

PROJECT NARRATIVE:

This project narrative is provided as a brief outline of the proposed scope of building improvements for this project.

The Project consists of the construction of a Duplex with in a new multi-unit residential rental apartment complex in Madison, AL, accessed off of Dunlop Blvd and Lime Quarry Rd. The program includes a total of 270 dwelling units of 7 unit types (1, 2, & 3 bedroom) & 10 Duplexes.

The Duplexes are classified as Type V(B) construction and is designed as a wood frame structure that includes engineered truss components for roofs. The buildings are placed on concrete slab on grade foundations with integral thickened edges and grade beams.

The Project program also includes amenity buildings which include a Pool Pavilion, Fitness Center, a Clubhouse and a Trash enclosure, that are submitted under separate packages.

The Project scope includes site engineering and landscape improvements that are submitted under separate cover.

SYMBOL KEY:

| | | |
|--|----------------------|---|
| | DOOR SYMBOL | NUMBERED BY TYPE REFER TO SCHEDULE |
| | WINDOW SYMBOL | NUMBERED BY TYPE REFER TO SCHEDULE |
| | GRID LINE TARGET | A,B,C, ETC. IN ONE DIRECTION 1,2,3, ETC. IN THE OTHER |
| | ROOM TAG | ROOM NUMBER |
| | TITLE | DRAWING NUMBER |
| | ELEVATION REFERENCES | DIRECTION OF VIEW SHEET NUMBER |
| | SECTION REFERENCES | DIRECTION OF VIEW SHEET NUMBER |
| | DETAIL REFERENCES | DETAIL AREA SHEET NUMBER |
| | INTERIOR ELEVATIONS | DIRECTION OF VIEW SHEET NUMBER |
| | LEVEL REFERENCE | Name Elevation |
| | ROOF SLOPE ARROW | 6:12 SLOPE SLOPE DIRECTION |
| | ROOF SLOPE | 6:12 SLOPE |
| | ACCESSORY TAG | LOCATION OF NOTE APPLICATION NOTE NUMBER |
| | NOTE TAG | LOCATION OF NOTE APPLICATION NOTE NUMBER |
| | LEVEL CHANGE | CHANGE IN LEVEL |
| | REVISION MARK | REV. LOCATION REV. No. |

DEFERRED SUBMITTALS:

- 1) Deferral of any submittal items shall have the prior approval of the Building Official having jurisdiction.
 - 2) Submittal documents for deferred submittal items shall be submitted to the Entry designated below for the project who shall review them. These will then be forwarded by the Owner to the Building Official having jurisdiction with a notation indicating that the deferred submittal documents have been reviewed and that they have been found to be in general compliance with the design of the project.
 - 3) The deferred submittal items shall not be installed until their design and submittal documents have been approved.
- LIST INCLUDING BUT NOT LIMITED TO:**
- A) BUILDING RAILINGS & GUARDRAILS REVIEW BY ARCHITECT
 - B) FIRE ALARM SYSTEM REVIEW BY ARCHITECT
 - C) AUTOMATIC FIRE SUPPRESSION (SPRINKLER) SYSTEM REVIEW BY ARCHITECT
 - D) PRE-ENGINEERED (WOOD) FLOOR & ROOF TRUSS SYSTEMS REVIEW BY ARCHITECT
 - E) BUILDING IDENTIFICATION AND WAYFINDING SIGNAGE REVIEW BY OWNER
 - F) POOL DESIGN, ENGINEERING & EQUIPMENT REVIEW BY OWNER
 - G) SITE FENCING REVIEW BY LANDSCAPE ARCHITECT

THE ROBERT

MADISON, ALABAMA

| OWNER/DEVELOPER | ARCHITECT | CIVIL ENGINEER | STRUCTURAL | MECHANICAL / ELECTRICAL / PLUMBING | LANDSCAPE ARCHITECT | INTERIOR DESIGN | CONTRACTOR |
|---|--|---|---|--|---|---|---|
| ROHDIE MADISON, LLC ATTN: RON LEICHTNER 52 VANDERBILT NEW YORK, NEW YORK 10017 PHONE (212) 682-5784 | Fugleberg Koch PA/PC ATTN: MICHAEL GOVE 2555 TEMPLE TRAIL WINTER PARK, FLORIDA 32789 PHONE (407) 629-0595 FAX (407) 628-1057 | MULLINS, LLC MULLINS, LLC 2101 WEST CLINTON AVE, SUITE 503, HUNTSVILLE, AL PHONE (256) 890-5312 | ASE ENGINEERING SERVICES, INC. ASE ENGINEERING SERVICES, INC. 10244 EAST COLONIAL DRIVE, SUITE 202 ORLANDO, FLORIDA 32817 PHONE (407) 677-5565 FAX (407) 730-2999 | JOSEPH, LAWRENCE & CO Consulting Engineers 1180 HARWOOD AVE, SUITE 3000 ALTA MONTE SPRINGS, FLORIDA 32714 PHONE (321) 972-4466 | TBD TBD 110 MONTE VISTA AVE CHARLOTTEVILLE, VA 22903 (434) 293-3265 | ALYSSA ROHDIE ATTN: ALYSSA ROHDIE 52 VANDERBILT NEW YORK, NEW YORK 10017 PHONE (212) 682-5784 | ESSIAN CONSTRUCTION & DEVELOPMENT ATTN: RICHARD SHASSIAN 999 DOUGLAS AVE, STE 1115 ALTA MONTE SPRINGS, FLORIDA 32714 PHONE (407) 245-8920 |

ISSUE HISTORY

| No. | Date | Description |
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REVISION HISTORY

| No. | Date | Description |
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ARCHITECTURAL ABBREVIATIONS

| A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W |
|----------------------|----------------------------|------------------------------|------------------------|------------------------------|-----------------------------------|-------------------|-------------------|-------------------|--------------|------------------------|-------------------------|--------------------|-------------------------|-----------------------|-------------------|---|---|---|---|---|---|---|
| ABV ABOVE | BD. BOARD | CIR. CIRCLE | D. DEPTH | E. EAST | F.A. FIRE ALARM | FTG. FOOTING | HDW. HARDWARE | K. KIT. | M.C. MAXIMUM | N. NORTH | P.LAM. PLASTIC LAMINATE | R. RISER | SCHED. SCHEDULE | T. TREAD | W. WEST / WIDE | | | | | | | |
| ACC.FL. ACCESS FLOOR | BLDG. BUILDING | C.J./J. CONTROL JOINT | DBL. DOUBLE | EA. EACH | F.D. FLOOR DRAIN | FUR. FURRING | H.M. HARDWOOD | KIT. KITCHEN | M.C. MECH. | N. NORTH | PLAS. PLASTER | R. RISER | SECT. SECTION | T. TREAD | W. WEST / WIDE | | | | | | | |
| ACoust. Acoustical | BLDG. BLOCK OR BLOCKING | C.L.G. CEILING | DEG. DEGREE | E.F. EACH FACE | F.D.C. FIRE DEPARTMENT CONNECTION | FUT. FUTURE | H.M. HOLLOW METAL | L. LONG OR LENGTH | M.C. MEMB. | N.A. NOT APPLICABLE | PLYWD. PLYWOOD | R. RADIUS | S.F. SQUARE FOOT / FEET | T & G TONGUE & GROOVE | W. WITH | | | | | | | |
| AD. AREA DRAIN | BM. BEAM | C.L.G. CALLING | D.F. DRINKING FOUNTAIN | E.F.S. EXPANSION JOINT | FDN. FOUNDATION | F.V. FIELD VERIFY | H.H. HORIZONTAL | L. LAB. | M.C. MEZZ. | N.I.C. NOT IN CONTRACT | PAN. PANEL | S.H.V./SH SHELVING | SHT. SHEET | T & G TEMPERED GLASS | W.C. WATER CLOSET | | | | | | | |
| ADJ. ADJACENT | BOT. BOTTOM | C.L.G. CENTER LINE | D.F. DIAMETER | E.I.F.S. EXTERIOR INSULATION | F.E.C. FIRE EXTINGUISHER | G. GAUGE | H.P. HOUR | L. LAM. | M.C. MEZZ. | N.I.C. NOT IN CONTRACT | PAN. POLISHED | SHT. SHEET | T. TOP OF | TER TERRAZZO | WD. WOOD | | | | | | | |
| ADJUST. ADJUSTABLE | B.O. BOTTOM OF | C.L.G. CLEAR | D.F. DIAMETER | E.I.F.S. EXTERIOR INSULATION | F.E.C. FIRE EXTINGUISHER | G. GAUGE | H.P. HOUR | L. LAM. | M.C. MEZZ. | N.I.C. NOT IN CONTRACT | PAN. POLISHED | SHT. SHEET | T. TOP OF | TER TERRAZZO | WD. WOOD | | | | | | | |
| AFF. ABOVE FINISHED | BRK. BRICK | C.L.G. CONCRETE MASONRY UNIT | D.F. DIAMETER | E.I.F.S. EXTERIOR INSULATION | F.E.C. FIRE EXTINGUISHER | G. GAUGE | H.P. HOUR | L. LAM. | M.C. MEZZ. | N.I.C. NOT IN CONTRACT | PAN. POLISHED | SHT. SHEET | T. TOP OF | TER TERRAZZO | WD. WOOD | | | | | | | |
| AL. ALUMINUM | BSMT. BASEMENT | C.O. CLEAR OPENING | D.F. DIAMETER | E.I.F.S. EXTERIOR INSULATION | F.E.C. FIRE EXTINGUISHER | G. GAUGE | H.P. HOUR | L. LAM. | M.C. MEZZ. | N.I.C. NOT IN CONTRACT | PAN. POLISHED | SHT. SHEET | T. TOP OF | TER TERRAZZO | WD. WOOD | | | | | | | |
| ALUM. ALUMINUM | B.T.W. BETWEEN | C.O. COLUMN | D.F. DIAMETER | E.I.F.S. EXTERIOR INSULATION | F.E.C. FIRE EXTINGUISHER | G. GAUGE | H.P. HOUR | L. LAM. | M.C. MEZZ. | N.I.C. NOT IN CONTRACT | PAN. POLISHED | SHT. SHEET | T. TOP OF | TER TERRAZZO | WD. WOOD | | | | | | | |
| ANG. ANGLE | B.U. BUILT-UP | C.O. COMM. | D.F. DIAMETER | E.I.F.S. EXTERIOR INSULATION | F.E.C. FIRE EXTINGUISHER | G. GAUGE | H.P. HOUR | L. LAM. | M.C. MEZZ. | N.I.C. NOT IN CONTRACT | PAN. POLISHED | SHT. SHEET | T. TOP OF | TER TERRAZZO | WD. WOOD | | | | | | | |
| ANOD. ANODIZED | B.W. BOTH WAYS | C.O. CONC. | D.F. DIAMETER | E.I.F.S. EXTERIOR INSULATION | F.E.C. FIRE EXTINGUISHER | G. GAUGE | H.P. HOUR | L. LAM. | M.C. MEZZ. | N.I.C. NOT IN CONTRACT | PAN. POLISHED | SHT. SHEET | T. TOP OF | TER TERRAZZO | WD. WOOD | | | | | | | |
| APPROX. APPROXIMATE | CAB. CABINET | C.O. CONTR. | D.F. DIAMETER | E.I.F.S. EXTERIOR INSULATION | F.E.C. FIRE EXTINGUISHER | G. GAUGE | H.P. HOUR | L. LAM. | M.C. MEZZ. | N.I.C. NOT IN CONTRACT | PAN. POLISHED | SHT. SHEET | T. TOP OF | TER TERRAZZO | WD. WOOD | | | | | | | |
| ARCH. ARCHITECTURAL | C.B./TB. CORNBOR/TACKBOARD | C.O. CONTR. | D.F. DIAMETER | E.I.F.S. EXTERIOR INSULATION | F.E.C. FIRE EXTINGUISHER | G. GAUGE | H.P. HOUR | L. LAM. | M.C. MEZZ. | N.I.C. NOT IN CONTRACT | PAN. POLISHED | SHT. SHEET | T. TOP OF | TER TERRAZZO | WD. WOOD | | | | | | | |
| AUTO. AUTOMATIC | C.B. CATCH BASIN | C.O. CONTR. | D.F. DIAMETER | E.I.F.S. EXTERIOR INSULATION | F.E.C. FIRE EXTINGUISHER | G. GAUGE | H.P. HOUR | L. LAM. | M.C. MEZZ. | N.I.C. NOT IN CONTRACT | PAN. POLISHED | SHT. SHEET | T. TOP OF | TER TERRAZZO | WD. WOOD | | | | | | | |
| AVG. AVERAGE | CER. CERAMIC | C.O. CONTR. | D.F. DIAMETER | E.I.F.S. EXTERIOR INSULATION | F.E.C. FIRE EXTINGUISHER | G. GAUGE | H.P. HOUR | L. LAM. | M.C. MEZZ. | N.I.C. NOT IN CONTRACT | PAN. POLISHED | SHT. SHEET | T. TOP OF | TER TERRAZZO | WD. WOOD | | | | | | | |
| | C.H. CEILING HEIGHT | C.O. CONTR. | D.F. DIAMETER | E.I.F.S. EXTERIOR INSULATION | F.E.C. FIRE EXTINGUISHER | G. GAUGE | H.P. HOUR | L. LAM. | M.C. MEZZ. | N.I.C. NOT IN CONTRACT | PAN. POLISHED | SHT. SHEET | T. TOP OF | TER TERRAZZO | WD. WOOD | | | | | | | |

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www.fuglebergkoch.com AA26002103

CONSULTANT

MICHAEL GOVE
PEM

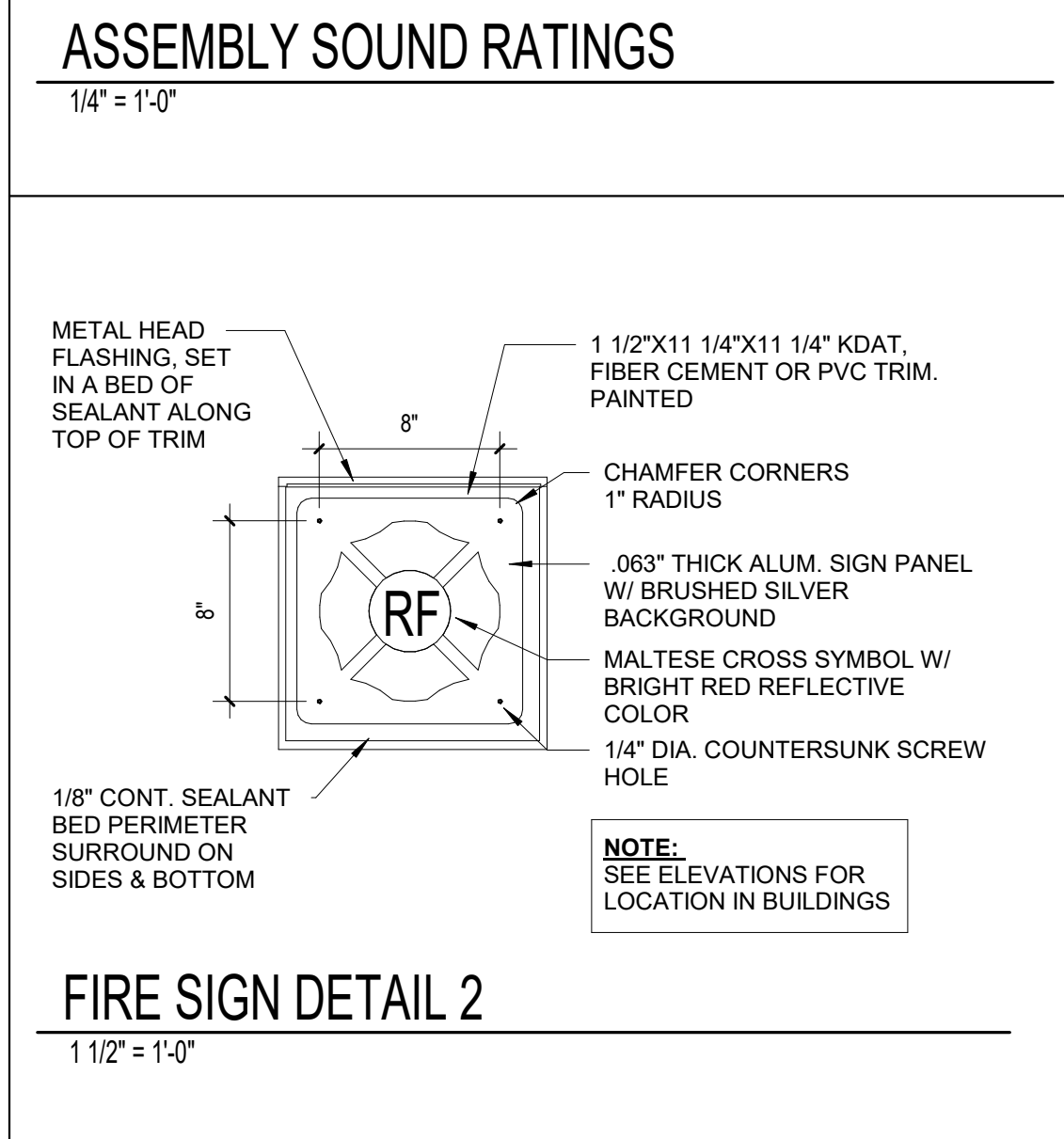
THE ROBERT MADISON
MADISON, AL
Drawn: MB
Checked: JK
Approval: MB
Date: 04/15/2022
Project #: 572

COVER SHEET
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BUILDING CODE ANALYSIS - INTERNATIONAL RESIDENTIAL CODE, 2018 EDITION

| CODE SUMMARY | | INTERIOR FINISH CLASSIFICATION | | TABLE 402.4.2 AIR BARRIER AND INSULATION INSPECTION COMPONENT CRITERIA | |
|---|----------|--|---------|--|--|
| <p>1. BUILDING CODE: 2018 INTERNATIONAL RESIDENTIAL CODE</p> <p>2. LIFE SAFETY CODE: 2018 NFPA 101</p> <p>3. PLUMBING CODE: 2018 INTERNATIONAL RESIDENTIAL CODE</p> <p>4. ENERGY CODE: 2018 INTERNATIONAL RESIDENTIAL CODE</p> <p>5. FIRE CODE: NA</p> <p>6. ICC/ANSI ACCESSIBILITY CODE: NA</p> <p>7. ELECTRICAL CODE: 2018 INTERNATIONAL RESIDENTIAL CODE</p> <p>8. MECHANICAL CODE: 2018 INTERNATIONAL RESIDENTIAL CODE</p> <p>9. NOT USED.</p> <p>10. NOT USED.</p> | | <p>PER 2018 IRC SECTION R302.9 FLAME SPREAD & SMOKE-DEVELOPED INDICES FOR WALL AND CEILING FINISHES SHALL BE IN ACCORDANCE WITH R302.9.1-R302.9.4.</p> | | <p>CRITERIA</p> <p>Air barrier and thermal barrier: Exterior thermal envelope insulation for framed walls is installed in substantial contact and continuous alignment with building envelope air barrier. Breaks or joints in the air barrier are filled or repaired. Air-permeable insulation is not used as a sealing material. Air-permeable insulation is inside of an air barrier.</p> <p>Ceiling/attic: Air barrier in any dropped ceiling/soffit is substantially aligned with insulation and any gaps are sealed. Attic access (except unvented attic), knee wall door, or drop down stair is sealed.</p> <p>Walls: Corners and headers are insulated. Junction of foundation and sill plate is sealed.</p> <p>Windows and doors: Space between window/door jambs and framing is sealed.</p> <p>Rim joists: Rim joists are insulated and include an air barrier.</p> <p>Floors (including above-garage and cantilevered floors): Insulation is installed to maintain permanent contact with underside of subfloor decking. Air barrier is installed at any exposed edge of insulation.</p> <p>Crawl space walls: Insulation is permanently attached to walls. Exposed earth in unvented crawl spaces is covered with Class I vapor retarder with overlapping joints taped.</p> <p>Duct shafts, utility penetrations, knee walls and flue shafts opening to exterior or unconditioned space are sealed.</p> <p>Narrow cavities: Batts in narrow cavities are cut to fit, or narrow cavities are filled by sprayed/blown insulation.</p> <p>Garage separation: Air sealing is provided between the garage and conditioned spaces. Recessed light fixtures are air tight, IC rated, and sealed to drywall. Exception-fixtures in conditioned space.</p> <p>Recessed lighting: Insulation is placed between outside and pipes. Batt insulation is cut to fit around wiring and plumbing, or sprayed/blown insulation extends behind piping and wiring.</p> <p>Plumbing and wiring: Showers and tubs on exterior walls have insulation and an air barrier separating them from the exterior wall.</p> <p>Shower/tub on exterior wall: Air barrier extends behind boxes or air sealed-type boxes are installed.</p> <p>Electrical/phone box on exterior walls: Air barrier is installed in common wall between dwelling units.</p> <p>Common wall: HVAC register boots that penetrate building envelope are sealed to subfloor or drywall.</p> <p>Fireplace: Fireplace walls include an air barrier.</p> | |
| BUILDING CODE PARAMETERS - IIRC 2018 | | | | | |
| DESCRIPTION | REQUIRED | THIS PROJECT | REMARKS | REFERENCE | |
| FIRE RATING | 0 HR | 0 HR | | R302.1(1) | |
| TENANT SEPARATION | 1 HR | 1 HR | | | |
| SPRINKLER | NS | NA | | 903.3.1.2 | |
| LEVEL 1 | | 1678 SF | | | |
| LEVEL 2 | | 1678 SF | | R302.3 | |
| TOTAL BUILDING AREA | | 3356 SF | | | |
| HEIGHT LIMIT (S) | | 2 STORIES | | | |
| HEIGHT LIMIT (PROVIDED) (FT) | | 28' - 0" | | | |
| OCCUPANT LOAD | | 17 PEOPLE | | | |

| ASSEMBLY SOUND RATINGS | | | |
|------------------------|-------------|------------|---|
| WALL ASSEMBLY | STC RATINGS | IC RATINGS | TEST # / STANDARD |
| U305 | 56 | N/A | BW-35ST 1969 GEIGER AND HAMME |
| U341 | 58 | N/A | TL-93-270/ NRC - CNRC |
| U356 | 52 | N/A | BW-35ST 1969 GEIGER AND HAMME |
| U336 | 60 | N/A | BW-35ST 1969 GEIGER AND HAMME |
| HORIZONTAL ASSEMBLY | | | |
| ASSEMBLY | STC RATINGS | IC RATINGS | TEST # / STANDARD |
| PS22 | 60 | 50 | RAL-TL-97-340 & RAL-IN-97-47/ USG LEVELROCK SOUND CONTROL |
| LS28 | 60 | 50 | RAL-TL-97-340 & RAL-IN-97-47/ USG LEVELROCK SOUND CONTROL |
| LS74 | 54 | 50 | RAL-TL-97-340 & RAL-IN-97-47/ USG LEVELROCK SOUND CONTROL |



LIFE SAFETY LEGEND

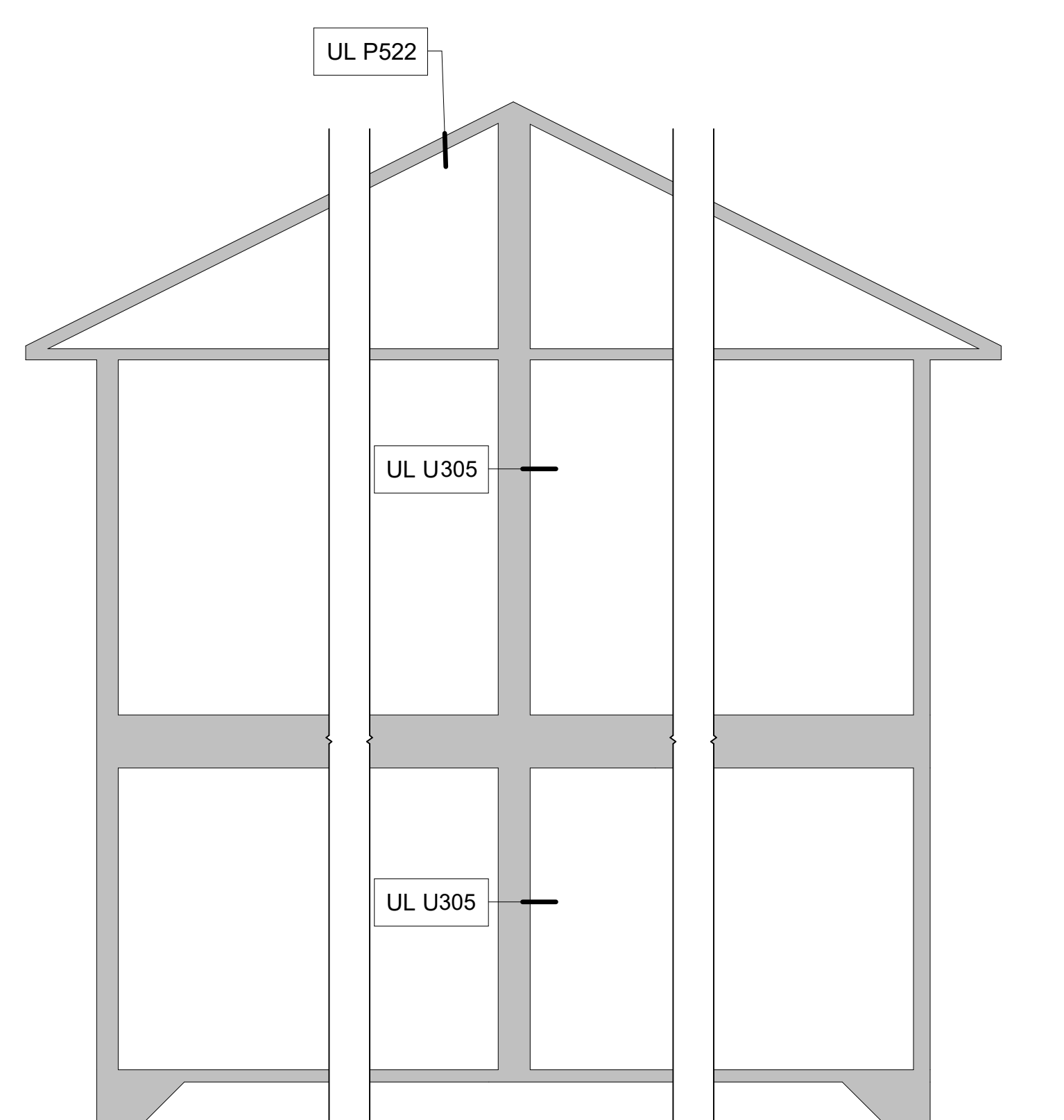
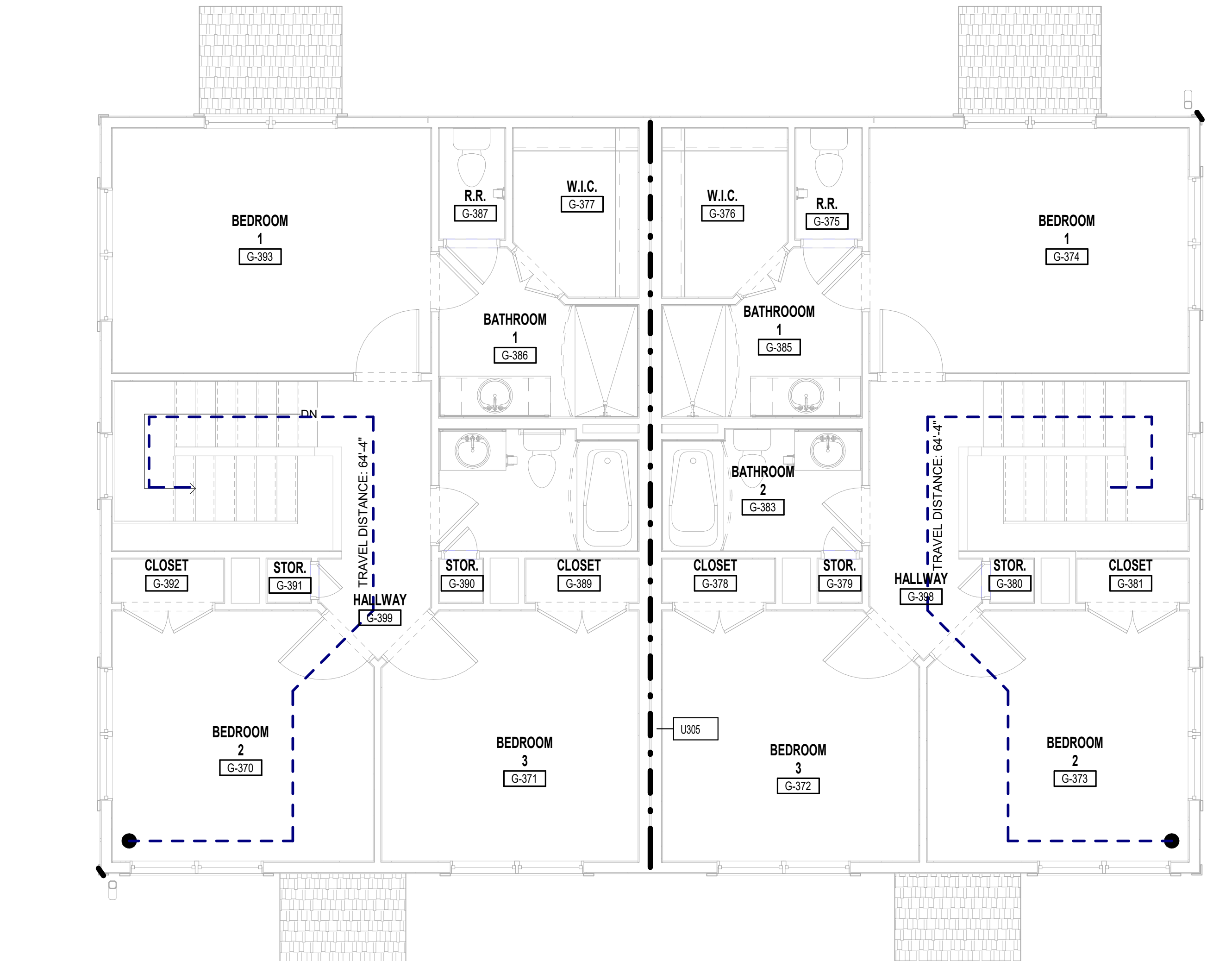
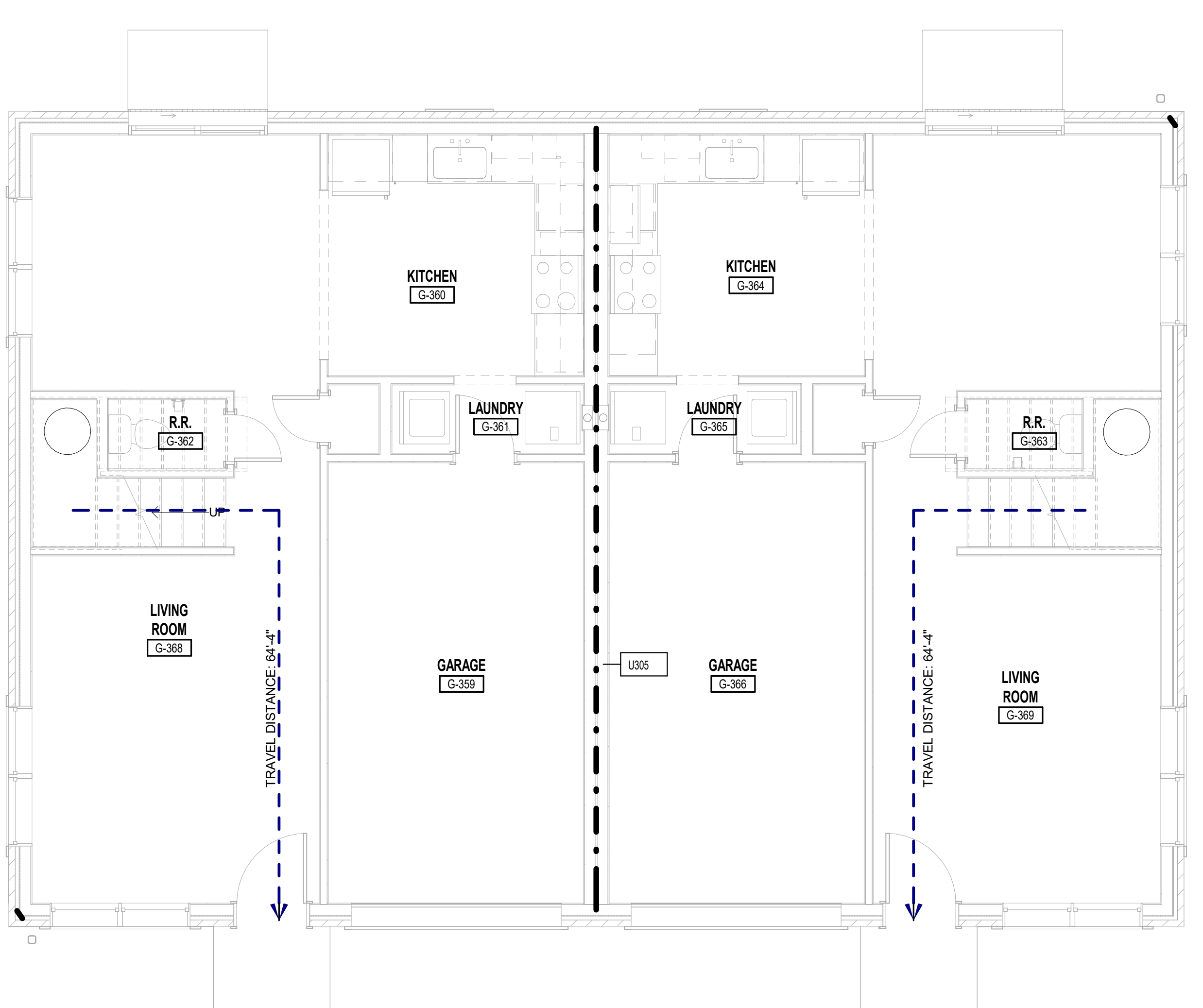
- NOTES:**
- ALL UNIT DOOR CAPACITY - 180 PERSONS
 - ALL EXIT DOOR COMMON AREA CAPACITY - 180 PERSONS EXCEPT: GROUND FLOOR ENTRY LOBBY DOORS - 360 PERSONS
 - 36" WIDE ACCESSIBLE ROUTE REQUIRED PER FAIR HOUSING
 - ALL DOORS ON ACCESSIBLE ROUTE TO HAVE A MINIMUM CLEARANCE OF 2'-8" (32")
- EXIT LIGHT
 - EMERGENCY LIGHT
 - TRAVEL DISTANCE TO EXIT
 - FIRE EXTINGUISHER VERIFY EXACT LOCATIONS AND TYPES WITH LOCAL FIRE OFFICIALS
 - 20 MIN DOOR
 - 45 MIN DOOR
 - 60 MIN DOOR
 - 90 MIN DOOR
 - REQUIRED 1 HOUR FIRE SEPARATION
 - REQUIRED 2 HOUR FIRE SEPARATION

ISSUE HISTORY

| No. | Date | Description |
|-----|------------|------------------|
| 1 | 04/15/2022 | PERMIT SUBMITTAL |

REVISION HISTORY

| No. | Date | Description |
|-----|------|-------------|
|-----|------|-------------|



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CONSULTANT

STATE OF ALABAMA
PROFESSIONAL ENGINEER
8284
4/15/22
REGISTERED ARCHITECT

MICHAEL GOVE
SEA

THE ROBERT MADISON
MADISON, ALABAMA

Drawn: MS
Checked: JK
Approval: MS
Date: 04/15/2022
Project #: 572

LIFE SAFETY PLANS - BUILDING TYPE C

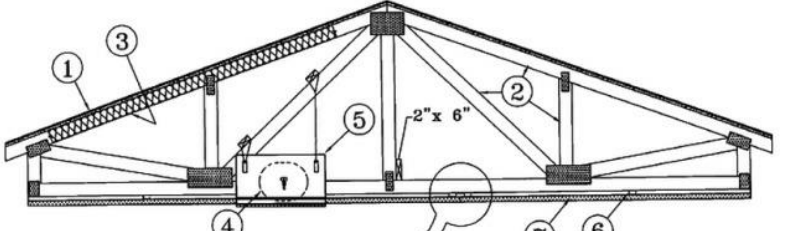
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Design No. P522

June 17, 2014
Unretained Assembly Rating – 1 Hr
Finish Rating – 25 Min (See Items 3 or 3A)

This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used – See Guide B30V or B30V7

*Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.



Alternate Insulation Placement

- 1. Roofing System – Any UL Class A, B, or C Roofing System (GFRI or Prepared Roof Coating (TFW) acceptable for use over Nom 15/32 in. thick wood structural panels, min. grade "C" or "Sheathing", Nom 15/32 in. thick wood structural panels secured to trusses with No. 6d ringed shank nails spaced 12 in. OC along each stud. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails. Construction adhesive may be used with either the nails or staples.
- 2. Trusses – Pitched or parallel chord wood trusses, spaced a max of 24 in. OC, fabricated from Nom 2 by 4 lumber, with lumber oriented vertically or horizontally. Truss members secured with min. 0.0356 in. thick galv steel plates. Plates have 5/16 in. long teeth perpendicular to the plane of the plate. The teeth are in pairs facing each other (made in the same punch), forming a split tooth plate. Each tooth has a chord point on its outside edge. These points are diagonally opposite each other for each pair. The top half of each tooth has a beak for stiffness. The pairs are repeated on approximately 7/8 in. centers with four teeth per inch of plate width. Where the truss intersects with the interior face of the exterior walls, the min truss depth shall be 5-1/4 in. with a min roof slope of 3/12 and a min. area in the plane of the truss of 21 sqft. Where the truss intersects with the interior face of the exterior walls, the min truss depth may be reduced to 3 in. if the batts and blankets (Item 3) are used as shown in the above illustration (Alternate Insulation Placement) and are firmly packed against the intersection of the bottom chords and the plywood sheathing.

- 3. Batts and Blankets* – (Optional) – Required when Item 6B is used – Glass fiber insulation, secured to the wood structural panels with staples spaced 12 in. OC or to the trusses with 1/8 in. diam galv steel wires spaced 12 in. OC. Any glass fiber insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance, having a min density of 0.5 pcf. As an option, the insulation may be fitted in the concealed space, draped over the resilient channel/gypsum board ceiling membrane when resilient channels and gypsum board attachment is modified as specified in Items 6 and 7. When Steel Framing Members (Item 6B) are used, max 3-1/2 in. thick insulation shall be draped over the furring channels (Item 6B) and gypsum board ceiling membrane, and friction-fitted between trusses and Steel Framing Members (Item 6B). The finished rating has only been determined when the insulation is secured to the ceiling.
- 3A. Fiber, Sprayed* – (As an alternate to Item 3) (Not evaluated for use with Item 6B) – Any thickness of dry-applied cellulose insulation material, having a min density of 0.5 lb/cu ft, applied with water, over the resilient channel/gypsum board ceiling membrane when resilient channels and gypsum board attachment is modified as specified in Items 6 and 7. Fiber, Sprayed is applied with moisture in accordance with the application instructions supplied with the product. The finish rating when Fiber, Sprayed is used has not been determined. Alternate application method: The fiber is applied without water or adhesive in accordance with the application instructions supplied with a minimum density of 0.5 lb/cu ft over the resilient channel/gypsum board ceiling membrane when resilient channels and gypsum board attachment is modified as specified in Items 6 and 7.

- 4. Air Duct* – Any UL Class 0 or Class 1 flexible air duct installed in accordance with the instructions provided by the damper manufacturer.
- 5. Ceiling Damper* – Max min area, 324 sq. in. Max square size, 18 in. by 18 in. rectangular sizes not to exceed 324 sq. in. with a max width of 26 in. Max damper height is 14 in. Installed in accordance with manufacturers installation instructions provided with the damper. Max damper openings not to exceed 162 sq in. per 100 sq ft of ceiling area.
- 6. CAS AIR PRODUCTS – Model RD-521 POTERRF – Model CFD-521
- 6A. Alternate Ceiling Damper* – Max min area, 196 sq. in. Max square size, 14 in. by 14 in. Rectangular sizes not to exceed 196 sq. in. with a max width of 26 in. Max overall damper height is 7 in. Installed in accordance with the manufacturers installation instructions provided with the damper. Max damper openings not to exceed 98 sq. in. per 100 sq ft of ceiling area.
- 6B. CAS AIR PRODUCTS – Model RD-521-6T POTERRF – Model CFD-521-6T
- 6B. Alternate Ceiling Damper* – Ceiling damper 6 fan assembly. Max min area shall be 75 sq. in. with length not to exceed 6-1/8 in. and the width not to exceed 6-3/4 in. Max height of damper shall be 9-7/8 in. Aggregate damper openings shall not exceed 36 sq in. per 100 sq ft of ceiling area. Damper shall be installed in accordance with the fan controls described in and in accordance with the manufacturers installation instructions provided with the damper. A plastic grille shall be installed in accordance with installation instructions.

- 7. Furring Channels – Resilient channels formed of 25 MSG galv steel, installed perpendicular to the trusses (Item 2), spaced a max of 16 in. OC when insulation (Item 3 or 3A) is fitted in the concealed space, or a max of 12 in. OC when insulation (Item 3 or 3A) is fitted in the concealed space, draped over the resilient channel/gypsum board ceiling membrane and secured to the trusses as described in Item 6A. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap.
- 7A. Steel Framing Members – (Not Shown) – (As an alternate to Item 7), furring channels and Steel Framing Members as described below.
- 7B. Furring Channels – Formed of No. 25 MSG galv steel, 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced 24 in. OC, perpendicular to trusses when no insulation (Items 3 or 3A) is fitted in the concealed space or 12 in. OC when insulation (Item 3 or 3A) is fitted in the concealed space, draped over the furring channel/gypsum board ceiling membrane or 24 in. OC when insulation (Items 3 or 3A) is fitted in the concealed space, draped over the furring channel/gypsum board ceiling membrane and a second layer of gypsum board is attached as described in Item 7 for Steel Framing Members. Channels secured to trusses as described in Item 6A. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap.

- 8. Steel Framing Members – Used to attach furring channels (Item 7B) to trusses (Item 2). Clips secured to the bottom chord of each truss (24 in. OC) with No. 6 by 2-1/2 in. long coarse drywall screw through center groove. Furring channels are friction fitted into clips. Adjoining channels as described in Item 6A. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping No. 6 framing screws, min 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Additional clips required to hold furring channel that supports the gypsum board but joints, as described in Item 7.
- 8A. Main Runners – Installed perpendicular to trusses – Nom 10 or 12 lb 15/16 in. or 1-1/2 in. wide face, spaced 48 in. OC. Main runners hung 8 min of 2 in. from bottom chord of trusses with 12 SWG galv steel wire. Wire located a max of 48 in. OC.
- 8B. Cross tees or channels – Nom 4 ft long, 15/16 in. or 1-1/2 in. wide face or cross channels, nom 4 ft long, 1-1/2 wide face, installed perpendicular to the main runners, spaced 16 in. OC. Additional cross tees or channels used to fill an 8 in. chord of butted gypsum board end joints. The cross tees or channels may be riveted or screw-attached to the wall angle or channel to facilitate the ceiling installation.
- 8C. Wall angles or channels – Used to attach steel framing member ends and for screw-attachment of the gypsum wallboard – Min 0.018 in. thick painted or galvanized steel angle with 1 in. legs or min 0.018 in. thick painted or galvanized steel channel with a 1-1/2 by 1-1/2 in. profile, attached to wall at perimeter of ceiling with fasteners 16 in. OC.

- 9. Steel Framing Members – (Not Shown) – (As an alternate to Items 6, 6A, 6B, and 6C), furring channels and Steel Framing Members as described below.
- 9A. Furring Channels – Formed of No. 25 MSG galv steel, 2-5/8 in. wide by 7/8 in. deep, spaced 24 in. OC, perpendicular to trusses. When insulation, Items 3 or 3A is used, the furring channel supports shall be reduced to 12 in. OC. Channels secured to joists as described in Item 6.
- 9B. Steel Framing Members – Used to attach furring channels (Item 9A) to the wood trusses (Item 2). Clips spaced at 24" OC and secured to the bottom of the trusses with one No. 10 x 1-1/2 Coarse Drywall Screw through the center hole. Furring channels are then friction fitted into clips. Ends of channels are overlapped 6" and secured with four No. 8 x 1-1/2 Self Drilling screws (2 per side 1 in. and 4 in. from overlap edge). Additional clips are required to hold the Gypsum But joints and side joints as described in Item 6.
- 9C. Cross tees or channels – Nom 4 ft long, 15/16 in. or 1-1/2 in. wide face or cross channels, nom 4 ft long, 1-1/2 wide face, installed perpendicular to the main runners, spaced 16 in. OC. Additional cross tees or channels used to fill an 8 in. chord of butted gypsum board end joints. The cross tees or channels may be riveted or screw-attached to the wall angle or channel to facilitate the ceiling installation.
- 9D. Wall angles or channels – Used to attach steel framing member ends and for screw-attachment of the gypsum wallboard – Min 0.018 in. thick painted or galvanized steel angle with 1 in. legs or min 0.018 in. thick painted or galvanized steel channel with a 1-1/2 by 1-1/2 in. profile, attached to wall at perimeter of ceiling with fasteners 16 in. OC.

- 10. Steel Framing Members – (Not Shown) – (As an alternate to Items 6, 6A, 6B, and 6C), furring channels and Steel Framing Members as described below.
- 10A. Furring Channels – Formed of No. 25 MSG galv steel, 2-5/8 in. wide by 7/8 in. deep, spaced 24 in. OC, perpendicular to trusses. When insulation, Items 3 or 3A is used, the furring channel supports shall be reduced to 12 in. OC. Channels secured to joists as described in Item 6.
- 10B. Steel Framing Members – Used to attach furring channels (Item 10A) to the wood trusses (Item 2). Clips spaced at 24" OC and secured to the bottom of the trusses with one No. 10 x 1-1/2 Coarse Drywall Screw through the center hole. Furring channels are then friction fitted into clips. Ends of channels are overlapped 6" and secured with four No. 8 x 1-1/2 Self Drilling screws (2 per side 1 in. and 4 in. from overlap edge). Additional clips are required to hold the Gypsum But joints and side joints as described in Item 6.
- 10C. Cross tees or channels – Nom 4 ft long, 15/16 in. or 1-1/2 in. wide face or cross channels, nom 4 ft long, 1-1/2 wide face, installed perpendicular to the main runners, spaced 16 in. OC. Additional cross tees or channels used to fill an 8 in. chord of butted gypsum board end joints. The cross tees or channels may be riveted or screw-attached to the wall angle or channel to facilitate the ceiling installation.
- 10D. Wall angles or channels – Used to attach steel framing member ends and for screw-attachment of the gypsum wallboard – Min 0.018 in. thick painted or galvanized steel angle with 1 in. legs or min 0.018 in. thick painted or galvanized steel channel with a 1-1/2 by 1-1/2 in. profile, attached to wall at perimeter of ceiling with fasteners 16 in. OC.

- 11. Steel Framing Members – (Not Shown) – (As an alternate to Items 6, 6A, 6B, and 6C), furring channels and Steel Framing Members as described below.
- 11A. Furring Channels – Formed of No. 25 MSG galv steel, 2-5/8 in. wide by 7/8 in. deep, spaced 24 in. OC, perpendicular to trusses. When insulation, Items 3 or 3A is used, the furring channel supports shall be reduced to 12 in. OC. Channels secured to joists as described in Item 6.
- 11B. Steel Framing Members – Used to attach furring channels (Item 11A) to the wood trusses (Item 2). Clips spaced at 24" OC and secured to the bottom of the trusses with one No. 10 x 1-1/2 Coarse Drywall Screw through the center hole. Furring channels are then friction fitted into clips. Ends of channels are overlapped 6" and secured with four No. 8 x 1-1/2 Self Drilling screws (2 per side 1 in. and 4 in. from overlap edge). Additional clips are required to hold the Gypsum But joints and side joints as described in Item 6.
- 11C. Cross tees or channels – Nom 4 ft long, 15/16 in. or 1-1/2 in. wide face or cross channels, nom 4 ft long, 1-1/2 wide face, installed perpendicular to the main runners, spaced 16 in. OC. Additional cross tees or channels used to fill an 8 in. chord of butted gypsum board end joints. The cross tees or channels may be riveted or screw-attached to the wall angle or channel to facilitate the ceiling installation.
- 11D. Wall angles or channels – Used to attach steel framing member ends and for screw-attachment of the gypsum wallboard – Min 0.018 in. thick painted or galvanized steel angle with 1 in. legs or min 0.018 in. thick painted or galvanized steel channel with a 1-1/2 by 1-1/2 in. profile, attached to wall at perimeter of ceiling with fasteners 16 in. OC.

- 12. Steel Framing Members – (Not Shown) – (As an alternate to Items 6, 6A, 6B, and 6C), furring channels and Steel Framing Members as described below.
- 12A. Furring Channels – Formed of No. 25 MSG galv steel, 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced 24 in. OC, perpendicular to trusses when no insulation (Items 3 or 3A) is fitted in the concealed space or 12 in. OC when insulation (Item 3 or 3A) is fitted in the concealed space, draped over the resilient channel/gypsum board ceiling membrane and secured to the trusses as described in Item 6A. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap.
- 12B. Steel Framing Members – Used to attach furring channels (Item 12A) to trusses (Item 2). Clips spaced 48 in. OC, RSC-1 and RSC-1 (2.75) clips secured to alternating trusses with No. 8 by 2-1/2 in. coarse drywall screw through the center groove. RSC-V and RSC-V (2.75) clips secured to alternating trusses with No. 8 by 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips. RSC-1 and RSC-V (2.75) clips used with 2-9/16 in. wide furring channels. RSC-1 (2.75) and RSC-V (2.75) clips for use with 2-23/32 in. wide furring channels. Adjoining channels are overlapped 6 in. and secured together with two self-tapping No. 6 framing screws, min 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Additional clips required to hold furring channel that supports the gypsum board but joints, as described in Item 6.
- 12C. Steel Framing Members – Used to attach furring channels (Item 12A) to trusses (Item 2). Clips spaced 48 in. OC, RSC-1 and RSC-1 (2.75) clips secured to alternating trusses with No. 8 by 2-1/2 in. coarse drywall screw through the center hole. RSC-V and RSC-V (2.75) clips secured to alternating trusses with No. 8 by 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips. RSC-1 and RSC-V (2.75) clips used with 2-9/16 in. wide furring channels. RSC-1 (2.75) and RSC-V (2.75) clips for use with 2-23/32 in. wide furring channels. Adjoining channels are overlapped 6 in. and secured together with two self-tapping No. 6 framing screws, min 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Additional clips required to hold furring channel that supports the gypsum board but joints, as described in Item 6.

- 13. Steel Framing Members – (Not Shown) – (As an alternate to Items 6, 6A, 6B, and 6C), furring channels and Steel Framing Members as described below.
- 13A. Furring Channels – Formed of No. 25 MSG galv steel, 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced 24 in. OC, perpendicular to trusses when no insulation (Items 3 or 3A) is fitted in the concealed space or 12 in. OC when insulation (Item 3 or 3A) is fitted in the concealed space, draped over the resilient channel/gypsum board ceiling membrane and secured to the trusses as described in Item 6A. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap.
- 13B. Steel Framing Members – Used to attach furring channels (Item 13A) to trusses (Item 2). Clips spaced 48 in. OC, RSC-1 and RSC-1 (2.75) clips secured to alternating trusses with No. 8 by 2-1/2 in. coarse drywall screw through the center groove. RSC-V and RSC-V (2.75) clips secured to alternating trusses with No. 8 by 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips. RSC-1 and RSC-V (2.75) clips used with 2-9/16 in. wide furring channels. RSC-1 (2.75) and RSC-V (2.75) clips for use with 2-23/32 in. wide furring channels. Adjoining channels are overlapped 6 in. and secured together with two self-tapping No. 6 framing screws, min 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Additional clips required to hold furring channel that supports the gypsum board but joints, as described in Item 6.
- 13C. Steel Framing Members – Used to attach furring channels (Item 13A) to trusses (Item 2). Clips spaced 48 in. OC, RSC-1 and RSC-1 (2.75) clips secured to alternating trusses with No. 8 by 2-1/2 in. coarse drywall screw through the center hole. RSC-V and RSC-V (2.75) clips secured to alternating trusses with No. 8 by 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips. RSC-1 and RSC-V (2.75) clips used with 2-9/16 in. wide furring channels. RSC-1 (2.75) and RSC-V (2.75) clips for use with 2-23/32 in. wide furring channels. Adjoining channels are overlapped 6 in. and secured together with two self-tapping No. 6 framing screws, min 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Additional clips required to hold furring channel that supports the gypsum board but joints, as described in Item 6.

- 14. Steel Framing Members – (Not Shown) – (As an alternate to Items 6, 6A, 6B, and 6C), furring channels and Steel Framing Members as described below.
- 14A. Furring Channels – Formed of No. 25 MSG galv steel, 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced 24 in. OC, perpendicular to trusses when no insulation (Items 3 or 3A) is fitted in the concealed space or 12 in. OC when insulation (Item 3 or 3A) is fitted in the concealed space, draped over the resilient channel/gypsum board ceiling membrane and secured to the trusses as described in Item 6A. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap.
- 14B. Steel Framing Members – Used to attach furring channels (Item 14A) to trusses (Item 2). Clips spaced 48 in. OC, RSC-1 and RSC-1 (2.75) clips secured to alternating trusses with No. 8 by 2-1/2 in. coarse drywall screw through the center hole. RSC-V and RSC-V (2.75) clips secured to alternating trusses with No. 8 by 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips. RSC-1 and RSC-V (2.75) clips used with 2-9/16 in. wide furring channels. RSC-1 (2.75) and RSC-V (2.75) clips for use with 2-23/32 in. wide furring channels. Adjoining channels are overlapped 6 in. and secured together with two self-tapping No. 6 framing screws, min 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Additional clips required to hold furring channel that supports the gypsum board but joints, as described in Item 6.
- 14C. Steel Framing Members – Used to attach furring channels (Item 14A) to trusses (Item 2). Clips spaced 48 in. OC, RSC-1 and RSC-1 (2.75) clips secured to alternating trusses with No. 8 by 2-1/2 in. coarse drywall screw through the center hole. RSC-V and RSC-V (2.75) clips secured to alternating trusses with No. 8 by 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips. RSC-1 and RSC-V (2.75) clips used with 2-9/16 in. wide furring channels. RSC-1 (2.75) and RSC-V (2.75) clips for use with 2-23/32 in. wide furring channels. Adjoining channels are overlapped 6 in. and secured together with two self-tapping No. 6 framing screws, min 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Additional clips required to hold furring channel that supports the gypsum board but joints, as described in Item 6.

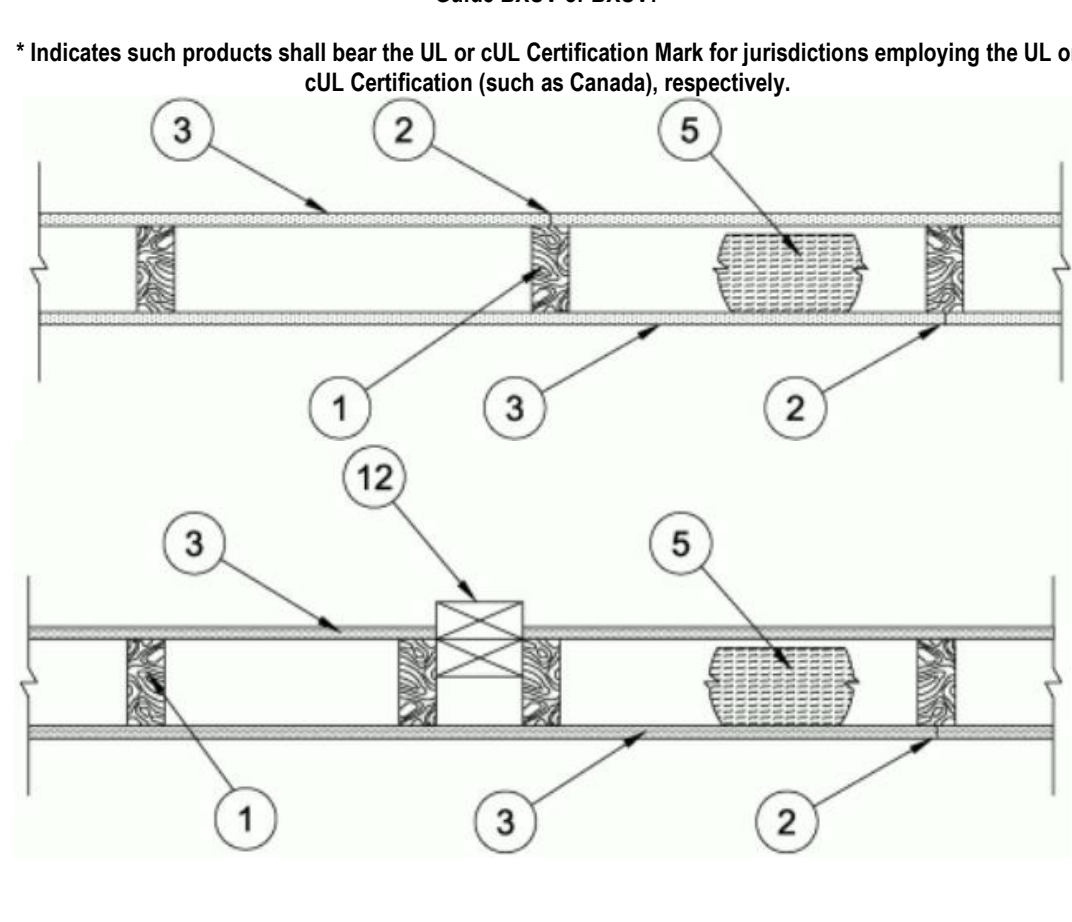
- 15. Steel Framing Members – (Not Shown) – (As an alternate to Items 6, 6A, 6B, and 6C), furring channels and Steel Framing Members as described below.
- 15A. Furring Channels – Formed of No. 25 MSG galv steel, 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced 24 in. OC, perpendicular to trusses when no insulation (Items 3 or 3A) is fitted in the concealed space or 12 in. OC when insulation (Item 3 or 3A) is fitted in the concealed space, draped over the resilient channel/gypsum board ceiling membrane and secured to the trusses as described in Item 6A. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap.
- 15B. Steel Framing Members – Used to attach furring channels (Item 15A) to trusses (Item 2). Clips spaced 48 in. OC, RSC-1 and RSC-1 (2.75) clips secured to alternating trusses with No. 8 by 2-1/2 in. coarse drywall screw through the center groove. RSC-V and RSC-V (2.75) clips secured to alternating trusses with No. 8 by 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips. RSC-1 and RSC-V (2.75) clips used with 2-9/16 in. wide furring channels. RSC-1 (2.75) and RSC-V (2.75) clips for use with 2-23/32 in. wide furring channels. Adjoining channels are overlapped 6 in. and secured together with two self-tapping No. 6 framing screws, min 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Additional clips required to hold furring channel that supports the gypsum board but joints, as described in Item 6.
- 15C. Steel Framing Members – Used to attach furring channels (Item 15A) to trusses (Item 2). Clips spaced 48 in. OC, RSC-1 and RSC-1 (2.75) clips secured to alternating trusses with No. 8 by 2-1/2 in. coarse drywall screw through the center groove. RSC-V and RSC-V (2.75) clips secured to alternating trusses with No. 8 by 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips. RSC-1 and RSC-V (2.75) clips used with 2-9/16 in. wide furring channels. RSC-1 (2.75) and RSC-V (2.75) clips for use with 2-23/32 in. wide furring channels. Adjoining channels are overlapped 6 in. and secured together with two self-tapping No. 6 framing screws, min 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Additional clips required to hold furring channel that supports the gypsum board but joints, as described in Item 6.

Design No. U305

February 04, 2015
Bearing Wall Rating – 1 Hr
Finish Rating – See Items 3, 3A, 3D, 3E, 3F, 3G, 3H, 3J and 3L
STC Rating – 56 (Item 3)

This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used – See Guide B30V or B30V7

*Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.



- 1. Wood Studs – Nom 2 by 4 in. spaced 16 in. OC, max, effectively firestopped.
- 2. Joints and Nail-Heads – Joints covered with joint compound and paper tape. Joint compound and paper tape may be omitted when square edge boards are used. As an alternate, nom 3/32 in. thick gypsum veneer plaster may be applied to the entire surface of Classified veneer boardboards with the joints reinforced with paper tape. Nailheads exposed or covered with joint compound.
- 3. Gypsum Board* – 5/8 in. thick paper or vinyl surfaced, with beveled, square, or tapered edges, applied vertically. Panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. When used in widths other than 48 in., gypsum panels are applied vertically. For an alternate method of attachment of gypsum panels, refer to Item 6, 6A or 6B. Steel Framing Members* – When Item 6B, or 6C Steel Framing Members* are used, gypsum panels attached to furring channels with 1 in. long Type S 8-gauge head steel screws spaced 12 in. OC. When Item 6A, Steel Framing Members* is used, two layers of gypsum panels attached to furring channels. Base layer attached to furring channels with 1 in. long Type S 8-gauge head steel screws spaced 12 in. OC. Face layer attached to furring channels with 1-5/8 in. long Type S 8-gauge head steel screws spaced 12 in. OC. All joints in face layer staggered with joints in base layer. One layer of gypsum board attached to opposite side of wood stud without furring channels as described in Item 3.

- 4. Steel Corner Fasteners – (Optional) – For use with wall corners. Channel shaped, 2 in. long by 1 in. high on the back side with two 1/8 in. wide protruding into the 5/8 in. wide channel, fabricated from 20 gauge cold-rolled steel. Applied to the exterior face of the gypsum board. Spacing shall be 24 in. OC, with a minimum of 2 in. from corner of gypsum board, max spacing 16 in. OC. Nailed to adjacent stud through batt using No. 6d cement coated nail per fastener. Corners of wall board shall be nailed to top and bottom plates using No. 6d cement coated nail per fastener. When Item 6A is used, glass fiber or mineral wool insulation placed to completely fill the stud cavities. When Item 6A is used, glass fiber or mineral wool insulation placed to completely fill the stud cavities.
- 5. Batts and Blankets* – (Optional) – Required when Item 6A is used (RSC-1) Glass fiber or mineral wool insulation. Placed to completely or partially fill the stud cavities. When Item 6A is used, glass fiber or mineral wool insulation placed to completely fill the stud cavities.

- 6. Steel Framing Members – (Not Shown) – (As an alternate to Items 6, 6A, 6B, and 6C), furring channels and Steel Framing Members as described below.
- 6A. Furring Channels – Formed of No. 25 MSG galv steel, 2-5/8 in. wide by 7/8 in. deep, spaced 24 in. OC, perpendicular to trusses. When insulation, Items 3 or 3A is used, the furring channel supports shall be reduced to 12 in. OC. Channels secured to joists as described in Item 6.
- 6B. Steel Framing Members – Used to attach furring channels (Item 6A) to the wood trusses (Item 2). Clips spaced at 24" OC and secured to the bottom of the trusses with one No. 10 x 1-1/2 Coarse Drywall Screw through the center hole. Furring channels are then friction fitted into clips. Ends of channels are overlapped 6" and secured with four No. 8 x 1-1/2 Self Drilling screws (2 per side 1 in. and 4 in. from overlap edge). Additional clips are required to hold the Gypsum But joints and side joints as described in Item 6.
- 6C. Cross tees or channels – Nom 4 ft long, 15/16 in. or 1-1/2 in. wide face or cross channels, nom 4 ft long, 1-1/2 wide face, installed perpendicular to the main runners, spaced 16 in. OC. Additional cross tees or channels used to fill an 8 in. chord of butted gypsum board end joints. The cross tees or channels may be riveted or screw-attached to the wall angle or channel to facilitate the ceiling installation.
- 6D. Wall angles or channels – Used to attach steel framing member ends and for screw-attachment of the gypsum wallboard – Min 0.018 in. thick painted or galvanized steel angle with 1 in. legs or min 0.018 in. thick painted or galvanized steel channel with a 1-1/2 by 1-1/2 in. profile, attached to wall at perimeter of ceiling with fasteners 16 in. OC.

- 7. Gypsum Board* – 5/8 in. thick paper or vinyl surfaced, with beveled, square, or tapered edges, applied vertically. Panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. When used in widths other than 48 in., gypsum panels are applied vertically. For an alternate method of attachment of gypsum panels, refer to Item 6, 6A or 6B. Steel Framing Members* – When Item 6B, or 6C Steel Framing Members* are used, gypsum panels attached to furring channels with 1 in. long Type S 8-gauge head steel screws spaced 12 in. OC. When Item 6A, Steel Framing Members* is used, two layers of gypsum panels attached to furring channels. Base layer attached to furring channels with 1 in. long Type S 8-gauge head steel screws spaced 12 in. OC. Face layer attached to furring channels with 1-5/8 in. long Type S 8-gauge head steel screws spaced 12 in. OC. All joints in face layer staggered with joints in base layer. One layer of gypsum board attached to opposite side of wood stud without furring channels as described in Item 3.

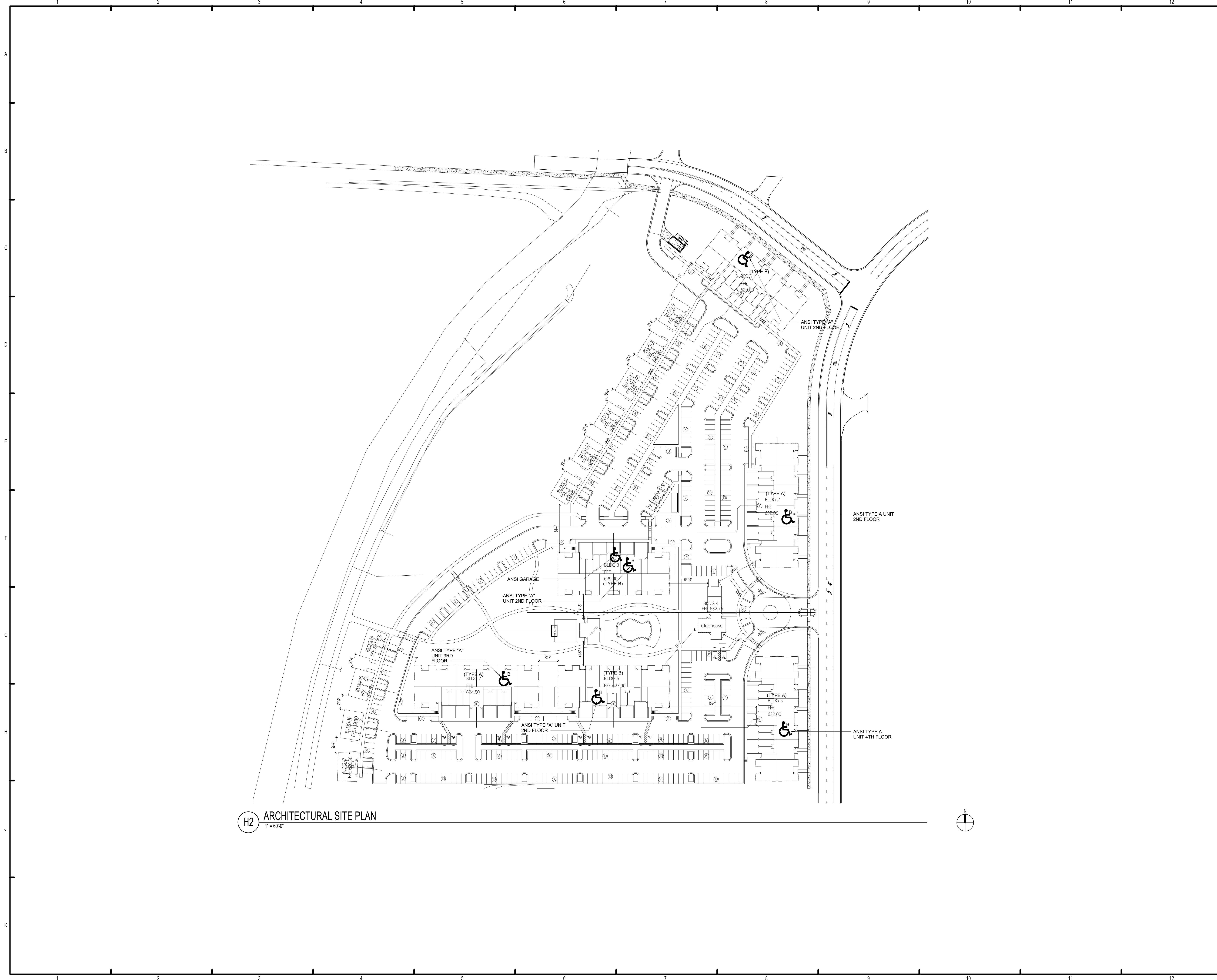
- 8. Steel Framing Members – (Not Shown) – (As an alternate to Items 6, 6A, 6B, and 6C), furring channels and Steel Framing Members as described below.
- 8A. Furring Channels – Formed of No. 25 MSG galv steel, 2-5/8 in. wide by 7/8 in. deep, spaced 24 in. OC, perpendicular to trusses. When insulation, Items 3 or 3A is used, the furring channel supports shall be reduced to 12 in. OC. Channels secured to joists as described in Item 6.
- 8B. Steel Framing Members – Used to attach furring channels (Item 8A) to the wood trusses (Item 2). Clips spaced at 24" OC and secured to the bottom of the trusses with one No. 10 x 1-1/2 Coarse Drywall Screw through the center hole. Furring channels are then friction fitted into clips. Ends of channels are overlapped 6" and secured with four No. 8 x 1-1/2 Self Drilling screws (2 per side 1 in. and 4 in. from overlap edge). Additional clips are required to hold the Gypsum But joints and side joints as described in Item 6.
- 8C. Cross tees or channels – Nom 4 ft long, 15/16 in. or 1-1/2 in. wide face or cross channels, nom 4 ft long, 1-1/2 wide face, installed perpendicular to the main runners, spaced 16 in. OC. Additional cross tees or channels used to fill an 8 in. chord of butted gypsum board end joints. The cross tees or channels may be riveted or screw-attached to the wall angle or channel to facilitate the ceiling installation.
- 8D. Wall angles or channels – Used to attach steel framing member ends and for screw-attachment of the gypsum wallboard – Min 0.018 in. thick painted or galvanized steel angle with 1 in. legs or min 0.018 in. thick painted or galvanized steel channel with a 1-1/2 by 1-1/2 in. profile, attached to wall at perimeter of ceiling with fasteners 16 in. OC.

- 9. Steel Framing Members – (Not Shown) – (As an alternate to Items 6, 6A, 6B, and 6C), furring channels and Steel Framing Members as described below.
- 9A. Furring Channels – Formed of No. 25 MSG galv steel, 2-5/8 in. wide by 7/8 in. deep, spaced 24 in. OC, perpendicular to trusses. When insulation, Items 3 or 3A is used, the furring channel supports shall be reduced to 12 in. OC. Channels secured to joists as described in Item 6.
- 9B. Steel Framing Members – Used to attach furring channels (Item 9A) to the wood trusses (Item 2). Clips spaced at 24" OC and secured to the bottom of the trusses with one No. 10 x 1-1/2 Coarse Drywall Screw through the center hole. Furring channels are then friction fitted into clips. Ends of channels are overlapped 6" and secured with four No. 8 x 1-1/2 Self Drilling screws (2 per side 1 in. and 4 in. from overlap edge). Additional clips are required to hold the Gypsum But joints and side joints as described in Item 6.
- 9C. Cross tees or channels – Nom 4 ft long, 15/16 in. or 1-1/2 in. wide face or cross channels, nom 4 ft long, 1-1/2 wide face, installed perpendicular to the main runners, spaced 16 in. OC. Additional cross tees or channels used to fill an 8 in. chord of butted gypsum board end joints. The cross tees or channels may be riveted or screw-attached to the wall angle or channel to facilitate the ceiling installation.
- 9D. Wall angles or channels – Used to attach steel framing member ends and for screw-attachment of the gypsum wallboard – Min 0.018 in. thick painted or galvanized steel angle with 1 in. legs or min 0.018 in. thick painted or galvanized steel channel with a 1-1/2 by 1-1/2 in. profile, attached to wall at perimeter of ceiling with fasteners 16 in. OC.

- 10. Steel Framing Members – (Not Shown) – (As an alternate to Items 6, 6A, 6B, and 6C), furring channels and Steel Framing Members as described below.
- 10A. Furring Channels – Formed of No. 25 MSG galv steel, 2-5/8 in. wide by 7/8 in. deep, spaced 24 in. OC, perpendicular to trusses. When insulation, Items 3 or 3A is used, the furring channel supports shall be reduced to 12 in. OC. Channels secured to joists as described in Item 6.
- 10B. Steel Framing Members – Used to attach furring channels (Item 10A) to the wood trusses (Item 2). Clips spaced at 24" OC and secured to the bottom of the trusses with one No. 10 x 1-1/2 Coarse Drywall Screw through the center hole. Furring channels are then friction fitted into clips. Ends of channels are overlapped 6" and secured with four No. 8 x 1-1/2 Self Drilling screws (2 per side 1 in. and 4 in. from overlap edge). Additional clips are required to hold the Gypsum But joints and side joints as described in Item 6.
- 10C. Cross tees or channels – Nom 4 ft long, 15/16 in. or 1-1/2 in. wide face or cross channels, nom 4 ft long, 1-1/2 wide face, installed perpendicular to the main runners, spaced 16 in. OC. Additional cross tees or channels used to fill an 8 in. chord of butted gypsum board end joints. The cross tees or channels may be riveted or screw-attached to the wall angle or channel to facilitate the ceiling installation.
- 10D. Wall angles or channels – Used to attach steel framing member ends and for screw-attachment of the gypsum wallboard – Min 0.018 in. thick painted or galvanized steel angle with 1 in. legs or min 0.018 in. thick painted or galvanized steel channel with a 1-1/2 by 1-1/2 in. profile, attached to wall at perimeter of ceiling with fasteners 16 in. OC.

- 11. Steel Framing Members – (Not Shown) – (As an alternate to Items 6, 6A, 6B, and 6C), furring channels and Steel Framing Members as described below.
- 11A. Furring Channels – Formed of No. 25 MSG galv steel, 2-5/8 in. wide by 7/8 in. deep, spaced 24 in. OC, perpendicular to trusses. When insulation, Items 3 or 3A is used, the furring channel supports shall be reduced to 12 in. OC. Channels secured to joists as described in Item 6.
- 11B. Steel Framing Members – Used to attach furring channels (Item 11A) to the wood trusses (Item 2). Clips spaced at 24" OC and secured to the bottom of the trusses with one No. 10 x 1-1/2 Coarse Drywall Screw through the center hole. Furring channels are then friction fitted into clips. Ends of channels are overlapped 6" and secured with four No. 8 x 1-1/2 Self Drilling screws (2 per side 1 in. and 4 in. from overlap edge). Additional clips are required to hold the Gypsum But joints and side joints as described in Item 6.
- 11C. Cross tees or channels – Nom 4 ft long, 15/16 in. or 1-1/2 in. wide face or cross channels, nom 4 ft long, 1-1/2 wide face, installed perpendicular to the main runners, spaced 16 in. OC. Additional cross tees or channels used to fill an 8 in. chord of butted gypsum board end joints. The cross tees or channels may be riveted or screw-attached to the wall angle or channel to facilitate the ceiling installation.
- 11D. Wall angles or channels – Used to attach steel framing member ends and for screw-attachment of the gypsum wallboard – Min 0.018 in. thick painted or galvanized steel angle with 1 in. legs or min 0.018 in. thick painted or galvanized steel channel with a 1-1/2 by 1-1/2 in. profile, attached to wall at perimeter of ceiling with fasteners 16 in. OC.

- 12. Steel Framing Members – (Not Shown) – (As an alternate to Items 6, 6A, 6B, and 6C), furring channels and Steel Framing Members as described below.
- 12A. Furring Channels – Formed of No. 25 MSG galv steel, 2-5/8 in. wide by 7/8 in. deep, spaced 24 in. OC, perpendicular to trusses. When insulation, Items 3 or 3A is used, the furring channel supports shall be reduced to 12 in. OC. Channels secured to joists as described in Item 6.
- 12B. Steel Framing Members – Used to attach furring channels (Item 12A) to the wood trusses (Item 2). Clips spaced at 24" OC and secured to the bottom of the trusses with one No. 10 x 1-1/2 Coarse Drywall Screw through the center hole. Furring channels are then friction fitted into clips. Ends of channels are overlapped 6" and secured with four No. 8 x 1-1/2 Self Drilling screws (2 per side 1 in. and 4 in. from overlap edge). Additional clips are required to hold the Gypsum But joints and side joints as described in Item 6.
- 12C. Cross tees or channels – Nom 4 ft long, 15/16 in. or 1-1/2 in. wide face or cross channels, nom 4 ft long, 1-1/2 wide face, installed perpendicular to the main runners, spaced 16 in. OC. Additional cross tees or channels used to



H2 ARCHITECTURAL SITE PLAN
1" = 60'-0"

GENERAL NOTES:

- SEE CIVIL PLAN FOR PARKING SUMMARY.
- THIS SITE PLAN IS FOR ARCHITECTURAL INFORMATION ONLY. SEE CIVIL & LANDSCAPE DOCUMENTS FOR SPECIFIC BUILDING LOCATION & OTHER SITE REQUIREMENTS. SEE LANDSCAPE DRAWINGS UNDER SEPARATE COVER FOR SITE CONFIGURATION, LAYOUT, GRADING AND RELATED INFORMATION.
- THE SWIMMING POOL(S) SHOWN ON THE DRAWINGS ARE PROVIDED FOR GENERAL LOCATION AND SHAPE SUGGESTION PURPOSES ONLY. FUGLEBERG KOCH LLC IS NOT QUALIFIED TO PROVIDE SERVICES FOR POOLS AND MAKES NO ATTEMPT TO DO SO. POOL DESIGN DOCUMENTS FOR CONSTRUCTION, CODE COMPLIANCE, AGENCY APPROVALS, CONSTRUCTION CERTIFICATION AND OTHER SERVICES REQUIRED FOR THE POOL(S) SHALL BE PERFORMED BY OTHERS UNDER THE SEPARATE CONTRACT WITH THE OWNER.

LEGEND:

- M.C METER CENTER, APROX 2000 AMP LOAD PER NEC
- DESIGNATED ANSI TYPE 'A' UNIT
- DESIGNATED ACCESSIBLE GARAGE

ISSUE HISTORY

| No. | Date | Description |
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| 1 | 04/15/2022 | PERMIT SUBMITTAL |
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REVISION HISTORY

| No. | Date | Description |
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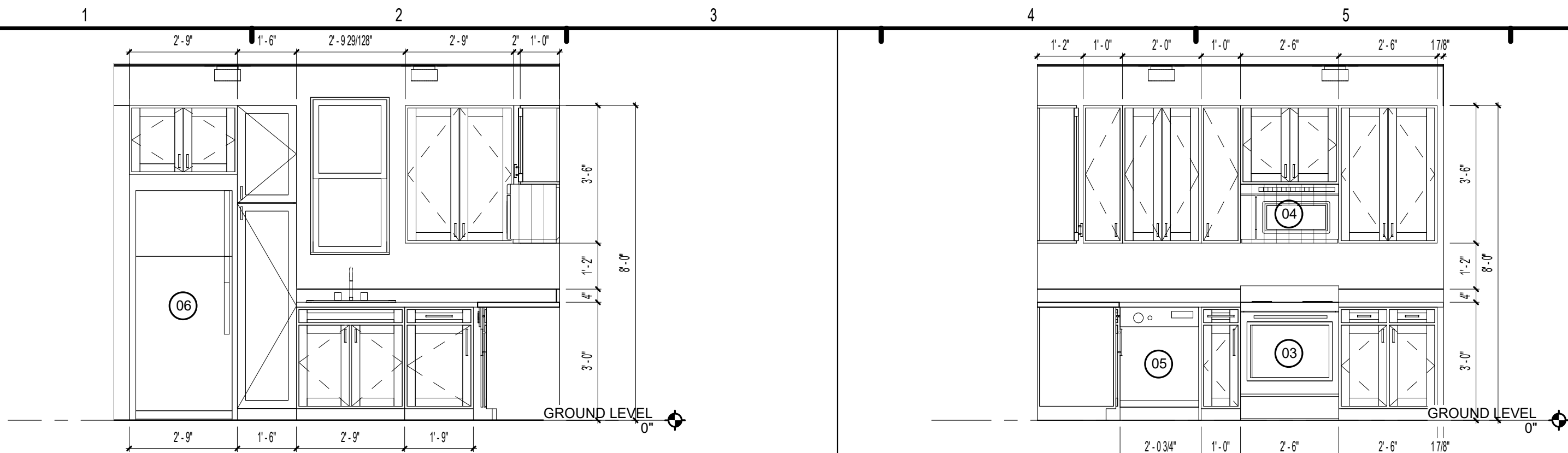
CONSULTANT

MICHAEL DOVE
PEM

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|-----------|------------|
| Drawn | MB |
| Checked | JK |
| Approval | MS |
| Date | 04/15/2022 |
| Project # | 572 |

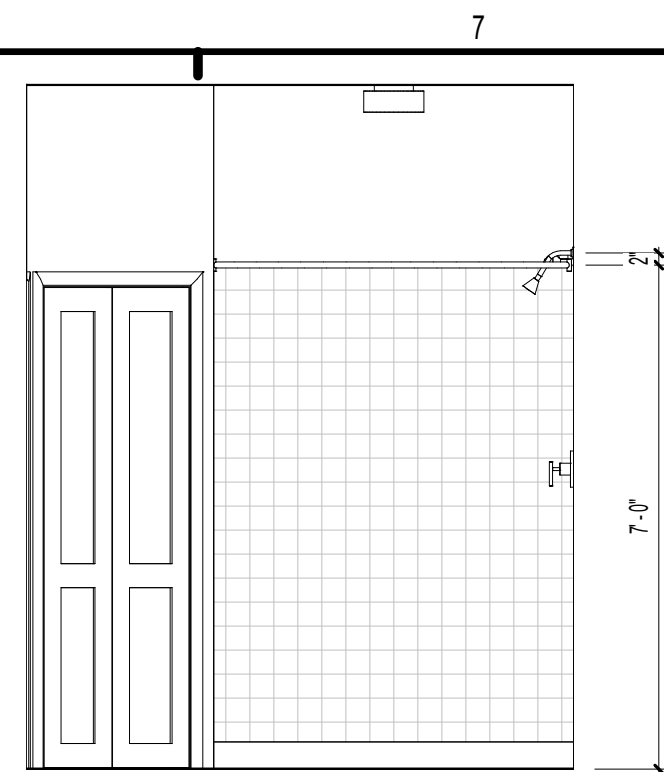
ARCHITECTURAL SITE PLAN

A1.01

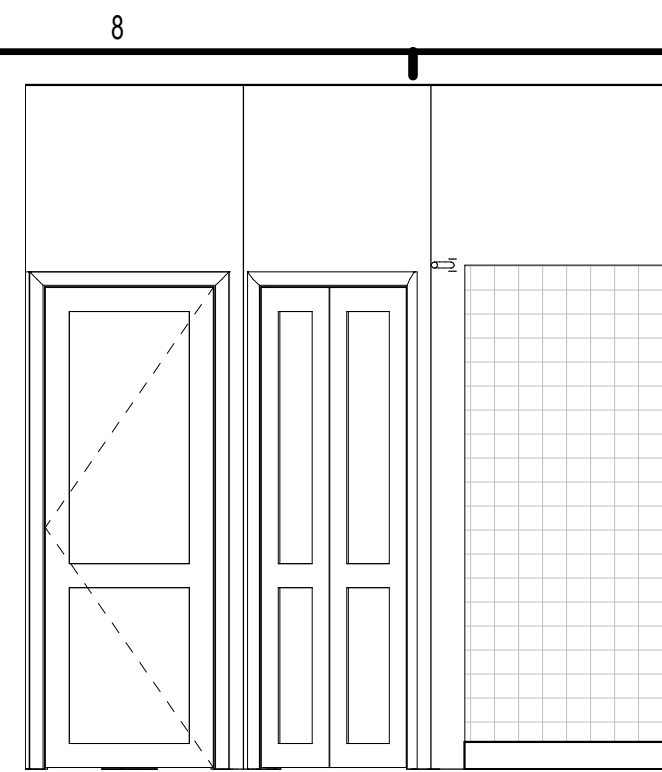


D1 BLDG C - KITCHEN ELEVATION
3/8" = 1'-0"

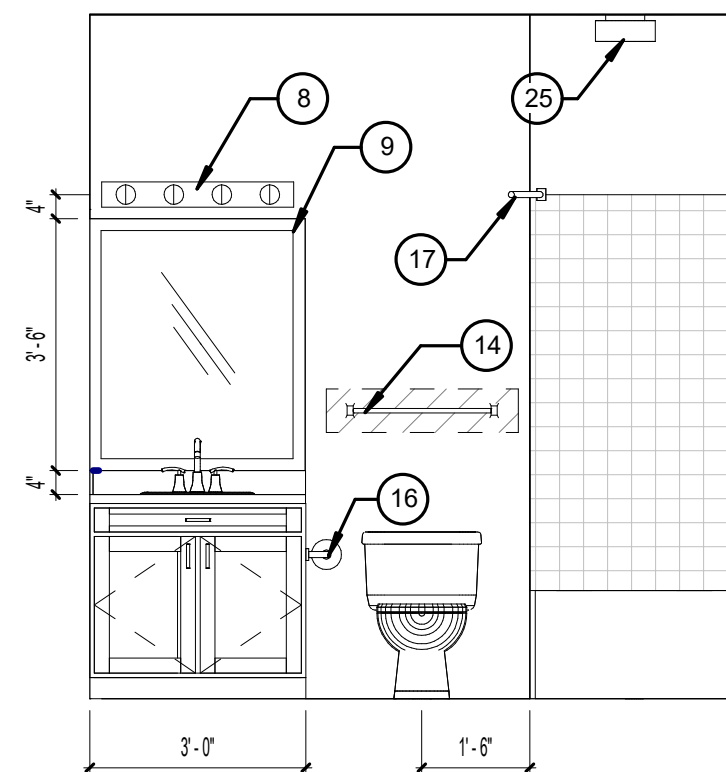
D2 BLDG C - KITCHEN ELEVATION 2
3/8" = 1'-0"



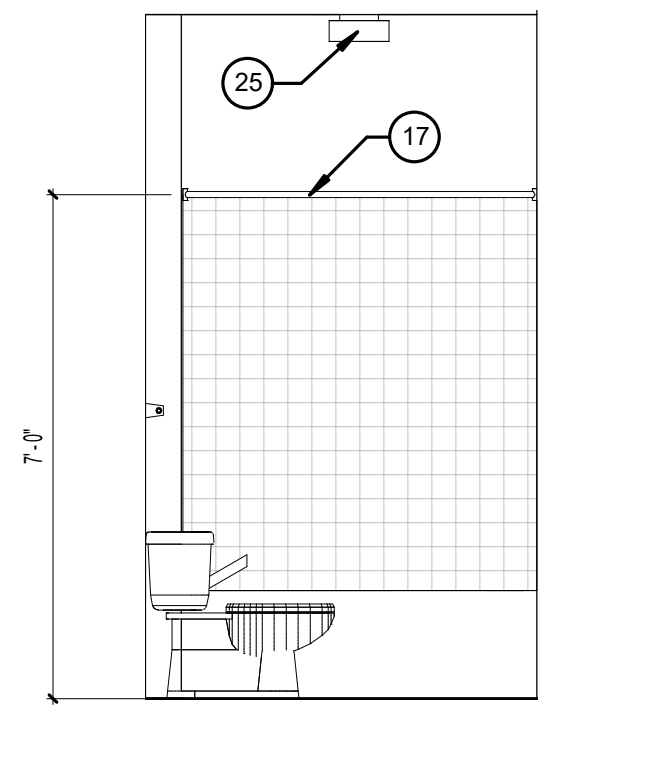
D3 BATHROOM ELEVATION 4
3/8" = 1'-0"



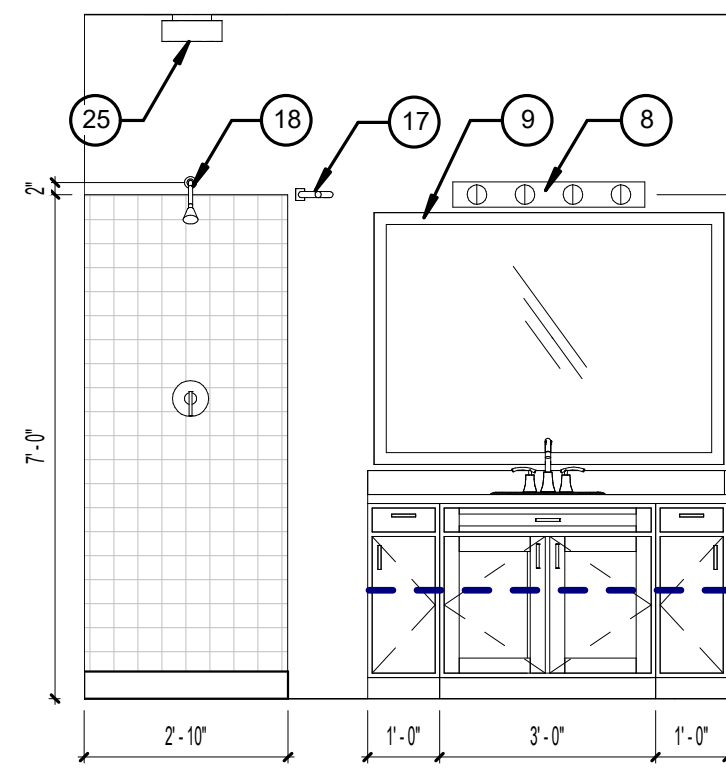
D4 BATHROOM ELEVATION 5
3/8" = 1'-0"



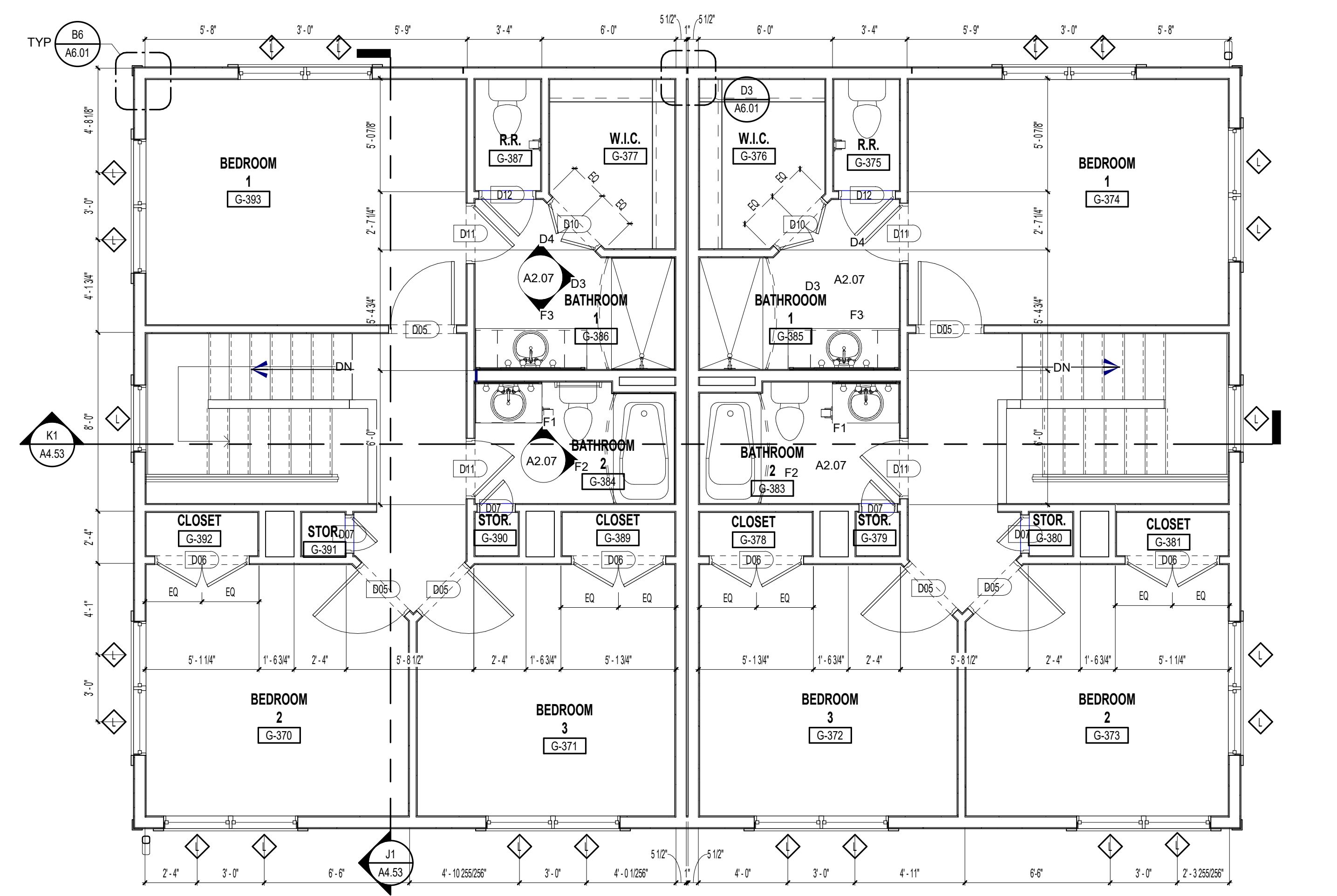
F1 BATHROOM ELEVATION 1
3/8" = 1'-0"



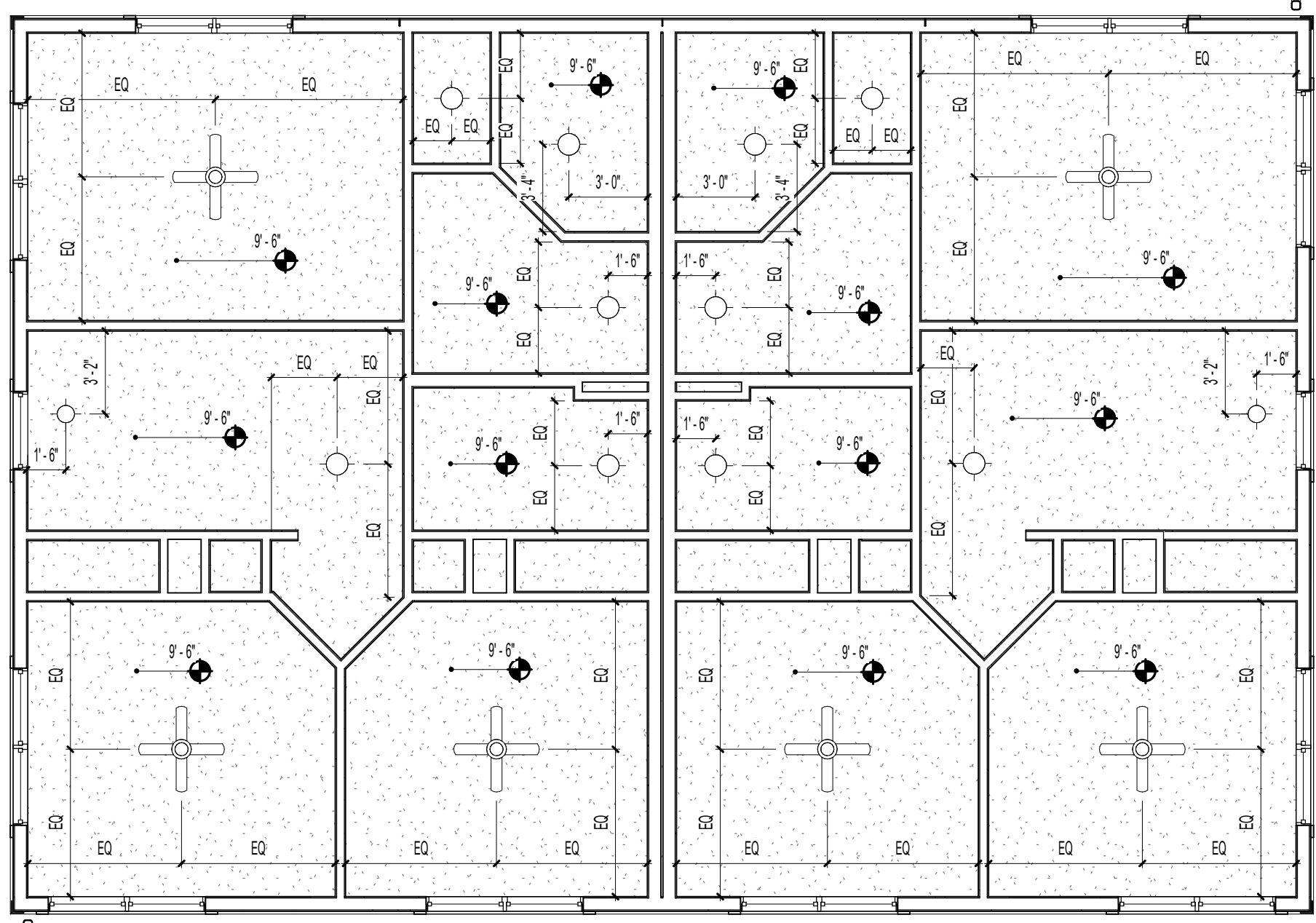
F2 BATHROOM ELEVATION 2
3/8" = 1'-0"



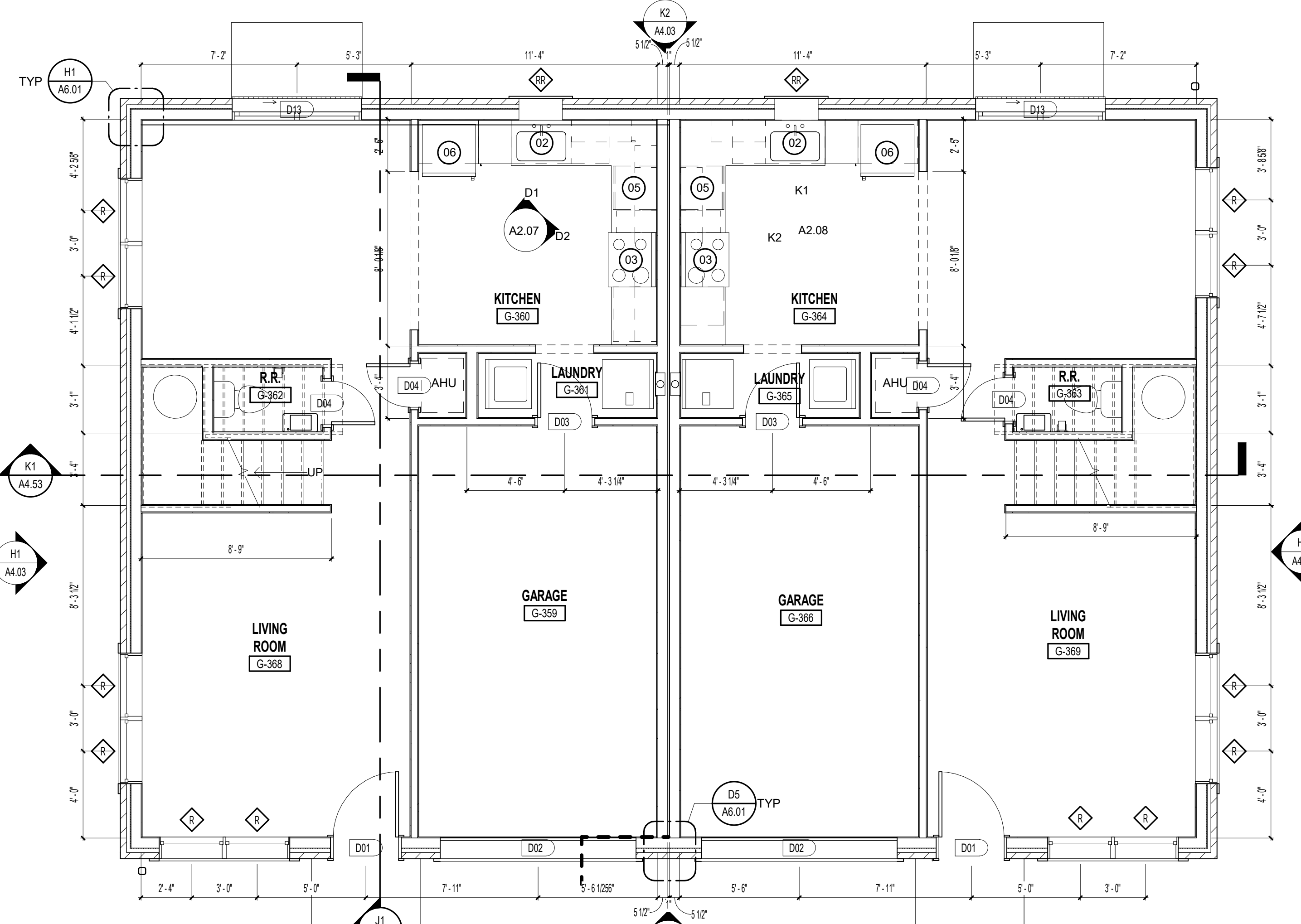
F3 BATHROOM ELEVATION 3
3/8" = 1'-0"



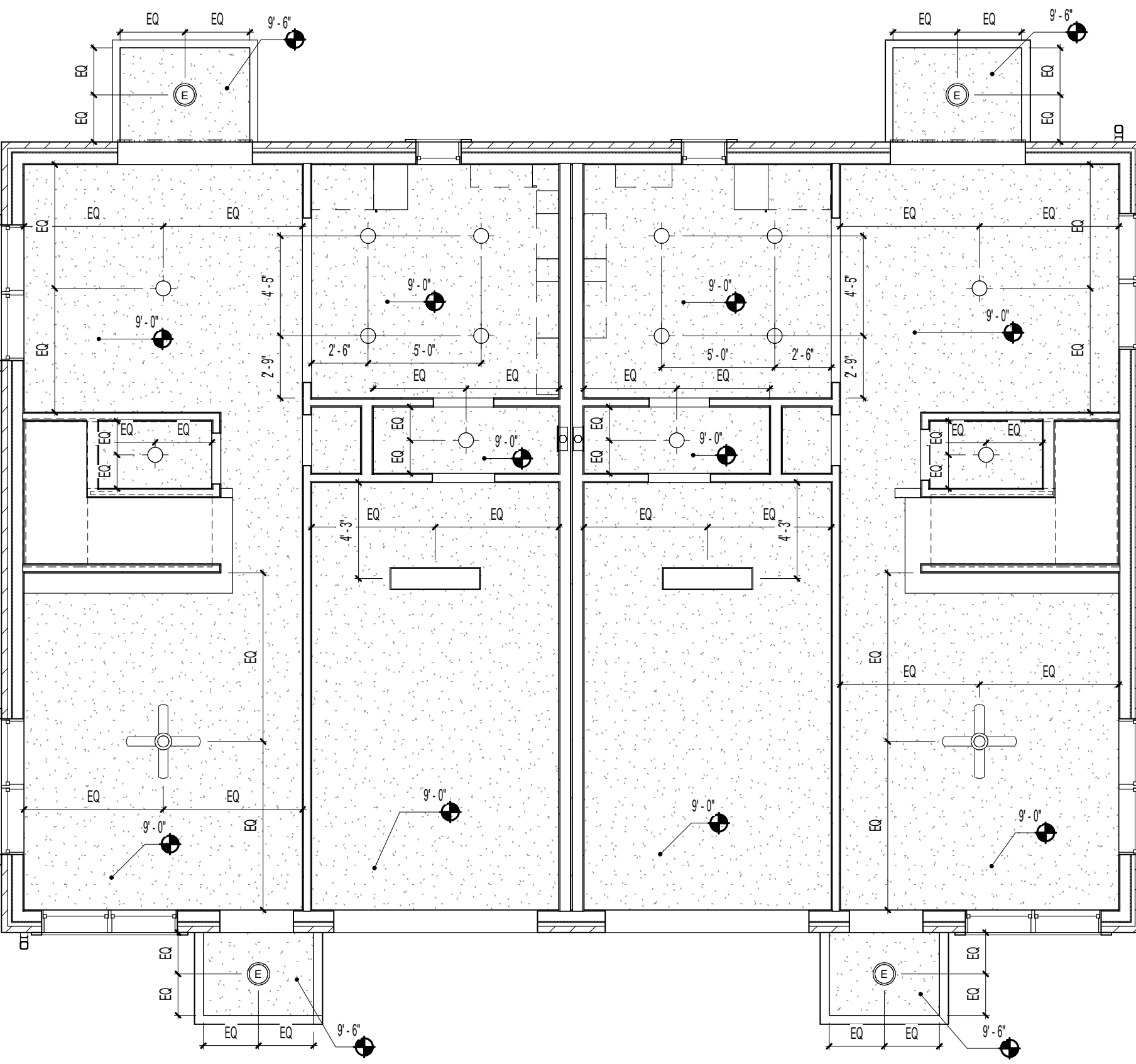
H1 BLDG TYPE C - 2ND LEVEL PLAN
1/4" = 1'-0"



H2 BLDG TYPE C - LEVEL 2 RCP
3/16" = 1'-0"



K1 BLDG. TYPE C - GROUND LEVEL PLAN
1/4" = 1'-0"



K2 ENLARGED GARAGE RCP PLAN 1 - BUILDING TYPE C
3/16" = 1'-0"

GENERAL NOTES:

1. ALL DIMENSIONS ARE FROM OUTSIDE FACE OF STUD UNLESS NOTED OTHERWISE.
2. REFER TO EXTERIOR ELEVATIONS AND BUILDING PLANS FOR WINDOW TYPE.
3. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS. NOTIFY ARCHITECT OF ANY DISCREPANCIES.
4. NOT USED.
5. ALL PLUMBING WALLS NEED TO BE COORDINATED WITH PLUMBER TO DETERMINE 2X4 OR 2X6 CONSTRUCTION.
6. PROVIDE ONE 4-A, 10-B-C 5B FIRE EXTINGUISHER PER UNIT. LOCATE PER FIRE DEPARTMENT REQUIREMENTS.
7. PROVIDE ACOUSTICAL UNDERLAYMENT UNDERNEATH VINYL PLANK FLOORING LOCATIONS WITHIN UNITS ON ELEVATED FLOORS. REFER TO SPECIFICATIONS FOR APPROVED PRODUCT.
8. PROVIDE DISPOSER AT ALL KITCHEN SINKS. REFER TO PLANS FOR AIR SWITCH LOCATION. PLACE ON SAME SIDE AS DISPOSER.
9. CLOSET RODS:
 - A. 12" DEEP, TOP OF SHELVING IN CLOSETS SHALL BE AT 3'-0" AND 6'-0". SEE PLANS.
 - B. 12" DEEP SHELVING AT PANTRIES & LINEN CLOSETS: 5 SHELVES EQUALLY SPACED @ 12" IN PARY 18", 20", 40", 60" AND 80".
 - C. PROVIDE (5) 18" X 12" DEEP LINEN SHELVES EQUALLY SPACED AT BEDROOM CLOSET ENDS WHERE INDICATED.
 - D. SHELVING AT LAUNDRY ROOMS - 24" DEEP @ 5'-7". SHELVING AT ENTRY CLOSETS - 12" DEEP @ 6'-0".
10. KITCHEN OUTLETS SHALL BE SPACED PER NEC. FHA REQUIRES THAT OUTLETS BE PLACED NO LESS THAN 3'-0" FROM THE CORNER UNLESS AN ADDITIONAL OUTLET IS ADDED. KITCHEN ELEVATIONS INDICATE APPROXIMATE DIMENSIONS NEEDED TO MEET BOTH NEC AND FHA. 4'-0" O.C. MAX. BETWEEN OUTLETS SHALL BE PROVIDED AROUND A CORNER.
11. SEE SHEET A3.10 FOR STANDARD MOUNTING HEIGHTS AND DETAILS.
12. PROVIDE WINDOW-EASE OPENING DEVICE AT ACCESSIBLE UNIT OPERABLE WINDOWS (WWW.WINDOWEASE.COM).

LEGEND:

01. ELECTRICAL PANEL. REFER TO ELECTRICAL DRAWINGS.
 02. HVAC UNIT. SEE MECHANICAL DRAWINGS.
 03. WATER HEATER.
 04. WASHER.
 05. DRYER.
 06. 12" DEEP SHELF ABOVE WID AT 5'-6" AFF.
 07. 12" WIRE SHELF AND ROD AT 5'-0" AFF & 6'-0" AFF.
 08. WIRE SHELF AND ROD AT 5'-0" AFF.
 09. WIRE SHELF AT 3'-0" AFF & 6'-0" AFF.
 10. WASHER/ DRYER COMBO.
-
01. CEILING MOUNTED LIGHT
 02. RECESSED LIGHT
 03. PENDANT LIGHT
 04. WALL MOUNTED LIGHT FIXTURE
 05. WALL MOUNTED VANITY LIGHT CENTERED TO THE MIRROR
 06. EXHAUST DUCT / DRYER VENT
 07. WALL MOUNTED AIR INTAKE
 08. CEILING MOUNTED AIR INTAKE
 09. CEILING FAN
 10. SUPPLY DIFFUSER - WALL MOUNTED
 11. EXHAUST FAN - CEILING MOUNTED
 12. TRANSFER GRILLE - WALL MOUNTED

FLOOR PLAN NOTES:

01. EXTERIOR DIMENSIONS ARE FROM EXTERIOR FACE OF STUD TO EXTERIOR FACE OF STUD. WHEN A TENANT WALL OCCURS, DIMENSIONS ARE TAKEN TO THE CENTERLINE. ALL OTHER DIMENSIONS ARE FROM OUTSIDE FACE OF STUD UNLESS NOTED OTHERWISE. SEE UNIT PLANS FOR FURTHER DIMENSIONS.
02. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS. NOTIFY ARCHITECT OF ANY DISCREPANCIES.
03. SEE A300 SERIES SHEETS FOR UNIT PLAN INFORMATION.
04. CONTRACTOR TO COORDINATE FLOOR & CEILING CONTROL JOINT PLACEMENT COMMON AREA AT 8'-0" MAX ON CENTER WHERE POSSIBLE.
05. SEE CIVIL PLANS FOR ACTUAL FINISH FLOOR ELEVATIONS.
06. REFER TO CIVIL DWGS. FOR SIDEWALK CONDITIONS.
07. REFER TO ELEVATIONS AND FLOOR PLANS FOR WINDOW TYPES AND LOCATIONS.

LEGEND:

01. PANTRY CABINET
02. SINK W/ GARBAGE DISPOSAL
03. RANGE
04. MICROWAVE W/ BUILT-IN HOOD
05. DISHWASHER
06. REFRIGERATOR
07. SOAP DISH
08. LIGHT FIXTURE OVER VANITY MIRROR
09. VANITY MIRROR
10. VANITY CABINET W/ SINK
11. BATH TUB
12. 12" TOWEL BAR @ 48" A.F.F.
13. 18" TOWEL BAR @ 48" A.F.F.
14. 24" TOWEL BAR @ 48" A.F.F.
15. WATER CLOSET
16. TOILET PAPER HOLDER
17. CURVED SHOWER CURTAIN ROD @ 6'-4" A.F.F.
18. SHOWER HEAD @ 7'-0" A.F.F.
19. GRAB BAR REINFORCEMENT, BTWN. 2'-6" MAX. A.F.F. & 2'-2" MIN. A.F.F.
20. HAND HELD/FIXED SHOWER SPRAY UNIT W/ HOSE 60" MIN. LONG & ADJUSTABLE BAR
21. OFFSET TUB CONTROL TO 9" HORIZONTAL FROM TUB SKIRT AT ALL GROUND FLOOR & BATHROOMS IN ANS! UNITS ONLY.
22. MEDICINE CABINET
23. BUILT IN HOOD
24. REMOVABLE IN TUB SEAT
25. LIGHT FIXTURE (SEE ELECTRICAL)
26. 12" WIRE SHELF AND ROD AT 5'-0" & 6'-0" AFF
27. SHOWER
28. 4"x4" TILE
29. 4" BACKSPASH
30. PAPER TOWEL DISPENSER
31. GLASS SHOWER DOOR

ISSUE HISTORY

| No. | Date | Description |
|-----|------------|------------------|
| 1 | 04/15/2022 | PERMIT SUBMITTAL |

REVISION HISTORY

| No. | Date | Description |
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CONSULTANT

 MICHAEL DOVE
 PE

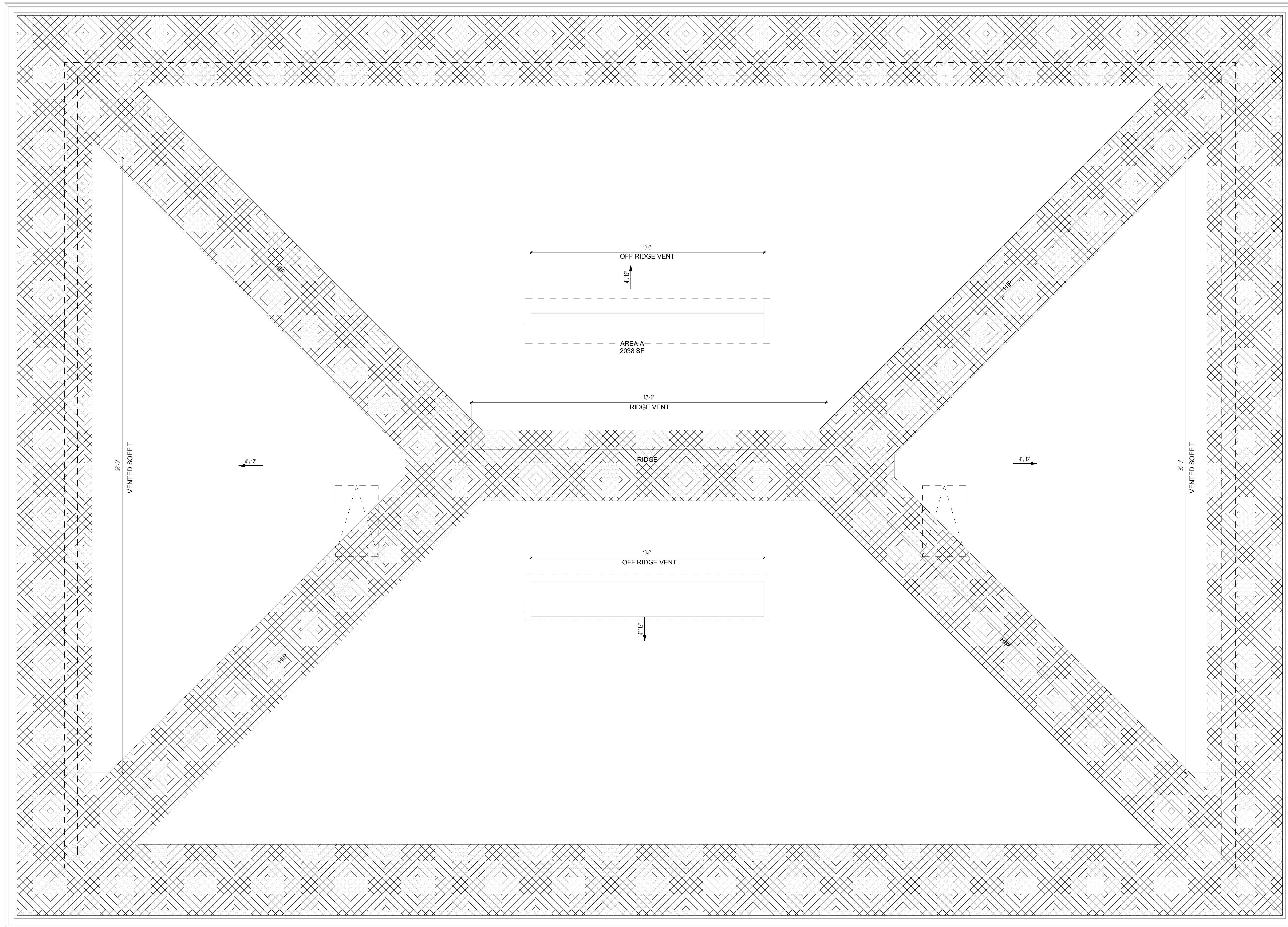
THE ROBERT MADISON
 MADISON, ALABAMA
 Project # 572

BUILDING TYPE C - GROUND & 2ND LEVEL PLANS & ELEVATIONS

A2.07

| ATTIC VENT CALCULATIONS - AREA "A" | | |
|------------------------------------|----------------|-------------|
| | REQUIRED | PROVIDED |
| TOTAL ROOF AREA | 2038 Sq.Ft. | |
| PER IRC 2018 | x 0.0033 | |
| REQ. VENTILATED AREA | 6.73 Sq.Ft. | |
| TOTAL SOFFIT LIN. FT. | 52 Lin.Ft. | |
| OPENING NET VENTILATION | x 0.07 Sq.Ft. | |
| NET FREE AREA | 3.64 Sq.Ft. | |
| TOTAL RIDGE VENT LIN. FT. | 25 Lin.Ft. | |
| OPENING NET VENTILATION | x 0.125 Sq.Ft. | |
| NET FREE AREA | 3.13 Sq.Ft. | |
| TOTAL VENTILATED AREA | 6.73 Sq.Ft. | 6.77 Sq.Ft. |

| VENTILATION SCHEDULE | | |
|----------------------|------------------|------------------|
| ROOF VENT | MFG. & MODEL No. | FREE AREA / L.F. |
| SOFFIT VENT AT EAVE | HARDIE SOFFIT | 0.0347 Sq.ft. |
| RIDGE VENT | CERTANTEED | 0.125 Sq.ft. |
| OFF - RIDGE VENT | FLAMCO - 6" - 0" | 1.67 Sq.ft. |



K1 ROOF PLAN - BUILDING TYPE C
1/2" = 1'-0"

GENERAL NOTES:

- PAINT ALL ROOF VENTS & PENETRATIONS TO MATCH ROOF SHINGLE COLOR.
- COORDINATE DOWNSPOUT DISCHARGE WITH CIVIL DRAWINGS. WHERE NOT TAKEN TO STORM, PROVIDE SPLASH BLOCK.
- LEAVE OPENING IN MAIN ROOF SHEATHING FOR VENTILATION UNDERNEATH OVER BUILT AREAS.
- DOWNSPOUTS AND GUTTERS SHOWN ARE MIN. REQUIREMENTS SUBJECT TO OWNER'S CONSIDERATIONS.
- CONTRACTOR SHALL BE RESPONSIBLE TO MEET MINIMUM ROOF VENT REQUIREMENTS.
- GENERAL CONTRACTOR SHALL COORDINATE ALL ROOF ACCESSORIES INSTALLATION DETAILS PER MANUFACTURERS SPECS TO MAINTAIN THE WATERTIGHT SYSTEM & EXTENDED WARRANTY.
- SEE CIVIL SITE PLAN FOR BUILDING ORIENTATION. CARDINAL DIRECTIONS SHOWN FOR REFERENCE ONLY.

LEGEND:

- DRAFTSTOPPING TO UNDERSIDE OF ROOF DECK
- 1HR. FIRE RATED (if required) ATTIC ACCESS PANEL, MIN. 22"x36", COORDINATE WITH ROOF TRUSSES
- OFF RIDGE VENT. SEE VENT SCHEDULE
- ICE & WATER SHIELD / SELF-ADHERED MEMBRANE UNDER ROOF FELT, 2" BACK FROM FACE OF EXTERIOR WALL TO EDGE OF EAVE AND 24" WIDE @ ALL RAKES, RIDGES, VALLEYS, HIPS, FLASHING AND UNDER ALL SHINGLE ROOFS LESS THAN 4/12' SLOPE
- D.S.** DOWNSPOUT

ISSUE HISTORY

| No. | Date | Description |
|-----|------------|------------------|
| 1 | 04/15/2022 | PERMIT SUBMITTAL |
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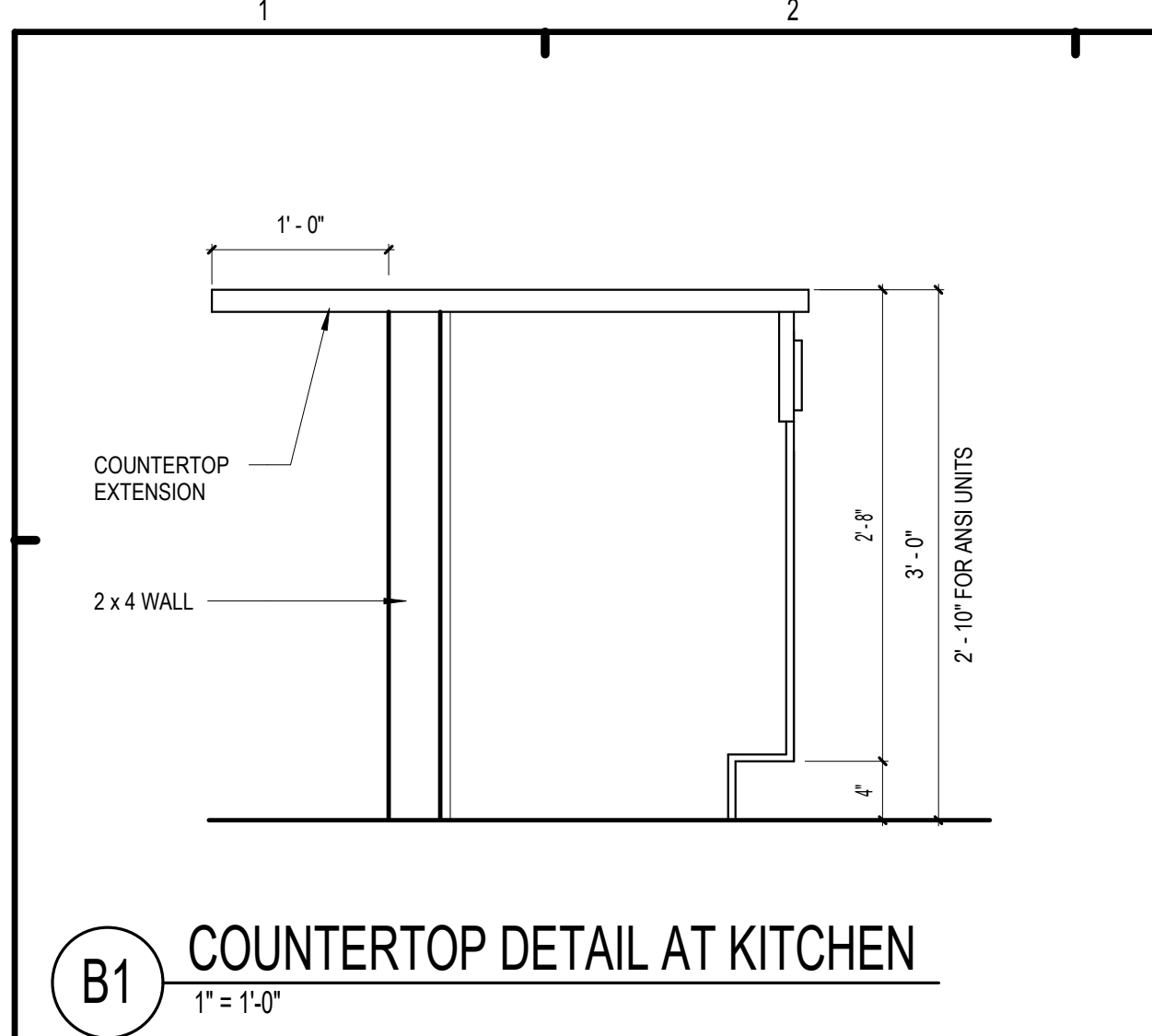
CONSULTANT

MICHAEL GOVE
PEM

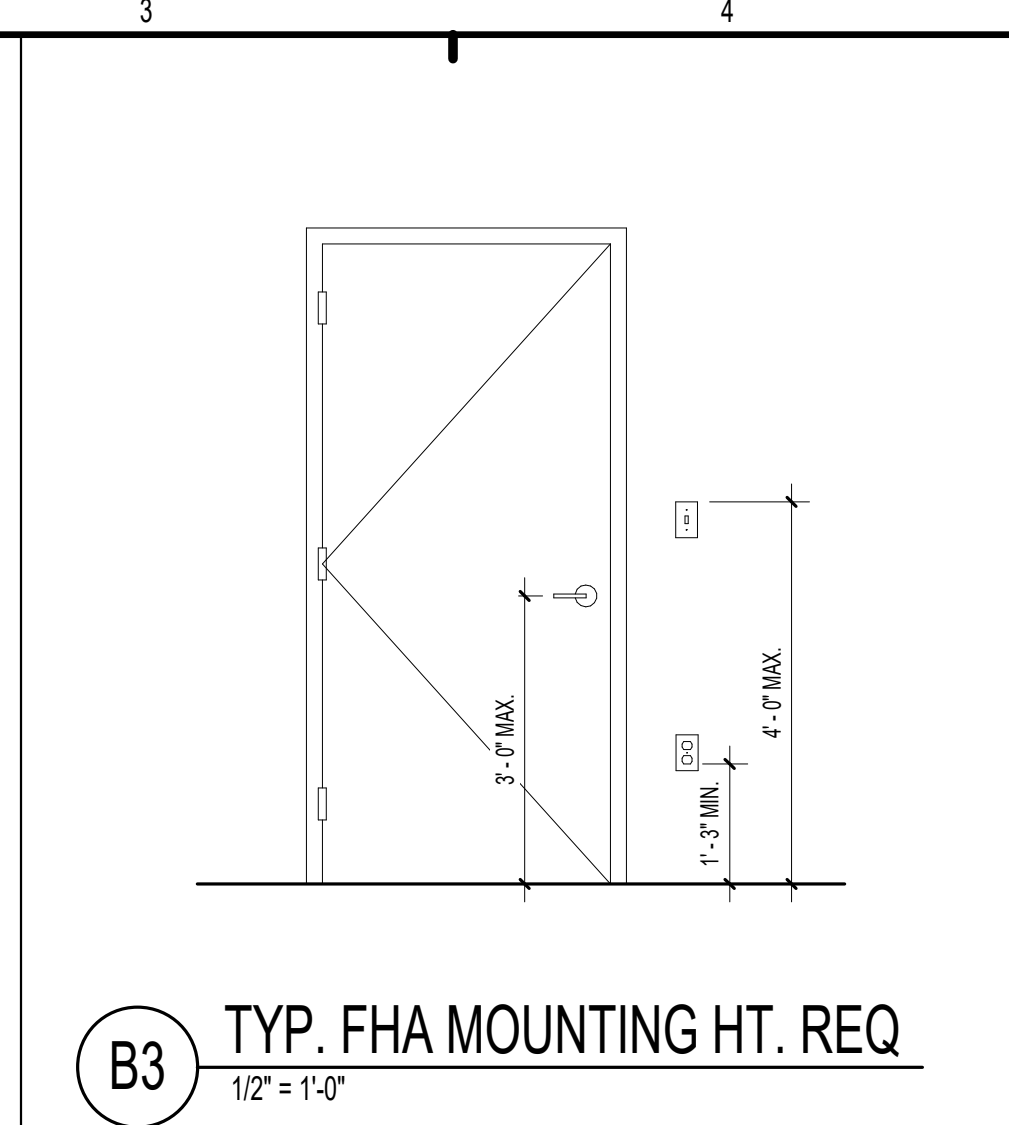
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|--|---|
| THE ROBERT MADISON MADISON, ALABAMA | Drawn: MB Checked: JK Approval: MS Date: 04/15/2022 Project #: 5722 |
|--|---|

BUILDING TYPE C - ROOF PLAN

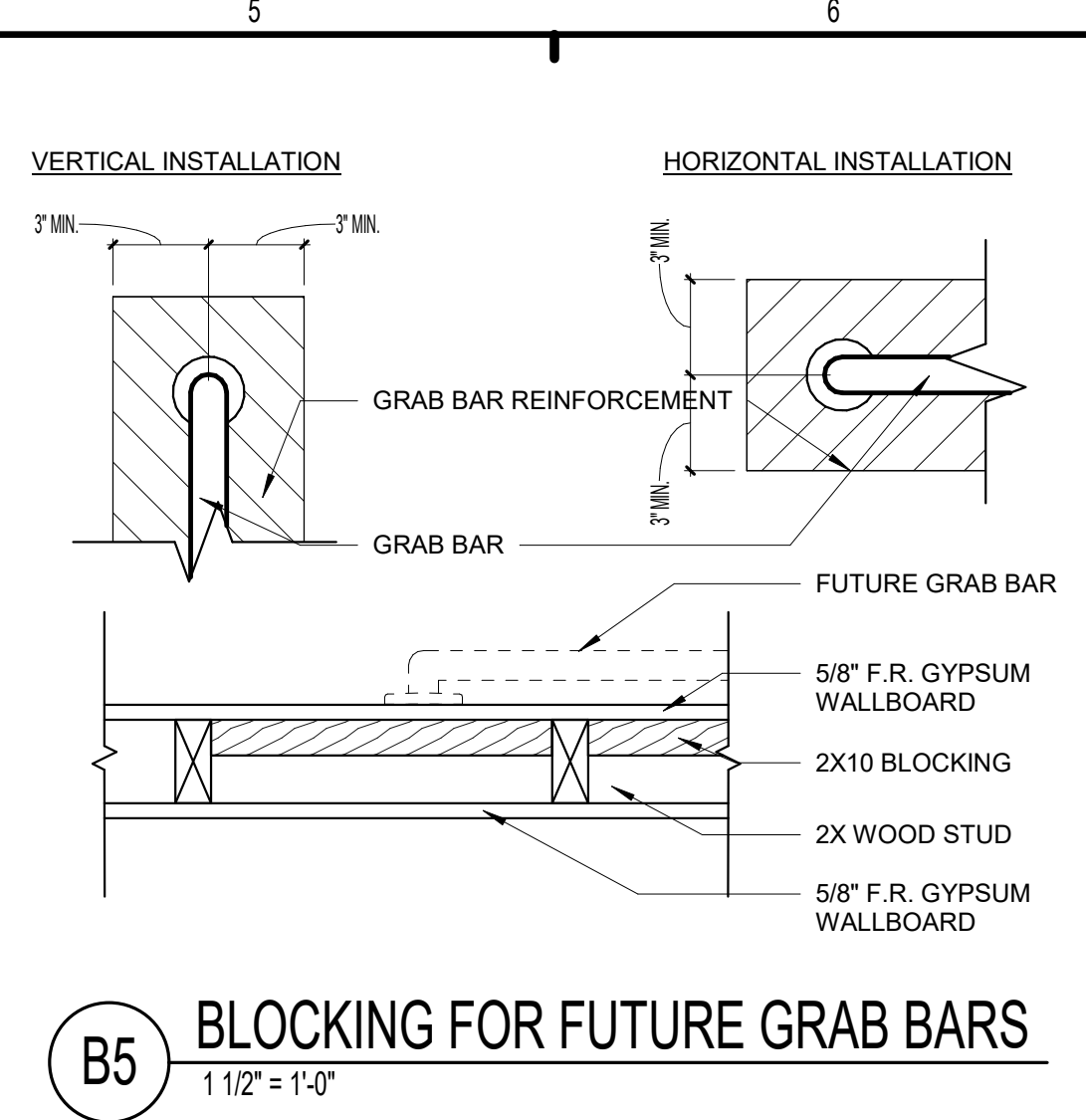
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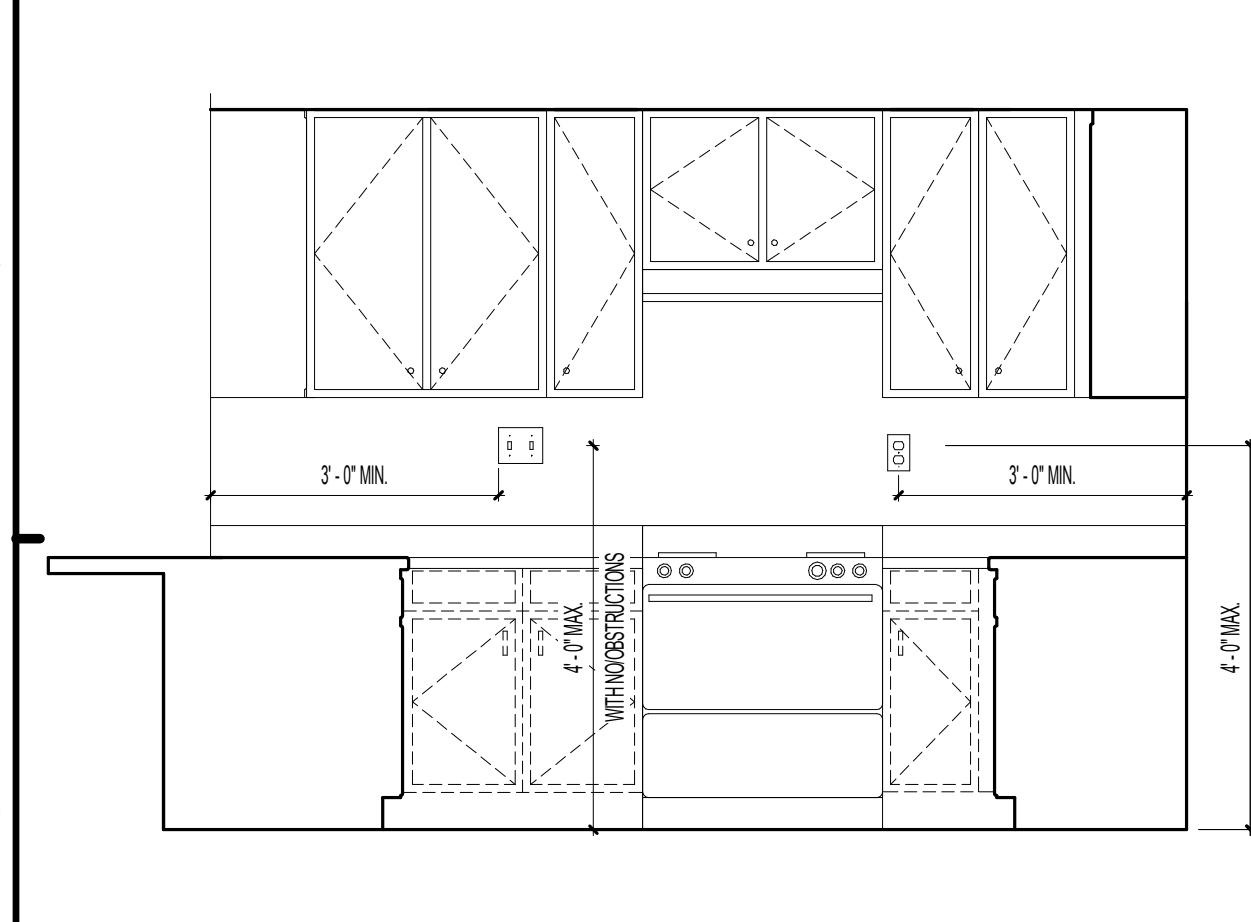
B1 COUNTERTOP DETAIL AT KITCHEN
1" = 1'-0"



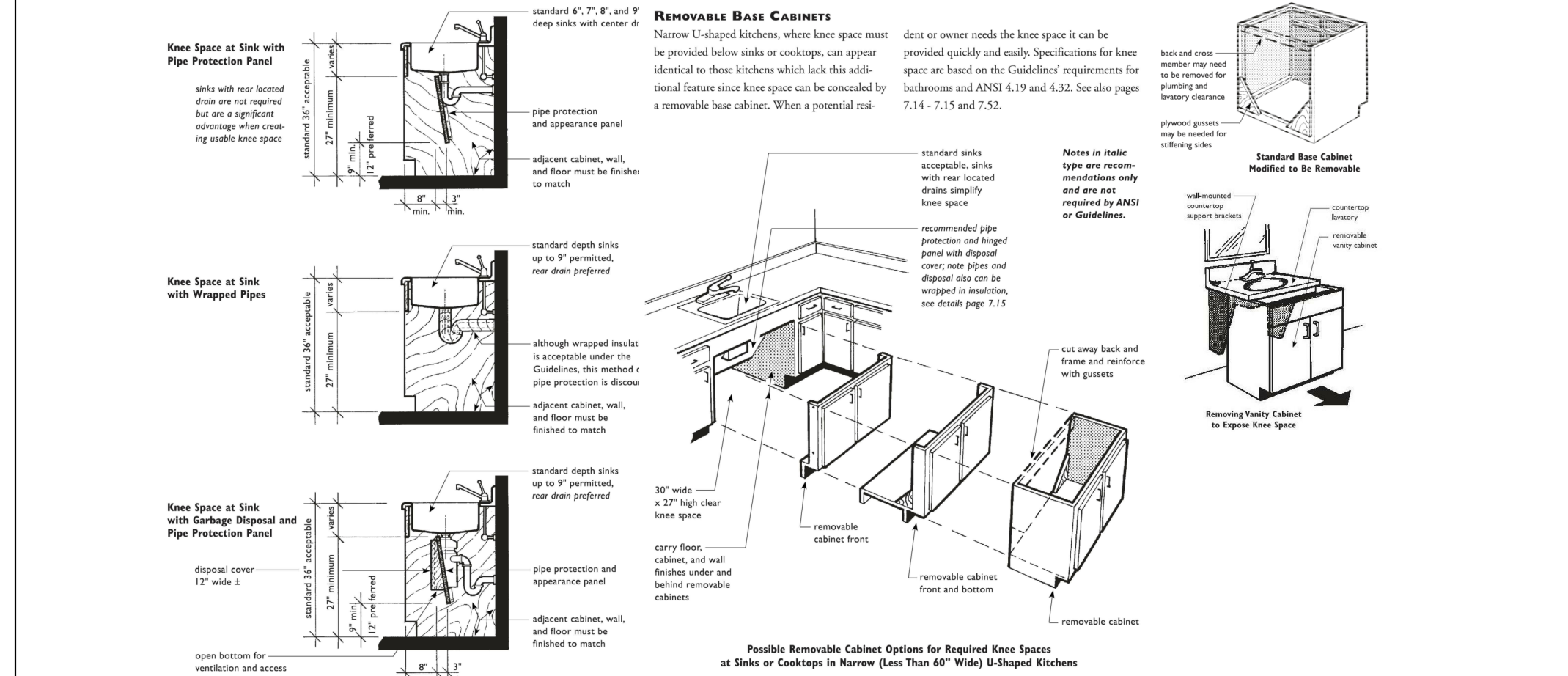
B3 TYP. FHA MOUNTING HT. REQ.
1/2" = 1'-0"



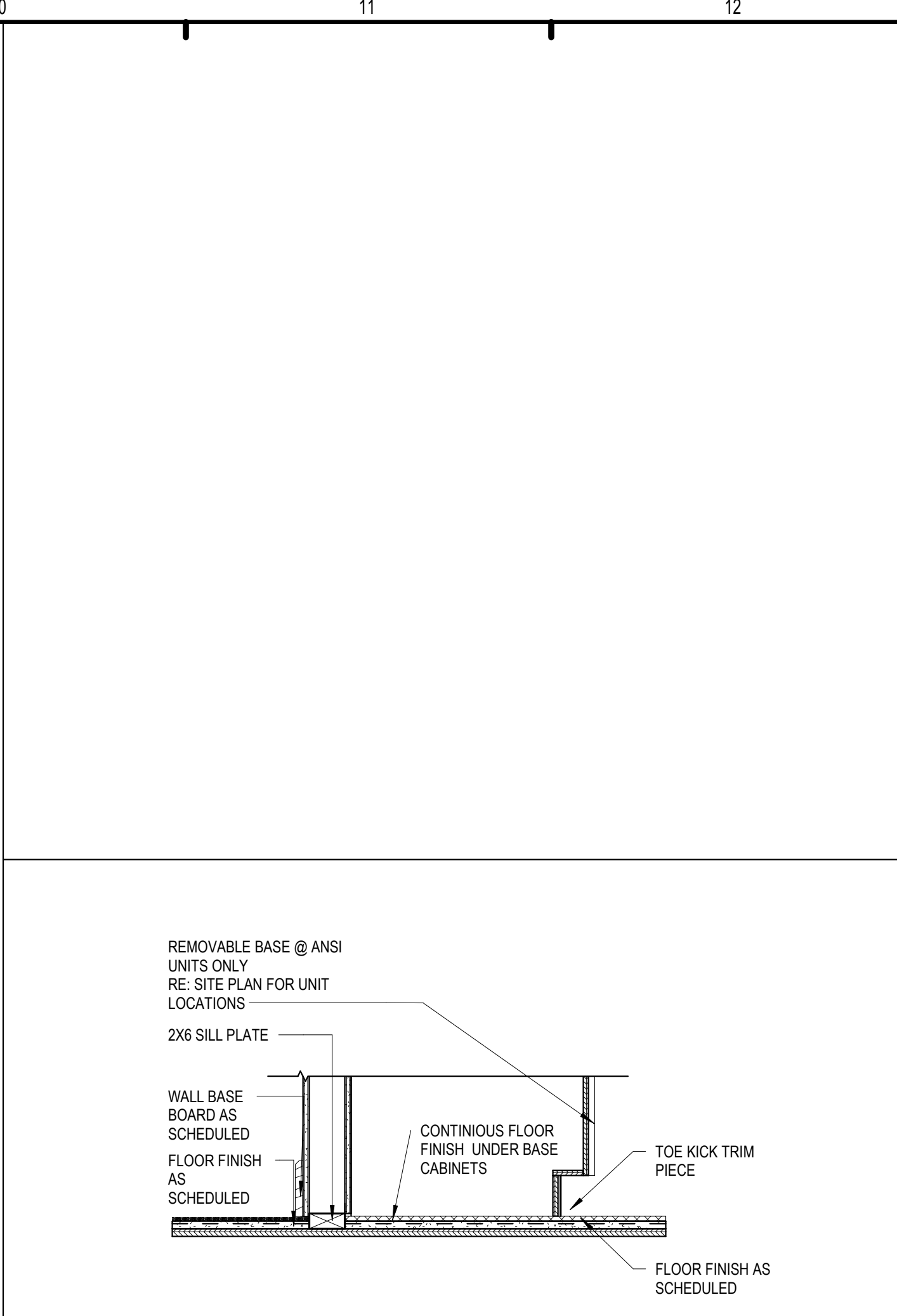
B5 BLOCKING FOR FUTURE GRAB BARS
1 1/2" = 1'-0"



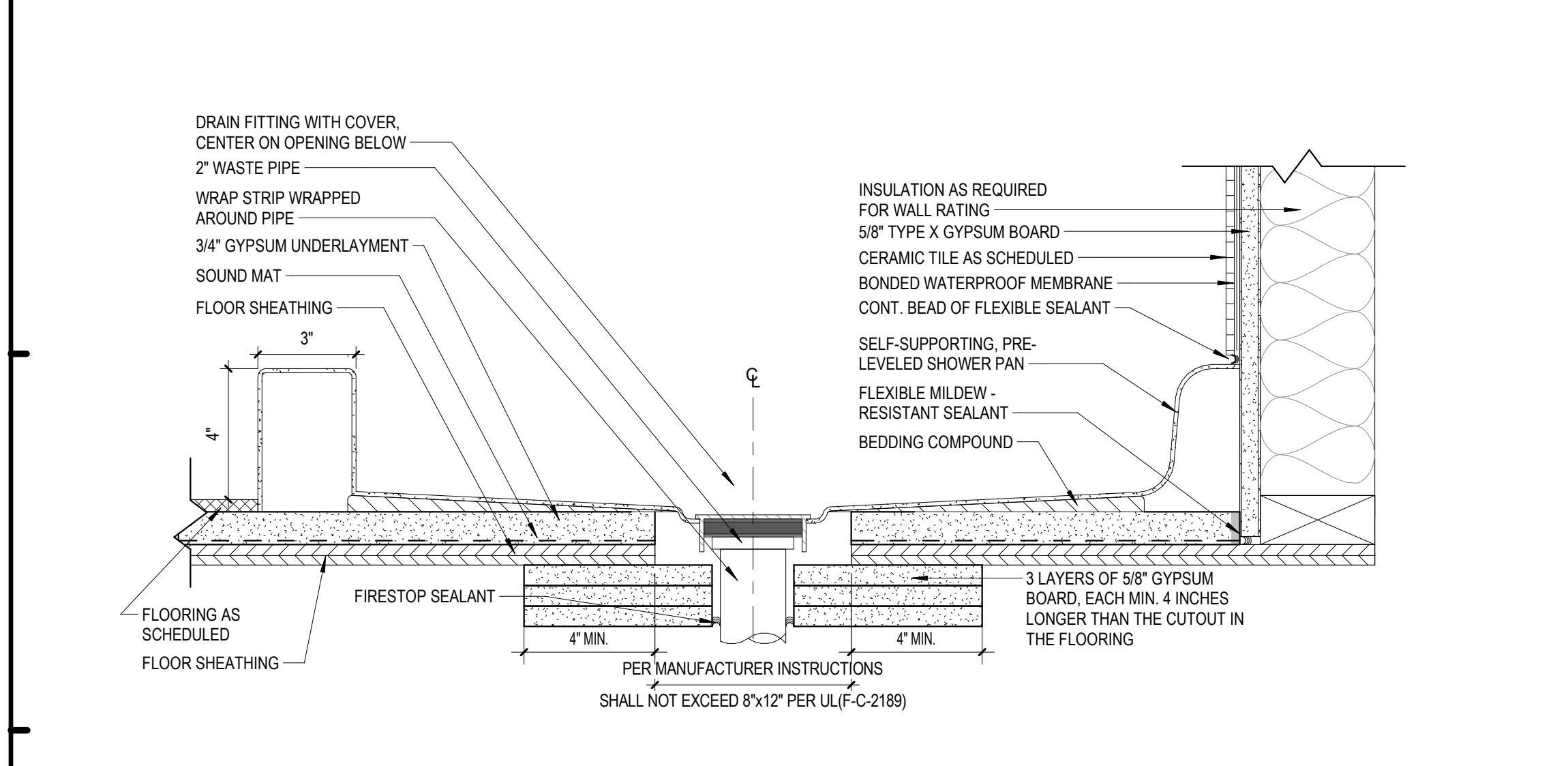
D1 TYP. FHA KITCHEN MOUNTING HT. REQ.
1/2" = 1'-0"



D3 REMOVABLE CABINET DETAIL Copy 1
3/8" = 1'-0"



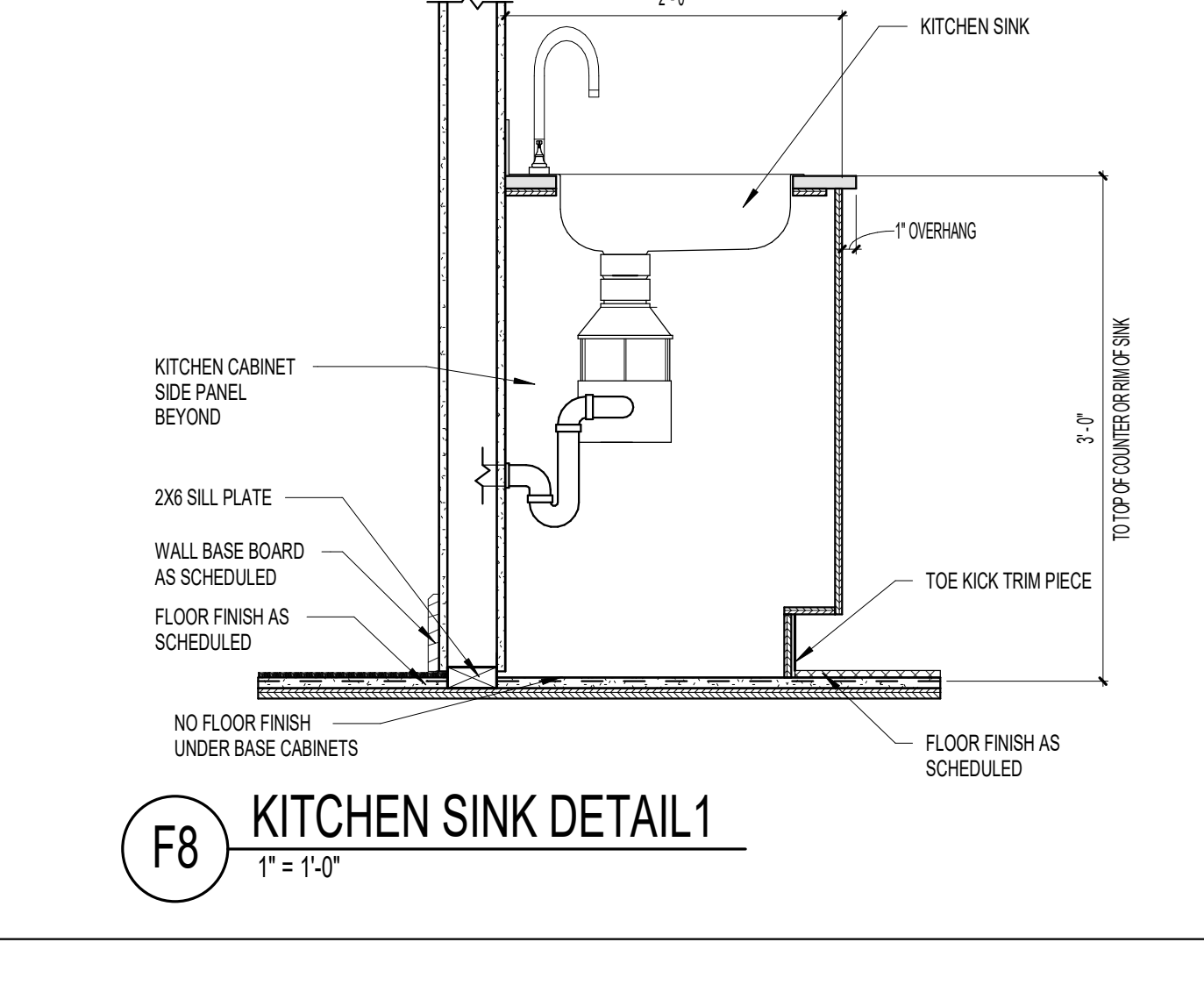
D11 REMOVABLE BASE CABINET DETAIL
1" = 1'-0"



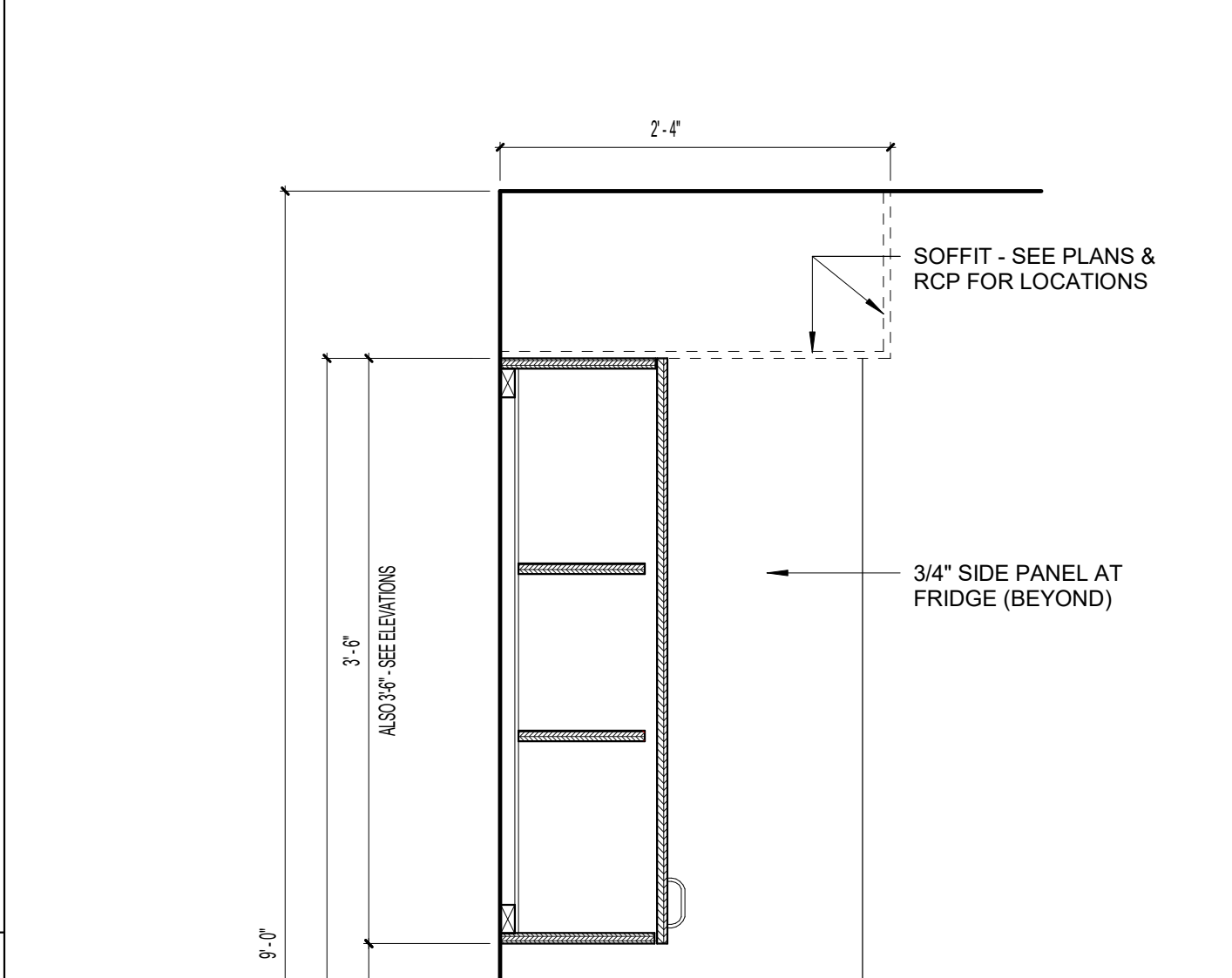
F1 SHOWER FRAMING DETAIL
3" = 1'-0"



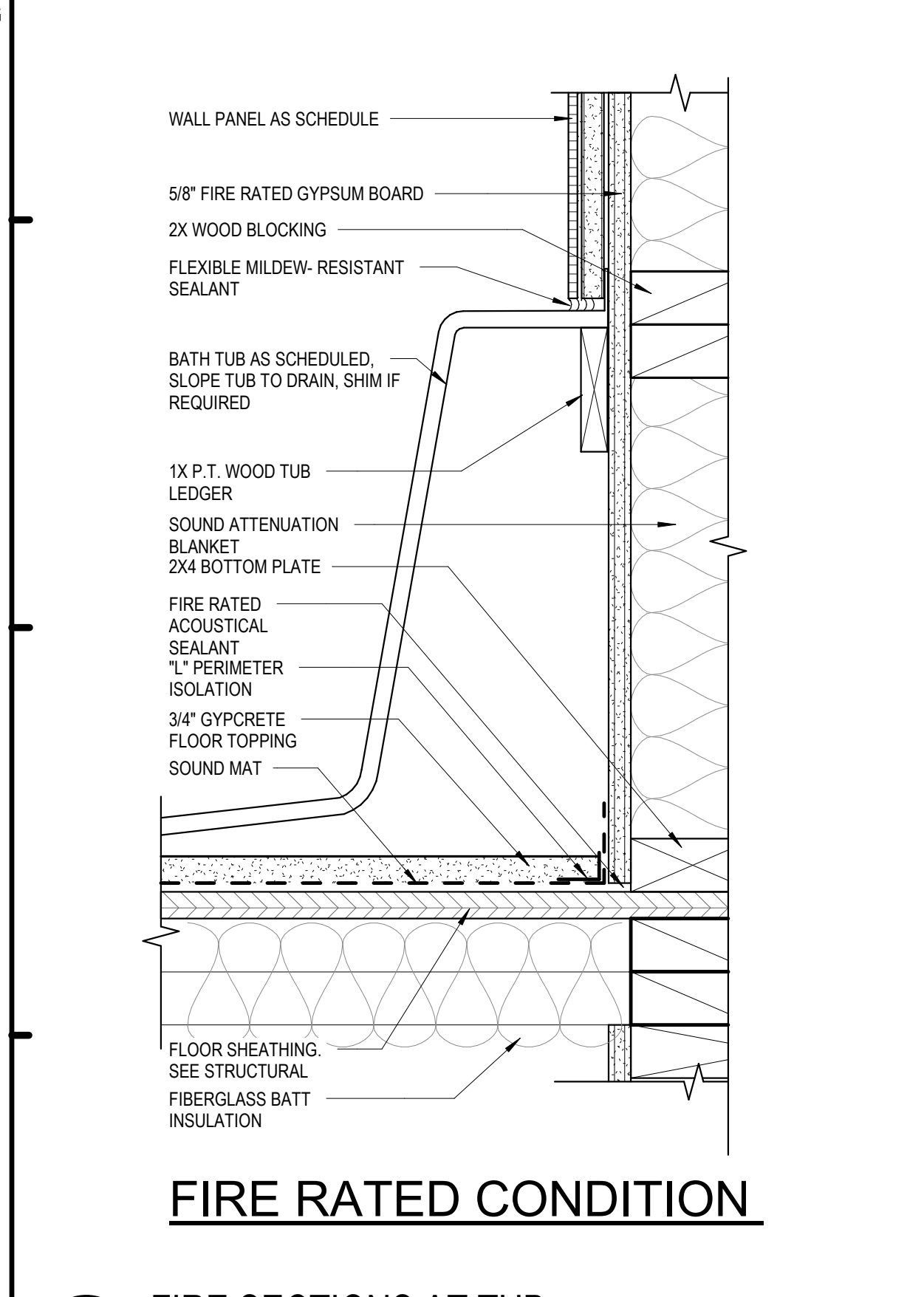
F8 KITCHEN SINK DETAIL 1
1" = 1'-0"



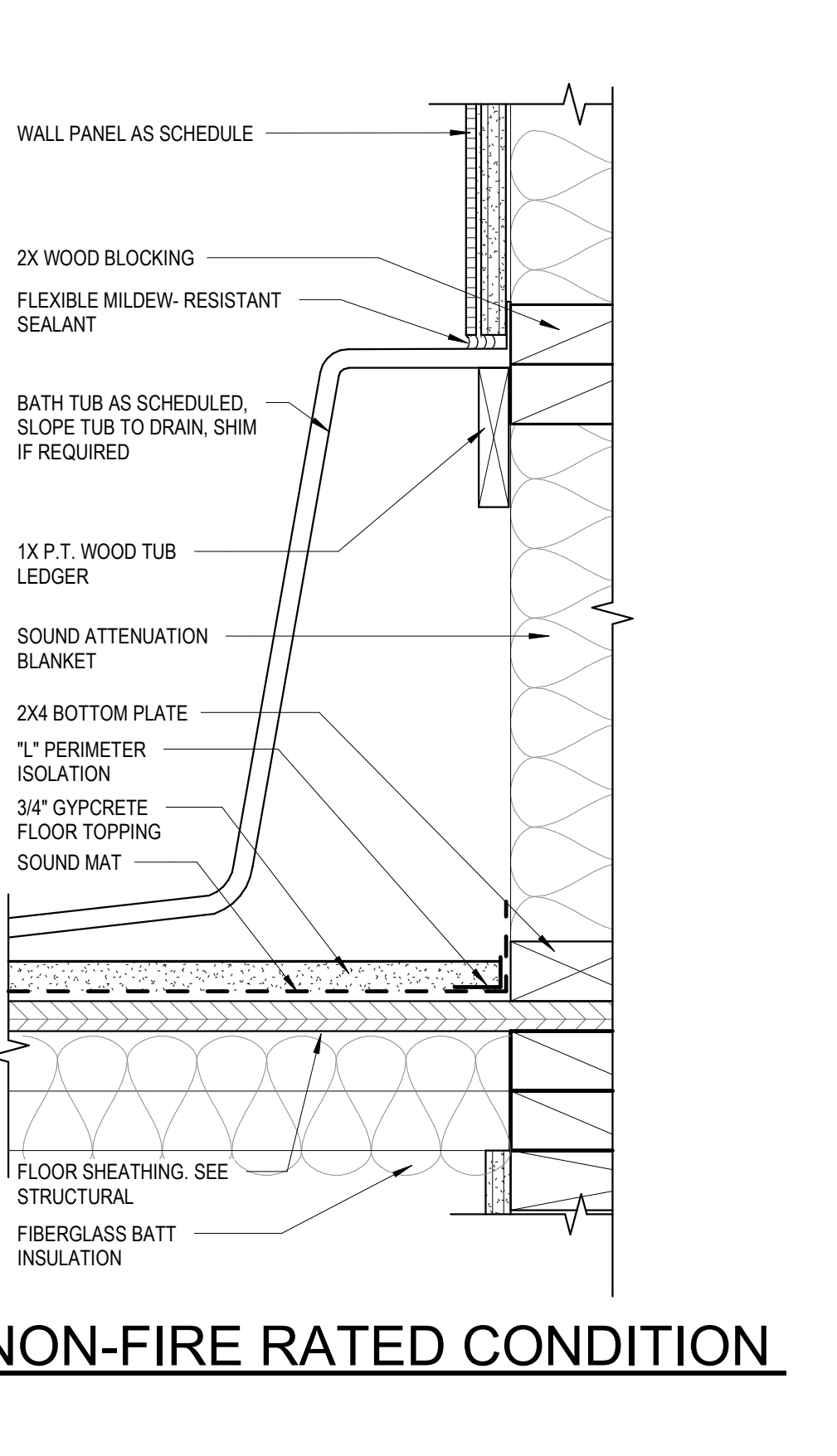
D8 REMOVABLE KITCHEN BASE CABINET DETAIL
1" = 1'-0"



