



University of Kentucky®

Procurement Services

INVITATION FOR BIDS

CCK-2617.0-9-25

AG RESEARCH FACILITY 1 – CORE AND SHELL BP04 PT 2 TC-022 Rebid

PROJECT # 2617.0

ADDENDUM # 1

10/31/2024

IMPORTANT: BID AND ADDENDUM MUST BE RECEIVED BY 11/19/2024 @ 3:00 P.M. LEXINGTON, KY TIME

Bidder must acknowledge receipt of this and any addendum as stated in the Invitation for Bids.

ITEM #1: CLARIFICATIONS AND MODIFICATIONS TO THE CONTRACT DOCUMENTS

Bidders are instructed to review, acknowledge, and incorporate the enclosed Addendum #1 prepared by Turner Construction Company into their offers.

OFFICIAL APPROVAL
UNIVERSITY OF KENTUCKY

Corey W. Leslie / (859) 257-9102

SIGNATURE

Typed or Printed Name

University of Kentucky
Procurement Services
322 Peterson Service Building
Lexington, KY 40506-0005

An Equal Opportunity University



**UK AG Research Building
BID PACKAGE – 04 Core & Shell – TC-022 Roofing, Sheet Metal Flashing & Trim RE-BID
ADDENDUM No. 01
CCK-2617.0-9-25
10/28/2024**

TCCO Addendum #01 Items

Attachments Included:

- **BHDP Core & Shell Package – Roof Bid Addendum 1 dated 10/21/2024**

| | |
|----------------------|---|
| Date | October 21, 2024 |
| Project Title | University of Kentucky Agriculture Research Facility 1 Core and Shell Package - Roof Bid |
| To | All Plan Holders |
| Purpose | Modify the Bid Documents |
| Distribution | All Plan Holders University of Kentucky Turner Construction A/E Design Team |

TO ALL BIDDERS: This Addendum modifies the Contract Documents and shall be taken into account in preparing bid proposals and shall become a part of the Contract Documents.

Specifications:

- Item 1.** Section 07 5423 - Thermoplastic-Polyolefin (TPO) Roofing
- Replace entire section with the attached TPO specification.

Drawings:

- Item 2.** Sheet A142.1 - FOURTH FLOOR CORE AND SHELL PLAN - AREA 2
- Addition of flexible walkway around rooftop equipment.
 - Addition of keynote 07 5423 AQ for flexible walkway.
- Item 3.** Sheet A143.1 - FOURTH FLOOR CORE AND SHELL PLAN - AREA 3
- Addition of flexible walkway around rooftop equipment.
 - Addition of keynote 07 5423 AQ for flexible walkway.
- Item 4.** Sheet A152.1 - GREENHOUSE & ROOF CORE AND SHELL PLAN - AREA 2
- Revision of original keynote 07 5400 K to be 07 5423 K.
- Item 5.** Sheet A160.1 - UPPER ROOF PLAN - OVERALL
- Revision to headhouse roof to clarify slope direction and spot elevations.
 - Addition of elevated roof portion for service elevator to meet required overhead clear space.
 - Addition of keynotes 07 5423 AN, and 177.
- Item 6.** Sheet A305.1 - SERVICE ELEVATOR - ENLARGED PLANS AND SECTIONS (issued in PCO-022)
- Section details to show elevated roof at service elevator shaft.
- Item 7.** Sheet A501.1 - EXTERIOR WALL AND ROOF ASSEMBLIES
- Revisions to RA1 and RA2 to change 07 5400 to 07 5423.
- Item 8.** Sheet A520.1 - SECTION DETAILS
- Revisions to keynotes to change original keynote series 07 5400 to be series 07 5423.
- Item 9.** Sheet A521.1 - SECTION DETAILS
- Revisions to keynotes to change original keynote series 07 5400 to be series 07 5423.

Item 10. Sheet A522.1 - SECTION DETAILS

- Revisions to keynotes to change original keynote series 07 5400 to be series 07 5423.

Item 11. Sheet A523.1 - SECTION DETAILS

- Revisions to keynotes to change original keynote series 07 5400 to be series 07 5423.

Item 12. Sheet A524.1 - SECTION DETAILS

- Revisions to keynotes to change original keynote series 07 5400 to be series 07 5423.

Item 13. Sheet A525.1 - SECTION DETAILS

- Revisions to keynotes to change original keynote series 07 5400 to be series 07 5423.

Item 14. Sheet A526.1 - SECTION DETAILS

- Revisions to keynotes to change original keynote series 07 5400 to be series 07 5423.

Item 15. Sheet A527.1 - SECTION DETAILS

- Revisions to keynotes to change original keynote series 07 5400 to be series 07 5423.

Item 16. Sheet A528.1 - SECTION DETAILS

- Revisions to keynotes to change original keynote series 07 5400 to be series 07 5423.

