

SECTION 057313
GLAZED DECORATIVE METAL RAILINGS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Interior structural glass baluster railing and guard systems.
 - 2. Interior smoke baffle (draft curtain) system.
 - 3. Fasteners.
 - 4. Miscellaneous materials.
- B. Related Requirements:
 - 1. Section 055100 "Metal Stairs" for stair on which railings will be mounted.
 - 2. Section 055210 "Pipe and Tube Railings" for decorative metal railing and guard systems with non-glass-infill panels.
 - 3. Section 061053 "Miscellaneous Rough Carpentry" for wood blocking for anchoring railings.

1.2 DEFINITIONS

- A. Railings: Guards, handrails, and similar devices used for protection of occupants at open-sided floor and exterior deck areas and for pedestrian guidance and support, visual separation, or wall protection.

1.3 COORDINATION AND SCHEDULING

- A. Coordinate installation of anchorages for railings. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver items to Project site in time for installation.
- B. Schedule installation so wall attachments are made only to completed walls. Do not support railings temporarily by any means that do not meet structural performance requirements.

1.4 ACTION SUBMITTALS

- A. Product Data:
 - 1. Manufacturer's product lines of glazed decorative metal railings assembled from standard components.
 - 2. Manufacturer's product lines of glazed smoke baffles assembled from standard components.
 - 3. Glass products.

4. Metal finishes.
5. Fasteners.
6. Post installed anchors.
7. Bituminous paint.
8. Anchoring cement.
9. Nonshrink, nonmetallic grout.

- B. Shop Drawings: Include plans, elevations, sections, and attachment details.
- C. Samples for Initial Selection: For products involving selection of color, texture, or design.
 1. Sections of each distinctly different linear railing member, including handrails, top rails, posts, and balusters.
 2. Base channel.
 3. Each type of glass and glass edge required.
 4. Fittings, end caps, and brackets.
- D. Delegated Design Calculations: For railings, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For delegated design professional engineer and manufacturer-certified Installer.

1.6 QUALITY ASSURANCE

- A. ICC-ES Certification
- B. Installer Qualifications: The manufacturer of railing system or a qualified installation firm that is approved, authorized, or licensed by railing system manufacturer to install manufacturer's products.
- C. Welding Qualifications: Qualify procedures and personnel in accordance with the following:
 1. AWS D1.6/D1.6M, "Structural Welding Code - Stainless Steel."
 2. AWS D1.2/D1.2M, "Structural Welding Code - Aluminum."

1.7 FIELD CONDITIONS

- A. Field Measurements: Verify actual locations of walls and other construction contiguous with railings by field measurements before fabrication and indicate measurements on Shop Drawings.

1.8 WARRANTY

- A. Manufacturer's Special Warranty for Laminated Glass: Glazed decorative metal railing manufacturer agrees to replace laminated-glass units that deteriorate within specified warranty period. Deterioration of laminated glass is defined as defects developed from normal use that are not attributed to glass breakage or to maintaining and cleaning laminated glass contrary to manufacturer's written instructions. Defects include edge separation, delamination materially obstructing vision through glass, and blemishes exceeding those allowed by referenced laminated-glass standard.

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

PART 2 - PRODUCTS

2.1 SOURCE LIMITATIONS

- A. Obtain glazed decorative metal railing systems from single source from single manufacturer. Systems must be designed, engineered, and fabricated by manufacturer of railing system.

2.2 MANUFACTURERS

- A. Glazed Decorative Metal Railings:

1. Basis-of-Design Product: Subject to compliance with requirements, provide VIVA Railings, LLC; SHOE ICC-ES Certified Railing System.

- B. Smoke Baffle System:

Basis-of-Design Product: Subject to compliance with requirements, provide VIVA Railings, LLC; SBS-2 Smoke Baffle. Vertical glass inset-mounted to ceiling substrate with continuous exposed or recessed aluminum track receiver.

2.3 PERFORMANCE REQUIREMENTS

- A. General: For engineering glazed decorative metal railings to withstand structural loads indicated, determine allowable design working stresses of railing materials based on the following:
1. Stainless Steel: 45 percent of minimum yield strength.
 2. Aluminum: The lesser of minimum yield strength divided by 1.65, or minimum ultimate tensile strength divided by 1.95.
 3. Glass: 25 percent of mean modulus of rupture (50 percent probability of breakage), as listed in "Mechanical Properties" in AAMA CW-12, "Structural Properties of Glass."

- B. Structural Performance: Glazed decorative metal railings, including attachment to building construction, shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated:
 - 1. ICC-ES Certified showing compliance to IBC and any additional local jurisdiction code requirements
 - 2. Handrails and Top Rails of Guards:
 - a. Uniform load of 50 lbf/ft. applied in any direction.
 - b. Concentrated load of 200 lbf applied in any direction.
 - c. Uniform and concentrated loads need not be assumed to act concurrently.
 - 3. Structural Glass Baluster Railings and Guards:
 - a. Concentrated load of 50 lbf applied horizontally on an area of 1 sq. ft..
 - b. Infill load and other loads need not be assumed to act concurrently.
 - 4. Structural Glass Baluster Railings and Guards: Support each section of baluster, top rail and handrail by a minimum of three glass panels or by other means so railings will remain in place if any one glass panel fails.
 - a. Support baluster, top rail and handrail ends such that railings remains in place if end glass panel fails.

2.4 METALS, GENERAL

- A. Metal Surfaces, General: Provide materials with smooth surfaces, without seam marks, roller marks, rolled trade names, stains, discolorations, or blemishes.
- B. Brackets, Flanges, and Anchors: Same metal and finish as supported rails unless otherwise indicated.
 - 1. Provide stainless steel wall brackets with flange tapped for concealed anchorage with vertical and horizontal adjustment capability.

2.5 ALUMINUM

- A. Aluminum, General: Provide alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated, and with strength and durability properties for each aluminum form required not less than that of alloy and temper designated below.
- B. Extruded Bars and Shapes, Including Extruded Tubing: ASTM B221, Alloy 6063-T5/T52.
- C. Extruded Structural Pipe and Round Tubing: ASTM B429/B429M.
 - 1. Provide Standard Weight (Schedule 40) pipe unless otherwise indicated.

- D. Drawn Seamless Tubing: ASTM B210.
- E. Plate and Sheet: ASTM B209, Alloy 5005-H32.
- F. Die and Hand Forgings: ASTM B247, Alloy 6061-T6.
- G. Castings: ASTM B26/B26M, Alloy A356.0-T6.

2.6 STRUCTURAL GLASS BALUSTERS

- A. Tempered Glass: Provide products that have been tested for surface and edge compression in accordance with ASTM C1048 and for impact strength in accordance with 16 CFR 1201 for Category II materials.
 - 1. Glass Color: Clear.
 - 2. Thickness for Structural Glass Balusters: As required by structural loads, but not less than 0.51 inch.
- B. Laminated Glass: ASTM C1172, Type II with two plies of glass bonded together by an interlayer.
 - 1. Construction: Laminate glass with interlayer.
 - 2. Interlayer Thickness: 0.060 inch.
 - 3. Kind: LT (laminated tempered).
 - 4. Glass Color: Inner-ply clear; outer-ply clear.
 - 5. Interlayer: SGP; 0.060 inch thick. Verify thickness by structural analysis as part of the delegated design.
 - a. Interlayer Color: Clear.
 - 6. Glass Plies for Structural Glass Balusters: Thickness required by structural loads, but not less than 0.39 inch thick each. Verify thickness by structural analysis as part of the delegated design.
- C. Dry-Set Continuous Compression Mounting Accessories for Structural Glass Balusters: As supplied by railing manufacturer for installing glass panels within railing system.
- D. Dry-Set Continuous Aluminum Mounting Base Shoe: As supplied by railing manufacturer for installing vertical cantilevered structural glass panels within railing system.
 - 1. Glass anchorage into the base shoe must be achieved by mechanical means to provide continuous compression along the entire length of glass. For maintenance purposes, glass replacement to be achieved using simple tools. Replacement using manufacturer-specific proprietary tools is not allowed.

2.7 FASTENERS

- A. Fastener Materials: Unless otherwise indicated, provide the following:

1. For Stainless Steel and Aluminum Components: Type 304 stainless steel fasteners.
 2. For Dissimilar Metals: Type 304 stainless steel fasteners.
 3. Finish exposed fasteners to match appearance, including color and texture, of railings.
- B. Fasteners for Anchoring to Other Construction: Select fasteners of type, grade, and class required to produce connections suitable for anchoring railings to other types of construction indicated and capable of withstanding design loads.
- C. Provide concealed fasteners for interconnecting railing components and for attaching railings to other work unless exposed fasteners are unavoidable.
1. Provide hex, hex socket, or hex button machine screws for exposed fasteners unless otherwise indicated.
- D. Post-Installed Anchors: Fastener systems with working capacity greater than or equal to design load, in accordance with an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES AC193.
1. Material for Interior Locations: Carbon-steel components zinc plated to comply with ASTM B633 or ASTM F1941/ASTM F1941M, Class Fe/Zn 5, unless otherwise indicated.

2.8 MISCELLANEOUS MATERIALS

- A. Handrail Brackets: Stainless steel with center of rail 2-1/2 inches from face of structural glass balusters.
1. Provide brackets with flange tapped for concealed anchorage to threaded hanger bolt.
- B. Bituminous Paint: Cold-applied asphalt emulsion complying with ASTM D1187/D1187M.
- C. Nonshrink, Nonmetallic Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C1107/C1107M. Provide grout specifically recommended by manufacturer for interior applications.
- D. Anchoring Cement: Factory-packaged, nonshrink, nonstaining, hydraulic-controlled expansion cement formulation for mixing with water at Project site to create pourable anchoring, patching, and grouting compound.
1. Water-Resistant Anchoring Cement: provide formulation that is recommended in writing to be resistant to erosion from water exposure without needing protection by a sealer or waterproof coating.

2.9 FABRICATION

- A. General: Fabricate glazed decorative metal railings to comply with requirements indicated for design, dimensions, member sizes and spacing, details, finish, and anchorage, but not less than that required to support structural loads.
- B. Shop assemble railings and guards to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation. Use connections that maintain structural value of joined pieces.
- C. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.
- D. Form work true to line and level with accurate angles and surfaces.
- E. Fabricate connections that will be exposed to weather in a manner to exclude water. Provide weep holes where water may accumulate. Locate weep holes in inconspicuous locations.
- F. Cut, reinforce, drill, and tap as indicated to receive finish hardware, screws, and similar items.
- G. Mechanical Connections: Connect members with concealed mechanical fasteners and fittings. Fabricate members and fittings to produce flush, smooth, rigid, hairline joints.
 - 1. Fabricate splice joints for field connection using an epoxy structural adhesive if this is manufacturer's standard splicing method.
- H. Form changes in direction as follows:
 - 1. By bending to smallest radius that will not result in distortion of railing member.
- I. Bend members in jigs to produce uniform curvature for each configuration required; maintain cross section of member throughout entire bend without buckling, twisting, cracking, or otherwise deforming exposed surfaces of components.
- J. Close exposed ends of hollow railing members with prefabricated cap and end fittings of same metal and finish as railings.
- K. Brackets, Flanges, Fittings, and Anchors: Provide wall brackets, flanges, handrail brackets, miscellaneous fittings, and anchors to interconnect railing members to other Work unless otherwise indicated.
 - 1. At brackets and fittings fastened to plaster or gypsum board partitions, provide crush-resistant fillers, or other means to transfer loads through wall finishes to structural supports and to prevent bracket or fitting rotation and crushing of substrate.

- L. Provide inserts and other anchorage devices for connecting railings to concrete or masonry work. Fabricate anchorage devices capable of withstanding loads imposed by railings. Coordinate anchorage devices with supporting structure.

2.10 FABRICATION OF STRUCTURAL GLASS BALUSTERS

- A. Fabricate glass to sizes and shapes required; provide for proper edge clearance and bite on glazing panels.
- B. Structural Glass Balusters: Provide structural glass balusters.
 - 1. Edge Finish: Grind smooth and flat polish exposed edges of glass, including those at open joints, to produce smooth, square edges with glass edge finishes.

2.11 METAL FINISH REQUIREMENTS, GENERAL

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" recommendations for applying and designating finishes.
- B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipment.
- C. Provide exposed fasteners with finish matching appearance, including color and texture, of railings.

2.12 ALUMINUM FINISHES

- A. Finish designations prefixed by AA comply with the system established by the Aluminum Association for designating aluminum finishes.
- B. Clear Anodic Finish: AAMA 611, AA-M12C22A31, Class II, 0.010 mm or thicker.
- C. Powder-Coat Finish: AAMA 2603 except with a minimum dry film thickness of 1.5 mils. Comply with coating manufacturer's written instructions for cleaning, conversion coating, and applying and baking finish.
 - 1. Color and Gloss: As selected by Architect from manufacturer's full range.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine plaster and gypsum board assemblies, where reinforced to receive anchors, to verify that locations of concealed reinforcements have been clearly marked for Installer. Locate reinforcements and mark locations if not already done.

- B. Installation Tolerances: Structural steel and concrete slabs to be within 1/8 inch in 10 ft. horizontally and 1/8 inch vertically. Correct out-of-tolerance conditions to meet railing manufacturer's requirements.

3.2 INSTALLATION, GENERAL

- A. Comply with Drawings and manufacturer's written instructions for installing glazed decorative metal railings, accessories, and other components.
 - 1. Set posts plumb within a tolerance of 1/16 inch in 3 ft..
 - 2. Align rails so variations from level for horizontal members and variations from parallel with rake of steps and ramps for sloping members do not exceed 1/4 inch in 12 ft..
- B. Control of Corrosion: Prevent galvanic action and other forms of corrosion by insulating metals and other materials from direct contact with incompatible materials.
 - 1. Coat concealed surfaces of aluminum that will be in contact with grout, concrete, masonry, wood, or dissimilar metals, with bituminous paint.
- C. Adjust railings before anchoring to ensure matching alignment at abutting joints.
- D. Fastening to In-Place Construction: Use anchorage devices and fasteners where necessary for securing railings and for properly transferring loads to in-place construction.

3.3 METAL RAILING CONNECTIONS

- A. Nonwelded Connections:
 - 1. Use mechanical or adhesive joints for permanently connecting railing components.
 - 2. Use wood blocks and padding to prevent damage to railing members and fittings.
 - 3. Seal recessed holes of exposed locking screws using plastic cement filler colored to match finish of railings.
- B. Expansion Joints: Install expansion joints at locations indicated, but not farther apart than required to accommodate thermal movement. Provide slip-joint internal sleeve extending 2 inches beyond joint on either side, fasten internal sleeve securely to one side, and locate joint within 6 inches of post.

3.4 INSTALLATION OF STRUCTURAL GLASS BALUSTERS

- A. Structural Glass Baluster Railings and Guards: Install assembly to comply with railing manufacturer's written instructions and with requirements in other Part 3 articles.
- B. For field-assembled structural glass balusters, attach base channel to building structure, insert glass in base channel, and mechanically secure structural glass balusters to aluminum base and top-rail channels using railing manufacturer's "dry-set" continuous compression mounting system.

- C. Adjust spacing of glass balusters so gaps between balusters are equal before securing in position.
 - 1. Erect glass railings under direct supervision of manufacturer's authorized technical personnel.

3.5 CLEANING

- A. Clean decorative metal finishes by washing thoroughly with water and soap, rinsing with clean water, and wiping dry.
- B. Clean and polish glass as recommended in writing by manufacturer. Wash both exposed surfaces in each area of Project not more than four days before date scheduled for inspections that establish date of Substantial Completion.
- C. Clean wood rails by wiping with a damp cloth and then wiping dry.

3.6 PROTECTION

- A. Protect finishes of railings from damage during construction period with temporary protective coverings approved by railing manufacturer. Remove protective coverings at time of Substantial Completion.
- B. Restore finishes damaged during installation and construction period so no evidence remains of correction work. Return items that cannot be refinished in the field to the shop; make required alterations and refinish entire unit or provide new units.

END OF SECTION

SECTION 072400 EXTERIOR INSULATION AND FINISH SYSTEM

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Exterior insulation and finish system (EIFS).
 - 2. Direct applied exterior finish system (DEFS).
- B. Drawings, the provisions of the Agreement, the General Conditions, and Division 1 specification sections apply to the work of this Section.
- C. Substitutions: Substitutions will be considered only under the terms and conditions of Section 016000. Include copy of ICC Evaluation Report with substitution request.

1.2 REFERENCES

- A. American Society for Testing and Materials (ASTM):
 - 1. C578 - Specification for Preformed , Cellular Polystyrene Thermal Insulation
 - 2. D897 - Test Method for Tensile Properties of Adhesive Bonds.
 - 3. E330 - Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure difference.
- B. EIFS Industry Members Association (EIMA)
 - 1. EIMA 101.86-[95], Standard Test for Impact Resistance

1.3 DEFINITIONS

- A. Back-wrapped: Detailed to include reinforcing mesh neatly wrapped over the edge of the insulation board, and extended a minimum of 1 inch (25 mm) over and adhered to the back of the board.

1.4 SYSTEM REQUIREMENTS

- A. Performance Requirements: The exterior insulation and finish system shall have been tested by an independent testing laboratory and shall have met the following performance standards:
 - 1. Adhesive Strength: When tested in accordance with ASTM D897 the strength of the adhesive bonding the insulation to gypsum sheathing shall have exceeded 30 psi (207 kPa).
 - 2. Wind Load:
 - a. Design for maximum allowable system deflection, normal to the plane of the wall, of L/240.
 - b. Design for wind load in conformance with code requirements.
 - c. Maximum wind load resistance: + 188 psf (9.00 kPa), provided structural supports and sheathing/sheathing attachment are adequate to resist these pressures.
 - 3. Moisture Control:
 - a. Prevent the accumulation of water behind the EIFS or into the wall or soffit assembly, either by condensation or leakage through the wall construction, in the design and detailing of the wall assembly:
 - b. Provide flashing to direct water to the exterior where it is likely to penetrate components in the wall assembly, including, above window and door heads, beneath window and door sills, at roof/wall intersections, decks, abutments of lower walls with higher walls, above projecting features, at floor lines, and at the base of the wall.
 - c. Air Leakage Prevention – provide continuity of the air barrier system at foundation, roof, windows, doors, and other penetrations through the wall with connecting and compatible air barrier components to minimize condensation and leakage caused by air movement.
 - 4. Impact Resistance
 - a. Provide ultra-high impact resistance of the EIFS to a minimum height of 8'-0" (2.44 m) above finished grade at all areas accessible to pedestrian or vehicular traffic and other areas exposed to abnormal stress or impact. Indicate the areas with impact resistance other than "Standard" on shop drawings.
 - 5. Color Selection
 - a. Select finish coat to match existing, adjacent EIFS to remain.
 - 6. Joints:

- a. Form through-joints at expansion or seismic joints in building substructure.
 - b. In addition, place expansion joints in EIFS at the following locations:
 - 1) Over interface of dissimilar substrates
 - 2) On walls as agreed by structural and EIFS manufacturer where deflections are more than L/240
 - 3) At floor lines where slab connection allows differential movement of wall panels due to sliding connections.
 - 4) At areas of concentrated load such as at changes in roof level; junctures of canopy with main building, etc.
 - 5) To accommodate thermal movement in long runs in excess of about 75 feet (22.86 m). Place joints at about 60 feet (18.3 m) on center.
 - c. Provide minimum 3/4 inch (19 mm) wide joints in the EIFS where they exist in the substrate or supporting construction, where the cladding adjoins dissimilar construction or materials, at changes in building height, at expansion, control, and cold joints in construction, and at floor lines in multi-level wood frame construction. Size joints to correspond with anticipated movement but in no case less than 1/2 inch (12.7 mm). Align terminating edges of EIFS with joint edges of through wall expansion joints and similar joints in construction.
 - d. Provide minimum 1/2 inch (12.7 mm) wide perimeter sealant joints at all penetrations through the EIFS (windows, doors, mechanical, electrical, and plumbing penetrations, etc.).
 - e. Specify compatible backer rod and sealant that has been evaluated in accordance with ASTM C 1382, and that meets minimum 50% elongation after conditioning.
 - f. Provide joints so that air barrier continuity is maintained across the joint, and drain joints to the exterior, or provide other means to prevent or control water infiltration at joints.
7. Grade Condition
- a. Do not specify the EIFS below grade (unless designed for use below grade and permitted by code) or for use on surfaces subject to continuous or intermittent water immersion or hydrostatic pressure. Provide minimum 6 inch (152 mm) clearance above grade or as required by code.
8. Trim, Projecting Architectural Features and Reveals
- a. All trim and projecting architectural features must have a minimum 1:2 [27°] slope along their top surface. All reveals must have minimum 3/4 inch (19 mm) insulation thickness at the bottom of the reveal. All horizontal reveals must have a minimum 1:2 [27°] slope along their bottom surface. Increase slope for northern climates to prevent accumulation of ice/snow and water on surface. Where trim/feature or bottom surface of reveal projects more than 2 inches (50 mm) from the face of the EIFS wall plane, protect the top surface with waterproof base coat. Periodic inspections and increased maintenance may be required to maintain surface integrity of the EIFS finish on weather exposed sloped surfaces. Limit projecting features to easily accessible areas and limit total area to facilitate and minimize maintenance.
 - b. Do not use the EIFS on weather exposed projecting ledges, sills, or other projecting features unless supported by framing or other structural support and protected with metal coping or flashing.
9. Insulation Thickness
- a. Minimum EPS insulation thickness is 1 inch (25 mm).
 - b. Maximum EPS insulation thickness is 12 inches, (305 mm) except as noted below for fire-resistance rated wall assemblies.
10. Fire Protection
- a. Do not use EPS foam plastic in excess of 12 inches (305 mm) thick on types I, II, III, or IV construction unless approved by the code official.
 - b. Where a fire-resistance rating is required by code use the EIFS over a rated concrete or concrete masonry assembly. Limit use over rated frame assemblies to non-load bearing assemblies (the EIFS is considered not to add or detract from the fire-resistance of the rated assembly). Maximum allowable EPS thickness: 4 inches (102 mm).
 - c. Refer to manufacturer's testing or applicable code compliance report for other limitations that may apply.

1.5 SUBMITTALS

- A. Make submittals in accordance with Section 013300.

- B. Product Data: Submit complete product data. Include installation instructions.
- C. Shop Drawings:
 - 1. Indicate sequencing, insulation thicknesses, joint details and locations, shop details, and field detailing requirements, locations of heavy duty reinforcing.
 - 2. Show R-value calculations.
- D. Samples: Submit one 12 inch (305 mm) square finish sample for each color and finish texture combination proposed for the work. Submit additional samples until a sample for each combination is approved by the Owner.
- E. Quality Control Submittals:
 - 1. Certifications: Submit certifications that the installer meets the qualification requirements specified.
 - 2. Submit ICC evaluation report.
- F. Closeout Submittal:
 - 1. In accordance with Section 017700
 - 2. Manufacturer's recommended procedures for maintenance, including requirements for periodic inspection, sealant maintenance, and cleaning.

1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: The EIFS manufacturer shall be a member of the Exterior Insulation Manufacturer's Association (EIMA).
- B. Applicator Qualifications:
 - 1. Minimum of 5 years experience in the application of EIFS of similar scope to the work indicated.
 - 2. Installer shall have been trained by the product manufacturer prior to bidding, and shall be currently approved by the manufacturer to install warrantable EIFS system as specified.
- C. Regulatory Requirements:
 - 1. The exterior insulation and finish system, including the insulation board, shall be accepted by International Code Council (ICC) as conforming to the currently enforced edition of the International Building Code, including as a noncombustible assembly suitable for use in non-combustible construction.
 - 2. The exterior insulation and finish system, including insulation board, shall be approved by the jurisdictional code authorities.

1.7 DELIVERY STORAGE AND HANDLING

- A. In accordance with Section 016000.

1.8 JOB CONDITIONS

- A. Environmental Requirements:
 - 1. Temperature: Apply system only on unfrozen surfaces and at ambient temperatures above 40 degrees F (4.5 degrees C). Maintain ambient temperature above 40 degrees F (4.5 degrees C) for minimum of 24 hours after installation. Provide supplementary heat if required.
 - 2. Moisture: Apply system to dry surfaces only.
- B. Protection: Protect adjacent materials and this system from weather and other damage during installation, while curing or when unattended.

1.9 WARRANTY

- A. Submit in accordance with Section 017700.
- B. Provide manufacturer's 3 year warranty against defects in materials and workmanship

PART 2 - PRODUCTS

2.1 APPROVED SYSTEMS

- A. Manufacturer's premium continuous insulation system including but not limited to liquid-applied air/moisture drainable backstop (barrier coat), EPS foam insulation, and acrylic-based textured wall finish as specified. One of the following:

1. "Sto Therm ci" by Sto Corp. (Atlanta GA; 404-346-3666; 800-221-2397).
2. "Outsulation Plus MD" by Dryvit Systems, Inc. (West Warwick RI; 401-822-4100; 800-556-7752).
3. "Senerflex Platinum ci" by Senergy (Jacksonville FL; 800-221-9255).

2.2 MATERIALS

- A. Provide manufacturer's standard materials as recommended for the installation.
- B. Insulation Board: Expanded polystyrene board, properly aged, minimum 6 weeks; complying with ASTM C578 Type 1; minimum average density 1 lbs/cu ft. (16 kg/m3); Code approved quality control and labeling; 1 inch (25mm) minimum thicknesses; thickness as indicated on the Drawings.
 1. Furnish factory back-wrapped strips as necessary to facilitate installation at sealant joints and interfaces with flashing and other building components.
- C. Base Coat: Manufacturer's standard polymer modified cementitious base coat; maximum 30% cement; dry factory pre-mixed formula, or pre-measured packaged materials for consistent site mixing.
- D. Finish Coat: Manufacturer's standard; 100% acrylic; custom integral color as selected by the Architect; listed by Underwriter's Laboratories, Inc. (UL/ULC) as having a flame spread of 25 or less.
- E. Reinforcing Mesh: Manufacturer's standard alkaline resistant open weave glass fiber mesh; standard duty and heavy duty.
 1. Standard: 4.5 oz/y2 (152 gsm) minimum.
 2. Heavy duty: 15 oz/y2 (508 gsm) minimum.
- F. Adhesives: Acrylic based composition, types as recommended by system manufacturer.
- G. Air/Moisture-Barrier Coat: Flexible, fiber-reinforced, polymer-based, cement-modified waterproof coating having water vapor transmission of 20 perms when tested in accordance with ASTM E96.
- H. Substrate Mesh Tape: Alkaline resistant open weave glass fiber mesh surfaced on one side with pressure sensitive adhesive; type as recommended by system manufacturer.
- I. Flashing Tape: Manufacturer's standard self-adhesive high density polyethylene film, nominal 4 inch (102 mm) width.
- J. Primer: Manufacturer's standard acrylic based tintable primer with sand for roller application.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Prior to starting work, carefully inspect installed work of other trades and verify that such work is complete to the point where work of this Section may properly commence. Notify the Architect in writing of conditions detrimental to the proper and timely completion of the work.
- B. Do not begin installation until all unsatisfactory conditions are resolved. Beginning work constitutes acceptance of site conditions and responsibility for defective installation caused by prior observable conditions.
- C. Verify flashing and similar elements to be built-in to the EIFS are properly installed.

3.2 PREPARATION

- A. Protect adjacent surfaces from contact with overspray and spatter of primers, adhesives, and finish coats.
- B. At concrete and CMU surfaces to receive finish coat only, remove all dirt, dust, form release agents, efflorescence, and other elements which would impair bond. Acid etch with muriatic acid.

3.3 EXTERIOR INSULATION AND FINISH SYSTEM INSTALLATION

- A. Install in accordance with manufacturer's recommendations.
- B. Install barrier coat to all surfaces indicated to receive EIFS. Prepare joints in substrate with mesh or flashing tape as recommended by manufacturer. Flash all joints at perimeter of applicable substrate

with similar or approved joint flashing. Flash in direction of water flow. Apply barrier coat in accordance with manufacturers directions.

- C. Attach insulation to substrate with adhesives. Stagger insulation board joints from joints in substrate.
- D. Install to the shapes indicated.
- E. Form through joints at expansion or seismic joints in building substructure.
- F. Cut weep holes 8 inches (203 mm) o.c. at all flashing locations.
- G. Base Coat:
 - 1. Apply base coat in two applications; a minimum of 1/16 inch (1.6 mm) thick per application.
 - 2. Embed reinforcing mesh in the base coat. Second base coat application shall be thick enough so that the reinforcing mesh does not show through the base coat.
 - 3. Provide minimum 3/16 inch (4.8 mm) thickness for base coat at panel edges, expansion joints, and other locations to receive sealant.
- H. Install heavy duty reinforcing from ground level to 8 feet (304.8 mm) minimum above ground level and at other locations indicated. Extend reinforcing to the nearest joint or break line. Ends of heavy duty mesh shall be neatly butted without lapping; avoid wrinkles.
- I. Back wrap edges at expansion joints, seismic joints, perimeters, and other exposed edges. Use factory back-wrapped panels as necessary to ensure proper edge detail.
- J. Tolerances:
 - 1. Surface Flatness: Maximum deviation of 1/8 inch (3 mm) from a true plane when tested with a 10 foot (3000 mm) straightedge.
 - 2. Curves: No point on the curve shall vary from the prescribed arc more than 1 percent of the radius.
 - 3. Arrises: No point on an arris shall vary more than 1/8 inch (3 mm) in 10 feet (3000 mm).
- K. Finish Coat:
 - 1. Apply finish coat continuously and in a single operation to each distinct area; maintain a wet edge during application. Employ techniques to ensure a uniform appearance.
 - 2. At joints to receive sealant, mask the base coat at the contact surfaces to receive the sealant. Align the masking so that when the sealant is applied after the finish coat is applied, the sealant will overlap the finish coat slightly. Apply the finish coat to the mask line.
 - 3. Finish: Fine sand finish, unless otherwise indicated.
- L. Provide temporary flashing at penetrations and at tops and edges of work in progress as necessary to prevent water intrusion into system prior to installation of permanent flashing and sealant

3.4 DIRECT-APPLIED EXTERIOR FINISH SYSTEM APPLICATION (DEFS)

- A. Where indicated provide DEFS over gypsum board sheathing specified elsewhere.
- B. Install DEFS in accordance with the manufacturer's recommendations.
- C. Apply base coat in two applications; a minimum of 1/16 inch (1.6mm) thick per application. Embed reinforcing mesh in the base coat. Second base coat application shall be thick enough so that the reinforcing mesh does not show through the base coat.
- D. Provide finish coat in fine sand finish, unless otherwise indicated.

3.5 FIELD QUALITY CONTROL

- A. Require a minimum of four periodic inspections by manufacturer's representative including the following.
 - 1. Inspection of substrate for suitability to receive EIFS system.
 - 2. Observation of flashing, moisture barrier, drainage provisions, and insulation board application procedures.
 - 3. Inspection of base coat, reinforcing mesh, and primer application.
 - 4. Review of completed application.
- B. Identify all deficiencies, implement corrective action, and reinspect.

3.6 CLEAN UP

- A. Remove dirt and stains from EIFS surfaces and adjacent surfaces without damaging finishes.

3.7 PROTECTION

- A. In accordance with Section 015000.

END OF SECTION

SECTION 074213 METAL WALL PANELS

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. Manufactured metal panels for exterior wall panels and sub-girt framing assembly, with related flashings and accessory components.

1.02 REFERENCE STANDARDS

- A. AAMA 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Aluminum Extrusions and Panels (with Coil Coating Appendix);
- B. AAMA 609 & 610 - Cleaning and Maintenance Guide for Architecturally Finished Aluminum (Combined Document).
- C. ASCE 7 - Minimum Design Loads and Associated Criteria for Buildings and Other Structures; Most Recent Edition Cited by Referring Code or Reference Standard.
- D. ASTM B209/B209M - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate;
- E. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
- F. AAMA 612 - Voluntary Specification, Performance requirements and Test procedures for Combined Coatings of Anodic Oxide and Transparent Organic Coatings on Architectural Aluminum.

1.03 SUBMITTALS

- A. See Section 01 3300 - Submittal Procedures.
- B. Manufacturers Shop Drawings: Indicate dimensions, layout, joints, construction details and methods of anchorage.
- C. Show work to be field fabricated or field assembled.
- D. Samples: Submit two samples of wall panel and soffit panel, 12 inches by 12 inches (305 mm by 305 mm) in size illustrating finish color, sheen, and texture.
- E. Manufacturer's Qualification Statement.

1.04 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum ten years of documented experience.
 - 1. Manufacturer to be ISO 9001:2015 with design.
- B. Installer Qualifications: Company specializing in installing products of the type specified in this section with minimum three years of documented experience.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Package metal panels for protection during transportation and handling.

- B. Protect panels from accelerated weathering by removing or venting sheet plastic shipping wrap.
- C. Store prefinished material off the ground and protected from weather; prevent twisting, bending, or abrasion; provide ventilation; slope metal sheets to ensure proper drainage.
- D. Prevent contact with materials that may cause discoloration or staining of products.

1.06 WARRANTY

- A. See Section 01 7700 - Closeout Procedures, for additional warranty requirements.
- B. Manufacturers standard finish warranty to correct defective work within a thirty-year period after Date of Substantial Completion for degradation of panel finish, including color fading caused by exposure to weather.

PART 2 – PRODUCTS

2.01 MANUFACTURERS

- A. Basis of Design: Metal Wall Panels - Concealed Fasteners
- B. Metaflex (MFL120) manufactured by ATAS International, Inc.
- C. Substitutions: See Section 01 6000 - Product Requirements
 - 1. Substitutions will be considered only if materials meet requirements of Basis of Design and are approved by Architect in writing 10 days prior to bid.

2.02 MANUFACTURED METAL PANELS

- A. Wall Panel System: Factory fabricated prefinished metal panel system; site assembled.
 - 1. Provide exterior wall panels.
 - 2. Design and size components to support assembly dead loads, and to withstand live loads caused by positive and negative wind pressure acting normal to plane of wall.
 - 3. Design Pressure: In accordance with applicable codes.
 - 4. Maximum Allowable Deflection of Panel: $L/180$ for length(L) of span.
 - 5. Movement: Accommodate movement within system without damage to components or deterioration of seals, movement between system and perimeter components when subject to seasonal temperature cycling; dynamic loading and release of loads; and deflection of structural support framing.
 - 6. Drainage: Provide positive drainage to exterior for moisture entering or condensation occurring within panel system.
 - 7. Panels to be tension leveled during the roll forming process.
 - 8. Fabrication: Formed true to shape, accurate in size, square, and free from distortion or defects; pieces of longest practical lengths.
- B. Exterior Wall Panels:
 - 1. Profile: Metaflex (MFL120)
 - 2. Horizontal Orientation

3. Side Seams: Continuous interlock, concealing all raw edges
4. Material: Precoated aluminum sheet, 20 gauge, 0.0320 inch (.81 mm) minimum thickness.
5. Panel Width: 12 Inches
6. Panel Depth: 1 1/2"
7. Texture: Smooth
8. Color: To match selection by Architect from ATAS International.
9. Color: Standard or premium color to be chosen later

2.03 MATERIALS

- A. Precoated Aluminum Sheet: ASTM B209 (ASTM B209M), 3105 alloy, O temper, smooth surface texture; continuous-coil-coated on exposed surfaces with specified finish coating and on panel back with specified panel back coating.
- B. Select materials with surface flatness, smoothness, and lack of surface blemishes where exposed to view in finished system.

2.04 FINISHES

- A. Below are for PVDF Colors only
 1. Cleaning and Pretreatment using Wet chemistry technology
 - a. Complex Chrome oxide pretreatment
 - b. Chrome final rinse
 2. Panel Backside Finish: Panel manufacturer's standard siliconized polyester wash coat.
 3. Fluoropolymer Coil Coating System: Manufacturer's standard multi-coat aluminum coil coating system complying with AAMA 2605, including at least 70 percent polyvinylidene fluoride (PVDF) resin, and at least 80 percent of coil coated aluminum surfaces having minimum total dry film thickness (DFT) of 0.9 mil, 0.0009 inch (0.023 mm); color and gloss to match sample.
 4. Color
 - a. Standard or premium color to be chosen later from Manufacturer's full range.
- B. Below are for Anodized Colors Only
 1. Comply with NAAMM AMP 500-06.
 2. Anodic Finish Performance Requirements: Anodized Coating Mass: Comply with AAMA 612, minimum, when tested according to AWI (AWS).
 3. Appearance: Limit variations in appearance of adjacent pieces to one-half of range represented in approved samples. Noticeable variations in the same piece are not acceptable. Install components within range of approved samples to minimize contrast.
 4. Provide manufacturer's premium anodized finish coating color.

- a. Standard or premium color to be chosen later from Manufacturer's full range.

2.05 ACCESSORIES

- A. Cladding Support Clips: Thermally broken, galvanized steel clips for support of cladding z-girts, angles, channels and other framing.
- B. Miscellaneous Sheet Metal Items: Provide factory formed flashings, gutters, downspouts, trim, moldings, closure strips, preformed crickets, caps, and equipment curbs of the same material, thickness, and finish as used for the roofing panels. Items completely concealed after installation may optionally be made of stainless steel.
 - 1. Fabricate trim and flashing components in minimum 12'-0" lengths, or as dictated by project conditions and approved by panel manufacturer
- C. Gaskets:
 - 1. Manufacturer's standard type suitable for use with system, permanently resilient; ultraviolet and ozone resistant.
 - 2. Profiled Rib Closures: Provide prefabricated, factory pre-notched closures to match the panel profile close fitting components .032 Aluminum in the same color and finish as the wall panel system.
- D. Sealants:
 - 1. Exposed Sealant: High Performance Elastomeric; clear tri-polymer, as recommended by manufacturer.
 - 2. Concealed Sealant: High Performance Space Cubes to prevent bottoming out of sealant when fasteners are installed non-curing butyl tape.
 - 3. Seam Sealant: Factory Applied High Performance, high solid, non-skinning, non-drying formulated for roll forming application into concealed panel joints.
- E. Fasteners: Provide as recommended by panel manufacturer suitable for application meeting the following characteristics.
 - 1. Self-tapping and Self-drilling for metal to metal
 - 2. Self-tapping wood screws for metal to wood applications
 - 3. Carbon steel thread with organic long-life coating.
 - 4. Exposed fasteners type 304 stainless steel cap head;
 - a. Encapsulated EPDM washer
 - b. Baked on High performance compatible, chip resistant finish to match panel color.
- F. Field Touch up Paint; As recommended by manufacturer
- G. Sub-girt Framing Assembly:
 - 18 gauge, 0.040 inch (1.024 mm) thick formed non-precoated steel sheet.
 - Secondary panel support framing spaced per design pressures indicated by ASCE-7
 - Profile as indicated; to attach panel system to building.

- H. Internal and External Corners: Same material, thickness, and finish as exterior sheets; profile to suit system; shop cut, and factory mitered to required angles.
- I. Hairline Corner: Provide field-fabricated corners using outside hairline corner trim to maintain continuity of profile around corner allowing for the continuous appearance in a horizontal application wall panels. (Horizontal profile only)
- J. Mitered Corner: Provide factory-fabricated mitered internal corners in panel width back braced with 20 gauge, 0.0320 inch (.81 mm) thick perforated aluminum sheet to maintain continuity of profile around corner. Horizontal profile only
- K. Extrusions: custom-designed 10-0"aluminum alloy 6063 extrusions factory post-painted in PVDF finish to match wall panels at areas of panel termination.
- L. Expansion Joints: Same material, thickness and finish as exterior sheets; 20 gauge, 0.0320 inch (0.81 mm) thick; manufacturer's standard brake formed type of design to suit system.
- M. Snap J: Factory formed two-piece J-channel to be used in trim areas without clip securement to minimize exposed fasteners
- N. Penetration Covers (Z Boxes) to be supplied by panel manufacturer, factory fabricated in same gauge and finish as metal panels.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Verify substrate framing members are ready to receive panels.
- B. Verify water-resistive barrier (WRB) has been properly installed over substrate, see Section 072500 for additional information.

3.02 PREPARATION

- A. Install subgirts perpendicular to panel length, securely fastened to substrates, shimmed and leveled to uniform plane, and spaced at intervals indicated.
- B. Protect surrounding areas and adjacent surfaces from damage during execution of this work.

3.03 INSTALLATION

- A. Install panels on walls and soffits in accordance with manufacturer's instructions and approved shop drawings.
- B. Protect surfaces in contact with cementitious materials and dissimilar metals with bituminous paint; allow time to properly dry prior to wall panel installation.
- C. Provide expansion and control joints where indicated.
- D. Use concealed fasteners unless otherwise indicated and approved by Architect.

3.04 TOLERANCES

- A. Maximum Offset From True Alignment Between Adjacent Members Butting or In Line: 1/16 inch (1.6 mm).
- B. Maximum Variation from Plane or Location Indicated on Drawings: 1/4 inch (6.4 mm).

3.05 FIELD QUALITY CONTROL

- A. See Section 014000 - Quality Requirements for additional requirements.

- B. Barrier Wall Water-Spray Test: Test assembled area as directed by Architect for water penetration in accordance with AAMA 501.2.
- C. Do not cover installed air/water barriers until required inspections have been completed.
- D. Obtain approval of installation procedures by air/water barrier manufacturer based on a mockup installed in place, prior to proceeding with remainder of installation.
- E. Take digital photographs of each portion of installation prior to covering up.

3.06 CLEANING

- A. See Section 017000 - Execution and Closeout Requirements for additional requirements.
- B. Remove site cuttings from finish surfaces.
- C. Remove protective material from wall panel surfaces.
- D. Clean and wash prefinished surfaces with mild soap and water, rinse with clean water.
- E. Upon completion of installation, thoroughly clean prefinished aluminum surfaces in accordance with AAMA 609 & 610.

3.07 PROTECTION

- A. Protect installed products from damage until Date of Substantial Completion.

END OF SECTION

SECTION 074293 SOFFIT PANELS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Metal soffit panels.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product.

1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of panel and accessory.

B. Shop Drawings:

1. Include fabrication and installation layouts of metal panels; details of edge conditions, joints, panel profiles, corners, anchorages, attachment system, trim, flashings, closures, and accessories; and special details.
2. Accessories: Include details of flashing, trim, and anchorage systems, at a scale of not less than 1-1/2 inches per 12 inches (1:10).

C. Samples for Initial Selection: For each type of metal panel indicated with factory-applied color finishes.

1. Include similar Samples of trim and accessories involving color selection.

D. Samples for Verification: For each type of exposed finish required, prepared on Samples of size indicated below:

1. Metal Panels: 12 inches long by actual panel width. Include fasteners, closures, and other metal panel accessories.

1.3 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer.

B. Product Test Reports: For each product, tests performed by a qualified testing agency.

C. Sample Warranties: For special warranties.

1.4 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For metal panels to include in maintenance manuals.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.
- B. UL-Certified, Portable Roll-Forming Equipment: UL-certified, portable roll-forming equipment capable of producing metal panels warranted by manufacturer to be the same as factory-formed products. Maintain UL certification of portable roll-forming equipment for duration of work.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver components, metal panels, and other manufactured items so as not to be damaged or deformed. Package metal panels for protection during transportation and handling.
- B. Unload, store, and erect metal panels in a manner to prevent bending, warping, twisting, and surface damage.
- C. Stack metal panels horizontally on platforms or pallets, covered with suitable weathertight and ventilated covering. Store metal panels to ensure dryness, with positive slope for drainage of water. Do not store metal panels in contact with other materials that might cause staining, denting, or other surface damage.
- D. Retain strippable protective covering on metal panels during installation.

1.7 FIELD CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit assembly of metal panels to be performed in accordance with manufacturers' written instructions and warranty requirements.

1.8 COORDINATION

- A. Coordinate metal panel installation with rain drainage work, flashing, trim, construction of walls, and other adjoining work to provide a leakproof, secure, and noncorrosive installation.

1.9 WARRANTY

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

1. Failures include, but are not limited to, the following:
 - a. Structural failures including rupturing, cracking, or puncturing.
 - b. Deterioration of metals and other materials beyond normal weathering.
 2. Warranty Period: Two years from date of Substantial Completion.
- B. Special Warranty on Panel Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace metal panels that show evidence of deterioration of factory-applied finishes within specified warranty period.
1. Exposed Panel Finish: Deterioration includes, but is not limited to, the following:
 - a. Color fading more than 5 Delta E units when tested in accordance with ASTM D2244.
 - b. Chalking in excess of a No. 8 rating when tested in accordance with ASTM D4214.
 - c. Cracking, checking, peeling, or failure of paint to adhere to bare metal.
 2. Finish Warranty Period: 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Structural Performance: Provide metal panel systems capable of withstanding the effects of the following loads, based on testing in accordance with ASTM E1592:
 1. Wind Loads: As indicated on Structural Drawings.
 2. Other Design Loads: As indicated on Structural Drawings.
 3. Deflection Limits: For wind loads, no greater than 1/180 of the span.
- B. Air Infiltration: Air leakage of not more than 0.06 cfm/sq. ft. when tested in accordance with ASTM E283 at the following test-pressure difference:
 1. Test-Pressure Difference: 1.57 lbf/sq. ft.
- C. Water Penetration under Static Pressure: No water penetration when tested in accordance with ASTM E331 at the following test-pressure difference:
 1. Test-Pressure Difference: 2.86 lbf/sq. ft.
- D. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes by preventing buckling, opening of joints, overstressing of components, failure of joint sealants, failure of connections, and other detrimental effects. Base calculations on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
 1. Temperature Change (Range): 120 deg F, ambient; 180 deg F, material surfaces.

2.2 METAL SOFFIT PANELS

- A. V-Groove-Profile Metal Soffit Panels: Perforated (full vent) panels formed with angled panel edges and intermediate V-groove rib symmetrically spaced between panel edges; with a V-groove joint between panels.
 - 1. Basis-of-Design Product: Subject to compliance with requirements, provide PAC-CLAD | Petersen Aluminum; Pac-Clad PAC-750 Soffit Panels or comparable product by one of the following:
 - a. ATAS International, Inc.
 - b. Dimensional Metals, Inc.
 - c. Englert, Inc.
 - d. Fabral.
 - e. Innovative Metals Company, Inc.
 - f. McElroy Metal, Inc.
 - g. PAC-CLAD; Petersen Aluminum Corporation.
 - 2. Aluminum Sheet: Coil-coated sheet, ASTM B209, alloy as standard with manufacturer, with temper as required to suit forming operations and structural performance required.
 - a. Thickness: 0.032 inch.
 - b. Surface: Smooth, flat perforated finish.
 - c. Exterior Finish: Two-coat fluoropolymer.
 - d. Color: As selected by Architect from manufacturer's full range.

2.3 MISCELLANEOUS MATERIALS

- A. Miscellaneous Metal Subframing and Furring: ASTM C645, cold-formed, metallic-coated steel sheet, ASTM A653/A653M, G90 coating designation or ASTM A792/A792M, Class AZ50 aluminum-zinc-alloy coating designation unless otherwise indicated. Provide manufacturer's standard sections as required for support and alignment of metal panel system.
- B. Panel Accessories: Provide components required for a complete, weathertight panel system including trim, clips, flashings, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of metal panels unless otherwise indicated.
 - 1. Closure Strips: Closed-cell, expanded, cellular, rubber or crosslinked, polyolefin-foam or closed-cell laminated polyethylene; minimum 1-inch thick, flexible closure strips; cut or premolded to match metal panel profile. Provide closure strips where indicated or necessary to ensure weathertight construction.
- C. Flashing and Trim: Provide flashing and trim formed from same material as metal panels as required to seal against weather and to provide finished appearance. Finish flashing and trim with same finish system as adjacent metal panels.
- D. Panel Fasteners: Self-tapping screws designed to withstand design loads. Provide exposed fasteners with heads matching color of metal panels by means of plastic caps

or factory-applied coating. Provide EPDM or PVC sealing washers for exposed fasteners.

- E. Panel Sealants: Provide sealant types recommended by manufacturer that are compatible with panel materials, are nonstaining, and do not damage panel finish.
 - 1. Sealant Tape: Pressure-sensitive, 100 percent solids, gray polyisobutylene compound sealant tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape 1/2 inch wide and 1/8 inch thick.
 - 2. Joint Sealant: ASTM C920; elastomeric polyurethane or silicone sealant; of type, grade, class, and use classifications required to seal joints in metal panels and remain weathertight; and as recommended in writing by metal panel manufacturer.
 - 3. Butyl-Rubber-Based, Solvent-Release Sealant: ASTM C1311.

2.4 FABRICATION

- A. Fabricate and finish metal panels and accessories at the factory, by manufacturer's standard procedures and processes, as necessary to fulfill indicated performance requirements demonstrated by laboratory testing. Comply with indicated profiles and with dimensional and structural requirements.
- B. On-Site Fabrication: Subject to compliance with requirements of this Section, metal panels may be fabricated on-site using UL-certified, portable roll-forming equipment if panels are of same profile and warranted by manufacturer to be equal to factory-formed panels. Fabricate in accordance with equipment manufacturer's written instructions and to comply with details shown.
- C. Provide panel profile, including major ribs and intermediate stiffening ribs, if any, for full length of panel.
- D. Fabricate metal panel joints with factory-installed captive gaskets or separator strips that provide a weathertight seal and prevent metal-to-metal contact, and that minimize noise from movements.
- E. Sheet Metal Flashing and Trim: Fabricate flashing and trim to comply with manufacturer's written instructions and recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, metal, and other characteristics of item indicated.
 - 1. Form exposed sheet metal accessories that are without excessive oil canning, buckling, and tool marks and that are true to line and levels indicated, with exposed edges folded back to form hems.
 - 2. Seams for Aluminum: Fabricate nonmoving seams with flat-lock seams. Form seams and seal with epoxy seam sealer. Rivet joints for additional strength.
 - 3. Seams for Other Than Aluminum: Fabricate nonmoving seams in accessories with flat-lock seams. Tin edges to be seamed, form seams, and solder.
 - 4. Sealed Joints: Form nonexpansion, but movable, joints in metal to accommodate sealant and to comply with SMACNA standards.

5. Conceal fasteners and expansion provisions where possible. Exposed fasteners are not allowed on faces of accessories exposed to view.
6. Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal recommended in writing by metal panel manufacturer.
 - a. Size: As recommended by SMACNA's "Architectural Sheet Metal Manual" or metal soffit panel manufacturer for application but not less than thickness of metal being secured.

2.5 FINISHES

- A. Protect mechanical and painted finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- B. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.
- C. Aluminum Panels and Accessories:
 1. Two-Coat Fluoropolymer: AAMA 2605. Fluoropolymer finish containing not less than 70 percent polyvinylidene fluoride (PVDF) resin by weight in color coat. Prepare, pretreat, and apply coating to exposed metal surfaces to comply with coating and resin manufacturers' written instructions.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, metal panel supports, and other conditions affecting performance of the Work.
 1. Examine framing to verify that girts, angles, channels, studs, and other structural panel support members and anchorage have been installed within alignment tolerances required by metal panel manufacturer.
 2. Examine sheathing to verify that sheathing joints are supported by framing or blocking and that installation is within flatness tolerances required by metal panel manufacturer.
 - a. Verify that air- or water-resistive barriers been installed over sheathing or backing substrate to prevent air infiltration or water penetration.

- B. Examine roughing-in for components and systems penetrating metal panels to verify actual locations of penetrations relative to seam locations of metal panels before installation.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Miscellaneous Supports: Install subframing, furring, and other miscellaneous panel support members and anchorages in accordance with ASTM C754 and metal panel manufacturer's written recommendations.
 - 1. Soffit Framing: Wire tie or clip furring channels to supports, as required to comply with requirements for assemblies indicated.

3.3 INSTALLATION

- A. Install metal panels in accordance with manufacturer's written instructions in orientation, sizes, and locations indicated. Install panels perpendicular to supports unless otherwise indicated. Anchor metal panels and other components of the Work securely in place, with provisions for thermal and structural movement.
 - 1. Shim or otherwise plumb substrates receiving metal panels.
 - 2. Flash and seal metal panels at perimeter of all openings. Fasten with self-tapping screws. Do not begin installation until air- or water-resistive barriers and flashings that will be concealed by metal panels are installed.
 - 3. Install screw fasteners in predrilled holes.
 - 4. Locate and space fastenings in uniform vertical and horizontal alignment.
 - 5. Install flashing and trim as metal panel work proceeds.
 - 6. Locate panel splices over, but not attached to, structural supports. Stagger panel splices and end laps to avoid a four-panel lap splice condition.
 - 7. Provide weathertight escutcheons for pipe- and conduit-penetrating panels.
- B. Fasteners:
 - 1. Aluminum Panels: Use aluminum or stainless steel fasteners for surfaces exposed to the exterior; use aluminum or galvanized-steel fasteners for surfaces exposed to the interior.
- C. Metal Protection: Where dissimilar metals contact each other or corrosive substrates, protect against galvanic action as recommended in writing by metal panel manufacturer.
- D. Lap-Seam Metal Panels: Fasten metal panels to supports with fasteners at each lapped joint at location and spacing recommended by manufacturer.
 - 1. Apply panels and associated items true to line for neat and weathertight enclosure.
 - 2. Provide metal-backed washers under heads of exposed fasteners bearing on weather side of metal panels.

3. Locate and space exposed fasteners in uniform vertical and horizontal alignment. Use proper tools to obtain controlled uniform compression for positive seal without rupture of washer.
 4. Install screw fasteners with power tools having controlled torque adjusted to compress washer tightly without damage to washer, screw threads, or panels. Install screws in predrilled holes.
- E. Accessory Installation: Install accessories with positive anchorage to building and weathertight mounting, and provide for thermal expansion. Coordinate installation with flashings and other components.
1. Install components required for a complete metal panel system including trim, corners, seam covers, flashings, sealants, gaskets, fillers, closure strips, and similar items. Provide types indicated by metal panel manufacturer; or, if not indicated, provide types recommended by metal panel manufacturer.
- F. Flashing and Trim: Comply with performance requirements, manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, and set units true to line and level as indicated. Install work with laps, joints, and seams that are permanently watertight.
1. Install exposed flashing and trim that is without buckling, and tool marks, and that is true to line and levels indicated, with exposed edges folded back to form hems. Install sheet metal flashing and trim to fit substrates and to achieve waterproof performance.
 2. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at a maximum of 10 ft. with no joints allowed within 24 inches of corner or intersection. Where lapped expansion provisions cannot be used or would not be waterproof, form expansion joints of intermeshing hooked flanges, not less than 1 inch deep, filled with mastic sealant (concealed within joints).

3.4 CLEANING AND PROTECTION

- A. Remove temporary protective coverings and strippable films, if any, as metal panels are installed unless otherwise indicated in manufacturer's written installation instructions. On completion of metal panel installation, clean finished surfaces as recommended by metal panel manufacturer. Maintain in a clean condition during construction.
- B. After metal panel installation, clear weep holes and drainage channels of obstructions, dirt, and sealant.
- C. Replace metal panels that have been damaged or have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

END OF SECTION

SECTION 211000 FIRE SUPPRESSION SYSTEMS

PART 1 – GENERAL

1.1 CONDITIONS

- A. The applicable provisions of Section 22 00 00, PLUMBING GENERAL REQUIREMENTS, are hereby made a part of this section, and the Contractor is cautioned to read Section 22 00 00 carefully as items of work applicable to this section are included in Section 22 00 00.
- B. Installation of entire system shall be accomplished by a Contractor who is duly licensed and accredited in the installation of automatic sprinkler systems and fire protection equipment for the past three years.

1.2 AUTHORITIES HAVING JURISDICTION

- A. The Fire Protection System shall meet all applicable rules and regulations of the Authorities Having Jurisdiction listed below:
 - 1. Regional Office of the State Fire Marshal
 - 2. Local Building Inspector
 - 3. Project Manager

1.3 CODES, STANDARDS, AND REGULATIONS

- A. Material, equipment, and installation shall be in compliance with, but not limited to, the following codes and standards:
 - 1. National Fire Protection Association (NFPA):
 - a. NFPA 10-2018 - Portable Fire Extinguishers
 - b. NFPA 13-2019 - Installation of Sprinkler Systems
 - c. NFPA 24-2019 - Private Fire Service Mains
 - d. NFPA 25-2020 – Inspection, Testing and Maintenance of Water-Based Fire Protection Systems
 - 2. American Society for Testing and Materials (ASTM)
 - 3. American National Standards Institute, Inc. (ANSI)
 - 4. Local utility company rules and regulations
 - 5. Rules and regulations of the Board of Health, Commonwealth of Virginia
 - 6. 2021 Virginia Construction Code
 - 7. 2021 Virginia Statewide Fire Prevention Code (VSFPC)
 - 8. Return Air Plenum Note: All material located in the return air plenums shall meet the requirements of the (International) (Virginia) Mechanical Code, Section 602.2.1.