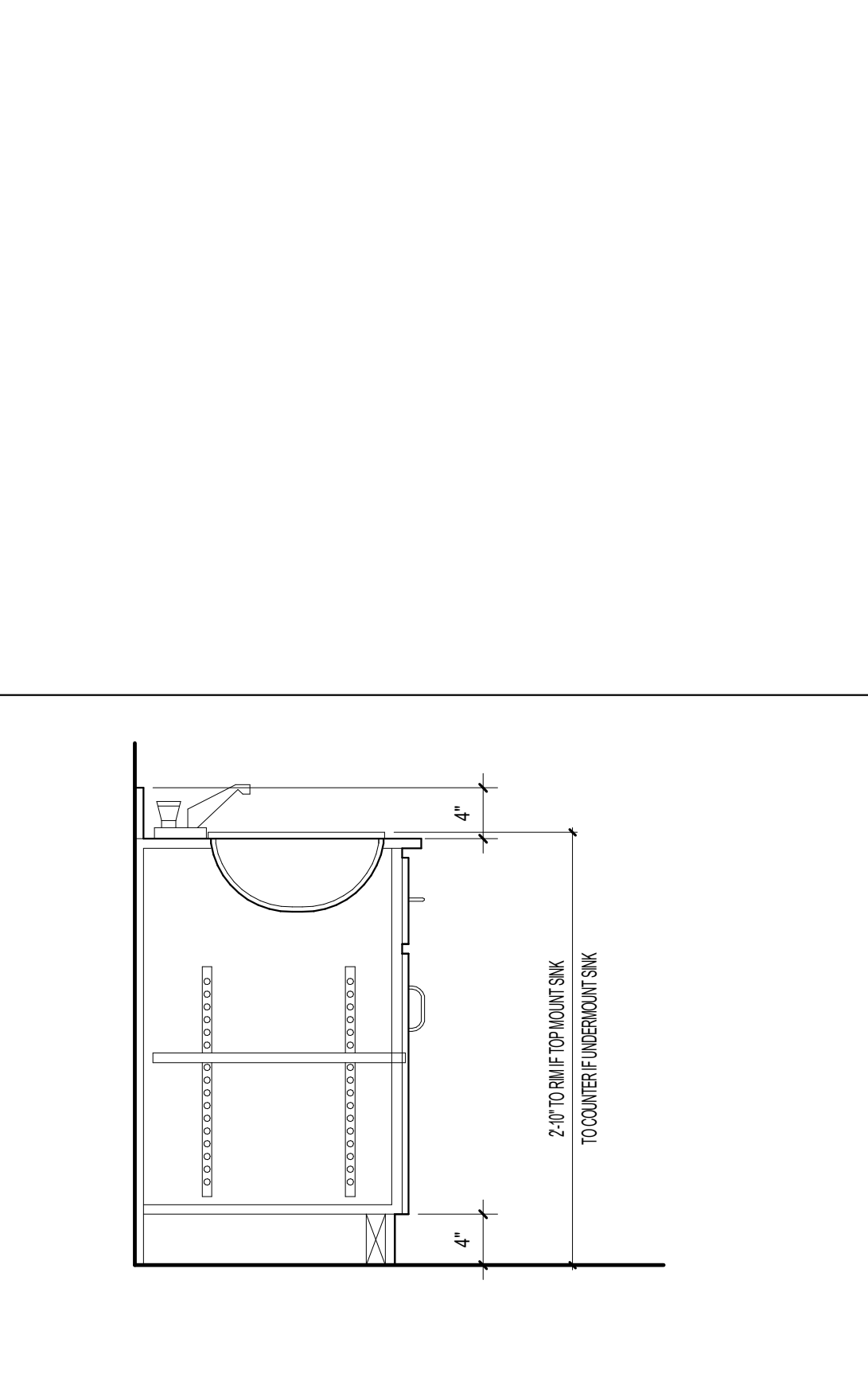
H11 KITCHEN CABINET SECTION
1" = 1'-0"



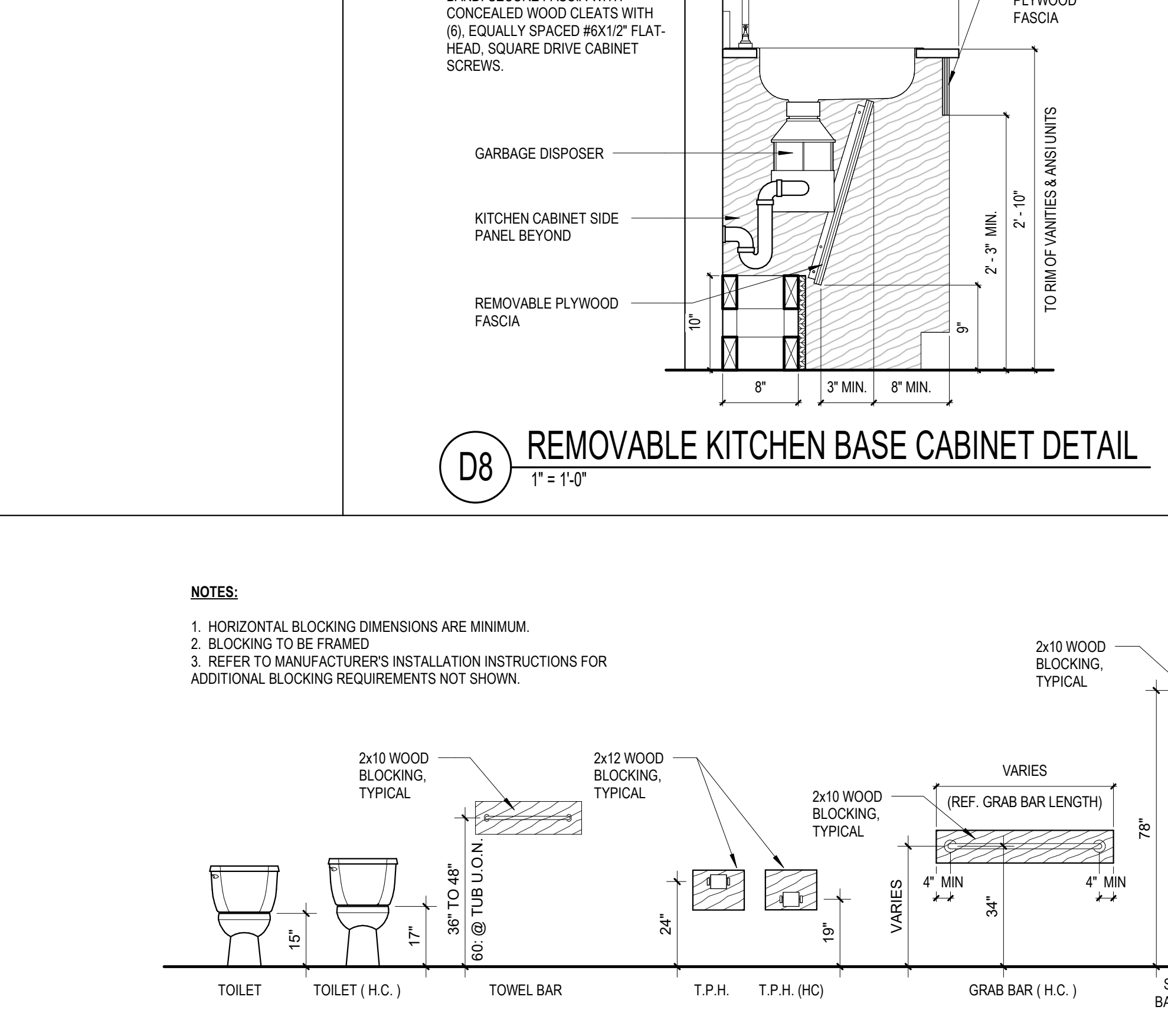
K1 FIRE SECTIONS AT TUB
3" = 1'-0"



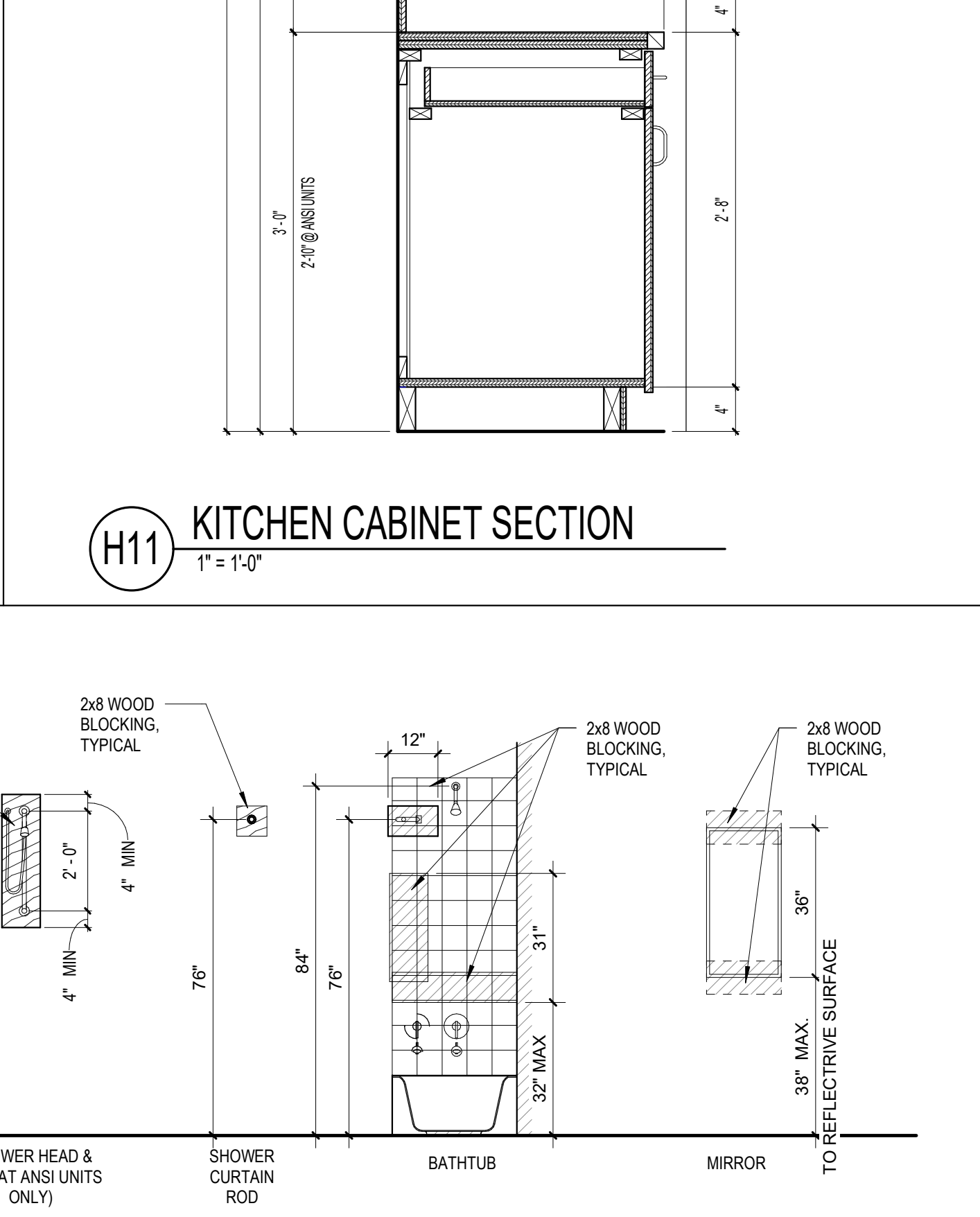
K1 NON-FIRE RATED CONDITION



K5 BASE CABINET DETAIL AT BATH
1" = 1'-0"



K7 BATH FIXTURE CLEAR HEIGHTS
3/8" = 1'-0"



K11 KITCHEN SINK DETAIL 2
1" = 1'-0"

| ISSUE HISTORY | | |
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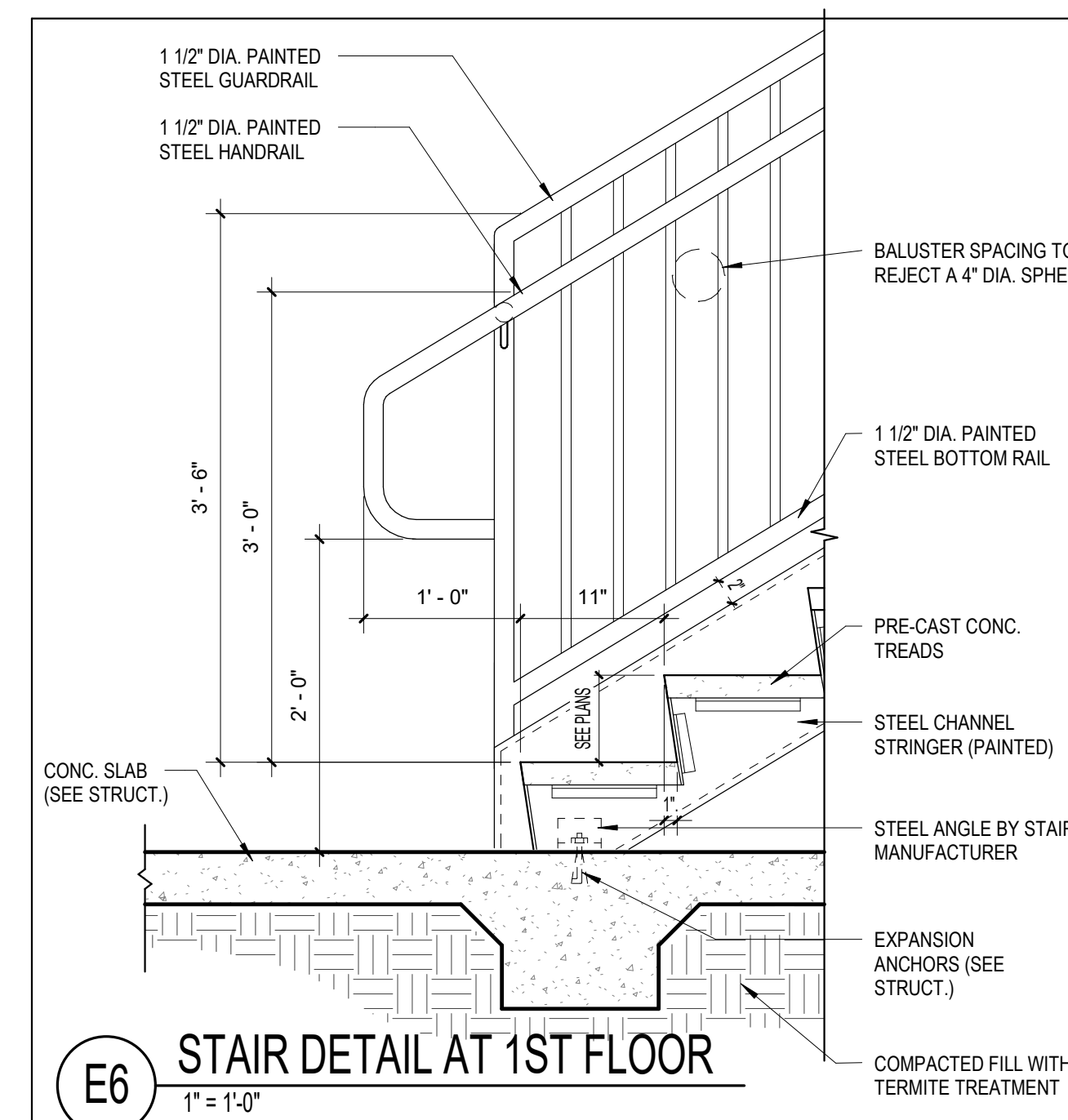
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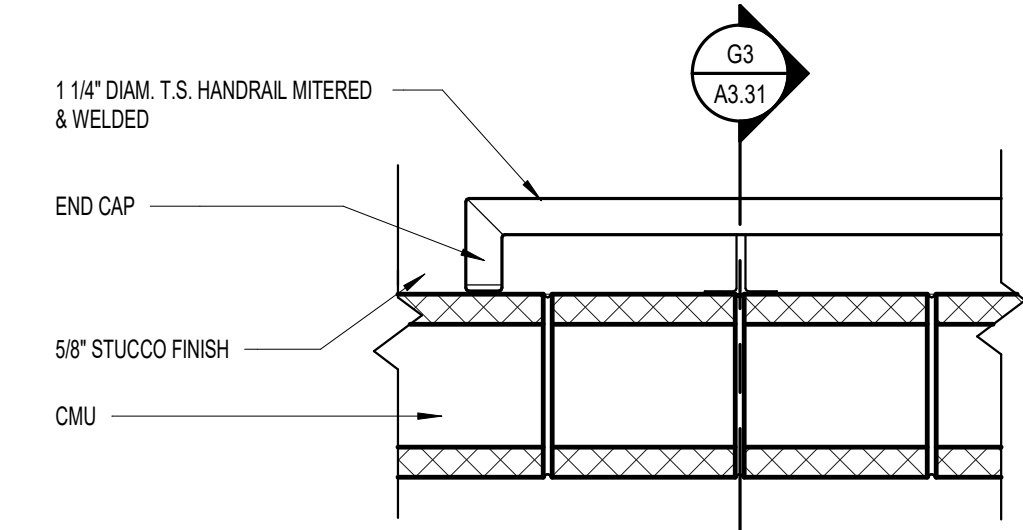


THE ROBERT MADISON
MADISON, ALABAMA

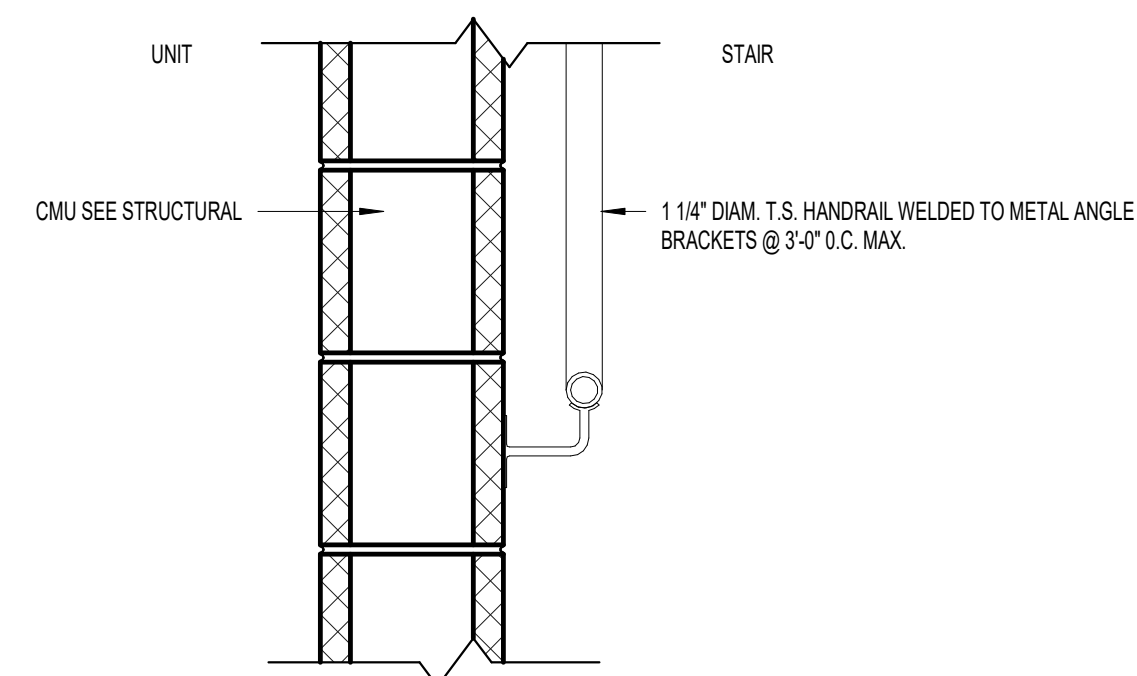
KITCHEN, BATH AND LAUNDRY REQUIREMENTS



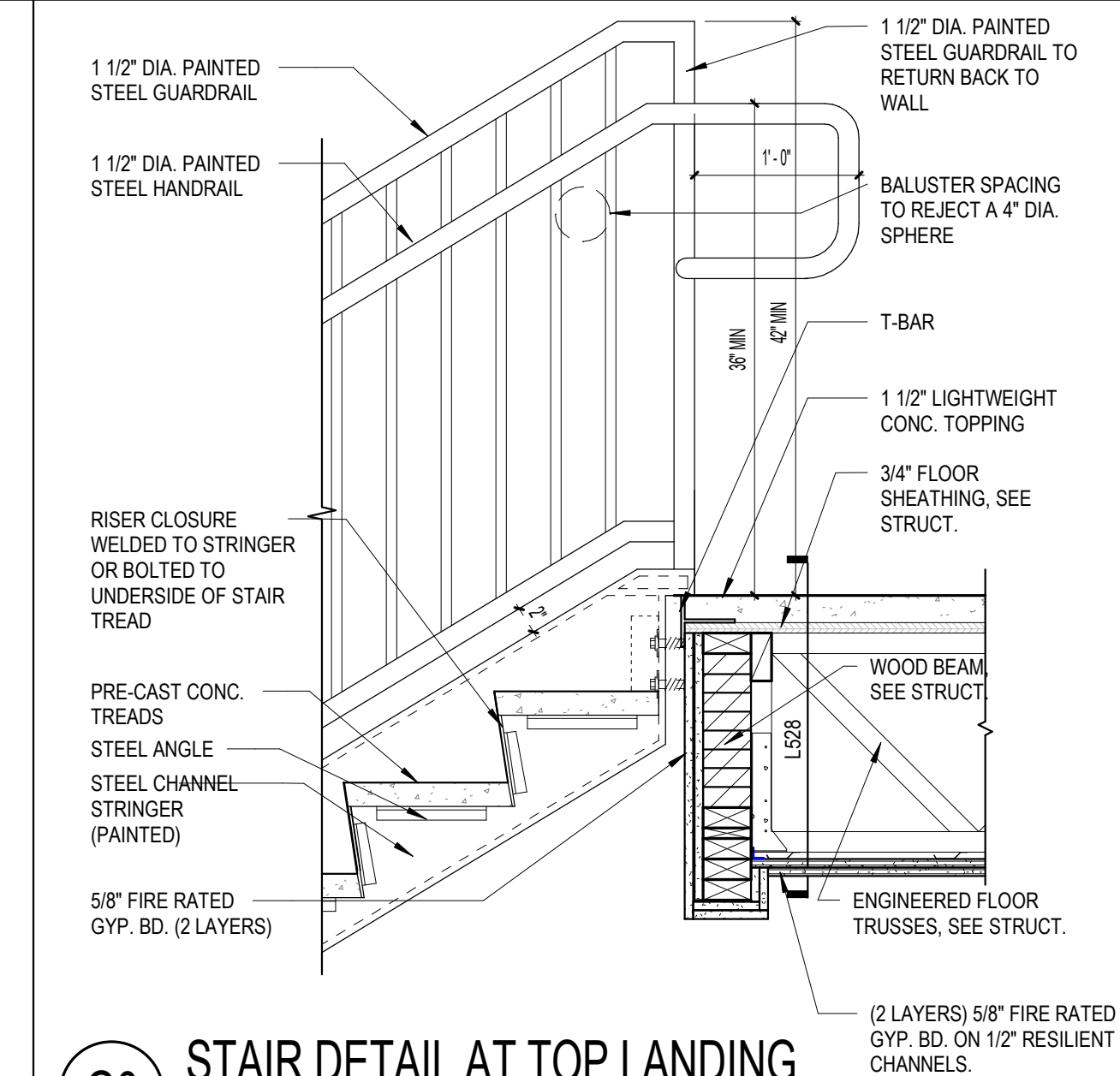
E6 STAIR DETAIL AT 1ST FLOOR
1" = 1'-0"



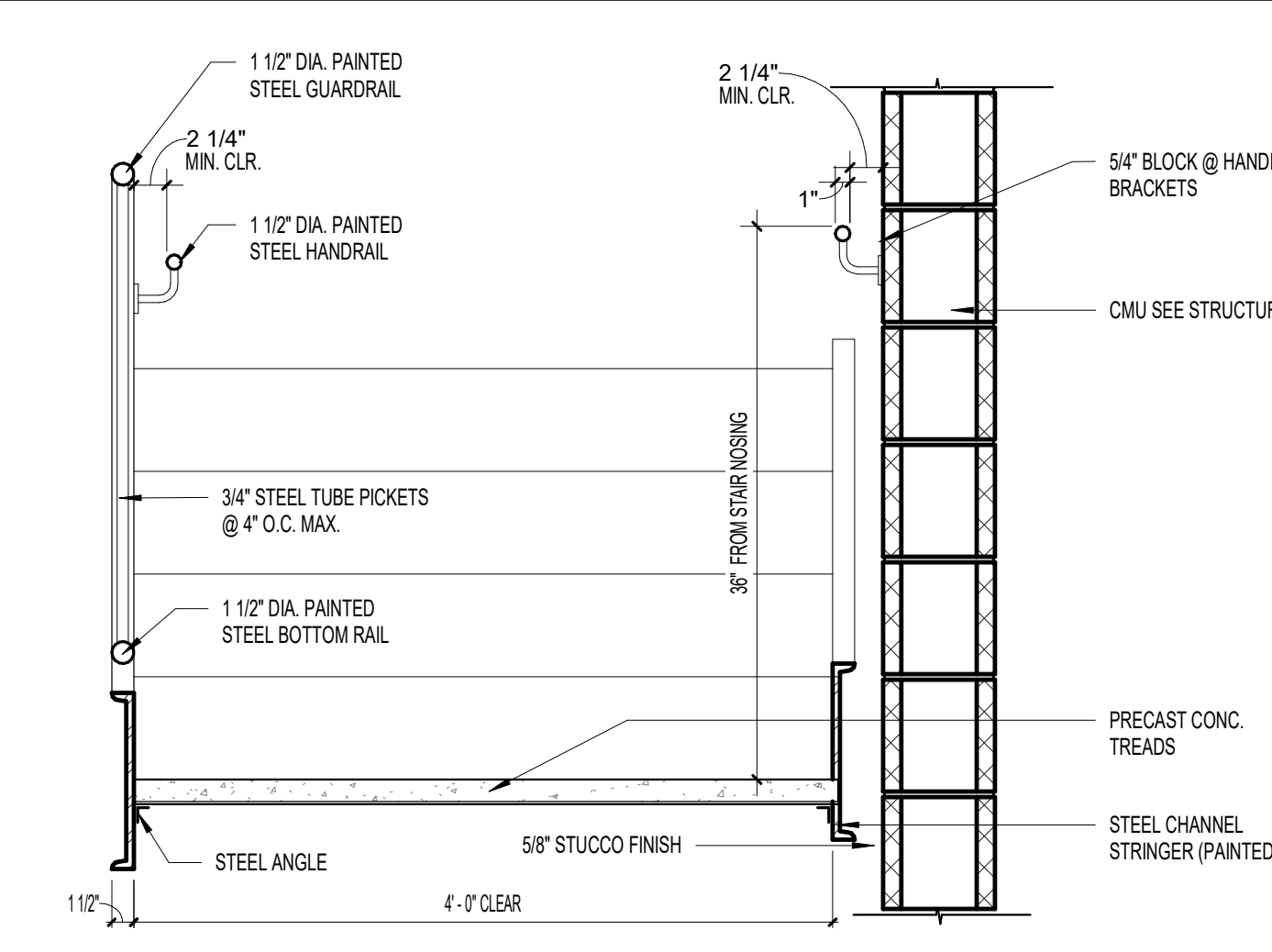
G1 PLAN DETAIL AT HANDRAIL
1 1/2" = 1'-0"



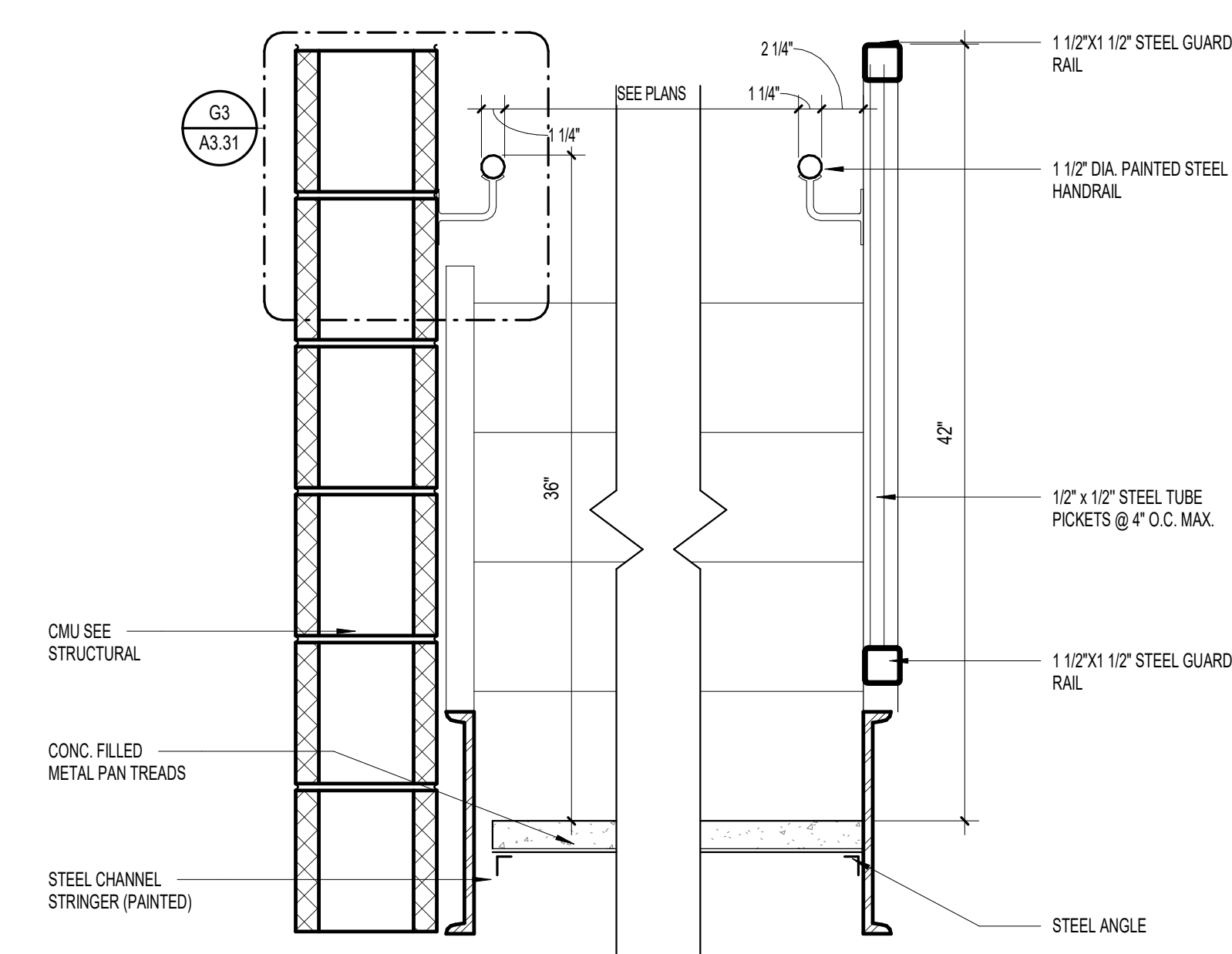
G3 SECTION AT HANDRAIL
1 1/2" = 1'-0"



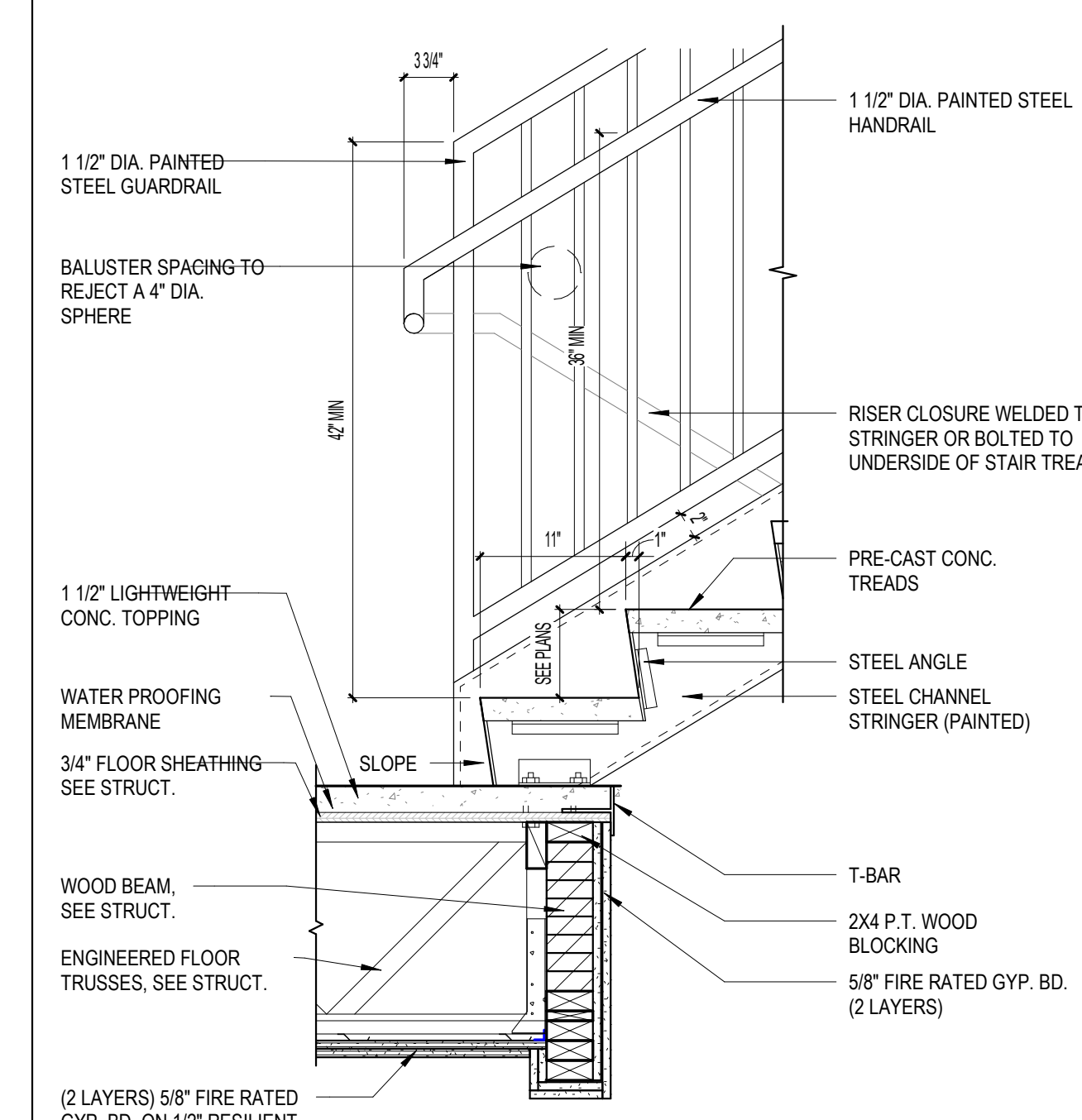
G6 STAIR DETAIL AT TOP LANDING
1" = 1'-0"



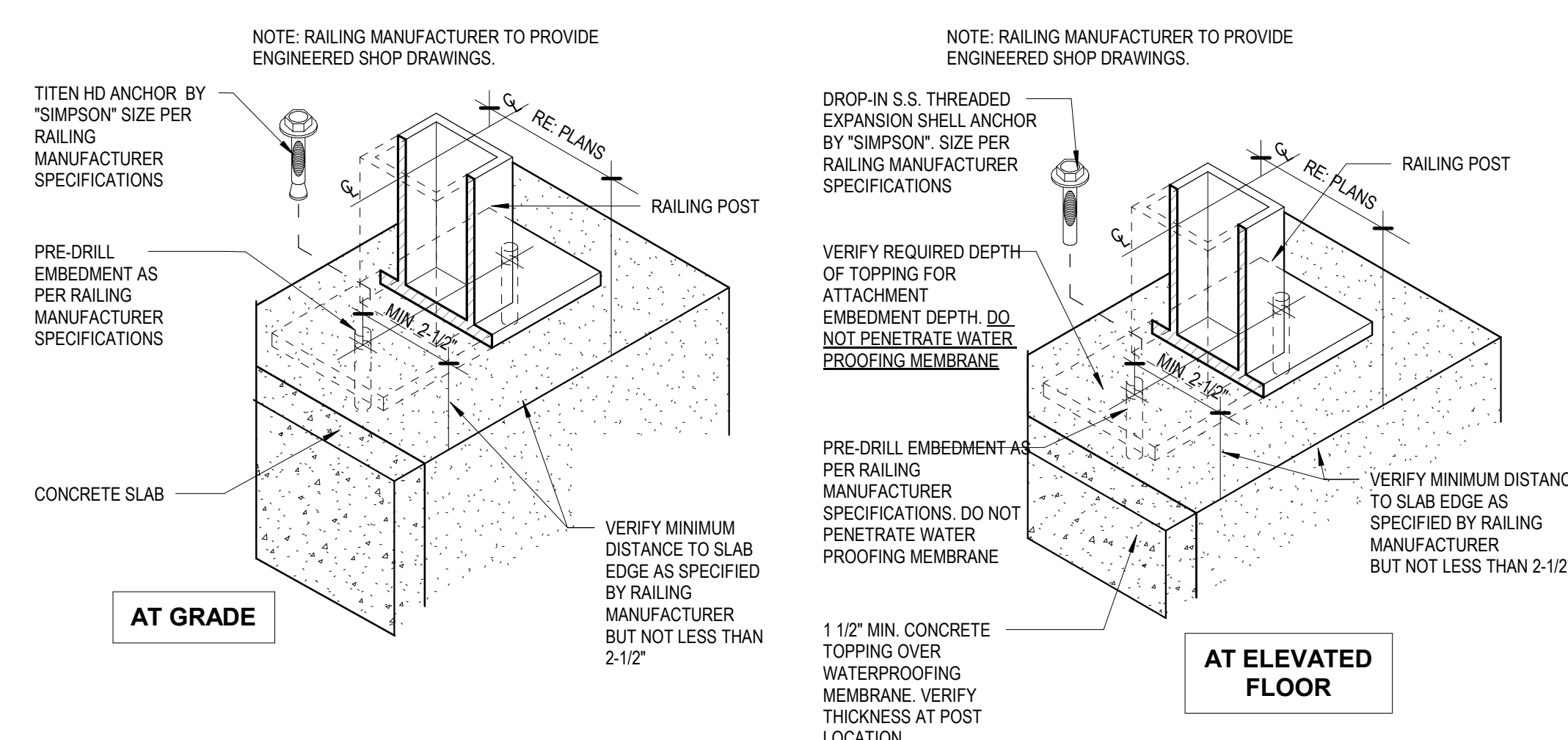
G9 STAIR CROSS SECTION
1" = 1'-0"



K3 STAIR SECTION @ BLDG A
1 1/2" = 1'-0"



K6 STAIR DETAIL AT SECOND LANDING
1" = 1'-0"



K9 RAILING DETAILS
3" = 1'-0"

| ISSUE HISTORY | | |
|---------------|------------|------------------|
| No. | Date | Description |
| 1 | 04/15/2022 | PERMIT SUBMITTAL |
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| REVISION HISTORY | | |
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| No. | Date | Description |
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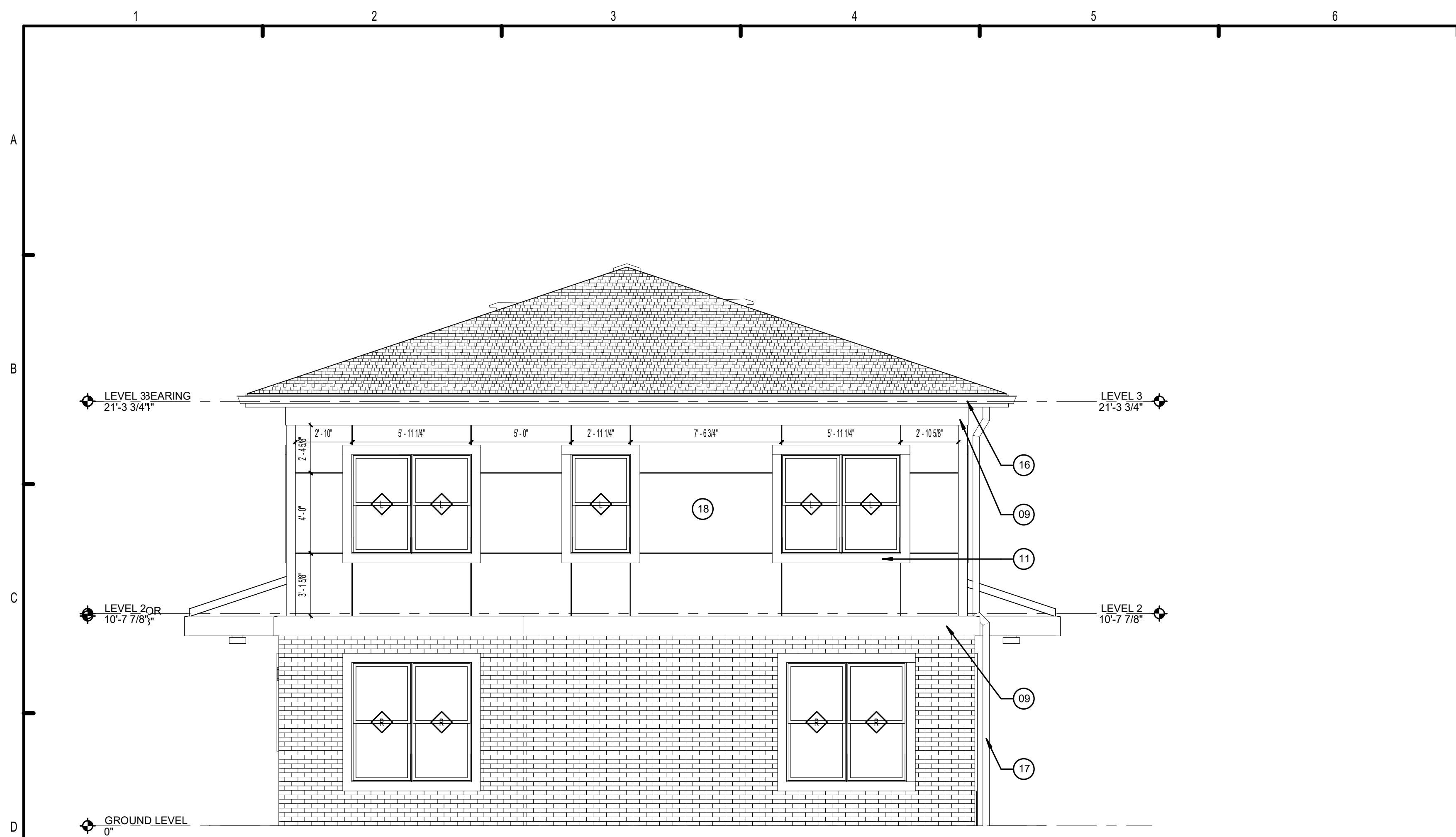
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2555 Temple Trail, Winter Park, FL 32789 (407) 629-0595
www.fuglebergkoch.com AA26002103

CONSULTANT
STATE OF ALABAMA
PROFESSIONAL ENGINEER
8234
4/15/22
REGISTERED ARCHITECT
MICHAEL GOVE
SEA

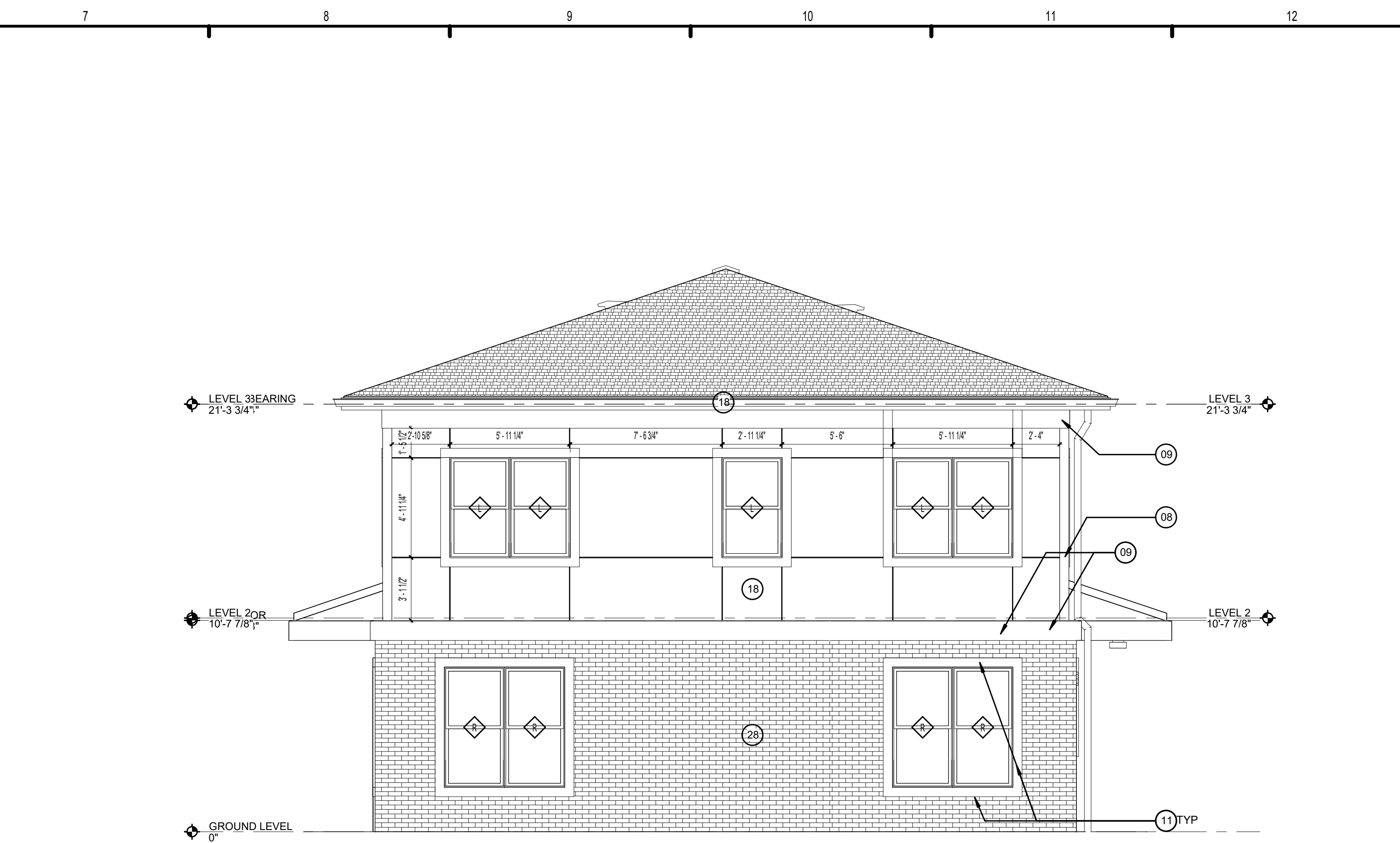
THE ROBERT MADISON
MADISON, ALABAMA
Date: 04/15/2022
Project #: 5722

STAIR SECTION DETAILS

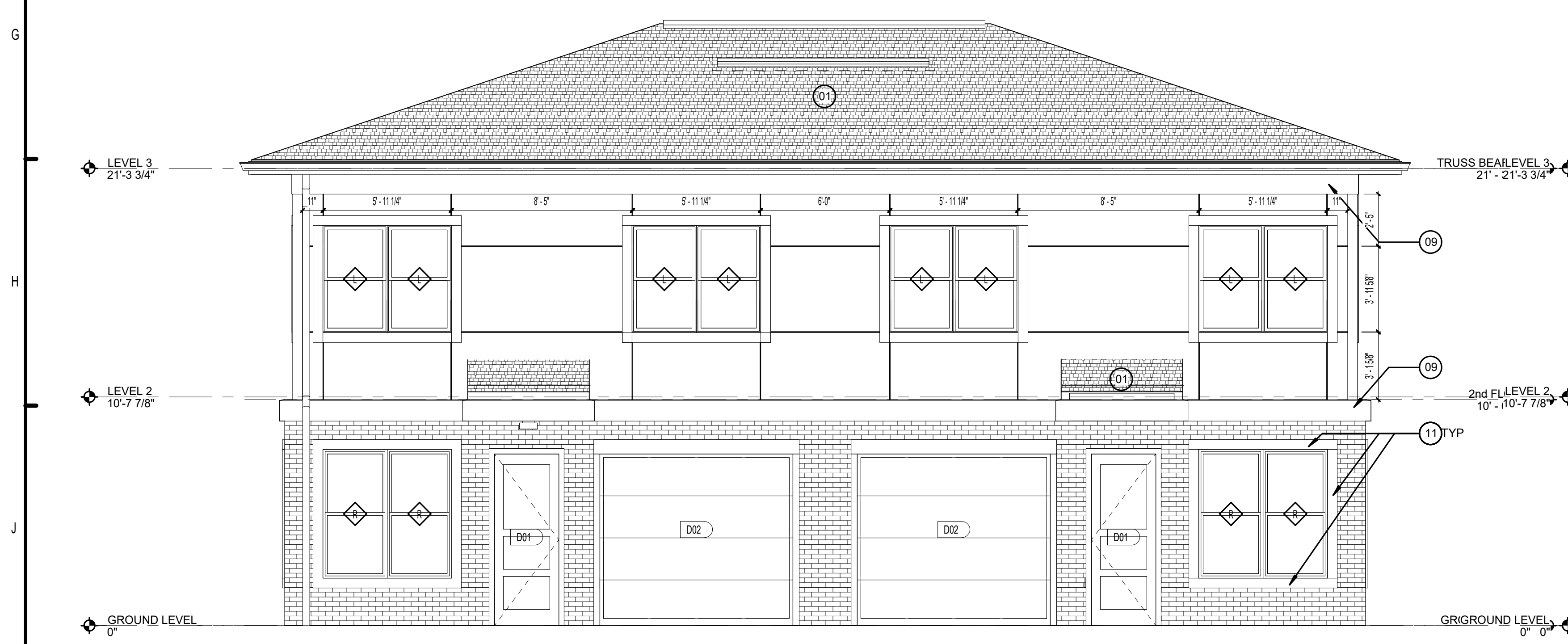
A3.31



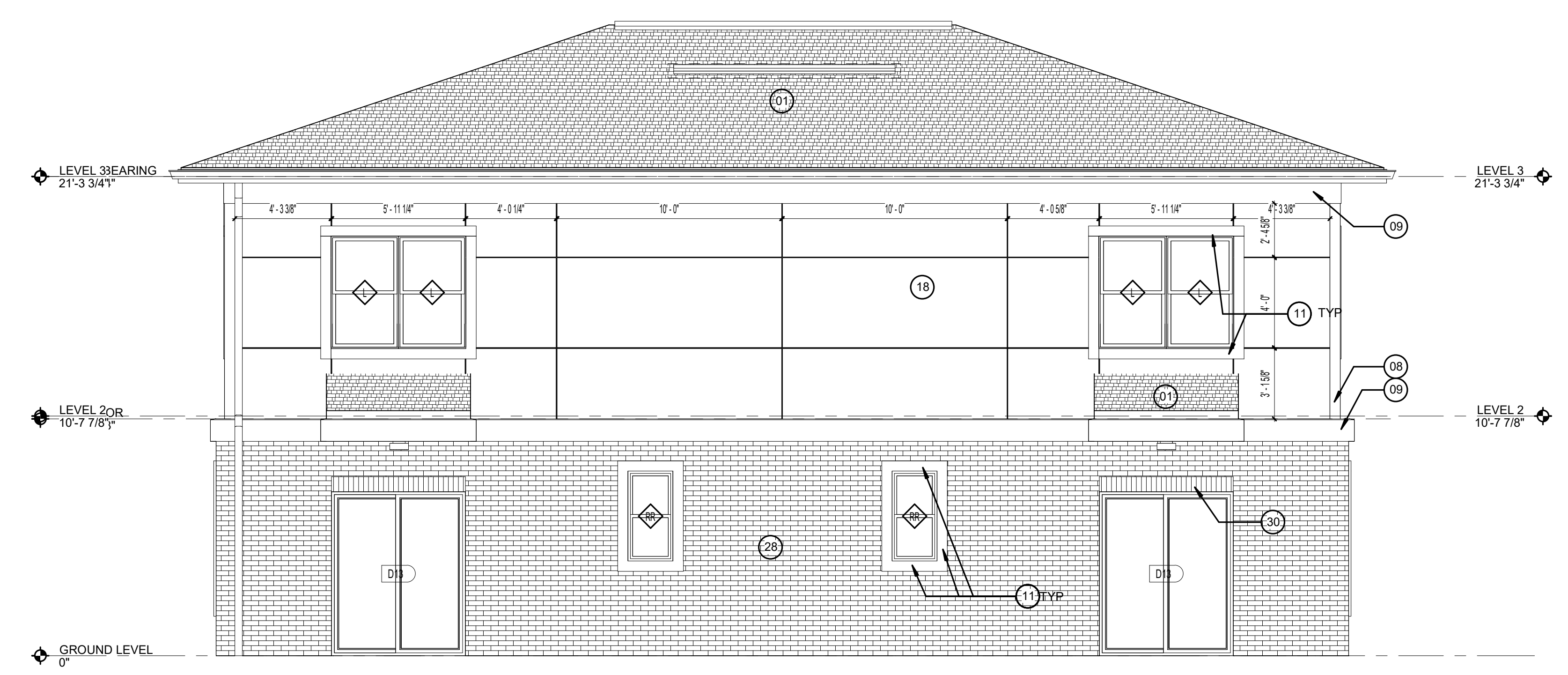
H1 BLDG C - LEFT ELEVATION
1/4" = 1'-0"



H2 BLDG C - RIGHT ELEVATION
1/4" = 1'-0"



K1 BLDG C - FRONT ELEVATION
1/4" = 1'-0"



K2 BLDG C - REAR ELEVATION
1/4" = 1'-0"
K1/A2.07

LEGEND:

- 01. ASPHALT SHINGLES
- 02. DECORATIVE LOUVER - 3'-0" X 12'-0"
- 03. NOT USED
- 04. FIBER CEMENT SIDING 8" EXPOSURE
- 05. NOT USED
- 06. NOT USED
- 07. NOT USED
- 08. 5/4 x 5-1/2" FIBER CEMENT CORNER TRIM
- 09. 5/4 x 11-1/4" FIBER CEMENT TRIM
- 10. 5/4 x 5-1/2" FIBER CEMENT TRIM
- 11. 5/4 x 5-1/2" FIBER CEMENT TRIM
- 12. CONDENSING UNIT - SEE MECHANICAL
- 13. VINYL TRIM - 5" DOUBLE CHANNEL LINEAL
- 14. 2x8 P.T. FASCIA ALUMINUM WRAPPED
- 15. NOT USED
- 16. 6" PREFINISHED METAL RAIN GUTTER
- 17. DOWNSPOUT
- 18. FIBER CEMENT PANEL
- 19. METER CENTER - SEE MECH. FOR LOCATION
- 20. LIGHTED BUILDING NUMBER SIGN
- 21. BUILDING APARTMENT NUMBER SIGN
- 22. NOT USED
- 23. EXHAUST VENTS
- 24. APARTMENT NUMBER SIGN
- 25. EXTERIOR WALL LIGHT - SEE ELECTRICAL
- 26. METAL RAILING SYSTEM
- 27. LOUVER - 4'-0" X 4'-0"
- 28. BRICK
- 29. BRICK SILL
- 30. BRICK SOLDIER COURSE
- 31. NOT USED
- 32. NOT USED

ISSUE HISTORY

| No. | Date | Description |
|-----|------------|------------------|
| 1 | 04/15/2022 | PERMIT SUBMITTAL |

REVISION HISTORY

| No. | Date | Description |
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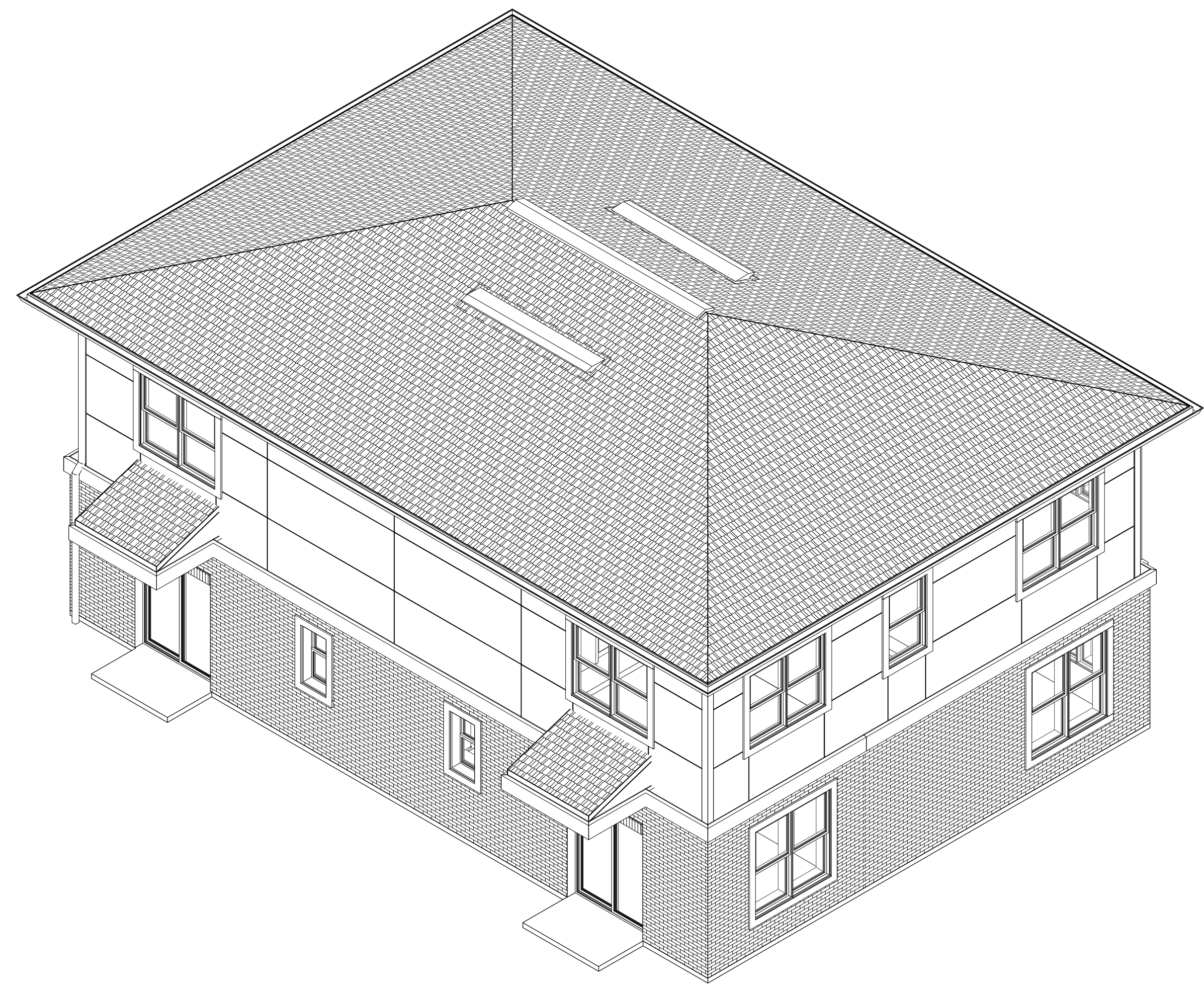
CONSULTANT

MICHAEL DOVE
SEAL

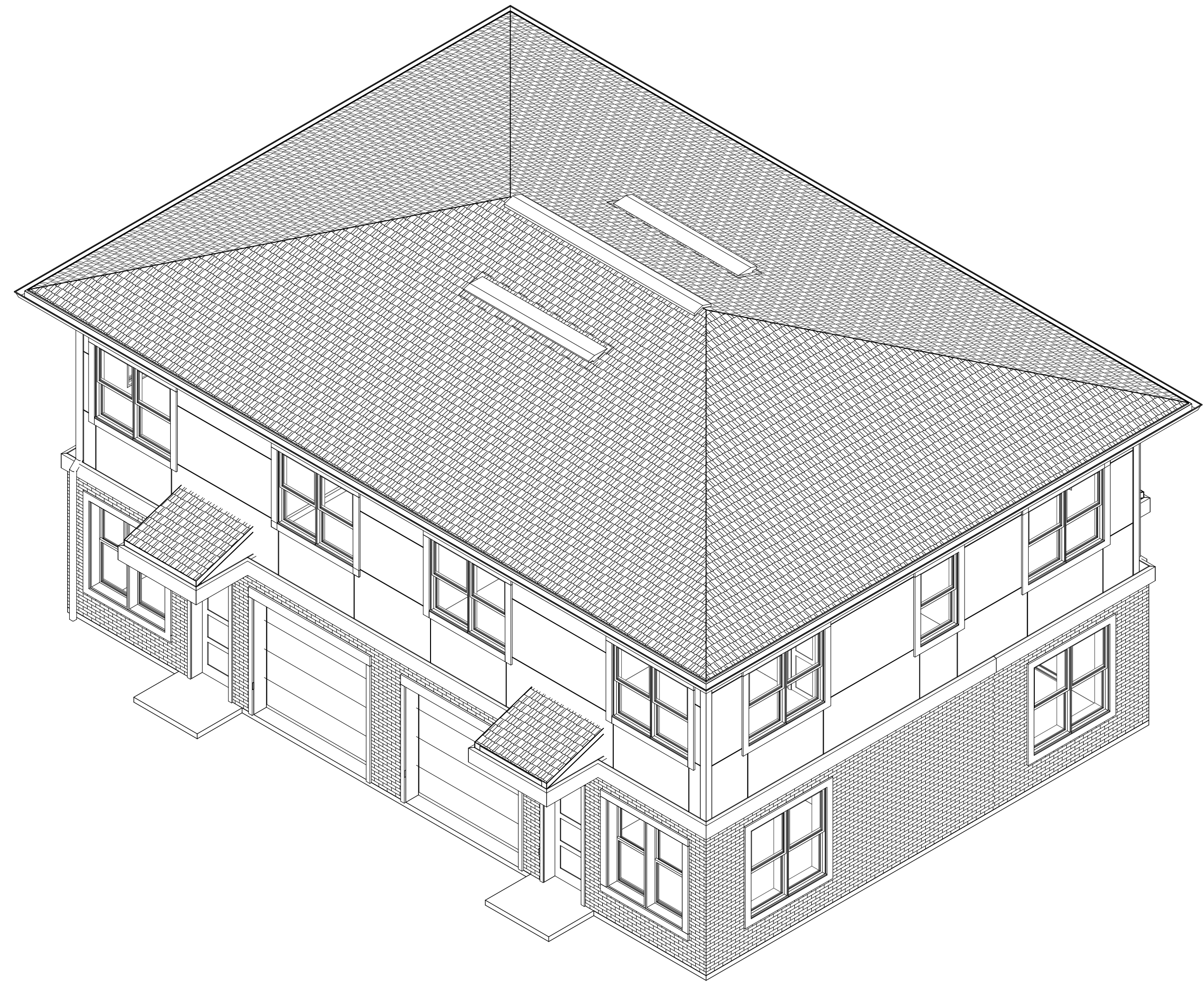
| | |
|---------------------------|------------------|
| THE ROBERT MADISON | Drawn: MB |
| | Checked: JK |
| | Approval: MS |
| | Date: 04/15/2022 |
| | Project #: 5722 |

BUILDING TYPE C - EXTERIOR ELEVATIONS

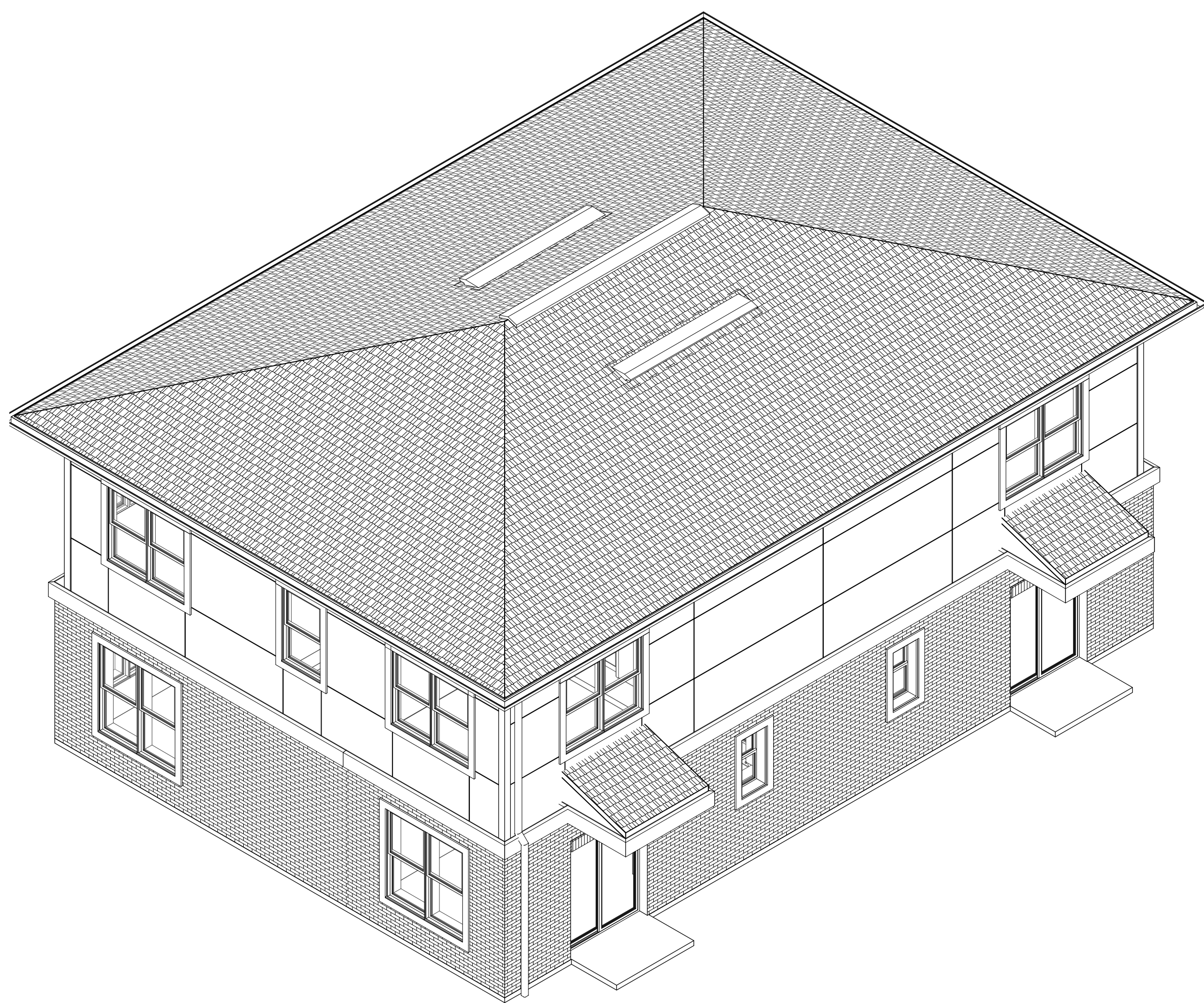
A4.03



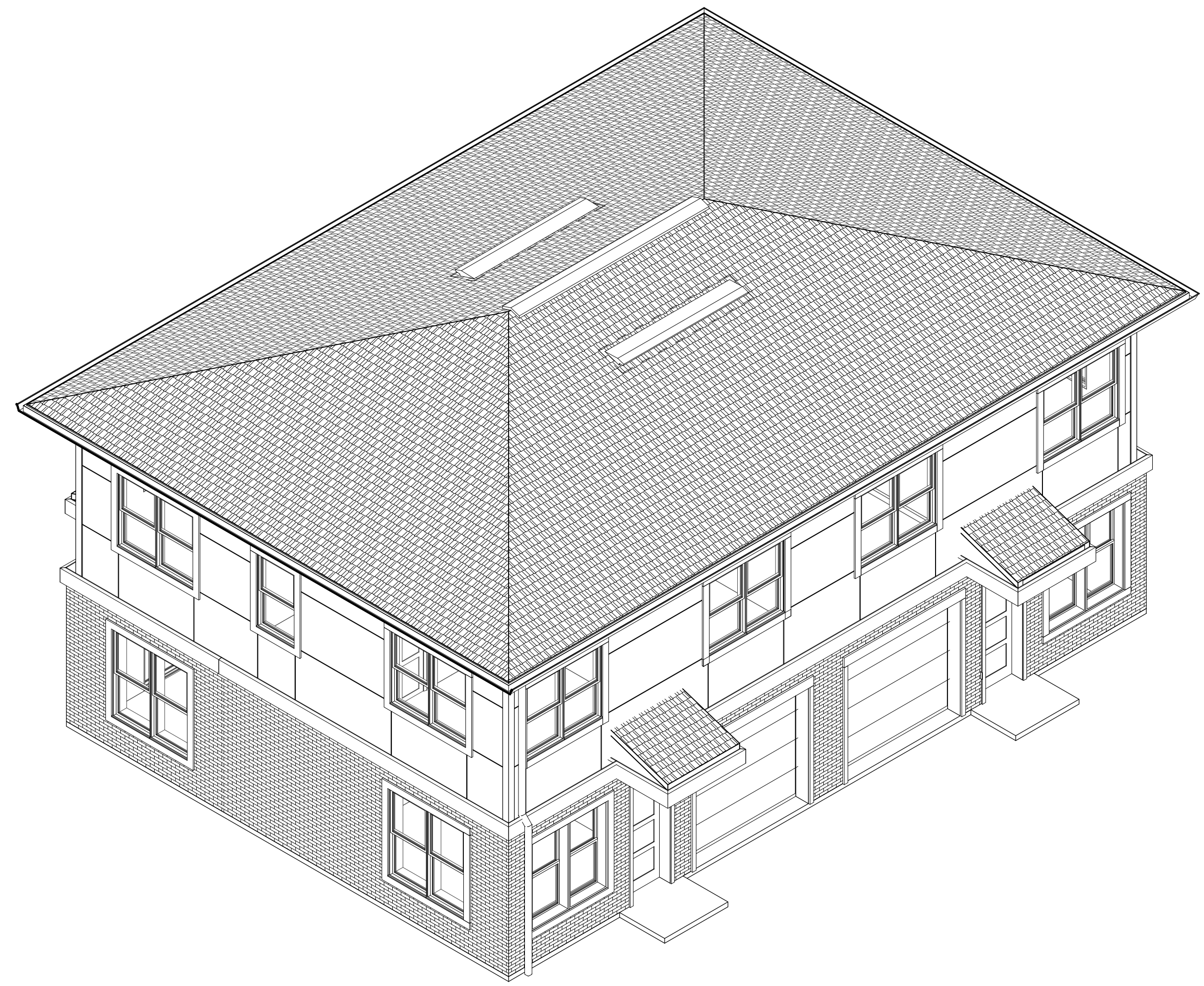
E2 BUILDING TYPE C - AXONOMETRIC 4



E1 BUILDING TYPE C - AXONOMETRIC 3



K2 BUILDING TYPE C - AXONOMETRIC 2



K1 BUILDING TYPE C - AXONOMETRIC 1

| ISSUE HISTORY | | |
|---------------|------------|------------------|
| No. | Date | Description |
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| REVISION HISTORY | | |
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| No. | Date | Description |
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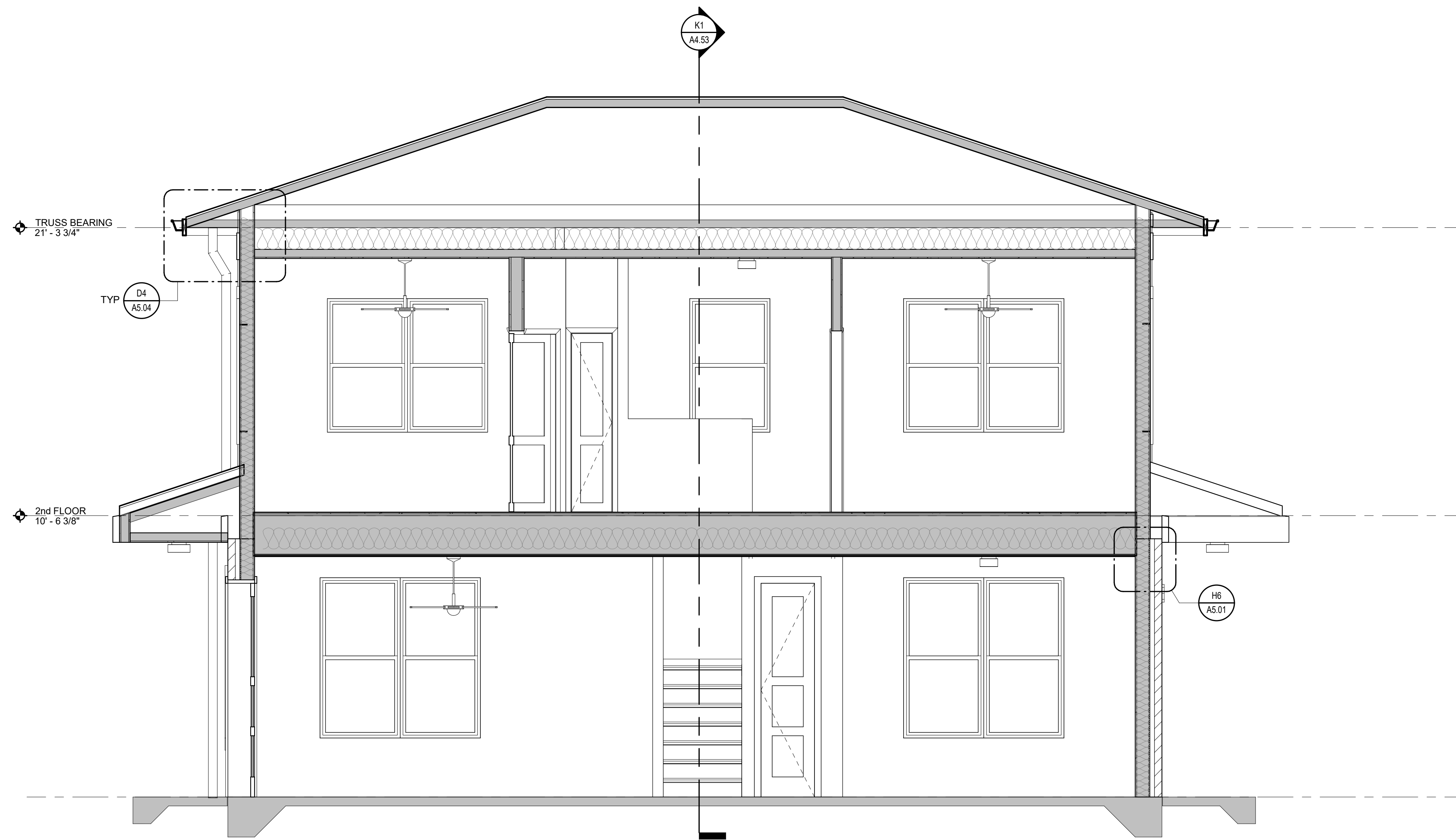
FUGLEBERG KOCH
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CONSULTANT

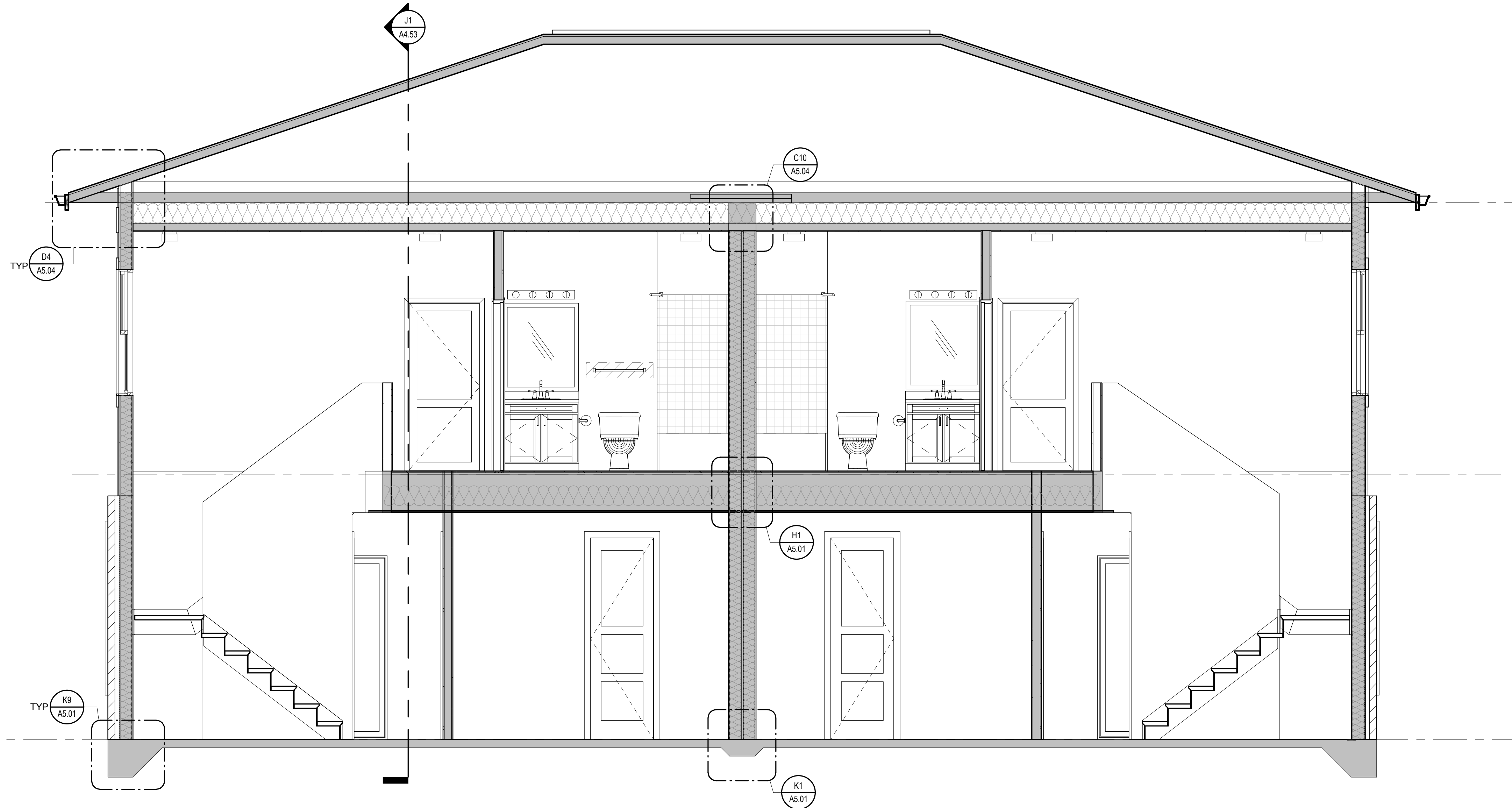
 MICHAEL GOVE
 SEA

| | |
|--------------------|------------------|
| THE ROBERT MADISON | Drawn: MB |
| MADISON, ALABAMA | Checked: JK |
| | Approval: MS |
| | Date: 04/15/2022 |
| | Project #: 572 |

BUILDING TYPE C - AXONOMETRICS
A4.12



J1 BUILDING TYPE C - SECTION 2
3/8" = 1'-0"



K1 BUILDING TYPE C - SECTION 1
3/8" = 1'-0"

ISSUE HISTORY

| No. | Date | Description |
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| 1 | 04/15/2022 | PERMIT SUBMITTAL |

REVISION HISTORY

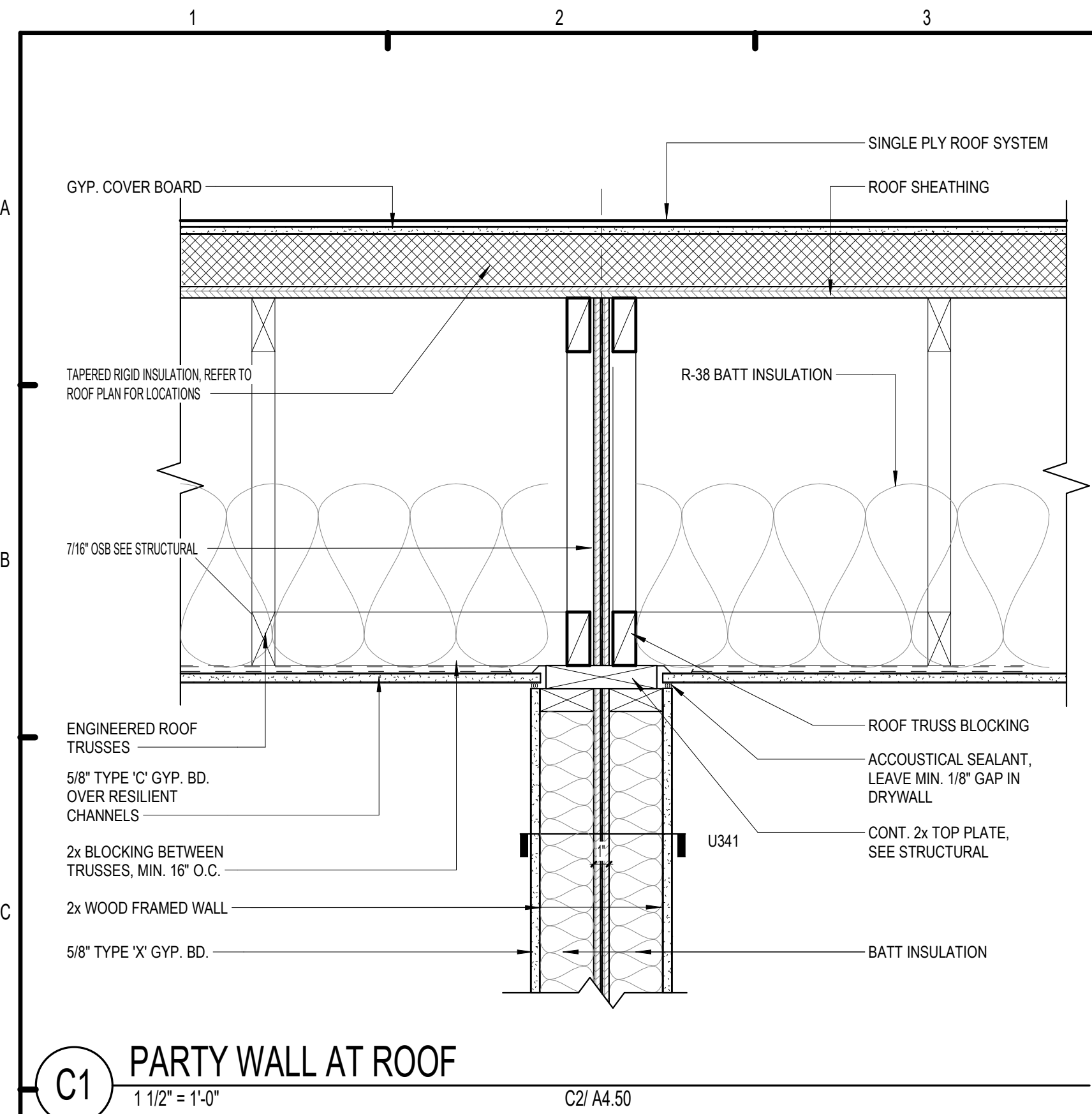
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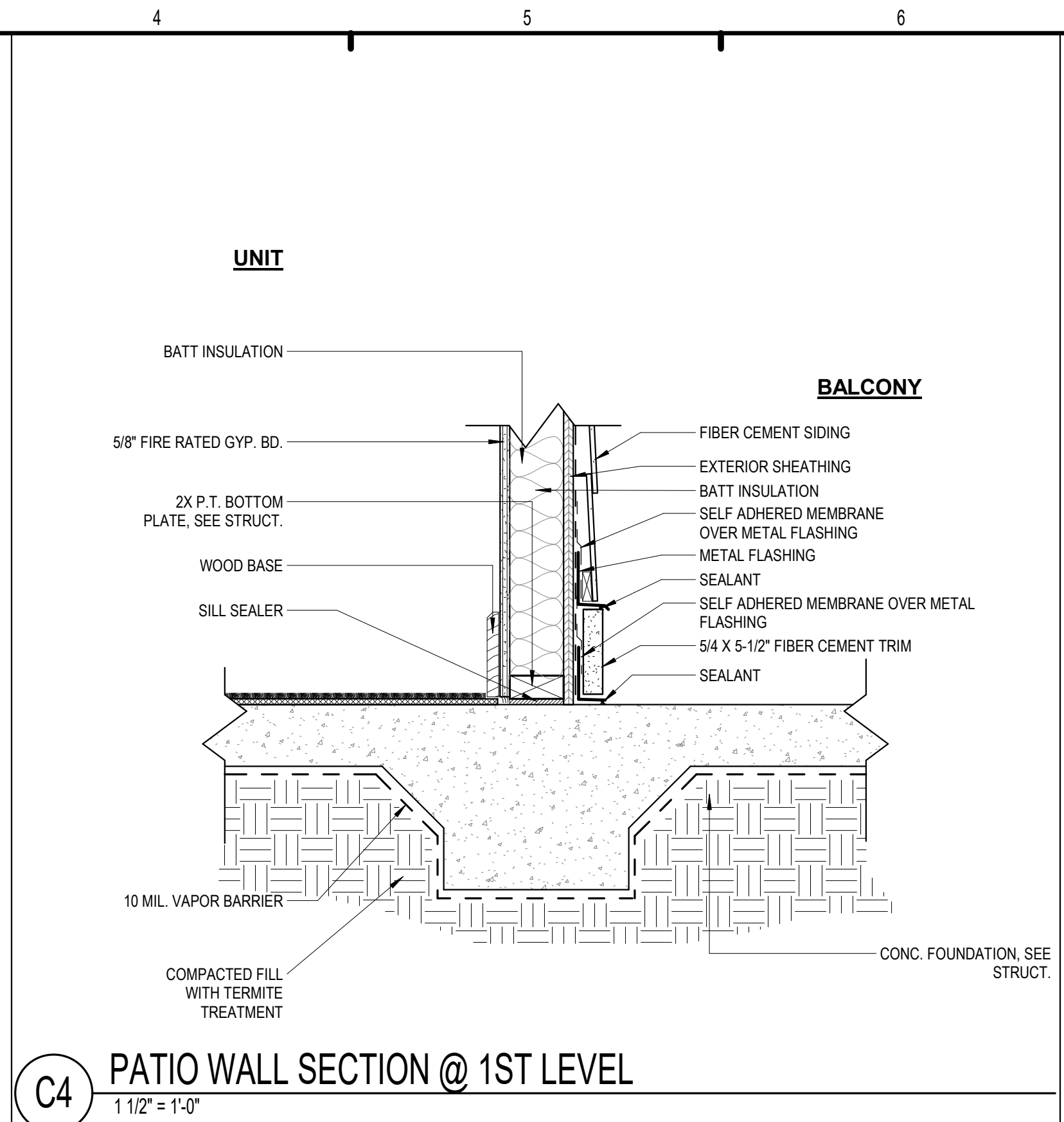
CONSULTANT
 STATE OF ALABAMA
 MICHAEL DOVE
 8284
 4/15/22
 REGISTERED ARCHITECT

THE ROBERT MADISON
 MADISON, ALABAMA
 Drawn: MB
 Checked: JK
 Approval: MS
 Date: 04/15/2022
 Project #: 572

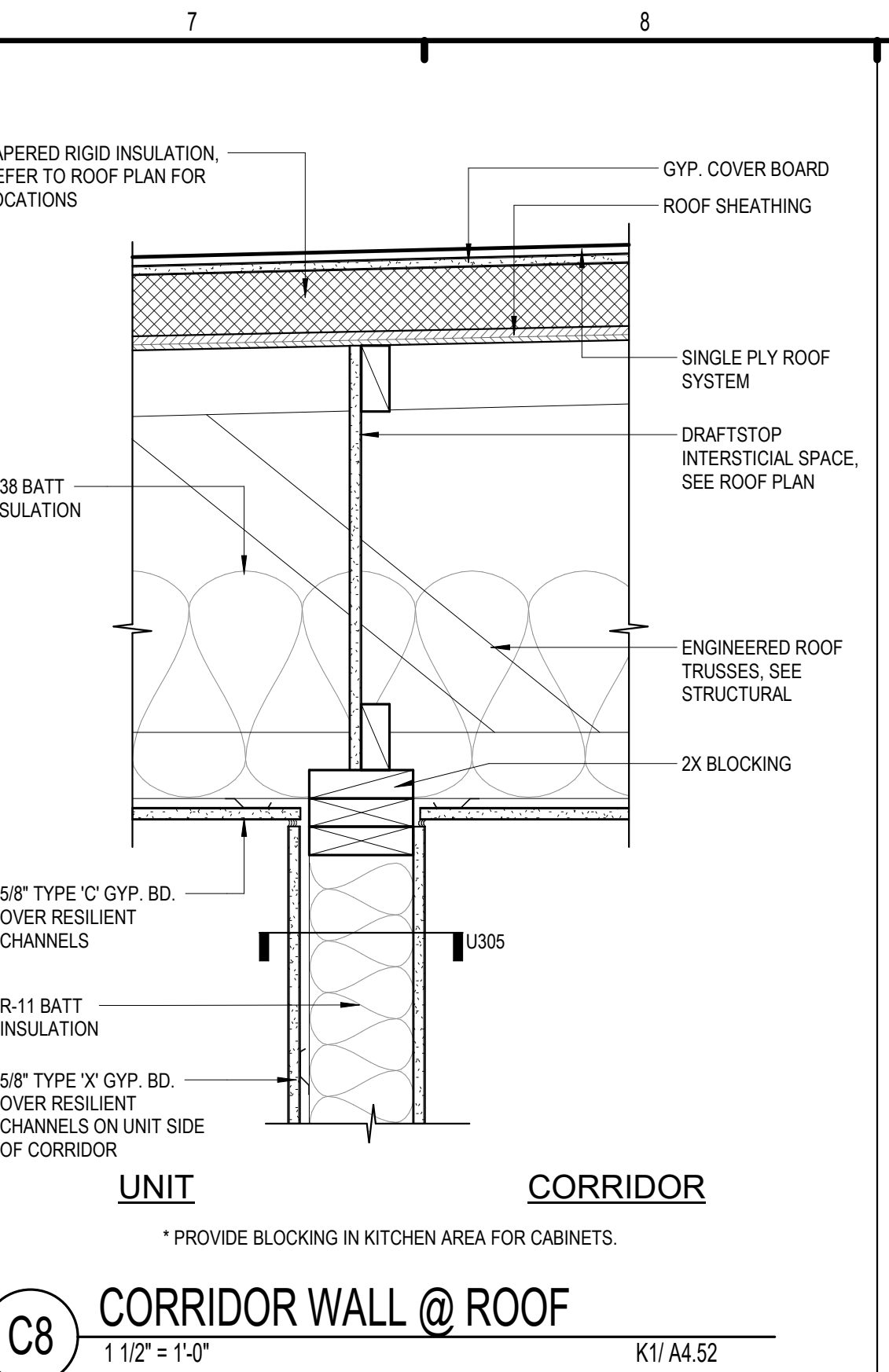
BUILDING TYPE C - BUILDINGS SECTIONS
A4.53



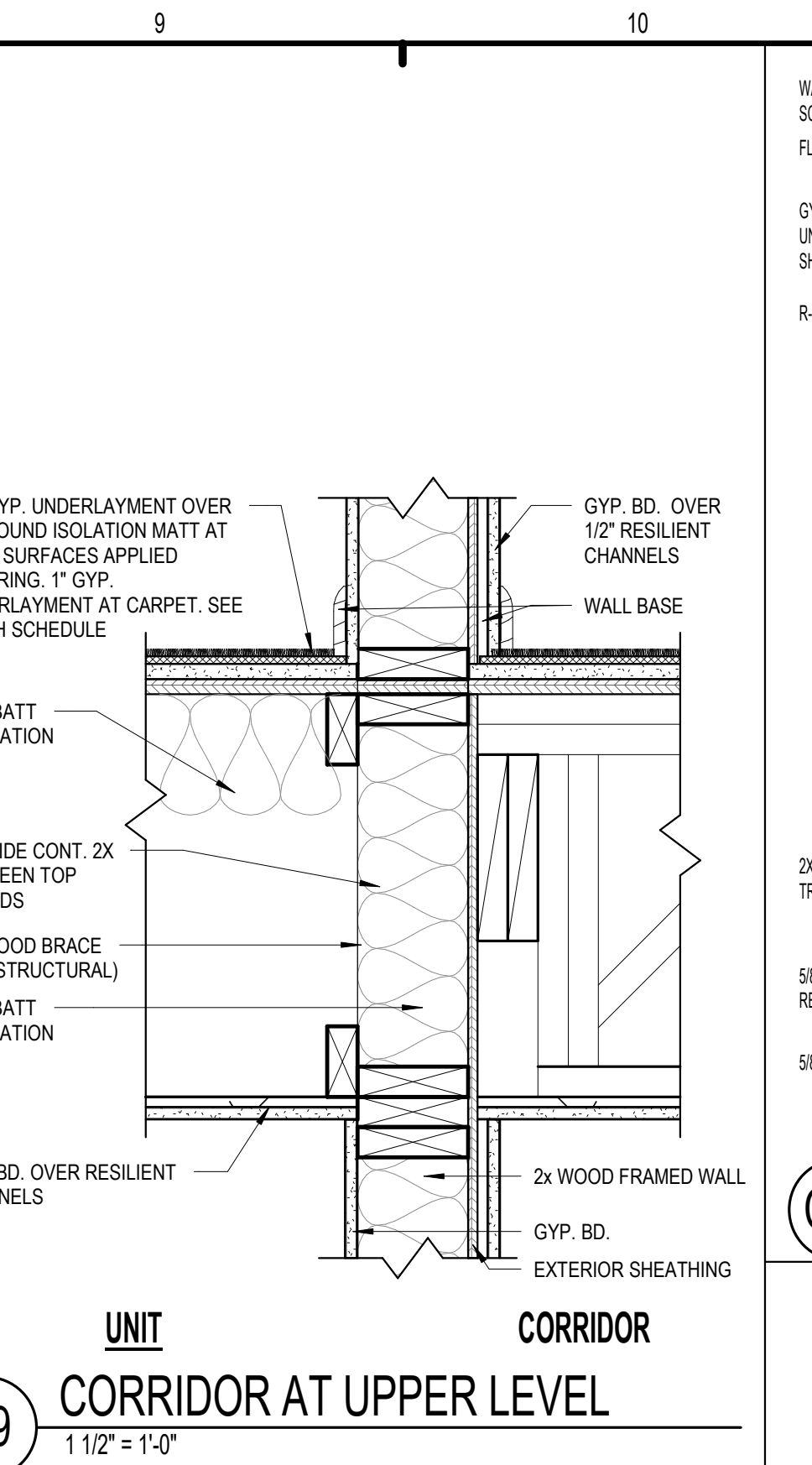
C1 PARTY WALL AT ROOF
1 1/2" = 1'-0"



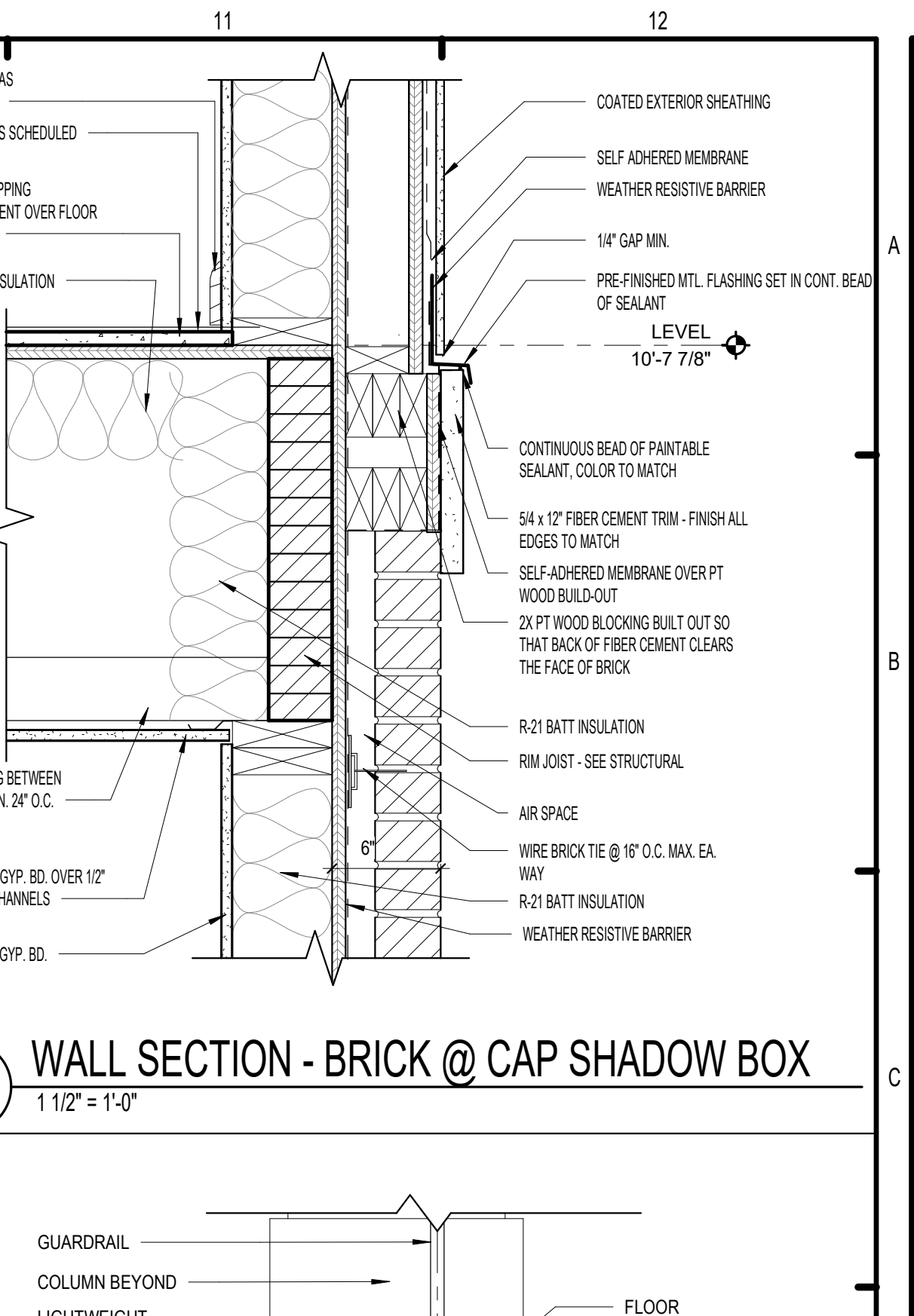
C4 PATIO WALL SECTION @ 1ST LEVEL
1 1/2" = 1'-0"



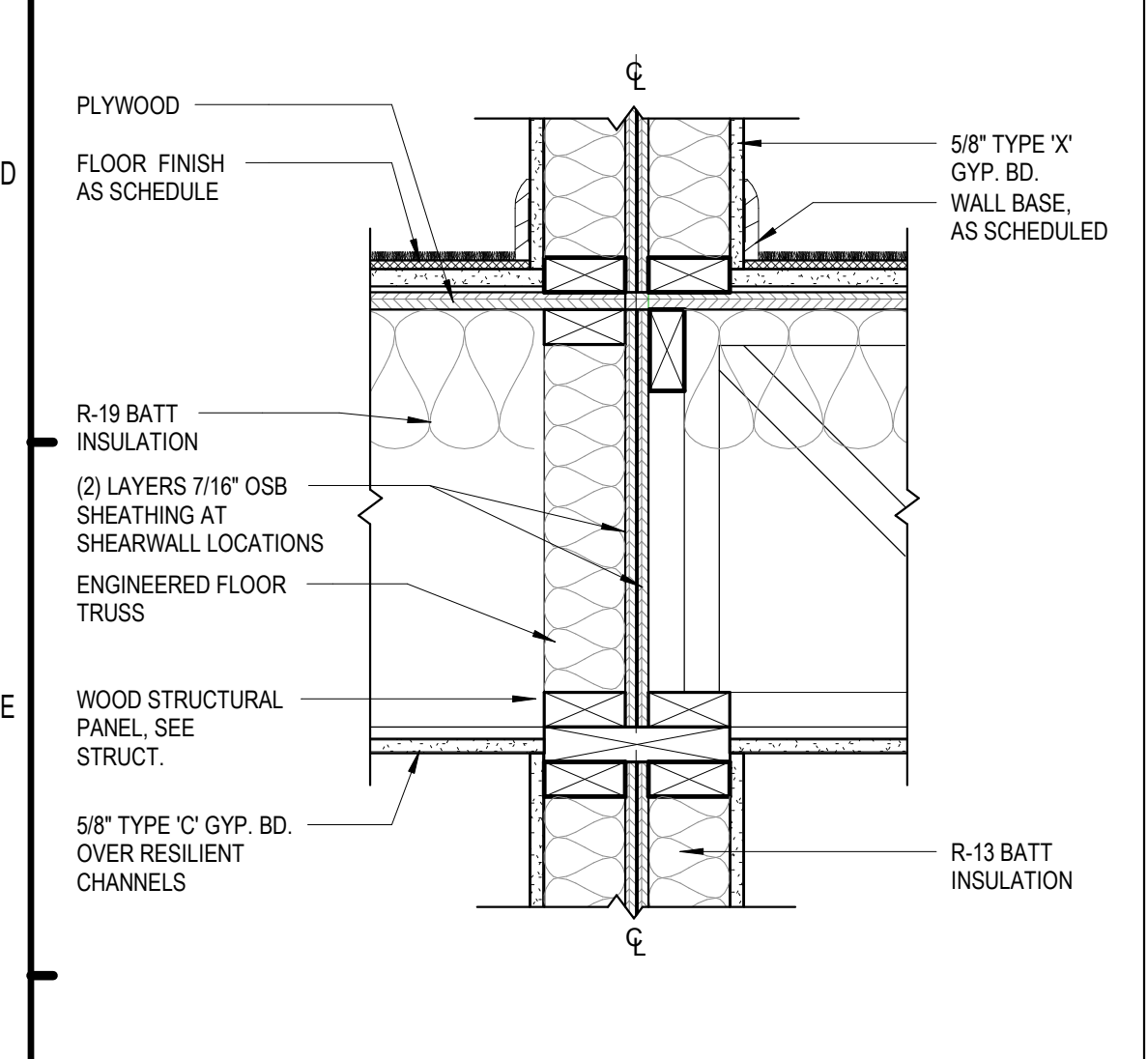
C8 CORRIDOR WALL @ ROOF
1 1/2" = 1'-0"



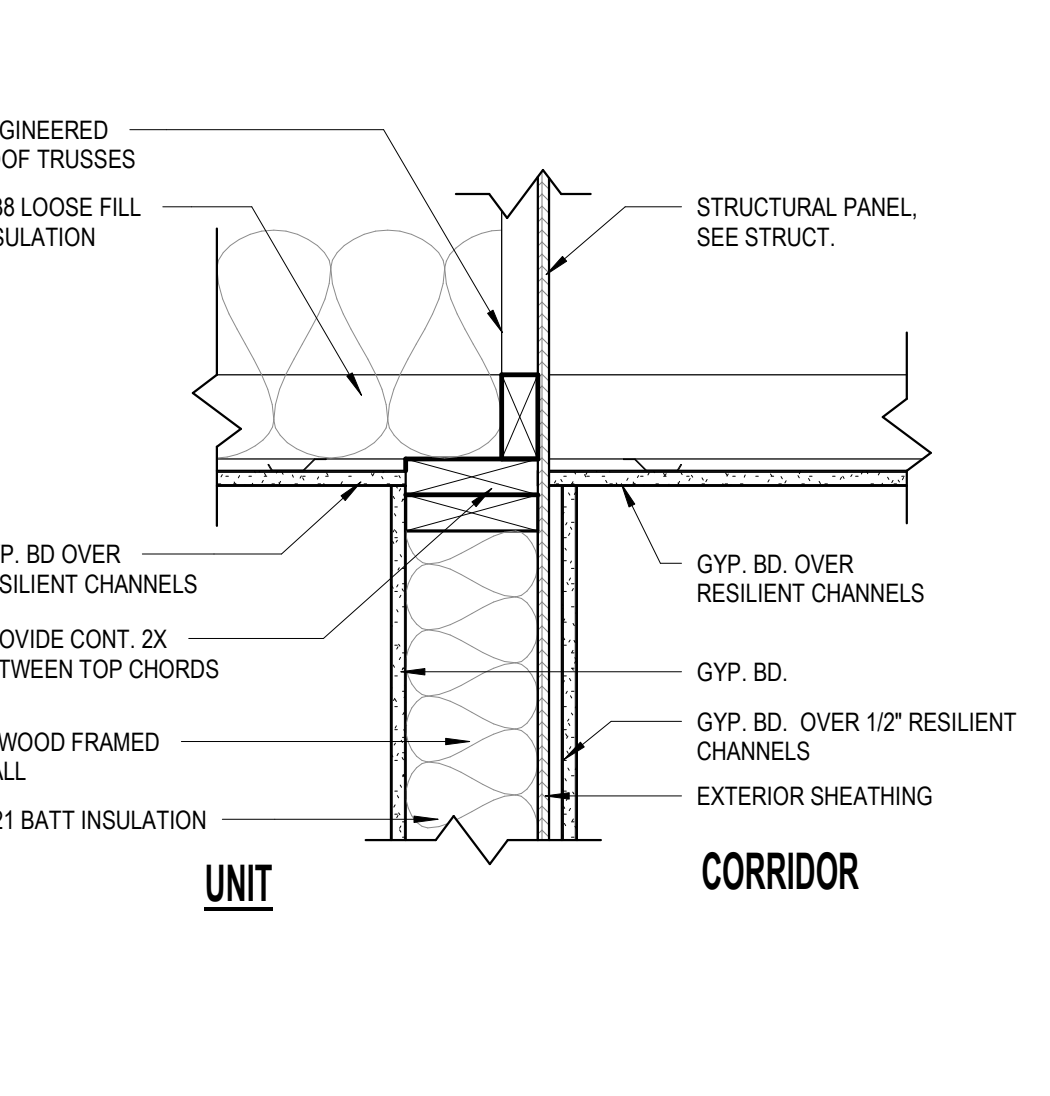
C9 CORRIDOR AT UPPER LEVEL
1 1/2" = 1'-0"



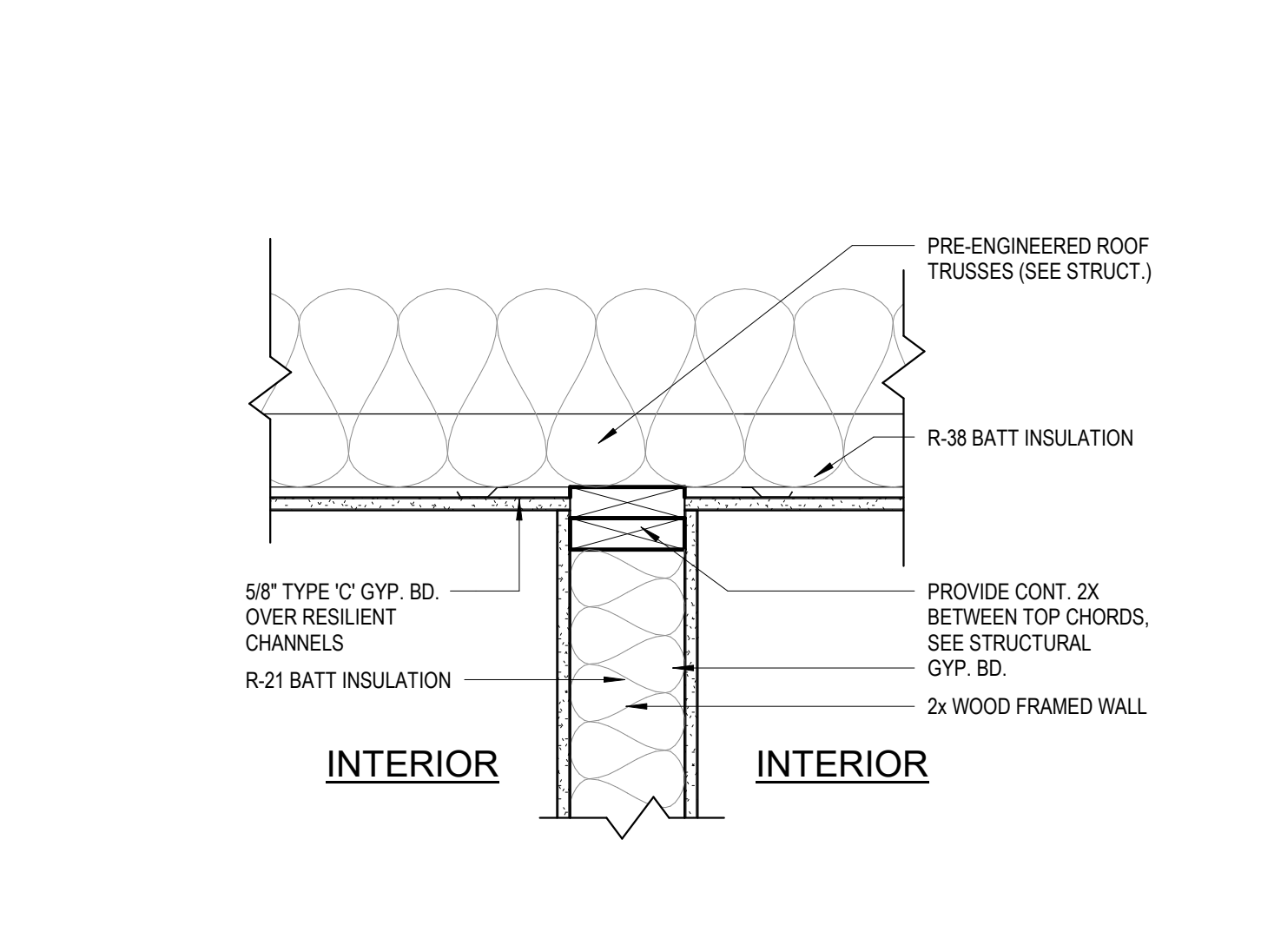
C11 WALL SECTION - BRICK @ CAP SHADOW BOX
1 1/2" = 1'-0"



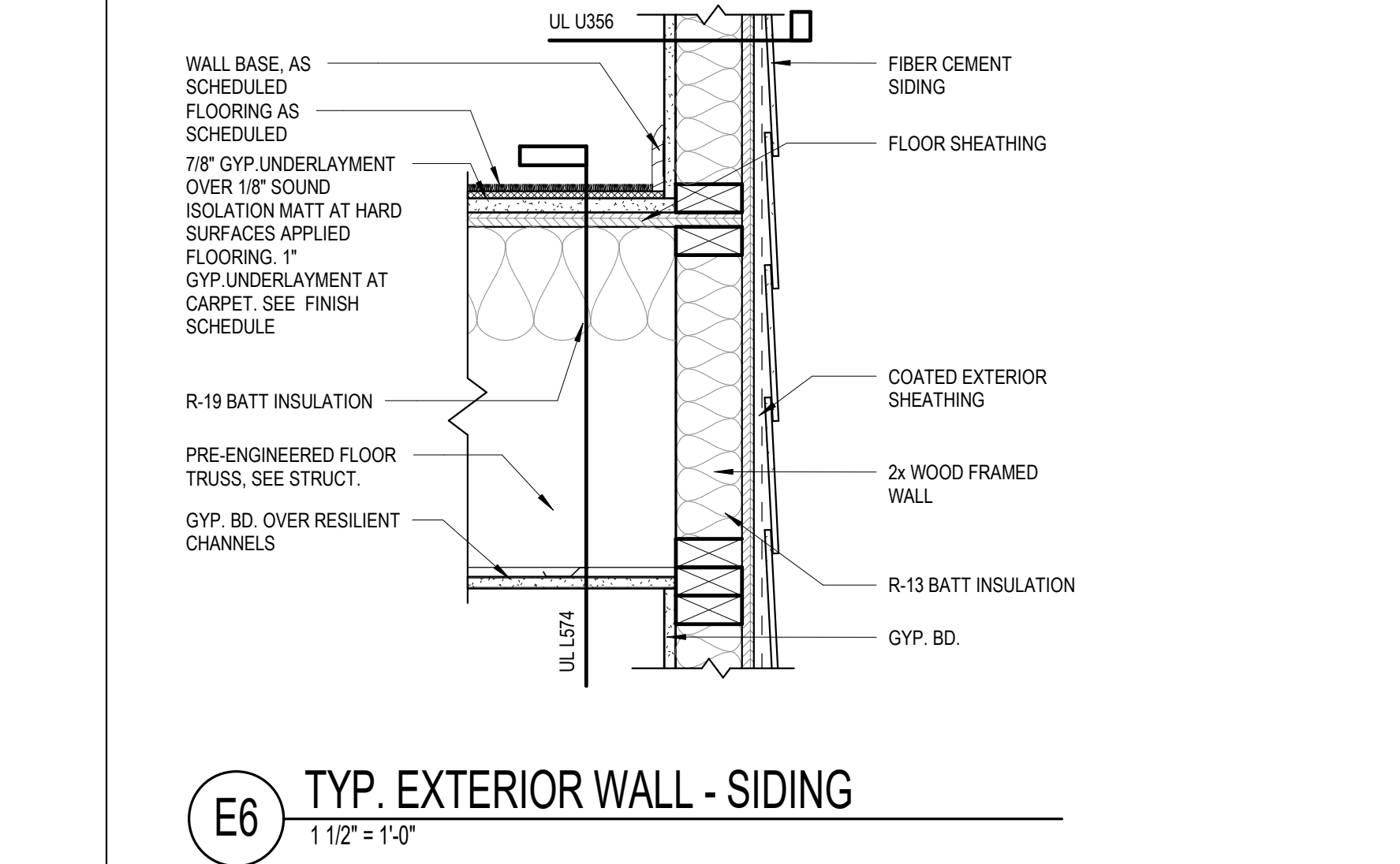
E1 PARTY WALL AT UPPER LEVELS
1 1/2" = 1'-0"



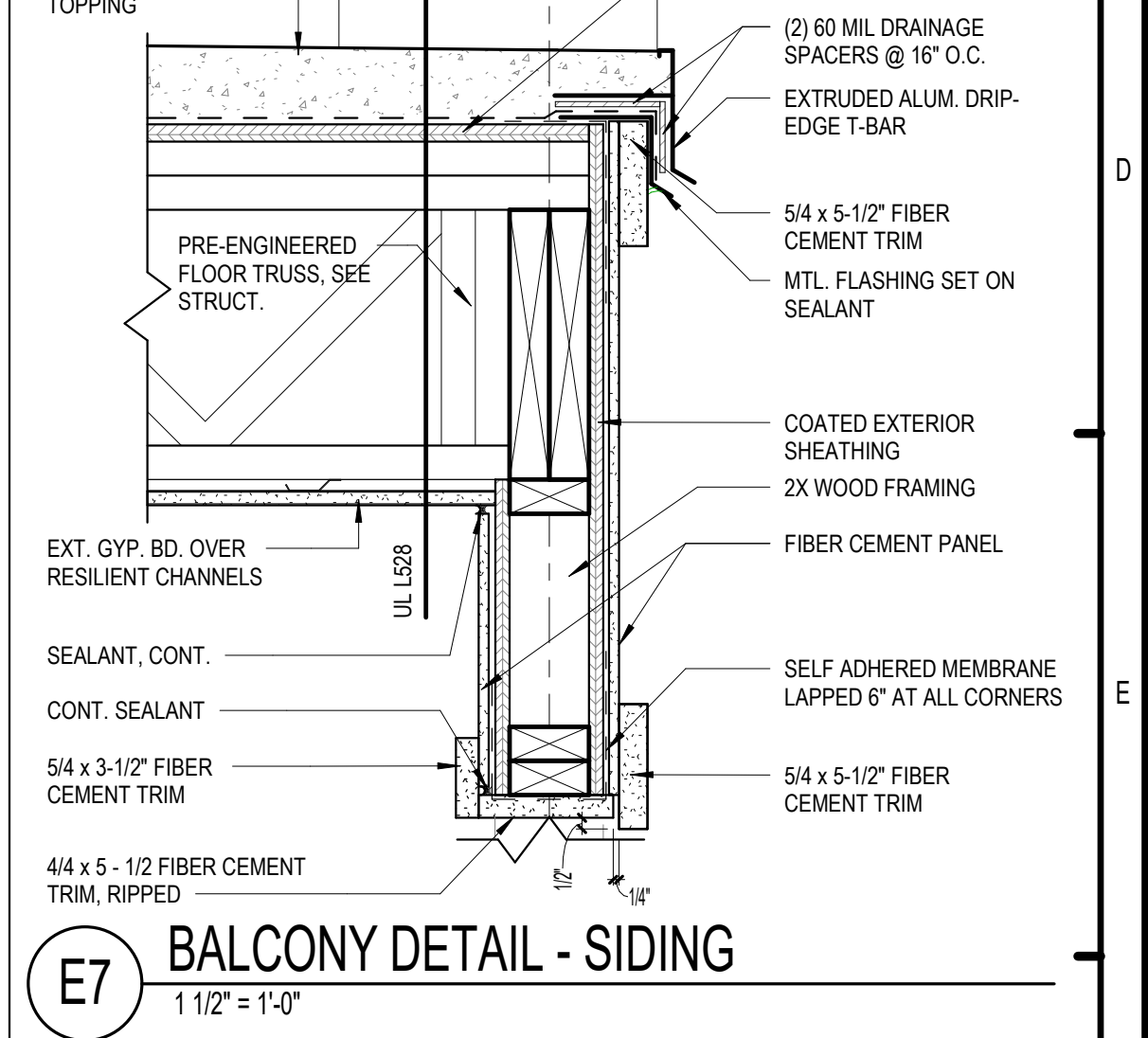
E3 CORRIDOR AT ROOF - SHEARWALL
1 1/2" = 1'-0"



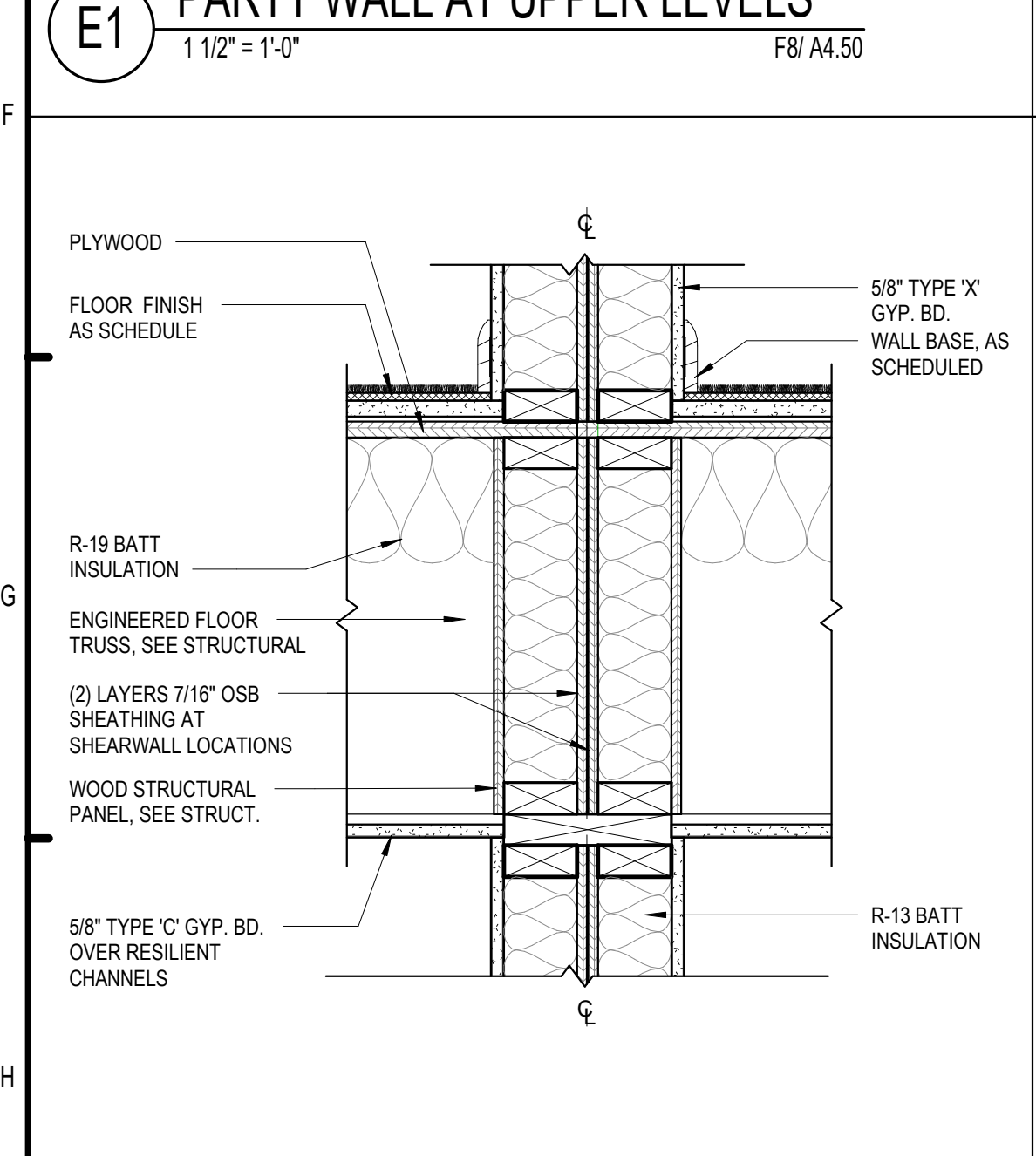
E5 UNIT WALL AT ROOF
1 1/2" = 1'-0"



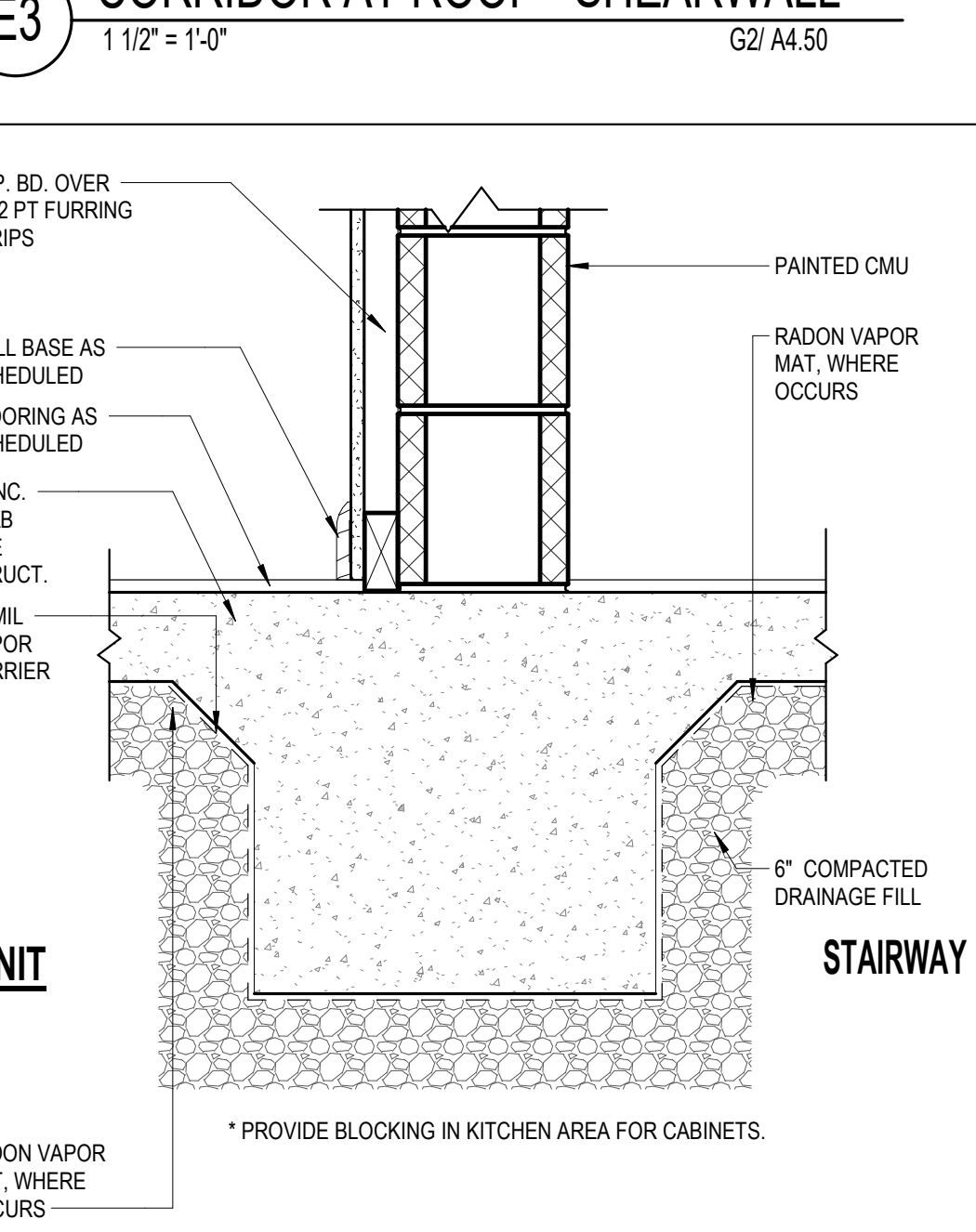
E6 TYP. EXTERIOR WALL - SIDING
1 1/2" = 1'-0"



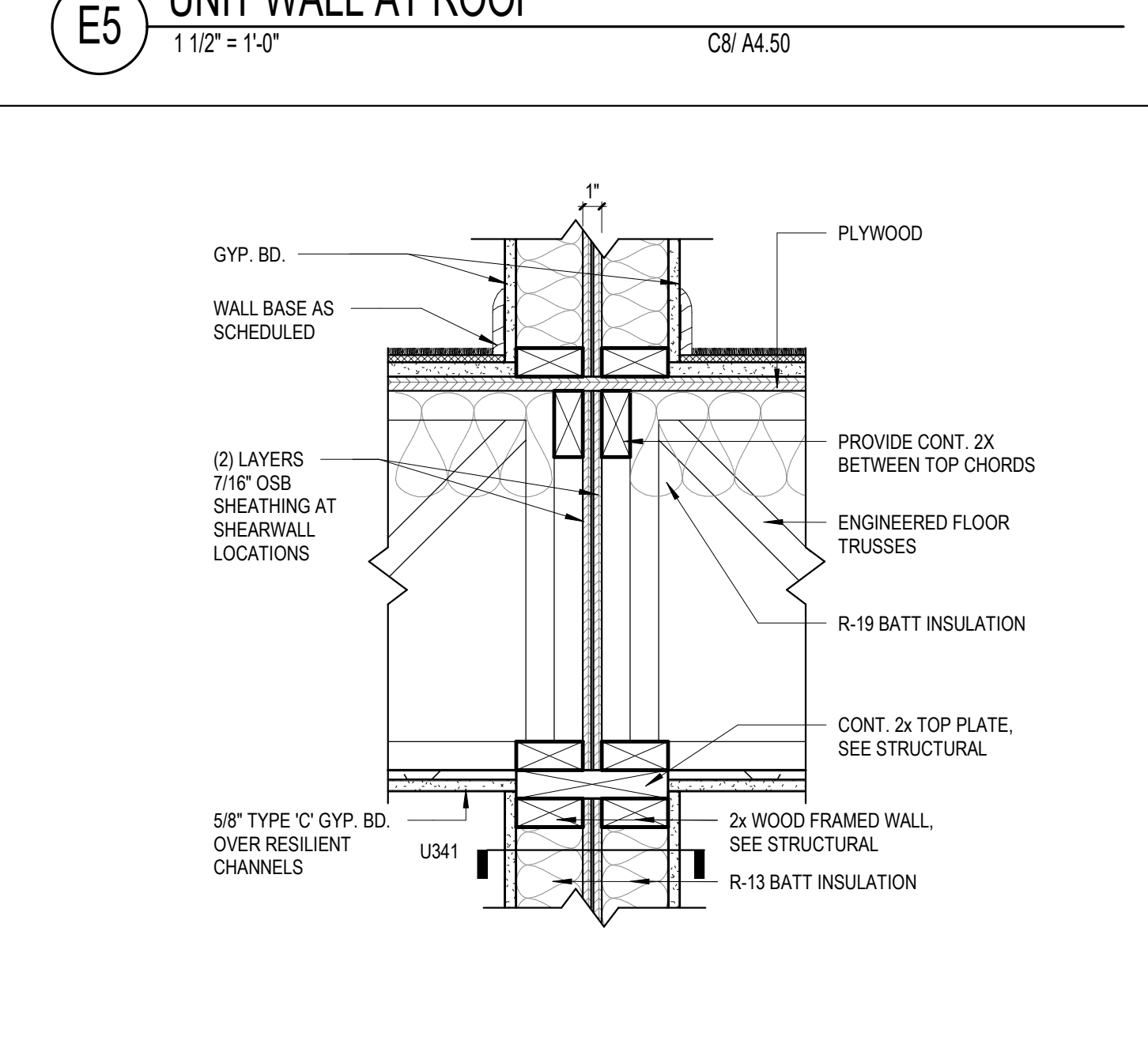
E7 BALCONY DETAIL - SIDING
1 1/2" = 1'-0"



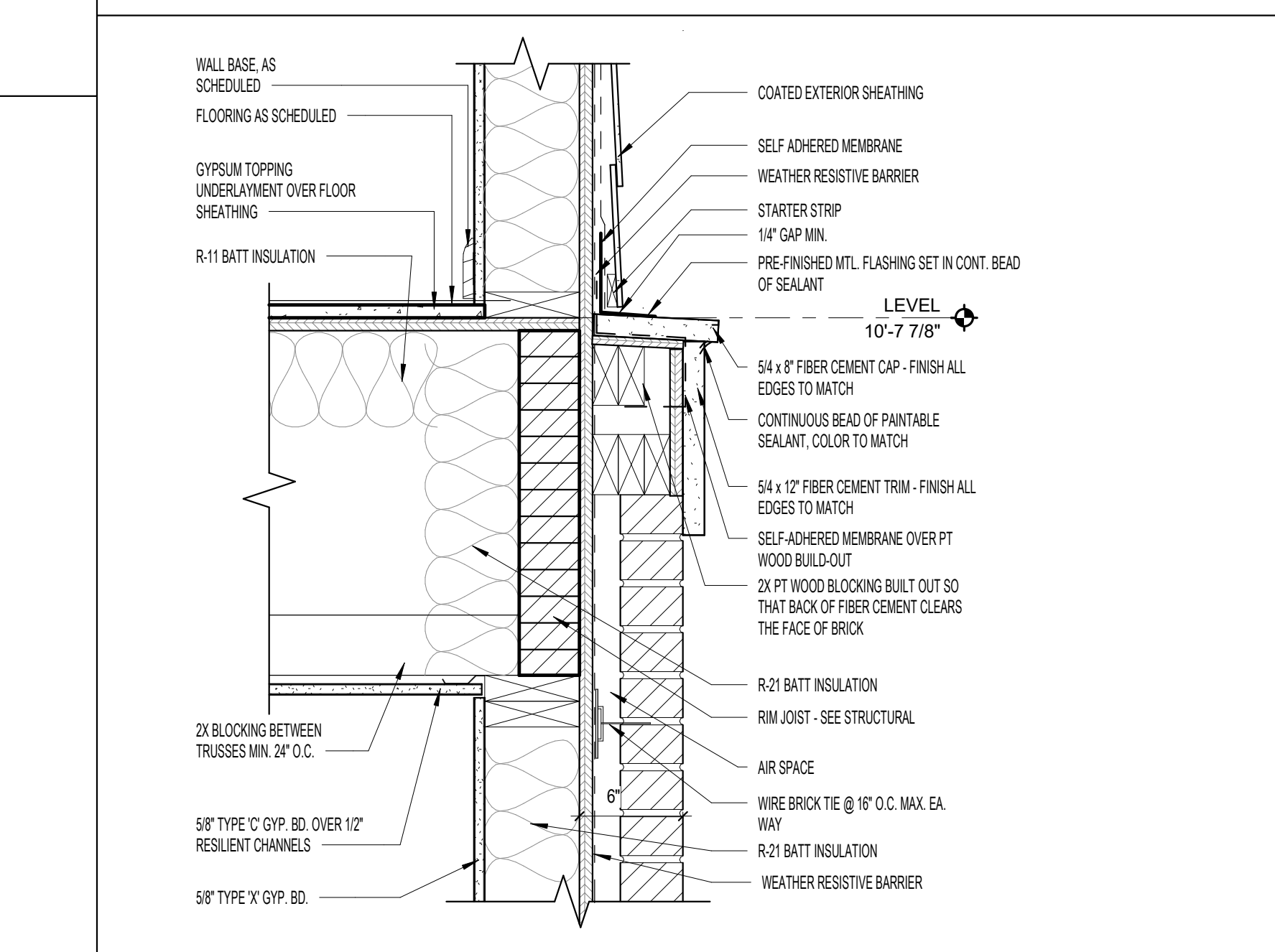
H1 PARTY WALL AT UPPER LEVELS
1 1/2" = 1'-0"



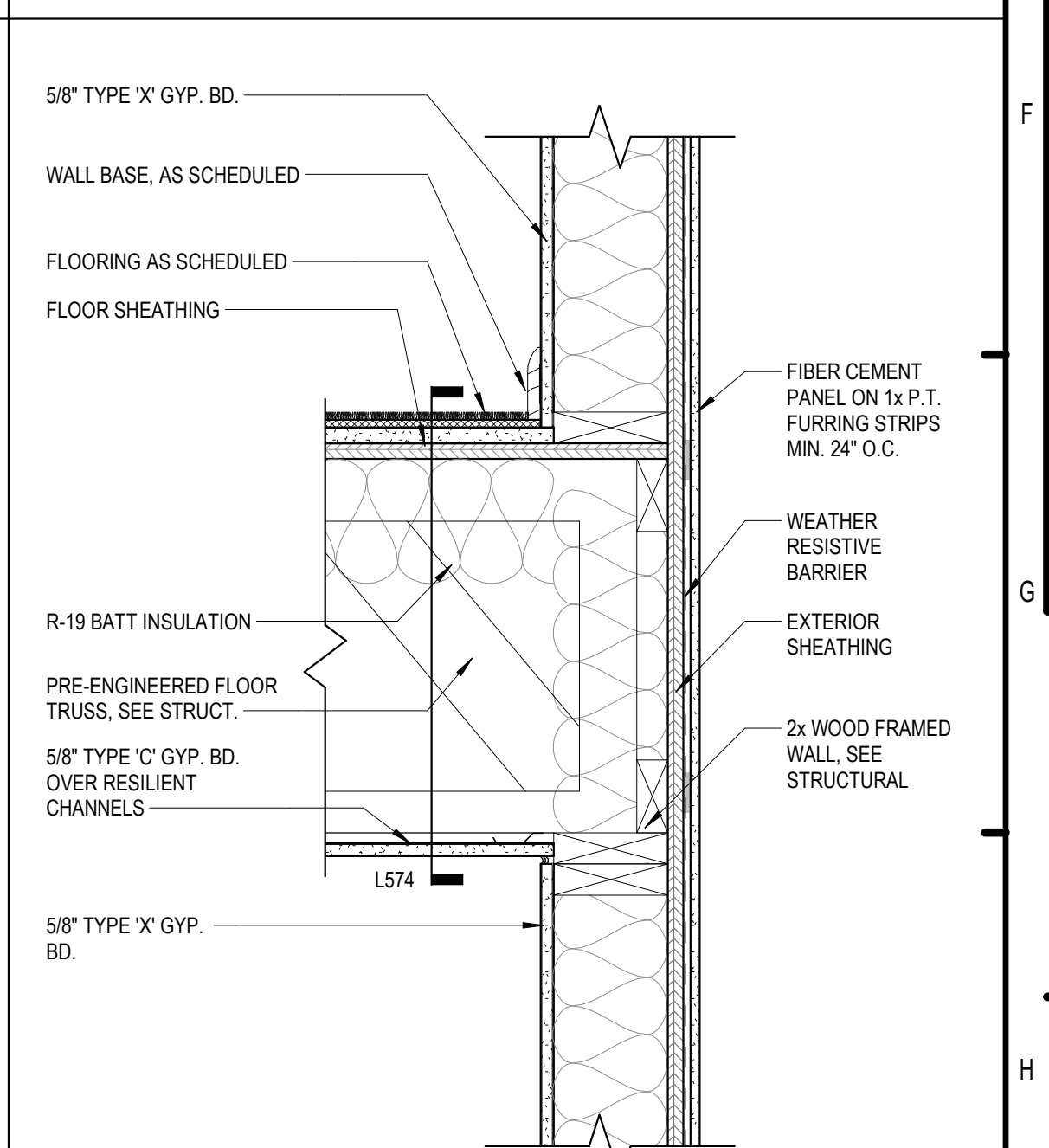
H2 BREEZEWAY AT FOUNDATION
1 1/2" = 1'-0"



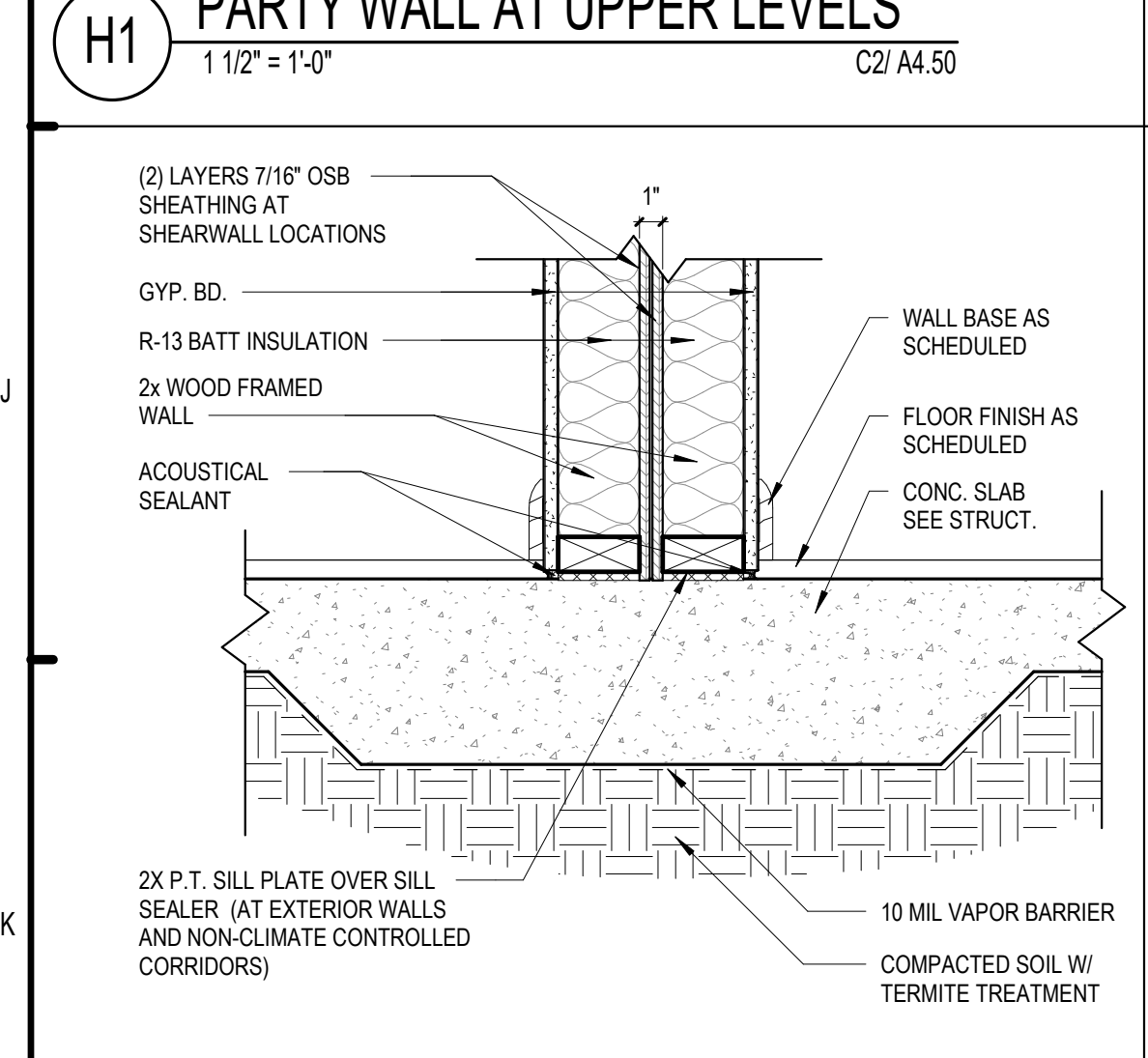
H5 PARTY WALL AT UPPER LEVELS
1 1/2" = 1'-0"



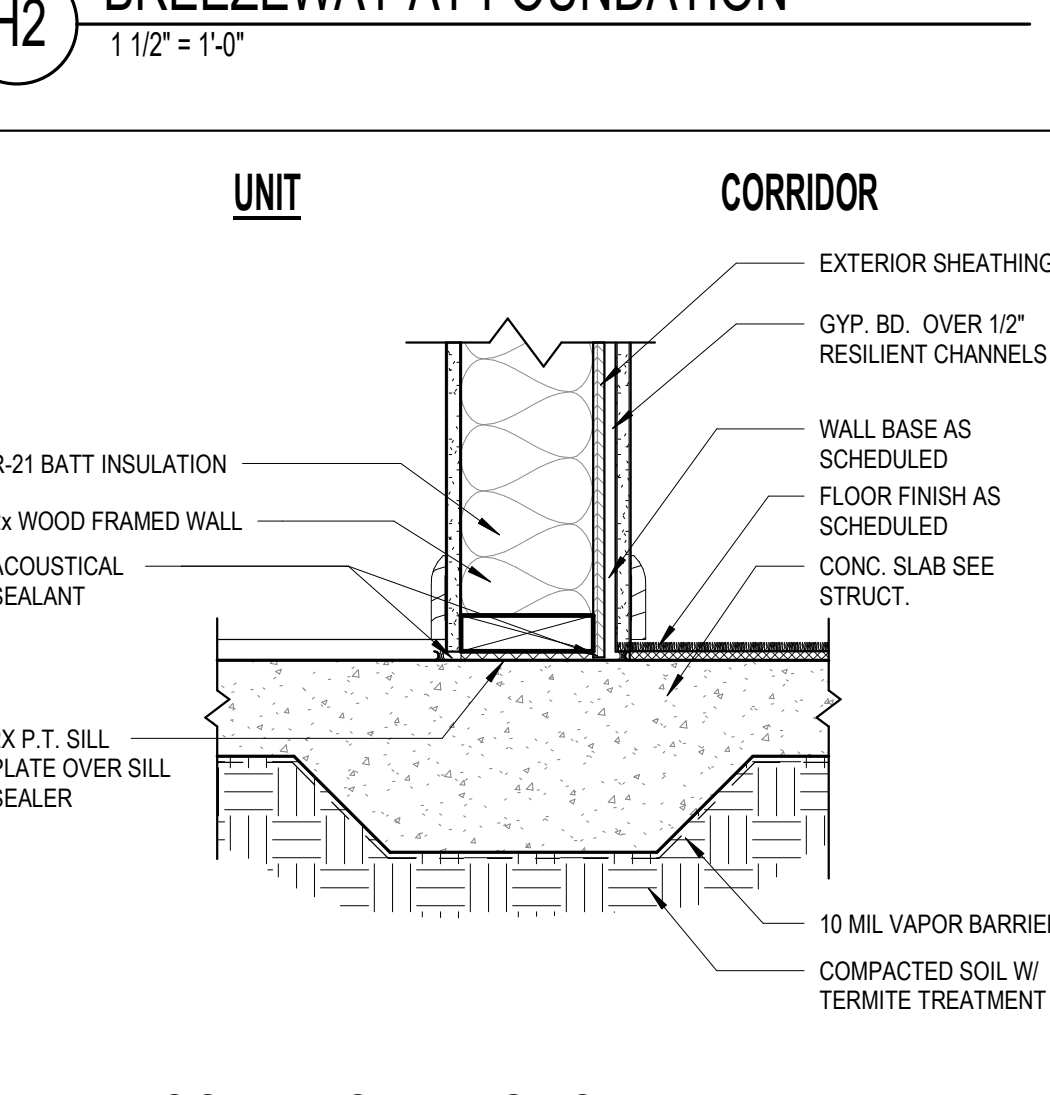
H6 WALL SECTION - BRICK @ CAP
1 1/2" = 1'-0"



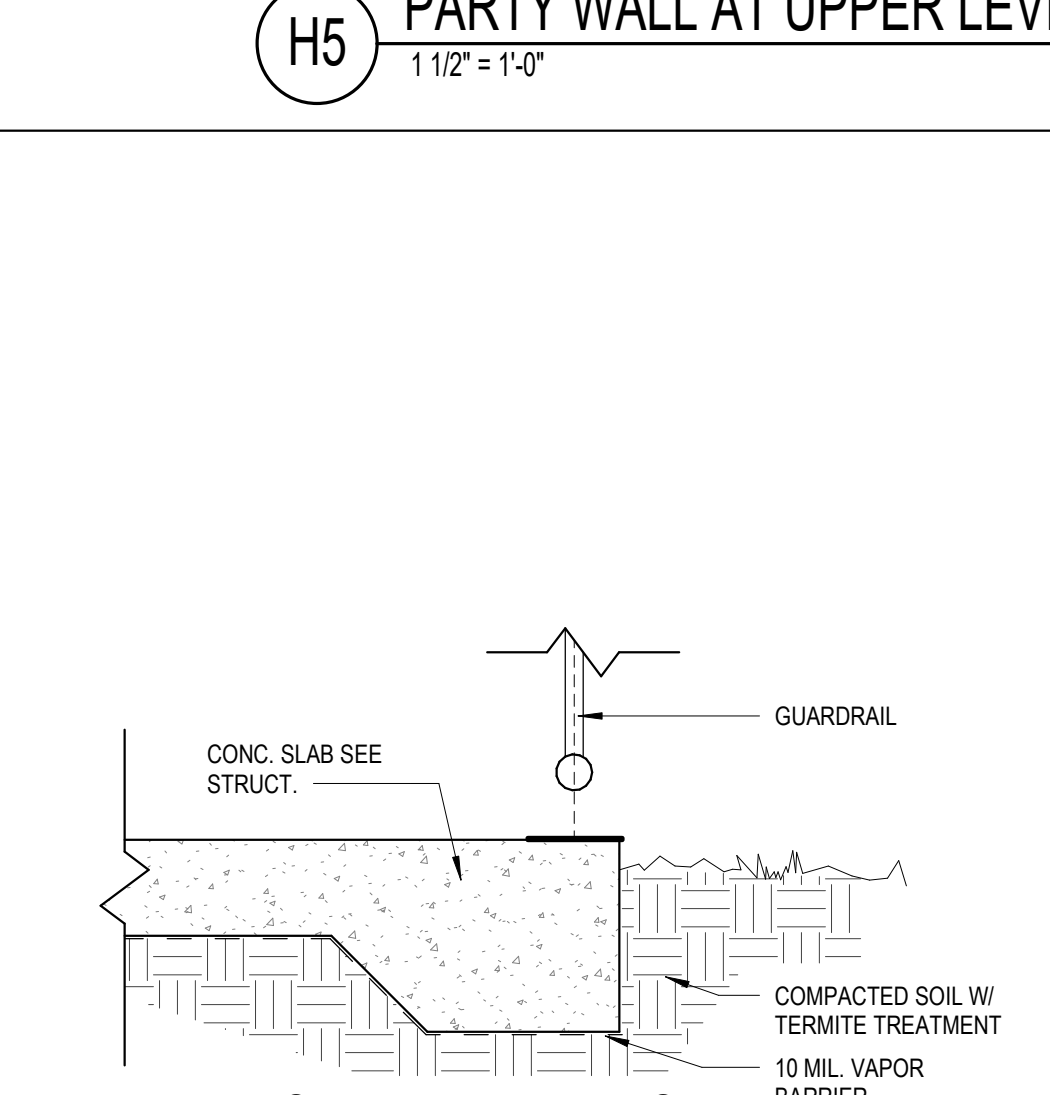
H11 TYP. EXTERIOR WALL - PANEL
1 1/2" = 1'-0"



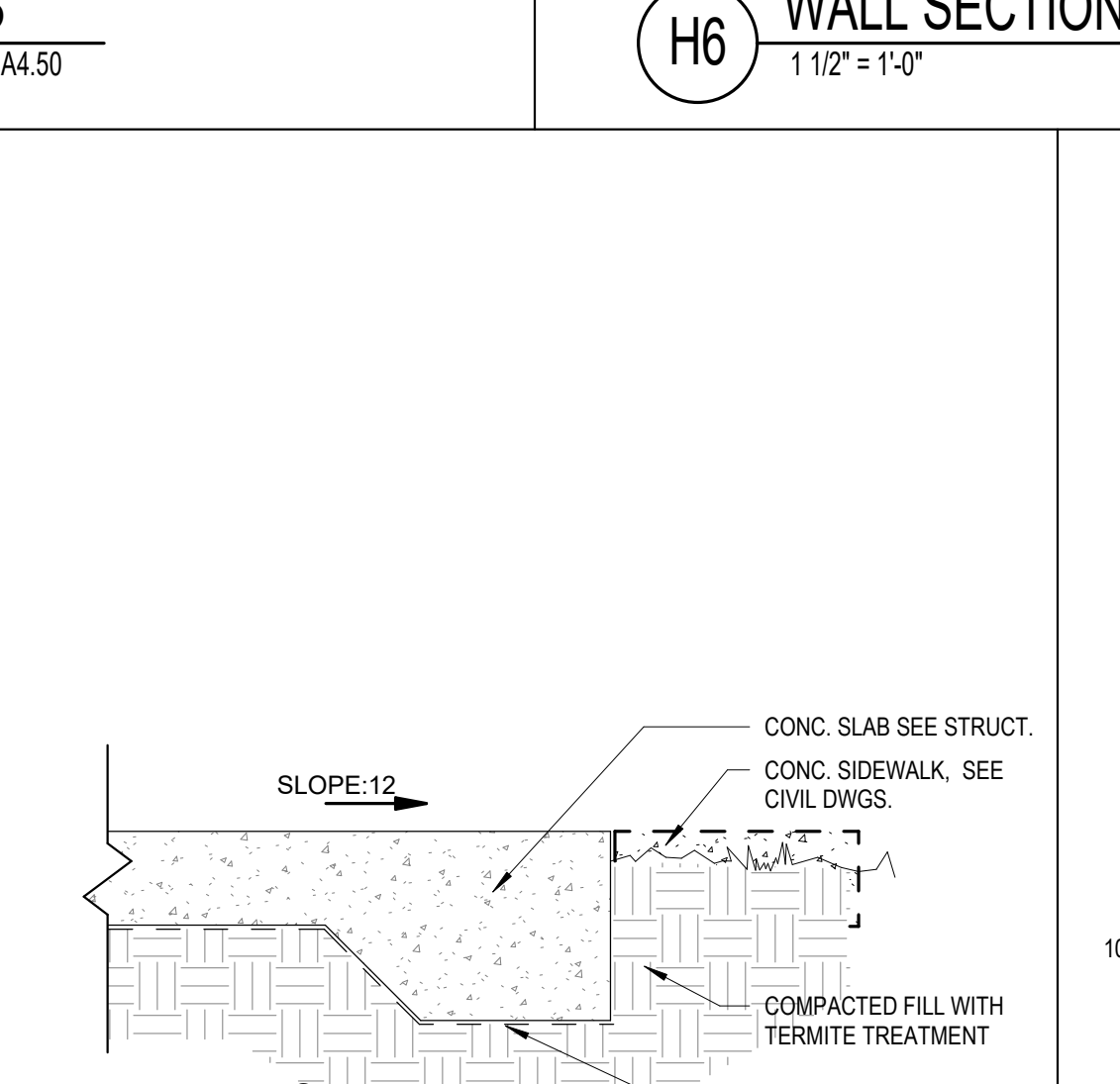
K1 PARTY WALL AT FND
1 1/2" = 1'-0"



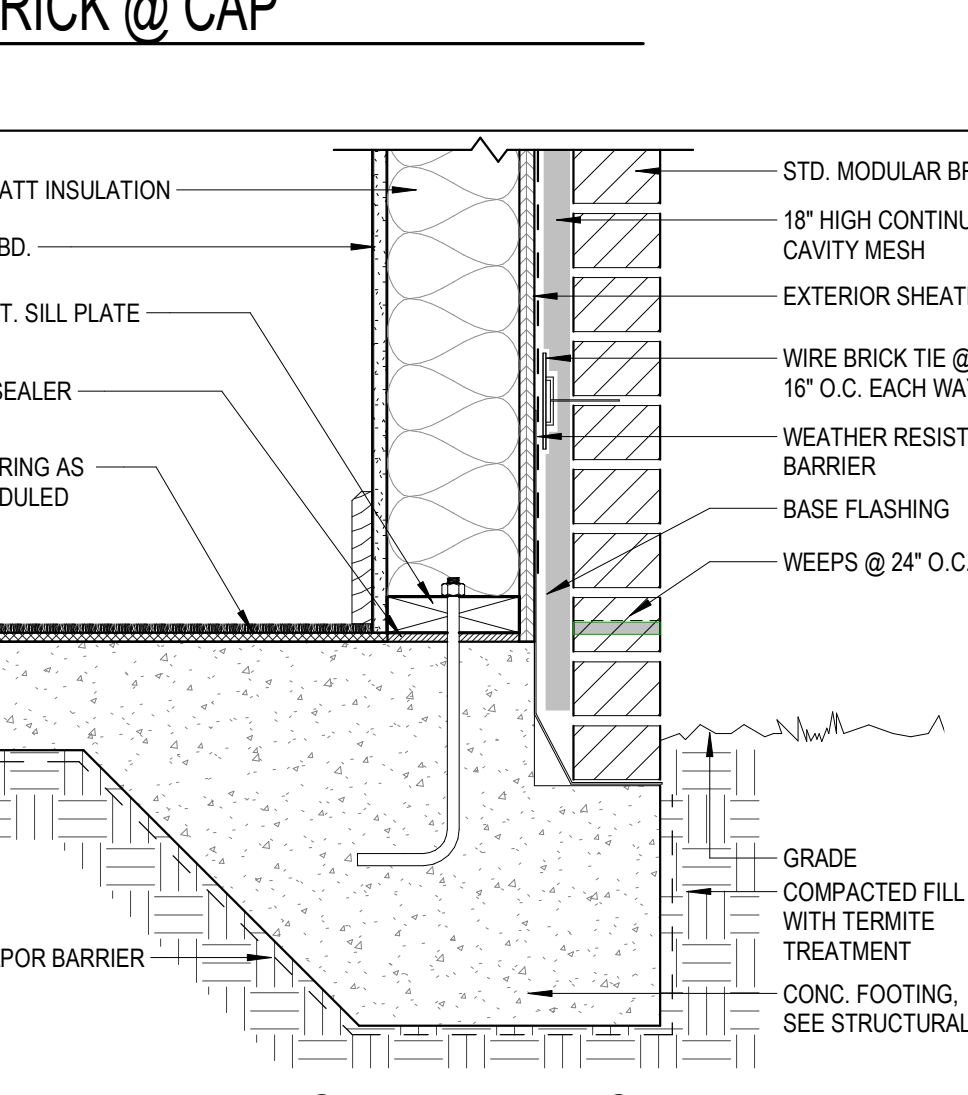
K3 CORRIDOR AT GROUND LEVEL
1 1/2" = 1'-0"



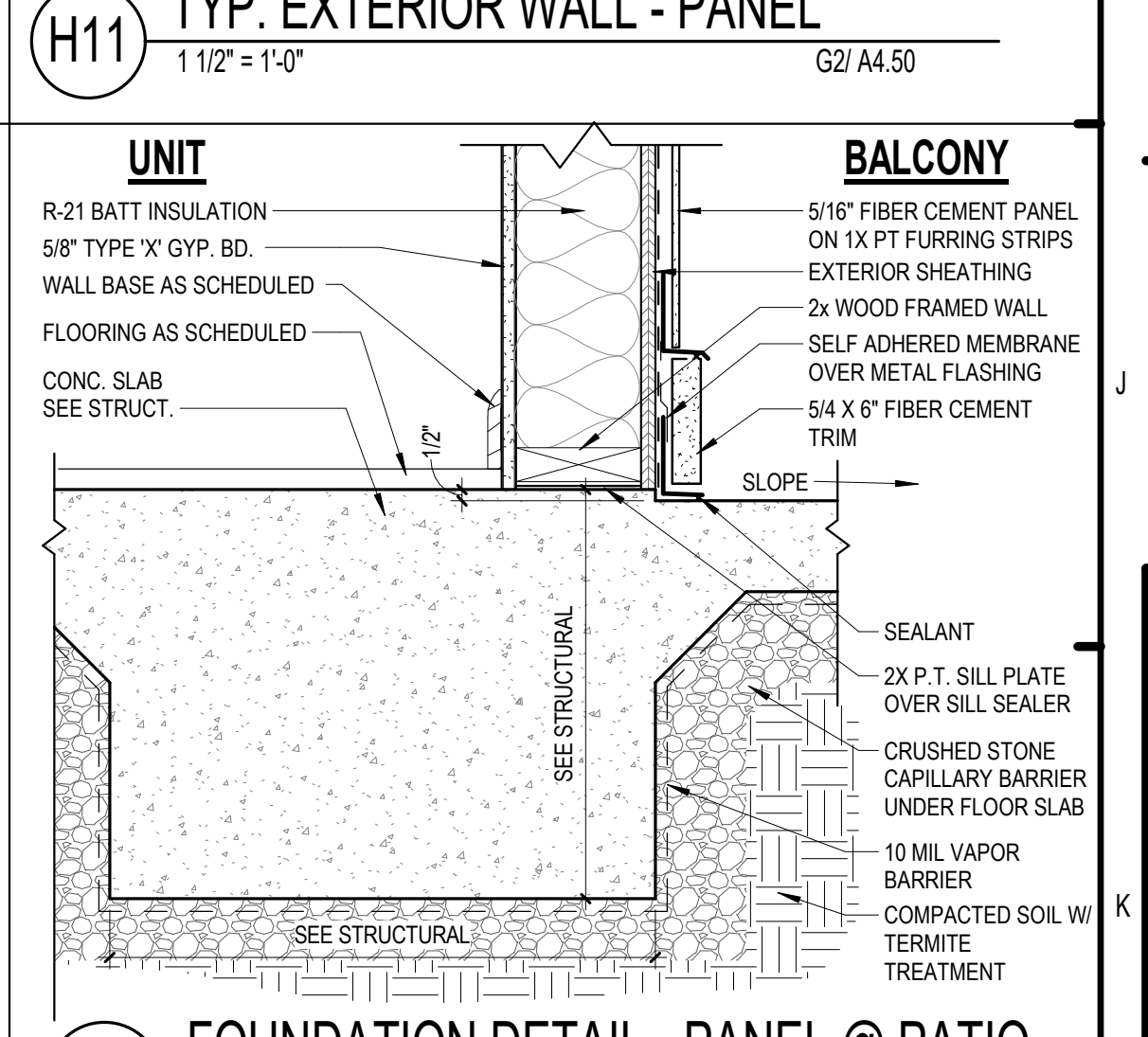
K5 EXTERIOR FDN AT PATIO
1 1/2" = 1'-0"



