD LOAD	12 PSF
TOP CHORD ROOF LIVE LOAD	20 PSF
TOP CHORD SNOW LOAD	25 PSF
BOTTOM CHORD DEAD LOAD	10 PSF
BOTTOM CHORD LIVE LOAD	**125 PSF**
CONCENTRATED HVAC LOAD	SEE MEP PLANS

5. TRUSS SUPPLIER IS ALSO RESPONSIBLE FOR COORDINATING THE REQUIREMENTS FOR NON-SPECIFIED CONCENTRATED LOADS SHOWN ON OTHER DISCIPLINES DRAWINGS.

6. ALL ATTACHMENTS AND HANGERS MUST BE ENGINEERED AND DESIGNED BY THE TRUSS SUPPLIER AND PROVIDED AS PART OF THE TRUSS SUBMITTAL PACKAGE.

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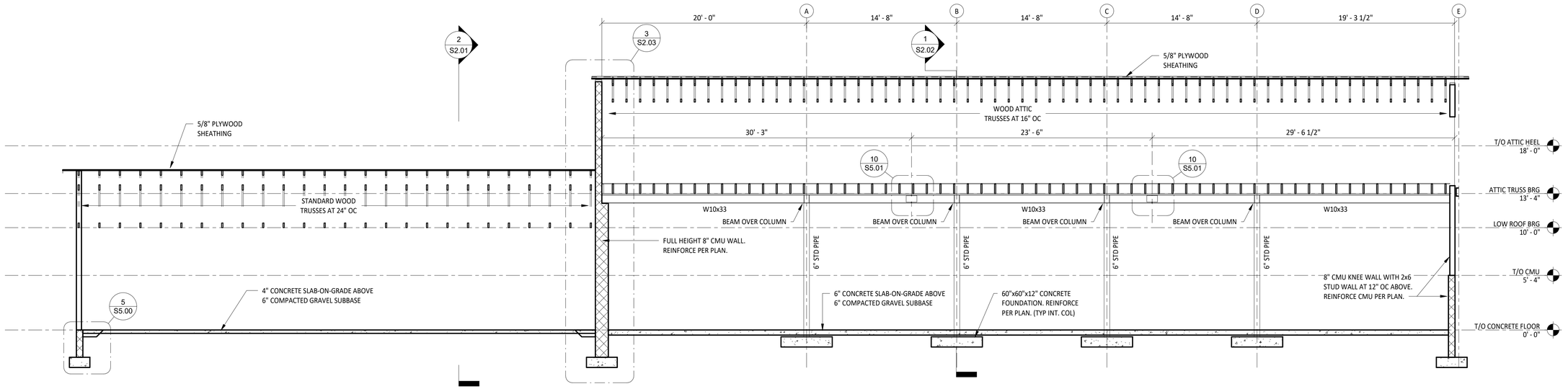
CHECKED: PDB DATE: 4/4/2023
APPROVED: MWH DATE: 4/4/2023

PROJECT No.
T60-11009.00

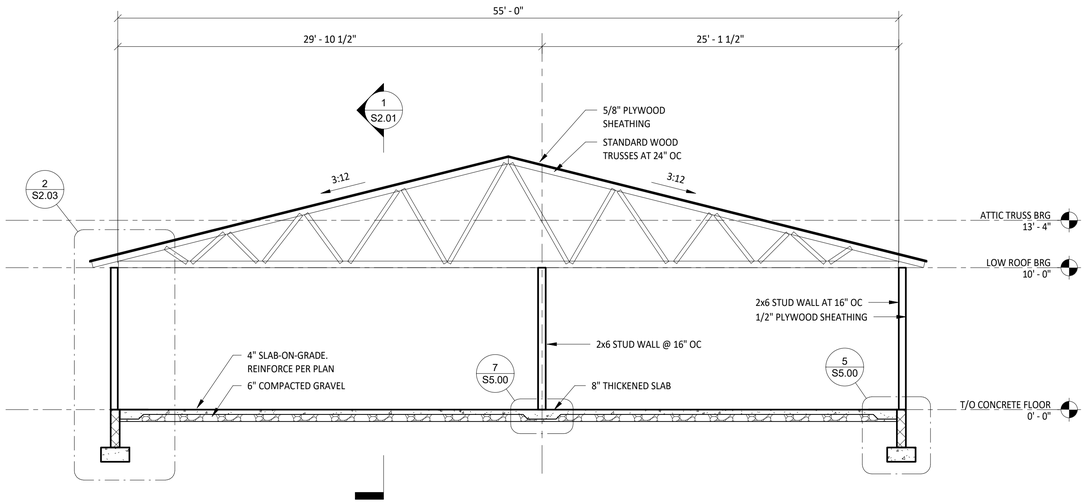
ROOF PLAN

SHEET No.
S1.03

LAYOUT TAB: ROOF PLAN
CAD FILE: K:\Projects\2021 35_Thrasher - Brooke EMS\S\Arw - Brooke EMS v22 (OWNER CHANGES).rvt
USER: PDB
PLOT DATE/TIME: 4/4/2023 9:59:59 AM



1 / S2.01 **LONGITUDINAL SECTION**
SCALE: 3/16" = 1'-0"



2 / S2.01 **RESIDENCE CROSS SECTION**
SCALE: 3/16" = 1'-0"

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4-4-2023

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BROOKE COUNTY COMMISSION
BROOKE COUNTY, WV
4.4.2023
Construction Drawings

DRAWN: PDB DATE: 4/4/2023
CHECKED: PDB DATE: 4/4/2023
APPROVED: MWH DATE: 4/4/2023

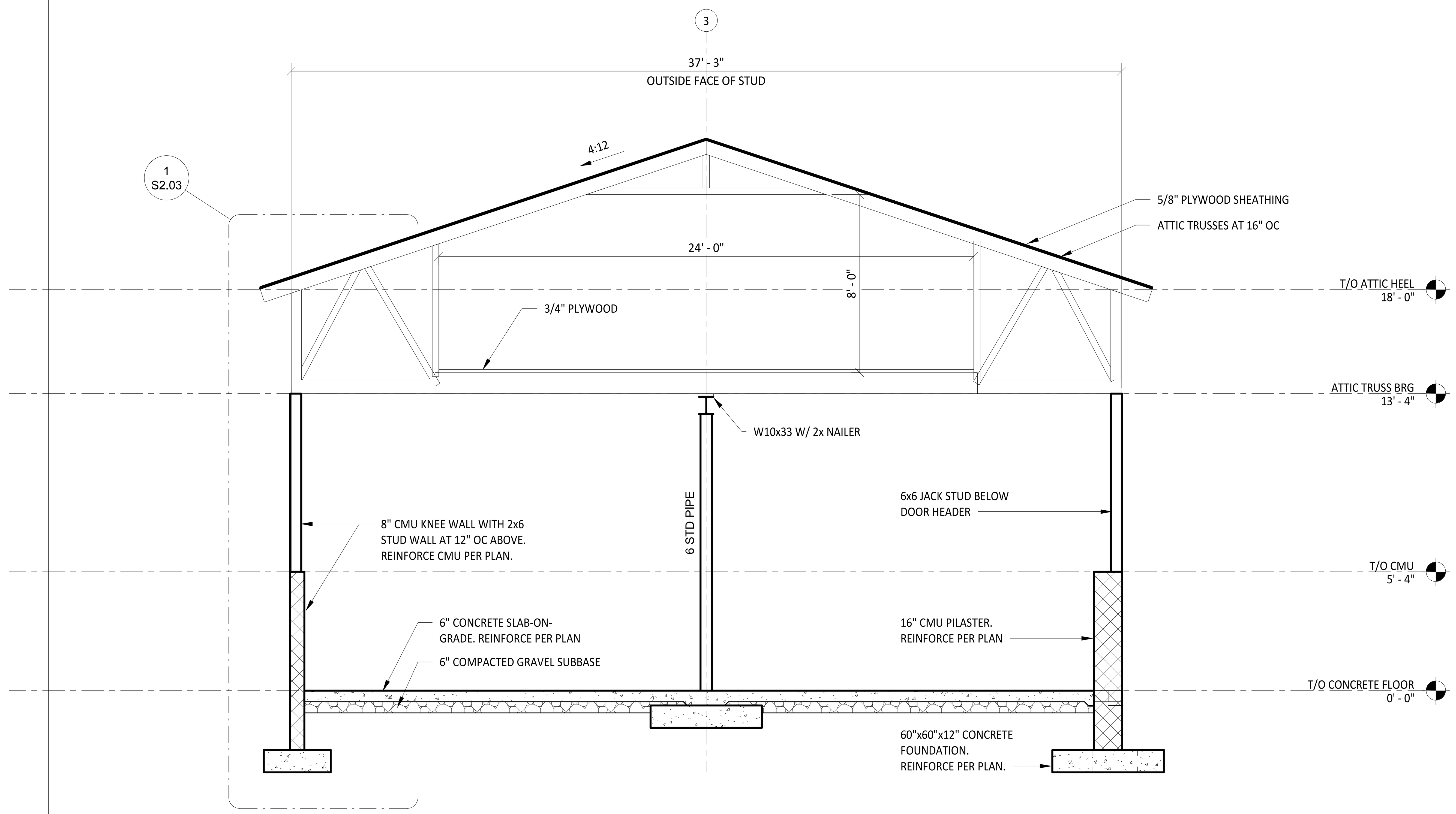
PROJECT No.
T60-11009.00

BUILDING SECTIONS

SHEET No.
1
S2.01

LAYOUT TAB: BUILDING SECTIONS
CAD FILE: A:\Projects\2022 185 Thrasher Brooke EMS\Brd\ - Brooke EMS r23 (OWNER CHANGES).rvt
PLOT DATE/TIME: 4/4/2023 10:00:00 AM
USER: PDB