1.4 DESCRIPTION OF WORK

- A. The work to be performed under this section of the specifications comprises the furnishing of all labor and materials and the completion of all work of this section as shown on the drawings and/or herein specified. In general, the work included under this section consists of, but is not limited to, the following:
1. A flow test was made at the site on March 24, 2025. The results were: 94 PSI static pressure, 24 PSI residual pressure with 817 GPM flow. The contractor shall verify the results given above.
 2. Sprinkler system layouts, hydraulic design, risers, sprinklers, water flow switches, valves, fire department connections, all interior piping, all exterior piping, and all other components indicated and/or required.
 3. Submit for review and comments by the Architect, electronic drawings of the reflected ceiling plan showing the proposed locations of sprinkler heads and piping with respect to ceiling, lights, diffusers, ducts, ceiling grid, framing members, etc. The sprinkler heads shall be centered within the ceiling grid.
 4. Prepare Working Plans:
 - a. A hydraulic designed wet pipe sprinkler system for complete protection of the building. Systems shall be designed with a minimum 10 percent safety factor.
 - b. The sprinkler system in corridors, toilets, offices, classrooms, break rooms, closets, lobbies and similar spaces shall be Light Hazard designed to provide 0.10 GPM/Sq. Ft. over 1500 Sq. Ft. plus a 100 GPM hose allowance. The system shall be wet using 155 Deg. F. sprinkler heads and cover no more than 225 Sq. Ft. per head.
 - c. The sprinkler system in mechanical rooms, storage rooms, I.T. Rooms and similar spaces shall be Ordinary Hazard 1 designed to provide 0.15 GPM/Sq. Ft. over 1500 Sq. Ft. plus a 250 GPM hose allowance. The system shall be wet using 155 Deg. F. sprinkler heads and cover no more than 130 Sq. Ft. per head.
 - d. Provide a 212 Deg. F. standard response sidewall spray sprinkler in the elevator pit, no greater than 2'-0" above the bottom of the pit in accordance with NFPA 13-2019 and ASME A17.1 - Safety Code for Elevators and Escalators. Provide a 212 Deg. F. standard response sprinkler in the Elevator Equipment Room.
 - e. Data on these working plans shall include, but not be limited to, the following: Requirements listed in NFPA 13-2019 - Sprinkler Systems, size of all piping; method of anchoring or hanging pipe lines; location and type of valves; position, type, and temperature ratings of sprinkler heads; material and equipment list indicating manufacturer's names and types; structural, mechanical, electrical, and architectural coordinating information; and the various other items pertinent to the complete installation of the systems. Where seismic bracing is required, seismically brace piping system in accordance with NFPA 13-2019. Seismically brace piping system in accordance with NFPA 13-2019. Seismic design data is as follows: Seismic Design Category: C; Risk Category: IV.
 - f. Working plans (shop drawings) shall be submitted to the engineer for review and the Authorities Having Jurisdiction for approval. Two copies of the

approved shop drawings shall then be submitted to the Architect for their review.

- g. Coordinate the sprinkler system with other pipes, ducts, mechanical and electrical equipment, lights, conduit, structural systems, ceiling supports, and framing before installation. Do NOT run piping under or beside fan coil units or their manufacturer recommended service clearance areas. There shall be mutual agreement among all of the trades as to the location of each trade's materials to be installed. In the event that the Contractor should proceed to install his material without properly coordinating with the other trades, all and any conflicting work shall be removed and reinstalled at the Contractor's own expense. The reinstalled work shall be at the direction and approval of the Authority Having Jurisdiction.

1.5 RELATED WORK

- A. Section 22 00 00 PLUMBING GENERAL REQUIREMENTS.

1.6 SUBMITTALS

- A. In accordance with Section 22 00 00 PLUMBING GENERAL REQUIREMENTS, furnish the following: (Contractor shall submit manufacturer's literature and data, drawings, hydraulic calculations and verification of water test data to the engineer for review and the Authorities Having Jurisdiction for approval. Two copies of the approved submittal shall then be submitted to the Architect for their records.)

- 1. Manufacturer's Literature and Data: Submit the following as one package with layout drawings and calculations:

- a. Piping and Fittings
- b. Valves
- c. Flow Switches
- d. Sprinkler Heads
- e. Supervisory Switches
- f. Electric Alarm Bell
- g. Fire Department Connection
- h. Backflow Preventer
- i. Alarm Valve
- j. Test Connections
- k. Check Valves
- l. Drain Valves
- m. Pressure Gauges
- n. Sprinkler Head Cabinet

- 2. Complete layout drawings of sprinkler system.
- 3. Hydraulic calculations.

- B. Grooved joint couplings and fittings shall be shown on drawings and be specifically identified with the applicable style or series number.

PART 2 – PRODUCTS

2.1 PIPING

- A. Interior: Steel piping (welded and seamless) having a corrosion resistance ratio (CRR) of 1.0 or greater, or copper tube (drawn, seamless) within the building shall be of the materials listed in NFPA 13-2019 – Installation of Sprinkler System and acceptable to the Authority Having Jurisdiction. Steel pipe shall be Schedule 40 for sizes 2 inches and smaller, and Schedule 10 for sizes 2-1/2 inches and larger. Plastic piping will not be an acceptable piping material. Changes in direction of piping shall be made with fittings. All materials and installation shall be suitable for minimum working pressure of 175 PSI or as specified hereinafter for tests.
1. Grooved mechanical piping system for ferrous piping 1" and larger shall be used with roll cut or cut grooved (ANSI/AWWA C606) carbon steel ASTM A53 or ASTM A-795 pipe. All grooved components shall be of one manufacturer and shall be UL listed and FM Global approved.
 - a. Grooved end fittings shall be cast of ductile iron conforming to ASTM A-536, Grade 65-45-12, forged steel conforming to ASTM A-234, Grade WPB 0.375" wall, or factory fabricated from standard weight carbon steel pipe conforming to ASTM A-53, Type F, E or S, Grade B, supplied with factory grooved ends designed to accept mechanical couplings.
 - b. Grooved joint couplings shall be manufactured in two segments of cast ductile iron, conforming to ASTM A-536, Grade 65-45-12. Gaskets shall be pressure-responsive synthetic rubber, grade to suit the intended service, conforming to ASTM D-2000. Mechanical coupling bolts shall be zinc plated (ASTM B-633) heat treated carbon steel track head conforming to physical properties of ASTM A-183 and A-449, minimum tensile strength 110,000 psi (758450 kPa) as provided standard.
 - (1) Rigid type: Housings shall be cast with offsetting, angle-pattern bolt pads to provide system rigidity and support and hanging in accordance with NFPA 13-2019. Tongue and recess rigid type couplings shall be permitted if the contractor uses a torque wrench for installation where required by the manufacturer and maintains the required gaps between bolt pads equally on each side of the coupling. Required torque shall be in accordance with the manufacturer's recommendations. Provide visual tags on every 10th coupling showing amount of torque applied to that coupling at time of installation. Contractor shall remove and replace any improperly installed products. 1-1/4" thru 12" shall be "Installation Ready" rigid type designed for direct "stab" installation onto grooved end pipe without prior disassembly of the coupling. Basis of design shall be Victaulic style 009.
 - (2) Flexible type: Use in seismic locations where required by NFPA 13-2019, equal to Victaulic Installation-Ready Style 177 and Style 75 or 77.

- c. Coupling gaskets shall be as follows:

Fire Protection Service	Temperature Range	Gasket Recommendation
Water/Wet Systems	Ambient	Grade E EPDM, Type A

- d. Grooved Joint Flange Adapters: ASTM A-536 ductile iron casting, flat face, for incorporating flanged components with ANSI Class 125, 150 and 300 bolt hole patterns to a grooved system. Basis of design shall be Victaulic Style 744 Vic Flange.
2. Installation-ready fittings for Schedule (40)(10) grooved end steel piping in fire protection applications sizes NPS 1-1/4" through 2-1/2". Fittings shall consist of a ductile iron housing conforming to ASTM A-536, Grade 65-45-12, with installation-ready ends, red enamel coated. Fittings complete with prelubricated Grade "E" EPDM Type 'A' gasket, and ASTM A449 electroplated steel bolts and nuts. System shall be UL listed for a working pressure of 300 psi and FM approved for working pressure of 365 psi.
- Fittings shall be rigid, for direct stab installation without field disassembly.
 - Fittings shall be fully assembled at visual pad-to-pad contact.
 - Installation-ready fittings shall be equal to Victaulic "Firelock", Anvil "SlideLOK", Smith-Cooper "CoopLOK", or accepted equal.
3. Threaded Fittings: May be used with Schedule 40 steel pipe only. Threaded pipe and fittings shall have threads cut in accordance with ASME B1.20.1 as indicated in NFPA 13-2019.

B. Flexible Sprinkler Hose Fittings:

- Description: Flexible Sprinkler Hose Fittings for use in commercial suspended ceilings and sheetrock ceilings.
- Regulatory Requirements: In accordance with NFPA 13-2019 Section 17.4.1.3.3.
- Basis of Design: Victaulic Vic Flex AH1 or AH2 with threaded nipple, AH1CC or AH2CC with captured coupling, VS1 Dry Sprinkler.
- Product Performance Criteria:
 - FM Approved for its intended use pursuant to FM 1637 Approval Standard for Flexible Sprinkler Hose with Threaded End Fittings.
 - UL Listed for its intended use pursuant to UL 2443 Standard for Flexible Sprinkler Hose with Fittings for Fire Protection Service. Flexible sprinkler hose fittings shall be installed in accordance with the manufacturer's installation instructions indicated in the most recent U.L. Listing.
 - Seismically qualified for use pursuant to ICC-ES AC-156 Acceptance Criteria for Seismic Qualification by Shake-Table Testing of Nonstructural Components and Systems.

- d. Materials: 100% Type 304 Stainless Steel, rated pressure 175 psi, braided, leak-tested with minimum 0.8 inch true-bore internal corrugated hose diameter. Hose shall have a minimum bend radius of 2 inches for UL. Provide union joints for ease of installation.
 - e. Ceiling Brackets: Shall be one-piece open gate type, having integrated snap-on clip ends positively attached to the ceiling using tamper-resistant screws. The bracket shall allow installation before the ceiling tile is in place.
 - f. Contractor shall provide complete copies of the correct and code compliant installation instructions. Non-compliant versions of installation instructions will result in rejection of the submittal.
 - C. Exterior: Exterior piping shall comply with AWWA Standards listed in NFPA 13-2019 – Installation of Sprinkler Systems and acceptable to the Authority Having Jurisdiction. All ferrous metal pipe shall be lined, steel pipe shall be coated and wrapped with joints field-coated and wrapped after assembly. Galvanized pipe is not acceptable. All materials and installation shall be suitable for minimum working pressure of 175 PSI or as specified hereinafter for tests.
 - D. Firestopping: Pipe penetrations of rated walls, floors, and floor-ceiling assemblies shall be constructed in accordance with Underwriter's Laboratories, Inc., Fire Resistance Directory, Volume II, Hourly Ratings for Through Firestop Penetrations. The Contractor shall provide U.L. firestop penetrations according to the particular wall, floor, or floor-ceiling assembly rating, construction type, pipe material, pipe size, insulation requirements, sleeve requirements, and the contractor's choice of firestop products as listed by U.L. Refer to the architectural drawings for the wall, floor, or floor-ceiling assembly construction types and ratings. Contractor shall submit shop drawings for through penetration firestop assemblies in the form of tested assemblies taken directly from U.L. Fire Resistance Directory documents.
 - E. Hangers and Supports: Pipe hangers and supports shall meet the requirements of NFPA 13-2019. Refer to Section 22 0000, PLUMBING GENERAL REQUIREMENTS, paragraph 2.05 inclusive, for additional hanger and support requirements. Pipe stands for supporting piping from the floor shall meet the requirements of NFPA 13-2019, section 17.5 and Table 17.5.3.1.
- 2.2 VALVES
- A. Provide identification sign (enamel on metal) to all valves in accordance with NFPA 13-2019.
 - 1. Gate Valves:
 - a. 2" and smaller, shall have approval rating of 175 psi WWP or greater with body and bonnet made from cast bronze alloy ASTM B-62. Valve shall be of OS&Y design with threaded ends. Valve shall be Underwriters Laboratories listed, Factory Mutual Approved and in compliance with MSS-SP 80. Provide with electrical supervisory contacts.
 - b. 3" and larger, shall have approval rating of 175 psi WWP or greater, ductile iron or iron body with bronze trim or with resilient rubber encapsulated wedge. Body and bonnet shall be of cast iron alloy ASTM A-126 Class B with OS&Y

type bonnet. Cast ductile iron body shall be ASTM A536. If of resilient wedge design, interior of valve shall be epoxy-coated. Valve stem shall be pre-grooved for use with supervisory switch. Ends shall be flanged Class 125 or I.P.S. grooved. Valves shall be Underwriters Laboratories listed, Factory Mutual Approved and in compliance with MSS-SP 70. Provide with electrical supervisory contacts. Valves shall be equal to Victaulic 771.

2. Check: (Type: Wet Pipe Alarm Check Valve): Reliable Model E, Viking Model J-1, Victaulic Series 751, or approved equal, Underwriters' Laboratories, Inc. or Factory Mutual Research Corporation approved, 225 psig WWP or greater, shall be complete with standard accessories and trim necessary to give an alarm and shall include pressure gauges, retard chamber, testing provisions and all necessary intercomponent piping, fittings, and valves. Pilot valve and clapper shall have individual elastomer seats. Provide with water motor and gong for mechanical alarm. Valve internal components shall be replaceable without removing the valve from the installed position.
3. Check valves: 2 1/2" and larger, shall have approval rating of 250 psi WWP or greater with bronze trim and rubber to metal seating. Body shall be of cast iron alloy ASTM A-126 Class B or ductile iron ASTM A-536. Ends shall be flanged or wafer for use with Class 125/150 flanges, or grooved for use with grooved joint couplings. Valves shall be Underwriters Laboratories listed, Factory Mutual Approved and where applicable in compliance with MSS-Sp 71. Valves shall have stainless steel spring and shaft, and shall be suitable for vertical or horizontal installation. Victaulic style 717 or approved equal.
4. Post indicator and valve: 4" and larger, shall have approval rating of 175 psi WWP or greater with bronze trim or with resilient rubber encapsulated wedge. Body and bonnet shall be of cast iron alloy ASTM A-126 Class B or ductile iron ASTM A-536 with bonnet incorporating indicator post mounting flange. If resilient wedge design, interior of valve shall be epoxy-coated. Ends shall be flanged Class 125, grooved ends or mechanical joint. Upright indicator post shall be adjustable for bury depth required. Valves and posts shall be Underwriters Laboratories listed and Factory Mutual Approved. Where applicable, valves shall be in compliance with MSS-SP 70. Post shall indicate if valve is "Open" or "Shut" and shall have operating wrench with locking staple. Post shall be cast iron, with all working parts completely enclosed. Provide complete with supervisory switch. Victaulic Series 772 with Series 774 upright post, or approved equal.
5. Butterfly Valves: 2 1/2" and larger, shall have approval rating of 175 psi WWP or greater. Valve shall have gear operator with handwheel and raised position indicator and weatherproof actuator with two internal pre-wired supervisory switches. Bodies shall be from cast ductile iron ASTM A395 or A536 and stems shall be 400 series stainless steel. Valves shall be wafer style for installation between Class 125/150 flanges or I.P.S. grooved for installation with grooved joint couplings. The seat shall be pressure responsive and the stem shall be offset from the disc centerline to provide complete 360 degree circumferential seating. Valves shall be Underwriters Laboratories listed, Factory Mutual Approved and in compliance with MSS-SP 67. Victaulic style 705 or approved equal.
6. Trim and Drain Valves (2" and smaller):
 - a. Ball Valves: Shall have approval rating of 175 psi WWP or greater. Valve shall have TFE seats, threaded or grooved ends, blow out proof stem and

lever handle or die-cast brass gear operator with pre-wired supervisory switches. Valve shall be Underwriters Laboratories listed and Factory Mutual Approved for trim and drain service and in compliance with MSS-SP 110.

- b. Globe Valves: Shall have approval rating of 175 psi WWP or greater. Valves shall have rubber seat disc and threaded ends. Valves shall be Underwriters Laboratories listed for trim and drain service.
- c. Check Valves: Shall be rated 175 psi or greater. Valves shall have rubber seat discs and threaded ends. Valve shall be of Y-pattern horizontal swing-type. Valve shall be in compliance with MSS-SP 80.

2.3 SELF-CONTAINED TEST AND DRAIN ASSEMBLY

- A. Ductile iron body with bronze "Drain" and "Test" valve bonnets. Acrylic sight glass for viewing test flow. Various sized orifice inserts to simulate flow through 17/32 inch, 1/2 inch, 7/16 inch, and 3/8 inch diameter sprinkler heads, 1-1/4 inch female threaded outlets or 1-1/4 inch one-quarter turn locking lug outlets for plain end pipe (end preparation to be in accordance with manufacturer's recommendation). Alarm test module must be UL Listed or FM Approved in accordance with NFPA 13-2019 for the specified service.
- B. UL Listed, bronze body, with chrome plated bronze ball, brass stem, steel handle, Teflon seat and sight glasses. Provide valve with three position indicator plate (off, test and drain), 1/4-inch tapping for pressure gauge and various sized orifice inserts to simulate flow through 3/8 inch, 7/16 inch, 1/2 inch and 17/32 inch diameter sprinkler heads.
- C. UL Listed, bronze body, globe type, with bronze and copper alloy internals, nitrile o-ring with EPDM seat and dual polycarbonate sight glasses, threaded or grooved ends, with a pressure rating of 300 psi. Integral 1/2" or 17/32" orifice, supplied with pressure gauge ports for tapping. Alarm test and drain valve must be UL Listed or FM Approved in accordance with NFPA 13-2019 for the specified service.
- D. All floor control valves, sight glasses and test and drain assemblies shall be located maximum 6'-0" above finished floor.

2.4 SPRINKLERS

- A. Underwriters' Laboratories, Inc. Listed, automatic, fusible link type or frangible glass bulb type, having temperature ratings suitable for installation. Sprinklers with "O" rings shall be prohibited. Sprinklers shall be upright in space with no ceilings, pendent in storage rooms with finished ceilings, recessed sidewall with threaded escutcheons in stairs and corridors where space above ceilings is insufficient, and recessed with threaded escutcheons in finished spaces. Pendent and sidewall shall have chrome finish, upright shall be brass. Sprinkler body shall be integrally cast with a hex-shaped wrench boss to facilitate installation and reduce the risk of damage during installation.
- B. Wrenches shall be provided by the sprinkler manufacturer that directly engage the hex-shaped wrench boss integrally cast in the sprinkler body.
- C. Install guards over sprinkler heads in Storage spaces where less than 8 feet above floor, on heads where subject to mechanical injury or installed in mechanical areas, I.T.,

Electrical, Data, Telephone, Telecommunications and A/V rooms/closets. Guards shall be listed, supplied and approved for use with the sprinkler by the sprinkler manufacturer.

- D. Install intermediate temperature heads where necessary because of heaters, duct openings, etc, or where installed in attic spaces.
- E. Provide a non-combustible water shield beside sprinkler heads adjacent to electrical service equipment in mechanical or electrical rooms. Quick response sprinklers shall be installed in all light hazard areas, and in ordinary hazard areas where listed for such use.
- F. Sprinklers in tile ceilings shall be located in center of 2 ft. x 2 ft. tile, or 1 ft. from one end and each side of 2 ft. x 4 ft. tile. Rough-in openings shall be cut no larger than required to accommodate the piping and/or escutcheon being installed, and the escutcheons shall completely cover the rough-in openings.
- G. Sprinklers shall be installed under fixed continuous and noncontinuous obstructions over 4 feet wide, including but not limited to ducts, decks, open grate flooring, overhead doors, closely spaced exposed Mechanical Room piping and mechanical equipment.
- H. Install all sidewall sprinklers such that the deflectors are located a minimum of 4 inches below finished ceilings in accordance with NFPA 13-2019 requirements and the sprinkler listing. Deflectors shall be installed at a maximum of either 6 inches or 12 inches below finished ceilings according to the sprinkler listing, refer to the sprinkler installation instructions.

2.5 SPRINKLER CABINET

- A. Complete with sprinklers and special wrenches in accordance with NFPA 13-2019.

2.6 FLOW SWITCHES

- A. Switch shall be of the vane type with adjustable pneumatic retard device, arranged to make on water flow, and break when flow ceases. Provide flow switches without retard adjustments on the branch line to Elevator shafts and Elevator Equipment Rooms on wet pipe systems. Water flow switch shall be suitable for connecting fire alarm system as specified in Division 26 - Electrical. Flow switch with gate valve up-stream, shall be provided on each floor zone in the branch main ahead of all sprinklers. System Sensor Model WFD or equal.

2.7 BACKFLOW PREVENTER

- A. Provide a double check-valve assembly (ASSE 1015; AWWA C510), complete with gate or butterfly valves and test cocks for forward flow testing. Locate assembly in fire system water line immediately inside building before any takeoffs. Provide Mueller 911U, United F0511-175, or equal, cast iron Y type strainer, U.L Listed for fire service, line size.

2.8 FIRE DEPARTMENT CONNECTIONS

- A. Connections shall be free-standing, 2-way polished brass finish and plate labeled "Auto-Spkr." Snap-on or threaded connections shall be as required by the local Fire

Department, with brass cap and chain. Connections shall be installed with centerlines of inlets 36 inches above finished grade. An approved check valve and 3/4 inch ball drip shall be provided for each fire department connection.

- B. At the low-point near each Fire department connection, install a 90-degree elbow with drain connection to allow for system drainage to prevent freezing. Elbow shall be Victaulic #10-DR or equal.

2.9 FIRE EXTINGUISHERS

- A. Fire extinguishers, if required, will be furnished and installed by the Owner.

2.10 TEST PIPES AND DRAINS

- A. Inspectors test pipes and connections shall be installed as required and shall be installed so that the flow of water will be visible. System piping shall be properly graded to provide for complete drainage. Drain pipes shall be provided with approved valves and shall be run to an accessible place for discharge. Auxiliary drain pipes shall be provided if required at any low points in the systems. System, auxiliary, test, and water motor alarm drain lines shall be provided with valves and piped to discharge over approved drains or to discharge through exterior walls not more than 6 inches above grade. Drain points shall be visible from the drain valves, and shall be located so that they are free from the possibility of causing water damage to persons or property.
- B. All drains through building walls to the exterior shall be terminated with a nozzle similar to Josam 25010-Z-BS series, Smith 1770 Series or Zurn Z199 Series downspout nozzle, 2" size, with bird screen.

2.11 WET SYSTEM

- A. Install alarm check valve and water flow switch on riser. Install pressure indicating gauges and drain in alarm check valve. Provide fire department connection and check valve with ball drip. Provide electric alarm bell. Provide tamper switches on gate valves.

2.12 ELECTRIC ALARM BELL

- A. Provide electric alarm bell, Potter Roemer Model 6230 or equal, 10 inch diameter, 24 volt D.C. electric motor, coordinate voltage with fire alarm system.

2.13 WATERFLOW ALARMS AND VALVE SUPERVISORY SYSTEM

- A. All wiring, conduit, etc., required for connection of alarm check valves, electric alarm bell, supervisory valves including PIV, dry pipe valve, (heat trace systems) and electric flow alarm switches to the fire alarm system panel located in _____ shall be furnished and installed by the Sprinkler Contractor. Final connections to the alarm panel shall be by the Electrical Contractor. All wiring shall be installed in conduit as specified in Section 26 05 33.

PART 3 – EXECUTION

3.1 INTENT OF DRAWINGS

- A. It is not the intent of these drawings and specifications to provide a complete detailed description of apparatus, material, equipment, etc., which is required to install a fire protection system or to comply with local building department requirements. The sprinkler contractor shall prepare drawings showing all material, equipment, and sizes required to install the system which meets the approval of the Authorities Having Jurisdiction for the completed project, or their designated representatives. Piping layout that may be shown on drawings is a suggested pipe route for the system and is not considered as absolute. Contractor shall submit his layout to the aforementioned authorities for their approval. Contractor's layout shall fit the design of the building, and under no circumstances will the building design be modified to fit the Contractor's layout.
- B. All materials and methods shall be in accordance with applicable codes, regulations, and/or ordinances and shall meet the approval of the local inspection authority having jurisdiction. NFPA 13-2019 as referenced in the 2021 Virginia Construction Code shall be the minimum requirement for all work. All materials under this section of the specifications shall be listed by the Underwriter's Laboratories, Inc., as approved for fire protection installation.
- C. The sprinkler systems shall be designed in accordance with NFPA 13-2019.
- D. Check with local water authorities to verify static pressure, water flow, residual pressure specified, and duration time available at base of riser of water supply for the proposed sprinkler system. Contractor shall be responsible for verification of water data or performing a flow test on the main to verify water flow data.
- E. Wet pipe sprinkler systems shall not be installed in locations subject to freezing or unheated attic spaces or spaces exterior to building insulation.

3.2 SUPERVISORY SWITCHES

- A. For all shut-off valves and each sprinkler zone control valve, provide a supervisory switch. All interior and exterior shut-off valves in the entire facility fire suppression system shall be supervised. The Sprinkler Contractor shall coordinate with the Electrical Contractor for connection of all supervisory switches to the fire alarm system.

3.3 FLOW ALARM SWITCHES

- A. Provide in sprinkler lines where noted. Install water flow switch and adjacent valves easily accessible. Locate flow switch minimum of 12 inches from a fitting that changes the direction.
- B. Elevator Shafts and Elevator Equipment Rooms: Flow switches for elevator shaft and elevator equipment room sprinklers shall not have a time delay; these shall activate immediately. Activation of these flow switches shall immediately disconnect main line power and activate the building fire alarm system.

3.4 INSTALLATION OF GROOVED JOINT PIPING SYSTEMS

- A. Grooved joint piping systems shall be installed in accordance with the manufacturer's guidelines and recommendations. All grooved couplings, fittings, valves and specialties shall be supplied by a single manufacturer. Grooving tools shall be supplied by the same manufacturer as the grooved components. The gasket style and elastomeric material (grade) shall be verified as suitable for the intended service as specified. Gaskets shall be supplied by the grooved coupling manufacturer. Grooved end shall be clean and free from indentations, projections and roll marks in the area from pipe end to groove for proper gasket sealing. A factory-trained field representative shall provide onsite training to Contractor's field personnel in the installation of grooved piping products. Factory-trained representative shall periodically review the product installation. Contractor shall remove and replace any improperly installed products.
- B. Installation ready fittings shall be installed in accordance with the manufacturer's published installation instructions. A factory trained representative (direct employee) of the manufacturer shall provide on-site training in the use of grooved tools, application of groove, and product installation.
- C. Press Piping Installation: Pipe shall be square cut, $\pm 0.030"$, properly deburred and cleaned. Pipe ends shall be marked at the required location, using a manufacturer-supplied gauge, to ensure full insertion into the coupling or fitting during assembly. Use the required tool for the piping system being installed with the proper sized jaw for pressing.
- D. The sprinkler bulb protector must remain in place until the sprinkler is completely installed and painting in the area around the sprinkler is complete and before the system is placed in service. Remove bulb protectors carefully by hand after installation. Do not use any tools to remove bulb protectors.
- E. Do not install sprinklers that have been dropped, damaged, or show a visible loss of fluid. Never install sprinklers with cracked bulbs.

3.5 PROTECTION OF ELECTRICAL EQUIPMENT

- A. Refer to Specification Section 220000, Paragraph 3.01.C.1 for requirements for piping above electrical equipment.

3.6 TESTING AND CLEANING

- A. General: Contractor shall provide all instruments, materials, and labor required for the following:
- B. Cleaning:
 - 1. Remove trash, plaster, dust, paint spots and all foreign matter from inside and outside of all equipment.
 - 2. The Contractor shall check each length of pipe before it is put in place to make certain there is not foreign material (stones, sand, etc.) in the systems. All pipes

shall be thoroughly flushed with water to remove construction debris before final connections are made to equipment.

C. Testing:

1. General - Tests shall be made in the presence of the Owner and/or the authority having jurisdiction or as otherwise directed by the Architect and/or Authorities Having Jurisdiction, who shall be given five (5) days notice by the Contractor of his readiness to perform tests, as required by the NFPA. Any leaks that develop during the tests shall be repaired by remaking the joint or replacing pipe and fittings. No piping shall be concealed until it has been tested, with results acceptable to the Architect and/or Authorities Having Jurisdiction.
2. All fire protection system piping shall be hydrostatically tested at a minimum 200 PSI pressure for two (2) hours or 50 PSI above maximum static pressure when maximum static pressure is above 150 PSI.
3. Double check backflow preventers shall be tested to determine whether they are operable. The testing procedure shall be in accordance with ASSE 5010-1015-1-91 with August 1992 Revisions; ASSE 5010-1015-2-91 with August 1992 Revisions; ASSE 5010-1015-3-91 with August 1992 Revisions; ASSE 5010-1015-4-91 with August 1992 Revisions.
4. The Contractor shall perform a forward flow test on the sprinkler service backflow preventer after the sprinkler system installation is complete and before the building is turned over to the owner. Any deficiencies shall be resolved before final completion of the project.

- D. Reports: Contractor shall verify in writing before completion of the job that all specified cleaning procedures and tests have been performed, with results as specified or as required by codes.

3.7 IDENTIFICATION OF VALVES AND CONTROLS

- A. Appropriate and necessary enamel signs shall be installed on all control valves, drains, fire department connection, and inspector's test. Signs shall conform to requirements of NFPA 13-2019.

3.8 REPORT OF INSPECTION

- A. The Contractor's Material and Test Certificates for Aboveground Piping and Underground Piping shall be filled out in triplicate after acceptance test and the copies sent to the Owner, insurance carrier, Fire Department or other authorities that the Owner may designate. Provide Owner with printed copy of NFPA 25-2020, Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems Tables for Sprinkler Systems.

END OF SECTION

SECTION 224000
PLUMBING FIXTURES

PART 1 - GENERAL

1.1 CONDITIONS

- A. The applicable provisions of Section 220000, PLUMBING GENERAL REQUIREMENTS, are hereby made a part of the section and the Contractor is cautioned to read Section 220000 carefully as items of work applicable to this section are included in Section 220000.

1.2 DESCRIPTION OF WORK

- A. The work to be performed under this section of the specifications comprises the furnishing of all labor and materials and the completion of all work of this section as shown on the drawings and/or herein specified.
- B. In general, the work included under this section consists of, but is not limited to, the following:
 - 1. Plumbing Fixtures
 - 2. Plumbing Trim

1.3 RELATED WORK

- A. Section 220000, PLUMBING GENERAL REQUIREMENTS.

1.4 SUBMITTALS

- A. In accordance with Section 220000, PLUMBING GENERAL REQUIREMENTS, furnish the following:
 - 1. Manufacturer's Literature and Dimension Cuts:
 - a. Plumbing Fixtures & Carriers
 - b. Plumbing Faucets & Flush Valves
 - c. Plumbing Traps and Fittings
 - d. Plumbing Supplies & Stop Valves
 - e. Plumbing Equipment

PART 2 - PRODUCTS

2.1 GENERAL

- A. Fixtures equal to those as hereinafter specified shall be furnished and installed complete with all supplies, waste and vent connections, all fittings, all necessary hangers and supports, bolt caps, faucets, valves and traps. All trim, except in Janitor's Closets, shall be brass with polished chromium plated finish with chrome setscrew escutcheon at wall, except fixture supply pipes may be chromium plated copper with chrome setscrew escutcheons at wall. Traps shall be cast brass (17 gauge) with cleanout plug. All fixtures shall be white except as otherwise indicated. Handicapped lavatories and sinks shall have both water supplies and trap insulated and wrapped with Handy-Shield (by Plumberex), Handi Lav-Guard (by Truebro) or Prowrap (by McGuire). Where below deck mixing valve or electronic faucet are specified, provide Zurn Model Z6900-V9 vandal guard enclosure or equal by Truebro. Color shall be white and fasteners shall remain out of sight. All electric water coolers and drinking fountains shall have a di-electric fitting on the water supply and PVC trap on waste.

2.2 ACCEPTABLE MANUFACTURERS

- A. Subject to compliance with requirements

Water Closets:	Kohler, American Standard, Toto, Sloan, Zurn
Lavatories:	Kohler, American Standard, Toto, Zurn
Urinals:	Kohler, American Standard, Toto, Sloan, Zurn
Showers:	Kohler, American Standard, Universal-Rundle Lasco, Aqua Glass, Aquarius
Sinks:	Acorn-Sinks, Just, Kohler, Elkay, Toto, American Standard, MR Direct
Mop Sinks:	Florestone, Aqua Glass, Fiat
Electric Water Coolers:	Oasis, Elkay, Halsey Taylor, Murdock
Flush Valves:	Delany, Zurn, Sloan, Hydrotek
Faucets:	Kohler, Chicago, T & S, Zurn, American Standard, MR Direct, Hydrotek
Water Closet Seats:	Kohler, Olsonite, Bemis, Church
Shower Fitting:	American Standard, Kohler, Speakman, Symmons, Controls
Carriers:	J.R. Smith, Zurn, Josam, Mifab

2.3 CODE COMPLIANCE

- A. Manufacturer's shop drawings shall indicate that fixtures, fittings and equipment meet specified codes. Fixtures, fittings or equipment materials for potable water system shall not contain lead. All plumbing fixtures, flush valves, flush valve operators, flush tank operators, faucets, and fittings designated for handicapped installation, shall meet ICC/ANSI A117.1-2017 and The Americans with Disabilities Act 2010 (ADA) requirements. Fittings and fixtures that are connected to potable water systems shall meet the 1996 Safe Water Drinking Act and the 2011 Reduction of Lead in Drinking Water Act, and where

applicable shall meet NSF Standard 61 and shall be labeled and certified. Faucets that supply drinking water shall comply with NSF 9.

B. Codes:

1. Vitreous china fixtures - ASME/ANSI A112.19.2M; ICC/ANSI A117.1-2017; ADA
2. Flush valves - ASSE 1037 with ASSE 1001 vacuum breaker on flush valves; ICC/ANSI A117.1-2017; ADA
3. Lavatory & Closet carrier - ASME/ANSI A112.6.1
4. Electric water coolers - ARI 1010; ICC/ANSI A117.1-2017; ADA. Unit shall be listed by Underwriters Laboratories for both the US and Canada and is to be compliant to ANSI/ASHRAE 18. Unit shall be certified to Public Law 111-380 (NO-LEAD) and NSF/ANSI/CAN 61. Fixture meets ADA, ADA Standing Person, and ADA Child requirements when mounted appropriately.
5. Stainless steel plumbing fixtures (sinks) - A112.19.3M; ICC/ANSI A117.1-2017; ADA
6. Faucets - ASSE 1025; ASME A112.18.1; ICC/ANSI A117.1-2017; ADA; NSF Standard 61 Section 9
7. Showers - ANSI Z124.2; ASME A112.19.9M, CSA B45.5; ADA

2.4 STOPS

- A. Provide lock-shield, loose-key or screw driver pattern polished chromium plated angle stops, with each sink faucet or lavatory faucet. Faucets for mop sinks shall have stops integral with faucet. Locate stops below fixture in accessible location. Flush valves and shower valves shall be furnished with integral stops.

2.5 ESCUTCHEONS

- A. Heavy duty solid type chrome plated brass with set screws.

2.6 ROSETTA SPRAY NON-AERATED CONTROL DEVICE

- A. Smooth, bright stainless steel or satin finish, chrome-plated metal Rosetta spray non-aerated flow device shall provide non-aeration, clear, coherent Rosetta spray control flow device that will not splash in basin. Device shall also have a flow control restrictor and have vandal resistant housing.

B. Flow Control Restrictor:

1. Capable of restricting flow between 0.5 GPM to 2.5 GPM for lavatories and for sinks. See fixture specification for GPM requirement for each fixture.
2. Compensates for pressure fluctuation maintaining flow rate specified above within 10 percent between 25 and 80 psig.
3. Operates by expansion and contraction, eliminates mineral/sediment build-up with self-clearing action, and is capable of easy manual cleaning.

- C. Device manufactured by OMNI Products, Inc.

2.7 THERMOSTATIC MIXING VALVE

- A. Provide on all lavatories and sinks Watts Model Series LFUSG-B-M2 under-sink Guardian ASSE 1070 thermostatic tempering valve for single fixture applications and Watts Model Series LFMMV, Bradley S59-4000A, Controls ST70, Powers LFG480 thermostatic mixing valve ASSE 1070 for multiple applications. Set valve for minimum 105 Deg. F, maximum 109 Deg. F.

2.8 FIXTURES

<u>Designation</u>	<u>Standard Fixture Type</u>
WC-1	Water closet: Sloan Royal Optima Wets 2050.1301-1.28-ES, 120V Transformer, 1.28 GPF HET sensor operated valve, matching wall-mounted 15 inch high floor to rim vitreous china, elongated siphon jet bowl, 1-1/2" top spud, Bemis #1655SSCT white extra heavy duty solid plastic open front seat without cover, self-sustaining check hinge. Sloan Royal Optima ES-S flush valve (ASSE 1037, ANSI A112.19.2) 11-1/2 inches above bowl with solenoid operator, vacuum breaker and vandal resistant control cap assembly. Optima EL-1500-L infrared sensor with indicator light, courtesy flush override button, transformer and two (2) chrome-plated wall cover plates with vandal resistant screws. Provide EL-485A electrical box positioning and support kit, coordinate location with plumbing rough-in and electrical. Provide coordinated closet carrier similar to Josam 12000 Series "chase saver" carrier with applicable fitting.
UR-1	Urinal: Sloan Royal Optima WEUS-1000.1301-0.13 ES-S, 120V Transformer, .13 GPF water saving, washdown flushing action, Optima sensor operating flush valve. Matching wall-mounted fixture 24 inches floor to top of rim, vitreous china, 3/4 inch top spud. Sloan Royal Optima 186 ESS flush valve (ASSE 1037, ANSI A112.19.2) mounted 11-1/2 inches above top of fixture with solenoid operator, vacuum breaker and vandal resistant control cap assembly. 2-inch outlet, Optima EL-1500 infrared sensor with indicator light, transformer and chrome plated wall cover plate with vandal resistant screws. Provide installation template to coordinate location of sensor and plumbing rough-in and electrical. Provide coordinated urinal carrier similar to Josam Series 17560-UR single carrier with hanger plate, bearing plate, steel pipe uprights and block bases for each urinal.
L-1	Lavatory: American Standard Lucerne 0355.012, 20-1/2 inch x 18-1/4 inch, vitreous china, wall hung, 4-inch centers, Zurn Z6915-XL-MV-CWB-F sensor faucet, 0.5 GPM flow device, grid drain and tailpiece. Provide coordinated lavatory carrier similar to Jay R. Smith 0700 or 0700D double, or Josam Series 17100 single or 17100-BB double carrier with concealed arms steel uprights, screws, and block bases for each lavatory.

MS	Mop Sink: Mop Sink: Fiat Model MSB-2424, Florestone Model MSR-2424, Zurn Model Z1996-24, 24 inch x 24 inch x 10 inch molded stone mop service basin, with Fiat E-77-AA, Florestone MR-373, Zurn BV bumper guard, stainless steel drain body, combination S.S. dome strainer (NOT integral flat strainer) and lint basket, Fiat 830-AA, Florestone MR-371, Zurn Z1996-SF, Chicago 897-RCF supply fitting with vacuum breaker, four arm handles, integral stops, wall brace, pailhook, threaded spout, Fiat 832-AA, Florestone MR-370, Zurn HH rubber hose and wall hook and Fiat 889-CC, Florestone MR-372, Zurn MH mop hanger, and MSG2424 stainless steel wall guards.
LO	Laundry Outlets: Guy Gray or equal washing machine supply and drain connections with hot and cold top hose connections and 2 inch drain connection in galvanized steel wall box, Model BB200TS top supplies. Mount bottom of box 42 inches above finished floor.
IM	Ice Maker Outlet Box: Guy Gray or equal ice maker supply connection box, Model BIM875AB, 20-gauge galvanized steel box and faceplate, 1/4 turn ball valve and hammer arrestor. Install with bottom of box maximum 24 inches above finished floor.
<u>Designation</u>	<u>Handicapped Fixture Type (ADA)</u>
WC-2	Water closet: Sloan Royal Optima Wets 2050.1301-1.28-ES, 1.28 GPF HET sensor operated valve, 120V Transformer, matching wall-mounted 17 inch high vitreous china, elongated siphon jet bowl, 1-1/2" top spud, Bemis #1655SSCT white extra heavy duty solid plastic open front seat without cover, self-sustaining check hinge. Sloan Royal Optima 111 ESS flush valve (ASSE 1037, ANSI A112.19.2) mounted 11-1/2 inches above bowl with solenoid operator, vacuum breaker and vandal resistant control cap assembly. Optima EL-1500-L infrared sensor with indicator light, courtesy flush override button, transformer and two (2) chrome-plated wall cover plates with vandal resistant screws. Provide EL-485A electrical box positioning and support kit, coordinate location with plumbing rough-in and electrical. Provide coordinated closet carrier similar to Josam 12000 Series "chase-saver" carrier with applicable fitting.
UR-2	Urinal: .13 GPF hardwired 120 VAC/24 VAC Sloan Royal Optima WEUS-1000.1301-0.13 ES-S, 120V Transformer, .13 GPF water saving, washdown flushing action, Optima sensor operating flush valve. Matching wall-mounted fixture 17 inches floor to top of rim, vitreous china, 3/4 inch top spud. Sloan Royal 186 flush valve (ASSE 1037, ANSI A112.19.2) mounted 11-1/2 inches above top of fixture with solenoid operator, vacuum breaker and vandal resistant control cap assembly. 2-inch outlet, Optima EL-1500 infrared sensor with indicator light, transformer and chrome plated wall cover plate with vandal resistant screws. Provide installation template to coordinate location of sensor and plumbing rough-in and electrical. Provide coordinated urinal

carrier similar to Josam Series 17560-UR single carrier with hanger plate, bearing plate, steel pipe uprights and block bases for each urinal.

- L-2 Lavatory: American Standard Lucerne 0355.012, 20-1/2 inch x 18-1/4 inch, vitreous china, 4-inch centers, wall hung, concealed arms, wall-hung lavatory, faucet ledge, Zurn Z6915-XL-MV-CWB-F sensor faucet, 0.5 GPM flow device, grid drain and tailpiece. Mount top of front rim 34 inches above finished floor. Provide concealed arms carrier similar to Jay R Smith 0700 single or 0700D double or Josam 17100 single or 17100-BB double floor-mounted lavatory carrier with leveling and securing screws, structural uprights and block bases.
- SK-1 Workroom Sink: Elkay ELUHADA2115, Acorn-Sinks SUADA-2116, 23-1/2 inch x 18-1/4" single compartment undermount, 18 gauge, 5-1/2" deep bowl, stainless steel, Chicago 1100-GN8AE35-369AB faucet, 8" centers, 8" gooseneck rigid/swing spout, 1.5 GPM at 60 psi discharge laminar flow device, 2-3/8" vandalproof lever handles, LKAD-35 strainer and LKADOS offset tailpiece.
- SK-2 Sink: Elkay Crosstown Model ECTSRAD33226TBG, Acorn-Sinks DUADA-3118, 33 inch x 22 inch double compartment, undermount, 18 gauge, 6" deep bowl, type 304 stainless steel, Chicago 1100-GN8AE35-369AB faucet, 8" centers, 8" gooseneck rigid/swing spout, 1.5 GPM at 60 psi discharge laminar flow device, 2-3/8" vandalproof lever handles, LKAD-35 strainer and LKADOS offset tailpiece in each compartment.
- EWC-1 Electric water cooler: Elkay Model EZWS-ERPBM28K, ADA, lead-free, two-level, recessed in the wall, air cooled, hermetically-sealed refrigeration system, 18-gauge Type 304 stainless steel satin finish fountain body, 16-gauge Type 304 tubular support arms, Type 304 stainless steel satin finish removable louvered ventilating front panel grille, vandal-resistant flexible guard bubblers with anti-rotation key, vandal-resistant front push buttons, bottle filling station with sensor activation, visual filter monitor, laminar flow, antimicrobial, bottle counter, drain, minimum 7.5 GPH of 50 Deg. F water at 90 Deg. F ambient. Provide wall mounting frame MF200 with stainless steel bolts and screws, chiller shelf and support rods. Secure frame to wall with stainless steel bolts or screws. Mount unit so that low side outlet is 36 inches above finished floor.
- SH-1 Shower: Symmons (ASSE 1016) Temptrol Commercial Model C-96-500-B30-V-X-231-VB pressure balancing mixing valve shower control with adjustable stop screw to limit handle turn, integral service stops, single blade handle, elevated vacuum breaker Levertrol 4-458 diverter with integral volume control, Super shower head with arm and flange, wall/hand shower with 60 inch flexible metal hose, wall connection and flange, 30-inch slide bar for hand shower mounting, and 2.5 GPM flow at 80.0 psi heads. Where shower valves are shown back-to-back,

provide one valve with reverse coring, hot on right, cold on left installation. The shower valve and the shower riser pipes from the diverter valve to the shower arm outlets shall be attached to the building structure in an approved manner. Provide Temptrol rapid install bracket, straps and screws.

SH (Enclosure) Shower: Freedom Showers molded fiberglass with applied gel coat finish. Model APC3838BF1PRF-R, ICC A117.1 – 2017 ANSI Type A, CSA B45.5-11 / IAPMO Z124-2017, exterior outside dimension of 38" x 38" x 77-3/4". 5/8" threshold with pre-leveled and reinforced shower base, 1-1/4" O.D. horizontal stainless steel L-shaped grab-bar, one 1-1/4" diameter vertical 18" bar, L-shaped shower seat model APCSSR2-32225PWSFI. One inch diameter 18-gage stainless steel curtain rod and shower curtain.

PART 3 - EXECUTION

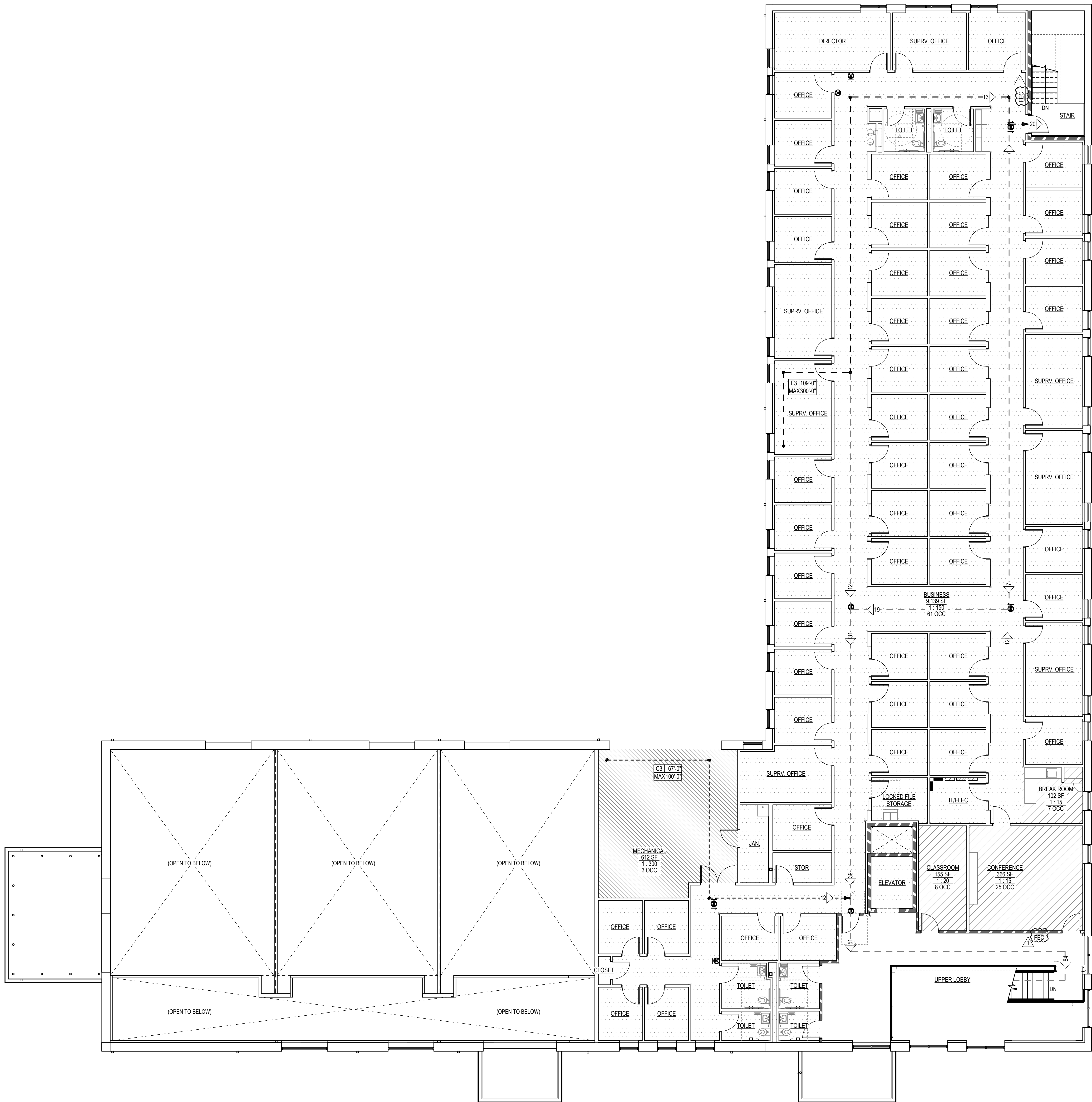
3.1 INSTALLATION

- A. Supports and Fastenings: Secure all fixtures, equipment and trimmings to partitions, walls, etc., with brass through bolts, toggle bolts, expansion bolts, or power set fasteners, as required. Exposed heads of bolts and nuts in finished rooms to be hexagonal, polished chromium plated brass with rounded tops.
- B. Through Bolts: For freestanding marble and metal stud partitions.
- C. Toggle Bolts: For hollow masonry units, finished or unfinished.
- D. Expansion Bolts: For brick or concrete or other solid masonry. To be 1/4-inch bolts, 20 threads per inch, and to extend at least three inches into masonry; to be fitted with loose tubing or sleeves extending into masonry. Wood plugs, fiber plugs, lead or other soft metal shields are prohibited.
- E. Power Set Fasteners: May be used for concrete walls, shall be 1/4-inch threaded studs, 20 threads per inch, and shall extend at least 1-1/4 inches into wall.
- F. Tightly cover and protect fixtures and equipment against dirt, water and chemical or mechanical injury.
- G. Where water closets are wall mounted or floor mounted, lavatories, urinals and water coolers are wall mounted, seal between water closet and wall or floor, and lavatory, urinal, or water cooler and wall, with a silicon caulking compound. Counter mounted lavatories or sinks shall be sealed between countertop and lavatory or sink. Where fixtures are white in color, the caulking compound shall be white. Where fixtures are stainless steel, use transparent caulking compound.

3.2 CLEANING

- A. At completion of all work, fixtures, exposed materials and equipment shall be thoroughly cleaned.

END OF SECTION



GENERAL EROSION AND SEDIMENT CONTROL NOTES

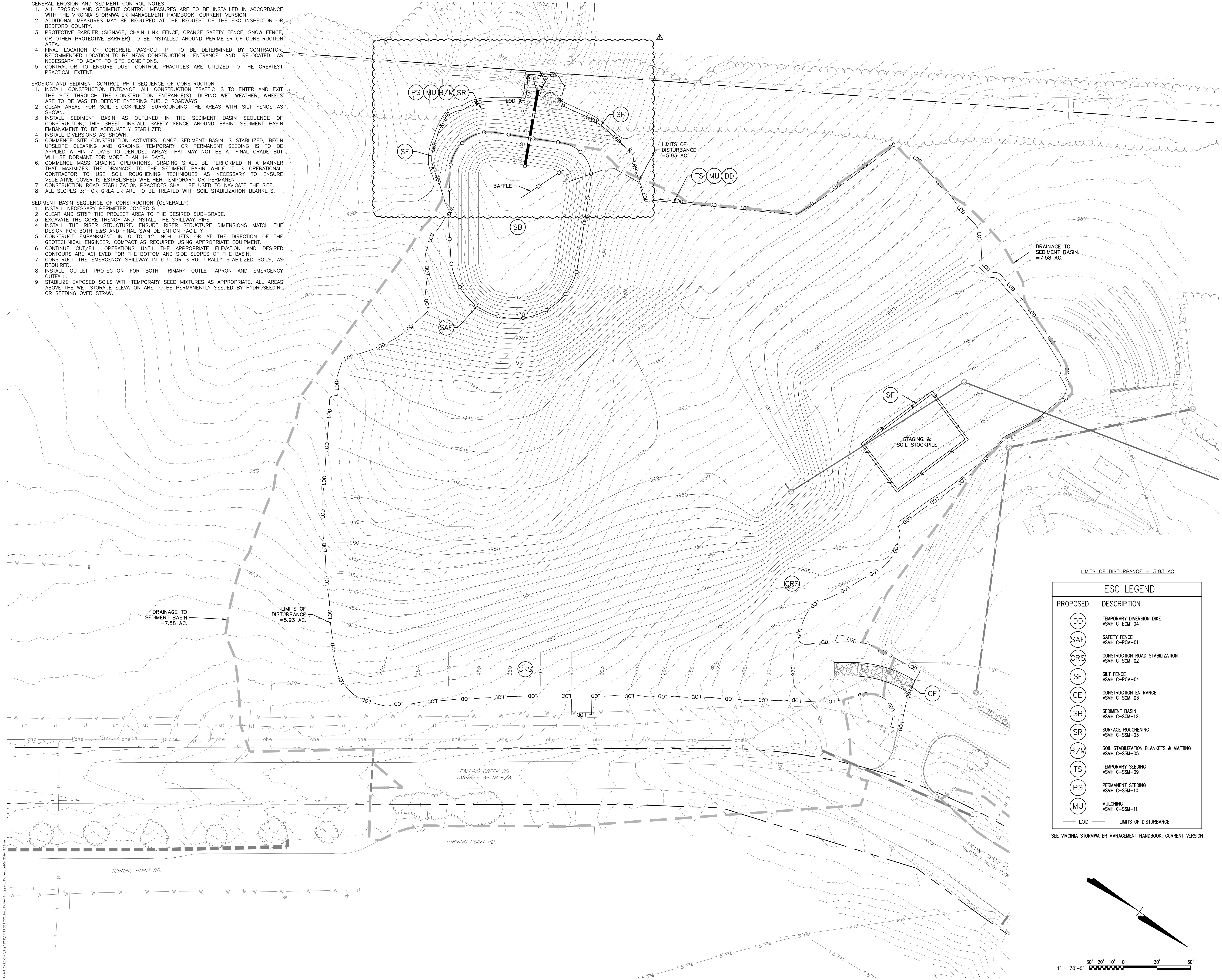
1. ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE INSTALLED IN ACCORDANCE WITH THE VIRGINIA STORMWATER MANAGEMENT HANDBOOK, CURRENT VERSION
2. ADDITIONAL MEASURES MAY BE REQUIRED AT THE REQUEST OF THE ESC INSPECTOR OR BEDFORD COUNTY.
3. PROTECTIVE BARRIER (SIGNAGE, CHAIN LINK FENCE, ORANGE SAFETY FENCE, SNOW FENCE, OR OTHER PROTECTIVE BARRIER) TO BE INSTALLED AROUND PERIMETER OF CONSTRUCTION AREA.
4. FINAL LOCATION OF CONCRETE WASHOUT PIT TO BE DETERMINED BY CONTRACTOR. RECOMMENDED LOCATION TO BE NEAR CONSTRUCTION ENTRANCE AND RELOCATED AS NECESSARY TO ADAPT TO SITE CONDITIONS.
5. CONTRACTOR TO ENSURE DUST CONTROL PRACTICES ARE UTILIZED TO THE GREATEST PRACTICAL EXTENT.

EROSION AND SEDIMENT CONTROL PH I SEQUENCE OF CONSTRUCTION

1. INSTALL CONSTRUCTION ENTRANCE. ALL CONSTRUCTION TRAFFIC IS TO ENTER AND EXIT THE SITE THROUGH THE CONSTRUCTION ENTRANCE(S). DURING WET WEATHER, WHEELS ARE TO BE WASHED BEFORE ENTERING PUBLIC ROADWAYS.
2. CLEAR AREAS FOR SOIL STOCKPILES, SURROUNDING THE AREAS WITH SILT FENCE AS SHOWN.
3. INSTALL SEDIMENT BASIN AS OUTLINED IN THE SEDIMENT BASIN SEQUENCE OF CONSTRUCTION. THIS SHEET. INSTALL SAFETY FENCE AROUND BASIN. SEDIMENT BASIN EMBANKMENT TO BE ADEQUATELY STABILIZED.
4. INSTALL DIVERSIONS AS SHOWN.
5. COMMENCE SITE CONSTRUCTION ACTIVITIES. ONCE SEDIMENT BASIN IS STABILIZED, BEGIN UPSLOPE CLEARING AND GRADING. TEMPORARY OR PERMANENT SEEDING IS TO BE APPLIED WITHIN 7 DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL BE DORMANT FOR MORE THAN 14 DAYS.
6. COMMENCE MASS GRADING OPERATIONS. GRADING SHALL BE PERFORMED IN A MANNER THAT MAXIMIZES THE DRAINAGE TO THE SEDIMENT BASIN WHILE IT IS OPERATIONAL. CONTRACTOR TO USE SOIL ROUGHENING TECHNIQUES AS NECESSARY TO ENSURE VEGETATIVE COVER IS ESTABLISHED WHETHER TEMPORARY OR PERMANENT.
7. CONSTRUCTION ROAD STABILIZATION PRACTICES SHALL BE USED TO NAVIGATE THE SITE.
8. ALL SLOPES 3:1 OR GREATER ARE TO BE TREATED WITH SOIL STABILIZATION BLANKETS.