K7 EXTERIOR FDN
1 1/2" = 1'-0"



K9 TYP. EXTERIOR FND - BRICK
1 1/2" = 1'-0"



K10 FOUNDATION DETAIL - PANEL @ PATIO
1 1/2" = 1'-0"

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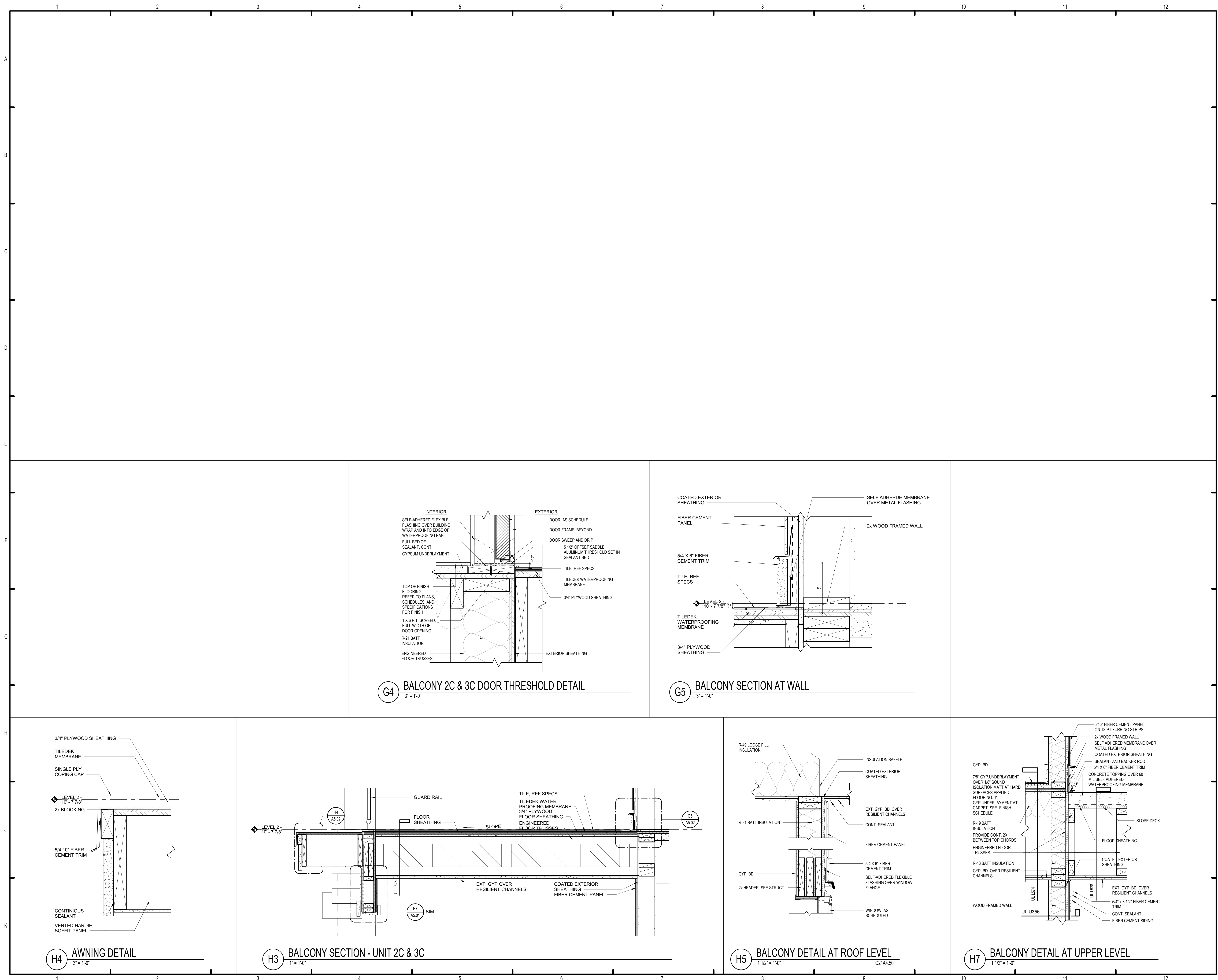
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CONSULTANT
STATE OF ALABAMA
Professional Engineer
8234
4/15/22
REGISTERED ARCHITECT

THE ROBERT MADISON
MADISON, ALABAMA
Date: 04/15/2022
Project #: 572

WALL SECTION DETAILS
A5.01



| ISSUE HISTORY | | |
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CONSULTANT

STATE OF ALABAMA
MICHAEL E. GOVE
8234
REGISTERED ARCHITECT

MICHAEL GOVE
BSA

| | | |
|---------------------------|--|--------------|
| THE ROBERT MADISON | | Drawn: MS |
| MADISON, ALABAMA | | Checked: JK |
| Project # 5722 | | Approval: MS |
| Date: 04/15/2022 | | |

WALL SECTION DETAILS

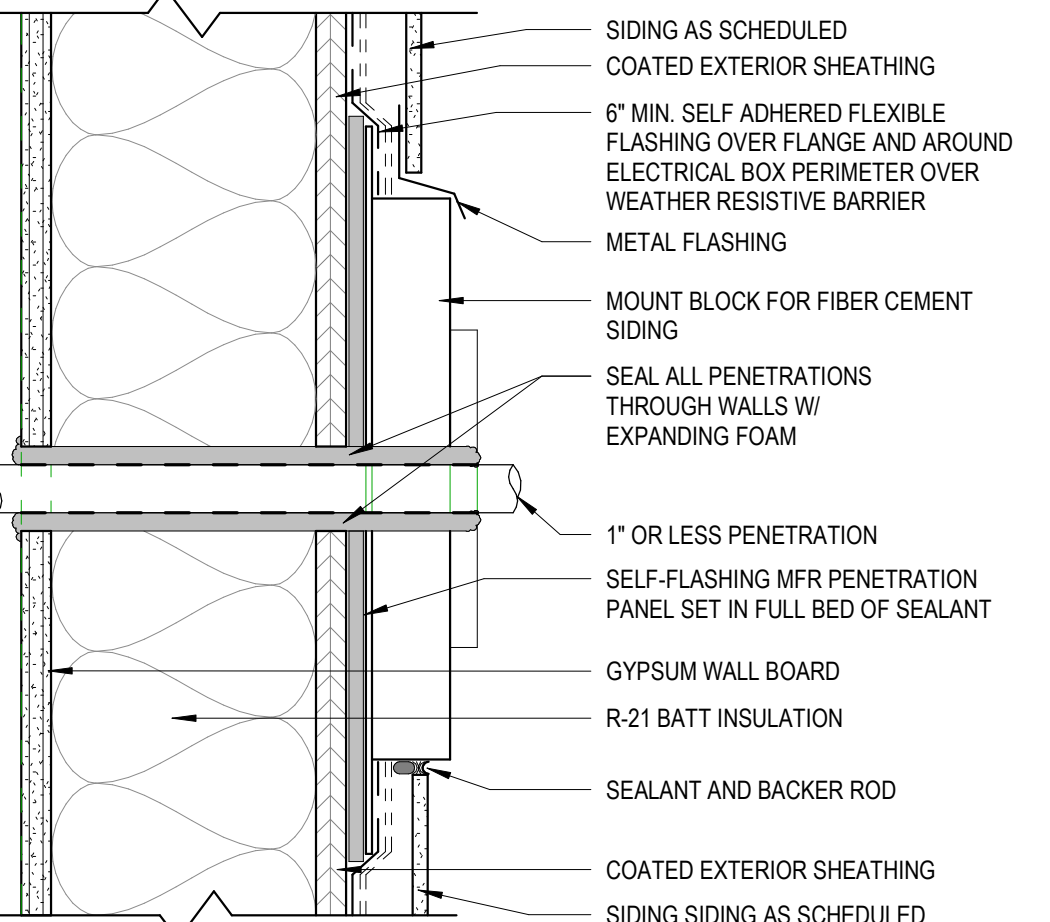
A5.02

PLOTTED: 04/02/22 12:50:37 PM

B3 ATTIC ACCESS DETAIL
1 1/2" = 1'-0"



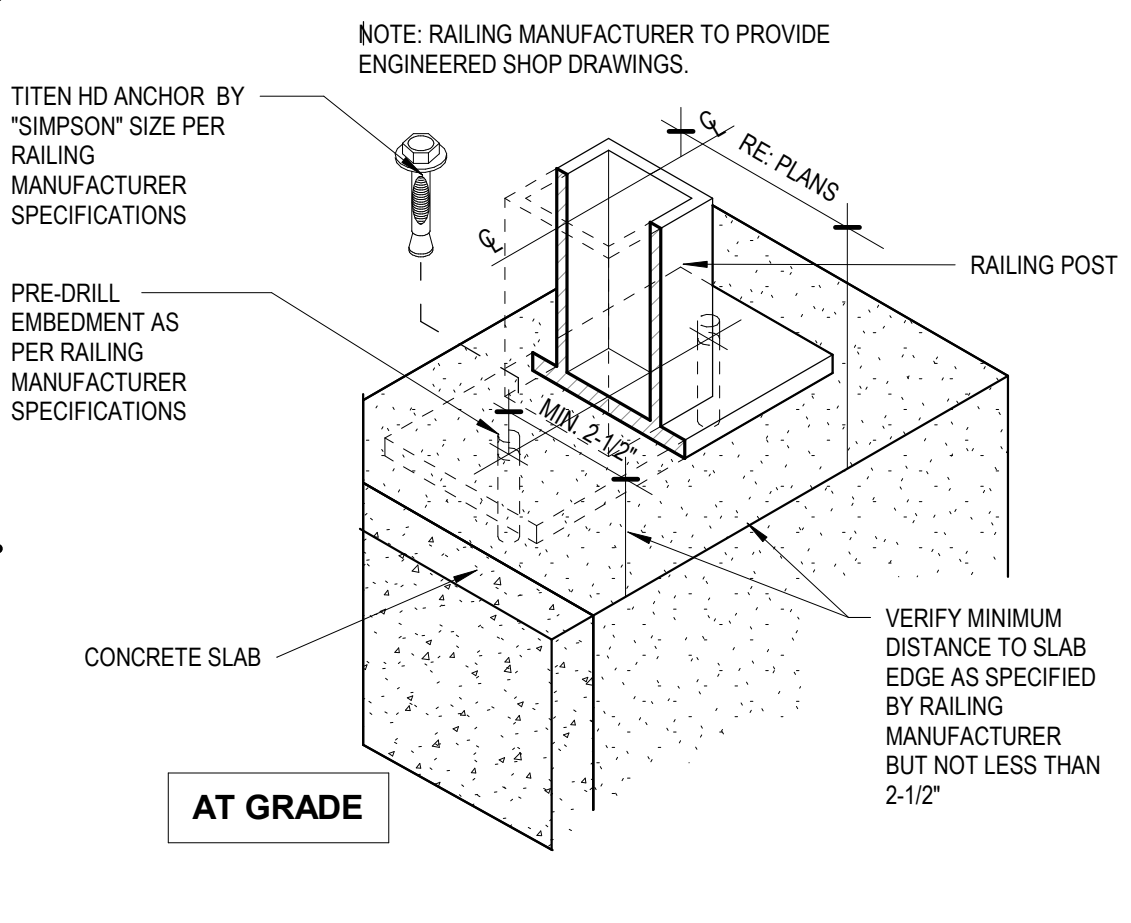
B5 LIGHT FIXTURE BOX DETAIL
3" = 1'-0"



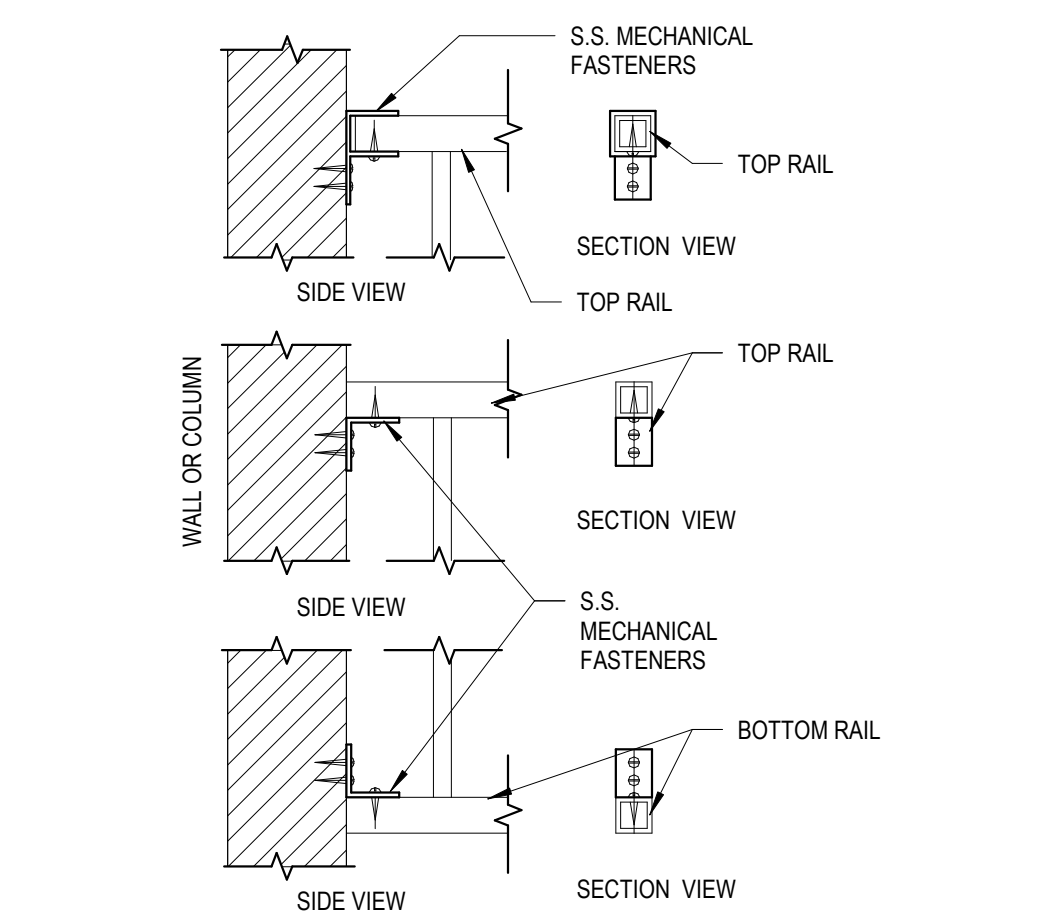
B9 CORRIDOR AT UPPER LEVEL
1 1/2" = 1'-0"



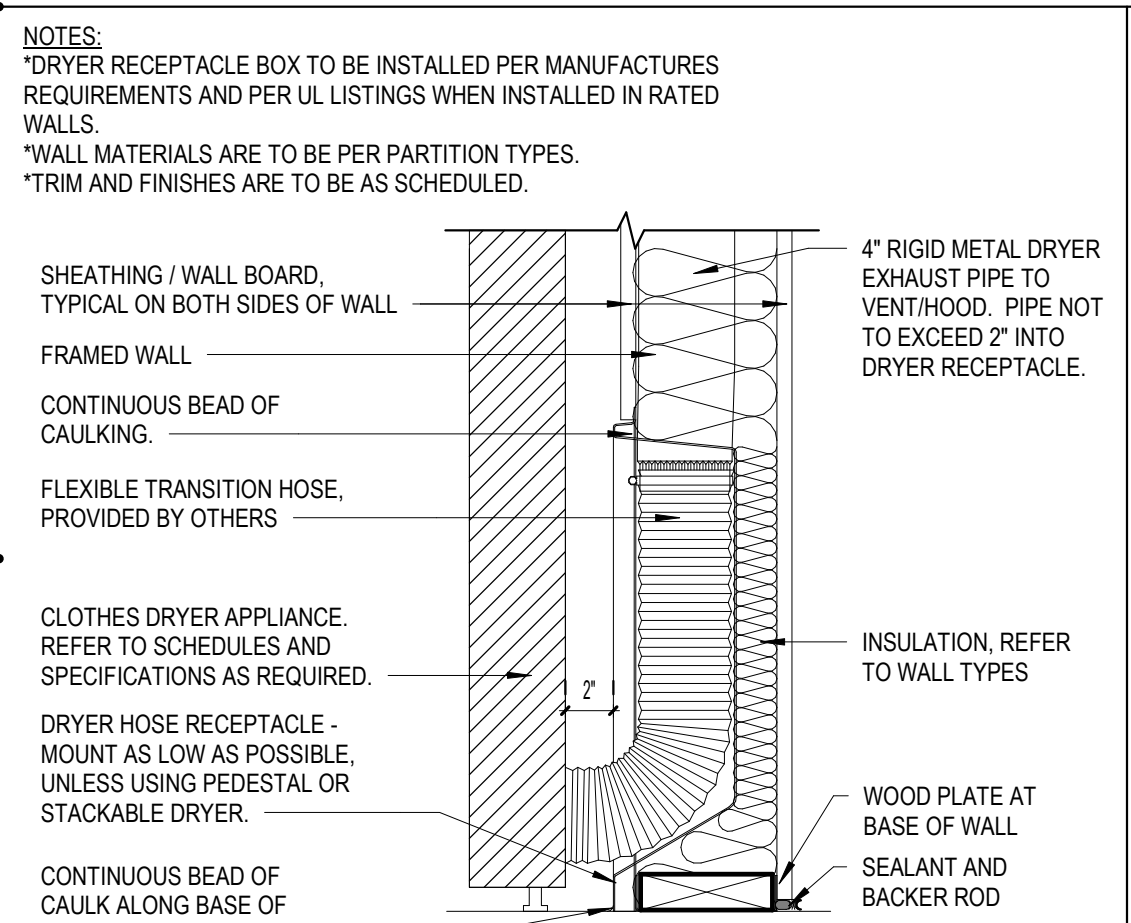
D1 EXHAUST PENETRATION (SIDING)
3" = 1'-0"



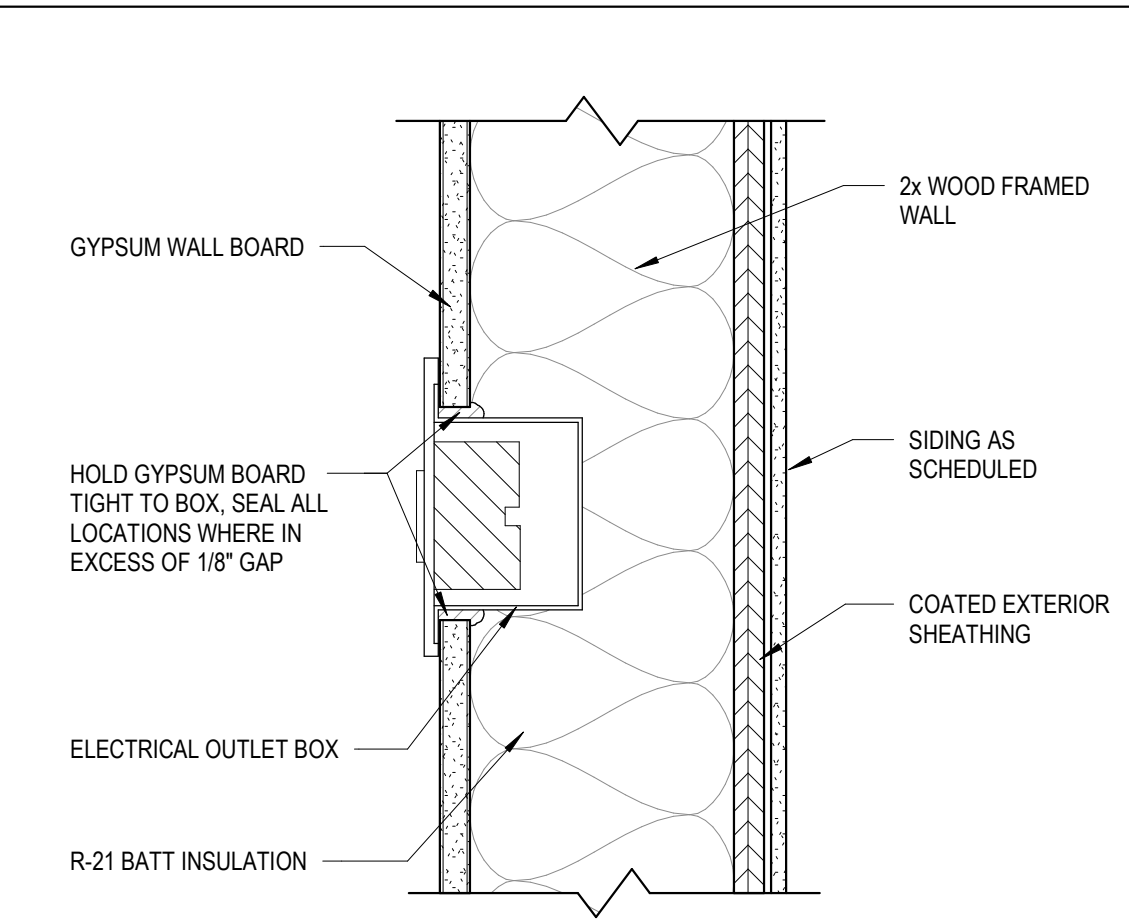
D5 PIPE PENETRATION DETAIL (SIDING)
3" = 1'-0"



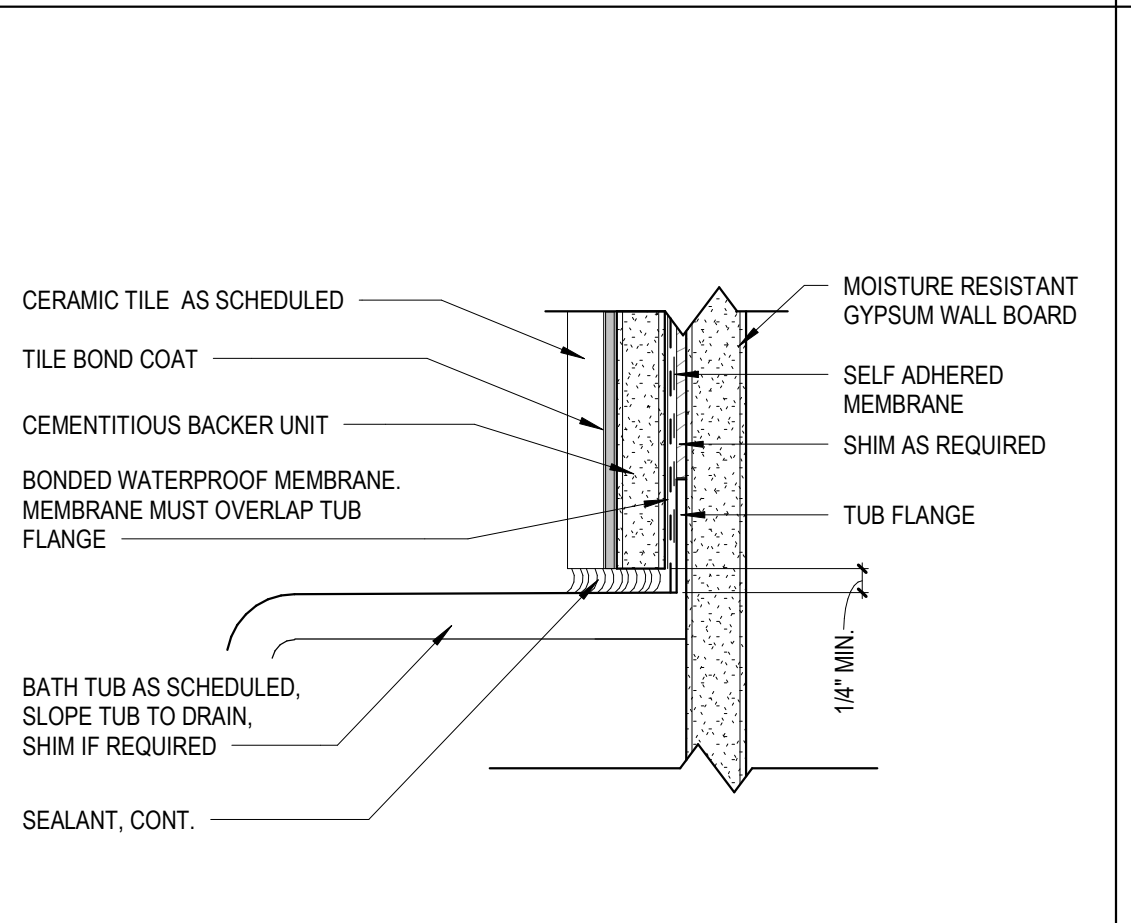
F1 RAILING ATTACHEMENT DETAIL (AXO)
3" = 1'-0"



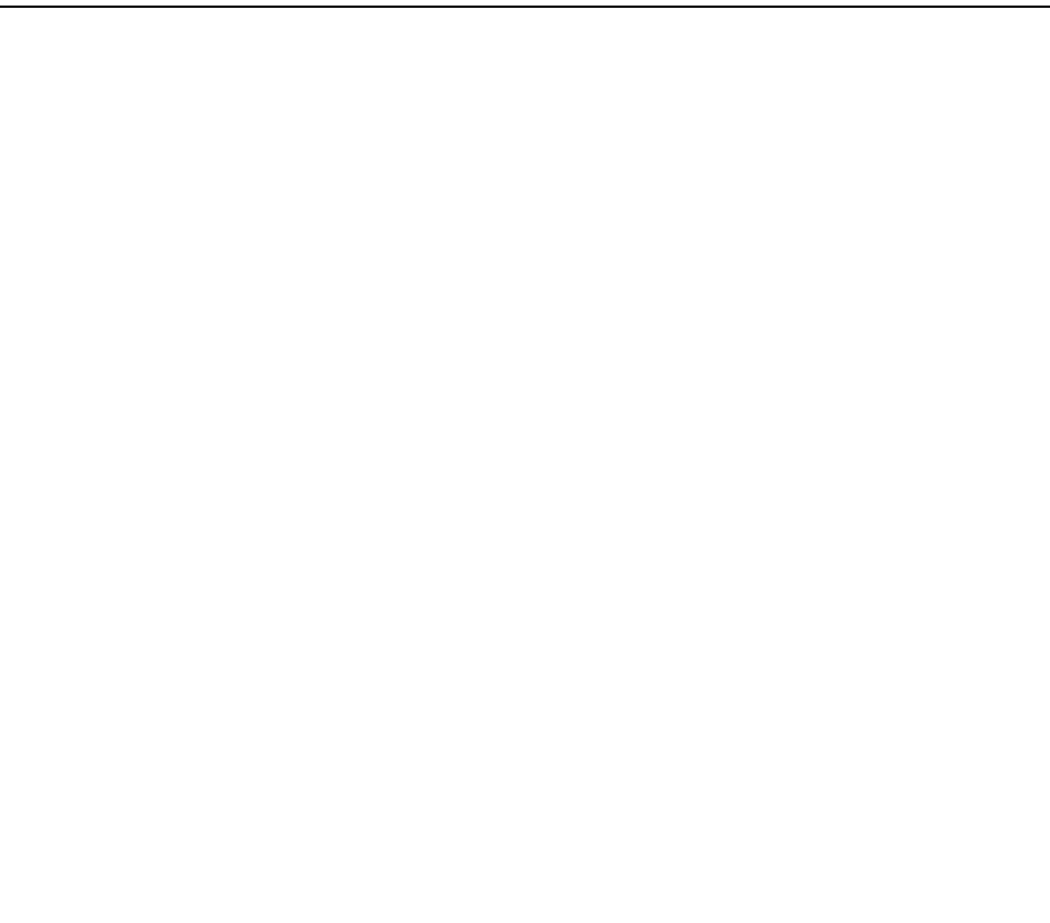
F5 RAILING ATTACHEMENT DETAIL
1 1/2" = 1'-0"



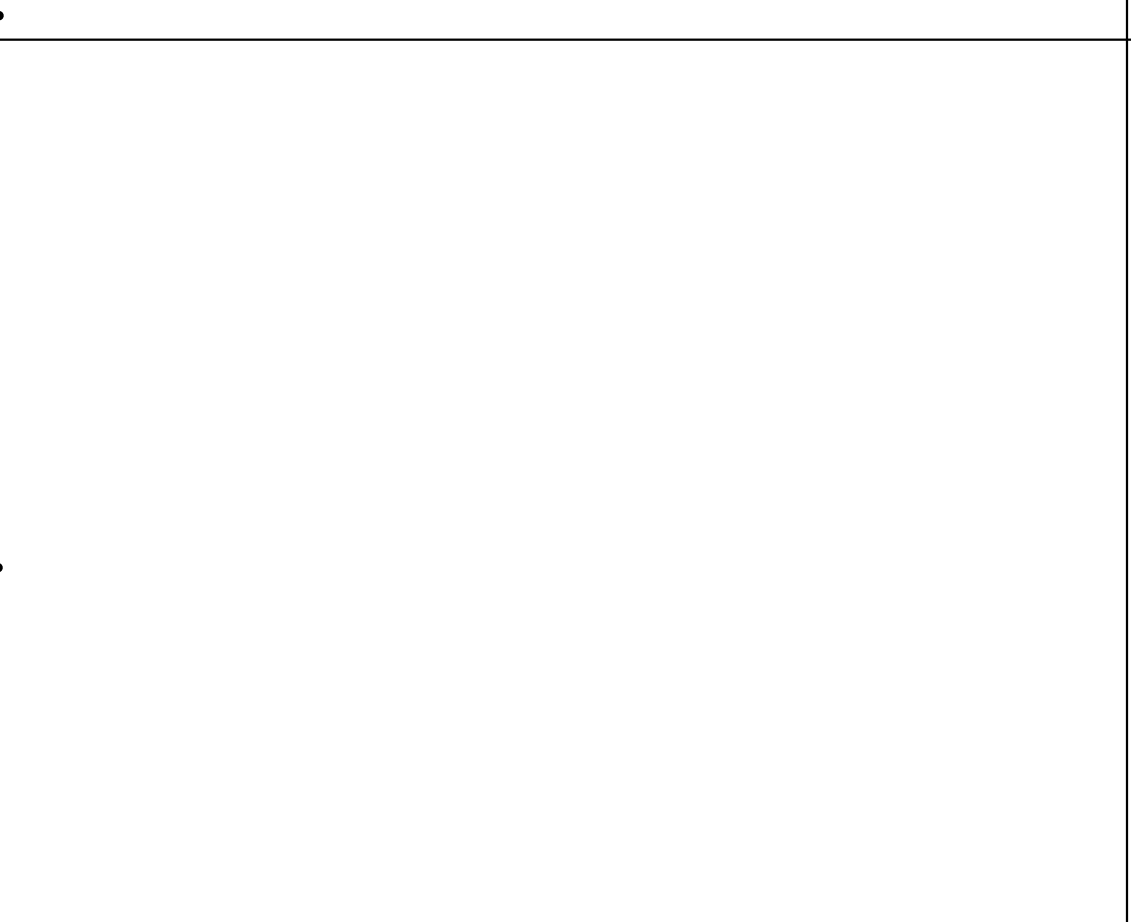
F7 VINYL GUARDRAIL DETAIL
1 1/2" = 1'-0"



F9 BOLLARD DETAIL
1" = 1'-0"



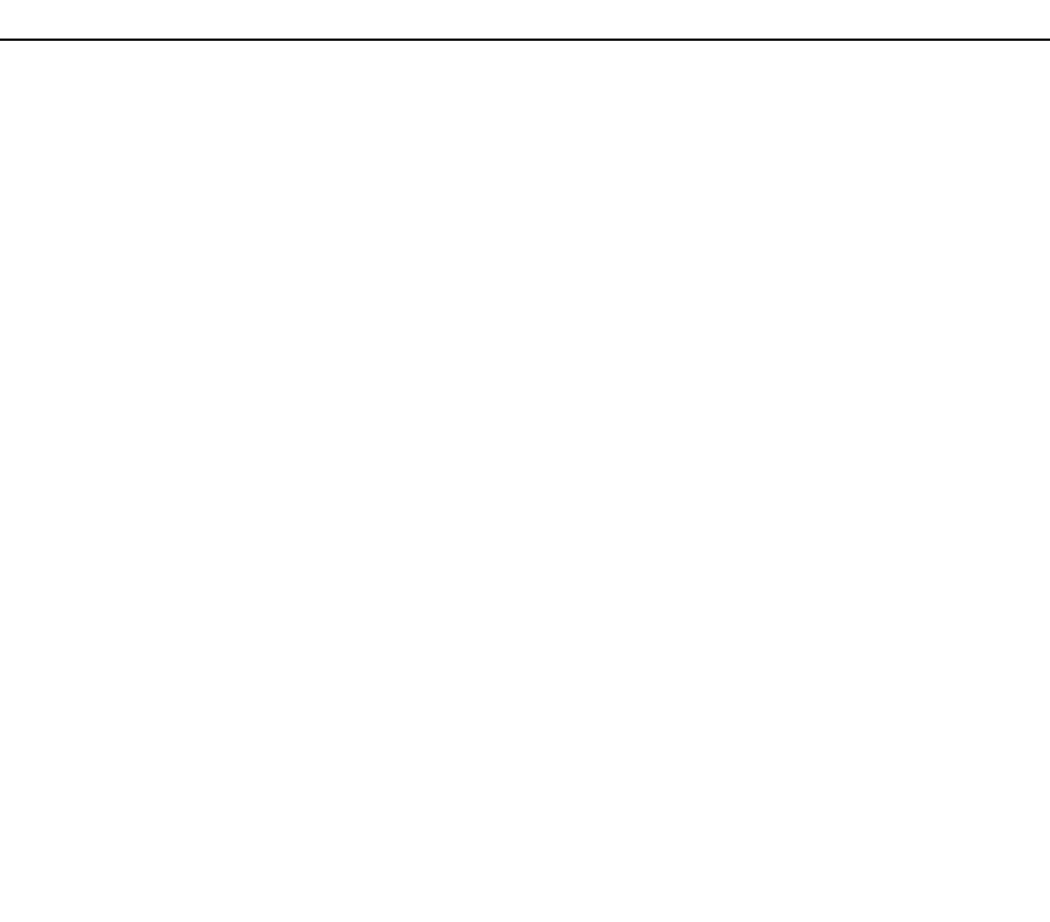
H1 DRYER HOSE RECEPTACLE
1 1/2" = 1'-0"



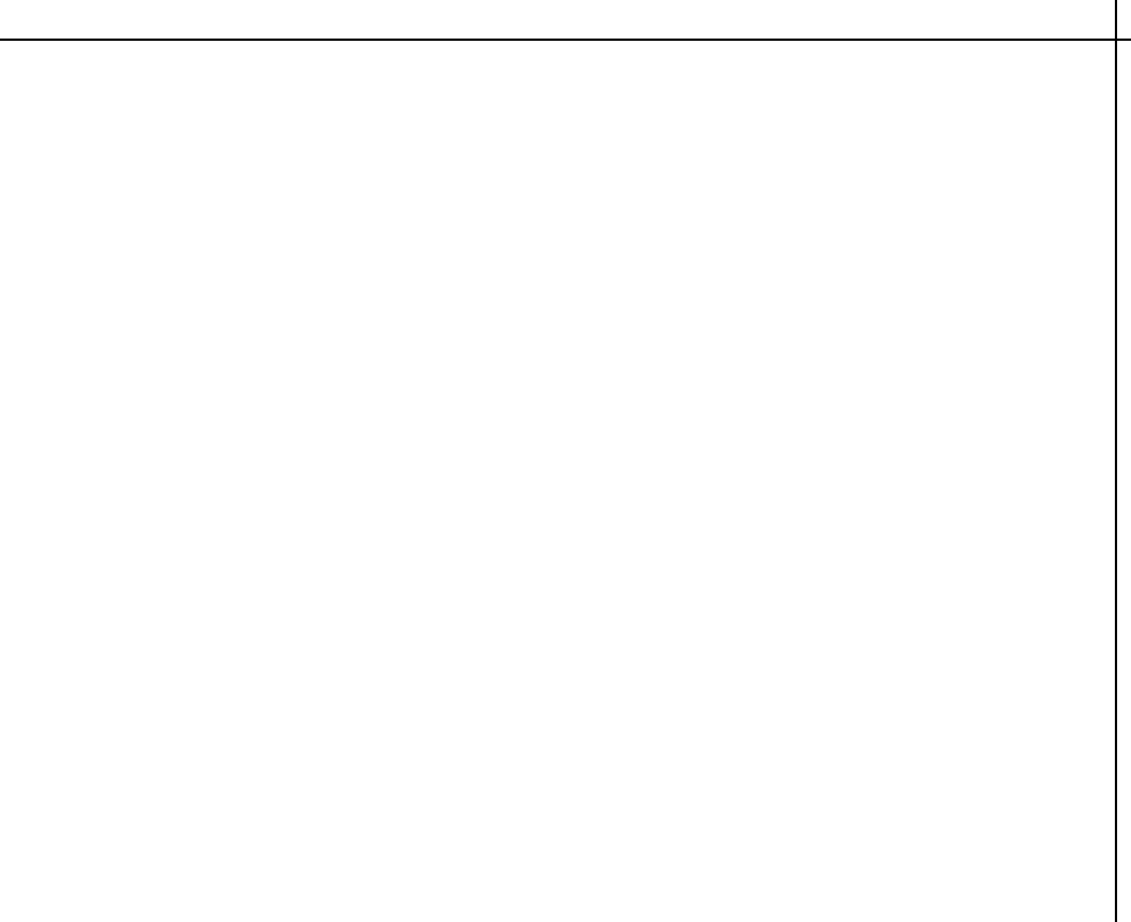
H3 OUTLET BOX DETAIL
3" = 1'-0"



H5 HOSE BIB DETAIL (SIDING)
3" = 1'-0"



H7 ENLARGED BATHTUB DETAIL
6" = 1'-0"



| ISSUE HISTORY | | |
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| REVISION HISTORY | | |
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| No. | Date | Description |
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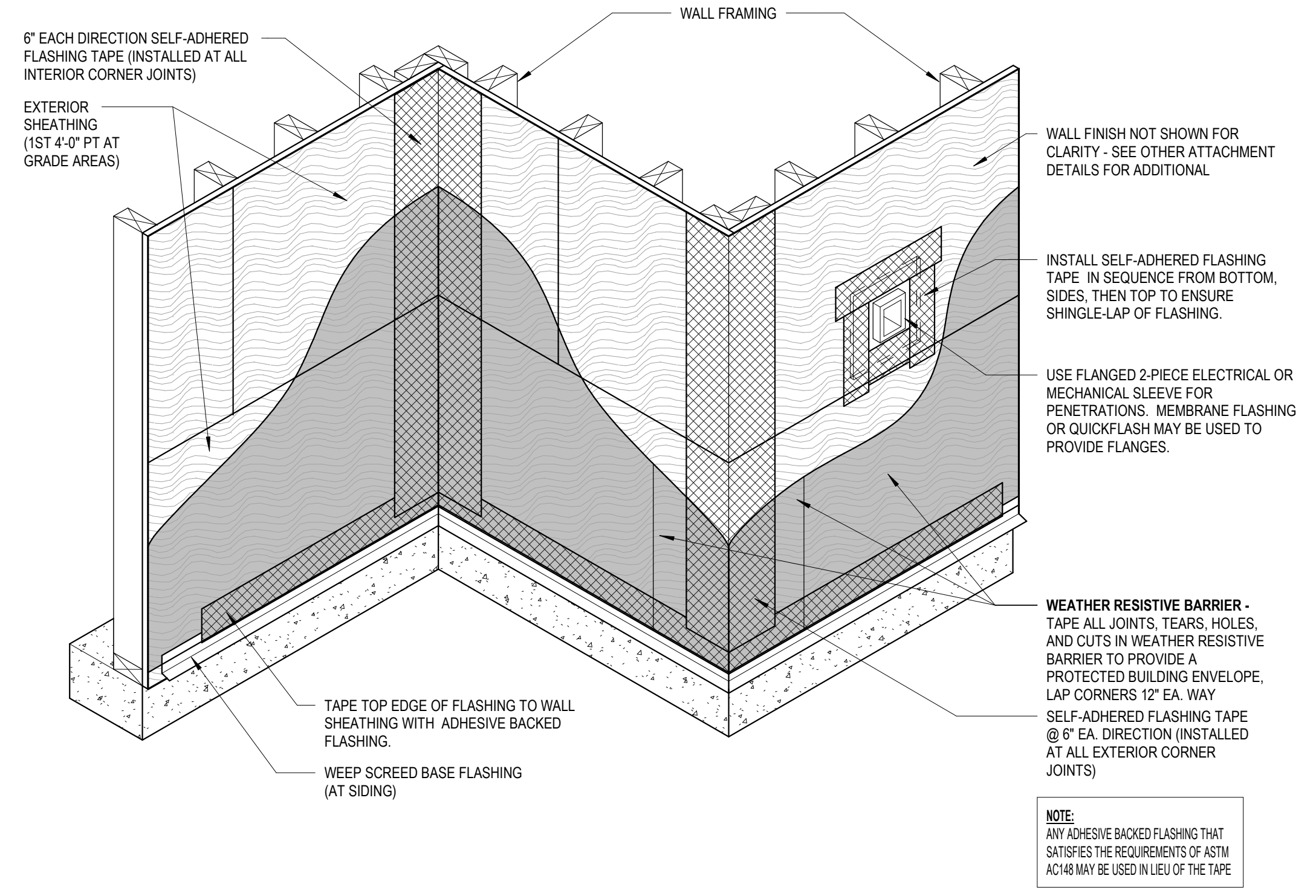
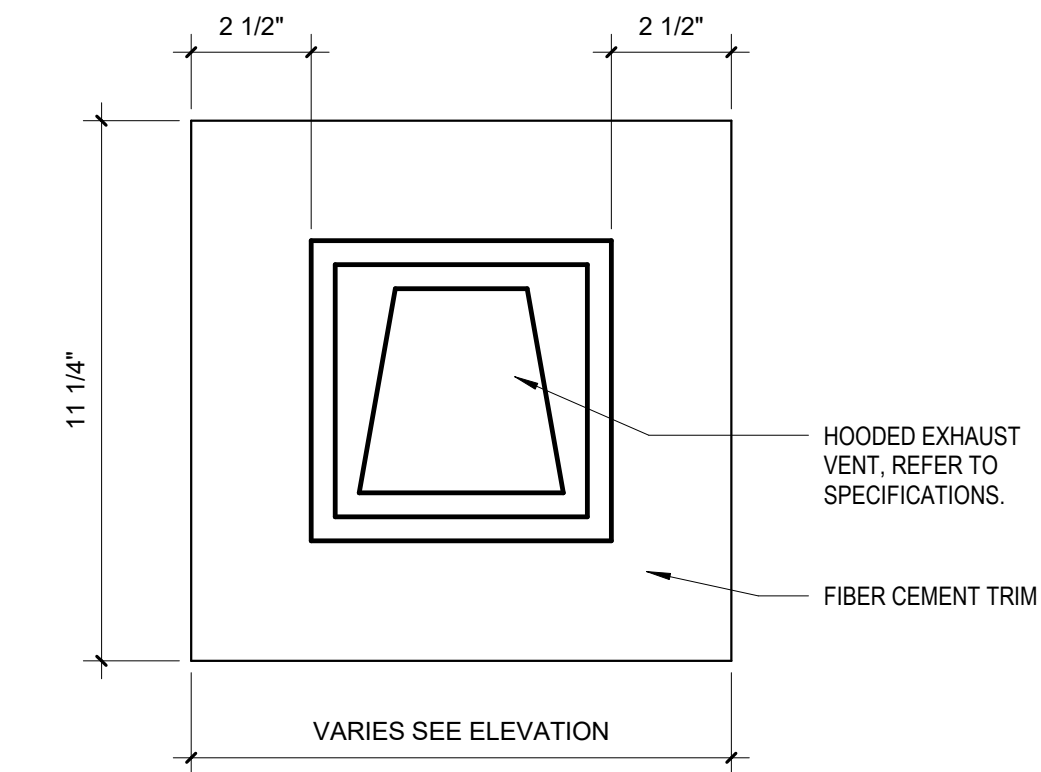


THE ROBERT MADISON
MADISON, ALABAMA
Project # 572

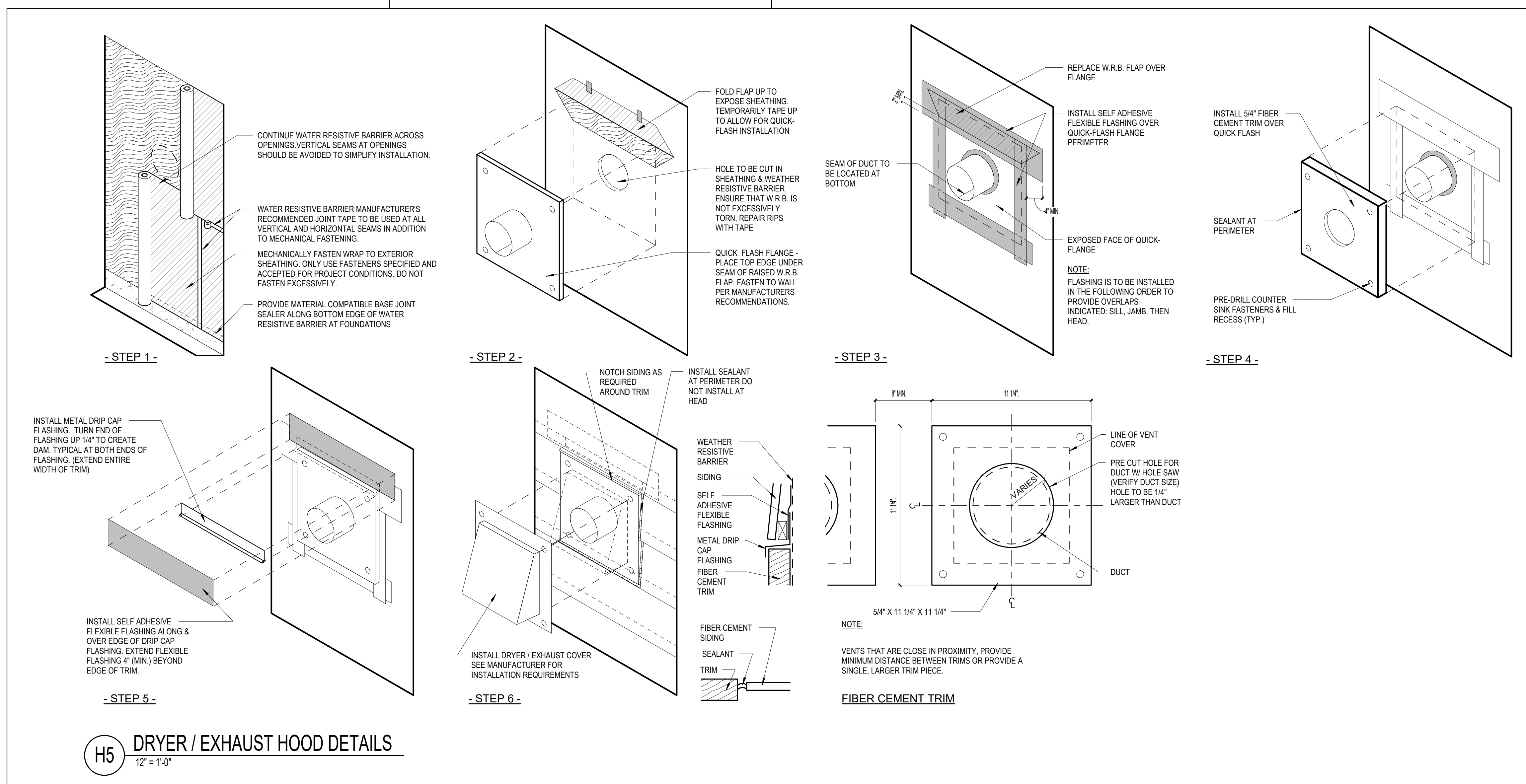
WALL SECTION DETAILS

A5.03

B7 DRYER / EXHAUST PLINTH DETAIL
3" = 1'-0"



D9 CORNER TAPING AND FLASHING INSTALLATION
12" = 1'-0"



| ISSUE HISTORY | | |
|---------------|------------|------------------|
| No. | Date | Description |
| 1 | 04/15/2022 | PERMIT SUBMITTAL |
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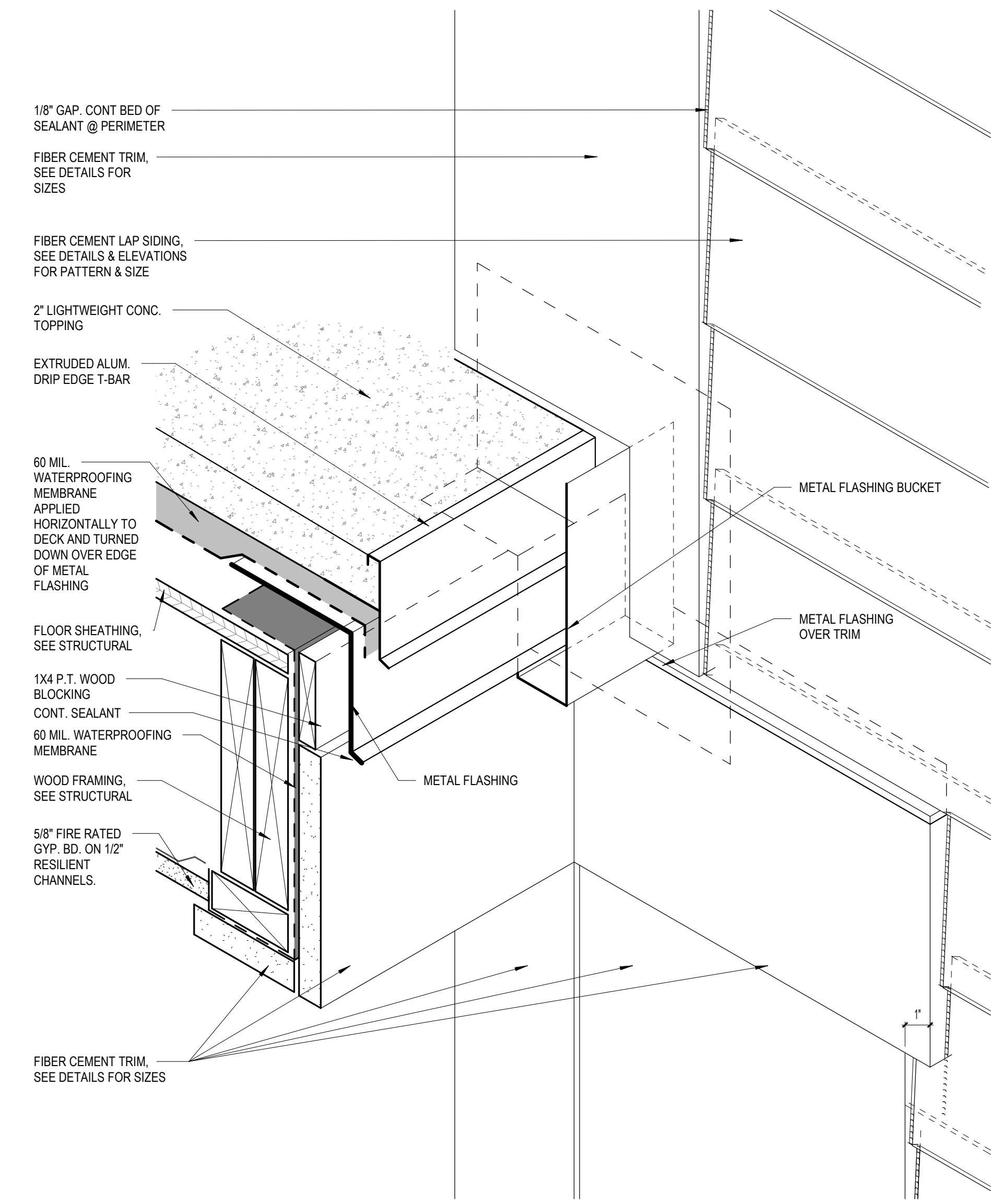
| REVISION HISTORY | | |
|------------------|------|-------------|
| No. | Date | Description |
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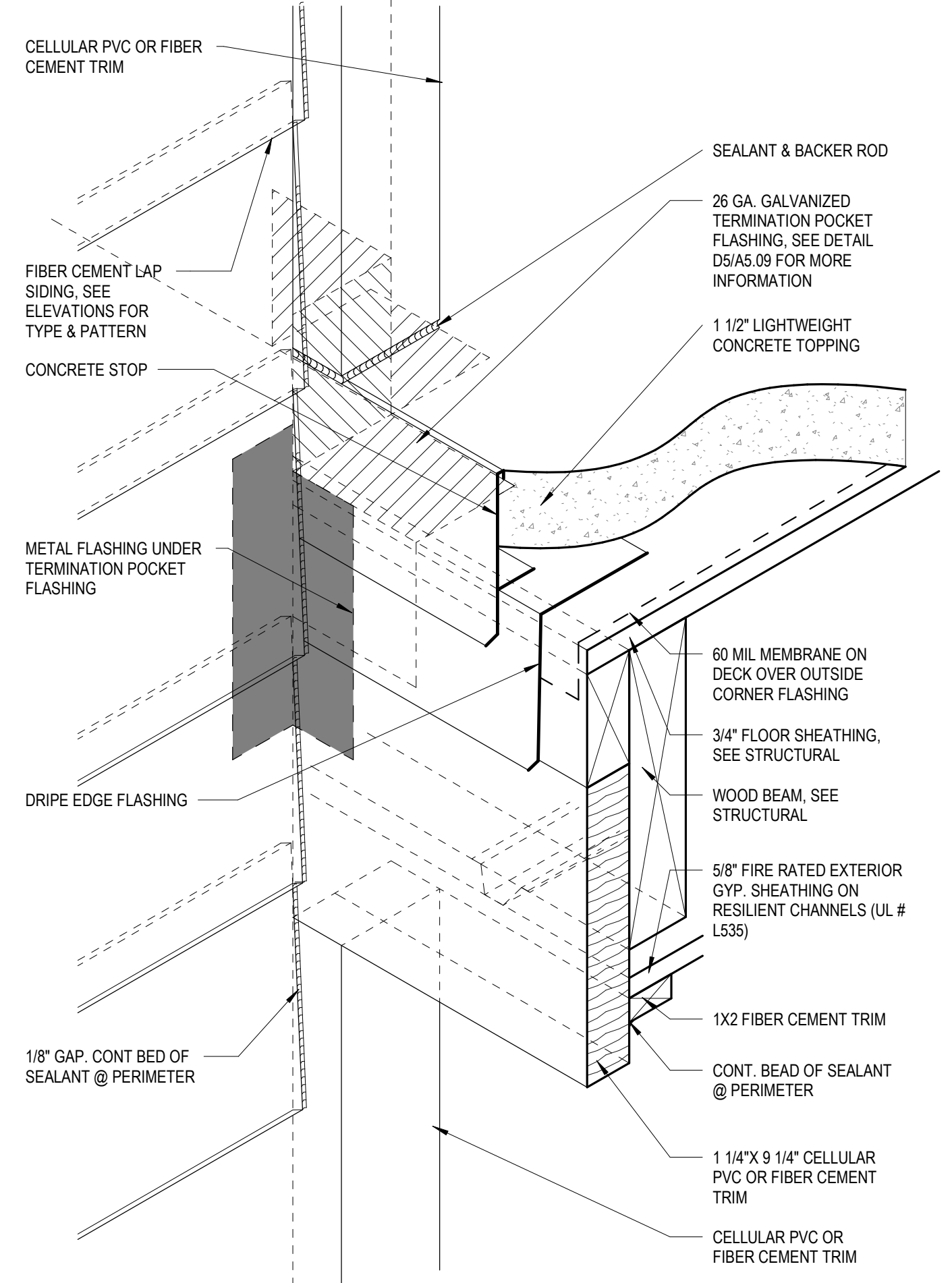
CONSULTANT
STATE OF ALABAMA
MICHAEL GOVE
8234
4/15/22
REGISTERED ARCHITECT

| | |
|--------------------|------------------|
| THE ROBERT MADISON | Drawn: MB |
| MADISON, ALABAMA | Checked: JK |
| | Approval: MS |
| | Date: 04/15/2022 |
| | Project #: 572 |

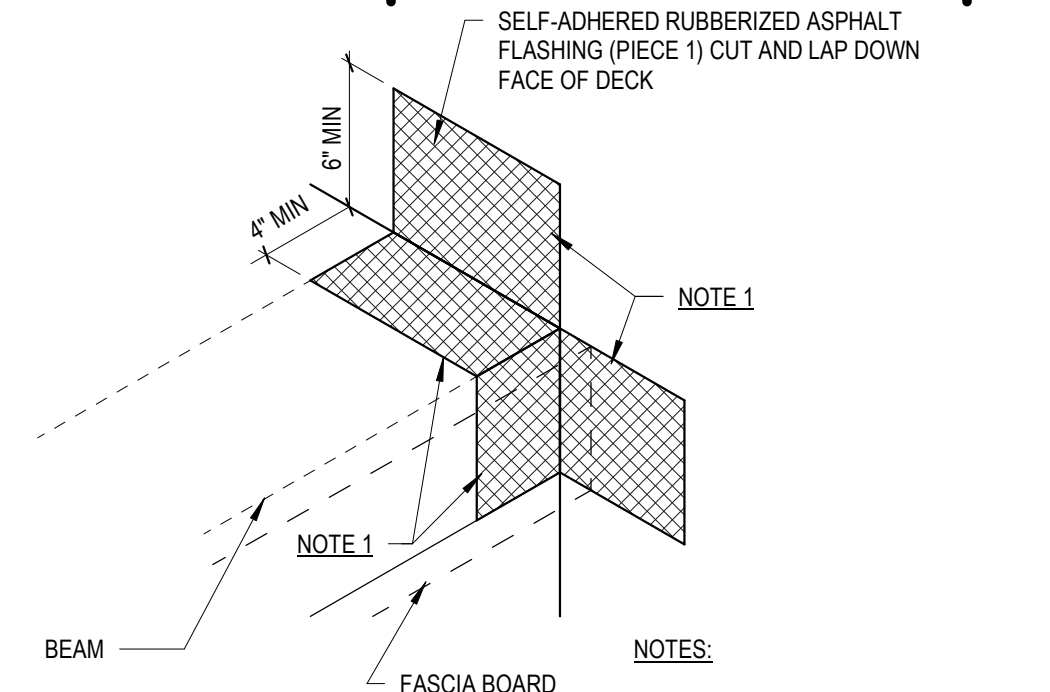
MISCELLANEOUS DETAIL
A5.05



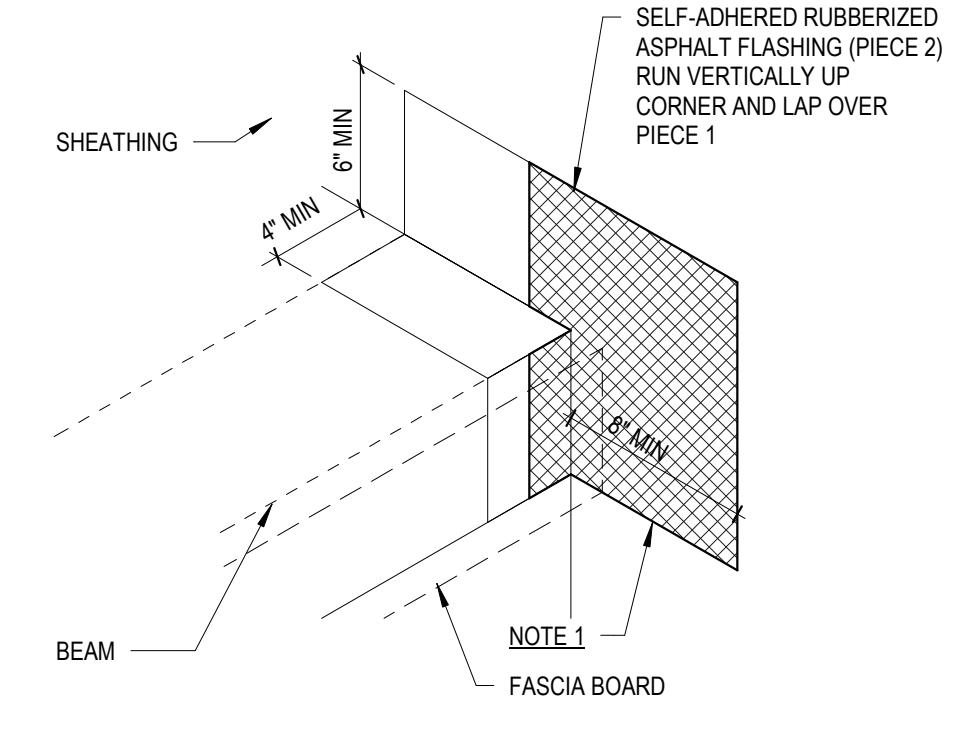
F1 BALCONY TRIM ISOMETRIC
3" = 1'-0"



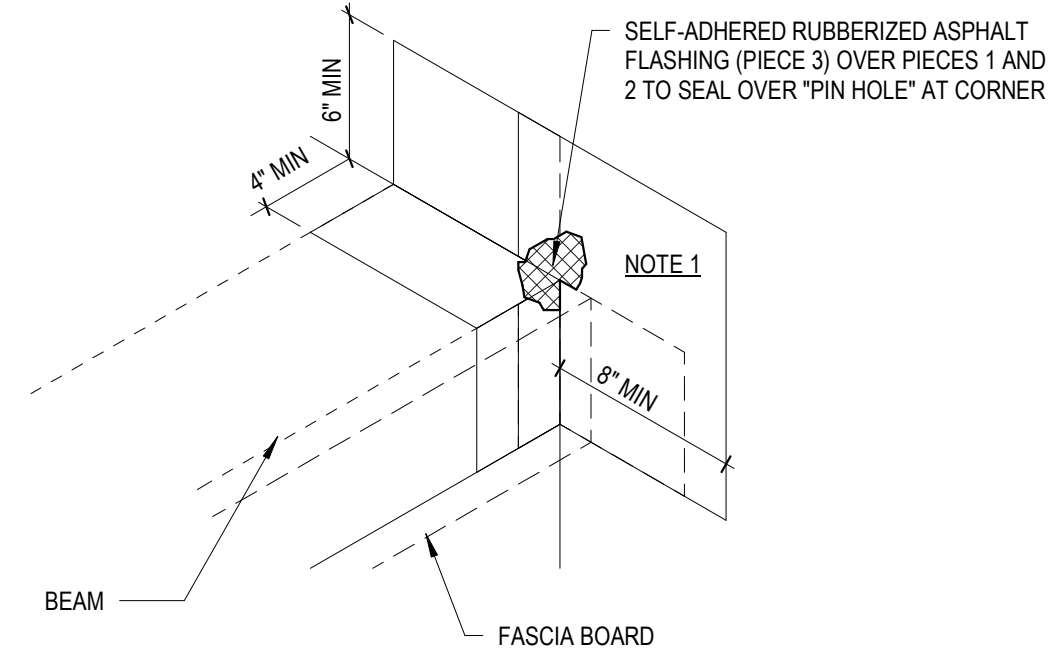
F2 BALCONY FLASHING ISOMETRIC
3" = 1'-0"



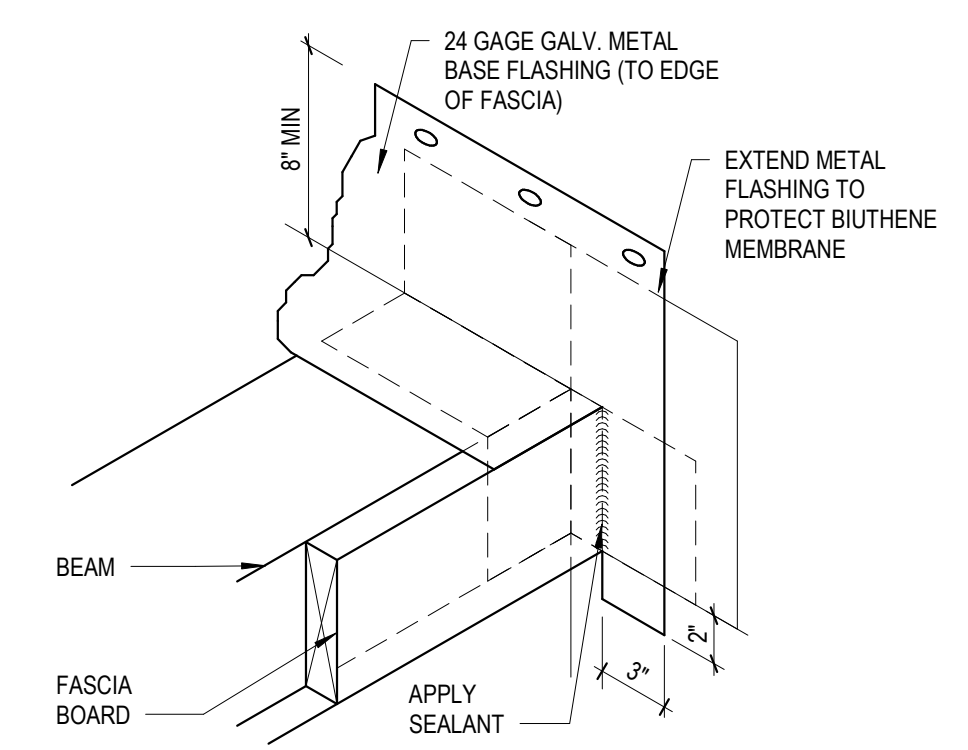
B1 WP-STEP1
1 1/2" = 1'-0"



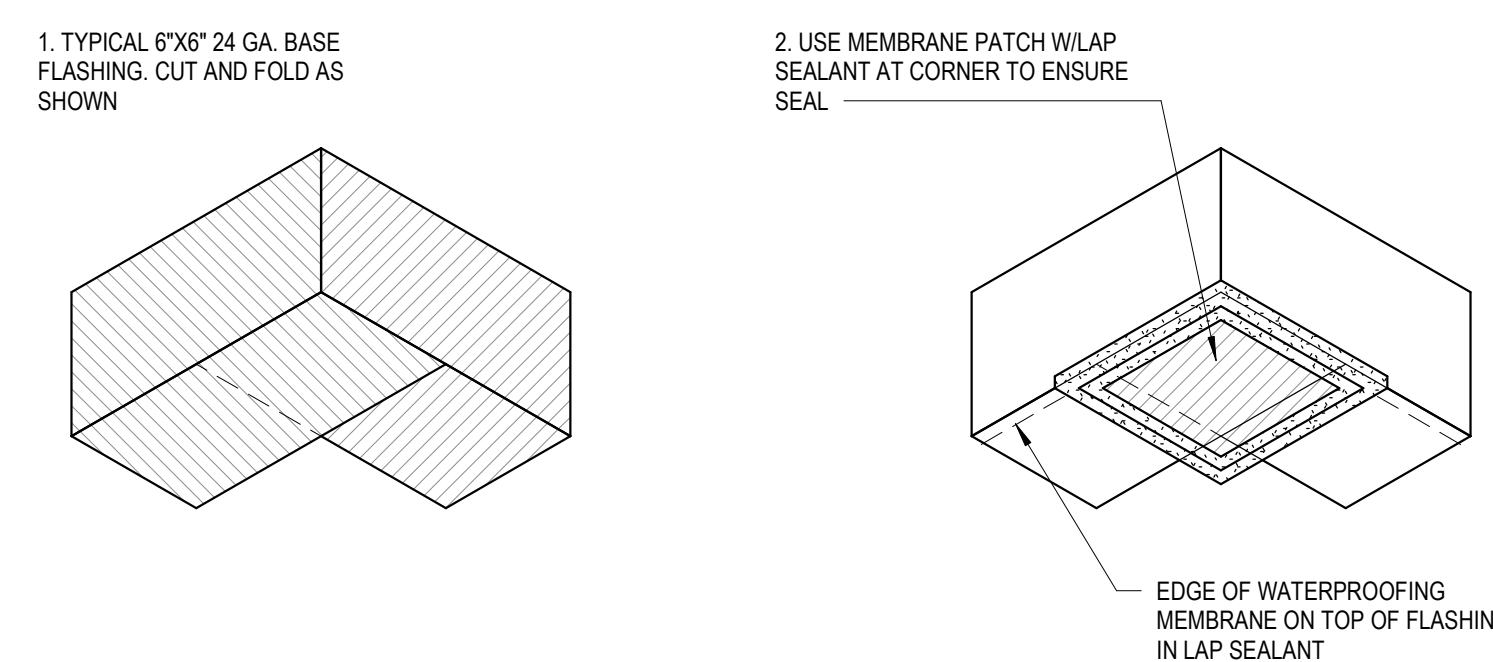
B2 WP-STEP2
1 1/2" = 1'-0"



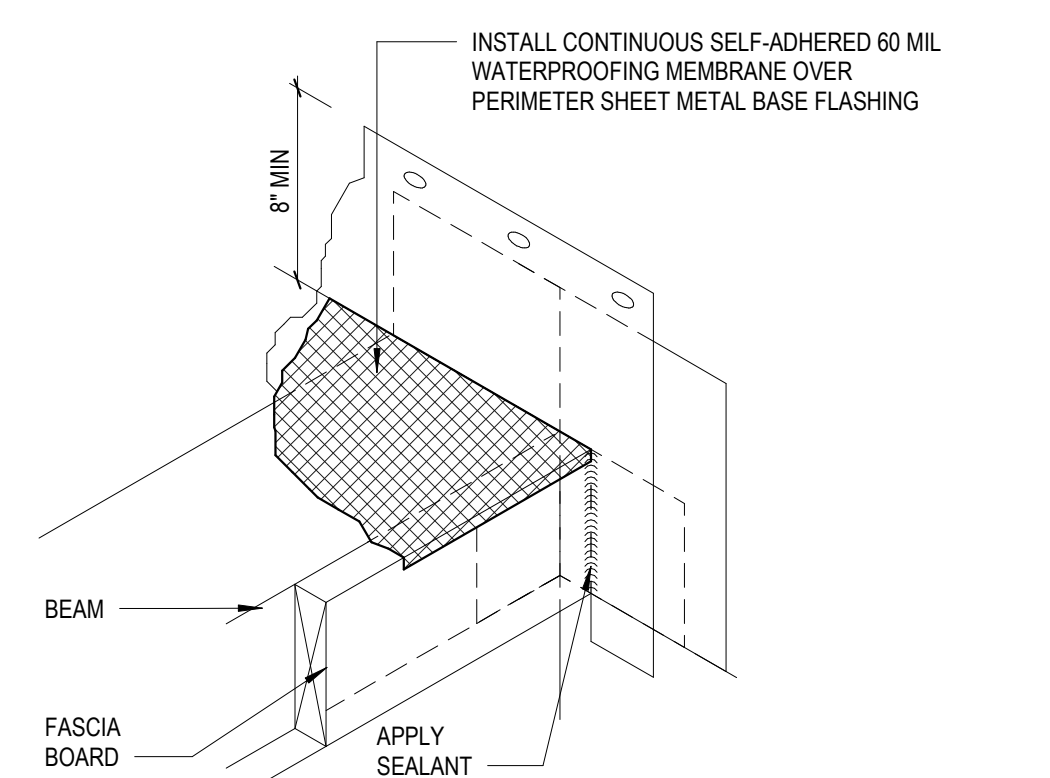
B3 WP-STEP 3
1 1/2" = 1'-0"



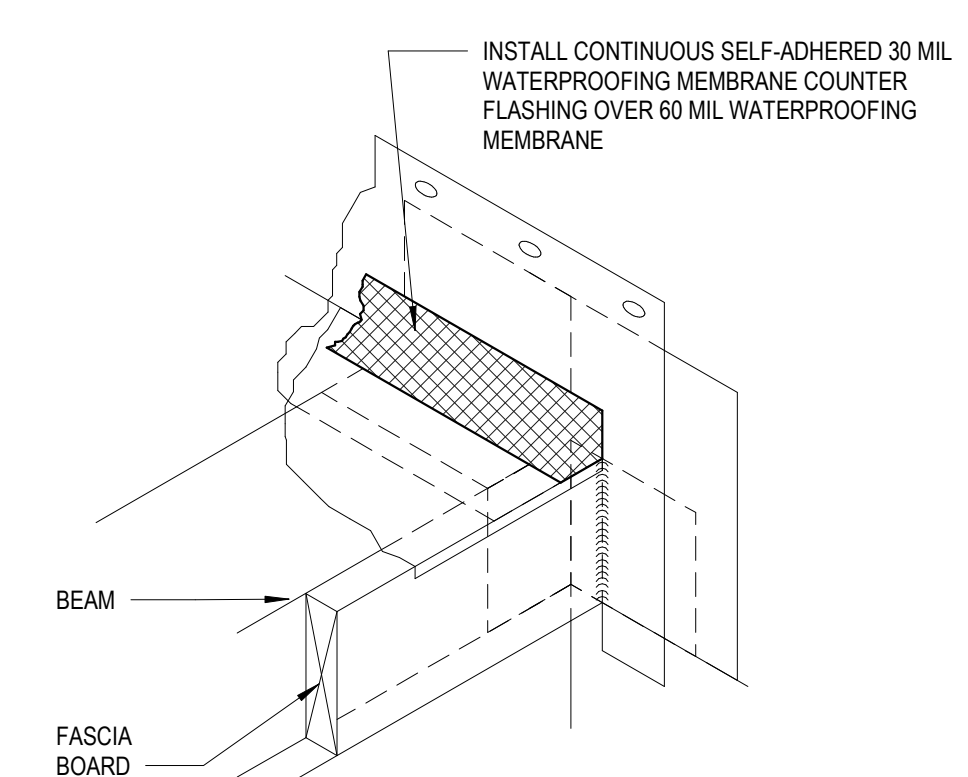
B4 WP-STEP 4
1 1/2" = 1'-0"



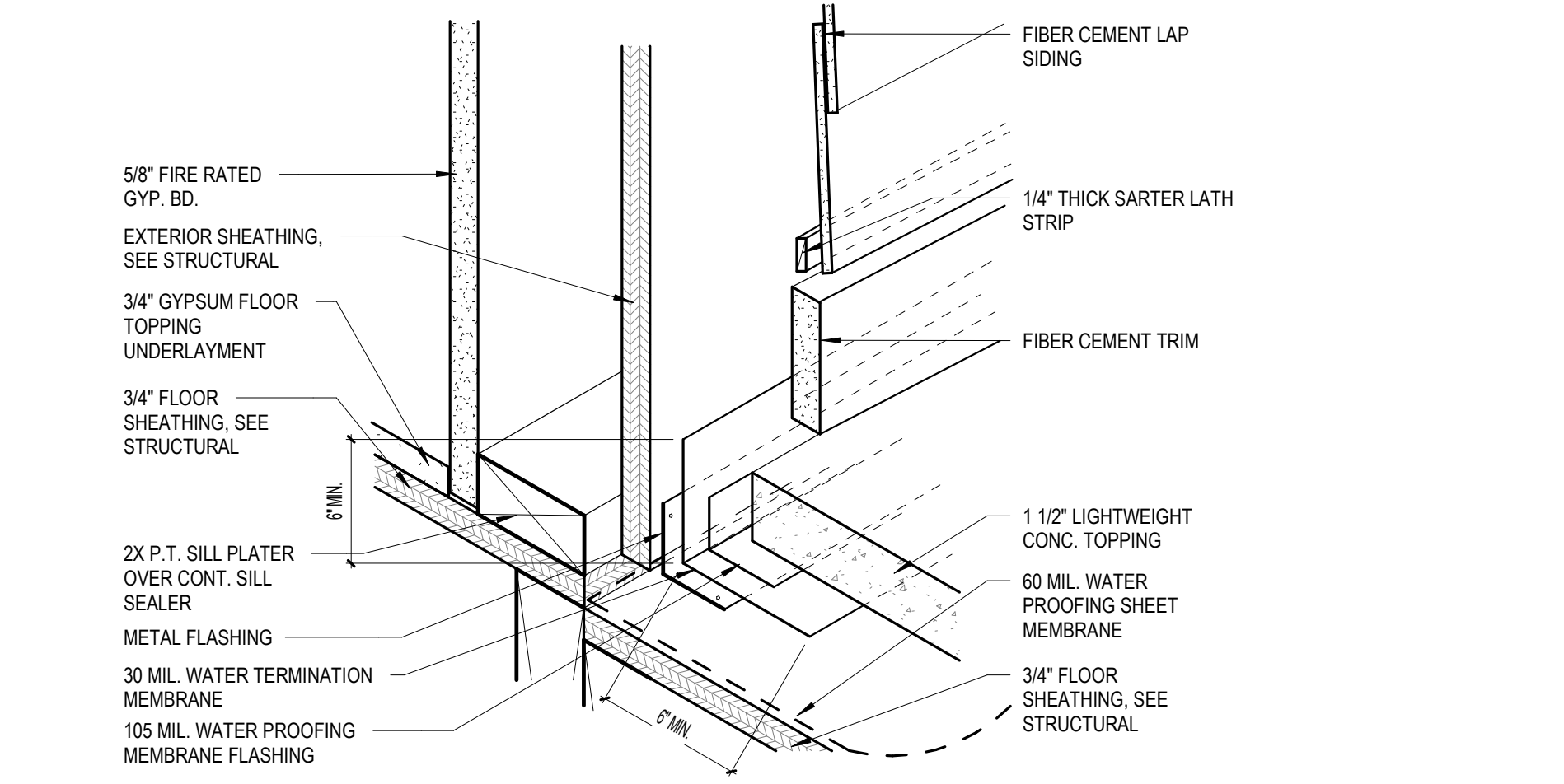
H1 DECK EDGE AT INSIDE CORNER DETAIL
3" = 1'-0"



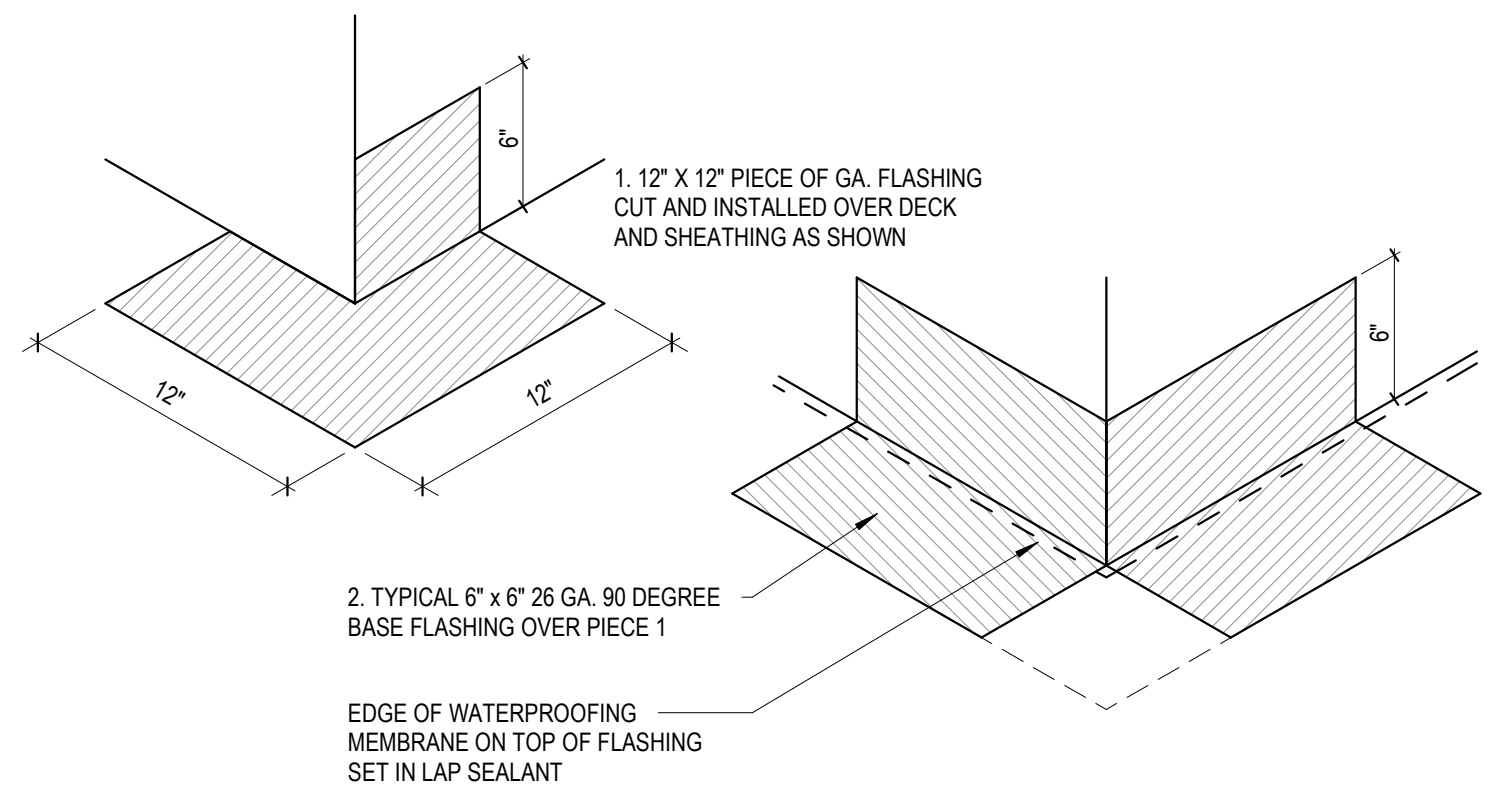
H2 WP-STEP 5
1 1/2" = 1'-0"



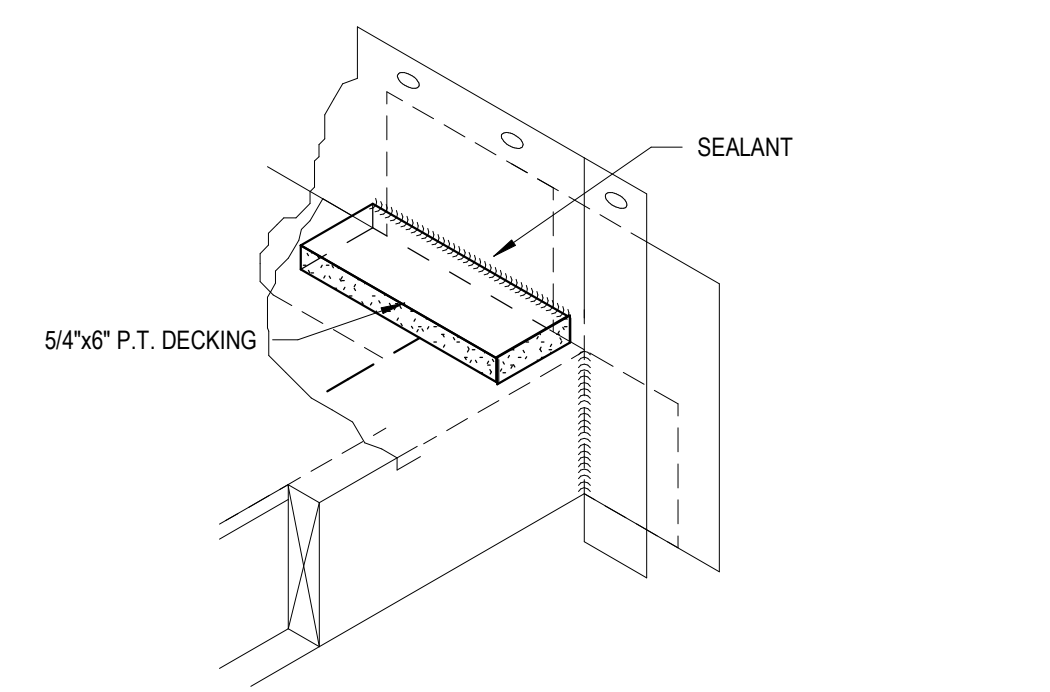
H3 WP-STEP 6
1 1/2" = 1'-0"



K1 FLASHING DETAIL @ BALCONY/BREEZEWAY
1 1/2" = 1'-0"



K2 DECK EDGE AT OUTSIDE CORNER DETAIL
1 1/2" = 1'-0"



K3 WP-STEP 7
1 1/2" = 1'-0"

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| No. | Date | Description |
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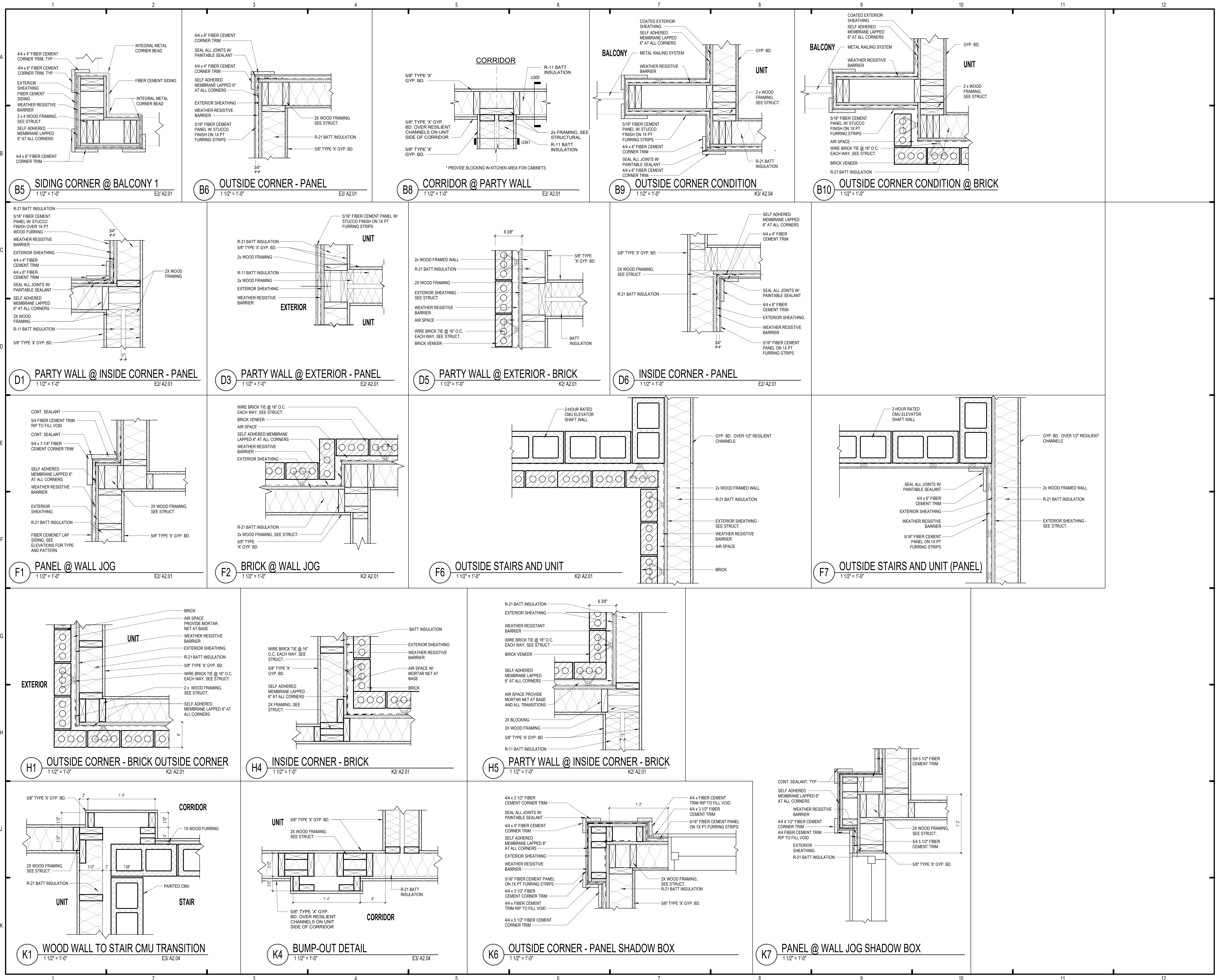


CONSULTANT
MICHAEL DOVE
SEA

| | |
|--------------------|------------------|
| THE ROBERT MADISON | Drawn: MB |
| MADISON, ALABAMA | Checked: JK |
| | Approval: MS |
| | Date: 04/15/2022 |
| | Project #: 572 |

PENETRATION AND FLASHING DETAILS

A5.06



| ISSUE HISTORY | | |
|---------------|------------|------------------|
| No. | Date | Description |
| 1 | 04/15/2022 | PERMIT SUBMITTAL |
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CONSULTANT

STATE OF ALABAMA
Professional Seal
8284
4/15/22
REGISTERED ARCHITECT

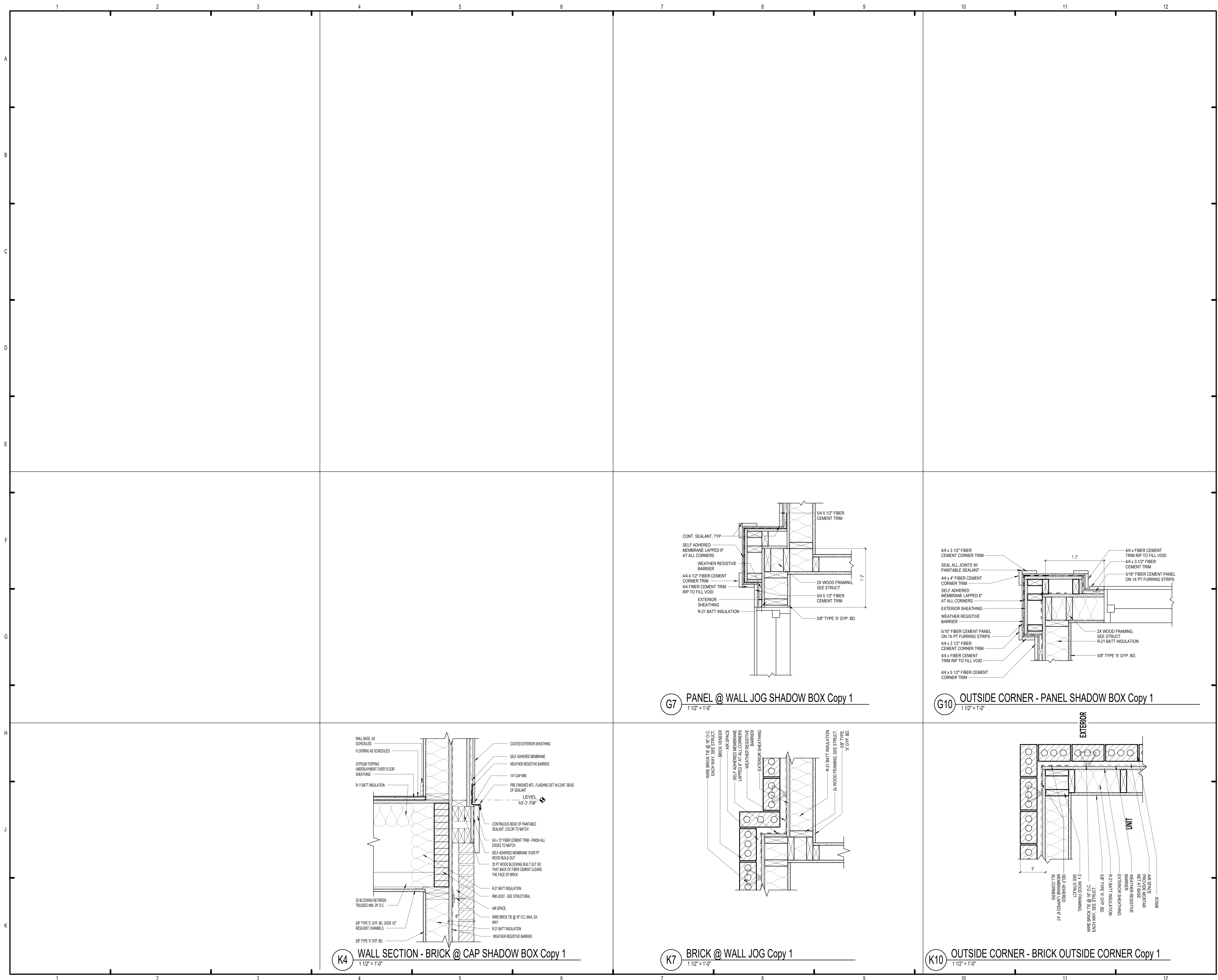
MICHAEL LOVE
SEA

| | |
|--------------------|------------------|
| THE ROBERT MADISON | Drawn: MB |
| MADISON, ALABAMA | Checked: JK |
| | Approval: MS |
| | Date: 04/15/2022 |
| | Project #: 572 |

PLAN DETAILS

A6.01

PLOTTED: 04/20/22 12:50:55 PM



ISSUE HISTORY

| No. | Date | Description |
|-----|------------|------------------|
| 1 | 04/15/2022 | PERMIT SUBMITTAL |

REVISION HISTORY

| No. | Date | Description |
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8234
4/15/22
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SEA

| | |
|--------------------|------------------|
| THE ROBERT MADISON | Drawn: MS |
| MADISON, ALABAMA | Checked: JK |
| | Approval: MS |
| | Date: 04/15/2022 |
| | Project #: 572 |

PLAN DETAILS

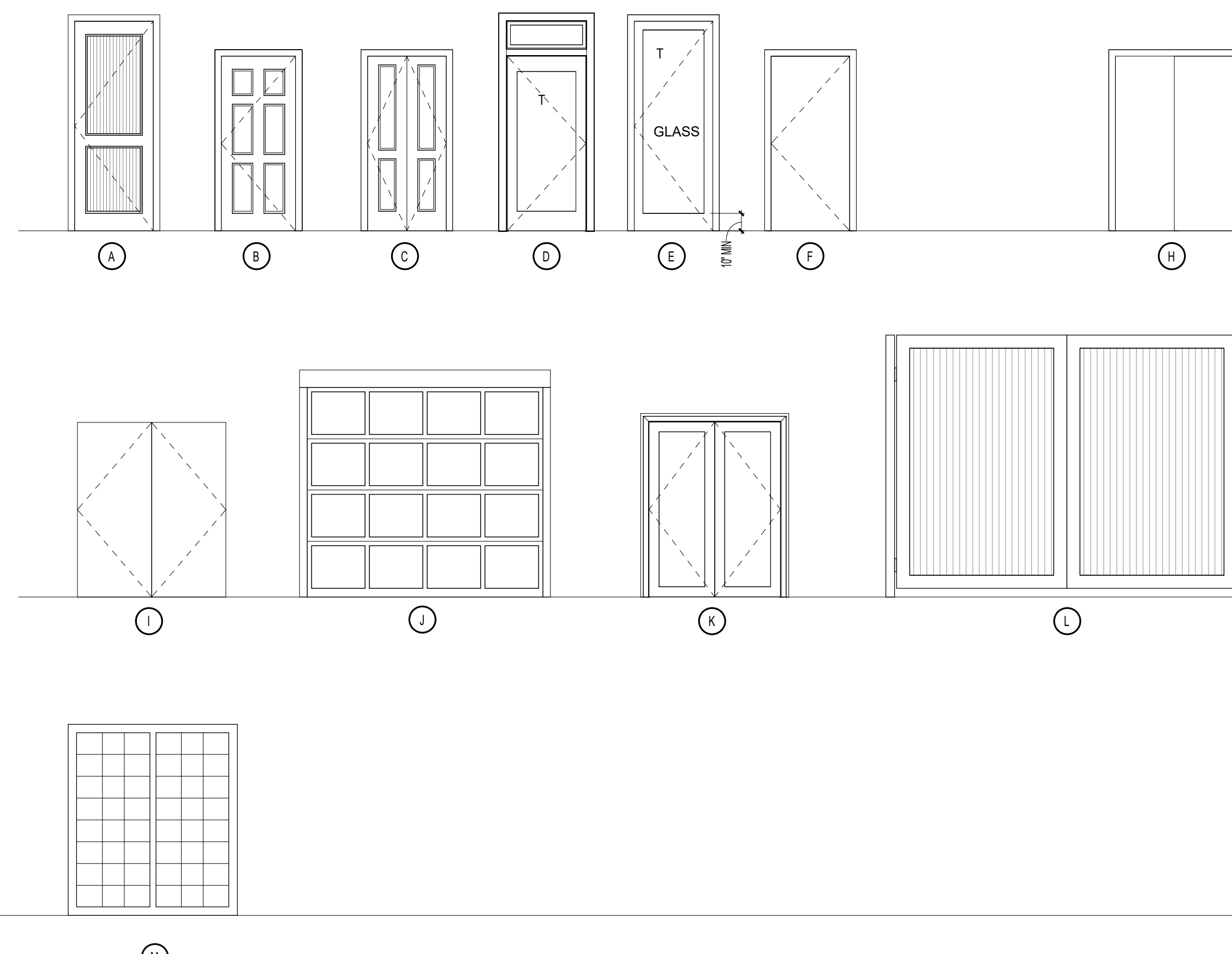
A6.02

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| DOOR SCHEDULE @ UNITS | | | | | | | | | | |
|-----------------------|--------|--------|-----------|----------|--------------|----------------|------|-------------|--------------|-----------------------------------|
| DOOR TYPE | WIDTH | HEIGHT | THICKNESS | MATERIAL | GLAZING TYPE | FRAME MATERIAL | TYPE | DOOR RATING | HARDWARE SET | REMARKS |
| U01 | 3'-0" | 6'-8" | 1 3/8" | FG | | HM | A | 20 MIN. | 1 | |
| U02 | 2'-10" | 6'-8" | 1 3/8" | WD | | WD | B | | 3 | |
| U03 | 2'-8" | 6'-8" | 1 3/8" | WD | | WD | B | | 3 | |
| U04 | 5'-0" | 6'-8" | 1 3/8" | WD | | WD | C | | 5 | |
| U05 | 3'-0" | 6'-8" | 1 3/8" | WD | | WD | C | | 5 | |
| U07 | 1'-4" | 6'-8" | 1 3/8" | WD | | WD | B | | 4 | |
| U09 | 5'-0" | 6'-8" | 1 3/8" | WD | | WD | B | | 7 | |
| U10 | 3'-0" | 6'-8" | 1 3/8" | FG/GLASS | | HM | E | | 2 | PROVIDE SAFETY GLAZING, INSULATED |
| U29 | 3'-0" | 6'-8" | 1 3/8" | WD | | WD | B | | 3 | |
| U30 | 2'-8" | 6'-8" | 1 3/8" | WD | | WD | C | | 5 | |
| U030 | 3'-0" | 6'-8" | 1 3/8" | WD | | WD | C | | 5 | |
| U46 | 4'-0" | 6'-8" | 1 3/8" | WD | | WD | C | | 5 | |
| U57 | 3'-0" | 6'-8" | 1 3/8" | WD | | WD | C | | 5 | |

| DOOR SCHEDULE @ COMMON AREAS | | | | | | | | | | |
|------------------------------|--------|--------|-----------|----------|--------------|----------------|------|-------------|--------------|-----------------------|
| TYPE | WIDTH | HEIGHT | THICKNESS | MATERIAL | GLAZING TYPE | FRAME MATERIAL | TYPE | DOOR RATING | HARDWARE SET | REMARKS |
| G03 | 9'-0" | 8'-0" | 1 1/2" | MTL | - | MTL | J | - | - | GARAGE DOOR |
| G05 | 3'-0" | 8'-0" | 1 3/8" | HM | - | HM | A | 1.5HR | 11 | |
| G06 | 10'-0" | 8'-0" | 1 1/2" | MTL | - | MTL | J | - | - | GARAGE DOOR |
| G07 | 3'-0" | 6'-8" | 1 3/8" | FG | - | HM | A | - | 9 | |
| G08 | 13'-0" | 10'-0" | 1 3/4" | MTL | - | MTL | L | - | - | TRASH ENCLOSURE GATES |
| G11 | 3'-0" | 8'-0" | 1 3/4" | FG/GLASS | TEMP | HM | E | - | 10 | ENTRANCE DOOR |

| DUPLEX DOOR SCHEDULE | | | | | | | | | | |
|----------------------|------------|-----------|-----------|----------|--------------|----------------|------|-------------|--------------|-------------|
| TYPE | WIDTH | HEIGHT | THICKNESS | MATERIAL | GLAZING TYPE | FRAME MATERIAL | TYPE | DOOR RATING | HARDWARE SET | REMARKS |
| D01 | 3'-0" | 8'-0" | 1 3/4" | FG | - | HM | A | - | 1 | |
| D02 | 9'-0" | 8'-0" | 1 1/2" | MTL | - | MTL | J | - | - | GARAGE DOOR |
| D03 | 2'-6" | 8'-0" | 1 3/4" | FG | - | HM | A | - | 1 | |
| D04 | 2'-0" | 8'-0" | 1 3/4" | WD | - | WD | D | - | 4 | |
| D05 | 2'-10" | 6'-8" | 1 1/2" | WD | - | WD | A | - | 3 | |
| D06 | 4'-0" | 6'-8" | 1 3/8" | WD | - | WD | K | - | 6 | |
| D07 | 1'-6" | 6'-8" | 1 3/8" | WD | - | WD | A | - | 4 | |
| D10 | 2'-10" | 6'-8" | 1 3/8" | WD | - | WD | K | - | 6 | |
| D11 | 2'-6" | 6'-8" | 1 1/2" | WD | - | WD | A | - | 3 | |
| D12 | 2'-4" | 6'-8" | 1 3/8" | WD | - | WD | A | - | 4 | |
| D13 | 5'-11 1/2" | 7'-3 1/2" | 4 5/8" | MTL | TEMP | MTL | M | - | - | |



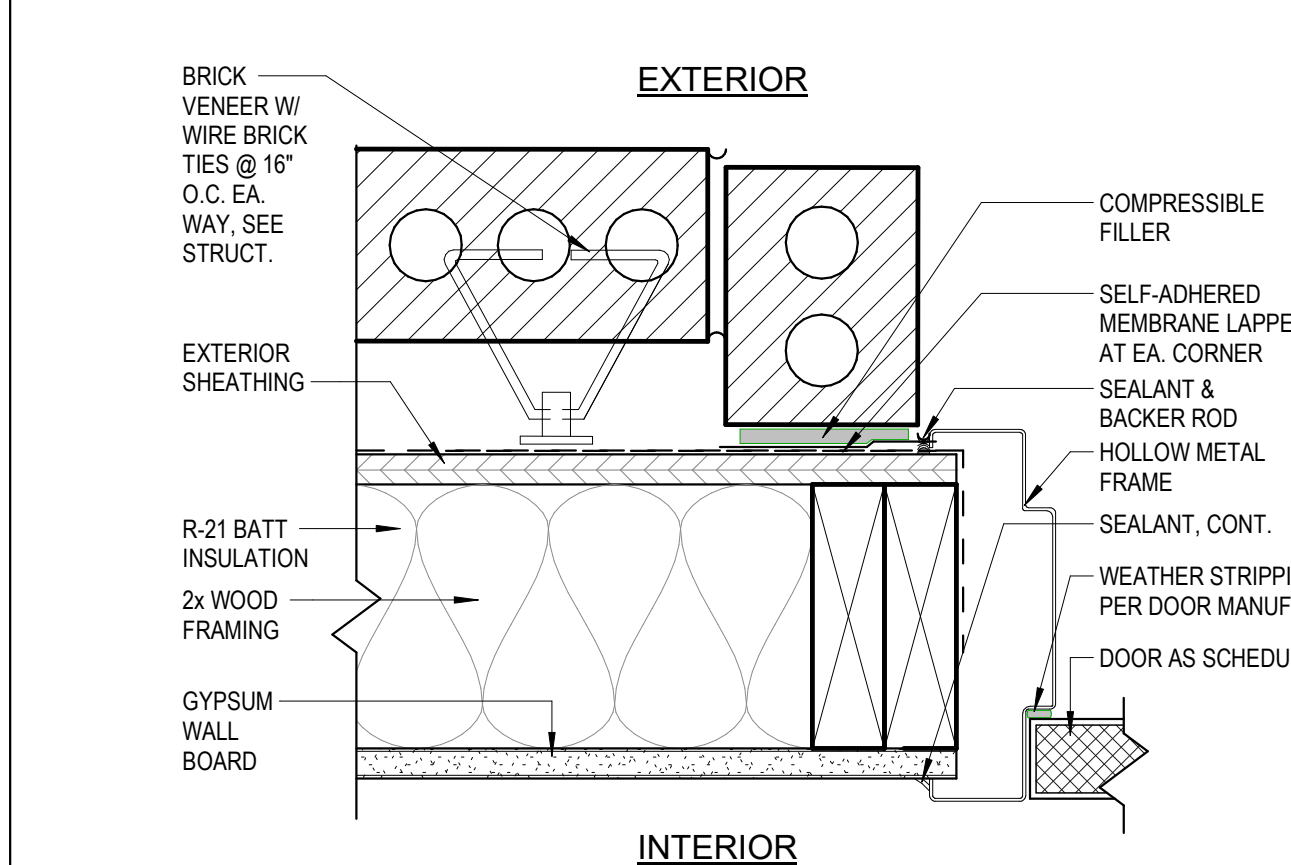
DOOR TYPES
1/4" = 1'-0"

DOOR NOTES:

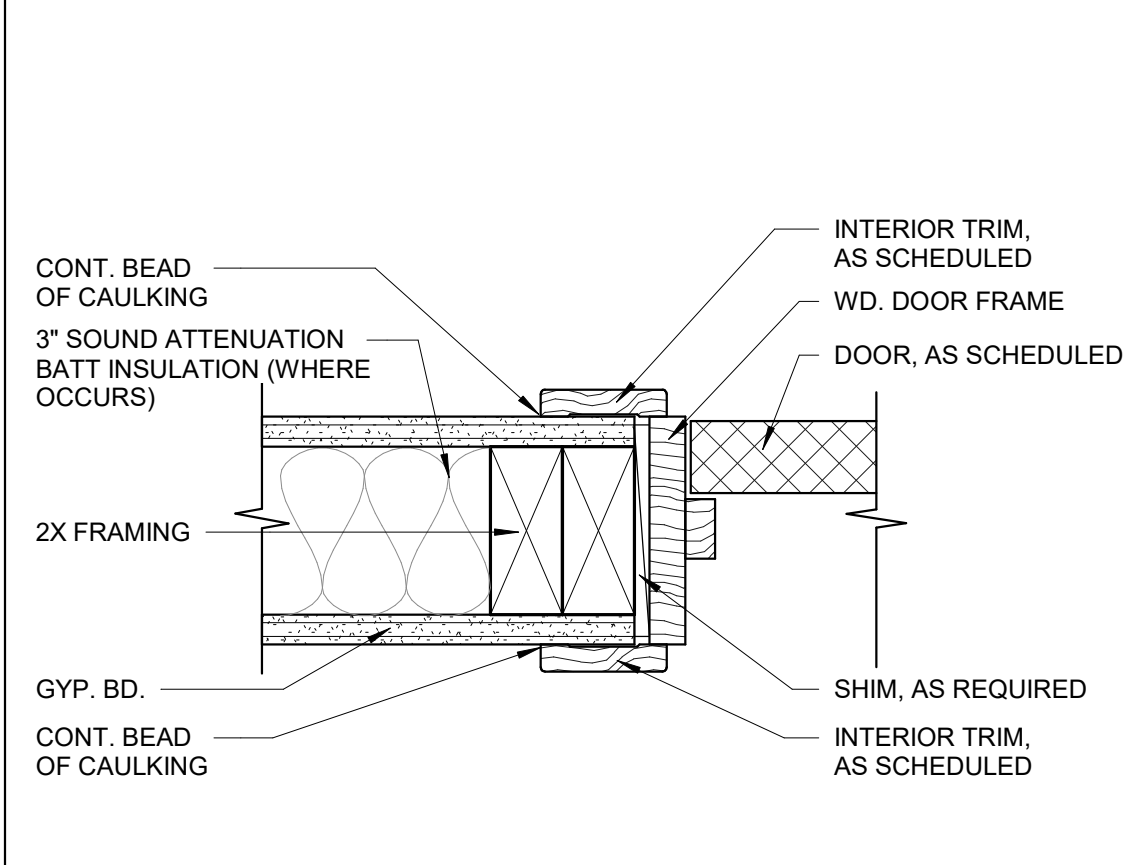
- A. ALL FIRE DOORS AND FRAMES TO HAVE APPROVED CLOSERS AND LATCHING MECHANISMS.
- B. THRESHOLDS AT EXTERIOR DOORS ARE NO HIGHER THAN 1/2" MAX.
- C. VERIFY ROUGH OPENING REQUIRED WITH DOOR FRAME MANUFACTURER.
- D. PROVIDE WEATHERSTRIPPING AT ALL EXTERIOR DOORS.
- E. DOOR MANUFACTURER SHALL PROVIDE CERTIFICATION, SIGNED AND SEAL BY A REGISTERED ALABAMA PROFESSIONAL ENGINEER THAT:
 - 1- DOORS WILL BE ABLE TO WITHSTAND REQUIRED WIND LOADS AND PRESSURE.
 - 2- TO SUPPLY TYPE AND NUMBER OF FASTENERS REQUIRED TO SECURE FRAME TO HEAD, JAMBS OF ALL DOOR OPENINGS.
- F. THE AVERAGE TEMPERATURE RISE DEVELOPED ON THE UNEXPOSED SIDE SHALL NOT EXCEED 450° F (232° C) AT THE END OF 30 MINUTES OF STANDARD FIRE TEST EXPOSURE.

HARDWARE NOTES:

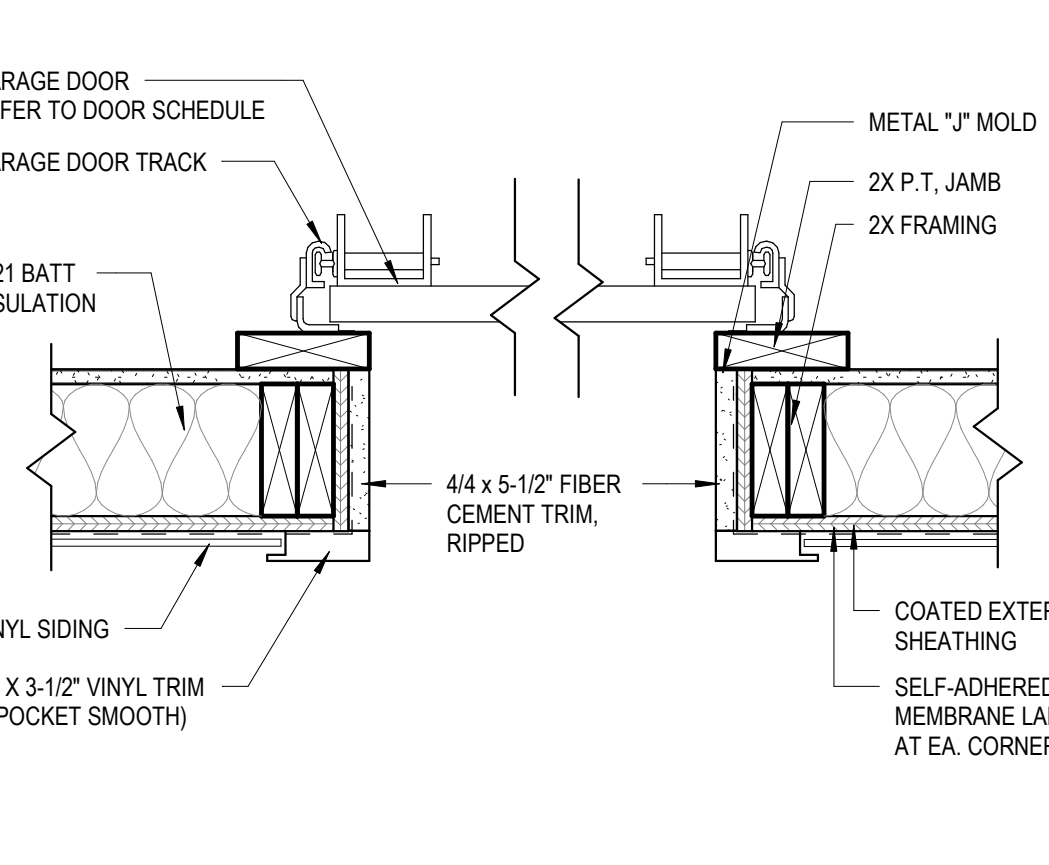
- A. REFER TO SPECIFICATIONS FOR HARDWARE GROUPS. ALL HARDWARE TO MEET INTERNATIONAL BUILDING CODE REQUIREMENTS AND MEET FAIR HOUSING GUIDELINES FOR ACCESSIBLE AND USABLE DOORS.
- B. PRIMARY ENTRY DOORS OF DWELLING UNIT EXTERIOR SIDE, PUBLIC AND COMMON USED DOORS MUST PROVIDE 32" CLEAR WIDTH AND HAVE 1/2" THRESHOLDS.
- C. BALCONY DOOR THRESHOLD TO NOT EXCEED 1/2" FOR IMPERVIOUS CONSTRUCTION OF THE WET SIDE.
- D. ALL UNITS SHALL HAVE LEVER TYPE HARDWARE ON ALL DOORS. IF CLOSER IS PROVIDED, SHALL NOT BE REQUIRED TO HAVE MORE THAN 5 LBF. TO OPERATE AND CLOSE UNLESS REQUIRED BY LOCAL FIRE AUTHORITY.



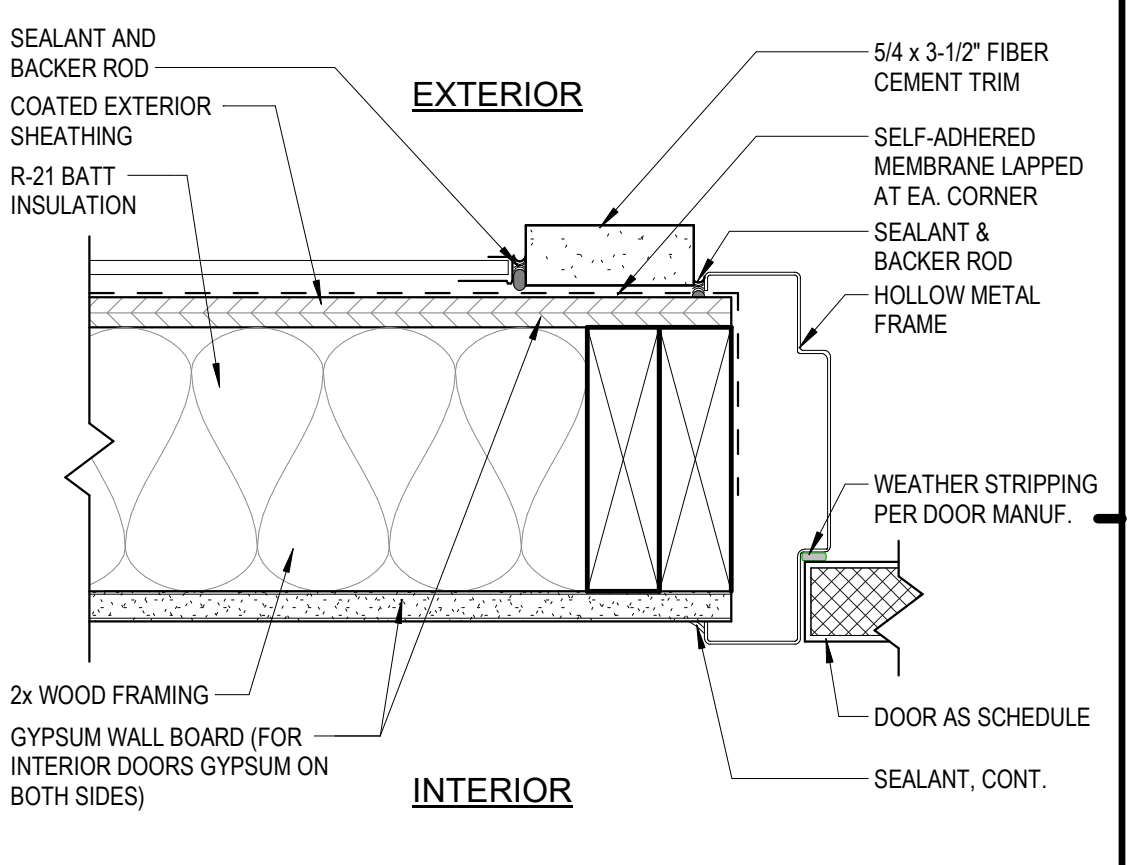
F3 EXT. DOOR JAMB DETAIL - BRICK
3" = 1'-0"



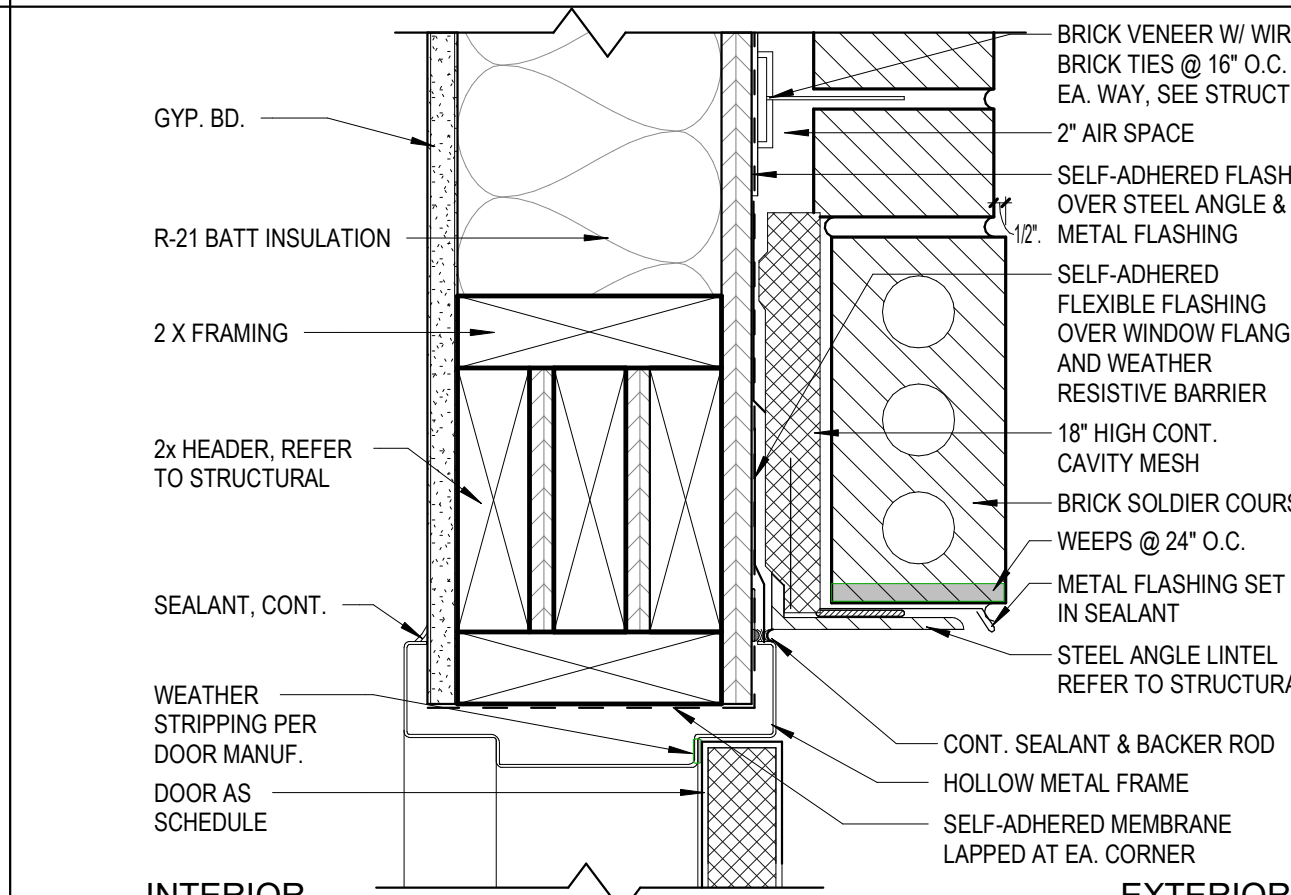
F5 TYPICAL INTERIOR DOOR JAMB DETAIL
3" = 1'-0"



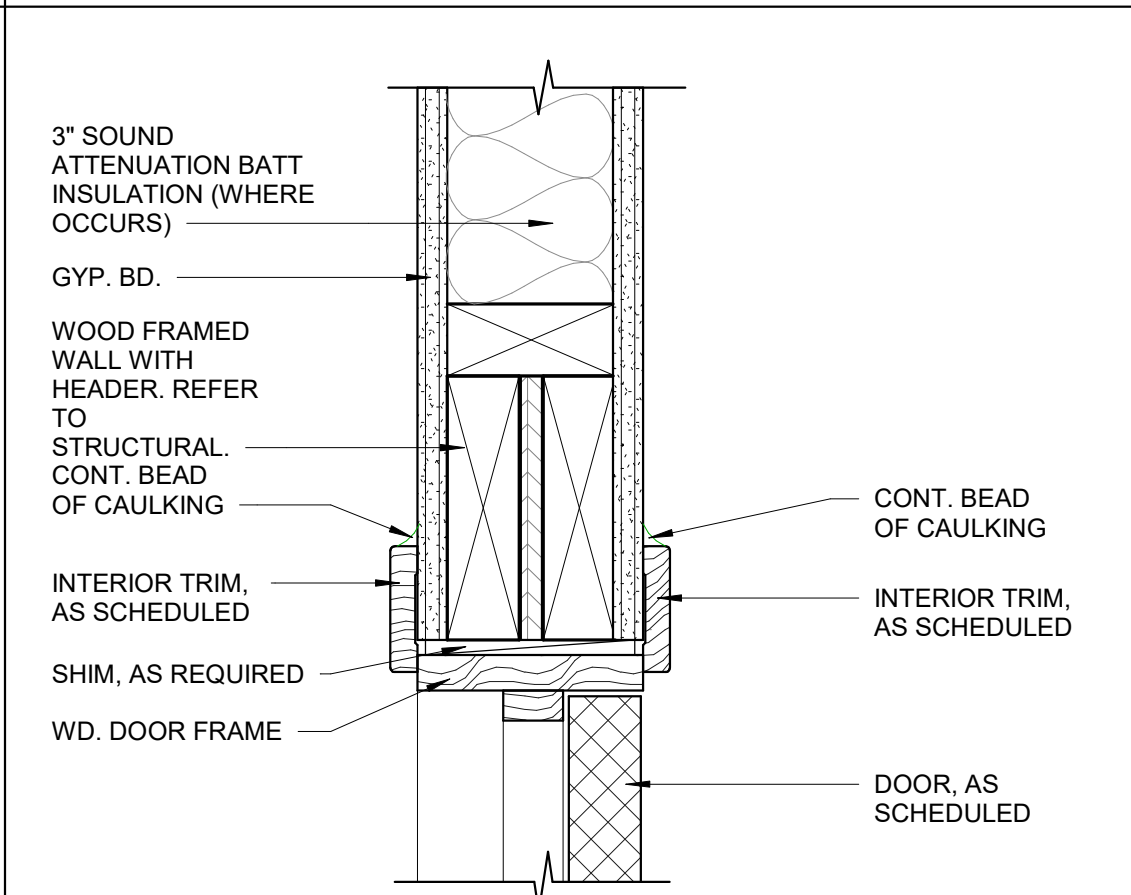
F7 GARAGE DOOR JAMB DETAIL
1 1/2" = 1'-0"



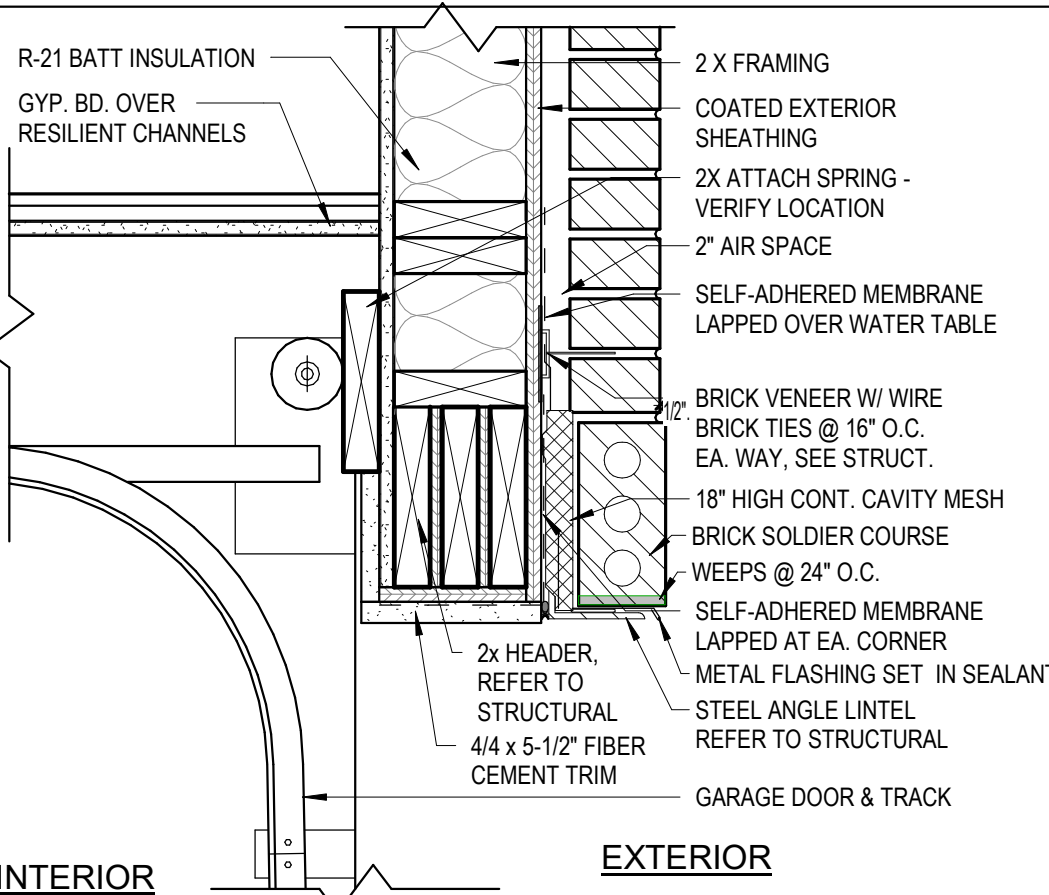
F11 EXT. DOOR JAMB DETAIL - SIDING
3" = 1'-0"



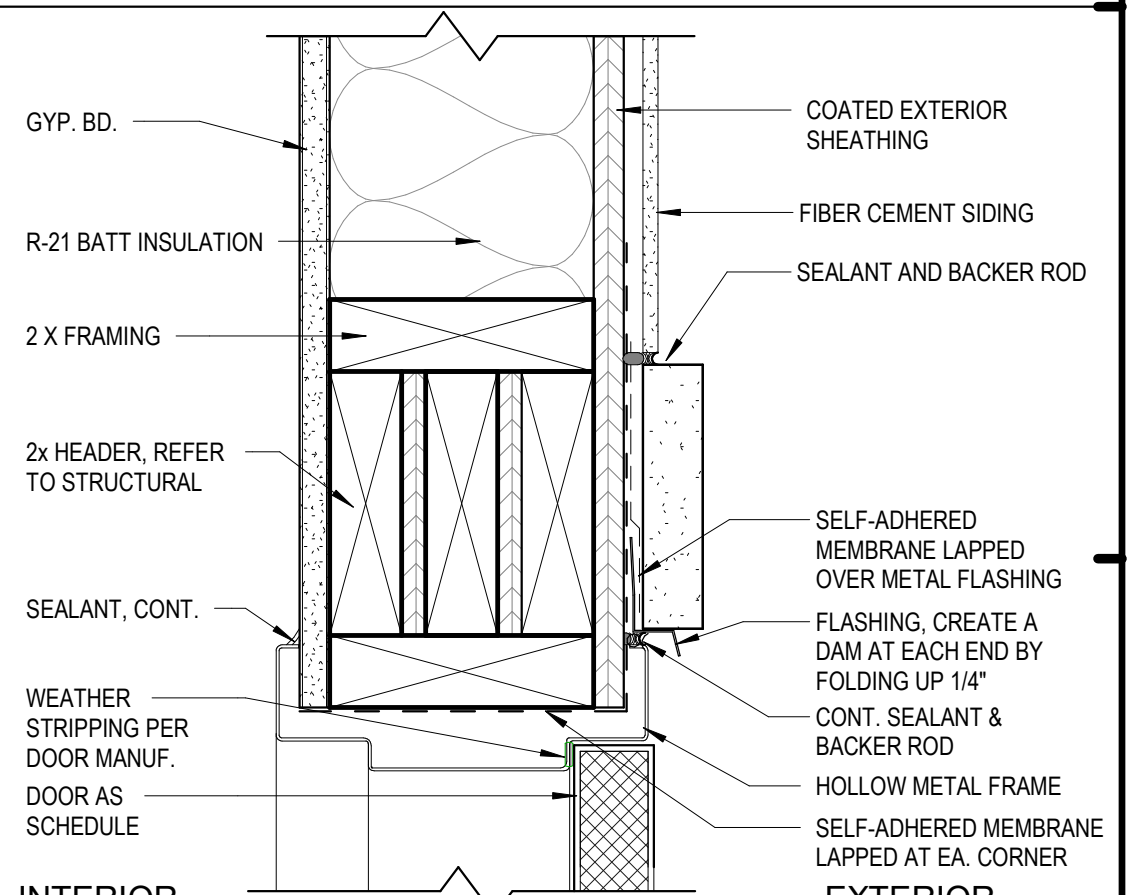
H3 EXT. DOOR HEAD DETAIL - BRICK
3" = 1'-0"



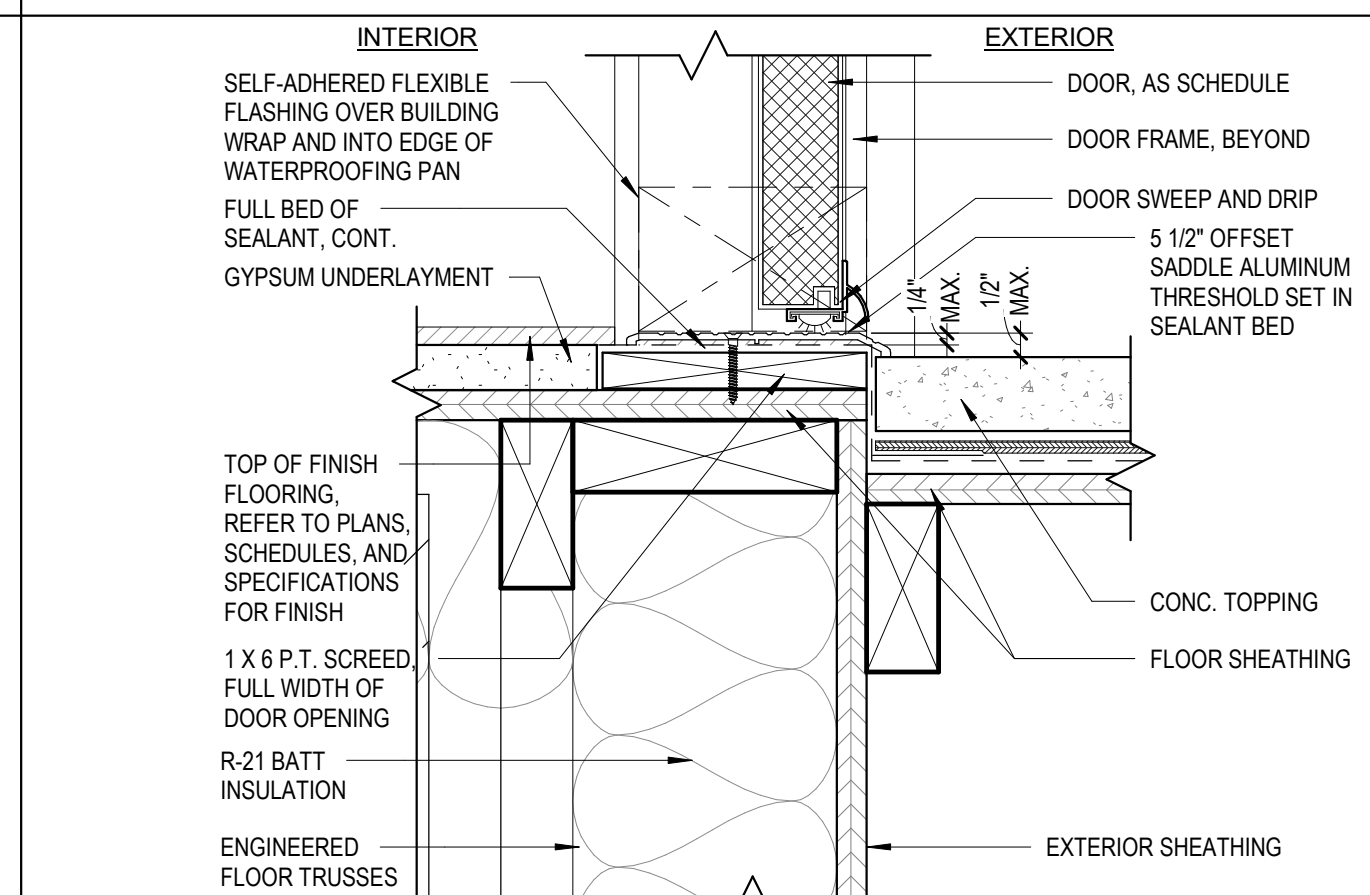
H5 TYPICAL INTERIOR DOOR HEAD DETAIL
3" = 1'-0"



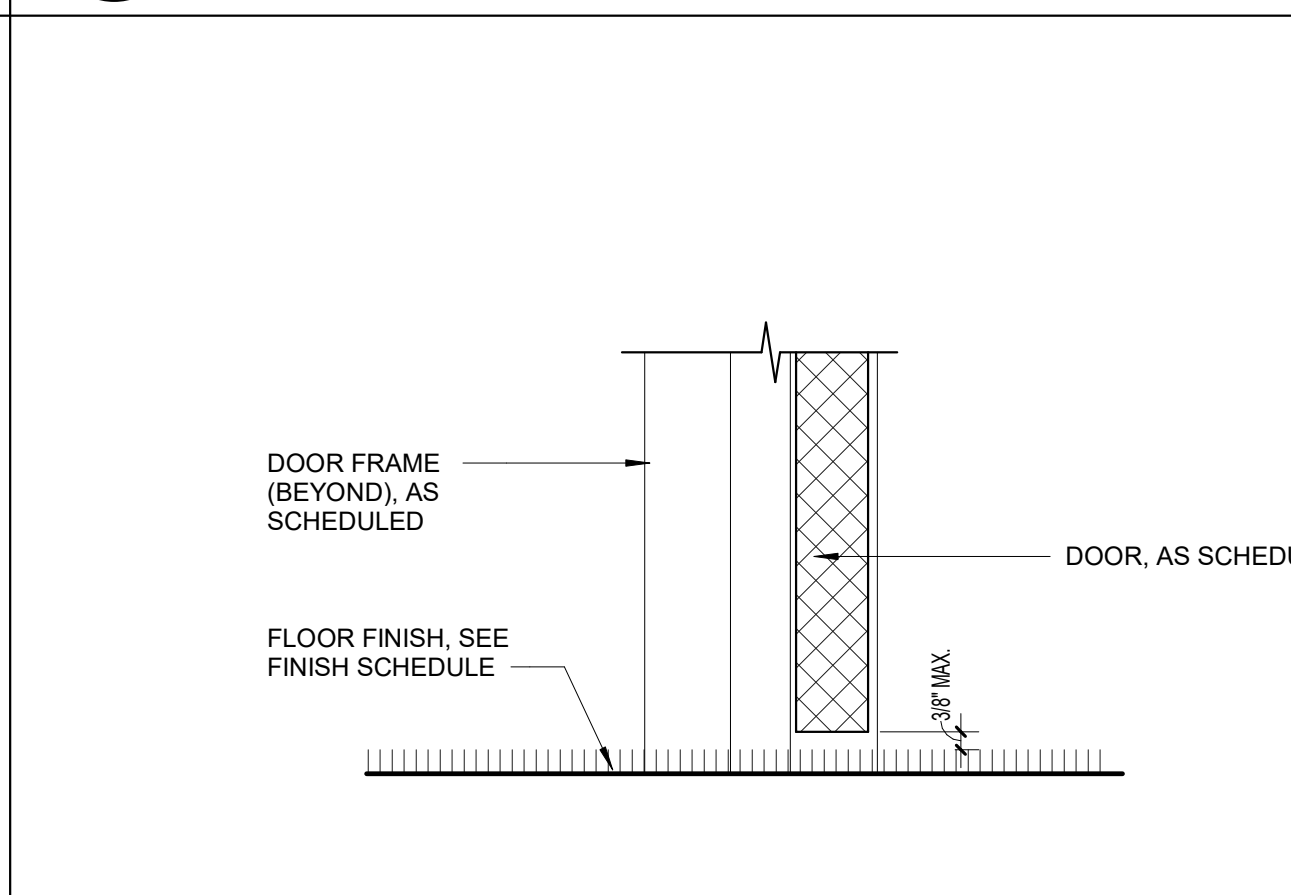
H7 GARAGE DOOR HEAD DETAIL
1 1/2" = 1'-0"



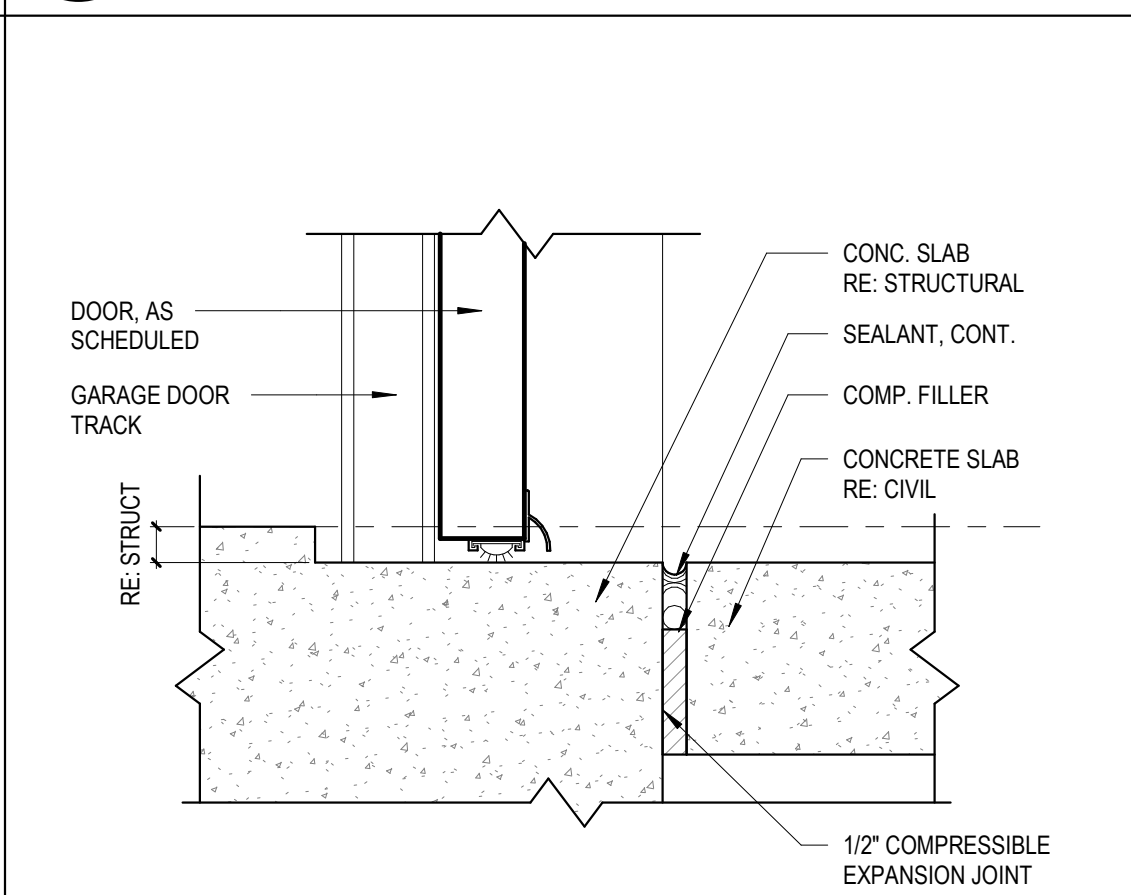
H11 EXT. DOOR HEAD DETAIL - SIDING
3" = 1'-0"



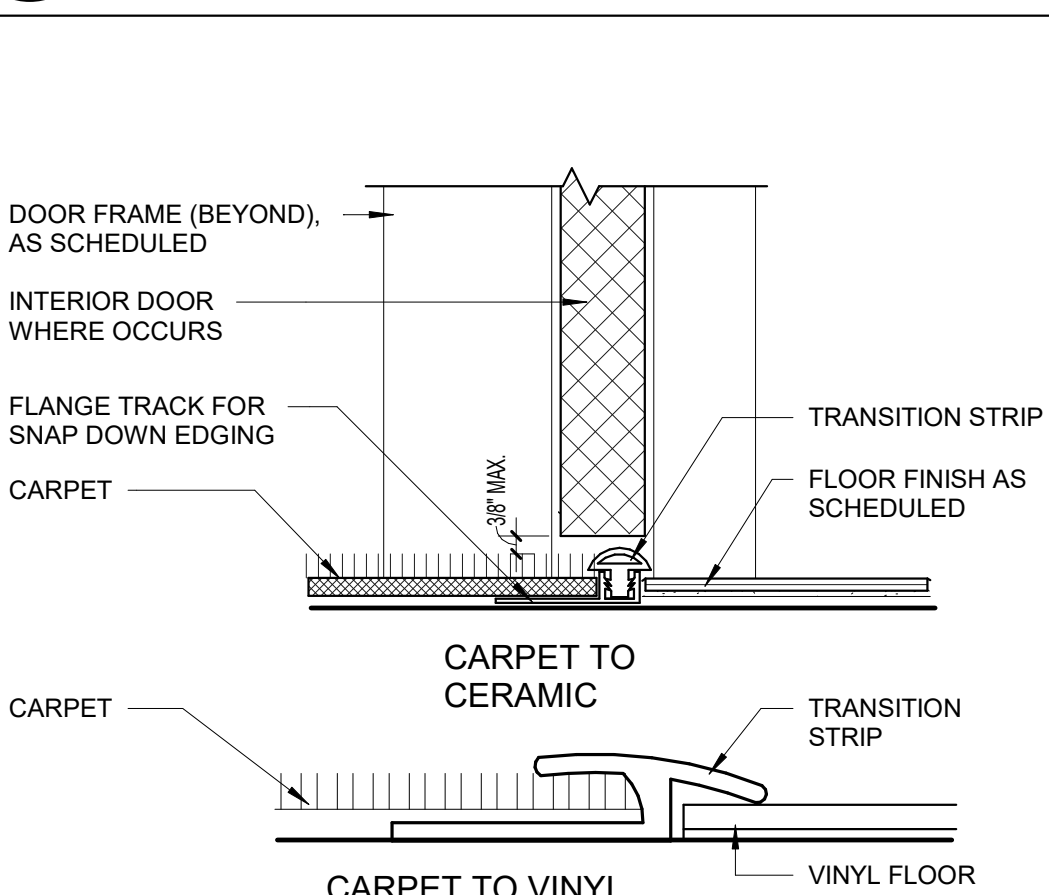
K3 EXT. THRESHOLD DETAIL - BALCONY/STAIR
3" = 1'-0"



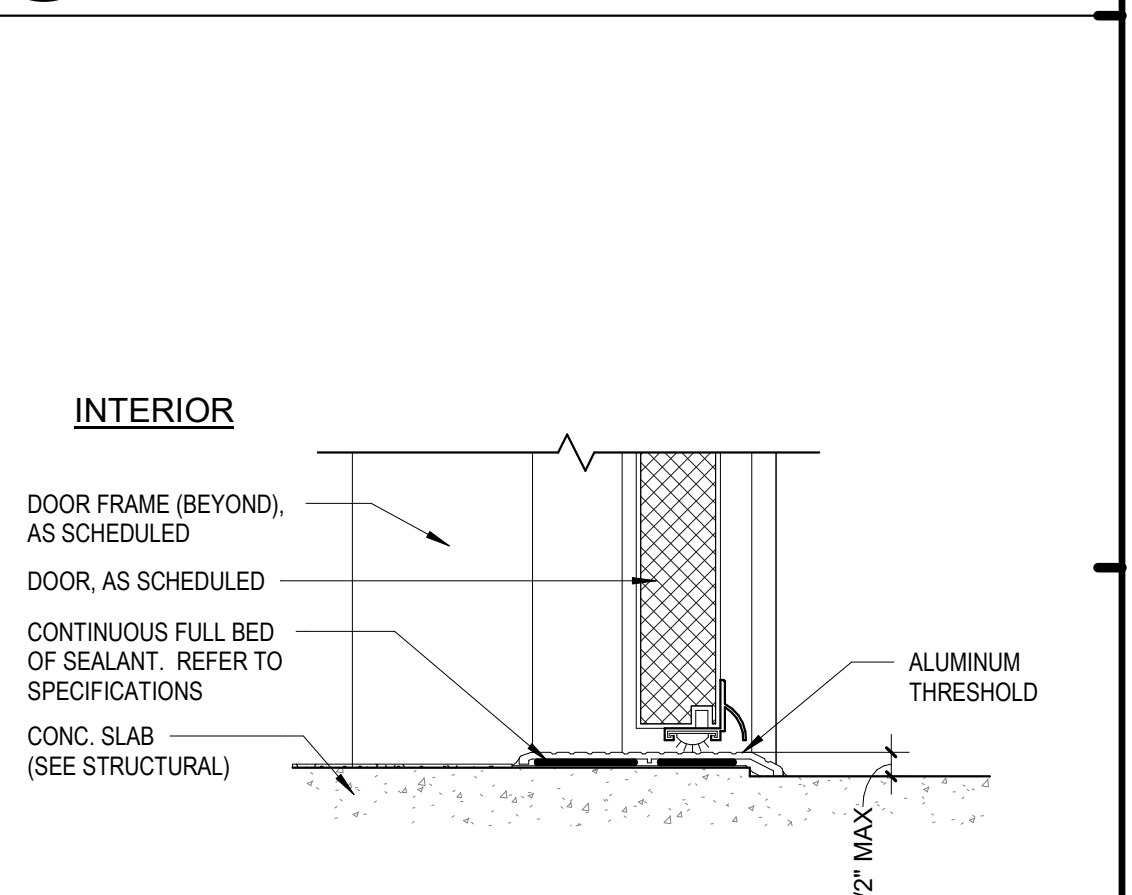
K5 INTERIOR DOOR THRESHOLD DETAIL
3" = 1'-0"



K7 GARAGE DOOR THRESHOLD DETAIL
3" = 1'-0"



K9 EXT. DOOR THRESHOLD CONDITIONS
3" = 1'-0"



K11 EXTERIOR DOOR THRESHOLD DETAIL
3" = 1'-0"

| ISSUE HISTORY | | |
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MICHAEL DOYE
SEAL

| | |
|--------------------|------------------|
| THE ROBERT MADISON | Drawn: MB |
| MADISON, ALABAMA | Checked: JK |
| | Approval: MS |
| | Date: 04/15/2022 |
| | Project #: 5722 |

DOOR SCHEDULE AND DETAILS

A7.01

1.1 DOOR HARDWARE SCHEDULE

Door Hardware Set No. 01

Locations: Unit Entry - Mark U01 - each to have the following:

| Qty. | Item | Manufacturer | Product | Finish |
|---------|---------------|------------------|--------------------|----------|
| 1/2 pr. | Spring Hinges | McKinney | 1522 4.5 x 4.5 | US26D |
| 1 | Latchset | Pamex | FLN - passage | US15-619 |
| 1 | Deadlock | Pamex or Kwikset | FD-2 - single cyl. | US15-619 |
| 1 | Door Guard | McKinney | DG03xEdge Guard | US26D |
| 1* | Door Viewer | Pamex | DD01-K160 | US26D |
| 1 | Stop | McKinney | FS02 | US26D |
| 1 set | Door Seals | McKinney | MCK S88D x LAR | NA |
| 1 | Door Sweep | McKinney | MCK 315CN-36" | AL |
| 1 | Threshold | McKinney | MCK 171A x LAR | AL |

* Provide two (2) door viewers at designated ANSI Type A unit entry doors.

Door Hardware Set No. 02

Locations: Bedroom, Bathroom - Mark U02, U04, - each to have the following:

| Qty. | Item | Manufacturer | Product | Finish |
|--------|-----------|--------------------------|---------------|----------|
| 11/2pr | Hinges | By prehung door supplier | McKinney | US26D |
| 1 | Latchset | Pamex | FLN - privacy | US15-619 |
| 1 | Door Stop | McKinney | DS36 or DS37 | US26D |
| 3 | Silencers | McKinney | SIM | NA |

Door Hardware Set No. 03

Locations: Closet - Mark U03 - each to have the following:

| Qty. | Item | Manufacturer | Product | Finish |
|------|--------------|---------------------|----------|--------|
| 6 | Hinges | By Prehung Supplier | McKinney | US26D |
| 2 | Dummy Trim | McKinney | 3U93-OL | US26D |
| 2 | Roller Latch | McKinney | RL1 | US26D |
| 2 | Silencers | McKinney | SIM | NA |

Door Hardware Set No. 04

Locations: Closet - Mark U09 - Bi-Pass Closet - each to have the following:

| Qty. | Item | Manufacturer | Product | Finish |
|-------|------------------|--------------|-----------|--------|
| 1 set | Bi-Pass Hardware | By door mfr. | Mfr. Std. | US26D |

Door Hardware Set No. 05

Locations: BiFold Closet - Mark U08 - each pair or 2 pair to have the following.

| Qty. | Item | Manufacturer | Product | Finish |
|-------|-----------------|--------------|-----------|--------|
| 1 set | BiFold Hardware | By door mfr. | Mfr. Std. | US26D |

Hardware Set No. 06 - Closet

Opening Number: U05

Each door to have:

| Qty. | Item | Manufacturer | Product | Finish |
|------|----------|--------------------------|---------|--------|
| 3 | Hinges | By Prehung Door Supplier | | |
| 1 | Latchset | 3U15-OL | US26D | SAR |

Hardware Set No. 07 - Exterior Patio

Opening Number: U06

Each to have:

| Qty. | Item | Manufacturer | Product | Finish |
|------|------------------------|----------------------|---------|--------|
| 3 | Hinges | TA2314 4.5 x 4.5 NRP | US32D | MCK |
| 1 | Latchset | 65U15-KL | US26D | SAR |
| 1 | Deadlock | 465 | US26D | SAR |
| 1 | Door Sweep | MCK 315 CN-36 | AL | MCK |
| 1 | Set Door Seals | MCK S88D x LAR | AL | MCK |
| 1 | Threshold | MCK 2005AV x LAR | AL | MCK |
| 1 | Spring Retaining Chain | Pamex | DD09-10 | PAM |

Hardware Set No. 08 - Exterior Patio

Opening Number: U07

Each to have:

| Qty. | Item | Manufacturer | Product | Finish |
|------|------------------------|----------------------|---------|--------|
| 3 | Hinges | TA2314 4.5 x 4.5 NRP | US32D | MCK |
| 1 | Latchset | 65U15-KL | US26D | SAR |
| 1 | Door Sweep | MCK 315 CN-36 | AL | MCK |
| 1 | Set Door Seals | MCK S88D x LAR | AL | MCK |
| 1 | Threshold | MCK 2005AV x LAR | AL | MCK |
| 1 | Spring Retaining Chain | Pamex | DD09-10 | PAM |

Hardware Set No. 09 - Utility, Storage Closet, Garage Entry

Opening Number: G01, G07

Provide Knox Box for Fire Riser Room Door access as accepted and located by authorities having jurisdiction.

Each to have:

| Qty. | Item | Manufacturer | Product | Finish |
|------|------------------------|------------------|---------|--------|
| 1 | Set Spring Hinges | 1522 4.5 x 4.5 | US26D | MCK |
| 1 | Latchset | 65U15-KL | US26D | SAR |
| 1 | Deadlock | 465 | US26D | SAR |
| 1 | Door Sweep | MCK 315 CN-36 | AL | MCK |
| 1 | Set Door Seals | MCK S88D x LAR | AL | MCK |
| 1 | Threshold | MCK 2005AV x LAR | AL | MCK |
| 1 | Spring Retaining Chain | Pamex | DD09-10 | PAM |

Hardware Set No. 10 - Elevator control room

Opening Number: G02

| Qty. | Item | Manufacturer | Product | Finish |
|-------|-------------|------------------|----------------------|---------|
| 4 pr. | Hinges | McKinney | 1522 4.5 x 4.5 | US26D |
| 1 | Latchset | BHP | - passage | 20126DC |
| 1 set | Flushbolts | McKinney | Door Manufacturer | US26D |
| 1 | Stop | McKinney | FS02 | US26D |
| 1 set | Door Seals | McKinney | MCK S88D x LAR | NA |
| 1 | Door Sweep | McKinney | MCK 315CN-36" | AL |
| 1 | Threshold | McKinney | MCK 171A x LAR | AL |
| 1 | Deadlock | Pamex or Kwikset | FD-2 - single cyl. * | AL |
| 2 | Door Closer | Pamex | GC 800 Series | AL |

* Dummy Trim at Interior side.