REVISED: ADDENDUM 3, APRIL 4, 2023

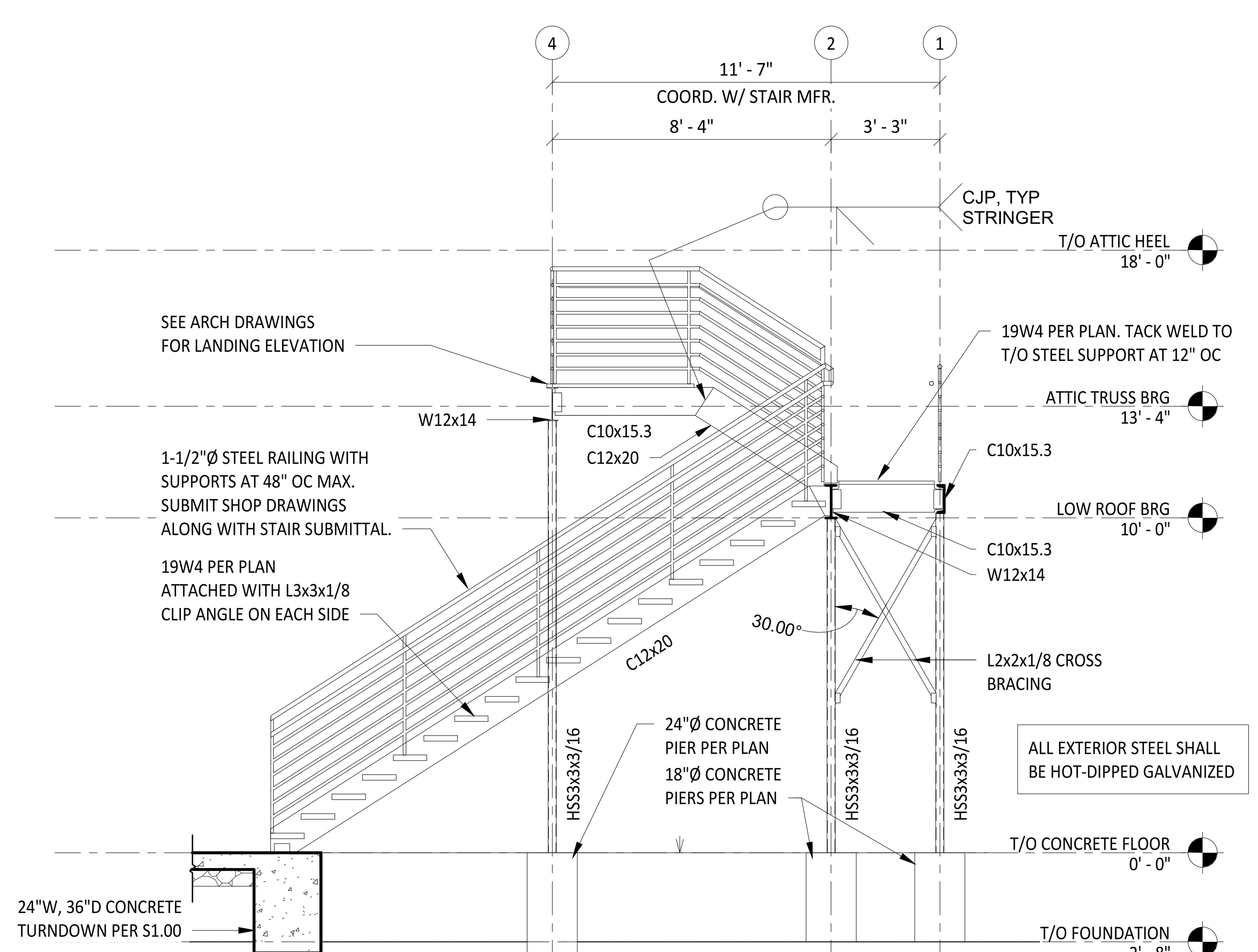


1
S2.02

APPARATUS BAY CROSS SECTION

SCALE: 1/4" = 1'-0"

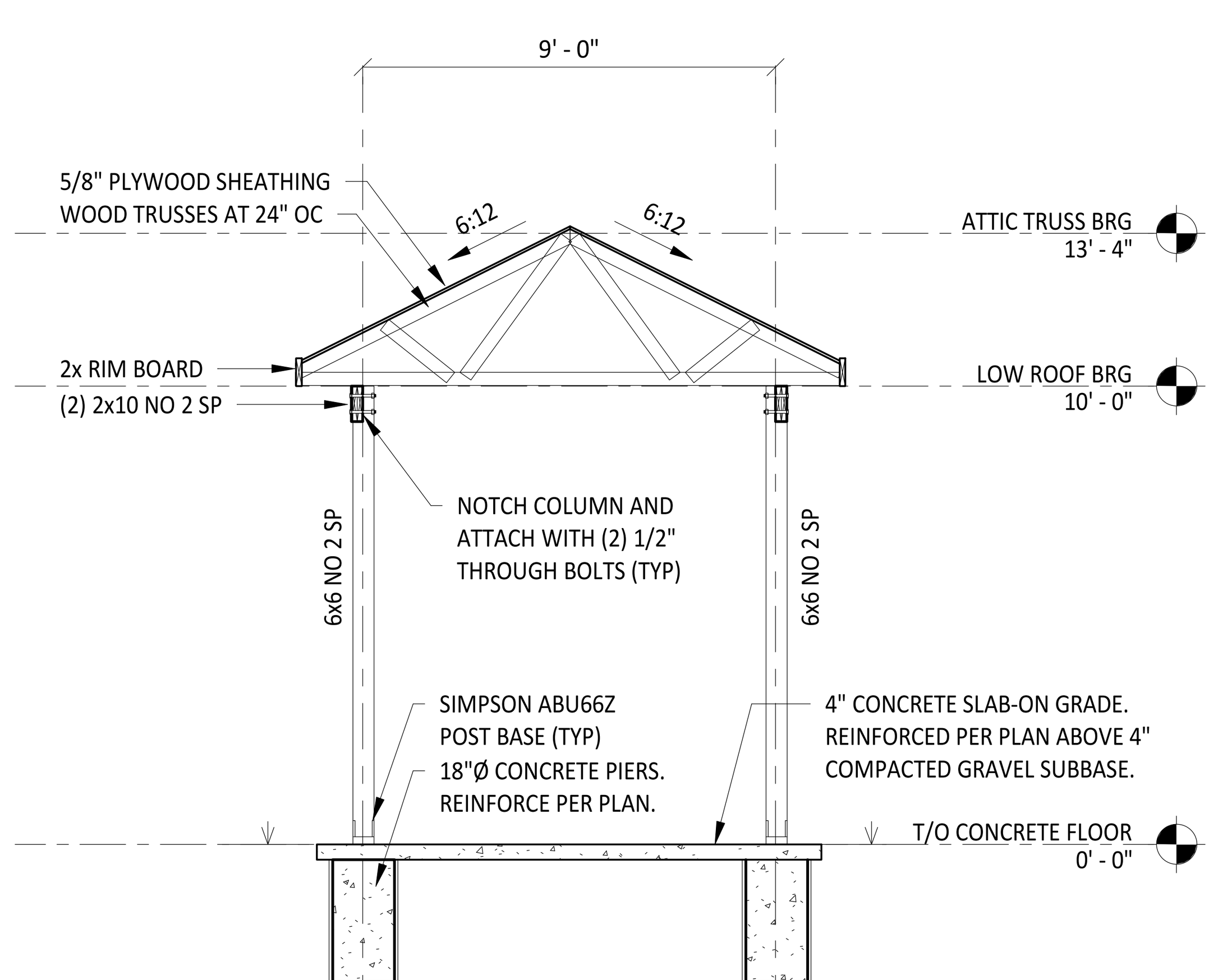
NOTES:
1) REFER TO TRUSS NOTES ON S1.03



3
S2.02

EXTERIOR STAIR CROSS SECTION

SCALE: 1/4" = 1'-0"



2
S2.02

FRONT ENTRANCE SECTION

SCALE: 1/4" = 1'-0"

METAL STAIRS STANDARDS

Metal Stairs Shall Conform to the Following:

ASTM A 6/A 6M - Standard Specification for General Requirements for Rolled Structural Steel Bars, Plates, Shapes, and Sheet Piling; 2009.

ASTM A 36/A 36M - Standard Specification for Carbon Structural Steel; 2008.

ASTM A 53/A 53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless; 2007.

ASTM A 283/A 283M - Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates; 2003 (Reapproved 2007).

ASTM A 325 - Standard Specification for Structural Bolts, Steel, Heat Treated, 120/105 ksi Minimum Tensile Strength; 2009a.

ASTM A 500/A 500M - Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes; 2010.

ASTM A 501 - Standard Specification for Hot-Formed Welded and Seamless Carbon Steel Structural Tubing; 2007.

ASTM E 985 - Standard Specification for Permanent Metal Railing Systems and Rails for Buildings; 2000 (Reapproved 2006).

AWS A2.4 - Standard Symbols for Welding, Brazing, and Nondestructive Examination; American Welding Society; 2007.

AWS D1.1/D1.1M - Structural Welding Code - Steel; American Welding Society; 2010.

ASTM A123/A123M - Standard Specification for Zinc (Hot-Dipped Galvanized) Coatings on Iron and Steel Products

ANSI/NAAMM MBG 531 - Metal Bar Grating Manual; 2017

Submittals:

- Shop Drawings:
  - Indicate profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners, and accessories.
  - Indicate welded connections using standard AWS A2.4 welding symbols. Indicate net weld lengths.
  - Include the design engineer's stamp or seal on each sheet of shop drawings.
- Welders' Certificates.

Quality Assurance:

- Structural Designer Qualifications:
  - Professional Structural Engineer experienced in design of this work and licensed in West Virginia, or personnel under direct supervision of such an engineer.
- Welder Qualifications:
  - Show certification of welders employed on the Work, verifying AWS qualification within the previous 12 months.