SEDIMENT BASIN SEQUENCE OF CONSTRUCTION (GENERALLY)

1. INSTALL NECESSARY PERIMETER CONTROLS.
2. CLEAR AND STRIP THE PROJECT AREA TO THE DESIRED SUB-GRADE.
3. EXCAVATE THE CORE TRENCH AND INSTALL THE SPILLWAY PIPE.
4. INSTALL THE RISER STRUCTURE. ENSURE RISER STRUCTURE DIMENSIONS MATCH THE DESIGN FOR BOTH E&S AND FINAL SWM DETENTION FACILITY.
5. CONSTRUCT EMBANKMENT IN 8 TO 12 INCH LIFTS OR AT THE DIRECTION OF THE GEOTECHNICAL ENGINEER. COMPACT AS REQUIRED USING APPROPRIATE EQUIPMENT.
6. CONTINUE CUT/FILL OPERATIONS UNTIL THE APPROPRIATE ELEVATION AND DESIRED CONTOURS ARE ACHIEVED FOR THE BOTTOM AND SIDE SLOPES OF THE BASIN.
7. CONSTRUCT THE EMERGENCY SPILLWAY IN CUT OR STRUCTURALLY STABILIZED SOILS, AS REQUIRED.
8. INSTALL OUTLET PROTECTION FOR BOTH PRIMARY OUTLET APRON AND EMERGENCY OUTFALL.
9. STABILIZE EXPOSED SOILS WITH TEMPORARY SEED MIXTURES AS APPROPRIATE. ALL AREAS ABOVE THE WET STORAGE ELEVATION ARE TO BE PERMANENTLY SEEDED BY HYDROSEEDING OR SEEDING OVER STRAW.



SPECTRUM DESIGN
architects | engineers

Plaza Suite 1
10 Church Avenue, SE
Roanoke, VA 24011

540.342.6001
spectrumpc.com

**DEPARTMENT OF SOCIAL
SERVICES BUILDING**
BEDFORD COUNTY

SPECTRUM DESIGN PROJECT NO.: 24112



PROJ. MGR.: **JM** CHECKED BY: **MAR** DRAWN BY: **GAG**

SHEET ISSUE DATE:
06.12.2026

PROJECT PHASE:
BID DOCUMENTS

SHEET REVISIONS:
REV 1 ADDENDUM 1 07.10.2026

KEY PLAN:

LIMITS OF DISTURBANCE = 5.93 AC	
ESC LEGEND	
PROPOSED	DESCRIPTION
(DD)	TEMPORARY DIVERSION DIKE VSMH C-EOM-04
(SAF)	SAFETY FENCE VSMH C-PCM-01
(CRS)	CONSTRUCTION ROAD STABILIZATION VSMH C-SOM-02
(SF)	SILT FENCE VSMH C-PCM-04
(CE)	CONSTRUCTION ENTRANCE VSMH C-SOM-03
(SB)	SEDIMENT BASIN VSMH C-SOM-12
(SR)	SURFACE ROUGHENING VSMH C-SSM-03
(B/M)	SOIL STABILIZATION BLANKETS & MATTING VSMH C-SSM-05
(TS)	TEMPORARY SEEDING VSMH C-SSM-09
(PS)	PERMANENT SEEDING VSMH C-SSM-10
(MU)	MULCHING VSMH C-SSM-11
— LOD —	LIMITS OF DISTURBANCE

SEE VIRGINIA STORMWATER MANAGEMENT HANDBOOK, CURRENT VERSION

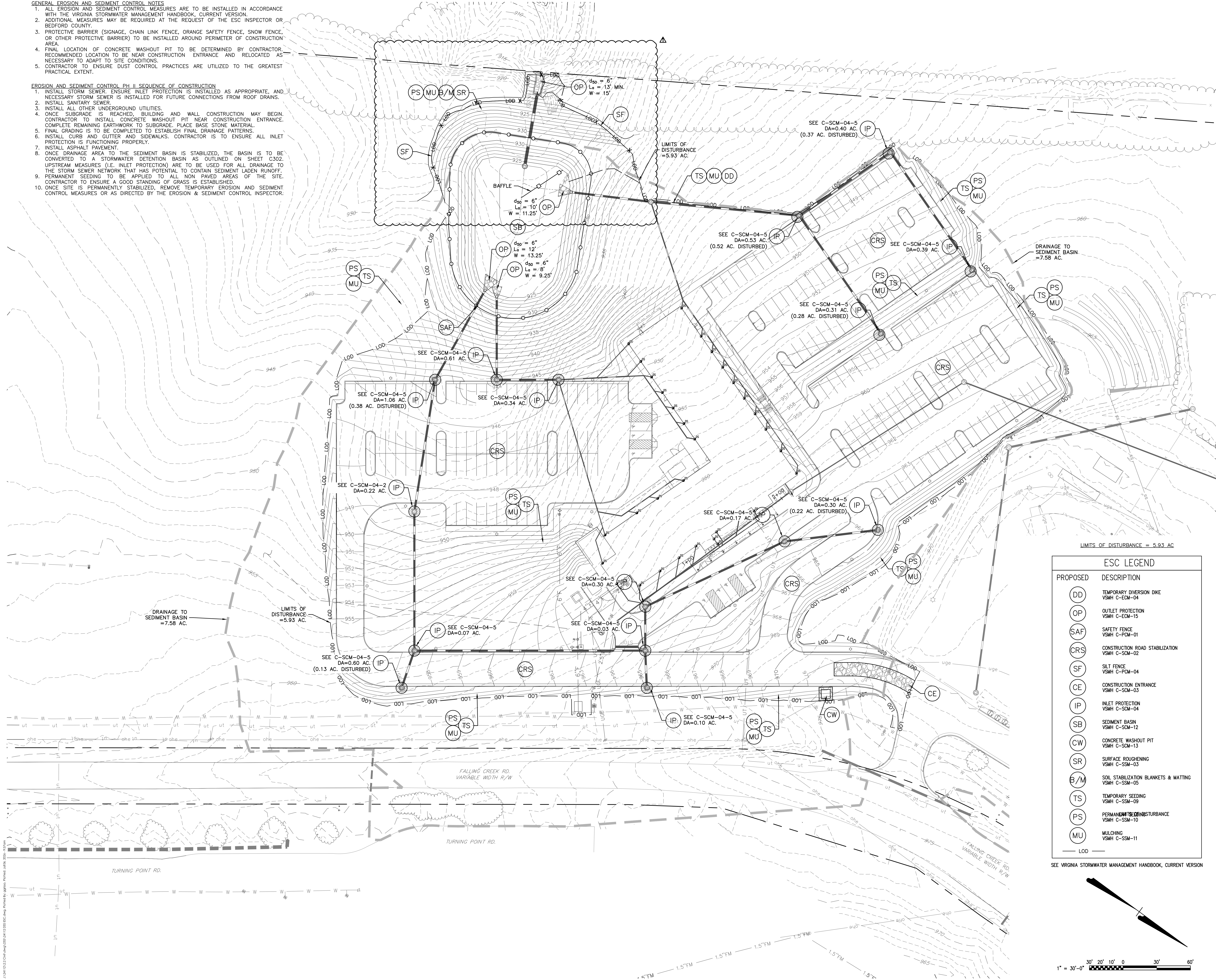
SHEET NAME:

**EROSION & SEDIMENT
CONTROL PLAN PH I**

SHEET NUMBER:

C201

- GENERAL EROSION AND SEDIMENT CONTROL NOTES
1. ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE INSTALLED IN ACCORDANCE WITH THE VIRGINIA STORMWATER MANAGEMENT HANDBOOK, CURRENT VERSION.
 2. ADDITIONAL MEASURES MAY BE REQUIRED AT THE REQUEST OF THE ESC INSPECTOR OR BEDFORD COUNTY.
 3. PROTECTIVE BARRIER (SIGNAGE, CHAIN LINK FENCE, ORANGE SAFETY FENCE, SNOW FENCE, OR OTHER PROTECTIVE BARRIER) TO BE INSTALLED AROUND PERIMETER OF CONSTRUCTION AREA.
 4. FINAL LOCATION OF CONCRETE WASHOUT PIT TO BE DETERMINED BY CONTRACTOR. RECOMMENDED LOCATION TO BE NEAR CONSTRUCTION ENTRANCE AND RELOCATED AS NECESSARY TO ADAPT TO SITE CONDITIONS.
 5. CONTRACTOR TO ENSURE DUST CONTROL PRACTICES ARE UTILIZED TO THE GREATEST PRACTICAL EXTENT.
- EROSION AND SEDIMENT CONTROL PH II SEQUENCE OF CONSTRUCTION
1. INSTALL STORM SEWER. ENSURE INLET PROTECTION IS INSTALLED AS APPROPRIATE, AND NECESSARY STORM SEWER IS INSTALLED FOR FUTURE CONNECTIONS FROM ROOF DRAINS.
 2. INSTALL SANITARY SEWER.
 3. INSTALL ALL OTHER UNDERGROUND UTILITIES.
 4. ONCE SUBGRADE IS REACHED, BUILDING AND WALL CONSTRUCTION MAY BEGIN. CONTRACTOR TO INSTALL CONCRETE WASHOUT PIT NEAR CONSTRUCTION ENTRANCE. COMPLETE REMAINING EARTHWORK TO SUBGRADE. PLACE BASE STONE MATERIAL.
 5. FINAL GRADING IS TO BE COMPLETED TO ESTABLISH FINAL DRAINAGE PATTERNS.
 6. INSTALL CURB AND GUTTER AND SIDEWALKS. CONTRACTOR IS TO ENSURE ALL INLET PROTECTION IS FUNCTIONING PROPERLY.
 7. INSTALL ASPHALT PAVEMENT.
 8. ONCE DRAINAGE AREA TO THE SEDIMENT BASIN IS STABILIZED, THE BASIN IS TO BE CONVERTED TO A STORMWATER DETENTION BASIN AS OUTLINED ON SHEET C302. UPSTREAM MEASURES (I.E. INLET PROTECTION) ARE TO BE USED FOR ALL DRAINAGE TO THE STORM SEWER NETWORK THAT HAS POTENTIAL TO CONTAIN SEDIMENT LADEN RUNOFF. PERMANENT SEEDING TO BE APPLIED TO ALL NON PAVED AREAS OF THE SITE.
 9. CONTRACTOR TO ENSURE A GOOD STANDING OF GRASS IS ESTABLISHED.
 10. ONCE SITE IS PERMANENTLY STABILIZED, REMOVE TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES OR AS DIRECTED BY THE EROSION & SEDIMENT CONTROL INSPECTOR.





SPECTRUM DESIGN
architects | engineers

Plaza Suite 1
10 Church Avenue, SE
Roanoke, VA 24011

540.342.6001
spectumpc.com

DEPARTMENT OF SOCIAL SERVICES BUILDING
BEDFORD COUNTY

SPECTRUM DESIGN PROJECT NO.: 24112



PROJ. MGR.: **JM** CHECKED BY: **MAR** DRAWN BY: **GAG**

SHEET ISSUE DATE: **06.12.2026**

PROJECT PHASE: **BID DOCUMENTS**

SHEET REVISIONS: REV 1 ADDENDUM 1 07.10.2026

ESC LEGEND	
PROPOSED	DESCRIPTION
(DD)	TEMPORARY DIVERSION DIKE VSMH C-ECM-04
(OP)	OUTLET PROTECTION VSMH C-ECM-15
(SAF)	SAFETY FENCE VSMH C-PCM-01
(CRS)	CONSTRUCTION ROAD STABILIZATION VSMH C-SCM-02
(SF)	SILT FENCE VSMH C-PCM-04
(CE)	CONSTRUCTION ENTRANCE VSMH C-SCM-03
(IP)	INLET PROTECTION VSMH C-SCM-04
(SB)	SEDIMENT BASIN VSMH C-SCM-12
(CW)	CONCRETE WASHOUT PIT VSMH C-SCM-13
(SR)	SURFACE ROUGHENING VSMH C-SSM-03
(B/M)	SOIL STABILIZATION BLANKETS & MATTING VSMH C-SSM-05
(TS)	TEMPORARY SEEDING VSMH C-SSM-09
(PS)	PERMANENT SEEDING VSMH C-SSM-10
(MU)	MULCHING VSMH C-SSM-11
---	LOD

SEE VIRGINIA STORMWATER MANAGEMENT HANDBOOK, CURRENT VERSION

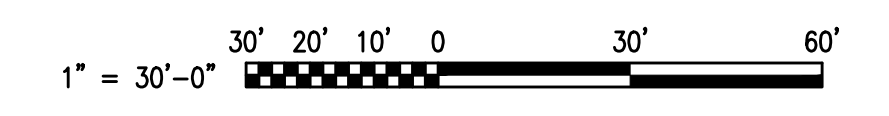
KEY PLAN:

SHEET NAME:

EROSION & SEDIMENT CONTROL PLAN PH II

SHEET NUMBER:

C202



EROSION AND SEDIMENT CONTROL NARRATIVE

RESPONSIBLE LAND DISTURBER

Upon award of the Construction Contract, the Contractor shall employ a Responsible Land Disturber, who is certified by the Department of Natural Resources (DNR), to assume this responsibility for the project. The name of this person is to be designated in writing by the Contractor to the State ESC plan approving authority, the A/E, and the Owner along with copies of their certification prior to any land disturbance. The Responsible Land Disturber for this project shall be in charge of and is responsible for carrying out the land-disturbing activities on this project. Should the certified Land Disturber change at any time during the life of this project then the Land Disturbing Permit will become void, and a new Permit must be obtained. Hereinafter RLD shall be interpreted as the Responsible Land Disturber. Relative to the SWPP Plan the RLD shall be the "Operator".

STORM WATER POLLUTION PREVENTION PLAN & REGISTRATION STATEMENT

A Virginia Pollutant Discharge Elimination System (VPDES) Permit for the Discharge of Stormwater from Construction Activities is required for projects disturbing one (1) acre or greater. Disturbance for this project is greater than 1 acre (5.93 acres) and is to conform to the requirements of the VPDES Permit.

PROJECT DESCRIPTION

The purpose of this project is for the new construction of the Bedford County Department of Social Services building and associated site infrastructure. The site is located at Tax ID 147-A-40 in Bedford County, adjacent to the Bedford Regional Water Authority (BRWA) and the Bedford County Sheriff's Office. Infrastructure extensions and improvements are necessary for the new site improvements. Total disturbance for this project is 5.93 acres, 3.16 of which are impervious in the past developed condition. The resulting construction will increase the net impervious cover of the site by 3.13 acres. For the purposes of this narrative, the "Site" shall be defined as the areas within these subject properties to be disturbed.

EXISTING SITE CONDITIONS

The existing site is an open grassed field. Disturbed areas surrounding the new building are anticipated to improve drainage. Current site runoff is collected and conveyed through a natural grassed waterway to Skinnels Creek. There are no known wetlands or jurisdictional waters on site.

ADJACENT PROPERTY

Generally, the site is surrounded by institutional buildings and agricultural land. The site is directly bound by the Sheriff's Office and maintenance buildings to the North, Falling Creek Rd to the East, the BRWA to the South, and agricultural land to the West.

OFF-SITE AREAS

No off-site disturbance is anticipated by these plans.

Should land disturbance at any off-site area be needed, the Contractor shall submit to the Bedford County Environmental Division a copy of plans, land disturbing permit, and/or agreement in lieu of approved by the appropriate Federal, State, or local authorities.

Should material be wasted off-site to a site owned by others or the Contractor, it is the Contractor's responsibility to assure that said source has a current, approved Erosion Control Plan in accordance with the Virginia Stormwater Management Handbook, Current Version.

Should borrow, excavation waste or spoil areas proposed not have a current approved ESC Plan, an ESC Plan shall be submitted and approved by Bedford County prior to any land disturbance in accordance with the Erosion Control notes in these plans and Virginia State Laws.

SOILS

A geotechnical subsurface investigation has been performed for this project. See report prepared by Hurt & Profit, Inc. dated April 18, 2026 in Appendix F of the Narrative.

NRCS Soil Survey information of the existing soils is found in Section 1.0 of the Erosion & Sediment Control and Stormwater Management Plan. Soil boundaries are shown on the Drainage Maps found in Appendix B of the Narrative.

CRITICAL EROSION AREAS

The existing site consists of an open field of stabilized grass that may become disturbed during construction activities. Silt runoff is to be controlled with erosion, sediment, and surface stabilization measures in accordance with local standards and the DEQ Virginia Stormwater Management Handbook, Current Version.

EROSION AND SEDIMENT CONTROL MEASURES

Unless otherwise indicated, all vegetative and structural erosion and sediment control practices will be constructed and maintained according to minimum standards and specifications of the Virginia Stormwater Management Handbook, current version. References to VDOT refer to the Virginia Department of Transportation "Road and Bridge Standards and Specifications," latest edition. A copy of the approved ESC Plan and Narrative and the Virginia Stormwater Management Handbook, Current Version, shall be maintained at the jobsite at all times.

EROSION CONTROL MEASURES

- Temporary Diversion Dike** (C-ECM-04): Ridge of compacted soil constructed to convey stormwater runoff through or around a disturbed area.
Sequence of Installation: First step measure with Sediment Basin and initial grading.
Removal Event: Upon site stabilization and approval of erosion & sediment control authority.
- Outlet Protection** (C-ECM-15): Structurally lined aprons or other forms of energy-dissipating devices placed at the outlets of pipes, curb openings, ditch turnouts, or paved channel sections to slow discharge velocity from the outlet to prevent an erosive condition.
Sequence of Installation: Installed prior to conveyance accepting flow.
Removal Event: Permanent practice and shall not be removed.

PERIMETER CONTROL MEASURES

- Silt Fence** (C-PCM-04) & **Super Silt Fence** (C-PCM-04-3): Temporary sediment barrier consisting of a synthetic filter fabric entrenched and stretched across and attached to supporting posts.
Sequence of Installation: Prior to any land disturbance.
Removal Event: Following permanent stabilization of the contributing drainage area.

SEDIMENT CONTROL MEASURES

- Construction Road Stabilization** (C-SCM-02): Stabilization of temporary construction access routes, onsite vehicle transportation routes, and construction parking areas.
Sequence of Installation: Following permanent stabilization of the contributing drainage area.
Removal Event: Following permanent stabilization of the contributing drainage area.
- Temporary Stone Construction Entrance** (C-SCM-03): A pad with a fabric filter liner underneath the stone located at the stormwater ingress and egress area of a construction site to minimize the amount of sediment, such as dirt or mud, leaving or being tracked from outside the construction site attached to vehicles.
Sequence of Installation: Prior to any land disturbance.
Removal Event: Immediately prior to paving.
- Inlet Protection** (C-SCM-04): Sediment filter or an excavated impoundment around a storm drain inlet or curb inlet. Protect inlets of storm sewers from erosion and sedimentation during construction. All storm sewer inlets that are made operable during construction shall be protected so that sediment-laden water cannot enter the conveyance system without first being filtered or otherwise treated to remove sediment.
Sequence of Installation: Immediately following structure installation or before land disturbance of a contributing drainage area to an existing structure.
Removal Event: Following permanent stabilization of the contributing drainage area.
- Temporary Sediment Basin** (C-SCM-12): Barrier or dam with a controlled stormwater release structure formed by constructing an embankment of compacted soil across a drainageway.
Sequence of Installation: First step measure installed with perimeter controls and made functional before upslope land disturbance.
Removal Event: Following permanent stabilization of the contributing drainage area.
- Concrete Washout Pit** (C-SCM-13): A temporary excavated or above-ground lined constructed pit or prefabricated container in which truck mixers and equipment can be washed.
Sequence of Installation: First step prior to construction of any poured concrete.
Removal Event: Following installation of all concrete site elements.

SURFACE STABILIZATION MEASURES

- Topsoiling** (C-SSM-02): Preservation and use of the existing surface layer of undisturbed soil, often enriched in organic matter, to obtain a more desirable planting growth medium and enhance final site stabilization.
Sequence of Installation: Prior to permanent stabilization and planting.
Removal Event: Not applicable.
- Surface Roughening** (C-SSM-03): Providing a rough soil surface with horizontal depressions to reduce runoff velocity, increase infiltration, aid in the establishment of vegetation, and reduce erosion.
Sequence of Installation: Following grading activities resulting in surfaces 3(h):1(v) or steeper.
Removal Event: As needed until final grade is achieved. Permanent practice once final grade is met.
- Soil Stabilization Blankets & Matting** (C-SSM-05): Protective blankets on a prepared planting area of a steep slope, channel, or shoreline.
Sequence of Installation: Following establishment of final grade and placement of lime, fertilizer, and seed.
Removal Event: Not Applicable.
- Temporary Seeding** (C-SSM-09): Establishment of a temporary vegetative cover on disturbed areas by seeding with appropriate rapidly growing annual plants.
Sequence of Installation: Within 7 days of land disturbing activity when cleared areas will not be brought to final grade within 14 days.
Maintenance: Areas which fail to establish vegetative cover adequate to prevent rill erosion are to be reseeded.
Removal Event: As needed for final grading.

- Permanent Seeding** (C-SSM-10): Establishment of a perennial vegetative cover on disturbed areas by planting seed.
Sequence of Installation: Within 7 days of achieving final grade or as noted above.
Maintenance: Areas which fail to establish vegetative cover adequate to prevent rill erosion are to be reseeded, following identification of the cause of poor germination. Contractor is responsible for establishment of permanent seed.
Removal Event: Not Applicable.
- Mulching** (C-SSM-11): Application of a protective blanket of straw or other plant residues/materials to the soil surface during the establishment of temporary and permanent seeding.
Sequence of Installation: Following establishment of final grade and placement of lime, fertilizer, and seed or in areas which cannot be seeded because of the season.
Removal Event: Not Applicable, unless used for temporary cover in areas which cannot be seeded because of the season.

MANAGEMENT STRATEGIES

- The RLD shall amend the SWPP Plan whenever there is a change in design, construction, operation, or maintenance, which has a significant effect on the potential for the discharge of pollutants to surface waters and which has not otherwise been addressed in the plan or if the plan proves to be ineffective in eliminating or significantly minimizing pollutants from sources identified in the permit, or in otherwise achieving the general objectives of controlling pollutants in storm water discharges from construction activities. Also amend to identify any new contractor that will implement a measure of the plan.
- The RLD shall be responsible for the installation and maintenance of all erosion and sediment control practices maintaining them in good and effective operating condition.
- The RLD shall notify the Architect/Engineer when the local governing official has inspected and approved all in-place erosion and sediment control devices, required by local ordinances to be in place prior to land disturbance.
- Construction shall be sequenced so that the duration of grading operations is as brief as possible.
- Maintenance of inlet and outlet protection shall be given high priority.
- Temporary seeding or other stabilization shall follow within 7 days after grading, or installation if a temporary measure.
- Areas which are not to be disturbed shall be clearly marked by flags, signs, etc.
- No solid materials, including building materials, garbage, and debris shall be discharged to surface waters of the State, except as authorized by a Section 404 permit.
- Where construction vehicle access routes intersect paved or public roads, provisions shall be made to minimize the transport of sediment by vehicular tracking onto the paved surface. Where sediment is transported onto a paved or public road surface, the road surface shall be cleaned thoroughly at the end of each day. Sediment shall be removed from the roads by shoveling or sweeping, and transported to a sediment control disposal area. Street washing shall be allowed only after sediment is removed in this manner. This provision shall apply to individual development lots as well as to larger land-disturbing activities. The generation of dust shall be minimized.
- Ensure and demonstrate compliance with applicable State and/or local waster disposal, sanitary sewer or septic system regulations.
- All sediment removed from sediment trapping measures or cleaning operations shall be appropriately wasted so as not to become a dust or sediment problem elsewhere.
- After achieving adequate stabilization, the temporary E&S controls will be cleaned up and removed.

MAINTENANCE

At a minimum, inspections should occur in accordance with 9VAC25-880-70 Part II G or at a more stringent frequency established by the authority as applicable. The contractor shall inspect all erosion control measures immediately after each run-off producing rainfall event, at least daily during prolonged rainfall, at least weekly when no rainfall occurs, and in accordance with any permit regulations. The following items shall be checked in particular:

- Inlet protection and sediment traps shall be checked regularly for sediment cleanout. Remove sediment prior to it reaching ½ the design depth of the trap.
- Silt fences shall be checked regularly for structural/functional integrity. Remove any sediment deposits – do not allow buildup.
- Seeded areas shall be checked regularly to see that a good stand is maintained. Areas should be fertilized and reseeded as needed.
- Sediment Basins, generally
 - Monitor the basin embankment regularly to ensure that it is structurally sound and has not been damaged by erosion or construction equipment.
 - Monitor the emergency spillway regularly to ensure that its lining is well established and erosion-resistant. Monitor the principal spillway and dewatering orifice for clogging and remove accumulated debris to maintain free flow from the basin after precipitation events to ensure functionality. Monitor the vegetative stabilization, soil stabilization matting, slope drains, and baffles if present, and maintain or repair immediately to ensure functionality.
 - Monitor the basin for sediment cleanout and when the sediment reaches the cleanout level, remove and properly dispose of the sediment.
 - Inspect the basin for sinkhole formation, and if found, repair promptly. See Appendix E of the VSMH, current version for additional considerations for Karst areas which may require an impermeable liner based on geotechnical testing and the discretion of the designer.

POTENTIAL POLLUTION SOURCES & STORED MATERIALS

The RLD shall prepare a list of all potential sources of pollution and all construction and waste materials expected to be stored on-site and update as appropriate. Examples would be vehicle fueling area, fuel delivery vehicle, fertilizer storage, concrete washouts, etc. For each listed item list its location and describe necessary controls to reduce pollutants from these materials including storage practices to minimize exposure to storm water as well as spill prevention and response, schedule of implementation and maintenance necessary for effectiveness.

INSPECTIONS

The RLD shall inspect disturbed areas of the construction site and areas used for storage of materials that are exposed to precipitation, structural control measures, and locations where vehicles enter or exit the site. The inspections shall be conducted at least once every four (4) days and within forty-eight (48) hours after a rain event greater than 0.25" inches.

Disturbed areas and areas used for storage of materials that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the drainage system. ESC measures identified in the plan shall be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they shall be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters. Locations where vehicles enter or exit the site shall be inspected for evidence of off-site sediment tracking. Based on the results of the inspection, the site description identified in the plan and pollution prevention measures shall be revised as appropriate, within seven (7) calendar days following the inspection. Such modifications shall provide for timely implementation of any changes to the plan within seven (7) calendar days following the inspection and before next anticipated storm event, if practical.

REPORTING

A report summarizing the scope of the inspection, names and qualifications of personnel making the inspection, the date of the inspection, major observations, and actions taken as a result of the inspection shall be made and retained by the Contractor. Where no incidents of noncompliance are reported, report shall certify that facility is in compliance plans and any permits; keep reports with this narrative. The report shall be certified in accordance with the permit.

STORM WATER MANAGEMENT

All runoff from the site will be collected, contained, and released to meet current Commonwealth of Virginia Standards and Regulations for Stormwater Quantity as set forth in 9VAC25-875-600 and the Virginia Stormwater Management Handbook, Current Version. The Water Quality requirements will be achieved through the purchase of offset nutrient credits per 9VAC25-875-590.

UNDERGROUND UTILITY INSTALLATION

Underground utilities are to be installed in accordance with MS-16 criteria and any additional state or local requirements.

PROHIBITION OF NON-STORM WATER DISCHARGES

- The following non-storm water discharges are allowed: discharges from fire fighting activities; fire hydrant flushing; waters used to wash vehicles where detergents are not used; water used to control dust; potable water sources including water hose flushing hydrostatic testing; routine external building washdown which does not use detergents; pavement washwaters where spills or leaks of toxic or hazardous materials have not occurred (unless all spill material has been removed) and where detergents are not used; air conditioning condensate; uncontaminated compressor condensate; uncontaminated oil or grease; and foundation or footing drains where flows are not contaminated with process materials such as solvents.
- Except for allowed discharges listed above, sources of non-storm water that are combined with storm water discharges from the construction site must be identified on the plan. The plan shall identify and ensure the implementation of appropriate pollution prevention measures for the non-storm water components.

CONTRACTORS

Identify for each measure identified in the plan, the Contractor/subcontractor that will implement the measure. All contractors identified above must sign the following certification statement. All certifications must be included in the SWPP Plan.

"I certify under penalty of law that I understand the terms and conditions of this Virginia Pollutant Discharge Elimination System (VPDES) general permit that authorizes the storm water discharges from the construction activity identified as part of this certification."

Name and title of signatory (Responsible Corporate Official, General Partner, or Sole Proprietor)
Name, address & phone of contracting firm
Address of other identifying description of the site
Date certification made

DISPLAY & STATUS OF PLAN

Plan with a copy of the permit must be maintained on-site and kept available for County inspectors at all times from the date of commencement of construction to the date of final stabilization. Note that this narrative and RLD's log of inspection reports and all certifications are part of the plan (keep with this narrative).

The Plan with all attachments, reports, etc. shall be retained by the contractor for at least three (3) years from the date that the site is finally stabilized.

SCHEDULE

Record of the dates when major grading activities occur, when construction activities temporarily or permanently cease on a portion of the site, and when stabilization measures are initiated.

Perimeter controls shall be installed after clearing and grubbing necessary for installation of the measure, but before the clearing and grubbing for the remaining portions of the site. The perimeter controls shall be actively maintained until final stabilization of those portions of the site upward of the perimeter control.

Stabilization measures shall be initiated as soon as practicable in portions of the site where construction activities have temporarily or permanently ceased. Where exposed surfaces are not to be fine-graded for periods longer than fourteen (14) days, Temporary Seeding shall be applied within seven (7) days after the construction activities have ceased. Permanent Seeding shall be applied to bare soil areas within seven (7) days after construction activities have reached final grade and permanently ceased, or in rough-graded areas where construction will remain dormant for more than 1 year. Stabilization shall be in accordance with MS-1, MS-3, and the Standards and Specifications of the VSMH.

Whenever water seeps from a slope face, adequate subsurface interception (french drain) shall be provided discharging to the nearest suitable stabilized channel.

All temporary ESC measures shall be removed within 30 days after final site stabilization or after the temporary measures are no longer needed, unless otherwise authorized by the local program administrator. Trapped sediment and other disturbed soil areas resulting from the disposition of temporary measures shall be permanently stabilized to prevent further erosion and sedimentation.

NOTICE OF TERMINATION

When the site has been finally stabilized and all the storm water discharges from construction activities that are authorized by the permit are eliminated, the permit holder must submit a Notice of Termination that is certified in accordance with permit. The terms and conditions of the permit shall remain in effect until a completed Notice of Termination is submitted to the County. Also, coordinate project close out with Bedford County and utilize the VSMF Project Completion Form.

SEEDING TABLE

PLANT MATERIAL FOR TEMPORARY SEEDING REQUIREMENTS*					
PLANTING DATES	ACCEPTABLE PLANT SPECIES	SCIENTIFIC NAME	SEEDING RATE (LBS/ACRE)	SOIL pH	LIMING RATE (TON/ACRE)
SEPT 1 - FEB 15	50/50 MIX OF ANNUAL RYEGRASS AND WINTER RYE	LOLIUM MULTIFLORUM AND SECALE CEREALE	50-100	BELOW 4.2	3
FEB 16- APR 30**	ANNUAL RYEGRASS	LOLIUM MULTIFLORUM	60-100	4.2 TO 5.2	2
MAY 1** - AUG 31	GERMAN MILLET	SETARIA ITALICA	50	5.2 TO 6	1
*MULCH IMMEDIATELY IN ACCORDANCE WITH MULCHING TABLE ON THIS SHEET AND VA STORMWATER MANAGEMENT HANDBOOK, CURRENT VERSION.					
**THE SHIT DATE FOR ANNUAL RYE TO GERMAN MILLET SHOULD BE APRIL 15 FOR THE PIEDMONT AND COASTAL PLAIN, RATHER THAN MAY 1.					
PERMANENT SEEDING MIXTURE REQUIREMENTS*					
SEED SPECIES	PERCENT OF TOTAL	SEEDING RATE (LBS/ACRE)	SEEK MIXES ARE SUGGESTIONS FOUND IN THE VA STORMWATER MANAGEMENT HANDBOOK AND ARE SUBJECT TO MODIFICATION BASED ON SITE-SPECIFIC CONDITIONS BY AGRONOMIST OR OTHER QUALIFIED REVEGETATION PROFESSIONALS. ALL SEED RATES ARE EXPRESSED AS PURE LIVE SEED (PLS) AS SHOWN IN TABLE C-SSM-10-9 OF THE VA STORMWATER MANAGEMENT HANDBOOK, CURRENT VERSION.		
TURF-TYPE TALL FESCUE	90-100%	150-200			
KENTUCKY BLUEGRASS	0-10%				
IMPROVED PERENNIAL RYEGRASS	0-10%				
*MULCH IMMEDIATELY IN ACCORDANCE WITH MULCHING TABLE ON THIS SHEET AND VA STORMWATER MANAGEMENT HANDBOOK, CURRENT VERSION.					

Erosion and Sediment Control Criteria, Techniques, and Methods: Minimum Standards

- ✓ CHECKMARK INDICATES ITEM IS APPLICABLE TO PROJECT.
N/A = N/A – NOT APPLICABLE.
- MS-1 **STABILIZATION**
 - ✓ Permanent or temporary soil stabilization shall be applied to denuded areas (bare soil) within 7 days after final grade is reached on any portion of the site. Temporary soil stabilization will be applied within 7 days to denuded areas that may not be at final grade but will remain dormant for longer than 14 days. Permanent stabilization will be applied to areas that are to be left dormant for more than 1 year.
- MS-2 **SLOPPED WASTE AND BORROW AREAS**
 - ✓ During construction of the project, soil stockpiles and borrow areas shall be stabilized or protected with sediment trapping measures. The applicant is responsible for the temporary protection and permanent stabilization of all soil stockpiles on site as well as borrow areas and soil intentionally transported from the project site. Locations of stockpiles and borrow pits should be identified on the site plans, and stockpiles should have perimeter erosion and sediment control measures installed as well as located with enough setback distance from streams, waterways, and entrances/line of sight. Soil stockpiles should not exceed 2H:1V.
- MS-3 **PERMANENT VEGETATION**
 - ✓ A permanent vegetative cover will be established on denuded areas not otherwise permanently stabilized. Permanent vegetation will not be considered established until a ground cover is achieved that is, uniform, mature enough to survive and will inhibit erosion.
- MS-4 **FIRST-STEP MEASURES**
 - ✓ Sediment basins and traps, perimeter dikes, sediment barriers and other measures intended to trap sediment shall be constructed as a first step in any land-disturbing activity and will be made functional before upslope land disturbance takes place.
- MS-5 **EARTHEN STRUCTURE STABILIZATION**
 - ✓ Stabilization measures will be applied to earthen structures, such as dams, dikes, channels, and diversions immediately after installation.
- MS-6 **TRAPS AND BASINS**
 - ✓ Sediment traps and sediment basins will be designed and constructed based upon the total drainage area to be served by the trap or basin. Sediment traps should not be used for more than 18 months unless they are designed as a permanent impoundment.
- A. **The minimum storage capacity of a sediment basin shall be 134 cubic yards per acre of drainage area.**
 - ✓ The outfall system shall, at a minimum, maintain the structural integrity of the basin during a twenty-five year storm of 24-hour duration. Runoff coefficients used in runoff calculations shall correspond to a bare earth condition or those conditions expected to exist while the sediment basin is utilized.
- MS-7 **CUT AND FILL SLOPES**
 - ✓ Cut and fill slopes will be designed and constructed in a manner that will minimize erosion. Slopes that are found to be eroding excessively within 1 year of permanent stabilization will be provided with additional slope stabilizing measures until the problem is corrected.
- MS-8 **CONCENTRATED RUNOFF**
 - ✓ Concentrated runoff will not flow down cut or fill slopes unless contained within an adequate temporary or permanent channel, flume, or slope drain structure.
- MS-9 **WATER SEEPS**
 - ✓ When water seeps from a slope face, adequate drainage or other protection will be provided.
- MS-10 **INLET PROTECTION**
 - ✓ All storm sewer inlets that are made operable during construction will be protected so that sediment-laden water does not enter the conveyance system without first being filtered or otherwise treated to remove sediment.
- MS-11 **OUTLET PROTECTION**
 - ✓ Before newly constructed stormwater conveyance channels or pipes are made operational, adequate outlet protection and any required temporary or permanent channel lining will be installed in both the conveyance channel and receiving channel.
- MS-12 **WATERCOURSE CONSTRUCTION**
 - N/A When watercourse is performed, precautions will be taken to minimize encroachment, control sediment transport, and stabilize the work area to the greatest extent possible during construction. Non-erodible material will be used for the construction of causeways and cofferdams. Earthen fill may be used for these structures if armored by stone, or offsite property.
- MS-13 **TEMPORARY VEHICULAR STREAM CROSSING**
 - N/A When a live watercourse must be crossed by construction vehicles more than twice in any 6-month period, a temporary vehicular stream crossing constructed of non-erodible material will be provided.
- MS-14 **OTHER WATERCOURSE REGULATIONS**
 - N/A All applicable federal, state, and local regulations pertaining to working in or crossing live watercourses will be met.
- MS-15 **BED AND BANK STABILIZATION**
 - N/A The bed and banks of a watercourse will be stabilized immediately after work in the watercourse is completed.
- MS-16 **UTILITY CONSTRUCTION**
 - ✓ Underground utility lines will be installed in accordance with the following standards in addition to other applicable criteria:
 - No more than 500 linear feet of trench may be opened at one time.
 - Excavated material will be placed on the uphill side of trenches.
 - Effluent from dewatering operations will be filtered or passed through an approved sediment trapping device, or both, and discharged in a manner that does not adversely affect flowing streams or offsite property.
 - Material used for backfilling trenches will be properly compacted in order to minimize erosion and promote stabilization.
 - Re-stabilization will be accomplished in accordance with Part V or teh Regulation, 9VAC25-875-470 et. seq.
 - Applicable safety requirements will be met.
- MS-17 **VEHICULAR TRACKING AND CONSTRUCTION ENTRANCES**
 - ✓ Where construction vehicle access routes intersect paved or public roads, provisions will be made to minimize the transport of sediment by vehicular tracking onto the paved surface. Where sediment is transported onto a paved or public road surface, the road surface will be cleaned thoroughly at the end of each day. Sediment will be removed from the roads by shoveling or sweeping and transported to a sediment control disposal area. Street washing will be allowed only after sediment is removed in this manner. This provision will apply to individual development lots as well as to larger land-disturbing activities.
- MS-18 **TEMPORARY CONTROL REMOVAL**
 - ✓ All temporary erosion and sediment control measures will be removed within 30 days after final site stabilization or after the temporary measures are no longer needed, unless otherwise authorized by the VESMP or VESCP authority. Trapped sediment and the disturbed soil areas resulting from the disposition of temporary measures will be permanently stabilized to prevent further erosion and sedimentation.

GENERAL EROSION & SEDIMENT CONTROL NOTES

- Unless otherwise indicated, all vegetative and structural erosion and sediment control practices will be constructed and maintained according to minimum standards and specifications of the Virginia Stormwater Management Handbook, Current Version, and Virginia Regulations (9VAC25-875) Virginia Erosion and Stormwater Management Regulations.
- The plan approving authority must be notified one week prior to the pre-construction conference, one week prior to the commencement of land disturbing activities, and one week prior to final inspection.
- All erosion and sediment control measures are to be placed prior to or as the first step in clearing.
- A copy of the approved erosion and sediment control plan shall be maintained on the site at all times.
- Prior to commencing land disturbing activities in areas other than indicated on these plans (including, but not limited to, off-site borrow or waste areas), the contractor shall submit a supplementary erosion control plan to the owner for review and approval by the plan approving authority.
- The contractor is responsible for installation of any additional erosion control measures necessary to prevent erosion and sedimentation as determined by the plan approving authority.
- All disturbed areas are to drain to approved sediment control measures at all times during land disturbing activities and during site development until final stabilization is achieved.
- During dewatering operations, water will be pumped into an approved filtering device.
- The contractor shall inspect all erosion control measures periodically and after each runoff-producing rainfall event. Any necessary repairs or cleanup to maintain the effectiveness of the erosion control devices shall be made immediately.

MULCHING TABLE

SEEDING AREA REQUIREMENTS (UNLESS OTHERWISE DIRECTED BY LANDSCAPE PLANS)		
MULCHES	RATE (LBS/1000 SF)	NOTES
STRAW OR HAY	70 – 90	FREE FROM WEEDS AND COARSE MATTER. MUST BE ANCHORED. SPREAD BY MULCH BLOWER OR BY HAND. USE MIN. 2 TONS PER ACRE FOR WINTER COVER
FIBER MULCH	35 (MIN.)	DO NOT USE FIBER MULCH FOR WINTER COVER OR DURING HOT, DRY, PERIODS. APPLY AS SLURRY. WHEN FIBER MULCH IS THE ONLY AVAILABLE MULCH DURING PERIODS WHEN STRAW SHOULD BE USED, APPLY AT A MIN. RATE OF 200 LBS/ACRE OR 45 LBS/1,000 SF
HARDWOOD MULCH REQUIREMENTS (UNLESS OTHERWISE DIRECTED BY LANDSCAPE PLANS)		
MULCHES	RATE (CY/1000 SF)	NOTES
SHREDED HARDWOOD BARK	1 – 2	MUST BE FREE OF WEEDS, DEBRIS, AND COARSE MATTER. AIR-DRIED. DO NOT USE IN FINE TURF AREAS. APPLY WITH MULCH BLOWER, CHIP HANDLER, OR BY HAND.



Plaza Suite 1
10 Church Avenue, SE
Roanoke, VA 24011

540.342.6001
spectrumpc.com

DEPARTMENT OF SOCIAL SERVICES BUILDING
BEDFORD COUNTY

SPECTRUM DESIGN PROJECT NO.:

24112



PROJ. MGR.: **JM** CHECKED BY: **MAR** DRAWN BY: **GAG**

SHEET ISSUE DATE:
06.12.2026

PROJECT PHASE:

BID DOCUMENTS

SHEET REVISIONS:
REV 1 ADDENDUM 1 07.10.2026

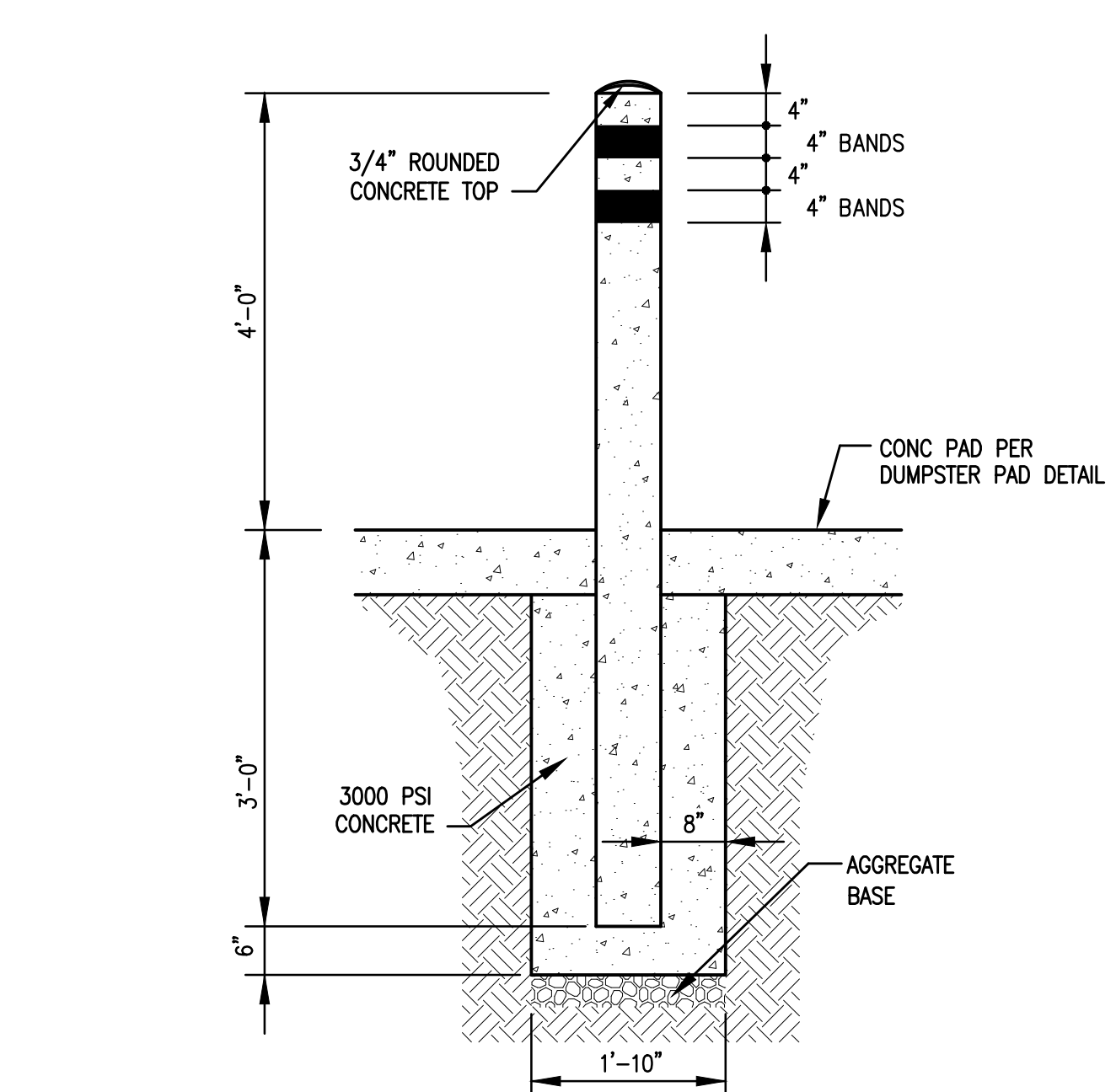
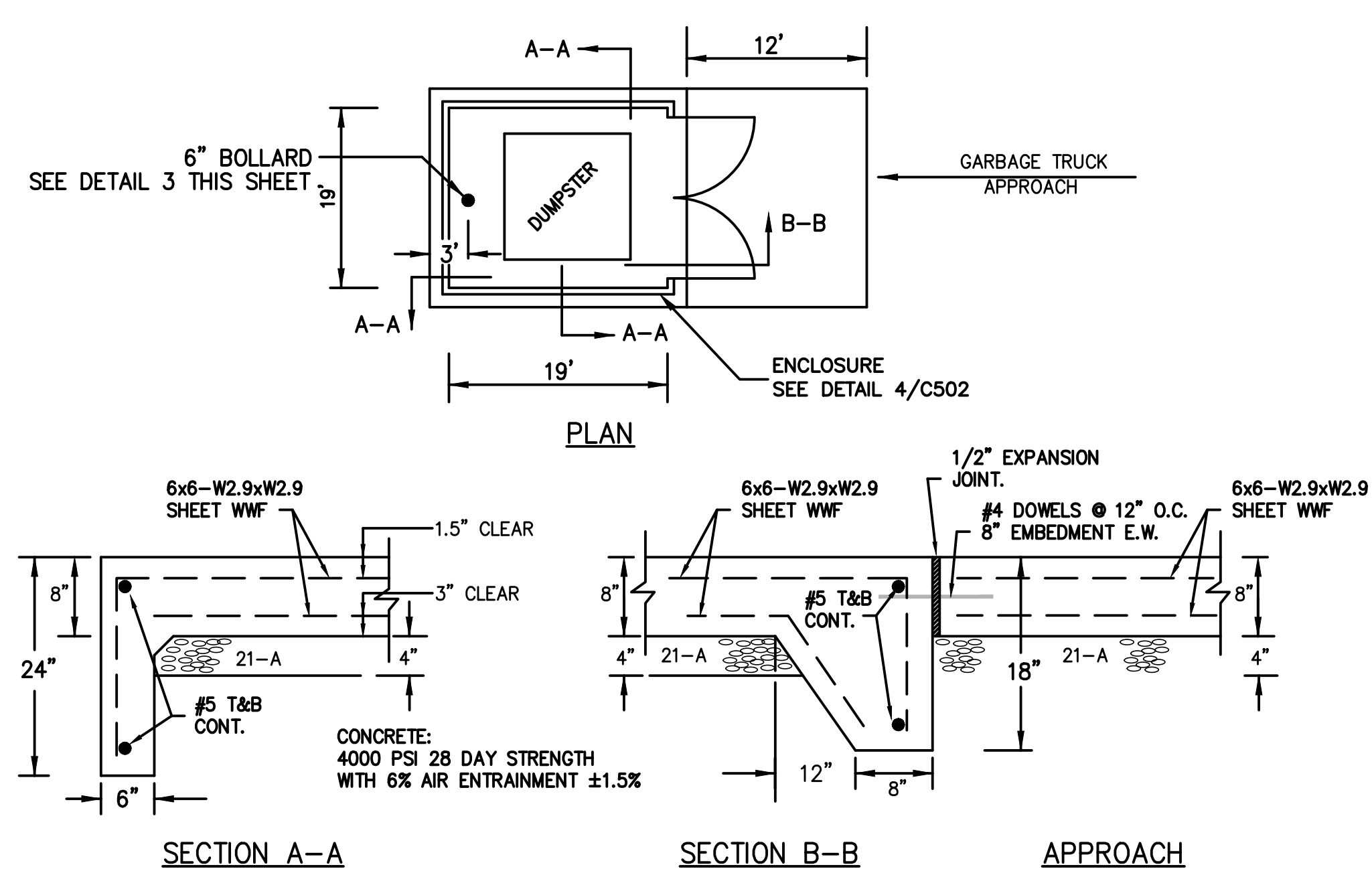
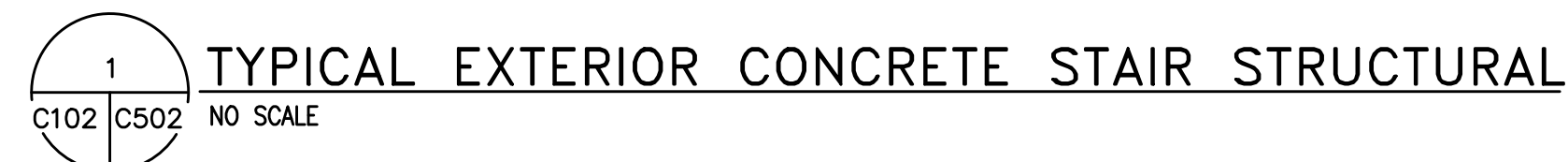
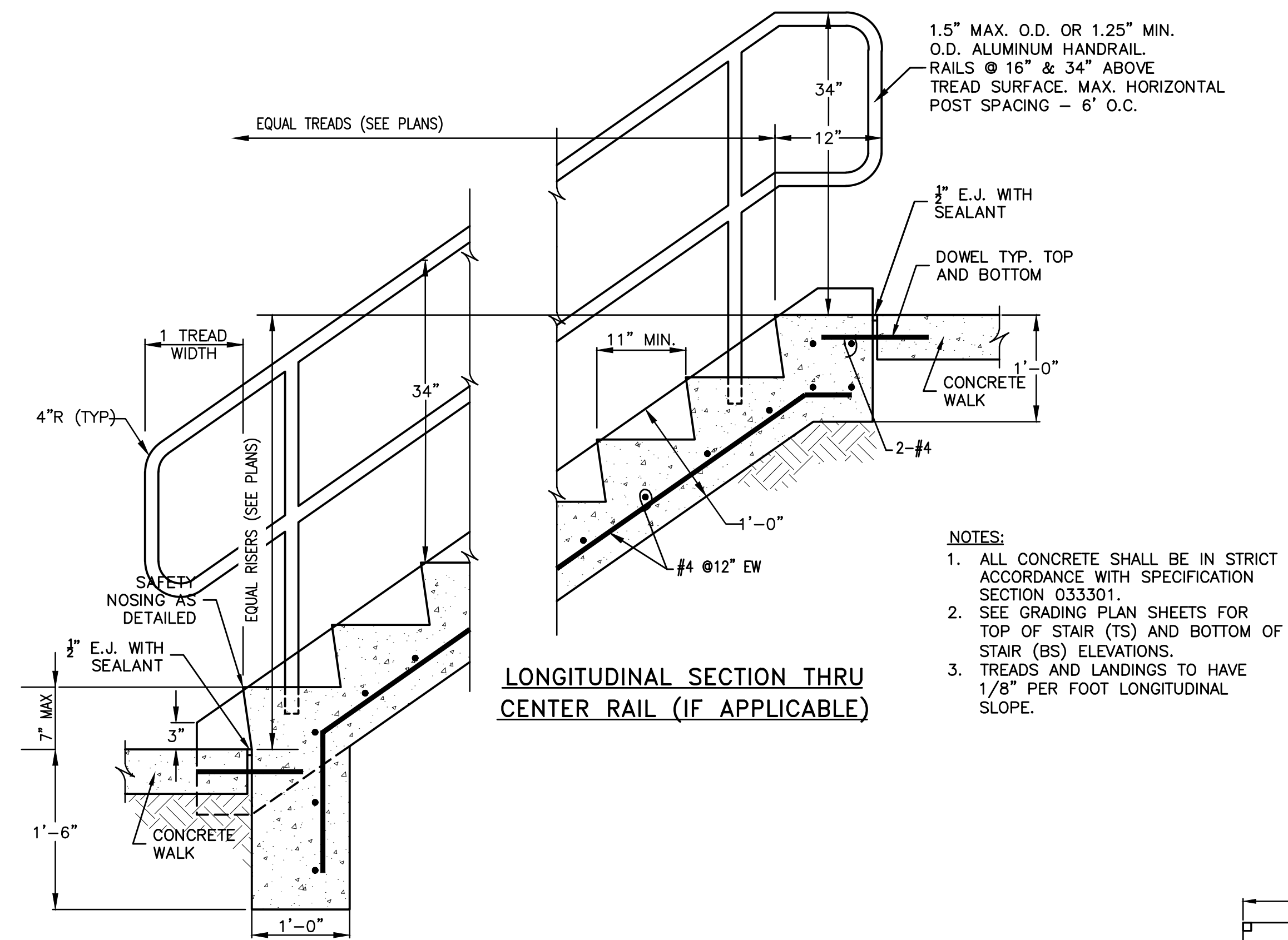
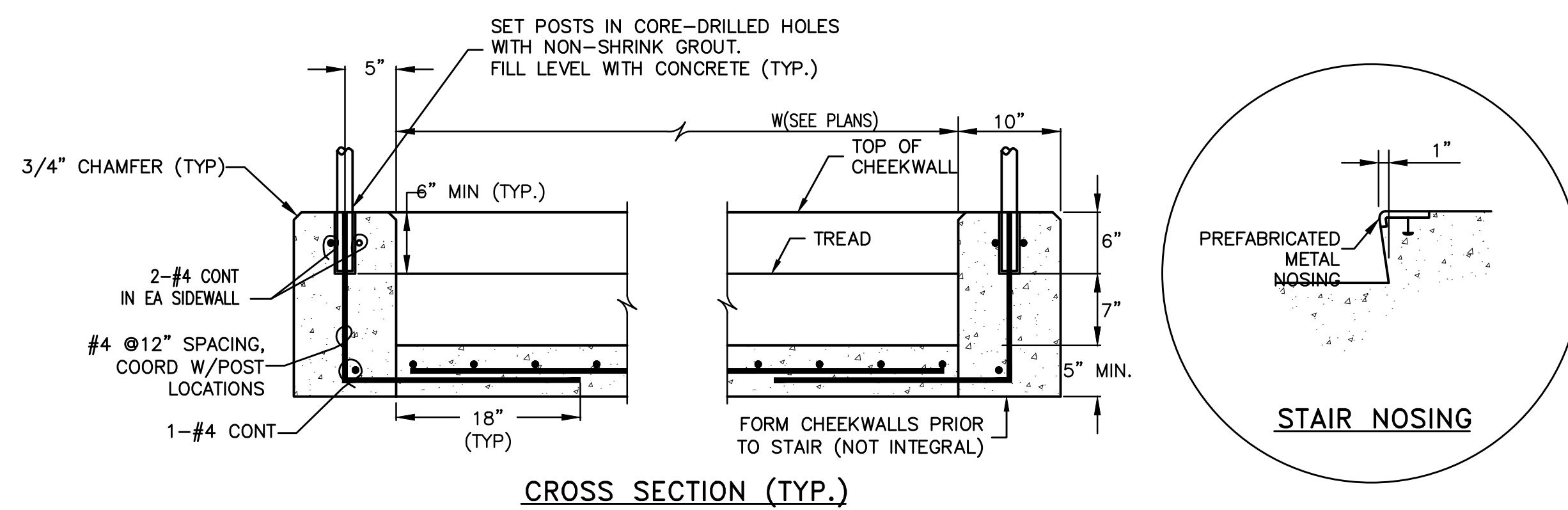
KEY PLAN:

SHEET NAME:

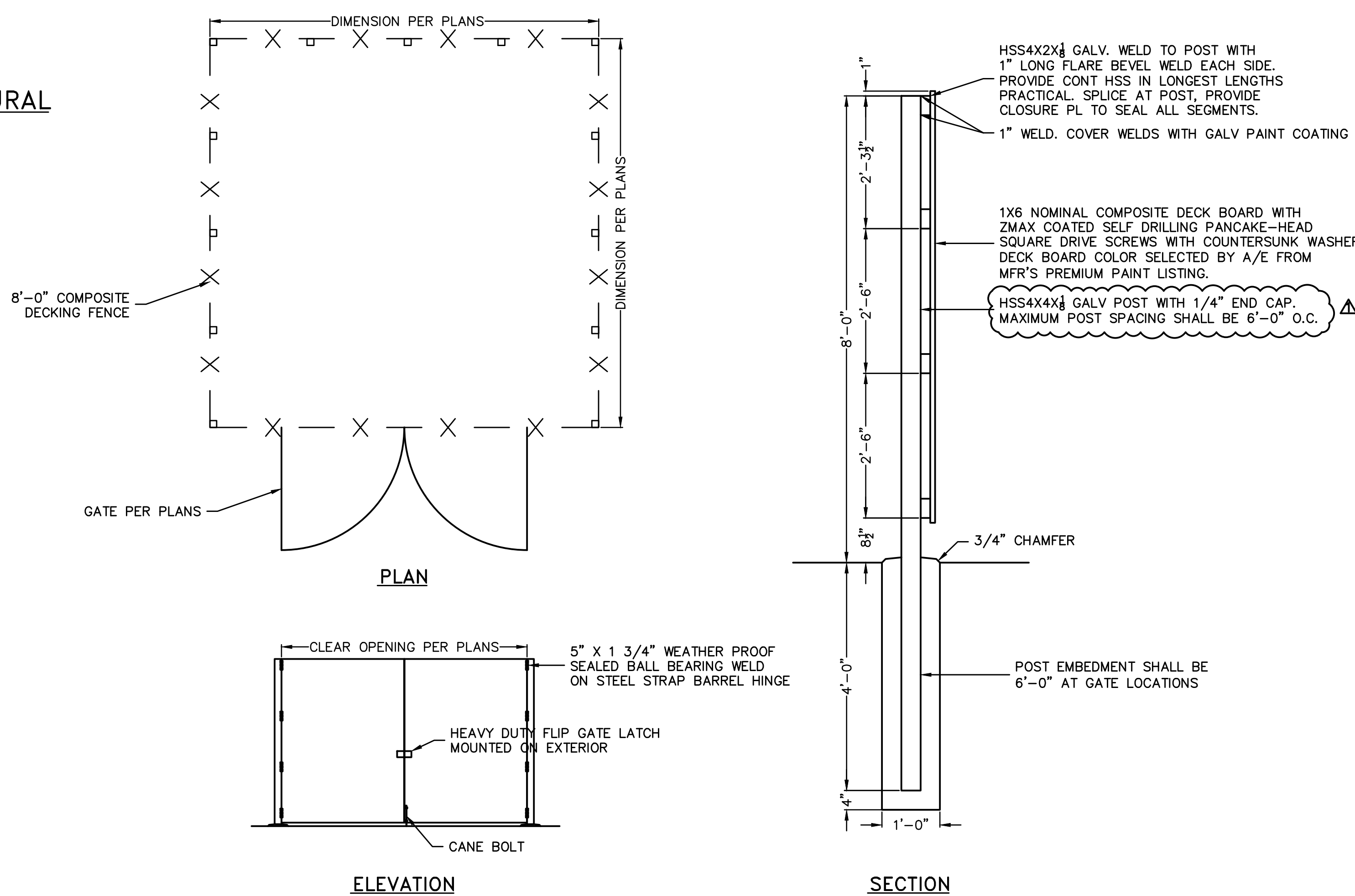
EROSION & SEDIMENT CONTROL NOTES

SHEET NUMBER:

C206



NOTE:
6" DIAMETER SCH 40 STEEL PIPE BOLLARD FILLED WITH 3000 PSI CONCRETE. PAINT WITH RUST PROHIBITIVE PRIMER AND ENAMEL (DARK GREEN W/(2) 4" INTERNATIONAL YELLOW BANDS).