Hardware Set No. 11 - Pair Interior Opening

Opening Number: G04

| Qty. | Item | Manufacturer | Product | Finish |
|------|---------------------|------------------|---------|--------|
| 8 | Hinges | By Door Provider | | |
| 1 | Lockset | 10G04 - LL | US26D | SAR |
| 1 | Set flush bolts | By Door provider | | |
| 1 | Dummy trim latchset | | | |

Hardware Set No. 12 - Pair Exterior Opening

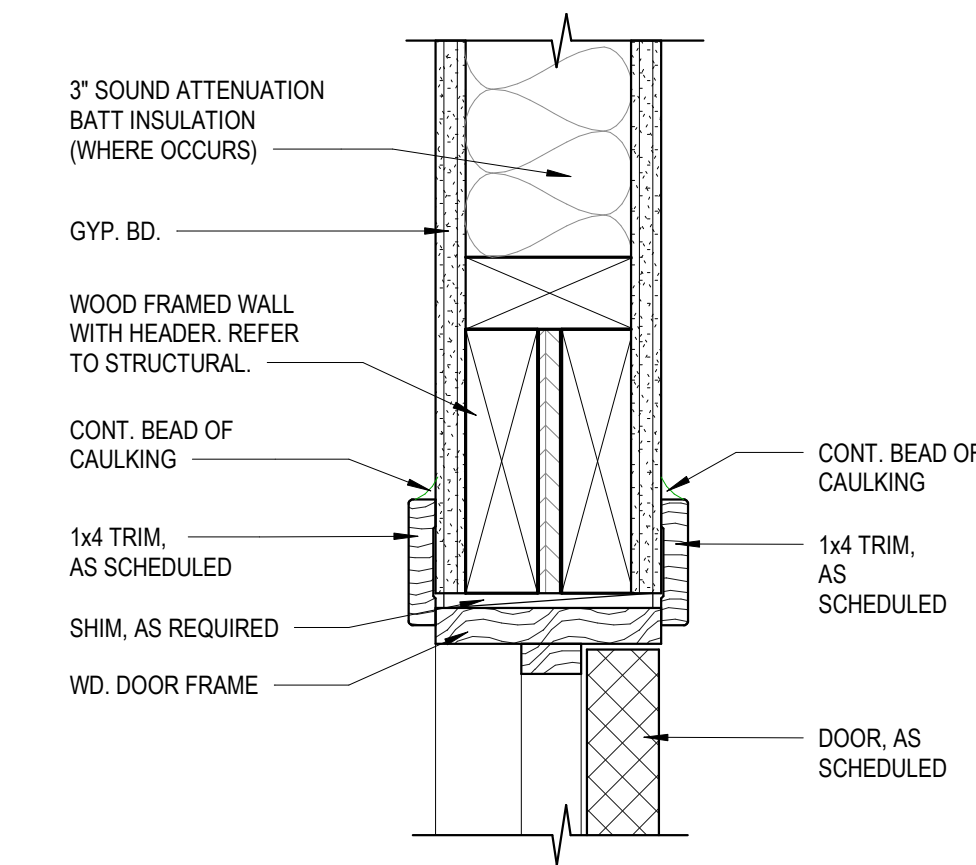
Opening Number: G06

| Qty. | Item | Manufacturer | Product | Finish |
|------|--------------|-----------------------|---------|--------|
| 8 | Hinges | By Door Provider | | |
| 2 | Exit Devices | 3727 x 28L - LL - 26D | PEN | SAR |
| 2 | Door Closers | 1431-PS | EN | SAR |
| 2 | Kickplates | KP50 6" x 1" LWOD | US32D | MCK |
| 2 | Door Stops | FS02 | US32D | MCK |
| 1 | Threshold | By Door Provider | | |
| 1 | Set Gasket | By Door Provider | | |
| 1 | Astragal | By Door Provider | | |

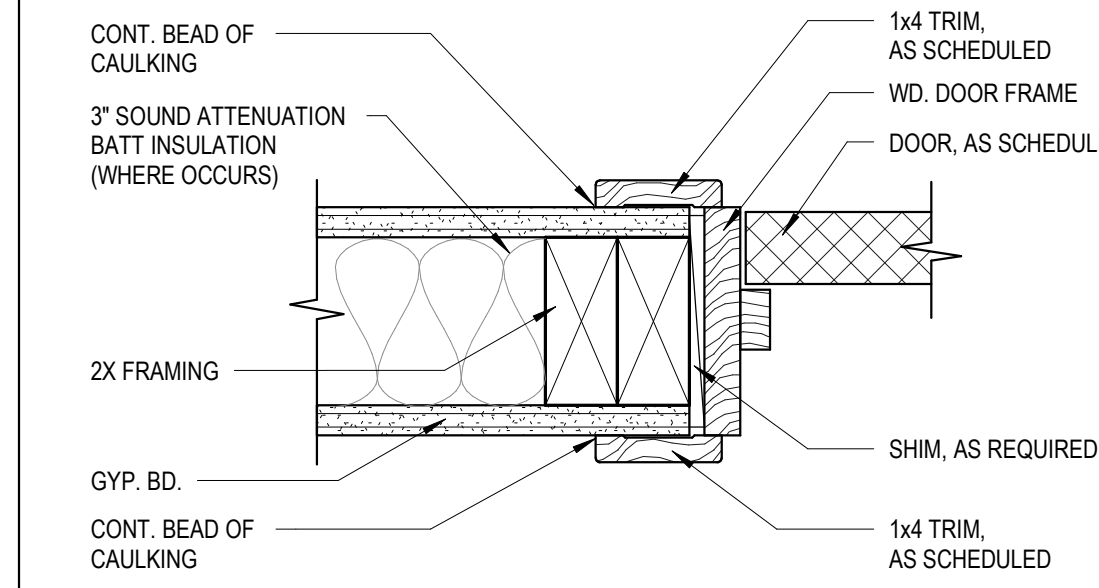
Hardware Set No. 13 - Single Exterior Opening

Opening Number: G05

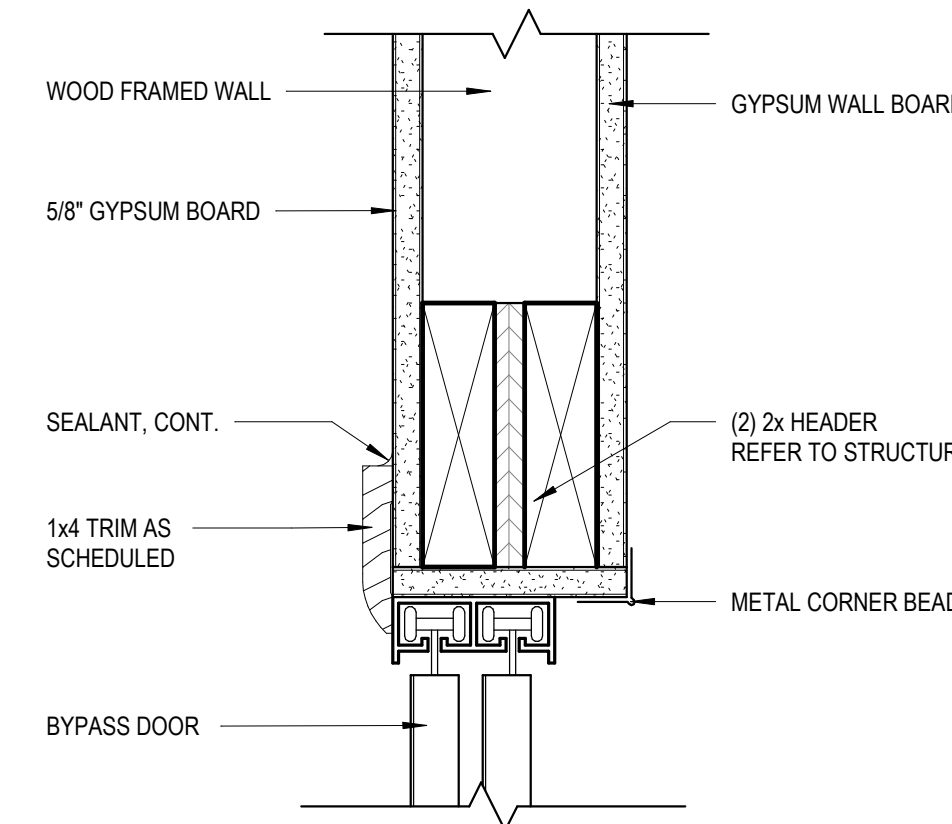
| Qty. | Item | Manufacturer | Product | Finish |
|------|-------------|-----------------------|---------|--------|
| 4 | Hinges | By Door Provider | | |
| 1 | Exit Device | 3828 x 28L - LL - 26D | PEN | SAR |
| 1 | Door Closer | 1431-PS | EN | SAR |
| 1 | Kickplate | KP50 6" x 2" LWOD | US32D | MCK |
| 1 | Door Stop | FS02 | US32D | MCK |
| 1 | Threshold | By Door Provider | | |
| 1 | Set Gasket | By Door Provider | | |



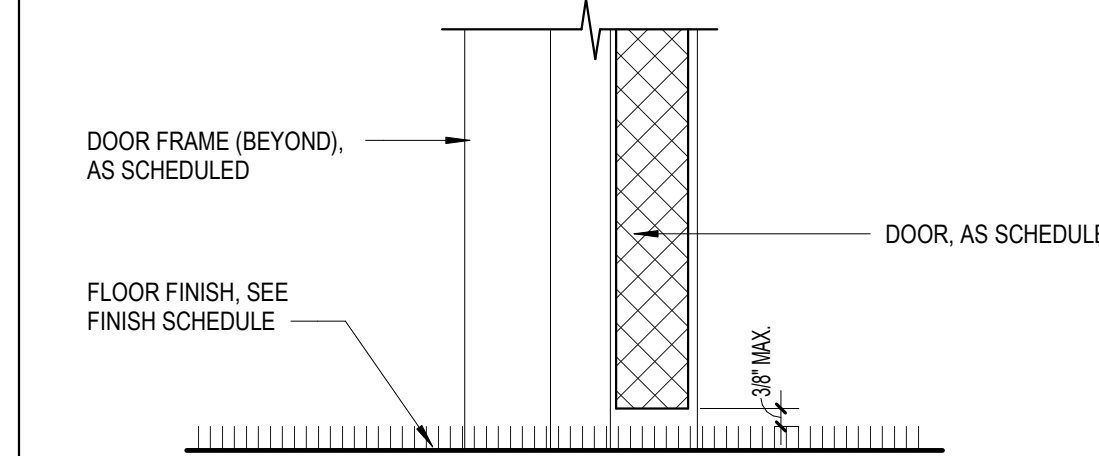
B9 TYPICAL INTERIOR DOOR HEAD DETAIL
3" = 1'-0"



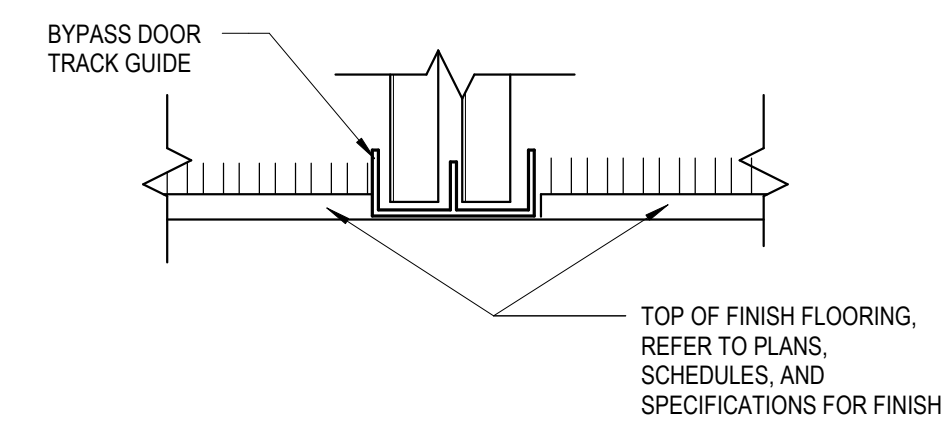
D9 TYPICAL INTERIOR DOOR JAMB DETAIL
3" = 1'-0"



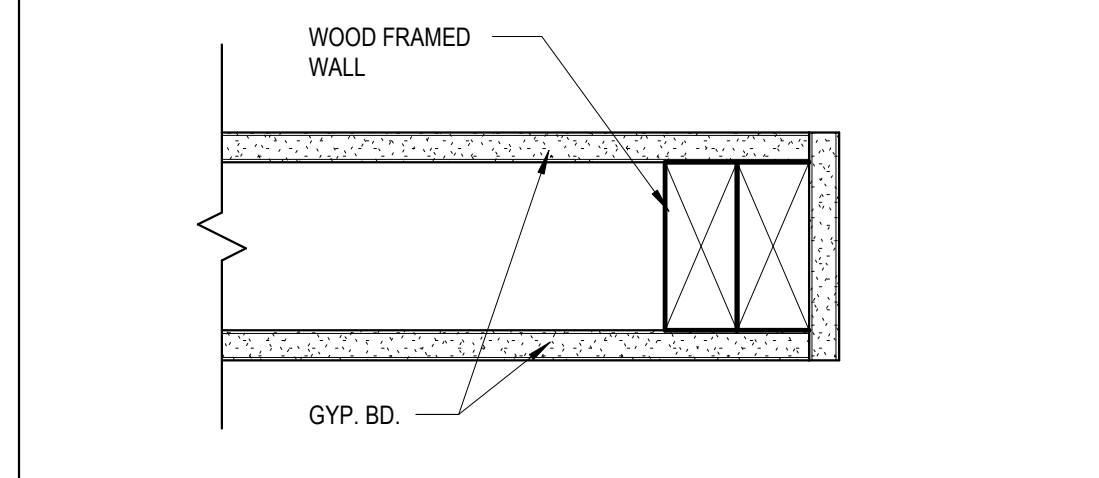
F7 BI-PASS DOOR HEAD DETAIL
3" = 1'-0"



F9 INTERIOR DOOR THRESHOLD DETAIL
3" = 1'-0"



H7 BI-FOLD DOOR THRESHOLD DETAIL
3" = 1'-0"



H9 CASED OPENING JAMB DETAIL
3" = 1'-0"

ISSUE HISTORY

| No. | Date | Description |
|-----|------------|------------------|
| 1 | 04/15/2022 | PERMIT SUBMITTAL |

REVISION HISTORY

| No. | Date | Description |
|-----|------|-------------|
|-----|------|-------------|

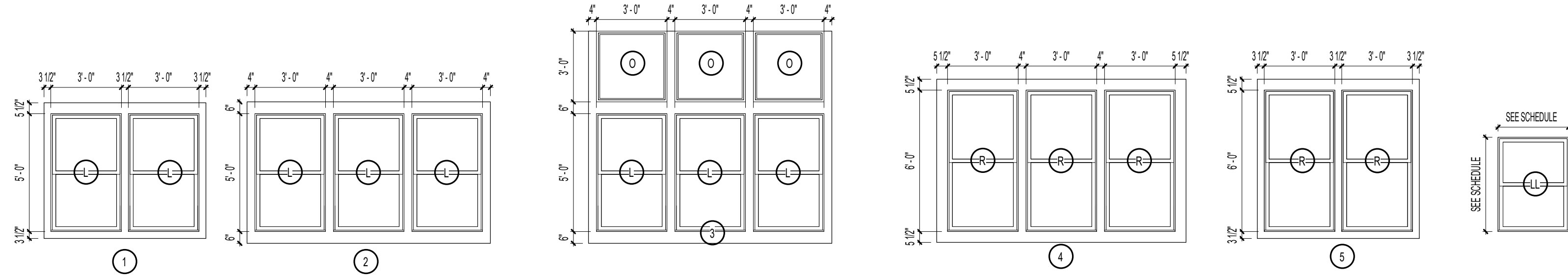
FUGLEBERG KOCH
2555 Temple Trail, Winter Park, FL 32789 (407) 629-0595
www.fuglebergkoch.com AA26002103

CONSULTANT
STATE OF ALABAMA
MICHAEL GOVE
8284
4/15/22
REGISTERED ARCHITECT

| | |
|--------------------|------------------|
| THE ROBERT MADISON | Drawn: MB |
| MADISON, ALABAMA | Checked: JK |
| | Approval: MS |
| | Date: 04/15/2022 |
| | Project #: 572 |

DOOR DETAILS
A7.02

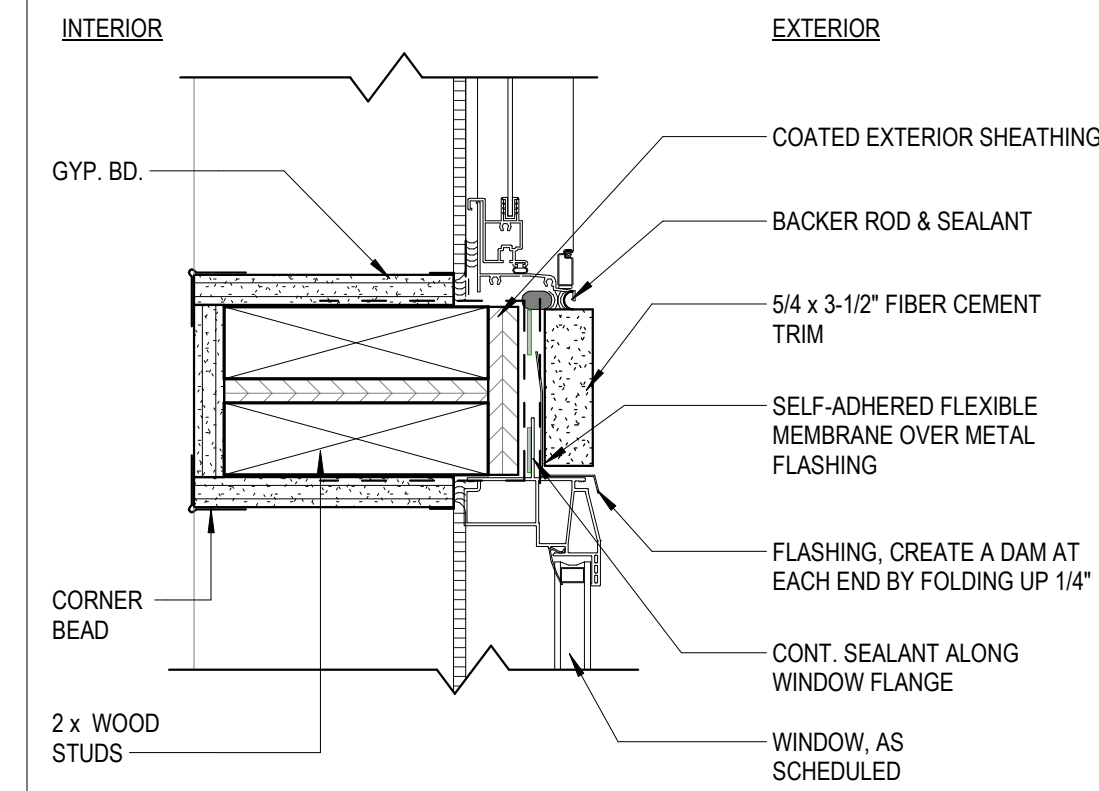
| WINDOW SCHEDULE | | | | | | | |
|-----------------|-------------|----------|-------------|-----------|---------|-------|-------------|
| TYPE | WINDOW UNIT | | | GLAZING | | FRAME | REMARKS |
| | WIDTH | HEIGHT | HEAD HEIGHT | THICKNESS | U VALUE | SHGC | |
| I | 3' - 0" | 5' - 0" | 8' - 0" | 1/4" TEMP | .30 | .25 | HM |
| L | 3' - 0" | 5' - 0" | 8' - 0" | 3/4" | 0.34 | 0.27 | VINYL LOW-E |
| LL | 3' - 0" | 4' - 0" | | 3/4" | 0.34 | 0.27 | VINYL LOW-E |
| O | 2' - 10" | 2' - 10" | | | | | |
| R | 3' - 0" | 6' - 0" | | 3/4" | 0.34 | 0.27 | VINYL LOW-E |
| SS | 1' - 6" | 8' - 0" | 8' - 0" | | | | |



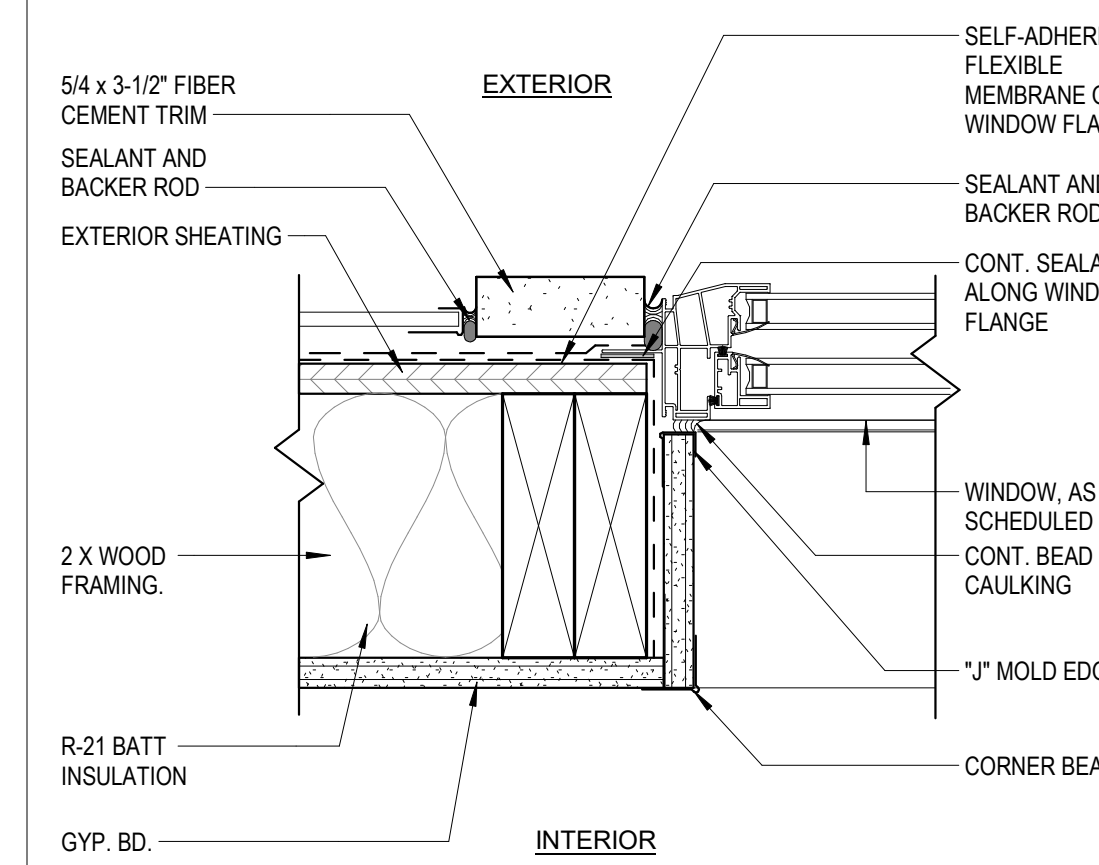
WINDOW TYPES
1/4" = 1'-0"

WINDOW NOTES:

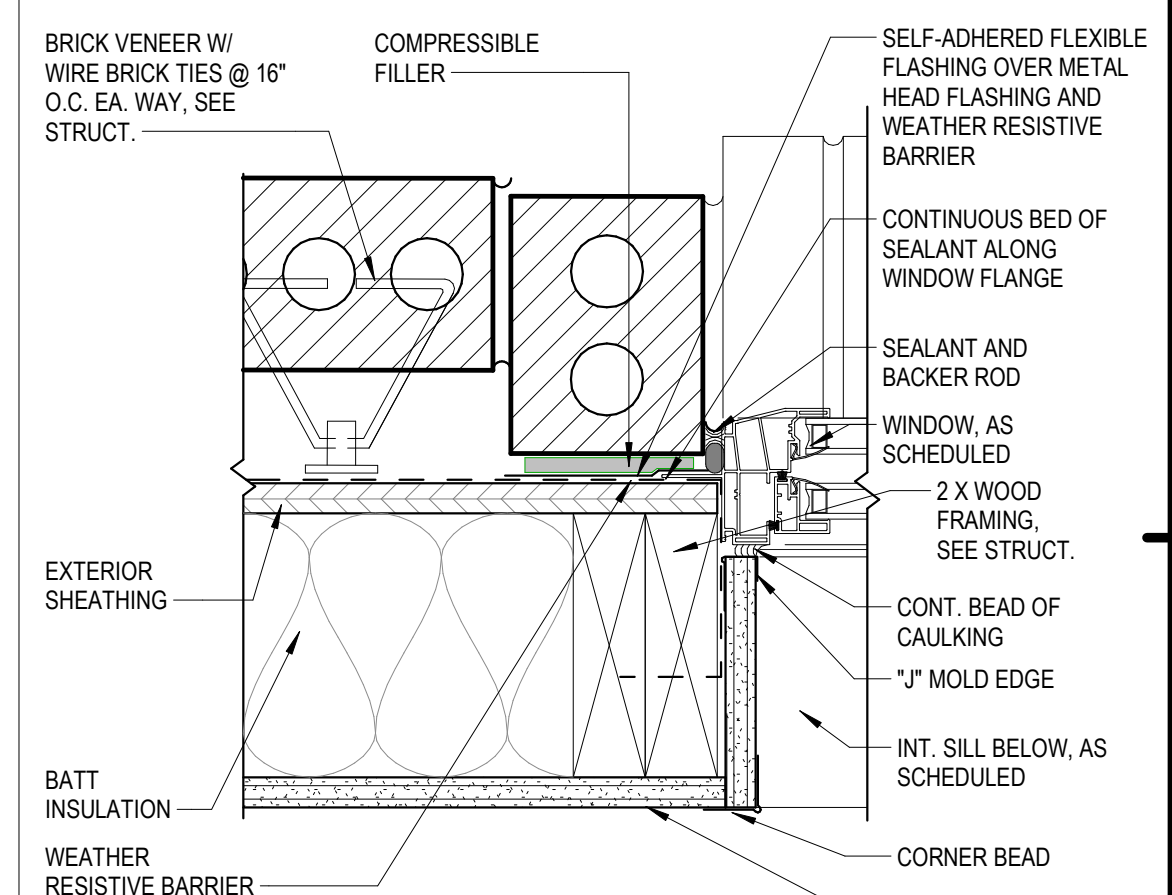
- A. VERIFY ROUGH OPENING REQUIRED WITH WINDOW MANUFACTURER.
- B. WINDOW MANUFACTURER SHALL PROVIDE CERTIFICATION, SIGNED AND SEAL BY A REGISTERED ALABAMA PROFESSIONAL THAT:
 - 1- WINDOWS WILL BE ABLE TO WITHSTAND REQUIRED WIND LOADS AND PRESSURE.
 - 2- TO SUPPLY TYPE AND NUMBER OF FASTENERS REQUIRED TO SECURE FRAME TO HEAD, JAMBS & SILL OF ALL WINDOW OPENINGS.
- C. PROVIDE SEALANT AT ALL SCREW HOLES PROVIDED FOR FASTENING PRIOR TO FASTENER INSTALLATION.
- D. WINDOWS UNITS SHALL BE ANCHOR THROUGH THE JAMB, ANCHORS SHALL BE SECURELY FASTENED IN TO THE STRUCTURAL MATERIAL.
- E. PROVIDE TEMPERED GLASS AT ALL WINDOWS LOCATIONS WHERE THE FOLLOWING CONDITIONS EXIST:
 - 1. LOWER SASH IF SILL HEIGHT IS BELOW 18"
 - 2. GLAZING ADJACENT TO A DOOR WHERE THE NEAREST VERTICAL EDGE OF THE GLAZING IS WITHIN A 24 INCH ARC OF EITHER VERTICAL EDGE OF THE DOOR IN A CLOSED POSITION.
 - 3. TOP EDGE GREATER THAN 36" ABOVE THE FINISHED FLOOR.
 - 4. THE EXPOSED AREA OF AN INDIVIDUAL WINDOW PANE IS GREATER THAN 9 SQ. FT.



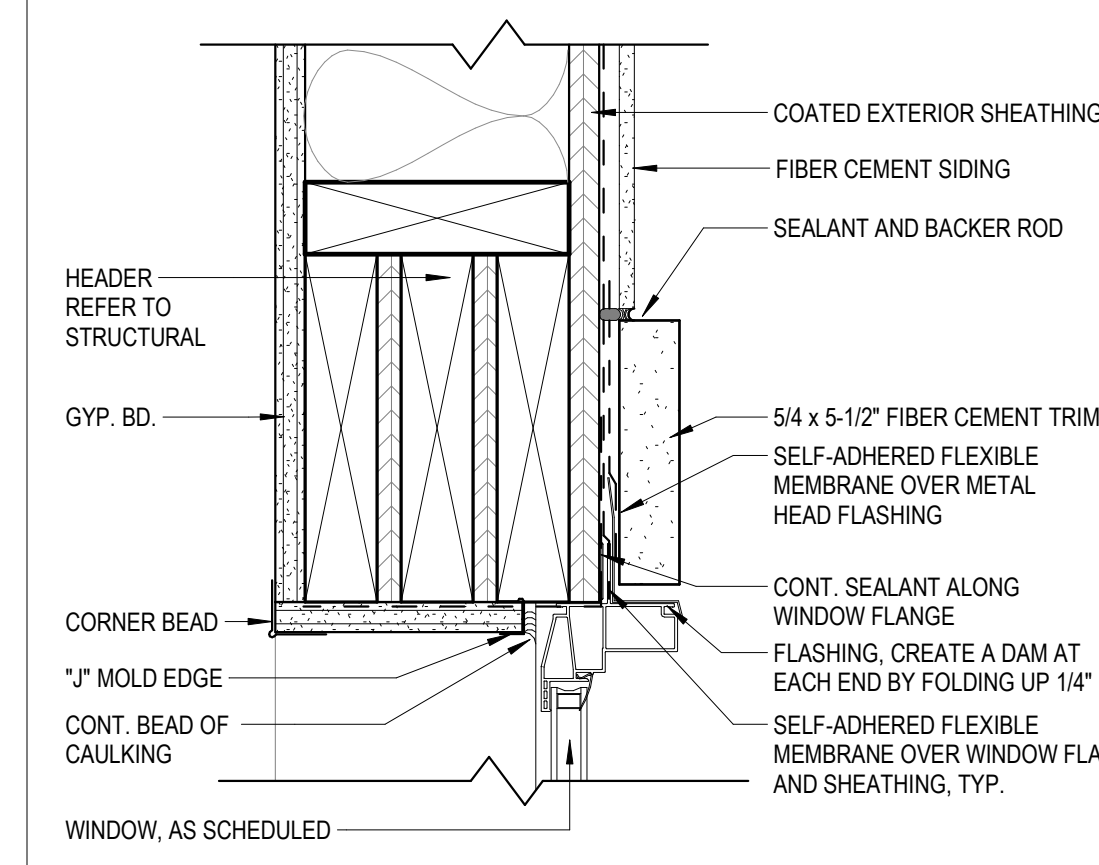
D9 TRANSOM WINDOW HEAD/SILL
3" = 1'-0"



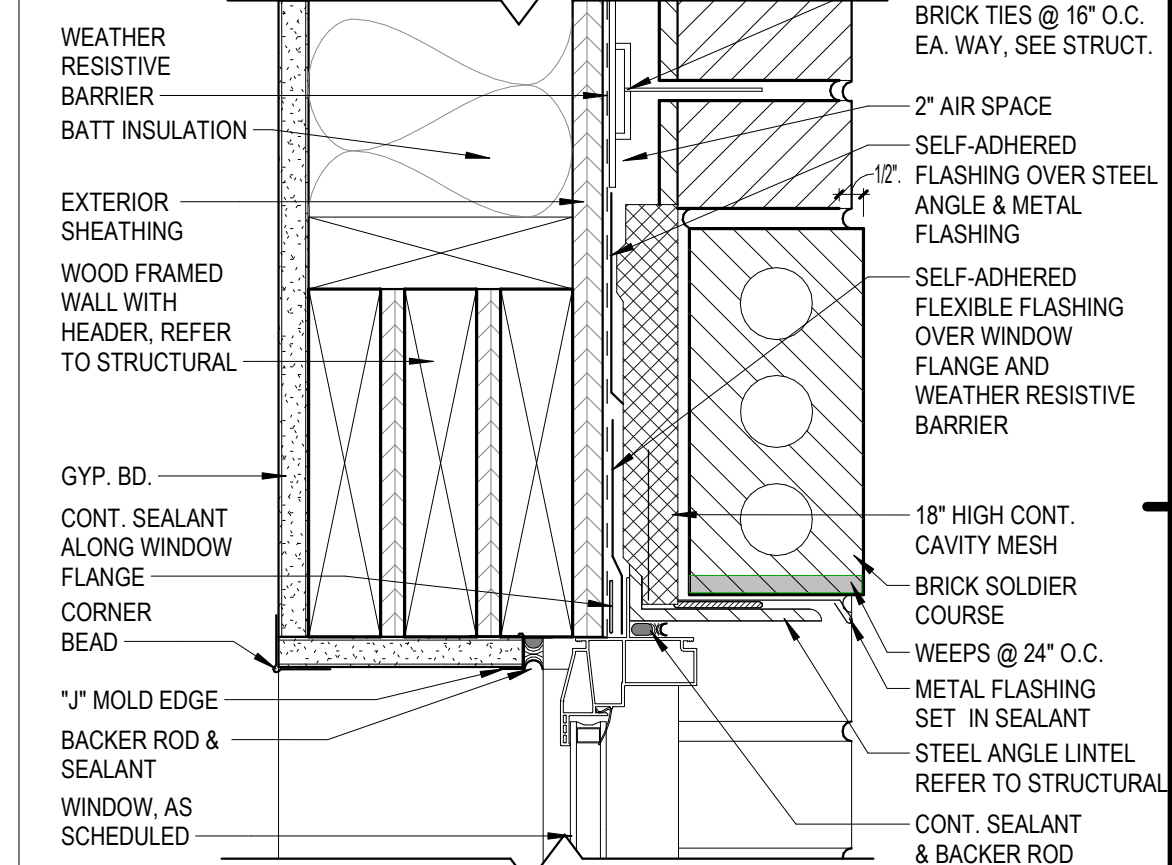
F9 WINDOW JAMB DETAIL AT SIDING
3" = 1'-0"



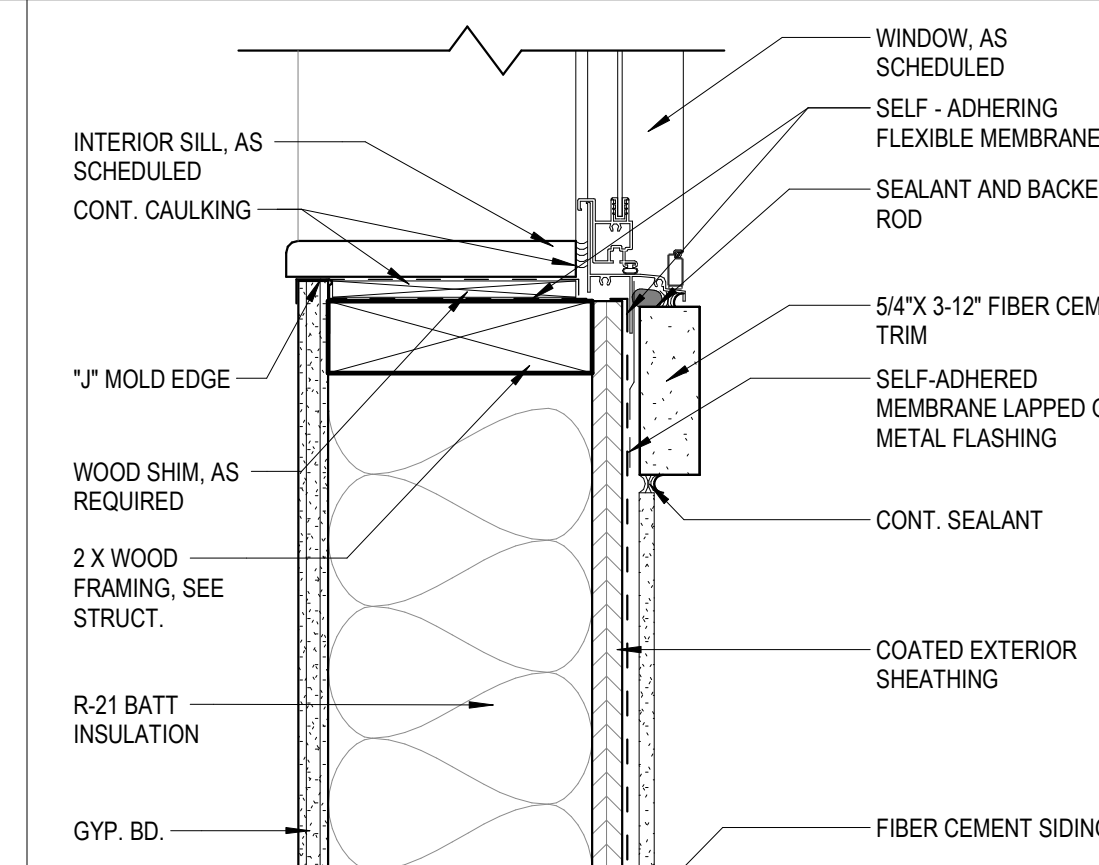
F11 WINDOW JAMB DETAIL AT BRICK
3" = 1'-0"



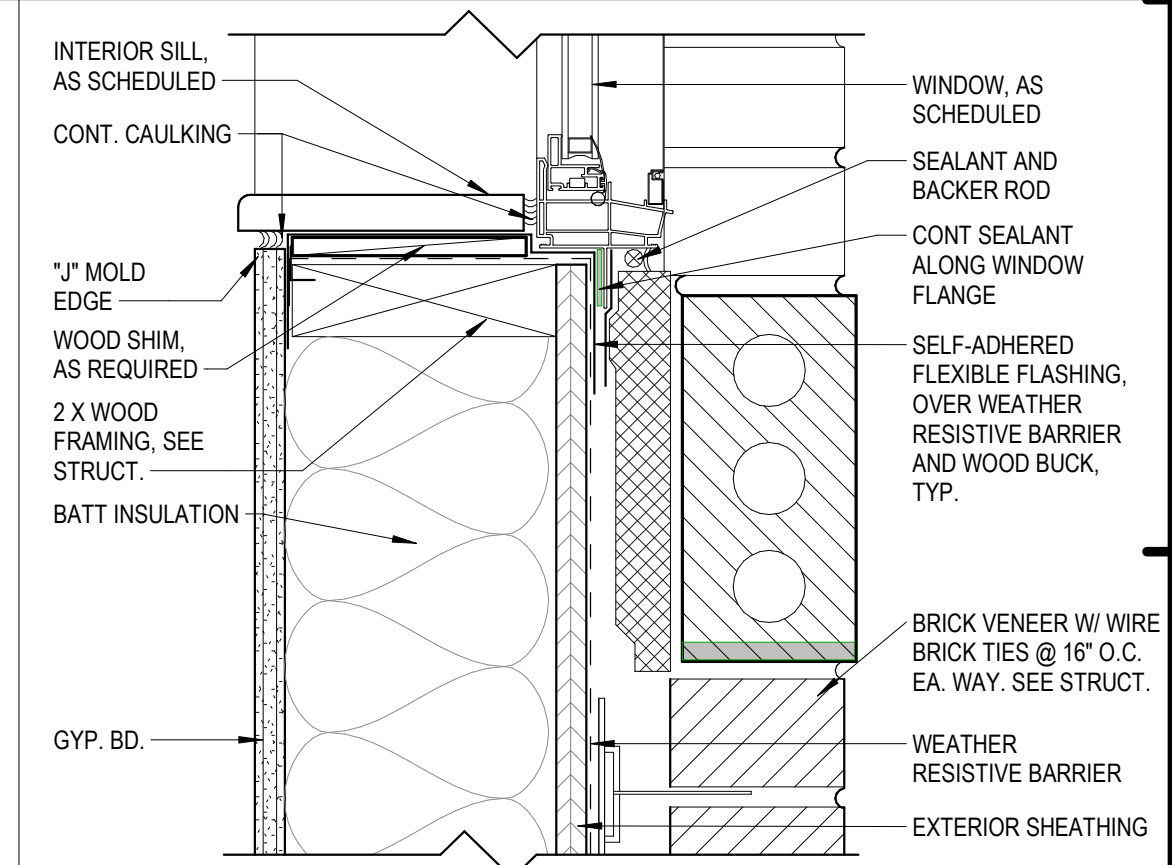
H9 WINDOW HEAD DETAIL AT SIDING
3" = 1'-0"



H11 WINDOW HEAD DETAIL AT BRICK TRIM
3" = 1'-0"



K9 WINDOW SILL DETAIL - SIDING
3" = 1'-0"



K11 WINDOW SILL DETAIL AT BRICK TRIM
3" = 1'-0"

ISSUE HISTORY

| No. | Date | Description |
|-----|------------|------------------|
| 1 | 04/15/2022 | PERMIT SUBMITTAL |

REVISION HISTORY

| No. | Date | Description |
|-----|------|-------------|
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www.fuglebergkoch.com AA26002103

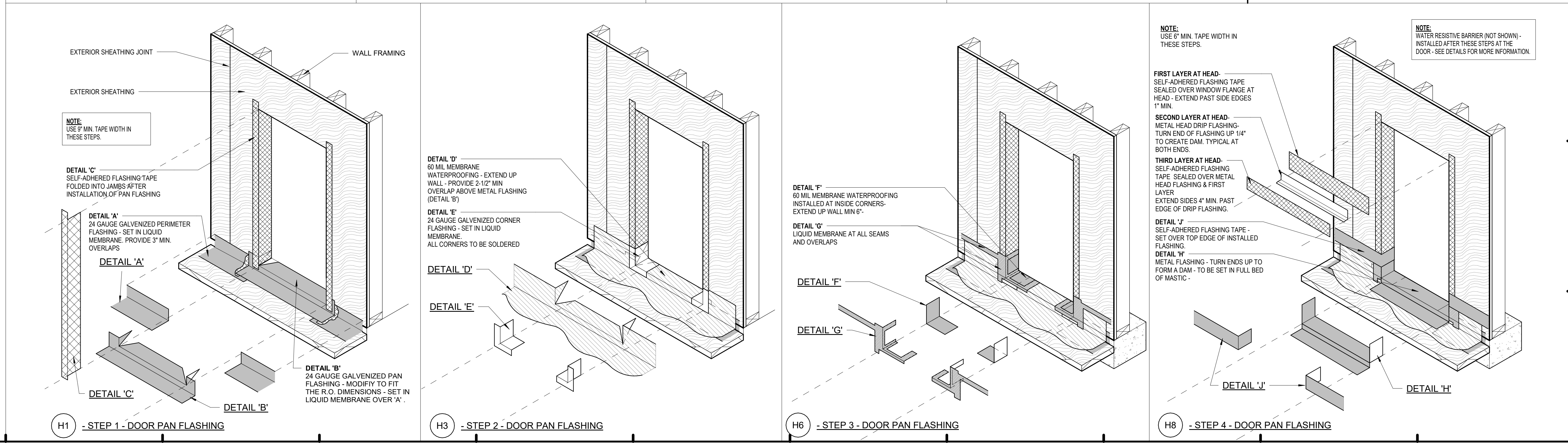
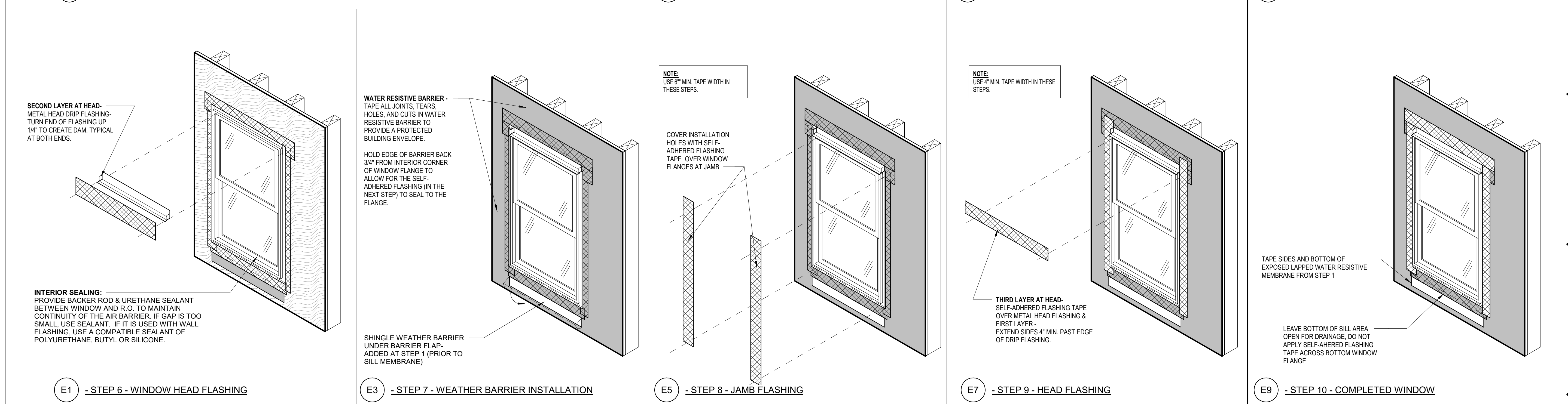
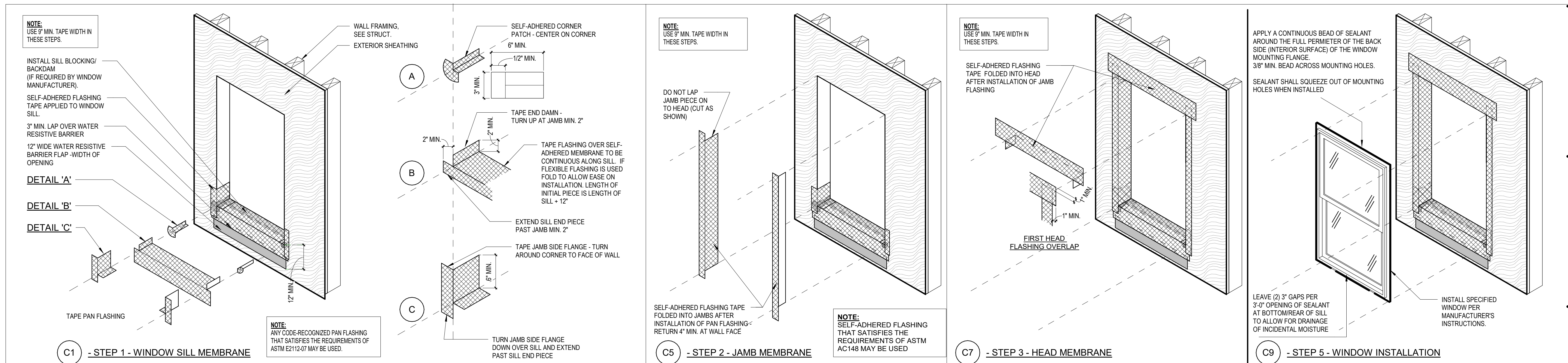
CONSULTANT
STATE OF ALABAMA
8234
4/15/22
REGISTERED ARCHITECT

MICHAEL GOVE
SEA

THE ROBERT MADISON
MADISON, ALABAMA
Date: 04/15/2022
Project #: 5722

WINDOW SCHEDULE AND DETAILS

A7.03



| ISSUE HISTORY | | |
|---------------|------------|------------------|
| No. | Date | Description |
| 1 | 04/15/2022 | PERMIT SUBMITTAL |
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| REVISION HISTORY | | |
|------------------|------|-------------|
| No. | Date | Description |
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CONSULTANT

STATE OF ALABAMA
Professional Seal
8234
4/15/22
REGISTERED ARCHITECT

MICHAEL GOVE
SEA

THE ROBERT MADISON

MADISON, ALABAMA

WINDOW AND DOOR TAPING PROCEDURES

A7.04

Drawn: MB
Checked: JK
Approval: MS
Date: 04/15/2022
Project #: 572

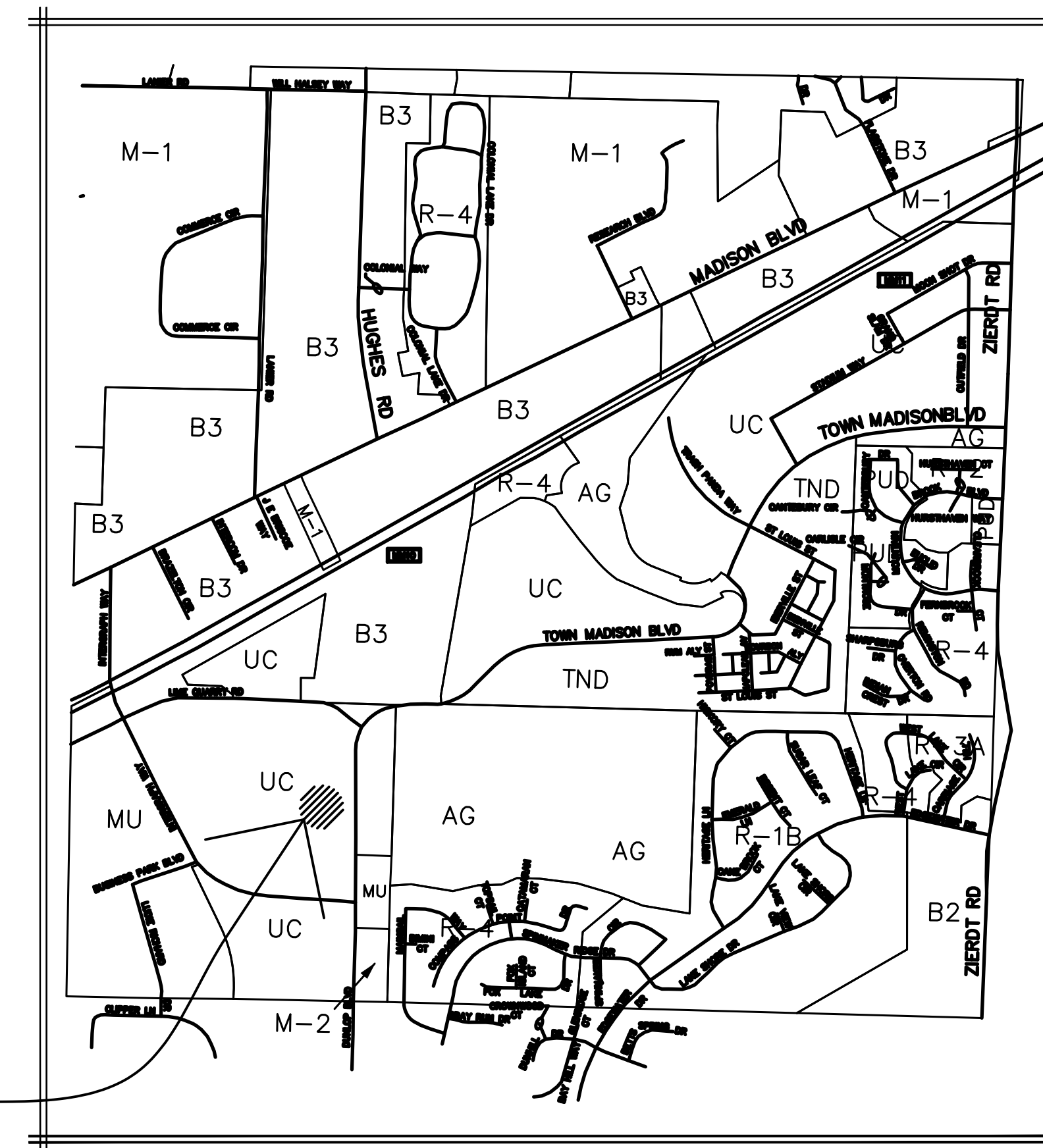
PLOTTED: 04/02/22 12:50:21 PM

The Roberts Apartments at Town Madison

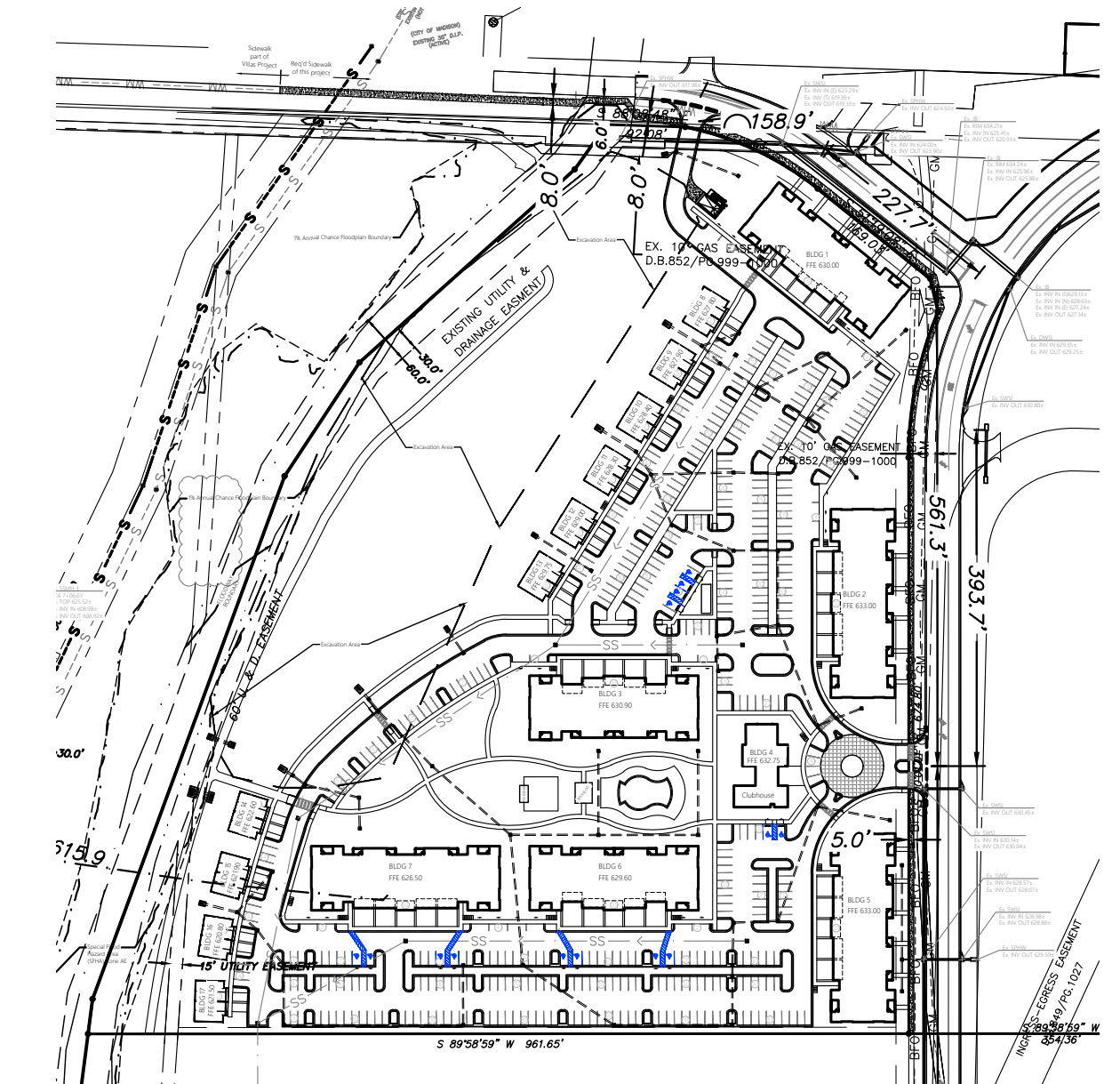
Address:
Dunlop Blvd
Madison, AL 35758

Prepared for:
Rohdie Group

Plan Set Date:
November 16, 2021



Site



FINAL FOR DEVELOPMENT
DEC 8 9 2021

General Notes:

1. The locations of existing utilities are shown in as approximate only. The contractor shall verify the exact location of all existing utilities before commencing work. Contractor shall be fully responsible for any and all damages which might occur by his failure to exactly locate and preserve any and all utilities.
2. Contractor is responsible for making application and paying for necessary permits.
3. The Contractor shall prevent the destruction of all survey monuments, bench marks, property corners and all other survey points. Where the removal of such points are necessary for the accomplishment of the work, the Contractor shall inform the Engineer in writing, prior to the disturbance of any point, and shall not disturb the point until written permission to do so has been issued by the Engineer.
4. All existing trees outside of the limits of work shall be protected during the accomplishment of the work, and are not to be damaged in any manner.
5. All boulders, debris, excess construction materials, material generated from demolition of existing structures and facilities or trash shall be removed from site at contractor's expense.
6. Pavement cuts shall be repaired with material in-kind to that removed.
7. In accordance with generally accepted construction practices, the contractor is solely and completely responsible for conditions of the job site, including safety of all persons and property during performance of the work. This requirement applies continuously and shall not be limited to normal working hours.
8. Contractor shall provide adequate traffic control devices and safety measures for construction work within public right-of-ways in accordance with the Manual on Uniform Traffic Control Devices for Streets and Highways.
9. The duty of the Engineer to conduct construction observation of the contractor's performance is not intended to include review of the adequacy of the Contractor's safety measures, in, on or near the construction site.
10. The Contractor shall be responsible for cleaning dirt and debris from the adjoining streets parking lots, and drives during construction. Any damage to adjoining and existing facilities shall be repaired by the Contractor, at no additional cost to the owner, during the construction of this site.
11. No fill dirt shall be placed on the property that might interfere with drainage flow from adjacent property. Storm drainage system shall be installed prior to fill material being placed.
12. The Contractor shall be totally responsible for TVI, vacuum testing manholes, and air testing sewer lines if required.
13. No changes shall be made to these approved plans without the Engineer of Record being notified before changes are made and the Engineer of Record acquiring approval from the City Engineer.
14. All sanitary sewer pipe shall either be SDR 26 PVC or Class 350 Ductile Iron.
15. The City of Madison Construction Specifications Manual for Public Improvements, latest edition and any revision thereof, are hereby made part of these plans.
16. If approval from any State or Federal Regulatory Agency is required to perform work on this project, a copy of each permit required shall be delivered to the City of Madison Engineering Department prior to the approval of said plans.
17. The Alabama Handbook for Erosion Control, Sediment Control and Stormwater Management on Construction Sites and Urban Areas, Vol. 1 and 2, latest edition and any revision thereof, are hereby made a part of these plans.
18. Contractor is required to schedule a Pre-Construction meeting with Engineering Inspector before commencement of work. Call 256-797-8025 for scheduling or go to www.madisonal.gov/index.aspx?NID=126 (pre-construction requirements) for more information.
19. Call 811 prior to any digging for Utility work.

Sheet Index

| | |
|------------------------------------|---------|
| Cover | C0 |
| Existing Conditions & Demolition | Plan C1 |
| Site Plan | C2.X |
| Keynote Plan | C2.3 |
| Water Infrastructure Plan | C3 |
| Storm Infrastructure Plan | C4.X |
| Sanitary Sewer Infrastructure Plan | C5.X |
| Grading & Drainage Plan | C6.X |
| Erosion Control Plan | C7 |
| Fire Truck Access Plan | C8 |
| Civil Details | C9.X |

Certificate of Approval by Fire Department

The undersigned, as a duly authorized representative of the Madison Fire Department, City of Madison, AL, certifies the within site plan has been reviewed and approved.

By: Scott Nelson
Date: 12-7-21

Certificate of Approval by City Council

The undersigned, as representative of the City Council of Madison, Alabama, hereby certified that the property and site plan has been approved by the City Council

By: Doug Se
Date: 12-7-21

Certificate of Approval by City Engineer

The undersigned, as City Engineer of the City of Madison, AL, hereby approves the within site plan.

By: E. Michelle Denson
Date: December 3, 2021

Certificate of Approval by Planning Director

The undersigned, as Director of Planning for the City of Madison, AL, hereby certifies that the property and site plan has been inspected, reviewed, and found to be compliant with the City's Zoning Ordinance and Subdivision Regulations.

By: [Signature]
Date: 12/9/2021

Madison Utilities

Submitted for approval:

APPROVED:

| | |
|---------------------------------|--|
| <u>[Signature]</u> ENGINEER | <u>[Signature]</u> BUSINESS DEVELOPMENT COORDINATOR |
| <u>[Signature]</u> DEVELOPER | <u>[Signature]</u> GENERAL MANAGER |

NOTE: CONSTRUCTION SPECIFICATIONS FOR WATER AND SANITARY SEWER LATEST EDITION AS ADOPTED BY MADISON UTILITIES (MU), IS HEREBY MADE PART OF THESE PLANS. CONTRACTOR SHALL CONTACT MU TO SCHEDULE A PRE-CONSTRUCTION MEETING PRIOR TO THE START OF ANY WATER OR SEWER CONSTRUCTION.



Prepared by:

LIME QUARRY ROAD



AASHTO NOTE: THE INTERSECTION SITE DISTANCE AND GEOMETRIC DESIGN OF THIS SUBDIVISION MEET RECOMMENDATIONS SET FORTH IN THE PREVAILING AASHTO STANDARDS.

| LOCATION | DESIGN SPEED | AASHTO GUIDELINES | | ACTUAL | | SIGHT DISTANCE SATISFIED |
|-------------------------------|--------------|-------------------|------|--------|------|--------------------------|
| | | RIGHT | LEFT | RIGHT | LEFT | |
| DRIVE @ LIMESTONE QUARRY ROAD | 25 MPH | 280 | 240 | 386 | 500+ | YES |
| DRIVE @ DUNLOP BLVD | 45 MPH | 500 | 430 | 500+ | 500+ | YES |

Fire Flow & Notes:

Date & Time Tested: 6-3-21 at 9:20 AM

| | |
|----------|----------|
| Static | 112 |
| Residual | 88 |
| Flow | 1465 GPM |

Note: Knox Boxes shall be required for riser room access

City Notes:

- All traffic control devices shall be erected and maintained in conformance with the Manual of Uniform-Control Devices and any revisions thereof.
- Required fire flows cannot be determined precisely until the specific building use, construction type, and other factors have been disclosed and reviewed. The applicant will comply with the fire flow and fire safety and suppression requirements and all adopted city codes and regulations.
- All drainage ditches are to be centered on property lines unless shown.
- All utilities will be underground.
- If adverse conditions are uncovered during construction, the city engineer may require modification of these plans to the extent necessary to assure compliance with the city's construction specifications manual.
- Setbacks are governed by the latest addition of the Madison Zoning Ordinance.
- Any signage requires separate review, approval, and permitting.

Layout Notes:

- All dimensions are from back of curb, U.N.O.
- Sidewalks to have max cross slope of 2%.

Site Notes:

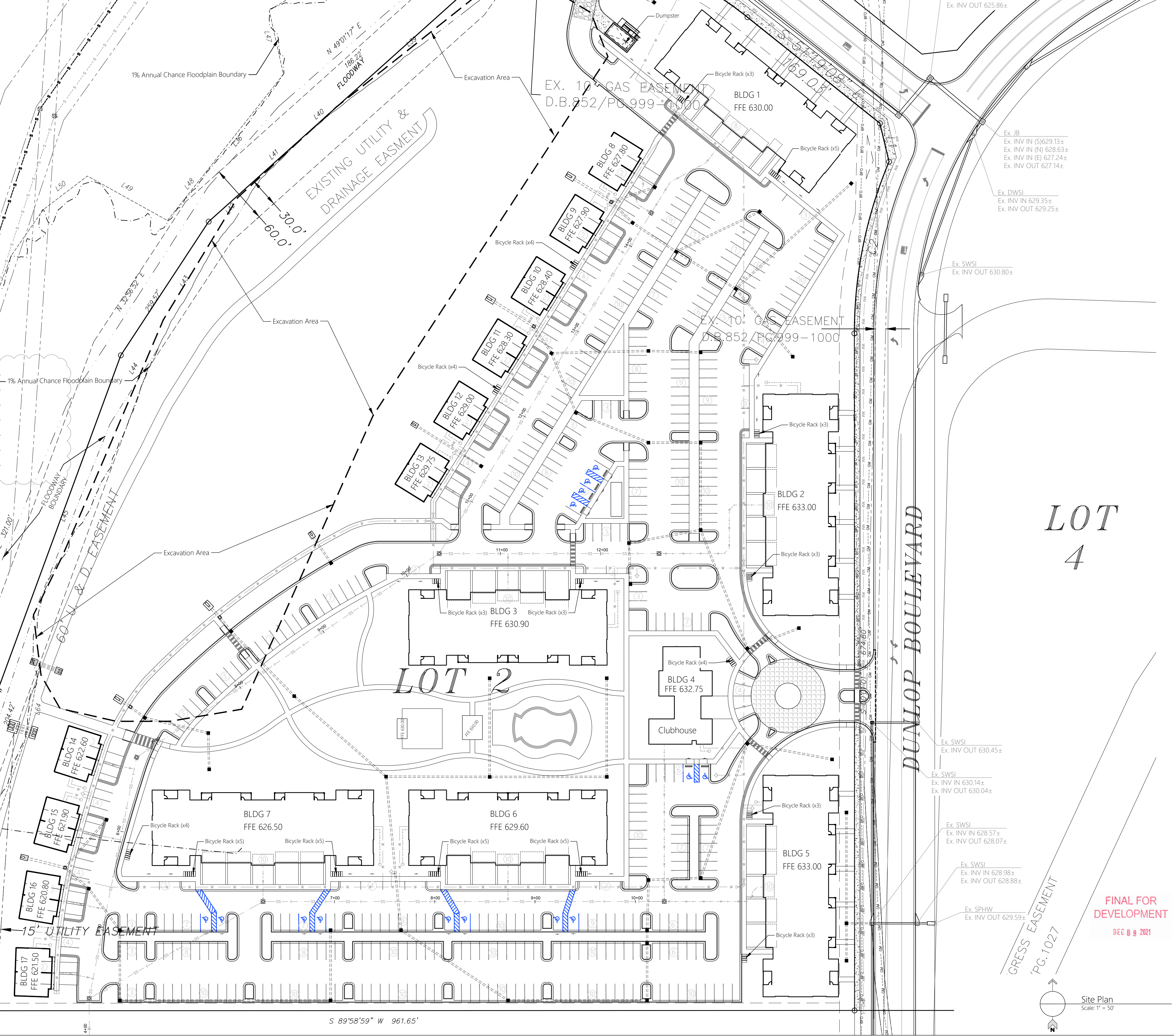
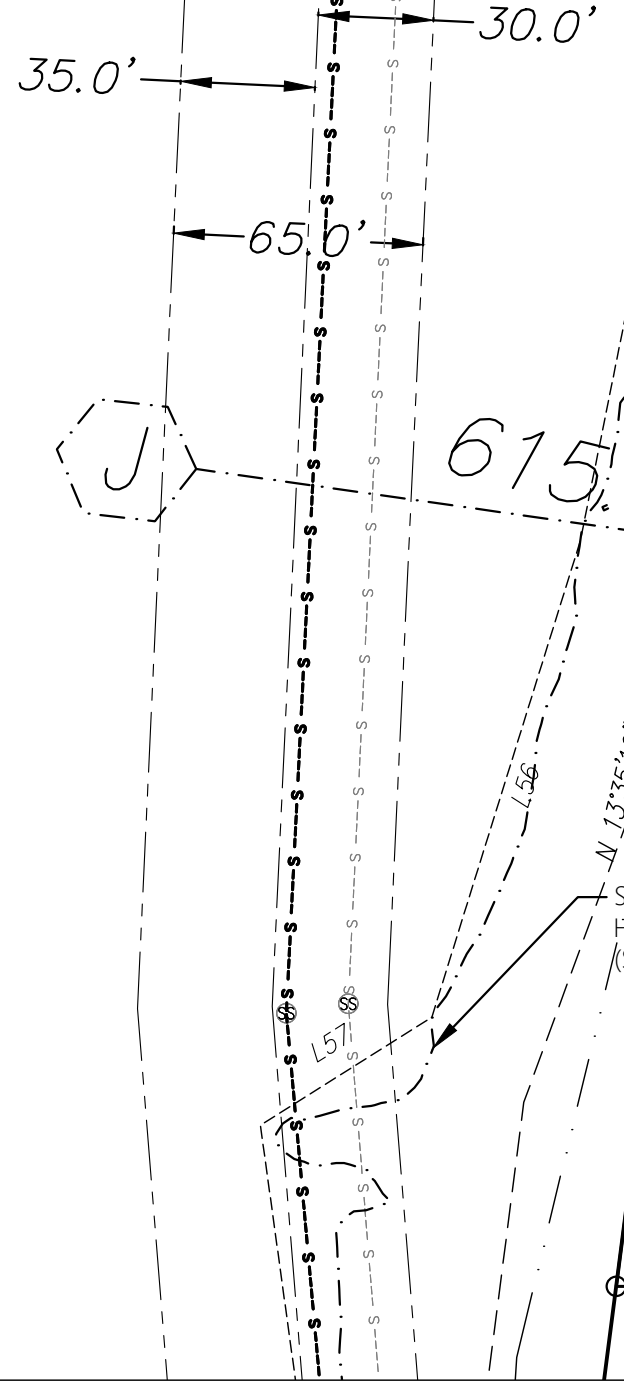
- Property line bearings are based on state plan coordinates, NAD 1983, as determined by CORS, GTAC. Distances are based on actual field survey. All bearing and distances are plat and measured.
- All traffic control devices shall be erected and maintained in conformance with the Manual on Uniform Traffic Control Devices and any revisions thereof.
- All drainage ditches shall be centered on property lines unless otherwise shown.
- All utilities are underground.
- If adverse conditions on the site are uncovered during construction, the City Engineer may require modification to these plans to the extent necessary to assure compliance with the City's Construction Specifications.
- All lots shall be graded so that runoff will be directed to the Street or to drainage ways in a dedicated easement.
- Setbacks are governed by the latest edition of the Madison Zoning Ordinance.
- Required fire flows cannot be determined precisely until the specific building use, construction type, and other factors have been disclosed and reviewed. The applicant will comply with the fire flow and fire safety and suppression requirements of all adopted City codes and regulations.
- Plaza areas shall be hardscape areas of concrete, paver, or some other durable, consistent material, compliant with ADA accessible surfaces, pattern & materials to be further refined through the design and construction process.
- Contractor shall coordinate with site Engineer for handicap ramp layout prior to construction to ensure compliance with design and ADA requirements.
- Special maintenance agreement for utilities under streetscape conditions/elements/materials (pavers, walls, trees, etc.) required prior to issuance of C.O.
- Coordinate with Geotechnical Engineer to ensure roads in excavated areas achieve proper compaction to Geotechnical Engineers requirements and recommendations.

Site Information:

| | |
|------------------------------------|---|
| Total Lot Area: | 30.48 acre (1,327,894 sf) |
| Pre Subdivided Remaining Property: | 12.81 acre (558,067 sf) |
| Post Subdivision: | 17.67 acre (769,807 sf) |
| Zoning District: | UC (Urban Center District) |
| Adjoining Zoning: | B3 (General Business District) |
| North: | UC (Urban Center District) |
| South: | UC (Urban Center District) |
| West: | UC (Urban Center District) |
| East: | UC (Urban Center District) |
| Building Info: | Residential Buildings NFPA 13r |
| Sprinkler System: | 4 |
| Stories (max): | 4 |
| Height: | 4-Story Buildings: 55'-3" |
| Townhouse/Apartment: | 27'-0" |
| Type of Construction: | V(a) |
| Others: | V(b) |
| Occupancy type: | R-2 |
| Residential Buildings: | A-3 |
| Clubhouse & Fitness Buildings: | U |
| Dumpster Enclosure: | |
| Units: | |
| 1 Bed: | 102 |
| 2 Bed: | 138 |
| 3 Bed: | 44 |
| Total: | 284 |
| Density Schedule: | |
| Net: | 284/17.67 = 16.07 = 16 units/acre |
| Building Number: | SF * Stories |
| Building 1: | 12,989 * 4 = 51,956 sf |
| Building 2 & 5: | 14,612 * 4 = 116,896 sf |
| Building 3 & 6: | 13,043 * 4 = 104,344 sf |
| Building 4: | 4,415 * 1 = 4,415 sf |
| Building 7: | 14,610 * 4 = 58,440 sf |
| Building 8 - 17: | 1,787 * 2 = 32,166 sf |
| Grill Building: | 480 * 1 = 480 sf |
| Maintenance and Pool Building: | 200 * 1 = 200 sf |
| Total: | 317,948 sf / 769,807 sf = 0.41 |
| Ratio: | |
| Total Disturbed Area: | |
| Total: | 17.67 acre |
| Parking Information: | |
| Req'd Parking Units: | 1.0 * units (1 bed) + 2.0 * units (2 bed) + 2.5 * units (3 bed) ==> |
| | 1.0 * 102 + 2 * 138 + 2.5 * 44 = 102 + 276 + 110 = |
| Total Required: | 488 |
| Total Provided: | 520 |
| Clubhouse/Rental Office: | |
| Total Required: | 1 |
| Total Provided: | 17 |
| Tandem Spaces: | 78 |
| ADA Accessible Parking: | |
| Req'd Parking: | 13 |
| Total Provided: | 14 |
| Bicycle Information: | |
| Req'd Spaces: | unit / 5 ==> 284/5 = 56.8 |
| Units: | 57 |
| Total Required: | 62 |
| Total Provided: | 62 |

Parking Table:

| | |
|--------------------|-------------|
| Parking Info | |
| Attached Garage | 78 |
| Open | 442 |
| - Compact | 21 (4.8%) |
| - Standard Parking | 421 (95.2%) |
| Total | 520 |
| Tandem Spaces | 78 |
| Clubhouse/Visitor | 17 |
| Bicycle | 62 |



REVISIONS

| NO. | DATE | DESCRIPTION |
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All documents, including Drawings and Bid Specifications, prepared or furnished by Firms listed on face, are instruments of service in respect of the client and firms listed on face, shall retain an ownership and property interest therein whether or not the Project is completed. Such documents are not intended to be represented to be suitable for reuse by the Client or others on extensions of the Project or on any other project. Any reuse without written verification by Firms listed on face will entitle Firms listed on face to further compensation at rates to be agreed upon by firms listed on face and the Client.

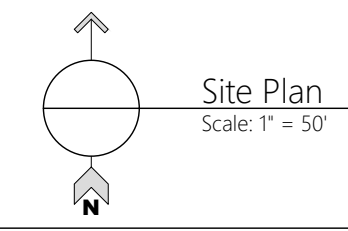
MULLINS, LLC
 CIVIL ENGINEERING, DEVELOPMENT DESIGN
 SURVEYING, LANDSCAPE ARCHITECTURE
 2101 West Clinton Avenue, Suite 503, Huntsville, AL 35805
 (256) 690-5312



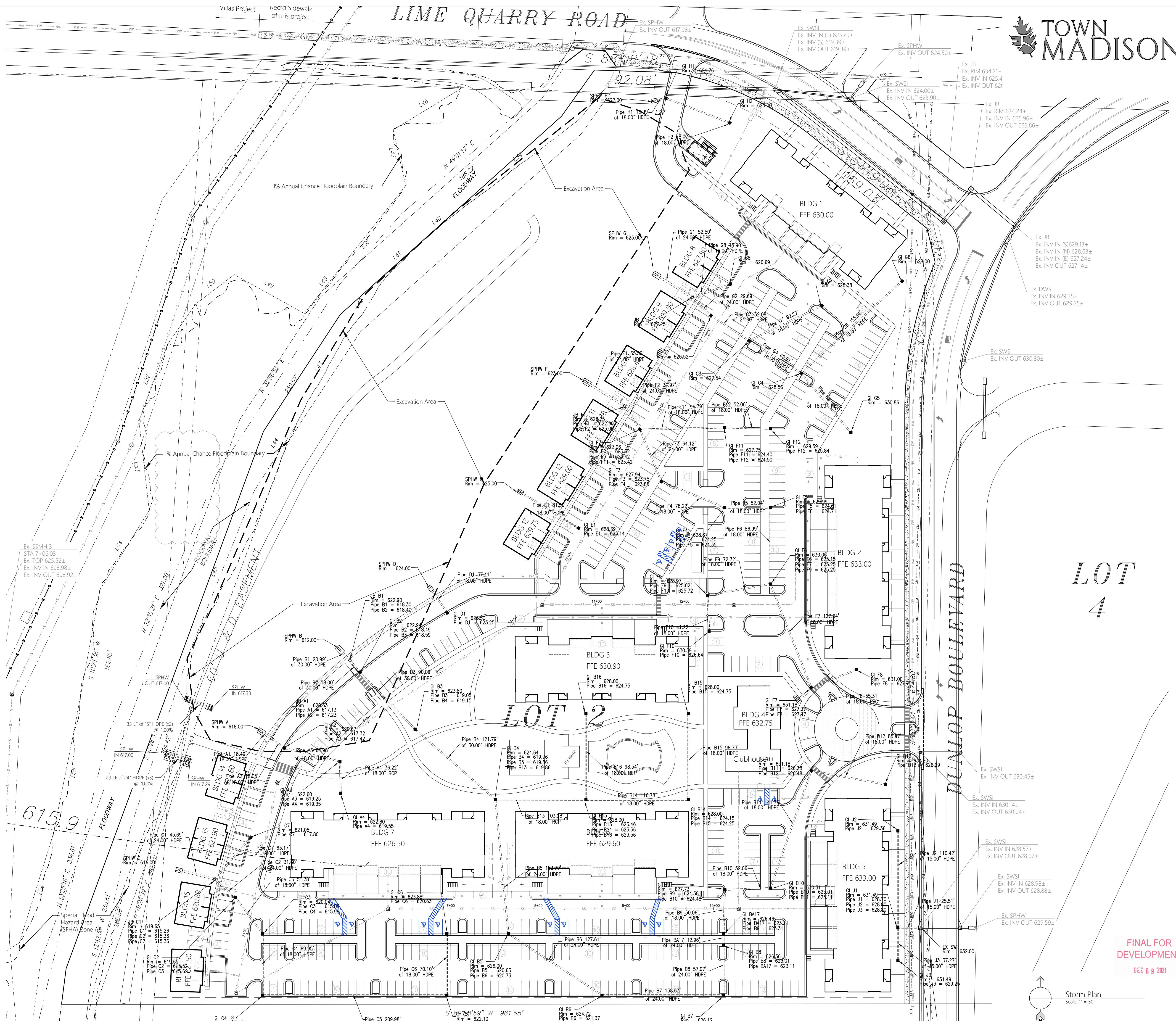
The Roberts Apartments at TM
 Madison, AL
 PREPARED FOR: Rohlfie Group

Site Plan
 Job No. 21-128
 Date: 2021-11-16
 Drawn By: JLH
 Checked By: RS
 SHEET NUMBER
C2

FINAL FOR DEVELOPMENT
 DEC 9 2021



LIME QUARRY ROAD



| NO. | DATE | DESCRIPTION |
|-----|------------|----------------------|
| 1 | 08/20/2021 | ISSUED FOR PERMITS |
| 2 | 09/01/2021 | REVISED PER COMMENTS |
| 3 | 09/15/2021 | REVISED PER COMMENTS |
| 4 | 09/28/2021 | REVISED PER COMMENTS |
| 5 | 10/12/2021 | REVISED PER COMMENTS |
| 6 | 10/26/2021 | REVISED PER COMMENTS |
| 7 | 11/09/2021 | REVISED PER COMMENTS |
| 8 | 11/23/2021 | REVISED PER COMMENTS |
| 9 | 12/07/2021 | REVISED PER COMMENTS |
| 10 | 12/21/2021 | REVISED PER COMMENTS |
| 11 | 01/04/2022 | REVISED PER COMMENTS |
| 12 | 01/18/2022 | REVISED PER COMMENTS |
| 13 | 02/01/2022 | REVISED PER COMMENTS |
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| 15 | 02/28/2022 | REVISED PER COMMENTS |
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| 19 | 04/25/2022 | REVISED PER COMMENTS |
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| 21 | 05/23/2022 | REVISED PER COMMENTS |
| 22 | 06/06/2022 | REVISED PER COMMENTS |
| 23 | 06/20/2022 | REVISED PER COMMENTS |
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| 25 | 07/18/2022 | REVISED PER COMMENTS |
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| 55 | 09/11/2023 | REVISED PER COMMENTS |
| 56 | 09/25/2023 | REVISED PER COMMENTS |
| 57 | 10/09/2023 | REVISED PER COMMENTS |
| 58 | 10/23/2023 | REVISED PER COMMENTS |
| 59 | 11/06/2023 | REVISED PER COMMENTS |
| 60 | 11/20/2023 | REVISED PER COMMENTS |
| 61 | 12/04/2023 | REVISED PER COMMENTS |
| 62 | 12/18/2023 | REVISED PER COMMENTS |
| 63 | 01/01/2024 | REVISED PER COMMENTS |
| 64 | 01/15/2024 | REVISED PER COMMENTS |
| 65 | 01/29/2024 | REVISED PER COMMENTS |
| 66 | 02/12/2024 | REVISED PER COMMENTS |
| 67 | 02/26/2024 | REVISED PER COMMENTS |
| 68 | 03/12/2024 | REVISED PER COMMENTS |
| 69 | 03/26/2024 | REVISED PER COMMENTS |
| 70 | 04/09/2024 | REVISED PER COMMENTS |
| 71 | 04/23/2024 | REVISED PER COMMENTS |
| 72 | 05/07/2024 | REVISED PER COMMENTS |
| 73 | 05/21/2024 | REVISED PER COMMENTS |
| 74 | 06/04/2024 | REVISED PER COMMENTS |
| 75 | 06/18/2024 | REVISED PER COMMENTS |
| 76 | 07/02/2024 | REVISED PER COMMENTS |
| 77 | 07/16/2024 | REVISED PER COMMENTS |
| 78 | 07/30/2024 | REVISED PER COMMENTS |
| 79 | 08/13/2024 | REVISED PER COMMENTS |
| 80 | 08/27/2024 | REVISED PER COMMENTS |
| 81 | 09/10/2024 | REVISED PER COMMENTS |
| 82 | 09/24/2024 | REVISED PER COMMENTS |
| 83 | 10/08/2024 | REVISED PER COMMENTS |
| 84 | 10/22/2024 | REVISED PER COMMENTS |
| 85 | 11/05/2024 | REVISED PER COMMENTS |
| 86 | 11/19/2024 | REVISED PER COMMENTS |
| 87 | 12/03/2024 | REVISED PER COMMENTS |
| 88 | 12/17/2024 | REVISED PER COMMENTS |
| 89 | 01/07/2025 | REVISED PER COMMENTS |
| 90 | 01/21/2025 | REVISED PER COMMENTS |
| 91 | 02/04/2025 | REVISED PER COMMENTS |
| 92 | 02/18/2025 | REVISED PER COMMENTS |
| 93 | 03/04/2025 | REVISED PER COMMENTS |
| 94 | 03/18/2025 | REVISED PER COMMENTS |
| 95 | 04/01/2025 | REVISED PER COMMENTS |
| 96 | 04/15/2025 | REVISED PER COMMENTS |
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| 100 | 06/10/2025 | REVISED PER COMMENTS |

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The Roberts Apartments at TM
 Madison, AL

Storm Infrastructure Plan

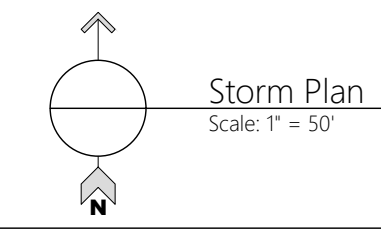
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 Date: 2021-11-16
 Drawn By: JLH
 Checked By: RS

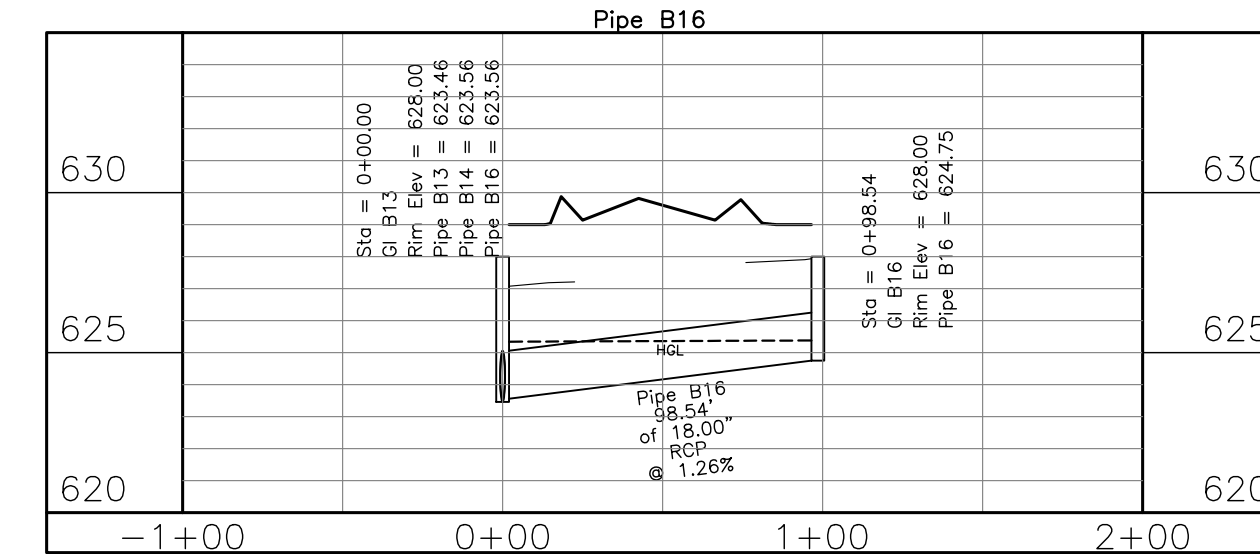
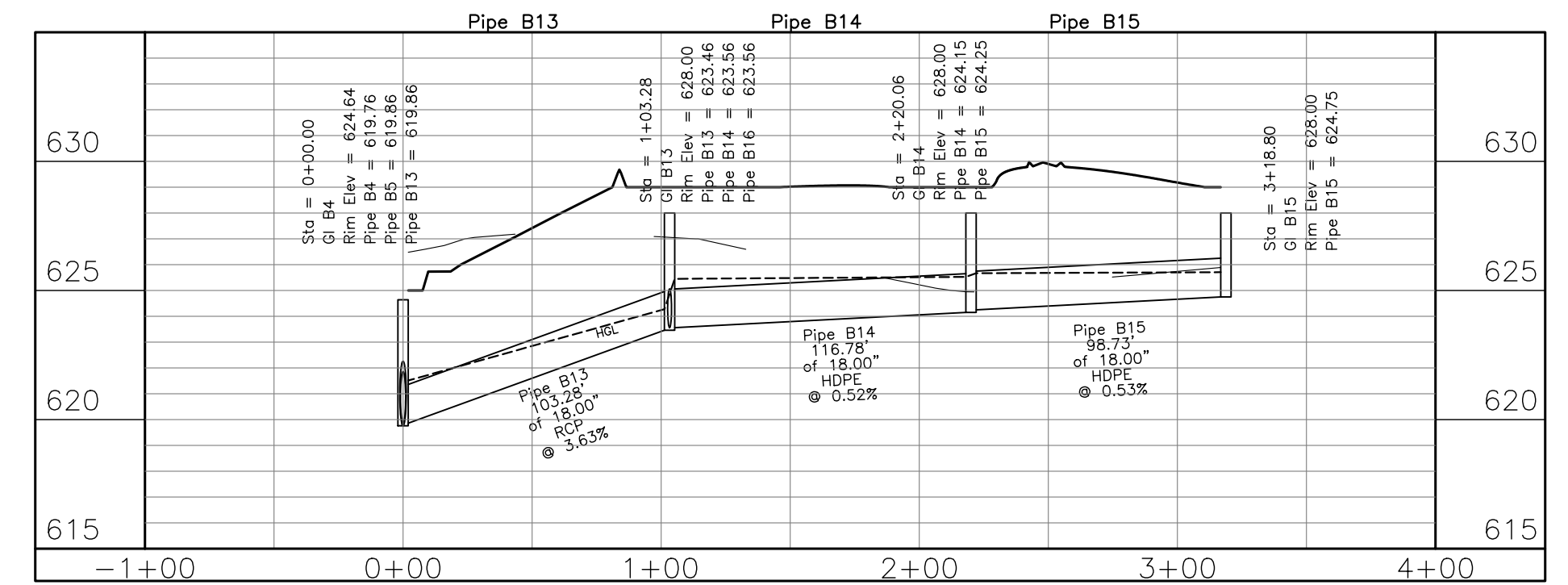
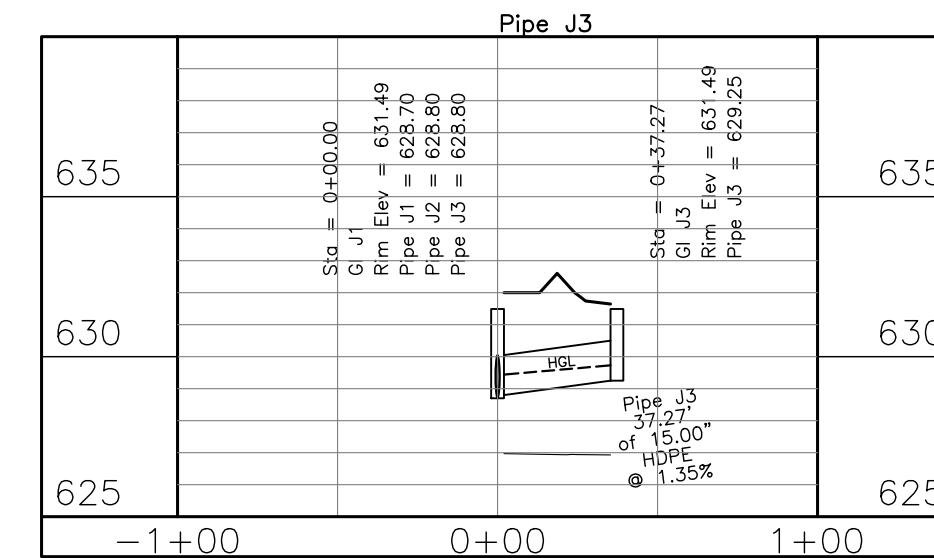
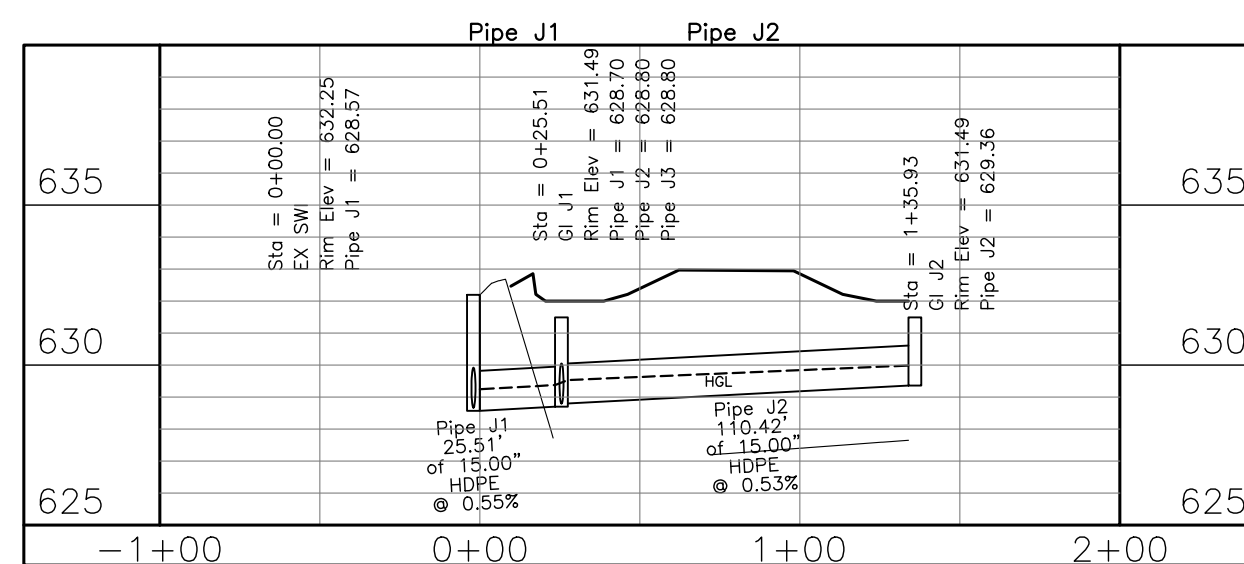
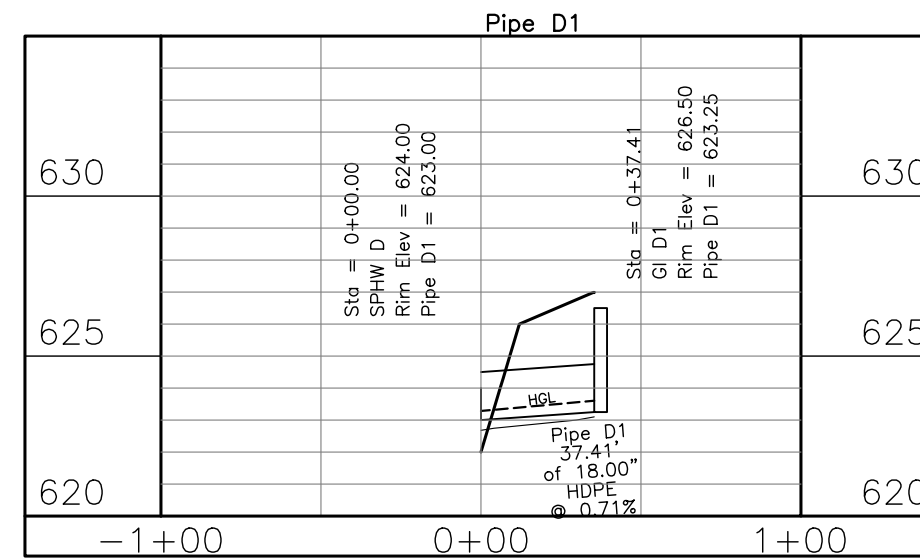
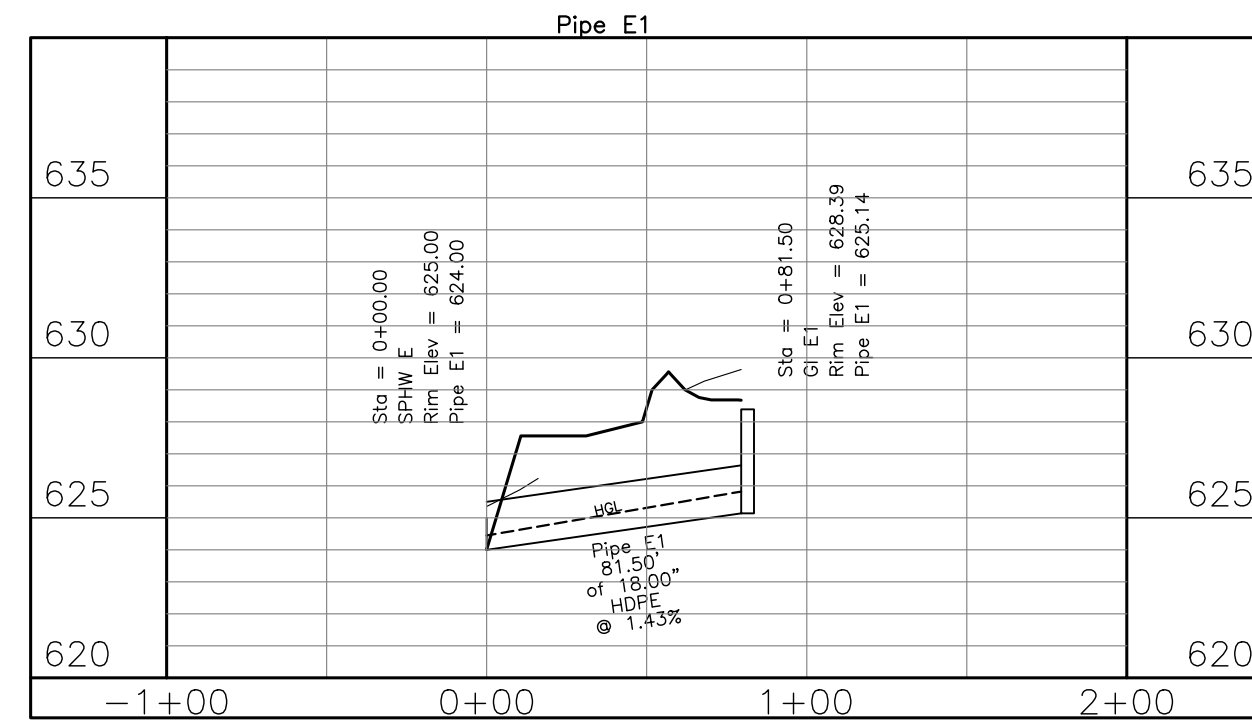
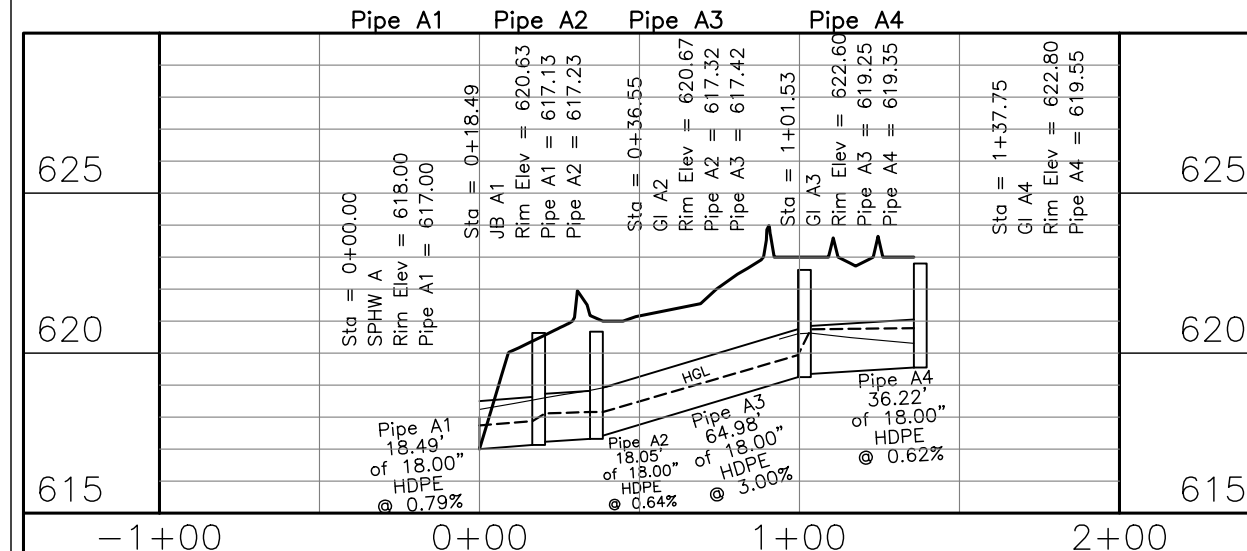
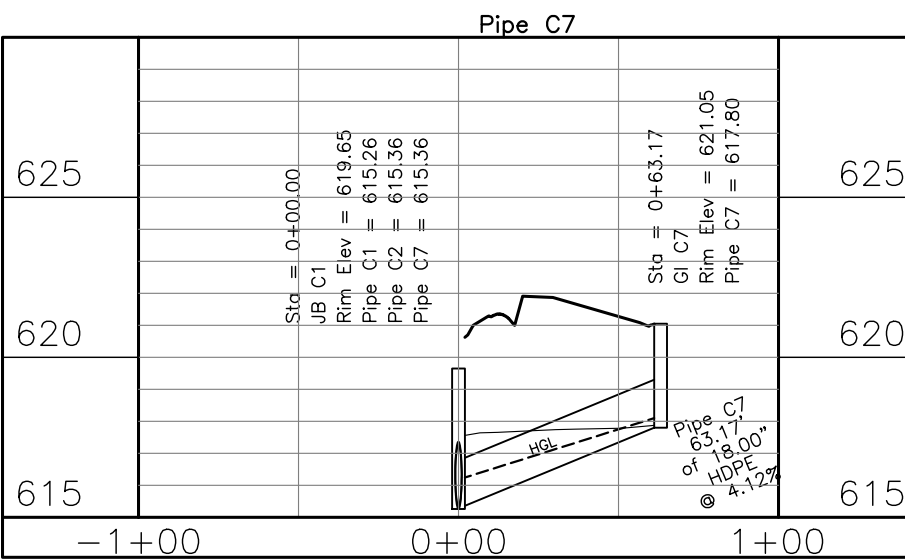
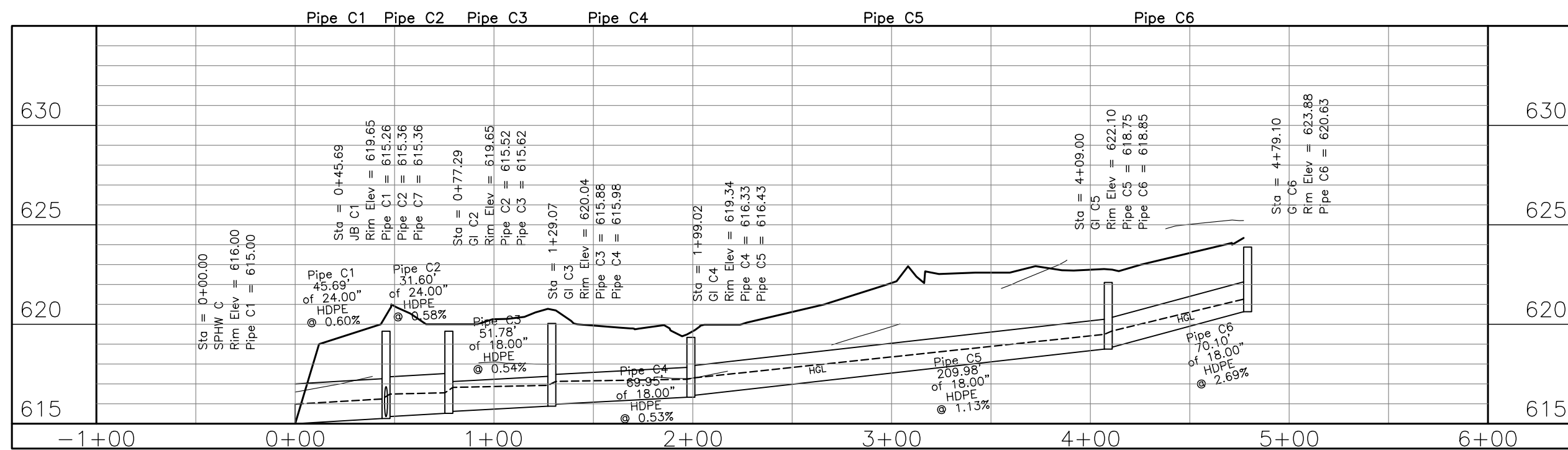
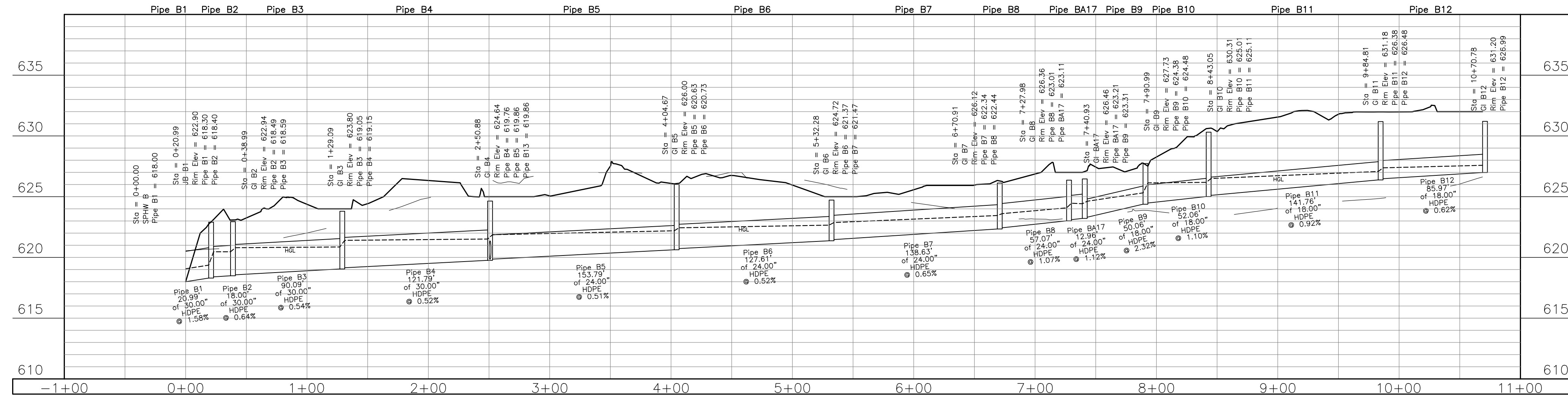
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LOT 4

LOT 2

FINAL FOR DEVELOPMENT
 DEC 8 9 2021





REVISIONS

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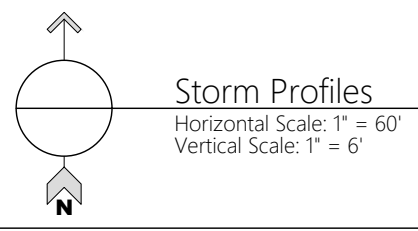


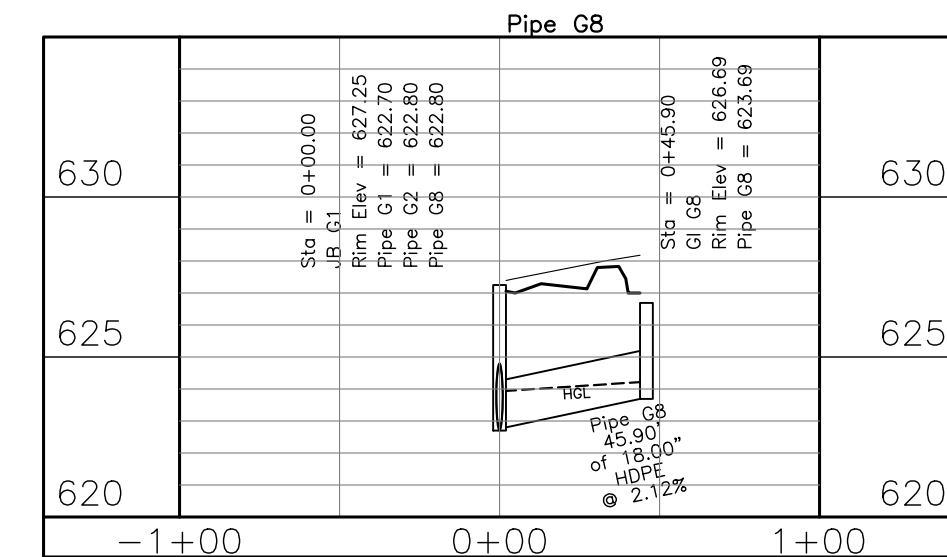
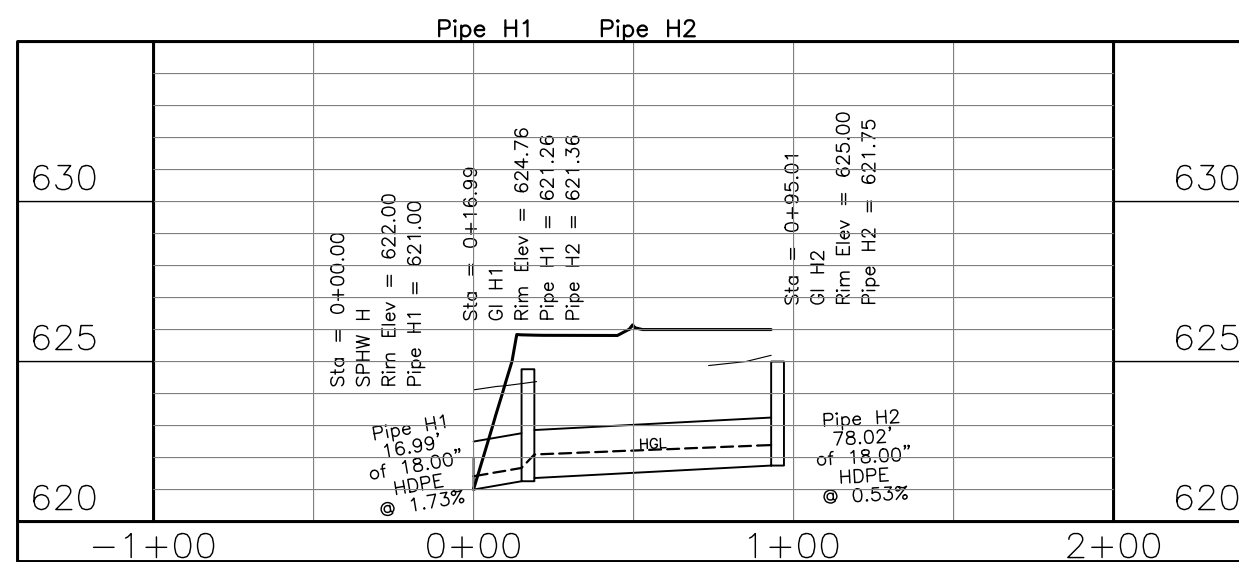
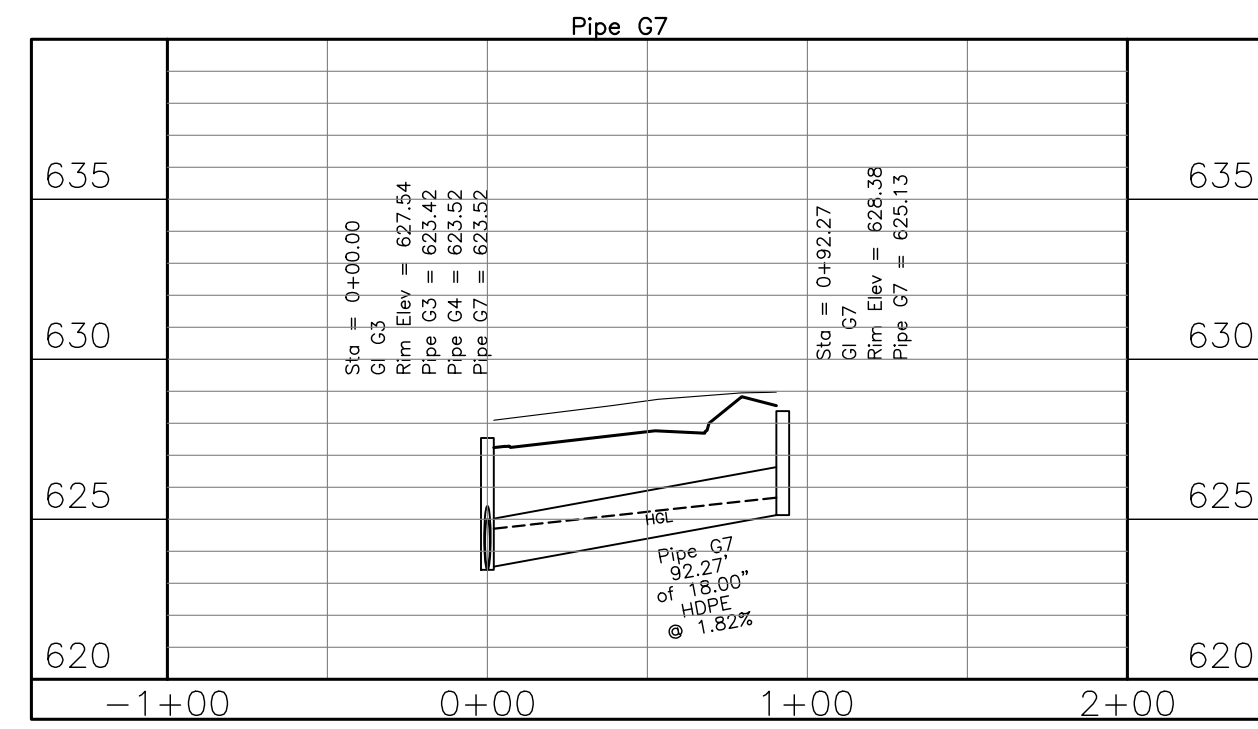
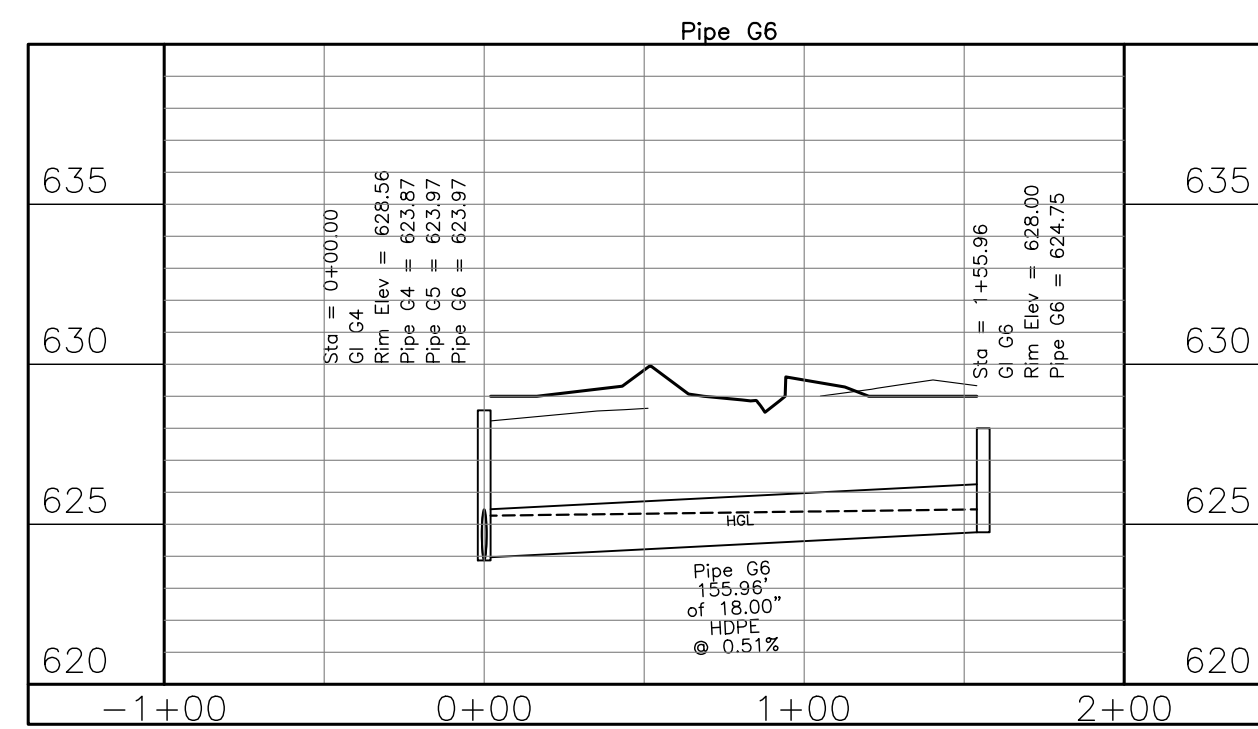
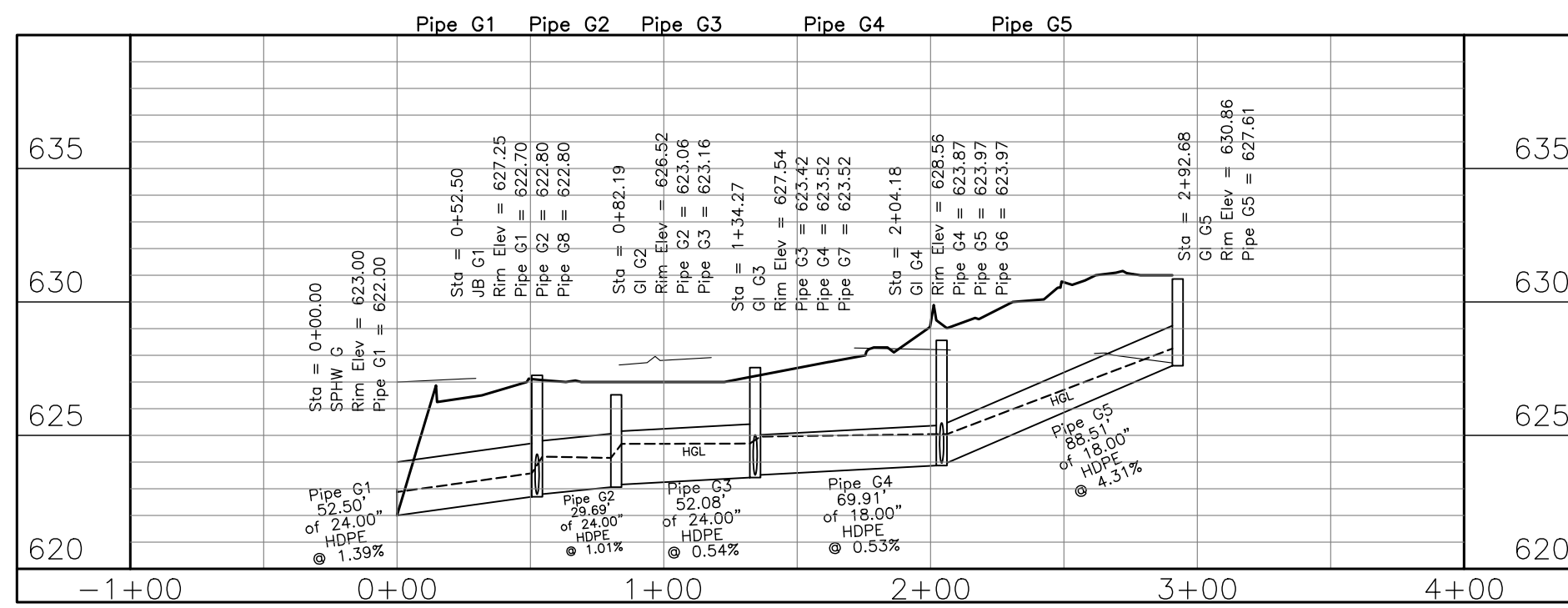
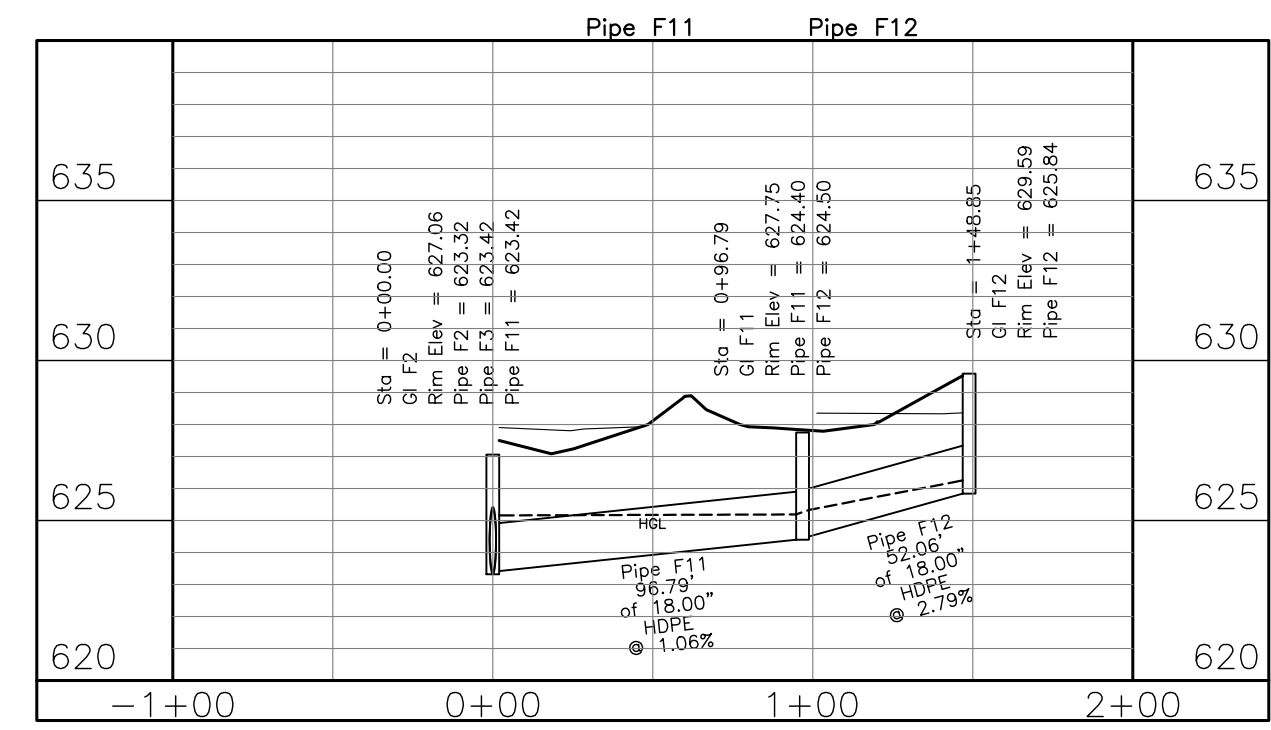
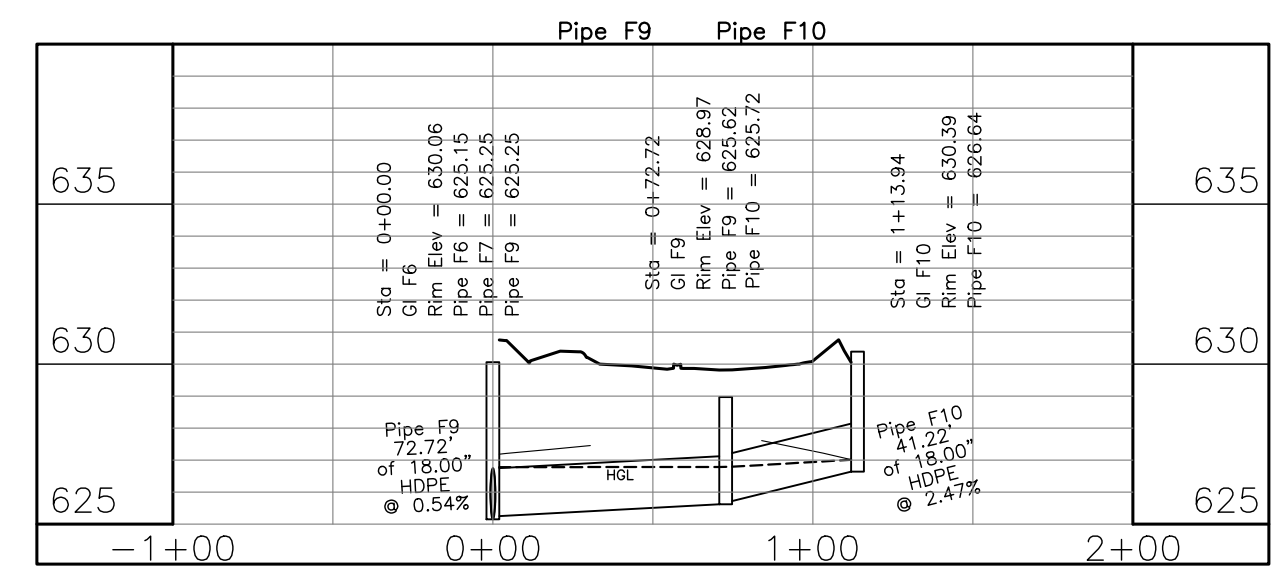
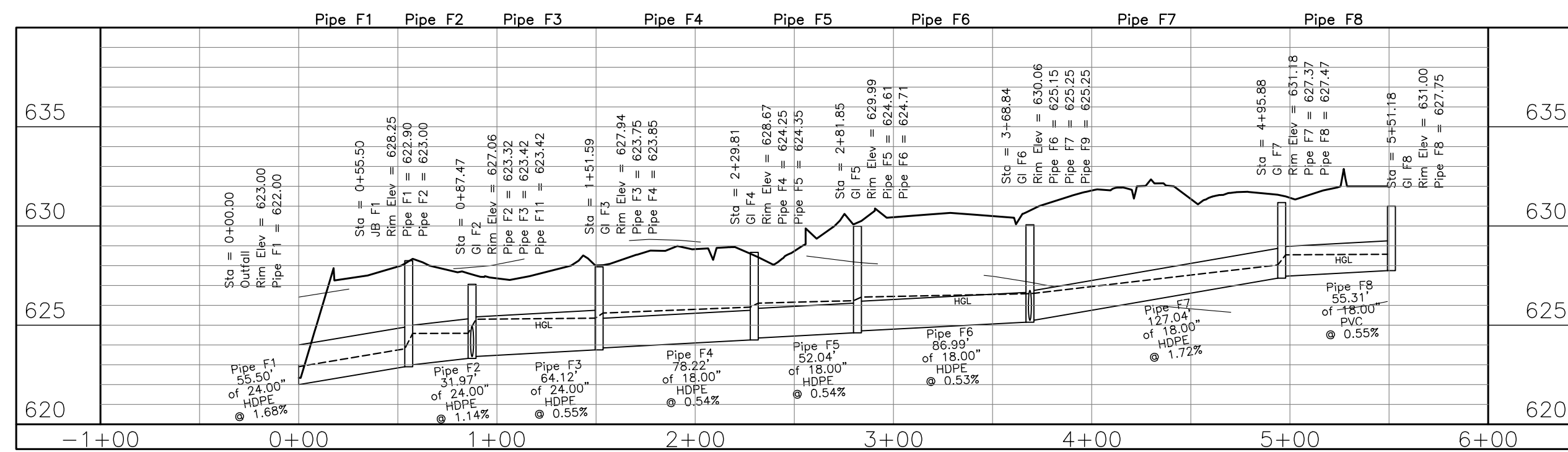
The Roberts Apartments at TM
 Madison, AL
 PREPARED FOR: ---

FINAL FOR
 DEVELOPMENT
 DEC 8 2021

Storm Infrastructure Profiles
 Job No. 21-128
 Date: 2021-11-16
 Drawn By: JLH
 Checked By: RS

SHEET NUMBER
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REVISIONS

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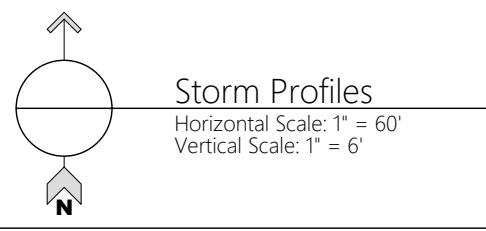


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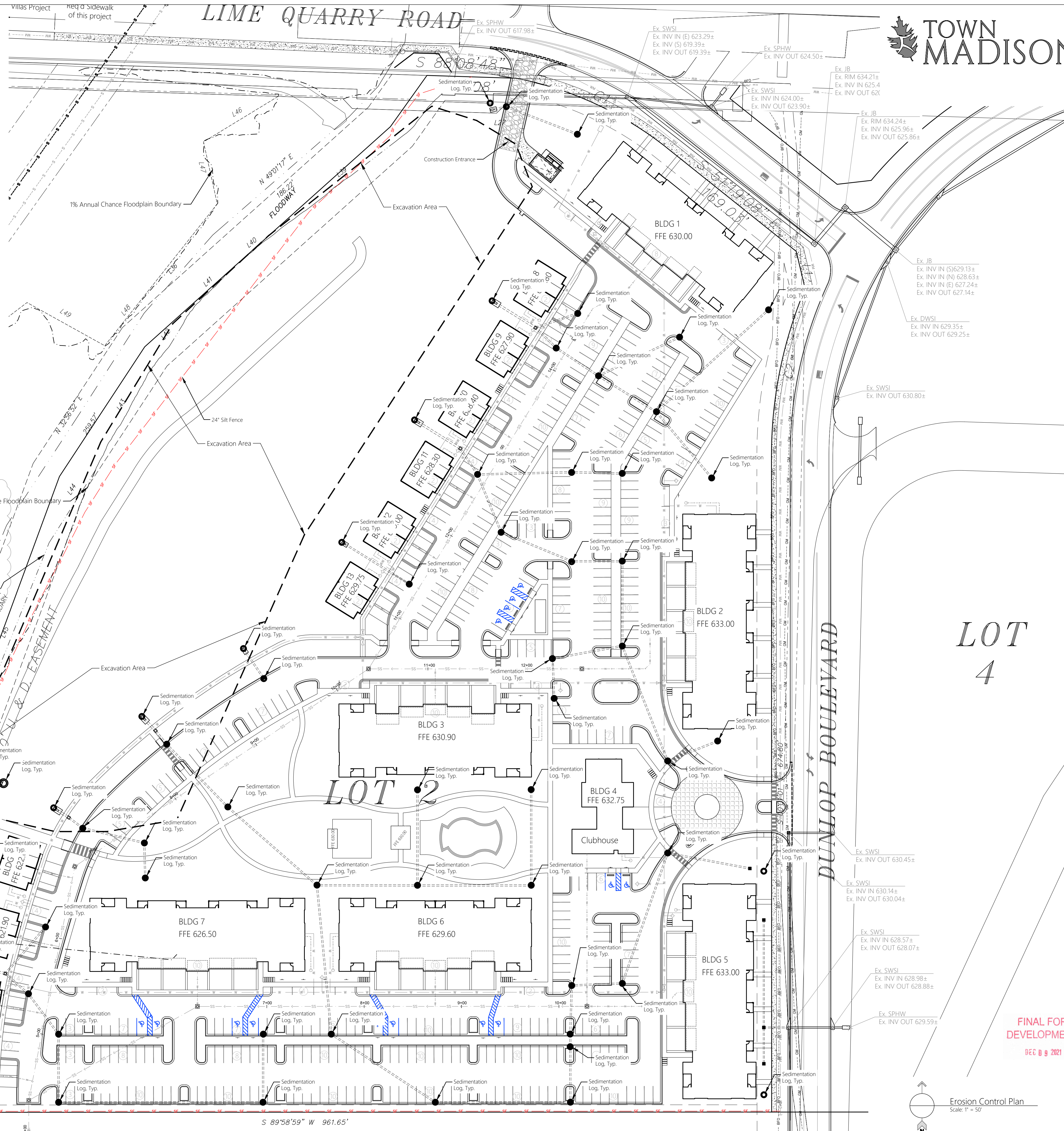
FINAL FOR
 DEVELOPMENT
 DEC 9 2021

Storm Infrastructure Profiles
 Job No. 21-128
 Date: 2021 11-16
 Drawn By: JLH
 Checked By: RS

SHEET NUMBER
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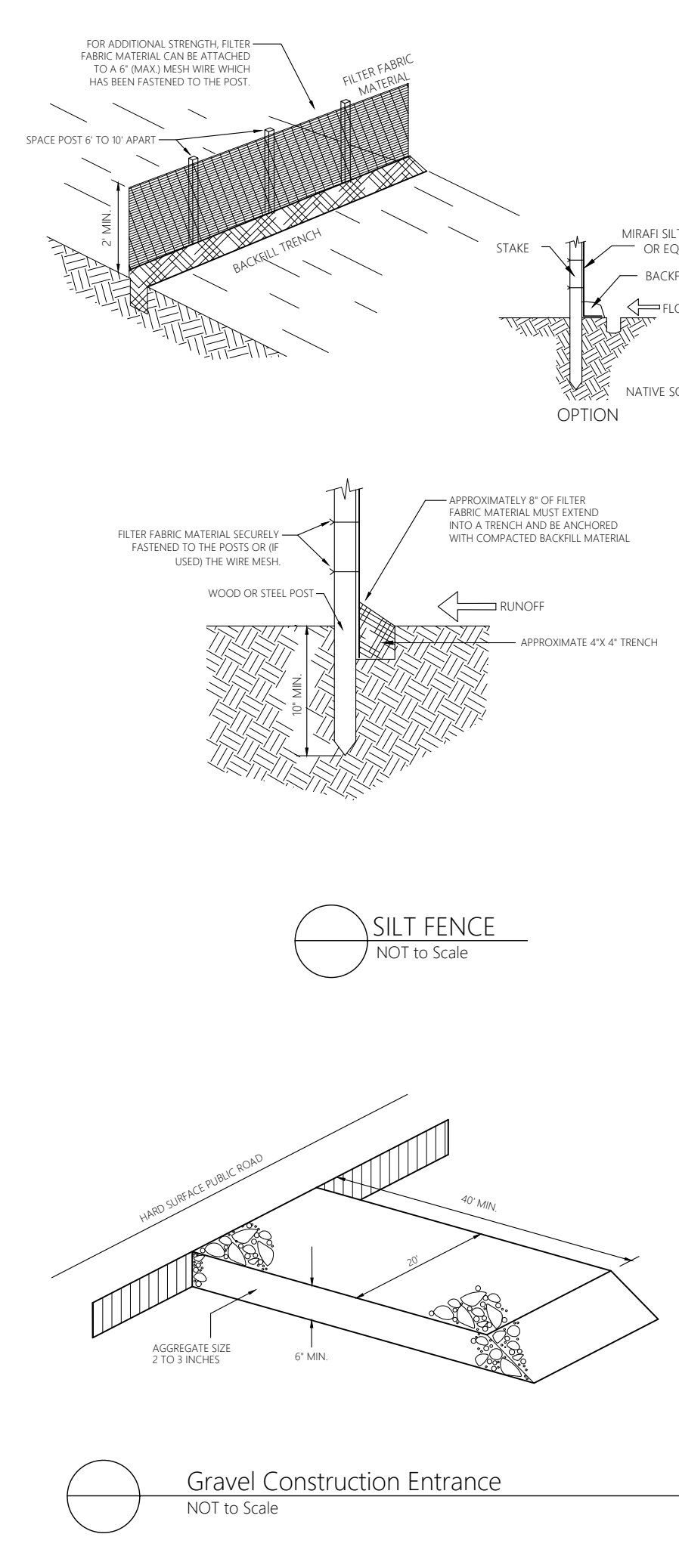
LIME QUARRY ROAD



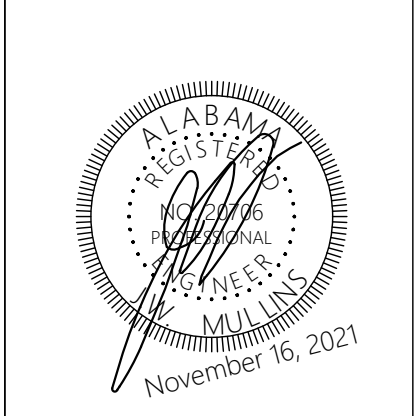
- Erosion Control Phasing:**
- THIS CONSTRUCTION SEQUENCE IS BASED ON THE ENGINEER'S OPINION AND NOT INTENDED TO BE A COMPREHENSIVE LIST OF EVENTS. THE CONTRACTOR SHOULD USE HIS/HER DISCRETION TO DETERMINE THE BEST SEQUENCE OF CONSTRUCTION. IN ADDITION, ALL EROSION AND SEDIMENTATION CONTROL MEASURES MUST BE INSTALLED PRIOR TO SELECT WORK ITEMS OR AT THE POINT OF COMPLETION OF EACH WORK ITEM. DEPENDING ON THE NATURE OF THE ITEM, EXAMPLES: SEDIMENT CONTROL PRIOR TO GRADING AND INLET PROTECTION UPON COMPLETION OF INLET CONSTRUCTION.
- PHASE 1 - PRE CONSTRUCTION**
1. INSTALL SILT FENCE AND CONSTRUCTION ENTRANCE AS SHOWN AND OTHER AREAS TO PREVENT SEDIMENT FROM BEING WASHED ON TO ADJOINING PROPERTY.
- PHASE 2 - DEMOLITION, SITE PREPARATION AND GRADING**
1. PROTECT EXISTING VEGETATION BUFFER ALONGS EXISTING PROPERTY BOUNDARY.
 2. INSTALL SILT FENCE AS SHOWN AND OTHER AREAS TO PREVENT SEDIMENT FROM BEING WASHED FROM THE SITE.
 3. INSTALL WATTLE CHECK DAMS IN DITCHES & CONCENTRATED DRAINAGE WAYS TO PREVENT SEDIMENT FROM BEING WASHED DOWNSTREAM.
 4. PERFORM SITE PREPARATION, DEMOLITION, AND CLEAR AND GRUB THE SITE.
 5. INSTALL UTILITIES AND UNDERGROUND-RELATED IMPROVEMENTS.
 6. GRADING ACCORDING TO THE GRADING PLAN; INSTALL FILTER AT DRAINAGE FLUMES AND LEAVE EXISTING DRAINAGE WAYS IN PLACE.
- PHASE 3**
1. BEGIN FOUNDATION CONSTRUCTION AND OTHER BUILDING PREPARATIONS.
 2. MAINTAIN ALL EROSION AND SEDIMENT CONTROL MEASURES, SUCH THAT THEY ARE PERFORMING THEIR FUNCTION PROPERLY, CLEAN OUT, SEDIMENT BUILD-UP WHEN FACILITIES REACH 50% CAPACITY. MAKE SURE THAT ADEQUATE DRAINAGE IS PROVIDED TO REDUCE RUNOFF ONTO EXISTING ROADS.
 3. COMPLETE THE PLACEMENT OF AGGREGATE BASE TO MEET GRADE AND COMPACTION REQUIREMENTS; & COMPACTION TEST AFTER PASSING INSPECTION, THEN START ASPHALT PAVING.
 4. INSTALL SIDEWALKS AND RELATED SITE IMPROVEMENTS.
 5. CONTRACTOR SHOULD BLOW SEED AND STRAW ON ALL DISTURBED AREAS IN ORDER TO REDUCE EROSION. BARE GROUND AREAS SHOULD BE MINIMIZED DURING CONSTRUCTION.
 6. CONTRACTOR SHOULD BE AWARE THAT EROSION MAY OCCUR IN AREAS THAT ARE UNPROTECTED ON THE CONSTRUCTION SITE. IF THE CONTRACTOR OBSERVES SEDIMENT ACCUMULATION OR EROSION PROBLEMS ON SITE, THEN THE CONTRACTOR MUST CONSULT WITH THE QCP TO DETERMINE THE NECESSARY MEASURES TO STOP SEDIMENTATION, SUCH AS SILT FENCES, WATTLE CHECK DAMS, ETC., AND THEN TAKE THE NECESSARY MEASURES TO STOP THE EROSION, SUCH AS SEED/MULCH, SOD, EROSION BLANKETS, ETC. AS DIRECTED BY THE QCP.

- PHASE 4**
1. SOLID SOD WILL BE UTILIZED IN ALL DISTURBED AREAS TO EXPEDITE VEGETATIVE COVER ON THE AREAS DISTURBED BY CONSTRUCTION. THE VEGETATIVE COVER WILL PREVENT LONG TERM EROSION OF THE SITE.
 2. PERMANENT SEEDING WILL BE UTILIZED IN ANY OTHER DISTURBED AREAS THAT DO NOT RECEIVE SOLID SOD. THE PERMANENT SEEDING WILL BE MAINTAINED AND WILL PREVENT SOIL EROSION.
 3. FINAL STABILIZATION OF DISTURBED AREAS MUST, AT A MINIMUM, BE INITIATED IMMEDIATELY WHENEVER ANY CLEARING, GRADING, EXCAVATING OR OTHER EARTH DISTURBING ACTIVITIES HAVE PERMANENTLY CEASED ON ANY PORTION OF THE SITE. TEMPORARY STABILIZATION OF DISTURBED AREAS MUST BE INITIATED IMMEDIATELY WHENEVER WORK TOWARD PROJECT COMPLETION AND FINAL STABILIZATION OF ANY PORTION OF THE SITE HAS TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND WILL NOT RESUME FOR A PERIOD EXCEEDING THIRTEEN (13) DAYS.
 4. RIP RAP - NO STEEP DISTURBED SLOPES ARE ANTICIPATED BUT IF UNEXPECTED CONSTRUCTION ISSUES CREATE STEEPER DISTURB SLOPES, THEY WILL BE STABILIZED WITH RIP RAP TO PROTECT SOIL ON THE SLOPES FROM EROSION. THE RIP RAP WILL PROTECT THE SOIL FROM EROSION DUE TO CONCENTRATED RUNOFF. IT WILL BE USED TO STABILIZE SLOPES THAT ARE UNSTABLE DUE TO SEEPAGE. IT IS ALSO USED TO SLOW THE VELOCITY OF CONCENTRATED RUNOFF WHICH IN TURN INCREASES THE POTENTIAL FOR INFILTRATION.
 5. STORM WATER DETENTION BASIN MUST BE MAINTAINED AFTER CONSTRUCTION AND REGULAR USAGE, REPLANT TREES, GRASS, SHRUBS OR VINES WHERE NEEDED TO MAINTAIN ADEQUATE COVER FOR EROSION CONTROL. MAINTAIN GRASS PLANTINGS WITH PERIODIC APPLICATIONS OF FERTILIZER AND MOWING. THE CITY OF MADISON ALSO REQUIRES THAT THESE DETENTION PONDS RETAIN THE 1/4 INCH, 24 HOUR STORM TO MIMIC THE PRE-DEVELOPMENT CONDITIONS OF PEAK DISCHARGE RATE AND DISCHARGE VOLUME. THIS WILL RETAIN AND SLOW DISCHARGE TO ALLOW SETTLEMENT, OR FILTERING, OF SEDIMENT AND DEBRIS PRIOR TO DISCHARGE INTO THE ADJACENT EXISTING GRASS DRAINAGE DITCH.
- GRASS SWALES MUST BE MAINTAINED: INSPECT THE CHANNEL FOLLOWING STORM EVENTS BOTH DURING AND AFTER GRASS COVER IS ESTABLISHED; MAKE NEEDED REPAIRS IMMEDIATELY. ALSO, CHECK THE CHANNEL OUTLET AND ROAD CROSSING FOR BLOCKAGE, PONDING, SEDIMENT, AND BANK INSTABILITY. BREAKS AND ERODED AREAS; REMOVE ANY BLOCKAGE, AND MAKE REPAIRS IMMEDIATELY TO.

- Erosion Control Notes:**
1. EROSION CONTROL SHALL BE MAINTAINED AT ALL TIMES AND SHALL BE IN ACCORDANCE WITH ALABAMA'S BEST MANAGEMENT PRACTICES.
 2. SILT FENCE SHALL BE PLACED IN ACCORDANCE WITH THE CITY OF MADISON STORMWATER MANAGEMENT MANUAL.
 3. SILT FENCE IS REQUIRED WHERE NECESSARY TO PREVENT EROSION AND WASHING OF TOPSOIL INTO EXISTING WATERWAYS AND DRAINAGE DITCHES UNTIL TIME AS GRASS HAS BEEN FINALLY ESTABLISHED.
 4. EROSION CONTROL IS REQUIRED AROUND INSTALLED STORM DRAINAGE INLETS AND BOXES AS SHOWN HEREON, UNTIL SUCH TIME AS GRASS HAS BEEN FINALLY ESTABLISHED TO PREVENT TOPSOIL EROSION FROM WASHING INTO SAID INLETS.
 5. 20" WATTLES SHALL BE USED AS TEMPORARY CHECK DAMS IN NEW AND EXISTING DRAINAGE DITCHES UNTIL SUCH TIME AS GRASS HAS BEEN FINALLY ESTABLISHED TO PREVENT DITCHES FROM WASHING OUT.
 6. AN ENTRANCE CONSTRUCTION PAD SHALL BE BUILT AT ALL EXITS FROM THIS CONSTRUCTION AREA TO EXISTING TRAVELED ROADWAYS IN ACCORDANCE WITH THE DETAILS SHOWN ON THESE PLANS.
 7. THE CONTRACTOR IS REQUIRED TO SEED GRASS OR OTHERWISE STABILIZE ALL DISTURBED AREAS AS SHOWN AS SOON AS CONSTRUCTION HAS BEEN COMPLETED IN THE IMMEDIATE AREA.
 8. THE CONTRACTOR IS REQUIRED TO INSURE THAT ALL RUNOFF FROM THE CONSTRUCTION SITE ONTO EXISTING AREAS HAVE BEEN ADEQUATELY TREATED BY THE USE OF EROSION CONTROL METHODS AS SHOWN HEREON.
 9. ALL REAR YARD DITCHES MUST BE FULLY SODDED.
 10. ALL R.O.W. MUST HAVE FULL STAND OF GRASS PRIOR TO FINAL INSPECTION.
 11. ALL GRADED SLOPES SHALL BE GRADED TO A MAXIMUM SLOPE OF 4%.



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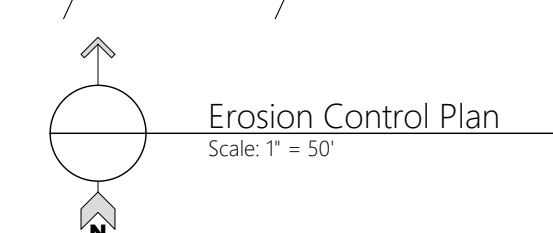
The Roberts Apartments at TM
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Erosion Control Plan

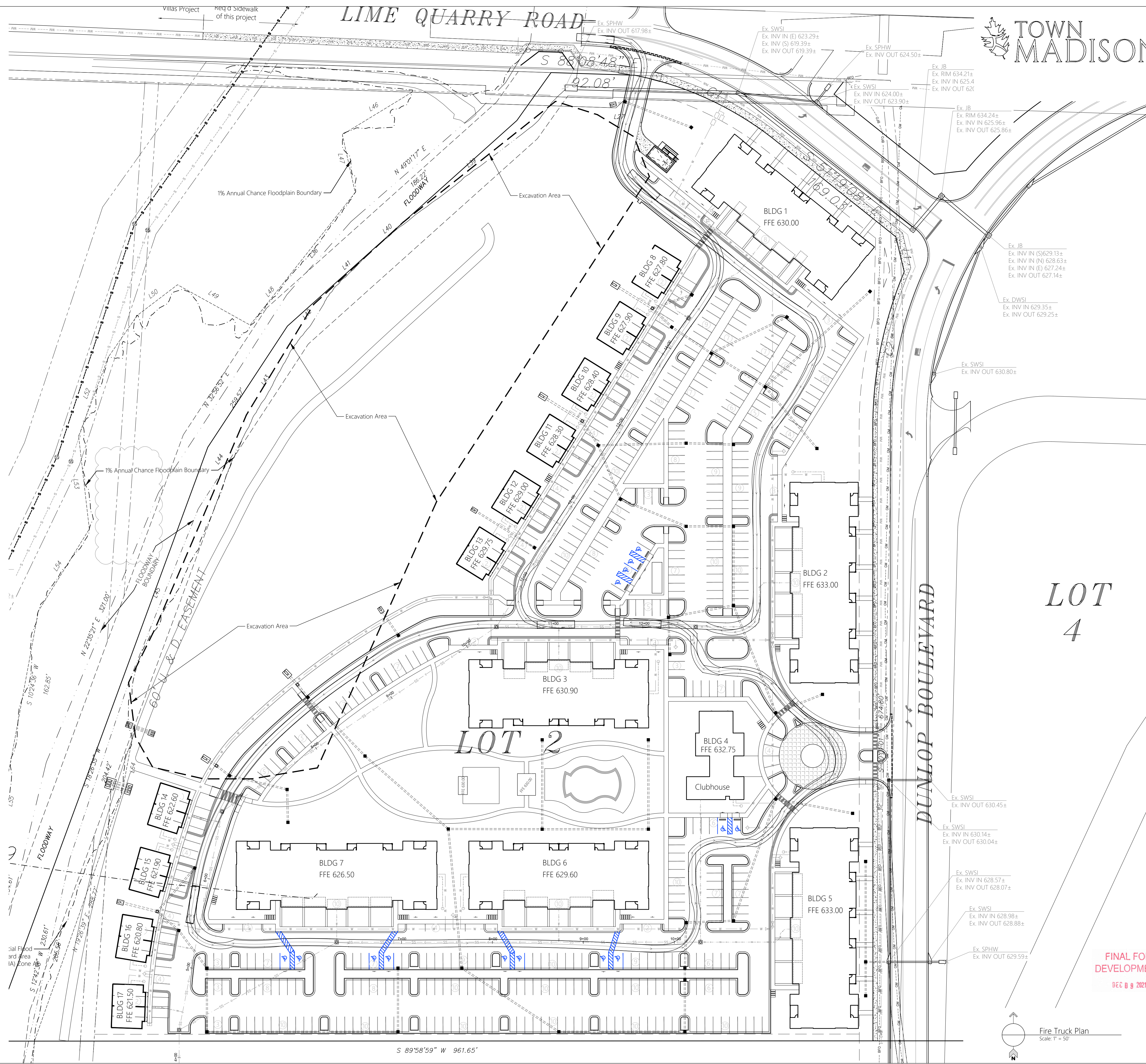
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 Drawn by: JLH
 Checked by: RS

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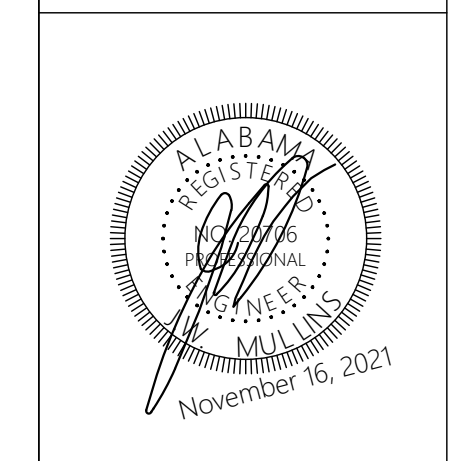
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| NO. | DATE | DESCRIPTION |
|-----|----------|------------------------|
| 1 | 11/16/21 | ISSUED FOR PERMIT |
| 2 | 11/16/21 | ISSUED FOR DEVELOPMENT |

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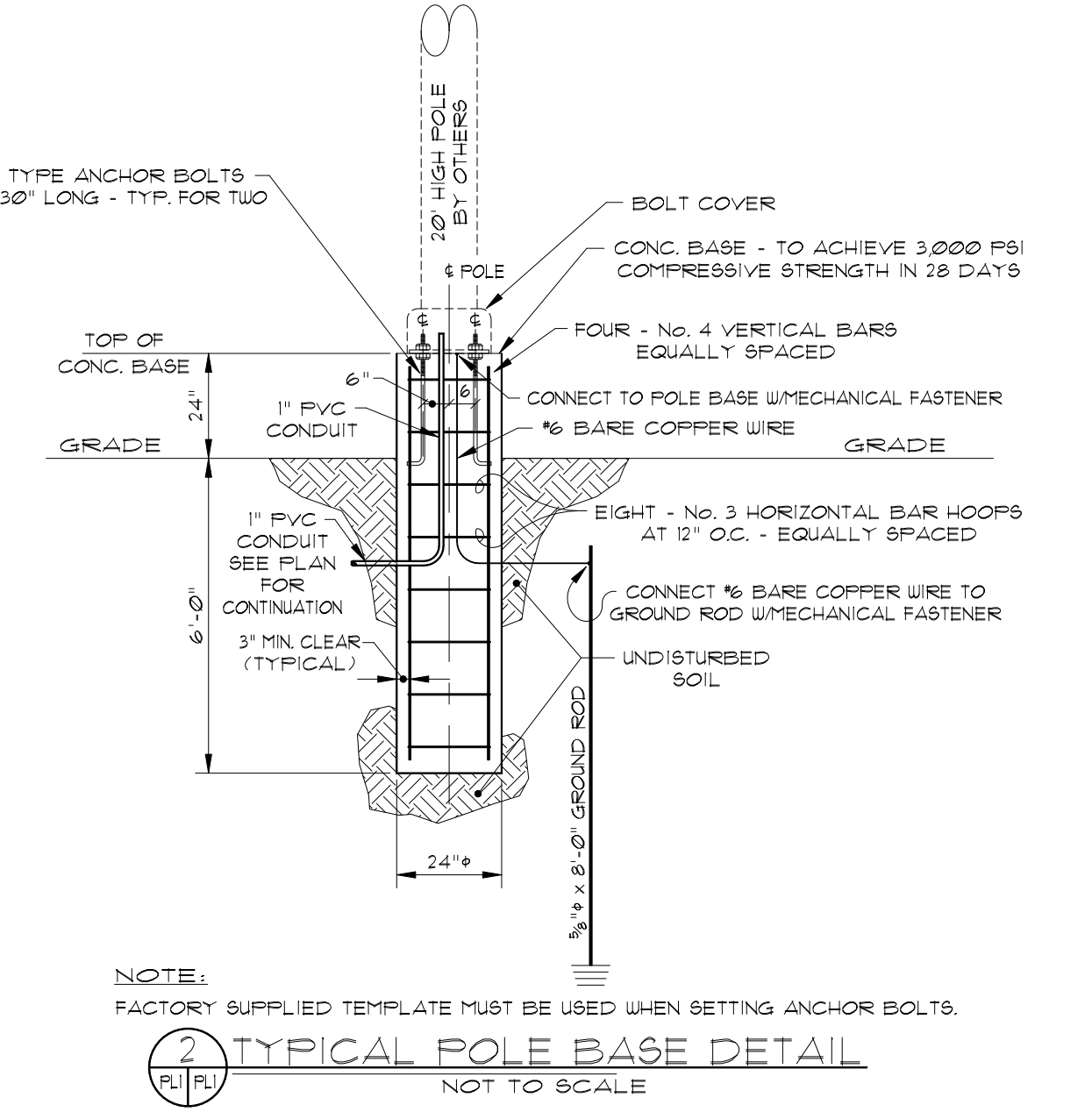
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| Job No. | 21-128 |
| Date | 2021 11-16 |
| Drawn By | JLH |
| Checked By | RS |
| SHEET NUMBER | C8 |

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Fire Truck Plan
 Scale: 1" = 50'

LIGHTING NOTES

1. VERIFY EXACT LOCATIONS WITH OWNER'S REPRESENTATIVE BEFORE ROUGHING IN.
2. CONTRACTOR SHALL CHECK ALL LIGHTING FIXTURES FOR EXACT MOUNTING TYPE AND SPACE REQUIRED BEFORE ROUGHING IN.
3. ELECTRICAL CONTRACTOR SHALL WORK CLOSELY WITH THE OWNER'S REPRESENTATIVE, TO VERIFY EXACT TYPE OF EQUIPMENT TO BE INSTALLED, AND THE DIMENSIONS WHICH MAY EFFECT THE EXACT PLACEMENT OF ELECTRICAL WORK.
4. FURNISH AND INSTALL LAMPS AS WITH FIXTURES.
5. ALL WORK SHALL BE IN COMPLIANCE WITH NFPA 70, AND THE CITY OF MADISON LIGHTING ORDINANCE REQUIREMENTS.



LUMINAIRE SCHEDULE

| Symbol | Label | Qty | Lum. Watts | Lum. Lumens | LLF | Arrangement | Description |
|--------|-------|-----|------------|-------------|------|-------------|---|
| □ | A | 8 | 147 | 22020 | 0.95 | SINGLE | RSX2-LED-P3-40K-R4-MVOLT-SPA-DDBXD Mounted on 25" Sq Steel Pole |
| ◻ | B | 3 | 244 | 31073 | 0.95 | SINGLE | RSX2-LED-P6-40K-R5-MVOLT-SPA-DDBXD Mounted on 25" Sq Steel Pole |
| □ | C | 10 | 374 | 25667 | 0.95 | SINGLE | RSX2-LED-P4-40K-R5-MVOLT-SPA-DDBXD Mounted on 25" Sq Steel Pole |
| ◻ | D | 2 | 312 | 41525 | 0.95 | SINGLE | RSX3-LED-P4-40K-R5-MVOLT-SPA-DDBXD Mounted on 25" Sq Steel Pole |

CALCULATION SUMMARY

| Label | CalcType | Units | Avg | Max | Min | Avg/Min | Max/Min |
|-----------------------|-------------|-------|-----|-----|-----|---------|---------|
| Parking and Driveways | ILLUMINANCE | Fc | 2.5 | 6.1 | 0.8 | 3.1:1 | 7.6:1 |
| Spillover | ILLUMINANCE | Fc | 0.1 | 0.9 | 0.0 | N.A. | N.A. |



GRAPHIC SCALE: 1"=50'-0"

Sept. 20, 2021 - 05:39:51

REVISIONS BY

PROJECT TITLE: **ROBERTS APARTMENTS INTER DUNLOP BLVD/ILME QUARRY MADISON, ALABAMA**

SHEET TITLE: **PARKING LOT LIGHTING PLAN, NOTES AND LEGEND**

STAMP: **ASSOCIATED ENGINEERING SERVICES HUNTSVILLE, ALABAMA**

DATE: **SEP 2021**

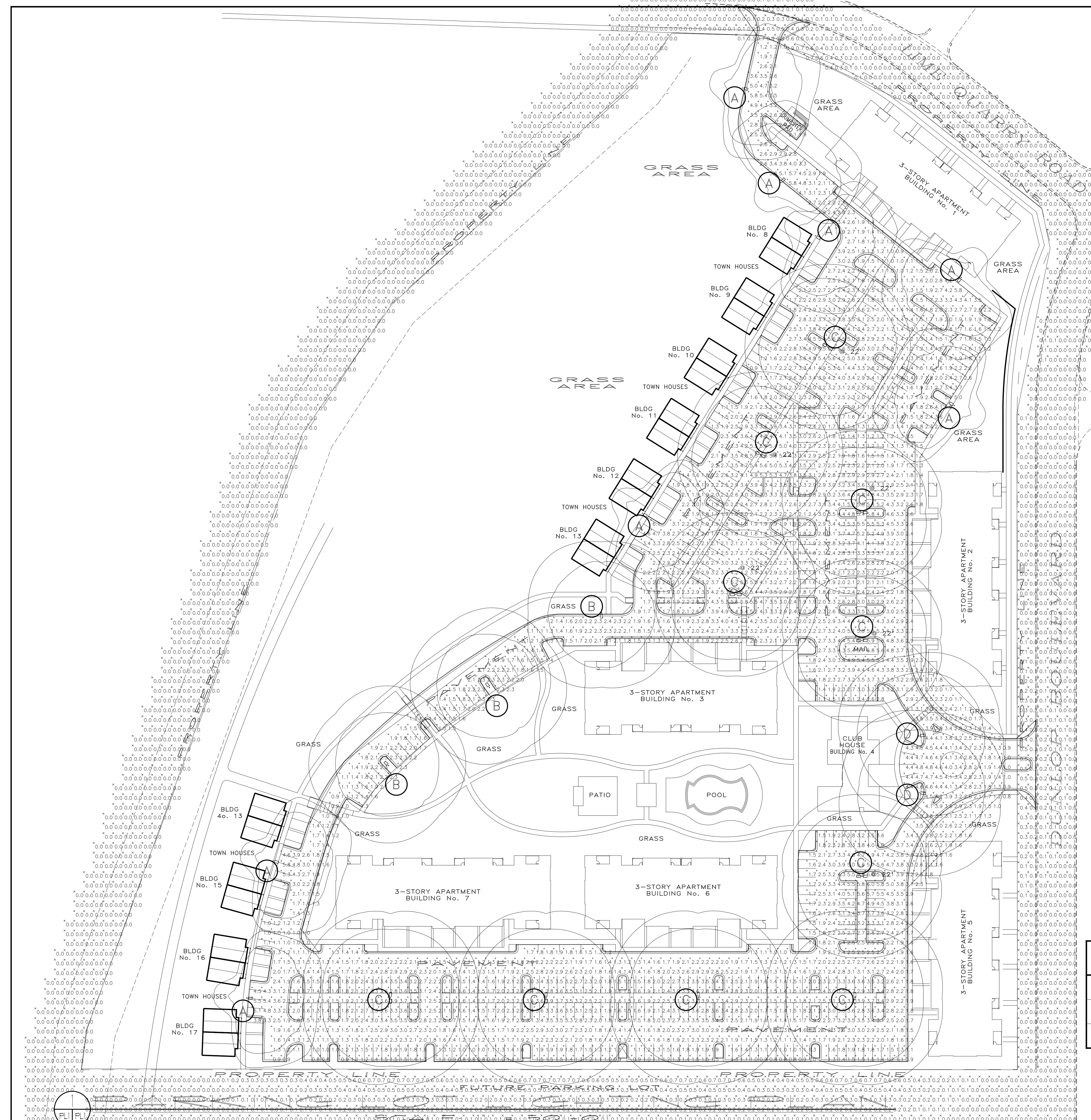
SCALE: **1"=50'-0"**

DRAWN: **N.A. Snow**

JOB: **P-21135**

SHEET: **1**

OF: **1** SHEETS



GENERAL NOTES

1. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DETERMINE ERECTION PROCEDURE AND SEQUENCE TO INSURE THE SAFETY OF THE BUILDING AND ITS COMPONENT PARTS DURING ERECTION. THIS INCLUDES, BUT IS NOT LIMITED TO, THE ADDITION OF WHATEVER TEMPORARY BRACING, GUYS OR TIE-DOWNS MAY BE NECESSARY.

CODES AND SPECIFICATIONS

- A. GENERAL BUILDING CODE:
 - 1. INTERNATIONAL BUILDING CODE 2018.
 - B. CONCRETE:
 - 1. BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318-19)
 - 2. SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS (ACI 301-16).

DESIGN LOADS

- A. DESIGN LIVE LOADS
 - ROOF.....20 PSF
 - ELEVATED FLOORS.....40 PSF
 - BALCONY.....100 PSF
 - CORRIDORS/LANDINGS.....100 PSF
 - STAIRS.....100 PSF
- B. WIND LOADS:
 - 1) BASIC WIND SPEED (ULTIMATE) = 115 MPH
 - 2) IMPORTANCE FACTOR = 1.0
 - 3) WIND EXPOSURE C.
 - 4) INTERNAL PRESSURE COEFFICIENT : 0.18 FULLY ENCLOSED STRUCTURE
 - 5) COMPONENTS AND CLADDING: +34.7 PSF AND -45.4 PSF FOR DESIGN WIND PRESSURES.
- C. SEISMIC LOADS:
 - 1) SEISMIC DESIGN CATEGORY.....B
 - 2) SDS.....0.26
 - 3) SD1.....0.117
 - 4) SMS.....0.337
 - 5) SDS.....0.225

FOUNDATIONS

- 1. FOUNDATION DESIGN IS BASED ON AN ALLOWABLE SOIL BEARING PRESSURE OF 2000 PSF AS RECOMMENDED IN THE FOUNDATION INVESTIGATION PREPARED BY GEOSERVICES, LLC (PROJECT NO. 21-0759) AUGUST 3, 2021.
- 2. PLACE FOOTINGS/SLAB ON COMPACTED SOIL. FOLLOW RECOMMENDATIONS OF SOILS REPORT.
- 3. VERIFY BEARING CAPACITY BY TESTING PRIOR TO SLAB PLACEMENT. SUBMIT REPORTS TO ARCHITECT.

CAST-IN-PLACE CONCRETE

- 1. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS, HAVE A SLUMP OF 4" PLUS OR MINUS 1", AND HAVE 2-4% AIR ENTRAINMENT.
- 2. ALL REINFORCING STEEL SHALL BE NEW DOMESTIC DEFORMED BILLET STEEL CONFORMING TO ASTM A-615 GRADE 60.
- 3. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH "THE BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" ACI 318-19.
- 4. ALL REINFORCING DETAILS SHALL CONFORM TO "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES" ACI 315-18.
- 5. CONTRACTOR SHALL VERIFY LOCATIONS OF ALL OPENINGS, SLEEVES, ANCHOR BOLTS, INSERTS, ETC., AS REQUIRED BY OTHER TRADES BEFORE CONCRETE IS PLACED.
- 6. CONTRACTOR SHALL PROVIDE SPACERS, CHAIRS, BOLSTERS, ETC., NECESSARY TO SUPPORT REINFORCING STEEL.
- 7. ALL SLABS SHALL BE POURED MONOLITHICALLY, EXCEPT FOR REQUIRED CONSTRUCTION JOINTS.
- 8. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCEMENT:
 - 3"-----CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH.
 - 1-1/2"-----ALL OTHER CASES.
- 9. HORIZONTAL SLAB BARS SHALL BE BENT 1'-6" AROUND CORNERS, OR PROVIDE CORNER BARS WITH A 2'-0" LAP ON EACH LEG.
- 10. TESTING LABORATORY SHALL SUBMIT ONE COPY OF ALL CONCRETE TEST REPORTS DIRECTLY TO THE POST TENSION ENGINEER ARCHITECT-SEE SPECS.

WOOD CONSTRUCTION

- 1. WOOD CONSTRUCTION SHALL CONFORM TO THE NDS "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION", LATEST EDITION.
- 2. ALL WALL STUDS SHALL BE NO. 2 SOUTHERN YELLOW PINE FINGER JOINT OR SOLID WITH 9' PRE-CUT STUDS TO BE USED. FOR BEARING WALLS, IS ACCEPTABLE TO USE SYP No. 3 WOOD FOR THE SINGLE BOTTOM PLATE AND THE DOUBLE TOP PLATE. STUDS FOR ALL STUD WALLS SHALL BE AS FOLLOWS:

| | |
|-----------------|-------------------------|
| TWO STORY WALLS | |
| FIRST FLOOR | 2x4'S @ 16"O.C. (U.N.O) |
| SECOND FLOOR | 2x4'S @ 16"O.C. (U.N.O) |

ALL LOAD BEARING WALLS SHALL HAVE MIDSPAN HORIZONTAL BLOCKING SPACED AT 48" O.C. INSTALLED BEFORE WALLS ARE LOADED. ALL NON-LOAD BEARING PARTITIONS SHALL CONSIST OF 2x4 STUDS SPACED AT 24" O.C. 2x4 STUDS DO NOT NEED TO BE DOUBLED AT THE FIRST FLOOR FOR NON-LOAD BEARING WALLS.