Products:

- Metal Stairs:
  - Provide stairs of the design specified, complete with landing platforms, vertical and horizontal supports, railings, and guards, fabricated accurately for anchorage to each other and to building structure.
- Stairs Treads:
  - Provide open tread grating for all stairs and landing
  - Basis of design: Type W-19 with dimple nosing at stair treads
  - Provide connections, details, and design based on specifications and requirements set by NAAMM MBG 531
- Regulatory Requirements:
  - Provide stairs and railings complying with the most stringent requirements of local, state, and federal regulations; where requirements of the contract documents exceed those of regulations, comply with the contract documents.
- Structural Design:
  - Provide complete stair and railing assemblies complying with the following:
  - Stair Capacity:
    - Uniform live load of 100 lb/sq ft and a concentrated load of 300 lb with deflection of stringer or landing framing not to exceed 1/360 of span.
  - Railing Assemblies:
    - Comply with ASTM E 985.
    - At exit stairwells, provide unit stair towers designed for stacking to height of building as a self-supporting structure.
  - Railing Assemblies:
    - Comply with ASTM E 985.

Finishes:

- Galvanizing of Structural Steel Members:
  - Galvanize after fabrication to ASTM A123/A123M requirements. Provide minimum 1.7 oz/sq. ft. galvanized coating.
  - Clean surfaces of rust, grease, and foreign matter prior to finishing.
  - Touch up primer for galvanized surfaces: SSPC-Paint 20, Type I - Inorganic, complying with VOC limitation of authorities having jurisdiction.

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BROOKE COUNTY COMMISSION
BROOKE COUNTY, WV
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Construction Drawings

DRAWN: PDB DATE: 4/4/2023
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PROJECT No.
T60-11009.00

BUILDING SECTIONS

SHEET No.
1
S2.02

LAYOUT TAB: BUILDING SECTIONS
CAD FILE: A:\Projects\22\22.135_Thrasher - Brooke EMS\Arw - Brooke EMS v22 (OWNER CHANGES).rvt
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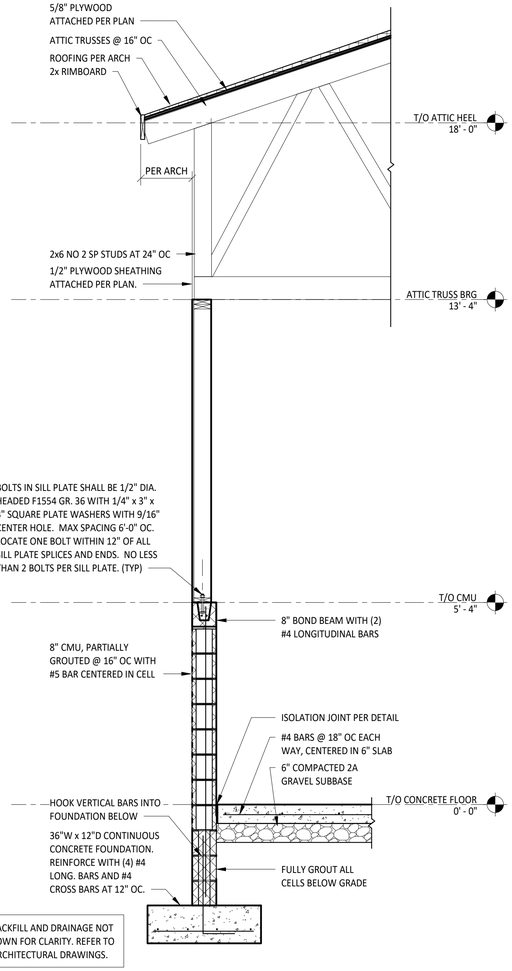
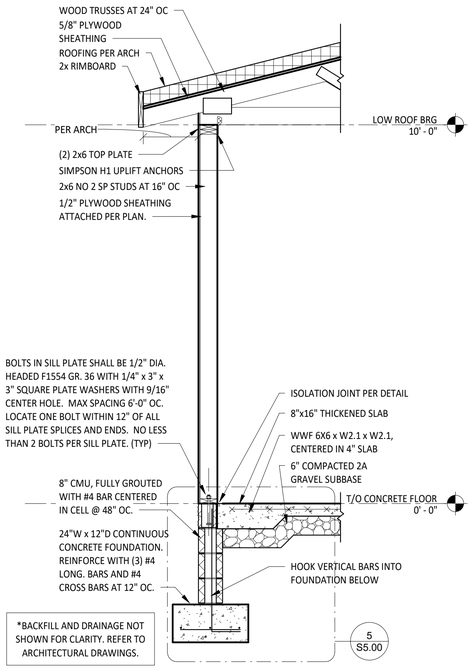
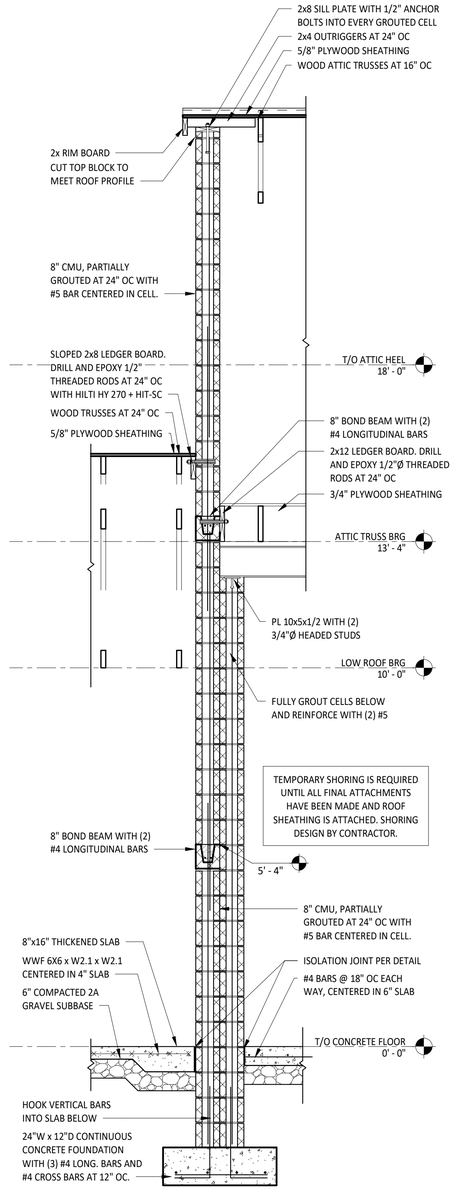
USER: PDB



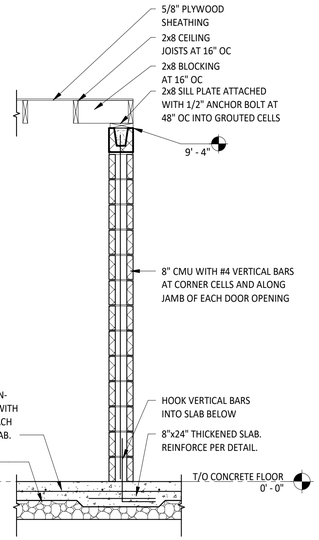
1 S2.03 APPARATUS BAY WALL SECTION
SCALE: 1/2" = 1'-0"



2 S2.03 RESIDENCE WALL SECTION
SCALE: 1/2" = 1'-0"



3 S2.03 DEMISING WALL SECTION
SCALE: 1/2" = 1'-0"



4 S2.03 INT. WALL SECTION
SCALE: 1/2" = 1'-0"

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4-4-2023

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BROOKE COUNTY EMS
BROOKE COUNTY COMMISSION
BROOKE COUNTY, WV
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DRAWN: PDB DATE: 4/4/2023
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PROJECT No.
T60-11009.00

WALL SECTIONS

SHEET No.
1
S2.03

LAYOUT TAB: WALL SECTIONS
CAD FILE: A:\Projects\2021 \55 - Thrasher - Brooke EMS\Rvt - Brooke EMS v21 (OWNER CHANGES).rvt
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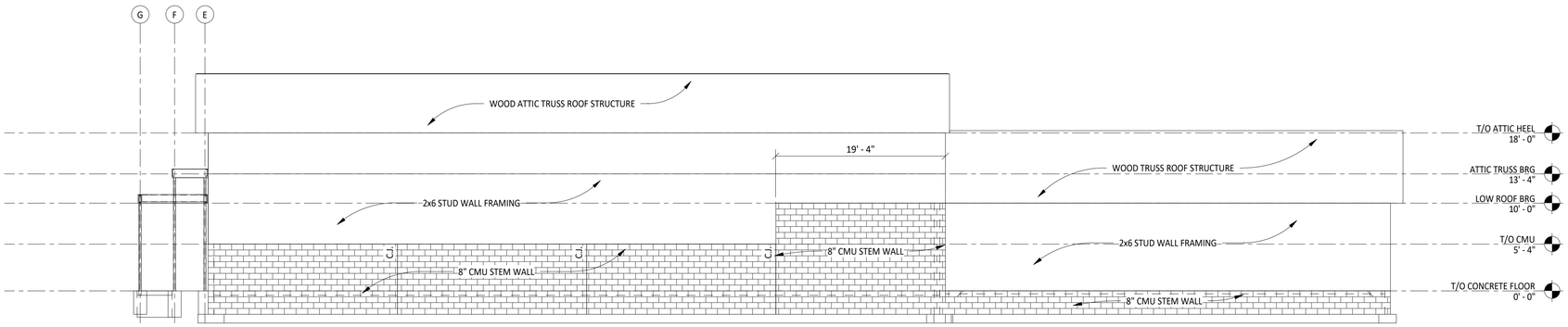
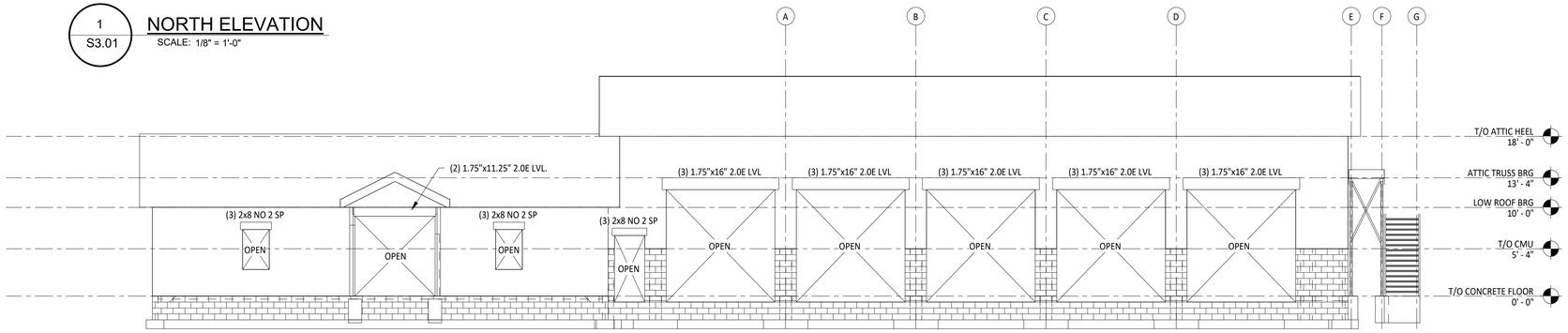
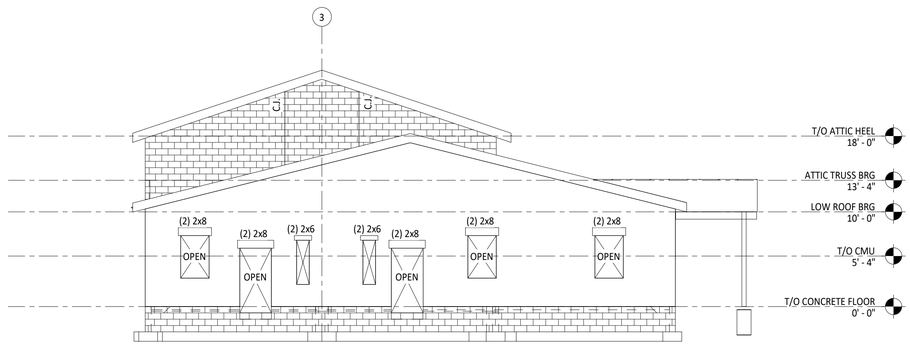
USER: PDB