Item 17. Sheet A550.1 - ROOF DETAILS

- Revisions to keynotes to change original keynote series 07 5400 to be series 07 5423.

Item 18. Sheet A700.1 - DOOR SCHEDULE - CORE AND SHELL

- Revisions to keynotes to change original keynote series 07 5400 to be series 07 5423.

Respectfully Submitted,



Kelly Gardner
Senior Architect
BHDP Architecture

ATTACHMENTS

1. Specification 07 5423 - 07 5423 - Thermoplastic-Polyolefin (TPO) Roofing_ROOF-ADD-1
2. Sheet A142.1 - FOURTH FLOOR CORE AND SHELL PLAN - AREA 2_ROOF-ADD-1
3. Sheet A143.1 - FOURTH FLOOR CORE AND SHELL PLAN - AREA 3_ROOF-ADD-1
4. Sheet A152.1 - GREENHOUSE & ROOF CORE AND SHELL PLAN - AREA 2_ROOF-ADD-1
5. Sheet A160.1 - UPPER ROOF PLAN - OVERALL_ROOF-ADD-1
6. Sheet A305.1 - SERVICE ELEVATOR - ENLARGED PLANS AND SECTIONS_PCO-022
7. Sheet A501.1 - EXTERIOR WALL AND ROOF ASSEMBLIES_ROOF-ADD-1
8. Sheet A520.1 - SECTION DETAILS_ROOF-ADD-1
9. Sheet A521.1 - SECTION DETAILS_ROOF-ADD-1
10. Sheet A522.1 - SECTION DETAILS_ROOF-ADD-1
11. Sheet A523.1 - SECTION DETAILS_ROOF-ADD-1
12. Sheet A524.1 - SECTION DETAILS_ROOF-ADD-1
13. Sheet A525.1 - SECTION DETAILS_ROOF-ADD-1
14. Sheet A526.1 - SECTION DETAILS_ROOF-ADD-1
15. Sheet A527.1 - SECTION DETAILS_ROOF-ADD-1
16. Sheet A528.1 - SECTION DETAILS_ROOF-ADD-1
17. Sheet A550.1 - ROOF DETAILS_ROOF-ADD-1

18. Sheet A700.1 - DOOR SCHEDULE - CORE AND SHELL_ROOF-ADD-1

END OF CORE AND SHELL PACKAGE - ROOF BID - ADDENDUM 1

**SECTION 07 5423
THERMOPLASTIC-POLYOLEFIN (TPO) ROOFING**

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Thermoplastic polyolefin (TPO) roofing system.
2. Accessory roofing materials.
3. Substrate board.
4. Vapor retarder.
5. Roof insulation.
6. Insulation accessories and cover board.
7. Walkways.

B. Related Requirements:

1. Section 061000 "Rough Carpentry" for wood nailers, curbs, and blocking; and for wood-based, structural-use roof deck panels.
2. Section 076200 "Sheet Metal Flashing and Trim" for metal roof flashings and counterflashings.
3. Section 077100 "Roof Specialties" for manufactured copings.
4. Section 077129 "Manufactured Roof Expansion Joints" for manufactured roof expansion-joint assemblies.
5. Section 079200 "Joint Sealants" for joint sealants, joint fillers, and joint preparation.
6. Section 221423 "Storm Drainage Piping Specialties" for roof drains.

1.2 DEFINITIONS

- A. Roofing Terminology: Definitions in ASTM D1079 and glossary in NRCA's "The NRCA Roofing Manual: Membrane Roof Systems" apply to Work of this Section.

1.3 PREINSTALLATION MEETINGS

- A. Preliminary Roofing Conference: Before starting roof deck construction, conduct conference at Project site.

1. Meet with Owner, Architect, Construction Manager, Owner's insurer if applicable, testing and inspecting agency representative, roofing Installer, roofing system manufacturer's representative, deck Installer, air barrier Installer, and installers whose work interfaces with or affects roofing, including installers of roof accessories and roof-mounted equipment.
2. Review methods and procedures related to roofing installation, including manufacturer's written instructions.
3. Review and finalize construction schedule, and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
4. Review deck substrate requirements for conditions and finishes, including flatness and fastening.

5. Review structural loading limitations of roof deck during and after roofing.
6. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that affects roofing system.
7. Review governing regulations and requirements for insurance and certificates if applicable.
8. Review temporary protection requirements for roofing system during and after installation.
9. Review roof observation and repair procedures after roofing installation.

B. Preinstallation Roofing Conference: Conduct conference at Project site.

1. Meet with Owner, Architect, Construction Manager, Owner's insurer if applicable, testing and inspecting agency representative, roofing Installer, roofing system manufacturer's representative, deck Installer, air barrier Installer, and installers whose work interfaces with or affects roofing, including installers of roof accessories and roof-mounted equipment.
2. Review methods and procedures related to roofing installation, including manufacturer's written instructions.
3. Review and finalize construction schedule, and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
4. Examine deck substrate conditions and finishes for compliance with requirements, including flatness and fastening.
5. Review structural loading limitations of roof deck during and after roofing.
6. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that affects roofing system.
7. Review governing regulations and requirements for insurance and certificates if applicable.
8. Review temporary protection requirements for roofing system during and after installation.
9. Review roof observation and repair procedures after roofing installation.