- 3. PLACE A SINGLE PLATE AT THE BOTTOM AND A DOUBLE PLATE AT THE TOP OF ALL STUD WALLS. 2x SOLE PLATES AT THE EDGES OF SLABS SHALL BE ATTACHED TO THE SLAB WITH SIMPSON MAS MUDSILL ANCHORS (WITH 6 10d NAILS) AT 32" O.C. AT INTERIOR STUD WALLS PROVIDE EITHER HILTI ZF72 (WITH 2 7/8" LENGTH, 5/84" THICK WASHERS) POWDER DRIVEN FASTENERS AT 8" ON CENTER, OR 1/2" DIAMETER ANCHOR BOLTS WITH 6" EMBEDMENT, AT 32" ON CENTER. RED-HEAD FASTENERS OF EQUIVALENT SIZES MAY BE USED. ALL OTHER SUBSTITUTIONS MUST BE APPROVED BY ASE ENGINEERING SERVICES, INC. PRIOR TO INSTALLATION. SEE THE SHEAR WALL SCHEDULE FOR SPECIAL SOLE PLATE ATTACHMENT.
- 4. STUDS SHALL BE PACKED AT ALL ANGLES, CORNERS, AROUND ALL OPENINGS AND AT SHEAR WALLS. SEE SCHEDULES, UL ASSEMBLIES AND ARCH. DETAILS FOR REQUIREMENTS.
- 5. WOOD LINTELS OVER OPENINGS SHALL BE AS NOTED PER DETAILS. NAIL MULTIPLE STUDS TOGETHER WITH NAILS PER DETAIL.
- 6. WALL SHEATHING SHALL BE: (SEE SHEAR WALL SCHEDULE S1.02 FOR REQUIREMENTS AT SHEAR WALLS.)

AT INTERIOR WALLS PROVIDE 5/8" GYPSUM WALLBOARD (SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS) EACH SIDE OF STUDS, NAILED WITH 5d COOLER NAILS AT 7" O.C. (USE 6d COOLER NAILS FOR 5/8" WALLBOARD) AT ALL SUPPORTS. PROVIDE SOLID 2x BLOCKING AT ALL SHEET EDGES. BLOCKING IS NOT REQUIRED AT NON-LOAD BEARING PARTITIONS.

AT EXTERIOR WALLS SHEATH THE INTERIOR FACE OF WALLS WITH 5/8" GYPSUM WALLBOARD AS NOTED ABOVE FOR INTERIOR WALLS. SHEATH THE EXTERIOR FACE OF WALLS WITH 7/16" C-DX PLYWOOD (OR 7/16" O.S.B.), NAILED WITH 8d NAILS AT 6" O.C. AT ALL EDGE SUPPORTS, AND 8d NAILS AT 6" O.C. AT ALL INTERMEDIATE SUPPORTS. PROVIDE SOLID DOUBLE 2x BLOCKING AT ALL SHEET EDGES. SHEARWALL SCHEDULE NOTE 5.
- 7. ALL WOOD IN CONTACT WITH CONCRETE OR EXPOSED TO WEATHER SHALL BE PRESSURE TREATED.
- 8. FLOOR SHEATHING IS 3/4" TONGUE AND GROOVE O.S.B., GLUED AND NAILED WITH 10d NAILS AT 6" O.C. AT SUPPORTED EDGES, AND 10d NAILS AT 10" O.C. AT INTERMEDIATE SUPPORTS.
- 9. ROOF SHEATHING SHALL BE 19/32" C - D PLYWOOD OR 19/32" O.S.B. (SPAN RATING 32/16), NAILED TO TRUSSES BELOW. SEE ROOF SHEATHING NAILING SCHEDULE FOR NAIL PATTERN. PROVIDE ONE PLYWOOD CLIP PER SPAN BETWEEN SHEET EDGES FOR 24" SPAN. PROVIDE TWO PLYWOOD CLIP PER SPAN BETWEEN SHEET EDGES FOR 48" SPAN. PROVIDE SOLID 2x BLOCKING BETWEEN SUPPORTS AT ALL HIPS, RIDGES, VALLEYS, AND CHANGES IN ROOF SLOPE.
- 10. ALL LUMBER SHALL BE STAMPED WITH THE GRADE MARK OF AN APPROVED GRADING AGENCY.
- 11. NAILING SCHEDULE:

| CONNECTION | COMMON NAIL | NUMBER OR SPACING |
|-------------------------------------|-------------|-------------------|
| SOLE PLATE TO TRUSS OR BLOCKING | 16d | 8" O.C. |
| STUD TO SOLE PLATE, TOE NAIL | 8d | 4 |
| DOUBLE STUDS, FACE NAIL | 16d | 24" O.C. |
| DOUBLE TOP PLATES, FACE NAIL | 16d | 6" O.C. |
| TOP PLATES LAPS AND INTERSECTIONS | 16d | 3 |
| TRUSSES, LAPS OVER WALLS, FACE NAIL | 16d | 4 |
| BUILT-UP CORNER STUDS | 16d | 12" O.C. |
| STUDS TO SOLE PLATE, END NAIL | 16d | 2 |

- 12. WHERE WOOD BEAMS/HEADERS ABUT WOOD COLUMNS, PROVIDE SIMPSON "HHUC" CONNECTORS WITH ALL NAILS SPECIFIED BY THE MANUFACTURER.
- 13. AT ALL WALLS SUPPORTING ROOF TRUSSES PROVIDE UPLIFT STRAPPING/CONNECTORS SHOWN IN THE TYPICAL WALL ELEVATION 1/5S.02, OR ALTERNATE: HURRY-BOLT SYSTEM OR EQUAL. - SUBMIT ENGINEERED SHOP DRAWINGS FOR REVIEW.
- 14. ALL PRESSURE TREATED AND FIRE RETARDANT LUMBER FASTENERS SHALL BE OF HOT-DIPPED ZINC COATED GALVANIZED STEEL.
- 15. ALL SIMPSON HOLD DOWN COLLECTORS SHALL USE ALL THREAD ROD WITH DOUBLE BOLTS AT THE BOTTOM W/ A MIN. EMBEDMENT OF 9" AT INTERIOR FOOTING AND 12" AT EXTERIOR FOOTING w/ 2" DIA WASHERS.

PREFABRICATED WOOD TRUSSES

- 1. ALL PREFABRICATED WOOD TRUSSES SHALL BE SECURELY FASTENED AT EACH END TO THEIR SUPPORTING WALLS OR BEAMS AS SHOWN IN THE TYPICAL WALL ELEVATION 1/5S.02
- 2. PREFABRICATED WOOD TRUSSES SHALL BE DESIGNED IN ACCORDANCE WITH THE LATEST EDITION OF THE "NATIONAL DESIGN SPECIFICATION FOR STRESS-GRADE LUMBER AND ITS FASTENERS" AS RECOMMENDED BY THE NATIONAL FOREST PRODUCTS ASSOCIATION.
- 3. TRUSS MEMBERS AND CONNECTIONS SHALL BE DESIGNED (WITH A MAXIMUM ALLOWABLE STRESS INCREASE FOR LOAD DURATION OF 25% FOR ROOF TRUSSES ONLY) TO WITHSTAND THE LIVE LOADS GIVEN IN THE NOTES AND TOTAL DEAD LOAD.
- 4. TRUSS MANUFACTURER SHALL SUBMIT SHOP DRAWINGS AND DESIGN NOTES WITH A ALABAMA REGISTERED ENGINEER'S SEAL FOR APPROVAL BY THE ARCHITECT. DESIGN NOTES TO INCLUDE THE RATED LOAD CAPACITY OF THE CONNECTORS USED TO SECURE THE MEMBERS, CERTIFICATION OF THE CONNECTOR CAPACITIES AND MANUFACTURER'S LICENSE TO FABRICATE TRUSSES UTILIZING THE CONNECTOR SYSTEM PROPOSED.
- 5. THE CONTRACTOR SHALL APPROVE FABRICATION AND INSTALLATION DRAWINGS SHOWING SIZE, SHAPE AND LAYOUT PRIOR TO SUBMITTAL FOR REVIEW BY THE ARCHITECT AND BEFORE FABRICATION HAS BEGUN.
- 6. BRIDGING FOR PRE-ENGINEERED TRUSSES SHALL BE AS REQUIRED BY TRUSS MANUFACTURER, AND THE LOCAL BUILDING CODE, UNLESS NOTED ON PLANS. ALSO WHERE HEEL HEIGHT ON BOTTOM CHORD BEARING TRUSSES EXCEEDS 11" PROVIDE CONTINUOUS 2x4 LET IN.
- 7. EACH PLY OF EVERY MULTIPLE-PLY GIRDER TRUSS SHALL BE NAILED TOGETHER PER TRUSS MANUFACTURER SPECIFICATIONS.

- 7. DESIGN LOADS - DEAD LOADS:

| | | |
|-----------------|--------------------------------|------------------|
| FLOOR TRUSSES | BOTTOM CHORD | 8 PSF |
| | TOP CHORD (APTS) | 22 PSF |
| OUTSIDE TRUSSES | BOTTOM CHORD | 8 PSF |
| | TOP CHORD | 45 PSF |
| ROOF TRUSSES | BOTTOM CHORD | 10 PSF |
| | TOP CHORD | 10 PSF |
| | TOP CHORD (AT OVERBUILT AREAS) | 5 PSF ADDITIONAL |
- 8. ALL SIMPSON TRUSS ANCHORS SHOWN ON DRAWINGS SHALL BE VERIFIED FOR LOADS SHOWN ON WOOD TRUSS DESIGN CALCULATIONS. THEREFORE, ANCHOR SIZES AND TYPES ARE SUBJECT TO CHANGE BY ADVANCED STRUCTURAL ENGINEERING II.

FASTENER SUBSTITUTIONS:

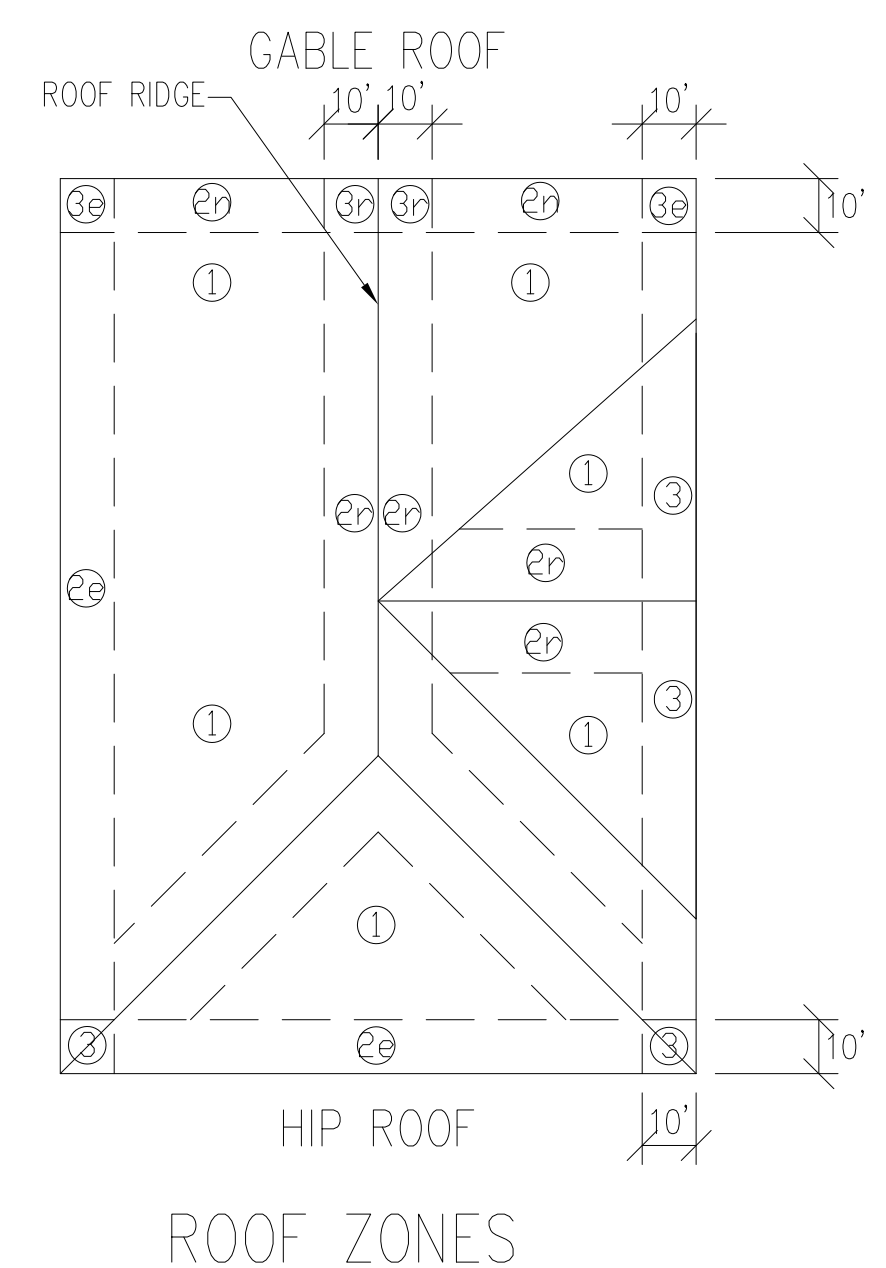
ALL NAILS ARE COMMON NAILS, UNLESS NOTED OTHERWISE. THE FOLLOWING FASTENERS ARE ACCEPTABLE SUBSTITUTIONS. THE ALTERNATE FASTENERS SHALL BE SPACED AT THE SAME SPACING AS THE SCHEDULED FASTENERS.

| SCHEDULED FASTENER | ALTERNATE FASTENER |
|--------------------|---|
| 8d COMMON NAIL | 8d RING SHANK NAIL 8d SCREW SHANK NAIL 0.131 P-NAIL |
| 10d COMMON NAIL | 10d RING SHANK NAIL 10d SCREW SHANK NAIL 0.148 P-NAIL |
| 16d COMMON NAIL | 16d RING SHANK NAIL 16d SCREW SHANK NAIL |
| 6d COOLER NAIL | #6 x 1 1/4" TYPE S OR W DRYWALL SCREW |

WATERPROOFING FOR THIS BUILDING IS THE SOLE RESPONSIBILITY OF THE BUILDER/CONTRACTOR/ARCHITECT, HENCE NO DETAILS OF FLASHING, FLOOR, SLOPE AND STEP, NOR ANY OTHER WATERPROOFING MEASURES HAVE BEEN INCLUDED IN OUR DRAWINGS. IF SLOPE AND FLOOR STEPS ARE SHOWN ON OUR DRAWINGS, THEY SHALL BE USED ONLY AS A REFERENCE.

ADDITIONAL NOTES

- 1. WATERPROOFING DESIGN IS NOT IN THE STRUCTURAL SCOPE OF WORK, HENCE NO DETAILS OF FLASHING, FLOOR, SLOPE AND STEP, NOR ANY OTHER WATERPROOFING MEASURES HAVE BEEN INCLUDED IN OUR DRAWINGS. IF SLOPE AND FLOOR STEPS ARE SHOWN ON OUR DRAWINGS, THEY SHALL BE USED ONLY AS A REFERENCE. FLOOR SLOPE AND STEPS SHALL FOLLOW ARCHITECTURAL DRAWINGS.
- 2. CONTRACTOR SHALL VERIFY THAT THE TRUSS LAYOUT SUPPLIED BY THE TRUSS MANUFACTURER MATCHES THE TRUSS LAYOUT SHOWN ON THE STRUCTURAL DRAWINGS. IF THERE IS ANY DISCREPANCY BETWEEN TRUSS LAYOUT SHOWN ON TRUSS SHOP DRAWINGS AND TRUSS LAYOUT SHOWN STRUCTURAL DRAWINGS, CONTRACTOR SHALL STOP CONSTRUCTION AND INFORM IN WRITING THE ENGINEER OF RECORD. CONTRACTOR SHALL WAIT FOR ENGINEER OF RECORD RESPONSE IN WRITING PRIOR TO START OF CONSTRUCTION.
- 3. EACH PLY OF EVERY MULTIPLE-PLY GIRDER TRUSS SHALL BE NAILED TOGETHER PER TRUSS MANUFACTURER SPECIFICATIONS.
- 4. ALL STUCCO AND/OR VENEER DESIGNS ARE NOT IN THE SCOPE OF WORK FOR THE STRUCTURAL ENGINEER.
- 5. PAVER AND SIDE WALK DESIGNS ARE NOT IN THE SCOPE OF WORK FOR THE STRUCTURAL ENGINEER.
- 6. CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS BETWEEN ARCHITECTURAL AND STRUCTURAL DRAWINGS. INFORM ARCH/ENG IF DIMENSIONS DO NOT MATCH. CONTRACTOR SHALL GET A RESPONSE FROM ARCHITECT/ENGINEER IN WRITING TO RESOLVE THE PROBLEMS PRIOR TO STARTING CONSTRUCTION.
- 7. BUILDING MAINTENANCE SUCH AS PAINTING AND SEALING ETC. IS THE HOME OWNER SOLELY RESPONSIBLE.
- 8. CONTRACTOR TO PROVIDE CRACK ISOLATION MEMBRANE OVER SLAB AT AREAS TO BE TILED PRIOR TO INSTALLATION OF FLOOR TILE.
- 9. ALL REBAR SHOWN ON ALL DRAWING DETAILS AND SECTIONS IS CONTINUOUS UNLESS NOTICE OTHERWISE.
- 10. THE SECTIONS SHOWN ON THE DESIGN DRAWINGS INDICATE THE TYPICAL SECTIONS WHICH ARE APPLIED TO ALL SIMILAR BUILDING CONDITIONS.
- 11. DEVELOPER OR G.C. SHOULD HIRE DELEGATED ENGINEERS TO SUBMIT SHOP DRAWINGS WITH CALCULATIONS TO ENGINEER OF RECORD FOR REVIEW SUCH AS TRUSSES, STEEL FRAMING AND CONNECTION, METAL STUD FRAMING, STEEL STAIRS, RAILING, POST TENSION MEMBERS, PRECAST STRUCTURES AND ETC.



ROOF SHEATHING FASTENING SCHEDULE
(8d RING SHANK NAILS TYP THROUGHOUT)

| PANEL EDGES | PANEL FIELDS |
|-------------|--------------|
| 4" O.C. | 4" O.C. |
| 4" O.C. | 4" O.C. |

8d RING SHANK NAILS SIZE = 2-1/2" X 0.131"

WINDOW & DOOR WINDOW PRESSURES
115 MPH WIND ZONE EXPOSURE C
BUILDING CATAGORY II

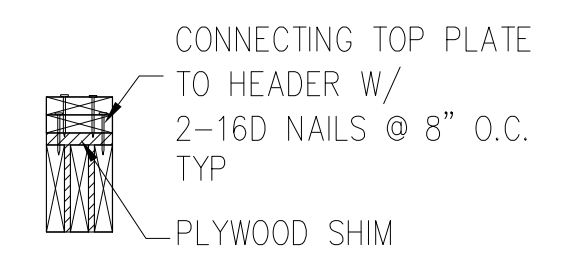
| OPENING SIZE | INTERIOR ZONE | EXTERIOR ZONE** |
|--------------|---------------|-----------------|
| 10 SQFT | +36.4 / -39.5 | +36.4 / -48.8 |
| 20 SQFT | +34.7 / -37.8 | +34.7 / -45.4 |
| 50 SQFT | +32.6 / -35.5 | +32.6 / -41.2 |
| 100 SQFT | +30.9 / -34.0 | +30.9 / -37.8 |

**END ZONE IS DEFINED AS AN AREA WITHIN 10' FROM THE EDGE OF THE BUILDING

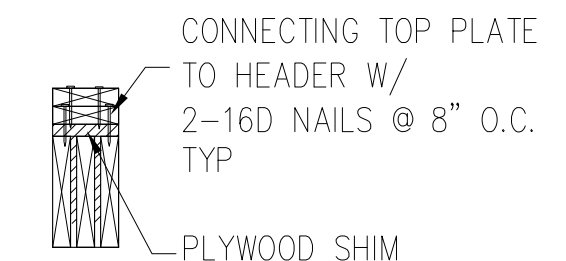
STANDARD WINDOWS AND DOORS WILL GENERALLY FALL INTO THE 10 TO 20 SQ. FT. CATEGORY. STANDARD DOUBLE SLIDING GLASS DOORS WILL GENERALLY FALL INTO THE 20 TO 50 SQ. FT. CATEGORY. STANDARD DOUBLE GARAGE DOORS WILL GENERALLY FALL INTO THE 50 TO 100 SQ. FT. CATEGORY

HEADER/BEAM SCHEDULE

| TYPE | HEADER/BEAM | TYPE | HEADER/BEAM |
|------|--|------|-------------------------|
| H-1 | DOUBLE 2x8 FOR 4" WALL TRIPLE 2x6 FOR 6" WALL | H-5 | (2) 1 3/4" x 9 1/2" LVL |
| H-2 | DOUBLE 2x10 FOR 4" WALL TRIPLE 2x8 FOR 6" WALL | H-6 | (3) 1 3/4" x 9 1/2" LVL |
| H-3 | DOUBLE 2x12 FOR 4" WALL TRIPLE 2x10 FOR 6" WALL | H-7 | (2) P.T. 2x12 |
| H-4 | (2) 1 3/4" x 11 7/8" LVL | | |



H-1 SECTION
SCALE: NTS.



H-2 SECTION
SCALE: NTS.

- 1. PROVIDE WOOD HEADERS OVER ALL OPENINGS. IF NO HEADER IS SPECIFIED, PROVIDE H-2 AT EXTERIOR WALLS AND WALLS SUPPORTING TRUSSES, AND H-1 AT OTHER WALLS.
- 2. AT DOUBLE 2x HEADER/BEAMS PROVIDE A 3/8" PLYWOOD (OR O.S.B.) SPACER BETWEEN MEMBERS.
- 3. NAIL ALL MULTI-MEMBER HEADERS AND BEAMS TOGETHER WITH 16d NAILS AT 12" O.C. TOP AND BOTTOM, EACH SIDE, STAGGERED.
- 4. PROVIDE DOUBLE WOOD STUD UNDER WOOD HEADER EA END U.N.O.



ISSUE HISTORY

| No. | Date | Description |
|-----|----------|-------------------|
| 1 | 04/15/22 | PERMIT SUBMISSION |

REVISION HISTORY

| No. | Date | Description |
|-----|------|-------------|
| | | |

FUGLEBERG KOCH

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CONSULTANT

ASE ENGINEERING SERVICES, INC.

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Orlando, Florida 32817 - 407-677-5640 Fax 407-730-2999
Certificate of Authorization No. 25873

Wenyi Hu P.E.
Alabama No. 26652

ALABAMA REGISTERED PROFESSIONAL ENGINEER

No. 29852
Professional Seal
4/26/2021

| | |
|---|--|
| THE ROBERT MADISON MADISON, ALABAMA | Drawn: CW Checked: CW Approval: MX Date: 02-20-22 Project #: XXX-XXX |
|---|--|

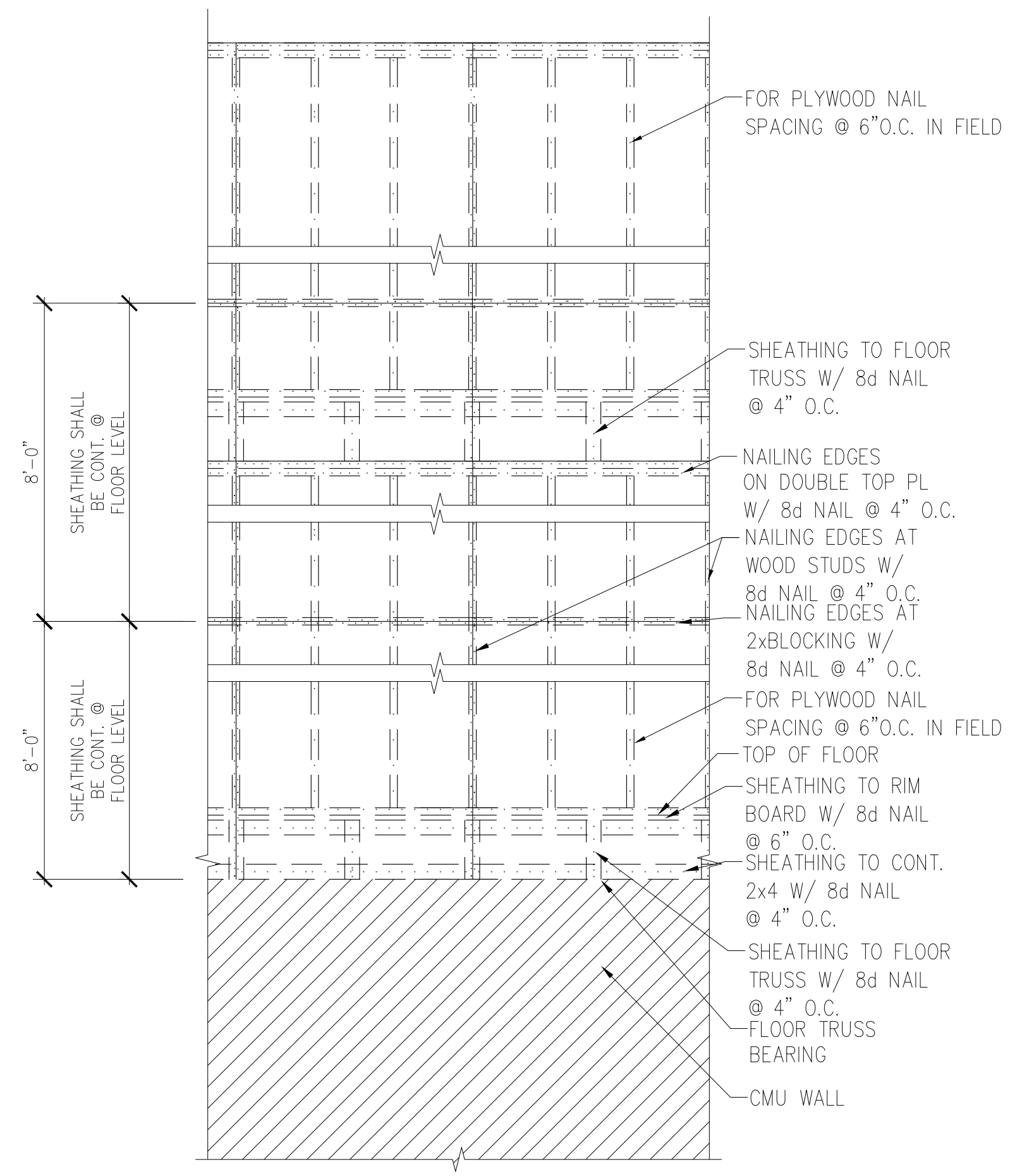
**GENERAL NOTES
BLDG TYPES A, B & C**

S0.01

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| CONNECTOR EQUIVALENT SCHEDULE SIMPSON | | | | |
|--|---------------------|---------------------|--|----------------|
| SIMPSON TYP | FASTENERS | UPLIFT(lbs.) | WOOD TO: | USP TYP |
| MTS16 OR MTS12 | (14) 10d x 1-1/2 | 1000 | WOOD | MTW16 |
| HTS20 | (24) 10d x 1-1/2 | 1450 | WOOD | HTW20 |
| LTS12 | (12) 10d x 1-1/2 | 775 | WOOD | LTW12 |
| H3 | (4) 8d | 455 | WOOD | RT7 |
| LTT20B | (10) 16d INTO STUDS | 1750 (NAILS) | CONCRETE, WOOD | LTS20B |
| HTT16 | (18) 16d | 4175 (NAILS) | CONCRETE, WOOD | HTT16 |
| SP-1 | (10) 10d | 585 | WOOD (BOT OF STUD) | SPT22 |
| SP-4 | (6) 10d x 1-1/2 | 735 | WOOD (TOP OF STUD) | SPT4 |
| THA/THAC TYP | PER SIMPSON CATALOG | PER SIMPSON CATALOG | SELECTION BASE ON TRUSS WIDTH AND HEIGHT | MSH TYP |
| CS16 | (22) 10d | 1650 | 11" MIN AT EA END FOR WOOD | RS150 |
| MAS | (6) 10d x 1-1/2 | 1005 | SLAB, STEMWALL | FA3 |
| HCP2 | (12) 10d x 1-1/2 | 605 | FOR 2x MEMBER | N/A |
| HCP4 | (16) 10d | 1000 | FOR 4x MEMBER | N/A |
| A35 | (12) 8d x 1/2 | 450 SHEAR | WOOD | MPA1 |
| CC44, ECCU44 | (4) 5/8d BOLTS | 1465 (UPLIFT) | ECCU44 AT BEAM END | KCC44, KECCU44 |
| CC66, ECCU66 | (6) 5/8d BOLTS | 3660 (UPLIFT) | ECCU66 AT BEAM END | KCC66, KECCU66 |
| PCM/EPC TYP | PER SIMPSON CATALOG | PER SIMPSON CATALOG | SELECTION BASE ON POST AND BEAM WIDTH | PCM/EPC TYP |
| ECCLL44 | BOLTS AS REQ | 1465 (UPLIFT) | ECCLL44 FOR 4x4 POST | KECCLL44 |
| ECCLL66 | (12) 16d | 3660 (UPLIFT) | ECCLL66 FOR 6x6 POST | KECCLL66 |
| ABU44 | 5/8 ANCHOR BOLT | 2200 | ABU44 FOR 4x4 POST | PAU44 |
| ABU66 | | | ABU44 FOR 4x4 POST | PAU66 |
| HUC410 | (18) 16d FOR WOOD | 1510 | CONCRETE, MASONRY, WOOD FOR 4x10 BM | HD410IF |
| HUC412 | (22) 16d FOR WOOD | 1510 | CONCRETE, MASONRY, WOOD FOR 4x12 BM | HD412IF |
| LUS TYP | PER SIMPSON CATALOG | PER SIMPSON CATALOG | LUS24 FOR 2x6, LUS26 FOR 2x8, LUS28 FOR 2x10, ETC. | JUS TYP |

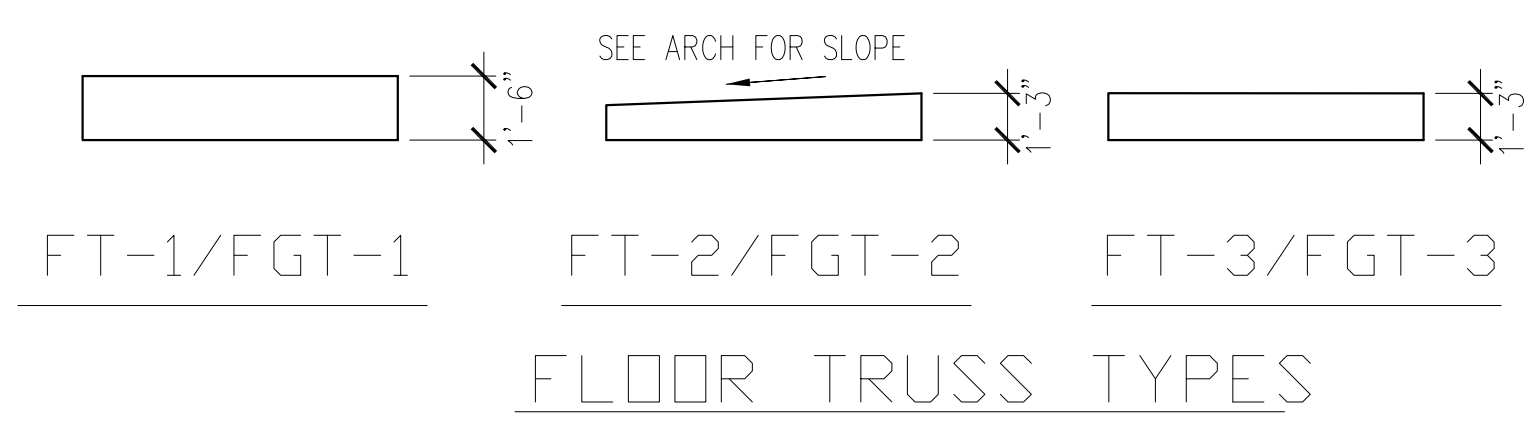
*SUBJECT TO COORDINATION WITH TRUSS ENGINEERING CRITERIA



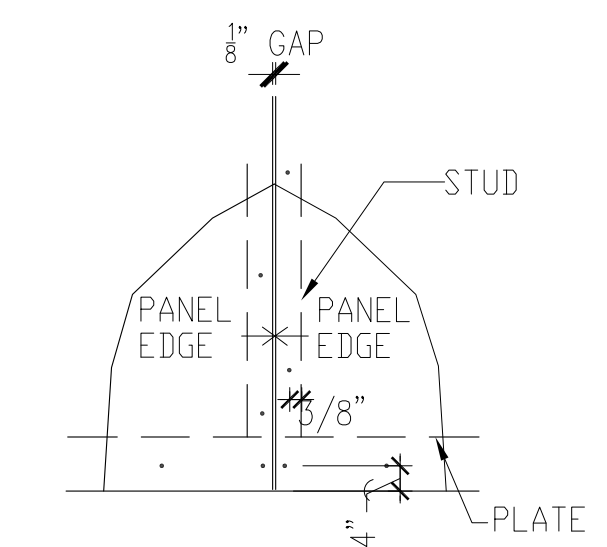
1 TYP EXTERIOR WALL SHEATHING LAY-OUT
SCALE: 3/4" = 1'-0"

TRUSS NOTES

1. TRUSSES SHOWN FOR GENERAL CONFIGURATION ONLY. WEB MEMBERS ARE NOT SHOWN, BUT SHALL BE DESIGNED BY THE TRUSS MANUFACTURER IN ACCORDANCE WITH THE GENERAL NOTES. WORKING POINTS SHALL BE DETERMINED BY THE TRUSS MANUFACTURER.
2. TRUSS MANUFACTURER IS RESPONSIBLE FOR THE DESIGN OF ANY BRIDGING OR BRACING REQUIRED TO BRACE THE TRUSS BOTTOM CHORDS FOR WIND UPLIFT.
3. SEE THE ARCHITECTURAL DRAWINGS FOR ELEVATIONS, OVERHANGS AND BEARING CONDITIONS.
4. THE CONNECTION OF TRUSS TO TRUSS SHALL BE PROVIDED BY THE TRUSS MANUFACTURER.
5. VERIFY TRUSS SLOPE WITH ARCH DRWG PRIOR TO CONSTRUCTION.



FLOOR TRUSS TYPES

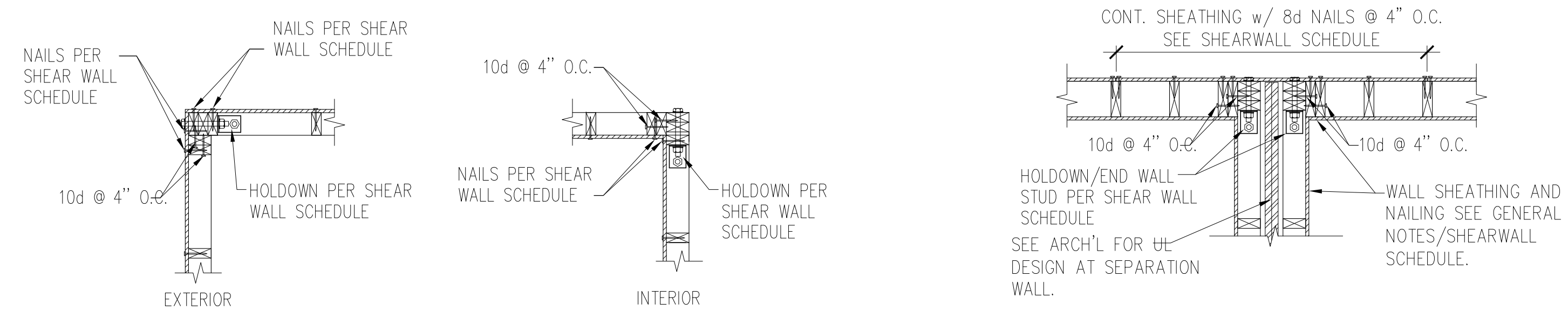


1. ALL HORIZONTAL & VERTICAL JOINTS SHALL OCCUR OVER FRAMING & SHALL BE ATTACHED IN THE SPACING SHOWN ON GENERAL NOTES. SOLID 2x BLOCKING OR FRAMING MEMBER SHALL BE AT ALL PANEL EDGES.

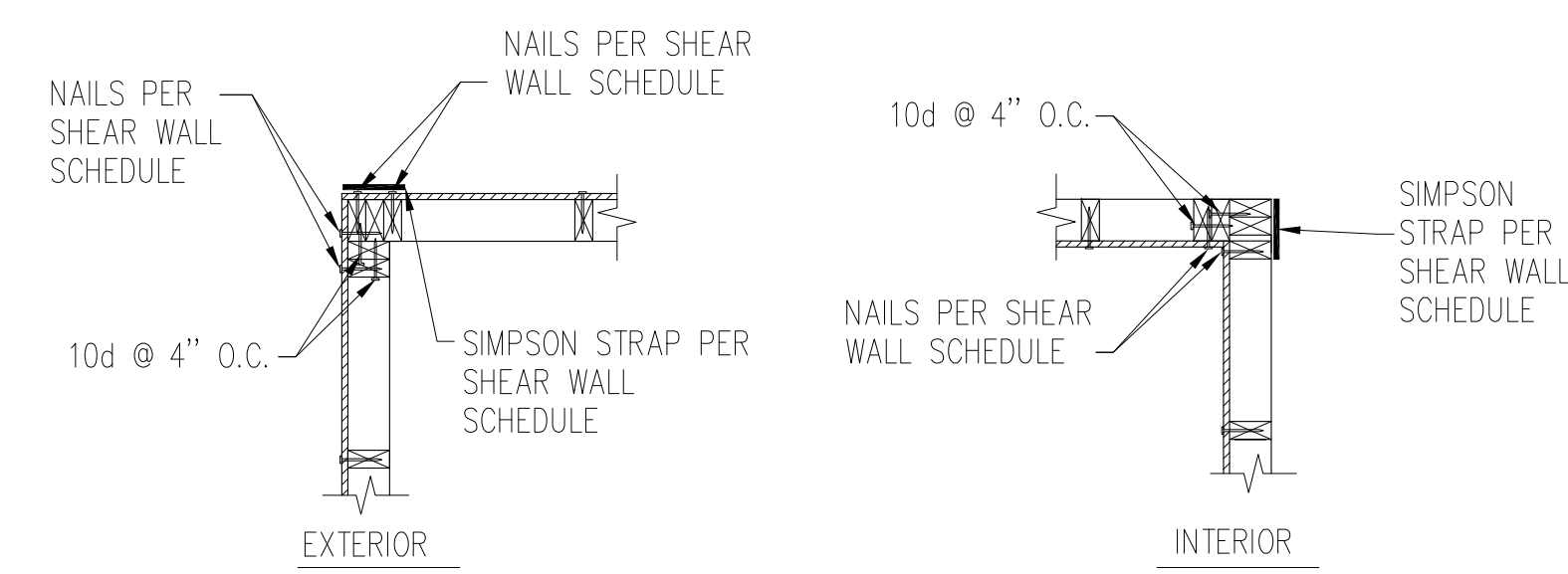
2 SHEATHING JOINT DETAIL
SCALE: NTS

| TYPE | SHEATHING | | SHEATHING NAILING | | FND CONN EACH END OF WALL | | | FND SOLE PLATE ATTACHMENT | 2nd FLOOR CONN EACH END OF WALL | | | | | |
|------|--------------------------|--------------------------|------------------------------|------------------------------|---------------------------|-----------------------------------|----------------|---------------------------|--|-----------|---------------------------------|---------------------------------------|----------------|----------------------------|
| | FND-2nd FLR | 2nd-ROOF @ 2 STORY | FND-2nd FLR | 2nd-ROOF @ 2 STORY | CONNECTOR | FND BOLT-12" EMBED DBL NUT EA END | BOLTS TO STUDS | | REQ'D STUDS AT END OF WALL | CONNECTOR | NAILS EACH END OF STRAP AT STUD | THREADED ROD BTWN CONN DBL NUT EA END | BOLTS TO STUDS | REQ'D STUDS AT END OF WALL |
| 4 | 5/8" GYPSUM WALLBOARD *1 | 5/8" GYPSUM WALLBOARD *1 | 6d COOLER NAILS @ 4" O.C. *5 | 6d COOLER NAILS @ 4" O.C. *5 | HD2A | (1) 5/8" | (2) 5/8" | (2) 2x4 | 1/2" x 4" EMBED HILTI KWIKBOLT (EXP ANCHOR) @ 48" O.C. | CS22x42 | (6) 10d | N/A | N/A | (2) 2x4 |
| 5 | 1/2" C-DX PLYWOOD *3 | 1/2" C-DX PLYWOOD *3 | 8d NAILS @ 4" O.C. | 8d NAILS @ 6" O.C. | HD2A | (1) 5/8" | (2) 5/8" | (2) 2x6 | 1/2" x 4" EMBED HILTI KWIKBOLT (EXP ANCHOR) @ 24" O.C. | CS22x42 | (6) 10d | N/A | N/A | (2) 2x6 |

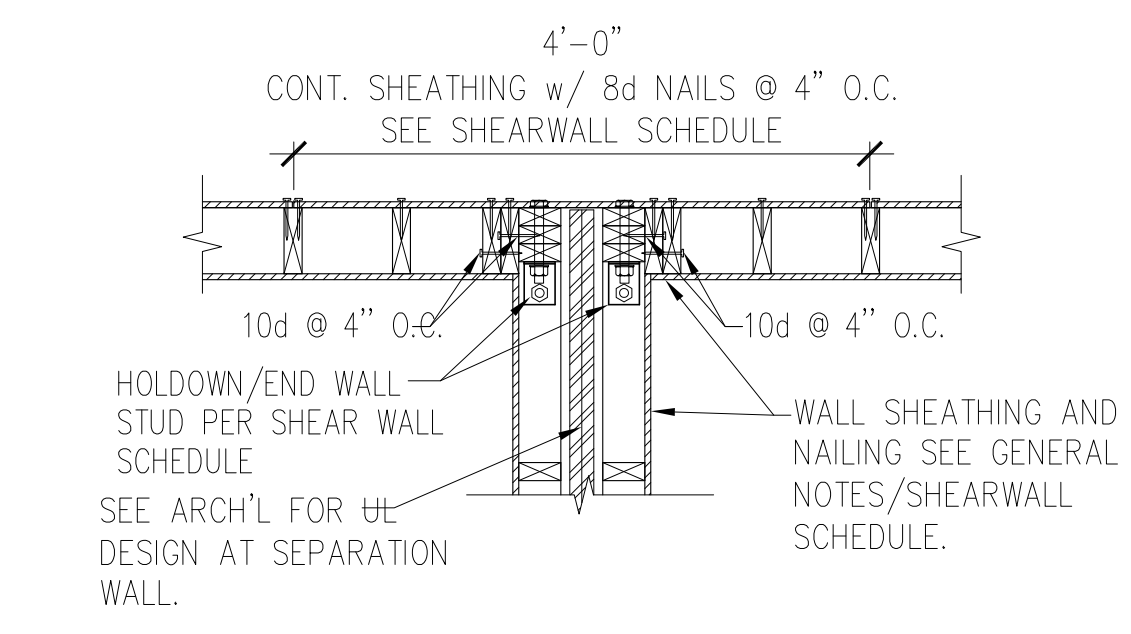
- *1 SHEATH ONLY EXPOSED FACE OF INTERIOR PARTY WALLS. PROVIDE SOLID BLOCKING AT ALL SHEET EDGES, AND AT 4'-0" O.C. MAXIMUM BETWEEN STUDS. 2-PLY INDICATES THAT (2) LAYERS OF GYPSUM WALLBOARD ARE TO BE USED AT FOUNDATION TO SECOND FLOOR. FASTEN AS SCHEDULED.
- *2 SHEATH EACH SIDE OF WALL WITH SHEATHING SCHEDULED (AT FIRST FLOOR ONLY). PROVIDE SOLID BLOCKING AT ALL SHEET EDGES, AND AT 4'-0" O.C. MAXIMUM BETWEEN STUDS.
- *3 SHEATH EXTERIOR FACE WITH PLYWOOD SCHEDULED, AND THE INTERIOR FACE OF STUDS AS SPECIFIED IN THE GENERAL NOTES FOR INTERIOR WALLS.
- *4 SHEATH ONLY EXPOSED FACE OF DOUBLE INTERIOR PARTY WALLS. SHEATH ONE FACE OF GARAGE WALLS WITH SHEATHING SCHEDULED AND OTHER FACE AT SPECIFIED IN THE GENERAL NOTES FOR INTERIOR WALLS. PROVIDE SOLID BLOCKING AT ALL SHEET EDGES, AND AT 4'-0" O.C. MAXIMUM BETWEEN STUDS.
- *5 DRYWALL SCREWS MAY BE SUBSTITUTED FOR THE 5d, 6d(COOLER) NAILS LISTED ABOVE: 1- 1/4" TYPE S OR W, #6 FOR 5d OR 6d (COOLER) NAILS.



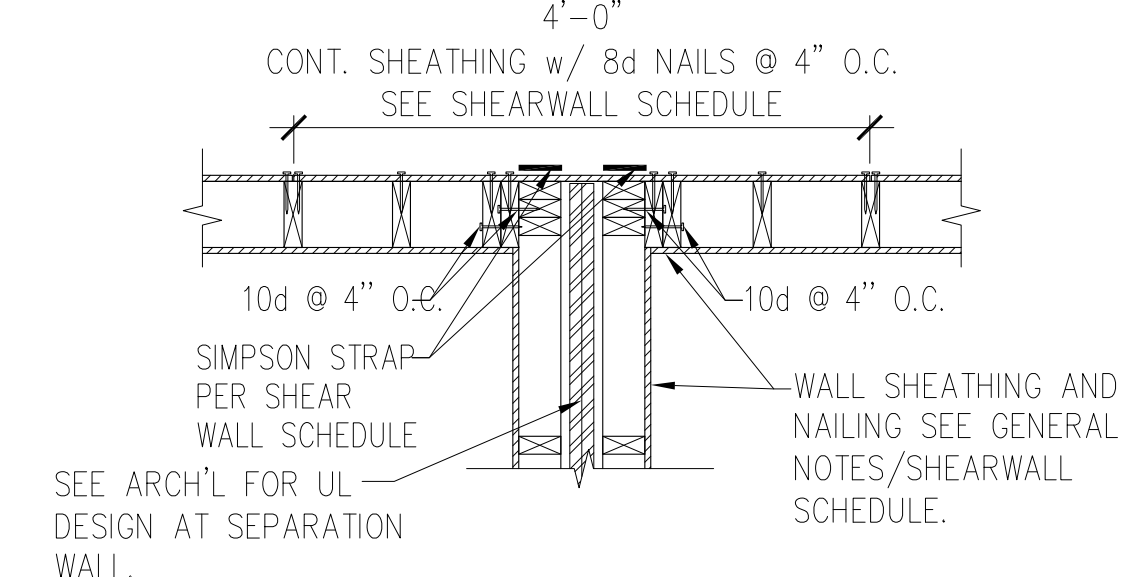
AT GROUND LEVEL



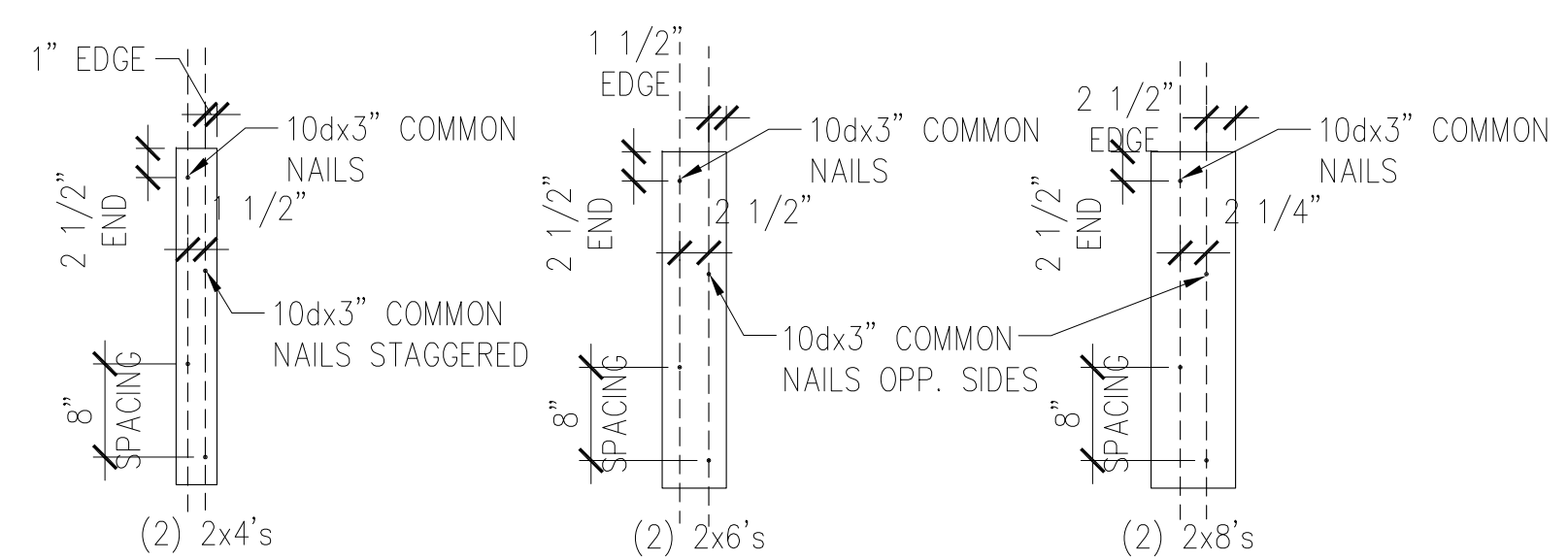
2ND FLOOR AND UPPER LEVEL



AT GROUND LEVEL



2ND FLOOR AND UPPER LEVEL



FOR STUD PACKS w/ MORE THAN (2) STUDS, USE NAILING PATTERN FOR EACH LAYER.

2x BUILT-UP STUD COLUMN DETAILS
SCALE: NTS

4 TYP. SHEARWALL CORNER HOLDDOWN
SCALE: NTS

5 TYPICAL SHEATHING AT TENANT SEPARATION WALL
SCALE: NTS

ISSUE HISTORY

| No. | Date | Description |
|-----|----------|-------------------|
| 1 | 04/15/22 | PERMIT SUBMISSION |

REVISION HISTORY

| No. | Date | Description |
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Wenji Hu P.E.
Alabama No. 26652

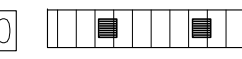
THE ROBERT MADISON
MADISON, ALABAMA

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|------------|----------|
| Drawn: | CW |
| Checked: | CW |
| Approved: | MX |
| Date: | 02-20-22 |
| Project #: | XXXX-XXX |

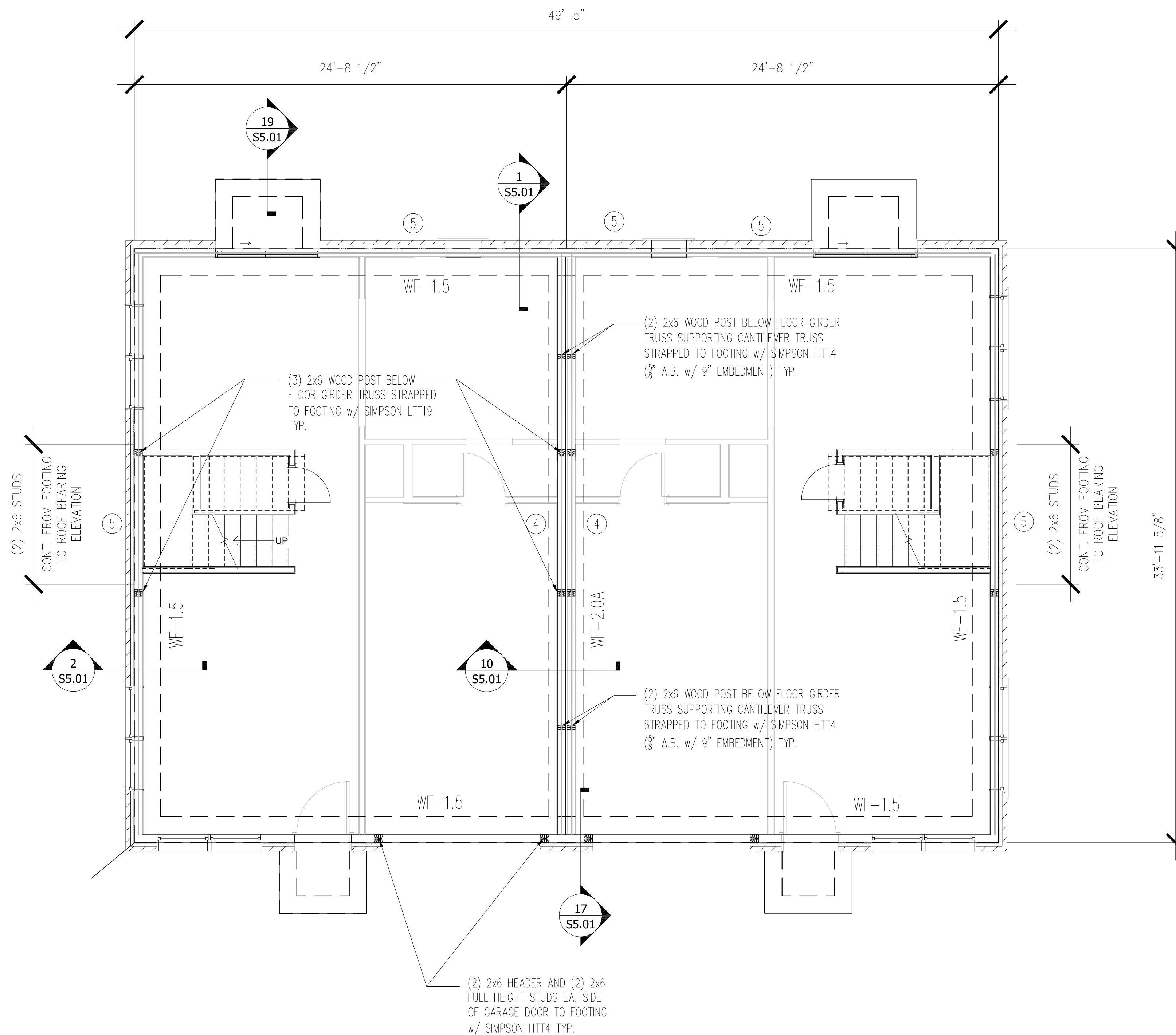
GENERAL NOTES
BLDG TYPES A, B & C

S0.02

PLAN NOTES:

- 1 SEE GENERAL NOTES ON SHEETS S0.01 & S0.02.
- 2 DO NOT SCALE DRAWINGS. SEE ARCH'L DRAWINGS FOR ADDITIONAL DIMENSIONS NOT SHOWN. VERIFY ALL DIMENSIONS WITH ARCH'L DRAWINGS PRIOR TO START OF CONSTRUCTION. IF DISCREPANCIES SHOULD OCCUR - CONTACT THE ARCHITECT IN WRITING FOR CLARIFICATION BEFORE PROCEEDING.
- 3 4" (TOTAL) CONCRETE SLAB REINFORCED WITH 6x6-W1.4xW1.4 W.W.F. OVER 10 MIL VAPOR BARRIER ON COMPACTED SUBGRADE. COORDINATE ALL SLAB SLOPES, DEPRESSIONS AND LIMITS THERE OF WITH ARCH'L DRAWINGS (FOR ACTUAL TOP OF SLAB ELEVATIONS, SEE ARCH'L AND / OR CIVIL DRAWINGS)
- 4 PRIOR TO CONCRETE PLACEMENT PROVIDE TERMITE SOIL TREATMENT WITH TEN YEAR WARRANTY AND FOUR ANNUAL INSPECTIONS AND RENEWALS. SEE ARCHITECTURAL FOR REQUIREMENT.
- 5 ○ INDICATES WOOD STUD SHEAR WALL TYPE, AND SHADING INDICATES EXTENT OF SHEAR WALL. SEE THE SHEAR WALL SCHEDULE ON SHEET S0.02 FOR SHEAR WALL INFORMATION.
- 6 THE MAX. SPACING OF CONTROL JOINT FOR ENCLOSURE SPACE SHALL BE 20'-0" O.C., AND FOR OPEN SPACE SHALL BE 8'-0" O.C. COORD. W/ FLOOR COVERING PLACEMENT. SEND SUBMITTAL TO ARCHITECT FOR REVIEW.
- 7 SEE ARCH'L DRAWINGS FOR LOCATIONS / LIMITS AND CONSTRUCTION INFORMATION OF INTERIOR NON-BEARING PARTITION WALLS NOT SHOWN ON PLAN. SEE GENERAL NOTES.
- 8 COORDINATE ALL SLAB (TOPPING) SLOPES AND DEPRESSIONS WITH ARCH'L DRAWINGS. (FOR ACTUAL TOP OF SLAB ELEVATIONS, SEE ARCH'L DRAWINGS)
- 9 SEE MECHANICAL DRAWINGS FOR LOCATION (ON PLANK) OF MECHANICAL UNITS. H.C. MANUFACTURER / SUPPLIER TO DESIGN FOR UNIT WEIGHT. AS REQUIRED VERIFY WEIGHTS WITH MECHANICAL DRAWINGS.
- 10  INDICATES MASONRY BEARING WALLS REINFORCED WITH (1)-#5 VERTICAL GROUT FILLED CELLS SOLID AT ALL CORNERS, ADJACENT MASONRY OPENINGS AND 24" O.C. (MAX).
- 11 SEE 16&17/S5.02 FOR THE 2x BLOCKING BETWEEN BEARING WALL FLOOR LEVEL.

| FOOTING SCHEDULE | | | |
|------------------|------------------------|--|---------------------------------|
| MARK | SIZE | REINFORCEMENT BOTTOM | NOTES |
| | WIDTH x LENGTH x DEPTH | | |
| WF-1.0 | 1'-0"xCONT.x2'-2" | (2)-#5's CONT. | |
| WF-1.5A | 1'-6"xCONT.x1'-0" | (2)-#5's CONT. #4's @ 48" O.C. TRANSVERSE | |
| WF-1.5 | 1'-6"xCONT.x2'-2" | (2)-#5's CONT. #4's @ 48" O.C. TRANSVERSE | |
| WF-2.0 | 2'-0"xCONT.x2'-2" | (2)-#5's CONT. #4's @ 48" O.C. TRANSVERSE | TYP. EXTERIOR WOOD WALL FOOTING |
| WF-2.0A | 2'-0"xCONT.x1'-0" | (3)-#5's CONT. #4's @ 48" O.C. TRANSVERSE | TYP. INTERIOR WOOD WALL FOOTING |
| WF-3.0 | 3'-0"xCONT.x2'-2" | (3)-#5's CONT. #4's @ 48" O.C. TRANSVERSE | TYP. EXTERIOR CMU WALL FOOTING |
| WF-3.0A | 3'-0"xCONT.x1'-0" | (3)-#5's CONT. #4's @ 48" O.C. TRANSVERSE | TYP. INTERIOR CMU WALL FOOTING |
| F-2.5A | 2'-6"x2'-6"x1'-0" | (3)-#5's EA WAY | |
| F-2.5 | 2'-6"x2'-6"x2'-2" | (3)-#5's EA WAY | |



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



| ISSUE HISTORY | | |
|---------------|----------|-------------------|
| No. | Date | Description |
| 1 | 04/15/22 | PERMIT SUBMISSION |

| REVISION HISTORY | | |
|------------------|------|-------------|
| No. | Date | Description |

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Certificate of Authorization No. 25873

Wenqi Hu P.E.
Alabama No. 28652

| | |
|------------|----------|
| Drawn: | CW |
| Checked: | CW |
| Approved: | MX |
| Date: | 02-20-22 |
| Project #: | XXXX-XXX |

BUILDING TYPE C
FOUNDATION PLAN

S3.01

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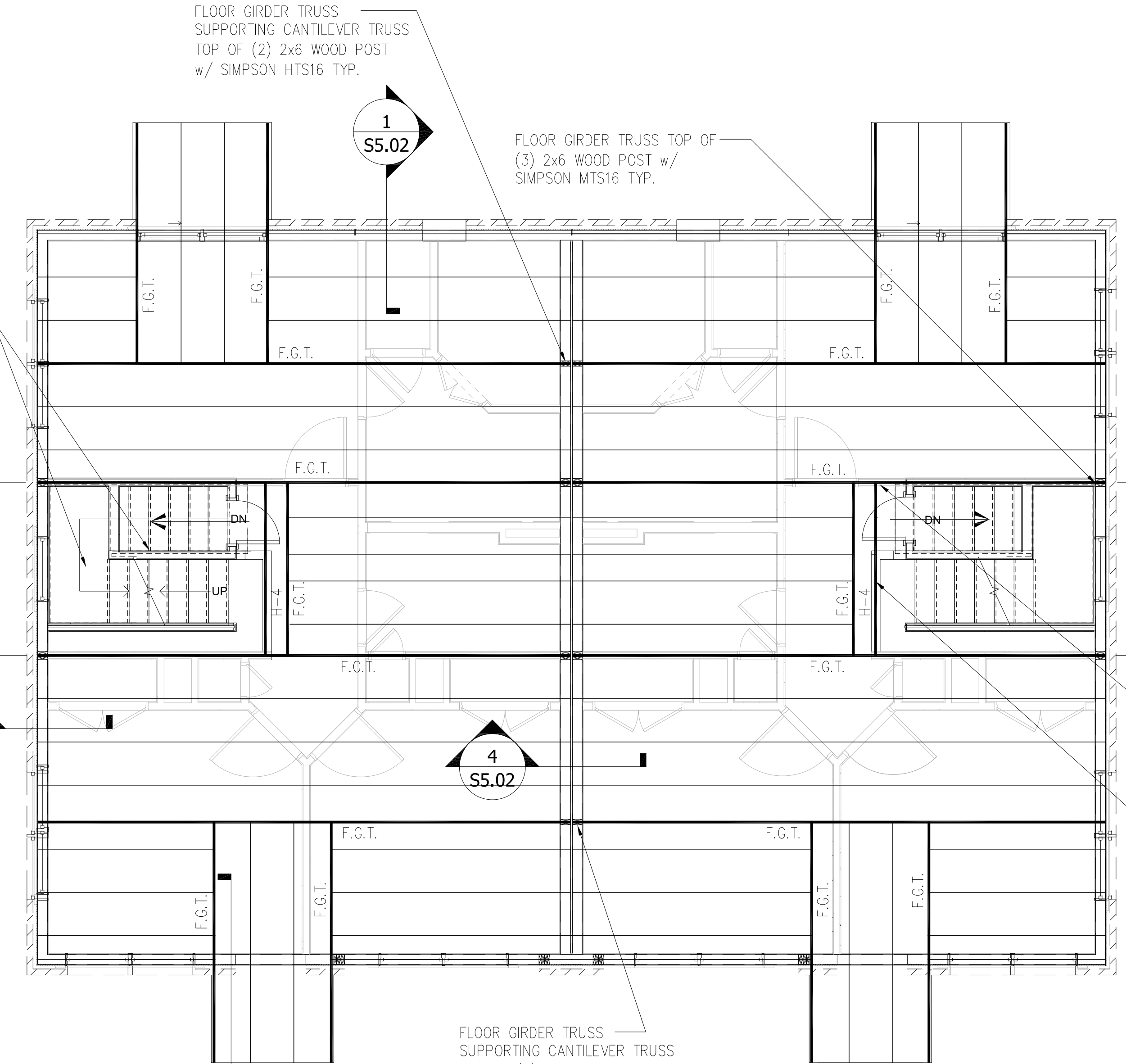


PLAN NOTES:

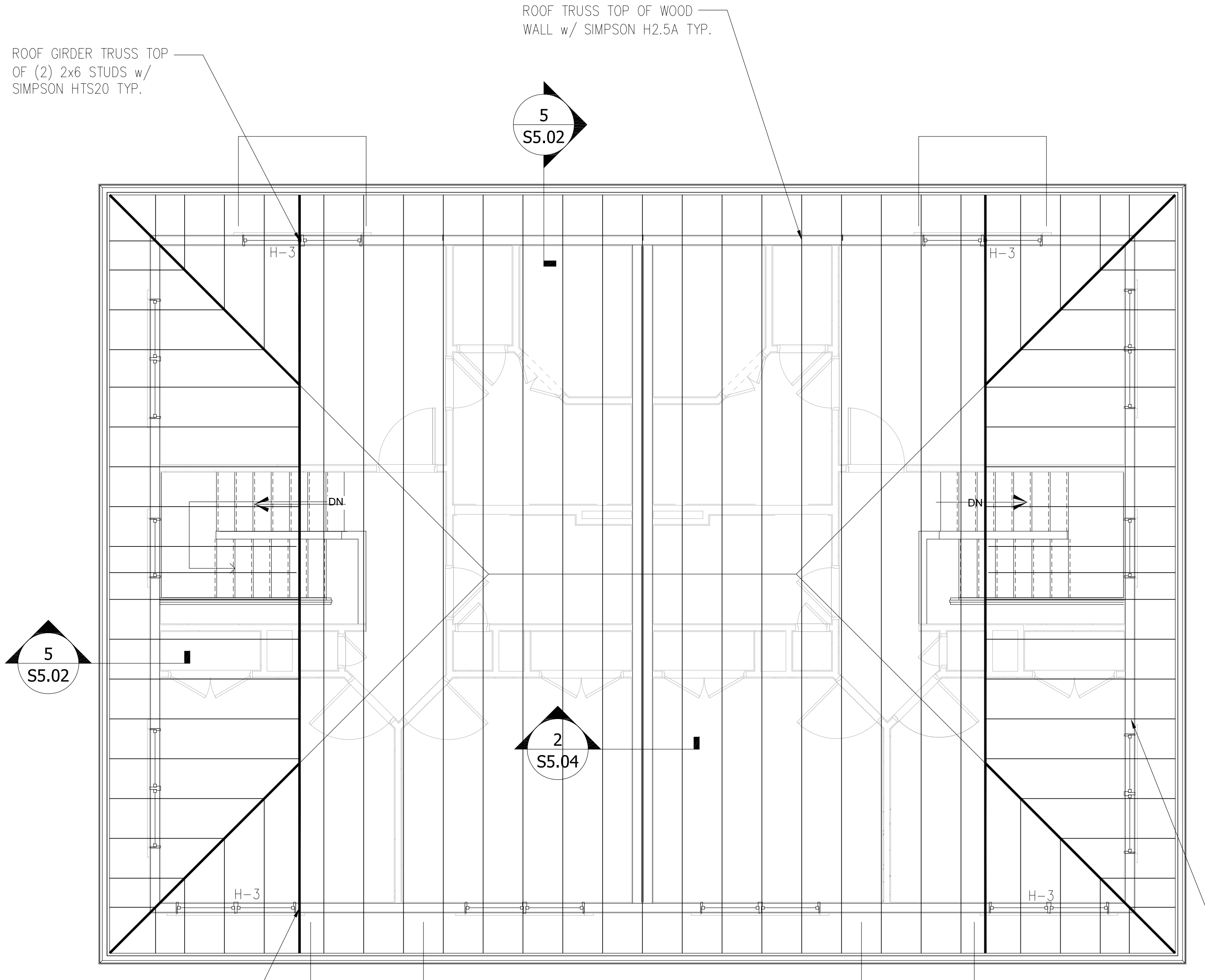
- 1 SEE GENERAL NOTES ON SHEET S0.01 & S0.02.
- 2 DO NOT SCALE DRAWINGS. SEE ARCH'L DRAWINGS FOR ADDITIONAL DIMENSIONS NOT SHOWN. VERIFY ALL DIMENSIONS WITH ARCH'L DRAWINGS PRIOR TO START OF CONSTRUCTION. IF DISCREPANCIES SHOULD OCCUR - CONTACT THE ARCHITECT IN WRITING FOR CLARIFICATION BEFORE PROCEEDING.
- 3 ○ INDICATES WOOD STUD SHEAR WALL TYPE, AND SHADING INDICATES EXTENT OF SHEAR WALL. SEE THE SHEAR WALL SCHEDULE ON SHEET S0.02 FOR SHEAR WALL INFORMATION.
- 4 SEE ARCH'L DRAWINGS FOR LOCATIONS/LIMITS AND CONSTRUCTION INFORMATION OF INTERIOR NON-BEARING PARTITION WALLS NOT SHOWN ON PLAN. SEE GENERAL NOTES (SHEET S0.01) FOR ADDITIONAL WALL FRAMING INFORMATION.
- 5 PROVIDE WOOD HEADER OVER ALL OPENINGS IN WOOD WALLS (COORD. EXACT SIZE, LOCATION AND ELEVATIONS WITH ARCH'L DRAWINGS) IF NO HEADER TYPE HAS BEEN CALL-OUT ON PLAN, PROVIDE WOOD HEADER BASED ON HEADER SCHEDULE SHOWN ON S0.01 SHEET. SEE DETAIL 1/S5.04 FOR CONT. HEADER OVER NON-MULLED WINDOWS AND STRAPPING.
- 6 PRE-ENGINEERED 18" DEEP WOOD TRUSSES AT 24" O.C. (MAX) U.N.O., 15" DEEP WOOD TRUSSES AT 24" O.C. (MAX) U.N.O AT BALCONY/BREEZEWAY WITH 3/4" P.T. C-D PLYWOOD SHEATHING.
- 7 COORDINATE LOCATION OF FLOOR TRUSSES W/ MECH. DWGS FOR LOCATION OF EXHAUST FAN, AIR HANDLING, AND DUCTS.
- 8 F.G.T. INDICATES FLOOR GIRDER TRUSS.
- 9 THE REQUIRED NUMBER OF FASTENERS FOR CONNECTORS SUCH AS NAILS TO WOOD MEMBERS, SEE SIMPSON CATALOG.
- 10 SEE THE GENERAL NOTES FOR FLOOR SHEATHING INFORMATION, AND FOR WOOD TRUSS TYPES.
- 11 PROVIDE DOUBLE WOOD STUDS UNDER WOOD HEADER, WOOD BEAM, F.G.T., G.T. CONTINUOUS TO THE FTG. U.N.O. (PROVIDE (2) 2X4 WOOD BLOCKING BETWEEN TRUSS TOP AND BOTTOM CORDS BELOW)
- 12 AT DOORWAYS FOR INTERIOR BEARING WALLS, ADD A (2) 2x BLOCKING BETWEEN FLOOR LEVELS.
- 13 SEE ARCH DRAWINGS FOR SPECS ON LIGHTWEIGHT CONCRETE OVER WOOD JOIST TYP.
- 14 [REINFORCED MASONRY SYMBOL] INDICATES MASONRY BEARING WALLS REINFORCED WITH (1)-#5 VERTICAL GROUT FILLED CELLS SOLID AT ALL CORNERS, ADJACENT MASONRY OPENINGS AND 24" O.C. (MAX).
- 15 PROVIDE DOUBLE KNOCK OUT BLOCK BOND BEAM AT EA FLOOR LEVEL WITH #5 BARS AT EA COURSE.
- 16 PROVIDE PRECAST "U" LINTELS OVER ALL OPENINGS IN MASONRY WALL. (COORD. EXACT SIZE, LOCATIONS AND ELEVATIONS WITH ARCH'L DRAWINGS). IF NO LINTEL TYPE HAS BEEN CALL-OUT ON PLAN, PROVIDE MASONRY LINTEL TYPE: 8F16-1B/1T, AND 8F14-1B/1T FOR DOOR SEE "LINTEL SCHEDULE" (ON SHEET S5.00) FOR LINTEL TYPE SIZES AND REINFORCING. PROVIDE TEMPORARY SHORING DURING CONSTRUCTION IF LINTEL SPAN IS GREATER THAN 6 (SIX) FEET.
- 17 SEE ARCH PLANS FOR OUTSIDE CORNER PANEL SHADOW BOX LOCATIONS AND DETAIL 12/S5.03 FOR CONNECTION/FRAMING SPECS.

PLAN NOTES:

- 1 SEE GENERAL NOTES ON SHEET S0.01 & S0.02.
- 2 DO NOT SCALE DRAWINGS. SEE ARCH'L DRAWINGS FOR ADDITIONAL DIMENSIONS NOT SHOWN. VERIFY ALL DIMENSIONS WITH ARCH'L DRAWINGS PRIOR TO START OF CONSTRUCTION. IF DISCREPANCIES SHOULD OCCUR - CONTACT THE ARCHITECT IN WRITING FOR CLARIFICATION BEFORE PROCEEDING.
- 3 SEE ARCH'L DRAWINGS FOR LOCATIONS/LIMITS AND CONSTRUCTION INFORMATION OF INTERIOR NON-BEARING PARTITION WALLS NOT SHOWN ON PLAN. SEE GENERAL NOTES (SHEET S0.01) FOR ADDITIONAL WALL FRAMING INFORMATION.
- 4 PROVIDE WOOD HEADER OVER ALL OPENINGS IN WOOD WALLS (COORD. EXACT SIZE, LOCATION AND ELEVATIONS WITH ARCH'L DRAWINGS) IF NO HEADER TYPE HAS BEEN CALL-OUT ON PLAN, PROVIDE WOOD HEADER BASED ON HEADER SCHEDULE SHOWN ON S0.01 SHEET.
- 5 PRE-ENGINEERED WOOD TRUSSES & MISCELLANEOUS WOOD FRAMING SPACED AT 24" O.C. (MAX).
- 6 O.B. INDICATES OVER-BUILT PRE-ENG. TRUSS.
- 7 G.T. INDICATES GIRDER TRUSS.
- 8 THE REQUIRED NUMBER OF FASTENERS FOR CONNECTORS SUCH AS NAILS TO WOOD MEMBERS, SEE SIMPSON CATALOG.
- 9 SEE THE GENERAL NOTES FOR ROOF SHEATHING INFORMATION, AND FOR WOOD TRUSS TYPES.
- 10 TRUSS ENGINEER TO DESIGN TRUSS TO INCORPORATE LOADS FROM MECHANICAL UNITS.
- 11 PROVIDE DOUBLE WOOD STUDS UNDER WOOD HEADER, WOOD BEAM, F.G.T., G.T. TO THE FTG. U.N.O.
- 12 2x10 JOIST @ 16" O.C. TOP OF ELEVATOR SHAFT. SEE DETAILS 7.11/S5.00 FOR JOIST LAYOUT AND HOIST BEAM CONNECTION.



1 2ND FLOOR PLAN
SCALE: 1/4"=1'-0"



1 ROOF FRAMING PLAN
SCALE: 1/4"=1'-0"

ISSUE HISTORY

| No. | Date | Description |
|-----|----------|-------------------|
| 1 | 04/15/22 | PERMIT SUBMISSION |

REVISION HISTORY

| No. | Date | Description |
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Certificate of Authorization No. 25873
Wenyi Hu P.E.
Alabama No. 28652

ALABAMA LICENSED PROFESSIONAL ENGINEER
No. 28852
4/26/2021

| | |
|------------|----------|
| Drawn: | CW |
| Checked: | CW |
| Approved: | MX |
| Date: | 02-20-22 |
| Project #: | XXX-XXX |

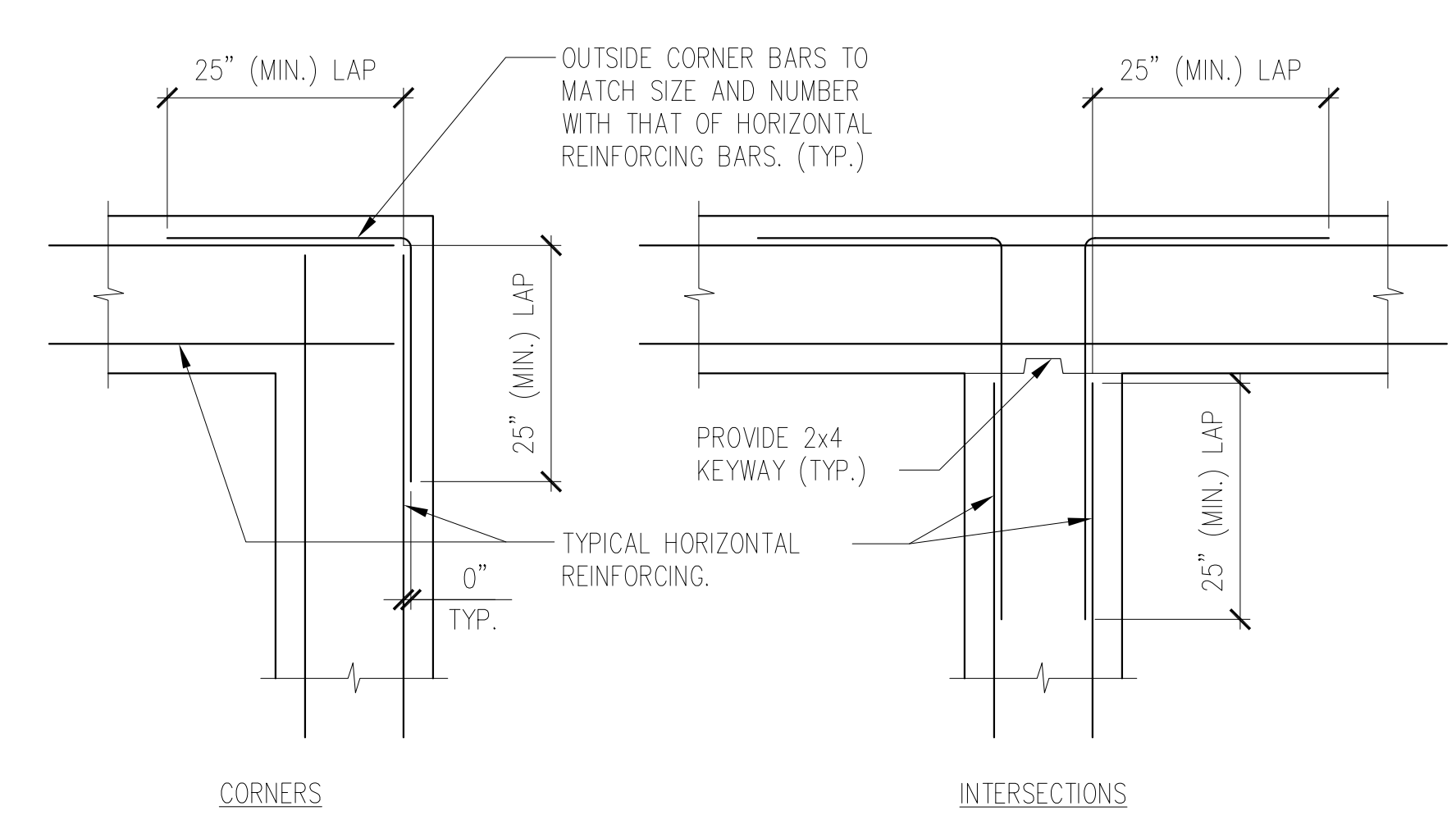
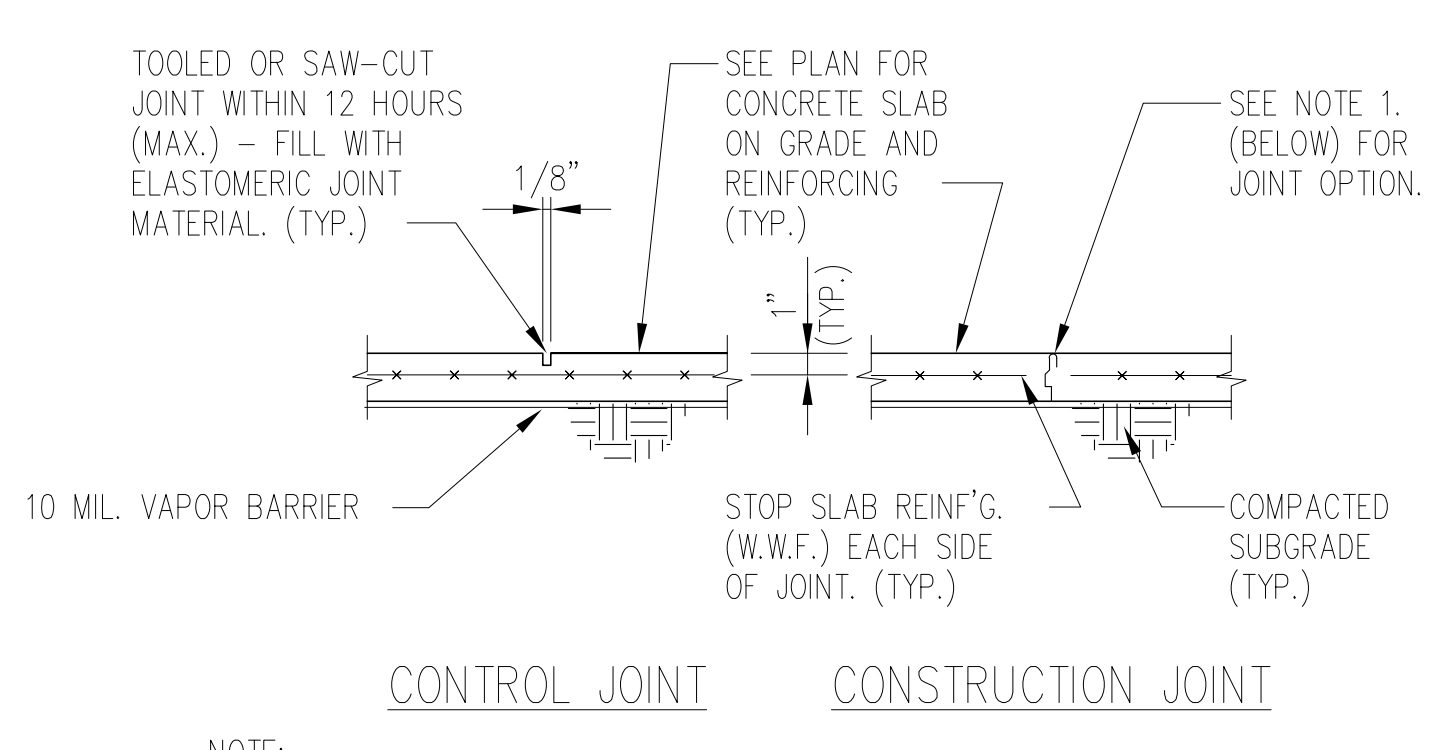
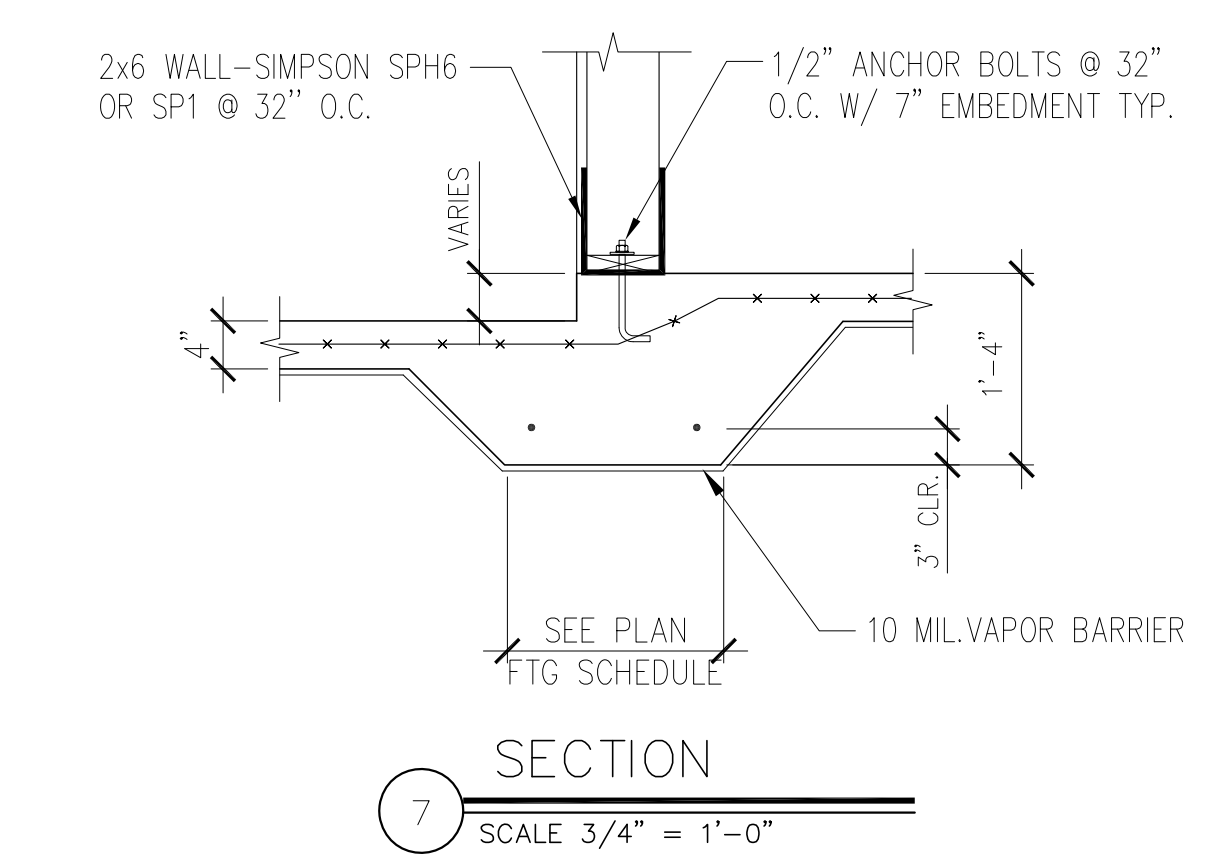
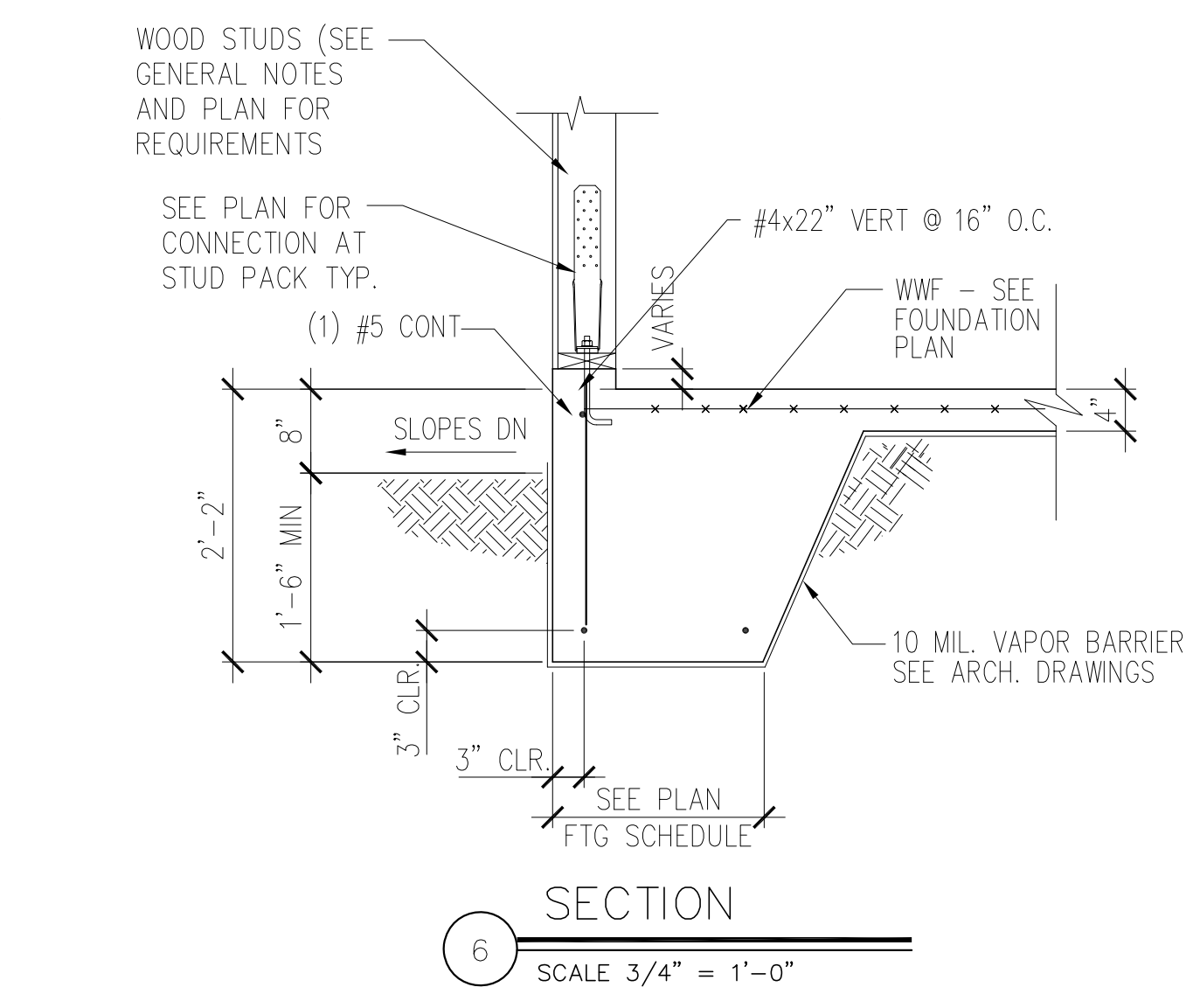
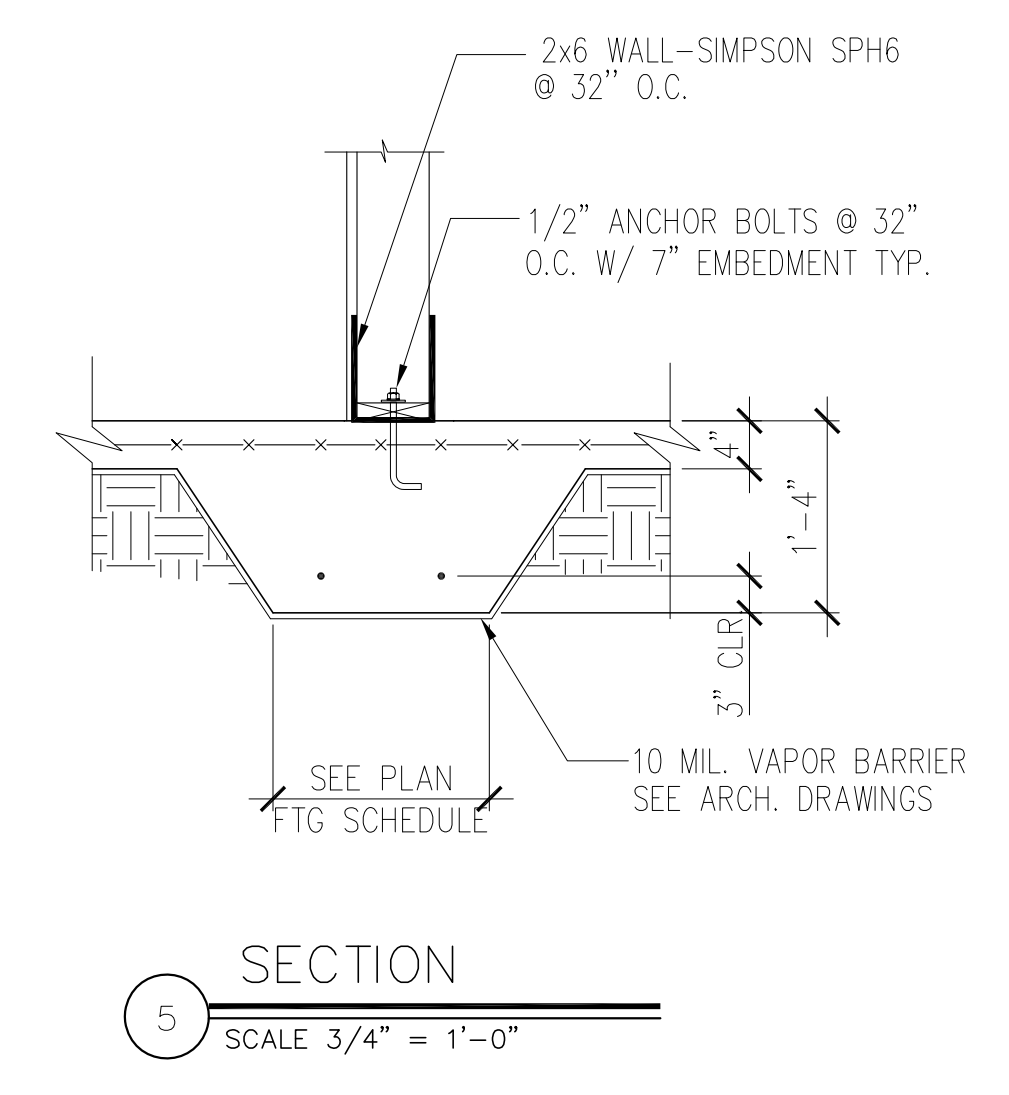
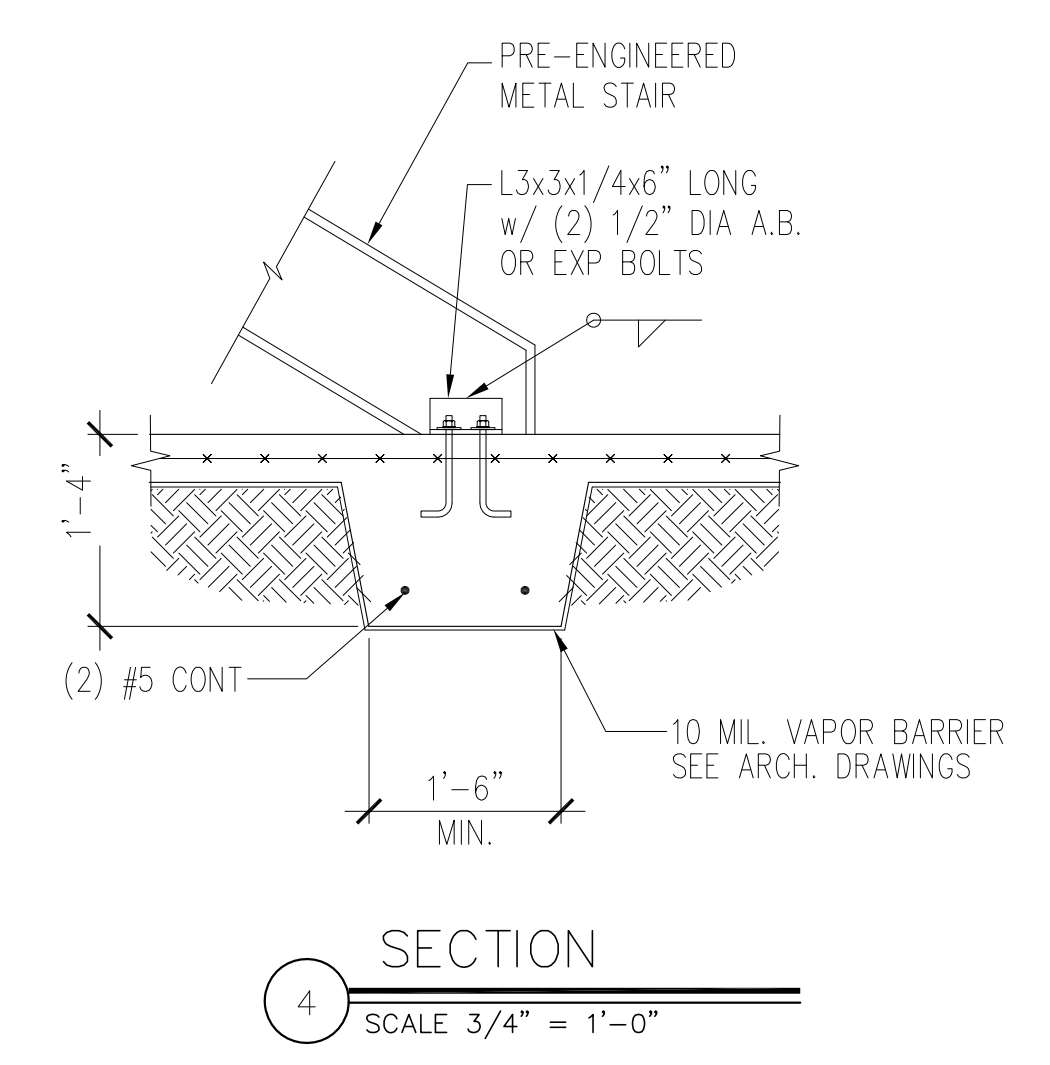
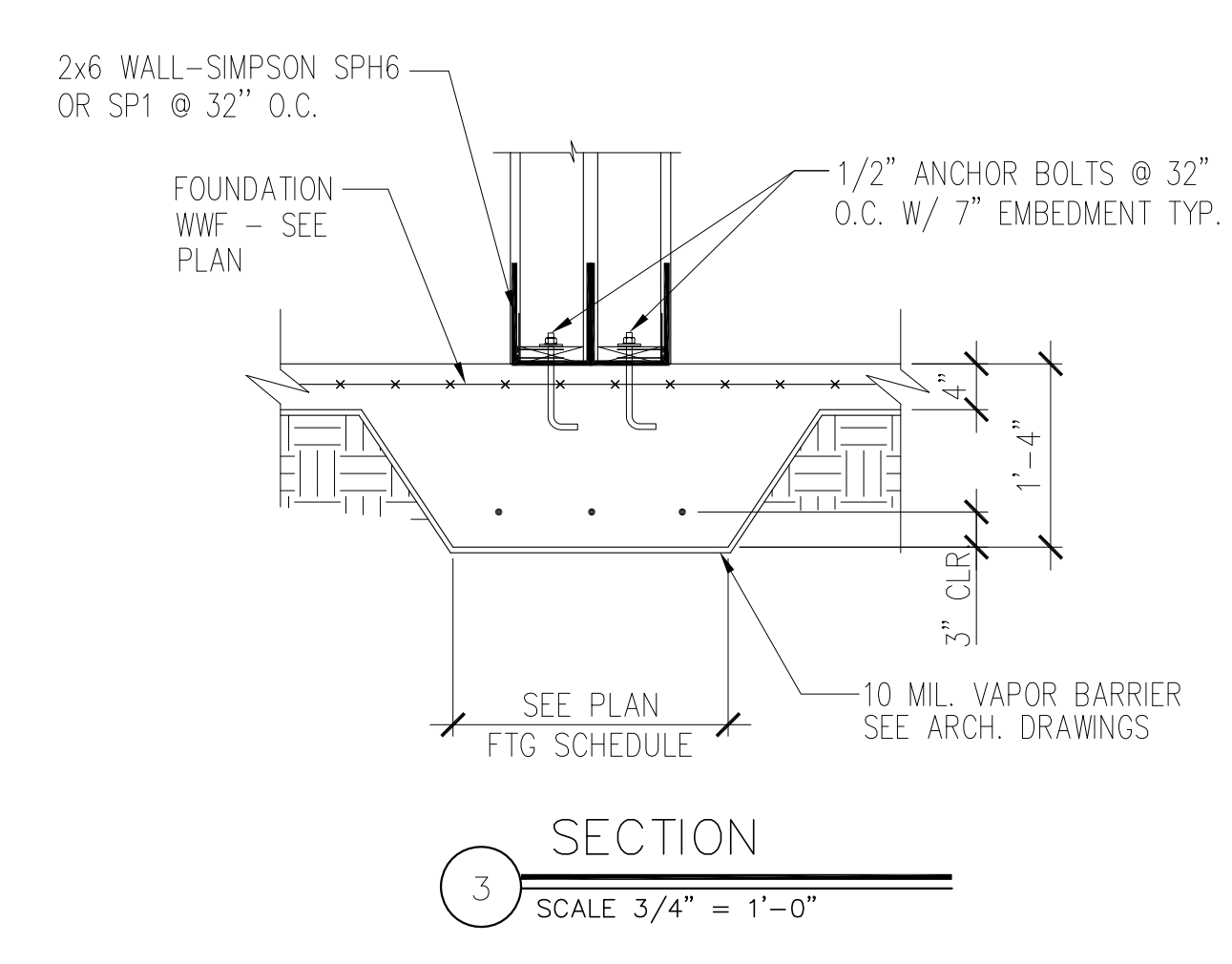
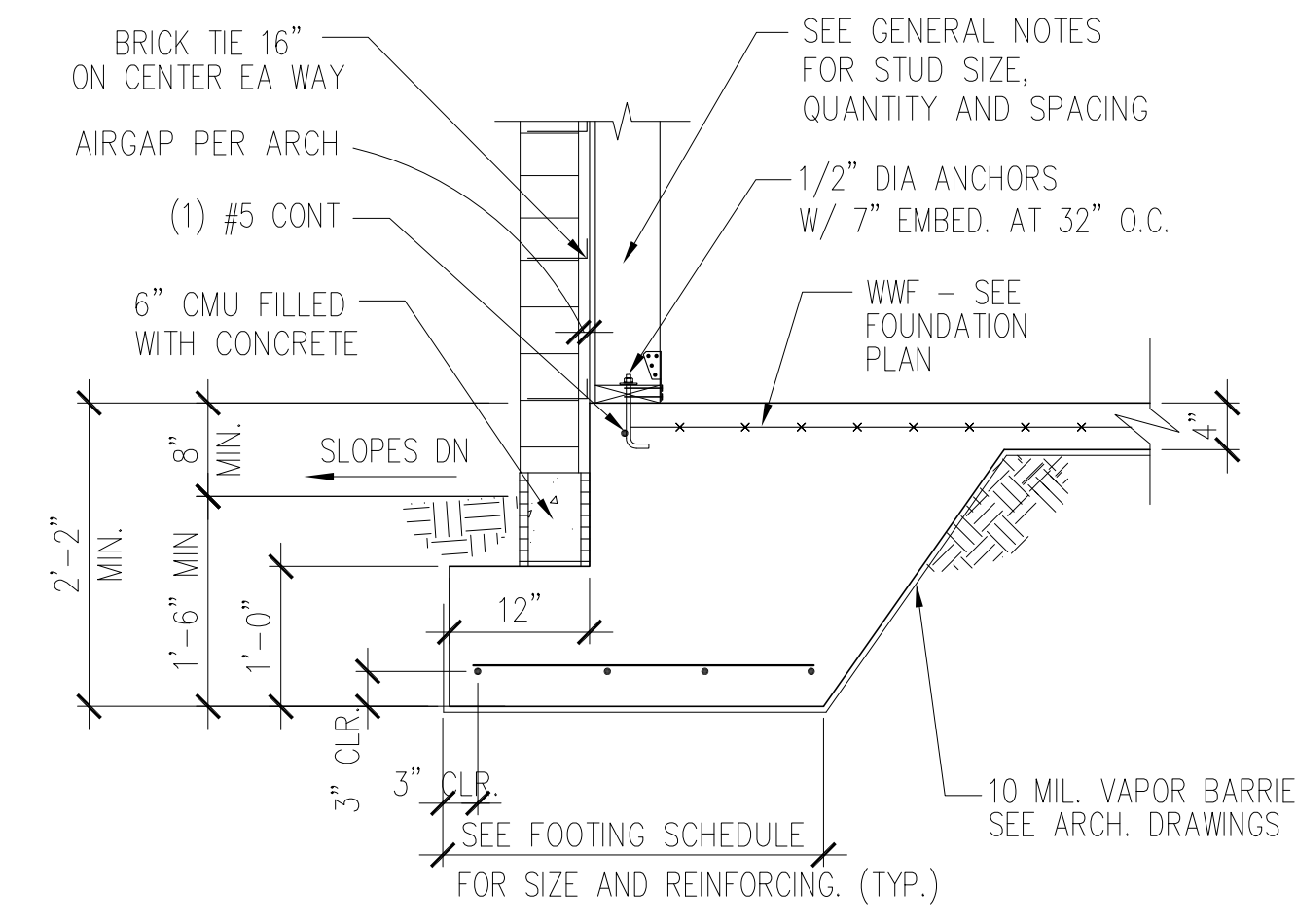
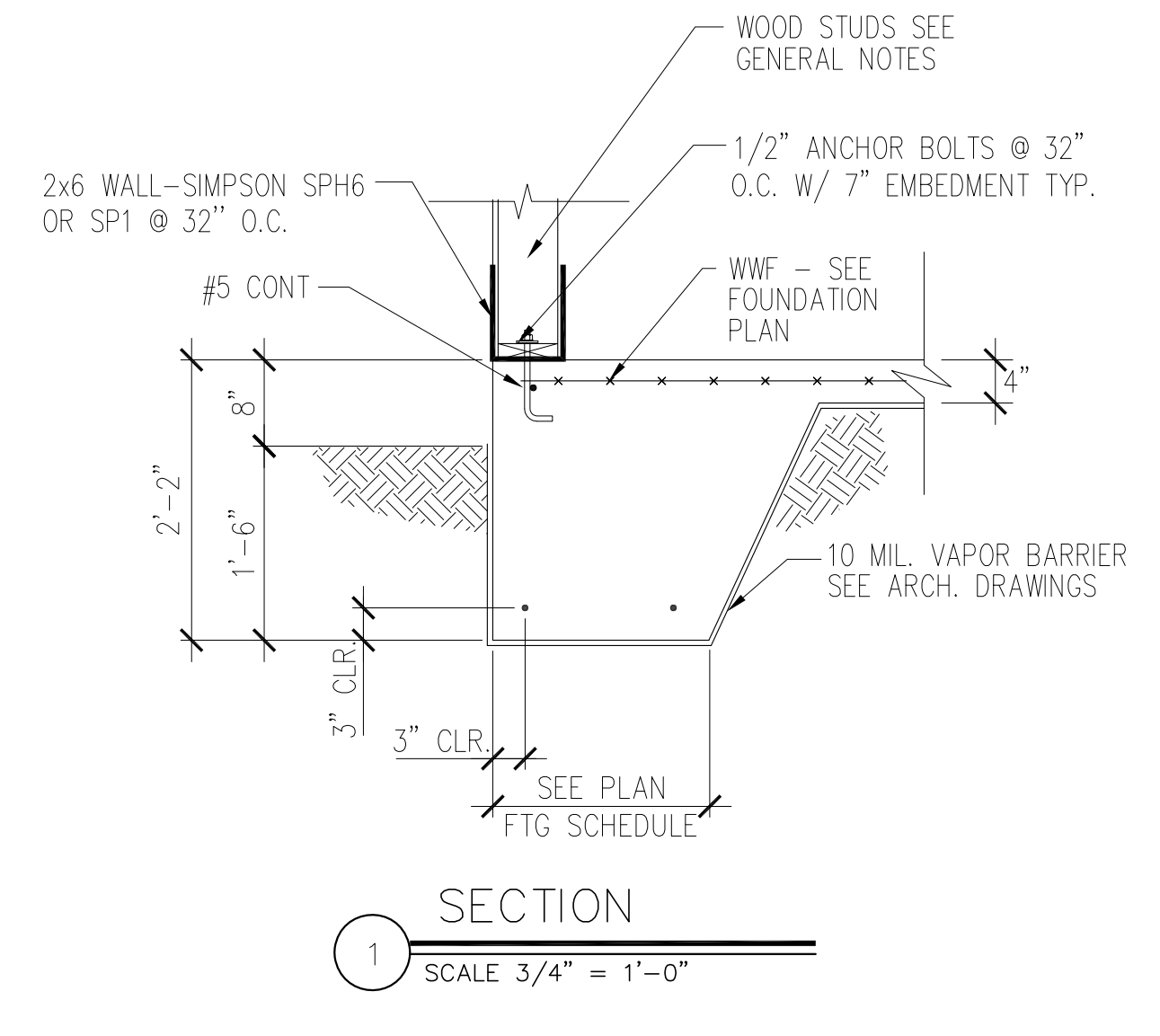
**BUILDING TYPE C
2ND FLOOR AND ROOF
FRAMING PLAN**

S3.02

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TYP. EXTERIOR WALL FOOTING w/ BRICK FACING. SEE TYP. EXTERIOR WALL DETAIL 1/SS.01 FOR EXTERIOR WALL w/o BRICK FACING.

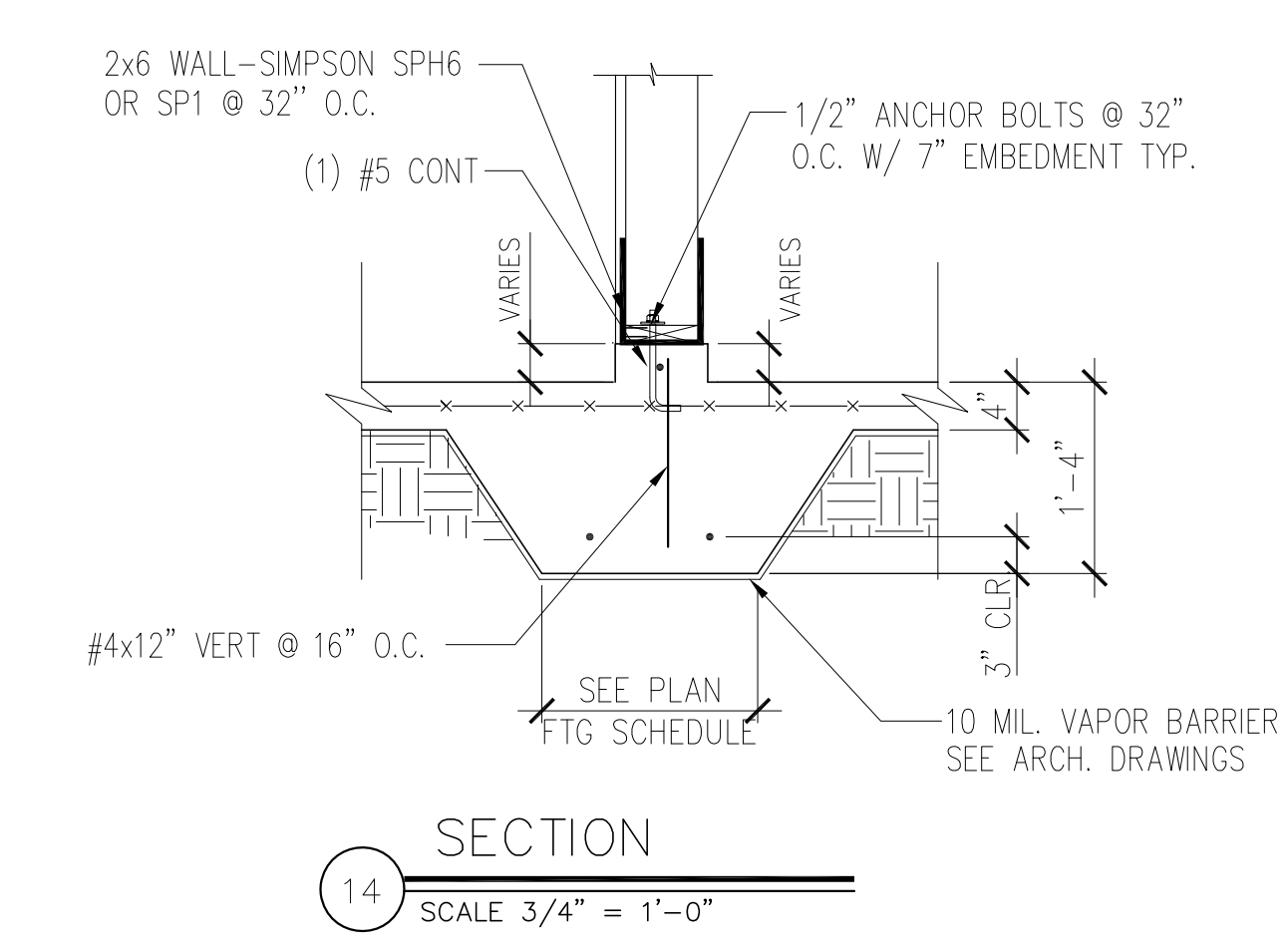
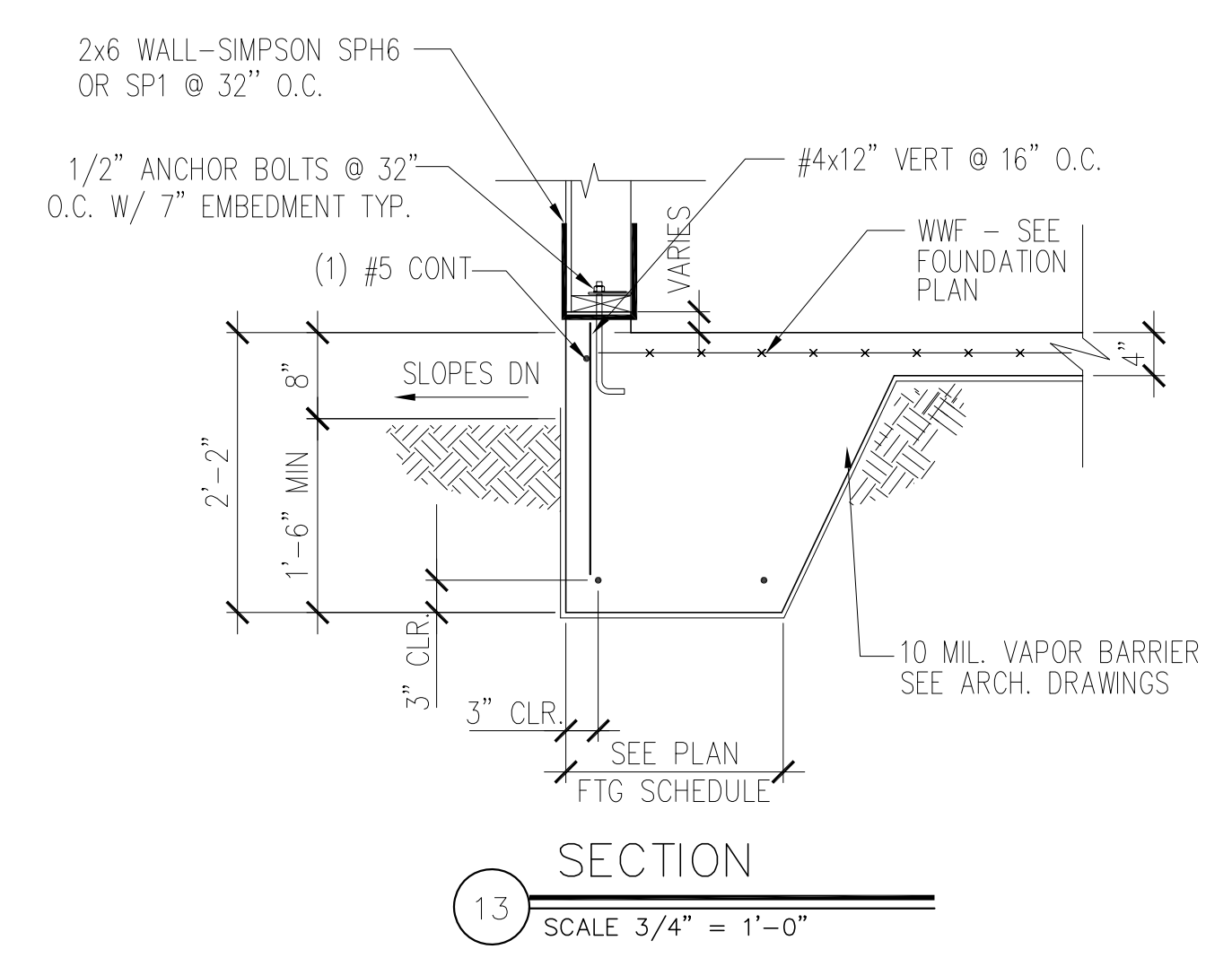
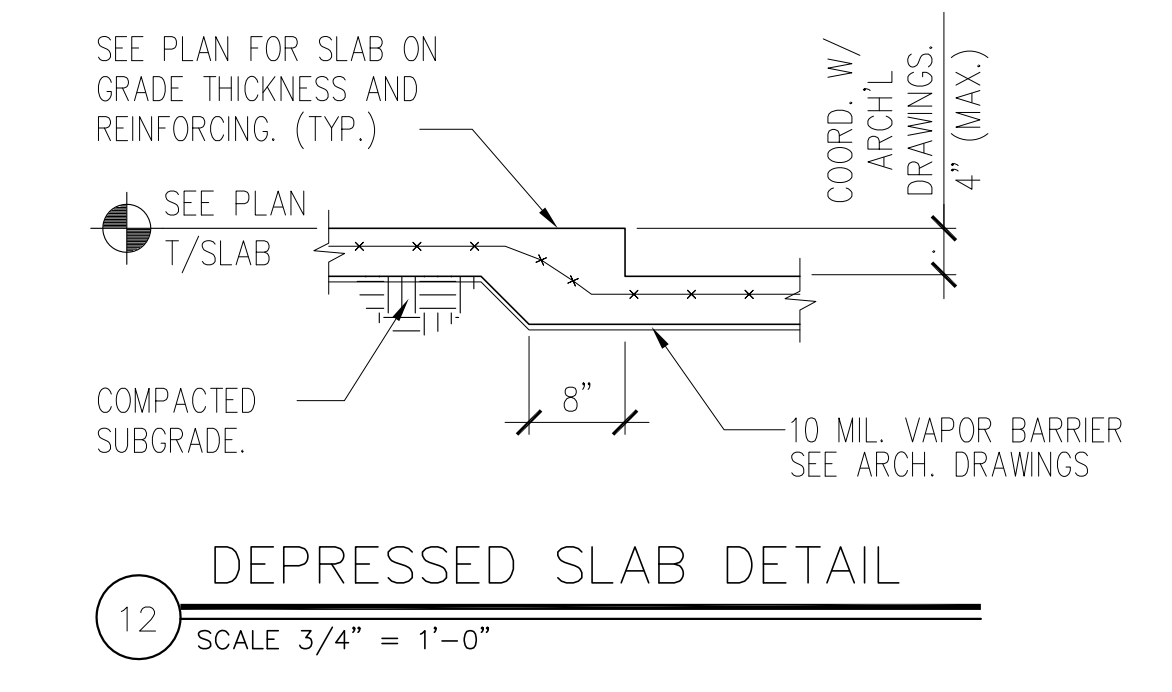
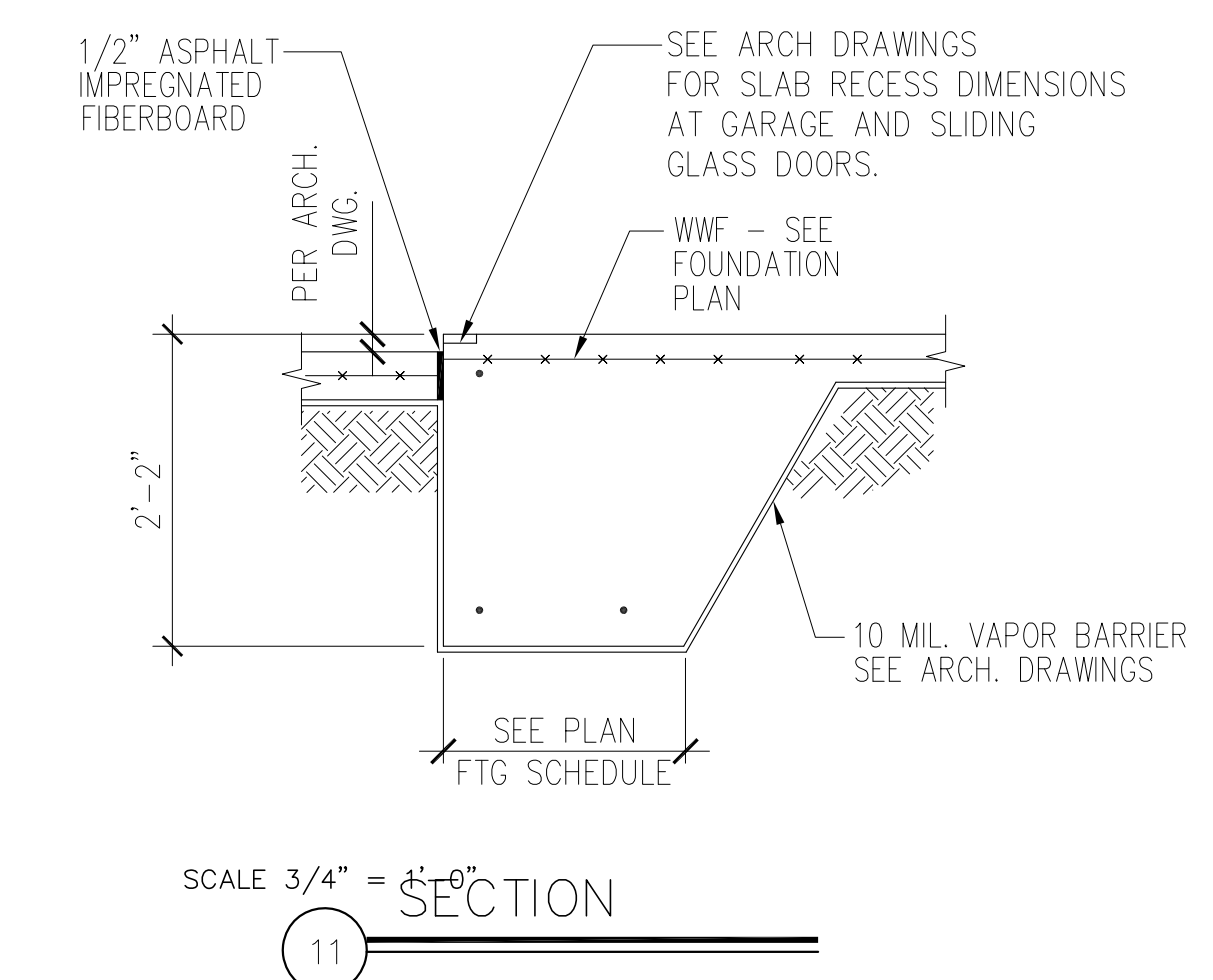
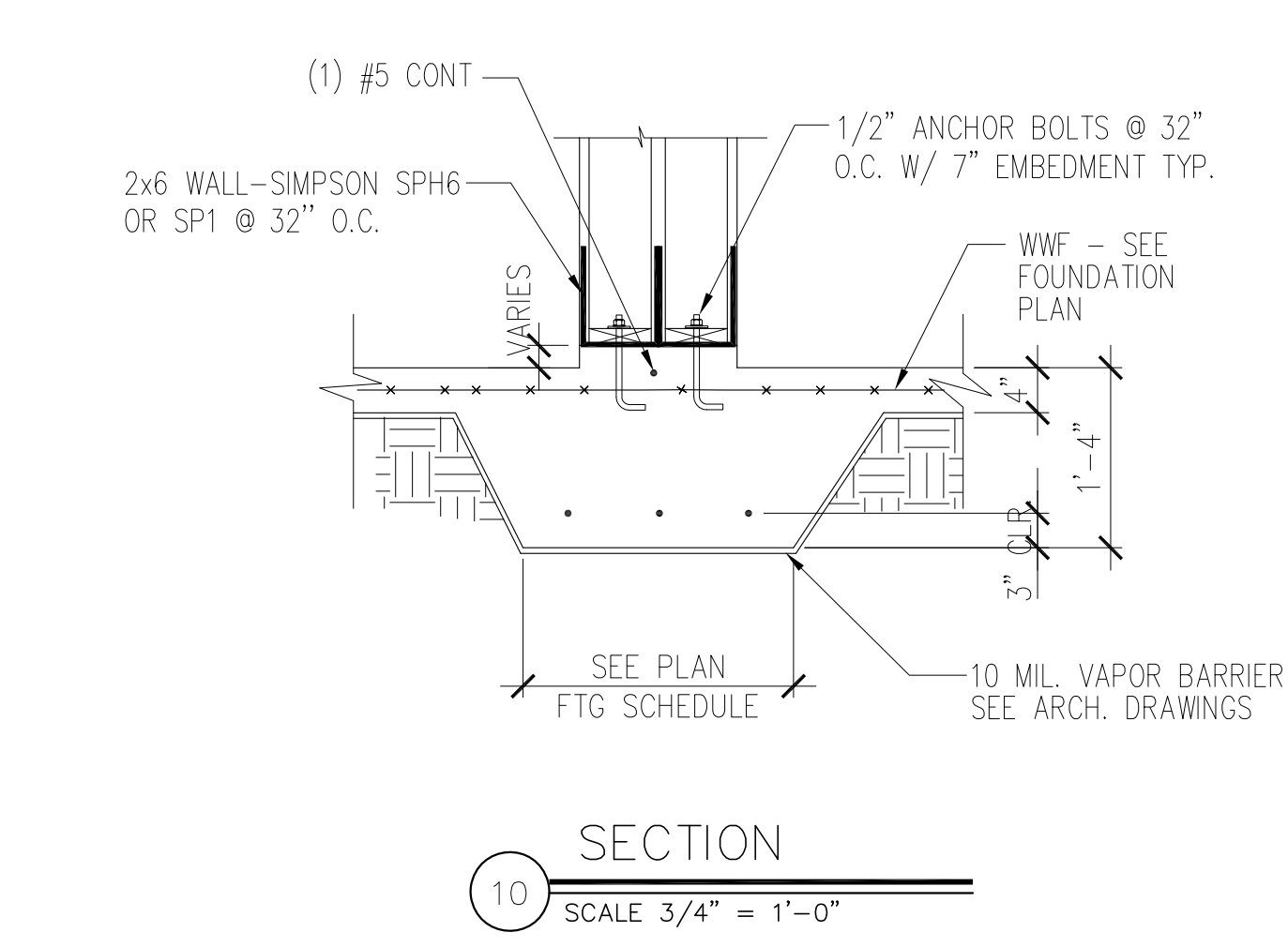


- NOTE:
- CONSTRUCTION JOINTS MAYBE USED IN LIEU OF CONTROL JOINTS.
 - JOINT PLACEMENT REQUIREMENTS: FOR ENCLOSED / INTERIOR AREAS. 20'-0" O.C. (MAX.) EACH WAY FOR OUTSIDE / EXTERIOR AREAS. 8'-0" O.C. (MAX.) EACH WAY WHERE TOP OF SLAB SURFACES ARE TO BE FINISHED WITH TILE - GENERAL CONTRACTOR IS TO COORDINATE JOINT LOCATIONS WITH THAT OF TILE MORTAR JOINTS. SUBMITTAL SHALL BE SENT TO THE ARCHITECT.

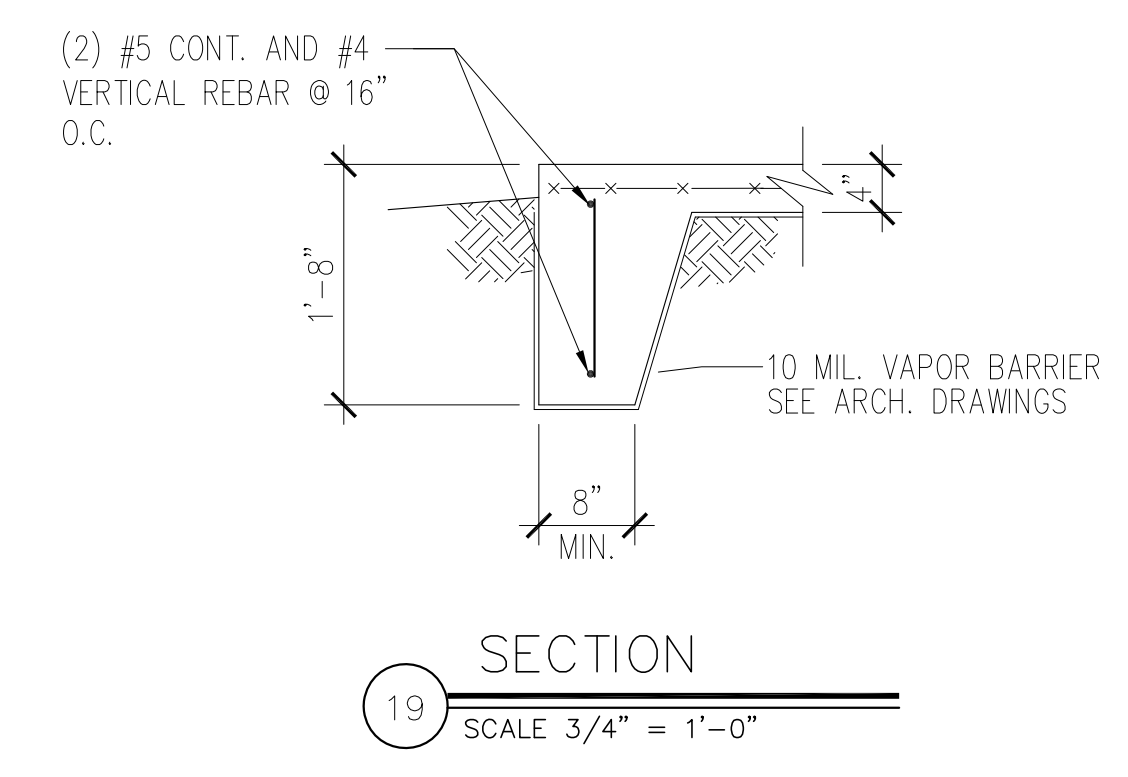
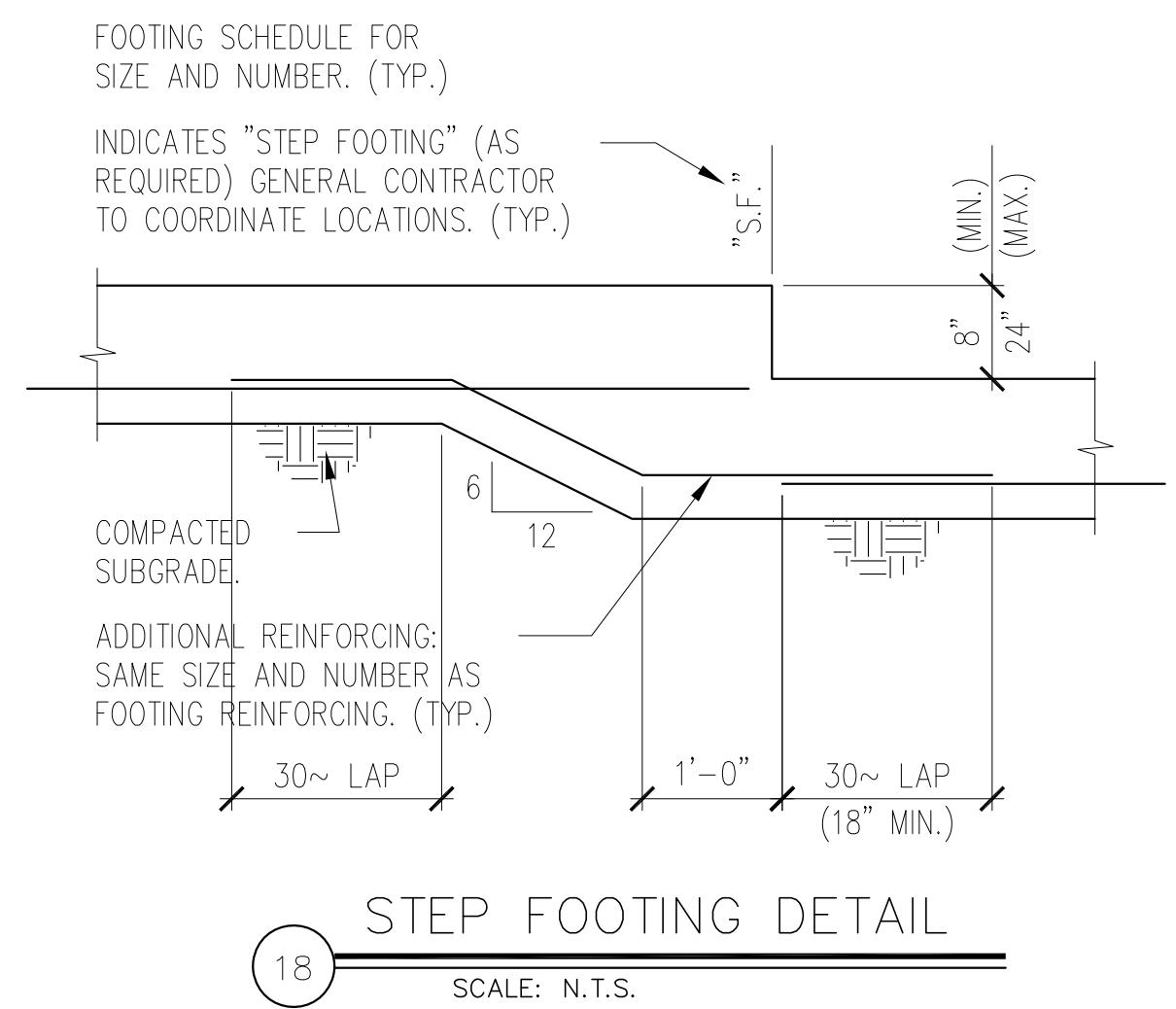
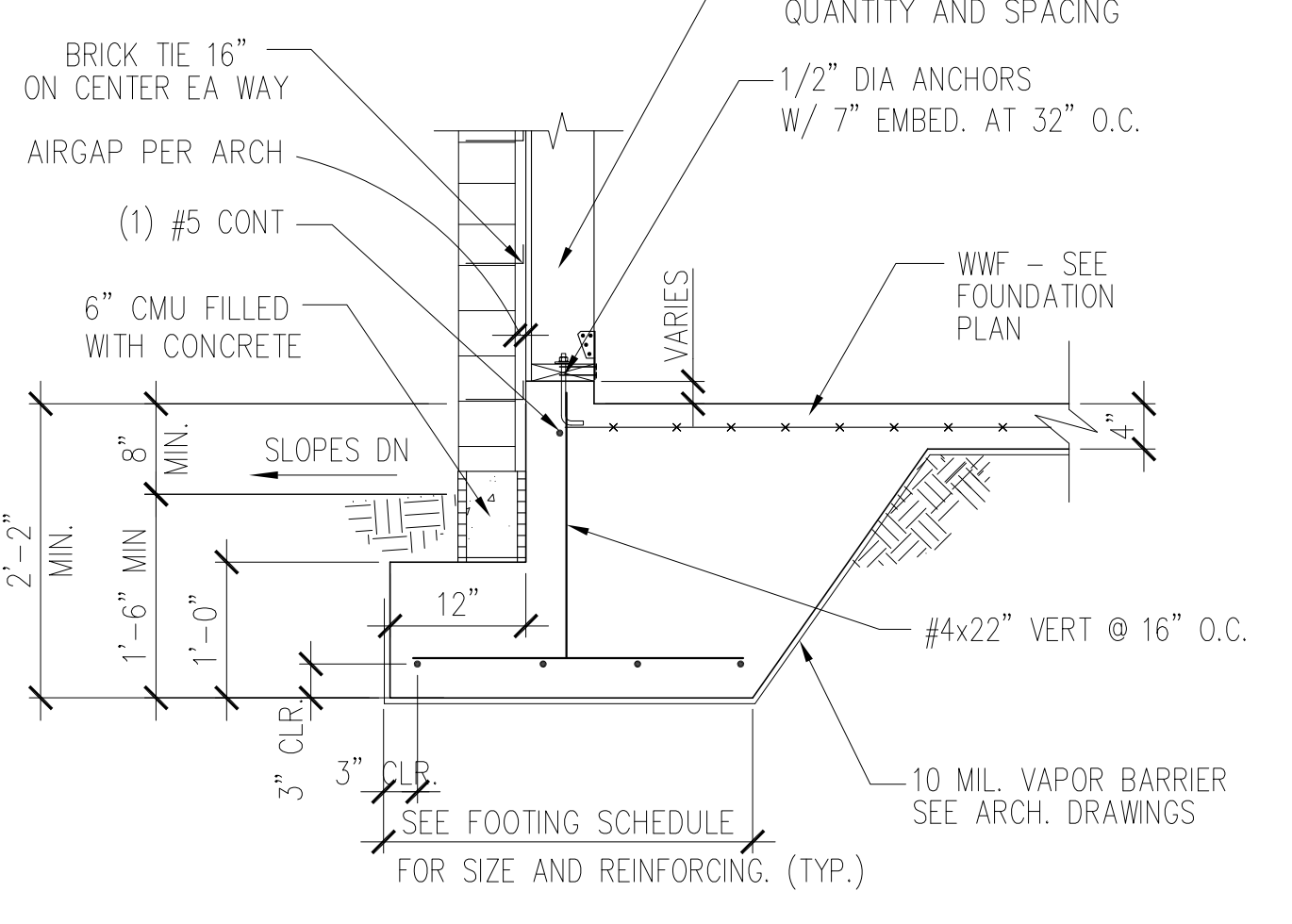
12 TYPICAL CONTROL JOINT DETAIL SCALE 3/4" = 1'-0"

9 HORIZONTAL REINFORCING AT FOOTINGS SCALE 3/4" = 1'-0"

1 04/20/2021 Revisions in response to Contractor's RFI No. 042



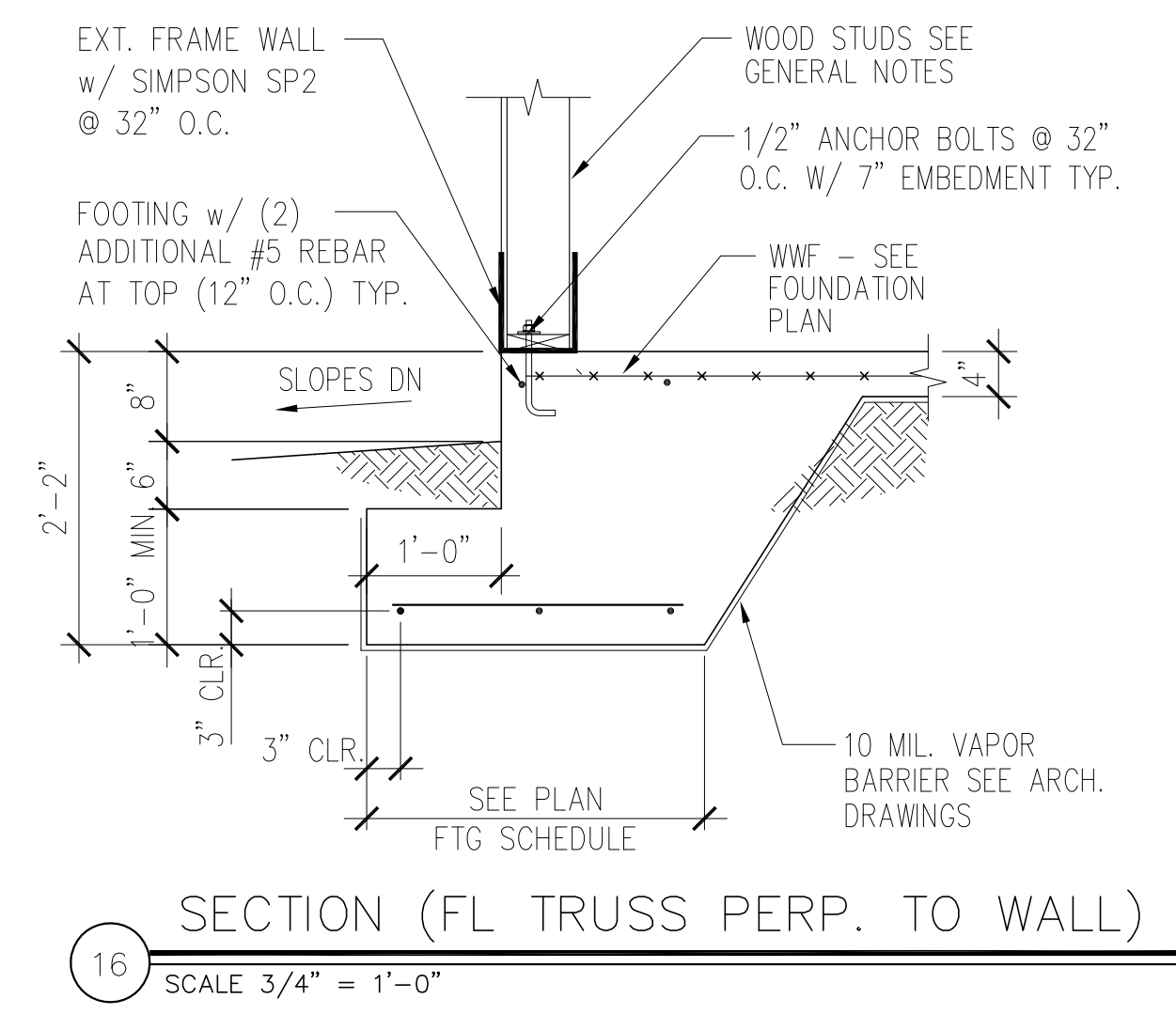
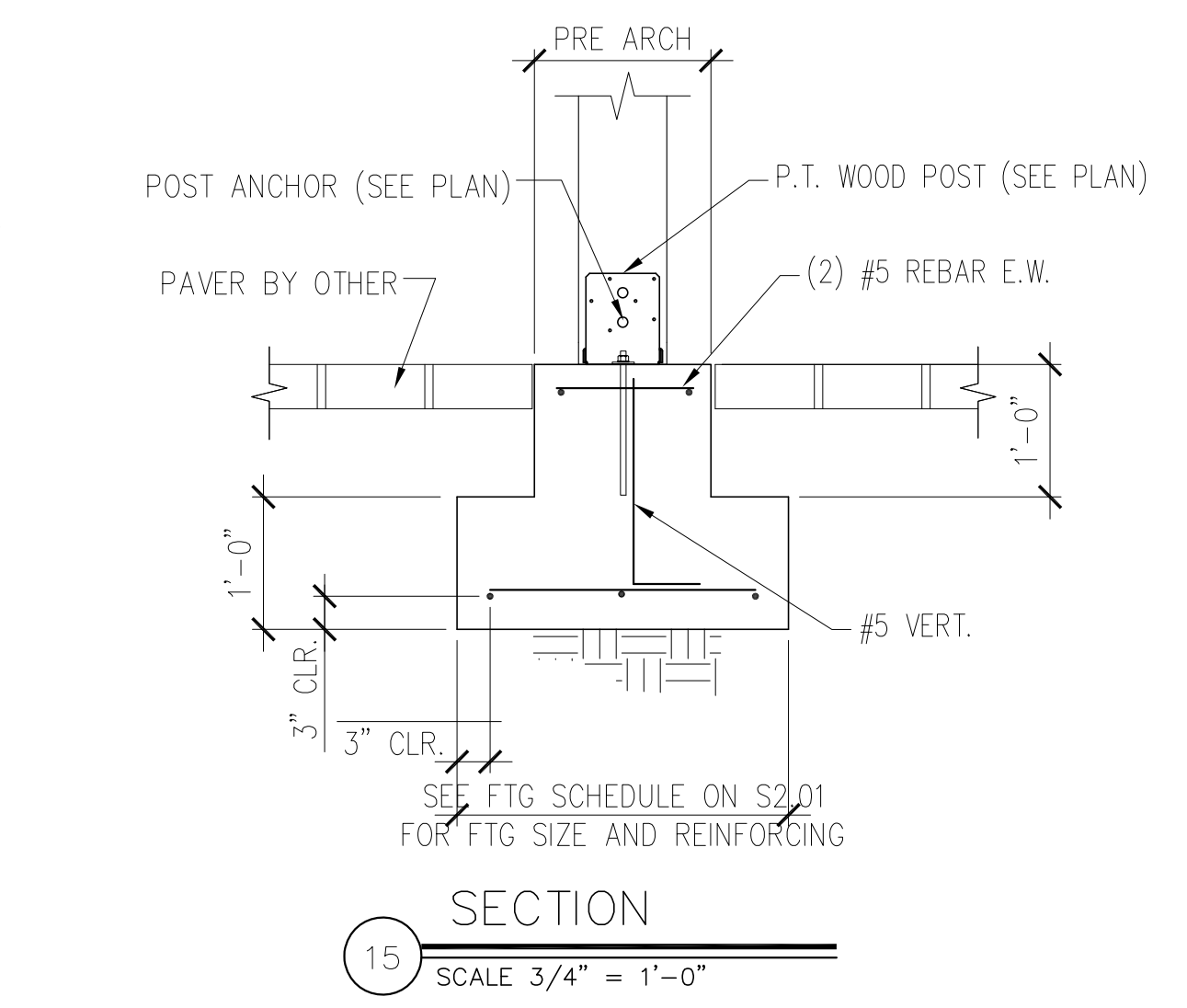
TYP. EXTERIOR WALL FOOTING w/ BRICK FACING. SEE TYP. EXTERIOR WALL DETAIL 1/SS.01 FOR EXTERIOR WALL w/o BRICK FACING.



17 SECTION SCALE = N.T.S.

18 STEP FOOTING DETAIL SCALE: N.T.S.

19 SECTION SCALE 3/4" = 1'-0"



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

16 SECTION (FL TRUSS PERP. TO WALL) SCALE 3/4" = 1'-0"

| ISSUE HISTORY | | |
|------------------|----------|-------------------|
| No. | Date | Description |
| 1 | 04/15/22 | PERMIT SUBMISSION |
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| REVISION HISTORY | | |
| No. | Date | Description |
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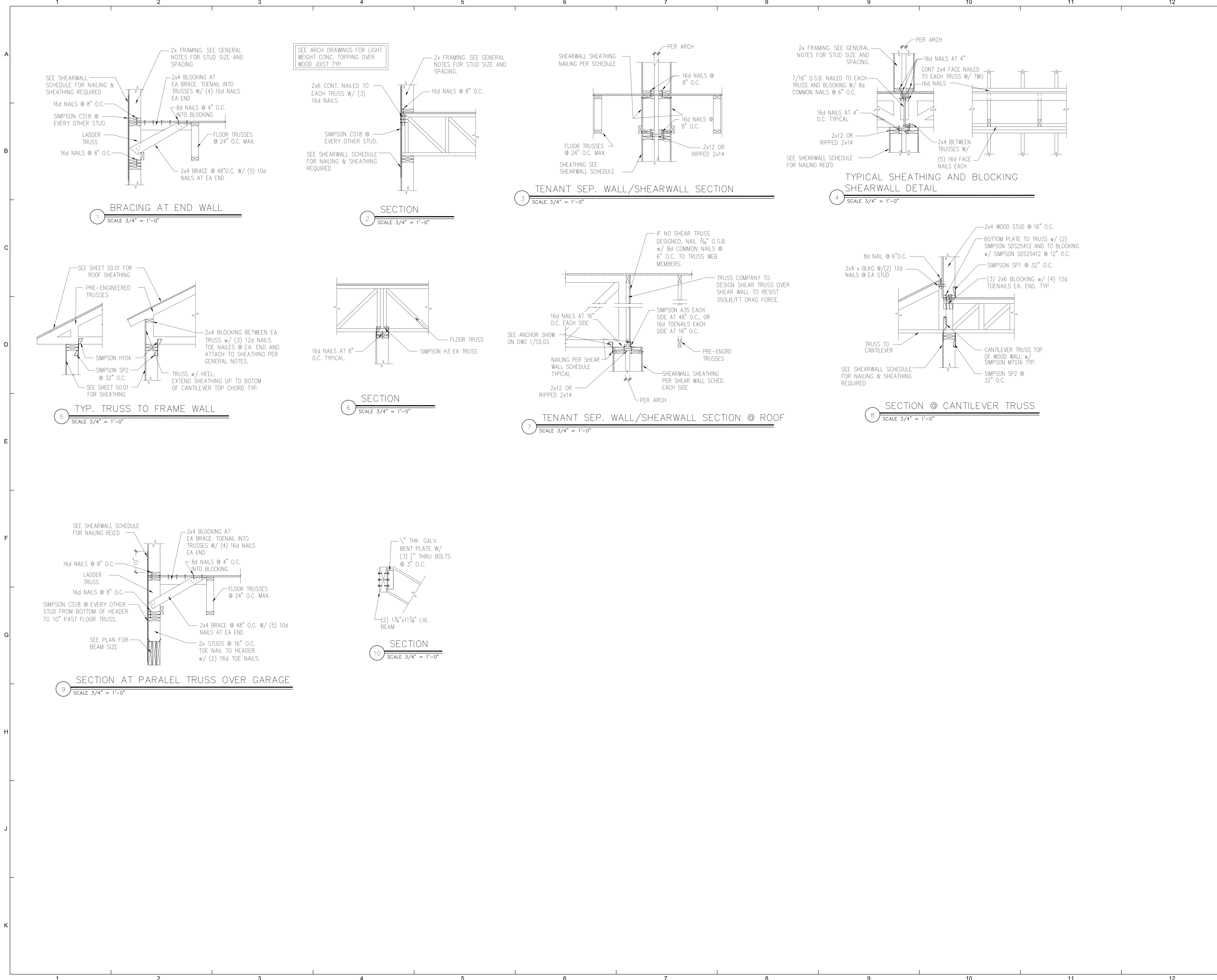
ALABAMA LICENSED PROFESSIONAL ENGINEER
 No. 29852
 Wenyi Hu
 4/26/2021

THE ROBERT MADISON
 MADISON, ALABAMA
 Drawn: CW
 Checked: CW
 Approval: MX
 Date: 02-20-22
 Project #: XXX-XXX

SECTION AND DETAILS BLDG TYPES A, B & C

S5.01

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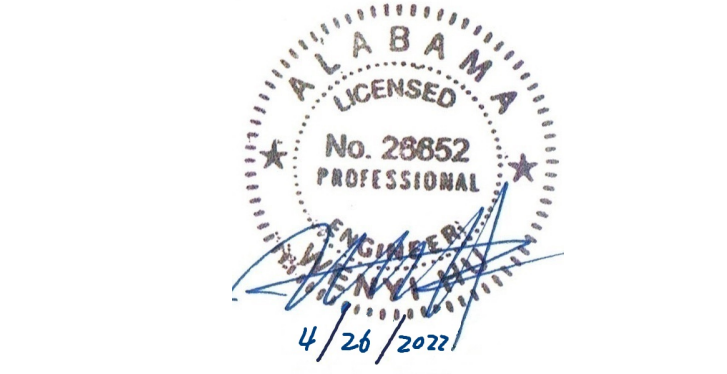
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STRUCTURAL DESIGN GROUP

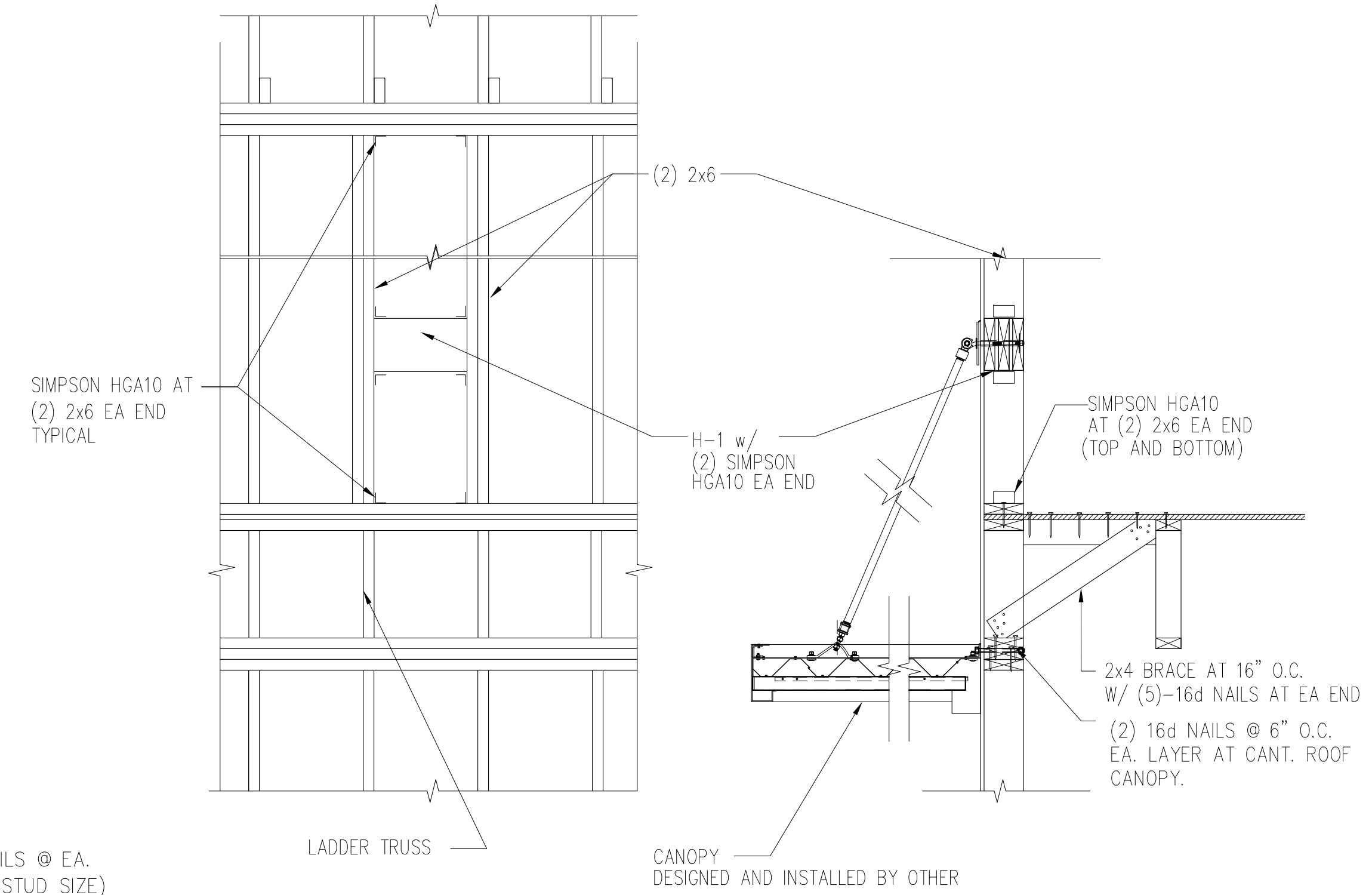
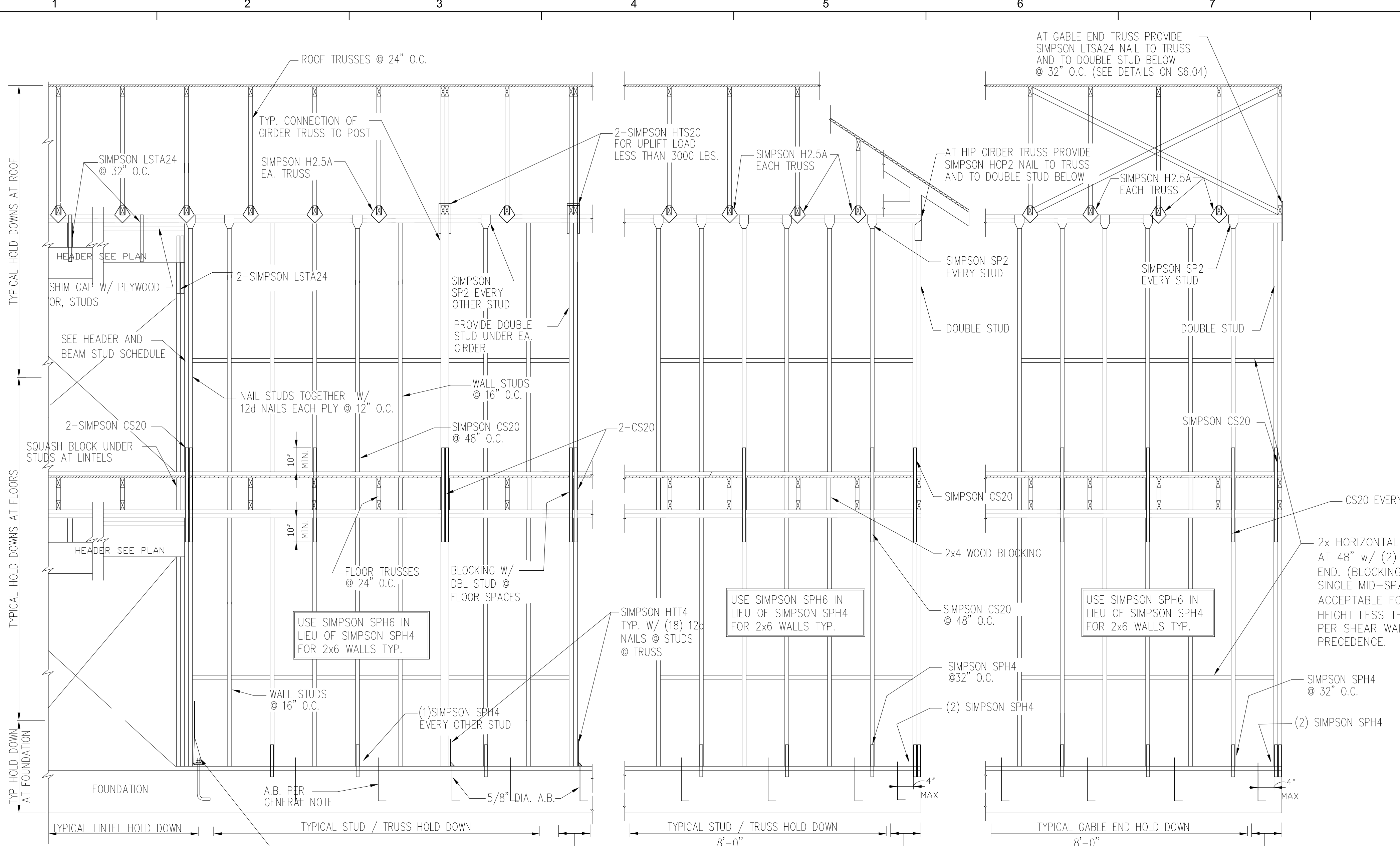
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Certificate of Authorization No. 25873

Wenyi Hu P.E.
Alabama No. 28652



| | |
|------------|----------|
| Drawn: | CW |
| Checked: | CW |
| Approved: | MX |
| Date: | 02-20-22 |
| Project #: | XXXX-XXX |

**SECTION AND DETAILS
BLDG TYPES A, B & C**



2 TYP CANOPY ATTACHMENT DETAIL
SCALE: N.T.S.

MINIMUM WALL AND HEADER STUD REQUIREMENTS

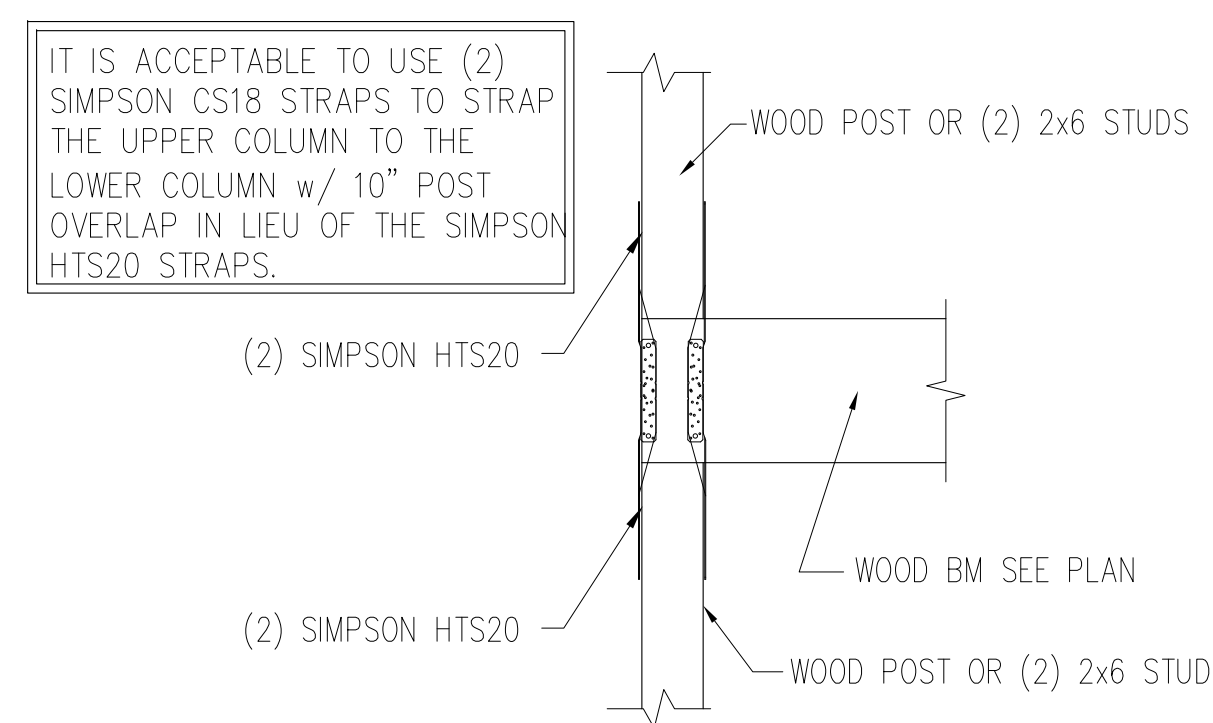
| UNSUPPORTED WALL HEIGHT | STUD SPACING | NUMBER OF FULL LENGTH STUDS AT EACH END OF HEADER | | | |
|-------------------------|--------------|---|---|---|----|
| | | 3 | 6 | 9 | 12 |
| 10' OR LESS | 12" | 2 | 2 | 3 | 3 |
| | 16" | 2 | 2 | 3 | 3 |
| | 24" | 1 | 2 | 2 | 2 |
| GREATER THAN 10' | 12" | 2 | 2 | 3 | 4 |
| | 16" | 2 | 2 | 3 | 3 |
| | 24" | 1 | 2 | 2 | 2 |

*THE HEADER STUD SHALL NOT BE REQUIRED IF THE HEADER IS SUPPORTED BY A SUITABLE FRAMING ANCHOR

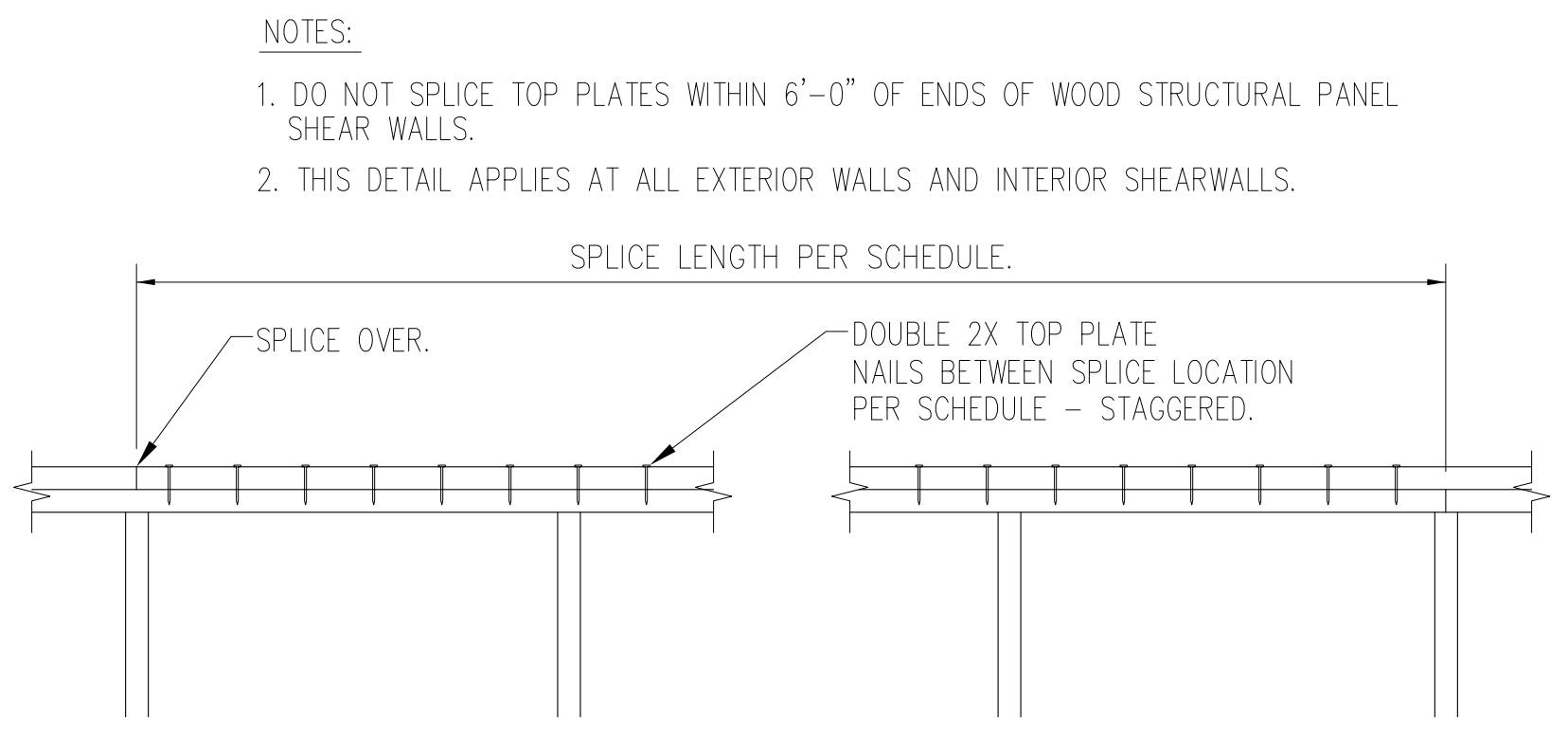
3 HEADER AND BEAM STUD SCHEDULE
SCALE 3/4" = 1'-0"

NOTE:
ALL CONNECTORS SPECIFIED ON THIS SHEET ARE SUGGESTED AND MAY BE REPLACED BY OTHER MODELS OR MANUFACTURERS ONLY IF THEY MEET OR EXCEED MIN. UPLIFT REQUIREMENTS DESCRIBED IN PROJECT DOCUMENTS, INCLUDING SHOP DRAWINGS.
ANCHORAGE/STRAPPING FOR ENDS OF SHEAR WALLS IS NOT SHOWN AND IS IN ADDITION TO THAT SHOWN HERE.