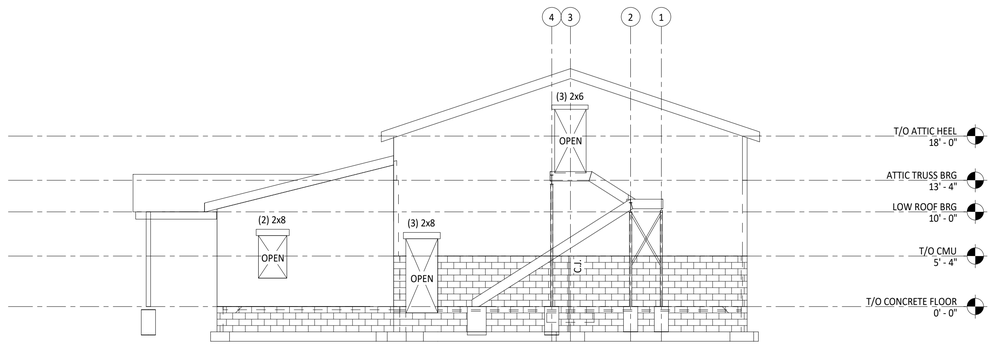
1 / S3.01 **NORTH ELEVATION**
SCALE: 1/8" = 1'-0"



2 / S3.01 **SOUTH ELEVATION**
SCALE: 1/8" = 1'-0"



3 / S3.01 **WEST ELEVATION**
SCALE: 1/8" = 1'-0"



4 / S3.01 **EAST ELEVATION**
SCALE: 1/8" = 1'-0"

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APPROVED: MWH DATE: 4/4/2023

PROJECT No.
T60-11009.00

ELEVATIONS

SHEET No.
S3.01

1

LAYOUT TAB: ELEVATIONS
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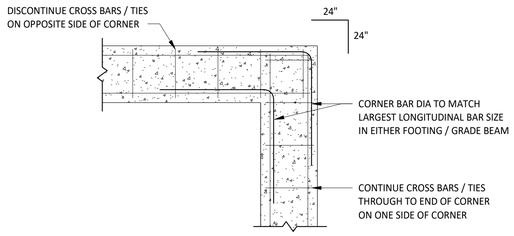
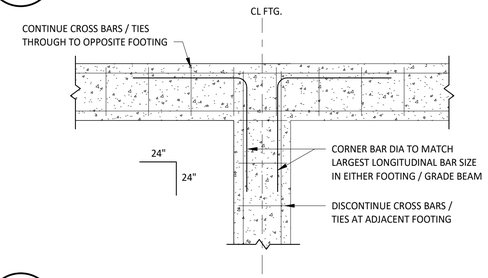


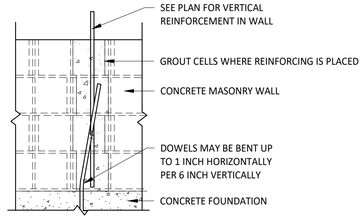
1 / S5.00 DETAIL AT GRADE BEAM / FOOTING CORNER

SCALE: 3/4" = 1'-0"



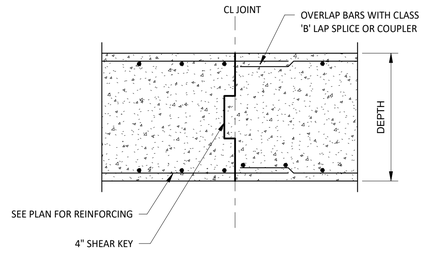
2 / S5.00 DETAIL AT GRADE BEAM / FOOTING INTERSECTION

SCALE: 3/4" = 1'-0"



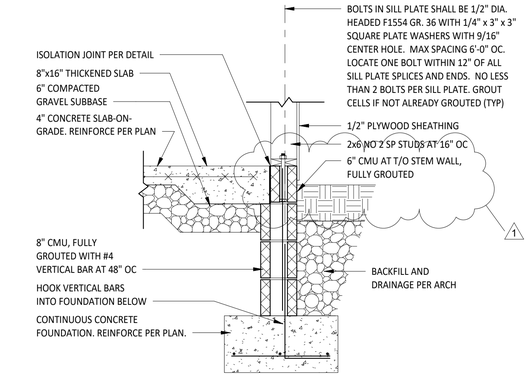
3 / S5.00 MASONRY WALL AT FTG. DETAIL

SCALE: 3/4" = 1'-0"



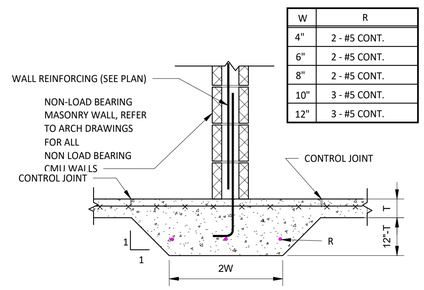
4 / S5.00 DETAIL AT FOOTING CONSTRUCTION JOINT

SCALE: 3/4" = 1'-0"



5 / S5.00 DETAIL AT FOUNDATION

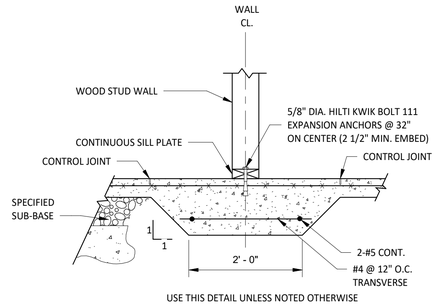
SCALE: 3/4" = 1'-0"



W	R
4"	2 - #5 CONT.
6"	2 - #5 CONT.
8"	2 - #5 CONT.
10"	3 - #5 CONT.
12"	3 - #5 CONT.

6 / S5.00 THICKENED SLAB UNDER CMU PARTITIONS

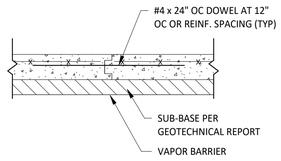
SCALE: 3/4" = 1'-0"



USE THIS DETAIL UNLESS NOTED OTHERWISE

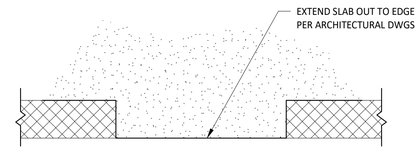
7 / S5.00 THICKENED SLAB AT L.B. STUD WALL

SCALE: 3/4" = 1'-0"

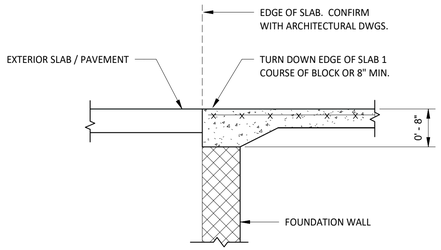


8 / S5.00 SLAB CONSTRUCTION JOINT DETAIL

SCALE: 3/4" = 1'-0"



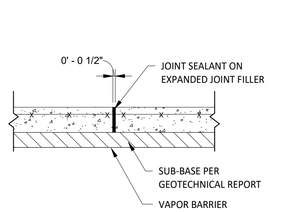
PLAN VIEW



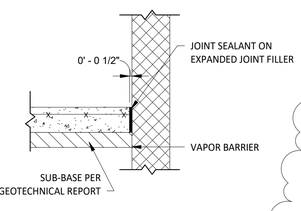
SECTION THROUGH OPENING

9 / S5.00 SLAB DETAIL AT ENTRANCES & OPENINGS

SCALE: 3/4" = 1'-0"



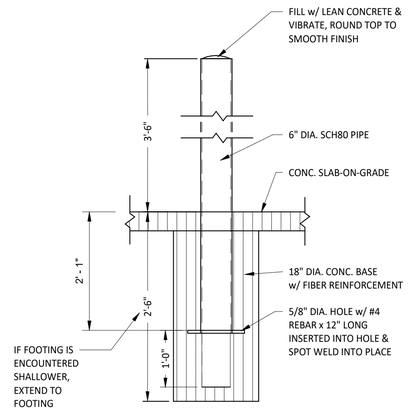
IN SLAB / AT COLUMNS



AT WALLS

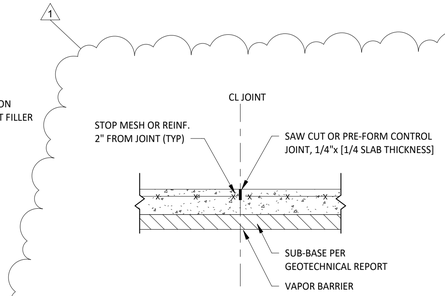
10 / S5.00 SLAB ISOLATION JOINT DETAIL

SCALE: 3/4" = 1'-0"