1.4 ACTION SUBMITTALS

A. Product Data:

1. Thermoplastic polyolefin (TPO) roofing system.
2. Accessory roofing materials.
3. Substrate board.
4. Vapor retarder.
5. Roof insulation.
6. Insulation accessories and cover board.
7. Walkways.
8. For insulation and roof system component fasteners, include copy of FM Approvals' RoofNav listing.

B. Sustainable Design Submittals:

1. Product Test Reports: For roof materials, documentation indicating that roof materials comply with Solar Reflectance Index requirements.
2. Product Data: For recycled content, indicating postconsumer and preconsumer recycled content and cost.
3. Third-Party Certifications: For each product.
4. Third-Party Certified Life Cycle Assessment: For each product.

- C. Shop Drawings: Include roof plans, sections, details, and attachments to other work, including the following:
 - 1. Layout and thickness of insulation.
 - 2. Base flashings and membrane termination details.
 - 3. Flashing details at penetrations.
 - 4. Tapered insulation layout, thickness, and slopes.
 - 5. Roof plan showing orientation of steel roof deck and orientation of roof membrane, fastening spacings, and patterns for mechanically fastened roofing system.
 - 6. Insulation fastening patterns for corner, perimeter, and field-of-roof locations.
 - 7. Tie-in with adjoining air barrier.
- D. Samples for Verification: For the following products:
 - 1. Roof membrane and flashings, of color required.
 - 2. Walkway pads or rolls, of color required.
- E. Wind Uplift Resistance Submittal: For roofing system, indicating compliance with wind uplift performance requirements.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer manufacturer.
- B. Manufacturer Certificates:
 - 1. Special Warranty Certificate: Signed by roof membrane manufacturer, certifying that all materials supplied under this Section are acceptable for special warranty.
- C. Product Test Reports: For roof membrane and insulation, for tests performed by a qualified testing agency, indicating compliance with specified requirements.
- D. Evaluation Reports: For components of roofing system, from ICC-ES.
- E. Field Test Reports:
 - 1. Concrete internal relative humidity test reports.
- F. Field quality-control reports.
- G. Sample Warranties: For manufacturer's special warranties.

1.6 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For roofing system to include in maintenance manuals.

1.7 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A qualified manufacturer that is UL listed for roofing system identical to that used for this Project.

- B. Installer Qualifications: A qualified firm that is approved, authorized, or licensed by roofing system manufacturer to install manufacturer's product and that is eligible to receive manufacturer's special warranty.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, approval or listing agency markings, and directions for storing and mixing with other components.
- B. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing system manufacturer. Protect stored liquid material from direct sunlight.
 - 1. Discard and legally dispose of liquid material that cannot be applied within its stated shelf life.
- C. Protect roof insulation materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Store in a dry location. Comply with insulation manufacturer's written instructions for handling, storing, and protecting during installation.
- D. Handle and store roofing materials, and place equipment in a manner to avoid permanent deflection of deck.

1.9 FIELD CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit roofing system to be installed according to manufacturer's written instructions and warranty requirements.

1.10 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace components of roofing system that fail in materials or workmanship within specified warranty period.
 - 1. Special warranty includes roof membrane, base flashings, roof insulation, fasteners, cover boards, vapor retarder, substrate board, walkways, and other components of roofing system.
 - 2. Warranty Period: 20 years from date of Substantial Completion.
- B. Special Project Warranty: Submit roofing Installer's warranty, on warranty form at end of this Section, signed by Installer, covering the Work of this Section, including all components of roofing system such as roof membrane, base flashing, roof insulation, fasteners, cover boards, substrate boards, vapor retarders, and walkway products, for the following warranty period:
 - 1. Warranty Period: Two years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. General Performance: Installed roofing system and flashings to withstand specified uplift pressures, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Roof system and flashings to remain watertight.
 - 1. Accelerated Weathering: Roof to withstand 2000 hours of exposure when tested according to ASTM G152, ASTM G154, or ASTM G155.
 - 2. Impact Resistance: Roof membrane to resist impact damage when tested according to ASTM D3746, ASTM D4272, or the "Resistance to Foot Traffic Test" in FM Approvals 4470.
- B. Material Compatibility: Roofing materials to be compatible with one another and adjacent materials under conditions of service and application required, as demonstrated by roof membrane manufacturer based on testing and field experience.
- C. FM Approvals' RoofNav Listing: Roof membrane, base flashings, and component materials comply with requirements in FM Approvals 4450 or FM Approvals 4470 as part of a roofing system, and are listed in FM Approvals' RoofNav for Class 1 or noncombustible construction, as applicable. Identify materials with FM Approvals Certification markings.
 - 1. Fire/Windstorm Classification: Class 1A-90.
 - 2. Hail-Resistance Rating: FM Global Property Loss Prevention Data Sheet 1-34 SH.
- D. Solar Reflectance Index (SRI): Three-year aged SRI not less than 64 or initial SRI not less than 82 when calculated in accordance with ASTM E 1980, based on testing identical products by a qualified testing agency.
- E. Fire-Resistance Ratings: Comply with fire-resistance-rated assembly designs indicated. Identify products with appropriate markings of applicable testing agency.