1 TYP. STUD WALL HOLD-DOWN
SCALE 3/4" = 1'-0"

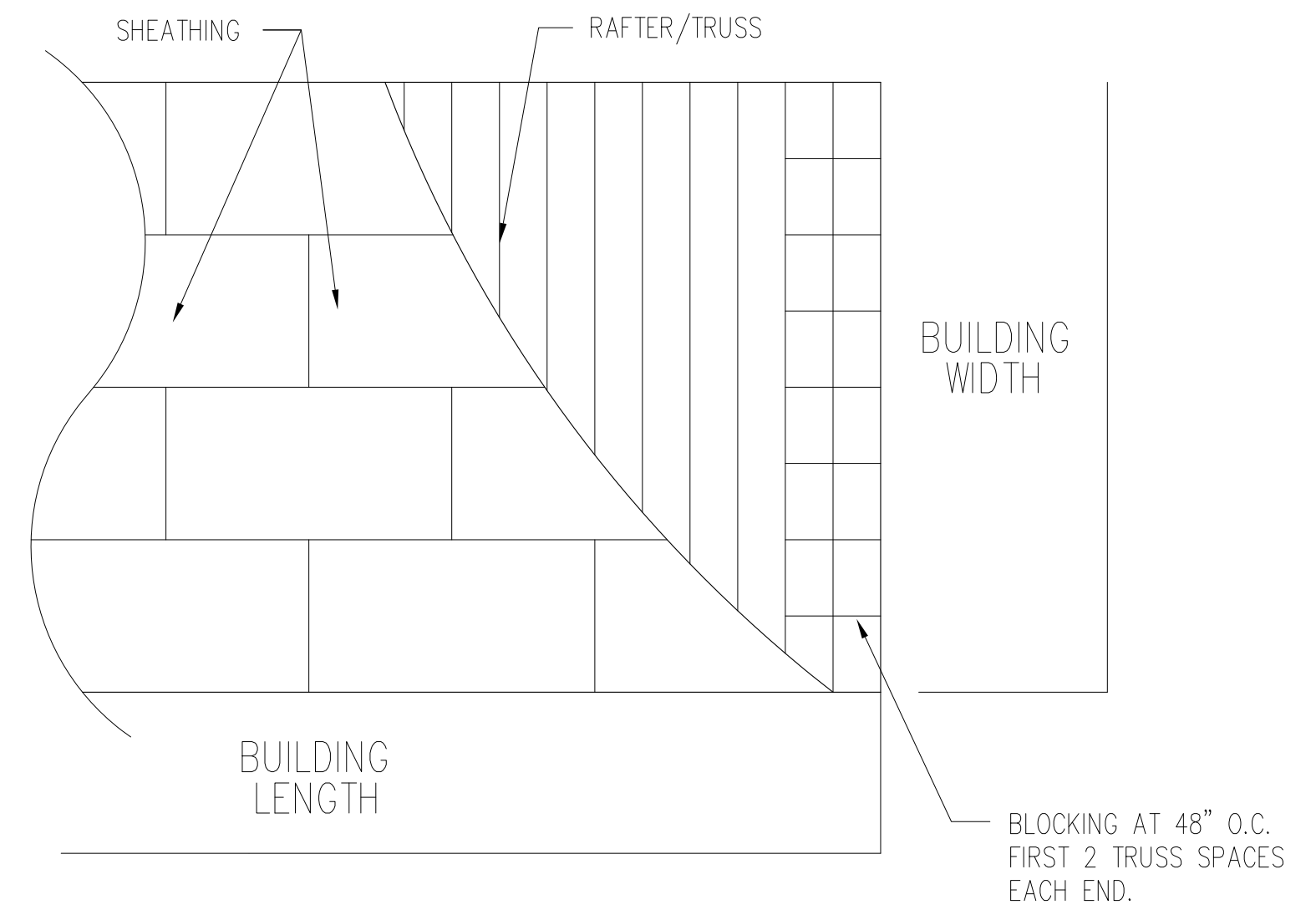


5 SECTION
SCALE 3/4" = 1'-0"

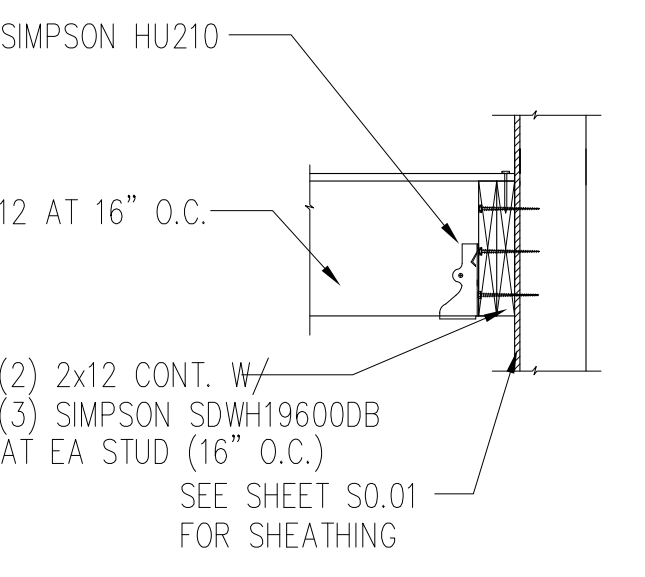


| LENGTH OF WALL (BETWEEN CORNERS) | SPLICE LENGTH (MINIMUM) | NAILS ALONG SPLICE LENGTH |
|----------------------------------|-------------------------|---------------------------|
| OVER 30' | 4'-0" | 18-16d |
| OVER 20' | 2'-8" | 10-16d |
| OVER 10' | 1'-4" | 6-16d |
| LESS THAN 10' | 1'-4" | 4-16d |

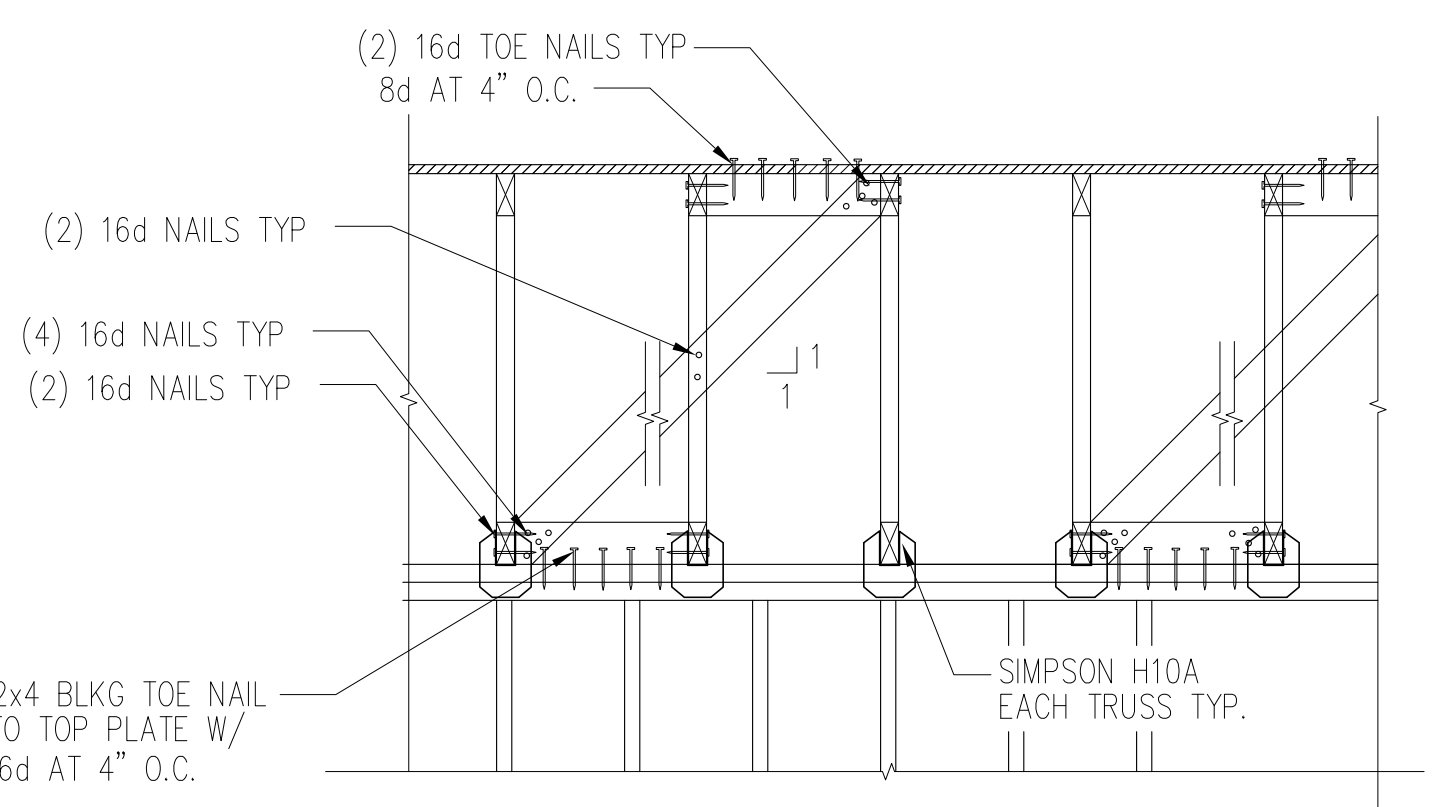
10 TYPICAL TOP PLATE SPLICE
SCALE 3/4" = 1'-0"



11 ROOF SHEATHING LAYOUT
SCALE N.T.S.



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



9 TYP. ROOF TRUSS BRACING AT PERPENDICULAR SHEAR WALL
SCALE 3/4" = 1'-0"

ISSUE HISTORY

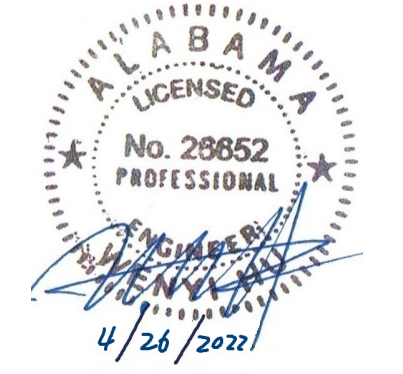
| No. | Date | Description |
|-----|----------|-------------------|
| 1 | 04/15/22 | PERMIT SUBMISSION |

REVISION HISTORY

| No. | Date | Description |
|-----|------|-------------|
|-----|------|-------------|

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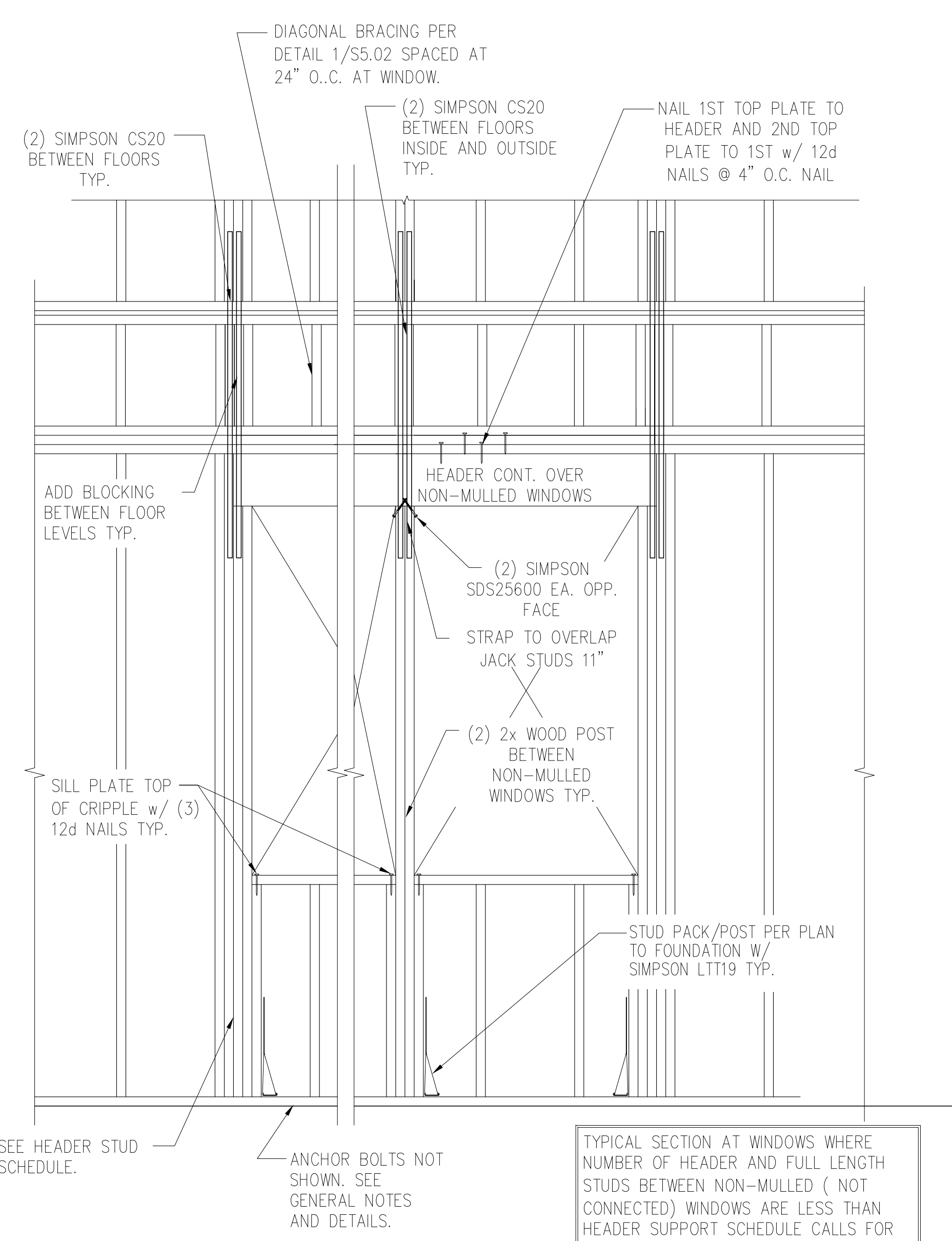


THE ROBERT MADISON
MADISON, ALABAMA
Drawn: CW
Checked: CW
Approval: MX
Date: 02-20-22
Project #: XXX-XXX

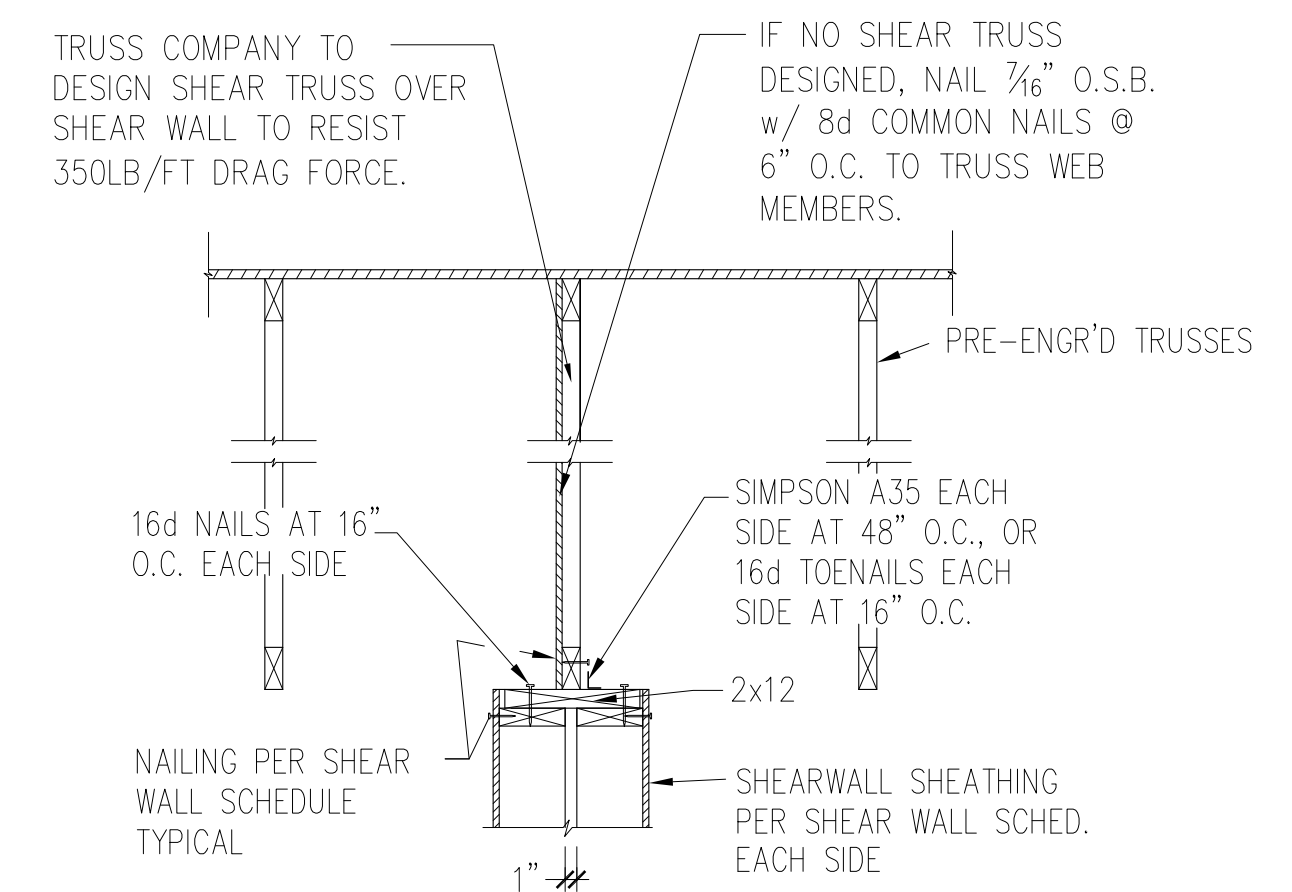
SECTION AND DETAILS
BLDG TYPES A, B & C

S5.03

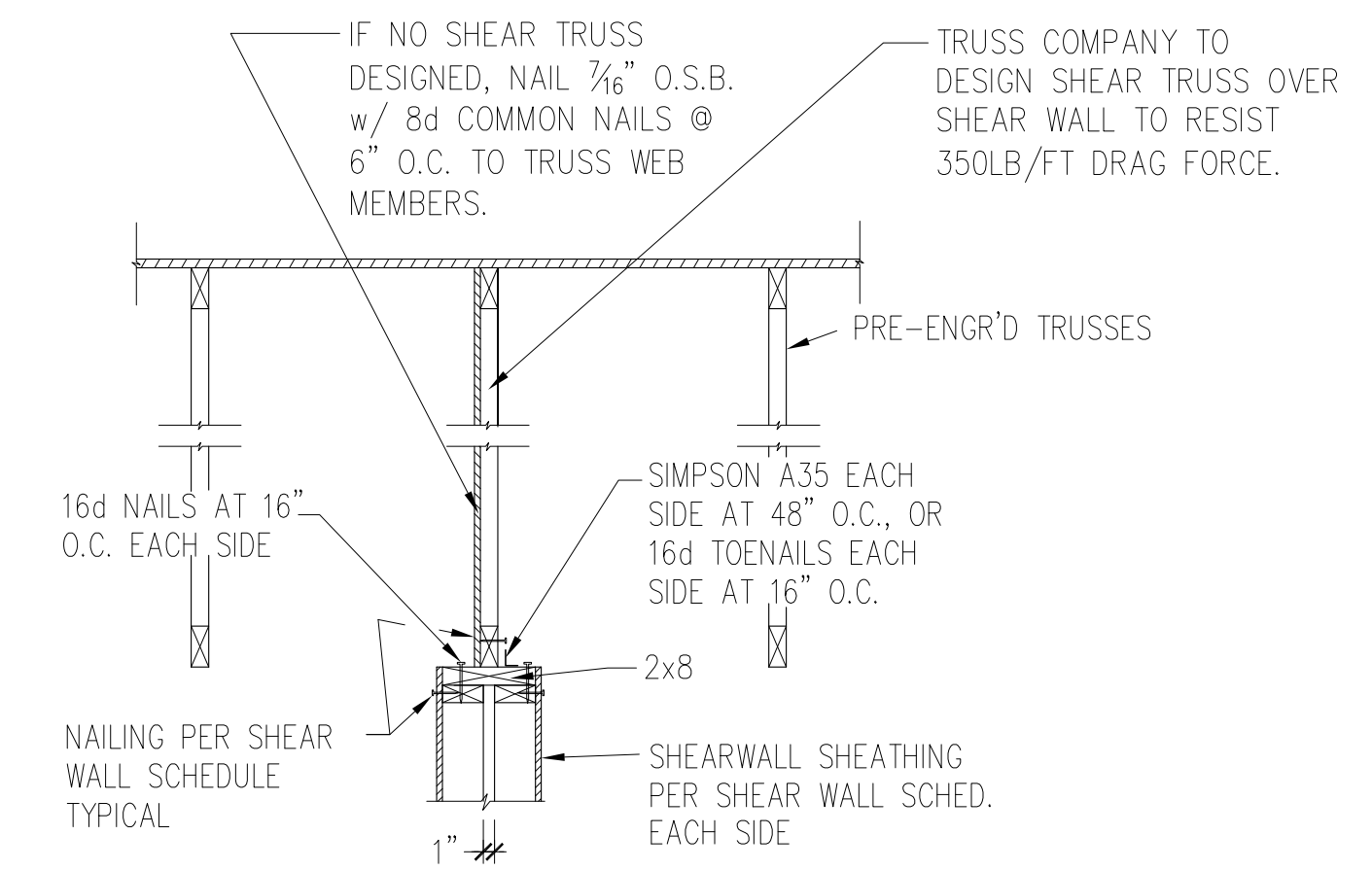
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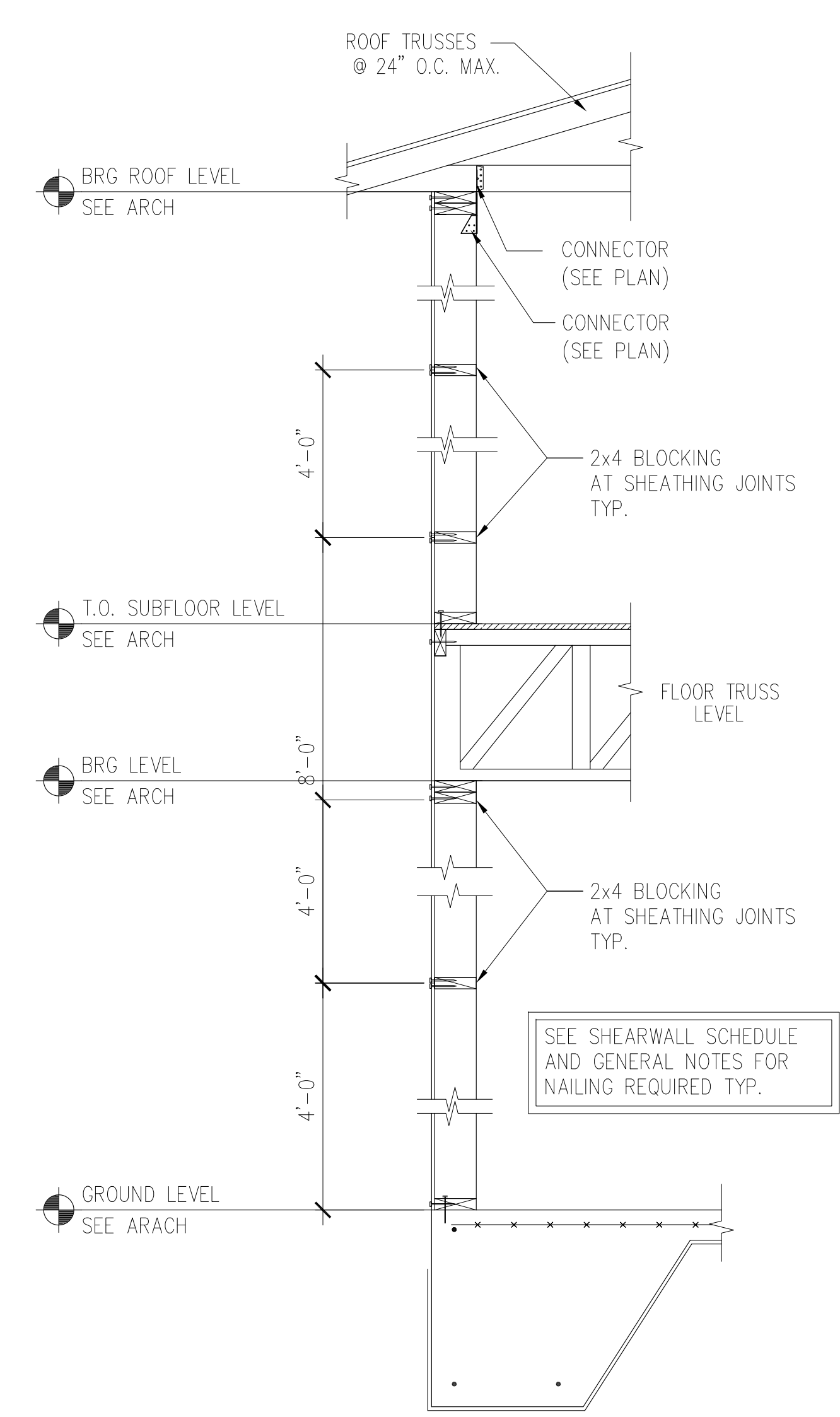
1 SECTION @ WINDOW
SCALE: N.T.S.



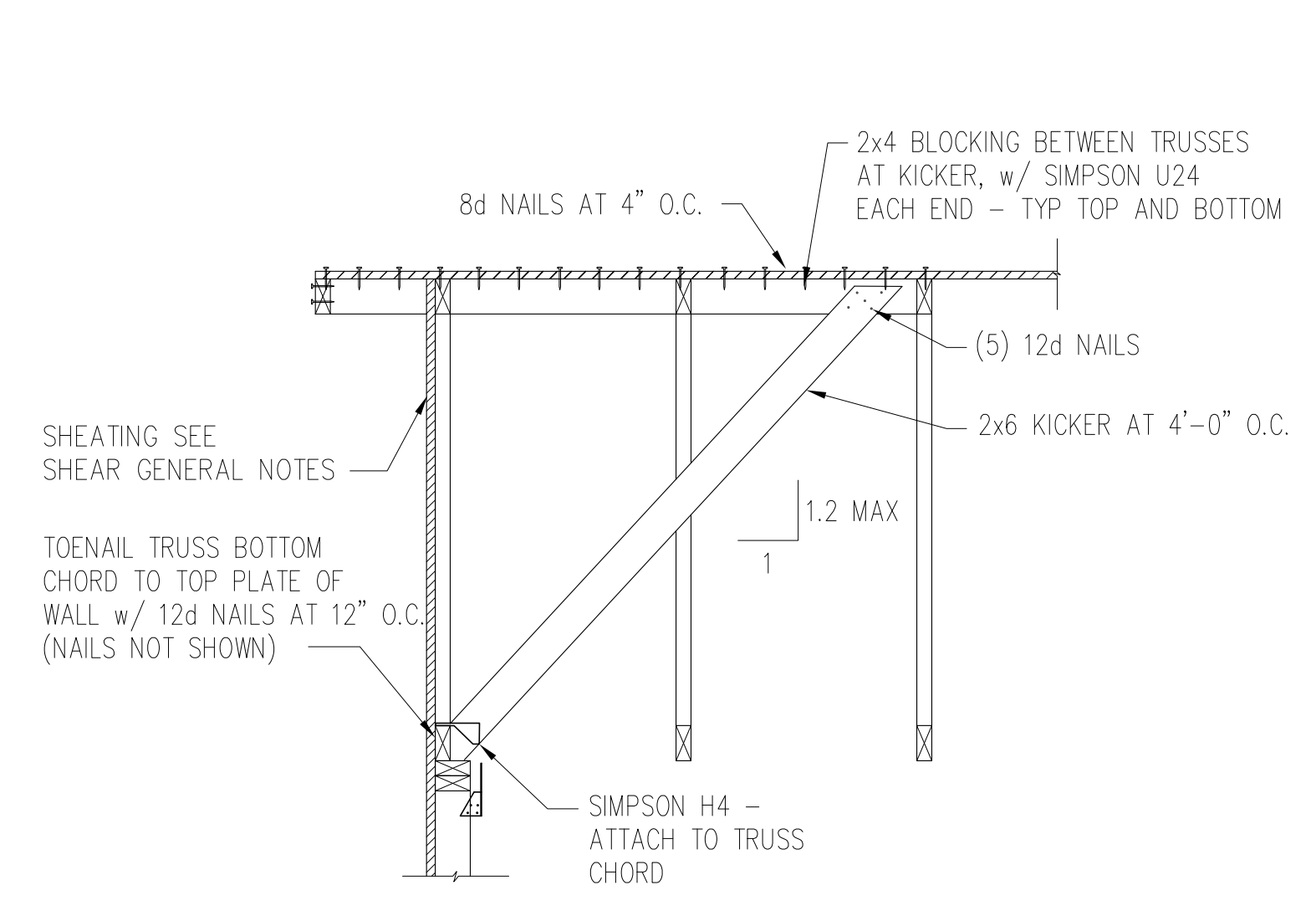
2 PARTY WALL/SHEARWALL SECTION AT ROOF (2x6 WALL)
SCALE: 3/4" = 1'-0"



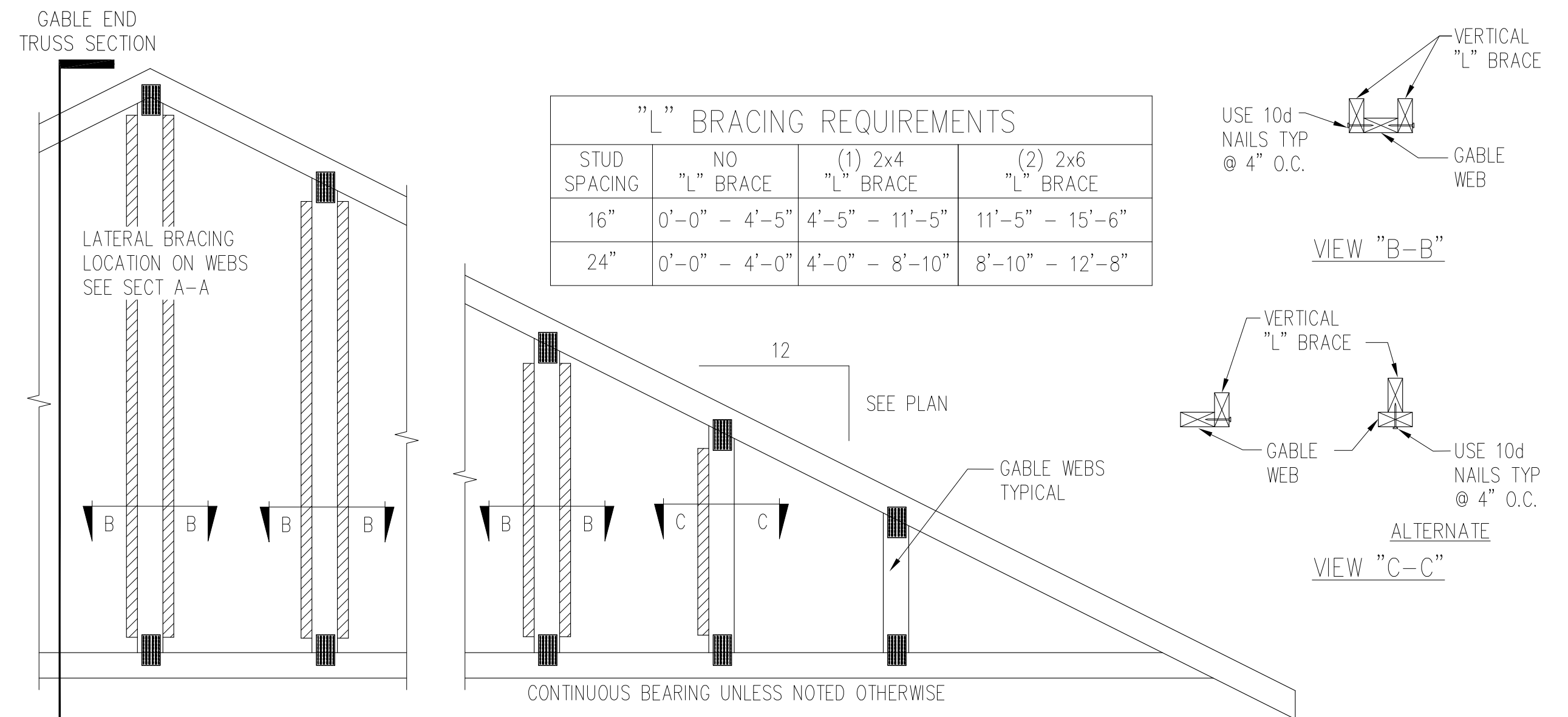
3 PARTY WALL/SHEARWALL SECTION AT ROOF (2x4 WALL)
SCALE: 3/4" = 1'-0"



4 TYP. EXT. WALL SHEATHING AND NAILING LAYOUT
SCALE: N.T.S.



5 TYP GABLE END SECTION
SCALE: N.T.S.



6 STANDARD GABLE END BRACING DETAIL
SCALE: N.T.S.

ISSUE HISTORY

| No. | Date | Description |
|-----|----------|-------------------|
| 1 | 04/15/22 | PERMIT SUBMISSION |

REVISION HISTORY

| No. | Date | Description |
|-----|------|-------------|
|-----|------|-------------|

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ALABAMA
LICENSED
No. 29852
PROFESSIONAL
4/26/2022

THE ROBERT MADISON

MADISON, ALABAMA

Drawn: CW
Checked: CW
Approved: MX
Date: 02-20-22
Project #: XXX-XXX

SECTION AND DETAILS BLDG TYPES A, B & C

S5.04



ABBREVIATIONS

| | | | |
|----------------------|-----------------------------------|-----------|--|
| ABV | ABOVE | HWR | HOT WATER RETURN |
| ADJ | ADJUSTABLE | HWS | HOT WATER SUPPLY |
| AF | AIRFOIL | HVAC | HEATING VENTILATION AND AIR CONDITIONING |
| AFF | ABOVE FINISHED FLOOR | HV | HEATING AND VENTILATING |
| AC | AIR CONDITIONER | IN.WG | INCHES WATER GAUGE |
| ACU | AIR CONDITIONING UNIT | KW | KILOWATTS |
| AHU | AIR HANDLING UNIT | LAT | LEAVING DIFFUSER |
| AP | ACCESS PANEL | LD | LINEAR DIFFUSER |
| BAS | BUILDING AUTOMATION SYSTEM | LWT | LEAVING WATER TEMPERATURE |
| BI | BACKWARD INCLINE | MAX | MAXIMUM |
| BLDG | BUILDING | MBH | 1000 X BTUH |
| BHP | BRAKE HORSEPOWER | MIN | MINIMUM |
| BTUH | BRITISH THERMAL UNIT PER HOUR | MD | MANUAL VOLUME DAMPER |
| BDD | BACKDRAFT DAMPER | M | MOTORIZED DAMPER |
| CD | CONDENSATE DRAIN | MZ | MULTI-ZONE |
| CFM | CUBIC FEET PER MINUTE | N.T.S. | NOT TO SCALE |
| CLG | CEILING | OA | OUTSIDE AIR |
| CHW | CHILLED WATER | OBMVD | OPPOSED BLADE MANUAL VOLUME DAMPER |
| CHWR | CHILLED WATER RETURN | OPD | OPEN DRIP PROOF |
| CHWS | CHILLED WATER SUPPLY | PROP | PROPELLER |
| CWR | CONDENSER WATER RETURN | PCR | PRE-CONDITIONED AIR SYSTEM RETURN WATER |
| CWS | CONDENSER WATER SUPPLY | PCS | PERCENT |
| CONC | CONCRETE | PD | PRESSURE DROP |
| COND | CONDENSATE | PERF. PL. | PERFORATED PLATE |
| CONT | CONTINUOUS | PLBG | PLUMBING |
| CO | CARBON MONOXIDE | PSIA | POUNDS PER SQUARE INCH ABSOLUTE |
| COP | COEFFICIENT OF PERFORMANCE | PSIG | POUNDS PER SQUARE INCH GAUGE |
| CU | CONDENSING UNIT | RA | RETURN AIR |
| DB | DRYBULB | RD | RADIATION DAMPER |
| DWDI | DOUBLE WIDTH, DOUBLE INLET | REG | REGISTER |
| DWGS | DRAWINGS | REQ'D | REQUIRED |
| DX | DIRECT EXPANSION | RG | RETURN AIR GRILLE |
| EF | EXHAUST FAN | RH | RELATIVE HUMIDITY |
| EXH | EXHAUST | RPM | REVOLUTIONS PER MINUTE |
| EA | EACH | RR | RETURN AIR REGISTER |
| EAT | ENTERING AIR TEMPERATURE | RTU | ROOFTOP UNIT |
| EER | ENERGY EFFICIENCY RATIO | SA | SUPPLY AIR |
| ELECT | ELECTRICAL | SF | SUPPLY FAN |
| ENT | ENTERING | SD | SMOKE DETECTOR |
| EQ | EQUAL | SDMP | SMOKE DAMPER |
| ER | EXHAUST REGISTER | SQ.FT. | SQUARE FOOT |
| EWT | ENTERING WATER TEMPERATURE | SR | SUPPLY REGISTER |
| FC | FORWARD CURVED | STR | STARTER |
| FCU | FAN COIL UNIT | SWSI | SINGLE WIDTH, SINGLE INLET |
| FD | FIRE DAMPER | SZ | SINGLE ZONE |
| FL | FLOOR | TEFC | TOTALLY ENCLOSED FAN COOLED |
| FLEX | FLEXIBLE CONNECTOR OR DUCT | TEMP | TEMPERATURE |
| FPM | FEET PER MINUTE | TG | TRANSFER GRILLE |
| F/S | COMBINATION FIRE AND SMOKE DAMPER | T/O | TRANSFER OPENING ABOVE CEILING |
| FT. H ₂ O | FEET WATER GAUGE | T'STAT | THERMOSTAT |
| F | DEGREES FAHRENHEIT | TYP | TYPICAL |
| GA | GAUGE | VFDC | VARIABLE FREQUENCY DRIVE |
| GAL | GALLON | VAV | VARIABLE AIR VOLUME |
| GALV | GALVANIZED | VS | VARIABLE SPEED |
| GPM | GALLONS PER MINUTE | W | WATTS |
| HP | HORSEPOWER | W/ | WITH |
| HTWR | HIGH TEMPERATURE HOT WATER RETURN | W/O | WITHOUT |
| HTWS | HIGH TEMPERATURE HOT WATER SUPPLY | WB | WETBULB |
| HW | HOT WATER | ZD | ZONE DAMPER |

GENERAL NOTES

- INSTALL EQUIPMENT AND MATERIALS IN COMPLIANCE WITH MANUFACTURER'S MINIMUM CLEARANCE REQUIREMENTS AND RECOMMENDATIONS.
- COMPLY WITH THE LATEST EDITIONS OF NFPA AND THE LATEST ADOPTED EDITION FLORIDA BUILDING CODE (MECHANICAL, PLUMBING, GAS AND ENERGY CONSERVATION).
- ALL MATERIALS SHALL FIT THE SPACE AVAILABLE. VERIFY DIMENSIONS AND CLEARANCES ON BUILDING PLANS PRIOR TO COMMENCING WORK.
- AN INDEPENDENT TEST AND BALANCE CONTRACTOR (TABCO) SHALL BE HIRED BY THE GENERAL CONTRACTOR.
- TABC IS RESPONSIBLE FOR TESTING AND BALANCING OF AIR SYSTEMS IN ACCORDANCE WITH AABC GUIDELINES. A TEST AND BALANCE REPORT SHALL BE SUBMITTED TO THE ARCHITECT FOR APPROVAL.
- PROVIDE 45 DEGREE BRANCH TAKE-OFF PER SMACNA FIG. 2-8 ON ALL RECTANGULAR DUCT TAKE-OFFS.
- ALL DUCTWORK TAKE-OFFS AND/OR BRANCH DUCTWORK SHALL BE PROVIDED WITH BALANCING DAMPERS (REMOVE IF IN HARD CEILING AREAS).
- PROVIDE AND INSTALL DUCT MOUNTED HINGED ACCESS DOORS FOR ALL SMOKE AND/OR FIRE DAMPERS, NOT OTHERWISE ACCESSIBLE.
- CONTRACTOR SHALL COORDINATE VOLTAGE AND PHASE OF EACH PIECE OF EQUIPMENT WITH THE ELECTRICAL CONTRACTOR PRIOR TO ORDERING AND SHALL COORDINATE WITH ALL OTHER TRADES PRIOR TO OR INSTALLING EQUIPMENT AND MATERIALS.
- COORDINATE ALL HVAC SYSTEM DRAWINGS WITH EXISTING/NEW TRUSS TO AVOID INTERFERENCE BETWEEN MECHANICAL SYSTEMS AND ROOF STRUCTURE. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH TRUSS INTERFERENCE THAT OCCURS IN THE FIELD DURING CONSTRUCTION. COORDINATE IN ADVANCE. DUCT SIZES MAY BE REVISED TO FIT TRUSS SYSTEM SO LONG AS THE EQUIVALENT INSIDE CROSS SECTIONAL AREA IS NOT DECREASED.
- GAUGES AND CONSTRUCTION FOR DUCTWORK SHALL CONFORM TO THE LATEST EDITION OF SMACNA'S HVAC DUCT CONSTRUCTION STANDARDS.
- TRANSITION RECTANGULAR DUCTWORK ON BOTTOM AND SIDES. MAINTAIN TOP OF DUCTWORK LEVEL AND HIGH AS POSSIBLE. FLEXIBLE DUCT RUN-OUTS TO CEILING DIFFUSERS SHALL BE AS STRAIGHT AS POSSIBLE AND FREE OF SAGS AND KINKS. FLEX DUCT SHALL BE THE SAME SIZE AS THE DIFFUSER NECK IT SERVES.
- ALL DUCT TRANSITIONS FROM SQUARE TO ROUND SHALL BE SMOOTH SQUARE TO ROUND TRANSITIONS. SPIN-IN FITTINGS AT THE END OF CAPPED DUCTS ARE NOT ACCEPTABLE. DUCT DIMENSIONS SHOWN ARE INSIDE CLEAR DIMENSIONS.
- THE CONTRACTOR SHALL FULFILL ALL REQUIREMENTS OF THE CONTRACT DOCUMENTS AND SHALL COMPLETE THE WORK SHOWN ON THESE DRAWINGS. ALL SYSTEMS SHALL BE FINISHED, TESTED AND BALANCED, ADJUSTED, AND PROVEN TO BE FULLY OPERATIONAL AND USEABLE.
- ADJUST ALL DIFFUSERS IN CORRIDORS OR WITHIN THREE (3) FEET OF A WALL TO PROVIDE 2-WAY OR 3-WAY BLOW AWAY FROM OR PARALLEL TO WALLS. ALL DIFFUSERS SHALL HAVE 4-WAY BLOW UNLESS NOTED OTHERWISE.
- PORTIONS OF DUCTWORK VISIBLE THROUGH GRILLES AND REGISTERS IN FINISHED AREAS SHALL BE PAINTED FLAT BLACK.
- ALL DAMPERS IN AND ABOVE CEILING SHALL BE ACCESSIBLE. CONTRACTOR SHALL COORDINATE ALL ACCESS PANELS IN CEILINGS OR WALLS WITH ARCHITECTURAL REFLECTED CEILING PLANS AND INTERIOR DRAWINGS FOR PROPER LOCATION.
- MOUNT THERMOSTATS WHERE INDICATED ON PLANS 48" ABOVE FINISHED FLOOR UNLESS NOTED OTHERWISE. IN HANDICAPPED ACCESSIBLE AREAS, MOUNT CONTROLS AT 48" (MAXIMUM) ABOVE FINISHED FLOOR.
- COORDINATE DUCTWORK AND PIPING WITH PLUMBING, FIRE PROTECTION AND ELECTRICAL. MAKE OFFSETS AND TRANSITIONS TO COORDINATE WITH OTHER TRADES WITHOUT ANY ADDITIONAL EXPENSE TO THE CONTRACT.
- SEAL ALL TRANSVERSE JOINTS AND FITTINGS WITH DUCT SEALER.
- TRAP AND ROUTE CONDENSATE DRAINS LINES, FULL SIZE OF UNIT CONNECTION, AS INDICATED. SLOPE 1/8" PER FOOT.
- ALTERNATE MANUFACTURERS AND MODELS WILL BE REVIEWED. THERE MAY BE ARCHITECTURAL, STRUCTURAL AND ELECTRICAL CHANGES RESULTING FROM THE ALTERNATES. THE COST OF IMPLEMENTING AND ENGINEERING THESE CHANGES SHALL BE BORNE BY THE MECHANICAL SUBCONTRACTOR.
- PIPE AND DUCT ROUTING SHOWN IS SCHEMATIC. PROVIDE ANY ADDITIONAL OFFSETS AND FITTINGS, INCLUDING DIVIDED DUCTS, REQUIRED FOR PROPER INSTALLATION AND TO MAINTAIN CLEARANCES AS ENCOUNTERED IN THE FIELD.
- COORDINATE CEILING MOUNTED AIR DEVICE LOCATION WITH REFLECTED CEILING PLAN AND OTHER TRADES.
- ALL CONTROL WIRING AND CONDUIT SHALL COMPLY WITH NEC DIVISION 16 SPECIFICATIONS.
- PROVIDE MATERIALS WHICH HAVE A FLAME SPREAD RATING OF 25 OR LESS AND A SMOKE DEVELOPED RATING OF 50 OR LESS WHEN TESTED IN ACCORD WITH ASTM E84.
- SLEEVE AND FIRE STOP PENETRATIONS THROUGH FIRE RATED SYSTEMS TO MAINTAIN RATING OF SYSTEM. USE MINIMUM GALVANIZED STEEL GAUGE DUCT AS REQUIRED TO MAINTAIN RATING OF SYSTEM.
- WHERE THE EXHAUST DUCT IS CONCEALED WITHIN THE BUILDING CONSTRUCTION, THE EQUIVALENT LENGTH OF THE DUCT SHALL BE IDENTIFIED ON A PERMANENT LABEL OR TAG. THE LABEL OR TAG SHALL BE LOCATED WITHIN 6 FEET OF THE EXHAUST DUCT CONNECTION.
- CONTRACTOR TO ORDER ALL FIRE/SMOKE DAMPERS WITH INTEGRAL SMOKE DETECTORS AND END STOP INDICATOR OPTIONS. VERIFY VOLTAGE WITH ELECTRICAL DRAWINGS. IF BUILDING IS EQUIPPED WITH FIRE ALARM SYSTEM ALL FIRE/SMOKE DAMPERS WILL BE CONNECTED TO BUILDING FIRE ALARM SYSTEM.
- ALL MECHANICAL EQUIPMENT SHALL BE THOROUGHLY CLEANED OF ALL DIRT, OIL, CONCRETE, ETC. ANY DENTS, SCRATCHES OR OTHER VISIBLE BLEMISHES SHALL BE CORRECTED AND THE APPEARANCE OF THE EQUIPMENT MADE "LIKE NEW" AND TO THE SATISFACTION OF THE ARCHITECT/ENGINEER. UPON COMPLETION, AND BEFORE FINAL ACCEPTANCE OF THE WORK, ALL DEBRIS, RUBBISH, LEFTOVER MATERIALS, TOOLS AND EQUIPMENT SHALL BE REMOVED FROM THE SITE. PROTECTION OF WORK UNTIL FINAL ACCEPTANCE: PROTECT ALL MATERIALS AND EQUIPMENT FROM DAMAGE, ENTRANCE OF DIRT AND CONSTRUCTION DEBRIS FROM THE TIME OF INSTALLATION UNTIL FINAL ACCEPTANCE. ANY MATERIALS AND EQUIPMENT WHICH ARE DAMAGED SHALL BE REPAIRED TO "AS NEW" CONDITION OR REPLACED AT THE DIRECTION OF THE ARCHITECT/ENGINEER. WHERE FACTORY FINISHES OCCUR AND DAMAGE IS MINOR, FINISHES MAY BE TOUCHED UP. IF, IN THE OPINION OF THE ARCHITECT/ENGINEER THE DAMAGE IS EXCESSIVE, FACTORY FINISH SHALL BE REPLACED TO "NEW" CONDITION.
- DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENT AND EXTENT OF WORK. EXACT LOCATIONS AND ARRANGEMENT OF MATERIALS AND EQUIPMENT SHALL BE DETERMINED, WITH THE ACCEPTANCE OF THE ARCHITECT/ENGINEER, AS WORK PROGRESSES TO CONFORM IN THE BEST POSSIBLE MANNER WITH THE SURROUNDINGS AND WITH THE ADJOINING WORK OF OTHER TRADES. WHERE LOCATIONS OF EQUIPMENT, DEVICES OR FIXTURES ARE CONTROLLED BY ARCHITECTURAL FEATURES, ESTABLISH SUCH LOCATIONS BY REFERRING TO DIMENSIONS ON ARCHITECTURAL DRAWINGS AND NOT BY SCALING DRAWINGS.
- IN CASE OF DIFFERENCES BETWEEN DRAWINGS AND SPECIFICATIONS, OR WHERE DRAWINGS AND SPECIFICATIONS ARE NOT CLEAR OR DEFINITE, THE SUBJECT SHALL BE REFERRED TO ARCHITECT/ENGINEER FOR CLARIFICATION AND INSTRUCTIONS.
- ANY INTERRUPTION OF EXISTING MECHANICAL AND ELECTRICAL SERVICES SHALL BE COORDINATED IN ADVANCE WITH THE OWNER'S REPRESENTATIVE. THIS INCLUDES, BUT IS NOT LIMITED TO, SERVICES PROVIDING CHILLED WATER, ELECTRICITY, OR OTHER CRITICAL SYSTEMS AS MAY BE PERTINENT TO THIS PARTICULAR PROJECT. SERVICE INTERRUPTION TIMES AND DURATION OF INTERRUPTION OF SERVICES SHALL BE DECIDED BY THE OWNER. PROVIDE APPROPRIATE PROVISIONS (SUCH AS ISOLATION SHUT-OFF VALVES, DAMPERS, END CAPS, AND SIMILAR ITEMS) AS NECESSARY TO ACCOMMODATE THE REQUIRED SERVICE INTERRUPTIONS. IF SHUTDOWNS CANNOT BE ACCOMMODATED, PROVIDE MEANS FOR "WET" TAPPING OR "HOT" TAPPING OF PIPING SYSTEMS.
- ALL MAIN DUCTWORK SHOWN PER PLAN IS TO BE SHEET METAL OR DUCT BOARD. ALL DUCT BOARD INSTALLATIONS ARE TO BE APPROVED BY BUILDING OWNER PRIOR TO MATERIAL PURCHASE.
- FIRE & FIRE/SMOKE DAMPERS ARE REQUIRED TO BE UL LISTED AND APPROVED FOR THE ASSEMBLIES LISTED ON THE ARCHITECTURAL DRAWINGS. THESE DAMPERS MUST ALSO BE REVIEWED AND APPROVED BY THE ARCHITECT PRIOR TO ORDERING.

ENERGY CALCULATION VALUES

| | | | |
|----------|--------|-------|---|
| ROOF: | R-38 | NOTE: | THIS PROJECT HAS MET THE MINIMUM ENERGY CODE REQUIREMENTS AND HAS BEEN DESIGNED TO THE MINIMUM VALUES NOTED. ALL MATERIALS USED IN THE CONSTRUCTION OF THIS PROJECT MUST MEET OR EXCEED THE MINIMUM VALUES NOTED PER THE LATEST ADOPTED EDITION OF THE FLORIDA BUILDING CODE AND FLORIDA ENERGY CODE. |
| WALLS: | R-21 | | |
| WINDOWS: | 0.25 | | |
| SHGC: | U-0.30 | | |
| U VALUE: | 0.5 | | |
| VLT: | R-2.85 | | |
| DOORS: | R-10 | | |
| FLOORS: | | | |

NOTE:
GENERAL NOTES ON THIS MECHANICAL SHEET ARE FOR GENERAL REFERENCE PURPOSES ONLY. ALL OF THESE NOTES MAY NOT BE USED FOR THIS PROJECT.

LEGEND

| | | | |
|--|---|--|--|
| | SUPPLY DIFFUSER (4-WAY) | | REFERENCE NOTES |
| | RETURN OR OUTDOOR AIR GRILLE | | REFERENCE NOTE - MULTI-DISCIPLINE SHEETS |
| | EXHAUST GRILLE | | FLOW DIRECTION |
| | SUPPLY DUCT UP SECTION (RECTANGULAR) | | INDICATES POINT OF CONNECTION BETWEEN NEW AND EXISTING |
| | RETURN DUCT UP SECTION (RECTANGULAR) | | POINT OF DISCONNECT |
| | EXHAUST DUCT UP SECTION (RECTANGULAR) | | CONDENSER WATER SUPPLY PIPING |
| | SUPPLY DUCT DOWN SECTION (RECTANGULAR) | | CONDENSER WATER RETURN PIPING |
| | RETURN DUCT DOWN SECTION (RECTANGULAR) | | BUILDING CONDENSER WATER SUPPLY PIPING |
| | EXHAUST DUCT DOWN SECTION (RECTANGULAR) | | BUILDING CONDENSER WATER RETURN PIPING |
| | SUPPLY DUCT UP SECTION (ROUND) | | CHILLED WATER SUPPLY PIPING |
| | SUPPLY DUCT DOWN SECTION (ROUND) | | CHILLED WATER RETURN PIPING |
| | LINEAR SLOT DIFFUSER | | HEATING WATER SUPPLY PIPING |
| | EXISTING LINEAR SLOT DIFFUSER (LIGHT LINETYPE) | | HEATING WATER RETURN PIPING |
| | RECTANGULAR DUCTWORK WITH TAKE-OFF, BALANCING DAMPER AND INSULATED FLEXIBLE ROUND DUCT. SAME SIZE AS DIFFUSER INLET UNLESS NOTED OTHERWISE. FIRST DIMENSION IS THAT OF SIDE SHOWN | | CONDENSATE DRAIN PIPING |
| | ROUND DUCTWORK | | REFRIGERANT PIPING |
| | CONICAL FITTING WITH DAMPER ON BRANCH CONNECTION TO RECTANGULAR MAIN (PROVIDE DAMPER IN LOW PRESSURE DUCTWORK ONLY) | | FLOW SENSOR |
| | EXISTING DUCTWORK TO REMAIN (LIGHT LINETYPE) | | STATIC PRESSURE TRANSMITTER ASSEMBLY |
| | DUCT OFFSETS UP (RISE) IN DIRECTION INDICATED | | RECTANGULAR BRANCH DUCT CONNECTION. (PROVIDE BALANCING DAMPER AT ALL BRANCH CONNECTIONS) |
| | DUCT OFFSETS DOWN (DROP) IN DIRECTION INDICATED | | TEE (PLAN, UP, DOWN) |
| | OPPOSED BLADE VOLUME DAMPER (OBD) | | ELBOW (PLAN, UP, DOWN) |
| | MANUAL DAMPER | | VALVE |
| | FLEXIBLE DUCT CONNECTION | | TWO WAY MOTORIZED CONTROL VALVE |
| | FIRE/RADIATION DAMPER WITH ACCESS PANEL | | THREE WAY MOTORIZED CONTROL VALVE |
| | COMBINATION FIRE/SMOKE DAMPER WITH ACCESS PANEL | | PRESSURE REDUCING VALVE |
| | EXISTING DUCTWORK TO BE REMOVED (DASHED LINETYPE) | | FLOW CONTROL VALVE |
| | AIR DEVICE TAG MARK=CFM | | BALL VALVE FOR PIPING 2-INCHES AND SMALLER, BUTTERFLY VALVE FOR PIPING 2-1/2 INCHES AND LARGER |
| | SIDEWALL TRANSFER GRILLE | | BUTTERFLY VALVE |
| | SIDEWALL SUPPLY REGISTER | | CHECK VALVE |
| | SIDEWALL RETURN GRILLE OR OUTSIDE AIR LOUVER | | STRAINER |
| | SIDEWALL EXHAUST GRILLE | | BALANCE VALVE WITH INTEGRAL TAPS FOR CONNECTION OF DIFFERENTIAL PRESSURE METER. VALVE SHALL HAVE NAMEPLATE INDICATING WATER FLOW RATE VERSUS VALVE PRESSURE DROP |
| | WALL MOUNTED DDC TEMPERATURE SENSOR MOUNT 4'-0" ABOVE FINISHED FLOOR | | AUTOMATIC FLOW CONTROL VALVE WITH INTEGRAL TEMPERATURE AND PRESSURE TEST PORTS |
| | WALL MOUNTED THERMOSTAT MOUNT 4'-0" ABOVE FINISHED FLOOR | | UNION |
| | WALL MOUNTED CO SENSOR MOUNT 4'-0" ABOVE FINISHED FLOOR | | VENTURI FLOW METER |
| | WALL MOUNTED DDC HUMIDITY SENSOR MOUNT 4'-0" ABOVE FINISHED FLOOR | | PRESSURE AND/OR TEMPERATURE PORT |
| | WALL MOUNTED HUMIDISTAT SENSOR MOUNT 4'-0" ABOVE FINISHED FLOOR | | THERMOMETER |
| | PHOTO DETAIL OR SECTION IDENTIFICATION TARGET A = DETAIL NUMBER B = SHEET NUMBER ON WHICH DETAIL IS LOCATED | | PRESSURE GAUGE WITH GAUGE COCK |
| | RADIATION DAMPER INSTALLED IN AIR DEVICE | | FLEXIBLE CONNECTION |
| | RADIATION DAMPER INSTALLED IN DUCT | | PRESSURE RELIEF VALVE |
| | ELBOW WITH TURNING VANES | | OPENING IN WALL ABOVE CEILING |
| | | | EQUIPMENT TAG |
| | | | 1" DOOR UNDER CUT, ARROW INDICATES DIRECTION OF FLOW |
| | | | FLEX DUCT |

NOTE:
SYMBOLS SHOWN ON THIS MECHANICAL LEGEND ARE FOR REFERENCE PURPOSES ONLY. ALL OF THESE SYMBOLS MAY NOT BE USED FOR THIS PROJECT.

| ISSUE HISTORY | | |
|---------------|----------|-------------------|
| No. | Date | Description |
| 1 | 04/15/22 | Permit Submission |
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| REVISION HISTORY | | |
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| No. | Date | Description |
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THE MADISON
HUNTSVILLE, AL

SYMBOL LEGEND & GENERAL NOTES MECHANICAL

M0.01

| | |
|------------|------------|
| Drawn: | MJRSMB |
| Checked: | BLSAJB |
| Approved: | BLSAJB |
| Date: | 04/15/2022 |
| Project #: | 5722 |

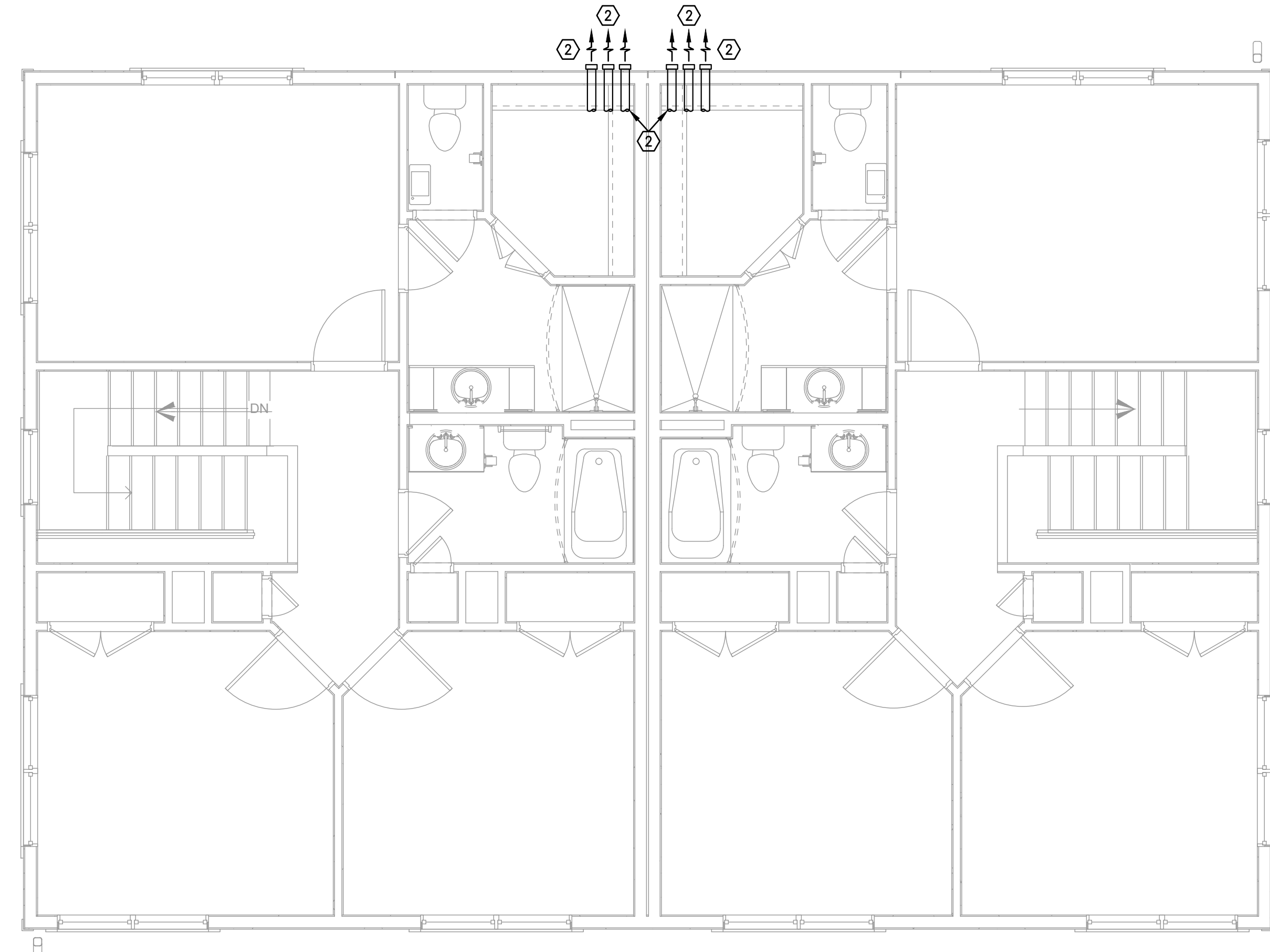


GENERAL NOTES:

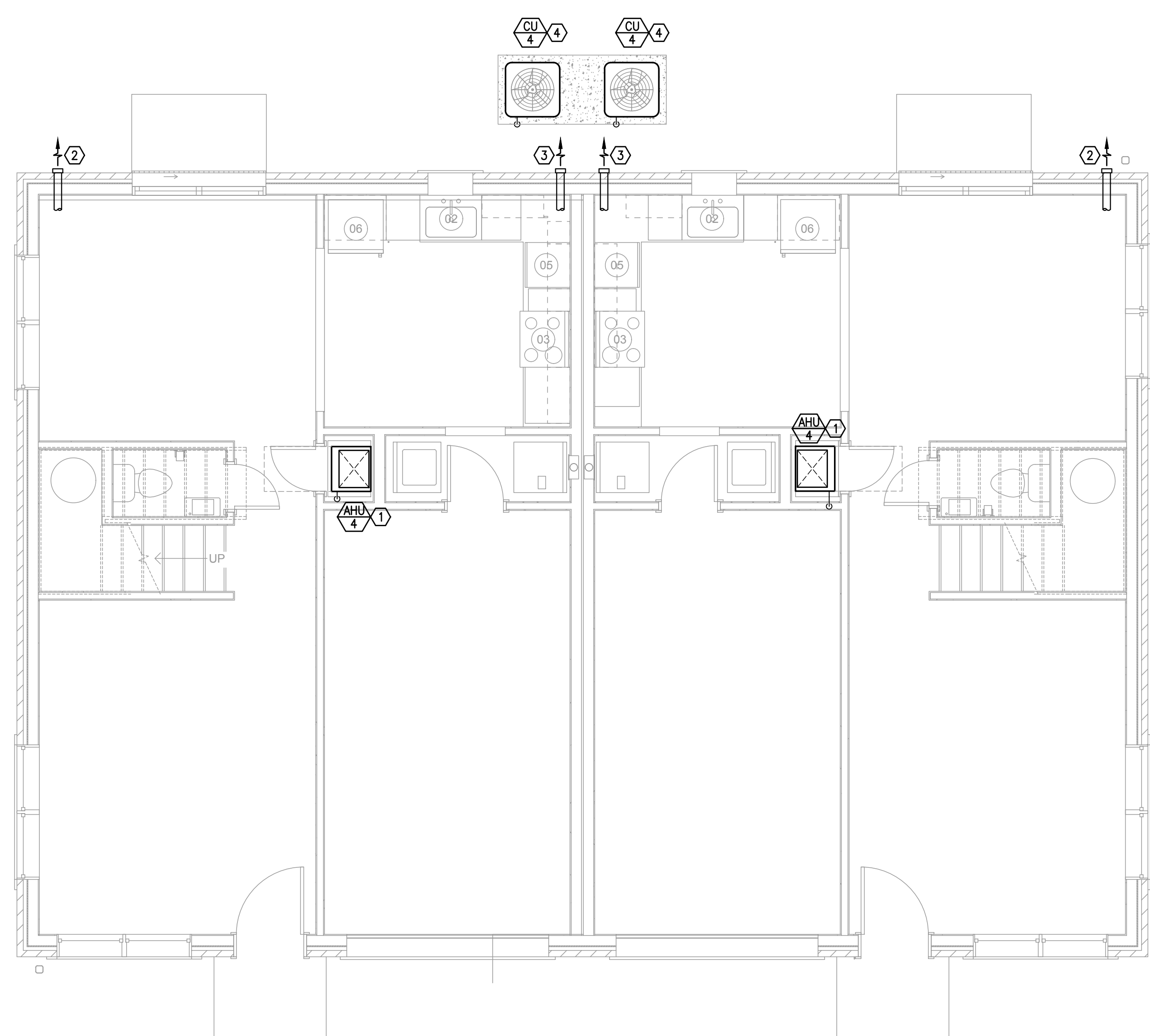
1. ALL EXHAUST OUTLETS SHALL BE FARTHER THAN 3 FEET AWAY FROM ANY OPERABLE WINDOWS.
2. INSTALL CONDENSING UNIT ON HOUSEKEEPING PAD PER DETAIL. CONDENSING UNITS TO BE INSTALLED WITH REQUIRED MANUFACTURER CLEARANCE. REFER TO OVERALL SITE PLAN FOR PROPOSED CONDENSING UNIT LOCATIONS BASED ON BUILDING SITE LOCATION.

REFERENCE NOTES: (X)

- ① MOUNT AHU PER DETAIL AND ROUTE REFRIGERANT LINES WITHIN MECHANICAL CLOSET WALL DOWN THRU FLOOR AND UNDER SLAB TO GROUND MOUNTED CONDENSING UNIT. SEE PLUMBING PLANS FOR CONDENSATE DISPOSAL. ROUTE REFRIGERANT LINES PER DETAIL.
- ② ROUTE TOILET EXHAUST DUCT FROM WALL MOUNTED EXHAUST FAN THROUGH TRUSS SPACE TO BUILDING SIDEWALL. TERMINATE DUCT AT EXTERIOR WALL CAP WITH BIRD SCREEN PER RISER DIAGRAM. PRIME COAT AND PAINT WALL CAP TO MATCH BUILDING COLOR. SEE INDIVIDUAL UNIT PLANS FOR CONTINUATION.
- ③ ROUTE DRYER EXHAUST DUCT THROUGH TRUSS SPACE TO BUILDING SIDEWALL. TERMINATE DUCT AT EXTERIOR WALL CAP (NO BIRD SCREEN) PER RISER DIAGRAM. PRIME COAT AND PAINT WALL CAP TO MATCH BUILDING COLOR. SEE INDIVIDUAL UNIT PLAN FOR CONTINUATION.
- ④ INSTALL CONDENSING UNIT AND HOUSEKEEPING PAD PER DETAIL. COORDINATE CONDENSING UNIT LOCATIONS WITH OWNER.



F3 BUILDING TYPE C - 2ND LEVEL - MECHANICAL
1/4" = 1'-0"



K3 BUILDING TYPE C - GROUND LEVEL - MECHANICAL
1/4" = 1'-0"

ISSUE HISTORY

| No. | Date | Description |
|-----|----------|-------------------|
| 1 | 04/15/22 | Permit Submission |

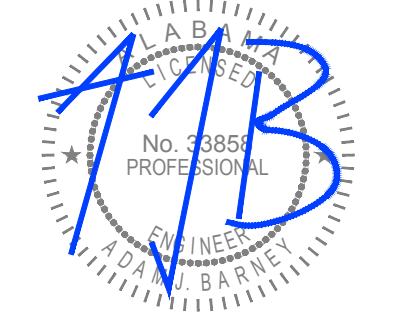
REVISION HISTORY

| No. | Date | Description |
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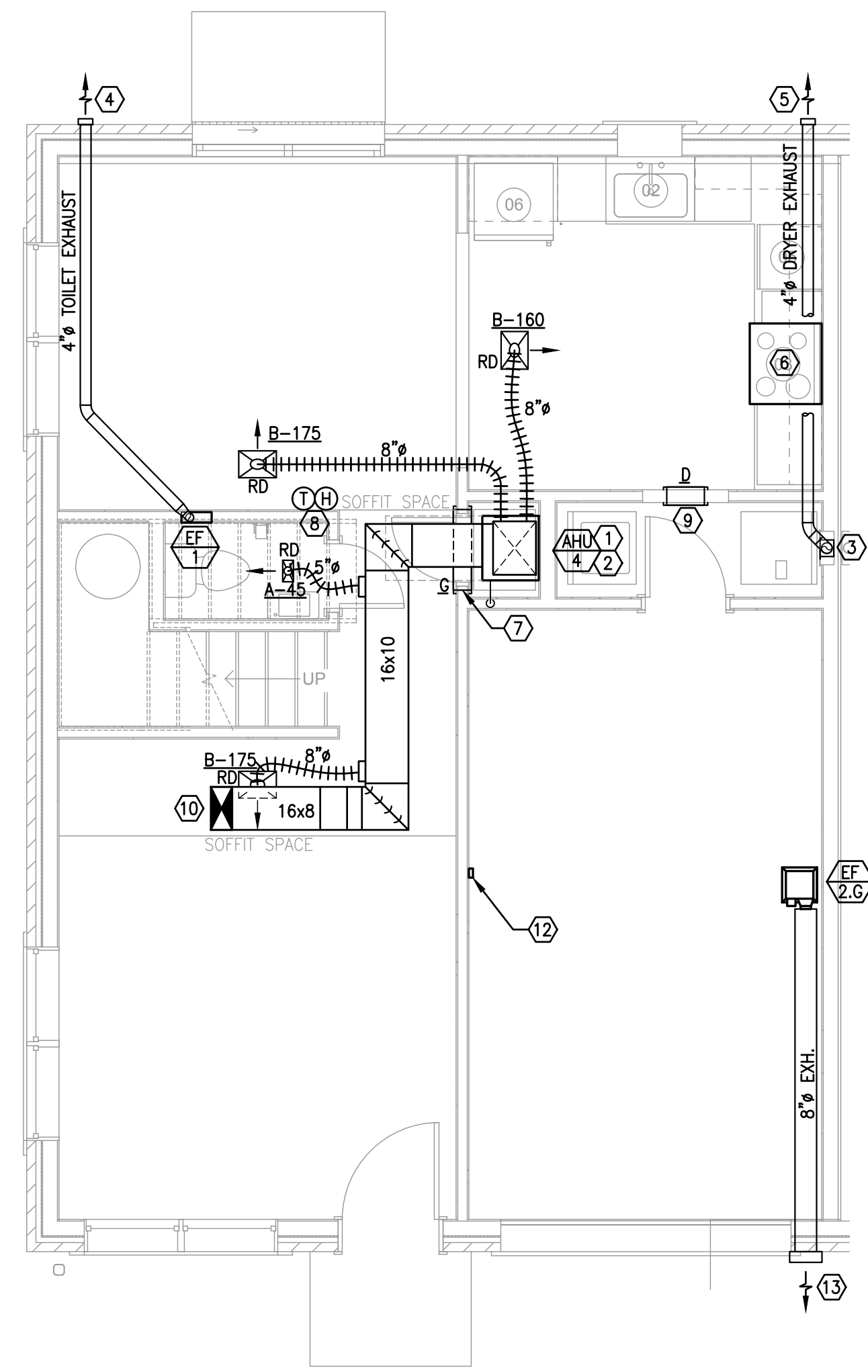


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| Drawn | MJRSMB |
| Checked | BLSA/B |
| Approved | BLSA/B |
| Date | 04/15/2022 |
| Project # | 572 |

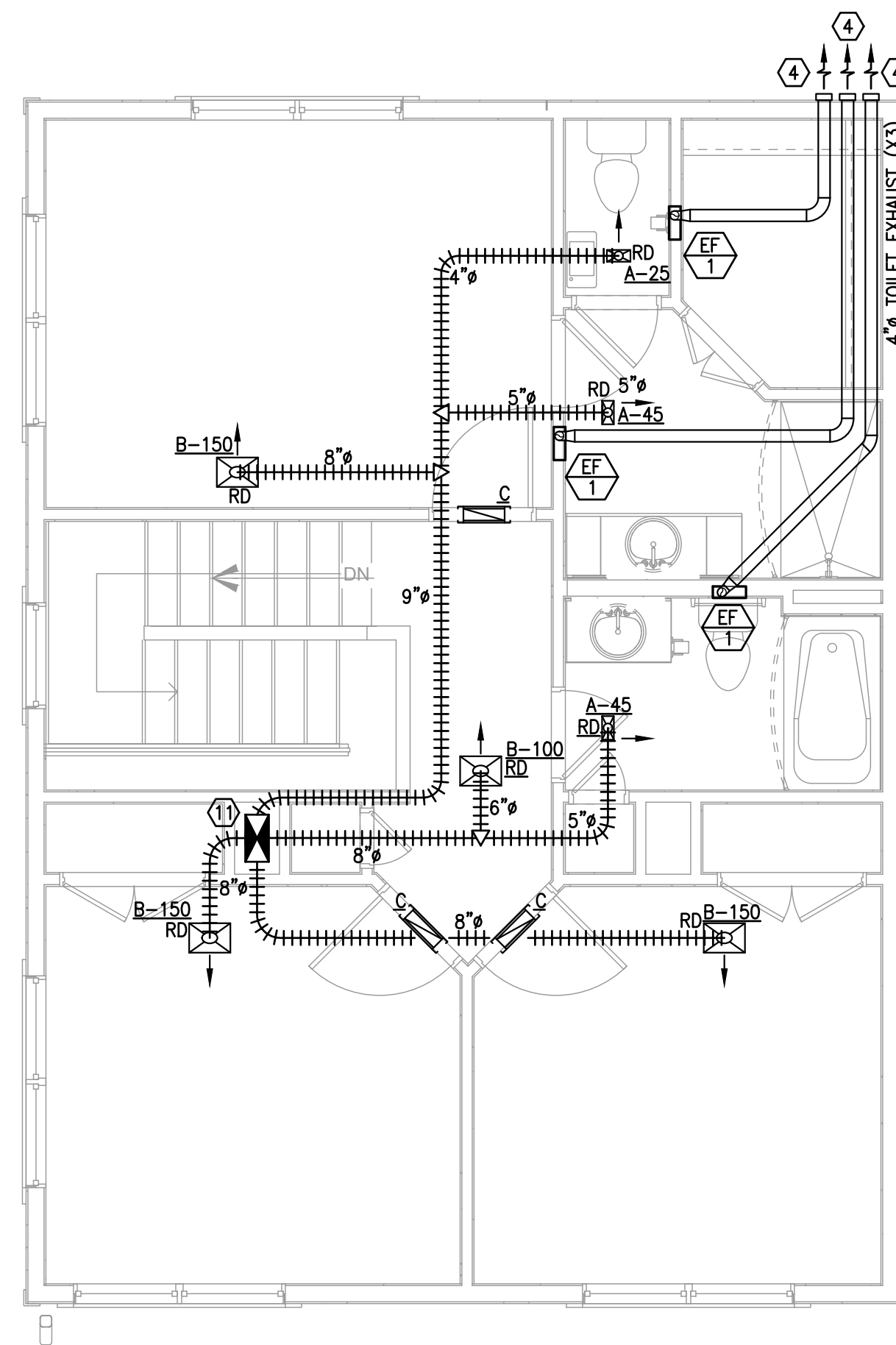
THE MADISON
HUNTSVILLE, AL
**BUILDING TYPE C
FLOOR PLANS
MECHANICAL**
M2.07

| NATURAL VENTILATION CALC. | |
|---|-------|
| UNIT TH | |
| UNIT FLOOR AREA: | 1,460 |
| MIN. VENTILATION AREA: (UNIT AREA ÷ 4%) | 58.40 |
| ACTUAL VENTILATION AREA: 155.75 (OPERABLE OPENING AREA) | |
| NATURAL VENTILATION CALCULATIONS BASED ON FLORIDA MECHANICAL CODE CHAPTER 4, SECTION 402. | |
| PER FMC SECTION 401.2 NATURAL VENTILATION IS BEING PROVIDED TO THE DWELLING UNIT THROUGH OPERABLE WINDOWS AND DOORS. THE ADJOINING KITCHEN SPACE COMMUNICATES DIRECTLY WITH THE LIVING NATURALLY VENTILATED LIVING SPACE PER FMC SECTION 402.3 THEREBY NO MECHANICAL EXHAUST IS REQUIRED FOR THE KITCHEN. | |
| ALL AREAS CALCULATED IN SQUARE FEET | |

| DRYER VENT LENGTH CALC. | |
|--|------|
| UNIT TH | |
| HORIZONTAL LENGTH: | 13 |
| VERTICAL LENGTH: | 7 |
| 90° (5 FT EACH): | 5 |
| 45° (2.5 FT EACH): | 2.5 |
| TOTAL EQ. LENGTH (FT): | 27.5 |
| THIS DRYER VENT SYSTEM IS LESS THAN THE CODE MAXIMUM LENGTH OF 35 FEET. A STANDARD SERVICE RATED DRYER MAY BE INSTALLED. | |



G2 UNIT TH - 1ST FLOOR - MECHANICAL
1/4" = 1'-0"



G6 UNIT TH - 2ND FLOOR - MECHANICAL
1/4" = 1'-0"

GENERAL NOTES:

- PROVIDE 1" DOOR UNDER CUT IN ALL BEDROOMS IN ADDITION TO TRANSFER GRILLE.
- ALL EXHAUST OUTLETS SHALL BE FARTHER THAN 3 FEET AWAY FROM ANY OPERABLE WINDOWS.
- DUCT SYSTEMS ARE TO BE SEALED WITH TAPE COMPLYING WITH UL 181, MASTIC GASKETS, OR AN APPROVED SYSTEM AS REQUIRED BY THE ICC IRC, SECTION M1601.3.1 OR ICC IMC, SECTION 603.9 TO REDUCE LEAKAGE.
- ALL MATERIALS INSTALLED WITHIN PLENUM RETURN CLOSET SHALL BE ASTM E-84 25/50 FIRE/SMOKE RATED OR BE WRAPPED WITH ASTM E-84 25/50 FIRE/SMOKE RATED MATERIAL. USE PLENUM RATED FIELD WIRING EQUAL TO SOUTHWIRE WITHIN AHU CLOSET. FULLY INSULATE EXPOSED SCHEDULE 40 PVC PIPING WITH 3M FIRE BARRIER PLENUM WRAP 5A+ OR EQUAL.
- EXHAUST VENT DUCTWORK TO BE INSTALLED WITH A 1/2" SLOPE TOWARD OUTLETS FOR THE FIRST 5'-0". EXHAUST DUCTWORK TO BE INSTALLED WITH LONGITUDINAL SEAMS FACING UPWARD FOR THE ENTIRE LENGTH OF THE DUCTWORK.

REFERENCE NOTES: (X)

- MOUNT AIR HANDLING UNIT PER STAND MOUNTED DETAIL.
- ROUTE REFRIGERANT AND CONDENSATE LINES DOWN WITHIN MECHANICAL CLOSET WALLS TO 1ST FLOOR AND UNDER SLAB. REFER TO PLUMBING PLANS FOR CONDENSATE ROUTING. ROUTE REFRIGERANT LINES PER RISER DIAGRAM.
- INSTALL DRYER EXHAUST WALL CONNECTION BOX PER DETAIL.
- ROUTE 4" EXHAUST DUCT FROM WALL MOUNTED EXHAUST FAN THROUGH TRUSS SPACE TO BUILDING SIDEWALL PER DETAIL. TERMINATE DUCT AT EXTERIOR WALL CAP PER RISER DIAGRAM.
- ROUTE 4" DRYER EXHAUST DUCT THROUGH TRUSS SPACE TO BUILDING SIDEWALL PER DETAIL. TERMINATE DUCT AT EXTERIOR WALL CAP (NO BIRD SCREEN) PER RISER DIAGRAM.
- MICROWAVE WITH DUCTLESS HOOD.
- PROVIDE RETURN AIR GRILLE ABOVE DOOR TO AIR HANDLER CLOSET. REFER TO AIR DEVICE SCHEDULE FOR EXACT SIZE.
- PROVIDE HONEYWELL VISIONPRO 8000 TOUCHSCREEN 7-DAY PROGRAMMABLE THERMOSTAT OR EQUAL.
- PROVIDE LOUVER ABOVE DOOR TO THE LAUNDRY CLOSET FOR DRYER MAKE-UP AIR.
- ROUTE 16"x8" SUPPLY DUCT FROM AHU THROUGH 2ND FLOOR CHASE. PLEASE REFER TO 2ND FLOOR FOR CONTINUATION.
- 16"x8" SUPPLY DUCT UP FROM FLOOR BELOW
- PROVIDE HARD WIRED 120V CARBON MONOXIDE MONITOR EQUAL TO FIRST ALERT.
- ROUTE 8" EXHAUST DUCT FROM CEILING MOUNTED EXHAUST FAN THROUGH TRUSS SPACE TO BUILDING SIDEWALL PER DETAIL. TERMINATE DUCT AT EXTERIOR WALL CAP PER RISER DIAGRAM.

UL ASSEMBLY REQUIREMENTS:

- INSTALL LOWER FLOOR DUCTS IN THE L-500 FLOOR TRUSS SYSTEM. FOLLOW THE REQUIREMENTS OF THE UL LISTING FOR THE L-500 SYSTEM.
- INSTALL TOP FLOOR DUCTS IN THE P-500 ROOF TRUSS SYSTEM. FOLLOW THE REQUIREMENTS OF THE UL LISTING FOR THE P-500 SYSTEM.
- PROVIDE CEILING RADIATION DAMPERS AT ALL SUPPLY AND TRANSFER DUCTS AND REGISTER PENETRATIONS.
 - MAXIMUM DAMPER SIZE OF 324 SQUARE INCHES (18x18) AND NO MORE THAN 162 SQUARE INCHES PER 100 SF OF CEILING AREA.
 - MAINTAIN 1" BETWEEN DAMPERS AND TRUSSES.
 - PROVIDE MINIMUM 2" SEPARATION BETWEEN DAMPERS.
 - INSTALL ONLY RADIATION DAMPERS THAT ARE UL LISTED FOR THE ASSEMBLY IN WHICH THEY ARE INTENDED.

BLOWER DOOR TESTING REQUIREMENTS

PER FLORIDA ENERGY EFFICIENCY CODE SECTION R402.4 ALL APARTMENT UNITS LOCATED WITHIN BUILDINGS THAT ARE 3 STORIES OR LESS ARE REQUIRED TO BE LEAK TESTED WITH A MAXIMUM LEAK RATE OF NO GREATER THAN 7 AIR CHANGES PER HOUR. IF LEAK TESTING RESULTS SHOW A LEAK RATE HIGHER THAN 7 AIR CHANGES PER HOUR THE UNIT THERMAL ENVELOPE MUST BE SEALED ACCORDINGLY AND RE-TESTED. A PASSING CERTIFIED BLOWER DOOR TEST REPORT MUST BE SUPPLIED TO THE AUTHORITY HAVING JURISDICTION PRIOR TO CERTIFICATE OF OCCUPANCY.

PER FLORIDA MECHANICAL CODE SECTION 401.2 IF THE UNIT LEAK RATE IS FOUND TO BE LESS THAN 3 AIR CHANGES PER HOUR DEDICATED MECHANICAL VENTILATION WILL BE REQUIRED TO BE INSTALLED.

***DOES NOT APPLY TO BUILDINGS 4 STORIES OR GREATER**

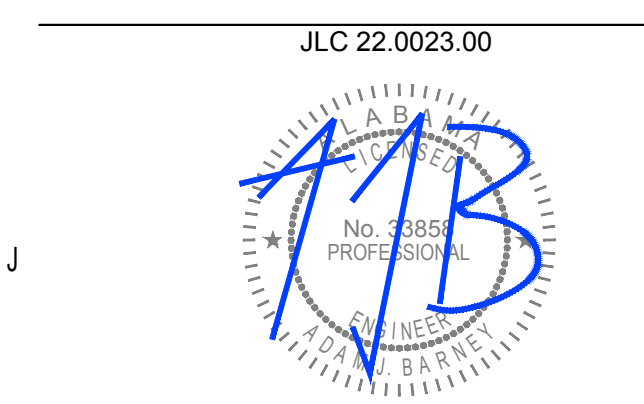


| ISSUE HISTORY | | |
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| No. | Date | Description |
| 1 | 04/15/22 | Permit Submission |
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| | |
|----------------|------------------|
| THE MADISON | Drawn: M/R/SMB |
| HUNTSVILLE, AL | Checked: BLSA/B |
| | Approved: BLSA/B |
| | Date: 04/15/2022 |
| | Project#: 5722 |

ENLARGED UNIT PLANS
MECHANICAL

M3.08



GENERAL NOTES:

- CONTRACTOR TO VERIFY ALL MECHANICAL EQUIPMENT SELECTED FITS WITHIN DESIGNATED SPACE SHOWN ON MECHANICAL PLANS AND PROVIDES THE CORRECT CLEARANCES REQUIRED BY THE MANUFACTURER.
- CONTRACTOR SHALL COORDINATE VOLTAGE, PHASE AND REQUIRED MOCP FOR EACH PIECE OF EQUIPMENT WITH THE ELECTRICAL CONTRACTOR PRIOR TO ORDERING.
- IF PRODUCTS/EQUIPMENT ARE VALUE ENGINEERED OR SUBSTITUTED IT IS THE CONTRACTORS RESPONSIBILITY TO FIELD COORDINATE ALL NEW PRODUCTS/EQUIPMENT REQUIREMENTS WITH OTHER DISCIPLINES/TRADES.

FAN SCHEDULE

| MARK | AREA SERVED | TYPE | CFM | T.S.P. | HP/WATTS | RPM | VOLTS/PH | SONES | MANUFACTURER & MODEL NO. | NOTES |
|--------|-------------|---------|-----|--------|-----------|-------|----------|-------|--------------------------------|------------|
| EF-1 | UNITS | CEILING | 52 | 0.25 | 7.7 WATTS | 1,050 | 120/1# | 0.5 | PANASONIC FV-0510VSC1 OR EQUAL | 1, 2, & 3. |
| EF-2.G | UNIT GARAGE | CEILING | 163 | 0.25 | 19 WATTS | 911 | 120/1# | 0.8 | GREENHECK CSP-A390-VG | 4, & 5. |
| EF-3.G | UNIT GARAGE | CEILING | 240 | 0.25 | 34 WATTS | 1,021 | 120/1# | 0.8 | GREENHECK CSP-A390-VG | 4, & 5. |
| EF-4.G | UNIT GARAGE | CEILING | 290 | 0.25 | 49 WATTS | 1,129 | 120/1# | 1.0 | GREENHECK CSP-A390-VG | 4, & 5. |
| EF-5.G | UNIT GARAGE | CEILING | 200 | 0.25 | 25 WATTS | 950 | 120/1# | 0.7 | GREENHECK CSP-A390-VG | 4, & 5. |

NOTES:
 1. EXHAUST FAN EQUIPPED WITH 4" OVAL CONNECTION. PROVIDE DUCTWORK TRANSITION AS REQUIRED.
 2. EXHAUST FAN TO OPERATE ON INDIVIDUAL SWITCH WITHIN BATHROOM.
 3. PROVIDE EXHAUST FAN CEILING RADIATION DAMPER PANASONIC MODEL PC-RD05C5 WHEN INSTALLED IN RATED CEILING.
 4. PROVIDE RADIATION DAMPER/FIRE DAMPER AT ALL RATED ASSEMBLY PENETRATIONS.
 5. PROVIDE WITH CARBON MONOXIDE DETECTOR MOUNTED ON GARAGE WALL FOR CONTROL OF FAN. FOLLOW FACTORY RECOMMENDED LOCATION AND MOUNTING HEIGHT.

LOUVER SCHEDULE (AMENITIES AREA)

| MARK | SERVICE | AIR FLOW (CFM) | FREE AREA (SF) | W x H (N) | MAX. VELOCITY IN FPM | MAX. PRESSURE DROP (IN H2O) | MANUFACTURER & MODEL NO. | NOTES |
|------|-------------|----------------|----------------|-----------|----------------------|-----------------------------|--------------------------|---------|
| L-1 | EXHAUST AIR | 240 | 0.4 | 14"x12" | 632 | 0.06 | GREENHECK EDD-401-14x12 | 1, & 2. |
| L-2 | OUTSIDE AIR | 290 | 0.5 | 14"x16" | 598 | 0.05 | GREENHECK ESD-635-14x16 | 1, & 2. |
| L-3 | OUTSIDE AIR | 198 | 0.3 | 12"x14" | 687 | 0.06 | GREENHECK ESD-635-12x14 | 1, & 2. |

NOTES:
 1. PROVIDE BIRD SCREEN.
 2. PROVIDE GRAVITY BACK DRAFT DAMPER ON INTERIOR SIDE OF LOUVER.

FLEX DUCT SCHEDULE

| CFM | FLEX SIZE |
|---------------|-----------|
| 0 - 35 | 4" |
| 36 - 60 | 5" |
| 61 - 100 | 6" |
| 101 - 140 | 7" |
| 141 - 210 | 8" |
| 211 - 280 | 9" |
| 281 - 400 | 10" |
| 401 - 600 | 12" |
| 601 - 900 | 14" |
| 901 - 1,300 | 16" |
| 1,300 - 1,700 | 18" |

AIR DEVICE SCHEDULE (APARTMENTS)

| MARK | DESCRIPTION | FACE SIZE | NECK | MATERIAL | MANUFACTURER & MODEL NO. | NOTES |
|------|-------------------------------|-----------|----------|----------|--------------------------------|-------|
| A | LOUVERED FACE SUPPLY DIFFUSER | 8"x4" | SEE PLAN | STEEL | TRUAIRE 401 | 1. |
| B | LOUVERED FACE SUPPLY DIFFUSER | 14"x10" | SEE PLAN | STEEL | TRUAIRE 401 | 1. |
| C | RETURN AIR TRANSFER GRILLE | 14"x6" | SEE PLAN | ALUMINUM | TAMARACK TECHNOLOGIES RAP 14.8 | 1. |
| D | RETURN AIR TRANSFER GRILLE | 14"x6" | SEE PLAN | ALUMINUM | TRUAIRE 170 | 1. |
| E | LOUVERED FACE RETURN GRILLE | 18"x18" | SEE PLAN | STEEL | TRUAIRE 170 | 1. |

NOTES:
 1. COORDINATE SURFACE FINISHES WITH ARCHITECTURAL DRAWINGS.

APARTMENT DX SPLIT AIR HANDLING UNIT SCHEDULE

| MARK | LOCATION SERVED | FAN | | | | COOLING COIL | | | FILTERS | | | ELECTRIC HEATING COIL | | | SINGLE POINT UNIT ELEC. REQUIREMENTS | | UNIT INFORMATION | | | | | | |
|-------|-----------------|----------------------|------------------------|---------------------------------|------------|--------------|-------------------------------|------------------------------|-----------------------|-----------|------------|-----------------------|---------------|----------|--------------------------------------|--------------------|---------------------|----------------------|-------------------------|------------------|--------------|-------------|---------------|
| | | TOTAL AIR FLOW (CFM) | OUTSIDE AIR FLOW (CFM) | EXTERNAL STATIC PRESS. (IN.WG.) | DRIVE TYPE | HP | ENTERING AIR TEMP. (°F DB/WB) | LEAVING AIR TEMP. (°F DB/WB) | TOTAL CAPACITY (BTUH) | TYPE | EFFICIENCY | THICKNESS | NO. OF STAGES | TOTAL KW | VOLTAGE/PHASE | SINGLE CIRCUIT MCA | SINGLE CIRCUIT MOCP | UNIT SIZE (H"xW"xD") | OPERATING WEIGHT (LBS.) | MANUFACTURER | MODEL NUMBER | MOUNTING | NOTES |
| AHU-1 | 1A, 1B, 1BS | 600 | - | 0.3 | DIRECT | 1/3 | 80.0/67.0 | 56.0/54.0 | 16,000 | THROWAWAY | 25%-30% | 1" | 1 | 6 | 208/1# | 36.0 | 40 | 36"x20"x16" | 84 | GOODMAN OR EQUAL | AHU190816* | THRU WALL | 1, 2, 3, & 4. |
| AHU-2 | 2B, 2BS | 800 | - | 0.3 | DIRECT | 1/3 | 80.0/67.0 | 56.0/54.0 | 24,000 | THROWAWAY | 25%-30% | 1" | 1 | 6 | 208/1# | 36.0 | 40 | 36"x20"x16" | 84 | GOODMAN OR EQUAL | AHU250816* | THRU WALL | 1, 2, 3, & 4. |
| AHU-3 | 3C | 1,000 | - | 0.3 | DIRECT | 1/2 | 80.0/67.0 | 56.0/54.0 | 30,000 | THROWAWAY | 25%-30% | 1" | 1 | 7.5 | 208/1# | 49.1 | 50 | 36"x24"x21" | 109 | GOODMAN OR EQUAL | AHU321016* | THRU WALL | 1, 2, 3, & 4. |
| AHU-4 | 3C | 1,200 | - | 0.3 | DIRECT | 1/2 | 80.0/67.0 | 56.0/54.0 | 36,000 | THROWAWAY | 25%-30% | 1" | 1 | 7.5 | 208/1# | 49.1 | 50 | 36"x24"x21" | 96 | GOODMAN OR EQUAL | AHU371016* | STAND MOUNT | 1, 2, & 3. |

NOTES:
 1. PROVIDE COMPLETE WITH PULL TYPE DISCONNECT SWITCH (PROVIDED BY DIVISION 16) AND HONEYWELL TH8321WF1001 7-DAY PROGRAMMABLE THERMOSTAT AND INTEGRAL HUMIDISTAT.
 2. ROUTE AND SIZE REFRIGERANT LINES PER MANUFACTURER'S REQUIREMENTS.
 3. PROVIDE CONDENSATE OVERFLOW SWITCH SAFE-T SWITCH MODEL S52 OR EQUIVALENT.
 4. PROVIDE MANUFACTURER'S WALL PANEL, MODEL NUMBER WAD-1 OR WAD-2 BASED ON AIR HANDLER MODEL NUMBER.

APARTMENT DX SPLIT CONDENSING UNIT SCHEDULE (STRAIGHT COOL)

| MARK | LOCATION | COMPRESSOR | | | | CONDENSER FANS | | ELECTRICAL | | | | UNIT INFORMATION | | MANUFACTURER | MODEL NUMBER | NOTES | | |
|------|----------|---------------------------|------|----------------|------|----------------|---------------|--------------------|---------------------|----------|------|------------------|------|--------------|--------------|------------------|----------------------|-------------------------|
| | | OUTDOOR DESIGN TEMP. (°F) | QTY. | CAPACITY STEPS | QTY. | NOMINAL HP | VOLTAGE/PHASE | COMPRESSOR RLA/LRA | CONDENSER FANS QTY. | FLA (EA) | MCA | MOCP | SEER | | | | UNIT SIZE (H"xW"xD") | OPERATING WEIGHT (LBS.) |
| CU-1 | GROUND | 95° | 1 | 100 | 1 | 1/8 | 208/1# | 9.0 | 1 | 0.70 | 12.0 | 20 | 14.0 | 28"x28"x28" | 131 | GOODMAN OR EQUAL | GSX140191* | 1, & 2. |
| CU-2 | GROUND | 95° | 1 | 100 | 1 | 1/8 | 208/1# | 11.5 | 1 | 0.70 | 17.8 | 30 | 14.0 | 33"x28"x28" | 136 | GOODMAN OR EQUAL | GSX140251* | 1, & 2. |
| CU-3 | GROUND | 95° | 1 | 100 | 1 | 1/6 | 208/1# | 12.8 | 1 | 0.95 | 17.0 | 25 | 14.0 | 33"x29"x29" | 162 | GOODMAN OR EQUAL | GSX140311* | 1, & 2. |
| CU-4 | GROUND | 95° | 1 | 100 | 1 | 1/6 | 208/1# | 14.1 | 1 | 0.95 | 18.6 | 30 | 14.0 | 33"x29"x29" | 162 | GOODMAN OR EQUAL | GSX140371* | 1, & 2. |

NOTES:
 1. PROVIDE COMPLETE WITH PULL TYPE DISCONNECT SWITCH (PROVIDED BY DIVISION 16), TIME DELAY RELAY AND ANTI-SHORT CYCLE TIMER.
 2. MOUNT AND SECURE CONDENSING UNITS PER DETAILS PROVIDED.

MINI-SPLIT AIR HANDLING UNIT SCHEDULE

| MARK | LOCATION SERVED | FAN | | | | COOLING COIL | | | FILTERS | | | ELECTRIC HEATING COIL | | | SINGLE POINT UNIT ELEC. REQUIREMENTS | | UNIT INFORMATION | | | | | | | | | | |
|-------|-----------------|----------------------|------------------------|---------------------------------|------------|--------------|-------------------------------|------------------------------|-----------------------|--------------------------|--------------------|-----------------------|----------|------------|--------------------------------------|-----------------------|------------------|--------------|---------------|--------------------|---------------------|----------------------|-------------------------|--------------|---------------------|----------------|-----------|
| | | TOTAL AIR FLOW (CFM) | OUTSIDE AIR FLOW (CFM) | EXTERNAL STATIC PRESS. (IN.WG.) | DRIVE TYPE | FLA | ENTERING AIR TEMP. (°F DB/WB) | LEAVING AIR TEMP. (°F DB/WB) | TOTAL CAPACITY (BTUH) | SENSIBLE CAPACITY (BTUH) | COIL AREA (SQ.FT.) | COIL ROW/FNS | TYPE | EFFICIENCY | THICKNESS | TOTAL CAPACITY (BTUH) | VOLTS/PHASE | HEATER WATTS | VOLTAGE/PHASE | SINGLE CIRCUIT MCA | SINGLE CIRCUIT MOCP | UNIT SIZE (H"xW"xD") | OPERATING WEIGHT (LBS.) | MANUFACTURER | MODEL NUMBER | NOTES | |
| MAU-1 | ELEVATOR EQUIP. | 385 | - | - | - | 0.19 | 80.0/67.0 | 56.0/54.0 | 12,000 | - | - | - | INTERNAL | 25%-30% | - | - | - | 208/1# | 1 | - | - | - | 12"x35"x10" | 28 | MITSUBISHI OR EQUAL | TPKA00121LA00A | 1, 2, & 3 |
| MAU-2 | FACP | 385 | - | - | - | 0.19 | 80.0/67.0 | 56.0/54.0 | 12,000 | - | - | - | INTERNAL | 25%-30% | - | - | - | 208/1# | 1,030 | 208/1# | 1 | - | 12"x35"x10" | 28 | MITSUBISHI OR EQUAL | TPKA00121LA00A | 1, 2, & 3 |

NOTES:
 1. POWER FOR INDOOR UNIT PROVIDED FROM EXTERIOR CONDENSER. COORDINATE WITH ELECTRICAL CONTRACTOR TO PROVIDE POWER WIRING BETWEEN EACH UNIT IN FIELD.
 2. ROUTE AND SIZE REFRIGERANT LINES PER MANUFACTURER'S REQUIREMENTS.
 3. MOUNT AS HIGH ON WALL AS POSSIBLE.

MINI-SPLIT CONDENSING UNIT SCHEDULE

| MARK | LOCATION | COMPRESSOR | | | | CONDENSER FANS | | ELECTRICAL | | | | UNIT INFORMATION | | MANUFACTURER | MODEL NUMBER | NOTES | | |
|-------|----------|---------------------------|------|----------------|------|----------------|---------------|--------------------|---------------------|------|-----|------------------|------|--------------|--------------|---------------------|----------------------|-------------------------|
| | | OUTDOOR DESIGN TEMP. (°F) | QTY. | CAPACITY STEPS | QTY. | NOMINAL HP | VOLTAGE/PHASE | COMPRESSOR RLA/LRA | CONDENSER FANS QTY. | FLA | MCA | MOCP | SEER | | | | UNIT SIZE (H"xW"xD") | OPERATING WEIGHT (LBS.) |
| MCU-1 | GROUND | 95° | 1 | 100 | 1 | - | 208/1# | 7.0/12.0 | 1 | 0.50 | 11 | 28 | 21 | 25"x32"x12" | 92 | MITSUBISHI OR EQUAL | TRUJAD121KA70NA | 1, & 2. |
| MCU-2 | GROUND | 95° | 1 | 100 | 1 | - | 208/1# | 7.0/12.0 | 1 | 0.50 | 11 | 28 | 21 | 25"x32"x12" | 93 | MITSUBISHI OR EQUAL | TRUZAD121KA70NA | 1, & 2. |

NOTES:
 1. PROVIDE COMPLETE WITH TIME DELAY RELAY AND ANTI-SHORT CYCLE TIMER.
 2. DISCONNECT SWITCH PROVIDED BY DIVISION 16.

ISSUE HISTORY

| No. | Date | Description |
|-----|----------|-------------------|
| 1 | 04/15/22 | Permit Submission |

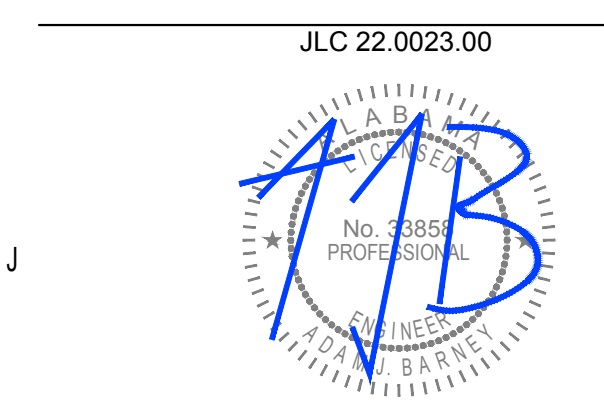
REVISION HISTORY

| No. | Date | Description |
|-----|------|-------------|
|-----|------|-------------|



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 www.fuglebergkoch.com AA26002103

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 ALTAHONTE SPRINGS, FLORIDA 32714
 TEL: 321.972.4464
 WWW.JLCENG.COM
 CA NO. 4050 - 1



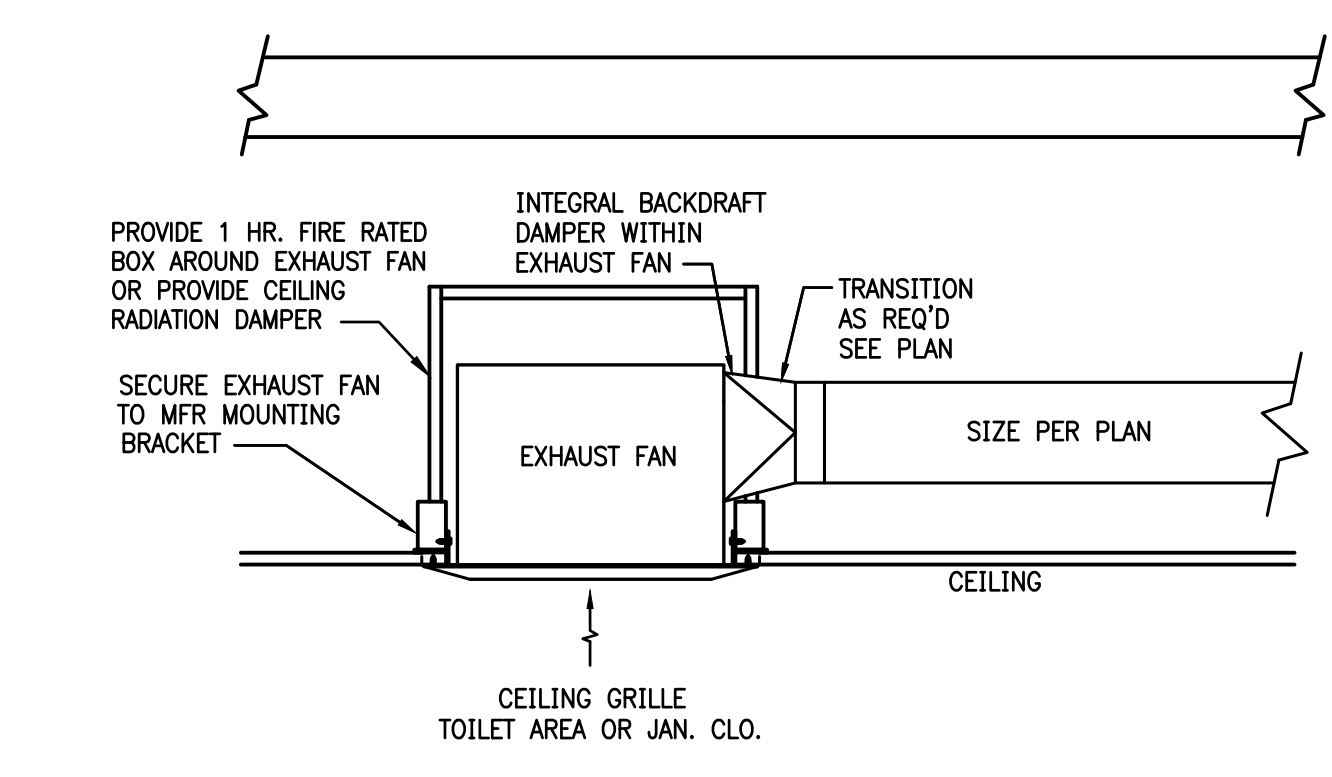
JLC 22.0023.00

THE MADISON
 HUNTSVILLE, AL

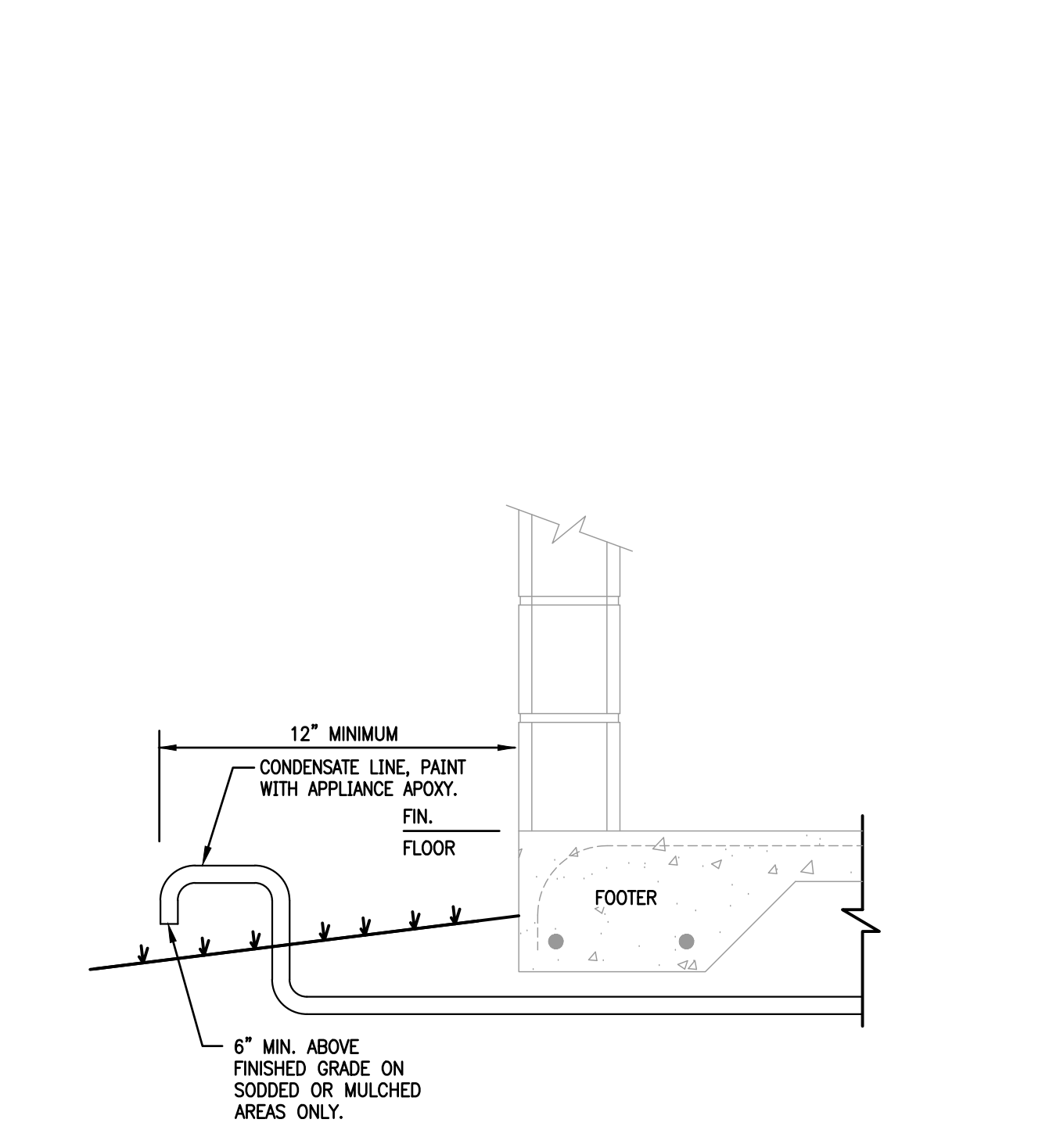
Drawn: MJS/MB
 Checked: BLS/AB
 Appr'd: BLS/AB
 Date: 04/15/2022
 Project#: 5722

SCHEDULES MECHANICAL

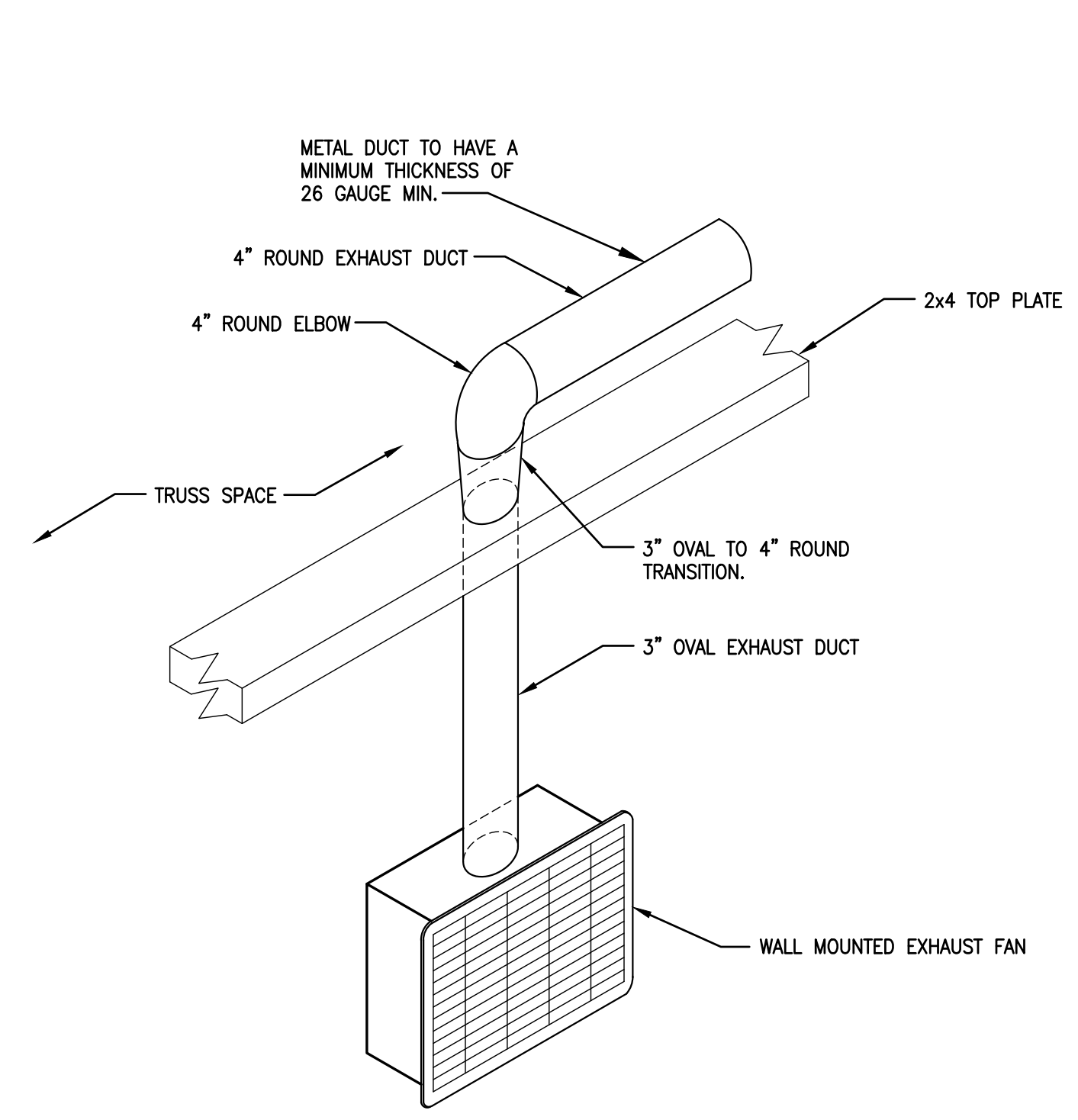
M5.01



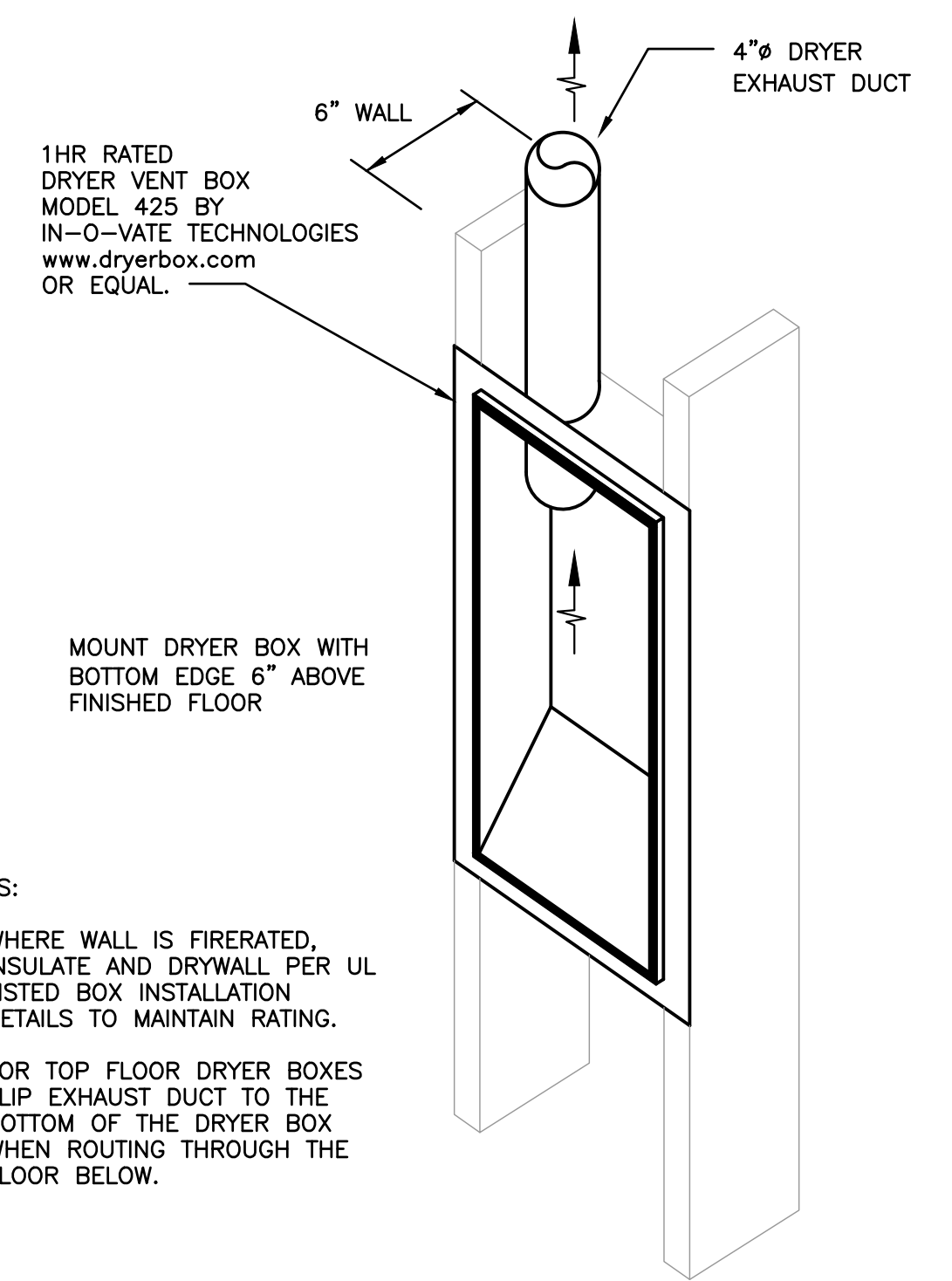
8 CEILING EXHAUST FAN SUPPORT DETAIL
NTS FIRE RATED CEILING



4 CONDENSATE DRAIN TERMINATION DETAIL
NTS



5 WALL MOUNTED EXHAUST FAN DETAIL UNITS
NTS

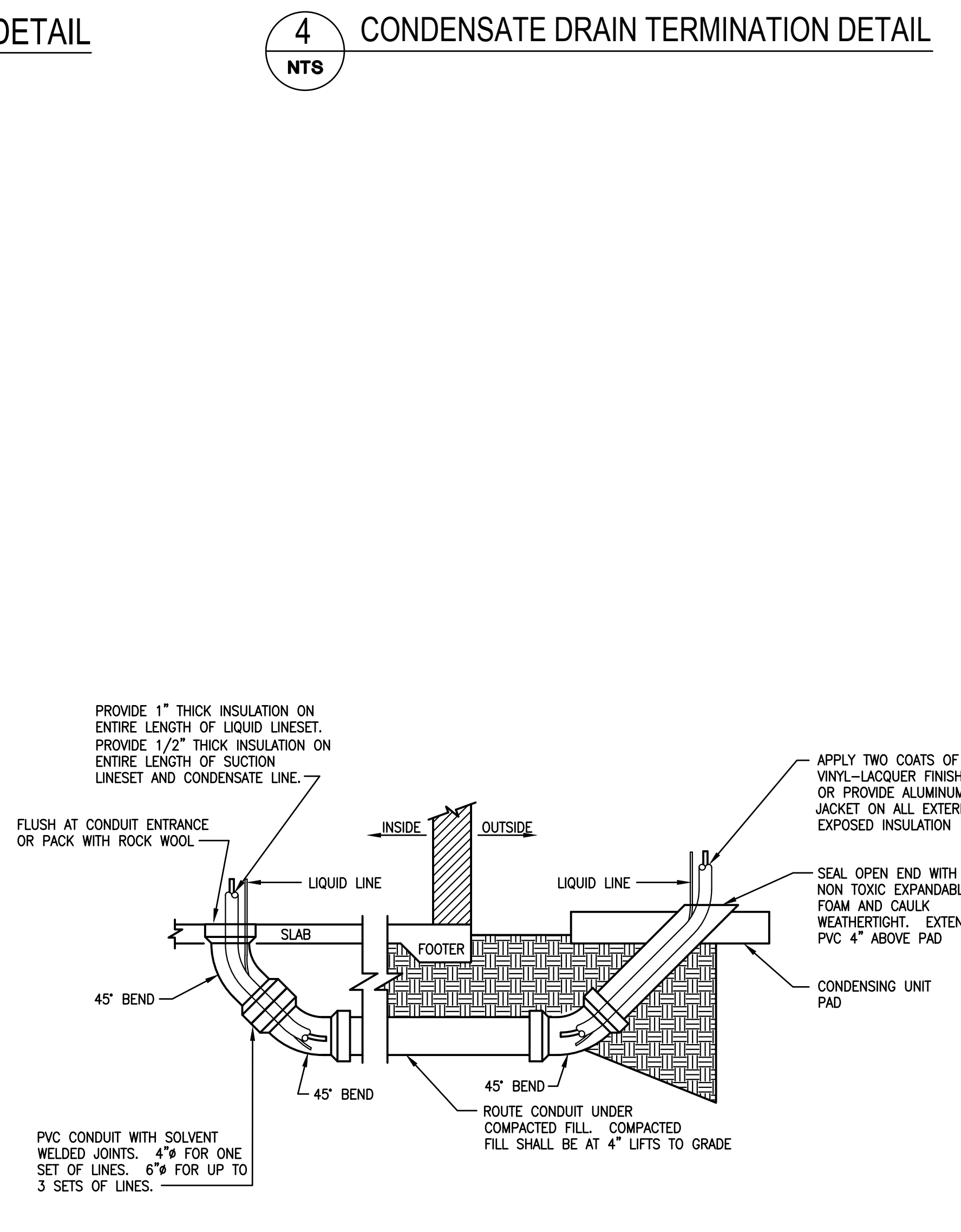


NOTES:

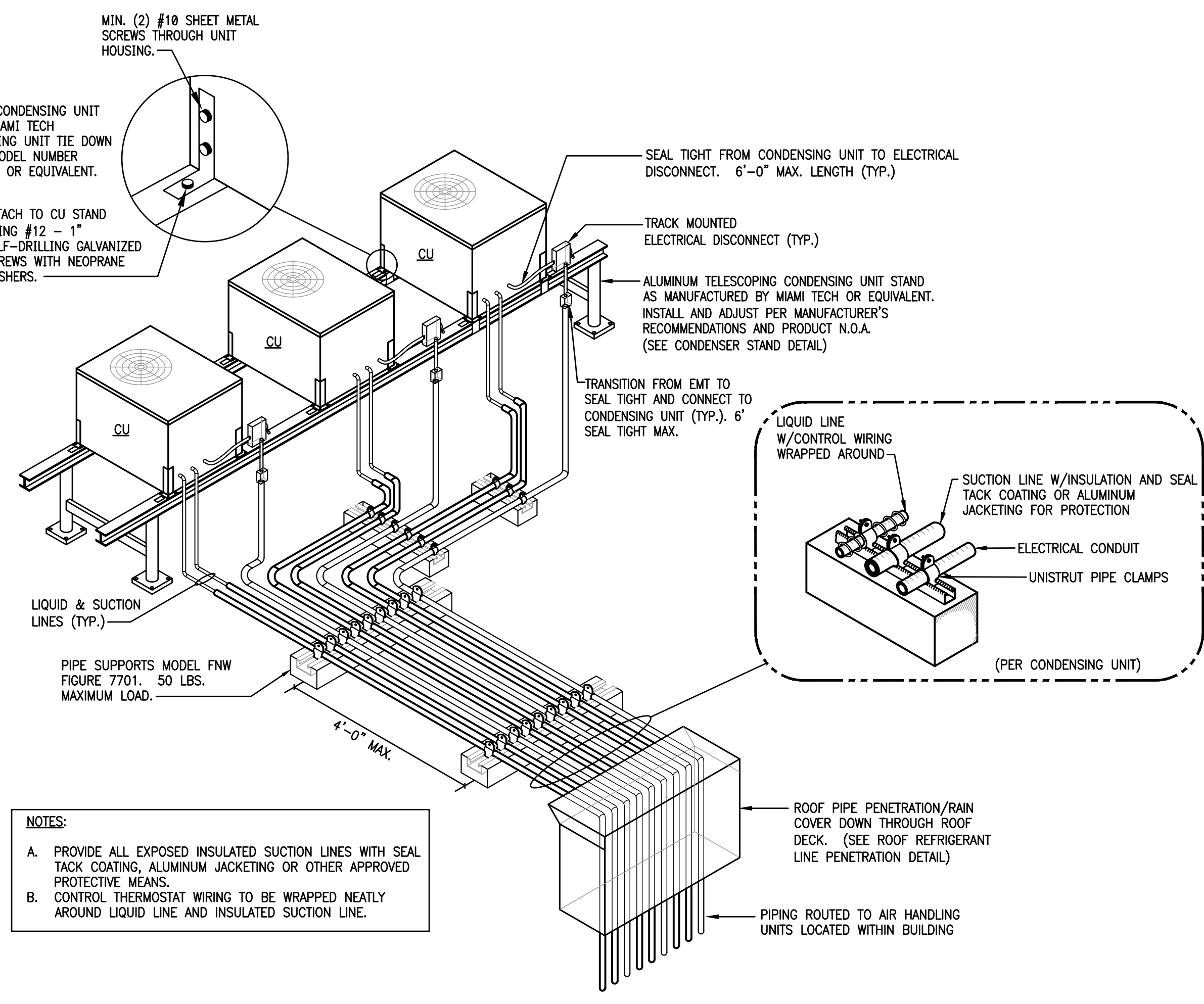
A. WHERE WALL IS FIRERATED, INSULATE AND DRYWALL PER UL LISTED BOX INSTALLATION DETAILS TO MAINTAIN RATING.

B. FOR TOP FLOOR DRYER BOXES FLIP EXHAUST DUCT TO THE BOTTOM OF THE DRYER BOX WHEN ROLLING THROUGH THE FLOOR BELOW.

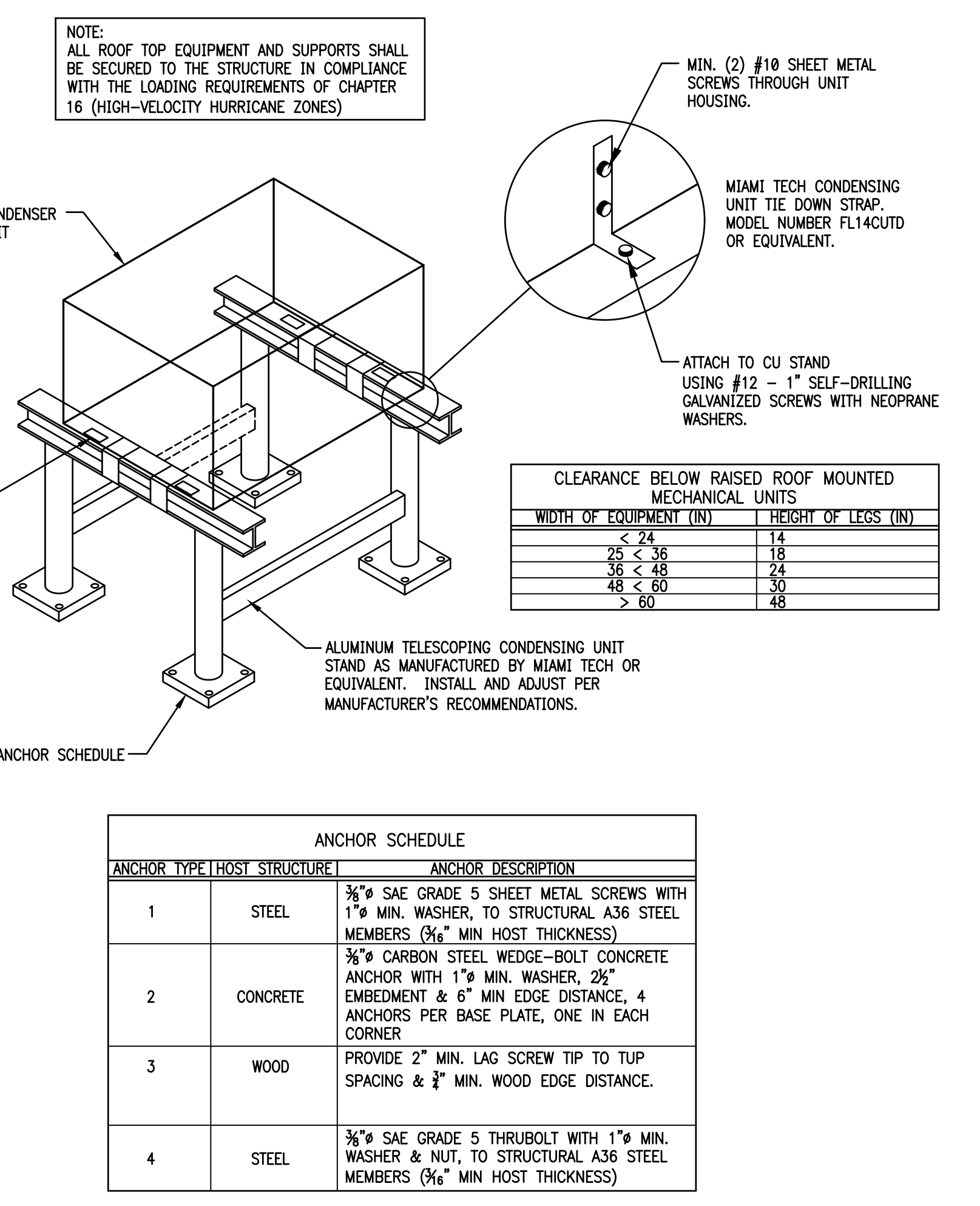
6 DRYER VENT BOX DETAIL
NTS



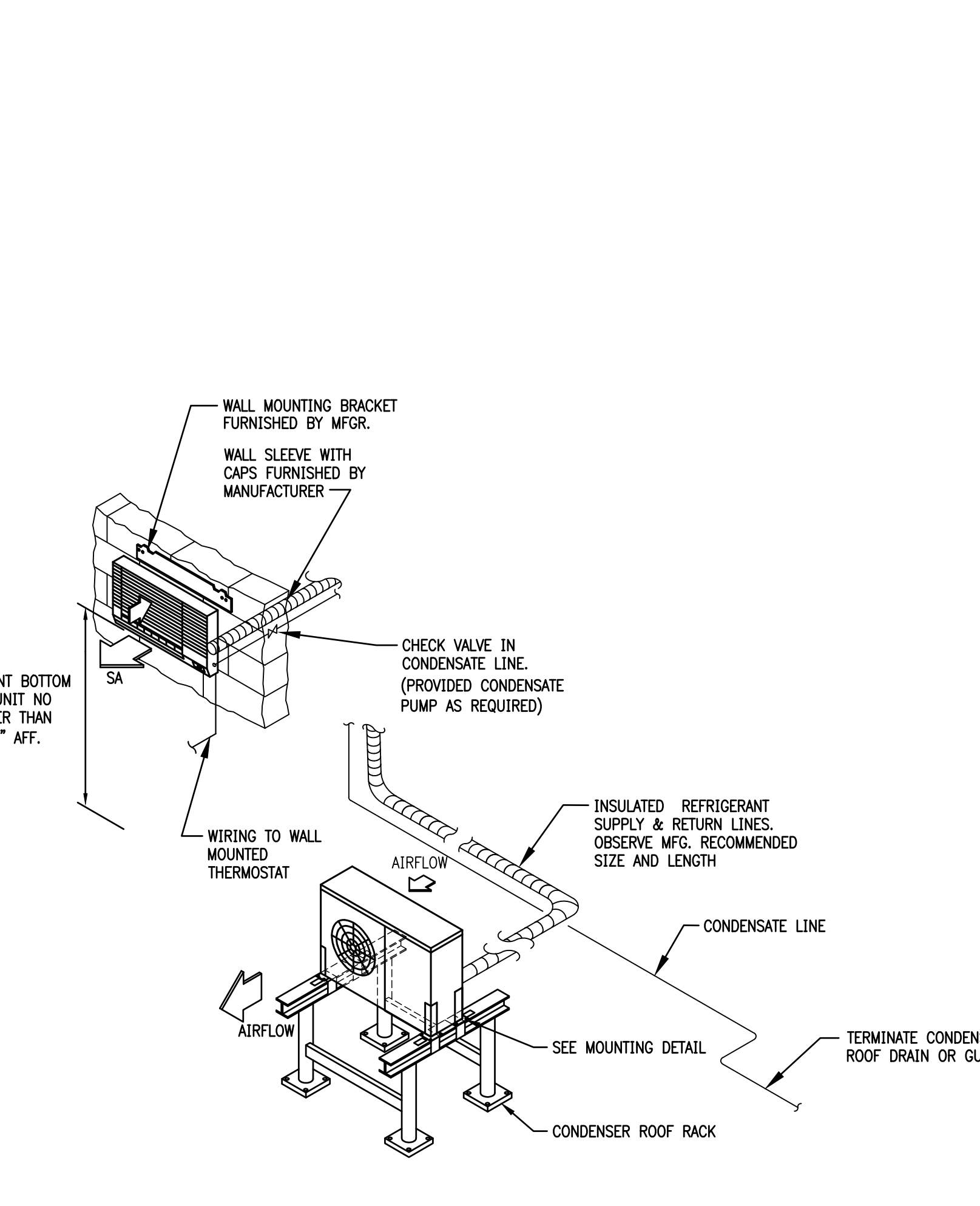
1 REFRIGERANT SLEEVE DETAIL
NTS



2 ROOF MOUNTED CONDENSING UNIT PIPING DETAIL
NTS



7 CONDENSER RACK DETAIL
NTS



3 WALL MOUNTED SPLIT SYSTEM SUPPORT DETAIL
NTS

| ISSUE HISTORY | | |
|---------------|----------|-------------------|
| No. | Date | Description |
| 1 | 04/15/22 | Permit Submission |
| | | |
| | | |

| REVISION HISTORY | | |
|------------------|------|-------------|
| No. | Date | Description |
| | | |
| | | |
| | | |

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CA NO. 4050 - E

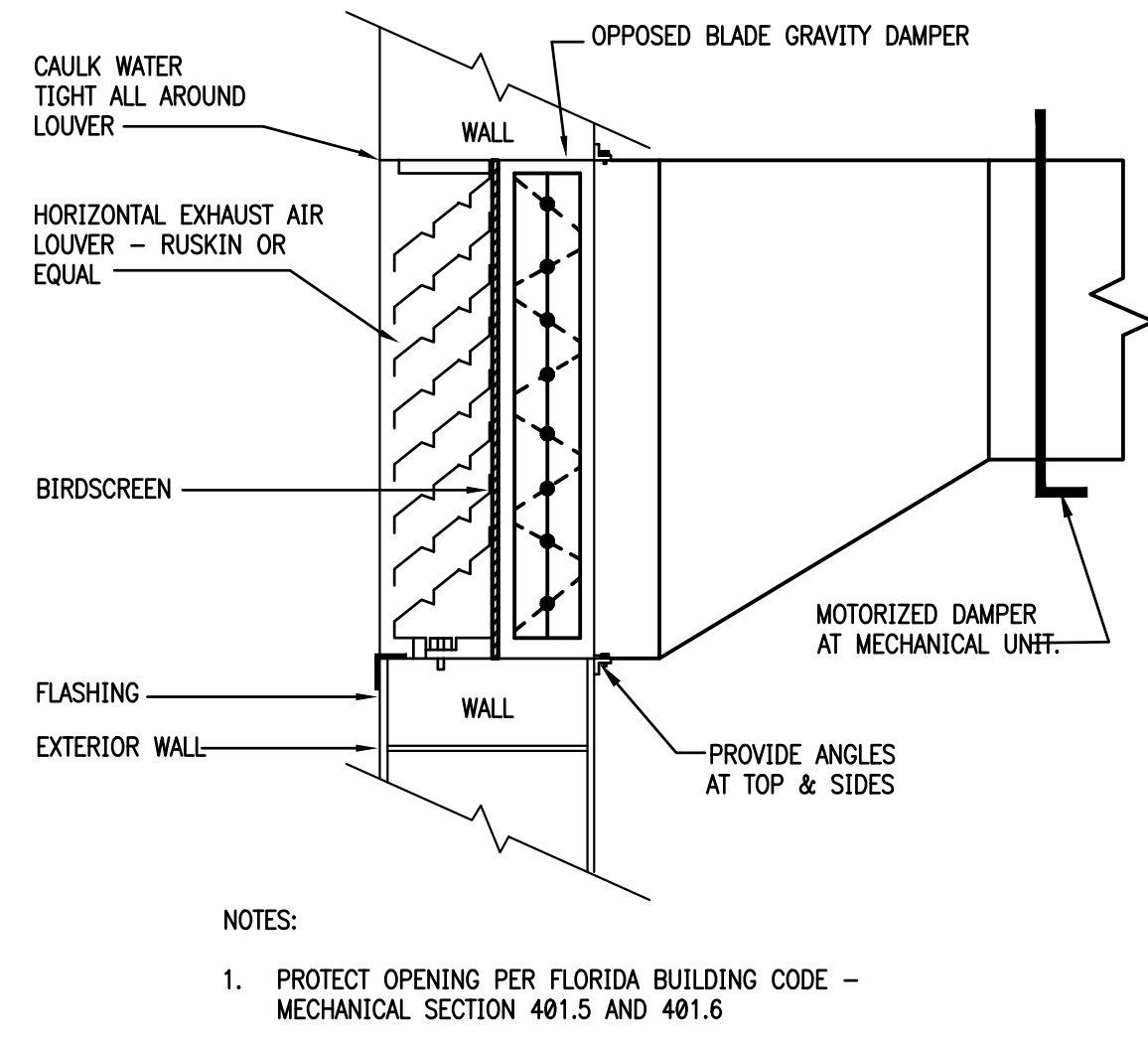
JLC 22.0023.00

THE MADISON
HUNTSVILLE, AL

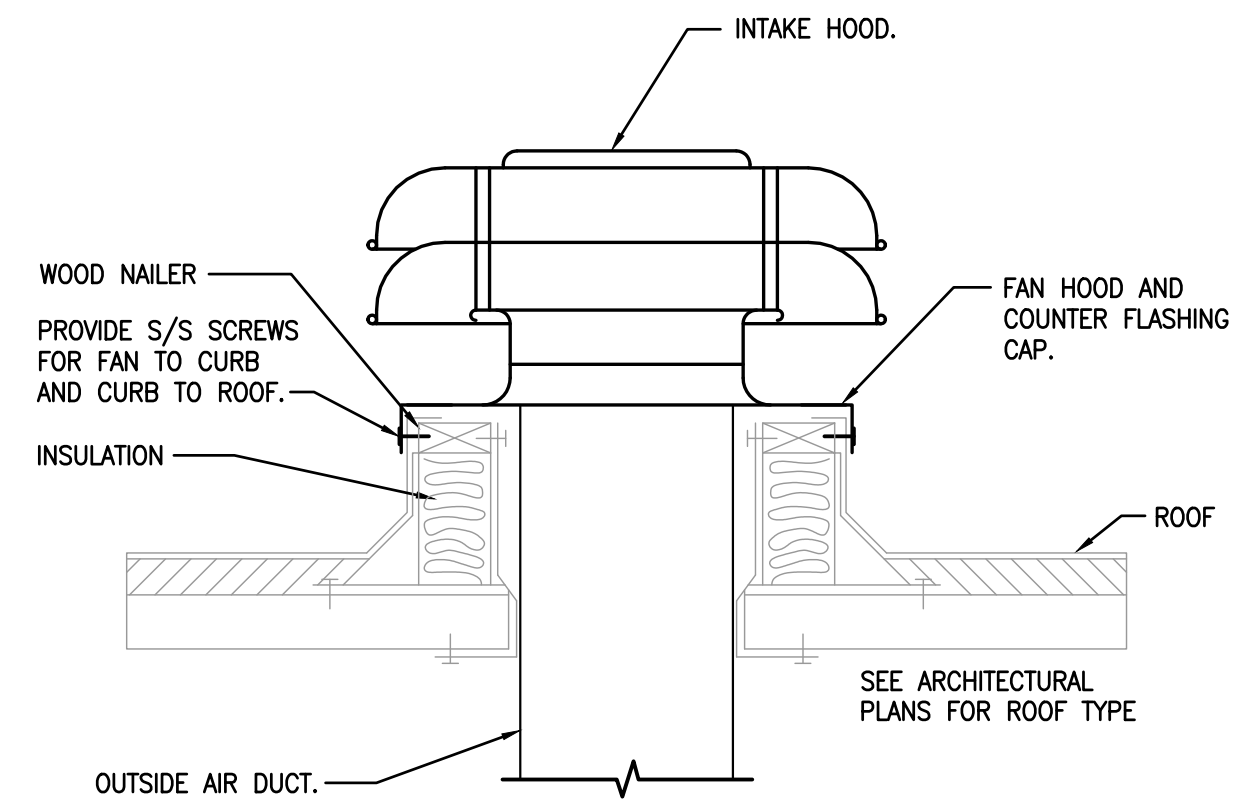
Drawn: MRS/SMB
Checked: BLS/AJB
Approved: BLS/AJB
Date: 04/15/2022
Project#: 5722

DETAILS MECHANICAL

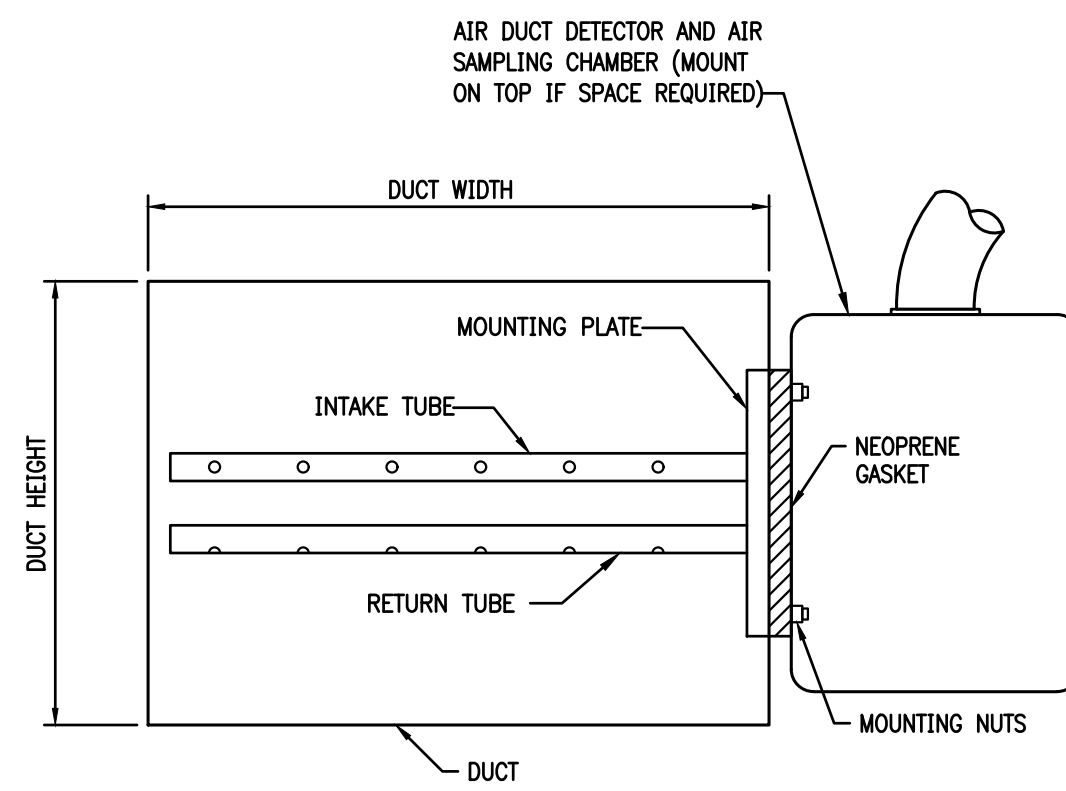
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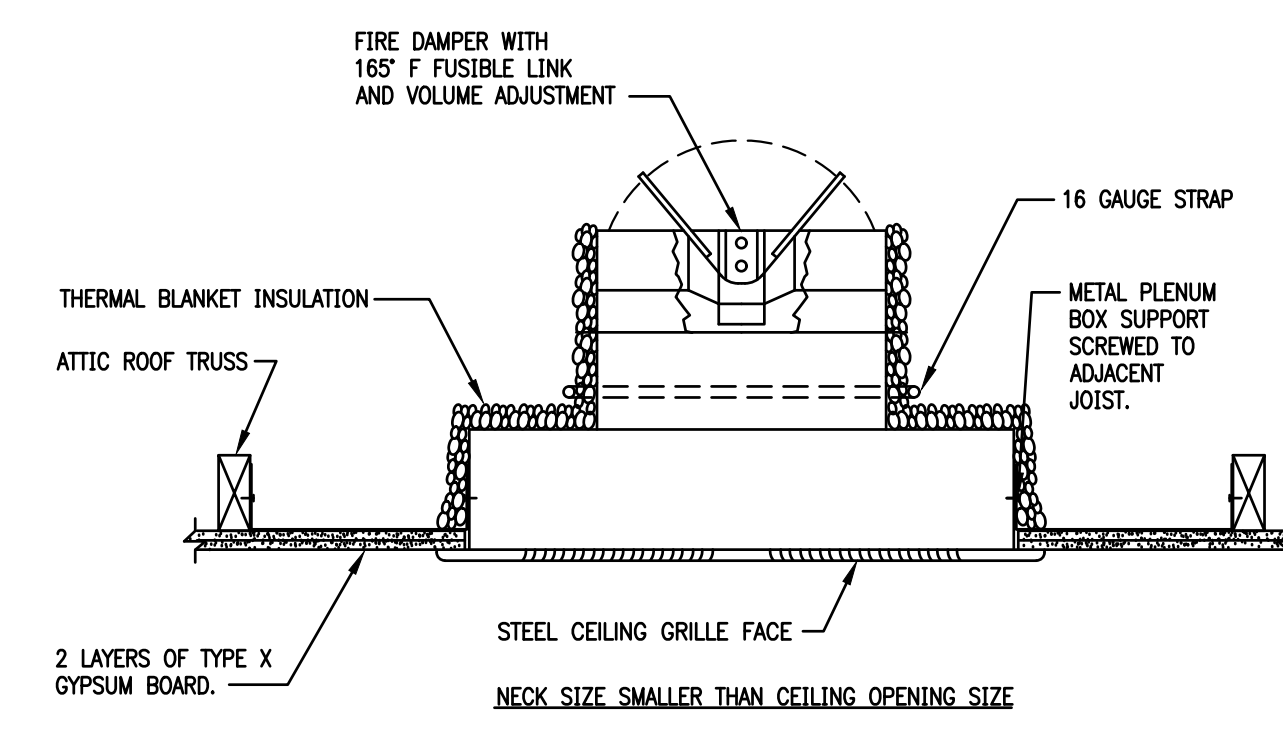
10
NTS
SIDEWALL LOUVER DETAIL



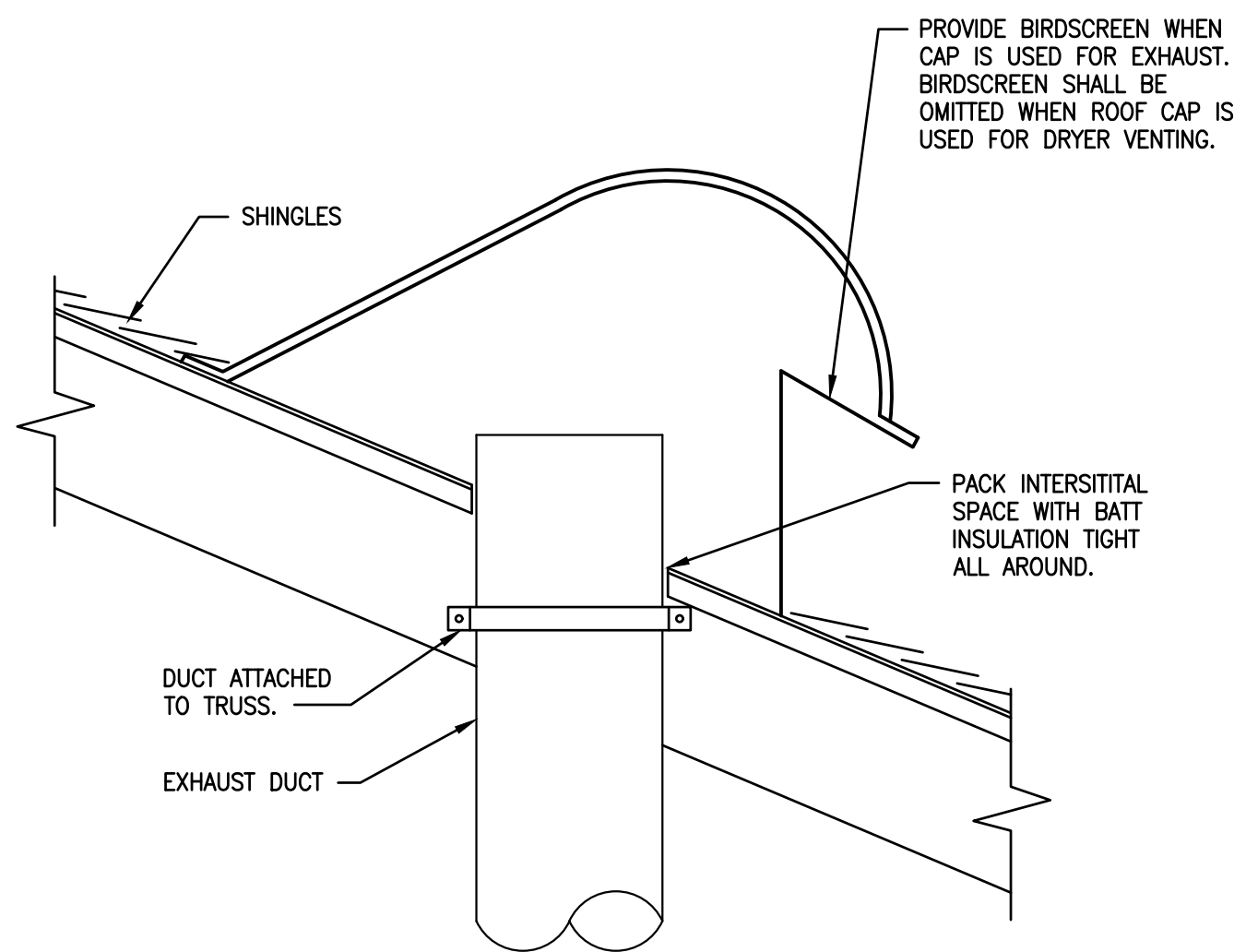
9
NTS
OUTSIDE AIR INTAKE DETAIL



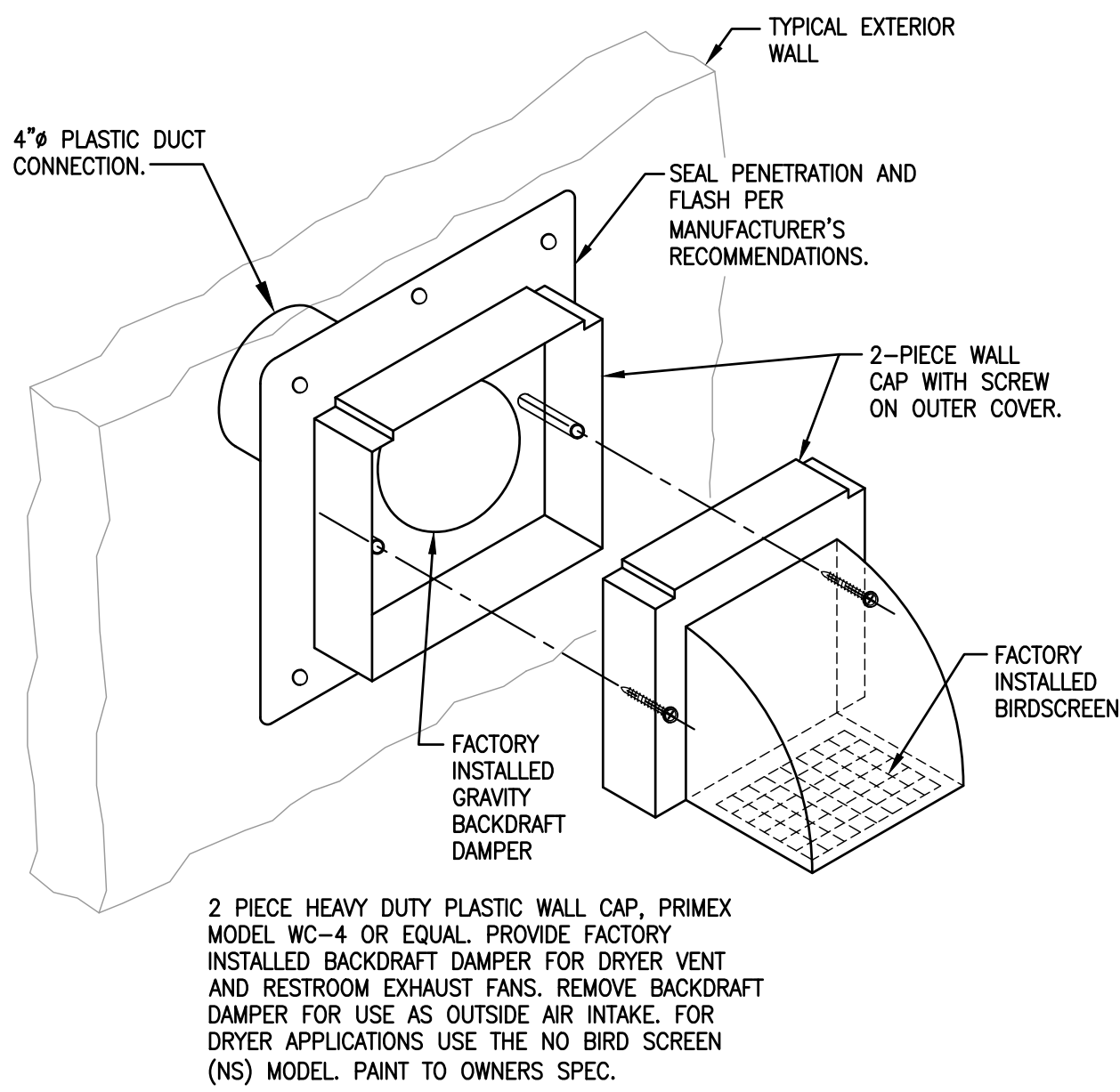
8
NTS
SMOKE DETECTOR DETAIL



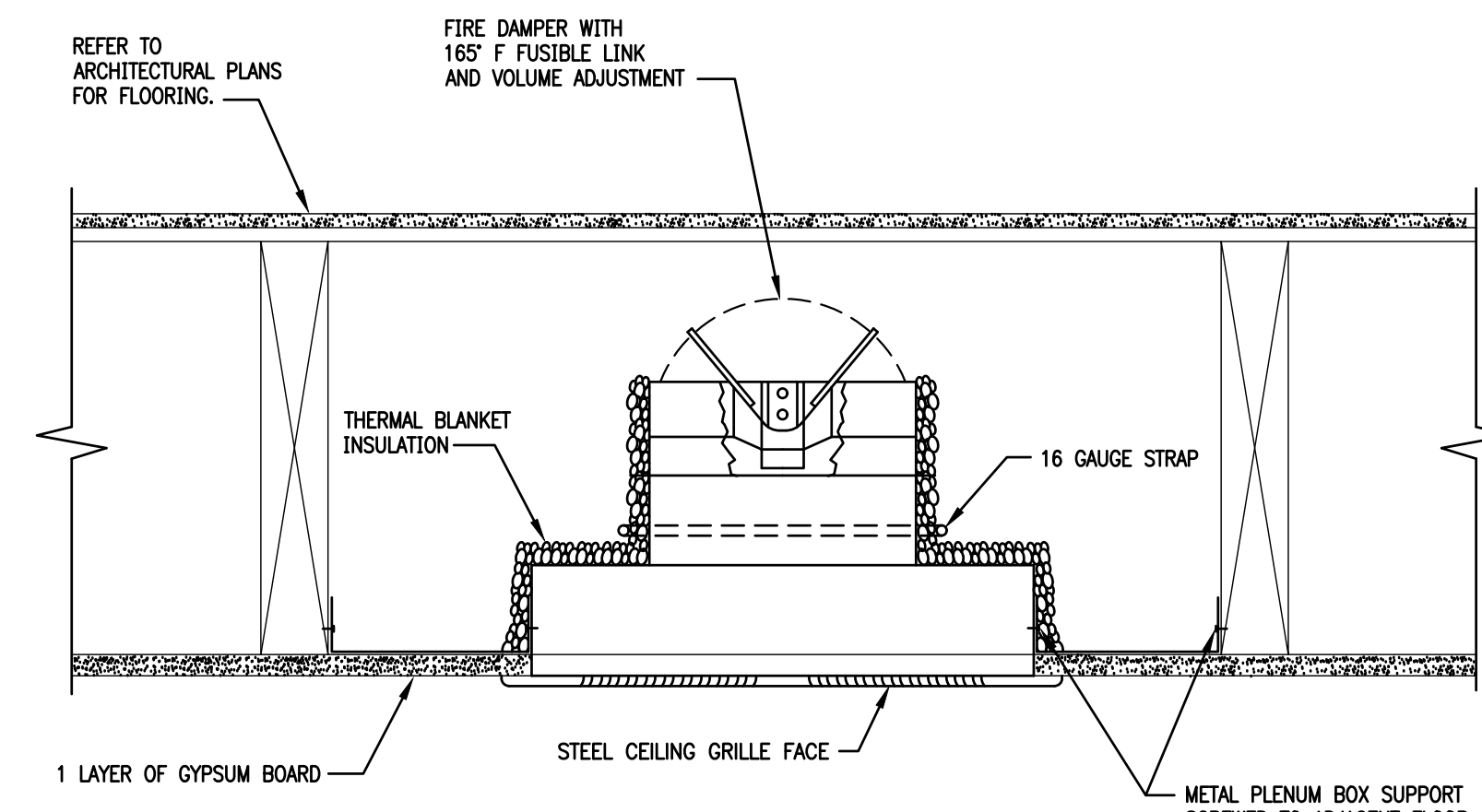
7
NTS
**RADIATION DAMPER DETAIL
(ATTIC SPACE INSTALLATION)**
POTTORFF CFD-521-BT / PS22 ASSEMBLY