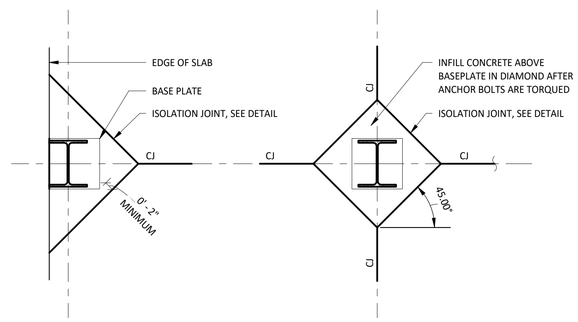
11 / S5.00 BOLLARD DETAIL @ GROUND LEVEL

SCALE: 3/4" = 1'-0"



13 / S5.00 SLAB CONTROL JOINT DETAIL

SCALE: 3/4" = 1'-0"



PLAN VIEW AT EXTERIOR COLUMN

PLAN VIEW AT INTERIOR COLUMN

12 / S5.00 ISOLATION JOINT DETAIL AT STEEL COLUMNS

SCALE: 3/4" = 1'-0"

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MICHAEL W. HASTEY 19837 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER 4-4-2023

NO.	BY	DATE	DESCRIPTION
1		4.4.2023	Addendum #3

BROOKE COUNTY EMS
BROOKE COUNTY COMMISSION
BROOKE COUNTY, WV
4.4.2023
Construction Drawings

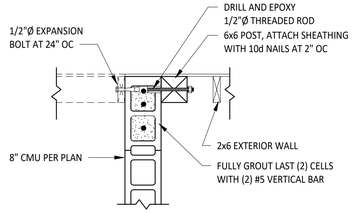
DRAWN: PDB DATE: 4/4/2023
CHECKED: PDB DATE: 4/4/2023
APPROVED: MWH DATE: 4/4/2023

PROJECT No.
T60-11009.00

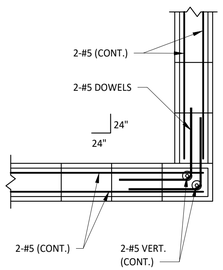
STRUCTURAL DETAILS

SHEET No.
S5.00

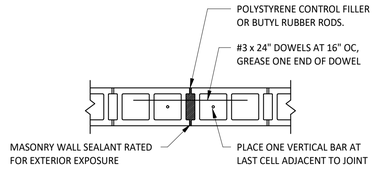
LAYOUT TAB: STRUCTURAL DETAILS
CAD FILE: A:\Projects\2022\ 165 - Thrasher - Brooke EMS\Sht\ - Brooke EMS-22 (OWNER CHANGES).rvt
PLOT DATE/TIME: 4/4/2023 10:00:02 AM
USER: PDB



1 / S5.01 — CMU/SHEAR WALL TRANSITION
SCALE: 3/4" = 1'-0"



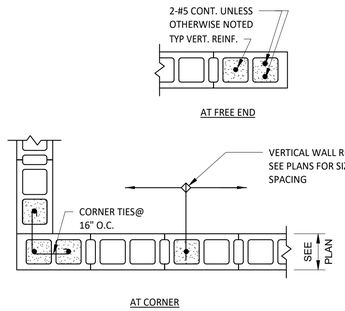
2 / S5.01 — TYPICAL BOND BEAM AT CORNER DETAIL
SCALE: 3/4" = 1'-0"

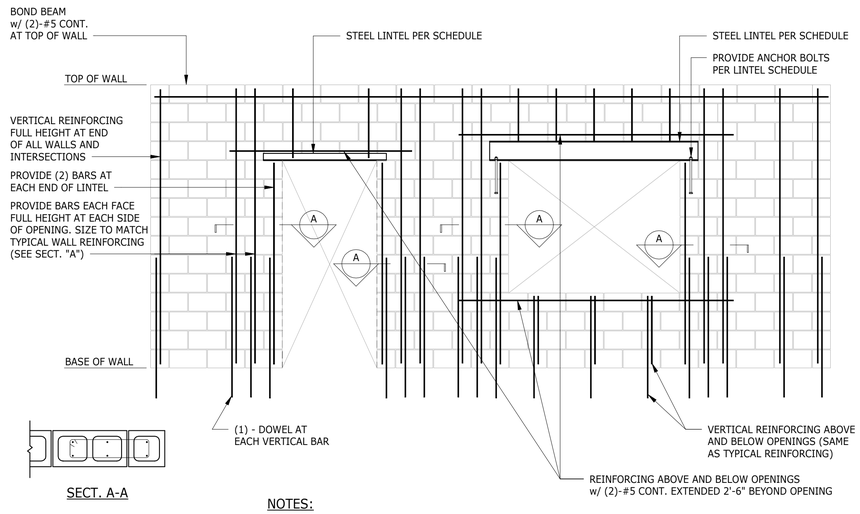


NOTE:
- CONTROL JOINTS SHALL BE SPACED 15'-0" O.C. AND AT EDGES OF ALL OPENINGS, MINIMUM ONE CONTROL JOINT PER WALL.

- PROPRIETARY CONTROL JOINT MATERIALS MAY BE SUBMITTED FOR APPROVAL BY ARROW

4 / S5.01 — TYPICAL MASONRY WALL CONTROL JOINT DETAIL
SCALE: 3/4" = 1'-0"





SECT. A-A

NOTES:

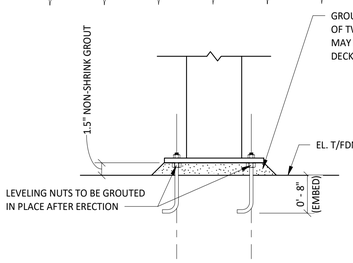
1. SEE GENERAL NOTES AND WALL SECTIONS FOR WALL REINFORCING.
2. LOCATE REINFORCING AS SHOWN ON TYPICAL WALL REINFORCING DETAIL.
3. SEE GENERAL NOTES FOR HORIZONTAL JOINT REINFORCING AND SPLICES.
4. SEE ARCHITECTURAL DRAWINGS FOR SIZE AND LOCATION OF WALLS NOT SHOWN ON STRUCTURAL DRAWINGS.
5. GROUT CELLS SOLID FULL HEIGHT AT ALL VERTICAL REINFORCING.

5 / S5.01 — TYPICAL REINFORCED C.M.U. WALL DETAILS
SCALE: 3/4" = 1'-0"

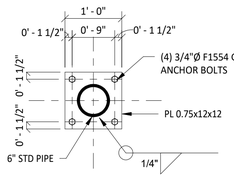
6 / S5.01 — TYPICAL OPENINGS
SCALE: 3/8" = 1'-0"

PLAN VIEW

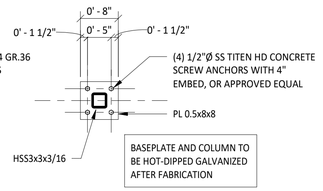
3 / S5.01 — TYP JAMB REINF IN MSNRY WALL DETAIL
SCALE: 3/4" = 1'-0"



ELEVATION - INTERIOR



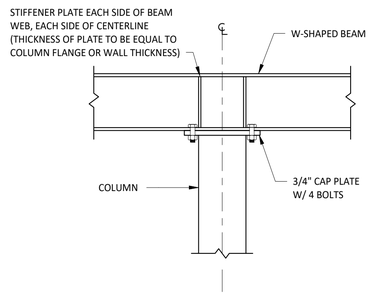
PLAN VIEW - INTERIOR



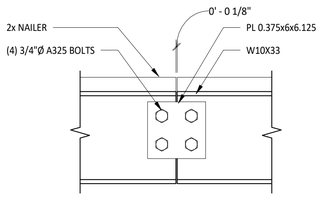
PLAN VIEW - EXTERIOR

REQUIRED DEVELOPMENT LENGTH OF REINFORCING BARS FOR MASONRY			
CLEAR SPACING (in)	COMPRESSIVE STRENGTH (psi)	REINFORCING BAR SIZE	DEVELOPMENT LENGTH
8	1500	#3	12"
		#4	14"
		#5	22"
		#6	40"
16	1500	#3	12"
		#4	12"
		#5	14"
		#6	22"
24	1500	#3	12"
		#4	12"
		#5	14"
		#6	22"
48	1500	#3	12"
		#4	12"
		#5	14"
		#6	22"

9 / S5.01 — DETAIL AT COLUMN BASE PLATE
SCALE: 3/4" = 1'-0"



8 / S5.01 — DETAIL AT BEAM BEARING AT COLUMN
SCALE: 3/4" = 1'-0"



10 / S5.01 — DETAIL AT BEAM SPLICE
SCALE: 1 1/2" = 1'-0"

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NO.	BY	DATE	DESCRIPTION
1		4.4.2023	Addendum #3

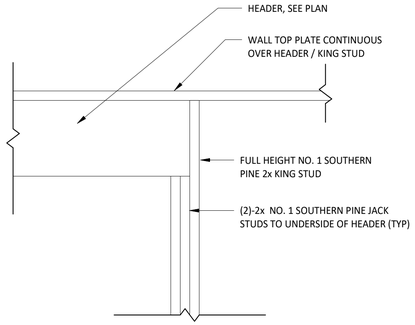
BROOKE COUNTY EMS
BROOKE COUNTY COMMISSION
BROOKE COUNTY, WV
4.4.2023
Construction Drawings