2.2 THERMOPLASTIC POLYOLEFIN (TPO) ROOFING SYSTEM

- A. TPO Sheet: ASTM D6878/D6878M, internally fabric- or scrim-reinforced, TPO sheet.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Carlisle Syntec Systems
 - b. GAF
 - c. Johns Manville; a Berkshire Hathaway company
 - d. Versico Roofing Systems; Carlisle Construction Materials
 - 2. Source Limitations: Obtain components for roofing system from roof membrane manufacturer or manufacturers approved by roof membrane manufacturer.
 - 3. Thickness: 60 mils, nominal minimum or thicker as required to meet warranty.
 - 4. Exposed Face Color: Gray.

2.3 ACCESSORY ROOFING MATERIALS

- A. General: Accessory materials recommended by roofing system manufacturer for intended use and compatible with other roofing components.
1. Adhesives and sealants shall comply with the following limits for VOC content:
- a. Plastic Foam Adhesives: 50 g/L.
 - b. Gypsum Board and Panel Adhesives: 50 g/L.
 - c. Multipurpose Construction Adhesives: 70 g/L.
 - d. Fiberglass Adhesives: 80 g/L.
 - e. Contact Adhesives: 80 g/L.
 - f. PVC Welding Compounds: 510 g/L.
 - g. Other Adhesives: 250 g/L.
 - h. Single-Ply Roof Membrane Sealants: 450 g/L.
 - i. Nonmembrane Roof Sealants: 300 g/L.
 - j. Sealant Primers for Nonporous Substrates: 250 g/L.
 - k. Sealant Primers for Porous Substrates: 775 g/L.
- B. Sheet Flashing: Manufacturer's standard unreinforced TPO sheet flashing, 55 mils thick, minimum, of same color as TPO sheet.
- C. Prefabricated Pipe Flashings: As recommended by roof membrane manufacturer.
- D. Bonding Adhesive: Manufacturer's standard.
- E. Slip Sheet: Manufacturer's standard, of thickness required for application.
- F. Metal Termination Bars: Manufacturer's standard, predrilled stainless steel or aluminum bars, approximately 1 by 1/8 inch thick; with anchors.
- G. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening roofing components to substrate, and acceptable to roofing system manufacturer.
- H. Miscellaneous Accessories: Provide pourable sealers, preformed cone and vent sheet flashings, preformed inside and outside corner sheet flashings, T-joint covers, lap sealants, termination reglets, and other accessories.

2.4 SUBSTRATE BOARD

- A. Substrate Board: ASTM C 1177/C 1177M, glass-mat, water-resistant gypsum board or ASTM C 1278/C 1278M, fiber-reinforced gypsum board.
1. Basis-of-Design Product: Subject to compliance with requirements, provide Georgia-Pacific Building Products; Dans Deck Prime or a comparable product by one of the following:
- a. CertainTeed Corporation.
 - b. National Gypsum Company.
 - c. USG Corporation.
2. Thickness: 5/8 inch thick.
3. Surface Finish: Factory primed.

- B. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening substrate board to roof deck.

2.5 VAPOR RETARDER

- A. Butyl-Rubber-Sheet Vapor Retarder, Self-Adhering: Polyethylene film laminated to layer of butyl rubber adhesive, minimum 30-mil total thickness; maximum permeance rating of 0.1 perm; cold applied, with slip-resisting surface and release paper backing. Provide primer when recommended by vapor retarder manufacturer.

2.6 ROOF INSULATION

- A. General: Preformed roof insulation boards manufactured or approved by TPO roof membrane manufacturer, approved for use in FM Approvals' RoofNav listed roof assemblies.
- B. Polyisocyanurate Board Insulation: ASTM C1289, Type II, Class 1, Grade 2, felt or glass-fiber mat facer on both major surfaces.
 - 1. Compressive Strength: 20 psi.
 - 2. Size: 48 by 48 inches.
 - 3. Thickness:
 - a. Base Layer: 1-1/2 inches.
 - b. Upper Layer: Thickness as required to achieve R-value indicated in drawings.
 - c. R-30 minimum.
- C. Tapered Insulation: Provide factory-tapered insulation boards.
 - 1. Material: Match roof insulation.
 - 2. Minimum Thickness: **1/4 inch**.
 - 3. Slope:
 - a. Roof Field: 1/4 inch per foot unless otherwise indicated on Drawings.
 - b. Saddles and Crickets: 1/2 inch per foot unless otherwise indicated on Drawings.