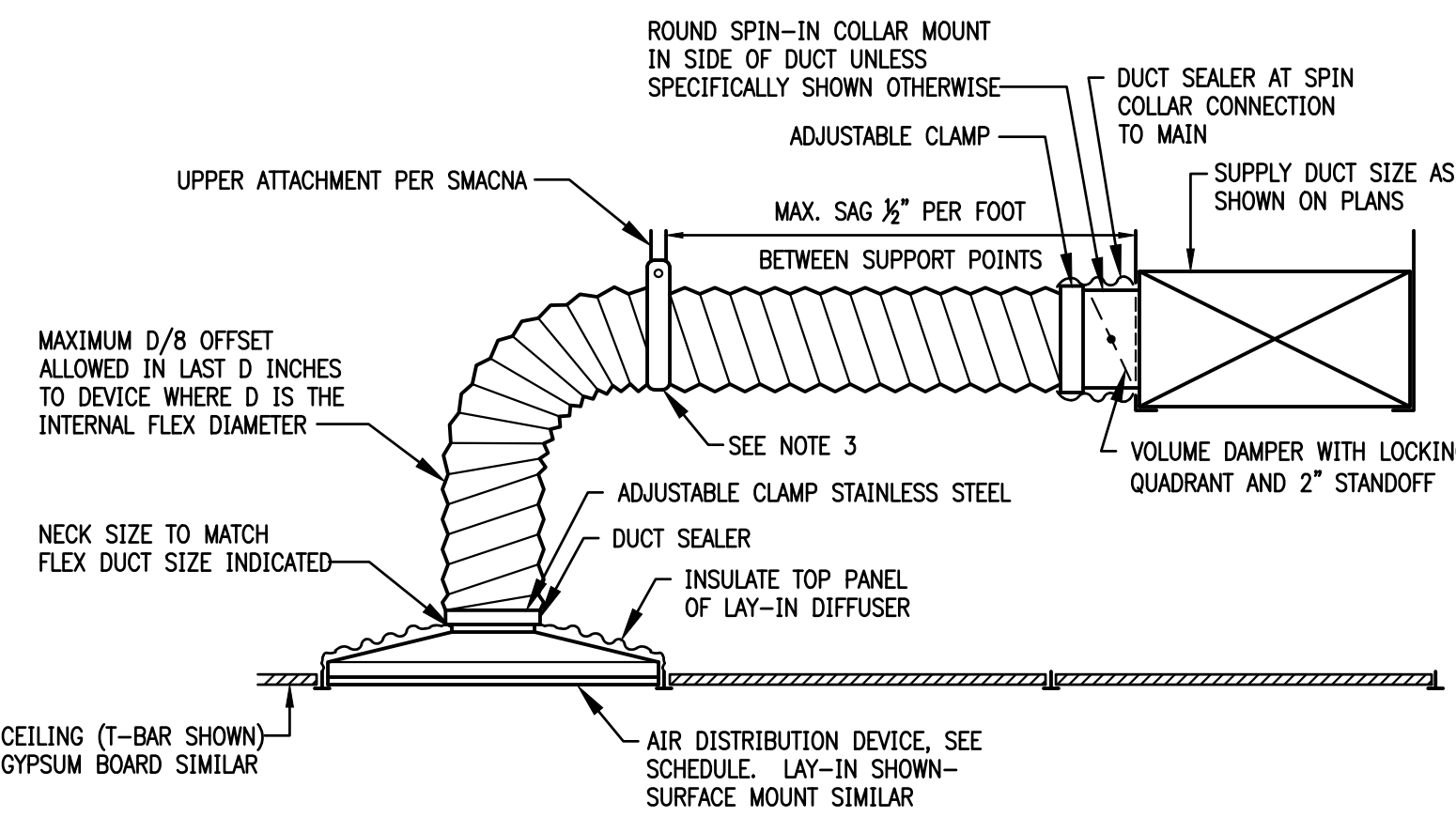
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NTS
ROOF CAP DETAIL



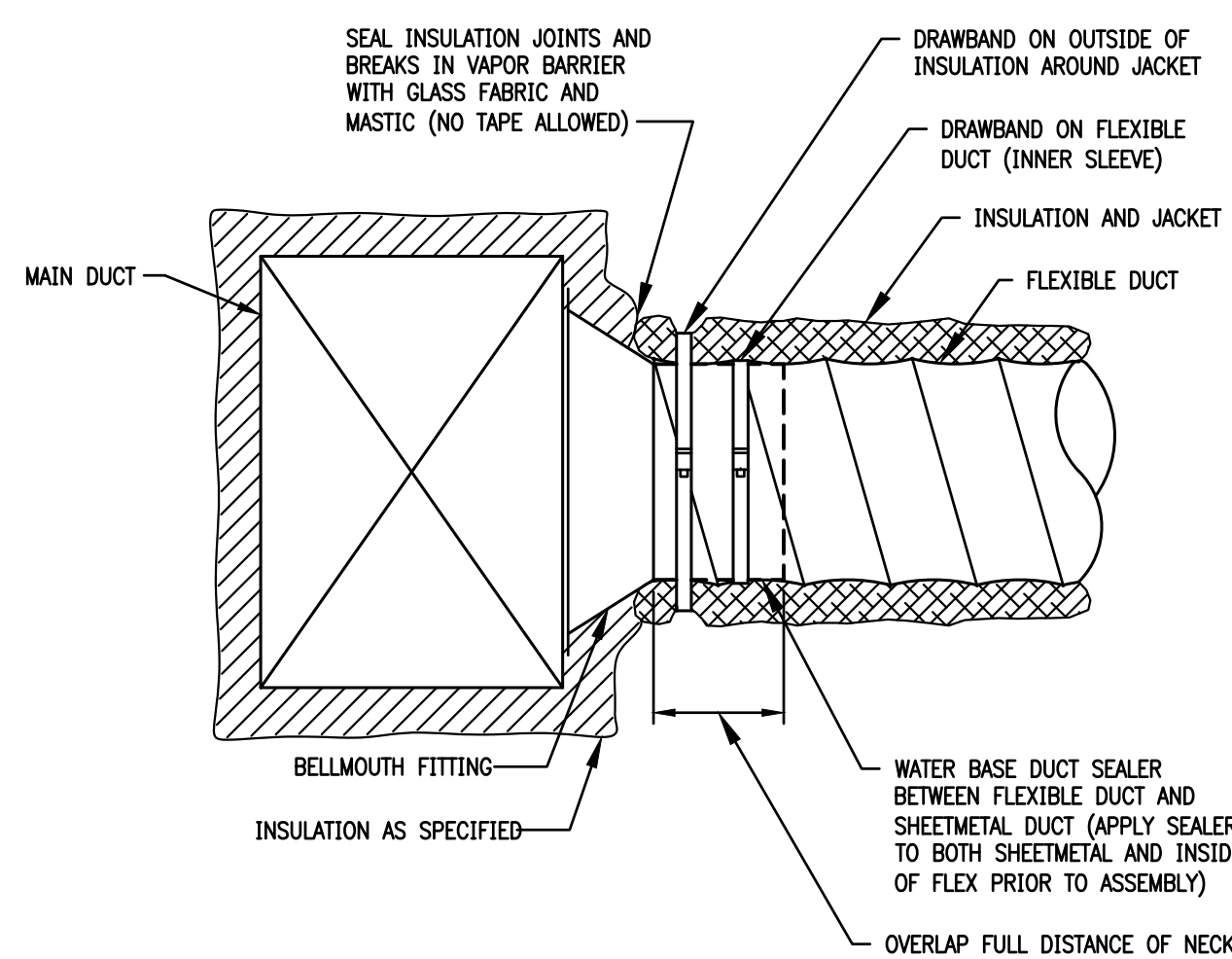
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NTS
TYPICAL WALL JACK DETAIL



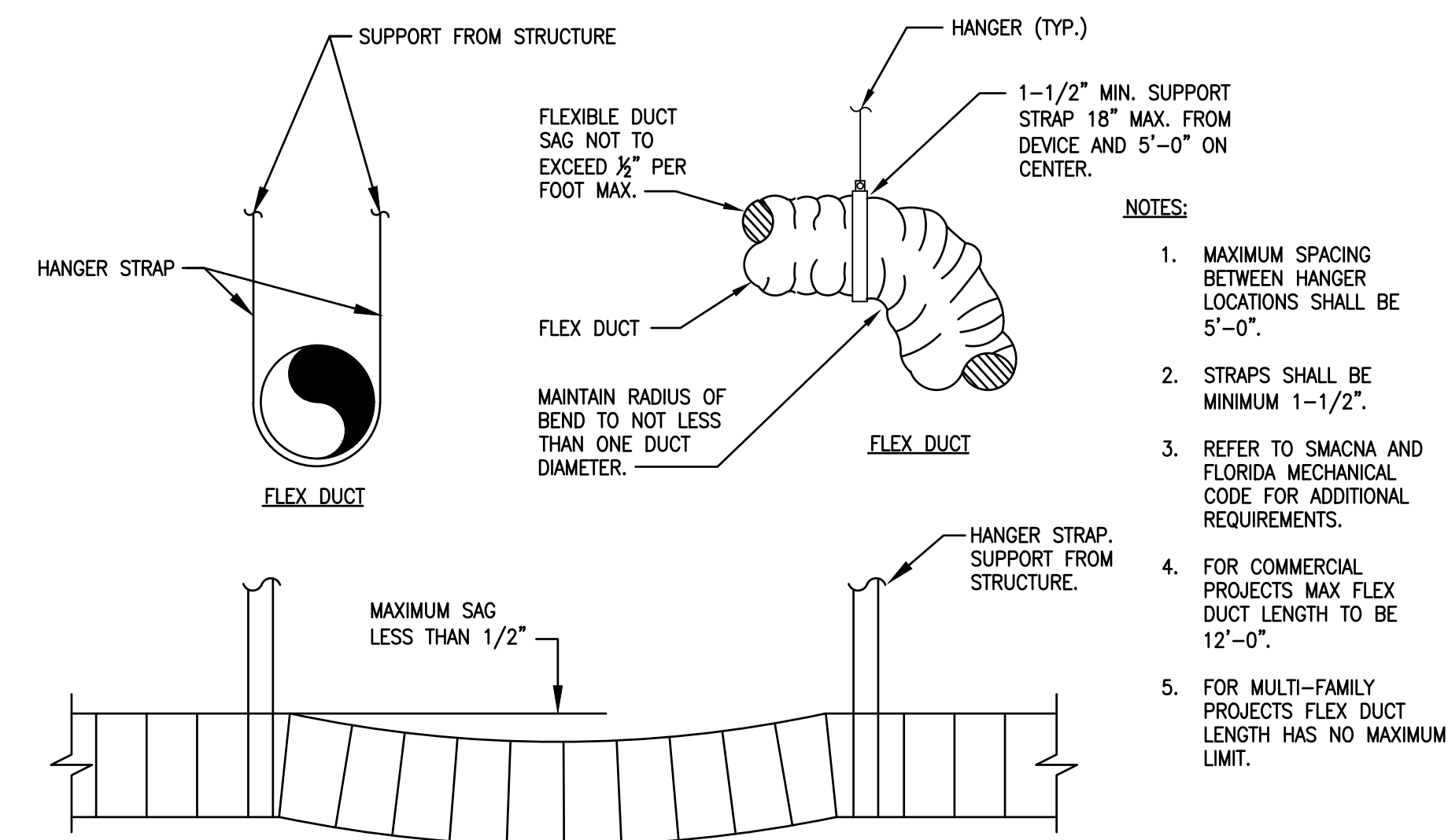
4
NTS
**RADIATION DAMPER DETAIL
(FLOOR JOIST INSTALLATION)**
POTTORFF CFD-521-IP / LS21 ASSEMBLY



3
NTS
FLEXIBLE DUCT DETAIL



2
NTS
FLEXIBLE DUCT CONNECTION DETAIL



1
NTS
FLEX DUCT HANGER DETAIL

ISSUE HISTORY

| No. | Date | Description |
|-----|----------|-------------------|
| 1 | 04/15/22 | Permit Submission |

REVISION HISTORY

| No. | Date | Description |
|-----|------|-------------|
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CA NO. 4050 - E

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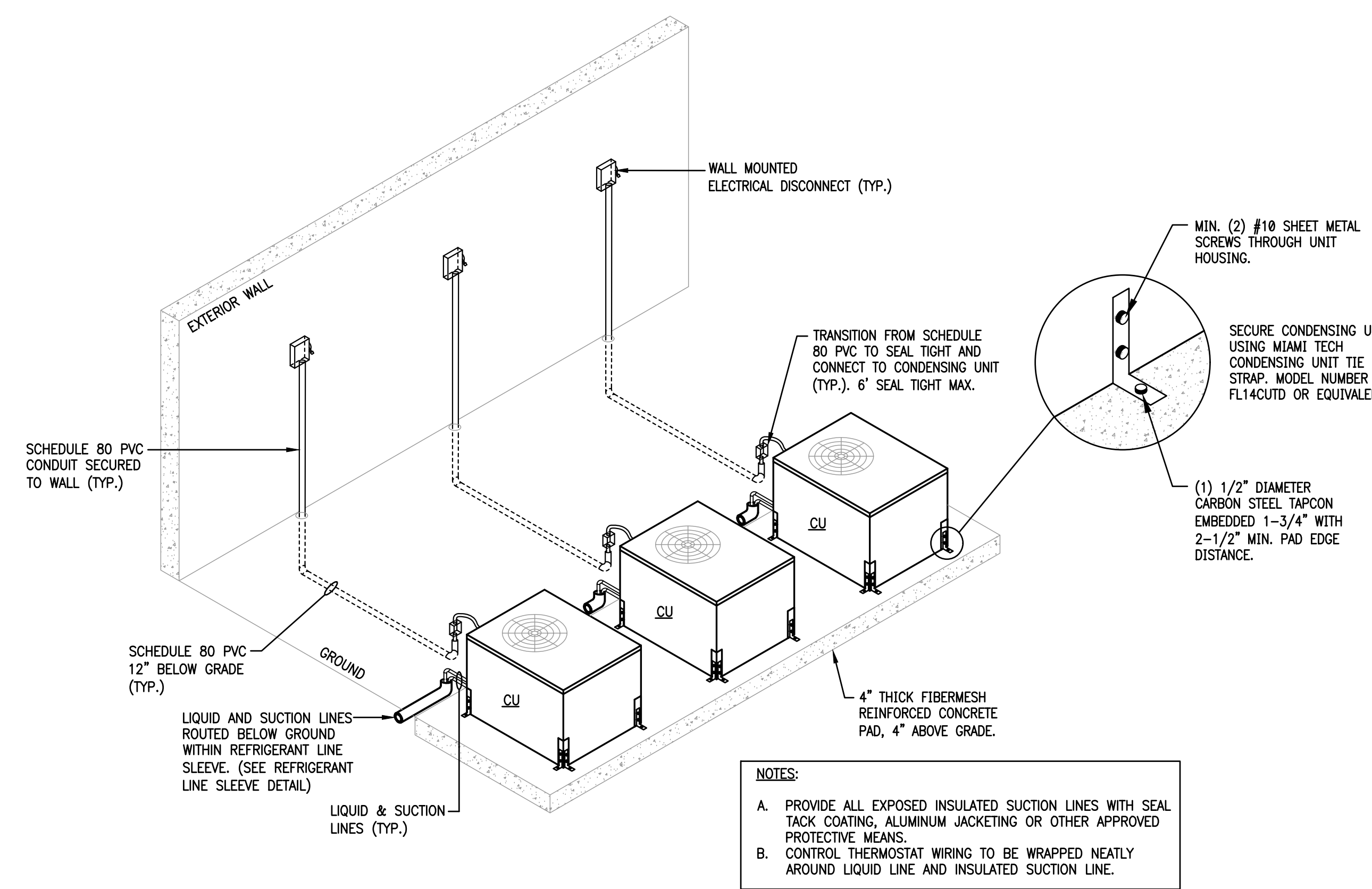


THE MADISON
HUNTSVILLE, AL

**DETAILS
MECHANICAL**

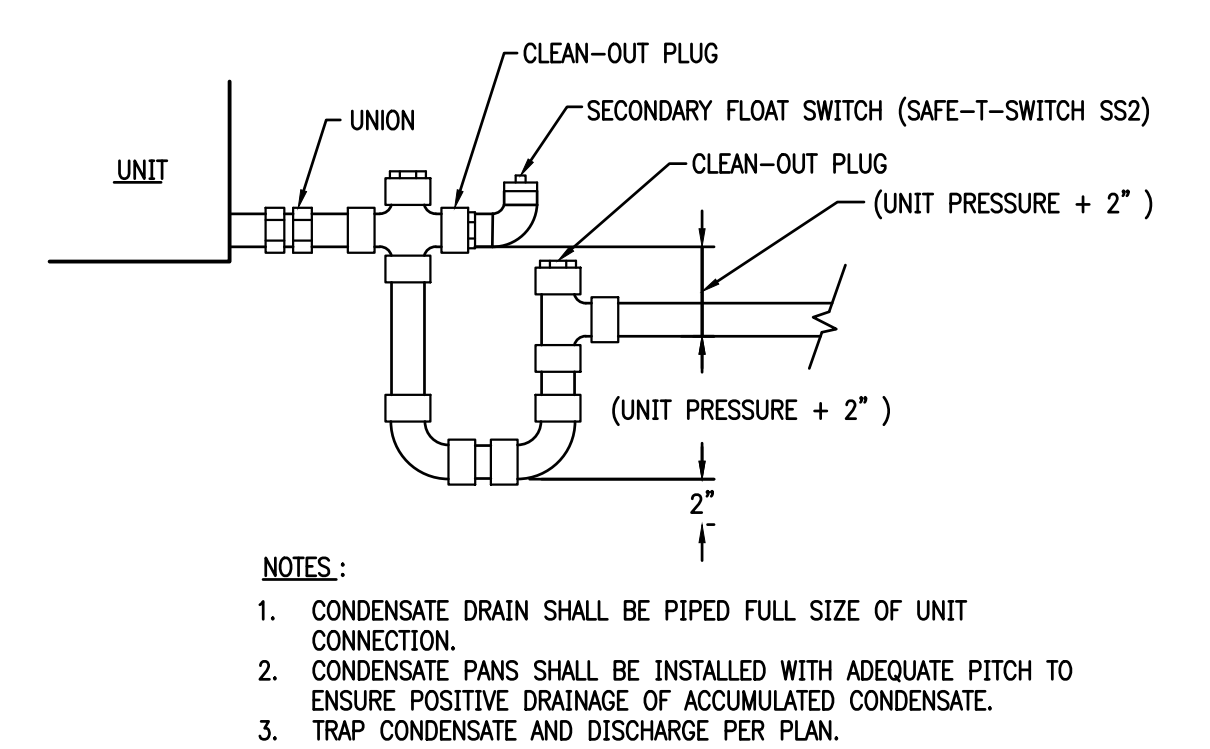
M6.02

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| Drawn | MRS/MB |
| Checked | BLS/AB |
| Approved | BLS/AB |
| Date | 04/15/2022 |
| Project # | 5722 |

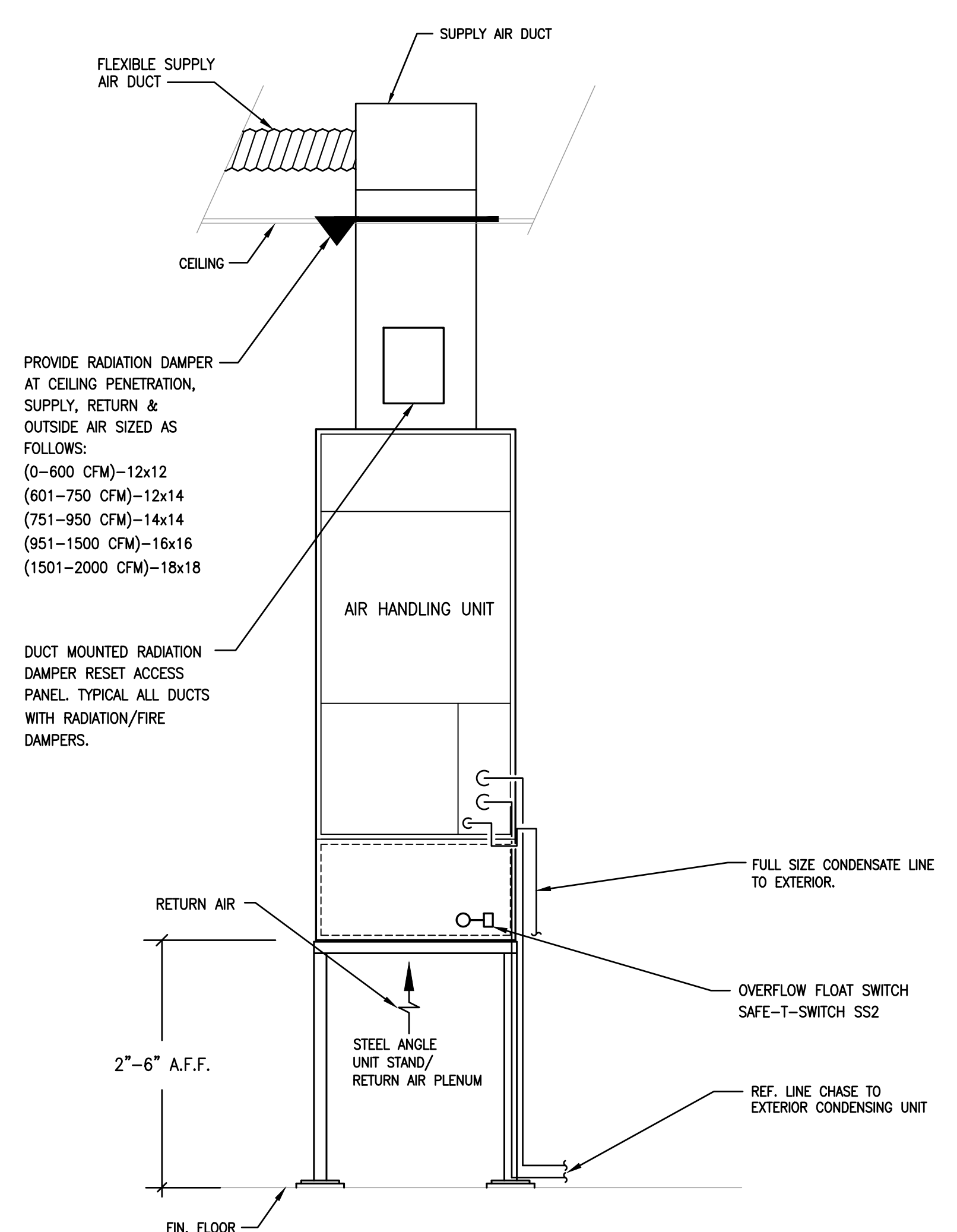


- NOTES:**
- A. PROVIDE ALL EXPOSED INSULATED SUCTION LINES WITH SEAL TACK COATING, ALUMINUM JACKETING OR OTHER APPROVED PROTECTIVE MEANS.
 - B. CONTROL THERMOSTAT WIRING TO BE WRAPPED NEATLY AROUND LIQUID LINE AND INSULATED SUCTION LINE.

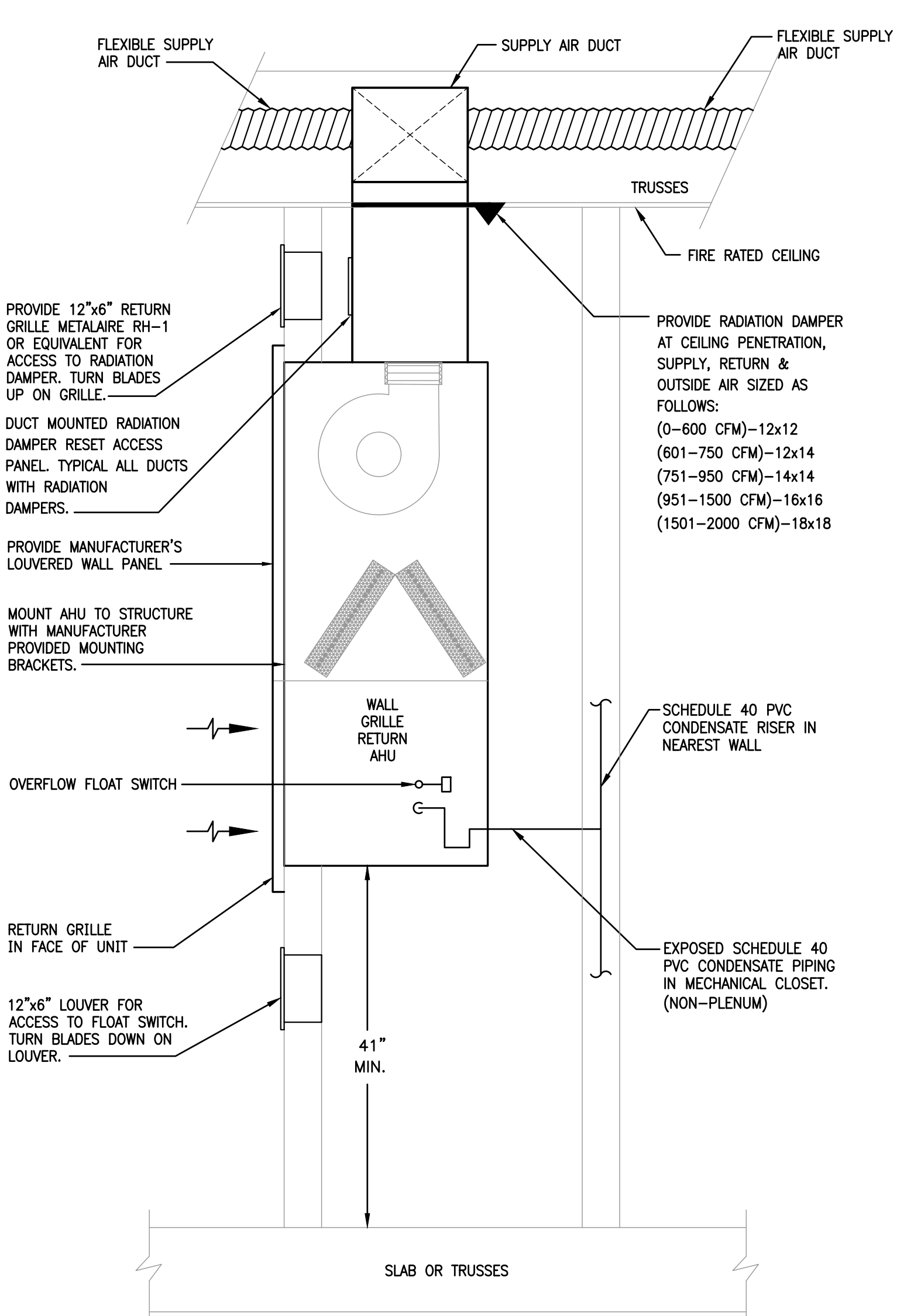
6 GROUND MOUNTED CONDENSING UNIT PIPING DETAIL
(REFRIGERANT & ELECTRICAL BELOW GRADE)



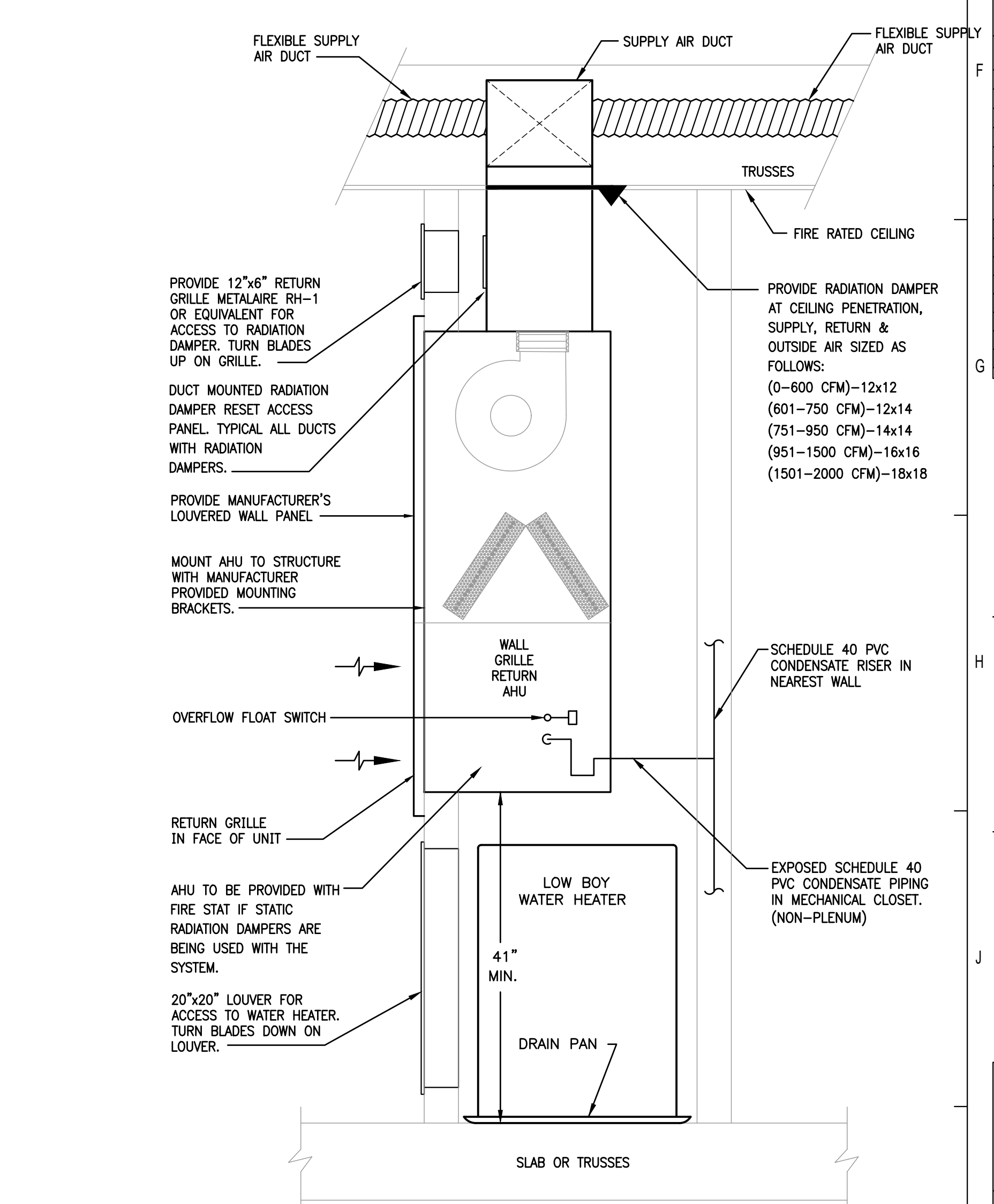
5 CONDENSATE DRAIN DETAIL



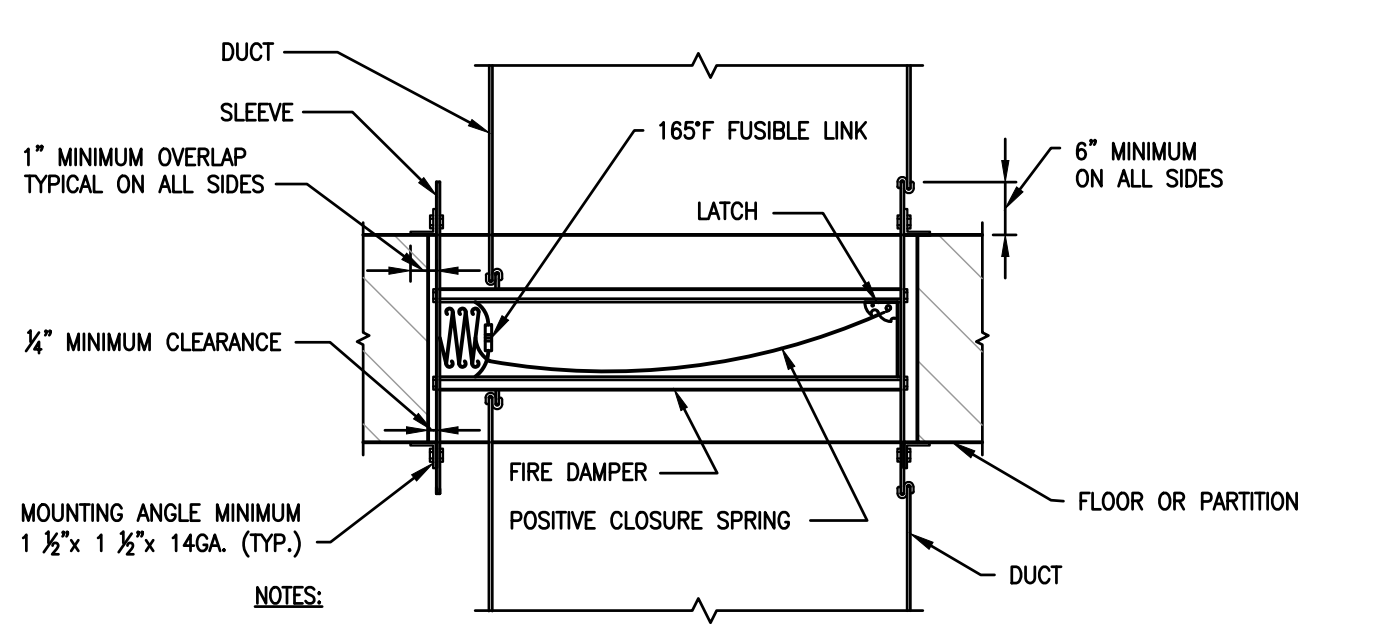
3 VERTICAL AHU DETAIL
(UNIT 3C)



2 THRU WALL MOUNTED AHU DETAIL



1 CLOSET MOUNTED AHU DETAIL
UNITS



4 FIRE DAMPER DETAIL

| ISSUE HISTORY | | |
|---------------|----------|-------------------|
| No. | Date | Description |
| 1 | 04/15/22 | Permit Submission |

| REVISION HISTORY | | |
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| No. | Date | Description |
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THE MADISON
 HUNTSVILLE, AL
 Date: 04/15/2022
 Project#: 5722

DETAILS MECHANICAL
M6.03

System No. F-C-8014
F Rating — 1 Hr
T Rating — 0 Hr

SECTION A-A

1. Floor — Ceiling Assembly — The 1 hr fire-rated wood joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory, as summarized below:
 A. Floor System — Lumber or plywood subfloor with finish floor of lumber, plywood or Floor Topping Mixture* as specified in individual Floor-Ceiling Design. Max diam of floor opening is 3 in.
 B. Joists — Nom 10 in. deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or Structural Wood Members* with bridging as required and with end firestopped.
 C. Gypsum Board* — Nom 5/8 in. thick as specified in the individual Floor-Ceiling Design. Max diam of openings is 3 in.

2. Chase Wall — (Optional) — The through penetrant (Item 3) may be routed through a 1 hr fire-rated single, double or staggered wood stud/gypsum wallboard chase wall shall be constructed of the materials and in the manner specified in the individual U300 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
 A. Studs — Nom 2 by 6 in. or double nom 2 by 4 in. lumber studs.
 B. Sole Plate — Nom 2 by 6 in. or parallel 2 by 4 in. lumber plates, tightly butted.
 C. Top Plate — The double top plate shall consist of two nom 2 by 6 in. or two sets of parallel 2 by 4 in. lumber plates, tightly butted. Max diam of openings is 3 in.
 D. Gypsum Board* — Thickness, type, number of layers and fasteners shall be as specified in the individual Wall and Partition Design.

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Page: 1 of 2

System No. F-C-7013

| | |
|-------------------------|-------------------|
| ANSI/UL1479 (ASTM E814) | CAN/ULC S115 |
| F Rating — 1 Hr | F Rating — 1 Hr |
| T Rating — 0 Hr | FT Rating — 0 Hr |
| | FH Rating — 1 Hr |
| | FTH Rating — 0 Hr |

SECTION A-A

1. Floor-Ceiling Assembly — The 1 hr fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The general construction features of the floor-ceiling assembly are summarized below:
 A. Flooring System — Lumber or plywood subfloor with finish floor of lumber, plywood or Floor Topping Mixture* as specified in the individual Floor-Ceiling Design. Max diam of opening shall be 5-1/4 in. (133 mm).
 B. Wood Joist* — Nom 10 in. (254 mm) deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or Structural Wood Members* with bridging as required and with ends firestopped.
 C. Gypsum Board* — Nom 4 ft (1,2 m) wide by 5/8 in. (16 mm) thick as specified in the individual Floor-Ceiling Design. Max diam of opening shall be 5-1/4 in. (133 mm).

1.1 Chase Wall — (Not shown, Optional) The through penetrants (Item 2) may be routed through a 1 hr fire-rated single, double or staggered wood stud/gypsum wallboard chase wall having a fire rating consistent with that of the floor-ceiling assembly. The chase wall shall be constructed of the materials and in the manner specified in the individual U300 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
 A. Studs — Nom 2 by 6 in. (51 by 152 mm) lumber or double nom 2 by 4 in. (51 by 102 mm) lumber studs.
 B. Sole Plate — Nom 2 by 6 in. (51 by 152 mm) lumber or parallel 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted. Max diam of opening shall be 5-1/4 in.
 C. Top Plate — The double top plate shall consist of two nom 2 by 6 in. (51 by 152 mm) lumber plates or two sets of nom 2 by 4 in. (51 by 102 mm) lumber plates tightly butted. Max diam of opening is 5-1/4 in. (133 mm).
 D. Gypsum Board* — Thickness, type, number of layers and fasteners shall be as specified in Individual Wall and Partition Design.

HILTI Firestop Systems

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Page: 1 of 2

System No. W-L-7017

| | |
|-------------------------|-------------------|
| ANSI/UL1479 (ASTM E814) | CAN/ULC S115 |
| F Rating — 1 Hr | F Rating — 1 Hr |
| T Rating — 0 Hr | FT Rating — 0 Hr |
| | FH Rating — 1 Hr |
| | FTH Rating — 0 Hr |

SECTION A-A

1. Wall Assembly — The fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300, U400, V400 or W400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
 A. Studs — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 2-1/2 in. (64 mm) wide and spaced max 24 in. (610 mm) OC.
 B. Gypsum Board* — One layer of nom 5/8 in. (16 mm) thick gypsum board, as specified in the individual Wall and Partition Design. Max diam of opening is 8-5/8 in. (219 mm).

2. Metallic Sleeve — Nom 8 in. (203 mm) diam (or smaller) Schedule 40 (or heavier) steel sleeve cast into wall assembly with joint compound and installed flush with wall surfaces.

3. Air Duct — Nom 6 in. (152 mm) diam (or smaller) prefabricated No. 28 MSG galv sheet metal duct. A min 1/2 in. (13 mm) to max 1-1/2 in. (38 mm) annular space is required within the firestop system. Duct to be rigidly supported on both sides of wall assembly.

4. Forming Material* — Foamed plastic forming material foamed into opening as a permanent form. Forming material to be recessed from both surfaces of wall as required to accommodate the required thickness of fill material.
 HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CF812 or CF-AS CJP Foam Sealant

5. Fill, Void or Cavity Material* — Min 5/8 in. (16 mm) thickness of fill material applied within annulus, flush with both surfaces of wall.
 HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant or FS-ONE MAX Intumescent Sealant

*Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

HILTI Firestop Systems

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System No. F-C-8014
F Rating — 1 Hr
T Rating — 0 Hr

3. Through-Penetrants — Pipes, conduits, tubing and cables to be bundled and centered in the opening. The space between penetrants and the periphery of the opening shall be min 1/4 in. to max 3/4 in. Penetrants to be rigidly supported on both sides of the floor-ceiling assembly.
 A. Metallic Pipes — A max of two metallic pipes, conduits or tubing, (one 3/4 in. diam and one 1/2 in. diam) to be installed within the firestop system. The following types and sizes of metallic pipes, conduits or tubing may be used:
 A1. Steel Pipe — Nom 3/4 in. diam (or smaller) Schedule 5 (or heavier) steel pipe.
 A2. Conduit — Nom 3/4 in. diam (or smaller) steel electrical metallic tubing or steel conduit.
 A3. Copper Tubing — Nom 3/4 in. diam (or smaller) Type L (or heavier) copper tubing.
 A4. Copper Pipe — Nom 3/4 in. diam (or smaller) Regular (or heavier) copper pipe.
 B. Nonmetallic Pipes — A max of one nonmetallic pipe to be installed within the firestop system. The following types and sizes of nonmetallic pipes may be used:
 B1. Polyvinyl Chloride (PVC) Pipe — Nom 1/2 in. diam (or smaller) Schedule 40 solid core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
 B2. Chlorinated Polyvinyl Chloride (CPVC) Pipe — Nom 1/2 in. diam (or smaller) SDR17 CPVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
 C. Cables — A max of two 4/C No. 18 AWG (or smaller) thermostat cables with PVC insulation and PVC/nylon jacketing material.
 D. Tube Insulation — Plastic+ — Nom 1/2 in. thick acrylonitrile butadiene/polyvinyl chloride (AB/PVC) flexible foam furnished in the form of tubing. Tube insulation to be installed on a max of one metallic pipe or tubing.
 See Plastics+ (QMFZ2) category in the Plastics Recognized Component Directory for names of manufacturers. Any Recognized Component tube insulation material meeting the above specifications and having a UL 94 Flammability Classification of 94-5VA may be used.

4. Fill, Void or Cavity Material* — Sealant — Min 3/4 in. thickness of fill material applied within the annulus, flush with top surface of floor or sole plate. Min 5/8 in. thickness of fill material applied within the annulus, flush with the bottom surface of the ceiling or lower top plate.
 HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS — ONE Sealant

*Bearing the UL Classification Marking
 +Bearing the UL Recognized Component Mark

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CLASSIFIED

Page: 2 of 2

System No. F-C-7013

2. Steel Duct — Nom 4 in. (102 mm) diam (or smaller) No. 28 gauge (or heavier) steel duct to be installed either concentrically or eccentrically within the firestop system. The annular space between duct and periphery of opening shall be min of 1/4 in. (6 mm) to max 3/4 in. (19 mm). Steel duct to be rigidly supported on both sides of floor-ceiling assembly.

3. Fill, Void or Cavity Material* — Sealant — Min 3/4 in. (19 mm) thickness of sealant applied within the annular space, flush with top surface of floor or sole plate. Min 5/8 in. (16 mm) thickness of sealant applied within annular space, flush with bottom surface of gypsum board or lower top plate.
 HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant or FS-ONE MAX Intumescent Sealant

*Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

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Page: 2 of 2

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

ISSUE HISTORY

| No. | Date | Description |
|-----|----------|-------------------|
| 1 | 04/15/22 | Permit Submission |
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| | | |
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REVISION HISTORY

| No. | Date | Description |
|-----|------|-------------|
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 TEL: 321.972.4464
 WWW.JLCENG.COM
 CA NO. 4050 - E

JLC 22.0023.00

THE MADISON

HUNTSVILLE, AL

DETAILS MECHANICAL

M6.04

| |
|------------------|
| Drawn: MRSMB |
| Checked: BLSA/B |
| Approved: BLSA/B |
| Date: 04/15/2022 |
| Project#: 5722 |

System No. W-L-7042

| | | | |
|--|--|---|--|
| ANSI/UL1479 (ASTM E814) | | CAN/ULC S115 | |
| F Ratings - 1 and 2 Hr (See Items 1 and 3) | | F Ratings - 1 and 2 Hr (See Items 1 and 3) | |
| T Rating - 0 Hr | | FT Rating - 0 Hr | |
| | | FH Ratings - 1 and 2 Hr (See Items 1 and 3) | |
| | | FTH Rating - 0 Hr | |

SECTION A-A

HILTI
Hilti Firestop Systems

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Page: 1 of 2

System No. W-L-7040

| | | | |
|---|--|---|--|
| ANSI/UL1479 (ASTM E814) | | CAN/ULC S115 | |
| F Ratings - 1 and 2 Hr (See Items 1 and 3) | | F Ratings - 1 and 2 Hr (See Items 1 and 3) | |
| T Rating - 0 Hr | | FT Rating - 0 Hr | |
| L Rating at Ambient - Less Than 1 CFM/sq ft | | FH Ratings - 1 and 2 Hr (See Items 1 and 3) | |
| L Rating at 400°F - Less Than 1 CFM/sq ft | | FTH Rating - 0 Hr | |
| | | L Rating at Ambient - Less Than 1 CFM/sq ft | |
| | | L Rating at 400°F - Less Than 1 CFM/sq ft | |

SECTION A-A

HILTI
Hilti Firestop Systems

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Page: 1 of 2

System No. W-L-7153

| | | | |
|-------------------------------------|--|--------------------------------------|--|
| ANSI/UL1479 (ASTM E814) | | CAN/ULC S115 | |
| F Ratings - 1 and 2 Hr (See Item 1) | | F Ratings - 1 and 2 Hr (See Item 1) | |
| T Rating - 1/2 Hr | | FT Rating - 1/2 Hr | |
| | | FH Ratings - 1 and 2 Hr (See Item 1) | |
| | | FTH Rating - 1/2 Hr | |

SECTION A-A

HILTI
Hilti Firestop Systems

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Page: 1 of 2

System No. W-L-7042

1. Wall Assembly — The 1 or 2 hr fire rated wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300, U400, V400 or W400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. Studs — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 2-1/2 in. (64 mm) wide and spaced 24 in. (610 mm) OC. Additional framing members shall be used to completely frame the opening for all ducts greater than 20 in. (502 mm) diam.

B. Gypsum Board* — For 1 hr assembly, one layer of min 5/8 in. (16 mm) thick wallboard as required in the individual Wall and Partition Design. For 2 hr assembly, two layers of min 5/8 in. (16 mm) thick wallboard as required in the individual Wall and Partition Design. Max diam of opening is 14-1/2 in. (368 mm) for wood stud walls and 25-1/2 in. (648 mm) for steel stud walls.

The hourly F and FH Ratings of the firestop system are equal to the hourly fire rating of the wall assembly in which it is installed.

2. Through Penetrant — Galv steel duct to be installed concentrically or eccentrically within the firestop system. The annular space between the duct and periphery of opening shall be 0 in. (0 mm, point contact) and max 1-1/2 in. (64 mm) Duct to be rigidly supported on both sides of wall assembly.

A. Spiral Wound HVAC Duct — Nom 24 in. (610 mm) diam (or smaller) No. 28 MSG (or heavier) galv steel spiral wound duct.

B. Sheet Metal Duct — Nom 12 in. (305 mm) diam (or smaller) No. 28 MSG (or heavier) galv steel sheet duct.

3. Fill, Void or Cavity Material* — Sealant — Min 5/8 in. (16 mm) and 1-1/4 in. (32 mm) thickness of fill material applied within annulus, flush with both surfaces of wall assembly for 1 and 2 hr F Ratings, respectively. When FS-ONE Max is used, min 5/8 in. (16mm) thickness for both 1 and 2 hr F Ratings. At the point contact location between duct and wallboard, a min 1/2 in. (13 mm) diam bead of sealant shall be applied at the wallboard/duct interface on both surfaces of wall assembly.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP601S Elastomeric Firestop Sealant, FS-ONE Sealant, FS-ONE MAX Intumescent Sealant or CP606 Flexible Firestop Sealant

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

HILTI
Hilti Firestop Systems

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Page: 2 of 2

System No. W-L-7040

3. Firestop System — The firestop system shall consist of the following:

A. Fill, Void or Cavity Material* — Sealant — Min 5/8 in. (16 mm) thickness of fill material applied within annulus flush with both surfaces of wall. At point contact location, a min 1/2 in. (13 mm) diam bead of fill material shall be applied to the wall/duct interface on both surfaces of wall. HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant, FS-ONE MAX Intumescent Sealant, CP601S Elastomeric Firestop Sealant or CP606 Flexible Sealant.

B. Steel Retaining Angle — No. 18 MSG (0.048 in.) galv steel angles cut to fit contour of duct with a 2 in. overlap on the duct and a min 1 in. overlap on the gypsum board assembly on both surfaces of wall. 2 in. leg of angle secured to duct with min No. 8 by 3/4 in. long sheet metal screws, spaced a max of 6 in. OC. When bead of fill material is used at joint contact locations, angles shall be installed prior to full material curing.

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

HILTI
Hilti Firestop Systems

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Page: 2 of 2

System No. W-L-7153

2. Steel Duct — Galv steel duct to be installed concentrically or eccentrically within the firestop system. Duct to be rigidly supported on both sides of wall assembly.

A. Spiral Wound HVAC Duct — Nom 20 in. (508 mm) diam (or smaller) No. 24 MSG (or heavier) galv steel spiral wound duct.

B. Sheet Metal Duct — Nom 12 in. (305 mm) diam (or smaller) No. 28 MSG (or heavier) galv steel sheet duct.

3. Duct Insulation* — Nom 1-1/2 in. or 2 in. (38 or 51 mm) thick glass fiber batt or blanket (min 3/4 pcf or 56 kg/m³) jacketed on the outside with a foil-scrim-kraft facing. Longitudinal and transverse joints sealed with aluminum foil tape. During the installation of the fill material, the batt or blanket shall be compressed 50% such that the annular space within the firestop system shall be min 1/4 in. (6 mm) to max 1-1/2 in. (38 mm). See Batts and Blankets - (BKNV) category in the Building Materials Directory for names of manufacturers. Any batt or blanket meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index 50 or less may be used.

4. Fill, Void or Cavity Material* — Sealant — Min 5/8 in. (16 mm) thickness of fill material applied within annulus, flush with both surfaces of wall. If voids develop after the fill materials cures, the voids shall be sealed with additional fill material.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant or FS-ONE MAX Intumescent Sealant

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

HILTI
Hilti Firestop Systems

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Page: 2 of 2

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

ISSUE HISTORY

| No. | Date | Description |
|-----|----------|-------------------|
| 1 | 04/15/22 | Permit Submission |

REVISION HISTORY

| No. | Date | Description |
|-----|------|-------------|
|-----|------|-------------|

FUGLEBERG KOCH
2555 Temple Trail, Winter Park, FL 32789 (407) 629-0595
www.fuglebergkoch.com AA26002103

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Consulting Engineers
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ALTA MONTÉ SPRINGS, FLORIDA 32714
TEL. 321.972.4464
WWW.JLCENG.COM
CA NO. 4050 - E

JLC 22.0023.00

THE MADISON
HUNTSVILLE, AL

DETAILS MECHANICAL

M6.05

Drawn: MRS/MB
Checked: BLSA/AB
Approved: BLSA/AB
Date: 04/15/2022
Project #: 5722

System No. W-L-7059

| | |
|--|--|
| ANSIUL1479 (ASTM E814) | CAN/ULC S115 |
| F Ratings - 1 and 2 Hr (See Item 1) | F Ratings - 1 and 2 Hr (See Item 1) |
| T Rating - 1/2 and 3/4 Hr (See Item 1) | FT Rating - 1/2 and 3/4 Hr (See Item 1) |
| | FH Ratings - 1 and 2 Hr (See Item 1) |
| | FTH Rating - 1/2 and 3/4 Hr (See Item 1) |

SECTION A-A

1. Wall Assembly — The 1 or 2 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner described in the individual U400, V400 or W400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

A. Studs — Wall framing shall consist of channel studs. Steel studs to be min 2-1/2 in. (64 mm) wide and spaced max 24 in. (610 mm) OC. The opening in the wall to accommodate the steel duct (Item 2) shall be framed on all sides using lengths of studs installed between the vertical studs and attached to the studs at each end. The framed opening in the wall shall be a nom 6 in. (152 mm) wide and 12 in. (305 mm) higher than the width and height of the steel duct.

B. Wallboard, Gypsum* — 5/8 in. (16 mm) thick, 4 ft (1.22 mm) wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300, U400, V400 or W400 Series Design in the UL Fire Resistance Directory. Max area of opening is 395 sq. in. (0.25 m²) with max dimensions of 26-3/4 in. (679 mm) for steel studs. The hourly F and FH Ratings of the firestop system are equal to the hourly fire rating of the wall assembly in which it is installed. The hourly T, FT and FTH Ratings are 1/2 hr and 3/4 hr for 1 and 2 hr rated assemblies, respectively.

HILTI Firestop Systems Reproduced by HILTI, Inc. Courtesy of Underwriters Laboratories, Inc. January 27, 2015 Page: 1 of 2

System No. W-L-7059

2. Steel Duct — Nom 24 in. by 12 in. (610 by 305 mm) (or smaller) No. 24 gauge (or heavier) steel duct to be installed eccentrically within the framed opening. The annular space shall be min 1 in. (25 mm) to max 1-3/4 in. (45 mm) Steel duct to be rigidly supported on both sides of wall assembly.

3. Batts and Blankets* — Max 1-1/2 in. (38 mm) thick glass fiber batt or blanket (min 3/4 pcf or 12 kg/m³) jacketed on the outside with a foil-scrim-kraft facing. Longitudinal and transverse joints sealed with aluminum foil tape. During the installation of the fill material, the batt or blanket shall be compressed 50% such that the annular space within the firestop system shall be min 1/4 in. (6 mm) to max 1 in. (25 mm). See Batts and Blankets - (BKNV) category in the Building Materials Directory for names of manufacturers. Any batt or blanket meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index 50 or less may be used.

4. Void or Cavity Material* - Sealant — Min 5/8 in. (16 or 32 mm) thickness of fill material applied within annulus, flush with both surfaces of wall for 1 or 2 hr walls, respectively. If voids develop after the fill materials cures, the voids shall be sealed with additional fill material.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant or FS-ONE MAX Intumescent Sealant

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

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System No. W-L-7151

| | |
|---|--|
| ANSIUL1479 (ASTM E814) | CAN/ULC S115 |
| F Ratings - 1 and 2 Hr (See Item 1) | F Ratings - 1 and 2 Hr (See Item 1) |
| T Rating - 0, 1, and 2 Hr (See Item 4C) | FT Rating - 0, 1, and 2 Hr (See Item 4C) |
| | FH Ratings - 1 and 2 Hr (See Item 1) |
| | FTH Ratings - 0, 1, and 2 Hr (See Item 4C) |

SECTION A-A

1. Wall Assembly — The fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300, U400, V400 or W400 Series Wall and Partition Designs in the Fire Resistance Directory and shall include the following construction features:

A. Studs — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 3-1/2 in. (89 mm) wide and spaced max 24 in. (610 mm). Additional framing members shall be used to completely frame around opening.

B. Gypsum Board* — Nom 5/8 in. (16 mm) thick with square or tapered edges. The gypsum wallboard type, number of layers and sheet orientation shall be as specified in the individual Wall and Partition Design Number. Max area of opening is 210 sq in. (1355 cm²) with a max width of 14-1/2 in. (368 mm) for wood studs. Max area of opening is 2457 in² (1.58 m²) with the max length or width dimension of 63 in. (1600 mm) for steel studs. The hourly F and FH Ratings of the firestop system are equal to the hourly fire rating of the wall assembly in which it is installed.

2. Steel Duct — Nom 36 in. by 60 in. (914 mm by 1524 mm or smaller) galv steel duct to be installed within the firestop system. The duct shall be constructed and reinforced in accordance with SMACNA construction standards. Duct to be rigidly supported on both sides of the wall assembly.

3. Batts and Blankets* — Max 2 in. (51 mm) thick min 3/4 pcf (12 kg/m³) glass fiber batt or blanket jacketed on the outside with a foil-scrim-kraft facing. Longitudinal and transverse joints sealed with aluminum foil tape. During the installation of the fill material, the batt or blanket shall be compressed minimum 50% such that the annular space within the firestop system shall be min 1/4 in. (6 mm) to a max 3-1/2 in. (89mm); refer to the table below.

See Batts and Blankets - (BKNV) category in the Building Materials Directory for names of manufacturers. Any batt or blanket meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index 50 or less may be used.

HILTI Firestop Systems Reproduced by HILTI, Inc. Courtesy of Underwriters Laboratories, Inc. August 22, 2018 Page: 1 of 2

System No. W-L-7151

4. Firestop System — The firestop system shall consist of the following:

A. Packing Material — Min 3-1/2 in. (89 mm) thickness of min 4.0 pcf (64 kg/m³) mineral wool batt insulation firmly packed into the opening as a permanent form. Packing material to be recessed from both sides of the wall to accommodate the required thickness of fill material.

B. Fill, Void or Cavity Material* — Sealant — Min 5/8 in. (16 mm) thickness of fill material applied within annulus flush with both surfaces of the wall.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE MAX Intumescent Sealant

C. Steel Retaining Angle — No. 16 MSG (or heavier) galv steel angles. When duct dimension exceeds 48 in. (1219 mm), angles shall be No. 16 MSG (or heavier). Angles cut to fit contour of duct with a 2 in. (51 mm) overlap on the duct and a min 1 in. (25 mm) overlap on the gypsum board assembly on both surfaces of wall. 2 in. (51 mm) leg of angle secured to duct with min No. 8 by 3/4 in. (19 mm) long sheet metal screws, spaced a max of 6 in. (152 mm) OC. Angles are optional for ducts 30 in. (762 mm) by 24 in. (610 mm) and smaller. In addition, see table below for additional conditions and options regarding retaining angles.

| Max Duct Dimension | Duct Thickness | Max Insulation Thickness (Item 3) | Annular Space | Packing Material (Item 4A) Required | Angle (Item 4C) Required | T-Rating Hr |
|---|------------------|-----------------------------------|---|-------------------------------------|--------------------------|-------------------------------|
| **24 in. (610 mm) | 24 ga or heavier | 1-1/2 in. (38 mm) | 1/4 in. min to 1 in. max (6 to 25 mm) | No | No | 0 |
| 25 in. (635 mm) wide by 45 in. (1143 mm) high | 24 ga or heavier | 2 in. (51 mm) | 1/4 in. min to 3-1/2 in. max (6 to 89 mm) | Yes | No | 1 and 2 (Same as wall rating) |

** Indicates that when max 1-1/2 in. (38 mm) thick insulation is used, steel angles are optional for those sides of the duct that do not exceed the dimension specified.

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

HILTI Firestop Systems Reproduced by HILTI, Inc. Courtesy of Underwriters Laboratories, Inc. August 22, 2018 Page: 2 of 2

Classified by Underwriters Laboratories, Inc. to ANSIUL 1479 (ASTM E814) and CAN/ULC S115

System No. F-C-7060

| | |
|---|---|
| ANSIUL1479 (ASTM E814) | CAN/ULC S115 |
| F Rating - 1 Hr | F Rating - 1 Hr |
| T Ratings - 1 Hr | FT Ratings - 1 Hr |
| L Rating At Ambient - Less Than 1 CFM/sq ft | FH Rating - 1 Hr |
| | FTH Ratings - 1 Hr |
| | L Rating At Ambient - Less Than 1 CFM/sq ft |

SECTION A-A

1. Floor - Ceiling Assembly - The 1 hr fire-rated wood joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Designs in the UL Fire Resistance Directory, as summarized below:

A. **Flooring System** - Lumber or plywood subfloor with finish floor of lumber, plywood or Floor Topping Mixture* as specified in the individual Floor-Ceiling Design.

B. **Wood Joists** - Nom 10 in. (254 mm) deep (or deeper) Lumber, steel or combination Lumber and steel joists, trusses or Structural Wood Members* with bridging as required and with ends firestopped.

C. **Gypsum Board*** - Thickness, type, number of layers and fasteners as required in the individual Floor-Ceiling Design. Diam of opening is to be max 1-1/2 in. (38 mm) larger than diam of steel duct.

1A. **Chase Wall** - (Optional, Not Shown) - The through penetrant (Item 2) may be routed through a 1 hr fire rated single, double or staggered wood stud/gypsum board chase wall. Depth of chase wall stud cavity to be min 1/2 in. (13 mm) greater than diameter of opening cut in top plates to accommodate the through penetrant (Item 2). The chase wall shall be constructed of the materials and in the manner specified in the individual U300 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. **Studs** - Nom 2 by 4 in. (51 by 102 mm), 2 by 6 in. (51 by 152 mm) or double nom 2 by 4 in. (51 by 102 mm) Lumber studs.

B. **Sole Plate** - Nom 2 by 4 in. (51 by 102 mm), 2 by 6 in. (51 by 152 mm) or parallel 2 by 4 in. (51 by 102 mm) Lumber plates, tightly butted.

C. **Top Plate** - The double top plate shall consist of two nom 2 by 4 in. (51 by 102 mm), two nom 2 by 6 in. (51 by 152 mm) or two sets of parallel 2 by 4 in. (51 by 102 mm) Lumber plates, tightly butted. Diam of opening is to be max 1-1/2 in. (38 mm) larger than diam of steel duct. As an alternate, the opening may be square-cut with a max dimension 1-1/2 in. (38 mm) greater than the diam of the pipe. Plates may be discontinuous over opening, terminating at two opposing edges of opening. Max length of discontinuity is 7-1/2 in. (191 mm).

D. **Steel Plate** - When Lumber plates are discontinuous, nom 1-1/2 in. (38 mm) wide No. 20 gauge (or heavier) galv steel plates shall be installed to connect discontinuous lumber plates and to provide a form for the fill material. Steel plates sized to lap 2 in. (51 mm) onto each discontinuous lumber plate and secured to lumber plates with steel screws or nails.

E. **Gypsum Board*** - Thickness, type, number of layers and fasteners shall be as specified in the individual Wall and Partition Design.

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2. **Steel Duct** - One nom 6 in. (152 mm) diam (or smaller) No. 30 GA (or heavier) galvanized steel duct to be installed either concentrically or eccentrically within the opening. Annular space to be min 0 in. (point contact) to max 1-1/2 in. (38 mm). Steel duct to be rigidly supported on both sides of floor-ceiling assembly.

3. **Fill, Void or Cavity Material* - Sealant** - Min 5/8 in. (16 mm) thickness of fill material applied within the annulus, flush with bottom surface of ceiling or top plate. Min 1/4 in. (6 mm) diam bead of fill material applied at point contact location at the penetrant/ceiling or chase wall top plate interface.

SPECIFIED TECHNOLOGIES INC - SpecSeal LCI Sealant, SpecSeal LC150 Sealant or Type WF300 Caulk

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

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ISSUE HISTORY

| No. | Date | Description |
|-----|----------|-------------------|
| 1 | 04/15/22 | Permit Submission |

REVISION HISTORY

| No. | Date | Description |
|-----|------|-------------|
|-----|------|-------------|

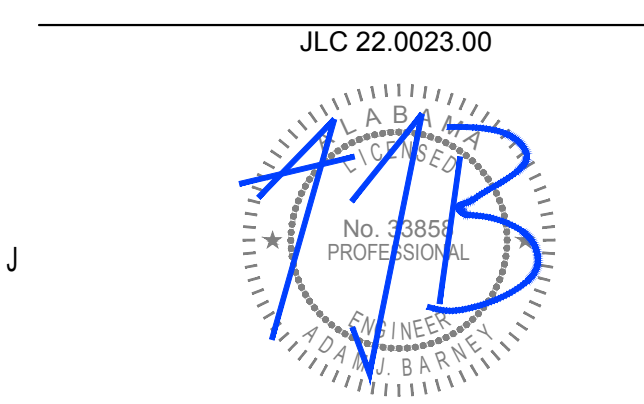
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CONSULTANT

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 WWW.JLCENG.COM
 CA NO. 4050 - E



JLC 22.0023.00

| | |
|-----------|------------|
| Drawn | MJRSMB |
| Checked | BLSAJB |
| Approved | BLSAJB |
| Date | 04/15/2022 |
| Project # | 5722 |

THE MADISON

HUNTSVILLE, AL

DETAILS MECHANICAL

M6.06

Generated by REScheck-Web Software Compliance Certificate

Project: The Madison - Unit TH

Energy Code: 2018 IECC
Location: Madison County, Alabama
Construction Type: Single-Family
Project Type: New Construction
Conditioned Floor Area: 1,460 ft²
Glazing Area: 14%
Climate Zone: 3 (3999 HDD)
Permit Date:
Permit Number:

Construction Site: Madison, Alabama
Owner/Agent: Ron Leichter, Rohdie Schoolhouse, LLC, 52 Vanderbilt New York, New York, New York 10017 (212) 682-5784
Designer/Contractor: Adam Barney, Joseph Lawrence & Co., 1180 Harwood Ave, Suite 3000, Altamonte Springs, Florida 32714 (321) 972-4466

Compliance: 5.4% Better Than Code. Maximum UA: 296. Your UA: 280. Maximum SHGC: 0.25. Your SHGC: 0.25. The % Better or Worse Than Code Index reflects how close to compliance the house is based on code trade-off rules. It DOES NOT provide an estimate of energy use or cost relative to a minimum code home. Slab-on-grade tradeoffs are no longer considered in the UA or performance compliance path in REScheck. Each slab-on-grade assembly in the specified climate zone must meet the minimum energy code insulation R-value and depth requirements.

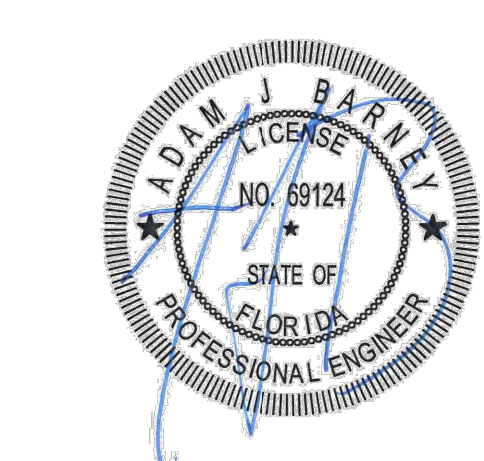
Envelope Assemblies

| Assembly | Gross Area or Perimeter | Cavity R-Value | Cont. R-Value | Prop. U-Factor | Req. U-Factor | Prop. UA | Req. UA |
|--|-------------------------|----------------|---------------|----------------|---------------|----------|---------|
| Ceiling: Flat Ceiling or Scissor Truss | 1,460 | 38.0 | 0.0 | 0.030 | 0.030 | 44 | 44 |
| South Wall: Wood Frame, 16" o.c., SHGC: 0.25, PF 0.50, [Bldg. Use 1 - Multifamily] | 1,056 | 21.0 | 0.0 | 0.057 | 0.060 | 56 | 59 |
| Door: Glass Door (over 50% glazing) | 40 | 0.300 | 0.320 | 12 | 13 | | |
| South Wall Windows: Vinyl Frame SHGC: 0.25 | 37 | 0.300 | 0.320 | 11 | 12 | | |
| North Wall: Wood Frame, 16" o.c., SHGC: 0.25 | 529 | 21.0 | 0.0 | 0.057 | 0.060 | 19 | 21 |
| Garage Door: Solid Door (under 50% glazing) | 72 | 0.320 | 0.320 | 23 | 23 | | |
| CO4 North Door: Glass Door (over 50% glazing) SHGC: 0.25 | 24 | 0.300 | 0.320 | 7 | 8 | | |
| North Windows: Vinyl Frame SHGC: 0.25 | 91 | 0.300 | 0.320 | 27 | 29 | | |
| East Wall: Wood Frame, 24" o.c., SHGC: 0.25 | 835 | 21.0 | 0.0 | 0.056 | 0.060 | 39 | 42 |
| East Windows: Vinyl Frame SHGC: 0.25 | 141 | 0.300 | 0.320 | 42 | 45 | | |
| Floor: Slab-On-Grade (Unheated) insulation depth: 2.0" | 2 | 10.0 | 0.700 | 0.730 | 0 | 0 | 0 |

Project Title: The Madison - Unit TH
Data filename: Report date: 04/18/22 Page 1 of 10

Compliance Statement: The proposed building design described here is consistent with the building plans, specifications, and other calculations submitted with the permit application. The proposed building has been designed to meet the 2018 IECC requirements in REScheck Version: REScheck-Web and to comply with the mandatory requirements listed in the REScheck Inspection Checklist.

Adam J. Barney, Principal
Name - Title: Signature: Date: 04/18/2022



Project Title: The Madison - Unit TH
Data filename: Report date: 04/18/22 Page 2 of 10

COMcheck Software Version COMcheckWeb Envelope Compliance Certificate

Project Information
Energy Code: 2018 IECC
Project Title: The Madison - Fitness Center
Location: Madison (Madison), Alabama
Climate Zone: 3a
Project Type: New Construction
Vertical Glazing / Wall Area: 13%

Construction Site: Madison, Alabama
Owner/Agent: Ron Leichter, Rohdie Schoolhouse, LLC, 52 Vanderbilt New York, New York, New York 10017 (212) 682-5784
Designer/Contractor: Adam Barney, Joseph Lawrence & Co., 1180 Harwood Ave, Suite 3000, Altamonte Springs, Florida 32714 (321) 972-4466


Additional Efficiency Package(s)
Credits: 1.0 Required, 1.0 Proposed
Reduced Lighting Power, 1.0 credit

Building Area
1-Multifamily: Nonresidential
Floor Area: 1988

Envelope Assemblies

| Assembly | Gross Area or Perimeter | Cavity R-Value | Cont. R-Value | Proposed U-Factor | Budget U-Factor |
|--|-------------------------|----------------|---------------|-------------------|-----------------|
| Roof: Attic: Roof, Wood Joists, [Bldg. Use 1 - Multifamily] | 3569 | 38.0 | 0.0 | 0.027 | 0.027 |
| Floor: Unheated Slab-On-Grade, Vertical 2 ft., [Bldg. Use 1 - Multifamily] (c) | 193 | — | 10.0 | 0.540 | 0.540 |
| NORTH Ext. Wall: Wood-Frame, 16in. o.c., [Bldg. Use 1 - Multifamily] Door: Glass (over 50% glazing); Metal Frame, Entrance Door, Perf. Specs.: Product ID N/A, SHGC: 0.40, PF 0.50, [Bldg. Use 1 - Multifamily] (d) Window: Metal Frame: Fixed, Perf. Specs.: Product ID N/A, SHGC: 0.25, PF 0.50, [Bldg. Use 1 - Multifamily] (b) | 1468 | 21.0 | 0.0 | 0.062 | 0.064 |
| 49 | — | — | 0.450 | 0.770 | |
| 75 | — | — | 0.300 | 0.460 | |
| EAST Ext. Wall: Wood-Frame, 16in. o.c., [Bldg. Use 1 - Multifamily] Door: Glass (over 50% glazing); Metal Frame, Entrance Door, Perf. Specs.: Product ID N/A, SHGC: 0.40, PF 0.50, [Bldg. Use 1 - Multifamily] (d) Door: Uninsulated Single-Layer Metal, Swinging, [Bldg. Use 1 - Multifamily] Window: Metal Frame: Fixed, Perf. Specs.: Product ID N/A, SHGC: 0.25, PF 0.50, [Bldg. Use 1 - Multifamily] (b) | 771 | 21.0 | 0.0 | 0.062 | 0.064 |
| 25 | — | — | 0.450 | 0.770 | |
| 24 | — | — | 1.200 | 0.610 | |
| 88 | — | — | 0.300 | 0.460 | |
| SOUTH Ext. Wall: Wood-Frame, 16in. o.c., [Bldg. Use 1 - Multifamily] Door: Glass (over 50% glazing); Metal Frame, Entrance Door, Perf. Specs.: Product ID N/A, SHGC: 0.40, PF 0.50, [Bldg. Use 1 - Multifamily] (d) Window: Metal Frame: Fixed, Perf. Specs.: Product ID N/A, SHGC: 0.25, PF 0.50, [Bldg. Use 1 - Multifamily] (b) | 1336 | 21.0 | 0.0 | 0.062 | 0.064 |
| 49 | — | — | 0.450 | 0.770 | |

Project Title: The Madison - Fitness Center
Data filename: Report date: 04/18/22 Page 1 of 19



ISSUE HISTORY

| No. | Date | Description |
|-----|----------|-------------------|
| 1 | 04/15/22 | Permit Submission |

REVISION HISTORY

| No. | Date | Description |
|-----|------|-------------|
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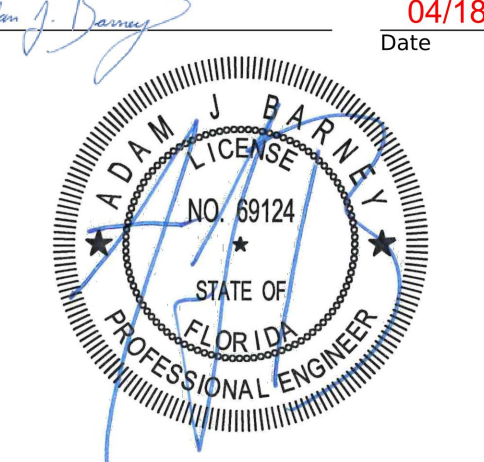
Envelope Compliance Certificate

| Assembly | Gross Area or Perimeter | Cavity R-Value | Cont. R-Value | Proposed U-Factor | Budget U-Factor |
|--|-------------------------|----------------|---------------|-------------------|-----------------|
| Window: Metal Frame: Fixed, Perf. Specs.: Product ID N/A, SHGC: 0.25, PF 0.50, [Bldg. Use 1 - Multifamily] (b) | 213 | — | — | 0.300 | 0.460 |
| WEST Ext. Wall: Wood-Frame, 16in. o.c., [Bldg. Use 1 - Multifamily] Door: Uninsulated Single-Layer Metal, Swinging, [Bldg. Use 1 - Multifamily] Window: Metal Frame: Fixed, Perf. Specs.: Product ID N/A, SHGC: 0.25, PF 0.50, [Bldg. Use 1 - Multifamily] (b) | 907 | 21.0 | 0.0 | 0.062 | 0.064 |
| 24 | — | — | 1.200 | 0.610 | |
| 75 | — | — | 0.300 | 0.460 | |

Envelope PASSES: Design 12% better than code

Compliance Statement: The proposed envelope design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed envelope systems have been designed to meet the 2018 IECC requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Adam J. Barney, P.E.
Name - Title: Signature: Date: 04/18/2022



Project Title: The Madison - Fitness Center
Data filename: Report date: 04/18/22 Page 2 of 19

COMcheck Software Version COMcheckWeb Interior Lighting Compliance Certificate

Project Information
Energy Code: 2018 IECC
Project Title: The Madison - Fitness Center
Project Type: New Construction

Construction Site: Madison, Alabama
Owner/Agent: Ron Leichter, Rohdie Schoolhouse, LLC, 52 Vanderbilt New York, New York, New York 10017 (212) 682-5784
Designer/Contractor: Adam Barney, Joseph Lawrence & Co., 1180 Harwood Ave, Suite 3000, Altamonte Springs, Florida 32714 (321) 972-4466

Additional Efficiency Package(s)
Credits: 1.0 Required, 1.0 Proposed
Reduced Lighting Power, 1.0 credit

Allowed Interior Lighting Power

| Area Category | A Floor Area (ft ²) | B Allowed Watts / ft ² | C Allowed Watts / ft ² | D Allowed Watts |
|----------------------------|---------------------------------|-----------------------------------|-----------------------------------|-----------------|
| 1-Multifamily | 1988 | 0.61 | 1217 | |
| Total Allowed Watts = 1217 | | | | |

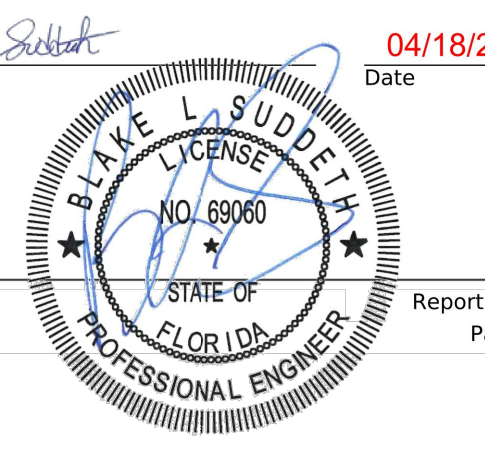
Proposed Interior Lighting Power

| Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast | B Lamps / Fixture | C # of Fixture | D Fixture Watt. | E (C X D) |
|--|-------------------|----------------|-----------------|-----------|
| 1-Multifamily | | | | |
| LED: CA: LED Other Fixture Unit 16W: | 1 | 5 | 19 | 95 |
| LED: CC: LED Other Fixture Unit 25W: | 1 | 1 | 25 | 25 |
| LED: CD: LED Other Fixture Unit 16W: | 1 | 2 | 17 | 34 |
| LED: CF1: LED Other Fixture Unit 28W: | 1 | 6 | 30 | 180 |
| LED: CC: LED Other Fixture Unit 36W: | 1 | 24 | 33 | 792 |
| LED: EM: LED Other Fixture Unit 6.5W: | 1 | 7 | 3 | Exempt |
| Exemption: Emergency lighting automatically off during normal business operation | | | | |
| Total Proposed Watts = 1128 | | | | |

Interior Lighting PASSES: Design 7% better than code

Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2018 IECC requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Blake L. Suddeth, P.E.
Name - Title: Signature: Date: 04/18/2022



Project Title: The Madison - Fitness Center
Data filename: Report date: 04/18/22 Page 3 of 19

COMcheck Software Version COMcheckWeb Exterior Lighting Compliance Certificate

Project Information
Energy Code: 2018 IECC
Project Title: The Madison - Fitness Center
Project Type: New Construction
Exterior Lighting Zone: 2 (Residentially zoned area (LZ2))

Construction Site: Madison, Alabama
Owner/Agent: Ron Leichter, Rohdie Schoolhouse, LLC, 52 Vanderbilt New York, New York, New York 10017 (212) 682-5784
Designer/Contractor: Adam Barney, Joseph Lawrence & Co., 1180 Harwood Ave, Suite 3000, Altamonte Springs, Florida 32714 (321) 972-4466

Allowed Exterior Lighting Power

| Area/Surface Category | B Quantity | C Allowed Watts / W | D Tradable Wattage | E Allowed Watts (B X C) |
|--|------------|---------------------|--------------------|-------------------------|
| Pedestrian and vehicular entrances and exits | 12 ft of | 14 | Yes | 168 |
| Total Tradable Watts (a) = 168 | | | | |
| Total Allowed Watts = 168 | | | | |
| Total Allowed Supplemental Watts (b) = 400 | | | | |

(a) Wattage tradeoffs are only allowed between tradable areas/surfaces.
(b) A supplemental allowance equal to 400 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

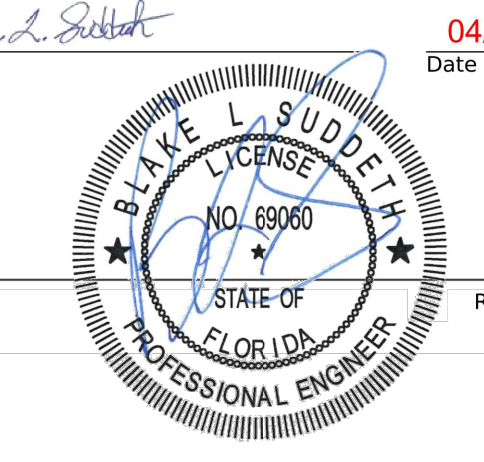
Proposed Exterior Lighting Power

| Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast | B Lamps / Fixture | C # of Fixture | D Fixture Watt. | E (C X D) |
|--|-------------------|----------------|-----------------|-----------|
| Pedestrian and vehicular entrances and exits (12 ft of door width): Tradable Wattage | | | | |
| LED: CA: LED Other Fixture Unit 16W: | 1 | 2 | 20 | 40 |
| LED: EM2: LED Other Fixture Unit 13W: | 1 | 2 | 10 | Exempt |
| Exemption: Emergency lighting automatically off during normal business operation | | | | |
| Total Tradable Proposed Watts = 154 | | | | |

Exterior Lighting PASSES: Design 73% better than code

Compliance Statement: The proposed exterior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed exterior lighting systems have been designed to meet the 2018 IECC requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Blake L. Suddeth, P.E.
Name - Title: Signature: Date: 04/18/2022



Project Title: The Madison - Fitness Center
Data filename: Report date: 04/18/22 Page 4 of 19

COMcheck Software Version COMcheckWeb Mechanical Compliance Certificate

Project Information
Energy Code: 2018 IECC
Project Title: The Madison - Fitness Center
Location: Madison (Madison), Alabama
Climate Zone: 3a
Project Type: New Construction

Construction Site: Madison, Alabama
Owner/Agent: Ron Leichter, Rohdie Schoolhouse, LLC, 52 Vanderbilt New York, New York, New York 10017 (212) 682-5784
Designer/Contractor: Adam Barney, Joseph Lawrence & Co., 1180 Harwood Ave, Suite 3000, Altamonte Springs, Florida 32714 (321) 972-4466

Additional Efficiency Package(s)
Credits: 1.0 Required, 1.0 Proposed
Reduced Lighting Power, 1.0 credit

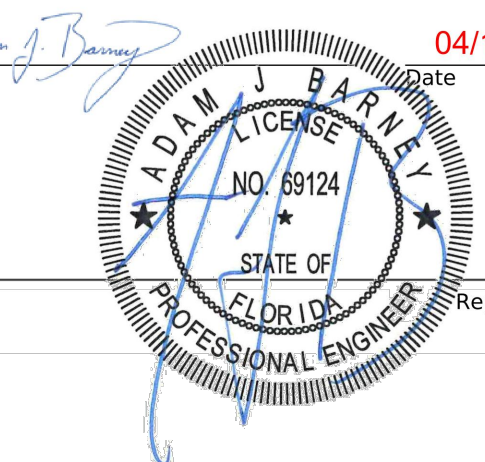
Mechanical Systems List

Quantity System Type & Description


- AHU-3-F (Single Zone)
Cooling: 1 each - Split System, Capacity = 42 kBtu/h, Air-Cooled Condenser, Unknown Economizer
Proposed Efficiency = 14.00 SEER, Required Efficiency: 13.00 SEER
Fan System: FAN SYSTEM 1 - Compliance (Motor nameplate HP and fan efficiency method) : Passes
Fans:
FAN 1 Supply, Constant Volume, 1400 CFM, 0.8 motor nameplate hp, 93.0 fan efficiency grade, 98.0 total fan efficiency, 98.0 design fan efficiency, fan exception: Fan array <= 5 total HP
- AHU-2-F (Single Zone)
Cooling: 1 each - Split System, Capacity = 42 kBtu/h, Air-Cooled Condenser, Unknown Economizer
Proposed Efficiency = 14.00 SEER, Required Efficiency: 13.00 SEER
Fan System: FAN SYSTEM 1 - Compliance (Motor nameplate HP and fan efficiency method) : Passes
Fans:
FAN 1 Supply, Constant Volume, 1400 CFM, 0.8 motor nameplate hp, 93.0 fan efficiency grade, 98.0 total fan efficiency, 98.0 design fan efficiency, fan exception: Fan array <= 5 total HP
- Water Heater:
Electric Storage Water Heater, Capacity: 40 gallons w/ Circulation Pump
Proposed Efficiency: 0.92 SL, % (If >= 12 W), Required Efficiency: 0.98 SL, % (If >= 12 kW)

Mechanical Compliance Statement
Compliance Statement: The proposed mechanical design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2018 IECC requirements in COMcheck Version COMcheckWeb and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Adam J. Barney, P.E.
Name - Title: Signature: Date: 04/18/2022




Project Title: The Madison - Fitness Center
Data filename: Report date: 04/18/22 Page 5 of 19



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WWW.JLCENG.COM
CA NO. 4050 - E

JLC 22.0023.00

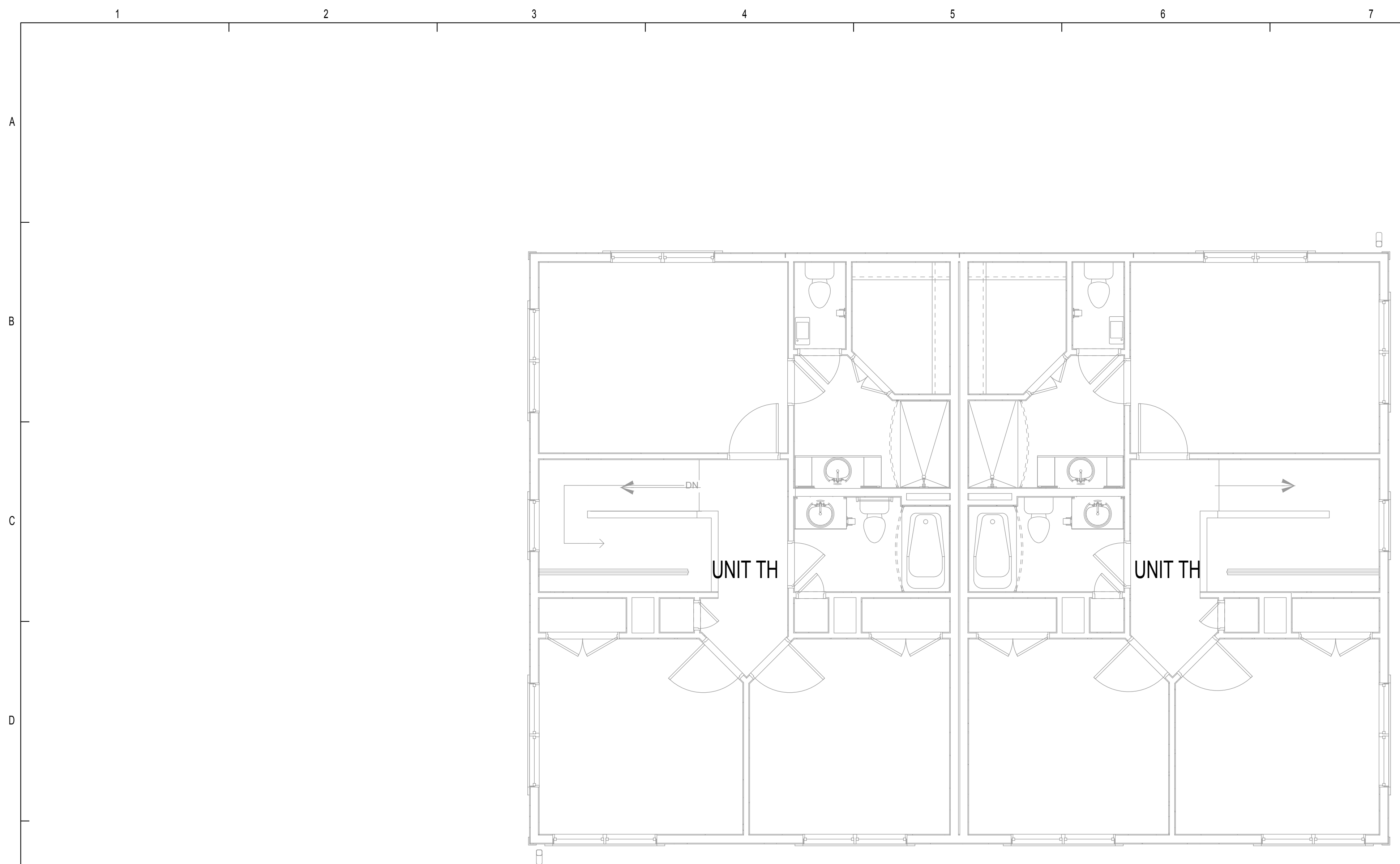


THE MADISON
HUNTSVILLE, AL

| | |
|------------|------------|
| Drawn: | MJRSMB |
| Checked: | BLSAJB |
| Approved: | BLSAJB |
| Date: | 04/15/2022 |
| Project #: | 5722 |

ENERGY CALCULATIONS MECHANICAL

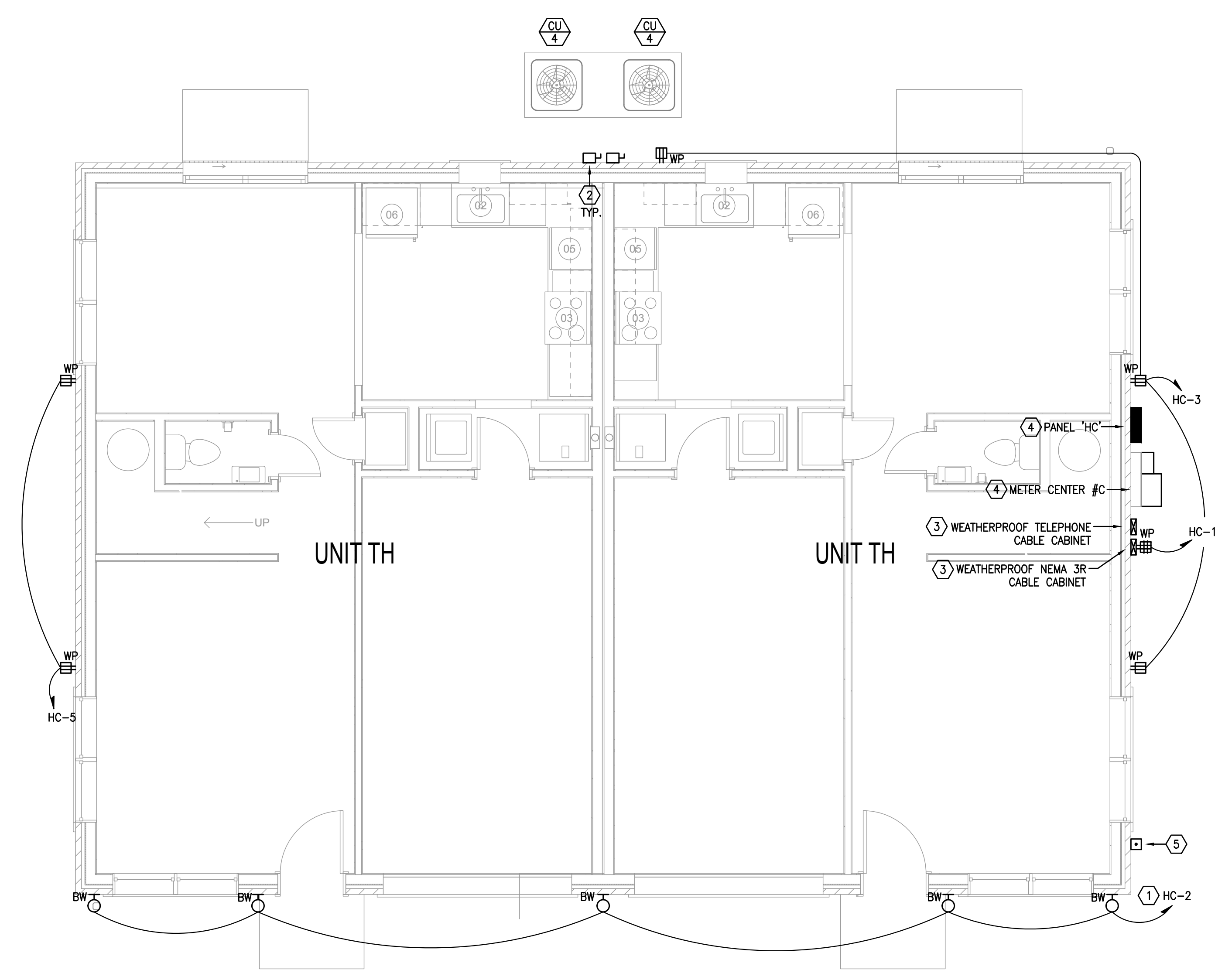
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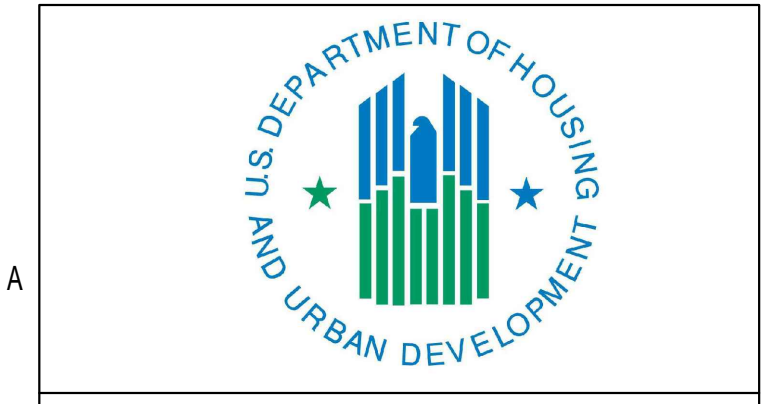
E3 BUILDING TYPE C - 2ND LEVEL - ELECTRICAL
1/4" = 1'-0"

- GENERAL NOTES:**
- DO NOT SCALE ELECTRICAL DRAWING FOR ANY DIMENSIONS.
 - ALL WORK SHALL COMPLY WITH THE 2017 NATIONAL ELECTRICAL CODE, NATIONAL, STATE AND LOCAL CODES. PROVIDE GROUNDING AND BONDING PER NEC 250.
 - SEE SINGLE LINE DIAGRAM FOR FEEDER WIRE AND CONDUIT SIZE. ALL CIRCUITS NOT SIZED ON DRAWING SHALL BE INSTALLED TO MEET MINIMUM SIZE REQUIRED BY NEC. ALL CONDUCTORS SHALL HAVE AN EQUIPMENT GROUND WIRE SIZED PER NEC.
 - FIELD VERIFY EXACT LOCATION OF ALL DEVICES AND EQUIPMENT PRIOR TO ROUGH IN.
 - REFER TO ENLARGED TYPICAL UNIT PLANS FOR ALL ELECTRICAL IN UNITS.
 - 'NL' NEXT TO FIXTURE DESIGNATES FIXTURE TO BE CONNECTED AHEAD OF AUTOMATIC CONTROLS TO OPERATE CONTINUOUSLY.
 - ALL EMERGENCY LIGHTING FIXTURES AND EXIT SIGNS SHALL BE CONNECTED "HOT" TO THE INDICATED LOCAL LIGHTING CIRCUIT.
 - EMERGENCY ILLUMINATION SHALL BE PROVIDED FOR A PERIOD OF 90 MINUTES IN THE EVENT OF FAILURE OF NORMAL LIGHTING. EMERGENCY LIGHTING FACILITIES SHALL BE ARRANGED TO PROVIDE INITIAL ILLUMINATION THAT IS AT LEAST AN AVERAGE OF 1 FOOTCANDLE (10 LUX) AND A MINIMUM AT ANY POINT OF 0.1 FOOTCANDLE (1 LUX) MEASURED ALONG THE PATH OF EGRESS AT FLOOR LEVEL. ILLUMINATION LEVELS SHALL BE PERMITTED TO DECLINE TO 0.6 FOOTCANDLE (6 LUX) AVERAGE AND A MINIMUM AT ANY POINT OF 0.06 FOOTCANDLE (0.6 LUX) AT THE END OF THE EMERGENCY LIGHTING TIME DURATION. A MAXIMUM-TO-MINIMUM ILLUMINATION UNIFORMITY RATIO OF 40:1 SHALL NOT BE EXCEEDED.

- REFERENCE NOTES:** (X)
- CONNECT CIRCUIT VIA LIGHTING CONTACTOR FOR AUTOMATIC CONTROL OF FIXTURES.
 - ELECTRICAL CONTRACTOR SHALL COORDINATE DISCONNECT AND FUSE REQUIREMENTS FOR MECHANICAL UNIT WITH MECHANICAL CONTRACTOR AND EQUIPMENT MANUFACTURER PRIOR TO ROUGH-IN AND PROVIDE AS REQUIRED. CONNECT CONDENSING UNIT TO CORRESPONDING UNIT PANEL. REFER TO TYPICAL UNIT PLANS AND SCHEDULES FOR CIRCUITING AND SIZING INFORMATION. COORDINATE LOCATION OF DISCONNECT WITH OWNER AND MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN. LOCATE AS REQUIRED TO MAINTAIN NEC CLEARANCES.
 - COORDINATE EXACT REQUIREMENTS AND LOCATION OF CABINET WITH UTILITY PROVIDER PRIOR TO ROUGH-IN.
 - COORDINATE EXACT LOCATION WITH THE ELECTRIC UTILITY AND ARCHITECTURAL PLANS. VERIFY 3'-0" CLEARANCE EXISTS IN FRONT OF METER CENTER AND HOUSE PANEL. A MAXIMUM OF 6'-6" SHALL BE MAINTAINED FROM GRADE TO THE CENTER OF THE HIGHEST METER.
 - COORDINATE EXACT LOCATION OF BUILDING SHUNT TRIP WITH FIRE MARSHALL PRIOR TO ROUGH-IN. SHUNT TRIP TO SHUT OFF ELECTRICAL SERVICE.



K3 BUILDING TYPE C - GROUND LEVEL - ELECTRICAL
1/4" = 1'-0"



ISSUE HISTORY

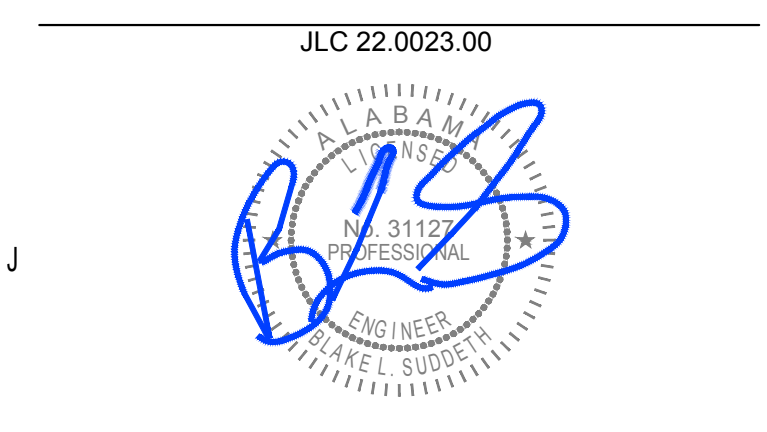
| No. | Date | Description |
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| 1 | 04/15/22 | Permit Submission |
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REVISION HISTORY

| No. | Date | Description |
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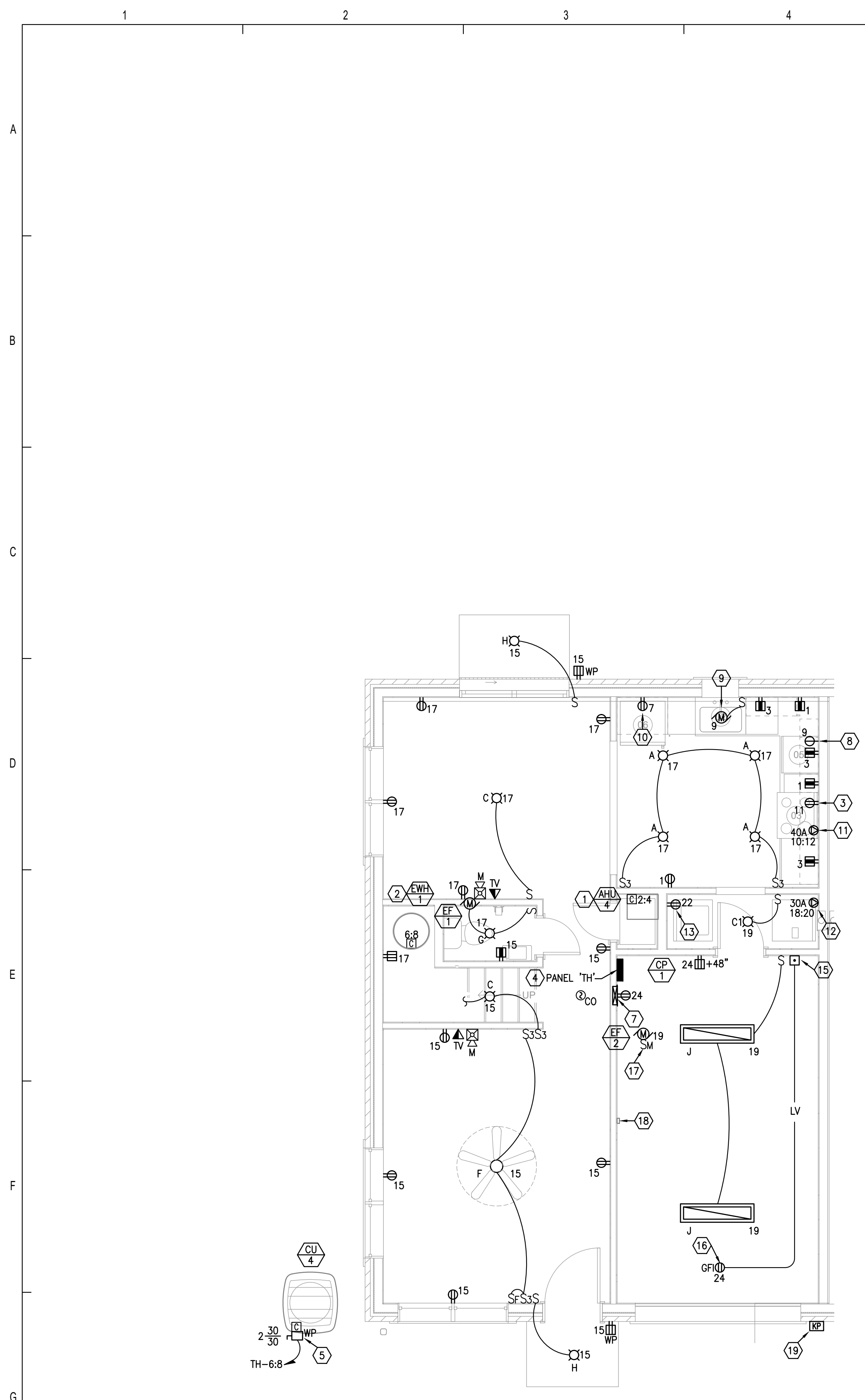
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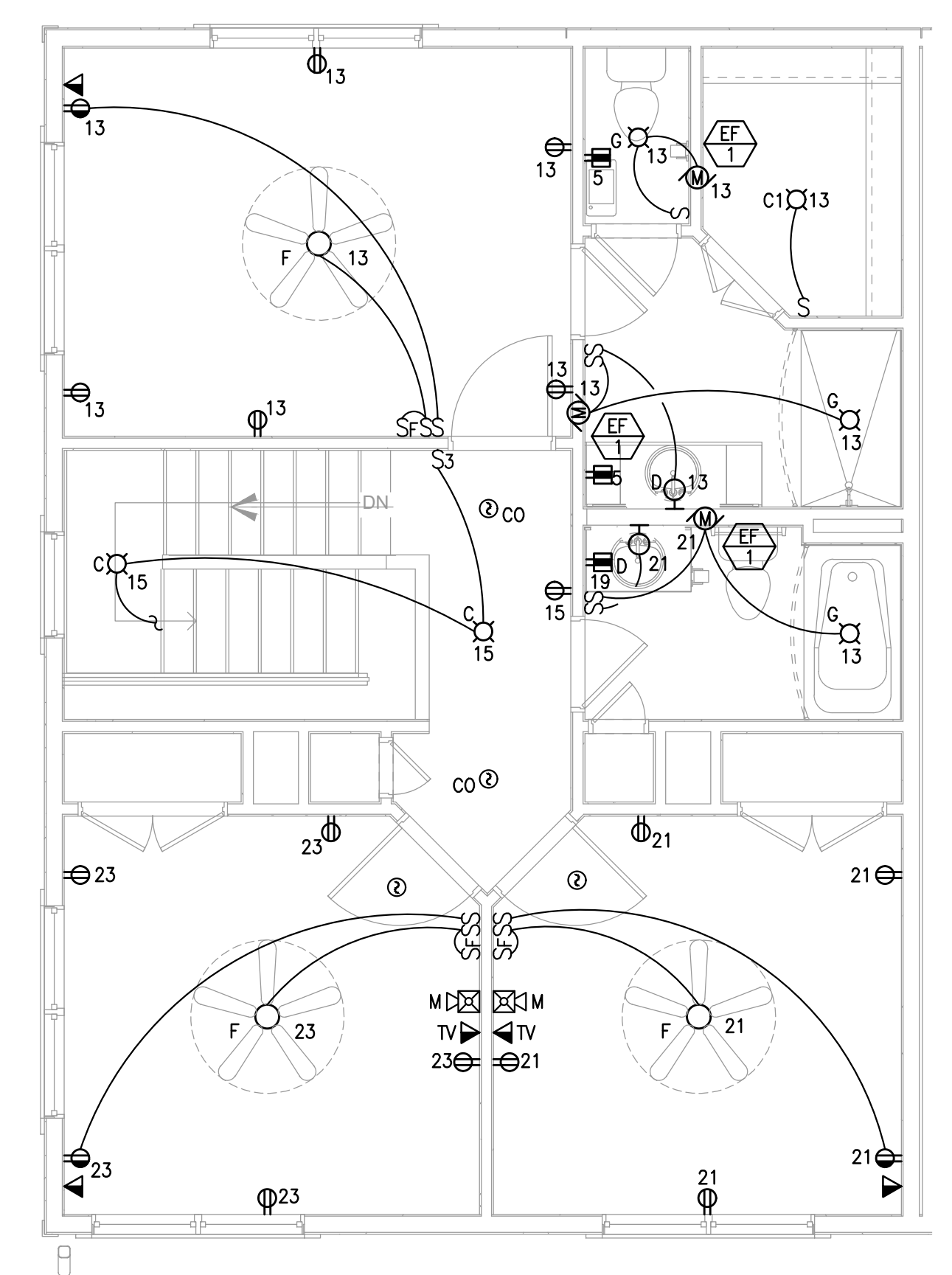


THE MADISON
HUNTSVILLE, AL
BUILDING TYPE C
FLOOR PLANS
ELECTRICAL
E2.07

| | |
|-----------|------------|
| Drawn | MJRSMB |
| Checked | BLSA/B |
| Approved | BLSA/B |
| Date | 04/15/2022 |
| Project # | 5722 |



G2 UNIT TH - 1ST FLOOR - ELECTRICAL
1/4" = 1'-0"



G6 UNIT TH - 2ND FLOOR - ELECTRICAL
1/4" = 1'-0"

GENERAL NOTES:

- A. DO NOT SCALE ELECTRICAL DRAWINGS FOR ANY DIMENSIONS.
- B. ALL WORK SHALL COMPLY WITH THE 2017 NATIONAL ELECTRICAL CODE, NATIONAL, STATE AND LOCAL CODES. PROVIDE GROUNDING AND BONDING PER NEC 250.
- C. SEE SINGLE LINE DIAGRAM FOR FEEDER WIRE AND CONDUIT SIZE. ALL CIRCUITS NOT SIZED ON DRAWING SHALL BE INSTALLED TO MEET MINIMUM SIZE REQUIRED BY NEC. ALL CONDUCTORS SHALL HAVE AN EQUIPMENT GROUND WIRE SIZED PER NEC.
- D. WHERE AVAILABLE THE ELECTRICAL CONTRACTOR SHALL COORDINATE THE EXACT LOCATION OF ALL DEVICES PER THE DIMENSIONED ARCHITECTURAL DRAWINGS (KITCHENS, BATHROOMS, ETC.). ELEVATIONS AND DETAILS PRIOR TO ROUGH-IN. THE ELECTRICAL CONTRACTOR SHALL COORDINATE WITH THE GENERAL CONTRACTOR AND FRAMING CONTRACTOR TO PROVIDE ALL ADDITIONAL FRAMING AND BLOCKING WHERE DEVICES ARE REQUIRED TO BE IN A SPECIFIC LOCATION PER FAIR HOUSING REQUIREMENTS, ADA OR LOCAL AUTHORITY HAVING JURISDICTION.
- E. ALL 120V, SINGLE PHASE, 15A AND 20A BRANCH CIRCUITS SUPPLYING OUTLETS OR DEVICES INSTALLED IN DWELLING UNIT KITCHENS, FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, BEDROOMS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, LAUNDRY AREAS, OR SIMILAR ROOMS OR AREAS SHALL BE PROTECTED BY A LISTED AFCI-FULL CIRCUIT INTERRUPTER INSTALLED TO PROVIDE PROTECTION OF THE BRANCH CIRCUIT AS REQUIRED BY NEC 210.12 AND LOCAL ORDINANCES.
- F. ALL 125V, 15A AND 20A RECEPTACLES INSTALLED IN DWELLING UNITS SHALL BE LISTED TAMPER-RESISTANT AS REQUIRED BY NEC 406.12.
- G. ALL SMOKE ALARMS IN DWELLING UNITS SHALL BE INTERCONNECTED AND INSTALLED IN ACCORDANCE WITH NFPA 101, 2018 EDITION, SECTION 30.3.4.5.
- H. ALL FIRE ALARM NOTIFICATION APPLIANCES LOCATED IN SLEEPING AREAS SHALL BE OF A LOW FREQUENCY SIGNAL TYPE IN ACCORDANCE WITH NFPA 72, 2016 EDITION, SECTION 18.4.5.3.

REFERENCE NOTES:

- 1) CONNECT MECHANICAL UNIT VIA INTEGRAL DISCONNECT PROVIDED WITH UNIT. COORDINATE EXACT REQUIREMENTS WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN.
- 2) PROVIDE CIRCUIT BREAKER FEEDING WATER HEATER WITH "LOCK OUT" STYLE BREAKER HANDLE PER NEC 422.31.
- 3) PROVIDE 120V OUTLET FOR MICROWAVE/HOOD CONNECTION. INSTALL OUTLET AT 78" AFF INSIDE THE CABINET. COORDINATE LOCATION WITH MILLWORK INSTALLER PRIOR TO ROUGH-IN.
- 4) REFER TO POWER RISER DIAGRAM AND UNIT PANEL SCHEDULES FOR ADDITIONAL INFORMATION.
- 5) PROVIDE ELECTRICAL CONNECTION TO UNIT'S ASSOCIATED CONDENSING UNIT. COORDINATE LOCATION WITH MECHANICAL CONTRACTOR PRIOR TO ROUGH-IN. COORDINATE ROUTING OF CONDUIT THROUGH BUILDING WITH GENERAL CONTRACTOR PRIOR TO ROUGH-IN. INCREASE WIRE SIZE AS REQUIRED FOR CIRCUIT LENGTH PER FBC AND NEC.
- 6) PROVIDE COMBINATION 120V TAMPER RESISTANT RECEPTACLE AND USB CHARGER OUTLET (LEVITON #15632-W OR APPROVED SUBSTITUTION). COLOR AS SELECTED BY OWNER. PROVIDE JUNCTION BOX SIZED AS REQUIRED BY NEC AND MANUFACTURER FOR DEVICE. COORDINATE OUTLET LOCATION WITH OWNER PRIOR TO ROUGH-IN.
- 7) 12"X18"X3" DEEP FLUSH MOUNTED CABINET WITH DOOR FOR TELEPHONE AND TV CABLE TERMINATIONS. "NFC" CABINET. COORDINATE MOUNTING HEIGHT AND EXACT LOCATION WITH ALL TRADES PRIOR TO ROUGH-IN. CONTRACTOR TO PULL AND LABEL ALL LINES IN STAR CONFIGURATION.
- 8) PROVIDE 120V CONNECTION FOR DISHWASHER. COORDINATE CONNECTION REQUIREMENTS AND LOCATION WITH EQUIPMENT INSTALLER PRIOR TO ROUGH-IN.
- 9) PROVIDE 120V CONNECTION FOR GARBAGE DISPOSAL. COORDINATE CONNECTION REQUIREMENTS AND LOCATION WITH EQUIPMENT INSTALLER PRIOR TO ROUGH-IN.
- 10) PROVIDE 120V OUTLET FOR REFRIGERATOR, 48" AFF.
- 11) PROVIDE 250V/40A/1Ø OUTLET FOR RANGE. COORDINATE PLUG CONFIGURATION AND LOCATION WITH EQUIPMENT INSTALLER PRIOR TO ROUGH-IN.
- 12) PROVIDE 250V/30A/1Ø OUTLET FOR DRYER. COORDINATE PLUG CONFIGURATION AND LOCATION WITH EQUIPMENT INSTALLER PRIOR TO ROUGH-IN.
- 13) PROVIDE 120V OUTLET FOR WASHER, 36" AFF.
- 14) IN ISLAND LOCATIONS, LOCATE 120V RECEPTACLE IN LOW WALL BELOW COUNTER WITHIN 12" OF COUNTERTOP AS REQUIRED BY NEC 210.52(5). COORDINATE LOCATION WITH AHJ PRIOR TO ROUGH-IN.
- 15) PROVIDE PUSHBUTTON CONTROL AND LOW VOLTAGE WIRING FOR GARAGE DOOR OPENER AS REQUIRED BY OWNER/MANUFACTURER.
- 16) PROVIDE 120V CEILING MOUNTED OUTLET FOR GARAGE DOOR OPENER. COORDINATE LOCATION WITH DOOR INSTALLER PRIOR TO ROUGH-IN. PROVIDE LOW VOLTAGE WIRING AND PUSH BUTTON LOCATED NEAR DOOR AS REQUIRED.
- 17) GARAGE EXHAUST FAN TO BE CONTROLLED BY CARBON MONOXIDE DETECTOR PROVIDED BY MECHANICAL CONTRACTOR.
- 18) PROVIDE 120V CONNECTION TO CARBON MONOXIDE SENSOR PROVIDED BY MECHANICAL CONTRACTOR. COORDINATE CONTROL WIRING WITH MECHANICAL CONTRACTOR AND PROVIDE AS REQUIRED. CONNECT TO LOCAL GARAGE CIRCUIT.
- 19) PROVIDE EXTERIOR GARAGE DOOR KEYPAD. COORDINATE LOCATION AND REQUIREMENTS WITH GARAGE DOOR INSTALLER. PROVIDE LOW VOLTAGE WIRING AS REQUIRED.

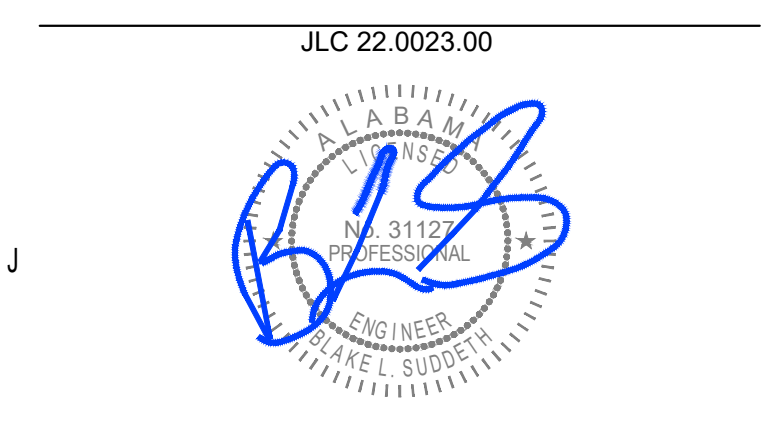


| ISSUE HISTORY | | |
|---------------|----------|-------------------|
| No. | Date | Description |
| 1 | 04/15/22 | Permit Submission |
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| | | |

| REVISION HISTORY | | |
|------------------|------|-------------|
| No. | Date | Description |
| | | |
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| | | |

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ALTA MONTA SPRINGS, FLORIDA 32714
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| | |
|-----------|------------|
| Drawn: | M,RSMB |
| Checked: | BLSA,B |
| Approved: | BLSA,B |
| Date: | 04/15/2022 |
| Project: | 5722 |

THE MADISON
HUNTSVILLE, AL

ENLARGED UNIT PLANS
ELECTRICAL
E3.08

| UNIT FEEDER SCHEDULE | | |
|----------------------------------|-------------------------|--|
| 208V/1Ø RESIDENTIAL LOAD CENTERS | | |
| UNIT LOAD CENTER | MAXIMUM DISTANCE (FEET) | MINIMUM FEEDER SIZE (ALUMINUM SER CABLE) |
| 125A | 125 | (3)#1/0 AWG AL & (1)#2 AWG AL GRD |
| | 156 | (3)#2/0 AWG AL & (1)#1 AWG AL GRD |
| | 192 | (3)#3/0 AWG AL & (1)#1/0 AWG AL GRD |
| | 250 | (3)#4/0 AWG AL & (1)#2/0 AWG AL GRD |

NOTES:
 1. FEEDER SIZES BASED ON NEC TABLE 310.15(B)(16) 75°C COLUMN.
 2. FEEDER SIZES BASED ON 3% VOLTAGE DROP.
 3. BASIS OF DESIGN: SOUTHWIRE SERVICE ENTRANCE CABLE - TYPE SER THREE CONDUCTOR WITH BARE GROUND.

CONDUIT & CONDUCTOR SIZES: (X)

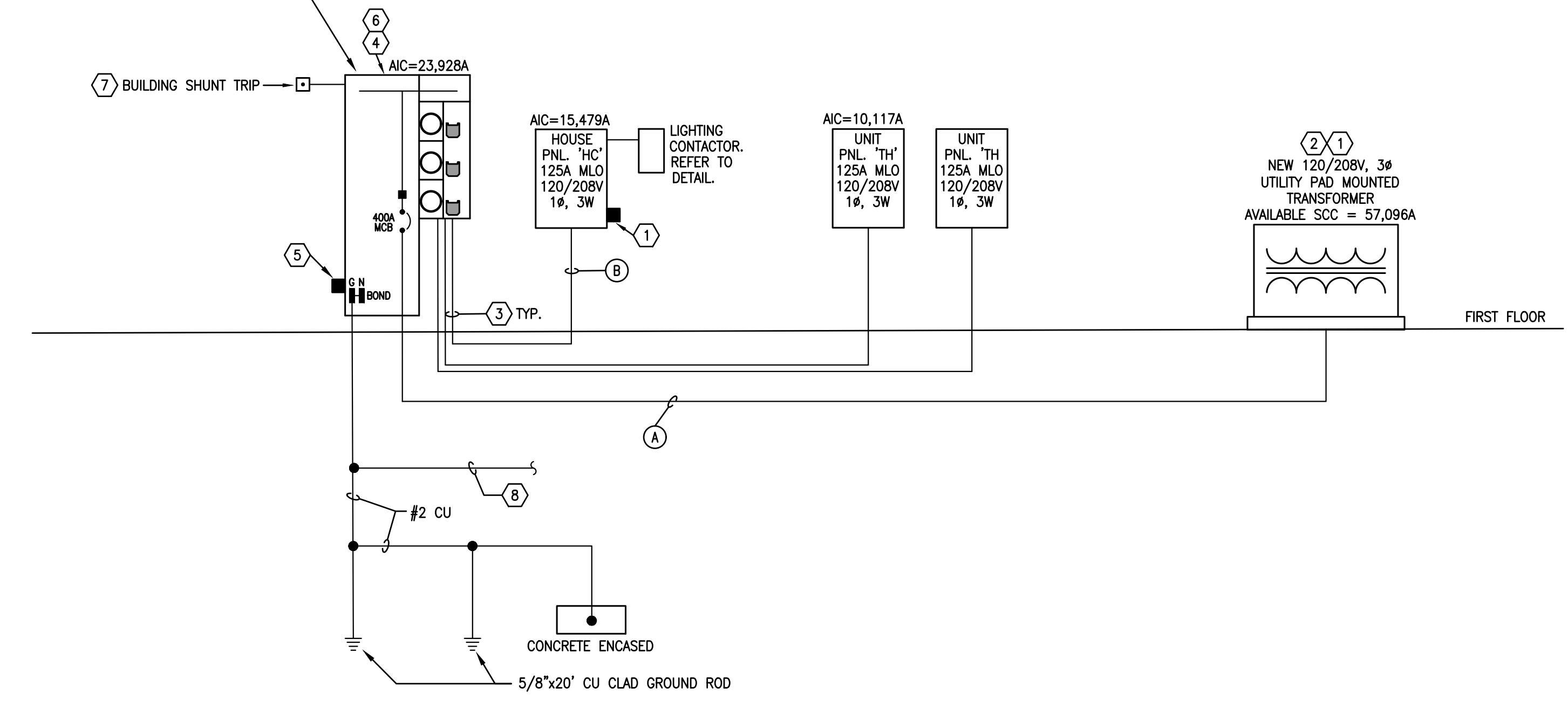
(A) 2 SETS [(4)#250 kcmil AL, 3°C.]
 (B) (3)#2/0 AWG AL & (1)#4 AWG. AL. GND. IN 2°C.

NOTE:
 FEEDERS ARE DESIGNED FOR A MAXIMUM VOLTAGE DROP OF 2% AT DESIGN LOAD.
 BRANCH CIRCUITS ARE DESIGNED FOR A MAXIMUM VOLTAGE DROP OF 3% AT DESIGN LOAD.

- REFERENCE NOTES: (X)**
- REFER TO CIVIL DRAWINGS FOR LOCATION OF UTILITY TRANSFORMER.
 - COORDINATE ALL REQUIREMENTS WITH LOCAL UTILITY COMPANY PRIOR TO ROUGH-IN AND PROVIDE AS REQUIRED.
 - COORDINATE ROUTING OF SERVICE ENTRANCE RATED CABLE WITH GENERAL CONTRACTOR AND ARCHITECT PRIOR TO ROUGH-IN.
 - COORDINATE LOCATION WITH CIVIL DRAWINGS, OWNER AND UTILITY COMPANY PRIOR TO ROUGH-IN. PROVIDE METER LABELING AS REQUIRED BY UTILITY COMPANY.
 - PROVIDE HARD WIRED SURGE PROTECTIVE DEVICE OF SAME MANUFACTURER AS PANEL/METER CENTER.
 - PROVIDE IDENTIFICATION SIGNAGE ON MAIN DISCONNECTS TO CONFORM WITH NEC 230.2(E) AND LOCAL UTILITY COMPANY.
 - COORDINATE EXACT LOCATION OF BUILDING SHUNT TRIP WITH FIRE MARSHALL PRIOR TO ROUGH-IN. SHUNT TRIP TO SHUT OFF ELECTRICAL SERVICE TO M/C.
 - PROVIDE #6 AWG CU. GND. INTER-SYSTEM BONDING JUMPER TO INTER-SYSTEM BONDING TERMINAL PER NEC 250.94.

- GENERAL NOTES:**
- DO NOT SCALE ELECTRICAL DRAWING FOR ANY DIMENSIONS.
 - ALL WORK SHALL COMPLY WITH THE 2017 NATIONAL ELECTRIC CODE, NATIONAL, STATE AND LOCAL CODES. PROVIDE GROUNDING AND BONDING PER NEC 250
 - COORDINATE ALL WORK WITH LOCAL UTILITY COMPANY.
 - CONTRACTOR TO PROVIDE AND INSTALL ARC ENERGY REDUCTION MITIGATION SYSTEM AND DOCUMENTATION FOR ALL OVERCURRENT DEVICES RATED 1200A OR GREATER PER NEC 240.87.
 - PER NEC ARTICLE 110.24, ALL CONSTRUCTION DOCUMENTS SHALL PROVIDE A PERMANENT LABEL TO THE FRONT OF SERVICE EQUIPMENT ENCLOSURE STATING THE MAXIMUM AVAILABLE FAULT CURRENT IN AMPS, THE DATE CALCULATED, THE NOMINAL VOLTAGE AND THE FREQUENCY IN HERTZ, THE SERVICE EQUIPMENT BUS RATING IN AMPS, AND THE SCCR OF SERVICE EQUIPMENT IN AMPS. SIGNAGE SHALL BE ENGRAVED, LAMINATED ACRYLIC, OR MELAMINE LABEL, PUNCHED OR DRILLED FOR MECHANICAL FASTENERS WITH WHITE LETTERS ON A BLACK BACKGROUND, MINIMUM 1/16" THICK. MINIMUM LETTER HEIGHT SHALL BE 1/2".
 - PER NEC ARTICLE 110.16, ARC FLASH WARNING LABELS ARE TO BE INSTALLED ON ALL SWITCHBOARDS, PANELBOARDS, METER SOCKET ENCLOSURES, AND MOTOR CONTROL CENTERS THAT ARE LIKELY TO REQUIRE EXAMINATION, ADJUSTMENT, SERVICING, OR MAINTENANCE WHILE ENERGIZED. ARC FLASH WARNING LABELS SHALL MEET THE ARTICLE 110.21(B).

METER CENTER #C
 SQUARE "D" - "E" METER-PAN" METER CENTER (OR EQUAL),
 400A, 120/208V, 3Ø, 4W, NEMA 3R MAIN SECTION
 WITH 400A, 3P MAIN CIRCUIT BREAKER WITH (3) 125A, 208V, 1Ø,
 3W, NEMA 3R METER SOCKETS WITH (2) 125A/2P TENANT SERVICE
 BREAKERS AND (1) 125A/2P HOUSE PANEL SERVICE BREAKER.
 MINIMUM AIC RATING SHALL BE 42K.



K3 BUILDING TYPE C - POWER RISER DIAGRAM - METER CENTER #C
 NOT TO SCALE



ISSUE HISTORY

| No. | Date | Description |
|-----|----------|-------------------|
| 1 | 04/15/22 | Permit Submission |

REVISION HISTORY

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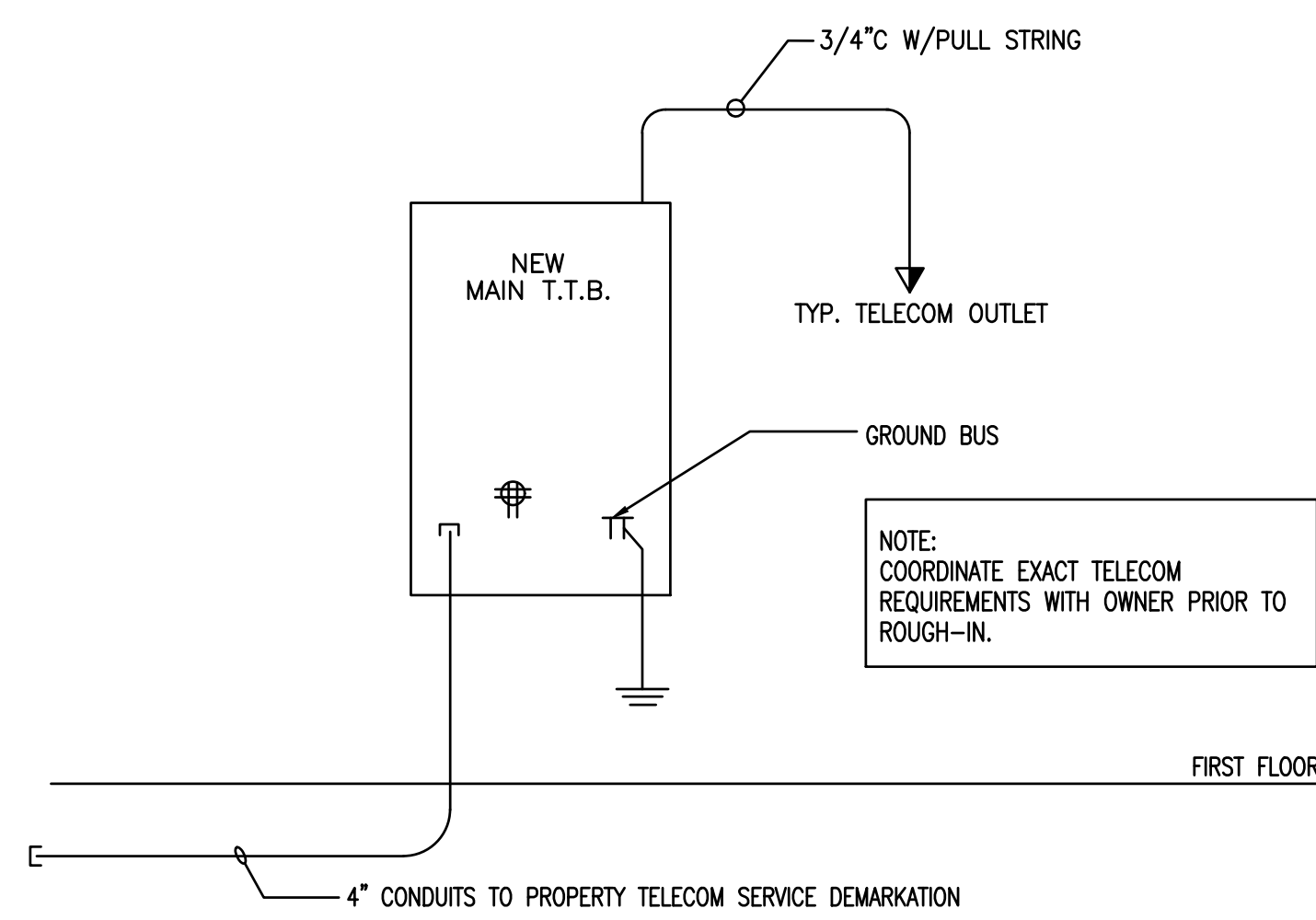
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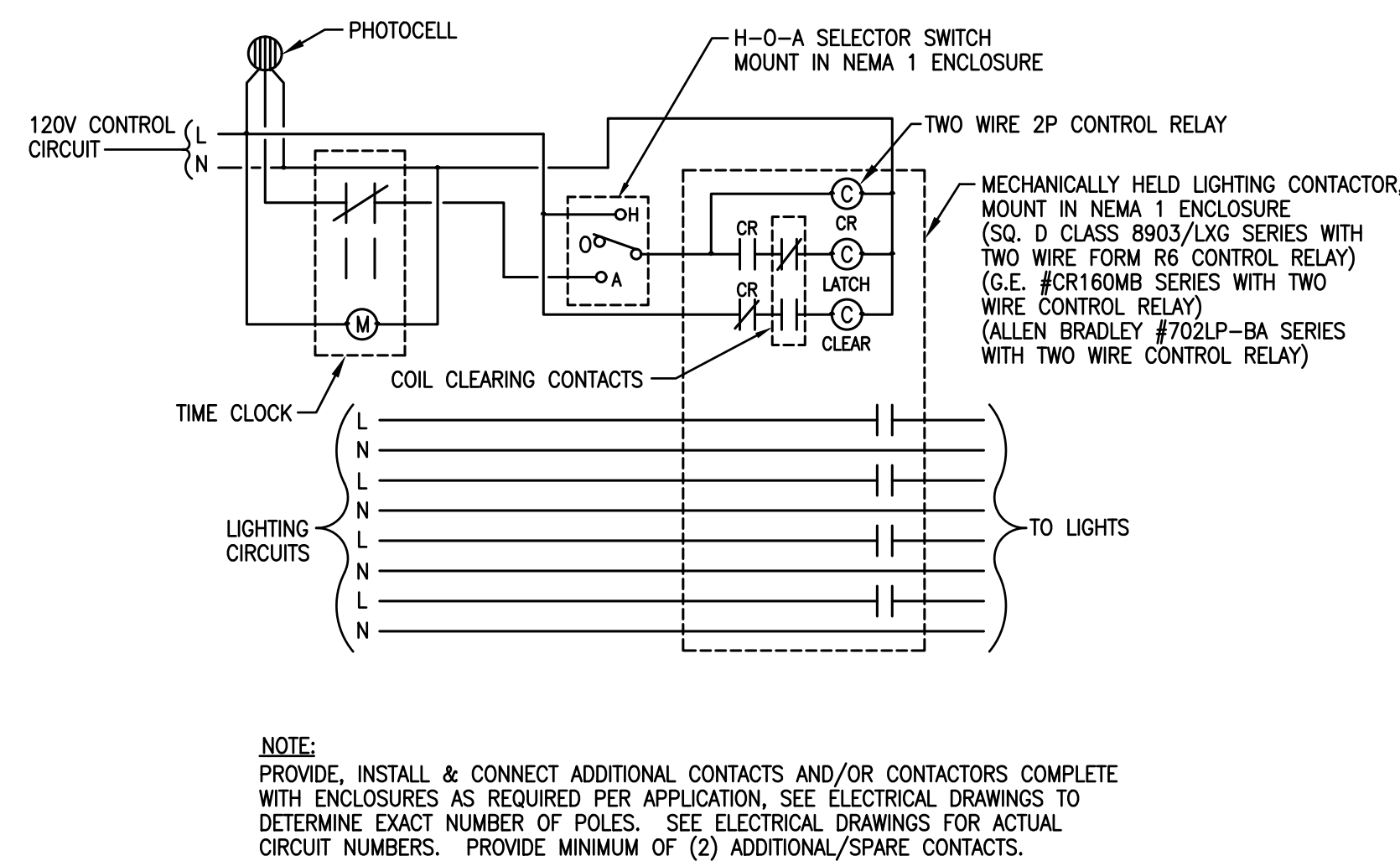


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| THE MADISON | Drawn: M/R/SMB |
| HUNTSVILLE, AL | Checked: BLSA/B |
| | Approved: BLSA/B |
| | Date: 04/15/2022 |
| | Project #: 5722 |

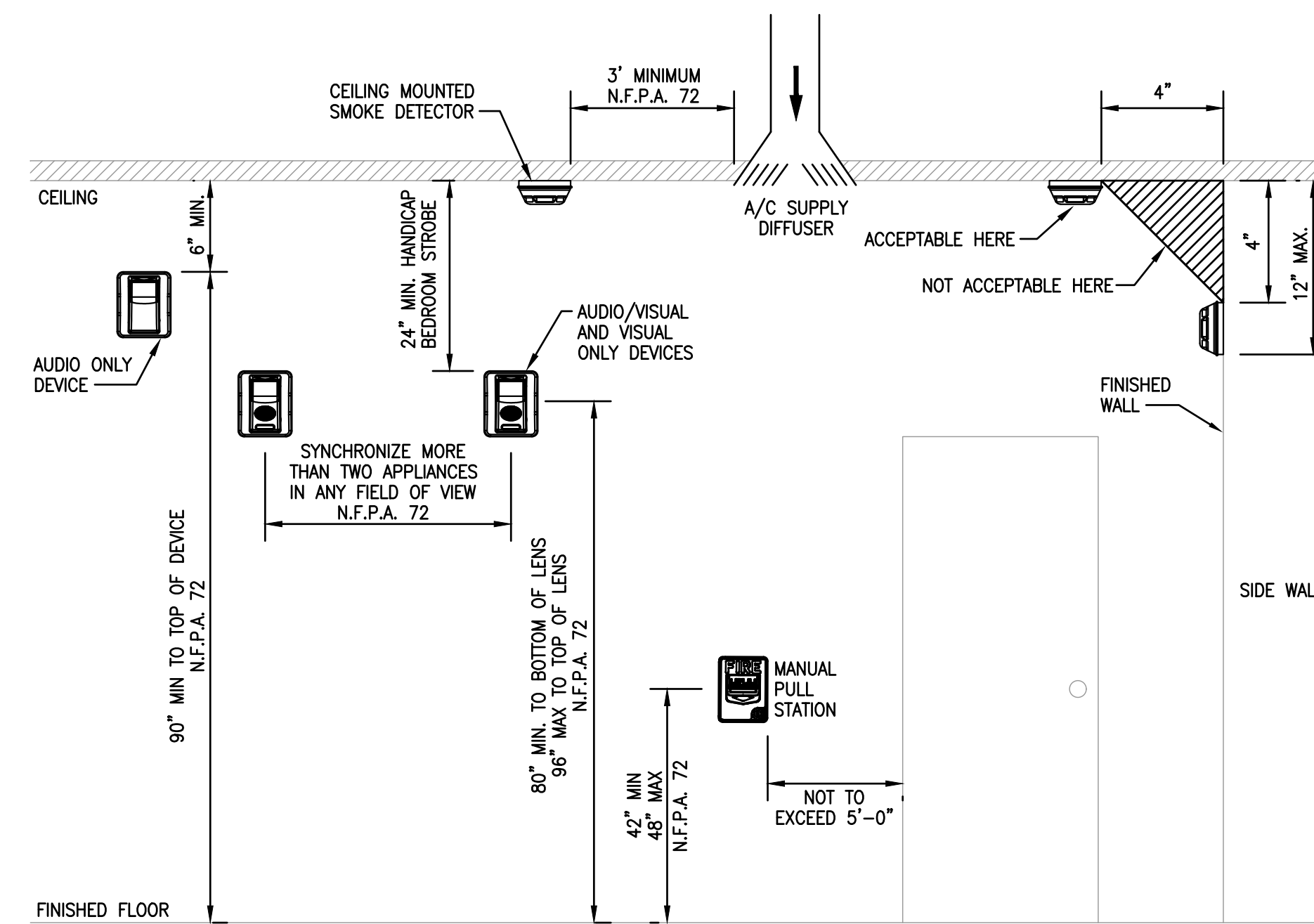
RISER DIAGRAM ELECTRICAL
E4.03



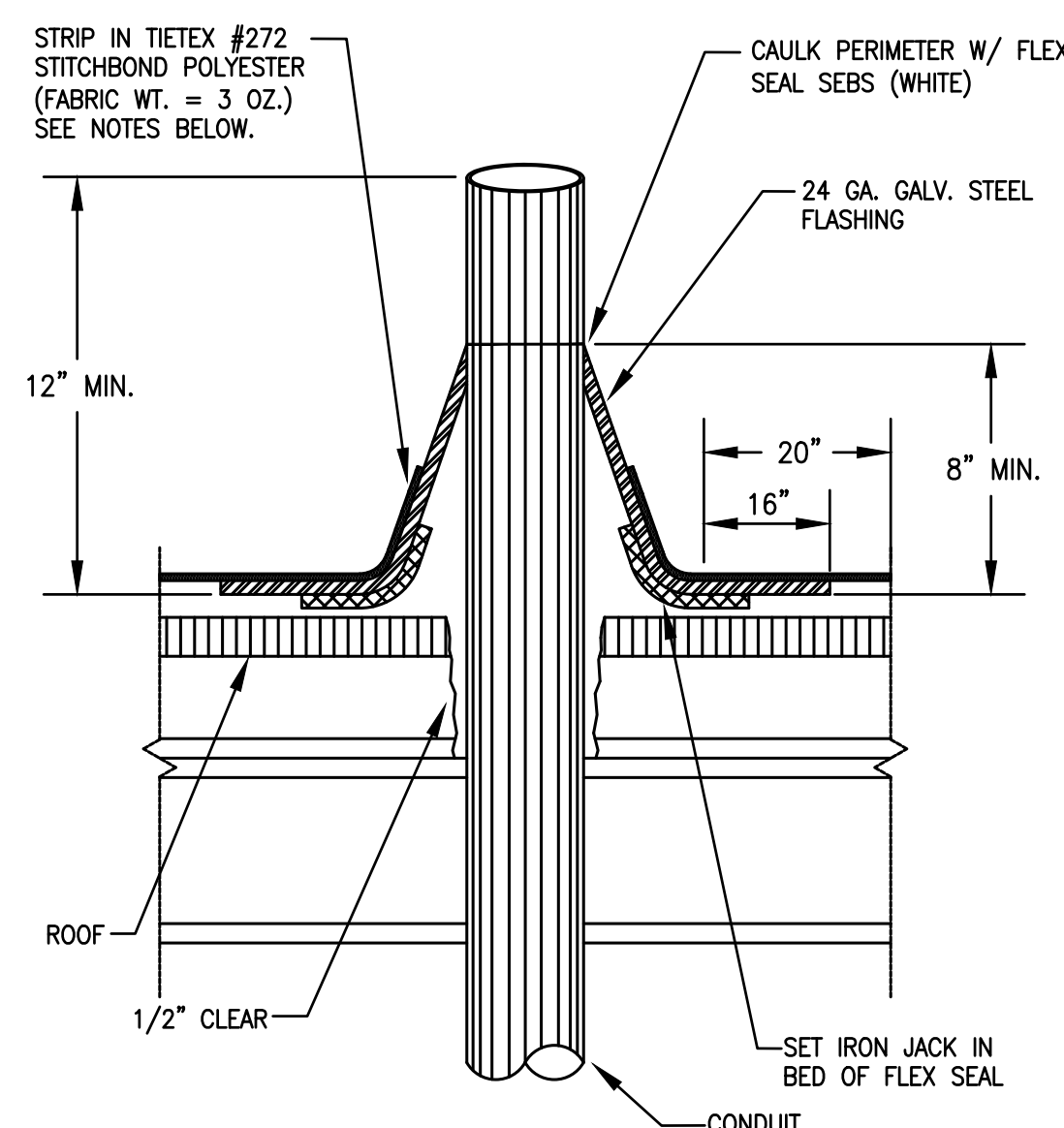
4 COMMUNICATION RISER DIAGRAM
NTS



5 CONTACTOR 'LC1' SCHEMATIC -
PHOTOCELL & TIMECLOCK CONTROLLED
NTS

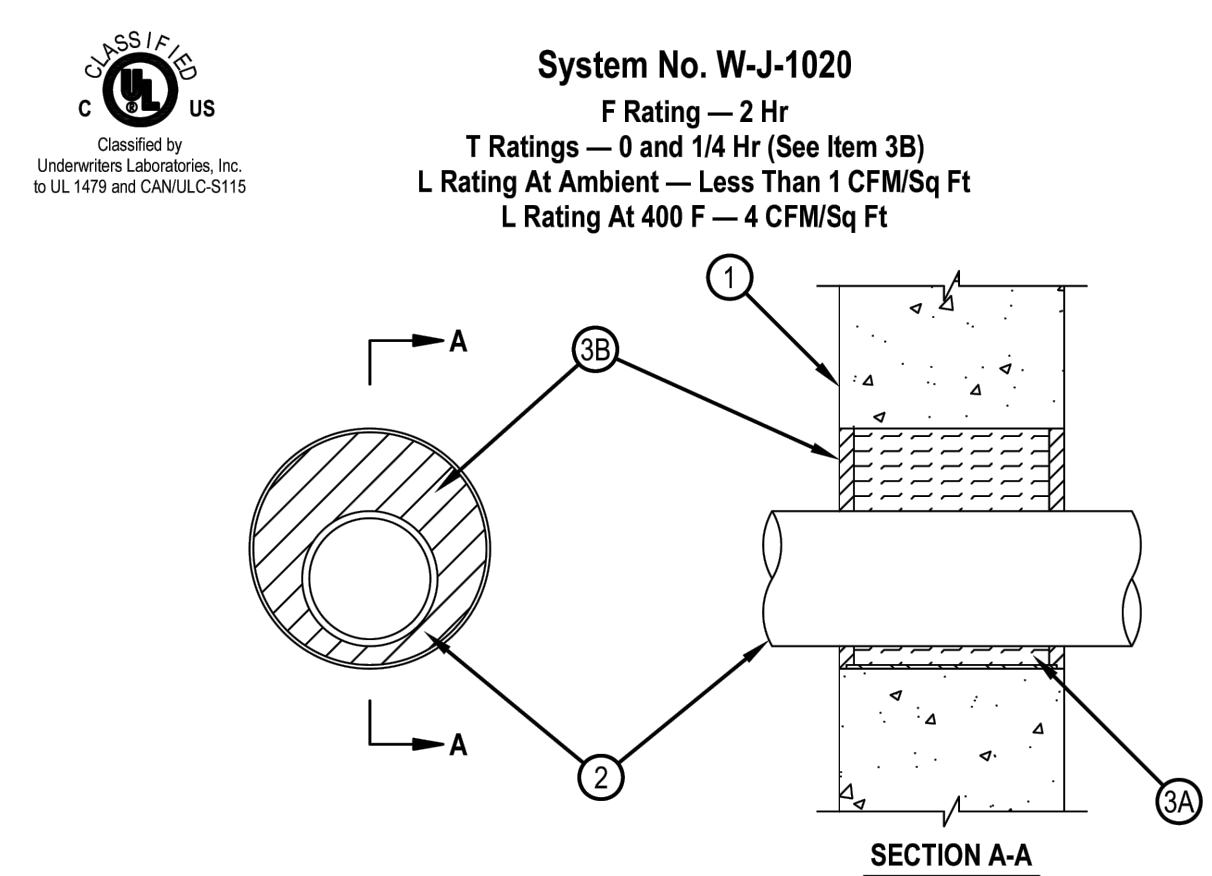


6 STANDARD MOUNTING HEIGHT DETAIL
NTS



- NOTES:
- ALL SURFACES TO BE CLEAN (FREE OF DIRT, GREASE, SCALE, PAINT, ETC.)
 - WIRE BRUSH ALL LOOSE MATERIAL AS REQUIRED.
 - PRIME EXISTING ROOF AND FLASHING W/ SB ELASTOMERIC PRIMER.
 - 5 COURSE: 2 PLYS TIETEX W/ SB ELASTOMERIC GEL (FEATHER SECOND PLY) AT MIN. 40 MIL UNCURED PER COURSE.
 - TOP COAT W/ K-2 EXTREME DUTY ELASTOMER (MATCH ROOF COLOR)
 - DETAIL SHOW FOR WEATHERPROOFING PENETRATION ONLY. CONTRACTOR SHALL PROVIDE FIRESTOPPING AS REQUIRED TO MAINTAIN FIRE RATING OF ROOF.

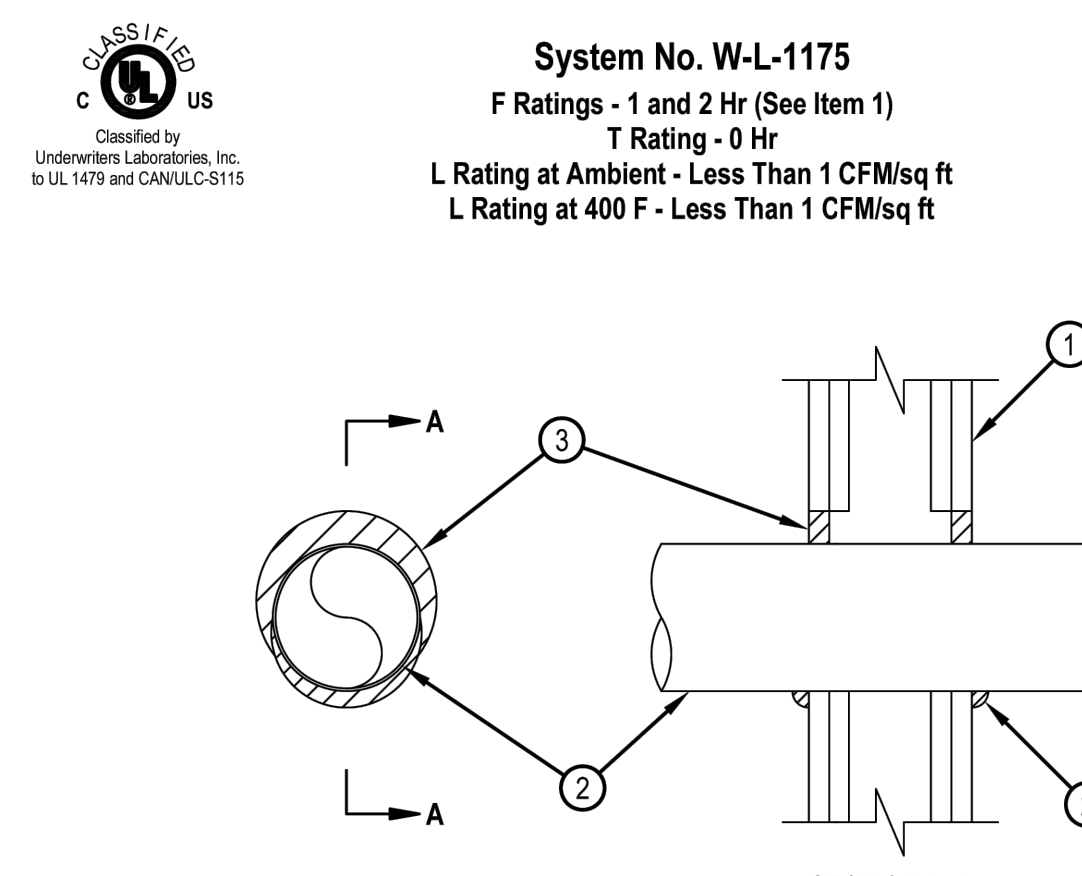
1 ROOF PENETRATION
WEATHERPROOF DETAIL
NTS



1. Wall Assembly — Min 5 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified Concrete Blocks*. Max diam of opening is 8 in.
*See Concrete Blocks (CA-27) category in the Fire Resistance Directory for names of manufacturers.
2. Through Penetrants — One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. Pipe, conduit or tubing to be rigidly supported on both sides of wall assembly. The annular space between pipe, conduit or tubing and periphery of opening shall be min. 3/4 in. to max. 5/16 in. The following types and sizes of metallic pipes, conduits or tubing may be used:
A. Conduit — Nom 4 in. diam (or smaller) electrical metallic tubing or steel conduit.
B. Copper Tubing — Nom 4 in. diam (or smaller) Type L (or heavier) copper tubing.
C. Copper Pipe — Nom 4 in. diam (or smaller) Regular (or heavier) copper pipe.
3. Firestop System — The hourly F and T Rating for the firestop systems are dependent upon the type and size of pipe, annular space, fill material thickness and fill material type as described in the table below. When the annular space in the table shows a range of distances, the penetrating item may be installed either concentrically or eccentrically within the firestop system. The firestop systems shall consist of the following:
A. Packing Material — Mineral wool batt insulation firmly packed into opening as a permanent form. As an option to the above, bakker rod and/or foamed plastic backer material may be used. Packing material to be recessed from both surfaces of wall as required to accommodate the required thickness of fill material.
B. Fill, Void or Cavity Material — Sealant* — Applied within the annulus, flush with both surfaces of wall as shown in the table below:

*Bearing the UL Classification Mark

2 UL FIRE RATED DETAIL (W-J-1020)
NTS



1. Wall Assembly — The 1 or 2 hr fire rated wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
A. Studs — Wall framing shall consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 2-1/2 in. wide and spaced max 24 in. OC.
B. Gypsum Board* — Nom 5/8 in. thick, 4 ft wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300 or U400 Series Design in the Fire Resistance Directory. Max diam of opening is 5-1/2 in.
The hourly F and T Ratings of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.
2. Through Penetrant — One metallic tubing or conduit installed concentrically or eccentrically within the firestop system. Tube or conduit to be rigidly supported on both sides of wall assembly. The annular space between the tube or conduit and periphery of the steel sleeve shall be min 0 in. (point contact) to max 1 in. The following types and sizes of metallic tube or conduit may be used:
A. Conduit — Nom 4 in. diam (or smaller) steel electrical metallic tubing or steel conduit.
3. Fill Void or Cavity Material — Putty — Min 5/8 in. thickness of fill material applied within the annulus, flush with both surfaces of wall. At point contact location between penetrant and wall, a 1/4 in. crown of fill material shall be applied at the conduit/wall interface on both sides of the assembly, lapping 1/4 in. on the conduit and 1/4 in. beyond the periphery of the opening.

*Bearing the UL Classification Mark

3 UL FIRE RATED DETAIL (W-L-1175)
NTS

| ISSUE HISTORY | | |
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| No. | Date | Description |
| 1 | 04/15/22 | Permit Submission |
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| REVISION HISTORY | | |
| No. | Date | Description |
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|------------|------------|
| Drawn: | MJRSMB |
| Checked: | BLSA/B |
| Approved: | BLSA/B |
| Date: | 04/15/2022 |
| Project #: | 5722 |

THE MADISON
HUNTSVILLE, AL
DETAILS ELECTRICAL
E6.01

ELECTRICAL SPECIFICATIONS

I. GENERAL REQUIREMENTS:

A. DO ALL WORK IN COMPLIANCE WITH THE LATEST ADOPTED EDITION OF THE INTERNATIONAL BUILDING CODE (IBC-2020), NFPA 70 (NEC-2017) AND NFPA 101 (LIFE SAFETY CODE-2015), AND THE REGULATIONS OF THE LOCAL UTILITY TELEPHONE, CABLE TELEVISION AND POWER UTILITY COMPANIES. OBTAIN AND PAY FOR ANY AND ALL REQUIRED PERMITS, INSPECTIONS, CERTIFICATES OF INSPECTIONS AND APPROVAL, AND THE LIKE, AND DELIVER SUCH CERTIFICATES TO THE ENGINEER.

B. THE CONTRACTOR SHALL FURNISH, PERFORM, OR OTHERWISE PROVIDE ALL LABOR (INCLUDING, BUT NOT LIMITED TO, ALL PLANNING, PURCHASING, PAINTING, TRANSPORTING, RIGGING, HOISTING, STORING, INSTALLING, TESTING, CHASING, CHANNELING, CUTTING, TRENCHING, EXCAVATING AND BACKFILLING), COORDINATION, FIELD VERIFICATION, EQUIPMENT INSTALLATION, SUPPORT, AND SAFETY, SUPPLIES, AND MATERIALS NECESSARY FOR THE CORRECT INSTALLATION OF COMPLETE AND FUNCTIONAL ELECTRICAL SYSTEMS (AS DESCRIBED OR IMPLIED BY THESE SPECIFICATIONS AND THE APPLICABLE DRAWINGS).

C. ALL DRAWINGS AND SPECIFICATIONS ON THE PROJECT ARE COMPLEMENTARY. EACH TO ALL OTHER SETS, AND THEY SHALL BE USED IN CONJUNCTION FOR THE EXECUTION OF THIS WORK. DIVISION 16 WORK SHOWN ON ANY ONE SET OF DRAWINGS, INCLUDING ALL ARCHITECTURAL DRAWINGS, MECHANICAL, PLUMBING AND FIRE PROTECTION DRAWINGS FOR GENERAL WORK AND EQUIPMENT, AND DIVISION 16 WORK CALLED FOR UNDER ANY SECTION OF THE PROJECT SPECIFICATIONS, SHALL BE CONSIDERED AS INCLUDED IN THIS WORK UNLESS SPECIFICALLY EXCLUDED BY INCLUSION IN SOME OTHER BRANCH OF THE WORK. THIS SHALL INCLUDE ROUGH-IN FOR CONNECTIONS AND EQUIPMENT AS CALLED FOR OR IMPLIED. THE CONTRACTOR SHALL CHECK ALL DRAWINGS AND SPECIFICATIONS FOR THE PROJECT AND SHALL BE RESPONSIBLE FOR THE INSTALLATION OF ALL DIVISION 16 WORK.

D. THE CONTRACTOR SHALL CAREFULLY CHECK THE DRAWINGS AND SPECIFICATIONS OF ALL OTHER TRADES AND DIVISIONS BEFORE INSTALLING ANY OF HIS WORK. HE SHALL IN ALL CASES CONSIDER THE WORK OF ALL OTHER TRADES, AND SHALL COORDINATE HIS WORK WITH THEM SO THAT THE BEST ARRANGEMENTS OF ALL EQUIPMENT, PIPING, CONDUIT, DUCTS, ROUGH-IN, ETC., CAN BE OBTAINED.

E. LOCATIONS DESIGNATED FOR OUTLETS, SWITCHES, DEVICES, EQUIPMENT, ETC., ARE APPROXIMATE AND FINAL LOCATION SHALL BE VERIFIED IN THE FIELD. CONTRACTOR SHALL LOCATE ALL DEVICES UP TO 5 FEET IN ANY DIRECTION AS DIRECTED BY OWNER AND PER CODE. WHERE INSTRUCTIONS OR NOTES ARE INSUFFICIENT TO CONVEY THE INTENT OF THE DESIGN, CONSULT THE OWNER PRIOR TO BIDDING AND INSTALLATION.

F. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING AND COORDINATING THE LOCATIONS OF DEVICES TO BE USED AND COORDINATING THE FINAL LOCATIONS OF ELECTRICAL EQUIPMENT WITH MILLWORK, SINKS, BENCHES, COUNTERS AND SHELVING PRIOR TO BIDDING AND INSTALLATION. ALL DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE OWNER.

G. DIVISION 16 CONTRACTOR SHALL HAVE HAD EXPERIENCE OF AT LEAST THE SAME SIZE AND SCOPE AS THIS PROJECT, ON AT LEAST TWO OTHER PROJECTS WITHIN THE LAST FIVE YEARS IN ORDER TO BE QUALIFIED TO BID THIS PROJECT.

H. CONTRACTOR SHALL DOES HEREBY WARRANT ALL MATERIALS AND EQUIPMENT FURNISHED UNDER THIS SECTION OF THE SPECIFICATIONS TO BE FREE FROM DEFECTS AND TO FUNCTION OR OPERATE SATISFACTORILY FOR ONE YEAR AFTER FINAL ACCEPTANCE OF THE WORK, AND THAT ANY ITEMS NOT MEETING THIS REQUIREMENT WILL BE MADE GOOD BY HIM WITHOUT COST TO THE OWNER, PROVIDED SUCH DEFECTS OR FAILURES ARE NOT DUE TO ABUSE, NEGLIGENCE, OR LACK OF REASONABLE AND ORDINARY MAINTENANCE.