DRAWN: PDB DATE: 4/4/2023
CHECKED: PDB DATE: 4/4/2023
APPROVED: MWH DATE: 4/4/2023

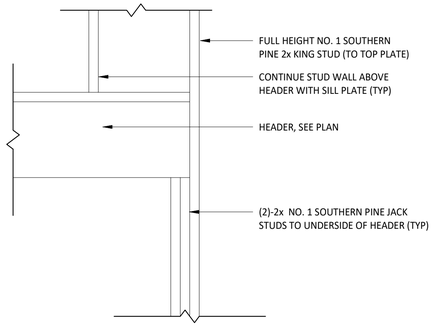
PROJECT No.
T60-11009.00

STRUCTURAL DETAILS

SHEET No.
S5.01

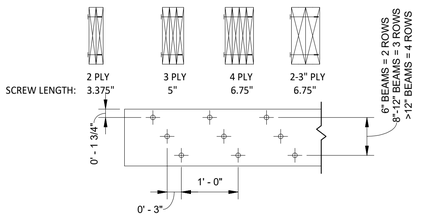


HEADER AT TOP OF WALL

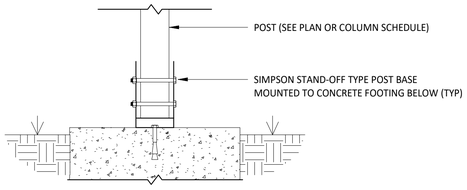


HEADER IN MIDDLE OF WALL

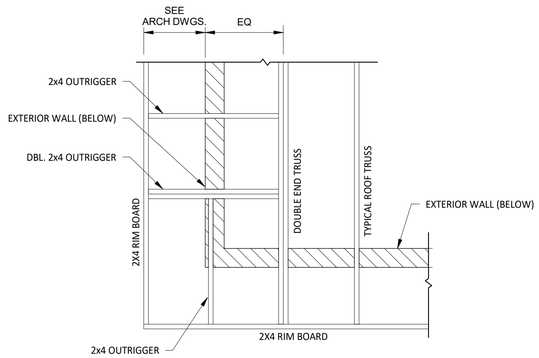
1 S5.02 DETAIL AT JAMB SUPPORT FOR WOOD HEADERS
SCALE: 1" = 1'-0"



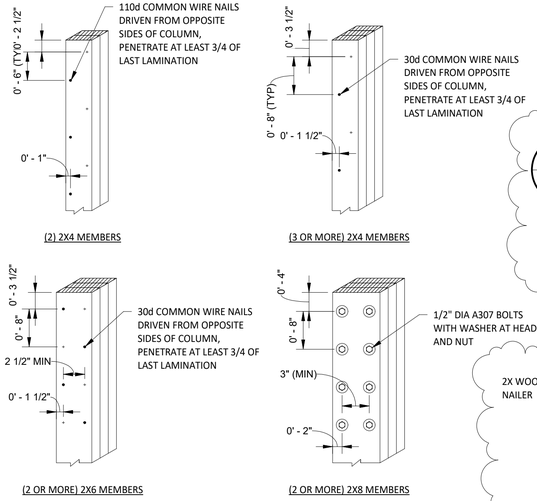
2 S5.02 DETAIL AT MULTI-PLY WOOD BEAM
SCALE: 3/4" = 1'-0"



5 S5.02 DETAIL FOR WOOD POST BASES
SCALE: 3/4" = 1'-0"



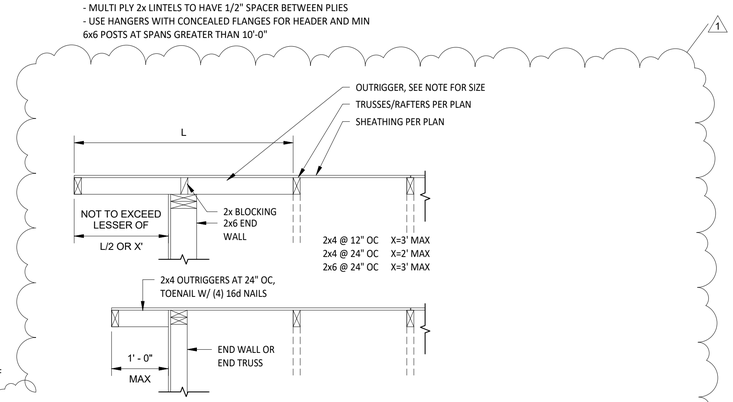
3 S5.02 DETAIL AT ROOF OUTRIGGER
SCALE: 1/2" = 1'-0"



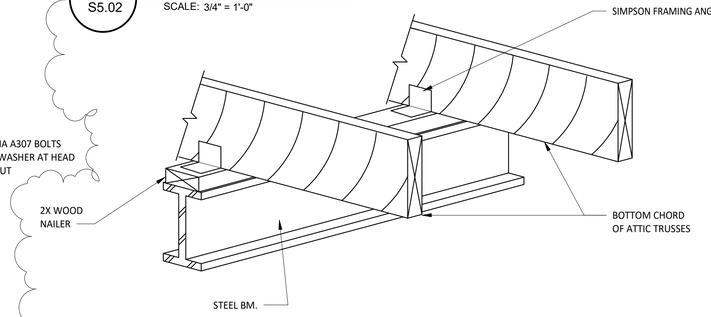
4 S5.02 DETAIL FOR BUILT UP MULTI-PLY STUD PACKS
SCALE: 3/4" = 1'-0"

NON-LOAD BEARING WALL WOOD LINTEL TABLE		
MAX. ROUGH OPENING	LINTEL	JACK / KING STUDS
UP TO 4'-0"	(3) 2x6 NO 1 SP	(1) JACK PLUS (1) KING STUD
4'-1" TO 6'-0"	(3) 2x6 NO 1 SP	(1) JACK PLUS (1) KING STUD
6'-1" TO 8'-0"	(3) 2x8 NO 1 SP	(2) JACK PLUS (1) KING STUD
8'-1" TO 10'-0"	(3) 2x8 NO 1 SP	(2) JACK PLUS (1) KING STUD
OVER 10'-0"	SEE PLAN	SEE PLAN

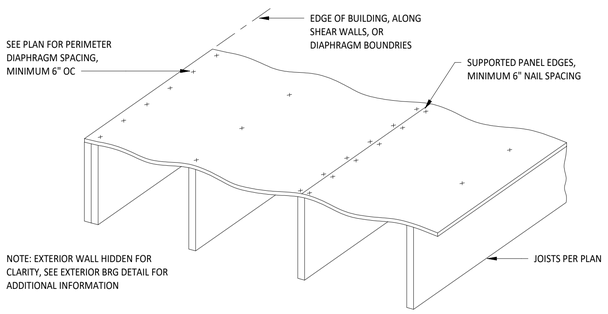
NOTES:
- MULTI PLY 2x LINTELS TO HAVE 1/2" SPACER BETWEEN PLIES
- USE HANGERS WITH CONCEALED FLANGES FOR HEADER AND MIN 6x6 POSTS AT SPANS GREATER THAN 10'-0"



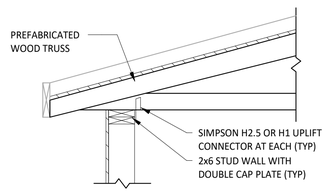
8 S5.02 OUTRIGGER DETAIL
SCALE: 3/4" = 1'-0"



9 S5.02 TYPICAL WOOD JOIST HANGER @ STEEL BEAM DETAIL
SCALE: 3/4" = 1'-0"



10 S5.02 DIAPHRAGM NAILING DETAIL
SCALE: 3/4" = 1'-0"



6 S5.02 WOOD TRUSS BEARING DETAIL
SCALE: 3/4" = 1'-0"

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MICHAEL W. HASTER 19837 STATE OF WEST VIRGINIA PROFESSIONAL ENGINEER 4-4-2023

NO.	BY	DATE	DESCRIPTION
1		4.4.2023	Addendum #3

BROOKE COUNTY EMS
BROOKE COUNTY COMMISSION
BROOKE COUNTY, WV
4.4.2023
Construction Drawings