2.7 INSULATION ACCESSORIES AND COVER BOARD

- A. General: Roof insulation accessories recommended by insulation manufacturer for intended use and compatibility with other roofing system components.
- B. Fasteners: Factory-coated steel fasteners with metal or plastic plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening roof insulation and cover boards to substrate, and acceptable to roofing system manufacturer.
- C. Insulation Adhesive: Insulation manufacturer's recommended adhesive formulated to attach roof insulation to substrate or to another insulation layer as follows:
 - 1. Modified asphaltic, asbestos-free, cold-applied adhesive.
 - 2. Adhesives and sealants shall comply with the following limits for VOC content:
- D. Glass-Mat Gypsum Cover Board: ASTM C1177/C1177M, water-resistant gypsum board.

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. CertainTeed; SAINT-GOBAIN
 - b. Gold Bond Building Products, LLC provided by National Gypsum Company
 - c. USG Corporation
 2. Thickness: 1/4 inch.
 3. Surface Finish: Factory primed.
- E. Protection Mat: Woven or nonwoven polypropylene, polyolefin, or polyester fabric; water permeable and resistant to UV degradation; type and weight as recommended by roofing system manufacturer for application.
- F. Flexible Walkways: Factory-formed, nonporous, heavy-duty, slip-resisting, surface-textured walkway pads or rolls, approximately 3/16 inch thick and acceptable to roofing system manufacturer.
1. Color: Contrasting with roof membrane.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements and other conditions affecting performance of the Work.
1. Verify that roof openings and penetrations are in place, curbs are set and braced, and roof-drain bodies are securely clamped in place.
 2. Verify that wood blocking, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and that nailers match thicknesses of insulation.
 3. Verify that surface plane flatness and fastening of steel roof deck complies with requirements in Section 053100 "Steel Decking."
 4. Verify that minimum concrete drying period recommended by roofing system manufacturer has passed.
 5. Verify that concrete substrate is visibly dry and free of moisture, and that minimum concrete internal relative humidity is not more than 75 percent, or as recommended by roofing system manufacturer, when tested according to ASTM F2170.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Clean substrate of dust, debris, moisture, and other substances detrimental to roofing system installation according to roofing system manufacturer's written instructions. Remove sharp projections.
- B. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction. Remove roof-drain plugs when no work is taking place or when rain is forecast.

3.3 INSTALLATION OF ROOFING, GENERAL

- A. Install roofing system according to roofing system manufacturer's written instructions, FM Approvals' RoofNav listed roof assembly requirements, and FM Global Property Loss Prevention Data Sheet 1-29.
- B. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system at end of workday or when rain is forecast. Remove and discard temporary seals before beginning Work on adjoining roofing.
- C. Coordinate installation and transition of roofing system component serving as an air barrier with air barrier specified under Section 072726 "Fluid-Applied Membrane Air Barriers."

3.4 INSTALLATION OF VAPOR RETARDER

- A. Self-Adhering-Sheet Vapor Retarder: Prime substrate if required by manufacturer. Install self-adhering-sheet vapor retarder over area to receive vapor retarder, side and end lapping each sheet a minimum of 3-1/2 and 6 inches, respectively.
 - 1. Extend vertically up parapet walls and projections to a minimum height equal to height of insulation and cover board.
 - 2. Seal laps by rolling.
- B. Completely seal vapor retarder at terminations, obstructions, and penetrations to prevent air movement into roofing system.

3.5 INSTALLATION OF INSULATION

- A. Coordinate installing roofing system components so insulation is not exposed to precipitation or left exposed at end of workday.
- B. Comply with roofing system and roof insulation manufacturer's written instructions for installing roof insulation.
- C. Installation Over Metal Decking:
 - 1. Install base layer of insulation with joints staggered not less than 24 inches in adjacent rows end joints staggered not less than 12 inches in adjacent rows and with long joints continuous at right angle to flutes of decking.
 - a. Where installing composite and noncomposite insulation in two or more layers, install noncomposite board insulation for bottom layer and intermediate layers, if applicable, and install composite board insulation for top layer.
 - b. Trim insulation neatly to fit around penetrations and projections, and to fit tight to intersecting sloping roof decks.
 - c. Make joints between adjacent insulation boards not more than 1/4 inch in width.
 - d. At internal roof drains, slope insulation to create a square drain sump with each side equal to the diameter of the drain bowl plus 24 inches.
 - 1) Trim insulation so that water flow is unrestricted.
 - e. Fill gaps exceeding 1/4 inch with insulation.
 - f. Cut and fit insulation within 1/4 inch of nailers, projections, and penetrations.