I. ALL WORK SHALL BE EXECUTED IN A WORKMANSHIP MANNER DISPLAYING A NEAT MECHANICAL APPEARANCE UPON COMPLETION.

J. BALANCE TOTAL PHASE LOADS IN EACH ELECTRICAL PANEL TO A VALUE WITHIN 10% OF EACH OTHER.

K. THE CONTRACTOR SHALL PROVIDE ADEQUATE PROTECTION, WHEREVER WORK IS TO BE PERFORMED IN FINISHED/OCCUPIED SPACES, TO PREVENT DAMAGE TO ADJACENT AREAS, EQUIPMENT OR FURNISHINGS; TO PREVENT ACCIDENTAL INJURY TO BUILDING OCCUPANTS AND THE PUBLIC; TO PREVENT THE SPREADING OF DUST, DIRT, DEBRIS, AND MOISTURE FROM THE AREA WHERE WORK IS BEING PERFORMED; AND TO PREVENT DUST, DIRT, DEBRIS, AND MOISTURE FROM GETTING ON OR IN THE BUILDING OCCUPANT'S FURNISHINGS OR EQUIPMENT.

L. THE CONTRACTOR SHALL REPAIR, AT NO COST TO THE OWNER, ANY DAMAGE DONE BY HIMSELF OR HIS EMPLOYEES. HE SHALL ALSO BE RESPONSIBLE FOR ALL CUTTING AND PATCHING REQUIRED TO PROPERLY INSTALL HIS WORK. THIS SHALL ALSO INCLUDE THE PATCHING OF EXISTING ROADWAYS (PAVED OR IMPROVED), PARKING AREAS, SIDEWALKS, WALLS, STAIRS, MECHANICAL WORK, CURBS, GUTTERS, ETC., CUT TO INSTALL WORK PROVIDED BY THE CONTRACTOR. PATCH WORK SHALL COMPLY WITH ALL SCHEDULED SECTIONS OF THESE SPECIFICATIONS AND SHALL MATCH THE EXISTING FINISHES.

M. UPON COMPLETION OF WORK, THE ENTIRE WIRING SYSTEM SHALL BE TESTED, AND SHALL BE SHOWN TO BE IN PROPER WORKING CONDITION IN ACCORDANCE WITH INTENT OF SPECIFICATIONS AND DRAWINGS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO HAVE ALL SYSTEMS READY FOR OPERATION AND TO HAVE AN ELECTRICIAN AVAILABLE TO OPERATE SAME IN ACCORDANCE WITH AND UNDER THE SUPERVISION OF THE INSPECTION REPRESENTATIVE OF THE ENGINEER. THE CONTRACTOR SHALL BE AVAILABLE TO ASSIST IN REMOVAL OF PANEL FRONTS, ETC., TO PERMIT INSPECTION AS REQUIRED.

N. IN ACCORDANCE WITH DIVISION 1 AND THE CONDITIONS OF THE CONTRACT, THE CONTRACTOR SHALL PROVIDE AND KEEP UP TO DATE A COMPLETE RECORD SET OF CONSTRUCTION "AS-BUILT" BLUELINE PRINTS WHICH SHALL BE CORRECTED DAILY, AND SHALL SHOW EVERY CHANGE FROM THE ORIGINAL CONTRACT DRAWINGS, INCLUDING ADDENDA AND CHANGE ORDERS IN ACCORDANCE WITH GENERAL REQUIREMENTS AND SPECIAL CONDITIONS. THIS SET OF PRINTS SHALL BE KEPT ON THE JOB SITE, AND SHALL BE USED ONLY AS A RECORD SET. THIS SHALL NOT BE CONSIDERED AS AUTHORIZATION FOR THE CONTRACTORS TO MAKE CHANGES IN THE LAYOUT WITHOUT DEFINITE INSTRUCTION IN EACH CASE.

II. ELECTRICAL SCOPE:

A. FURNISHING AND INSTALLATION OF POWER SYSTEMS, AND AUXILIARY SYSTEMS AS SHOWN OR HEREIN SPECIFIED.

B. CONNECTION OF ALL EQUIPMENT REQUIRING ELECTRICAL CONNECTION, MENTIONED IN THIS DIVISION OR SHOWN ON DRAWINGS, WHETHER FURNISHED BY DIVISION 16 OR UNDER OTHER DIVISIONS, OR FURNISHED BY OWNER.

C. FURNISHING AND INSTALLATION OF OUTLET BOXES, CONDUIT RACEWAYS, FOR A TELEPHONE AND DATA RACEWAY DISTRIBUTION SYSTEM. (TELEPHONE AND DATA HARDWARE, AS WELL AS WIRING AND SOFTWARE IS NOT INCLUDED).

D. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR CONTACTING THE OFFICES OF ALL LOCAL AND/OR STATE AUTHORITIES HAVING JURISDICTION OVER THIS PROJECT IN ORDER TO SCHEDULE ALL REQUIRED INSPECTIONS AND OBTAIN ALL NECESSARY PERMITS, ETC. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER OF ALL SCHEDULED INSPECTIONS AT LEAST TWO WEEKS IN ADVANCE OF THE SCHEDULED DATE.

E. THE CONTRACTOR SHALL REPLACE ANY DEFECTIVE MATERIALS, EQUIPMENT, OR WORKMANSHIP WITHOUT COST TO THE OWNER WITHIN THE STIPULATED GUARANTEED PERIOD.

F. IT SHALL BE THE RESPONSIBILITY OF THE DIVISION 16 CONTRACTOR TO HAVE ALL SYSTEMS READY FOR OPERATION AND TO HAVE AN ELECTRICIAN AVAILABLE FOR ALL INSPECTIONS. THE CONTRACTOR SHALL PROVIDE PERSONNEL TO ASSIST IN REMOVAL OF PANEL FRONTS, ETC. TO PERMIT INSPECTION AS REQUIRED.

G. SUBMIT TO THE ARCHITECT/ENGINEER PROMPTLY AFTER AWARD OF CONTRACT AND PRIOR TO PURCHASING, SIX COPIES OF MANUFACTURER'S SHOP DRAWINGS IN ACCORDANCE WITH DIVISION 1, SECTION 01300 -- SUBMITTALS FOR THE FOLLOWING ITEMS: ALL SHOP DRAWINGS OF A SPECIFIC ITEM OR SYSTEM SHALL BE MADE IN ONE SUBMITTAL, AND WITHIN TEN DAYS AFTER AWARD OF CONTRACT.

1. PANELBOARDS
2. SUPPORTS
3. WIRING DEVICES
4. DISCONNECT SWITCHES
5. CONDUIT
6. WIRE

H. COMPLETED WIRING SYSTEMS SHALL BE FREE FROM SHORT CIRCUITS AND AFTER COMPLETION, PERFORM TESTS FOR INSULATION RESISTANCE IN ACCORDANCE WITH THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE. ALL WIRING SYSTEMS SHALL BE COMPLETELY AND TOTALLY "SAFE" DURING CONSTRUCTION. ONLY QUALIFIED PERSONNEL SHALL HANDLE ELECTRICAL SYSTEMS.

I. BEFORE ROUGH-IN OF CIRCUITRY OR CONNECTING TO EQUIPMENT, FURNISHED UNDER THIS DIVISION, ANY OTHER DIVISION, OR BY THE OWNER, THE CONTRACTOR SHALL VERIFY THE ELECTRICAL CHARACTERISTICS AND REQUIREMENTS OF THE EQUIPMENT BEING FURNISHED AND FOR THAT SPECIFIED AND SHOWN ON THE DRAWINGS AND PROVIDE FOR PROPER ROUGH-IN AND CONNECTION.

J. THE ELECTRICAL CIRCUITS, COMPONENTS, AND CONTROLS FOR ALL EQUIPMENT ARE SELECTED AND SIZED, BASED ON THE EQUIPMENT SPECIFIED. IF SUBSTITUTIONS AND/OR EQUIPMENT ARE FURNISHED, IT SHALL BE THE RESPONSIBILITY OF ALL PARTIES CONCERNED, INVOLVED IN, AND FURNISHING THE SUBSTITUTE AND/OR EQUIPMENT EQUIPMENT TO VERIFY AND COMPARE THE ELECTRICAL CHARACTERISTICS AND REQUIREMENTS OF THAT SPECIFIED AND/OR SHOWN EQUIPMENT TO THE EQUIPMENT SPECIFIED. GREATER CAPACITY OR MORE MATERIALS OR LABOR IS REQUIRED FOR THE ROUGH-IN, CIRCUITRY OR CONNECTIONS THAN FOR THE ITEM SPECIFIED AND PROVIDED FOR, THEN IT SHALL BE THE RESPONSIBILITY OF THE PARTIES INVOLVED IN PROVIDING THE SUBSTITUTE AND/OR EQUIPMENT TO PROVIDE THE NECESSARY MATERIALS OR LABOR TO CORRECT THE ROUGH-IN FOR THE PROPER ROUGH-IN, CIRCUITRY AND CONNECTIONS FOR THE EQUIPMENT FURNISHED. NO ADDITIONAL CHARGES ABOVE THE BASE BID SHALL BE ALLOWED FOR SUCH REVISIONS.

K. EXCAVATION FOR UNDERGROUND ELECTRICAL STRUCTURES: CONFORM TO ELEVATIONS AND DIMENSIONS SHOWN WITH A TOLERANCE OF PLUS OR MINUS 0.10"; PLUS A SUFFICIENT DISTANCE TO PERMIT PLACING AND REMOVAL OF CONCRETE FORMWORK, INSTALLATION OF SERVICES, OTHER CONSTRUCTION, AND FOR INSPECTION.

L. TRENCHING: EXCAVATE TRENCHES FOR ELECTRICAL INSTALLATIONS AS FOLLOWS:

1. EXCAVATE TRENCHES TO THE UNIFORM WIDTH, SUFFICIENTLY WIDE TO PROVIDE AMPLE WORKING ROOM AND A MINIMUM OF 6" TO 7" CLEARANCE ON BOTH SIDES OF RACEWAYS AND EQUIPMENT.
2. EXCAVATE TRENCHES TO DEPTH INDICATED OR REQUIRED.
3. LIMIT THE LENGTH OF OPEN TRENCH TO THAT IN WHICH INSTALLATIONS CAN BE MADE AND THE TRENCH BACKFILLED WITH THE SAME DAY.
4. WHERE ROCK IS ENCOUNTERED, CARRY EXCAVATION BELOW REQUIRED ELEVATION AND BACKFILL WITH A LAYER OF CRUSHED STONE OR GRAVEL PRIOR TO INSTALLATION OF RACEWAYS AND EQUIPMENT. PROVIDE A MINIMUM OF 6" OF STONE OR GRAVEL CUSHION BETWEEN ROCK BEARING SURFACE AND ELECTRICAL INSTALLATIONS.

M. THE CONTRACTOR SHALL PROVIDE ALL INSERTS FOR DIVISION 16 EQUIPMENT TO BE PLACED IN CONCRETE OR THROUGH CONCRETE SLABS AS CONSTRUCTION PROGRESSES. HE SHALL PROVIDE ALL MISCELLANEOUS HANGING AND SUPPORTING HARDWARE. ALL ELECTRICAL WORK IS TO BE CONCEALED IN OR BUILT INTO GENERAL CONSTRUCTION SHALL BE PLACED AS CONSTRUCTION PROGRESSES. FAILURE OF THE CONTRACTOR TO COORDINATE WORK WITH OTHER TRADES AND THE PROJECT CONSTRUCTION PROGRESS SHALL MAKE HIM RESPONSIBLE FOR ALL COST OF CUTTING AND PATCHING, AS REQUIRED TO INSTALL WORK, NO STRUCTURAL MEMBER, SHOWN BY ARCHITECT/ENGINEER OR FINISHED WORK SHALL BE CUT OR ALTERED WITHOUT PRIOR WRITTEN APPROVAL BY ARCHITECT/ENGINEER. CONTRACTOR SHALL FIRE RATE ALL PENETRATIONS THROUGH ALL FIRE RATED SLABS OR WALLS PER THE INTENDED RATING.

N. THE CONTRACTOR SHALL SUPPLY AND SET INTO PLACE ALL WALL SLEEVES FOR CONDUITS AND CEILING INSERTS FOR HANGERS IN AREAS OF NEW CONSTRUCTION AS BUILDING CONSTRUCTION PROGRESSES. INSTALL EQUIPMENT TO BE CONCEALED IN WALLS BEFORE WALLS ARE CONSTRUCTED IN ORDER THAT WALLS MAY BE CONSTRUCTED AROUND CONDUITS, ENCLOSURES, ETC.

O. METALLIC MATERIALS SHALL BE PROTECTED AGAINST CORROSION. EQUIPMENT ENCLOSURES SHALL BE GIVEN RUST-INHIBITING TREATMENT AND STANDARD FINISH BY MANUFACTURER. ALUMINUM SHALL NOT BE USED ON CONTACT WITH EARTH, AND, WHERE CONNECTED TO DISSIMILAR METALS, SHALL BE PROTECTED BY SUITABLE FITTINGS AND TREATMENT. ALL TERRIBLE METALS SUCH AS ANCHORS, BOLTS, BRACKETS, BOXES, BODIES, CLAMPS, FITTINGS, GARDERS, NUTS, PINS, RODS, SHIMS, THIMBLES, WASHERS, AND MISCELLANEOUS PARTS, NOT OF STAINLESS STEEL, OR NONFERROUS MATERIALS, SHALL BE HOT-DIPPED GALVANIZED.

P. ALL CONDUITS STUBBED OUT FOR FUTURE USE SHALL HAVE A PULL WIRE INSTALLED, A PLASTIC CAP INSTALLED AND BE IDENTIFIED AS TO THE CONDUIT ORIGIN.

Q. THE RESPONSIBILITY FOR ANY CUTTING OF CONSTRUCTION WHICH IS REQUIRED FOR THE INSTALLATION OF DIVISION 16 WORK, SHALL BE BY THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH ALL OTHER TRADES AND THE OWNER BEFORE ANY CUTTING AND OBTAIN APPROVAL FROM THE ARCHITECT/ENGINEER PRIOR TO ANY CUTTING. ALL PATCHING AND FINISHING SHALL BE BY THE CONTRACTOR.

R. WHERE OPENINGS OR HOLES ARE CUT IN CONSTRUCTION AND THE CUTTING BREAKS ELECTRICAL CIRCUITRY OR CONTROL CIRCUITRY AND WIRING, THEN IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REROUTE THE CIRCUITRY CONDUIT AND REWIRING AND TO COMPLETE THE CIRCUITRY AS REQUIRED AND AS APPROVED BY THE ARCHITECT/ENGINEER. TEMPORARY COMPLETION SHALL BE PROVIDED WHERE NECESSARY BEFORE THE PERMANENT REROUTING AND COMPLETION WORK IS FINISHED.

S. ANY PENETRATIONS OF FIRE OR SMOKE RATED ASSEMBLIES MADE BY THIS CONTRACTOR IN VERTICAL OR HORIZONTAL CONSTRUCTION SHALL BE SEALED AND PROTECTED BY THIS CONTRACTOR IN ORDER TO MAINTAIN THE ESTABLISHED FIRE RATING WITH METHODS AS APPROVED BY THE AUTHORITY HAVING JURISDICTION.

III. IDENTIFICATION:

A. IDENTIFICATION NAMEPLATES SHALL BE LAMINATED PLASTIC, SECURED TO EQUIPMENT WITH TWO SCREWS.

B. EACH PANELBOARD AND SWITCHBOARD SHALL BE EQUIPPED WITH A PERMANENT PLASTIC NAMEPLATE WITH 1/2" MINIMUM LETTERS, SECURELY FASTENED TO THE DEVICE.

C. EACH INDIVIDUALLY MOUNTED CIRCUIT BREAKER, SWITCH, TRANSFER SWITCH, MOTOR STARTER, LIGHTING CONTROLLER, TRANSFORMER AND/OR ANY OTHER CONTROL OR PROTECTIVE DEVICE SHALL BE EQUIPPED WITH 1/2" MINIMUM LETTERS.

D. PANELBOARDS SHALL HAVE TYPEDWRITTEN DIRECTORIES. ALL CIRCUITS TO BE IDENTIFIED BY DEVICES SERVED AND ROOM NUMBERS (I.E., LIGHTING ROOM 216). HANDWRITTEN DIRECTORIES WILL NOT BE ALLOWED.

E. EACH JUNCTION BOX CABINET OR WIREWAY LARGER THAN 6" X 6" SHALL BE EQUIPPED WITH A PLASTIC NAMEPLATE WITH 1/2" MINIMUM LETTERS INDICATING THE SYSTEM ENCLOSED.

F. ALL STATES JUNCTION BOXES AND CONDUIT SHALL BE COLOR CODED INSIDE AND OUTSIDE OF THE BOX PRIOR TO THE INSTALLATION OF CONDUCTORS PER THE FOLLOWING:

1. CCTV SYSTEM: GREEN
2. TELEPHONE DATA SYSTEM: BLUE
3. FIRE ALARM SYSTEM: RED

G. ENTIRE BOX INSIDE AND OUT, INCLUDING COVER, SHALL BE PAINTED PRIOR TO INSTALLING CONDUCTORS.

IV. WIRING DEVICES:

A. SWITCHES AND RECEPTABLES IN LOBBIES, CORRIDORS OR COMMERCIAL SPACES, UNFINISHED AND MECHANICAL SPACES SHALL BE 20 AMP COMMERCIAL GRADE 125 VAC. GRAY IN COLOR WITH STAINLESS STEEL COVERPLATES.

B. WEATHERPROOF RECEPTABLES SHALL BE 60A TYPES WITH GASKETED STAINLESS STEEL KEY LOCKABLE FLIP COVER TYPE COVERPLATES. SURGE SUPPRESSION TYPE OUTLETS IN MDGS AND IDFS SHALL BE HUBBELL #83625 (BLUE) OR EQUAL.

C. RECEPTABLES PROVIDED FOR ATTACHMENT OF CORD AND PLUG EQUIPMENT SHALL BE HEAVY DUTY, SPECIFICATION GRADE, NON-INTERCHANGEABLE, FLUSH MOUNTED TYPES OF THE PROPER NEMA CONFIGURATION TO SERVE THE EQUIPMENT. NEMA CONFIGURATIONS SHALL BE VERIFIED PRIOR TO INSTALLATION OF CIRCUIT CONDUCTORS. CONTRACTOR TO PROVIDE ALL CONNECTION, WIRING, POTENTIALS FOR DISHWASHERS, COOKING RANGES, OVENS AND GARBAGE DISPOSALS.

D. ALL DEVICES SHALL HAVE PROPER PLATES, CARPET FLANGES, TRIMS, RINGS, ESCUTCHEONS, ETC., AS MANUFACTURED BY SAME MANUFACTURER AS DEVICES. ANY TELEPHONE OR OTHER OUTLET WHICH IS NOT EQUIPPED WITH A PLATE FURNISHED BY OTHERS SHALL HAVE ONE PROVIDED BY THIS CONTRACTOR. DEVICE PLATES SHALL BE COLOR AND TYPE AS SHOWN BELOW.

1. FINISHED SPACES DECORA LINE:
 - a. COORDINATE EXACT COLOR WITH OWNER/ARCHITECT.
2. UNFINISHED OR INDUSTRIAL OR COMMERCIAL TYPE SPACES:
 - a. GRAY DEVICES
 - b. STAINLESS STEEL OR STAMPED GALVANIZED STEEL ON SURFACE MOUNTED BOXES
 - c. STAINLESS STEEL PLATES ON FLUSH MOUNTED BOXES

F. MOUNTING HEIGHTS ARE APPROXIMATE. THE EXACT LOCATIONS AND MOUNTING HEIGHTS SHALL BE DETERMINED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WITH ALL TRADES TO INSURE CORRECT INSTALLATION, I.E. OVER COUNTERS IN OR ABOVE BACK-SPLASHES, IN BLOCK WALLS, TILE, AND OTHER SPECIFIC CONSTRUCTION FEATURES. LOCATION OF OUTLETS IN KITCHENS, BATHS, HALLWAYS, AND CABINETS SHALL BE VERIFIED. OUTLETS MOUNTED IN KICK OR TOE SPACES SHALL BE MOUNTED HORIZONTALLY. OUTLET BOXES SHALL BE MOUNTED TO PREVENT DEVICE PLATE FROM OVERLAPPING BACKSPLASH, TRIM, TILE, ETC. LOCATE SO DEVICE PLATE WILL LAY FLAT AGAINST SURFACE COMPLETELY AROUND THE PERIMETER OF PLATE.

G. OUTLETS, OTHER THAN THOSE COORDINATED WITH COUNTER TOPS, SHELVES, AND CABINETS, SHALL BE MOUNTED WITH CENTER LINE OF OUTLET BOXES THE FOLLOWING DISTANCE ABOVE THE FINISHED FLOOR, UNLESS OTHERWISE INDICATED:

1. RECEPTABLES, GENERAL: 1'-6" AFF
2. TELEPHONE OUTLETS: 1'-6" AFF
3. SWITCHES, GENERAL: 4'-0" AFF

V. RACEWAYS:

A. SHALL BE GALVANIZED OUTSIDE AND INSIDE BY HOT DIPPING. E.M.T. SHALL BE ELECTRO-GALVANIZED. CONDUITS SHALL BE AS MANUFACTURED BY REPUBLIC, PITTSBURGH STANDARD, WHEATLAND, TRIANGLE, ALLED, OR YOUNGSTOWN.

B. SHALL BE STANDARD THREADED TYPE, GALVANIZED OUTSIDE AND INSIDE BY HOT DIPPING. THREADED AND CLAMP TYPE NOT ACCEPTABLE. SHALL BE AS MANUFACTURED BY RACO, EFCOR, OR APFLETON.

C. SHALL BE STEEL THREADED COMPRESSION TYPE. ALL COUPLINGS AND CONNECTORS SHALL BE EFCOR OR RACO. PRESSURE INDICATED TYPE CONNECTORS OR CAST METAL WILL NOT BE APPROVED FOR ANY LOCATION.

D. CONNECTORS SHALL HAVE PLASTIC INSULATED THROAT INSERTS.

E. THE USE OF METAL CLAD CABLE IS ACCEPTABLE IN LOCATIONS AS ACCEPTED BY THE NEC AND ALL LOCAL JURISDICTIONAL CODES.

F. STEEL METAL CLAD CABLE, TYPE MC, EMPLOYING CIRCUIT CONDUCTORS #12 SOLID TO #2 AWG, SOLID OR STRANDED COPPER WITH THIN INSULATION, AN INSULATED GREEN GROUNDING CONDUCTOR AND GALVANIZED STEEL INTERLOCKED ARMOR EXCEEDING THE CABLES SHALL BE SUITABLE FOR USE IN DRY LOCATIONS AT TEMPERATURES NOT EXCEEDING 90° C ON AD CIRCUITS UP TO 600 VOLTS IN ACCORDANCE WITH ARTICLE 330. THE CABLE SHALL BE ONE AND TWO HOUR FIRE RATED PER ANS/UL 1479 FOR USE IN WALL, CEILING AND FLOOR ASSEMBLIES.

G. FLEXIBLE METALLIC CONDUIT RACEWAYS MAY BE USED TO CONNECT HVAC UNITS LOCATED IN INTERIOR MECHANICAL AREAS. MINIMUM SIZE 3/4".

H. CONDUIT SHALL BE SIZED IN ACCORDANCE WITH THE LATEST NATIONAL ELECTRICAL CODE EXCEPT THAT NO CONDUIT SHALL BE SMALLER THAN 3/4" UNLESS OTHERWISE NOTED. CONDUIT SHALL BE SIZED LARGER THAN REQUIRED ABOVE WHEN SO SHOWN ON THE DRAWINGS OR WHEN REQUIRED BY LOCAL CODE.

I. ANY CONDUIT STUBBED OUT FOR FUTURE SHALL BE CAPPED WITH A PLASTIC CAP AND MARKED WITH A 2" MINIMUM RED METAL TAG WHICH IDENTIFIES CONDUIT ORIGIN. CONDUITS STUBBED UP ABOVE GRADE OR ROOF SHALL BE TAGGED ON THE CONDUIT. CONDUIT STUBBED OUT BELOW GRADE SHALL BE TAGGED ON NEAREST BUILDING WALL, CURB, ETC., DIRECTLY OVER THE CONDUIT RUN. ALL EMPTY SCHEDULES SHALL HAVE PULL WIRES.

VI. SCHEDULES 40 RIGID PVC:

A. CONDUIT SHALL BE COMPOSED OF POLYVINYLCHLORIDE AND SHALL BE UL RATED TYPE 40 FOR USE WITH 90°C RATED CONDUCTORS. CONDUIT SHALL CONFORM TO NEMA STANDARDS AND APPLICABLE SECTIONS OF NEC.

B. INSTALLATION OF RIGID NON-METALLIC CONDUIT SHALL COMPLY WITH ARTICLE 352 OF THE NATIONAL ELECTRICAL CODE (NFPA 79) AND THESE SPECIFICATIONS.

C. PROVIDE A CONTINUOUS, INSULATED, GROUNDING CONDUCTOR IN EVERY RIGID, NON-METALLIC RACEWAY EVEN IF NOT SHOWN ON THE DRAWINGS. THE GROUNDING CONDUCTOR SHALL BE CONNECTED TO GROUND AT EACH END OF THE RACEWAY IN ACCORDANCE WITH ARTICLE 250 OF THE NATIONAL ELECTRICAL CODE (NFPA 70).

D. WHERE RIGID NON-METALLIC CONDUIT TRANSITIONS TO METALLIC CONDUIT, THE LOCATION OF THE TRANSITION SHALL BE UNDERGROUND.

E. NO PVC CONDUIT SHALL BE RUN EXPOSED, OR ABOVE GRADE.

VII. WIRE AND CABLE 600 VOLTS:

A. CONDUCTORS SHALL HAVE CURRENT CARRYING CAPACITIES AS PER NEC AND WITH 600 VOLT INSULATION. #12 AVERAGE MINIMUM FOR 20 AMP CIRCUITS AND #14 FOR 15 AMP CIRCUITS EXCEPT FOR CONTROLS, AND FIXTURE WIRE. THINWALL SHALL BE COPPER.

B. #12 AND #10 SHALL BE SOLID, TYPE THW/THHN INSULATION.

C. #8 AND LARGER, AND ANY SIZE TO MOTORS SHALL BE STRANDED TYPE THW.

D. SHALL BE MADE WITH T & B STA-KON WIRE JOINTS, PT SERIES, COMPLETE WITH INSULATING CAPS AND INSTALLED WITH WT161 TOOL OR WT2000 TOOL. IDEAL SUPER-NUTS (NOT WIRE NUTS), IDEAL WIRE NUTS, BUSHINGS AND ELEC. PRODUCTS & CAT. OR SERIES 2000 PRES-SURE CONNECTORS COMPLY WITH NYLON SNAP-ON INSULATORS AND INSTALLED WITH C24 PRESSURE TOOL.

E. ALL JOINTS AND SPLICES IN WIRE SHALL BE MADE WITH APPROVED SOLDERLESS CONNECTORS, AND COVERED SO THAT INSULATION IS OWNER APPROVED EQUAL TO CONDUCTOR INSULATION. SPLICES SHALL NOT BE PERMITTED IN CONTROL, SECURITY, FIRE ALARM, TELEVISION OR COMMUNICATIONS SYSTEMS, OR WHERE OTHERWISE NOTED. SPLICING OF WIRE OR CABLES WILL NOT BE ALLOWED BELOW GRADE, INCLUDING IN BOXES BELOW GRADE.

F. BOTH CONDUCTORS AND CONDUITS SHALL BE CONTINUOUS FROM OUTLET TO OUTLET.

G. IN INSTALLING THE MAIN ELECTRICAL SERVICE, ADDITIONAL SLACK CONDUCTORS SHALL BE PROVIDED AND TERMINATED AS REQUIRED BY ELECTRIC UTILITY FOR CONNECTION TO THEIR EQUIPMENT, FIELD COORDINATE WITH UTILITY PRIOR TO INSTALLING CONDUCTORS.

H. IN INSTALLING PARALLEL CONDUCTORS IT IS MANDATORY THAT ALL CONDUCTORS MAKING UP THE FEEDER BE EXACTLY THE SAME LENGTH, THE SAME SIZE AND THE SAME TYPE OF CONDUCTOR WITH THE SAME INSULATION. FURTHER, EACH GROUP OF CONDUCTORS MAKING UP A PHASE OR NEUTRAL MUST BE BONDED AT BOTH ENDS IN AN APPROVED MANNER.

I. CONDUCTOR SIZES INDICATED ON CIRCUIT HOMERUNS OR IN PANELBOARD SCHEDULES SHALL BE INSTALLED OVER THE ENTIRE LENGTH OF THE CIRCUIT UNLESS NOTED OTHERWISE ON THE DRAWINGS.

J. CONDUCTORS SHALL BE CONTINUOUS AND UNSPLICED WHERE INSTALLED IN CONDUIT. SPLICES SHALL OCCUR ONLY WITHIN WRING TROUGHS, WIREWAYS, JUNCTION BOXES, OUTLET BOXES, OR EQUIPMENT ENCLOSURES WHERE SUFFICIENT ADDITIONAL ROOM IS PROVIDED FOR ALL SPLICES.

K. EACH BRANCH CIRCUIT AND FEEDER CONDUCTOR SHALL BE COLOR CODED. FOR CONDUCTOR SIZES THRU NO. 6 AWG, THE INSULATION SHALL BE OF THE COLOR AS INDICATED BELOW. COLOR CODE SHALL BE STRICTLY ADHERED TO. FOR CONDUCTOR SIZES NO. 4 AWG AND LARGER, COLOR CODED PHASE TAPE MAY BE APPLIED COMPLETELY AROUND THE CONDUCTOR INSULATION WITHIN 8" OF EACH END OF THE CONDUCTOR AND IN EACH PULL OR JUNCTION BOX OR WHENEVER CONDUCTORS ARE PHYSICALLY EXPOSED TO VIEW. GROUNDING CONDUCTORS AND GROUNDING CONDUCTORS SHALL HAVE INSULATION COLOR AS INDICATED FOR SIZES THROUGH #6 AWG. 120/208V, 3PHASE, 3W.

- PHASE A COLOR: BLACK
- PHASE B COLOR: RED
- PHASE C COLOR: BLUE
- NEUTRAL COLOR: WHITE
- GROUND, COLOR: GREEN

VIII. GROUNDING:

A. THIS SECTION DEALS WITH THE GROUNDING OF SERVICE EQUIPMENT, TRANSFORMERS, NON-CURRENT CARRYING CONDUCTIVE SURFACES OF EQUIPMENT, METAL BUILDING, STRUCTURES AND OTHER EQUIPMENT.

B. ALL GROUNDING CONNECTIONS SHALL BE INSTALLED IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE AND REQUIREMENTS. SUCH CODES SHALL BE CONSIDERED MINIMUM REQUIREMENTS AND THE INSTALLATION OF THE GROUNDING SYSTEM SHALL INSURE FREEDOM FROM DANGEROUS SHOCK EXPOSURE AND SHALL PROVIDE A LOW IMPEDANCE GROUND FAULT PATH TO PERMIT OPERATION OF OVERCURRENT AND GROUND FAULT PROTECTIVE DEVICES.

C. ALL SERVICE AND EQUIPMENT GROUNDING CONDUCTORS, AND BONDING JUMPERS SHALL BE INSULATED COPPER, TYPE THHN, THWN, OR THW CONDUCTORS (UNLESS NOTED OTHERWISE) AND SHALL BE SIZED IN ACCORDANCE WITH THE APPLICABLE PORTIONS OF ARTICLES 250 AND 517 OF THE NATIONAL ELECTRICAL CODE. GROUNDING CONDUCTORS #6 AWG AND SMALLER SHALL HAVE A GREEN COLOR INSULATION. ALL GROUNDING CONDUCTORS #4 AWG AND LARGER SHALL BE ADEQUATELY IDENTIFIED WITH A GREEN TRACER AND IN GREEN COLORED TAPE AT EACH END OF THE GROUNDING CONDUCTOR AND AT EACH PULLBOX OR OTHER ACCESSIBLE LOCATION.

D. THE MAIN SERVICE GROUNDING ELECTRODE SYSTEM SHALL CONSIST OF THE FOLLOWING ITEMS BONDED TOGETHER BY THE GROUNDING ELECTRODE CONDUCTORS IN ACCORDANCE WITH NEC ARTICLE 250, PART H:

1. THE MAIN UNDERGROUND COLD WATER PIPE, IF METAL, NEC 250-81(A)
2. METAL FRAME OF BUILDING WHERE AVAILABLE, NEC 250-81(B)
3. CONCRETE ENCASED ELECTRODE, NEC 250-81(C)
4. THE BUILDING LIGHTNING PROTECTION SYSTEM.

E. THE NEUTRAL CONDUCTOR SHALL BE GROUNDING AT THE SERVICE ENTRANCE MAIN DISCONNECT, AND AT EACH SEPARATELY DERIVED SYSTEM ONLY PER NEC ARTICLE 250.

F. A #8 (MINIMUM) INSULATED COPPER CONDUCTOR INSTALLED IN 3/4" CONCEALED CONDUIT SHALL BE CONNECTED FROM THE BUILDING GROUNDING ELECTRODE SYSTEM TO EACH BUILDING TELEPHONE TERMINAL BOARD OR TERMINAL BOARD OF CABINET, FIRE ALARM CONTROL CABINETS, CCTV SYSTEM CABINETS, EMS CABINETS, AND SECURITY SYSTEM CABINETS. TERMINATE ON AN APPROPRIATELY SIZED (8) TERMINAL MULTI-CONDUCTOR CONNECTION GROUNDING LUG LOCATED WITHIN CABINET OR ON TERMINAL BOARD.

G. FLEXIBLE METALLIC CONDUIT RACEWAYS MAY BE USED TO CONNECT HVAC UNITS LOCATED IN INTERIOR MECHANICAL AREAS. MINIMUM SIZE 3/4".

H. CONDUIT SHALL BE SIZED IN ACCORDANCE WITH THE LATEST NATIONAL ELECTRICAL CODE EXCEPT THAT NO CONDUIT SHALL BE SMALLER THAN 3/4" UNLESS OTHERWISE NOTED. CONDUIT SHALL BE SIZED LARGER THAN REQUIRED ABOVE WHEN SO SHOWN ON THE DRAWINGS OR WHEN REQUIRED BY LOCAL CODE.

I. ANY CONDUIT STUBBED OUT FOR FUTURE SHALL BE CAPPED WITH A PLASTIC CAP AND MARKED WITH A 2" MINIMUM RED METAL TAG WHICH IDENTIFIES CONDUIT ORIGIN. CONDUITS STUBBED UP ABOVE GRADE OR ROOF SHALL BE TAGGED ON THE CONDUIT. CONDUIT STUBBED OUT BELOW GRADE SHALL BE TAGGED ON NEAREST BUILDING WALL, CURB, ETC., DIRECTLY OVER THE CONDUIT RUN. ALL EMPTY SCHEDULES SHALL HAVE PULL WIRES.

IX. PANELBOARDS:

A. PANELBOARDS SHALL BE DEAD FRONT TYPE AND SHALL BE IN ACCORDANCE WITH UNDERWRITERS' LABORATORIES, INC. STANDARD FOR PANELBOARDS AND ENCLOSING CABINETS AND SO LABELED.

B. PANELBOARDS SHALL BE FACTORY ASSEMBLED WITH BRANCH BREAKERS ARRANGED AS SHOWN IN SCHEDULES. BREAKERS SHALL BE NUMBERED VERTICALLY BEGINNING TOP LEFT. BREAKER NUMBERS SHALL BE PERMANENTLY ATTACHED TO TRIM PANEL SHALL BE MINIMUM 20" WIDE OR 16" FOR RESIDENTIAL LOAD CENTERS, UNLESS SPECIFICALLY NOTED OTHERWISE.

C. ANY SPECIAL REQUIREMENTS ON THE DRAWINGS OR SCHEDULES, SUCH AS GROUND FAULT PROTECTION, ARC-FAULT CIRCUIT BREAKERS, INCREASING INTERRUPTING CAPACITY, SHUNT TRIP TYPE CIRCUIT BREAKER, FEED THRU PANELBOARDS, ETC., SHALL, SUPERSEDE THESE SPECIFICATIONS, BUT ONLY INsofar AS THAT PARTICULAR REQUIREMENT IS CONCERNED AND AS INDICATED.

D. WIRING IN PANELBOARD OUTLETS SHALL BE DONE IN A NEAT AND WORKMANLIKE MANNER. WIRING SHALL BE GROUPED INTO NEAT BUNDLES AND SECURED WITH NYLON TIE WAPS.

E. PROVIDE TYPE WRITTEN DIRECTORIES FOR EACH PANELBOARD INDICATING THE LOAD SERVED.

X. LIGHTING FIXTURES:

A. LIGHTING FIXTURES SHALL BE FURNISHED AS SHOWN ON DRAWINGS AND IN THE LIGHTING FIXTURE SCHEDULE. IT SHALL SPECIFICALLY BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXACT TYPE, COLOR AND FINISH OF ALL ACCESSORY DEVICES AND TO FURNISH THE MOUNTING TRIMS AND ACCESSORIES OF THE SPECIFIED AND/OR APPROVED FIXTURES FOR THE CEILING TO BE INSTALLED. LIGHTING FIXTURES SHALL BE PROVIDED WITH JUNCTION PILES, END CAPS, RETAINING CLIPS, PLASTER BRACKETS, HOUSINGS, AND ALL OTHER ACCESSORIES REQUIRED FOR A COMPLETE INSTALLATION.

B. ALL FIXTURES SHALL BE EQUIPPED WITH LAMPS UNLESS OTHERWISE NOTED. LAMPS SHALL BE INSTALLED NEAR, IMMEDIATELY PRIOR TO FINAL INSPECTION, AND SHALL NOT BE USED FOR CONSTRUCTION.

C. FIXTURE CATALOG NUMBER REPRESENTS BASIC LUMINARY SIZE, TYPE, QUALITY AND COMPLETE CONFIGURATION. ACCESSORIES SHALL BE FURNISHED WITH EACH UNIT AS REQUIRED FOR A COMPLETE FINISHED INSTALLATION. BASIC ACCESSORIES SHALL INCLUDE, BUT ARE NOT LIMITED TO, THE FOLLOWING:

1. JOINING PLATES, END CAPS, RETAINING CLIPS, ETC.
2. TRIMS FOR RECESSED FIXTURES.
3. FIXTURE STAYS AND CANOPES FINISHED TO MATCH FIXTURES.
4. SPECIAL MOUNTING BRACKETS, TENSORS, SLIP FITTERS, CONCRETE BASES, POLES, ANCHOR BOLTS, JUNCTION BOXES, AND STANCHIONS FOR ALL EXTERIOR LIGHTING FIXTURES.

D. ALL WEATHERPROOFING FOR ALL LIGHTING FIXTURES TO BE INSTALLED IN EXTERIOR LOCATIONS.

E. STRUCTURAL SUPPORT OF ALL FIXTURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

F. THE SYSTEM GROUNDING CONDUCTOR SHALL BE SECURED TO EACH FIXTURE BODY BY MEANS OF A BONDING SCREW.

G. OWNER/DEVELOPER WILL HAVE RIGHT TO RELOCATE LIGHTING FIXTURES OR LIGHTING SWITCHES WITHIN 72" OF LOCATION SHOWN ON FIRST WALK-THROUGH AT NO ADDITIONAL EXPENSE. COORDINATE THE WALK-THROUGH PRIOR TO THE INSTALLATION OF THE WIRING.

XI. FIRE ALARM SYSTEMS:

A. THIS SECTION INCLUDES AUTOMATIC ADDRESSABLE VOICE EVACUATION FIRE ALARM SYSTEMS, INCLUDING FIRE ALARM CONTROL PANEL, AND REMOTE ANNUNCIATOR, MANUAL PULL STATIONS, HEAT AND SMOKE DETECTORS, FIRE ALARM AUDIO, VISUAL SIGNAL EQUIPMENT, CONTROLS, AND SURGE PROTECTION DEVICES. COORDINATE ALL WIRING AND DEVICE INTERFACES WITH OWNER'S REPRESENTATIVE. THE FIRE ALARM SYSTEM SHALL MEET THE LATEST ADOPTED EDITION OF NFPA 72. ALL LOCAL AND STATE AMENDMENTS AND FEDERAL ADA REQUIREMENTS. ALL DEVICES SHALL BE WHITE IN COLOR WITH RED LETTERING.

B. GENERAL: COMPLETE, ZONED, NONCODED, ADDRESSABLE, MICROPROCESSOR-BASED FIRE DETECTION ALARM SYSTEM WITH MANUAL AND AUTOMATIC ALARM INITIATION SIGNALS FROM A SUPERVISED FIRE ALARM SOUND DISTRIBUTION SYSTEM. DEVICES LOCATED OUTDOORS SHALL BE SPECIFICALLY DESIGNED FOR EXTERIOR SERVICE. PROVIDE BATTERY BACK-UP BASED UPON TOTAL LOAD PER NFPA 72. ALARM SHALL ACHIEVE A MINIMUM OF 80 DB THROUGHOUT OCCUPABLE SPACES AND MEET ADA REQUIREMENTS.

C. TRANSMISSION TO REMOTE CENTRAL STATION: PROVIDE WIRING TO AUTOMATICALLY ROUTE AN ALARM, SUPERVISORY, AND TROUBLE SIGNALS TO THE GRAND SANDESTIN CENTRAL STATION SERVICE TRANSMITTER LOCATED IN MAIN FIRE ALARM CONTROL PANEL USING LISTED AND APPROVED EQUIPMENT. PROVIDE ALL NECESSARY WIRING CONNECTION BY THIS CONTRACTOR.

D. GENERAL ALARM: A SYSTEM GENERAL ALARM INCLUDES:

1. INDICATING THE GENERAL ALARM CONDITION AT THE FACP AND THE INTEGRAL ANNUNCIATOR.
2. IDENTIFYING THE DEVICE THAT IS THE SOURCE OF THE ALARM AT THE FACP AND THE ANNUNCIATOR.
3. INITIATING AUDIBLE AND VISIBLE ALARM SIGNALS THROUGHOUT THE BUILDING.
4. STOPPING HVAC SUPPLY AND RETURN FANS.
5. INITIATING TRANSMISSION OF ALARM SIGNAL TO REMOTE CENTRAL STATION.
6. MANUAL STATION ALARM OPERATION INITIATES A GENERAL ALARM.
7. SMOKE OR HEAT DETECTION INITIATES A GENERAL ALARM.

E. INSTALLER QUALIFICATIONS: A CERTIFIED FACTORY-TRAINED TECHNICIAN IS TO PERFORM THE WORK OF

LEGEND

| | |
|--|--|
| | DIRECTION OF FLOW IN PIPE |
| | PITCH PIPE DOWN IN DIRECTION OF ARROW |
| | PIPE UP |
| | PIPE DOWN |
| | EXPANSION JOINT |
| | FLEXIBLE PIPE CONNECTOR |
| | BALL VALVE |
| | CHECK VALVE, HORIZONTAL SWING |
| | GATE VALVE |
| | BUTTERFLY VALVE |
| | GLOBE VALVE |
| | BALANCING VALVE |
| | BALANCING COCK |
| | STRAINER, Y-TYPE AND BLOWOFF VALVE |
| | PRESSURE RELIEF VALVE (WATER) |
| | PRESSURE REDUCING VALVE |
| | MANUAL AIR VENT |
| | SOLENOID VALVE |
| | VALVE OS & Y |
| | CAPPED LINE |
| | SANITARY SEWER (ABOVE GRADE) |
| | SANITARY SEWER (BELOW GRADE) |
| | DOMESTIC COLD WATER |
| | BOOSTED PRESSURE DOMESTIC COLD WATER |
| | DOMESTIC HOT WATER |
| | DOMESTIC HOT WATER RETURN |
| | CONDENSATE DRAIN (BELOW GRADE) |
| | CONDENSATE DRAIN (ABOVE GRADE) |
| | STORM SEWER (BELOW GRADE) |
| | STORM SEWER (ABOVE GRADE) |
| | SECONDARY STORM SEWER |
| | GREASE SEWER (BELOW GRADE) |
| | GREASE SEWER (ABOVE GRADE) |
| | SOFT COLD WATER |
| | VENT |
| | GAS LINE (BELOW GRADE) |
| | GAS LINE (ABOVE GRADE) |
| | POINT OF CONNECTION NEW TO EXISTING |
| | POINT OF REMOVAL FOR DEMOLITION |
| | DELTA T (TEMPERATURE DIFFERENCE) |
| | PHOTO DETAIL OR SECTION IDENTIFICATION TARGET A = DETAIL NUMBER B = SHEET NUMBER ON WHICH DETAIL IS LOCATED. |
| | HOSE BIBB |
| | FLOOR DRAIN |
| | HUB DRAIN |
| | TRENCH DRAIN |
| | COMPRESSED AIR (BELOW GRADE) |
| | COMPRESSED AIR (ABOVE GRADE) |
| | FLOOR CLEANOUT |
| | CLEANOUT |
| | EXTERIOR CLEANOUT |
| | HORIZONTAL CLEANOUT |
| | PAN DRAIN (FROM WATER HEATER) |
| | FILTERED WATER |
| | SHOCK ABSORBER |
| | GARBAGE DISPOSAL |
| | DISHWASHER |

NOTE:
SYMBOLS SHOWN ON THIS PLUMBING LEGEND ARE FOR REFERENCE PURPOSES ONLY. ALL OF THESE SYMBOLS MAY NOT BE USED FOR THIS PROJECT.

SPECIFICATIONS

- PART 1 - GENERAL**
- 1.1 SECTION INCLUDES
A. GENERAL PROVISIONS SPECIFICALLY APPLICABLE TO DIVISION 15 SECTIONS, IN ADDITION TO DIVISION 1 - GENERAL REQUIREMENTS.
- 1.2 SCOPE
A. THE WORK SHALL INCLUDE THE PROVISIONS OF SYSTEMS, EQUIPMENT AND MATERIALS SPECIFIED IN THIS DIVISION AND AS CALLED FOR ON THE DRAWINGS. WORK SHALL ALSO INCLUDE SUPERVISION, OPERATION, METHODS AND LABOR FOR THE FABRICATION, START-UP AND TESTS FOR A COMPLETE OPERATIONAL PLUMBING INSTALLATION.
B. DRAWINGS FOR THE WORK ARE DIAGRAMMATIC IN NATURE AND ARE INTENDED TO CONVEY THE SCOPE OF THE INSTALLATION AND TO INDICATE THE GENERAL ARRANGEMENT AND LOCATIONS OF THE WORK. BECAUSE OF THE SCALE OF THE DRAWINGS, CERTAIN BASIC ITEMS SUCH AS PIPE FITTINGS, ACCESS PANELS, AND SLEEVES MAY NOT BE SHOWN. THIS CONTRACTOR SHALL BE RESPONSIBLE FOR SELECTING THE EQUIPMENT TO FIT THE SPACE PROVIDED, THE LOCATION AND SIZES FOR PIPE FITTINGS, SLEEVES, INSERTS, FIRE AND/OR SMOKE DAMPERS, AND OTHER BASIC ITEMS REQUIRED BY CODE AND OTHER SECTIONS SHALL BE COORDINATED AND INCLUDED FOR THE PROPER INSTALLATION OF THE WORK.
C. EQUIPMENT SPECIFICATIONS MAY NOT DEAL INDIVIDUALLY WITH MINUTE ITEMS REQUIRED SUCH AS COMPONENTS, PARTS, CONTROLS AND DEVICES WHICH MAY BE REQUIRED TO PRODUCE THE EQUIPMENT PERFORMANCE SPECIFIED OR AS REQUIRED TO MEET THE EQUIPMENT WARRANTIES. WHERE SUCH ITEMS ARE REQUIRED, THEY SHALL BE INCLUDED BY THE INSTALLER OF THE EQUIPMENT, WHETHER OR NOT SPECIFICALLY INDICATED IN THE CONTRACT DOCUMENTS WITH NO ADDITIONAL COST INCURRED.
D. WHERE NOTED ON THE DRAWINGS OR INDICATED IN OTHER SECTIONS OF THE SPECIFICATION, THE CONTRACTOR FOR THIS DIVISION SHALL INSTALL PLUMBING EQUIPMENT FURNISHED BY OTHERS, AND SHALL MAKE ALL FINAL CONNECTIONS. CONTRACTOR SHALL INSTALL EQUIPMENT AND SYSTEMS IN STRICT ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
E. COORDINATE WITH ALL TRADES IN SUBMITTAL OF SHOP DRAWINGS. TIGHT SPACE CONDITIONS SHALL BE DETAILED TO THE SATISFACTION OF ALL TRADES, SUBJECT TO THE REVIEW AND FINAL ACCEPTANCE OF THE ARCHITECT/ENGINEER. IN THE EVENT THAT THE CONTRACTOR INSTALLS HIS WORK BEFORE COORDINATING WITH OTHER TRADES OR SO AS TO CAUSE ANY INTERFERENCE WITH THE WORK OF THE OTHER TRADES THIS CONTRACTOR SHALL MAKE ALL REQUIRED CHANGES TO CORRECT THE CONDITION AT NO ADDITIONAL COST TO THE PROJECT.
F. CONTRACTOR SHALL VERIFY ALL EQUIPMENT CONNECTION SIZES PRIOR TO INSTALLATION OF ANY SYSTEMS. THIS CONTRACTOR SHALL ADJUST PIPING SYSTEM SIZES AS REQUIRED TO MATCH EQUIPMENT CONNECTIONS. UTILIZE REDUCERS WHERE EQUIPMENT CONNECTIONS ARE SMALLER THAN PIPE SIZES INDICATED ON PLANS, NO PIPING SHALL BE DECREASED IN SIZE (IN THE DIRECTION OF FLOW).
- 1.3 EXAMINATION OF BIDDING DOCUMENTS:
A. EACH BIDDER SHALL EXAMINE THE BIDDING DOCUMENTS CAREFULLY AND NOT LATER THAN TEN (10) DAYS PRIOR TO THE DATE FOR RECEIPT OF BIDS, SHALL MAKE WRITTEN REQUEST TO THE ENGINEER FOR INTERPRETATION OR CORRECTION OF ANY AMBIGUITY, INCONSISTENCY, OR ERROR THEREIN. ANY INTERPRETATION OR CORRECTION WILL BE ISSUED AS AN ADDENDUM BY THE ENGINEER. ONLY A WRITTEN INTERPRETATION OR CORRECTION TO BID DOCUMENTS BY ADDENDUM SHALL BE BINDING. NO BIDDER SHALL RELY UPON ANY INTERPRETATION OR CORRECTION GIVEN BY ANY OTHER METHOD.
- 1.4 SUBSTITUTIONS:
A. EXCEPT AS PROVIDED BELOW, EACH BIDDER REPRESENTS THAT HIS BID IS BASED UPON THE MATERIALS AND EQUIPMENT DESCRIBED IN THE BIDDING DOCUMENTS.
B. NO SUBSTITUTIONS FOR OTHER MATERIALS AND EQUIPMENT WILL BE CONSIDERED UNLESS WRITTEN REQUEST HAS BEEN SUBMITTED TO THE ENGINEER FOR APPROVAL AT LEAST TEN (10) DAYS PRIOR TO THE DATE FOR RECEIPT OF BIDS. EACH SUCH REQUEST SHALL INCLUDE A COMPLETE DESCRIPTION OF THE PROPOSED SUBSTITUTE, THE NAME OF THE MATERIAL OR EQUIPMENT FOR WHICH IT IS TO BE SUBSTITUTED, DRAWINGS, CUTS, PERFORMANCE AND TEST DATA OR INFORMATION NECESSARY FOR A COMPLETE EVALUATION.
C. IF THE ENGINEER APPROVES ANY PROPOSED SUBSTITUTION, SUCH APPROVAL WILL BE ISSUED AS AN ADDENDUM FORWARDED TO ALL PARTICIPATING BIDDERS.
D. IF ANY BIDDER IS UNABLE TO PROCURE WRITTEN APPROVAL OF ANY SUBSTITUTION FROM THE ENGINEER PRIOR TO THE OPENING OF BIDS, THEN HE SHALL BASE HIS BID ON ITEMS AND SYSTEMS AS SPECIFIED IN BID DOCUMENTS.
E. SUBSTITUTIONS REQUESTED ON THE BID PROPOSAL FORM WHICH ARE PRIOR APPROVED BY THE ENGINEER WILL BE INCORPORATED INTO THE CONTRACT WITH THE SUCCESSFUL BIDDER.
F. REQUESTS FOR ANY SUBSTITUTIONS NOT SUBMITTED AND APPROVED IN ACCORDANCE WITH THE ABOVE INSTRUCTIONS WILL BE DENIED BY THE ENGINEER.
- 1.5 REGULATORY REQUIREMENTS:
A. ALL INSTALLATIONS AND EQUIPMENT SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE STATUTES, CODES AND REGULATIONS OF THE GOVERNMENTAL BODIES HAVING JURISDICTION.
B. CONFORM TO THE LATEST EDITION OF THE INTERNATIONAL PLUMBING CODE.
C. CONFORM TO THE LATEST EDITION OF THE INTERNATIONAL FIRE PREVENTION CODE.
D. CONFORM TO THE LATEST EDITION OF THE INTERNATIONAL BUILDING CODE.
- 1.6 CUTTING AND PATCHING:
A. SUBMIT WRITTEN REQUEST IN ADVANCE OF CUTTING OR ALTERING ELEMENTS.
B. EMPLOY SKILLED AND EXPERIENCED INSTALLER TO PERFORM CUTTING AND PATCHING WHICH EFFECT:
B.1 STRUCTURAL INTEGRITY OF ELEMENT.
B.2 INTEGRITY OF WEATHER.
B.3 EFFICIENCY, MAINTENANCE, OR SAFETY OF ELEMENT.
B.4 VISUAL QUALITIES OF SIGHT.
B.5 WORK OF OWNER OR SEPARATE CONTRACTOR.
- PART 2 - PRODUCTS**
- 2.1 PIPE HANGERS AND SUPPORTS
A. MANUFACTURERS:
A.1 B-LINE
A.2 OTHER ACCEPTABLE MANUFACTURERS OFFERING EQUIVALENT PRODUCTS
A.2.1 MICHIGAN HANGER
A.2.2 PHD

GENERAL NOTES

1. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY FITTINGS AS REQUIRED BY ALL APPLICABLE CODES AND GOVERNING AUTHORITIES.
2. CONTRACTOR SHALL VERIFY AND CORRECT AS REQUIRED TO MEET ALL CODES AND REGULATIONS ANY POSSIBLE DISCREPANCIES BETWEEN TYPE AND SIZE OF CONNECTION SPECIFIED IN PLUMBING FIXTURE SCHEDULE AND FIXTURES ACTUALLY INSTALLED ON THE SITE.
3. ALL DRAINAGE PIPING 3" AND LARGER SHALL HAVE A MINIMUM 1/4" PER FOOT SLOPE. ALL DRAINAGE PIPING 2" AND SMALLER SHALL HAVE A MINIMUM 1/8" PER FOOT SLOPE, UNLESS OTHERWISE NOTED.
4. VENT PIPING SHOWN ON FLOOR PLANS IS ONLY INDICATIVE EXCEPT FOR VTR LOCATIONS.
5. VALVES AND FITTINGS SHALL BE OF SAME SIZE OF LINE ON WHICH THEY ARE LOCATED, UNLESS OTHERWISE INDICATED ON DRAWINGS.
6. CONTRACTOR SHALL COORDINATE ALL WORK WITH OTHER TRADES.
7. CONTRACTOR SHALL FIELD VERIFY ALL GIVEN MEASUREMENTS PRIOR TO LAYING AND CONNECTING ALL SANITARY AND WASTE PIPING AND NOTIFY ARCHITECT OF ANY DISCREPANCIES.
8. AIR CHAMBERS SHALL NOT BE CONSIDERED AN EQUAL TO WATER ARRESTORS AS SPECIFIED.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING FIRE RATING AND WEATHERPROOFING INTEGRITY OF ALL PIPING AND PENETRATIONS.
10. ALL WATER SUPPLY AND SANITARY LINES SHALL BE RUN AS CLOSE TO PLANS AS POSSIBLE WITH NO CHANGES IN SIZING.
11. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL NECESSARY SUPPORTING DEVICES FOR ALL FIXTURES INCLUDED IN CONTRACT OR HEREIN SPECIFIED OR OTHERWISE.
12. CHANGES IN THE DIRECTION OF SANITARY PIPING SHALL NOT BE MADE WITH FITTINGS WHICH WILL CAUSE EXCESSIVE REDUCTION IN THE VELOCITY OF FLOW OR CREATE ANY OTHER ADVERSE EFFECT UNLESS PHYSICALLY IMPOSSIBLE (IE: USE OF SANITARY TEE IN A HORIZONTAL CONNECTION, USE OF A DOUBLE SANITARY TEE IN A VERTICAL STACK, IN GENERAL, USE OF SHORT-RADIUS FITTINGS FOR BRANCH TO HOUSE DRAIN OR STACK CONNECTION).
13. ALL DRAINAGE PIPING SHALL BE MARKED WITH THE SEAL OF APPROVAL OF THE NATIONAL SANITATION FOUNDATION.
14. DO NOT PENETRATE FOUNDATIONS WITH PIPING, COORDINATE WITH GENERAL CONTRACTOR TO DROP FOUNDATIONS AS REQUIRED TO CLEAR PLUMBING SERVICES WHERE ABSOLUTELY NECESSARY. ALL PIPING PENETRATING A BEARING WALL OR FOOTING MUST BE SLEEVED AND LOCATION APPROVED BY STRUCTURAL ENGINEER.
15. ROUTE ALL PIPING CONCEALED ABOVE CEILINGS, WITHIN WALLS, OR IN CHASES. PIPING EXPOSED SHALL BE SLOPED AND PAINTED TO MATCH ARCHITECTURAL FINISHES. PIPING IN MECHANICAL ROOMS MAY BE EXPOSED.
16. PROVIDE ACCESS PANELS TO ALL VALVES WITHIN CHASES OR ABOVE NON-ACCESSIBLE CEILINGS. REFER TO ARCHITECTURAL DRAWINGS FOR CEILING TYPES.
17. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF PLUMBING FIXTURE MOUNTING HEIGHTS, AND DIMENSIONS.
18. CONTRACTOR SHALL VERIFY INVERT ELEVATIONS OF SEWERS TO WHICH NEW SEWER LINES ARE TO BE CONNECTED BEFORE INSTALLATION OF NEW SEWER LINE.
19. ALL VENTS THROUGH ROOF SHALL BE MINIMUM OF 10'-0" FROM ANY AIR INTAKES.
20. CONTRACTOR SHALL INSTALL DIELECTRIC UNIONS AT CONNECTIONS OF DISSIMILAR METALS.
21. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS (INCLUDING PIPE ROUTING AND EQUIPMENT LOCATIONS) TO ARCHITECT/ENGINEER FOR REVIEW AND APPROVAL PRIOR TO THE INSTALLATION OR PURCHASING OF ANY PIPING AND/OR EQUIPMENT.
22. PROVIDE 1/2" C.W. SUPPLY WITH ANGLE STOP AND FLEXIBLE SUPPLY TO REFRIGERATORS WITH ICE MAKERS AT HEIGHT REQUIRED BY MANUFACTURER OF EQUIPMENT INSTALLED.
23. PROVIDE 1/2" H.W. SUPPLY WITH ANGLE STOP AND FLEXIBLE SUPPLY TO DISHWASHER MACHINE, AT HEIGHT REQUIRED BY MANUFACTURER OF EQUIPMENT INSTALLED.
24. ALL WATER PIPING INSTALLED IN EXTERIOR WALLS SHALL BE PLACED ON THE INTERIOR SIDE OF THE WALL, SO THAT WALL INSULATION CAN BE PLACED ON THE EXTERIOR SIDE OF THE PIPING.
25. FIELD VERIFICATION OF EXISTING PIPING: ALL EXISTING PIPING SHOWN ON THE CONSTRUCTION DOCUMENTS IS BASED OFF OF VISUAL SITE INVESTIGATION AND AS BUILT DRAWINGS OF THE EXISTING SITE AND BUILDING CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE LICENSED PLUMBING CONTRACTOR TO FIELD VERIFY ALL EXISTING PIPING LOCATIONS, TYPES, SIZES, ELEVATIONS AND INVERTS. NOTIFY ENGINEER IF THE CONDITIONS ARE NOT AS SHOWN ON THE PLANS OR AS STATED IN THE SPECIFICATIONS PRIOR TO THE INITIATION OF ANY WORK. IDENTIFICATION AND VERIFICATION OF EXISTING PIPING TO BE ACCOMPLISHED BY THE FOLLOWING MEANS:
• MANDATORY DYE TESTING OF ALL EXISTING SANITARY, STORM AND GREASE WASTE PIPING FOR SYSTEM IDENTIFICATION.
• SNAKE ALL SANITARY, STORM AND GREASE WASTE PIPING FOR A DISTANCE OF 100 FEET AND REPORT ANY BLOCKAGES.
• TEST WATER PRESSURE TO INSURE MINIMUM PSI MATCHES MOST DEMANDING EQUIPMENT SUPPLIED OR TO BE INSTALLED.
• ALL IDENTIFICATION AND VERIFICATION RESULTS SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER FOR REVIEW PRIOR TO THE INITIATION OF ANY WORK.
26. IF NO PLUMBING ELEVATION OR INVERT IS NOTED ON PLANS THE MINIMUM DEPTH OF THE PLUMBING TO CIVIL CONNECTION SHALL BE CALCULATED BASED ON THE FURTHERS POSSIBLE PLUMBING FIXTURE DISTANCE TIMES 1%. TOTAL LINE LENGTH*1%-DEPTH B.F.F. AT CIVIL POINT OF CONNECTION.



| ISSUE HISTORY | | |
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| No. | Date | Description |
| 1 | 04/15/22 | Permit Submission |
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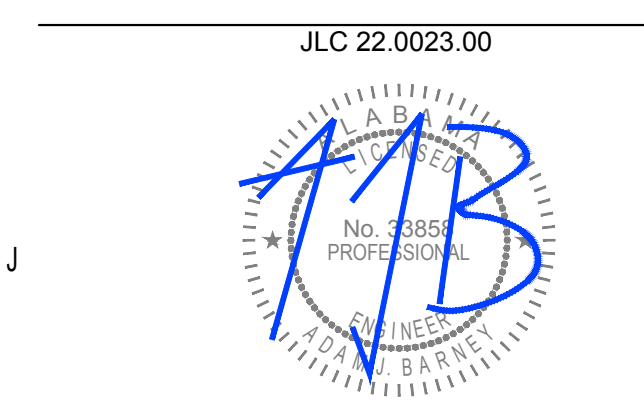
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THE MADISON

HUNTSVILLE, AL

SYMBOL LEGEND & GENERAL NOTES PLUMBING

P0.01

| | |
|-----------|------------|
| Drawn | MJRSMB |
| Checked | BLSAJB |
| Approved | BLSAJB |
| Date | 04/15/2022 |
| Project # | 572 |



GENERAL NOTES:

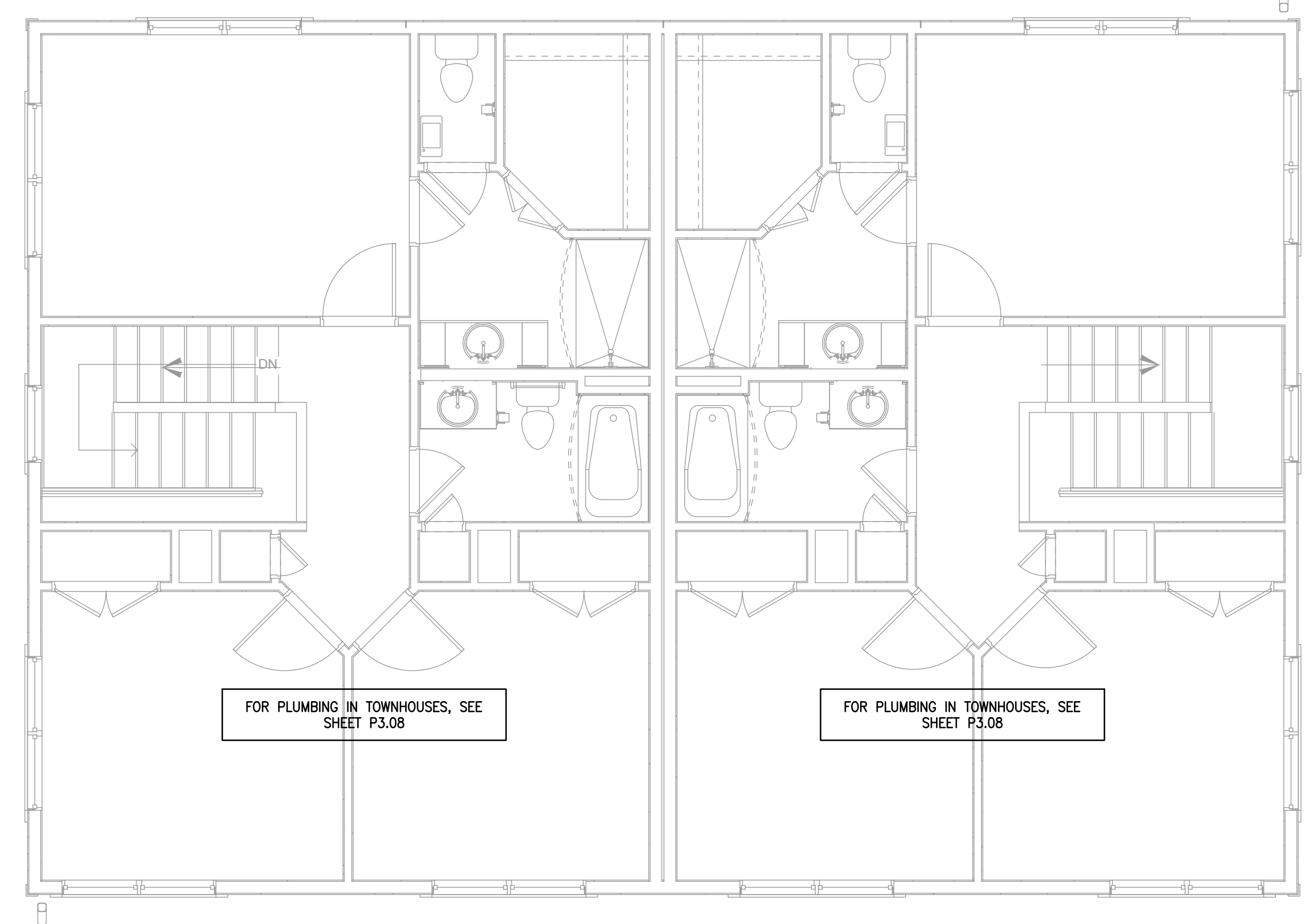
1. PROVIDE WALL CLEAN OUTS AT THE BASE OF ALL SANITARY STACKS, CONDENSATE STACKS, AND RAIN LEADERS 30" AFF. WHERE A HORIZONTAL DRAINAGE PIPE HAS A CHANGE OF HORIZONTAL DIRECTION GREATER THAN 45 DEGREES. A CLEANOUT SHALL BE INSTALLED AT THE CHANGE OF DIRECTION. WHERE MORE THAN ONE CHANGE OF HORIZONTAL DIRECTION GREATER THAN 45 DEGREES OCCURS WITHIN 40 FEET OF DEVELOPED LENGTH OF PIPING, THE CLEANOUT INSTALLED FOR THE FIRST CHANGE OF DIRECTION SHALL SERVE AS THE CLEANOUT FOR ALL CHANGES IN DIRECTION WITHIN THAT 40 FEET OF DEVELOPED LENGTH OF PIPING.
2. ALL SHUT-OFF VALVES SHALL BE FULLY ACCESSIBLE. SEE ARCHITECTURAL DRAWINGS FOR RATED WALLS AND CEILINGS, AND PROVIDE RATED ACCESS PANELS.
3. SEE SHEET P4.02 FOR RISER DIAGRAMS.
4. INSTALL WATER HAMMER SHOCK ARRESTORS AT ICE MAKERS, DISHWASHERS, WASHER BOXES, AND AT ALL QUICK CLOSING SOLENOID VALVES. SIZE SHOCK ARRESTORS PER PLUMBING AND DRAINAGE INSTITUTE STANDARD P.D.I. WH-201. SHOCK ARRESTORS SHALL CONFORM TO ASSE 1010. ACCEPTABLE MANUFACTURERS - SIOUX CHIEF, PRECISION PLUMBING PRODUCTS INC., FOR 1"-1 1/2" F.U.'S PROVIDE PDI-A, 12-32 F.U.'S PDI-B, 33-60 F.U.'S PDI-C. INSTALL PER MANUFACTURER'S INSTRUCTIONS.

PLUMBING FIXTURE UNIT CALCULATION
* BASED ON 2020 FLORIDA BUILDING CODE - PLUMBING

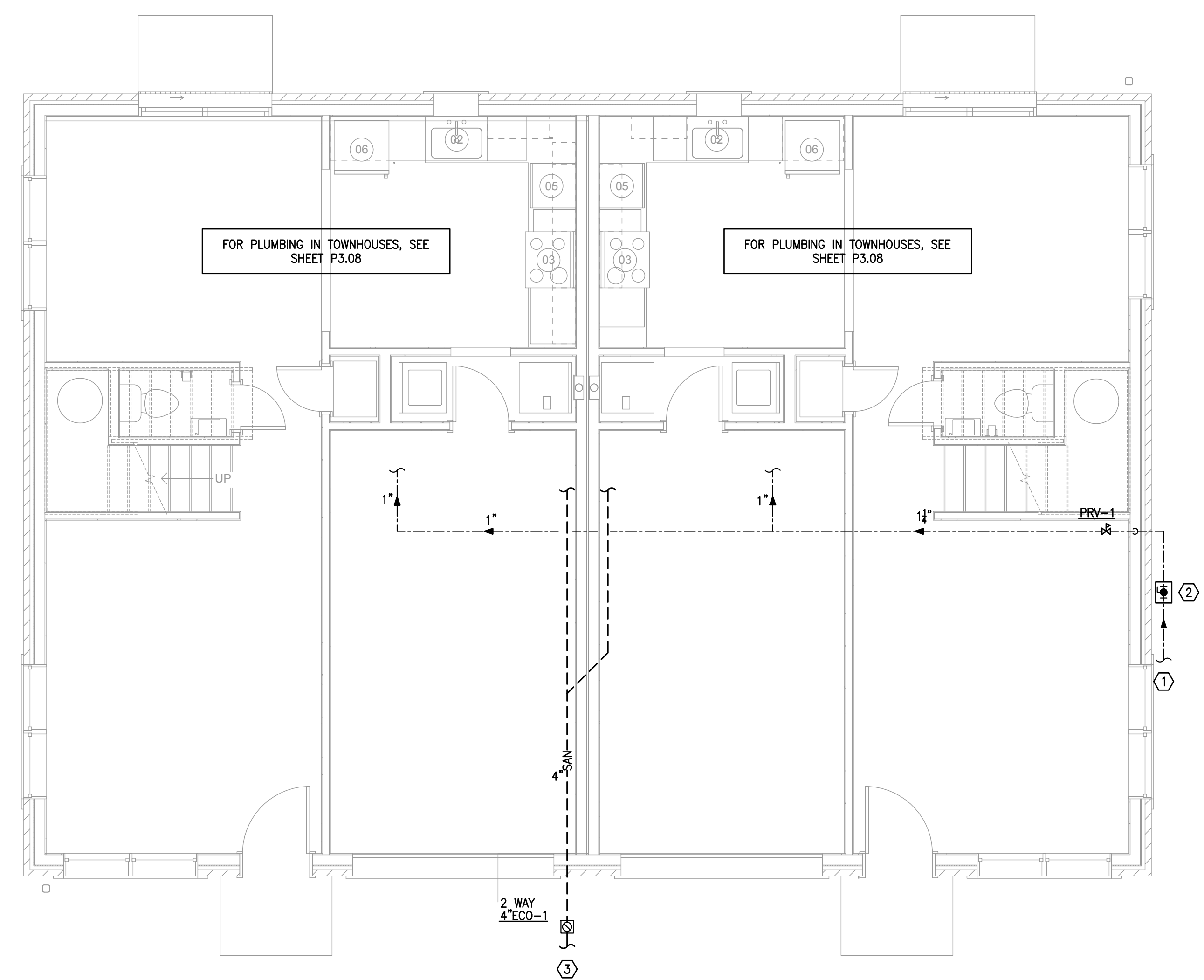
| TYPE OF SERVICE | WATER | SANITARY |
|----------------------------|--------|----------|
| FIXTURE UNIT COUNT TOTAL | 27 | 34 |
| TOTAL GALLONS PER MINUTE | 22 | --- |
| SIZE OF SERVICE CONNECTION | 1 1/2" | 4" |

REFERENCE NOTES: (1)-(3)

- (1) 1 1/2" POTABLE CW SUPPLY BELOW GRADE, FOR CONTINUATION SEE CIVIL DRAWINGS.
- (2) SHUT-OFF VALVE AND WATER METER IN CAST IRON ACCESS BOX FLUSH WITH PAVEMENT.
- (3) 4" SANITARY SEWER BELOW GRADE FOR CONTINUATION SEE CIVIL DRAWINGS. INV. EL. = (-2'-6" BFF)



F3 BUILDING TYPE C - 2ND LEVEL - PLUMBING
1/4" = 1'-0"



K3 BUILDING TYPE C - GROUND LEVEL - PLUMBING
1/4" = 1'-0"

ISSUE HISTORY

| No. | Date | Description |
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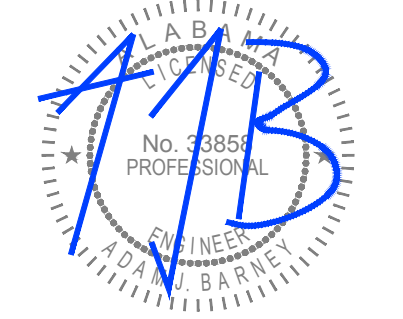
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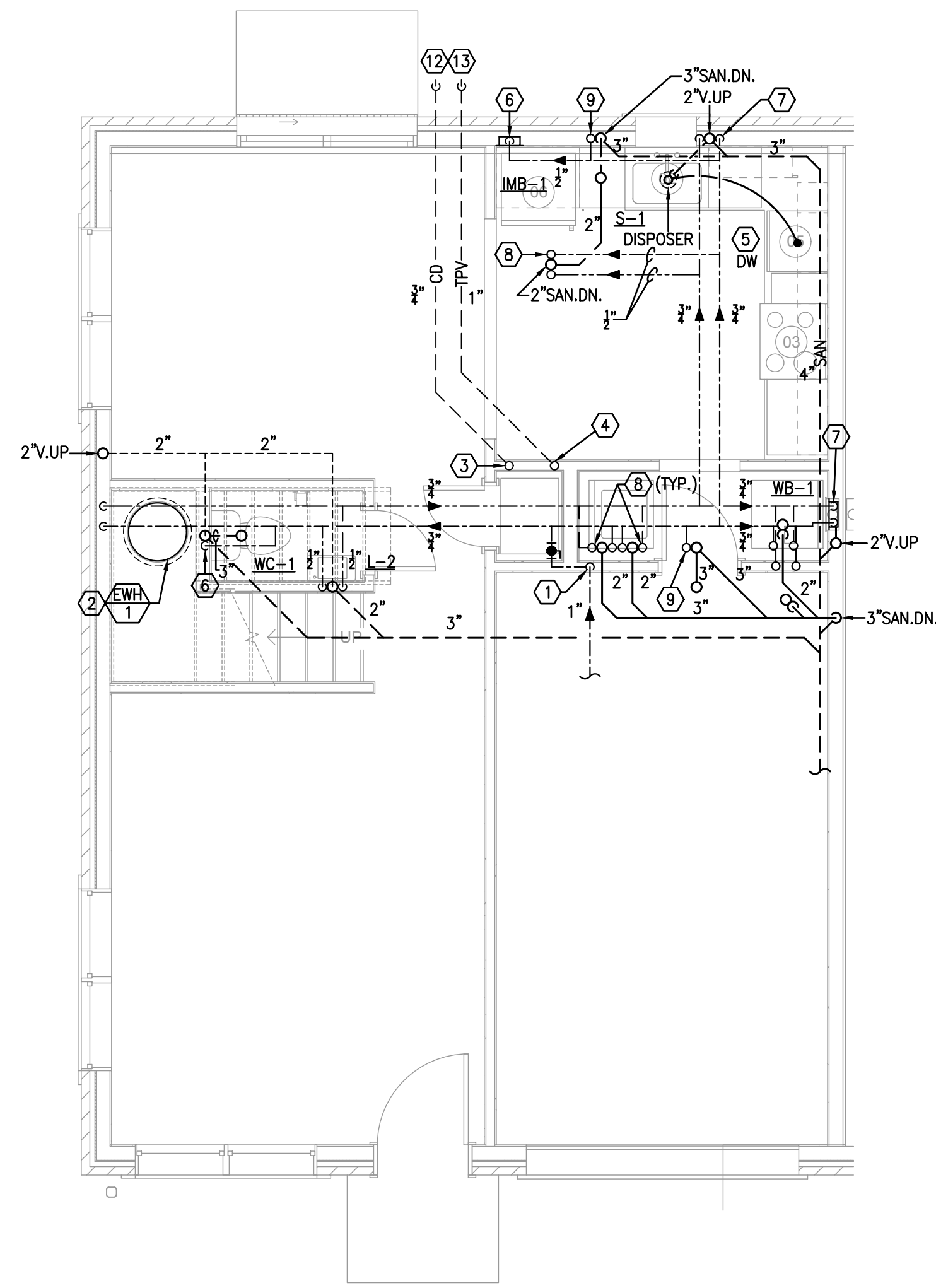
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| Drawn | M/R/SMB |
| Checked | BLSA/B |
| Approved | BLSA/B |
| Date | 04/15/2022 |
| Project # | 572 |

THE MADISON
HUNTSVILLE, AL
BUILDING TYPE C
FLOOR PLANS
PLUMBING
P2.07

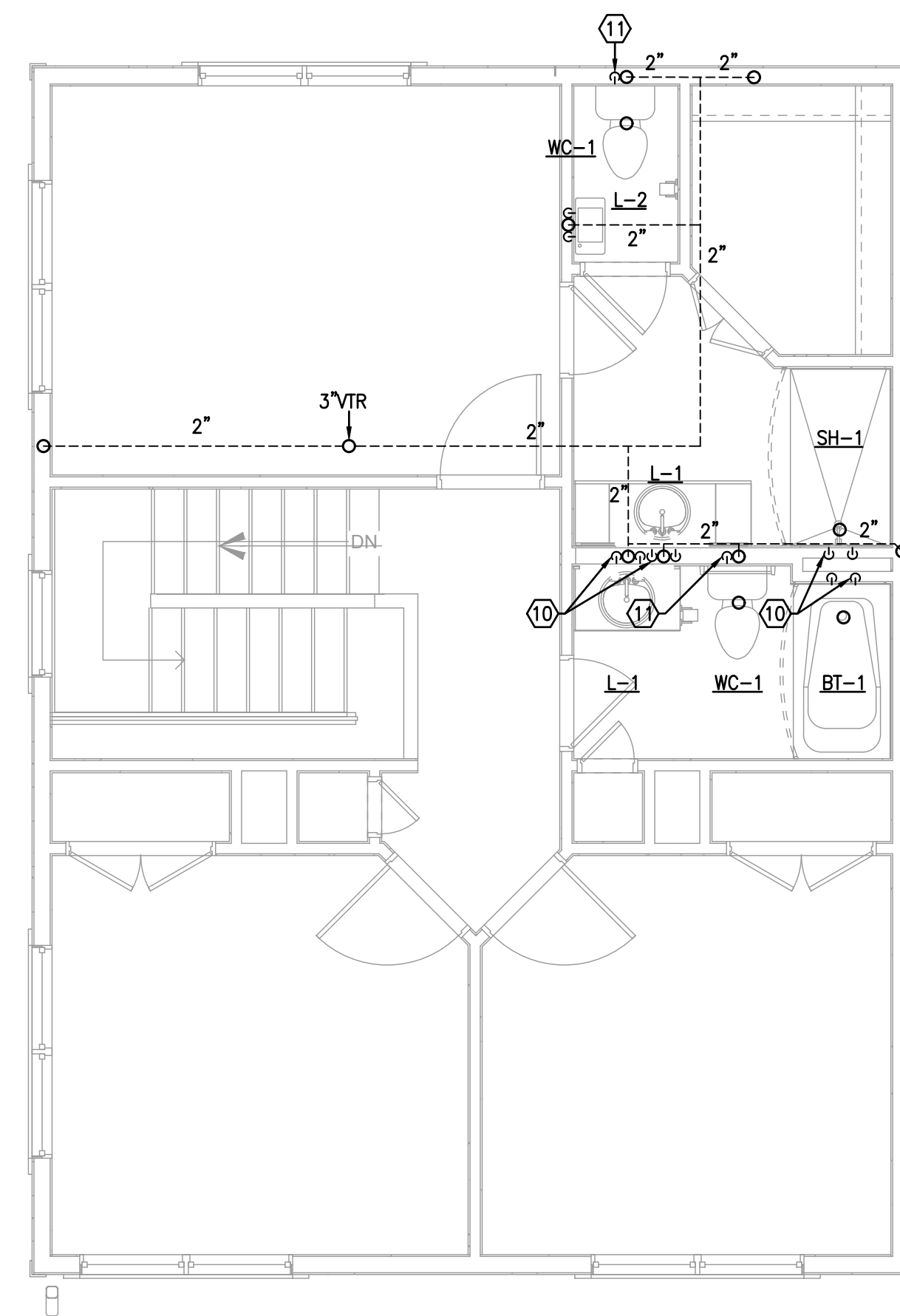


REFERENCE NOTES: ☒

- ① COLD WATER DOWN WITH UNIT SHUT-OFF VALVE & REMOTE READ SUB-METER. CONTRACTOR TO INSTALL SUB-METER FURNISHED BY OWNER.
- ② ELECTRIC WATER HEATER, SEE SCHEDULE & DETAIL.
- ③ 3/4" COND. DRAIN DOWN.
- ④ 1" WATER HEATER PAN DRAIN DOWN.
- ⑤ 1/2" HW TO DISHWASHER, CONNECT DISHWASHER DRAIN TO DISPOSER.
- ⑥ 1/2" CW DOWN.
- ⑦ 1/2" CW & HW DOWN.
- ⑧ 1/2" CW & HW UP.
- ⑨ 1/2" CW UP.
- ⑩ 1/2" CW & HW UP FROM FLOOR BELOW.
- ⑪ 1/2" CW UP FROM FLOOR BELOW.
- ⑫ TERMINATE CONDENSATE DRAIN ABOVE GROUND IN LANDSCAPE, SEE DETAIL.
- ⑬ TERMINATE WATER HEATER PAN DRAIN ABOVE GROUND IN LANDSCAPE, SEE DETAIL.



G2 UNIT TH - 1ST FLOOR - PLUMBING
1/4" = 1'-0"



G6 UNIT TH - 2ND FLOOR - PLUMBING
1/4" = 1'-0"

ISSUE HISTORY

| No. | Date | Description |
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| 1 | 04/15/22 | Permit Submission |
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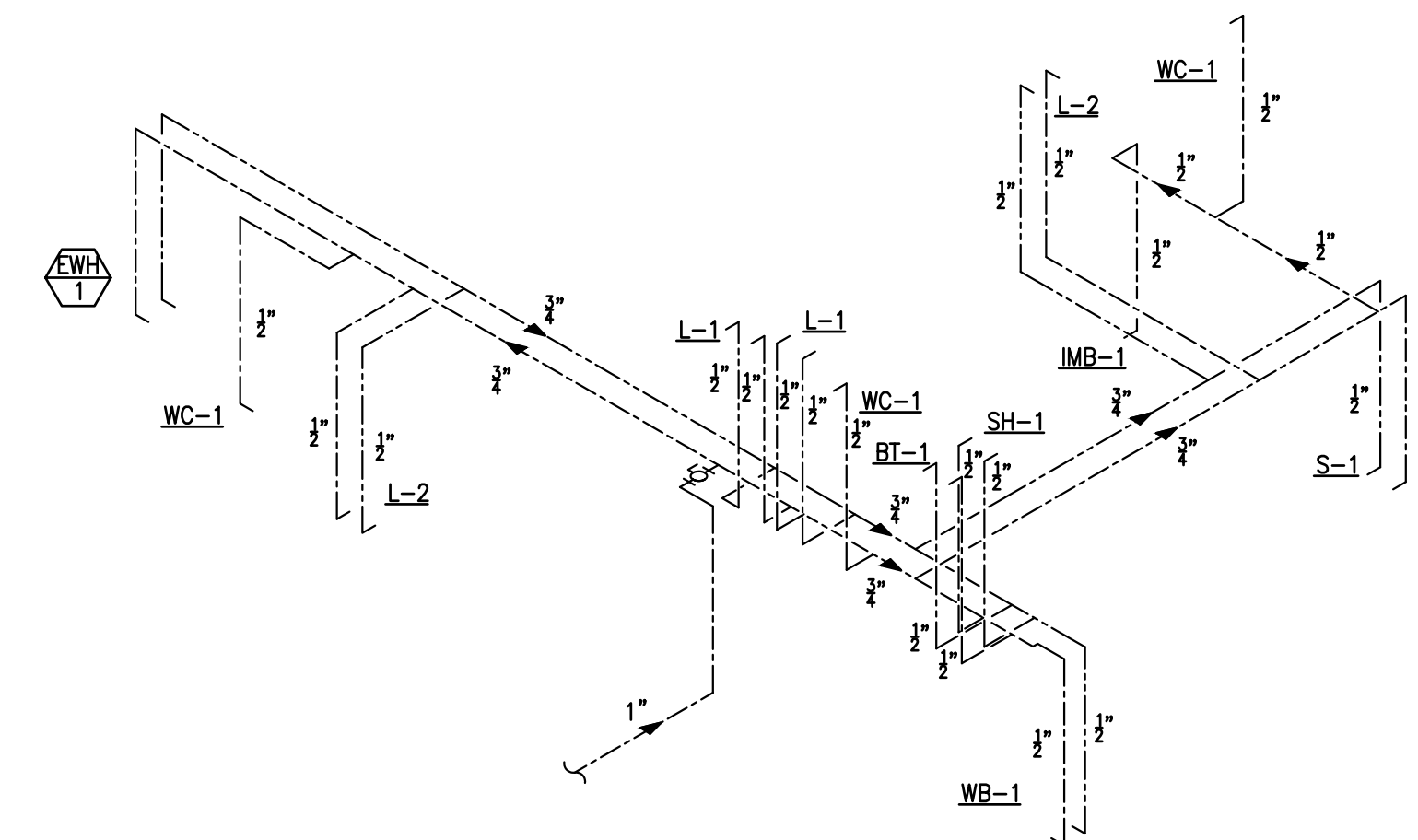
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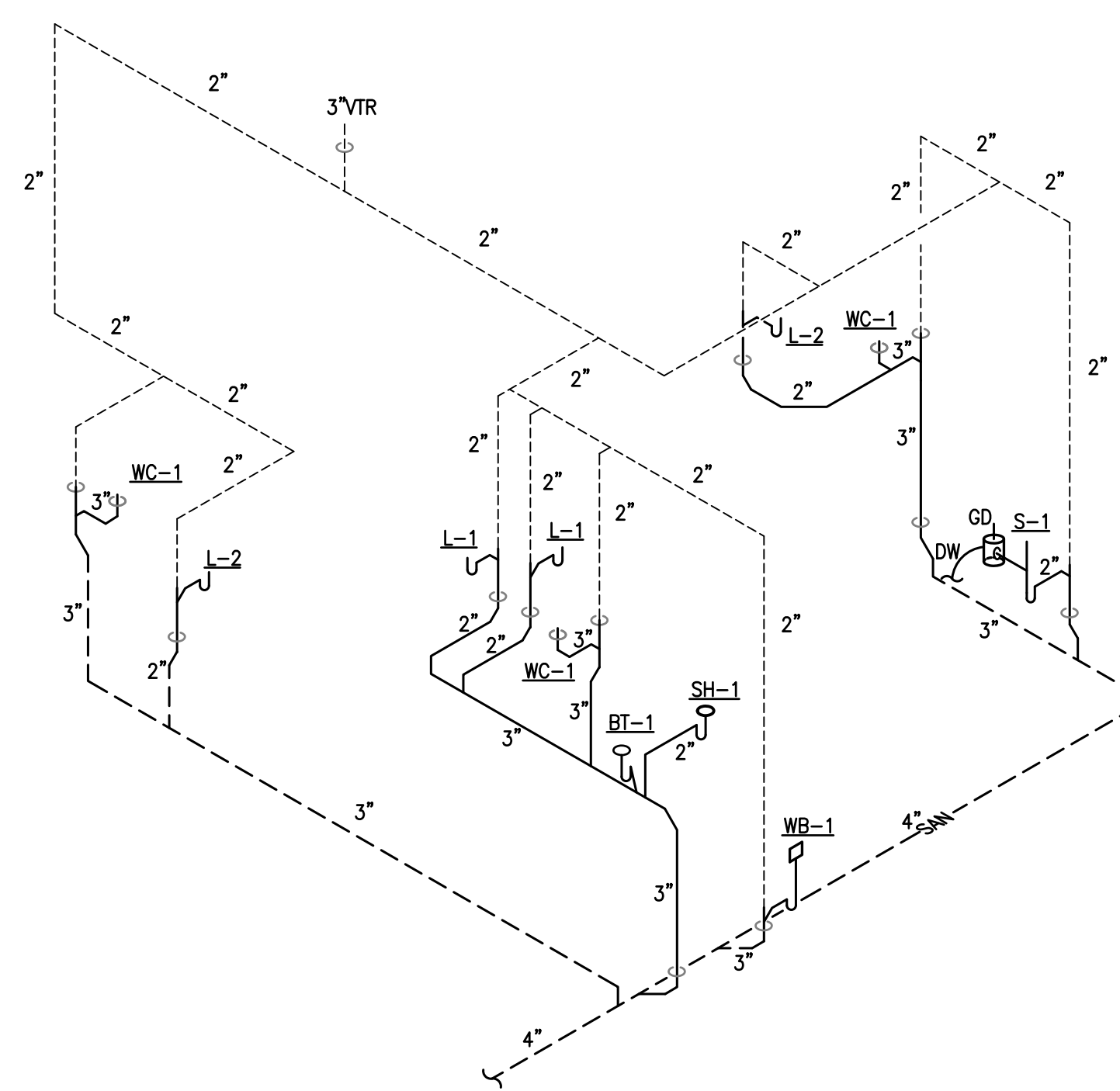
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| THE MADISON | Drawn: MJS/MB |
| HUNTSVILLE, AL | Checked: BLSA/B |
| | Approved: BLSA/B |
| | Date: 04/15/2022 |
| | Project#: 5722 |

ENLARGED UNIT PLANS
PLUMBING

P3.08



1 UNIT TYPE TH - DOMESTIC WATER RISER - PLUMBING
NTS



2 UNIT TYPE TH - SANITARY RISER - PLUMBING
NTS

ISSUE HISTORY

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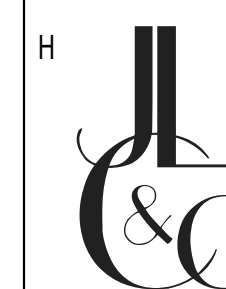
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| THE MADISON | Drawn: MJS/SMB |
| HUNTSVILLE, AL | Checked: BLSA/B |
| | Approved: BLSA/B |
| | Date: 04/15/2022 |
| | Project #: 572 |

RISER DIAGRAMS
PLUMBING

P4.02

GENERAL NOTES:

- A. ALL PLUMBING FIXTURES MUST BE REVIEWED AND APPROVED BY THE ARCHITECT/OWNER/BRAND PRIOR TO ORDERING.
- B. CONTRACTOR TO VERIFY ALL BATHTUB AND SHOWER SIZES, INCLUDING DRAIN LOCATIONS, WITH ARCHITECT PRIOR TO ORDERING.
- C. CONTRACTOR TO VERIFY LAVATORY AND SINK SIZES ARE COORDINATED WITH COUNTERTOPS BEING INSTALLED PRIOR TO ORDERING.
- D. CONTRACTOR TO VERIFY ALL PLUMBING EQUIPMENT SELECTED FITS WITHIN DESIGNATED SPACE SHOWN ON PLUMBING PLANS AND PROVIDES REQUIRED CLEARANCE AS LISTED BY MANUFACTURER.
- E. CONTRACTOR SHALL COORDINATE VOLTAGE AND PHASE OF EACH PIECE OF EQUIPMENT WITH THE ELECTRICAL CONTRACTOR PRIOR TO ORDERING.

PLUMBING SPECIALTIES SCHEDULE - APARTMENT

| MARK | FIXTURE | WASTE | TRAP | VENT | COLD WATER | HOT WATER | MANUFACTURER /MODEL # | DESCRIPTION |
|--------|--|----------|------|------|------------|-----------|---|---|
| WB-1 | WASHER BOX | - | - | - | - | - | SIOUX CHIEF STANDARD: 696-2313CF FIRE RATED: 696R2313CF | ABS BOX 5-1/2" HIGH x 4" WIDE. 1/2" O.D. COMPRESSION ANGLE VALVE. SUPPLY CONNECTION SIZE SHALL BE 1/2" O.D. PROVIDE WATER HAMMER SHOCK ARRESTORS AND FIRE RATED BOX WHERE REQUIRED. |
| IMB-1 | ICE MAKER BOX | - | - | - | - | - | SIOUX CHIEF STANDARD: 696-C1010CF FIRE RATED: 696R2313CF | ABS BOX 5-1/2" HIGH x 4" WIDE. 1/2" SUPPLY CONNECTION. PROVIDE WATER HAMMER SHOCK ARRESTORS AND FIRE RATED BOX WHERE REQUIRED. |
| SA | SHOCK ARRESTOR | - | - | - | - | - | SIOUX CHIEF 650 SERIES | SIZE PER MANUFACTURER'S RECOMMENDATIONS. PDI CERTIFIED. WHA-1: SIZE "A", WHA-2: SIZE "B", SIZE PER PDI METHOD. |
| WCO-1 | WALL CLEANOUT | SEE DWG. | - | - | - | - | ZURN Z1446 | CLEANOUT TEE, DURA-COATED CAST IRON BODY, GAS AND WATERTIGHT ABS TAPERED THREAD PLUG, AND ROUND, SMOOTH STAINLESS STEEL WALL ACCESS COVER WITH SECURING SCREW. |
| ECCO-1 | EXTERIOR CLEANOUT | SEE DWG. | - | - | - | - | ZURN Z51400-VP | "LEVEL-TROL" ADJUSTABLE FLOOR CLEANOUT, DURA-COATED CAST IRON BODY WITH GAS AND WATERTIGHT ABS TAPERED THREAD PLUG AND ROUND SECURED STAINLESS STEEL ADJUSTABLE TO FINISHED FLOOR WITH VANDALPROOF SCREWS. |
| FCO-1 | FLOOR CLEANOUT | SEE DWG. | - | - | - | - | ZURN Z51400-VP | "LEVEL-TROL" ADJUSTABLE FLOOR CLEANOUT, DURA-COATED CAST IRON BODY WITH GAS AND WATERTIGHT ABS TAPERED THREAD PLUG AND ROUND SECURED STAINLESS STEEL ADJUSTABLE TO FINISHED FLOOR WITH VANDALPROOF SCREWS. |
| HB-1 | HOSE BIBB - BUILDING FREEZE PROOF | - | - | - | - | - | ZURN Z1320XL | FREEZE PROOF ANTI-SIPHON WALL FAUCET WITH EXTERNAL VACUUM BREAKER, ALL BRONZE INTERIOR COMPONENTS, VANDAL-RESISTANT OPERATING STEM, ROUGH BRONZE EXTERIOR AND 3/4" MALE HOSE CONNECTION, LOOSE KEY HANDLE AND 3/8" DEEP BOX. |
| FD-1 | FLOOR DRAIN | SEE DWG. | - | - | - | - | ZURN ZM4155-HD-P | DURA-COATED CAST IRON BODY WITH BOTTOM OUTLET, COMBINATION INVERTIBLE MEMBRANE CLAMP AND ADJUSTABLE COLLAR WITH SEEPAGE SLOTS AND "TYPE S" POLISHED NICKEL BRONZE, SQUARE HEAVY-DUTY STRAINER AND 1/2" TRAP PRIMER CONNECTION. |
| RD-1 | ROOF DRAIN - PRIMARY & SECONDARY COMBO | SEE DWG. | - | - | - | - | ZURN ZC163 | 15" DIAMETER PRIMARY & SECONDARY COMBO ROOF DRAIN. DURA-COATED CAST IRON BODY WITH COMBINATION MEMBRANE FLASHING CLAMP/GRAVEL GUARD, DOUBLE TOP SET DECK PLATE AND LOW SILHOUETTE GALVANIZED CAST IRON DOME. SEE PLANS FOR PIPE SIZING. |
| RD-1 | ROOF DRAIN - PRIMARY | SEE DWG. | - | - | - | - | ZURN ZC100-C-D | 15" DIAMETER PRIMARY ROOF DRAIN. DURA-COATED CAST IRON BODY WITH COMBINATION MEMBRANE FLASHING CLAMP/GRAVEL GUARD AND LOW SILHOUETTE GALVANIZED CAST IRON DOME. SEE PLANS FOR PIPE SIZING. |
| RPBP-1 | REDUCED PRESSURE BACKFLOW PREVENTER | - | - | - | SEE DWG. | - | WATTS LF009 | LEAD FREE REDUCED PRESSURE ZONE ASSEMBLY WITH 2 ISOLATION VALVES AND 2 BRONZE TEST COCKS. 1/2"-2" IN SIZE. |
| DSN-1 | DOWNSPOUT NOZZLE | - | - | - | SEE DWG. | - | JR SMITH 1770T | CAST BRONZE NOZZLE AND FLANGE. |
| DSN-2 | DOWNSPOUT NOZZLE | - | - | - | SEE DWG. | - | JR SMITH 1775 | FABRICATED TYPE 304 STAINLESS STEEL DOWNSPOUT COVER WITH HINGED PERFORATED COVER. |
| TPV-1 | TRAP PRIMER VALVE | - | - | - | 1/2" | - | PRECISION PLUMBING PRODUCTS PR-500 | PROVIDE FULLY ACCESSIBLE SHUT OFF VALVE TO EACH PRIMER VALVE. |
| TMV-1 | MIXING VALVE | - | - | - | 1/2" | 1/2" | SYMMONS 7-225-CK | THERMOSTATIC CONTROLLER, CHECK STOPS, REMOVABLE CARTRIDGE WITH STRAINER, S.S. PISTON, THERMAL MOTOR, MIN FLOW RATE .5 GPM. |
| BWV-1 | BACKWATER VALVE | SEE DWG. | - | - | - | - | ZURN Z1090 | DURA-COATED CAST IRON BODY WITH NO-HUB INLET AND OUTLET, GASKETED BOLTED COVER, AUTOMATIC PVC FLAPPER TYPE BACKWATER VALVE WITH O-RING. |
| PRV-1 | PRESSURE REGULATING VALVE | - | - | - | SEE DWG. | - | CLA-VAL 90-01 | BRONZE BODY AND COVER, ANSI B16.24, GLOBE TYPE, BRONZE DISC GUIDE, SEAT & COVER, BUNA-N RUBBER DISC, NYLON REINFORCED BUNA-N RUBBER DIAPHRAGM, STAINLESS STEEL STEM NUT AND SPRING, STAINLESS STEEL PILOT SYSTEM. |
| FCV-1 | FLOW CONTROL VALVE | - | - | - | - | 1/2" | CIRCUIT SOLVER CS-1/2-120 | THERMOSTATIC SELF-ACTUATING BALANCING VALVE. |

- NOTES:
- ALL PLUMBING FIXTURES SHALL BE SUPPLIED WITH ANGLE STOP SUPPLY RISERS. THIS SHALL INCLUDE ALL WASHING MACHINES, DISHWASHERS & ICE MAKERS.
 - PROVIDE FULLY ACCESSIBLE SHOCK ARRESTORS ON SUPPLIES TO WASHING MACHINES, DISHWASHERS & ICE MAKERS.

PLUMBING FIXTURE SCHEDULE - APARTMENT

| MARK | FIXTURE | WASTE | TRAP | VENT | COLD WATER | HOT WATER | MANUFACTURER /MODEL # | DESCRIPTION |
|------|--------------------|-------|--------|--------|------------|-----------|---|---|
| WC-1 | WATER CLOSET | 3" | INTEG | - | 1/2" | - | STERLING WALTON LEFT HAND LEVER: 402312 BOWL: 403378 TANK: 404501 | FLOOR MOUNTED TANK TYPE, 15-5/16" RIM HEIGHT, 1.28 GALLONS PER FLUSH, WHITE VITREOUS CHINA, ELONGATED BOWL, BRASSCRAFT 1/2 TURN ANGLE STOP SUPPLY TUBE & ESCUTCHEONS. PROVIDE SOLID PLASTIC ELONGATED SEAT WITH COVER. |
| | | | | | | | RIGHT HAND LEVER: 402312-RA BOWL: 403378 TANK: 404501-RA | |
| L-1 | LAVATORY | 2" | 1-1/4" | 1-1/2" | 1/2" | 1/2" | STERLING SANIBEL 442004 MOEN ADLER 84603 | 20"x17" OVAL DROP-IN, VITREOUS CHINA, 4" CENTERS WITH FRONT OVERFLOW. TWO HANDLE LAVATORY FAUCET, 1.2 GPM, POP UP WASTE, P-TRAP AND WALL ARM, BRASSCRAFT 1/2 TURN ANGLE STOP SUPPLIES W/SUPPLY TUBES AND ESCUTCHEONS. |
| L-2 | LAVATORY | 2" | 1-3/4" | 1-1/2" | 1/2" | 1/2" | NAMEX'S CITY CERA STYLE 001600-U KOHLER DEVONSHIRE K-193-4 | 18"x9.8" RECTANGULAR WALL MOUNTED, WHITE CERAMIC, SINGLE HOLE WITH FRONT OVERFLOW. SINGLE HANDLE LAVATORY FAUCET, 1.2 GPM, POP UP WASTE, P-TRAP AND WALL ARM, BRASSCRAFT 1/2 TURN ANGLE STOP SUPPLIES W/SUPPLY TUBES AND ESCUTCHEONS. |
| S-1 | SINK (SINGLE BOWL) | 2" | 1-1/2" | 1-1/2" | 1/2" | 1/2" | STERLING SOUTHWEST 24912-4-NA MOEN ADLER 87233 | 33"x22"x8" SINGLE BOWL, 20 GAUGE STAINLESS STEEL, TOP MOUNT SINK. SINGLE LEVER HANDLE PULL DOWN SPRAYER, 1.5 GPM, STAINLESS STEEL FINISH. STAINLESS STEEL STRAINER DRAIN AND TAILPIECE, P-TRAP AND WALL ARM, BRASSCRAFT 1/2 TURN ANGLE STOP SUPPLY TUBES & ESCUTCHEONS. |
| BT-1 | BATHTUB | 2" | 2" | 1-1/2" | 1/2" | 1/2" | STERLING ENSEMBLE RIGHT DRAIN: 71101120 LEFT DRAIN: 71101110 MOEN CALDWELL 828705RN | 60"x36"x16" VIKRELL, SLOPING WITH INTEGRAL APRON AND TILING FLANGE. PRESSURE BALANCING MIXING VALVE. TRIM WITH SPRAY HEAD, ARM AND FLANGE, 1.75 GPM, CHROME. LSP RAPID FIT LIFT AND TURN WASTE AND OVERFLOW KIT. |
| SH-1 | SHOWER | 2" | 2" | 2" | 1/2" | 1/2" | STERLING ENSEMBLE RIGHT DRAIN: 72181120 LEFT DRAIN: 72181110 MOEN CALDWELL 82495C | 60"x32" VIKRELL, 3-1/2" THRESHOLD, TEXTURED FLOOR AND TILING FLANGE. PRESSURE BALANCING MIXING VALVE. TRIM WITH SPRAY HEAD, ARM AND FLANGE, 1.75 GPM, CHROME. PVC FLOOR DRAIN WITH STAINLESS STEEL STRAINER. |

- NOTES:
- CONTRACTOR TO VERIFY IF THIS PROJECT HAS I.D. DRAWINGS. IF THERE ARE I.D. DRAWINGS THE PLUMBING FIXTURES SELECTED IN THE I.D. PACKAGE OVERRIDE THIS PLUMBING SCHEDULE.
 - COLOR/FINISH OPTIONS SHALL BE SUBMITTED TO THE ARCHITECT/OWNER PRIOR TO PURCHASE AND INSTALLATION.
 - REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHTS OF ALL FIXTURES.
 - ALL PLUMBING FIXTURES SHALL BE SUPPLIED WITH ANGLE STOP SUPPLY RISERS. THIS SHALL INCLUDE ALL FAUCETS AND TOILETS.

ELECTRIC WATER HEATER SCHEDULE - APARTMENT

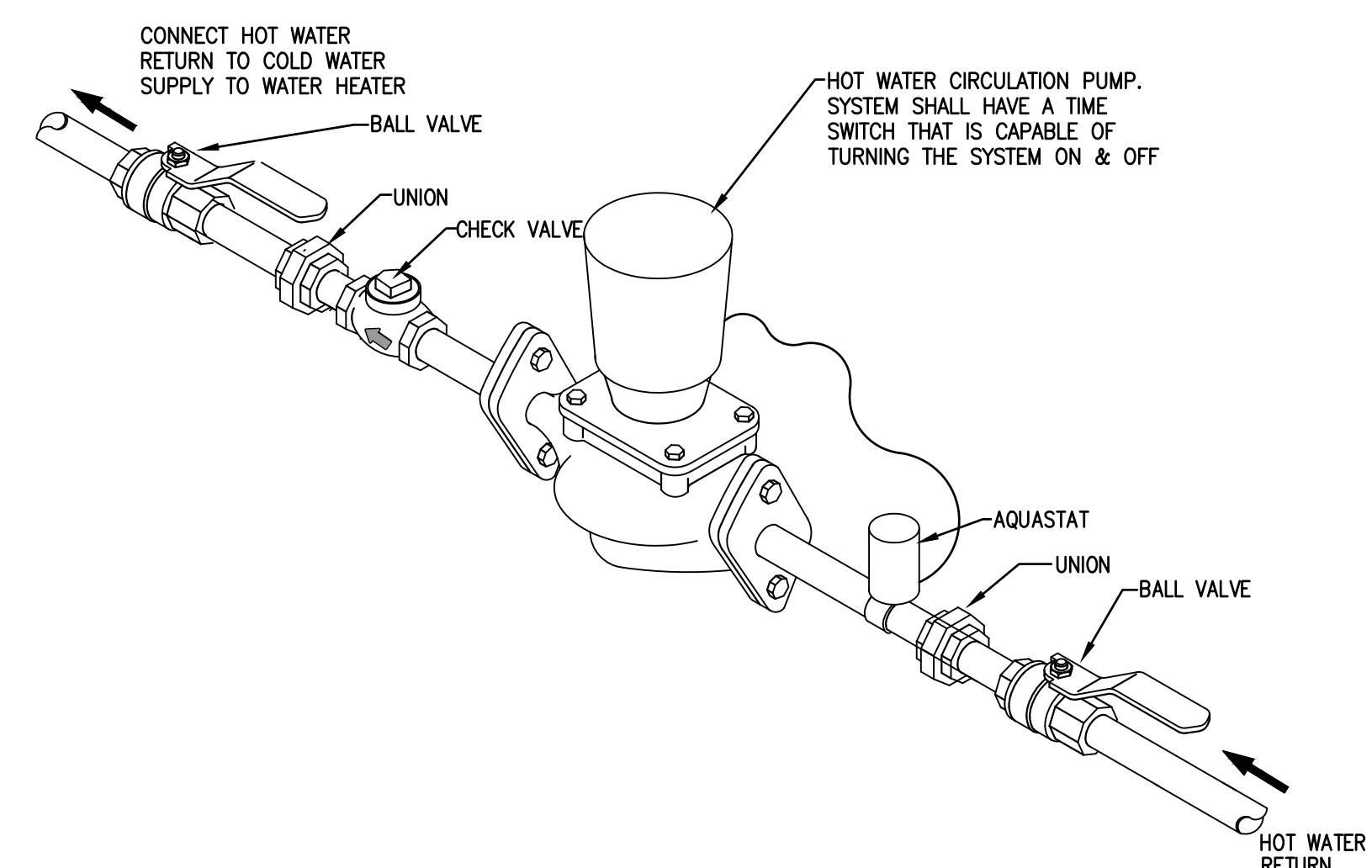
| MARK | TYPE | GALLONS | INPUT KW | GPH REC. @ 90° RISE | VOLTAGE/PHASE | OPERATING WEIGHT (LBS.) | DIMENSIONS | SELECTION BASED ON: | | UNIFORM ENERGY FACTOR | NOTES |
|-------|----------|---------|----------|---------------------|---------------|-------------------------|-----------------------|---------------------|---------|-----------------------|---------|
| | | | | | | | | MANUFACTURER | MODEL # | | |
| EWH-1 | ELECTRIC | 38 | 4.5 | 21 | 208/240V/1φ | 418 | 32"H x 23"W - LOW BOY | A.O. SMITH OR EQUAL | ENL-40 | .92 | 1. & 2. |
| EWH-2 | ELECTRIC | 40 | 4.5 | 21 | 208/240V/1φ | 418 | 62"H x 18"W - TALL | A.O. SMITH OR EQUAL | ENT-40 | .92 | 1. & 2. |
| EWH-3 | ELECTRIC | 50 | 4.5 | 21 | 208/240V/1φ | 510 | 61"H x 21"W - TALL | A.O. SMITH OR EQUAL | ENT-50 | .92 | 1. & 2. |

- NOTES:
- PROVIDE T & P VALVE, EXPANSION CONTROL DEVICE, AND 24 GAUGE 1/2" DEEP WATER HEATER DRAIN PAN WITH 1" DRAIN CONNECTION. REFER TO DETAIL.
 - COORDINATE WATER HEATER LOCATION AND PIPING WITH MECHANICAL PLANS.

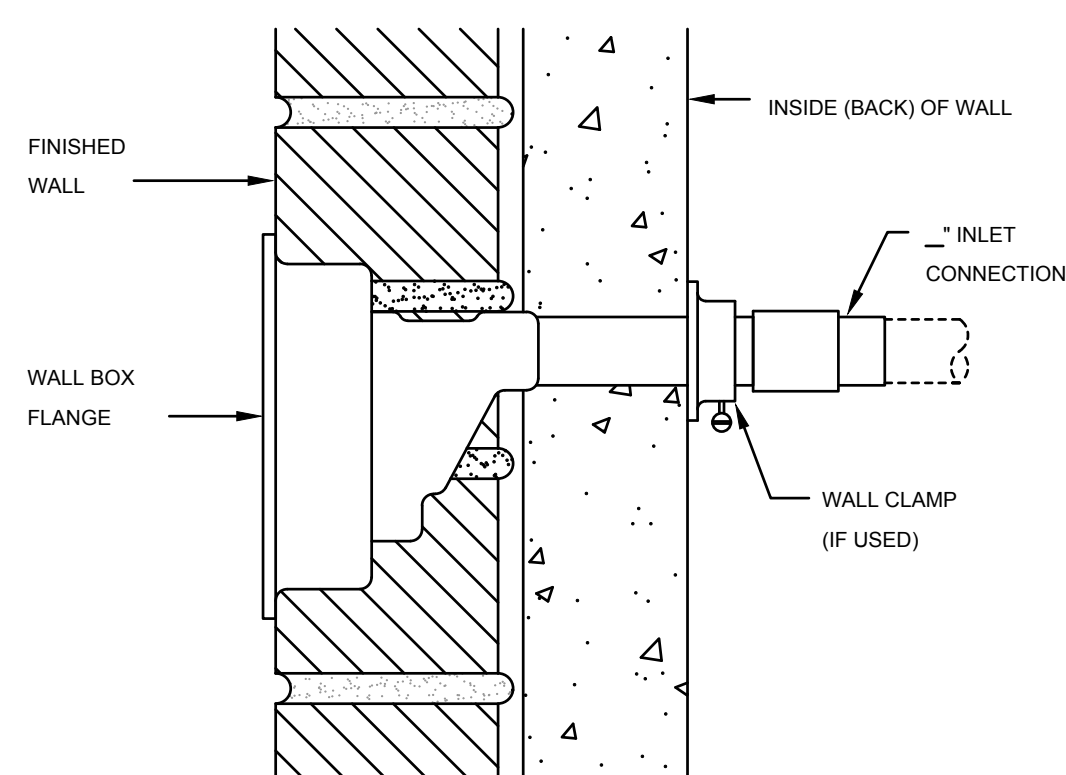
PUMP SCHEDULE - APARTMENT

| MARK | LOCATION | GPM | FT HEAD | CONN. SIZE | | MOTOR DATA | | SELECTION BASED ON: | | NOTES |
|------|-----------------------|-----|---------|------------|--------|------------|---------------|---------------------|--------------------|---------|
| | | | | INLET | OUTLET | HP/WATT | VOLTAGE/PHASE | MANUFACTURER | MODEL | |
| SP-1 | ELEVATOR SUMP PIT | 50 | 25 | 1-1/2" | 1-1/2" | 3/4 HP | 120/1φ | LIBERTY | ELV-290 | 1. & 2. |
| CP-1 | UNIT CIRCULATING PUMP | 2.2 | 3.9 | 1/2" | 1/2" | 8.5 WATTS | 120/1φ | GRUNDFOS | UP10-16 PM A BU/LC | 3. & 4. |

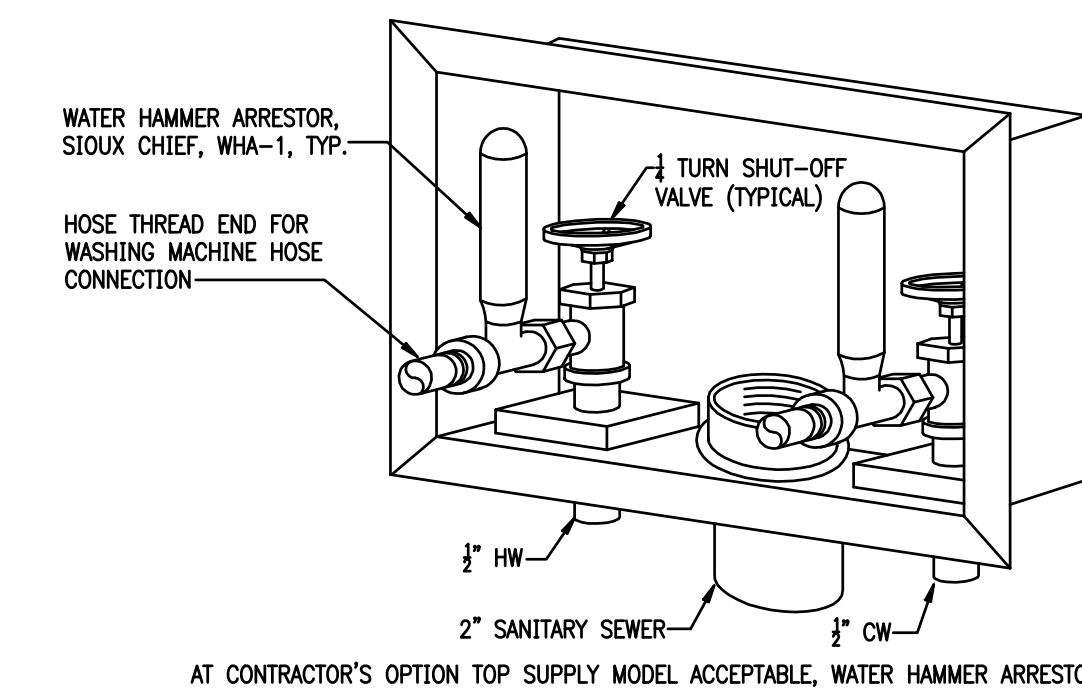
- NOTES:
- SUMP PUMP PROVIDED WITH OIL DETECTOR CONTROL REQUIRED FOR HYDRAULIC TYPE ELEVATORS. LOCATE ALARM IN MECHANICAL ROOM AND PROVIDE SIGNAGE "ELEVATOR SUMP PUMP". PROVIDE MODEL WITHOUT OIL DETECTOR IF TRACTION DRIVE ELEVATOR IS BEING INSTALLED.
 - PER ASME 17.1 ONE 50 GPM SUMP PUMP IS REQUIRED PER ELEVATOR CAR.
 - UNIT CIRCULATING PUMP SHALL OPERATE PER FBCE R403.5.2. PUMP SHALL START ON FLOW OF DEMAND HOT WATER AND BASED ON MAINTAINING LOOP TEMPERATURE OF 104°F.
 - PROVIDE WITH AQUASTAT AND FLOW CONTROL.



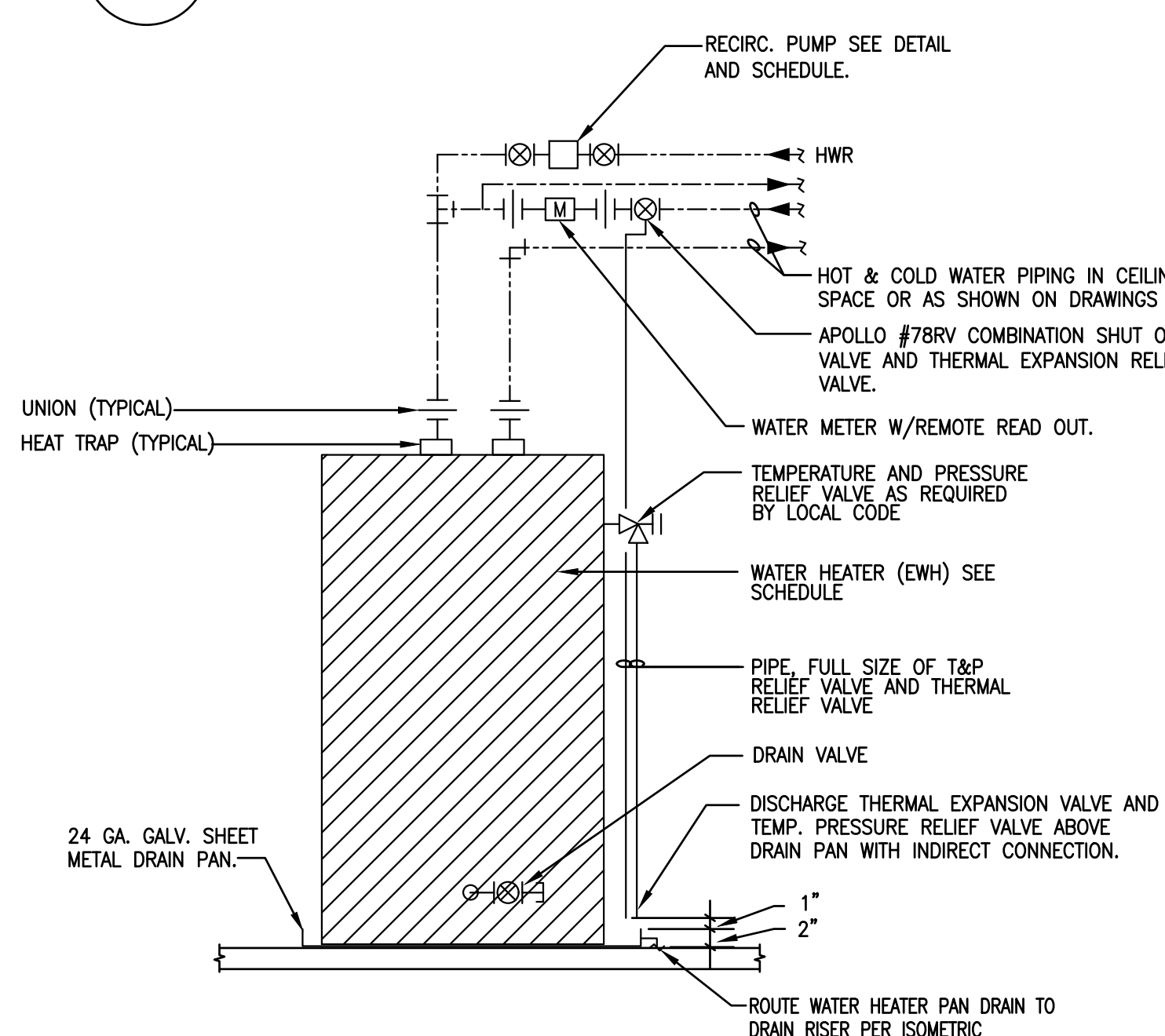
6
NTS
HOT WATER RECIRCULATING PUMP DETAIL



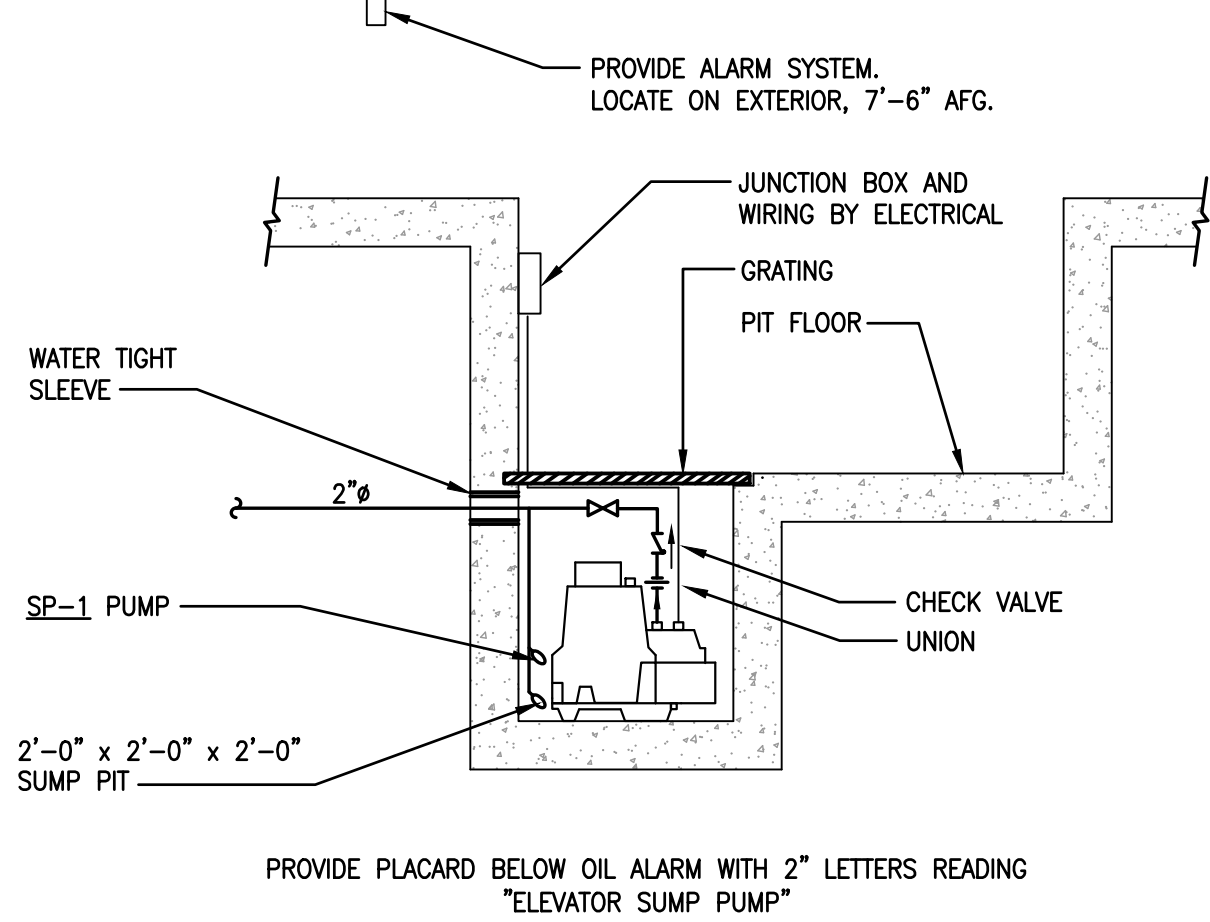
5
NTS
FREEZEPROOF WALL HYDRANT



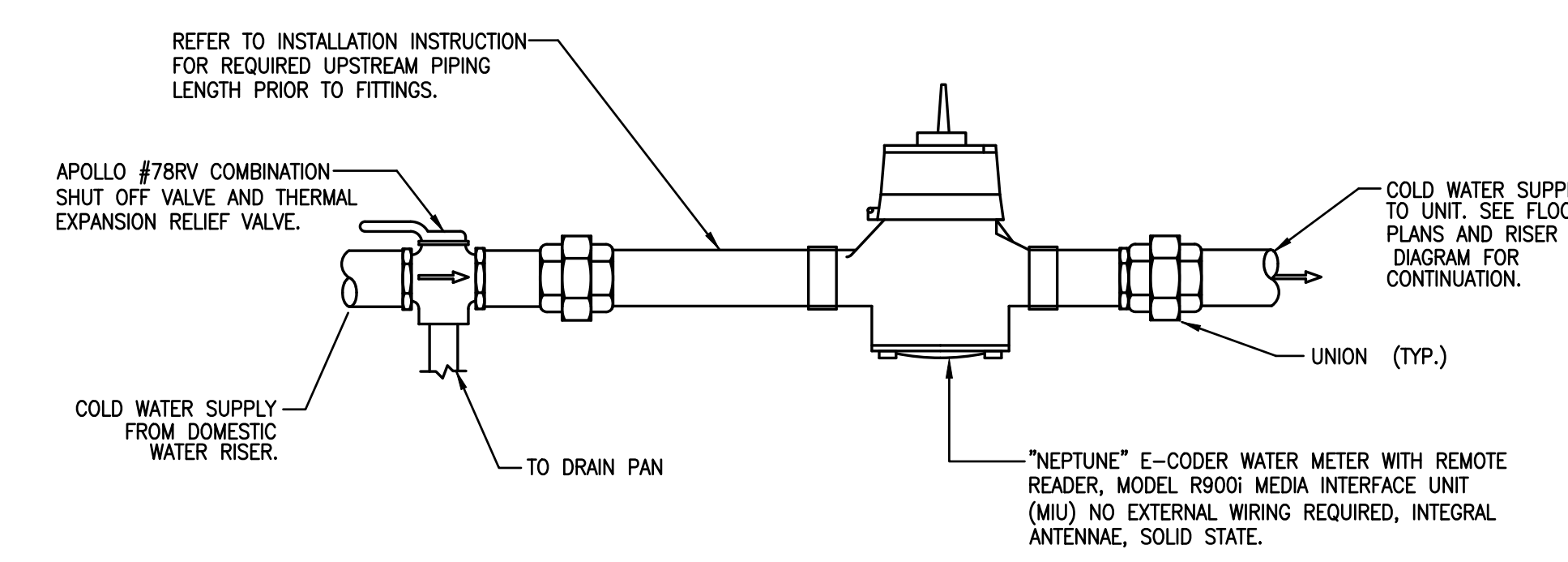
4
NTS
WASHER BOX



3
NTS
WATER HEATER DETAIL IN UNITS (WITH CIRCULATING PUMP)



2
NTS
ELEVATOR SUMP PUMP DETAIL



1
NTS
WATER METER DETAIL (WITH EXPANSION VALVE)



ISSUE HISTORY

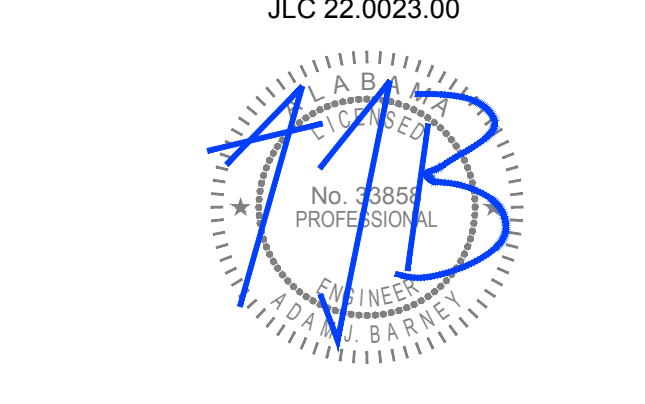
| No. | Date | Description |
|-----|----------|-------------------|
| 1 | 04/15/22 | Permit Submission |

REVISION HISTORY

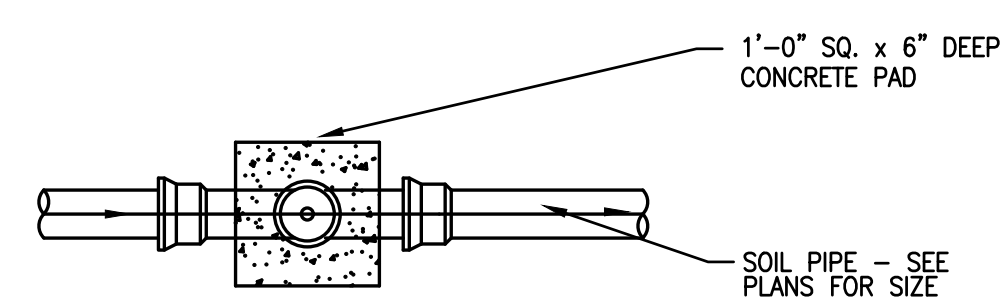
| No. | Date | Description |
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FUGLEBERG KOCH
2555 Temple Trail, Winter Park, FL 32789 (407) 629-0595
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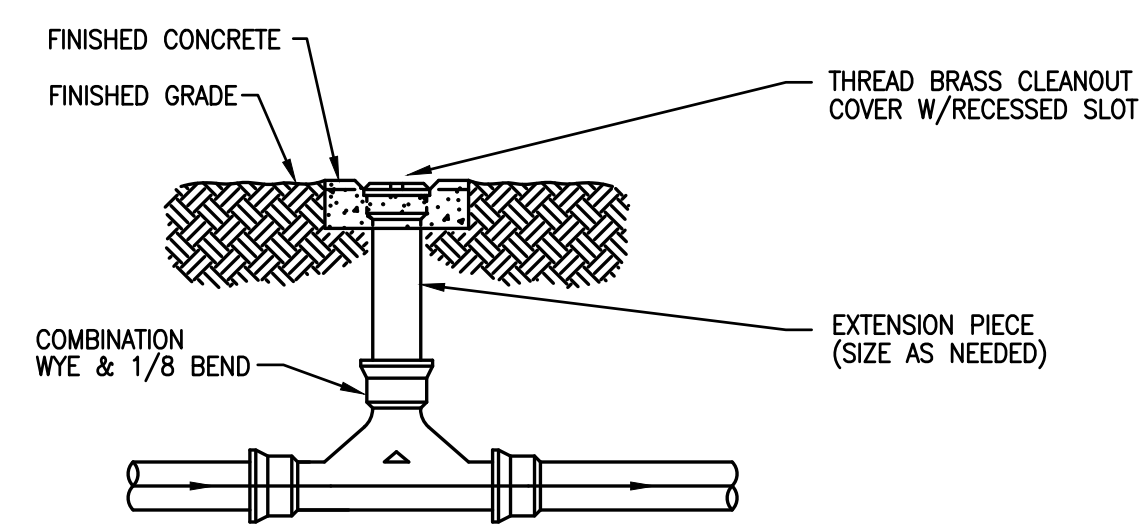
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CA NO. 4050 - E



THE MADISON
HUNTSVILLE, AL
APARTMENT SCHEDULE & DETAIL PLUMBING
P5.01

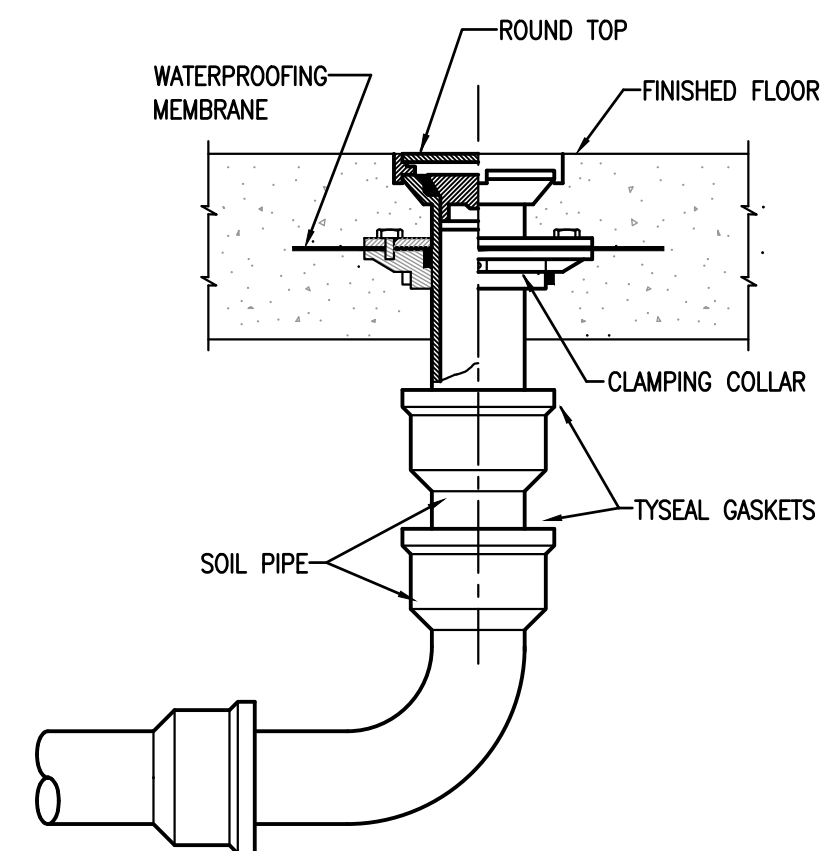


PLAN

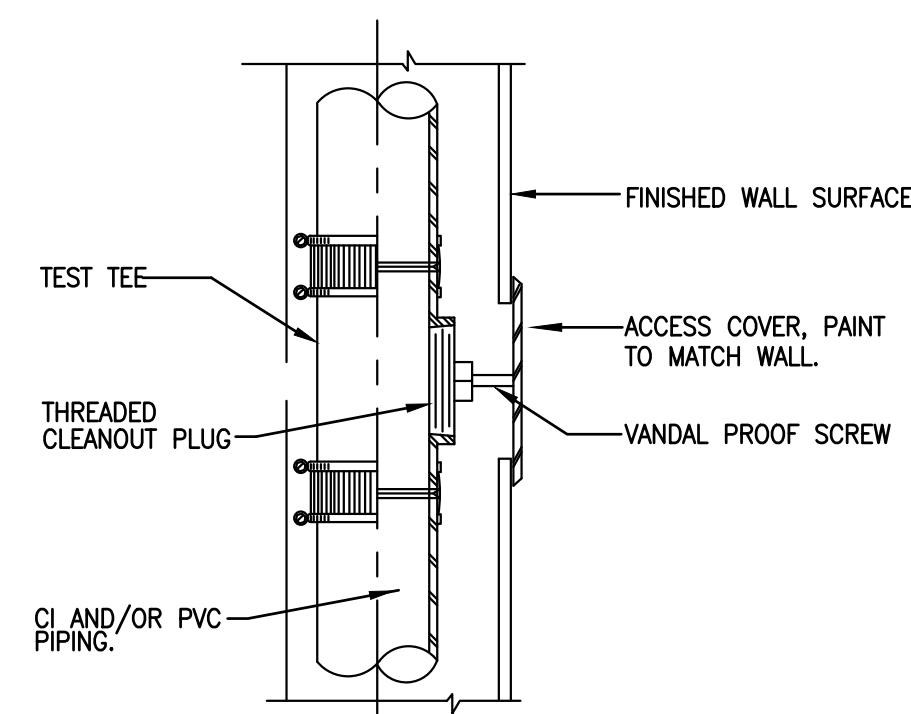


ELEVATION

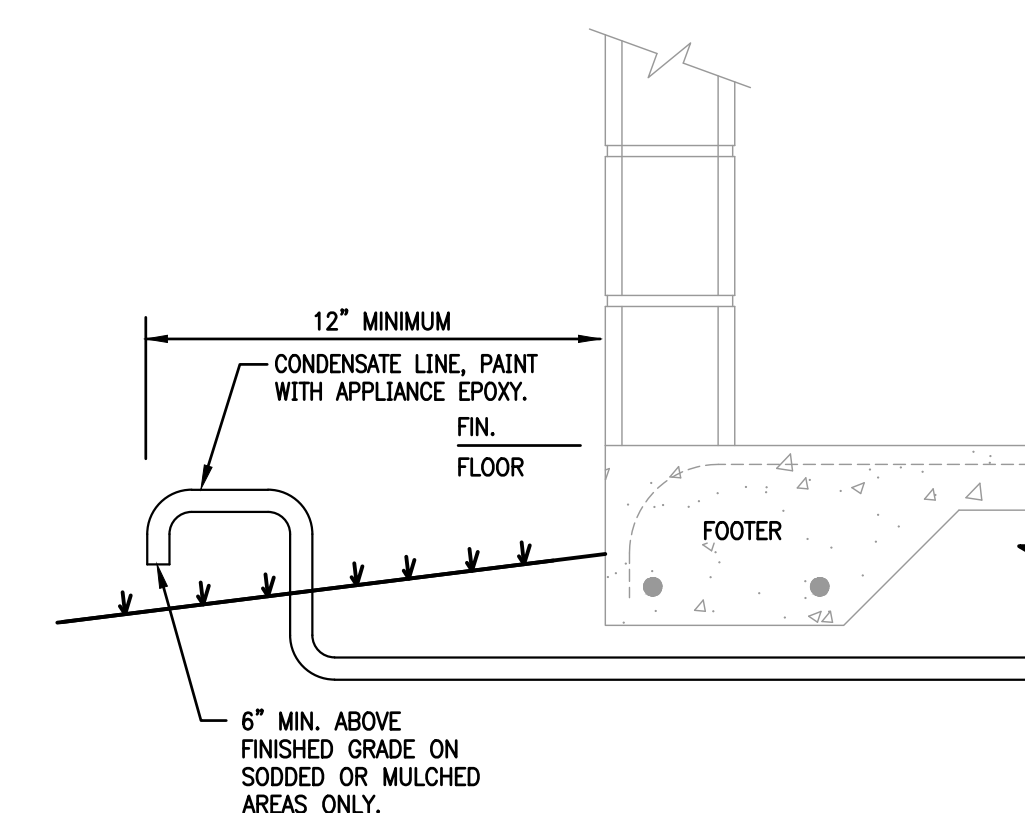
6 TWO-WAY CLEANOUT
NTS



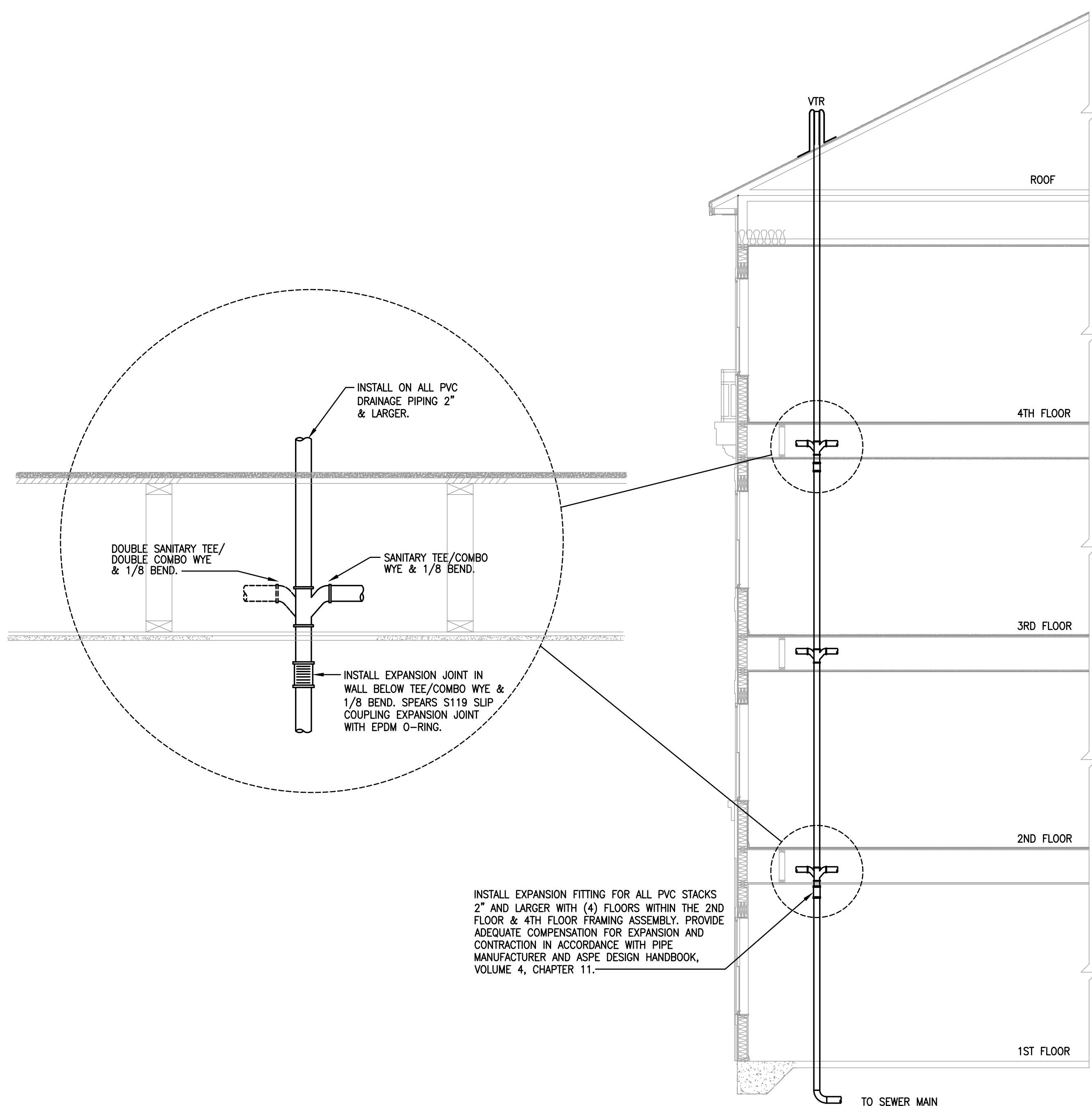
5 FLOOR CLEANOUT
NTS



4 WALL CLEANOUT
NTS

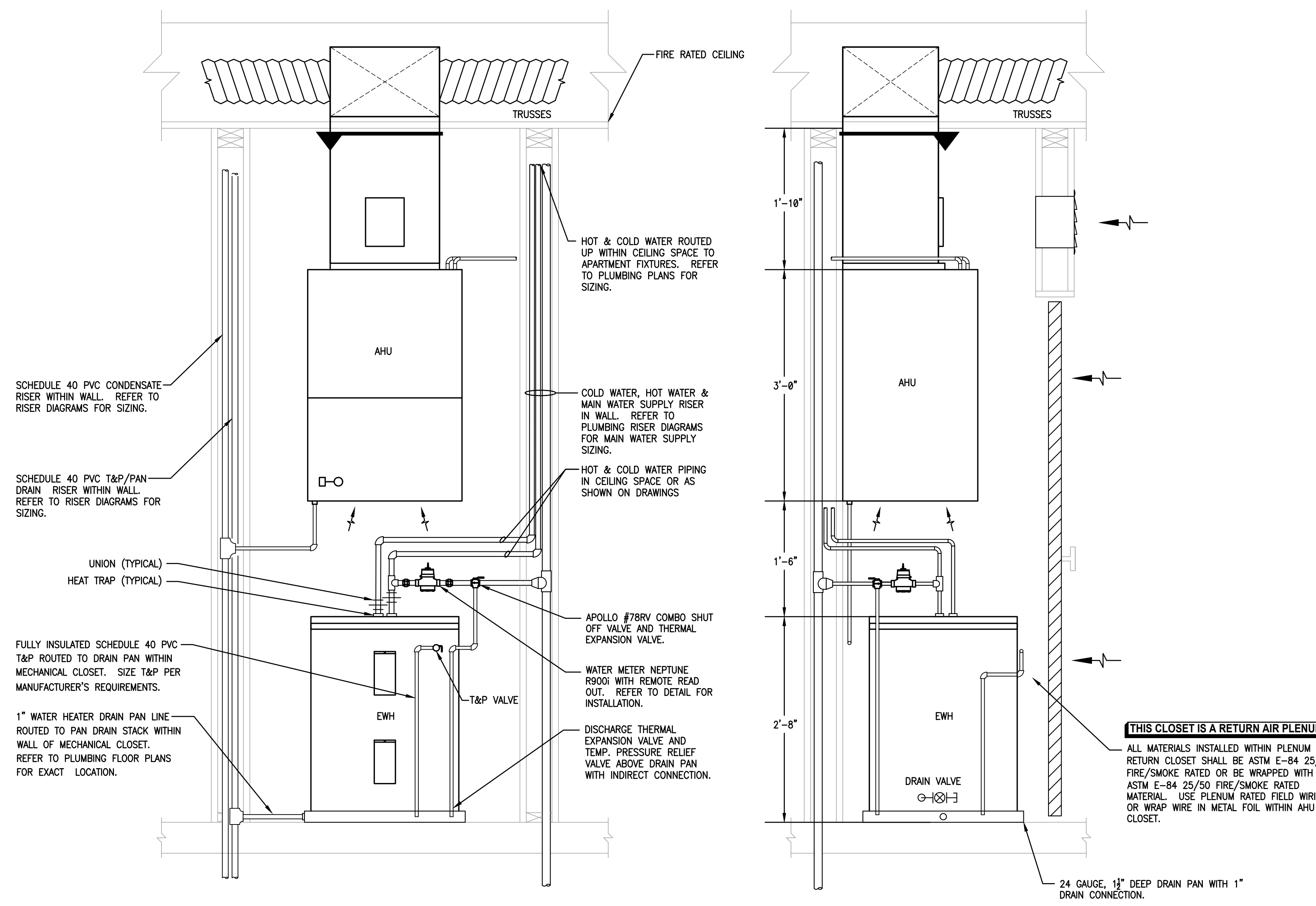


3 CONDENSATE DRAIN TERMINATION DETAIL
NTS



INSTALL EXPANSION FITTING FOR ALL PVC STACKS 2" AND LARGER WITH (4) FLOORS WITHIN THE 2ND FLOOR & 4TH FLOOR FRAMING ASSEMBLY. PROVIDE ADEQUATE COMPENSATION FOR EXPANSION AND CONTRACTION IN ACCORDANCE WITH PIPE MANUFACTURER AND ASPE DESIGN HANDBOOK, VOLUME 4, CHAPTER 11.

2 DRAIN PIPING EXPANSION DETAIL
NTS



FRONT VIEW

SIDE VIEW

1 LOWBOY WATER HEATER BELOW AHU DETAIL
NTS

ISSUE HISTORY

| No. | Date | Description |
|-----|----------|-------------------|
| 1 | 04/15/22 | Permit Submission |

REVISION HISTORY

| No. | Date | Description |
|-----|------|-------------|
|-----|------|-------------|

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| | |
|-----------|------------|
| Drawn | MJRSMB |
| Checked | BLSA/B |
| Approved | BLSA/B |
| Date | 04/15/2022 |
| Project # | 5722 |

THE MADISON
HUNTSVILLE, AL
APARTMENT DETAILS
PLUMBING

P5.02

System No. W-L-2078
F Ratings — 1 and 2 Hr (See Item 1)
T Ratings — 0, 1 and 2 Hr (See Items 2 and 3)
L Rating At Ambient — 3 CFM/sq ft
L Rating At 400 F — Less Than 1 CFM/sq ft

SECTION A-A

1. Wall Assembly — The fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual L500, L400, V400 or V400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the construction features noted below:
 A. Studs — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced max 16 in. (406 mm) OC. Steel studs to be min 2-1/2 in. (64 mm) wide and spaced max 24 in. (610 mm) OC.
 B. Gypsum Board — Nom 5/8 in. (16 mm) thick gypsum board, as specified in the individual Wall and Partition Design. Max diam of opening is 11-1/2 in. (292 mm).
 The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.
 2. Through-Penetrants — One nonmetallic pipe, conduit or tubing to be installed within the firestop system. The annular space between pipe and periphery of opening shall be min 0 in. (point contact) to max 1/2 in. (13 mm). Pipe or conduit to be rigidly supported on both sides of the wall assembly. The following types and sizes of nonmetallic pipes may be used:
 A. Polyvinyl Chloride (PVC) Pipe — Nom 10 in. (254 mm) diam (or smaller) Schedule 40 solid-core or cellular core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
 B. Chlorinated Polyvinyl Chloride (CPVC) Pipe — Nom 10 in. (254 mm) diam (or smaller) SDR13.5 CPVC pipe for use in closed (process or supply) piping systems.
 C. Acrylonitrile Butadiene Styrene (ABS) Pipe — Nom 6 in. (152 mm) diam (or smaller) Schedule 40 solid-core or cellular core ABS pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
 D. Flame Retardant Polypropylene (FRPP) Pipe — Nom 6 in. (152 mm) diam (or smaller) Schedule 40 FRPP pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
 E. Polyvinylidene Fluoride (PVDF) Pipe — Nom 4 in. (102 mm) diam (or smaller) PVDF pipe for use in closed (process or supply) or vented (drain, waste or vent) piping system.
 F. Crosslinked Polyethylene (PEX) Tubing — Nom 4 in. (102 mm) diam (or smaller) SDR 9 Uponor AquaPEX or Wirsbo hePEX PEX tube for use in closed (process or supply) piping systems.
 When max 6 in. diam pipe is used, T Rating is equal to the hourly fire rating of the wall except that when penetrant type 2F is used, T Rating is 0 hr. When nom 8 in. or 10 in. (203 or 254 mm) diam pipe is used, T Rating is 0 hr.

Hiiti Firestop Systems
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 Page: 1 of 2

System No. F-C-2160
F Rating — 1 and 2 Hr
T Rating — 1 and 2 Hr

SECTION A-A

1. Floor-Ceiling Assembly — The 1 and 2 hr fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The general construction features of the floor-ceiling assembly are summarized below:
 A. Flooring System — Lumber or plywood subfloor with finish floor of lumber, plywood or Floor Topping Mixture* as specified in the individual Floor-Ceiling Design. Diam of opening shall be 2 in. (51 mm) larger than the nom diam of through penetrant (Item 2).
 B. Wood Joists — Nom 10 in. (254 mm) deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or Structural Wood Members* with bridging as required and with ends firestopped.
 C. Furring Channels (Not Shown) — Resilient galv steel furring installed perpendicular to wood joists between first and second layers of wallboard (Item 10). Furring channels spaced max 24 in. (610 mm).
 D. Gypsum Board* — Nom 4 ft (1.2 m) wide by 5/8 in. (16 mm) thick as specified in the individual Floor-Ceiling Design. First layer of wallboard nailed to wood joists. Second layer of wallboard screw-attached to furring channels. Diam of opening shall be 2 in. (51 mm) larger than the nom diam of through penetrant (Item 2).
 1.1 Chase Wall — (Optional, not Shown) — The through penetrants (Item No. 2) may be routed through a fire-rated or non-rated single, double or staggered wood stud/gypsum wall board chase wall. The chase wall shall be constructed to include the following construction features:
 A. Studs — Nom 2 by 6 in. (51 by 152 mm) or double nom 2 by 4 in. (51 by 102 mm) lumber studs.
 B. Sole Plate — Nom 2 by 6 in. (51 by 152 mm) or parallel nom 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted. Diam of opening shall be 2 in. (51 mm) larger than the nom diam of through penetrant (Item 2).
 C. Top Plate — The double top plate shall consist of two nom 2 by 6 in. (51 by 152 mm) or two sets of parallel 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted. Diam of opening shall be 2 in. (51 mm) larger than the nom diam of through penetrant (Item 2).
 D. Gypsum Board* — One or two layers of min 1/2 in. (14 mm) gypsum board.

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 Page: 1 of 2

System No. F-C-2029
F Rating - 2 Hr
T Rating - 2 Hr

SECTION A-A

System tested with a pressure differential of 2.5 Ps between the exposed and the unexposed surfaces with the higher pressure on the exposed side.
 1. Floor-Ceiling Assembly — The fire-rated wood joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L 500 Series Floor-Ceiling Design in the UL Fire Resistance Directory, as summarized below:
 A. Flooring System — Lumber or plywood subfloor with finish floor of lumber, plywood or Floor Topping Mixture* as specified in the individual Floor-Ceiling Design.
 B. Wood Joists — Nom 10 in. (254 mm) deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or Structural Wood Members* with bridging as required and with ends firestopped.
 C. Furring Channels — (Not Shown) — (As required) Resilient galvanized steel furring installed in accordance with the manner specified in the individual L500 Series Designs in the Fire Resistance Directory.
 D. Gypsum Board* — Thickness, type, number of layers and fasteners shall be as specified in the individual Floor-Ceiling Design.
 2. Through-Penetrants — One nonmetallic pipe, conduit or tubing to be installed within the firestop system. Diam of openings hole-sawed through flooring system and through two layers gypsum wallboard ceiling to be 0 to 1/2 in. (13 mm) larger than the outside diam of through-penetrant. Pipe or conduit to be rigidly supported on both sides of the floor-ceiling assembly. The following types and sizes of nonmetallic pipes may be used:
 A. Polyvinyl Chloride (PVC) Pipe — Nom 4 in. (102 mm) diam (or smaller) Schedule 40 solid-core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
 B. Chlorinated Polyvinyl Chloride (CPVC) Pipe — Nom 4 in. (102 mm) diam (or smaller) SDR13.5 CPVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
 3. Firestop System — The details of the firestop system shall be as follows:
 A. Steel Collar — Collar fabricated from coils of precut min 0.017 in. (0.43 mm) thick (No. 28 MSG) galv steel available from the sealant manufacturer. Collar shall be nom 1-3/4 in. (44 mm) deep with 1 in. (25 mm) wide by 2 in. (51 mm) long anchors tabs on 2 in. (51 mm) centers for securement to floor and ceiling surfaces. The anchor tabs shall be bent 90 degrees outward for securement to the floor and ceiling surfaces. The opposite side incorporates retainer tabs, 1/2 in. (13 mm) wide by 3/16 in. (5 mm) long, prebent toward the pipe surface. Collar shall be wrapped around pipe maintaining a 1 in. (25 mm) distance between pipe and collar, and overlapping min 1 in. (25 mm) at seam. Collar secure to subfloor with wood screws and washers at every other tab. Collar secured to gypsum board ceiling using 3/16 in. (5 mm) diam steel toggle bolts in conjunction with 1-1/4 in. (32 mm) diam steel fender washers at every other tab. After sealant is installed (Item 3B), the collars shall be compressed around the pipe using a 1/2 in. (13 mm) wide by 0.028 in. (0.7 mm) thick stainless steel band clamp fastened at the collar mid-height.
 B. Fill, Void or Cavity Material* — Sealant — Fill material to be installed to completely fill the collar and provide a min 1/4 in. (6 mm) thickness in the annular spaces at the floor and ceiling.
 HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant or FS-ONE MAX Intumescent Sealant.
 * Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

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 Page: 1 of 2

System No. W-L-2078

3. Firestop Device* — Firestop Collar — Firestop collar shall be installed in accordance with the accompanying installation instructions. Collar to be installed and latched around the pipe and secured to both sides of the wall using the anchor hooks provided with the collar. (Minimum two anchor hooks for 1-1/2 and 2 in. (38 and 51 mm) diam pipes, three anchor hooks for 3 and 4 in. (76 and 102 mm) diam pipes, four anchor hooks for 6 in. (152 mm) diam pipes, ten anchor hooks for 8 in. (203 mm) diam pipes and twelve anchor hooks for 10 in. (254 mm) diam pipes. The anchor hooks are to be secured to the surface of wall with 3/16 in. (4.8 mm) diam by 2-1/2 in. (64 mm) long steel toggle bolts along with washers. As an alternate for pipe sizes of nom 4 in. diam or less, min No. 10 by 1-1/2 in. (254 by 38 mm) long drywall or laminate screws with min 3/4 in. (19 mm) steel washers may be used. When the drywall or laminate screw is used, T Rating shall not exceed 1 hr.
 HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 643 501/57N, CP 643 633/7N, CP 643 903/7N, CP 643 1104/7N, CP 643 1606/7N, CP 644-2008* US and CP 644-2501/0* US Firestop Collars
 4. Fill, Void or Cavity Material* — Sealant — (Not Shown) — Min 1/2 in. (13 mm) thickness of sealant applied within the annular space for nom 6 in. and 10 in. (203 and 254 mm) diam pipes. Flush with each side of wall. Sealant in annular space is optional for max 6 in. (152 mm) diam pipes except that for penetrant type 2F, sealant is required. A min 1/4 in. (6 mm) thickness of sealant is required within the annular space, flush with each side of wall, to attain the L Ratings for max 6 in. (152 mm) diam pipes.
 HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE MAX Intumescent Sealant
 * Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

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 Page: 2 of 2

System No. F-C-2160

2. Through Penetrants — One nonmetallic pipe or conduit to be installed concentrically or eccentrically within the firestop system. Annular space between pipe or conduit and edge of opening to be min 1/2 in. (13 mm) and max 1-1/8 in. (29 mm). Pipe or conduit to be rigidly supported on both sides of floor-ceiling assembly. The following types and sizes of nonmetallic pipes or conduits may be used:
 A. Polyvinyl Chloride (PVC) Pipe — Nom 2 in. (51 mm) diam (or smaller) Schedule 40 solid or cellular core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
 B. Chlorinated Polyvinyl Chloride (CPVC) Pipe — Nom 2 in. (51 mm) diam (or smaller) SDR13.5 CPVC pipe for use in closed (process or supply) piping systems.
 3. Fill, Void or Cavity Material* — Sealant — Fill material forced into annular space to fill space to max extent possible. Sealant shall be installed flush with top surface of floor or sole plate and bottom surface of ceiling or lower top plate.
 HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant or FS-ONE MAX Intumescent Sealant
 * Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

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 Page: 2 of 2

System No. F-C-2263
F Rating — 1 Hr
T Rating — 1 Hr

SECTION A-A

1. Floor-Ceiling Assembly — The 1 hr fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The general construction features of the floor-ceiling assembly are summarized below:
 A. Flooring System — Lumber or plywood subfloor with finish floor of lumber, plywood or Floor Topping Mixture* as specified in the individual Floor-Ceiling Design. Max diam of opening shall be 5 in. (127 mm).
 B. Wood Joist — Nom 10 in. (254 mm) deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or Structural Wood Members* with bridging as required and with ends firestopped.
 C. Gypsum Board* — Nom 5/8 in. (16 mm) thick, 4 ft (1.2 m) wide as specified in the individual Floor-Ceiling Design.
 2. Closest Flange — Acrylonitrile butadiene styrene (ABS) or polyvinyl chloride (PVC) closest stub sized to accommodate drain pipe. Closest flange installed over drain piping within floor opening with flange secured to plywood floor with steel screws. Annular space between closest flange and periphery of opening shall be 1/4 in. (6 mm).
 3. Drain Piping — Nom 4 in. (102 mm) diam (or smaller) Schedule 40 acrylonitrile butadiene styrene (ABS) or polyvinyl chloride (PVC) drain pipe and 90 degree elbow for use in vented (drain, waste or vent) piping systems. Pipe installed concentrically within firestop system.
 4. Fill, Void or Cavity Material* — Sealant — Min 3/4 in. (19 mm) thickness of fill material applied within the annulus, flush with the bottom surface of floor.
 HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 606 Flexible Firestop Sealant, FS-ONE Sealant or FS-ONE MAX Intumescent Sealant
 5. Water Closet — (Not Shown) — Floor mounted vitreous china water closet.
 * Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.

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 Page: 1 of 2

| ISSUE HISTORY | | | |
|---------------|----------|-------------------|-------------|
| No. | Date | Submission | Description |
| 1 | 04/15/22 | Permit Submission | |
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| REVISION HISTORY | | |
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| No. | Date | Description |
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| Drawn | MJRSMB |
| Checked | BLSA,B |
| Approved | BLSA,B |
| Date | 04/15/2022 |
| Project # | 5722 |

THE MADISON
 HUNTSVILLE, AL

APARTMENT DETAILS PLUMBING

P5.03