DRAWN: PDB DATE: 4/4/2023
CHECKED: PDB DATE: 4/4/2023
APPROVED: MWH DATE: 4/4/2023

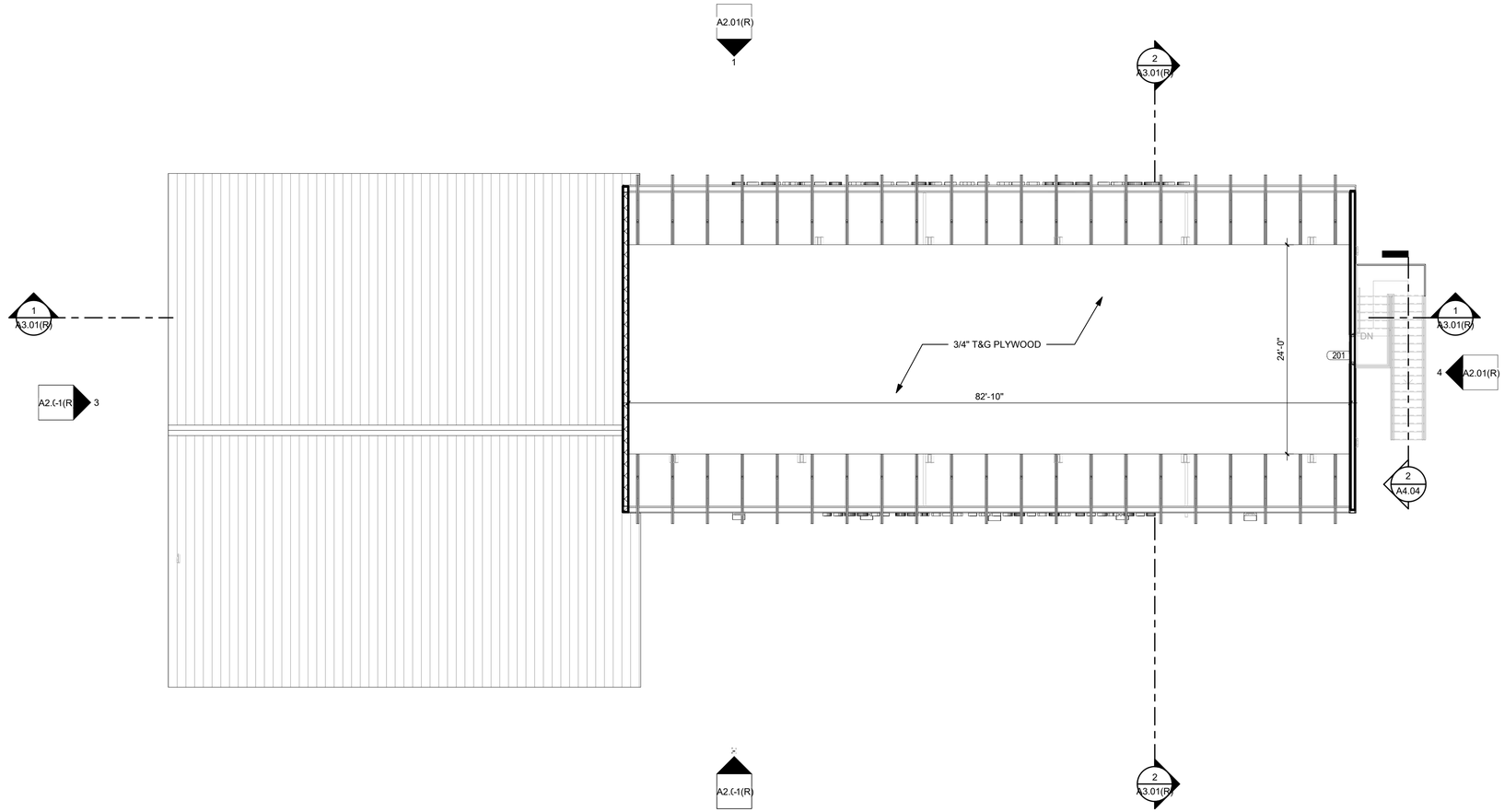
PROJECT No.
T60-11009.00

STRUCTURAL DETAILS

SHEET No.
S5.02

LAYOUT TAB: STRUCTURAL DETAILS USER: PDB
CAD FILE: X:\Projects\2021 Jobs\Thrasher - Brooke EMS\Arw - Brooke EMS v22 (OWNER CHANGES).rvt PLOT DATE/TIME: 4/4/2023 10:00:03 AM

ADDED: Addendum 3 - April 4, 2023



1 A1.04 ATTIC PLAN
1/8" = 1'-0"

0' 5' 10' 20'

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NO.	BY	DATE	DESCRIPTION

BROOKE COUNTY EMS

BROOKE COUNTY COMMISSION
3031 PLEASANT AVE, WELLSBURG WV 26070
FEBRUARY 24, 2023
CONSTRUCTION DOCUMENTS

DRAWN: Author DATE: 03/29/23
CHECKED: Checker DATE: 03/29/23

PROJECT No.
T60-11009.00

ATTIC PLAN

SHEET No.
A1.04

LAYOUT TAB: ATTIC PLAN
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USER: Author
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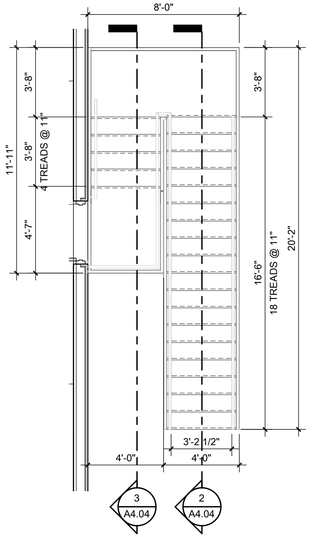
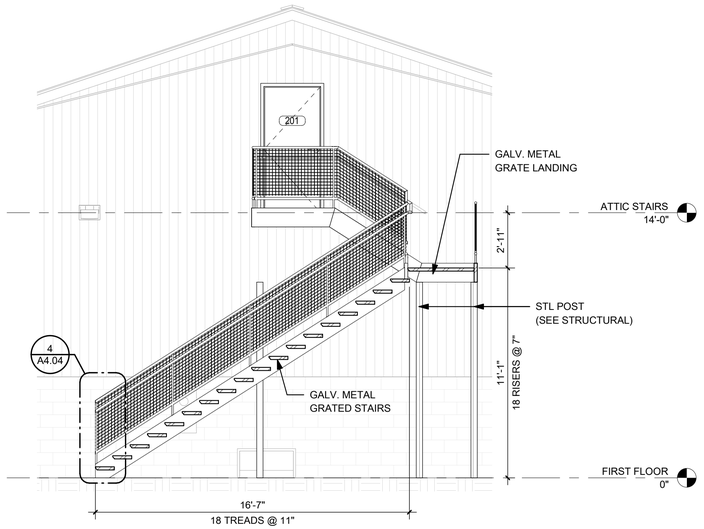
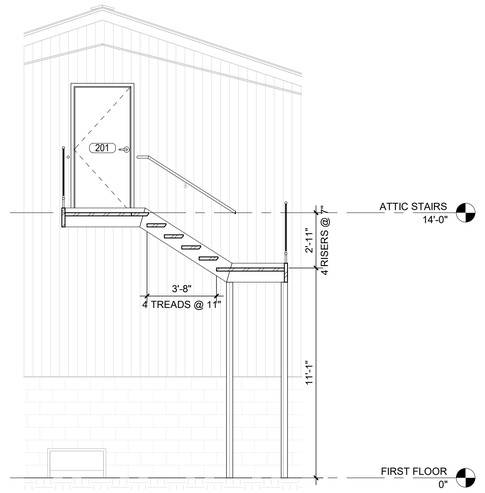


1 A4.04 EXTERIOR STAIR PLAN
1/4" = 1'-0"

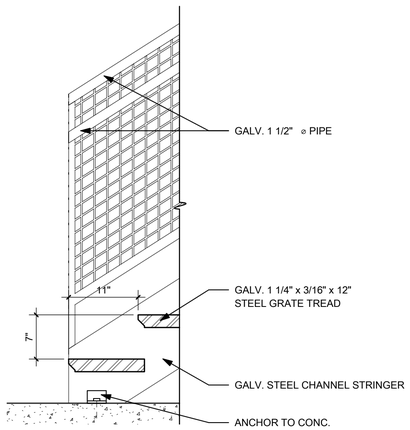


2 A4.04 EXTERIOR STAIR SECTION
1/4" = 1'-0"



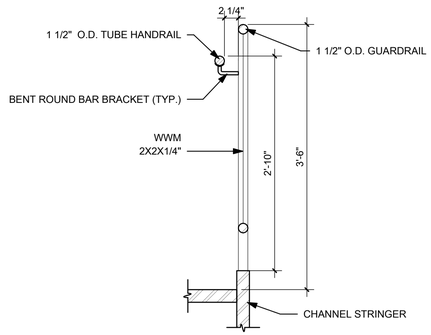
3 A4.04 EXTERIOR STAIR SECTION 2
1/4" = 1'-0"

0' 2'-6" 5' 10'

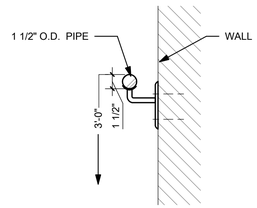


NOTE: GALVANIZED ALL COMPONENTS

4 A4.04 DETAIL - EXTERIOR STAIRS
1" = 1'-0"



5 A4.04 STAIRS/RAILING - STAIR RAILING
1" = 1'-0"



6 A4.04 STAIRS/RAILING - STAIR RAILING MOUNT
1 1/2" = 1'-0"

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NO.	BY	DATE	DESCRIPTION

BROOKE COUNTY EMS
BROOKE COUNTY COMMISSION
3031 PLEASANT AVE, WELLSBURG WV 26070
FEBRUARY 24, 2023
CONSTRUCTION DOCUMENTS

DRAWN: Author DATE: 03/27/23
CHECKED: Checker DATE: 03/27/23

PROJECT No.
T60-11009.00

EXTERIOR STAIRS

SHEET No.
A4.04

LAYOUT TAB: EXTERIOR STAIRS
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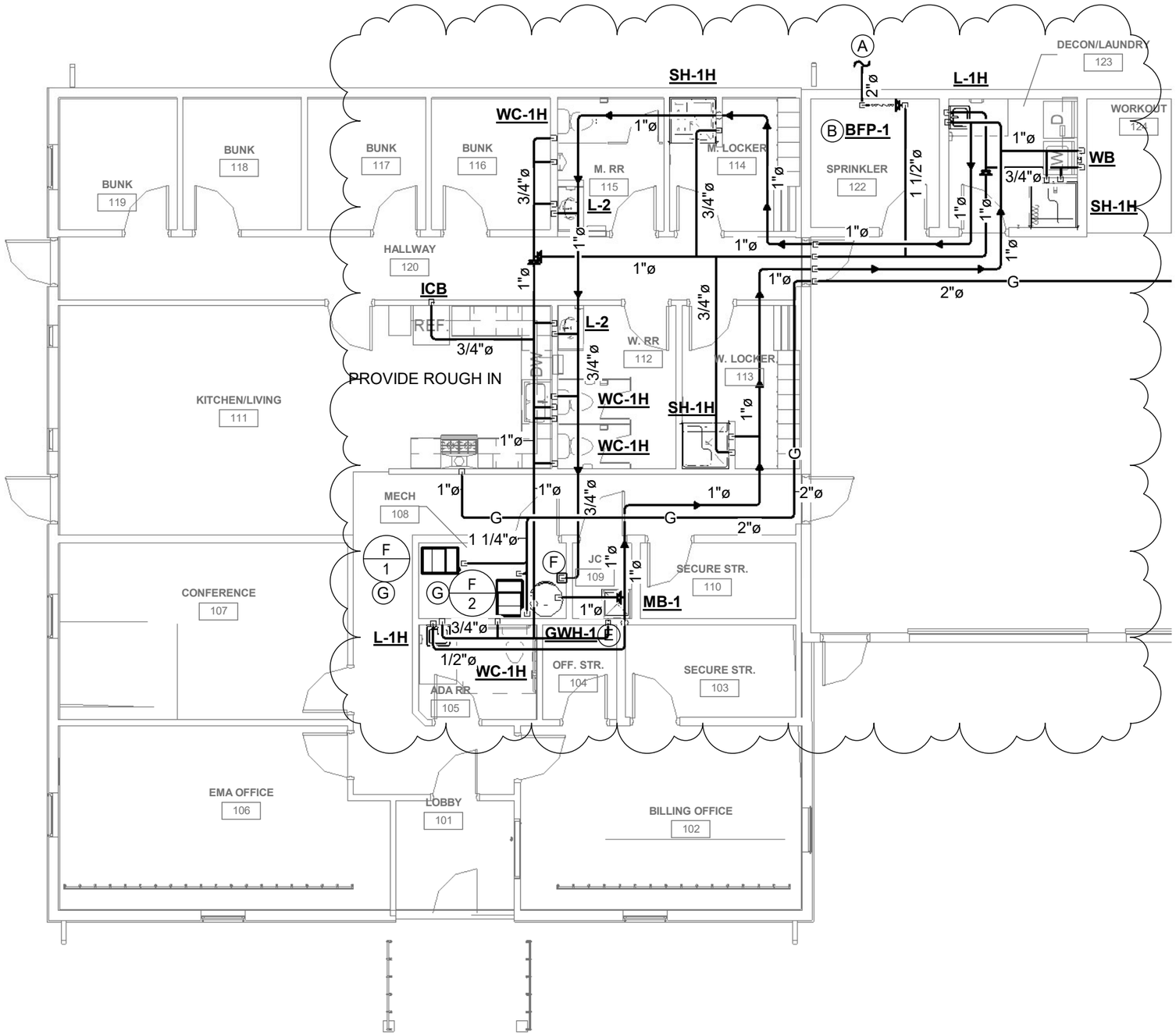
USER: Author