- g. Mechanically attach base layer of insulation and substrate board using mechanical fasteners specifically designed and sized for fastening specified board-type roof insulation to metal decks.
 - 1) Fasten insulation according to requirements in FM Approvals' RoofNav for specified Windstorm Resistance Classification.
 - 2) Fasten insulation to resist specified uplift pressure at corners, perimeter, and field of roof.
 - 2. Install upper layers of insulation and tapered insulation with joints of each layer offset not less than 12 inches from previous layer of insulation.
 - a. Staggered end joints within each layer not less than 24 inches in adjacent rows.
 - b. Install with long joints continuous and with end joints staggered not less than 12 inches in adjacent rows.
 - c. Trim insulation neatly to fit around penetrations and projections, and to fit tight to intersecting sloping roof decks.
 - d. Make joints between adjacent insulation boards not more than 1/4 inch in width.
 - e. At internal roof drains, slope insulation to create a square drain sump with each side equal to the diameter of the drain bowl plus 24 inches.
 - 1) Trim insulation so that water flow is unrestricted.
 - f. Fill gaps exceeding 1/4 inch with insulation.
 - g. Cut and fit insulation within 1/4 inch of nailers, projections, and penetrations.
 - h. Adhere each layer of insulation to substrate using adhesive according to FM Approvals' RoofNav listed roof assembly requirements for specified Windstorm Resistance Classification and FM Global Property Loss Prevention Data Sheet 1-29, as follows:
- D. Installation Over Concrete Decks:
- 1. Install base layer of insulation with joints staggered not less than 24 inches in adjacent rows.
 - a. Where installing composite and noncomposite insulation in two or more layers, install noncomposite board insulation for bottom layer and intermediate layers, if applicable, and install composite board insulation for top layer.
 - b. Trim insulation neatly to fit around penetrations and projections, and to fit tight to intersecting sloping roof decks.
 - c. Make joints between adjacent insulation boards not more than 1/4 inch in width.
 - d. At internal roof drains, slope insulation to create a square drain sump with each side equal to the diameter of the drain bowl plus 24 inches.
 - 1) Trim insulation so that water flow is unrestricted.
 - e. Fill gaps exceeding 1/4 inch with insulation.
 - f. Cut and fit insulation within 1/4 inch of nailers, projections, and penetrations.
 - g. Adhere base layer of insulation to vapor retarder according to FM Approvals' RoofNav listed roof assembly requirements for specified Windstorm Resistance Classification and FM Global Property Loss Prevention Data Sheet 1-29, as follows:
 - 2. Install upper layers of insulation and tapered insulation with joints of each layer offset not less than 12 inches from previous layer of insulation.

- a. Staggered end joints within each layer not less than 24 inches in adjacent rows.
- b. Install with long joints continuous and with end joints staggered not less than 12 inches in adjacent rows.
- c. Trim insulation neatly to fit around penetrations and projections, and to fit tight to intersecting sloping roof decks.
- d. Make joints between adjacent insulation boards not more than 1/4 inch in width.
- e. At internal roof drains, slope insulation to create a square drain sump with each side equal to the diameter of the drain bowl plus 24 inches.
 - 1) Trim insulation so that water flow is unrestricted.
- f. Fill gaps exceeding 1/4 inch with insulation.
- g. Cut and fit insulation within 1/4 inch of nailers, projections, and penetrations.
- h. Adhere each layer of insulation to substrate using adhesive according to FM Approvals' RoofNav listed roof assembly requirements for specified Windstorm Resistance Classification and FM Global Property Loss Prevention Data Sheet 1-29, as follows:

3.6 INSTALLATION OF COVER BOARDS

- A. Install cover boards over insulation with long joints in continuous straight lines with end joints staggered between rows. Offset joints of insulation below a minimum of 6 inches in each direction.
 - 1. Trim cover board neatly to fit around penetrations and projections, and to fit tight to intersecting sloping roof decks.
 - 2. At internal roof drains, conform to slope of drain sump.
 - a. Trim cover board so that water flow is unrestricted.
 - 3. Cut and fit cover board tight to nailers, projections, and penetrations.
 - 4. Loosely lay cover board over substrate.
 - 5. Adhere cover board to substrate using adhesive according to FM Approvals' RoofNav listed roof assembly requirements for specified Windstorm Resistance Classification and FM Global Property Loss Prevention Data Sheet 1-29, as follows:
 - a. Set cover board in ribbons of bead-applied insulation adhesive, firmly pressing and maintaining insulation in place.
 - b. Set cover board in a uniform coverage of full-spread insulation adhesive, firmly pressing and maintaining insulation in place.
- B. Install slip sheet over cover board and beneath roof membrane.