STRUCTURAL GENERAL NOTES:

1. DESIGN TO COMPLY WITH VIRGINIA STATEWIDE BUILDING CODE (VUSBC) 2021 AND INTERNATIONAL BUILDING CODE (IBC) 2021.
2. DESIGN CRITERIA:
 - 2.1. UNLESS NOTED OTHERWISE, ALL DESIGN LOADS ARE BASED ON THE FOLLOWING DATA IN ACCORDANCE WITH THE VUSBC.
 - 2.2. RISK CATEGORY I
 - 2.3. WIND LOADS
 - 2.3.1. ULTIMATE DESIGN WIND SPEED= $V_{ult}=115$ MPH
 - 2.3.2. NOMINAL DESIGN WIND SPEED= $V_{nom}=V_{ult} \times 0.775=90$ MPH
 - 2.3.3. EXPOSURE CATEGORY B
 - 2.3.4. INTERNAL PRESSURE COEFFICIENT, $C_{pi}=\pm 0.18$
 - 2.3.5. THE DESIGN WIND PRESSURE FOR EXTERIOR COMPONENTS AND CLADDING SHALL BE DETERMINED IN ACCORDANCE WITH ASCE 7-10.
3. SOIL BEARING CAPACITY:
 - 3.1. THE STRUCTURE HAS BEEN DESIGNED USING THE FOLLOWING ASSUMED VALUES:
 - 3.1.1. ALLOWABLE NET SOIL BEARING PRESSURE: 2000 PSF
 - 3.1.2. MAXIMUM TOTE SOIL BEARING PRESSURE: 2500 PSF
 - 3.1.3. BACKFILL SOIL UNIT WEIGHT: 120 PCF
 - 3.1.4. COEFFICIENT OF EARTH PRESSURE AT REST: 0.60
 - 3.1.5. COEFFICIENT OF PASSIVE EARTH PRESSURE: 2.5
 - 3.1.6. COEFFICIENT OF ACTIVE EARTH PRESSURE: 0.40
 - 3.1.7. SLIDING COEFFICIENT OF FRICTION: 0.3
 - 3.2. THE OWNER SHALL RETAIN A TESTING AGENCY STAFFED WITH A QUALIFIED GEOTECHNICAL ENGINEER LICENSED IN THE COMMONWEALTH OF VIRGINIA TO INSPECT AND APPROVE THE SUBGRADE INCLUDING FILL AND BACKFILL MATERIALS AND OPERATIONS.
- 3.3. NO FOUNDATION CONCRETE SHALL BE INSTALLED UNTIL ALL FOUNDATION WORK HAS BEEN COORDINATED WITH UNDERGROUND UTILITIES.
4. ALL CAST-IN-PLACE CONCRETE CONSTRUCTION SHALL CONFORM TO THE CURRENT EDITIONS OF ACI 318 AND ACI 301.
5. CONCRETE SHALL BE NORMAL WEIGHT WITH A MINIMUM 28-DAY COMPRESSIVE STRENGTH (F'C) OF 3000 PSI. PROVIDE 6% +/- 1% AIR.
 - 5.1. ALL THE DESIGN DETAILING, FABRICATION, AND ERECTION OF ALL STRUCTURAL STEEL SHALL CONFORM TO AISC 360-10 AND AWS D1.1.
 - 5.2. STRUCTURAL STEEL HSS SHALL BE ASTM A500 GRADE C, Fy=50 KSI.
 - 5.3. STRUCTURAL STEEL PLATES AND ANGLES SHALL BE ASTM A36, Fy=36 KSI.
 - 5.4. ALL STEEL SHALL BE HOT DIP GALVANIZED AND PAINTED AFTER FABRICATION.
 - 5.5. DO NOT ALTER STEEL MEMBERS AND ASSEMBLIES IN THE FIELD WITHOUT APPROVAL OF THE ARCHITECT.
 - 5.6. NO CHANGE IN SIZE OR POSITION OF ANY STRUCTURAL ELEMENT SHALL BE MADE UNLESS DETAILED AND NOTED AS A PROPOSED CHANGE ON THE SHOP DRAWINGS AND REVIEWED AND APPROVED BY THE ARCHITECT.
 - 5.7. ALL WELDING SHALL BE IN STRICT ACCORDANCE WITH AWS D1.1. ELECTRODES SHALL BE 70XX. PROVIDE 3/16" FILL BE TITEN HD SUREW ANCHORS ARE THE BASIS OF DESIGN, OTHER MANUFACTURER'S PRODUCTS MAY BE SUBSTITUTED SUBJECT TO REVIEW AND APPROVAL IF THEY HAVE AN ICC-APPROVED AND THE PUBLISHED ALLOWABLE LOAD CAPACITY (FACTOR OF SAFETY OF 4) AND CORROSION RESISTANT FINISH IS EQUAL OR GREATER THAN THE ANCHOR SPECIFIED. INSTALL ALL ANCHORS IN STRICT ACCORDANCE WITH THE MANUFACTURER'S WRITTEN INSTRUCTIONS.
4. SUBMIT SHOP DRAWINGS FOR APPROVAL FOR CONCRETE MIX DESIGN, STEEL SHOP DRAWINGS, AND SCREW ANCHORS.



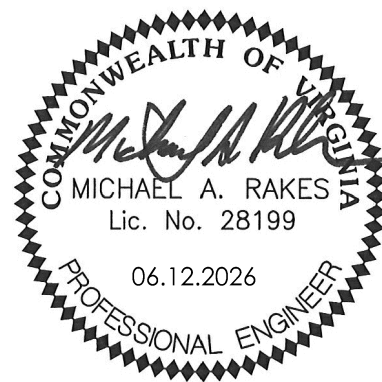
SPECTRUM DESIGN
architects | engineers

Plaza Suite 1
10 Church Avenue, SE
Roanoke, VA 24011

540.342.6001
spectrumpc.com

**DEPARTMENT OF SOCIAL
SERVICES BUILDING
BEDFORD COUNTY**

SPECTRUM DESIGN PROJECT NO.:



PROJ. MGR.: **JM** CHECKED BY: **MAR** DRAWN BY: **GAG**

SHEET ISSUE DATE:
06.12.2026

PROJECT PHASE:
BID DOCUMENTS

SHEET REVISIONS:
REV 1 ADDENDUM 1 07.10.2026

KEY PLAN:

SHEET NAME:

DETAILS

SHEET NUMBER:

C502



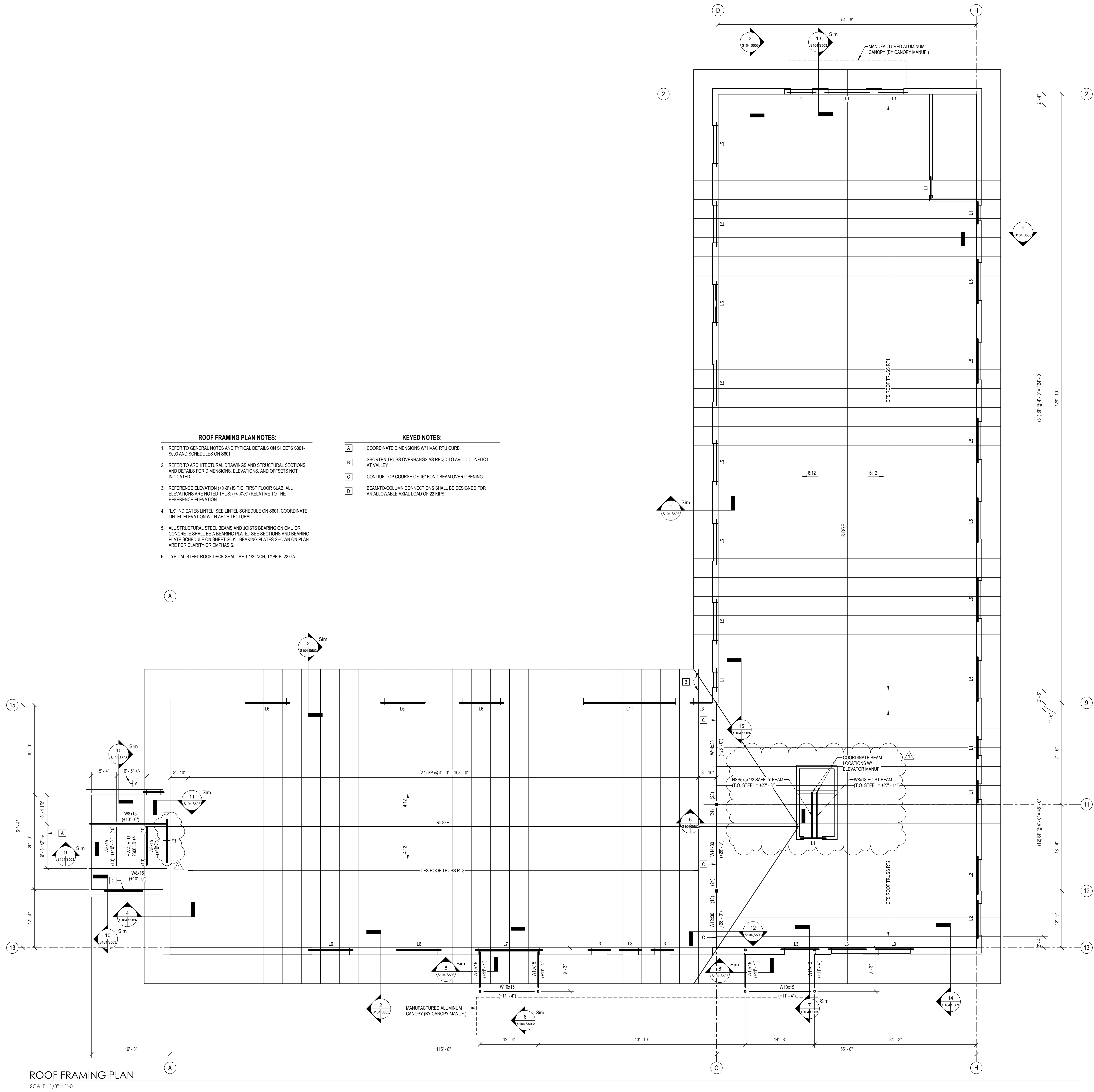
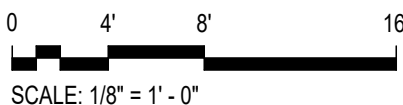
540.342.6001
spectrumpc.com

BEDFORD COUNTY

SHEET REVISIONS:
REV 1 07.10.2026 ADDENDUM 001



S104



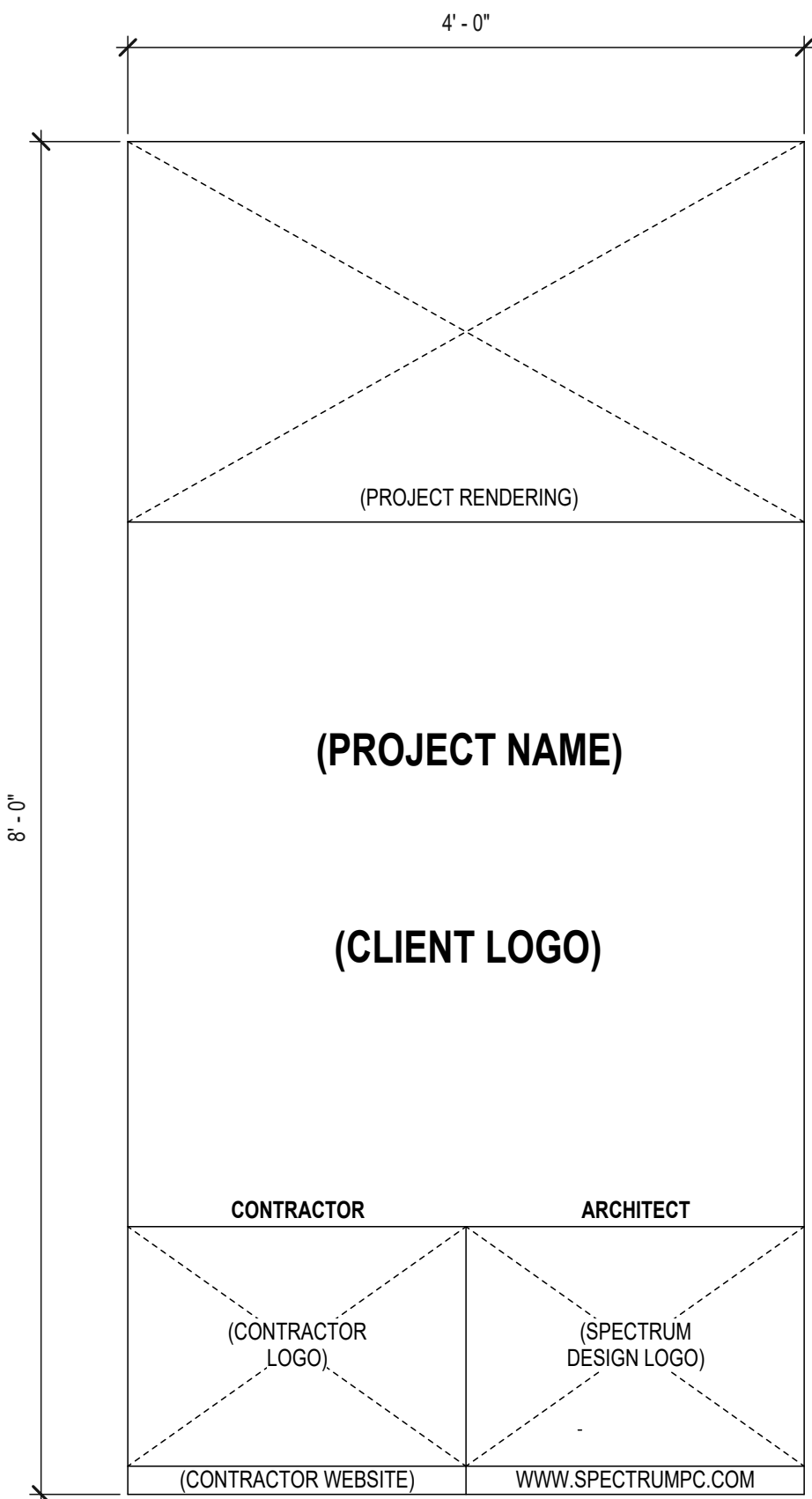
SYMBOLS LEGEND	
VIEW TITLE	VIEW NUMBER 00 SCALE: 1/8" = 1'-0" REF: R/01 DRAWING SCALE SHEET REFERENCE
SECTION TAG	DRAWING NUMBER 1 SHEET NUMBER WHERE TAKEN A101 SHEET NUMBER WHERE DRAWN
ENLARGED DETAIL	DRAWING NUMBER 1 SHEET NUMBER WHERE TAKEN A101 SHEET NUMBER WHERE DRAWN
EXTERIOR ELEVATION TAG	DRAWING NUMBER 1 SHEET NUMBER WHERE TAKEN A101 SHEET NUMBER WHERE DRAWN
INTERIOR ELEVATION TAG	5F/ A101 DRAWING / SHEET NUMBER
ROOM TAG	SPACE NAME 101 ROOM NUMBER
LIFE SAFETY TAG	SPACE NAME 1200 SF 1-200 200/200 ROOM AREA OCCUPANT PER SF RATIO ACTUAL SEATS (IF APPLICABLE) CALCULATED OCCUPANCY
PARTITION TAG	A2B1 FIRE RATING (HOURS) PARTITION STRUCTURE SIZE (NOMINAL) PARTITION TYPE (SCHEDULE)
DOOR NUMBER	101 DOOR
EGRESS TAG	ALLOWABLE EGRESS CAPACITY OF OPENING CLEAR WIDTH OF OPENING ACTUAL EGRESS LOAD OF OPENING EGRESS CAPACITY FACTOR CUMULATIVE EGRESS LOAD ALONG PATH
STOREFRONT / WINDOW / CURTAIN WALL FRAMING	FRAME TYPE FRAME NO. FRAME DEPTH
GLASS TYPE	GL-#
COLUMN GRID LINE NEW CONSTRUCTION	1 DESIGNATOR
KEYNOTE	XX
DEMOLITION NOTE	D1
LOUVER TYPE	LE
TOILET ACCESSORIES	TA1
EQUIPMENT NUMBER	EQ1
REVISION NUMBER	#
NORTH DIRECTION	N NORTH
MATCHLINE	MATCHLINE RE: REFERENCE DRAWING
CENTERLINE	CL
FINISH TRANSITION	FIN / FIN
LIMITS OF CONSTRUCTION	L.O.C.
STAIR DIRECTION	UP / DN
BREAKLINE	BREAKLINE
SPOT ELEVATION	1226'-0"
BENCHMARK ELEVATION	XX LEVEL XX-XX
CASEWORK TAG	NAAWS CABINET DESIGN SERIES NUMBER CASEWORK WIDTH CASEWORK HEIGHT (TOP OF COUNTERTOP IF BASE CABINET) NOMINAL CASEWORK DEPTH (REAR OF CABINET TO FACE OF CABINET DOOR) MODIFICATION DETAIL OR DESCRIPTION
SIGNAGE TAG	101A SIGNAGE
SMART BOARD	LENGTH OF BOARD (FT) → SB-6
TACK WALL - SPECIAL	→ TW-S
ART WALL	LENGTH OF BOARD → HW-30
MASONRY BOARD	LENGTH OF BOARD → MB-4
TACK BOARD	LENGTH OF BOARD (FT) → TB-4
TACK STRIPS	LENGTH OF BOARD (FT) → TS-20
TACKABLE WALL	LENGTH OF BOARD (FT) → TW-8

KEYNOTE INDICATOR	
A - ARCHITECTURAL / GENERAL C - CIVIL E - ELECTRICAL D - DEMOLITION F - FINISHES / FURNITURE G - GLAZING / DOORS LS - LIFE SAFETY NOTES: 1. INDICATOR LETTER IS USED FOR KEYNOTE ORGANIZATION ONLY AND IS NOT INTENDED TO ASSIGN OR EXCLUDE WORK AND/OR COORDINATION TO OR FROM SPECIFIC TRADES OR DISCIPLINES. 2. KEYNOTES ARE TYPICALLY ASSOCIATED WITH A DRAWING SERIES. KEYNOTE NUMBERS MAY VARY FROM SERIES TO SERIES. SOME KEYNOTES MAY APPEAR IN A SHEET'S LEGEND, BUT NOT APPEAR IN A DRAWING ON THAT SPECIFIC SHEET.	M - MECHANICAL P - PLUMBING R - ROOF S - STRUCTURAL W - WALLS X - EXISTING
ARCHITECTURAL ABBREVIATIONS	
AB ANCHOR BOLT ABV ABOVE AC ACCESS CONTROL ACM ASBESTOS ACP ACOUSTICAL CEILING PANEL AED AUTOMATED EXTERNAL DEFIBRILLATOR AFF ABOVE FINISH FLOOR AHU AUTHORITY HAVING JURISDICTION ALT ALTERNATE ALUM ALUMINUM AO AUTOMATIC OPERATOR ARA AREA OF RESCUE ASSISTANCE ARCH ARCHITECTURAL BD BOARD BLDG BUILDING BLKG BLOCKING BOT BOTTOM BRG BEARING CI CONTINUOUS INSULATION CJ CONTROL JOINT CLG CEILING CMU CONCRETE MASONRY CONC CONCRETE CONF CONFERENCE CONT CONTINUOUS CONTR CONTRACTOR CW CASEWORK DIA DIAMETER DS DOWNSPOUT EA EACH EB EXPANSION BOLT EF EACH FACE EJ EXPANSION JOINT EL ELEVATION ELEC ELECTRICAL ELEV ELEVATION EQ EQUAL EQUIP EQUIPMENT EW EACH WAY EXIST EXISTING EXT EXTERIOR FE FIRE EXTINGUISHER FEC FIRE EXTINGUISHER AND CABINET FLR FLOOR FRT FIRE RETARDANT TREATED FSM FLEXIBLE SHEET MEMBRANE ROOFING FTG FOOTING GALV GALVANIZED GN GENERAL NOTE GYB GYPSUM WALL BOARD GYP GYPSUM WALL BOARD HDWR HARDWARE HGT HEIGHT HPAC HIGH PERFORMANCE ARCH COATING HP HIGH POINT HR HOUR ID INSIDE DIAMETER INT INTERIOR ISOL ISOLATION JAN JANITOR JT JOINT	LLH LONG LEG HORIZONTAL LLV LONG LEG VERTICAL LOC LIMITS OF CONSTRUCTION LP LOW POINT MACH MACHINE MAINT MAINTENANCE MATL MATERIAL MCM METAL COMPOSITE MATERIAL MECH MECHANICAL MO MOUNTED MTD MOUNTED MTL METAL NA NOT APPLICABLE NIC NOT IN CONTRACT NTS NOT TO SCALE OC ON CENTER OD OUTSIDE DIAMETER OH OPPOSITE HAND OHD OVERHEAD DOOR OS OVERFLOW SCUPPER PLAM PLASTIC LAMINATE PLUMB PLUMBING PNT PAINT PR PAIR PRES PRESERVATIVE TREATED R RADIUS RCP REFLECTED CEILING PLAN RD ROOF DRAIN RE REFER RECTP RECEPTION REF REFER TO REINF REINFORCEMENT REV REVERSED RM ROOM RO ROUGH OPENING SCHD SCHEDULE SFRM SPRAY APPLIED FIRE RESISTIVE MATERIAL SHT SHEET SPEC SPECIFICATION SS STAINLESS STEEL STL STEEL STOR STORAGE STRUCT STRUCTURAL THRESH THRESHOLD TLT TOILET TOJ TOP OF JOIST TOS TOP OF STEEL TOW TOP OF WALL TYP TYPICAL UNO UNLESS NOTED OTHERWISE UR URINAL VEST VESTIBULE W/ WITH W/O WITHOUT WC WATER CLOSET WD WOOD WHL WHEELCHAIR CHR CHAIR ° DEGREE ± PLUS / MINUS Ø DIAMETER ≤ LESS THAN OR EQUAL TO ≥ GREATER THAN OR EQUAL TO • BULLET POINT

ARCHITECTURAL MATERIALS

EARTH	FINISH WOOD
POROUS FILL (STONE OR GRAVEL)	CAST-IN-PLACE CONCRETE
BRICK	CONCRETE MASONRY UNITS
BRICK VENEER (ELEVATIONS)	CMU VENEER (ELEVATIONS)
STEEL	ALUMINUM
PLYWOOD	RIGID INSULATION
BATT INSULATION	GYPSUM WALL BOARD
WOOD BLOCKING	

*NOTE: THESE ARE STANDARD SYMBOLS - ALL SYMBOLS NOTED ON THIS SHEET MAY NOT APPLY.



NOTES:
GN-1: ARCHITECT TO PROVIDE CONTRACTOR W/ COLOR DIGITAL GRAPHIC FOR PROJECT SIGN.
GN-2: ADHERE SIGN TO 3/4" PLYWOOD SHEET SUPPORTED BY (2) 1/4" P.T. WOOD POSTS. MECHANICALLY ATTACH PLYWOOD TO POSTS W/ WOOD SCREWS @16" O.C.

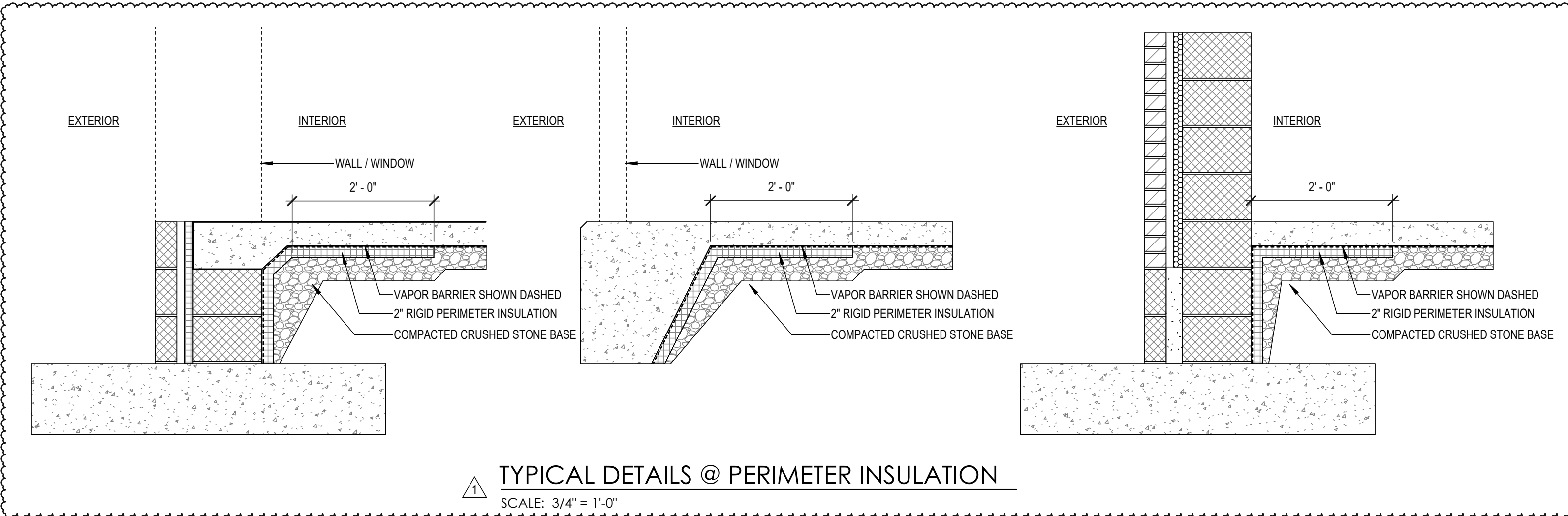
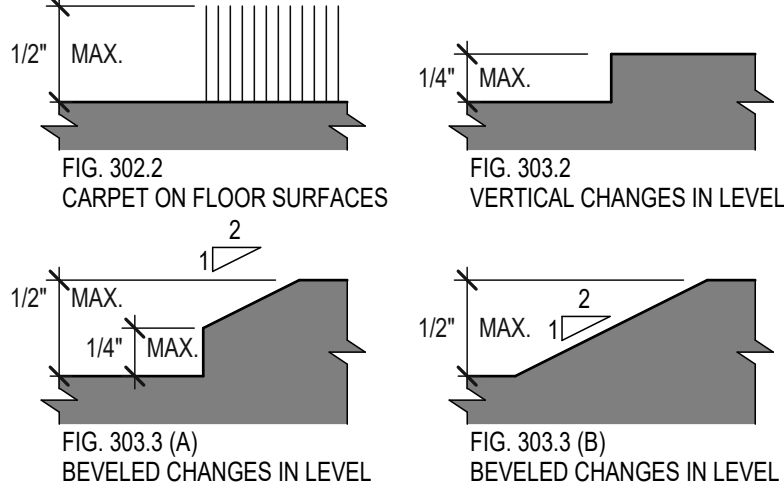
GN-3: CONSULT WITH A/E OF RECORD FOR SIGN LOCATION.

PROJECT SITE SIGN

SCALE: 1" = 1'-0"

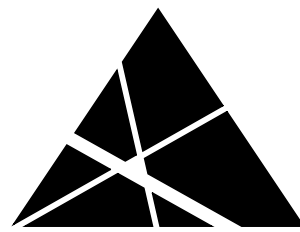
ACCESSIBLE CHANGES IN FLOOR FINISH LEVEL

ANSI 117.1 2017 / ADA/2010 SECTION 302 & 303 REQUIREMENTS



TYPICAL DETAILS @ PERIMETER INSULATION

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



SPECTRUM DESIGN
architects | engineers

Plaza Suite 1
10 Church Avenue, SE
Roanoke, VA 24011

540.342.4001
spectrumpc.com

DEPARTMENT OF SOCIAL SERVICES BUILDING

BEDFORD COUNTY

SPECTRUM DESIGN PROJECT NO.: 24112



PROJ. MGR.: **JM** CHECKED BY: **NLH** DRAWN BY: **MCA, TLR, LAC**

SHEET ISSUE DATE:

06.12.2026

PROJECT PHASE:

BID DOCUMENTS

SHEET REVISIONS:

REV 1 07.10.2026 ADDENDUM 01

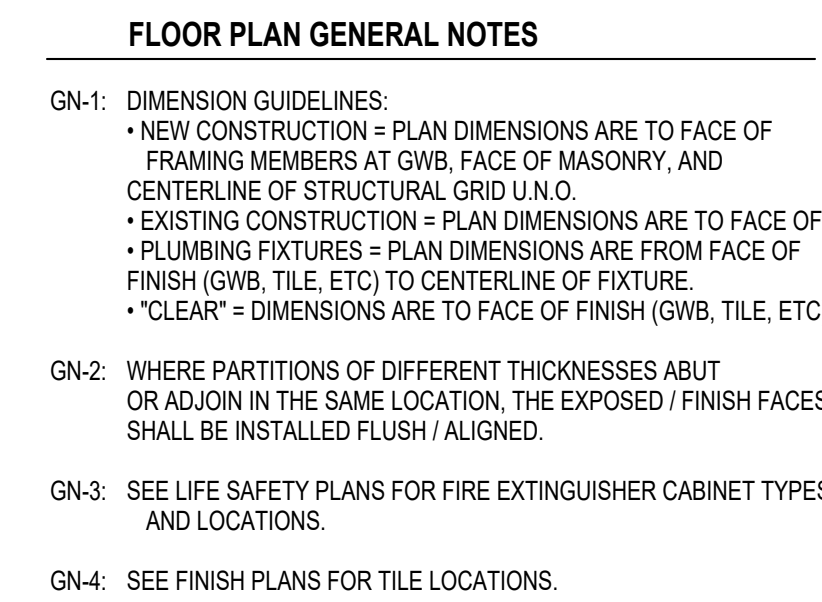
PLAN NORTH
N
SITE NORTH
N

SHEET NAME:

GENERAL ARCHITECTURAL INFORMATION

SHEET NUMBER:

A001

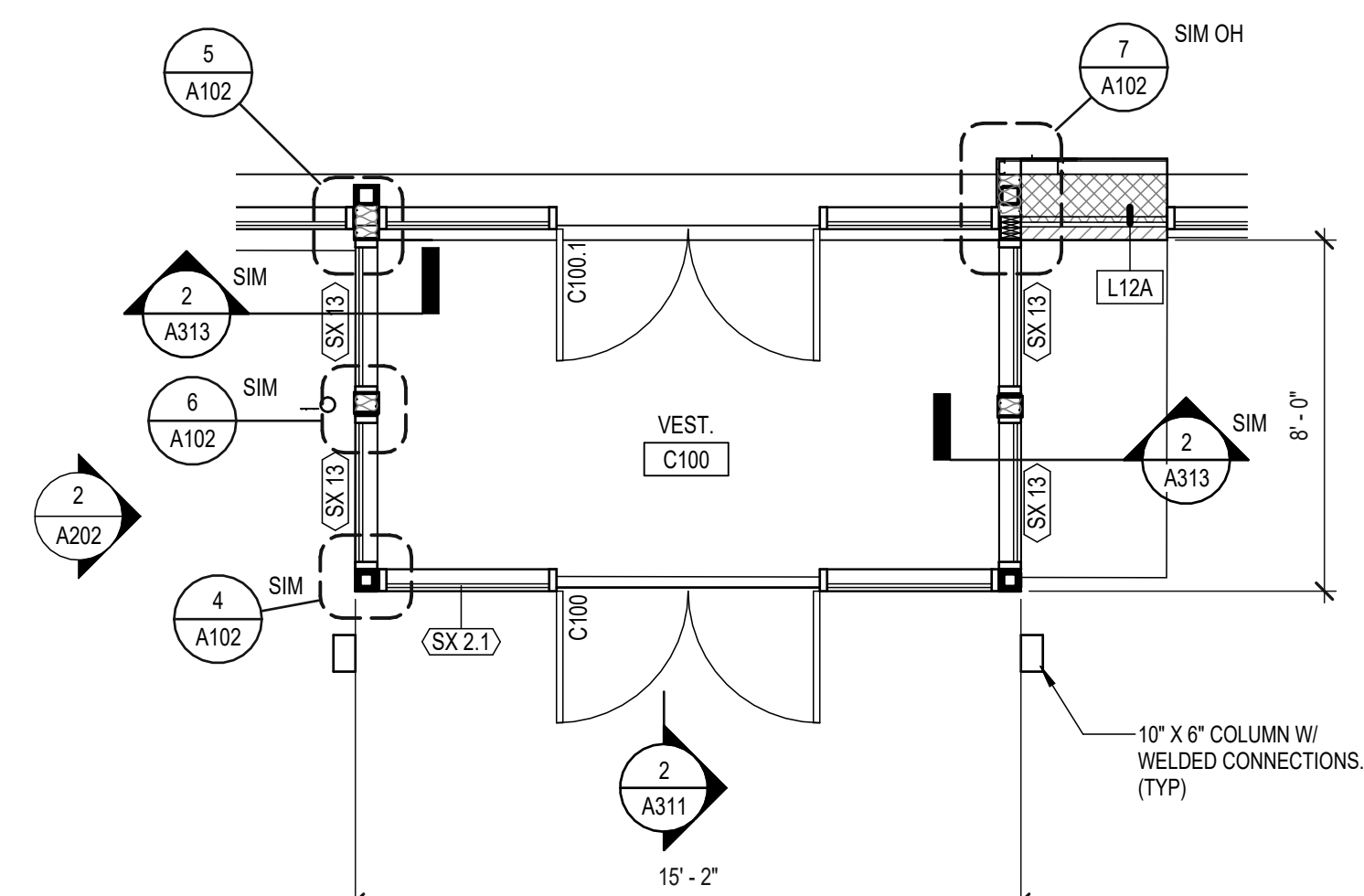


BEDFORD COUNTY

COMMONWEALTH OF VIRGINIA
NATHAN L. HARPER
Lic. No. 14926
06.12.2026
ARCHITECT

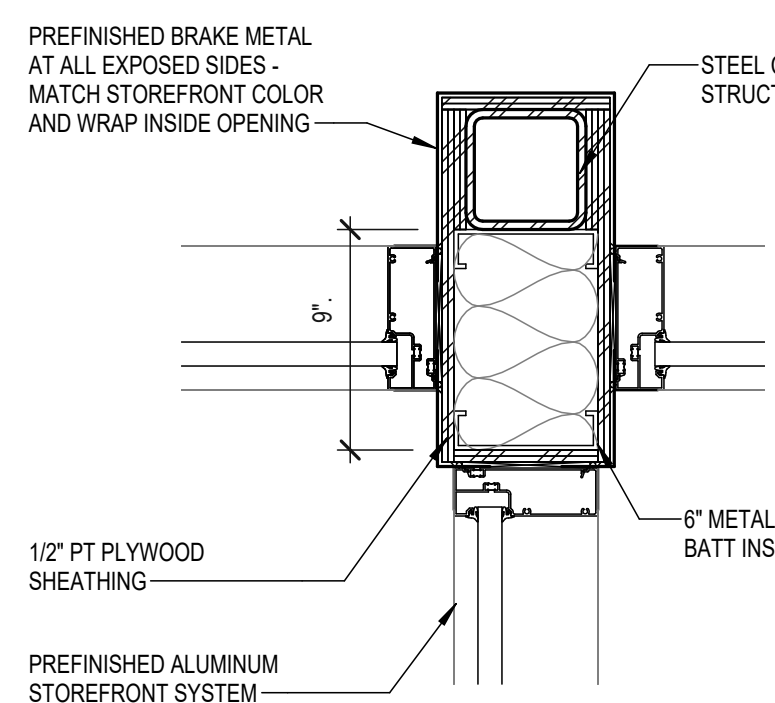
SHEET REVISIONS:
REV 1 07.10.2026 ADDENDUM 01





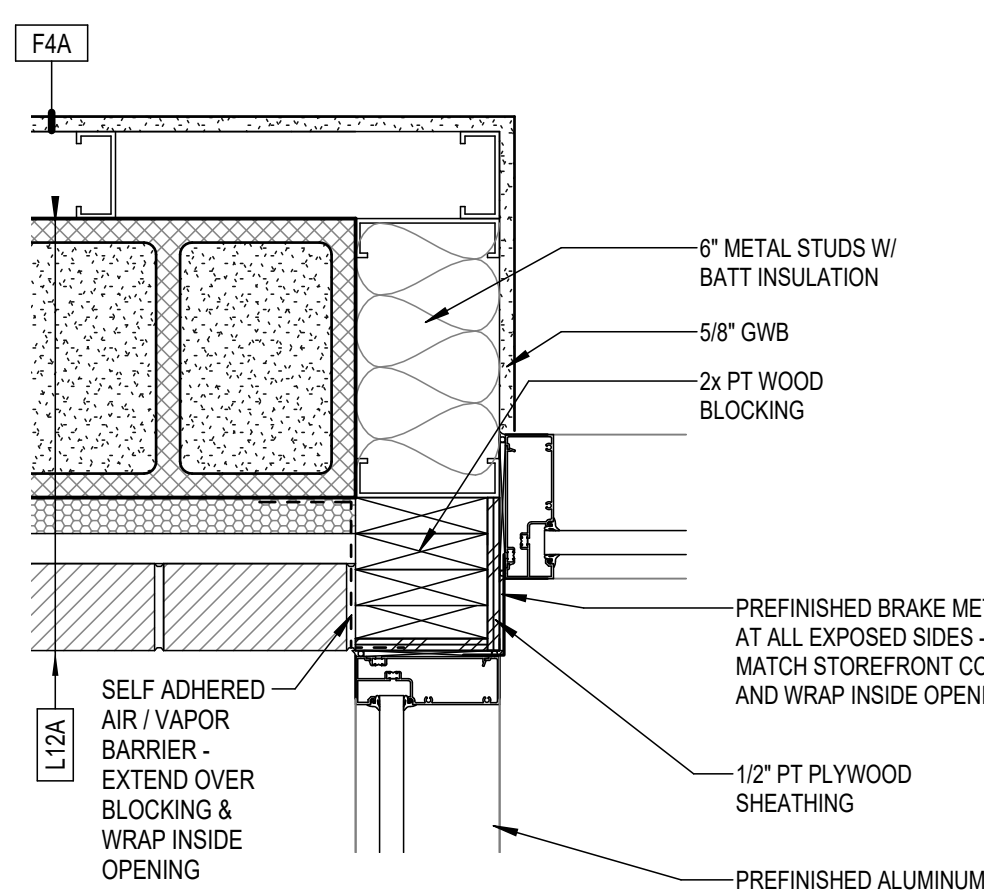
3 C100 VESTIBULE

A102 SCALE: 1/4" = 1'-0"
REF: A102



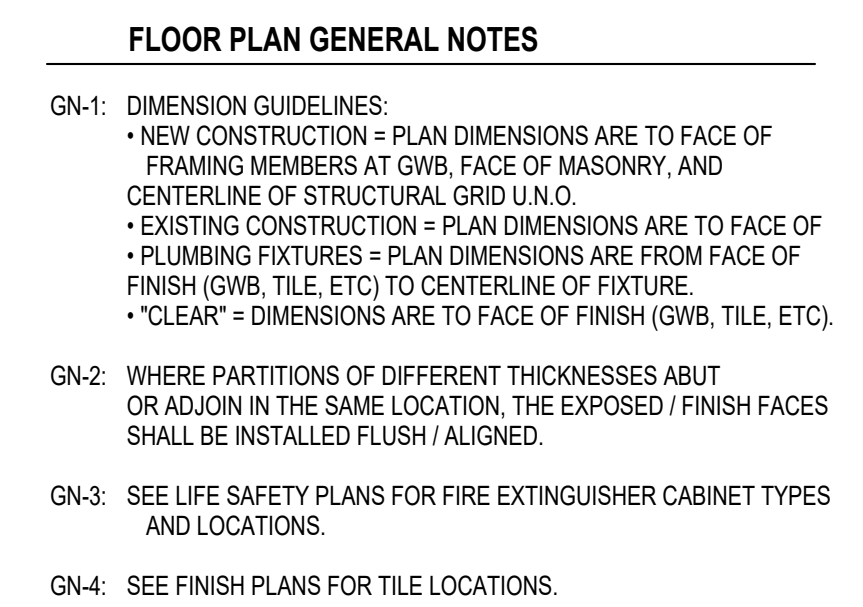
5 PLAN DETAIL

A102 SCALE: 1 1/2" = 1'-0"
REF: A102



7 PLAN DETAIL

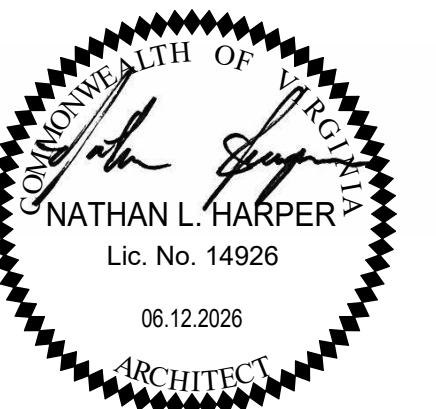
A102 SCALE: 1 1/2" = 1'-0"
REF: A102



Plaza Suite 1
10 Church Avenue, SE
Roanoke, VA 24011

540.342.6001
ectrumpc.com

BEDFORD COUNTY

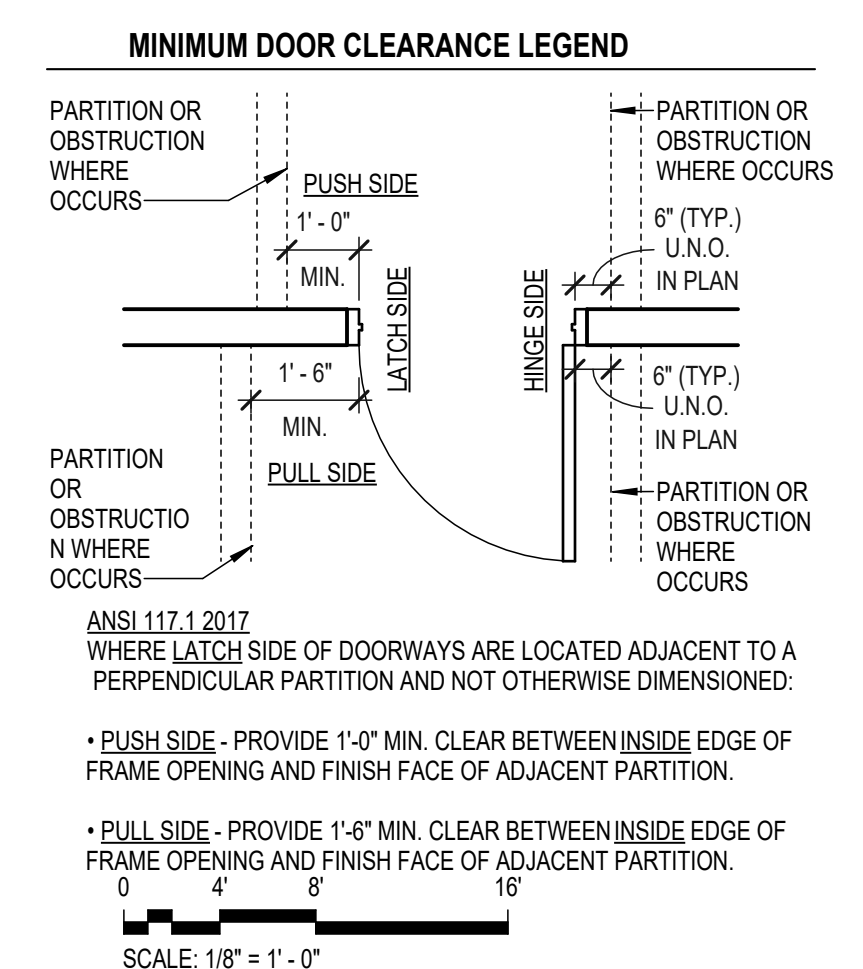
SPECTRUM DESIGN PROJECT NO.: **24112**

PROJ. MGR.: **JM** CHECKED BY: **NLH** DRAWN BY: **MCA, TLR, LAC**

SHEET ISSUE DATE:

PROJECT PHASE:
BID DOCUMENTS

SHEET REVISIONS:
REV 1 07.10.2026 ADDENDUM 01



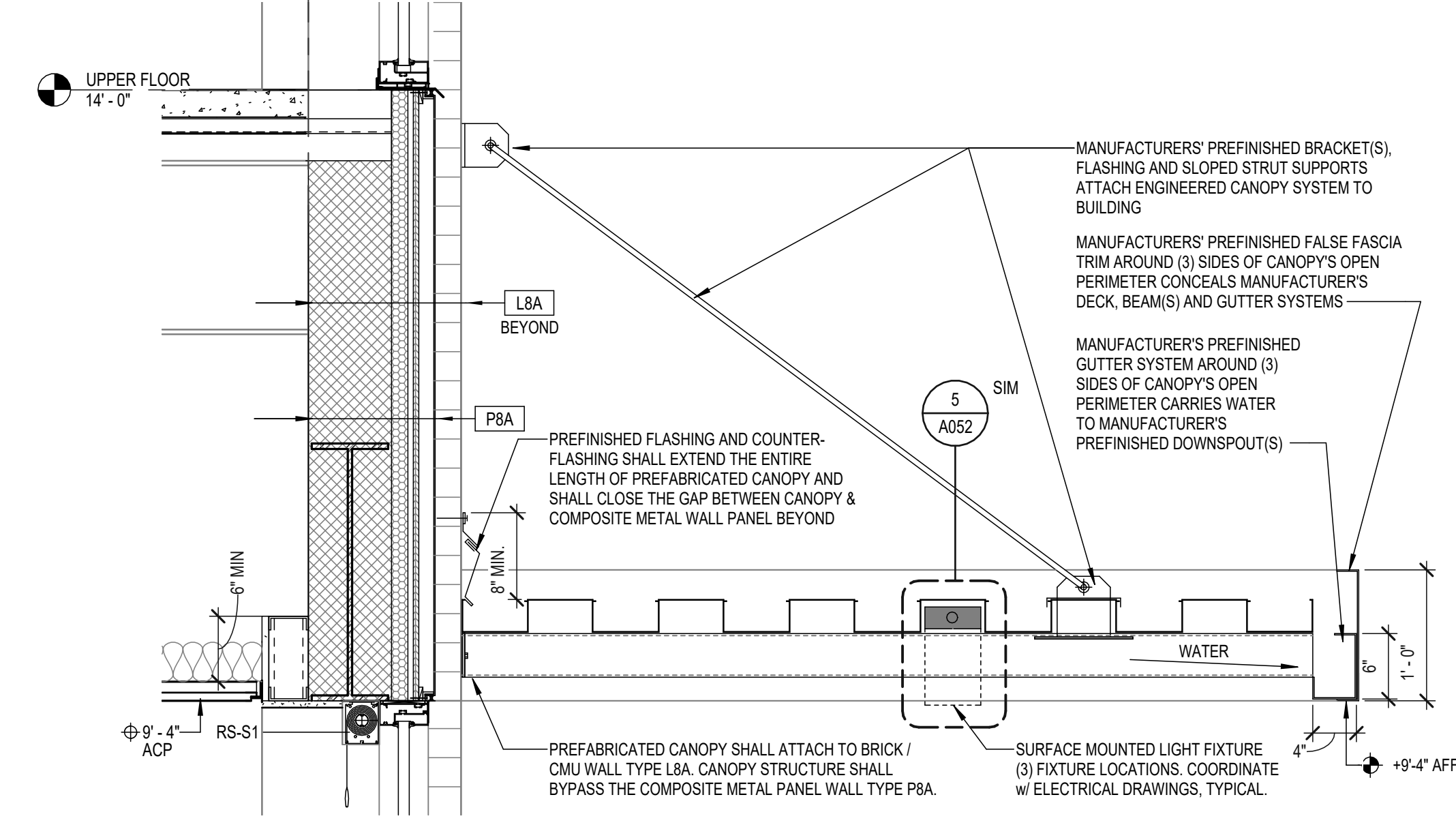
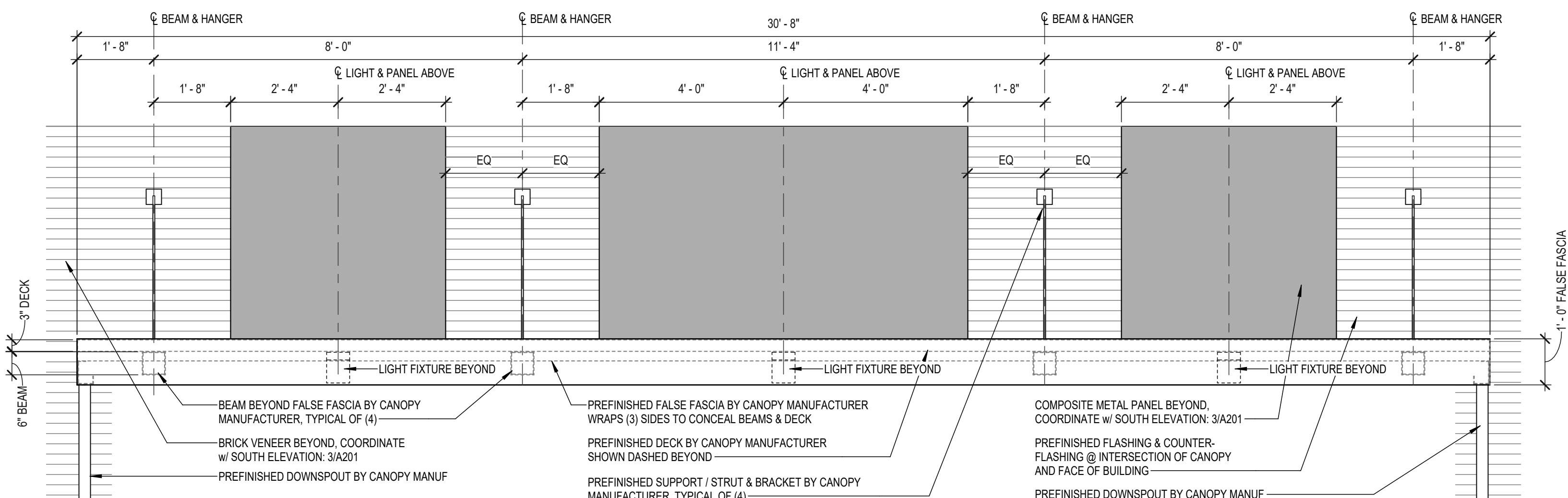
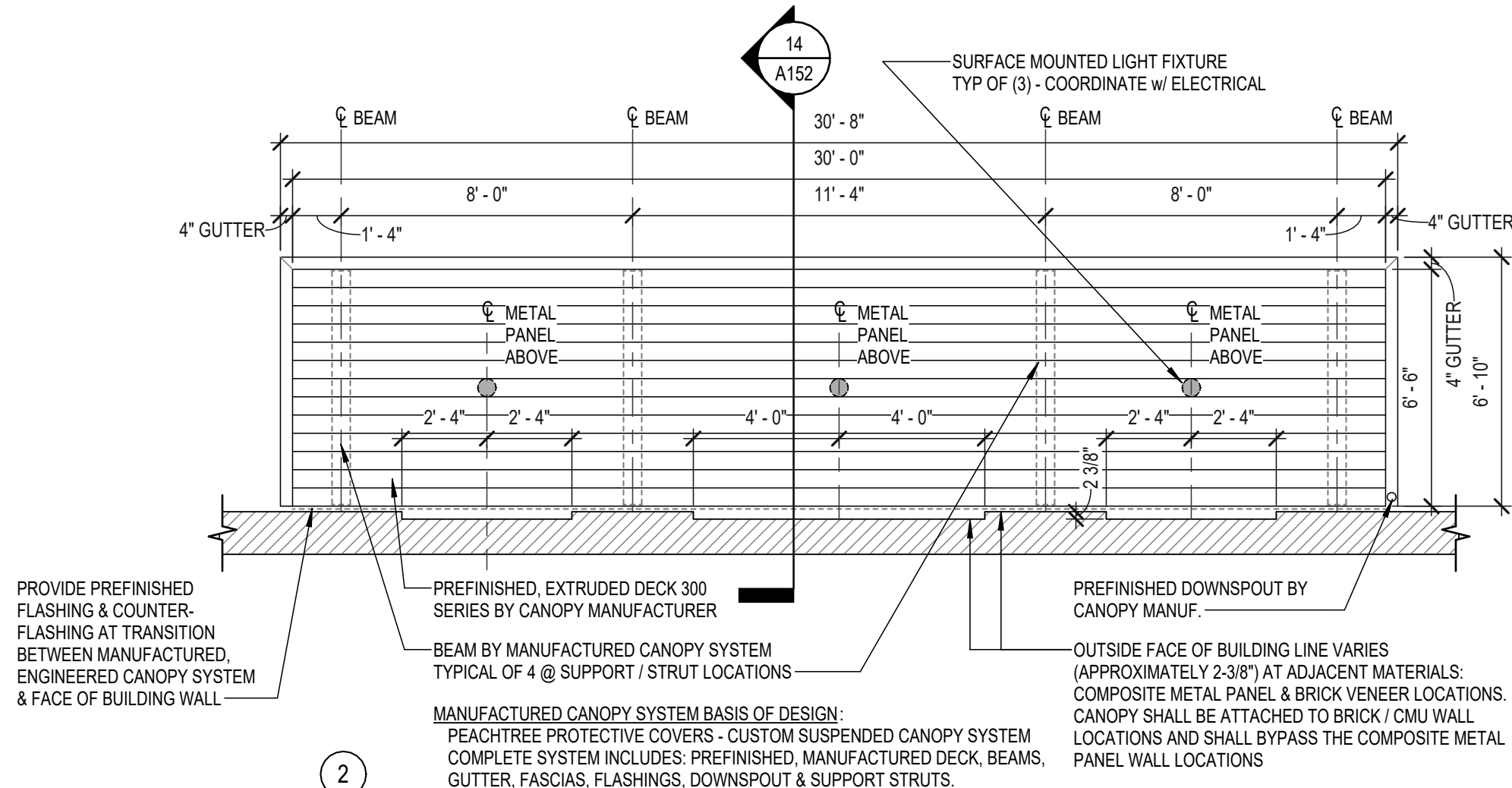
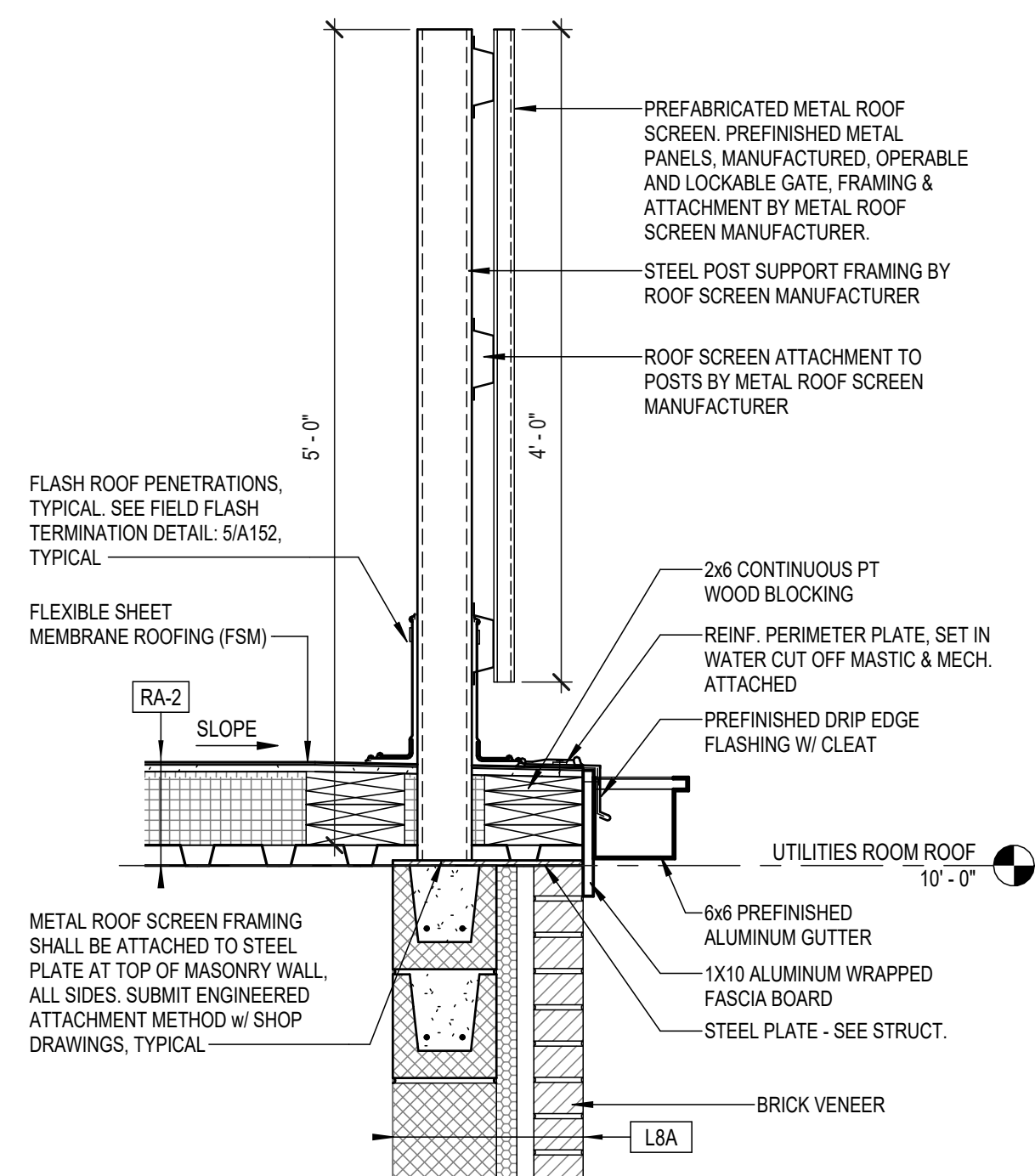
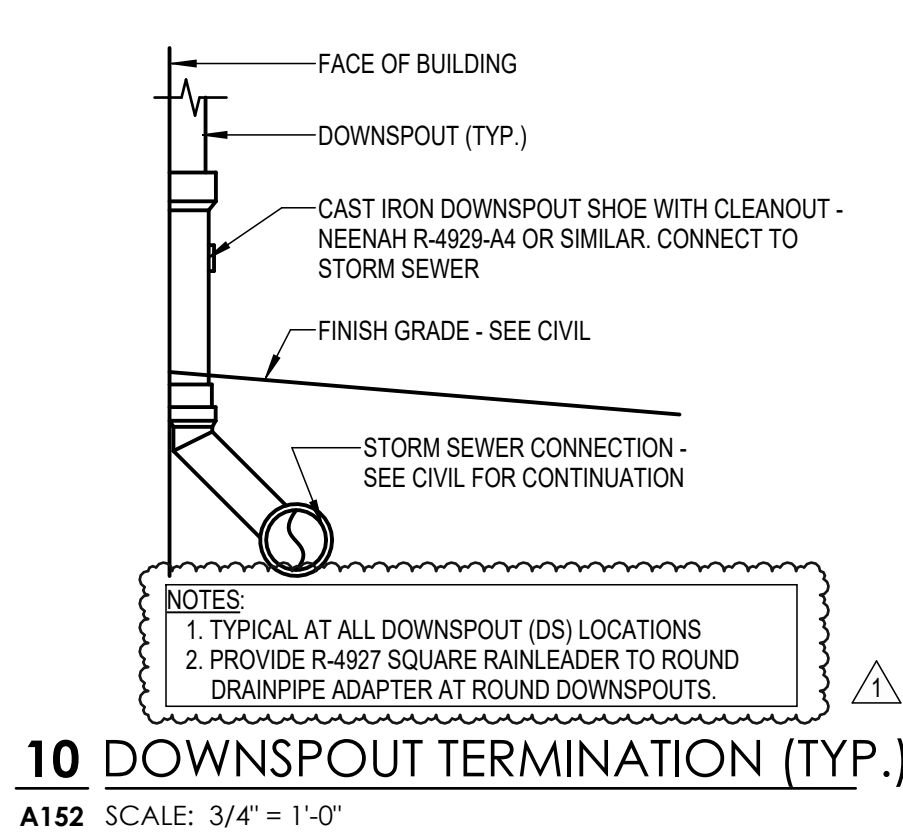
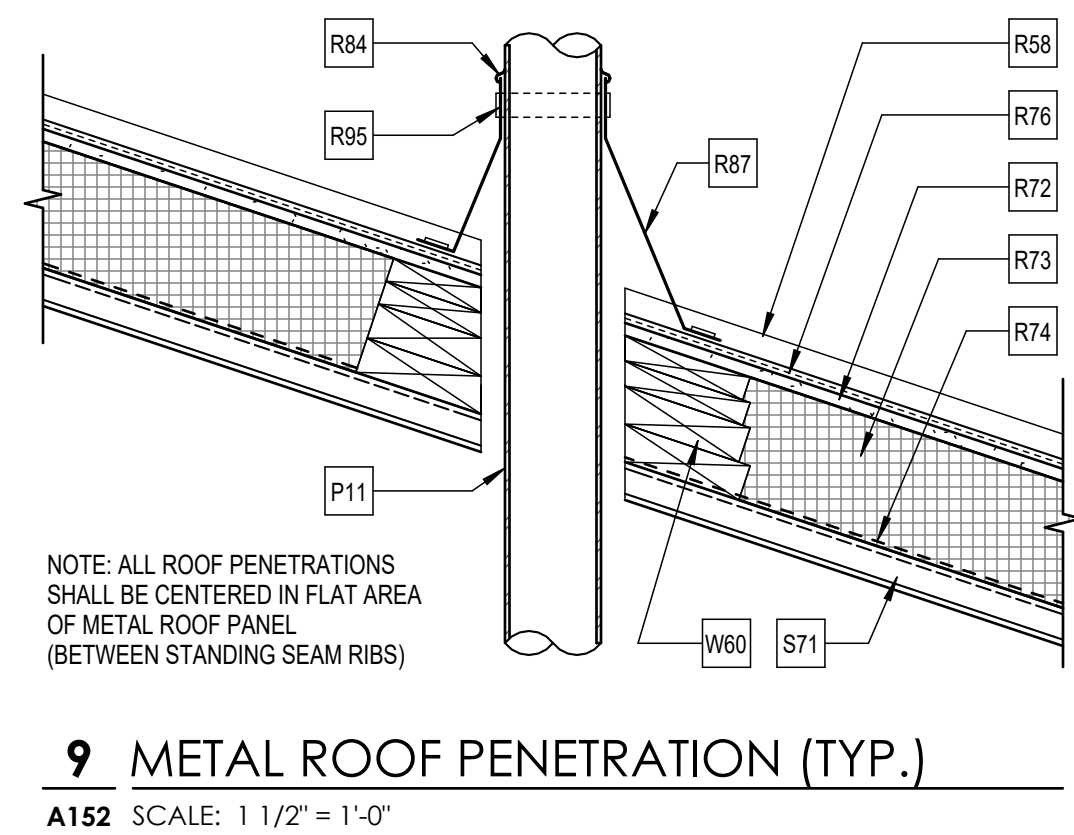
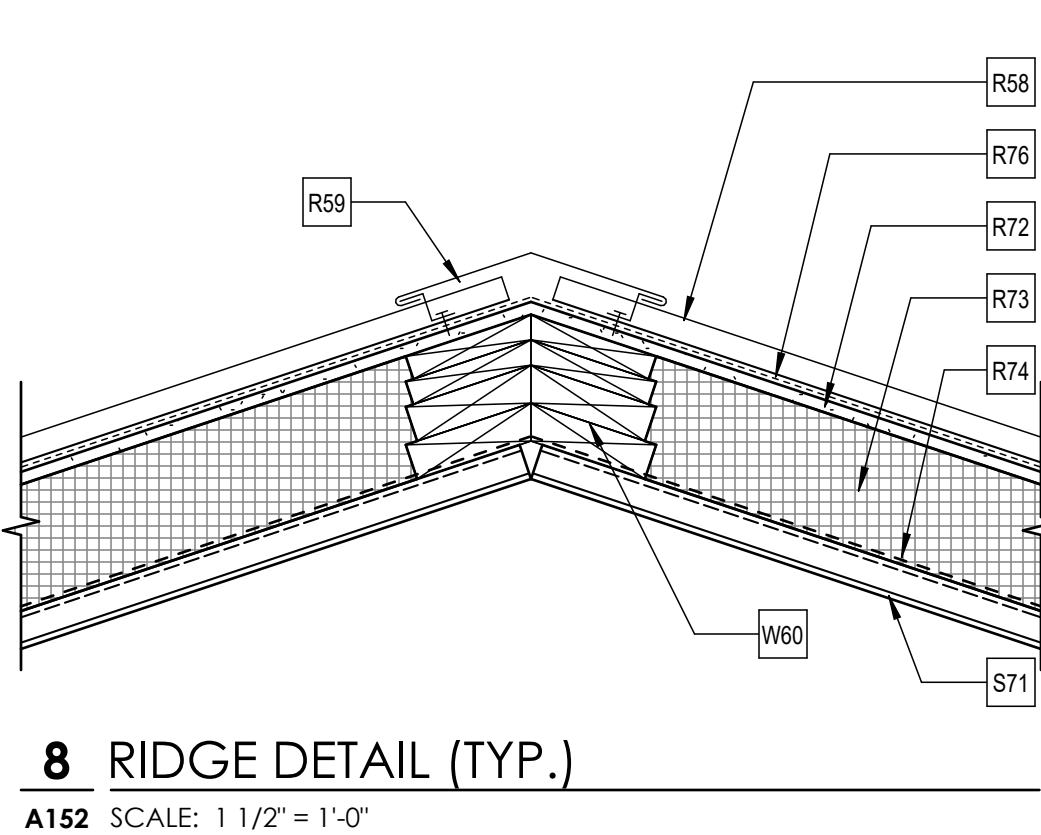
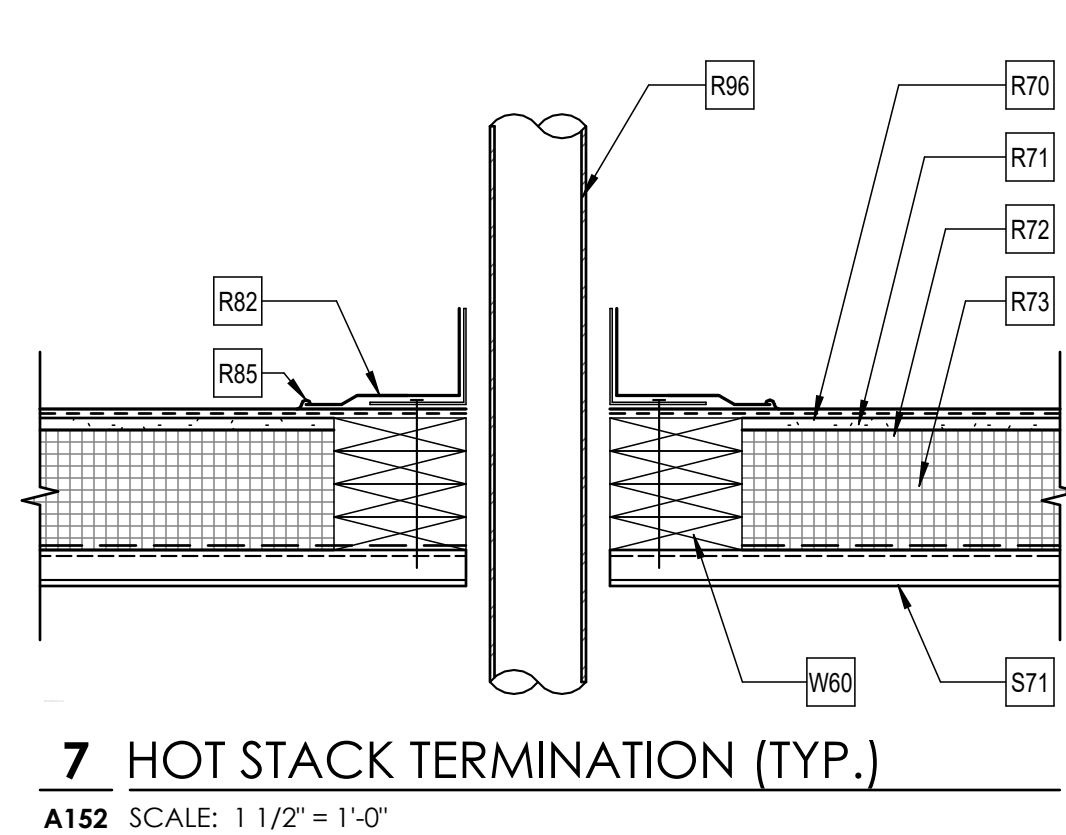
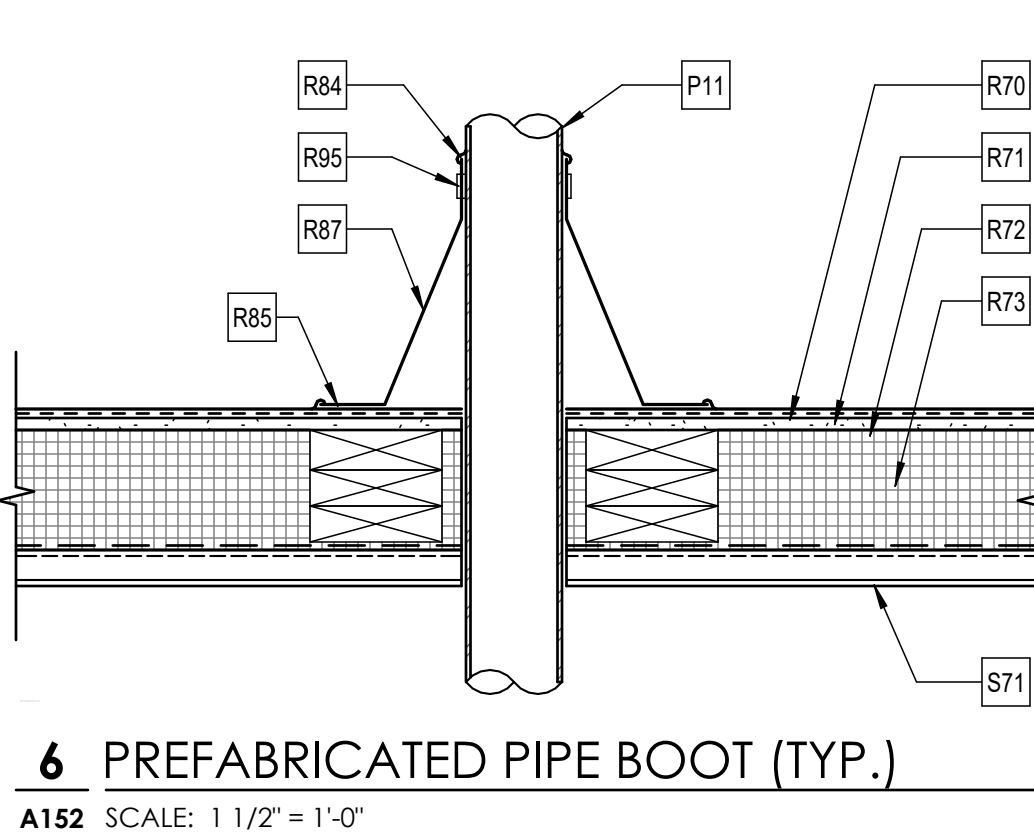
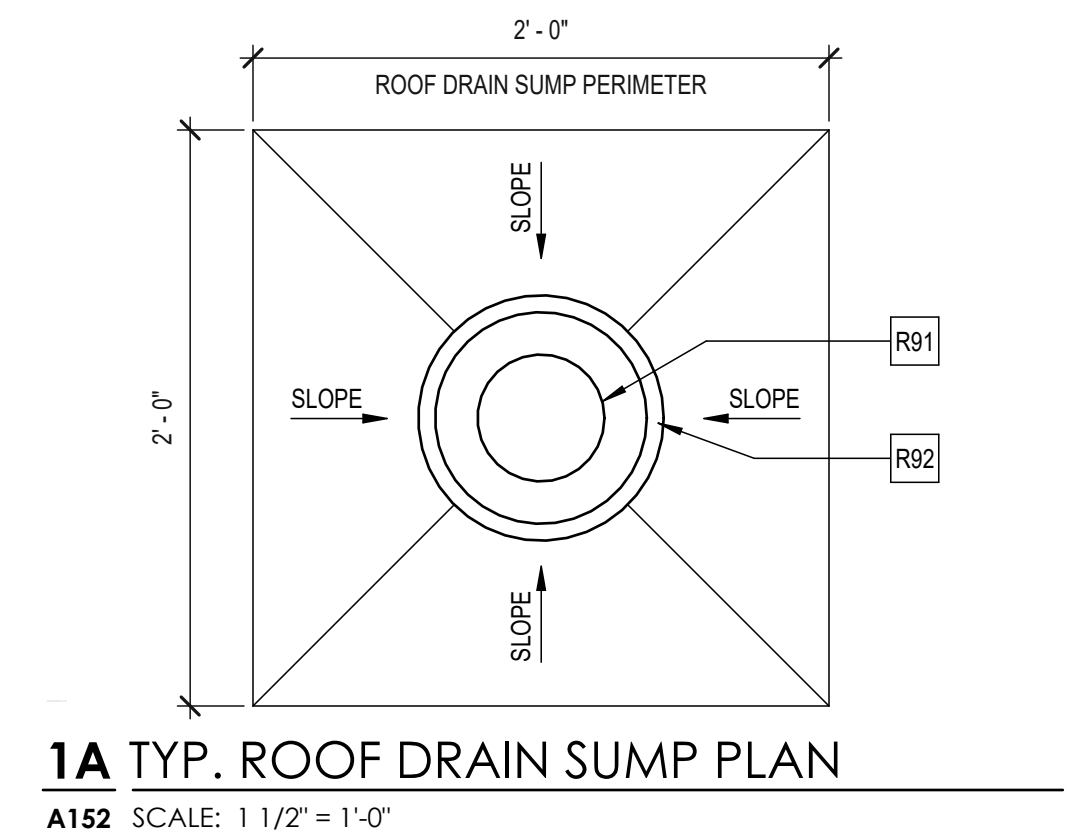
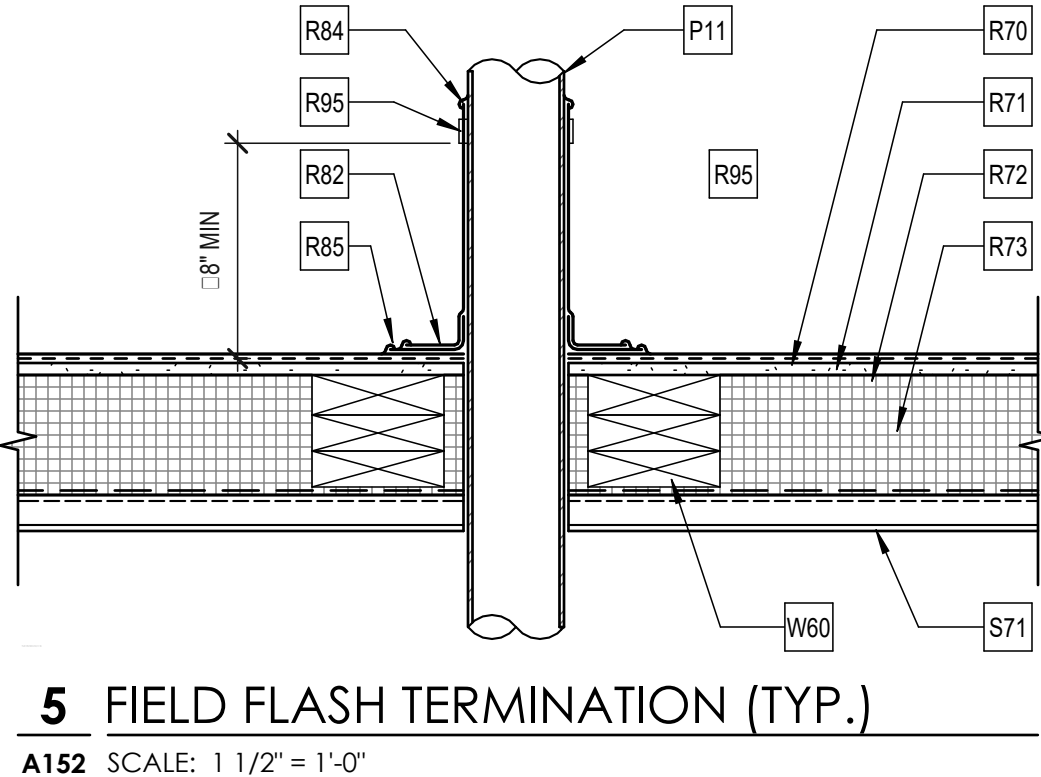
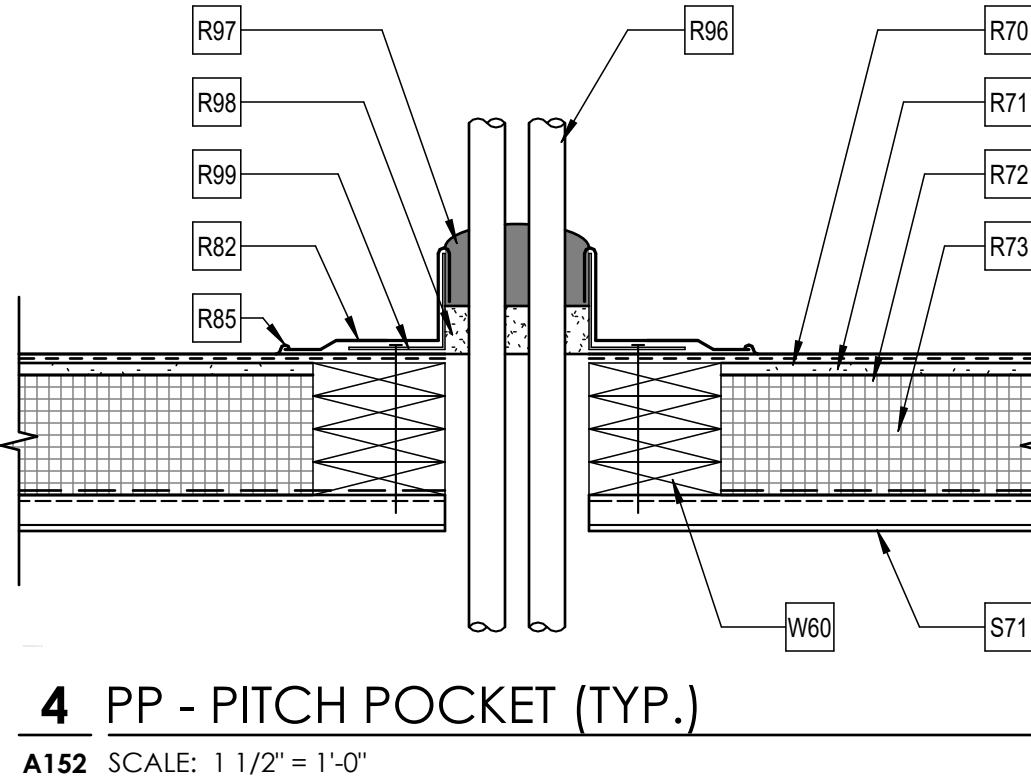
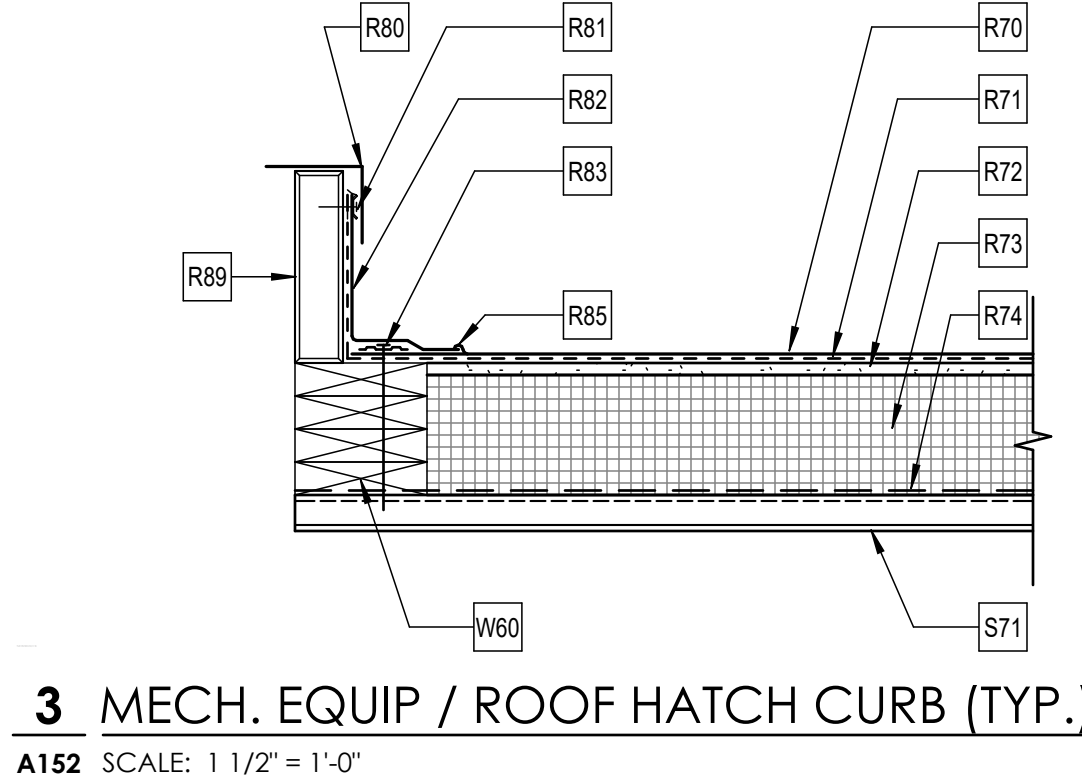
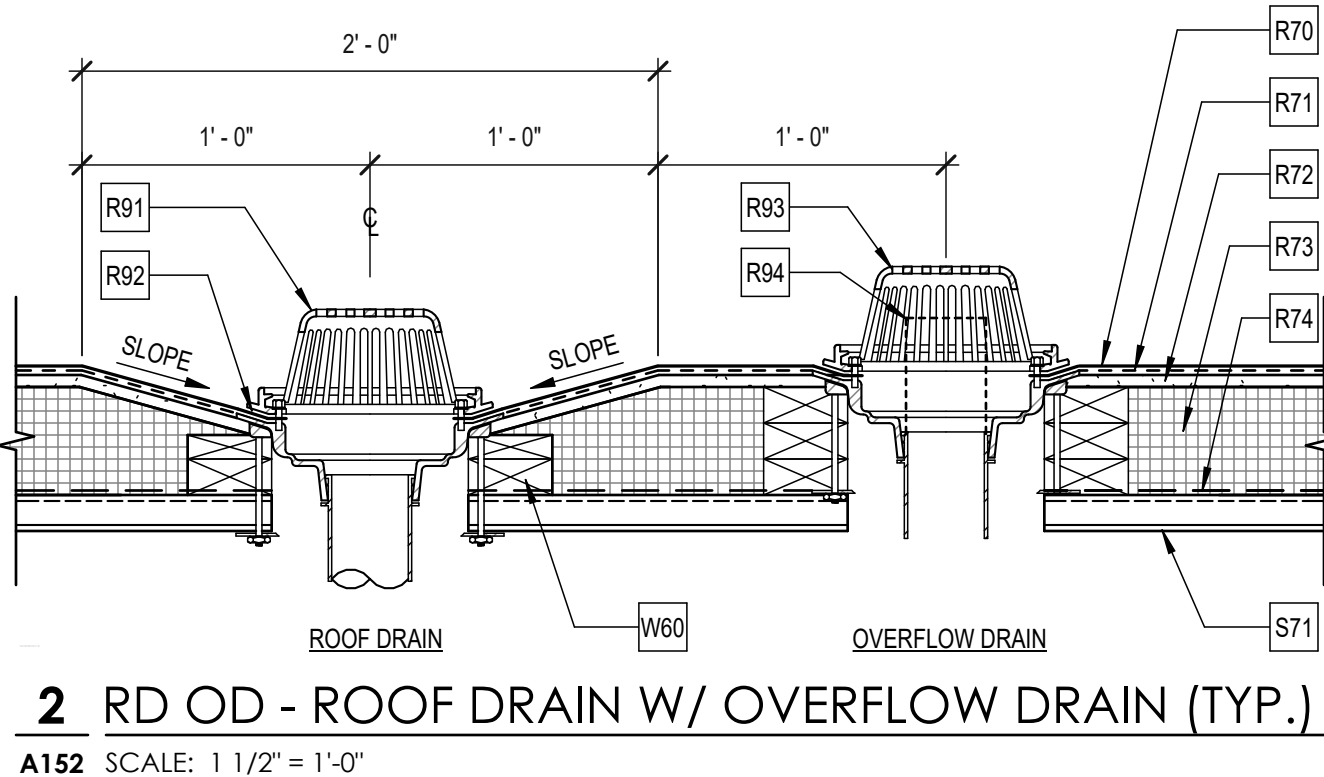
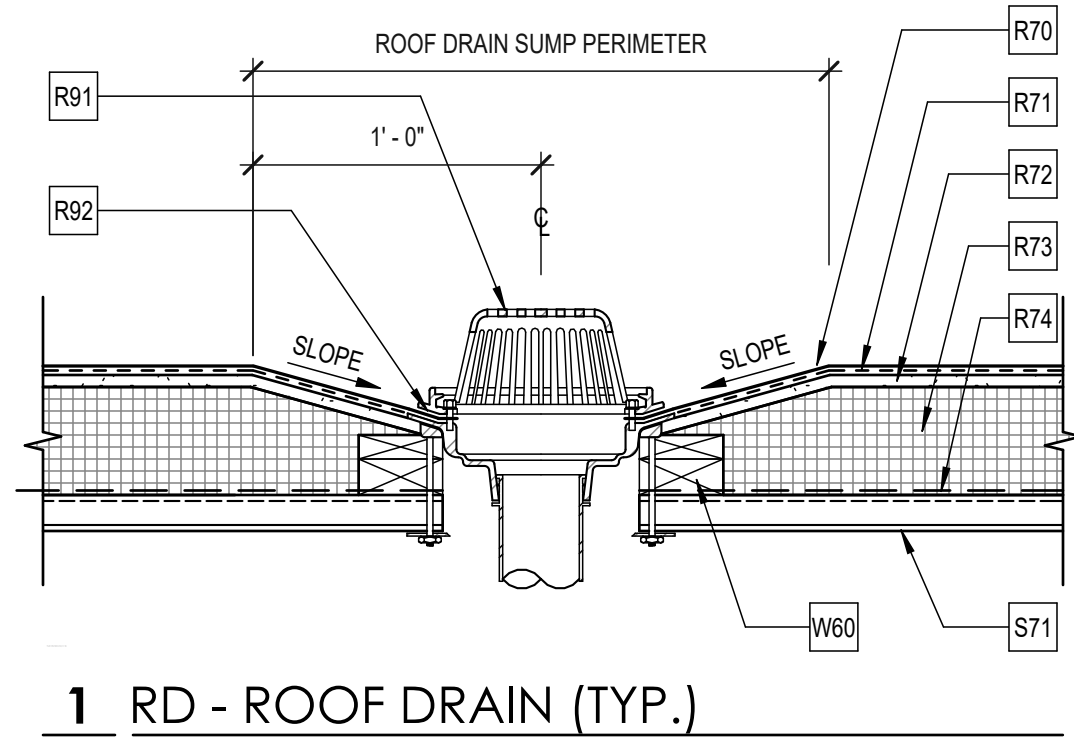
PLAN NORTH SITE NORTH

SHEET NAME:

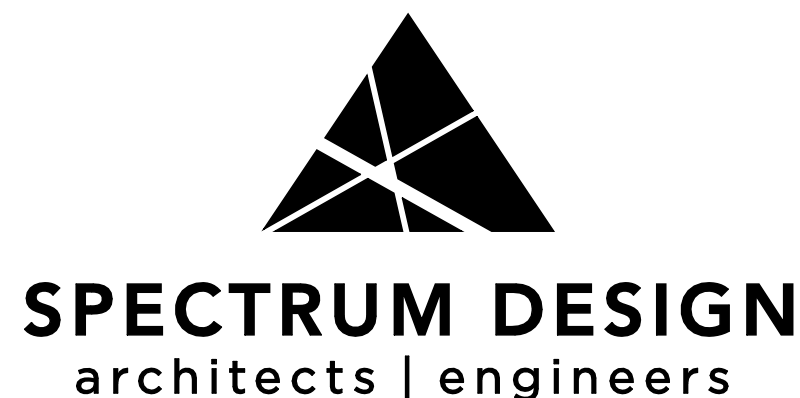
**MAIN LEVEL FLOOR
PLAN**

SHEET NUMBER:

A102



- ROOF PLAN GENERAL NOTES**
- GN-1: SEE ROOF ASSEMBLIES FOR ROOF CONSTRUCTION U.N.O.
- GN-2: PROVIDE CRICKETS AT ALL OBSTRUCTIONS TO MAINTAIN POSITIVE DRAINAGE.
- GN-3: ALL BLOCKING SHALL BE PRESSURE TREATED.
- GN-4: FLASH AND SEAL ALL PENETRATIONS AND CURBS PER ROOFING MANUFACTURER'S RECOMMENDED DETAILS.
- GN-5: COORDINATE ALL ROOF PENETRATIONS WITH STRUCTURAL, PLUMBING, MECHANICAL, AND ELECTRICAL DRAWINGS. SEE M.E.P. DRAWINGS FOR ADDITIONAL PENETRATIONS NOT SHOWN ON ARCHITECTURAL DRAWINGS.
- GN-6: SEE PLUMBING DRAWINGS FOR ROOF DRAIN DIAMETER / SIZE.
- GN-7: SLOPE ALL COPING TOWARDS ROOF U.N.O.
- SHEET KEYNOTES**
- P11 VENT PIPE - SEE PLUMBING DRAWINGS
- R70 FLEXIBLE SHEET MEMBRANE ROOFING (FSM)
- R71 BONDING ADHESIVE
- R72 (1) LAYER 1/2" INSULATED COVERBOARD (R-2.5 MIN)
- R73 POLYISO BOARD INSULATION - STAGGERED JOINTS
- R74 VAPOR / AIR BARRIER MEMBRANE
- R80 CURB FLASHING
- R81 TERMINATION BAR
- R82 FSM FLASHING
- R83 FASTENER AND PLATE
- R84 SEALANT
- R85 HEAT WELD AND SEALANT
- R87 PREFABRICATED PIPE BOOT
- R89 PREMANUFACTURED EQUIPMENT CURB
- R91 ROOF DRAIN ASSEMBLY
- R92 SET ROOF DRAIN ELEVATION 1" BELOW SUMP PERIMETER
- R93 OVERFLOW DRAIN ASSEMBLY
- R94 ADJUSTABLE OVERFLOW DRAIN COLLAR
- R95 STAINLESS STEEL BAND CLAMP
- R96 CONDUIT, PIPE POST, ETC.
- R97 MIN. 2" POURABLE SEALER MOUND TO SHED WATER
- R98 NON-SHRINK GROUT OR OTHER ACCEPTABLE FILLER MATERIAL
- R99 MECHANICALLY ATTACHED METAL DAM
- S71 METAL ROOF DECK
- W60 2x P.T. WOOD BLOCKING



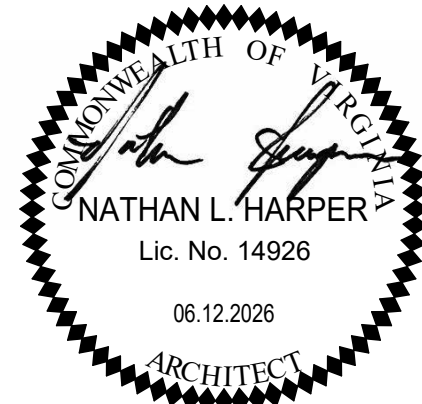
Plaza Suite 1
10 Church Avenue, SE
Roanoke, VA 24011

540.342.4001
spectrumcpe.com

DEPARTMENT OF SOCIAL SERVICES BUILDING

BEDFORD COUNTY

SPECTRUM DESIGN PROJECT NO.: 24112



PROJ. MGR.: **JM** CHECKED BY: **NLH** DRAWN BY: **MCA, TLR, LAC**

SHEET ISSUE DATE:

06.12.2026

PROJECT PHASE:
BID DOCUMENTS

SHEET REVISIONS:
REV 1 07.10.2026 ADDENDUM 01



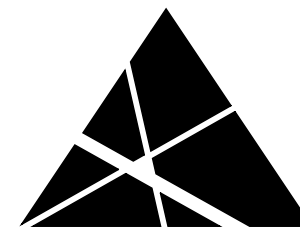
SHEET NAME:

ROOF DETAILS

SHEET NUMBER:

A152

0 4' 8' 16'
SCALE: 1/8" = 1'-0"



SPECTRUM DESIGN
architects | engineers

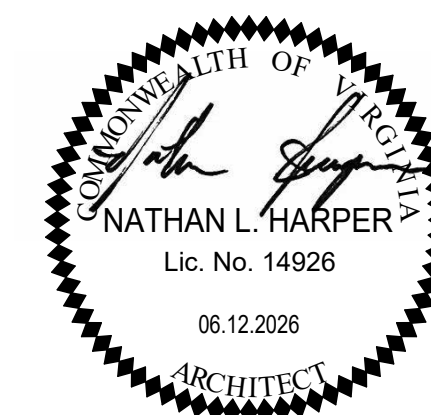
Plaza Suite 1
10 Church Avenue, SE
Roanoke, VA 24011

540.342.4001
spectrumpc.com

DEPARTMENT OF SOCIAL SERVICES BUILDING

BEDFORD COUNTY

SPECTRUM DESIGN PROJECT NO.: 24112



PROJ. MGR.: **JM** CHECKED BY: **NLH** DRAWN BY: **MCA, TLR, LAC**

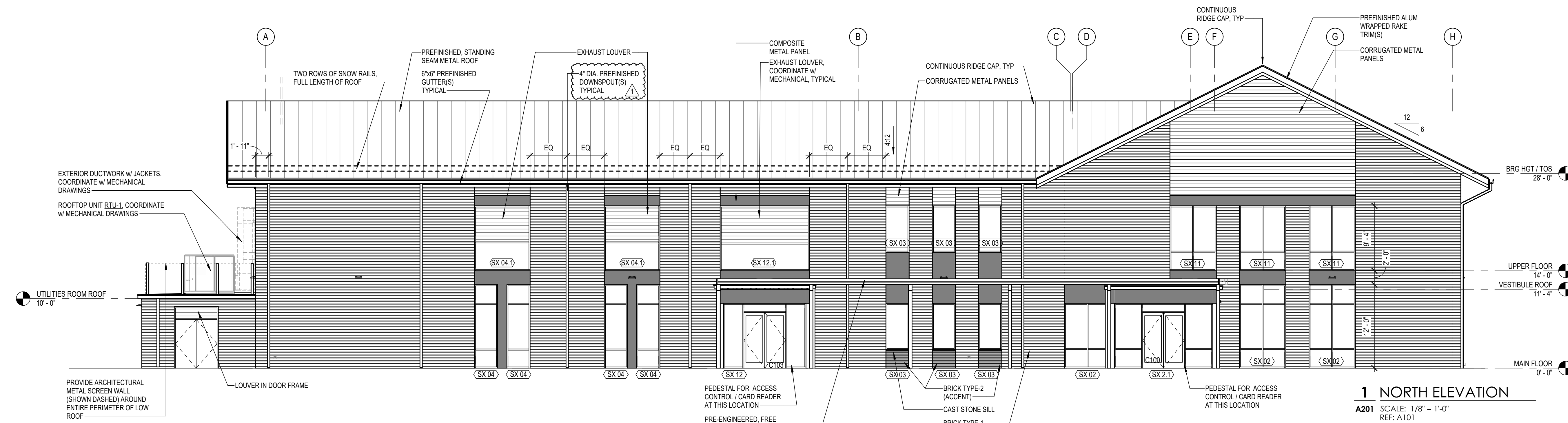
SHEET ISSUE DATE:
06.12.2026

PROJECT PHASE:
BID DOCUMENTS

SHEET REVISIONS:
REV 1 07.10.2026 ADDENDUM 01

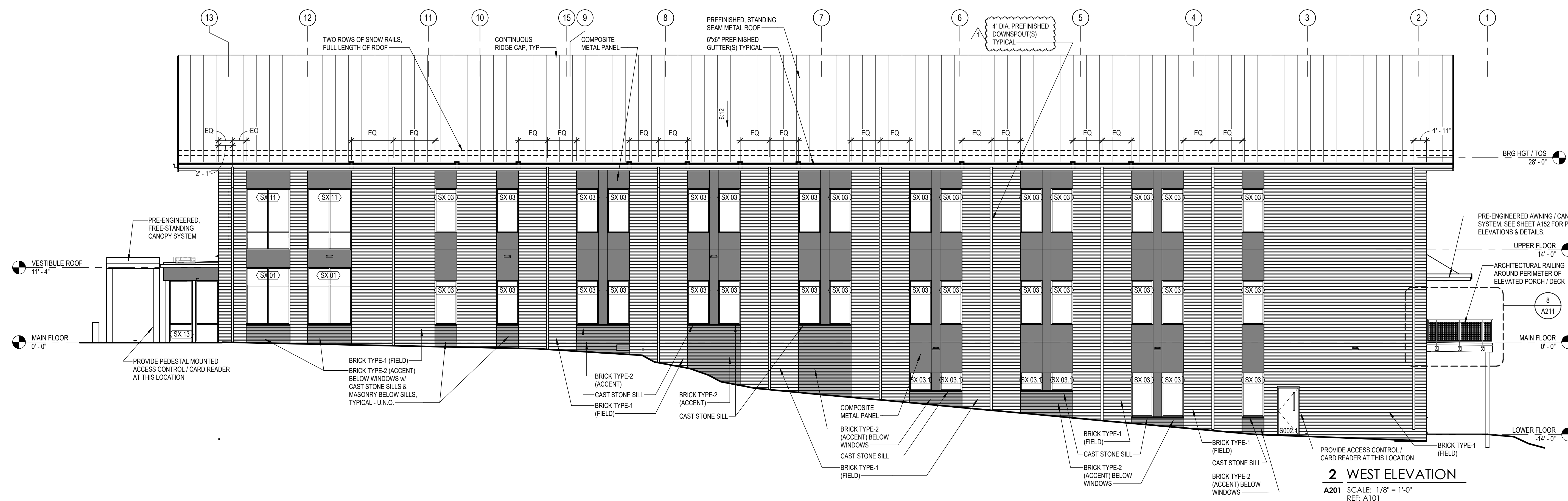
EXTERIOR ELEVATION GENERAL NOTES

- GN-1: SEE ROOF ASSEMBLIES FOR ROOF CONSTRUCTION U.N.O.
GN-2: PROVIDE CRICKETS AT ALL OBSTRUCTIONS TO MAINTAIN POSITIVE DRAINAGE.
GN-3: ALL BLOCKING SHALL BE PRESSURE TREATED.
GN-4: FLASH AND SEAL ALL PENETRATIONS AND CURBS PER ROOFING MANUFACTURER'S RECOMMENDED DETAILS.
GN-5: COORDINATE ALL ROOF PENETRATIONS WITH STRUCTURAL, PLUMBING, MECHANICAL, AND ELECTRICAL DRAWINGS. SEE M.E.P. DRAWINGS FOR ADDITIONAL PENETRATIONS NOT SHOWN ON ARCHITECTURAL DRAWINGS.



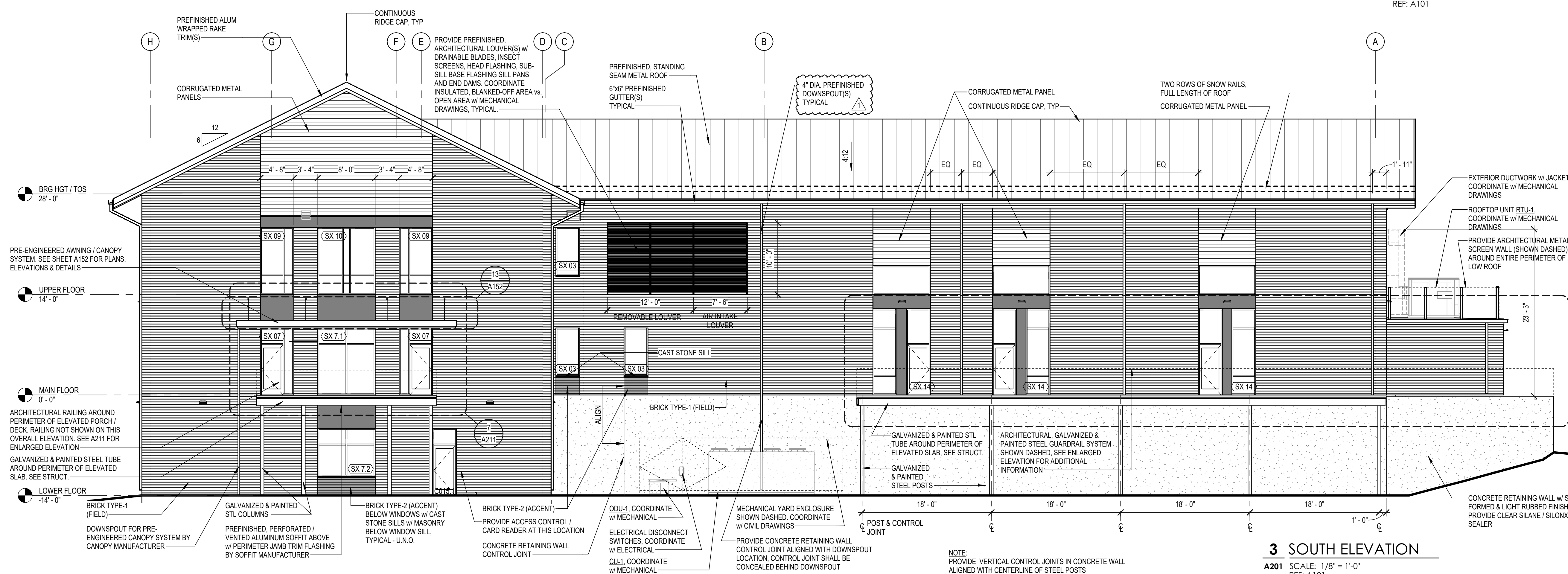
1 NORTH ELEVATION

A201 SCALE: 1/8" = 1'-0"
REF: A101



2 WEST ELEVATION

A201 SCALE: 1/8" = 1'-0"
REF: A101



3 SOUTH ELEVATION

A201 SCALE: 1/8" = 1'-0"
REF: A101

EXTERIOR ELEVATION MATERIAL LEGEND

FRAMED OPENINGS INDICATOR

Frame Type	CW = CURTAIN WALL
Frame No.	LVR = LOUVER
Frame Depth	HM = HOLLOW METAL
	SF = STOREFRONT (INTERIOR)
	SX = STOREFRONT (EXTERIOR)
	WN = WINDOW

GLAZING / PANEL LEGEND

GL-1 = 1/4" CLEAR	GL-5 = 1/4" ONE WAY MIRROR GLASS
GL-2 = 1" INSULATED	GL-6 = 1" INSULATED W/ SAFETY FILM
GL-3 = 1" INSULATED SPANDREL	IP = INSULATED METAL PANEL
GL-4 = 1" INSULATED W/ FROSTED FILM	

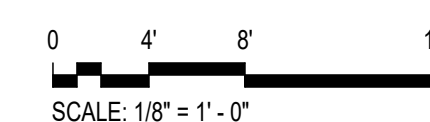


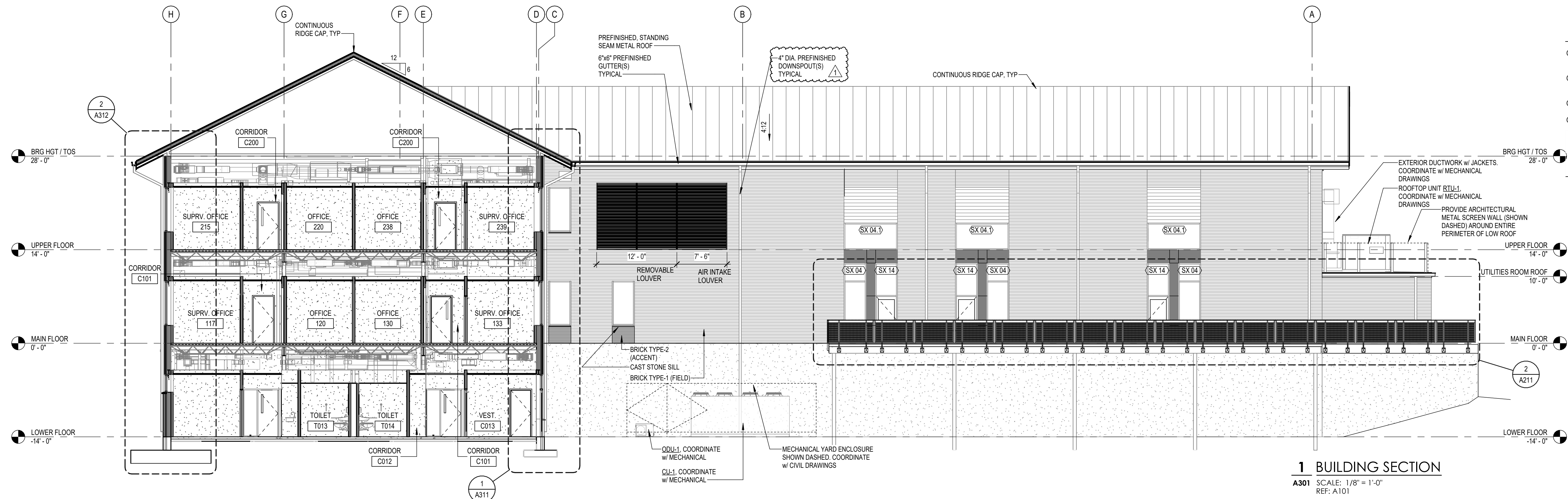
SHEET NAME:

EXTERIOR ELEVATIONS

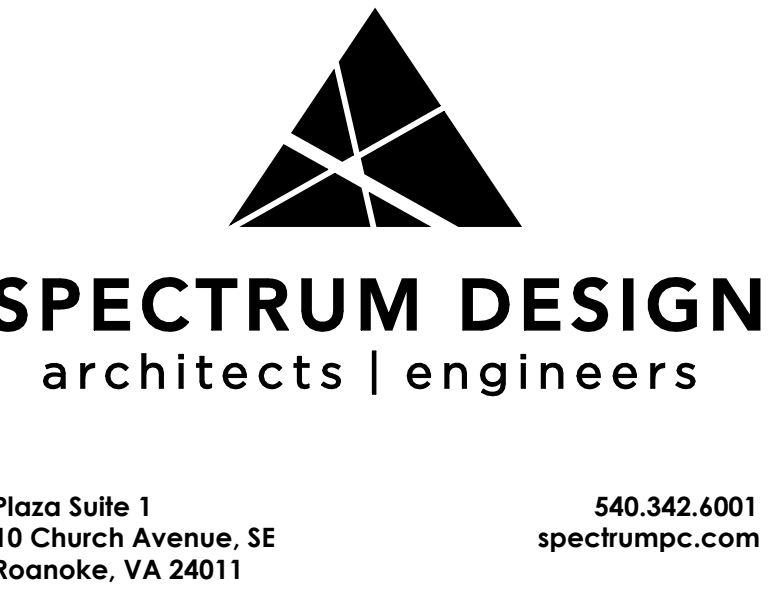
SHEET NUMBER:

A201





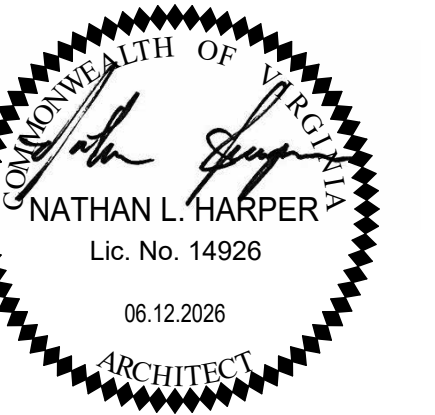
- WALL SECTION & DETAILS GENERAL NOTES**
- GN-1: FINISH GRADES, FOOTINGS, AND FOUNDATIONS ARE SHOWN FOR ILLUSTRATION ONLY - SEE CIVIL AND STRUCTURAL DRAWINGS.
- GN-2: SEE STRUCTURAL DRAWINGS FOR MASONRY REINFORCING, GROUTING, AND BOND BEAMS.
- GN-3: PROVIDE COLD FORMED METAL FRAMING KICKERS AS REQUIRED.
- GN-4: SEE ASSEMBLIES SHEET FOR INTERIOR WALL AND PARTITION TYPES, EXTERIOR WALLS, AND ROOF TYPES.
- SHEET KEYNOTES**