ADDED: ADDENDUM 3, April 4, 2023



1 SK-P3 UPDATED FIRST FLOOR PIPING SIZE

1/8" = 1'-0"

Harper Engineering

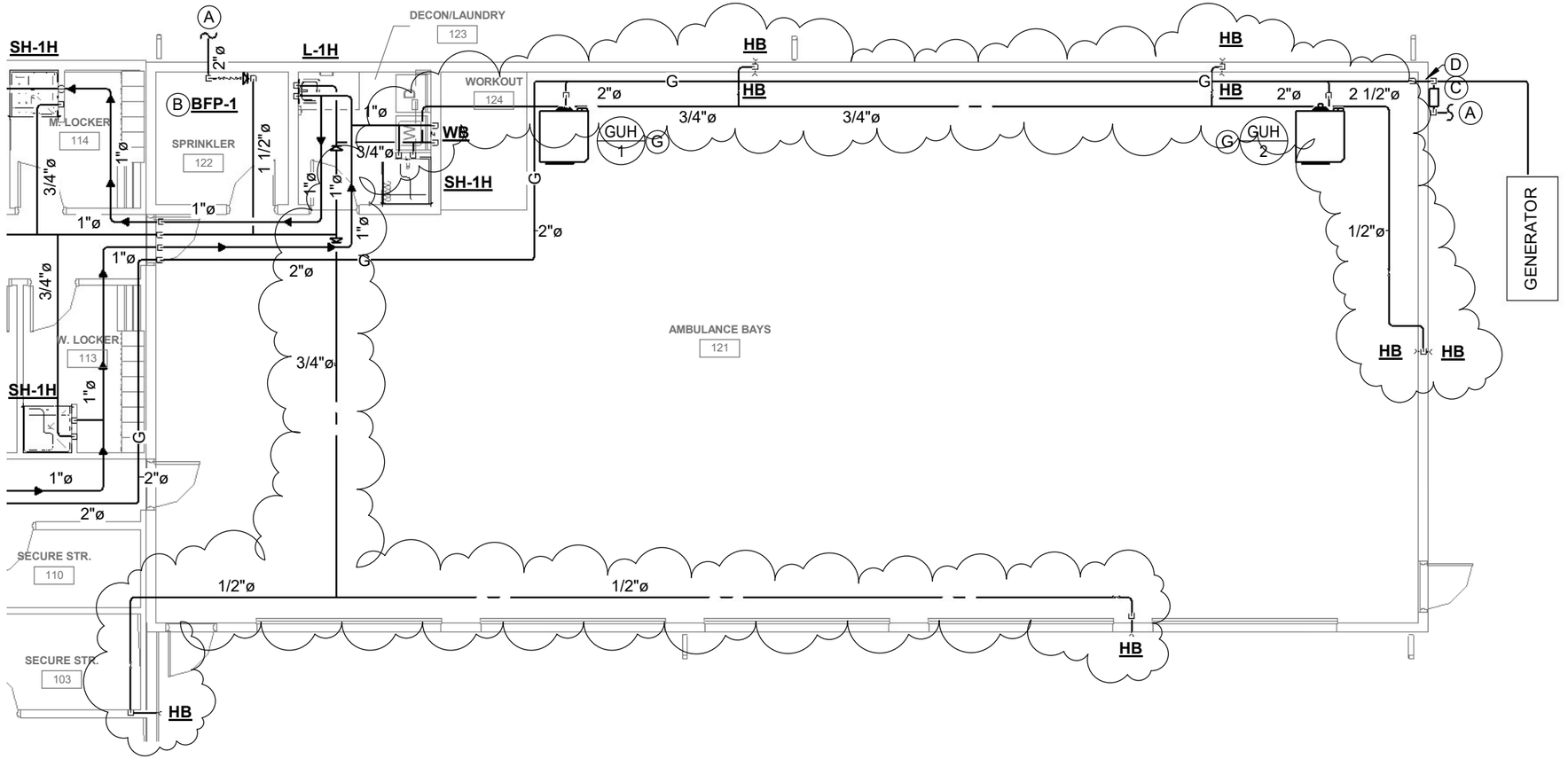
52 B Street
St Albans, WV 25177
p. 304.722.3602 f. 304.722.3603

CONSTRUCTION DOCUMENTS
BROOKE COUNTY EMS
3031 PLEASANT AVE, WELLSBURG, WV 26070

SK-P3

Date: 03/18/23

ADDED: ADDENDUM 3, APRIL 4, 2023



1 SK-P4 HOSE BIBB SKETCH

1/8" = 1'-0"

Harper Engineering

52 B Street
St Albans, WV 25177
p. 304.722.3602 f. 304.722.3603

CONSTRUCTION DOCUMENTS
BROOKE COUNTY EMS
3031 PLEASANT AVE, WELLSBURG, WV 26070

SK-P4

Date: 04/01/23

ADDED: ADDENDUM 3
April 4, 2023

SUBSTITUTION REQUEST
(During the Bidding/Negotiating Stage)

Project:	Brooke County EMS Facility (23-074287)	Substitution Request Number:	SubReq-26248
	Wellsburg, WV	From:	Erik Muir, Scranton Products
To:	Philip Freeman, The Thrasher Group (Bridgeport)	Date:	03/21/2023
	pfreeman@thethrashergroup.com, (304) 624-4108	A/E Project Number:	
Re:	Metal Lockers	Contract For:	Brooke County Commission

Specification Title: Metal Lockers
Description: Welded Corridor Lockers
Section: 105113 Page: 2
Article/Paragraph: 2.2

Proposed Substitution: Duralife Lockers
Manufacturer: Scranton Products Address: scrantonproducts.com Phone: 570-348-0997
Trade Name: Scranton Duralife Lockers Model No.: N/A

Attached data includes product description, specifications, drawings, photographs, and performance and test data adequate for evaluation of the request; applicable portions of the data are clearly identified.

Attached data also includes a description of changes to the Contract Documents that the proposed substitution will require for its proper installation.

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Proposed substitution does not affect dimensions and functional clearances.

Submitted by: Erik Muir
Signed by: Erik Muir
Firm: Scranton Products
Address: 801 E. Corey Street
Scranton, Pennsylvania 18504
Telephone: (570) 348-0997, erik.muir@azekco.com

A/E' s REVIEW AND ACTION

☐ Substitution approved - Make submittals in accordance with Specification Substitution Procedures.

☐ Substitution approved as noted - Make submittals in accordance with Specification Substitution Procedures.

☐ Substitution rejected - Use specified materials.

☐ Substitution Request received too late - Use specified materials.

Signed by: **Date:**

Supporting Data Attached: ☐ Drawings ☐ Product Data ☐ Samples ☐ Tests ☐ Reports ☐ ___

ADDED: ADDENDUM 3
April 4, 2023

SUBSTITUTION REQUEST
(During the Bidding/Negotiating Stage)

Project:	Brooke County EMS Facility (23-074287)	Substitution Request Number:	SubReq-26249
	Wellsburg, WV	From:	Erik Muir, Scranton Products
To:	Philip Freeman, The Thrasher Group (Bridgeport)	Date:	03/21/2023
	pfreeman@thethrashergroup.com, (304) 624-4108	A/E Project Number:	
Re:	Metal Lockers	Contract For:	Brooke County Commission

Specification Title: Metal Lockers
Description: Locker Benches
Section: 105113 Page: 3
Article/Paragraph: 2.4

Proposed Substitution: Tufftec Bench
Manufacturer: Scranton Products Address: scrantonproducts.com Phone: 570-348-0997
Trade Name: Scranton Tufftec Bench Model No.: N/A

Attached data includes product description, specifications, drawings, photographs, and performance and test data adequate for evaluation of the request; applicable portions of the data are clearly identified.

Attached data also includes a description of changes to the Contract Documents that the proposed substitution will require for its proper installation.

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Proposed substitution does not affect dimensions and functional clearances.

Submitted by: Erik Muir
Signed by: Erik Muir
Firm: Scranton Products
Address: 801 E. Corey Street
Scranton, Pennsylvania 18504
Telephone: (570) 348-0997, erik.muir@azekco.com

A/E' s REVIEW AND ACTION

☐ Substitution approved - Make submittals in accordance with Specification Substitution Procedures.

☐ Substitution approved as noted - Make submittals in accordance with Specification Substitution Procedures.

☐ Substitution rejected - Use specified materials.

☐ Substitution Request received too late - Use specified materials.

Signed by: **Date:**

Supporting Data Attached: ☐ Drawings ☐ Product Data ☐ Samples ☐ Tests ☐ Reports ☐ ___