DEPARTMENT OF SOCIAL SERVICES BUILDING

BEDFORD COUNTY

SPECTRUM DESIGN PROJECT NO.:24112



PROJ. MGR.: **JM** CHECKED BY: **NLH** DRAWN BY: **MCA, TLR, LAC**

SHEET ISSUE DATE:
06.12.2026

PROJECT PHASE:
BID DOCUMENTS

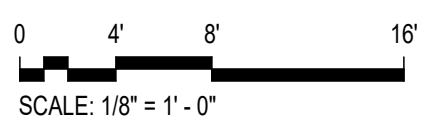
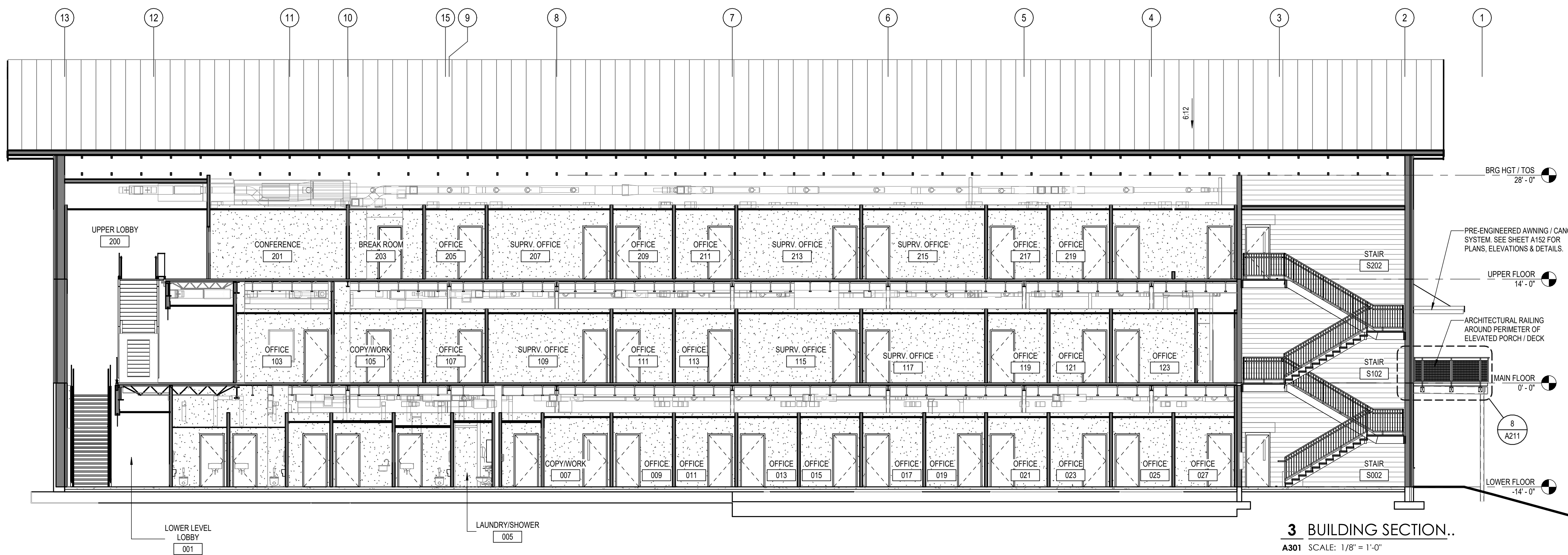
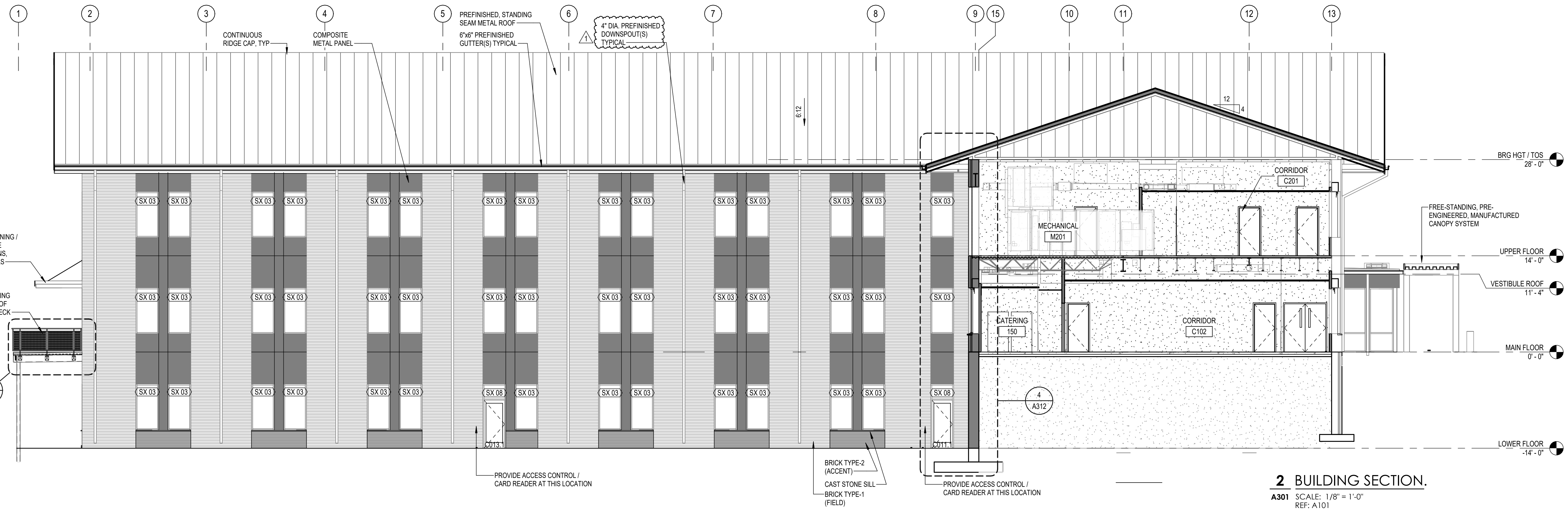
SHEET REVISIONS:
REV 1 07.10.2026 ADDENDUM 01



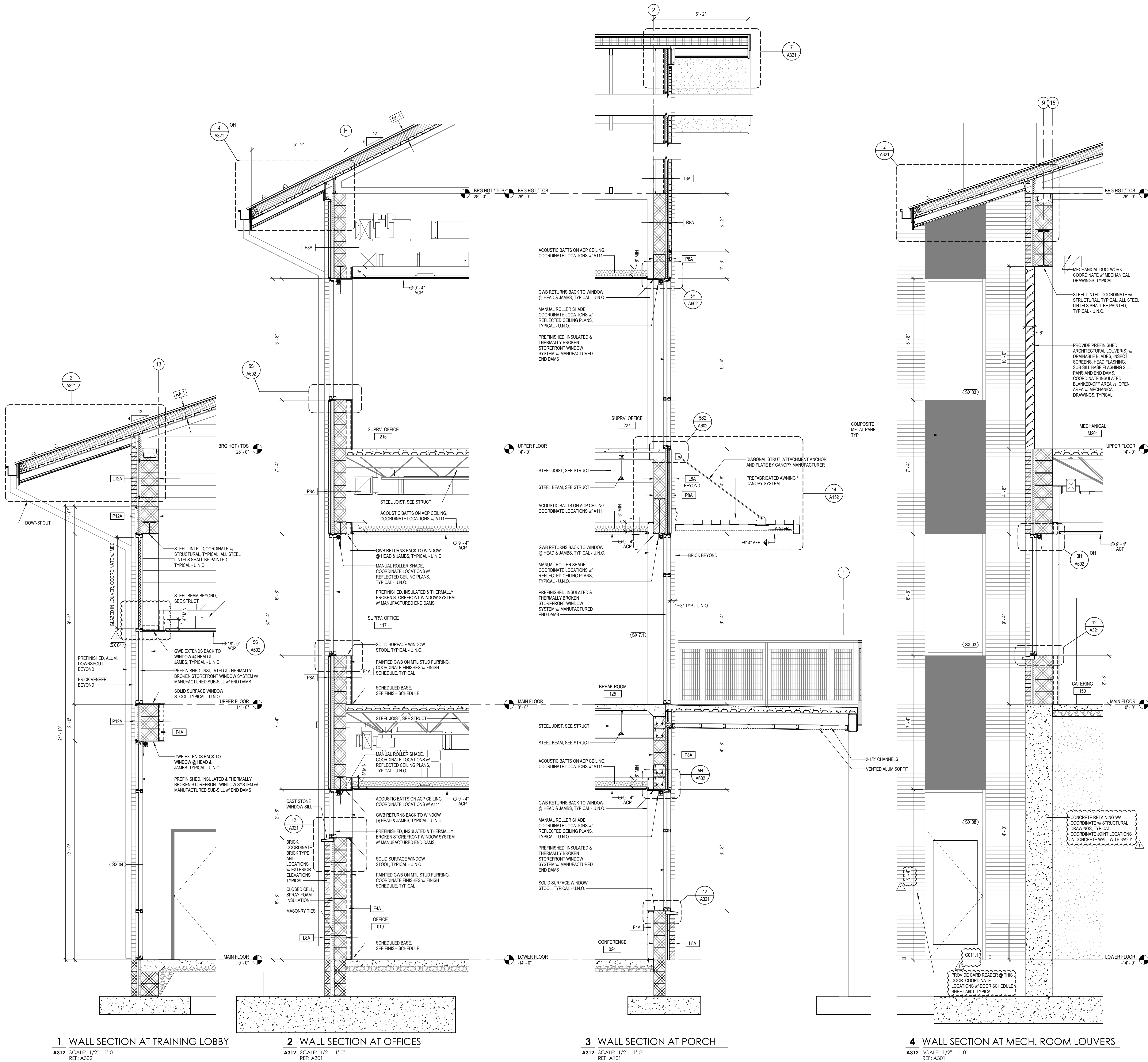
SHEET NAME:
BUILDING SECTIONS

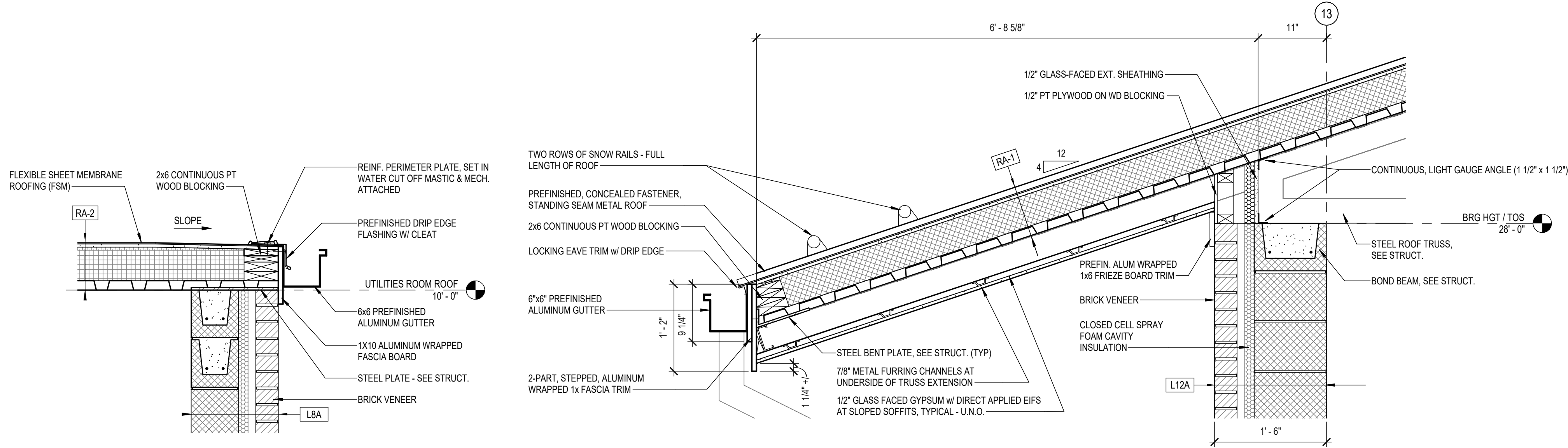
SHEET NUMBER:

A301



ORIGINAL SET: A312 (1/2" = 1'-0") 1/1/2024, 03:57 PM
C:\Users\jharper\OneDrive\Documents\A312 (1/2" = 1'-0")\A312 (1/2" = 1'-0").dwg



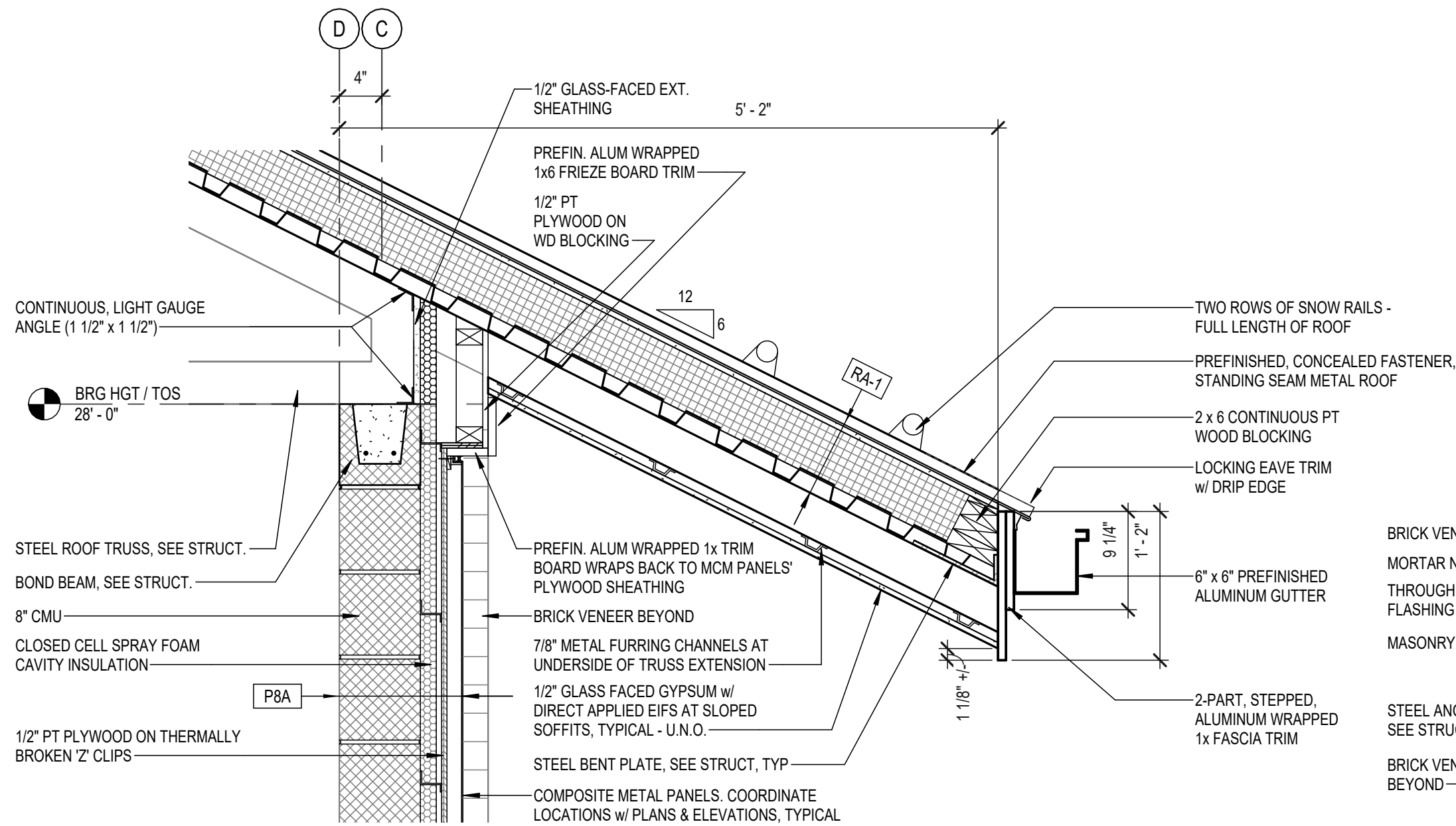


1 ROOF - WALL DETAIL

A321 SCALE: 1" = 1'-0"
REF: A313

2 ROOF - WALL TRANSITION @ BRICK, TYP

A321 SCALE: 1" = 1'-0"
REF: A311

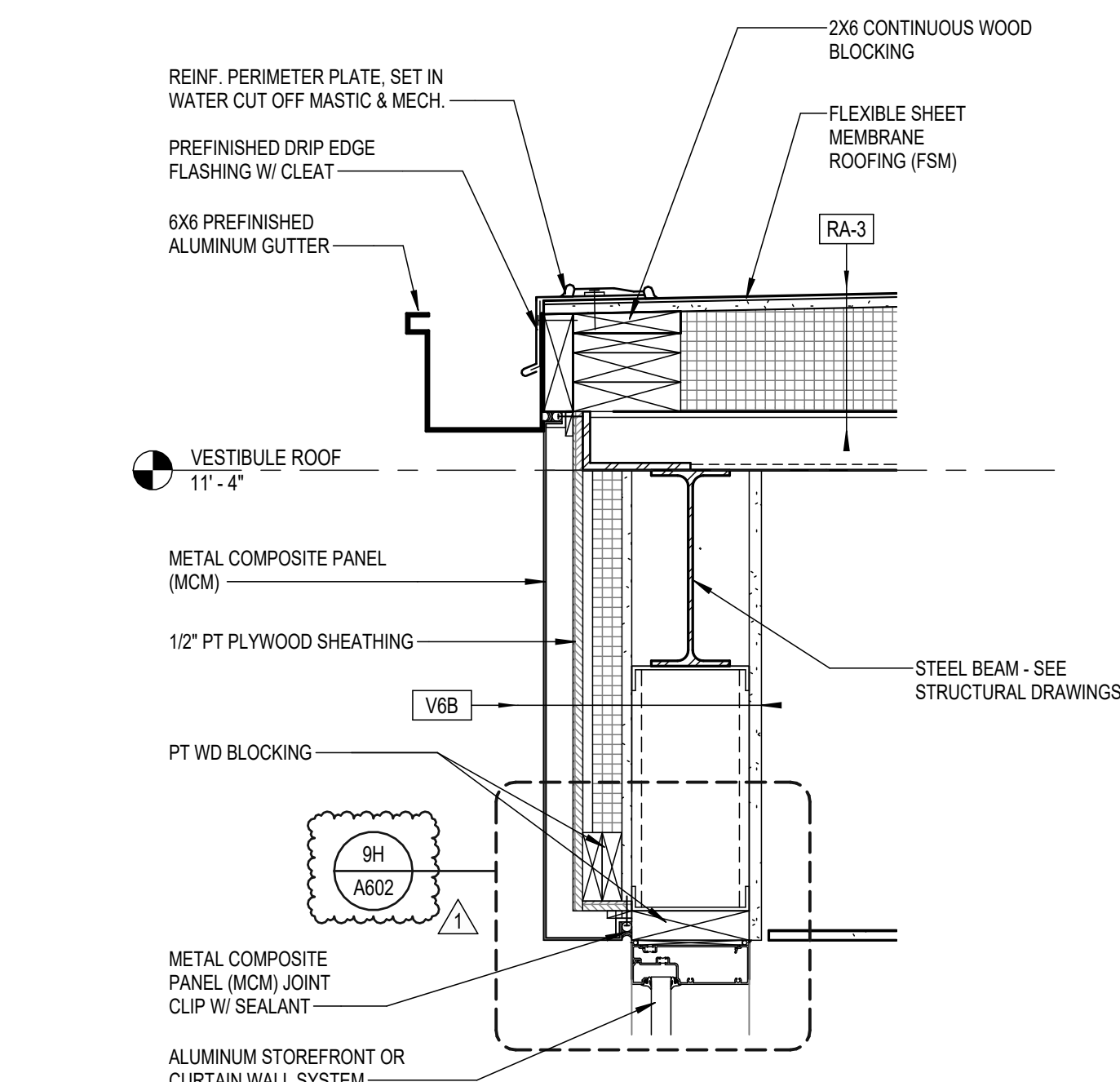


4 ROOF - WALL TRANSITION @ ALUMINUM COMPOSITE PANELS

A321 SCALE: 1" = 1'-0"
REF: A311

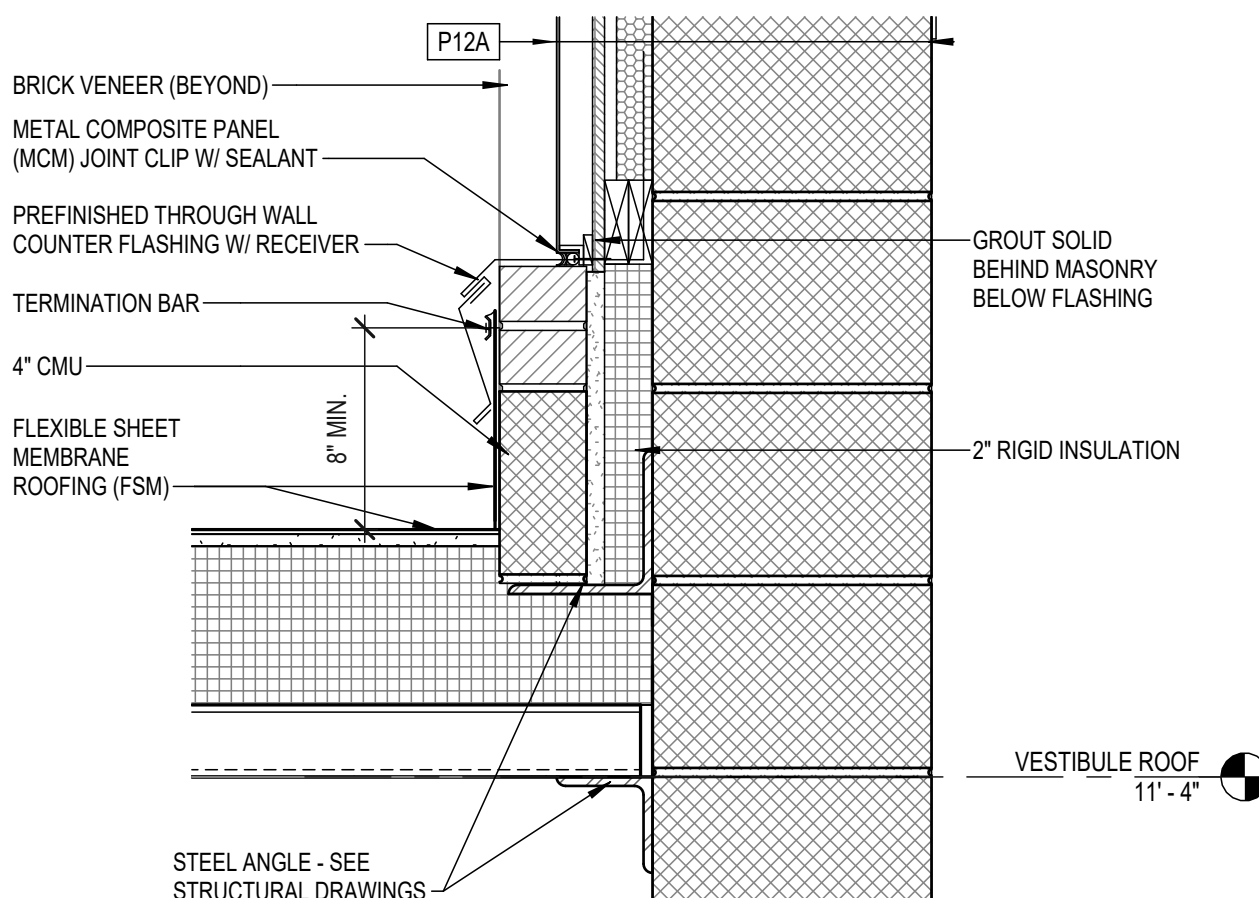
5 WALL DETAIL

A321 SCALE: 1 1/2" = 1'-0"
REF: A311



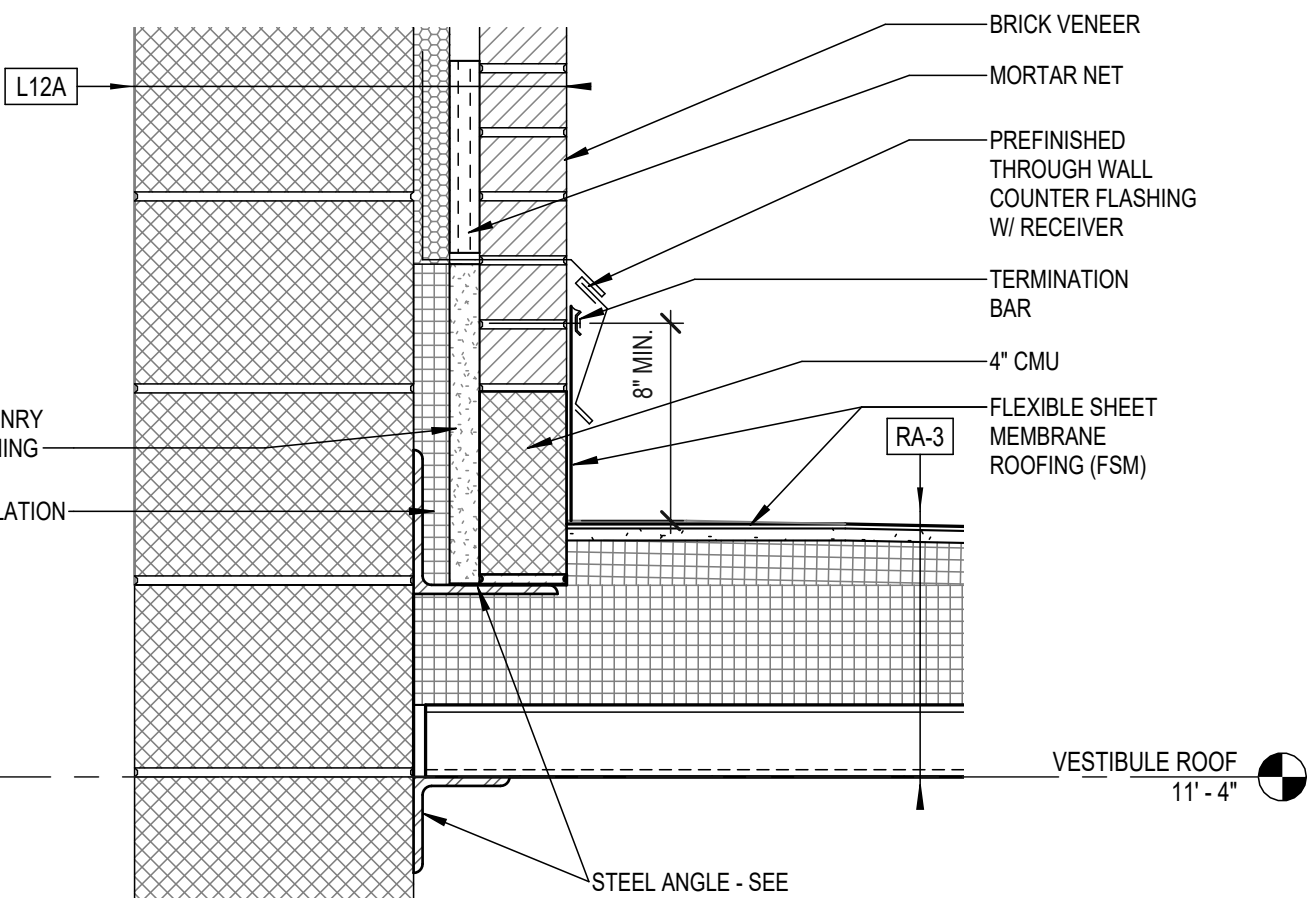
8 VESTIBULE ROOF - EDGE

A321 SCALE: 1 1/2" = 1'-0"
REF: A311



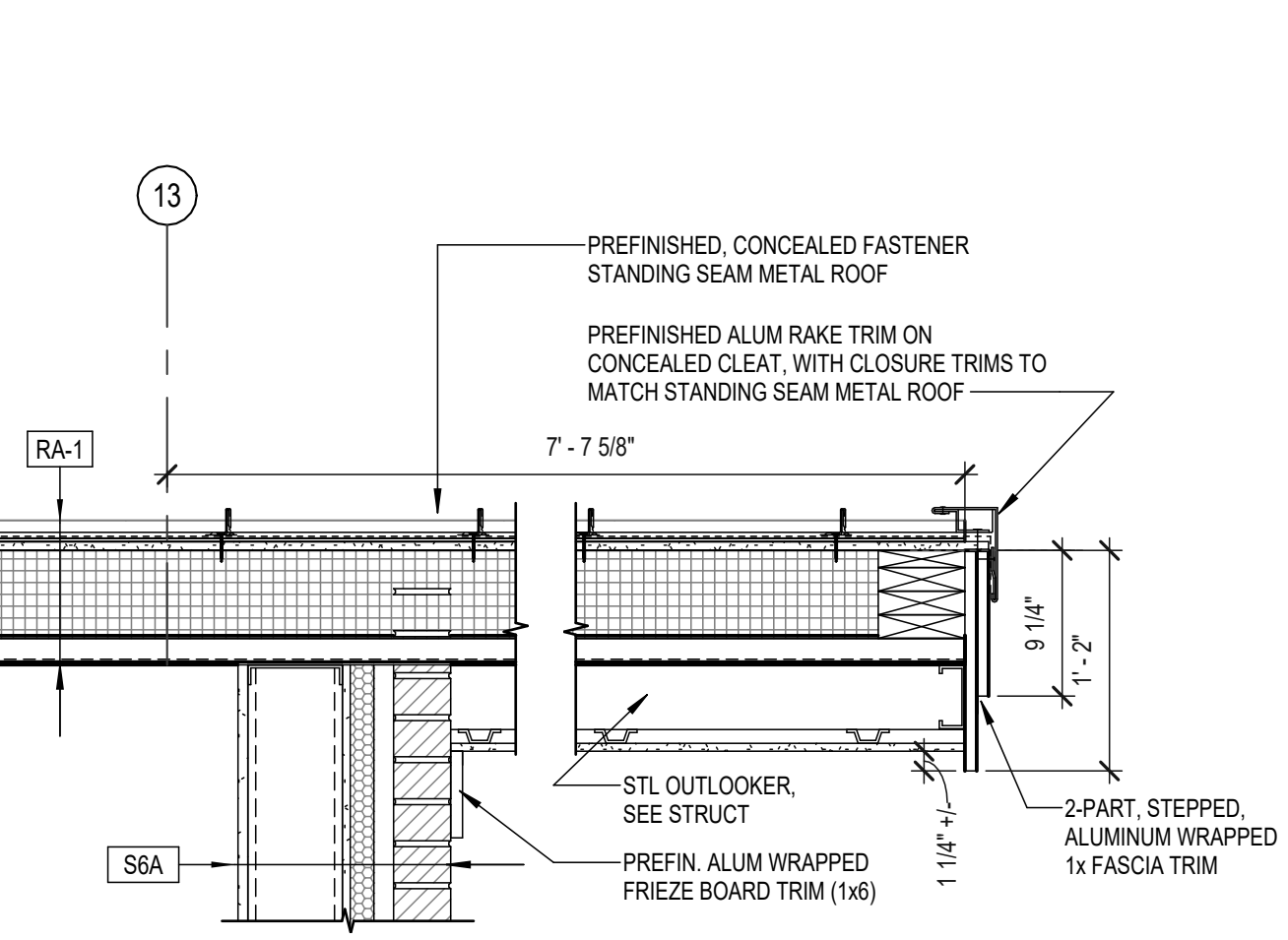
9 VESTIBULE ROOF - MCM

A321 SCALE: 1 1/2" = 1'-0"
REF: A311



10 VESTIBULE ROOF - BRICK

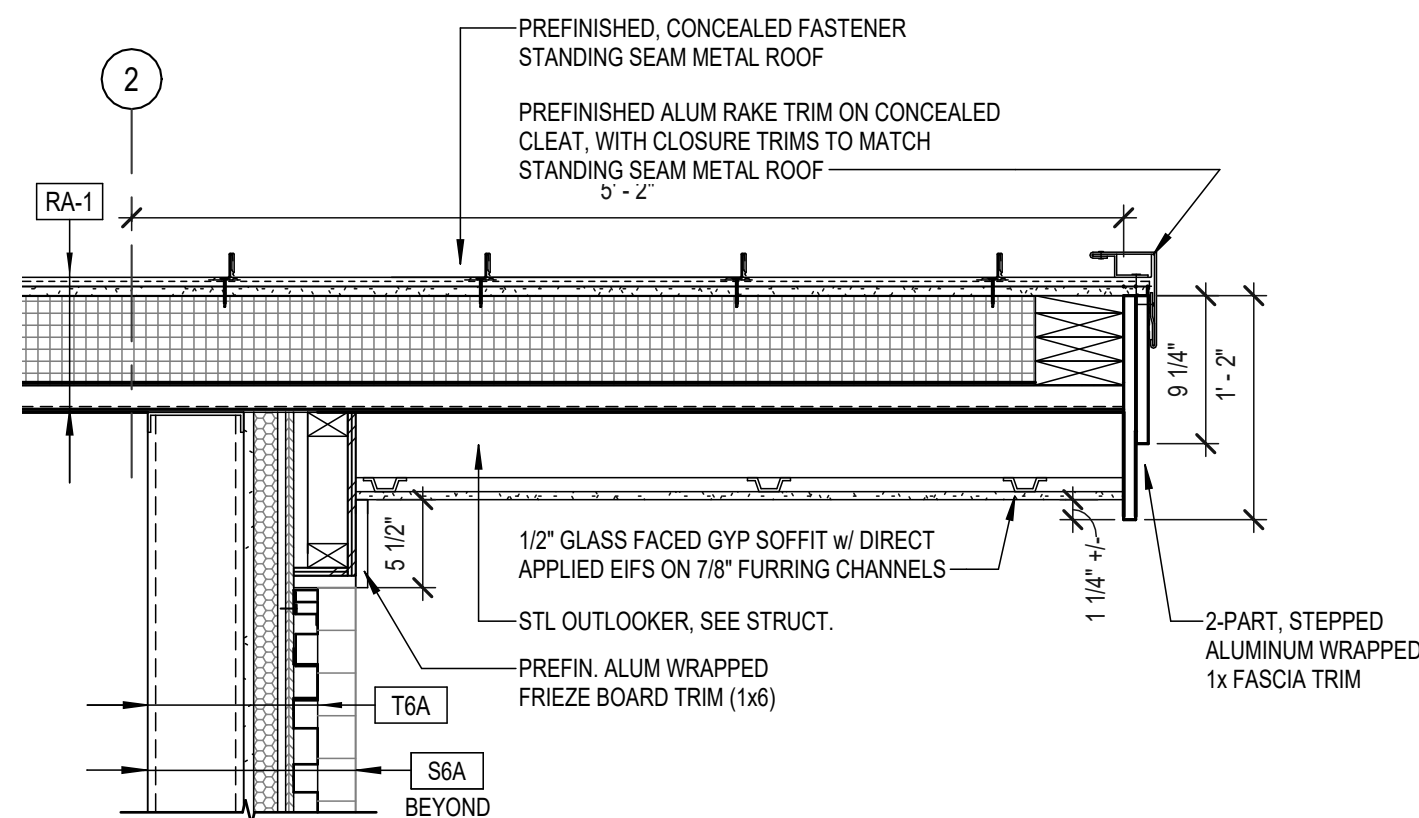
A321 SCALE: 1 1/2" = 1'-0"
REF: A311



3 GABLE END RAKE TRIM DETAIL @ BRICK

A321 SCALE: 1" = 1'-0"
REF: A311

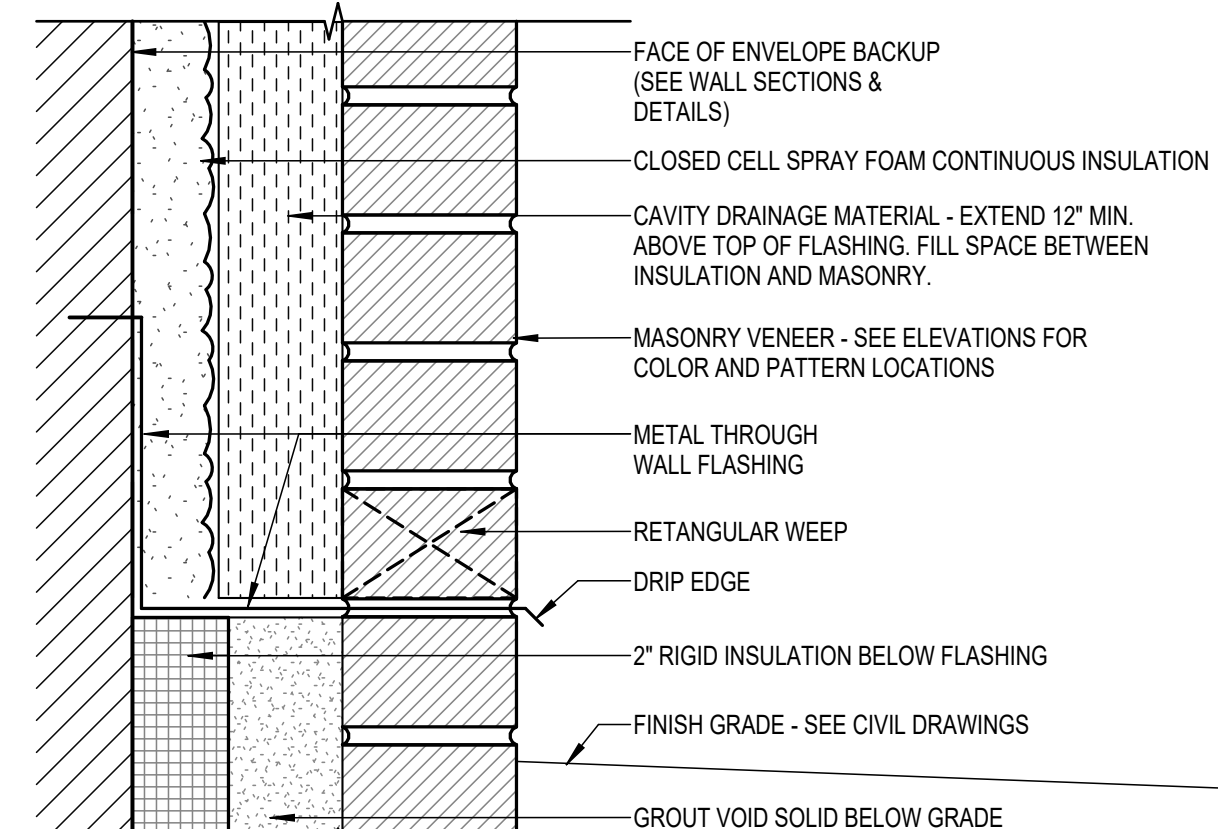
NOTE: GABLE END RAKE TRIM & SOFFIT FASCIA SHALL ALIGN HORIZONTALLY AND VERTICALLY AROUND ENTIRE ROOF PERIMETER.



7 GABLE END RAKE TRIM DETAIL @ CORRUGATED METAL PANEL

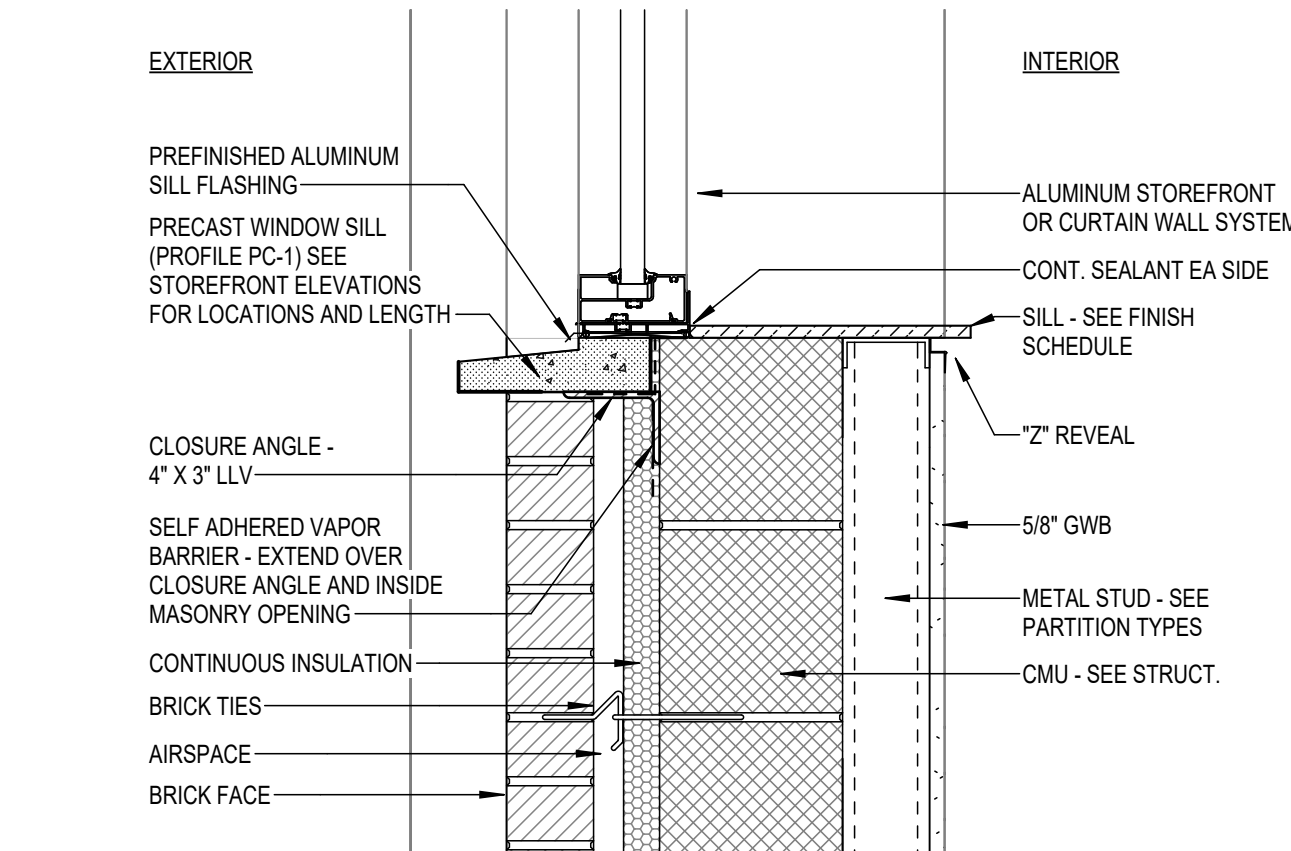
A321 SCALE: 1" = 1'-0"
REF: A312

NOTE: GABLE END RAKE TRIM & SOFFIT FASCIA SHALL ALIGN HORIZONTALLY AND VERTICALLY AROUND ENTIRE ROOF PERIMETER.



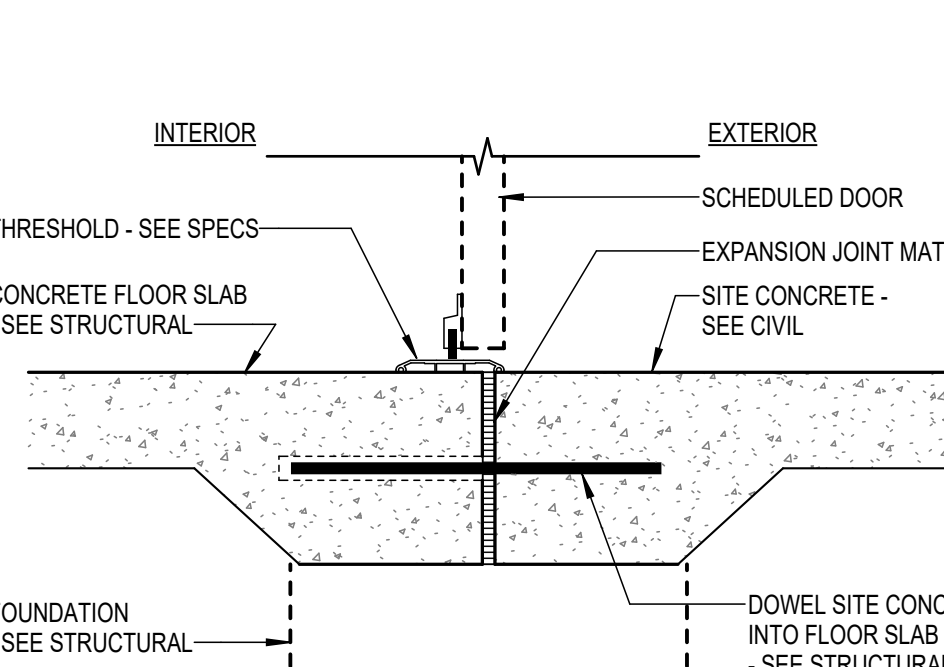
11 TYP. MASONRY WALL FLASHING

A321 SCALE: 3" = 1'-0"
REF: A313



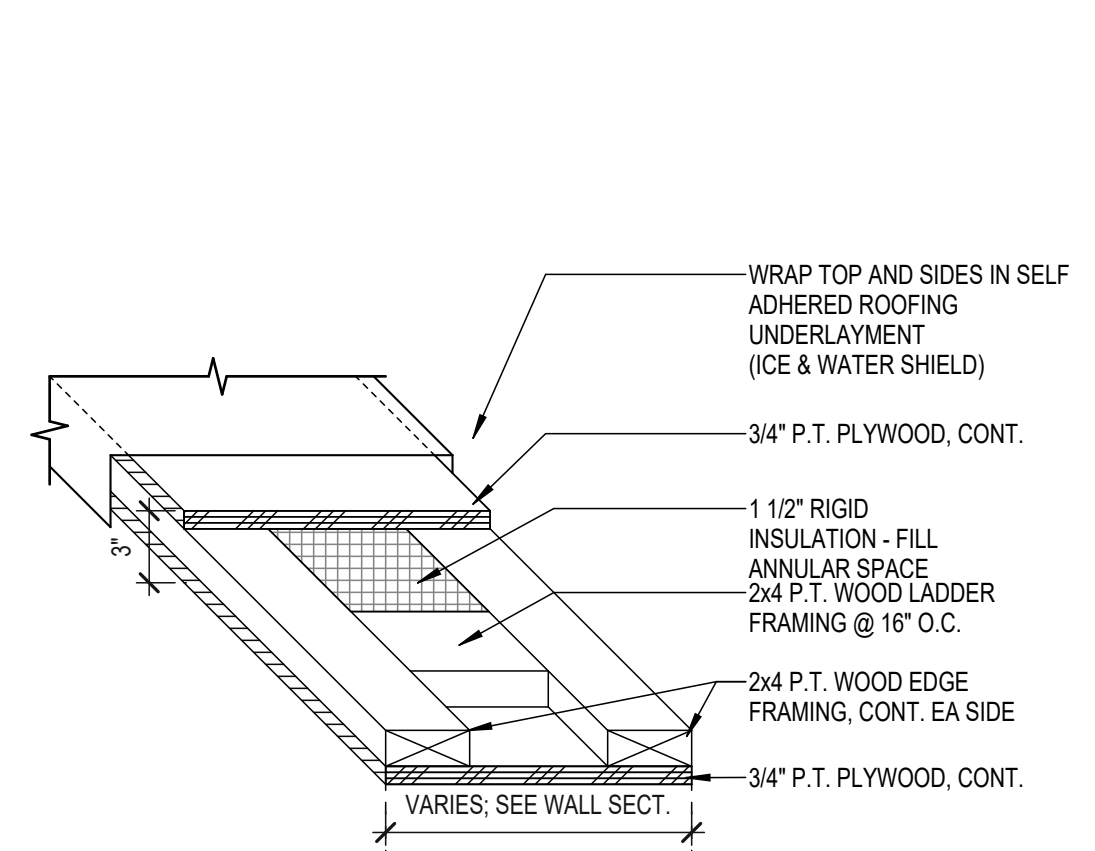
12 SF @ BRICK/CMU W/ STONE SILL

A321 SCALE: 1 1/2" = 1'-0"
REF: A312



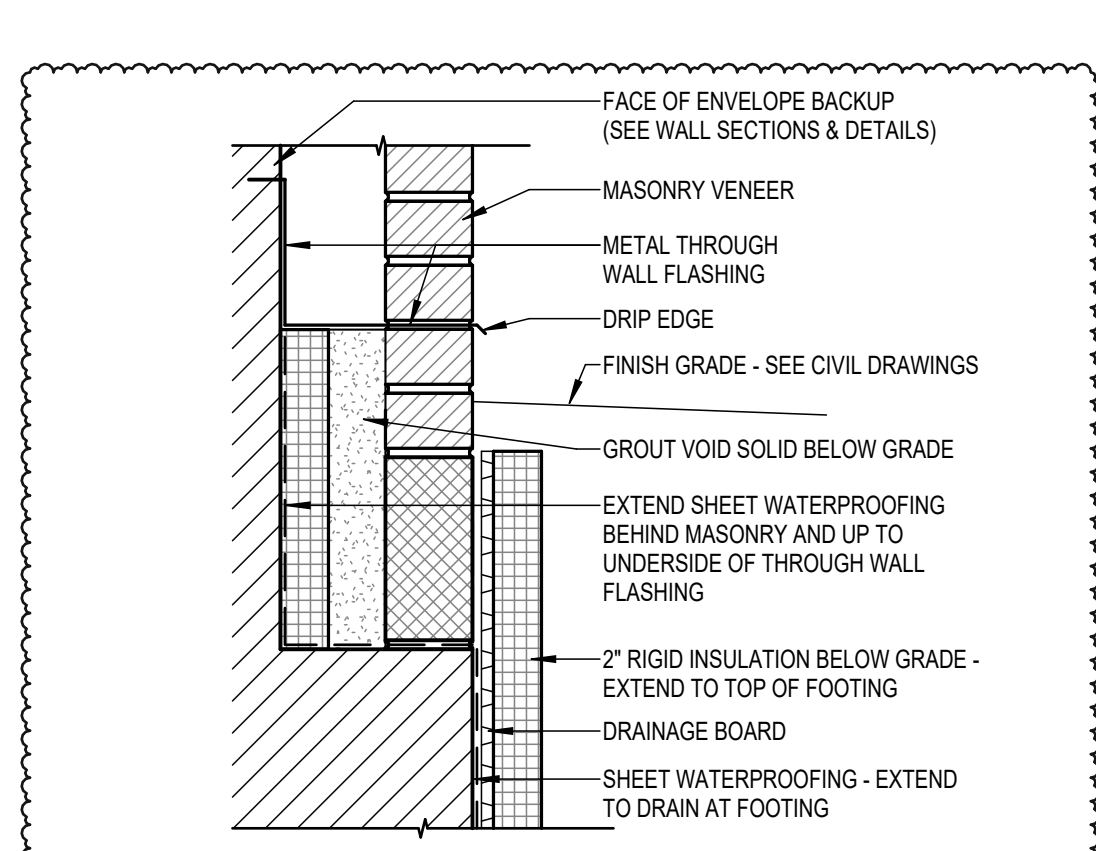
13 TYP. DOOR OPENING

A321 SCALE: 1 1/2" = 1'-0"
REF: A311



14 DETAIL - PARAPET CAP WOOD BLOCKING

A321 SCALE: 1 1/2" = 1'-0"



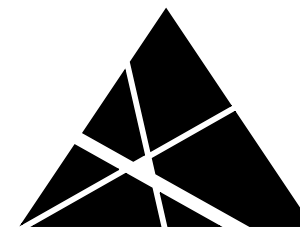
15 TYP. MASONRY WALL FLASHING

A321 SCALE: 1 1/2" = 1'-0"

WALL SECTION & DETAILS GENERAL NOTES

- GN-1: FINISH GRADES, FOOTINGS, AND FOUNDATIONS ARE SHOWN FOR ILLUSTRATION ONLY - SEE CIVIL AND STRUCTURAL DRAWINGS.
- GN-2: SEE STRUCTURAL DRAWINGS FOR MASONRY REINFORCING, GROUTING, AND BOND BEAMS
- GN-3: PROVIDE COLD FORMED METAL FRAMING KICKERS AS REQUIRED.
- GN-4: SEE ASSEMBLY SHEET FOR INTERIOR WALL AND PARTITION TYPES, EXTERIOR WALLS, AND ROOF TYPES.

XX SHEET KEYNOTES



SPECTRUM DESIGN
architects | engineers

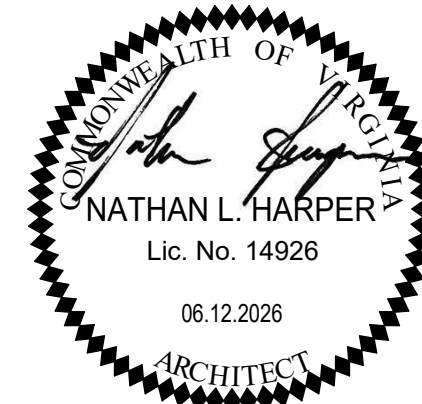
Plaza Suite 1
10 Church Avenue, SE
Roanoke, VA 24011

540.342.6001
spectrumpe.com

**DEPARTMENT OF SOCIAL
SERVICES BUILDING**

BEDFORD COUNTY

SPECTRUM DESIGN PROJECT NO.: 24112



PROJ. MGR.: **JM** CHECKED BY: **NLH** DRAWN BY: **MCA, TLR, LAC**

SHEET ISSUE DATE:

06.12.2026

PROJECT PHASE:

BID DOCUMENTS

SHEET REVISIONS:

REV 1 07.10.2026 ADDENDUM 01



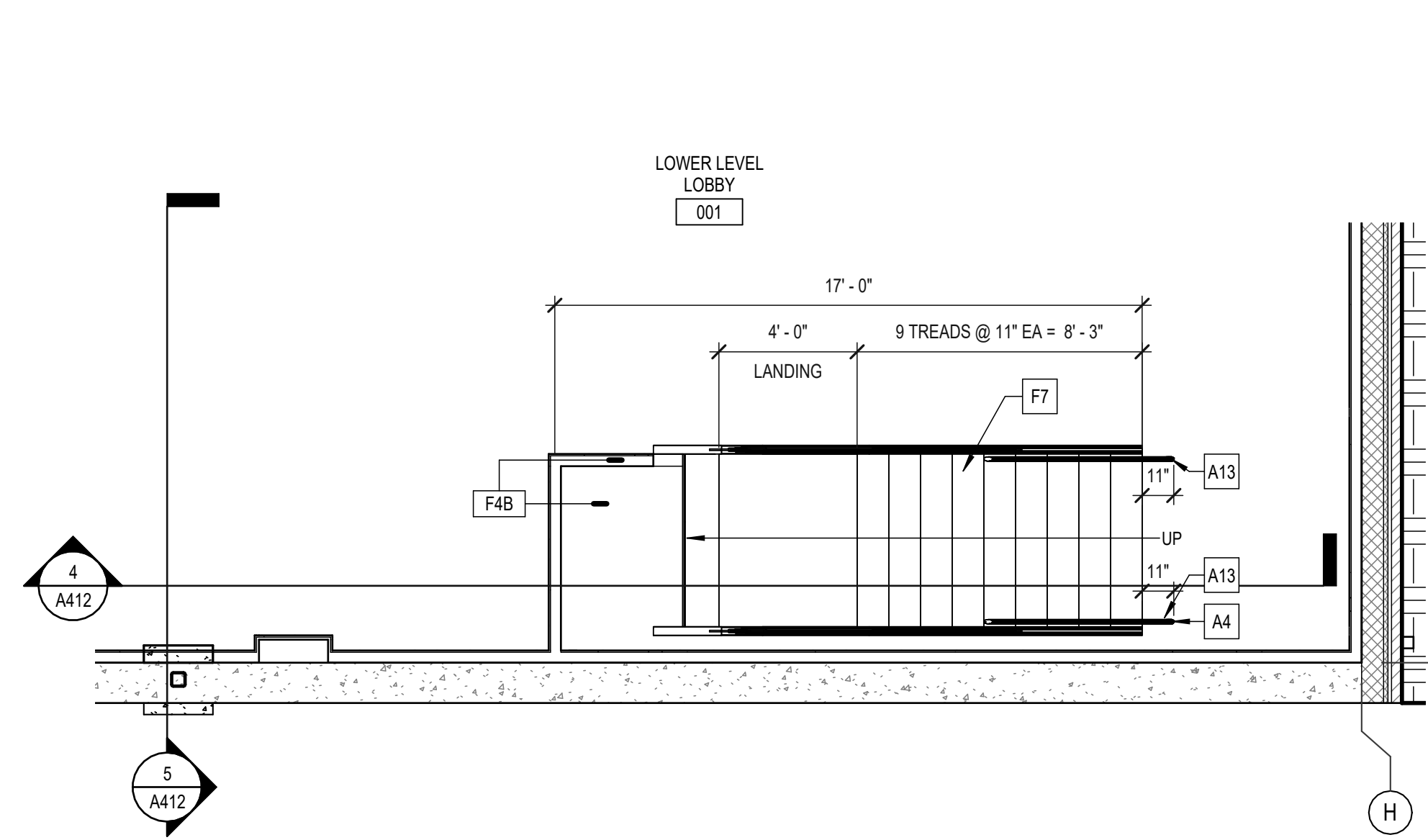
SHEET NAME:

WALL DETAILS

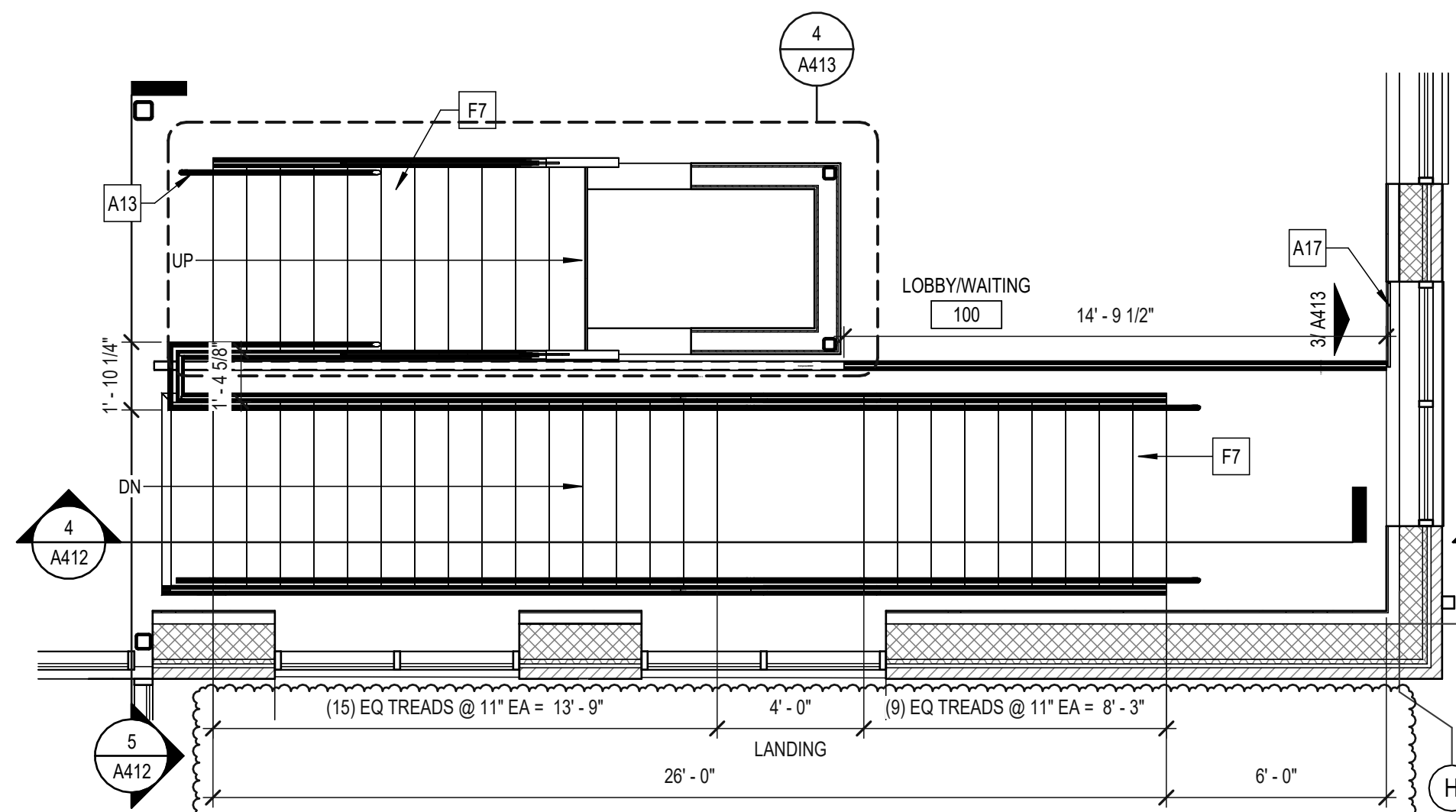
SHEET NUMBER:

A321

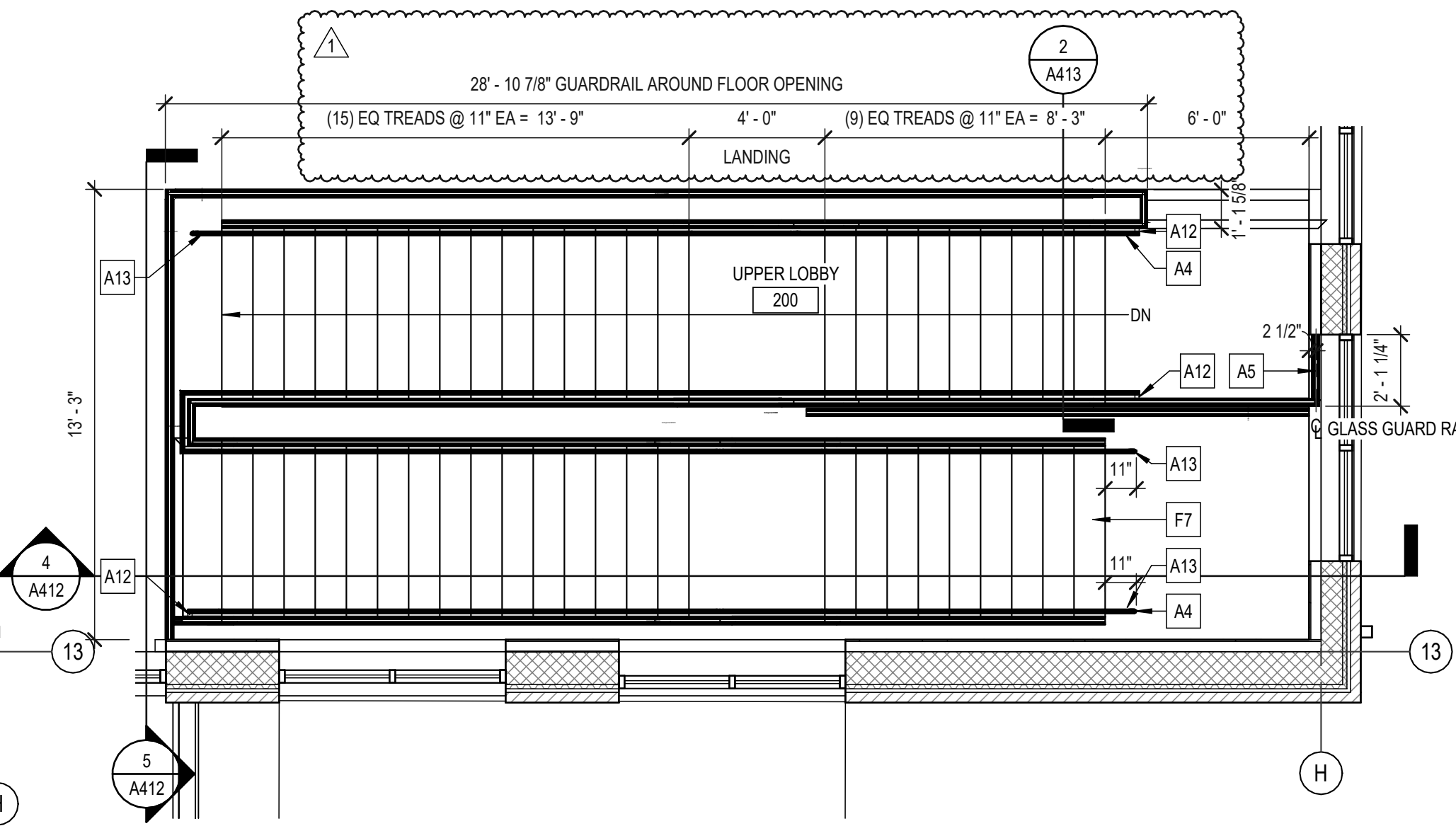
0 0.5' 1' 2'
SCALE: 1 1/2" = 1'-0"



1 MAIN STAIR - LOWER LEVEL PLAN
A412 SCALE: 1/4" = 1'-0"
REF: A101



2 MAIN STAIR - FIRST FLOOR PLAN
A412 SCALE: 1/4" = 1'-0"
REF: A102



3 MAIN STAIR - SECOND FLOOR PLAN
A412 SCALE: 1/4" = 1'-0"
REF: A103

VERTICAL CIRCULATION GENERAL NOTES

GN-1: FINISH GRADES, FOOTINGS, AND FOUNDATIONS ARE SHOWN FOR ILLUSTRATION ONLY - SEE CIVIL AND STRUCTURAL DRAWINGS.

GN-2: SEE STRUCTURAL DRAWINGS FOR MASONRY REINFORCING, GROUTING, AND BOND BEAMS.

GN-3: PROVIDE COLD FORMED METAL FRAMING KICKERS AS REQUIRED.

GN-4: SEE ASSEMBLIES SHEET FOR INTERIOR WALL AND PARTITION TYPES, EXTERIOR WALLS, AND ROOF TYPES.

SHEET KEYNOTES

A4 1 1/2" O.D. STAINLESS STEEL HANDRAIL

A5 TURN GUARDRAIL SYSTEM INTO WINDOW OPENING.

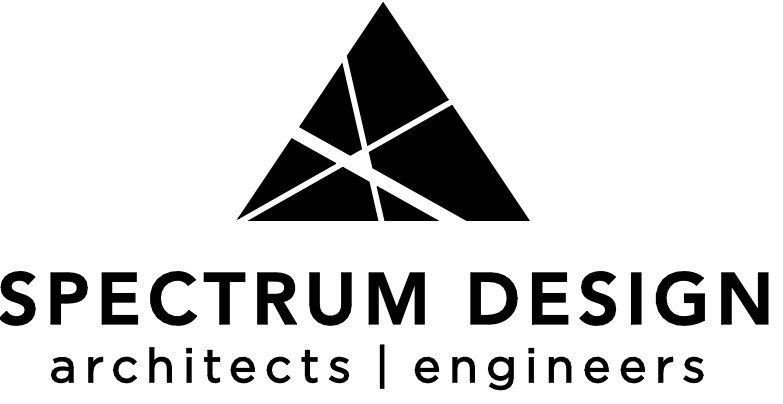
A12 RETURN HANDRAIL TO GLASS GUARDRAIL

A13 RETURN HANDRAIL EXTENSION TO FLOOR

A14 CONCEALED MOUNT SMOKE Baffle SYSTEM WRAPS PERIMETER OF CEILING OPENING AT STAIR, CENTER WITHIN BULKHEAD.

A17 U-CAP AT TOP AND BOTTOM OF LAMINATED GLAZING, MATCH APPEARANCE OF U-CAP AT TOP OF GLASS GUARDRAIL SYSTEM.

F7 TILE STAIR TREADS, RISERS, AND LANDINGS, PT-1, SEE FINISH SCHEDULE FOR ADDITIONAL INFORMATION, PROVIDE ALUMINUM SLIP RESISTANT STAIR NOSINGS AT TILE TREADS, BASIS OF DESIGN: SCHLUTER TREP-E AND PROVIDE PERIMETER JOINT PROFILE AT TILE EDGES AT STRINGER AND AT INSIDE CORNER WHERE TILE ON TREAD MEETS TILE ON RISER, BASIS OF DESIGN: SCHLUTER DILEX-BWA.



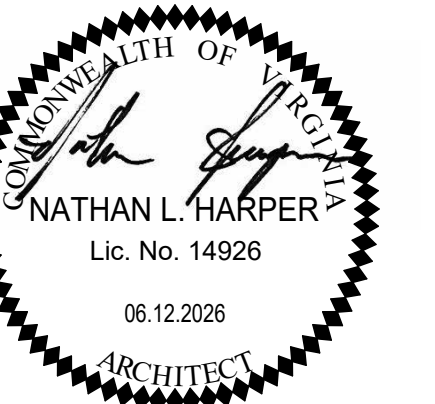
Plaza Suite 1
10 Church Avenue, SE
Roanoke, VA 24011

540.342.4001
spectrumpc.com

DEPARTMENT OF SOCIAL SERVICES BUILDING

BEDFORD COUNTY

SPECTRUM DESIGN PROJECT NO.: 24112



PROJ. MGR.: **JM** CHECKED BY: **NLH** DRAWN BY: **MCA, TLR, LAC**

SHEET ISSUE DATE:

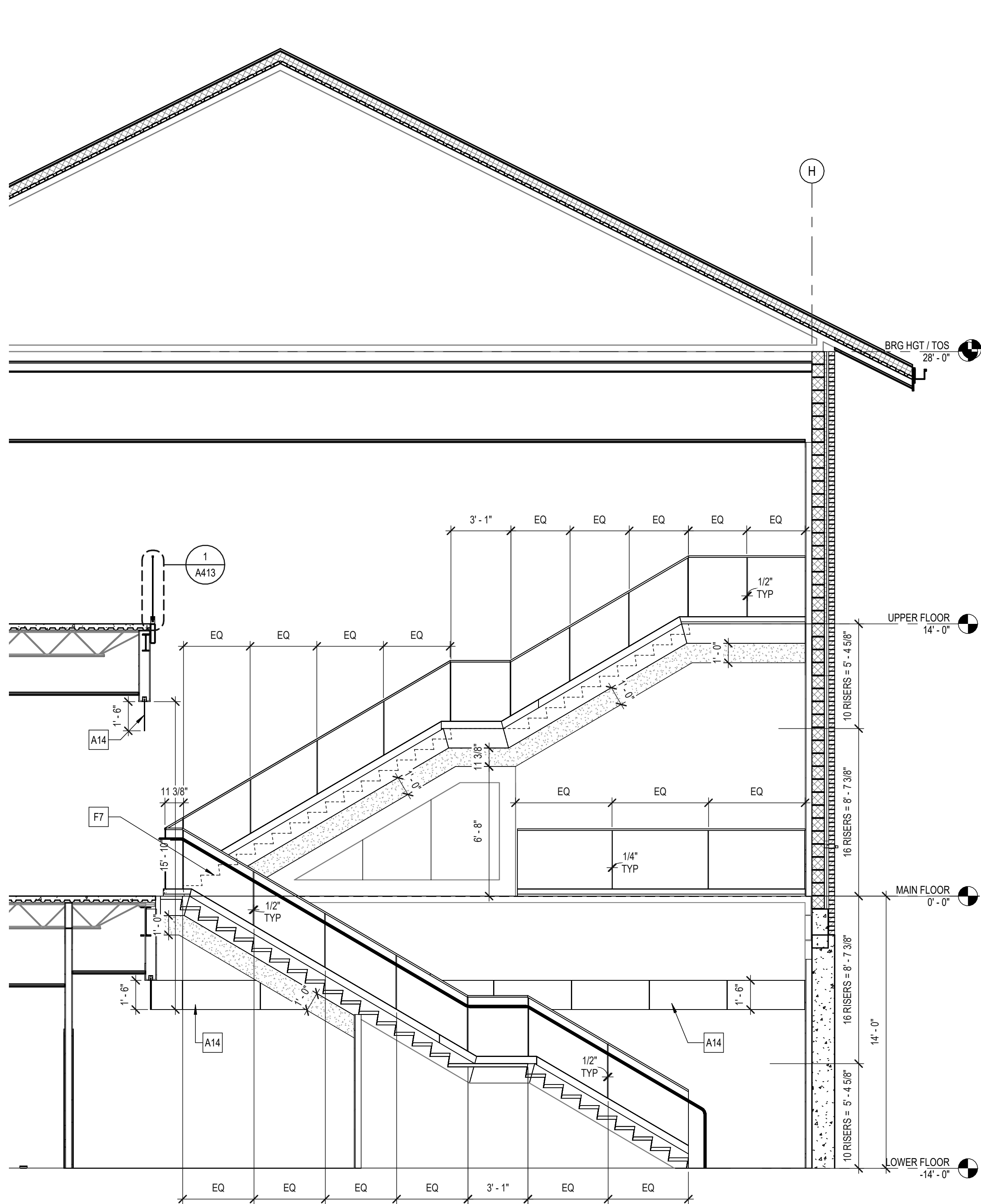
06.12.2026

PROJECT PHASE:

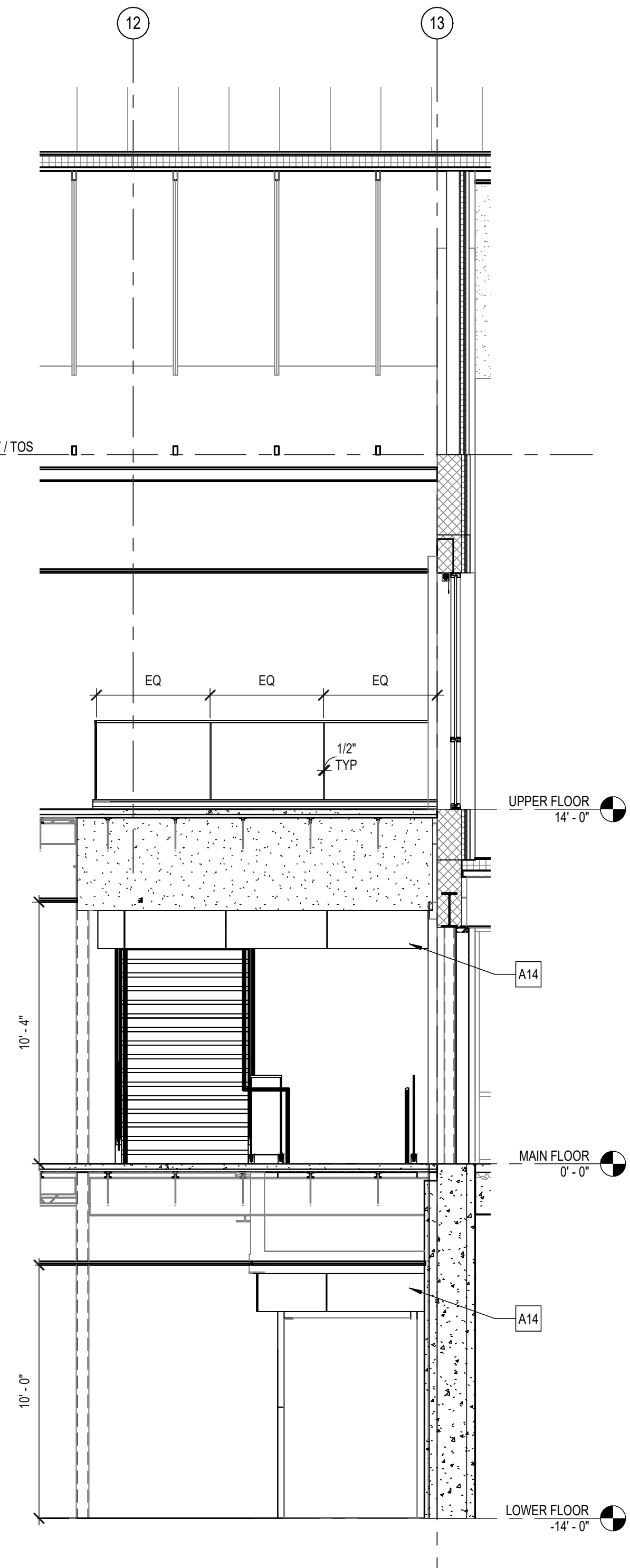
BID DOCUMENTS

SHEET REVISIONS:

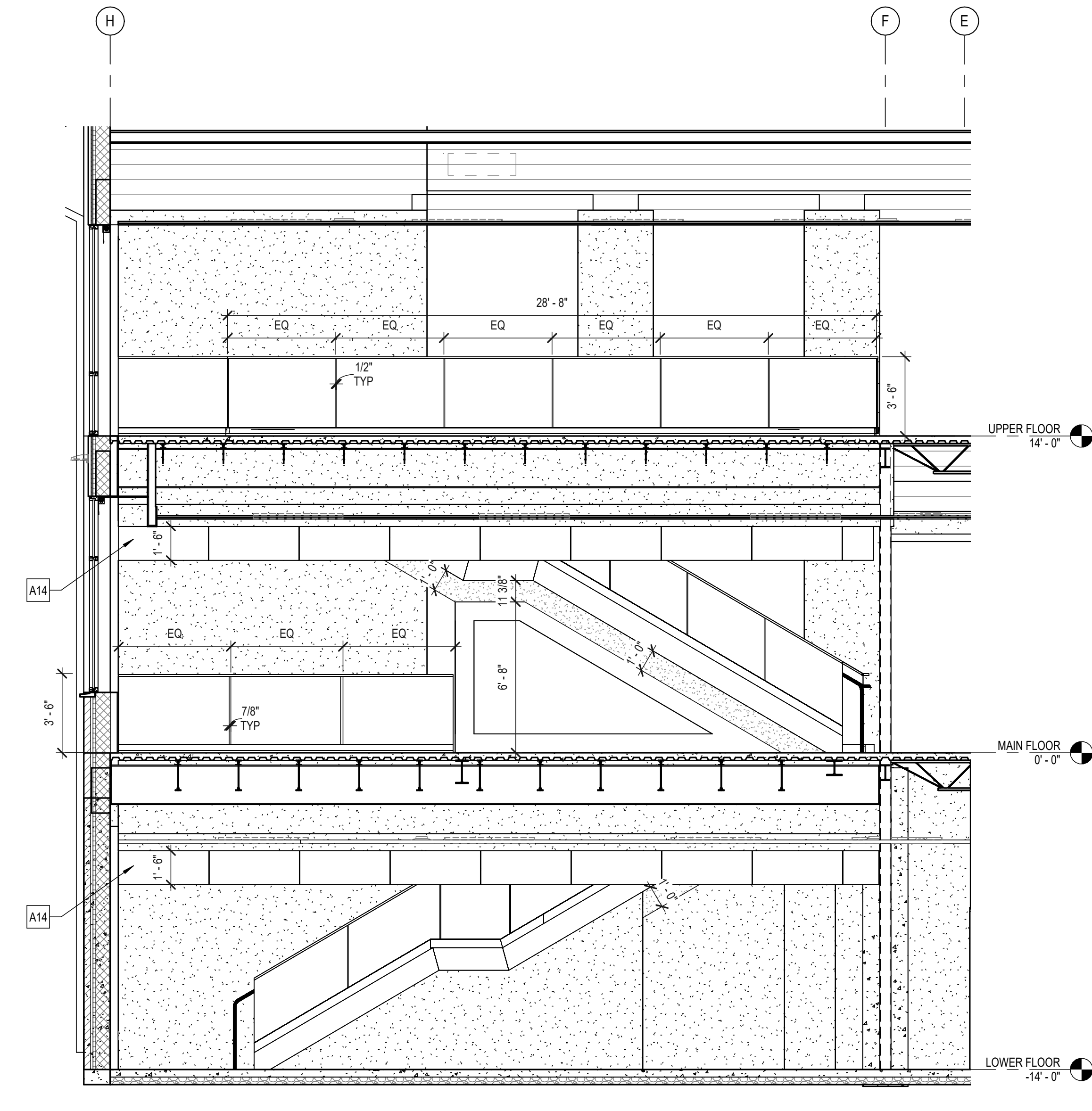
REV 1 07.10.2026 ADDENDUM 01



4 MAIN STAIR - PARTIAL SECTION.
A412 SCALE: 1/4" = 1'-0"
REF: A412



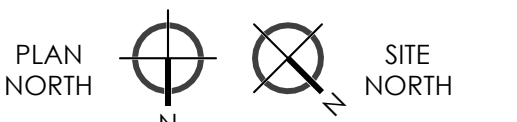
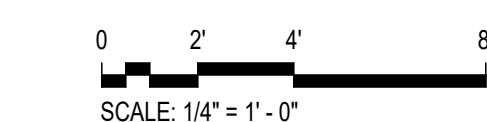
5 MAIN STAIR - PARTIAL SECTION
A412 SCALE: 1/4" = 1'-0"
REF: A412



6 MAIN STAIR - ELEVATION
A412 SCALE: 1/4" = 1'-0"
REF: A713

GRAPHICS DISCLAIMER

3D / ISOMETRIC VIEWS AND GRAPHICS ON THIS SHEET ARE FOR ILLUSTRATIVE PURPOSES ONLY. GO TO REFERENCE DETAILED AND DIMENSIONED DRAWINGS FOR THE CONTRACT REQUIREMENTS.



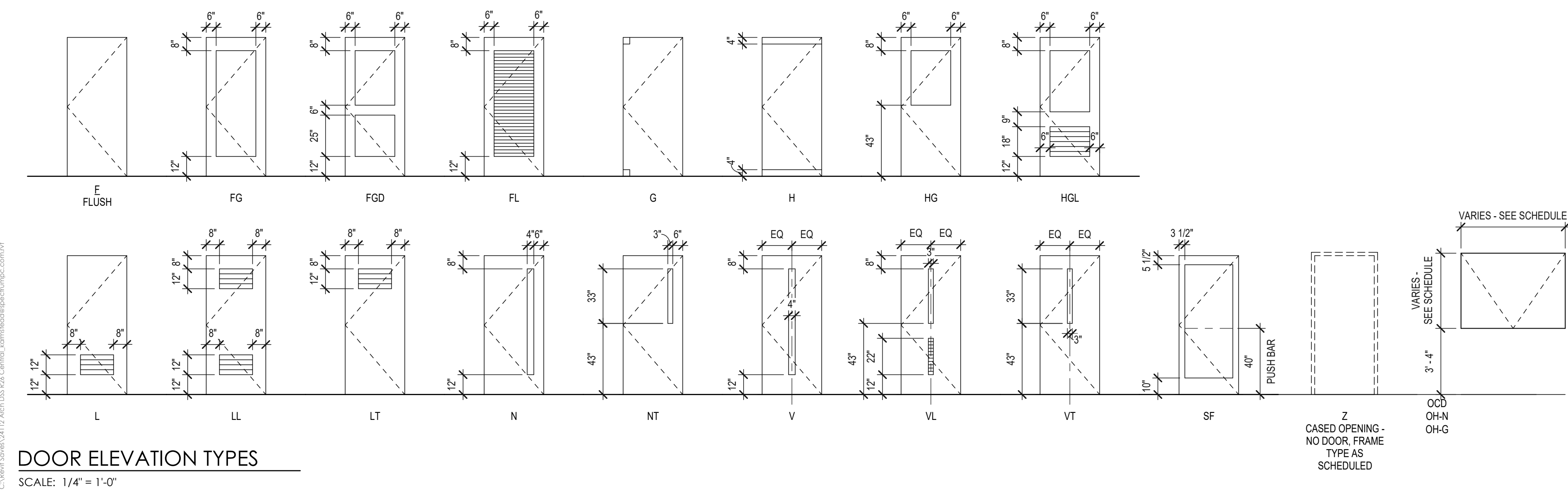
SHEET NAME:

VERTICAL CIRCULATION PLANS, SECTIONS, & DETAILS

SHEET NUMBER:

A412

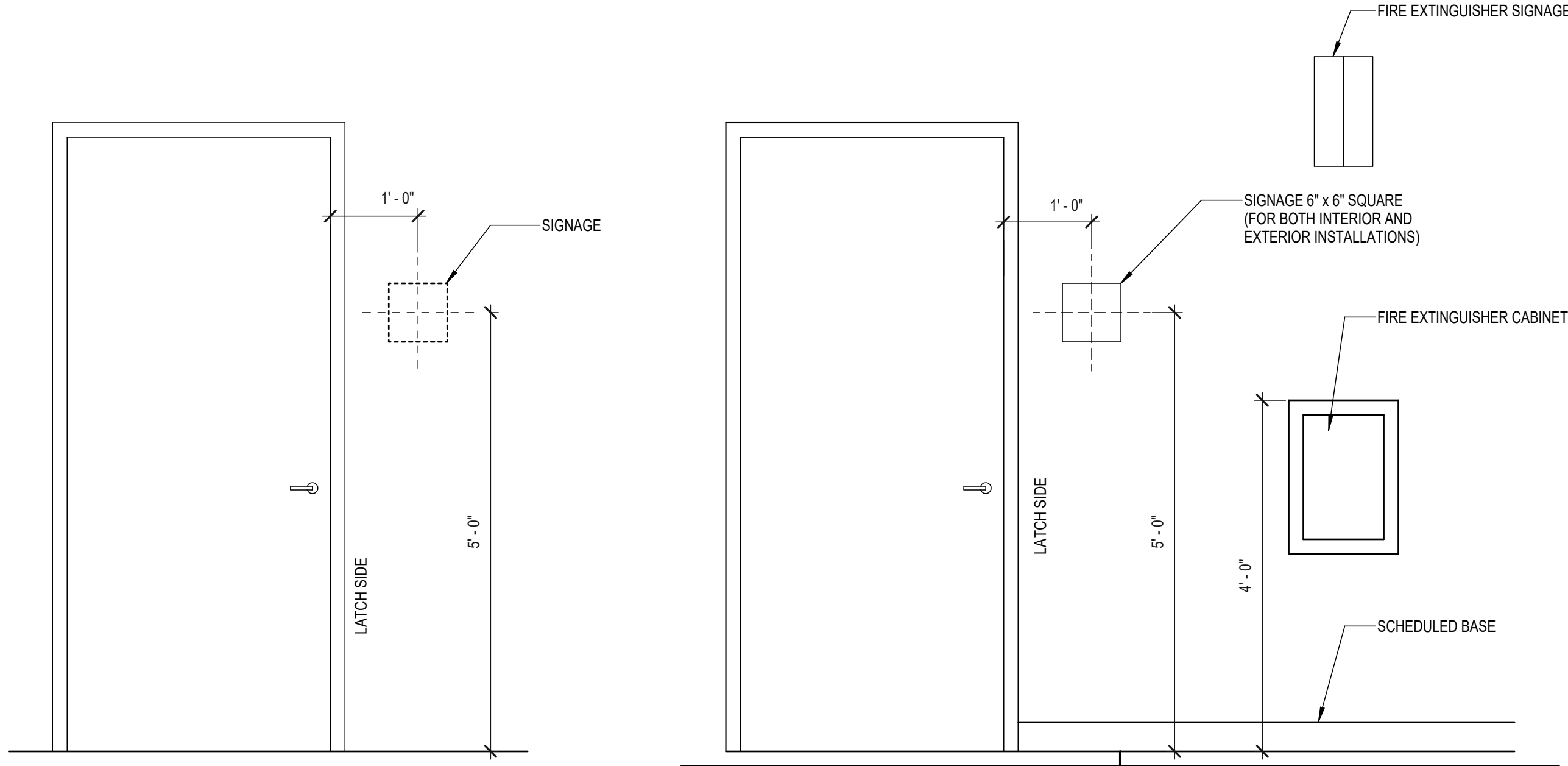
DOOR AND FRAME SCHEDULE													
OPENING NO/ DOOR MARK	DOOR				FIRE RATING	FRAME				HDWRE SET	AC	AO	KEYNOTES
	ELEV	PAIR	MATL	WIDTH		HEIGHT	ELEV	MATL	HEAD				
LOWER FLOOR													
001	NT	--	WD	3'-0"	7'-0"	60 MIN	F1	HM	1HA602	1JA602	27	•	
002	NT	--	WD	3'-0"	7'-0"		F1	HM	2HA602	2JA602	10		NOTE-1
003	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
004	NT	--	WD	3'-0"	7'-0"		F1	HM	2HA602	2JA602	14		NOTE-1
005	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	05		
006	F	--	WD	3'-0"	7'-0"		F1	HM	2HA602	2JA602	08		NOTE-1
007	NT	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	06		
008	F	--	WD	3'-0"	7'-0"		F1	HM	2HA602	2JA602	10		NOTE-1
009	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
010	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
011	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
012	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
013	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
014	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
015	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
016	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
017	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
018	F	--	WD	3'-0"	7'-0"		F1	HM	2HA602	2JA602	10		NOTE-1
019	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
020	F	--	WD	3'-0"	7'-0"		F1	HM	2HA602	2JA602	10		NOTE-1
021	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
022	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	06	•	
023	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
024	NT	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	07		
024.1	NT	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	04		
025	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
027	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
028	F	--	WD	3'-0"	7'-0"		F1	HM	2HA602	2JA602	10		NOTE-1
029	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
030	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
031	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
032	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
033	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
034	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
035	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
036	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
037	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	08		
038	F	--	WD	3'-0"	7'-0"		F1	HM	2HA602	2JA602	10		NOTE-1
039	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	09		
041	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
043	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
045	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
047	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
049	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	06	•	
051	NT	--	WD	3'-0"	7'-0"	60 MIN	F1	HM	1HA602	1JA602	15	•	
053	F	--	WD	3'-0"	7'-0"	60 MIN	F1	HM	1HA602	1JA602	11	•	
C010	NT	--	WD	3'-0"	7'-0"		SP-CV	AL	2HA602	2JA602	37		SEE SCHED
C011	SE	PAIR	WD	6'-0"	7'-0"		SP-CV	AL	2HA602	2JA602	35		SEE SCHED
C011.1	SE	PAIR	WD	6'-0"	7'-0"		SP-CV	AL	2HA602	2JA602	31		SEE SCHED
C012	SE	PAIR	WD	6'-0"	7'-0"		SP-CV	AL	2HA602	2JA602	35		SEE SCHED
C012.1	SE	PAIR	WD	6'-0"	7'-0"		SP-CV	AL	2HA602	2JA602	35		SEE SCHED
C013	SE	PAIR	WD	6'-0"	7'-0"		SP-CV	AL	2HA602	2JA602	35		SEE SCHED
C013.1	SE	PAIR	WD	6'-0"	7'-0"		SP-CV	AL	2HA602	2JA602	35		SEE SCHED
C014	SE	PAIR	WD	6'-0"	7'-0"		SP-CV	AL	2HA602	2JA602	35		SEE SCHED
C014.1	SE	PAIR	WD	6'-0"	7'-0"		SP-CV	AL	2HA602	2JA602	35		SEE SCHED
J001	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	43		
S002	NT	--	WD	3'-0"	7'-0"	60 MIN	F2	HM	10HA602	10JA602	37	•	
S002.1	NT	--	HM	3'-0"	7'-0"		F2	HM	H8A602	8JA602	47		
T001	F	--	WD	3'-0"	7'-0"	60 MIN	F1	HM	1HA602	1JA602	05		
T002	F	--	WD	3'-0"	7'-0"	60 MIN	F1	HM	1HA602	1JA602	05		
T003	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	05		
T013	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	05		
T014	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	05	--	
T015	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	05	--	
V001	F	--	WD	3'-0"	7'-0"	60 MIN	F1	HM	1HA602	1JA602	50	--	



DOOR ELEVATION TYPES
SCALE: 1/4" = 1'-0"

ORIGINAL SET: ARCH 1 (2024) / 1772004_14-24-PM
C:\Users\jharper\OneDrive\Documents\2024\1772004_14-24-PM\1772004_14-24-PM.dwg

DOOR AND FRAME SCHEDULE													
OPENING NO/ DOOR MARK	DOOR				FIRE RATING	FRAME				HDWRE SET	AC	AO	KEYNOTES
	ELEV	PAIR	MATL	WIDTH		HEIGHT	ELEV	MATL	HEAD				
MAIN FLOOR													
100	NT	--	WD	3'-0"	7'-0"	60 MIN	F1	HM	1HA602	1JA602	27	•	
102	F	--	HM	3'-0"	7'-0"	60 MIN	F1	HM	1HA602	1JA602	13		
103	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
104	F	--	WD	3'-0"	7'-0"		F1	HM	2HA602	2JA602	15		NOTE-1
105	NT	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	18	•	
106	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
107	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
108	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
109	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
110	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
111	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
112	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
113	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
114	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
115	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
116	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
117	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
118	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
119	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
120	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
121	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
122	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
123	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
124	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
125	HG	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	17		
125.1	HG	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	17		
126	ST	AL	3'-0"	7'-0"		SPFW	AL	H5A602	1JA602	16			
126.1	ST	AL	3'-0"	7'-0"		SPFW	AL	H5A602	1JA602	16			
127	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
128	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
129	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
130	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
131	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
132	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
133	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
134	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
135	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
136	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
137	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
138	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
139	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
140	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
141	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
142	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
143	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
144	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
145	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
146	F	--	WD	3'-0"	7'-0"		F1	HM	2HA602	2JA602	16		NOTE-1
147	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
148	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	05		
149	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	03		
150	NT	--	WD	3'-6"	7'-0"		F1	HM	1HA602	1JA602	19		
150.1	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	20		
151	NT	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	21		
151.1	NT	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	21		
151.2	NT	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	22		
151.3	F	PAIR	WD	6'-0"	7'-0"		F1	HM	1HA602	1JA602	23		
151.4	ST	AL	3'-0"	7'-0"		SPFW	AL	H5A602	1JA602	24			
151.5	ST	AL	3'-0"	7'-0"		SPFW	AL	H5A602	1JA602	24			
151A	F	PAIR	WD	6'-0"	7'-0"		F1	HM	1HA602	1JA602	25		
151B	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	26		
C100	ST	PAIR	WD	6'-0"	7'-0"		SPFW	AL	H6A602	4JA602	34		
C100.1	ST	PAIR	AL	6'-0"	7'-0"		SPFW	AL	H6A602	4JA602	35		
C101.1	F	PAIR	WD	6'-0"	7'-0"		F1	HM	1HA602	1JA602	36		
C101.2	F	PAIR	WD	6'-0"	7'-0"		F1	HM	1HA602	1JA602	37		
C101.3	F	PAIR	WD	6'-0"	7'-0"		F1	HM	1HA602	1JA602	38		
C101.4	F	PAIR	WD	6'-0"	7'-0"		F1	HM	1HA602	1JA602	38		
C102	ST	PAIR	WD	6'-0"	7'-0"		F1	HM	1HA602	1JA602	38		
C103	ST	PAIR	WD	6'-0"	7'-0"		F1	HM	1HA602	1JA602	38		
C104	F	PAIR	HM	6'-0"	7'-0"		F1	HM	1HA602	1JA602	40		--
C104.1	NT	PAIR	WD	6'-0"	7'-0"	60 MIN	F1	HM	1HA602	1JA602	41	•	
J100	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	43		
M010	F	PAIR	HM	6'-0"	7'-0"		F3	HM	H8A602	8JA602	45		
S102	NT	--	HM	3'-0"	7'-0"	60 MIN	F2	HM	10HA602	10JA602	37	•	
T100	F	--	WD	3'-0"	7'-0"	60 MIN	F1	HM	1HA602	1JA602	05		--
T101	F	--	WD	3'-0"	7'-0"	60 MIN	F1	HM	1HA602	1JA602	05		--
T102	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	48		
T103	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	49		NOTE-1
T105	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	05		
T106	F	--	WD	3'-0"	7'-0"		F1	HM	1HA602	1JA602	05		



TYPICAL SIGNAGE LOCATION

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

TYPICAL CORRIDOR SIGNAGE

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

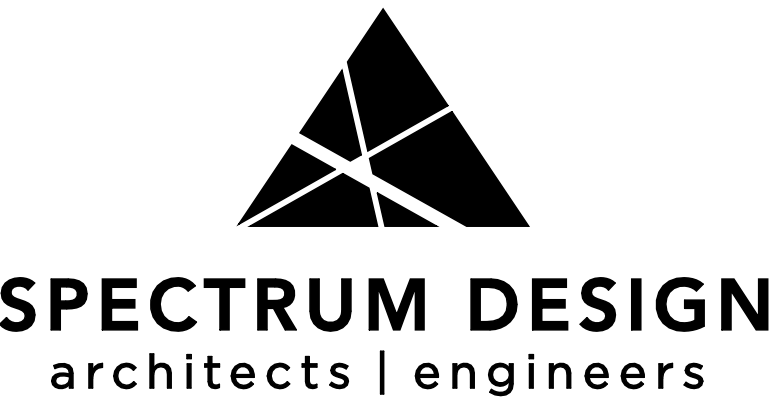
SIGNAGE SCHEDULE			
OPENING NO./ DOOR MARK	SIGNAGE		
	TYP E	ROOM NO.	VERBIAGE
LOWER FLOOR			
001	A		TBD
002	C		INTAKE VISITATION
003	C		TESTING
004	C		OBSERVATION
005	N		SHOWER
006	C		INTAKE VISITATION
007	C		COPYWORK
008	B		OFFICE
009	B		OFFICE
010	B		OFFICE
011	B		OFFICE
012	B		OFFICE
013	B		OFFICE
014	B		OFFICE
015	B		OFFICE
016	B		OFFICE
017	B		OFFICE
018	B		OFFICE
019	B		OFFICE
020	C		STORAGE
021	B		OFFICE
022	C		FILING
023	B		OFFICE
024	C		CONFERENCE
024.1	C		CONFERENCE
025	B		OFFICE
027	B		OFFICE
028	B		OFFICE
029	B		OFFICE
030	B		OFFICE
031	B		OFFICE
032	B		OFFICE
033	B		OFFICE
034	B		OFFICE
035	B		OFFICE
036	B		OFFICE
037	C		FOOD PANTRY
038	B		OFFICE
039	C		CAR SEAT STORAGE
041	B		OFFICE
043	B		OFFICE
045	B		OFFICE
047	B		OFFICE
049	C		FILING
051	C		CONFERENCE
053	C		STORAGE
C010	A		TBD
C010.1	A		TBD
C011	A		EXIT
C011.1	A		EXIT
C012	A		TBD
C013	A		EXIT
C013.1	A		EXIT
C015	A		EXIT
C015.1	A		EXIT
E001	C		IT/ELECTRICAL
J001	C		JANITOR
S002	J		STAIRS
S002.1	A		EXIT
T001	F		RESTROOM
T002	F		RESTROOM
T003	C		TEST TOILET
T013	F		RESTROOM
T014	F		RESTROOM

SIGNAGE SCHEDULE			
OPENING NO./ DOOR MARK	SIGNAGE		
	TYP E	ROOM NO.	VERBIAGE
T015	F		RESTROOM
V001	A		ELEVATOR EQUIPMENT
MAIN FLOOR			
100	A		TBD
102	C		RECEPTION
103	B		OFFICE
104	C		IT/ELECTRICAL
105	C		COPYWORK
106	B		OFFICE
107	B		OFFICE
108	B		OFFICE
109	B		SUPRV. OFFICE
110	B		OFFICE
111	B		OFFICE
112	B		OFFICE
113	B		OFFICE
114	B		OFFICE
115	B		SUPRV. OFFICE
116	B		OFFICE
117	B		SUPRV. OFFICE
118	B		OFFICE
119	B		OFFICE
120	B		OFFICE
121	B		OFFICE
122	B		OFFICE
123	B		OFFICE
124	B		OFFICE
125	C		BREAK ROOM
125.1	C		BREAK ROOM
125.2	A		PORCH
125.3	A		PORCH
126	B		OFFICE
127	B		OFFICE
128	B		OFFICE
129	B		OFFICE
130	B		OFFICE
131	B		OFFICE
132	B		OFFICE
133	B		SUPRV. OFFICE
134	B		OFFICE
135	B		SUPRV. OFFICE
136	B		OFFICE
137	B		OFFICE
138	B		OFFICE
139	B		OFFICE
140	B		OFFICE
141	B		SUPRV. OFFICE
142	B		OFFICE
143	B		OFFICE
144	B		OFFICE
145	B		OFFICE
146	B		OFFICE
147	B		SUPRV. OFFICE
148	L		LACTATION
149	C		INTERN OFFICE
150	C		CATERING
150.1	C		CATERING
151	M		TRAINING
151.1	M		TRAINING
151.2	M		TRAINING
151.3	C		CHAIR STORAGE
151.4	A		EXIT
151.5	A		EXIT
151.6	A		EXIT
151A	C		CHAIR STORAGE
151B	C		CLOSET
C100	A		EXIT

SIGNAGE SCHEDULE			
OPENING NO./ DOOR MARK	SIGNAGE		
	TYP E	ROOM NO.	VERBIAGE
C100.1	A		EXIT
C101.1	C		CLOSET
C101.2	C		CLOSET
C101.3	C		CLOSET
C101.4	C		CLOSET
C103	A		EXIT
C103.1	A		EXIT
C104	A		TBD
J100	C		JANITOR
M010			
S102	J		STAIRS
T100	F		RESTROOM
T101	F		RESTROOM
T102	D		WOMENS
T103	E		MENS
T104	F		RESTROOM
T105	F		RESTROOM
T106	F		RESTROOM
UPPER FLOOR			
200	A		EXIT
201	C		CONFERENCE
201.1	C		CONFERENCE
202	C		CLASSROOM
204	C		IT/ELECTRICAL
205	B		OFFICE
206	B		OFFICE
207	B		SUPRV. OFFICE
208	B		OFFICE
209	B		OFFICE
210	B		OFFICE
211	B		OFFICE
212	B		OFFICE
213	B		SUPRV. OFFICE
214	B		OFFICE
215	B		SUPRV. OFFICE
216	B		OFFICE
217	B		OFFICE
218	B		OFFICE
219	B		OFFICE
220	B		OFFICE
221	B		OFFICE
222	B		OFFICE
223	B		OFFICE
224	B		OFFICE
225	B		OFFICE
226	B		OFFICE
227	B		SUPRV. OFFICE
228	B		OFFICE
229	B		SUPRV. OFFICE
230	B		OFFICE
231	B		OFFICE
232	B		OFFICE
233	B		OFFICE
234	B		OFFICE
235	B		OFFICE
236	B		OFFICE
237	B		OFFICE
238	B		OFFICE
239	B		SUPRV. OFFICE
240	B		OFFICE
241	B		SUPRV. OFFICE
242	B		OFFICE
243	B		OFFICE
244	B		OFFICE
245	B		OFFICE
246	B		OFFICE
247	B		OFFICE
248	B		OFFICE

SIGNAGE SCHEDULE			
OPENING NO./ DOOR MARK	SIGNAGE		
	TYP E	ROOM NO.	VERBIAGE
249	B		OFFICE
250	B		OFFICE
251	B		OFFICE
252	B		OFFICE
253	B		OFFICE
254	C		LOCKED FILE STORAGE
255	B		SUPRV. OFFICE
257	B		OFFICE
258	B		OFFICE
259	C		STORAGE
260	B		OFFICE
267	B		OFFICE
268	B		OFFICE
269	B		OFFICE
270	B		OFFICE
C105	H		ELEVATOR
C201.1	C		CLOSET
J200	C		JANITOR
M201	C		MECHANICAL
S202	J		STAIRS
T200	F		TOILET
T201	F.1		TOILET
T202	F		TOILET
T203	F.1		TOILET
T205	F		TOILET
T206	F		TOILET

NOTE: PROVIDE ELEVATOR SIGN (SIGN TYPE-H) AT EACH ELEVATOR LANDING, TYPICAL



Plaza Suite 1
10 Church Avenue, SE
Roanoke, VA 24011

540.342.4001
spectrumcpe.com

DEPARTMENT OF SOCIAL SERVICES BUILDING

BEDFORD COUNTY

SPECTRUM DESIGN PROJECT NO.:24112



PROJ. MGR.: **JM** CHECKED BY: **NLH** DRAWN BY: **MCA, TLR, LAC**

SHEET ISSUE DATE:

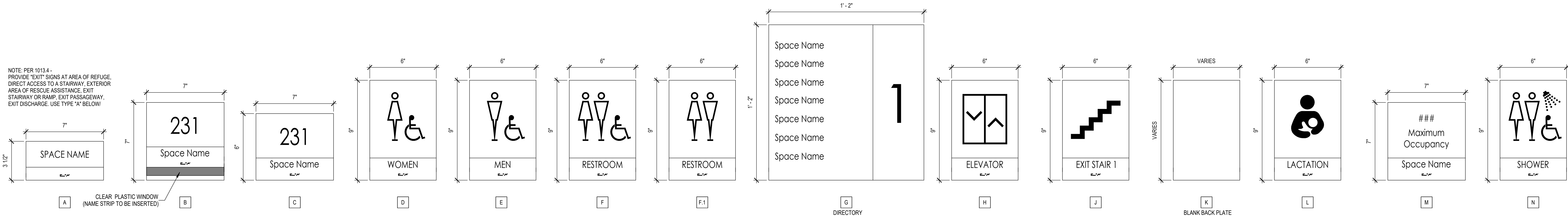
06.12.2026

PROJECT PHASE:

BID DOCUMENTS

SHEET REVISIONS:

REV 1 07.10.2026 ADDENDUM 01

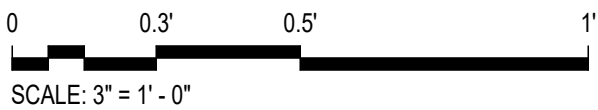


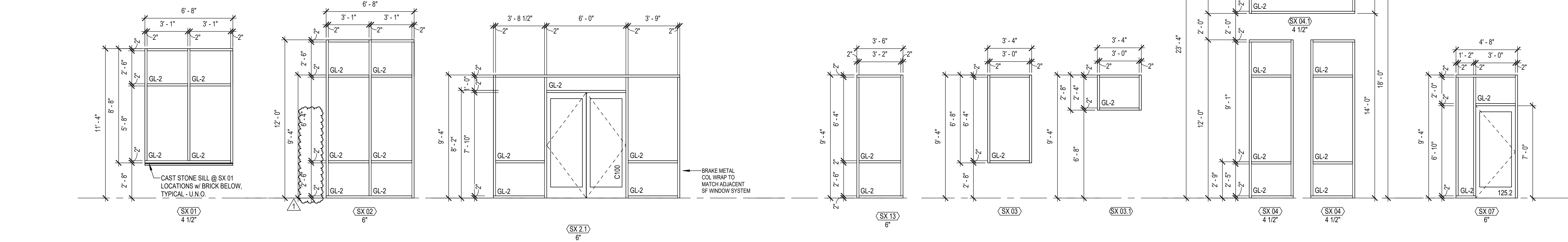
SIGNAGE TYPES - INTERIOR (NEW)

SCALE: 3" = 1'-0"

SHEET NUMBER:

A603





FRAMED OPENINGS INDICATOR

— FRAME TYPE — C/W = CURTAIN WALL
— FRAME NO. — LVR = LOUVER
— FRAME DEPTH — HM = HOLLOW METAL
SF = STOREFRONT (INTERIOR)
SX = STOREFRONT (EXTERIOR)
WN = WINDOW

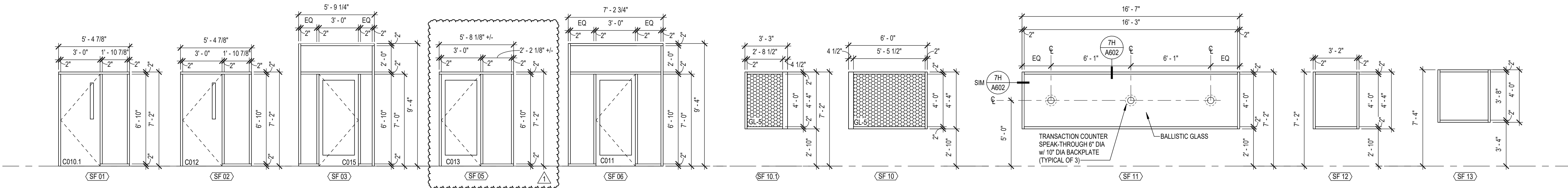
GLAZING / PANEL LEGEND

GL-1 = 1/4" CLEAR
GL-2 = 1" INSULATED
GL-3 = 1" INSULATED SPANDREL
GL-4 = 1" INSULATED W/ FROSTED FILM
GL-5 = 1/4" ONE WAY MIRROR GLASS
GL-6 = 1" INSULATED W/ SAFETY FILM
IP = INSULATED METAL PANEL

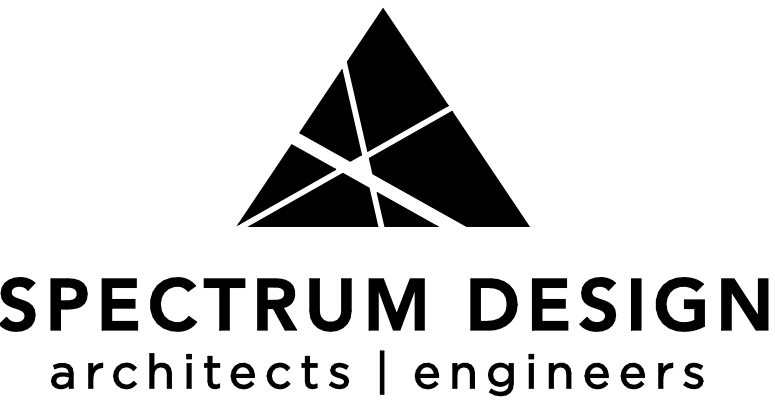
- FRAMED OPENINGS GENERAL NOTES**
- GN-1: CONTRACTOR TO PROVIDE STOREFRONT AND CURTAIN WALL MANUFACTURER'S PREFORMED SUB-SILL, BASE FLASHING, AND END DAMS, TYPICAL.
- GN-2: DIMENSIONS SHOWN ARE NOMINAL AND PROVIDED FOR DESIGN INTENT. CONTRACTOR TO FIELD VERIFY ROUGH OPENINGS, AND ACCOUNT FOR JOINTS, SHIMS, SEALANT, ETC.
- GN-3: EXTERIOR FRAMES ARE VIEWED FROM EXTERIOR OF BUILDING. INTERIOR WINDOW FRAMES ARE VIEWED FROM EXTERIOR OF ROOM, U.N.O.
- GN-4: SOME FRAME TYPES ARE REPEATED. SEE FLOOR PLANS AND ELEVATIONS FOR LOCATIONS AND QUANTITIES.
- GN-5: JOINTS SHOWN IN ELEVATION BETWEEN STOREFRONT MEMBERS ARE NOT INTENDED TO SHOW ACTUAL JOINT LOCATIONS.
- GN-6: DEPTH OF STOREFRONT FRAMES TO BE 4 1/2" U.N.O.
- GN-7: ALL GLAZING IN INTERIOR FRAMES SHALL BE TYPE GL-1, U.N.O.
- GN-8: ALL GLAZING IN EXTERIOR FRAMES SHALL BE TYPE GL-2, U.N.O.
- GN-10: GLAZE ALL OPENINGS IN FRAMES, U.N.O.
- GN-11: ALL GLAZING SHALL BE SAFETY GLASS, U.N.O.

☒ SHEET KEYNOTES

EXTERIOR STOREFRONT WINDOW ELEVATIONS
SCALE: 1/4" = 1'-0"



INTERIOR STOREFRONT WINDOW ELEVATIONS
SCALE: 1/4" = 1'-0"



Plaza Suite 1
10 Church Avenue, SE
Roanoke, VA 24011

540.342.4001
spectrumpc.com

DEPARTMENT OF SOCIAL SERVICES BUILDING

BEDFORD COUNTY

SPECTRUM DESIGN PROJECT NO.:24112

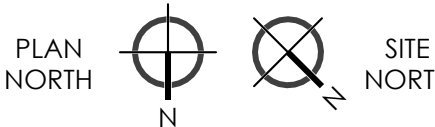


PROJ. MGR.: CHECKED BY: DRAWN BY:
JM NLH MCA, TLR, LAC

SHEET ISSUE DATE:
06.12.2026

PROJECT PHASE:
BID DOCUMENTS

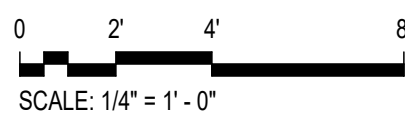
SHEET REVISIONS:
REV 1 07.10.2026 ADDENDUM 01



SHEET NAME:
STOREFRONT, CURTAINWALL, & WINDOW ELEVATIONS

SHEET NUMBER:

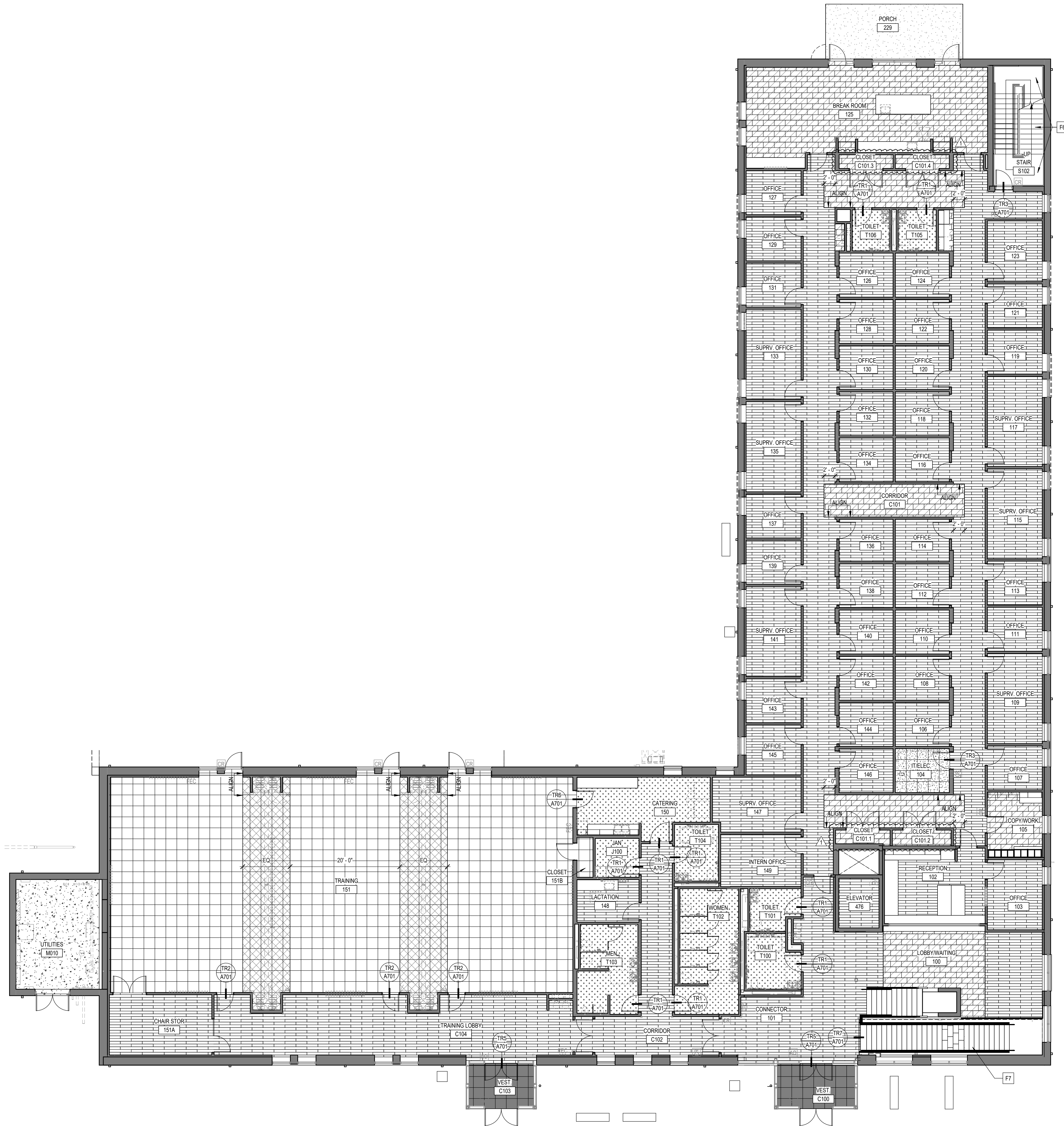
A611



ROOM FINISH SCHEDULE									
ROOM NO.	ROOM NAME	FLOOR FINISH	WALL		CEILING		REMARKS		
			BASE	FINISH	MATERIAL	FINISH			
LOWER FLOOR									
001	LOWER LEVEL LOBBY	LVT-1/LVT-2"	WB-1	PNT-1/C T-2"	ACP-1/GW B***	-PNT-CLG	*SEE FLOOR FINISH PLANS **SEE WALL FINISH PLANS ***SEE RCP		
002	INTAKE VISITATION	LVT-1	WB-1	PNT-2	ACP-1	-			
003	TEST	RES-1	WB-1	PNT-2	GW B	PNT-CLG	*EPOXY PAINT - SEE SPECS		
004	OBSERVE	LVT-1	WB-1	PNT-1	ACP-1	-	*EPOXY PAINT - SEE SPECS		
005	LAUNDRY/SHOWER	RES-1	WB-1	PNT-2"	GW B	PNT-CLG	*EPOXY PAINT - SEE SPECS		
006	INTAKE VISITATION	LVT-1	WB-1	PNT-2	ACP-1	-			
007	COPY/WORK	LVT-2	WB-1	PNT-1	ACP-1	-			
008	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
009	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
010	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
011	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
012	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
013	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
014	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
015	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
016	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
017	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
018	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
019	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
020	STOR	LVT-1	WB-1	PNT-1	ACP-1	-			
021	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
022	FILE	LVT-1	WB-1	PNT-1	ACP-1	-			
023	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
024	CONFERENCE	LVT-1/LVT-2"	WB-1	PNT**	ACP-1	-	*SEE FLOOR FINISH PLANS **SEE WALL FINISH PLANS		
025	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
026	OPEN OFFICE	LVT-2	WB-1	PNT**	VARIES*	VARIES*	*SEE RCP **SEE WALL FINISH PLAN		
027	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
028	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
029	SUPRV. OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
030	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
031	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
032	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
033	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
034	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
035	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
036	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
037	FOOD PANTRY	RES-1	RES-1	PNT-1	ACP-1	-			
038	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
039	CAR SEAT STOR	RES-1	RES-1	PNT-1	ACP-1	-			
041	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
043	SUPRV. OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
045	SUPRV. OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
047	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
049	FILE	CPT-1	WB-1	PNT-1	ACP-1	-			
051	CONFERENCE	LVT-1/LVT-2"	WB-1	PNT**	ACP-1	-	*SEE FLOOR FINISH PLANS **SEE WALL FINISH PLANS		
053	STOR	LVT-1	WB-1	PNT-1	ACP-1	-			
475	ELEVATOR	LVT-1	-	SEE SEE SPECS	SEE SEE SPECS	SEE SEE SPECS	SEE ELEVATOR SPEC FOR ADDITIONAL INFORMATION		
C010	CORRIDOR	LVT-1/LVT-2"	WB-1	PNT**	ACP-1	-	*SEE FLOOR FINISH PLANS **SEE WALL FINISH PLANS		
C011	VEST.	CPT-WM	WB-1	PNT-1	ACP-1	-			
C012	CORRIDOR	LVT-1/LVT-2"	WB-1	PNT**	ACP-1	-	*SEE FLOOR FINISH PLANS **SEE WALL FINISH PLANS		
C013	VEST	CPT-WM	WB-1	PNT-1	ACP-1	-			
C014	CORRIDOR	LVT-1	WB-1	PNT*	ACP-1	-	*SEE WALL FINISH PLAN		
C015	VEST.	CPT-WM	WB-1	PNT-1	ACP-1	-			
E001	IT/ELEC	SDT-1*	WB-1	PNT-1	EXP-STR	PNT-STR	*COORD. W. / ELEC- SEE ELEC DWGS		
J001	JAN	RES-1	RES-1	PNT-2/C T-3"	ACP-2	-	*SEE WALL FINISH PLAN EPOXY PAINT - SEE SPECS		
S002	STAIR	RUB-1	WB-1	PNT-1	GW B	PNT			
T001	TOILET	RES-1	RES-1	PNT-2"	GW B	PNT-CLG	*EPOXY PAINT - SEE SPECS		
T002	TOILET	RES-1	RES-1	PNT-2"	GW B	PNT-CLG	*EPOXY PAINT - SEE SPECS		
T003	TOILET	RES-1	RES-1	PNT-2"	GW B	PNT-CLG	*EPOXY PAINT - SEE SPECS		
T013	TOILET	RES-1	RES-1	PNT-2"	GW B	PNT-CLG	*EPOXY PAINT - SEE SPECS		
T014	TOILET	RES-1	RES-1	PNT-2"	GW B	PNT-CLG	*EPOXY PAINT - SEE SPECS		
T015	TOILET	RES-1	RES-1	PNT-2"	GW B	PNT-CLG	*EPOXY PAINT - SEE SPECS		
V001	ELEV EQUIP	SC-1	WB-1	PNT-1	EXP-STR	PNT-STR			
MAIN FLOOR									
100	LOBBY/INTAKE	LVT-1/LVT-2"	WB-1	PNT-1/C T-1"	ACP-1/GW B***	-PNT-CLG	*SEE FLOOR FINISH PLANS **SEE WALL FINISH PLANS ***SEE RCP		
101	CONNECTOR	LVT-1	WB-1	PNT-1	ACP-1	-			
102	RECEPTION	LVT-1	WB-1	PNT-1	ACP-1/GW B"	-PNT-CLG	*SEE RCP		
103	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
104	IT/ELEC	SDT-1*	WB-1	PNT-1	EXP-STR	PNT-STR	*COORD. W. / ELEC- SEE ELEC DWGS		
105	COPY/WORK	LVT-2	WB-1	PNT-1	ACP-1	-			
106	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
107	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
108	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
109	SUPRV. OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
110	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
111	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
112	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
113	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
114	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
115	SUPRV. OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
116	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			

FINISH SCHEDULE GENERAL NOTES
1. WHEN FLOOR FINISH IS NOTED AS "VARIES" REFER TO FINISH PLANS FOR FLOOR MATERIAL & PATTERN. SIMILARLY, WHEN THE CEILING MATERIAL IS NOTED AS "VARIES" REFER TO THE RCP FOR DESIGN INTENT.
2. WALL FINISH NOTED ON SCHEDULE IS THE PRIMARY WALL FINISH ONLY. OTHER WALL FINISHES MAY BE NOTED ON FINISH PLANS & ELEVATIONS.

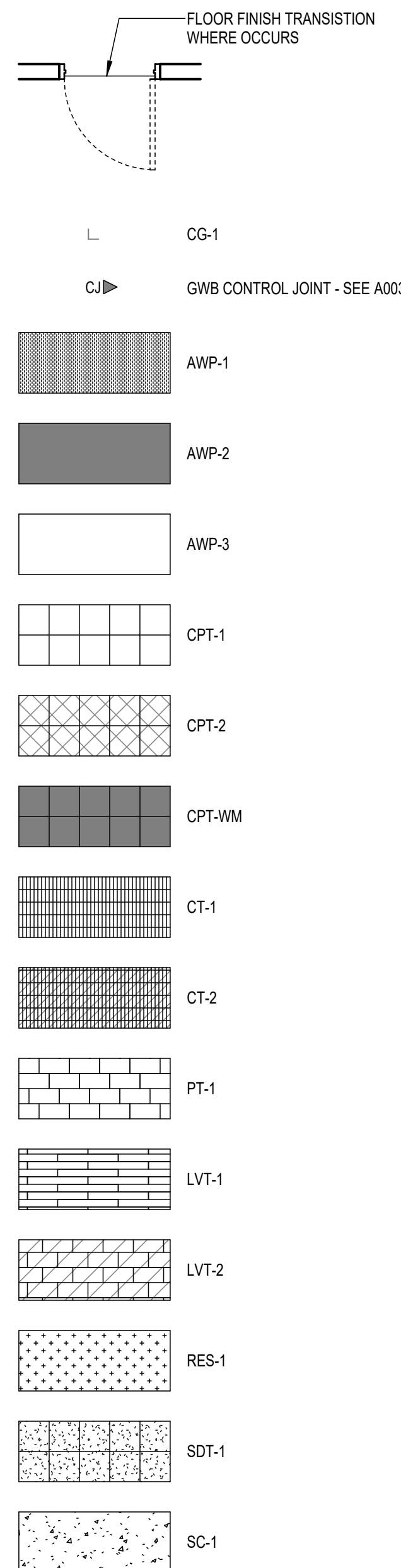
ROOM FINISH SCHEDULE									
ROOM NO.	ROOM NAME	FLOOR FINISH	WALL		CEILING		REMARKS		
			BASE	FINISH	MATERIAL	FINISH			
117	SUPPLY OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
118	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
119	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
120	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
121	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
122	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
123	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
124	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
125	BREAK ROOM	LVT-2	WB-1	PNT-1/C T-1"	ACP-1/GWB"	-PNT-CLG	*SEE WALL FINISH PLAN **SEE RCP		
126	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
127	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
128	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
129	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
130	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
131	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
132	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
133	SUPPLY OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
134	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
135	SUPPLY OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
136	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
137	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
138	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
139	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
140	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
141	SUPPLY OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
142	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
143	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
144	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
145	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
146	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
147	SUPPLY OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
148	LACTATION	LVT-1	WB-1	PNT-2	ACP-1	-			
149	INTERN OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
150	CATERING	RES-1	RES-1	PNT-2"	ACP-1/GWB B"	-PNT-CLG	*SEE RCP *EPOXY PAINT - SEE SPECS		
151	TRAINING	CPT-1/CPT-2	WB-1	PNT-1	ACP-1/GWB B"	-PNT-CLG	*SEE FLOOR FINISH PLANS **SEE RCP		
151A	CHAIR STOR	LVT-1	WB-1	PNT-1	ACP-1	-PNT-STR			
151B	CLOSET	CPT-1	WB-1	PNT-1	ACP-1	-			
229	PORCH	TBD	-	-	-	-			
476	ELEVATOR	LVT-1	-	SEE SPECS	SEE SPECS	SEE SPECS	SEE ELEVATOR SPEC FOR ADDITIONAL INFORMATION		
C100	VEST	CPT-WM	-	-	GWB	PNT-CLG			
C101	CORRIDOR	LVT-1/LVT-2	WB-1	PNT-1/C T-1"	ACP-1/GWB B"	VARIES*	*SEE FLOOR FINISH PLANS **SEE WALL FINISH PLANS ***SEE RCP		
C101.1	CLOSET	LVT-2	WB-1	PNT-1	ACP-1	-			
C101.2	CLOSET	LVT-2	WB-1	PNT-1	ACP-1	-			
C101.3	CLOSET	LVT-2	WB-1	PNT-1	ACP-1	-			
C101.4	CLOSET	LVT-2	WB-1	PNT-1	ACP-1	-			
C102	CORRIDOR	LVT-1	WB-1	PNT-1	VARIES*	VARIES*	*SEE RCP		
C103	VEST	CPT-WM	-	-	GWB	PNT-CLG			
C104	TRAINING CLOSET	LVT-1	WB-1	PNT-1	VARIES*	VARIES*	*SEE RCP		
3100	JAN	RES-1	RES-1	PNT-2	ACP-2	-	*SEE WALL FINISH PLAN EPOXY PAINT - SEE SPECS		
M010	UTILITIES	SC-1	WB-1	PNT-1	EXPOSED STRUCT	PNT-STR			
S102	STAIR	RUB-1	WB-1	PNT-1	GWB	PNT-CLG			
T100	TOILET	RES-1	RES-1	PNT-2"	GWB	PNT-CLG	*EPOXY PAINT - SEE SPECS		
T101	TOILET	RES-1	RES-1	PNT-2"	GWB	PNT-CLG	*EPOXY PAINT - SEE SPECS		
T102	WOMEN	RES-1	RES-1	PNT-2"	ACP-2	-	*EPOXY PAINT - SEE SPECS		
T103	MEN	RES-1	RES-1	PNT-2"	ACP-2	-	*EPOXY PAINT - SEE SPECS		
T104	TOILET	RES-1	RES-1	PNT-2"	ACP-2	-	*EPOXY PAINT - SEE SPECS		
T105	TOILET	RES-1	RES-1	PNT-2"	GWB	PNT-CLG	*EPOXY PAINT - SEE SPECS		
T106	TOILET	RES-1	RES-1	PNT-2"	GWB	PNT-CLG	*EPOXY PAINT - SEE SPECS		
UPPER FLOOR									
200	UPPER LOBBY	LVT-1	WB-1	PNT-1	ACP-1	-			
201	CONFERENCE	LVT-1	WB-1	PNT"	ACP-1	-	*SEE WALL FINISH PLAN		
202	CLASSROOM	LVT-1	WB-1	PNT-1	ACP-1	-			
203	BREAK ROOM	LVT-2	WB-1	PNT-1	ACP-1/GWB B"	-PNT	*SEE WALL FINISH PLAN **SEE RCP		
204	IT/elec	SDFT-1"	WB-1	PNT-1	GWB	-	*COORD. W / ELEC- SEE ELEC DWGS		
205	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
206	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
207	SUPPLY OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
208	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
209	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
210	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
211	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
212	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
213	SUPPLY OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
214	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
215	SUPPLY OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
216	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
217	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
218	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
219	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
220	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
221	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
222	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
223	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
224	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			
225	OFFICE	LVT-1	WB-1	PNT-1	ACP-1	-			



1 FLOOR FINISH PLAN - MAIN FLOOR

A712 SCALE: 1/8" = 1'-0"
REF: A052

FINISH LEGEND



INTERIOR ELEVATIONS & FINISHES GENERAL NOTES

- GN-1: NOTES REGARDING FINISH COLORS AND ACCENT PAINT COLORS ARE NOT LIMITED TO THE A700-SERIES DRAWINGS. REFER ALSO TO REFLECTED CEILING PLANS, INTERIOR ELEVATIONS, CASEWORK ELEVATIONS, SECTIONS, DETAILS, AND ENLARGED PLANS.
- GN-2: FOR CLARITY PURPOSES, ACCENT PAINT COLOR NUMBERS, HATCHING PATTERNS AND FLOORING NUMBERS NOTED ARE APPLICABLE ONLY TO THE ROOM, CORRIDOR OR AREA SHOWN IN THE SECTION, PLAN, ELEVATION OR DETAIL NOTED. THEIR PURPOSE SERVES ONLY TO DELINEATE DIFFERENT FINISHES WITHIN A DESIGNATED AREA AND ARE NOT TRANSFERABLE TO THE OVERALL NUMBER UTILIZED.
- GN-3: HATCHES DENOTE FLOORING TYPE ONLY. REFER TO SPEC FOR LAYOUT.
- GN-4: PAINT COLORS TO TERMINATE AT INSIDE CORNERS, U.N.O.
- GN-5: ALL BULKHEADS TO BE PAINTED AN ACCENT COLOR, U.N.O. WHEN ACCENT PAINT COLOR IS NOTED ON A BULKHEAD OR SOFFIT, IT APPLIES TO BOTH THE VERTICAL AND HORIZONTAL SURFACES OF SAID BULKHEAD OR SOFFIT.
- GN-6: USE EPOXY PAINT AT THE FOLLOWING ROOM TYPES:
• CATERING
• JANITORS CLOSETS
• SHOWERS & TOILETS
- GN-7: AT BASE CABINETS, WALL BASE TO EXTEND:
• AROUND SIDES AND ACROSS TOE KICK U.N.O.
• INSIDE CABINET AND ACROSS REAR WALL AT CABINET OPENINGS.

SHEET KEYNOTES

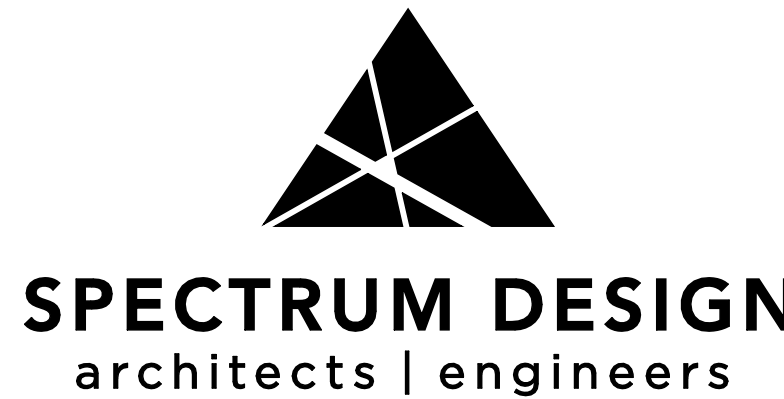
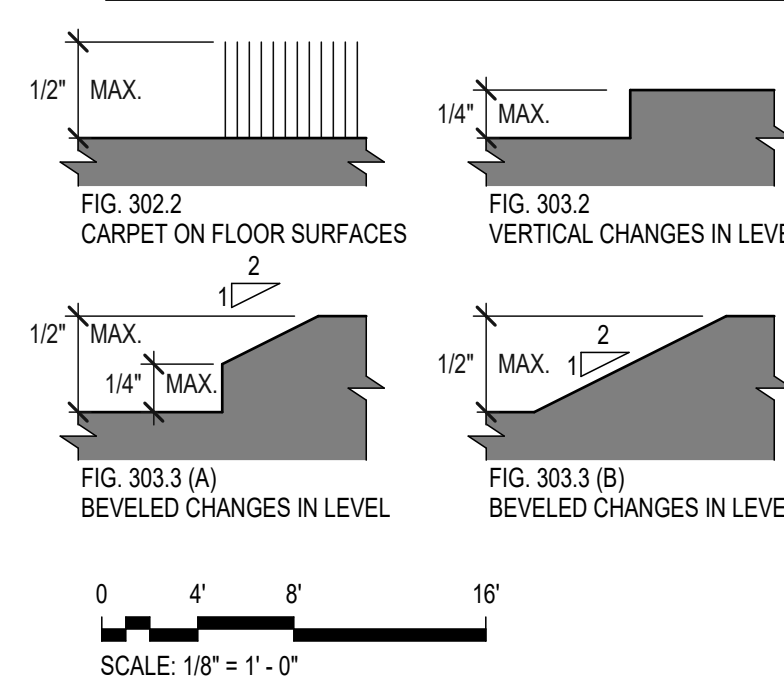
- F6 RUBBER STAIR TREADS, RISERS, AND LANDINGS INCLUDING TOP AND BOTTOM LANDING IN STAIR ENCLOSURE, RUB-1. SEE FINISH SCHEDULE FOR ADDITIONAL INFORMATION.
- F7 TILE STAIR TREADS, RISERS, AND LANDINGS, PT-1. SEE FINISH SCHEDULE FOR ADDITIONAL INFORMATION. PROVIDE ALUMINUM SLIP RESISTANT STAIR NOSINGS AT TILE TREADS, BASIS OF DESIGN: SCHLITZER TREP-E AND PROVIDE PERIMETER JOINT PROFILE AT TILE EDGES AT STRINGER AND AT INSIDE CORNER WHERE TILE ON TREAD MEETS TILE ON RISER, BASIS OF DESIGN: SCHLITZER DILEX-BWA.

FINISH TRANSITIONS

MARK	SHEET REF	TYPE
TR1	A701	RESILIENT TO RESINOUS/ CONCRETE
TR2	A701	RESILIENT TO CARPET
TR3	A701	RESILIENT TO RESILIENT (2.5MM TO 3MM)
TR4	A701	WALK-OFF CPT TO RESINOUS/ CONCRETE
TR5	A701	RESILIENT TO WALK-OFF CPT
TR6	A701	RESINOUS/ CONCRETE TO CARPET
TR7	A701	TILE TO RESILIENT

ACCESSIBLE CHANGES IN FLOOR FINISH LEVEL

ANSI 117.1 2017 / ADASAD 2010 SECTION 302 & 303 REQUIREMENTS



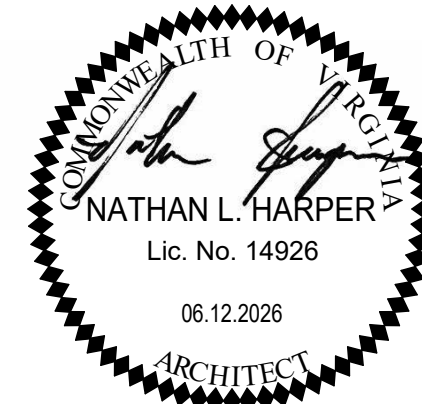
Plaza Suite 1
10 Church Avenue, SE
Roanoke, VA 24011

540.342.6001
spectrumpc.com

DEPARTMENT OF SOCIAL SERVICES BUILDING

BEDFORD COUNTY

SPECTRUM DESIGN PROJECT NO.: 24112



PROJ. MGR.: **JM** CHECKED BY: **NLH** DRAWN BY: **MCA, TLR, LAC**

SHEET ISSUE DATE:

06.12.2026

PROJECT PHASE:

BID DOCUMENTS

SHEET REVISIONS:

REV 1 07.10.2026 ADDENDUM 01

PLAN NORTH

SHEET NAME:

FLOOR FINISH PLAN - MAIN FLOOR

SHEET NUMBER:

A712



Plaza Suite 1
10 Church Avenue, SE
Roanoke, VA 24011

540.342.6001
spectrumpc.com



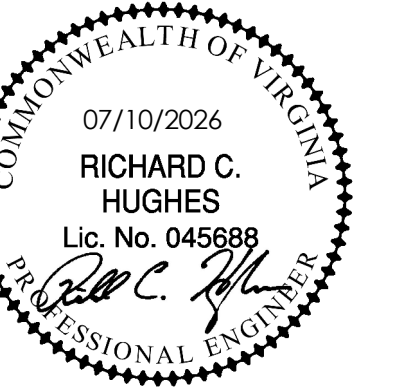
15 E Salem Avenue SE, Suite 101
Roanoke, Virginia 24011
Ph: (540) 342-1816
Fax: (540) 344-3410

Comm. No.: 25114

©Lawrence Perry and Associates, Inc.

**DEPARTMENT OF SOCIAL
SERVICES BUILDING**

BEDFORD COUNTY

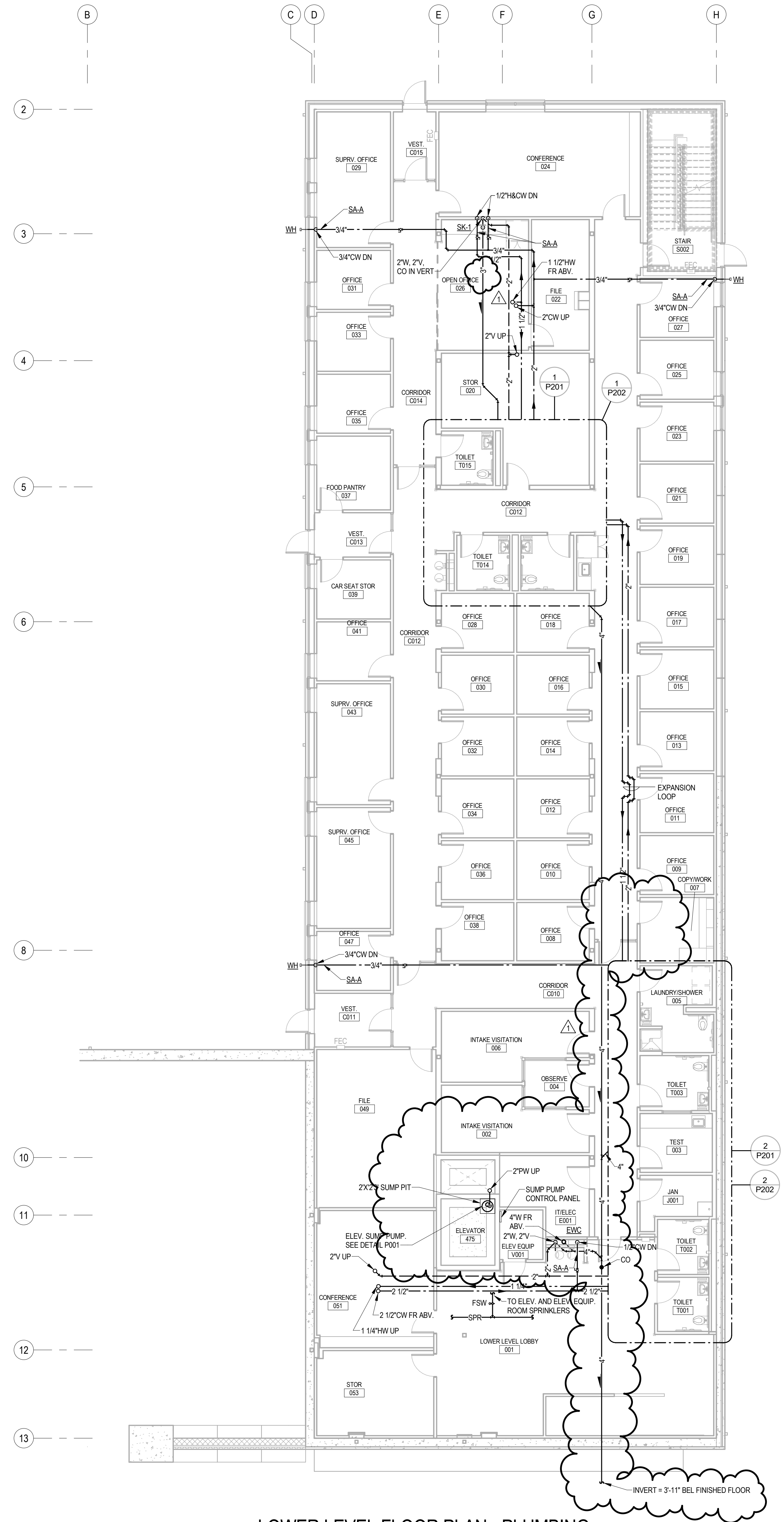
SPECTRUM DESIGN PROJECT NO.: **24112**

PROJ. MGR.: CHECKED BY: DRAWN BY:
RCH MGW CAD

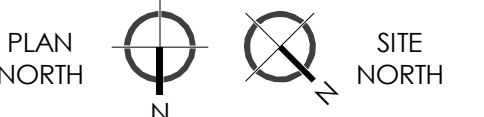
SHEET ISSUE DATE:
07.10.2026

PROJECT PHASE: BID DOCUMENTS

REVISIONS:
REV 1 7/10/2026 ADDENDUM 1



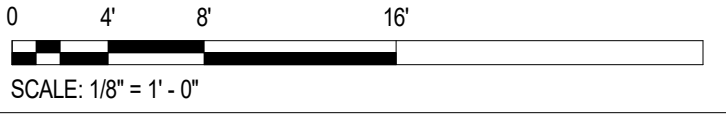
LOWER LEVEL FLOOR PLAN - PLUMBING



SHEET NAME:

**LOWER LEVEL FLOOR
PLAN - PLUMBING**

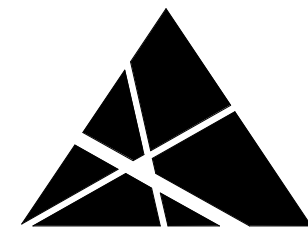
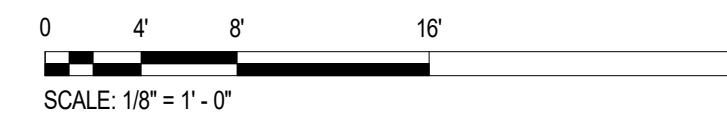
SHEET NUMBER:
P101



ORIGINAL USE ARCHITECT (BMA2) 7/10/2026 2:05:18 PM
C:\Users\josh\Documents\3114_Webb\3114_Webb.dwg (11/08/25) cad.rvt



MAIN LEVEL FLOOR PLAN - PLUMBING
SCALE: 1/8" = 1'-0"



SPECTRUM DESIGN
architects | engineers

Plaza Suite 1
10 Church Avenue, SE
Roanoke, VA 24011

540.342.4001
spectrumpc.com



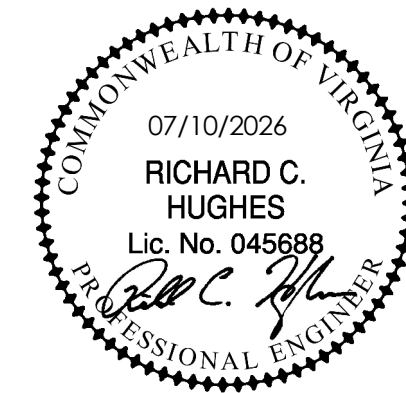
LAWRENCE PERRY & ASSOCIATES
Consulting Engineers

15 E Salem Avenue SE, Suite 101
Roanoke, Virginia 24011
Phone: (540) 342-1818
Fax: (540) 344-3410
Curren No.: 25114
© Lawrence Perry and Associates, Inc.

**DEPARTMENT OF SOCIAL
SERVICES BUILDING**

BEDFORD COUNTY

SPECTRUM DESIGN PROJECT NO.: 24112

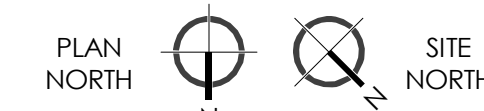


PROJ. MGR.: **RCH** CHECKED BY: **MGW** DRAWN BY: **CAD**

SHEET ISSUE DATE:
07.10.2026

PROJECT PHASE:
BID DOCUMENTS

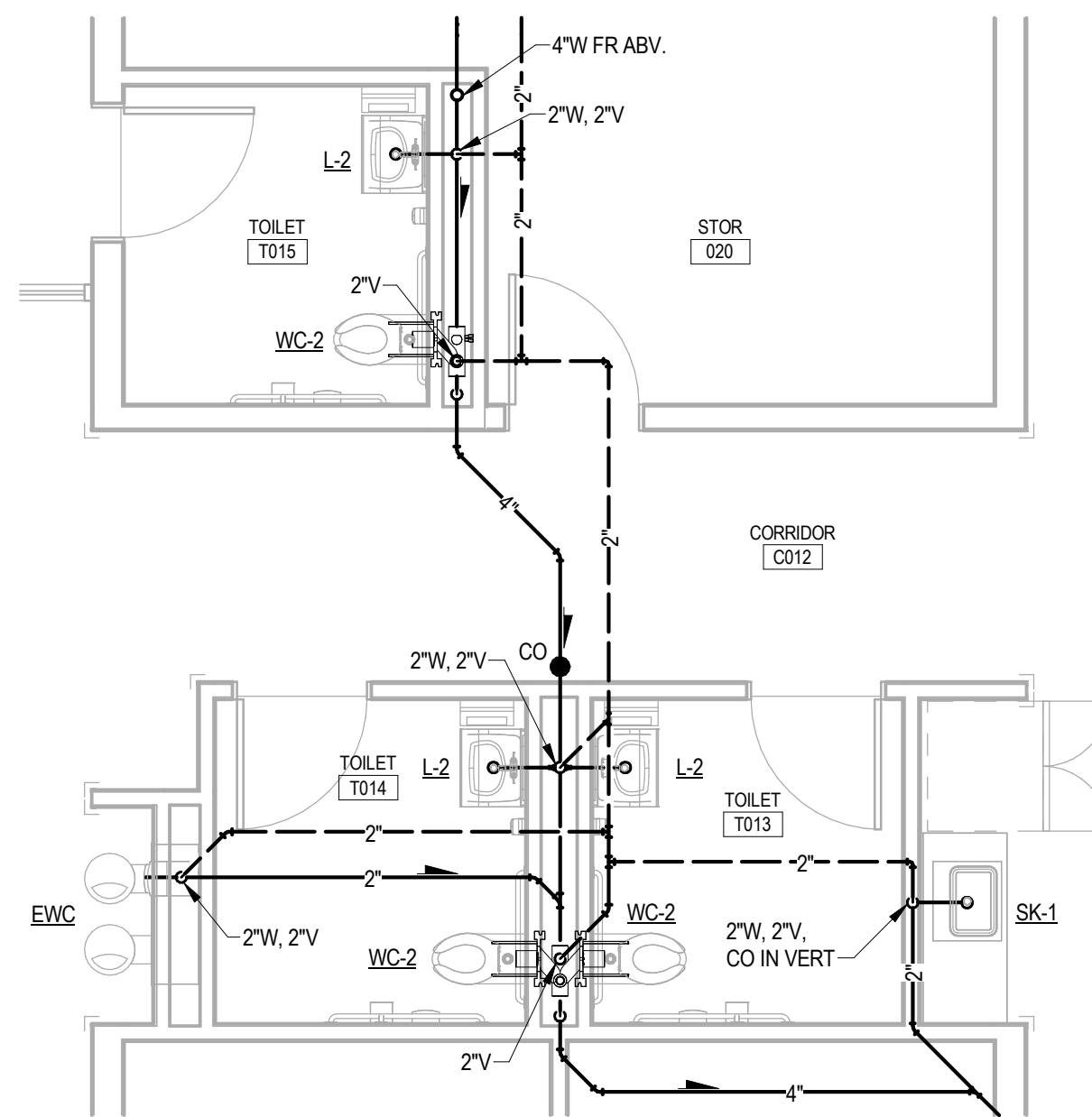
SHEET REVISIONS:
REV 1 7/10/2026 ADDENDUM 1



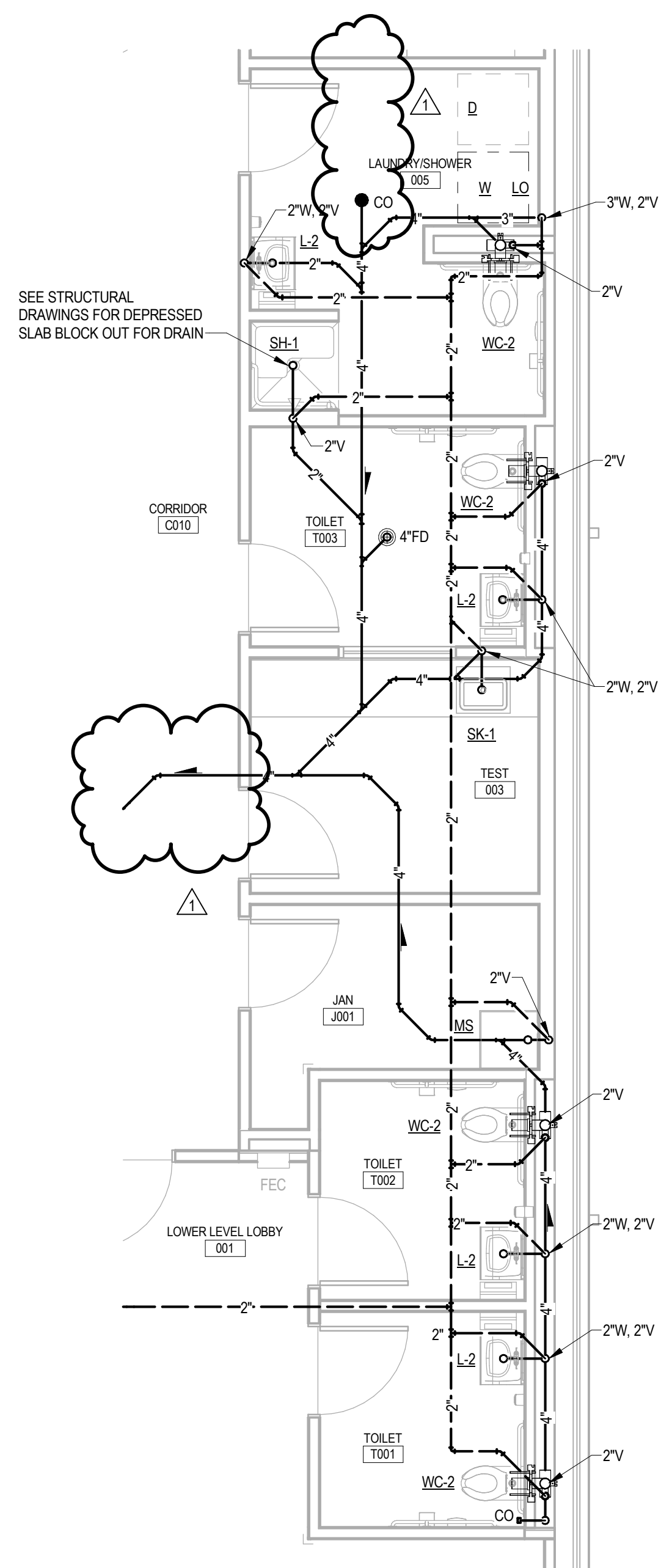
SHEET NAME:
**MAIN LEVEL FLOOR
PLAN - PLUMBING**

SHEET NUMBER:

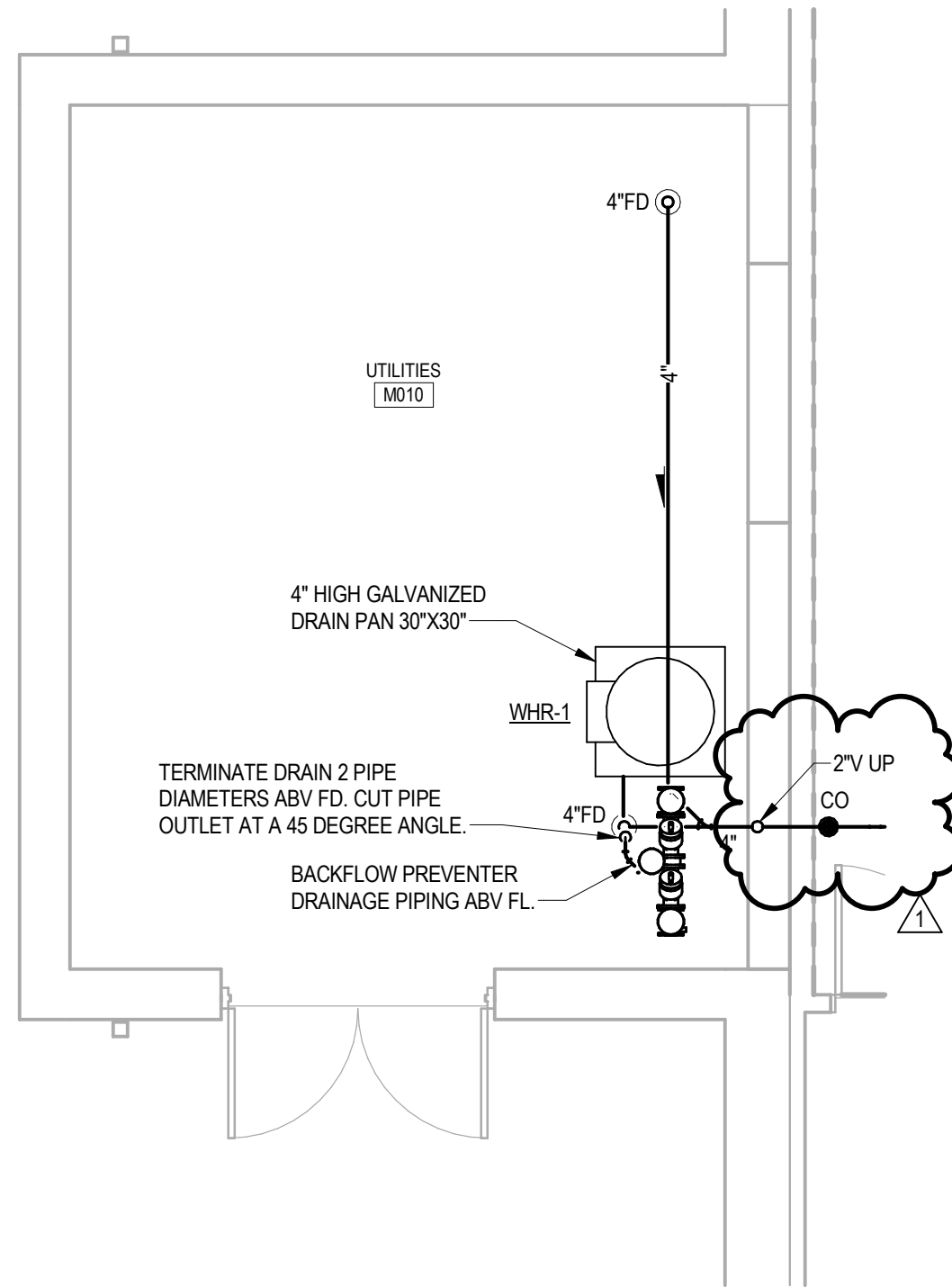
P102



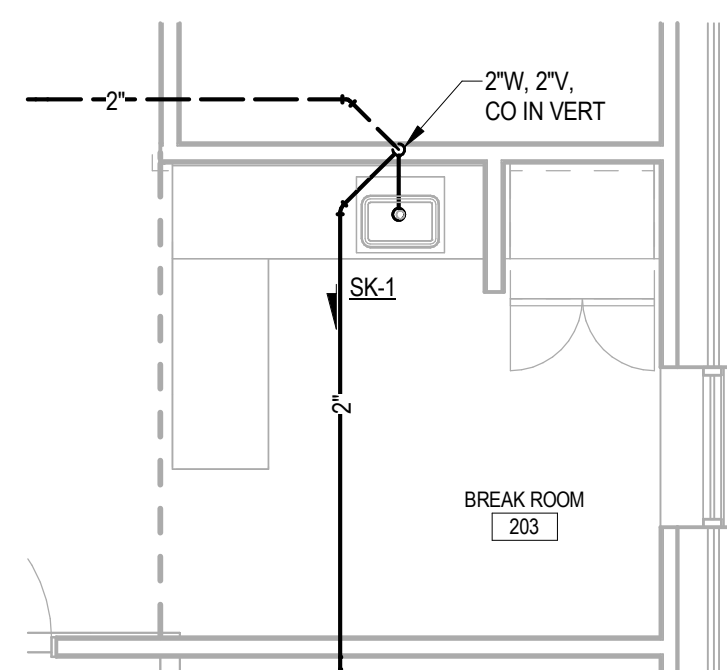
1
P101
PARTIAL PLAN - PLUMBING
SCALE: 1/4" = 1'-0"



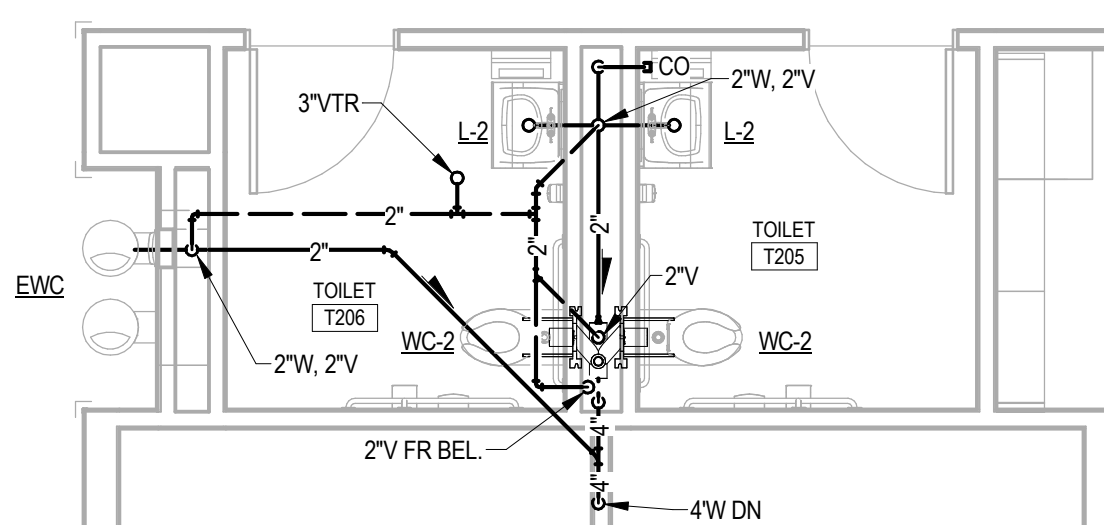
2
P101
PARTIAL PLAN - PLUMBING
SCALE: 1/4" = 1'-0"



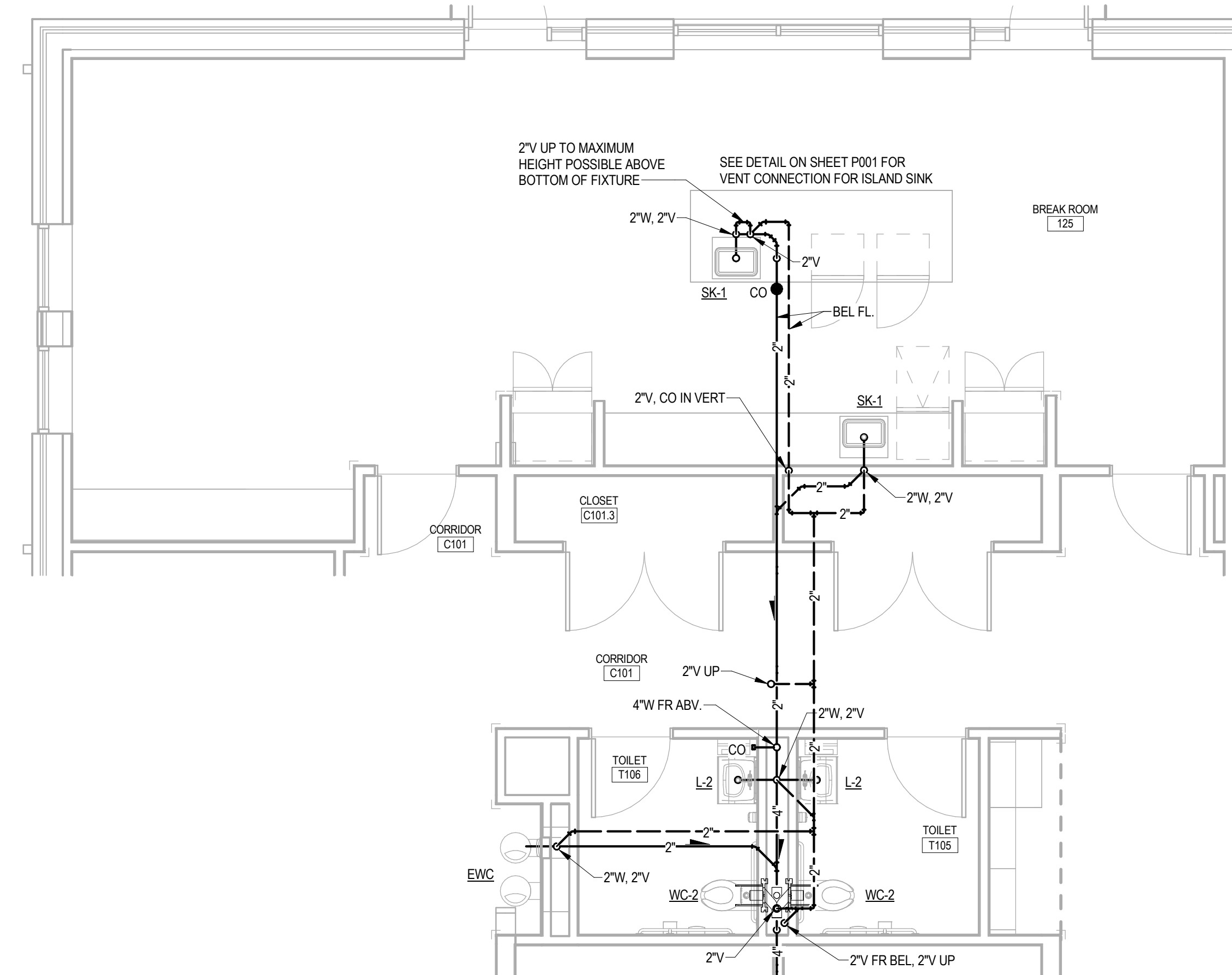
3
P102
PARTIAL PLAN - PLUMBING
SCALE: 1/4" = 1'-0"



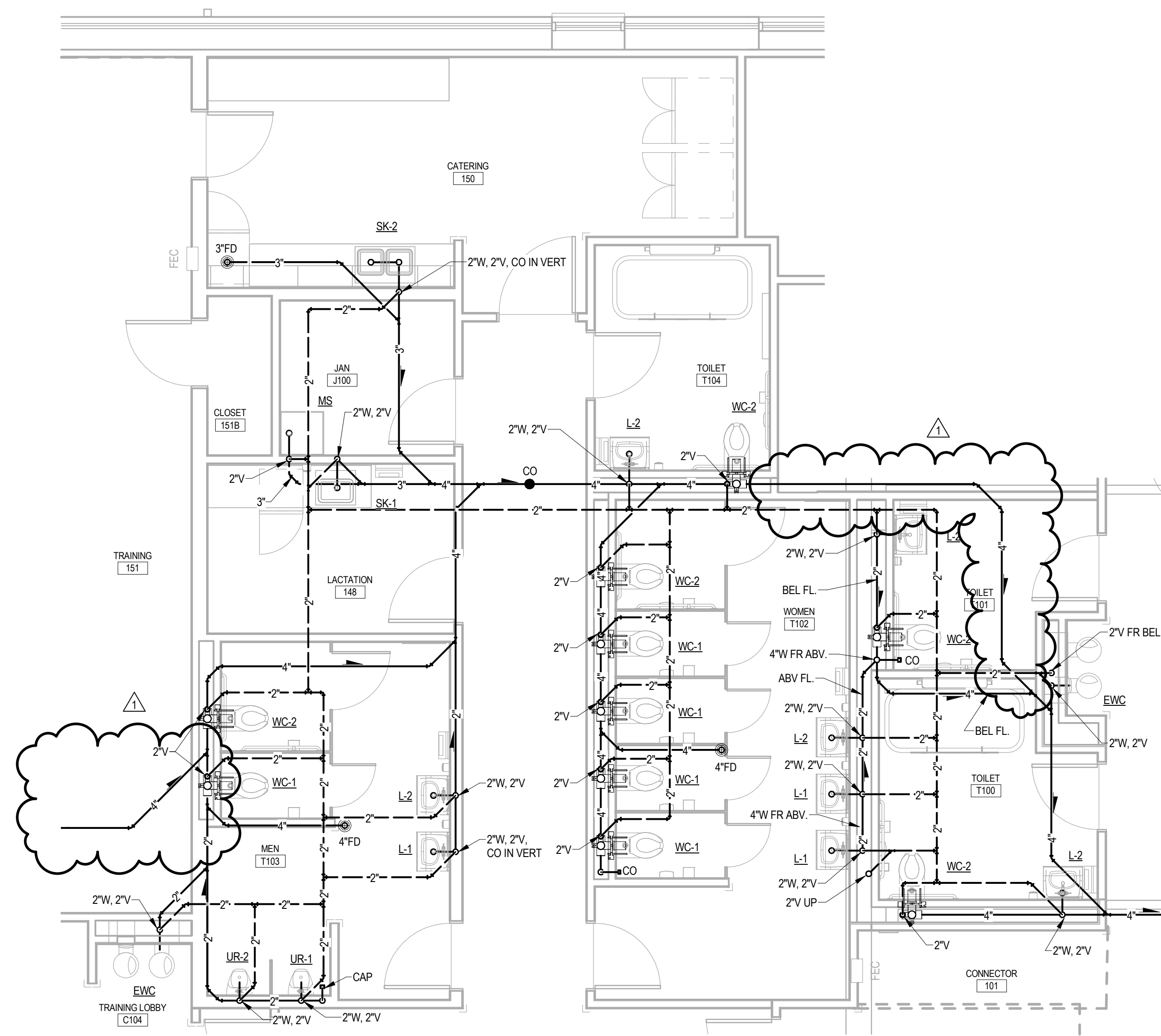
6
P103
PARTIAL PLAN - PLUMBING
SCALE: 1/4" = 1'-0"



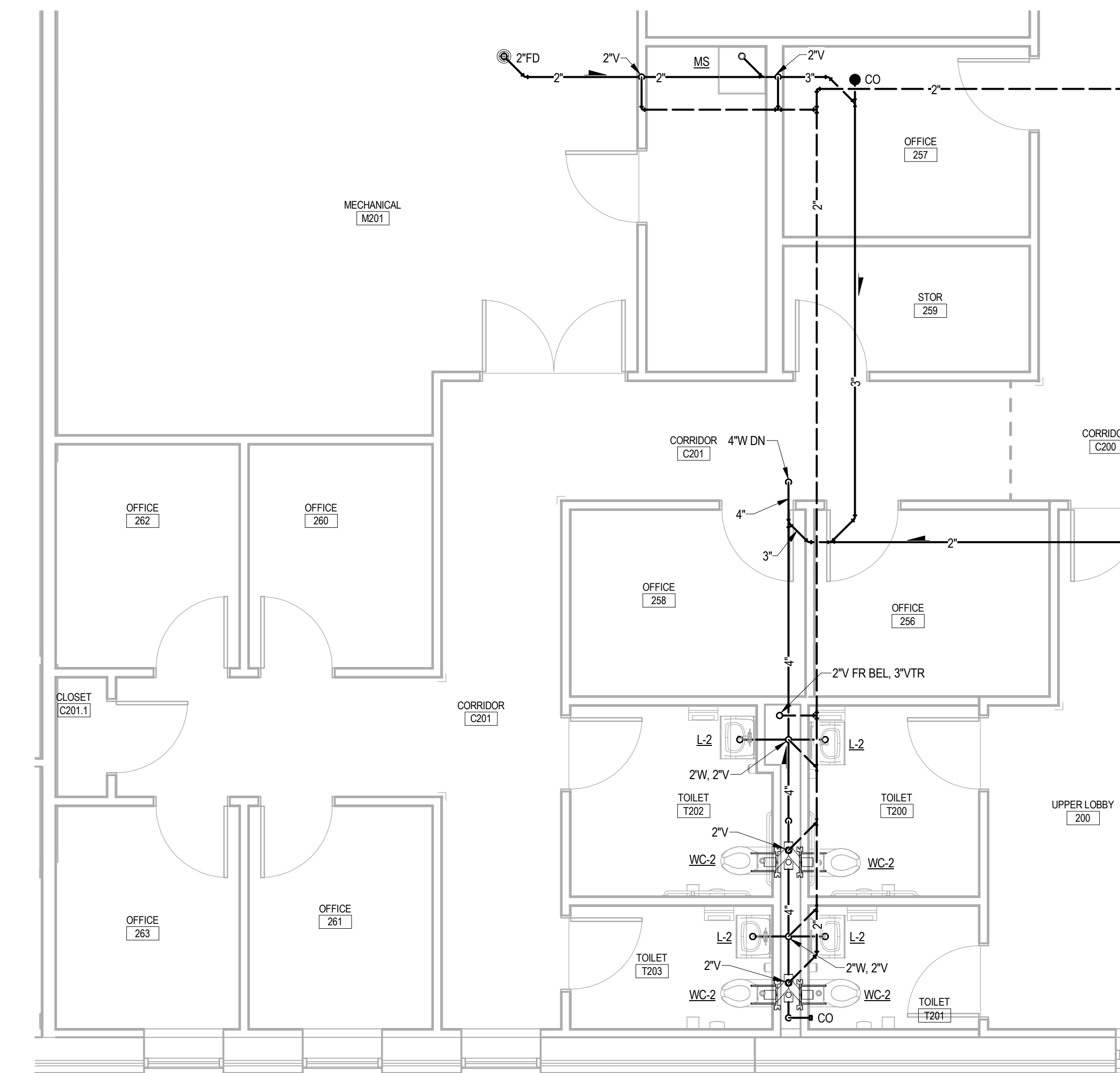
7
P103
PARTIAL PLAN - PLUMBING
SCALE: 1/4" = 1'-0"



4
P102
PARTIAL PLAN - PLUMBING
SCALE: 1/4" = 1'-0"



5
P102
PARTIAL PLAN - PLUMBING
SCALE: 1/4" = 1'-0"



8
P103
PARTIAL PLAN - PLUMBING
SCALE: 1/4" = 1'-0"