3.7 INSTALLATION OF ADHERED ROOF MEMBRANE

- A. Adhere roof membrane over area to receive roofing according to roofing system manufacturer's written instructions.
- B. Unroll roof membrane and allow to relax before installing.
- C. Start installation of roofing in presence of roofing system manufacturer's technical personnel and Owner's testing and inspection agency.

- D. Accurately align roof membrane, and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.
- E. Bonding Adhesive: Apply to substrate and underside of roof membrane at rate required by manufacturer, and allow to partially dry before installing roof membrane. Do not apply to splice area of roof membrane.
- F. In addition to adhering, mechanically fasten roof membrane securely at terminations, penetrations, and perimeter of roofing.
- G. Apply roof membrane with side laps shingled with slope of roof deck where possible.
- H. Seams: Clean seam areas, overlap roof membrane, and hot-air weld side and end laps of roof membrane and sheet flashings, to ensure a watertight seam installation.
 - 1. Test lap edges with probe to verify seam weld continuity. Apply lap sealant to seal cut edges of roof membrane and sheet flashings.
 - 2. Verify field strength of seams a minimum of twice daily, and repair seam sample areas.
 - 3. Repair tears, voids, and lapped seams in roof membrane that do not comply with requirements.
- I. Spread sealant bed over deck-drain flange at roof drains, and securely seal roof membrane in place with clamping ring.

3.8 INSTALLATION OF BASE FLASHING

- A. Install sheet flashings and preformed flashing accessories, and adhere to substrates according to roofing system manufacturer's written instructions.
- B. Apply bonding adhesive to substrate and underside of sheet flashing at required rate, and allow to partially dry. Do not apply to seam area of flashing.
- C. Flash penetrations and field-formed inside and outside corners with cured or uncured sheet flashing.
- D. Clean seam areas, overlap, and firmly roll sheet flashings into the adhesive. Hot-air weld side and end laps to ensure a watertight seam installation.
- E. Terminate and seal top of sheet flashings and mechanically anchor to substrate through termination bars.

3.9 WALKWAY INSTALLATION

- A. Flexible Walkways:
 - 1. Install flexible walkways at the following locations:
 - a. Locations indicated on Drawings.
 - b. As required by roof membrane manufacturer's warranty requirements.
 - 2. Provide 6-inch clearance between adjoining pads.
 - 3. Heat weld to substrate or adhere walkway products to substrate with compatible adhesive according to roofing system manufacturer's written instructions.

3.10 FIELD QUALITY CONTROL

- A. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion, in presence of Architect, and to prepare inspection report.
- B. Repair or remove and replace components of roofing system where inspections indicate that they do not comply with specified requirements.
- C. Additional testing and inspecting, at Contractor's expense, will be performed to determine if replaced or additional work complies with specified requirements.

3.11 PROTECTING AND CLEANING

- A. Protect roofing system from damage and wear during remainder of construction period. When remaining construction does not affect or endanger roofing system, inspect roofing system for deterioration and damage, describing its nature and extent in a written report, with copies to Architect and Owner.
- B. Correct deficiencies in or remove roofing system that does not comply with requirements, repair substrates, and repair or reinstall roofing system to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.
- C. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

3.12 ROOFING INSTALLER'S WARRANTY

- A. WHEREAS _____ of _____, herein called the "Roofing Installer," has performed roofing and associated work ("work") on the following project:
 - 1. Owner: _____.
 - 2. Owner Address: _____.
 - 3. Building Name/Type: _____.
 - 4. Building Address: _____.
 - 5. Area of Work: _____.
 - 6. Acceptance Date: _____.
 - 7. Warranty Period: _____.
 - 8. Expiration Date: _____.
- B. AND WHEREAS Roofing Installer has contracted (either directly with Owner or indirectly as a subcontractor) to warrant said work against leaks and faulty or defective materials and workmanship for designated Warranty Period,
- C. NOW THEREFORE Roofing Installer hereby warrants, subject to terms and conditions herein set forth, that during Warranty Period Roofing Installer will, at Roofing Installer's own cost and expense, make or cause to be made such repairs to or replacements of said work as are necessary to correct faulty and defective work and as are necessary to maintain said work in a watertight condition.
- D. This Warranty is made subject to the following terms and conditions:
 - 1. Specifically excluded from this Warranty are damages to work and other parts of the

building, and to building contents, caused by:

- a. lightning;
 - b. peak gust wind speed exceeding 90 mph;
 - c. fire;
 - d. failure of roofing system substrate, including cracking, settlement, excessive deflection, deterioration, and decomposition;
 - e. faulty construction of parapet walls, copings, chimneys, skylights, vents, equipment supports, and other edge conditions and penetrations of the work;
 - f. vapor condensation on bottom of roofing; and
 - g. activity on roofing by others, including construction contractors, maintenance personnel, other persons, and animals, whether authorized or unauthorized by Owner.
2. When work has been damaged by any of foregoing causes, Warranty shall be null and void until such damage has been repaired by Roofing Installer and until cost and expense thereof have been paid by Owner or by another responsible party so designated.
 3. Roofing Installer is responsible for damage to work covered by this Warranty but is not liable for consequential damages to building or building contents resulting from leaks or faults or defects of work.
 4. During Warranty Period, if Owner allows alteration of work by anyone other than Roofing Installer, including cutting, patching, and maintenance in connection with penetrations, attachment of other work, and positioning of anything on roof, this Warranty shall become null and void on date of said alterations, but only to the extent said alterations affect work covered by this Warranty. If Owner engages Roofing Installer to perform said alterations, Warranty shall not become null and void unless Roofing Installer, before starting said work, shall have notified Owner in writing, showing reasonable cause for claim, that said alterations would likely damage or deteriorate work, thereby reasonably justifying a limitation or termination of this Warranty.
 5. During Warranty Period, if original use of roof is changed and it becomes used for, but was not originally specified for, a promenade, work deck, spray-cooled surface, flooded basin, or other use or service more severe than originally specified, this Warranty shall become null and void on date of said change, but only to the extent said change affects work covered by this Warranty.
 6. Owner shall promptly notify Roofing Installer of observed, known, or suspected leaks, defects, or deterioration and shall afford reasonable opportunity for Roofing Installer to inspect work and to examine evidence of such leaks, defects, or deterioration.
 7. This Warranty is recognized to be the only warranty of Roofing Installer on said work and shall not operate to restrict or cut off Owner from other remedies and resources lawfully available to Owner in cases of roofing failure. Specifically, this Warranty shall not operate to relieve Roofing Installer of responsibility for performance of original work according to requirements of the Contract Documents, regardless of whether Contract was a contract directly with Owner or a subcontract with Owner's General Contractor.

E. IN WITNESS THEREOF, this instrument has been duly executed this _____ day of _____, _____.

1. Authorized Signature: _____.
2. Name: _____.
3. Title: _____.

END OF SECTION 07 5423



A. REFER TO G-SERIES FOR PROJECT GENERAL NOTES, CODE 339.000. LIFE SAFETY INFORMATION, AND FIRE RATED ASSEMBLY LOCATIONS.

B. ALL PARTS TYPICAL TO THIS PROJECT SHALL BE TO THE FOLLOWING: (CIVIL) = 100'-0" (ARCH) = 120'-0" (STRUCTURE) = 100'-0"

C. HALF-TONED ELEMENTS ARE GRAPHIC REPRESENTATION OF ITEMS INCLUDED IN OTHER CONSTRUCTION BID PACKAGES AND ARE SHOWN FOR REFERENCE ONLY.

D. DIMENSIONS (170) = SERIES 170. DIMENSIONS (170) = SERIES 170. DIMENSIONS OF PERIMETER, OPENINGS, ETC.

E. DIMENSIONS ON PLANS ARE FROM FACE TO FACE OF WALL, CONCRETE, CONCRETE CURTAINWALL, OR CURTAINWALL PERIMETER, UNLESS OTHERWISE INDICATED.

F. OPENING DIMENSIONS ON PLAN ARE TO ROUGH OPENING OR TO CENTERLINE OF CURTAINWALL, CURTAINWALL PERIMETER, OR STOREFRONT MULLIONS UNLESS OTHERWISE INDICATED.

G. ROOM NAMES AND NUMBERS ARE FOR REFERENCE ONLY.

H. IN THE EVENT OF ANY CONFLICTS BETWEEN THE DIMENSIONS OF THE PROJECT, THE DIMENSIONING BEFORE PROCEEDING WITH CONSTRUCTION.

RA# ROOF ASSEMBLY TYPE _____

A. REFER TO SHEET A501.1 FOR ROOF TYPE ASSEMBLIES.

B. REFER TO SHEET A550.1 AND SECTION DETAILS SHEETS FOR ROOF DETAILS.

C. CONTRACTOR SHALL REVIEW CONDITIONS AT THE UNDERSIDE OF THE ROOF DECK TO IDENTIFY ANY DEFECTS, PENETRATIONS, OR CONDITIONS WHICH ARE AT RISK OF BEING DAMAGED BY ROOF SYSTEM FASTENERS. THE CONTRACTOR SHALL MAP THE LOCATIONS OF THE EXISTING AT-RISK ITEMS TO ENSURE THE PLACEMENT OF THE ROOF SYSTEM FASTENERS DOES NOT EXCEED THE STRUCTURAL CAPACITY OR DAMAGE CAUSED BY ROOF SYSTEM FASTENERS SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. DISTRIBUTE STAGGERED ROOFING MATERIALS OVER ROOF SURFACE AND CAPACITY OF ROOF SYSTEM MATERIALS SHALL NOT EXCEED THE STRUCTURAL CAPACITY OF ROOF WITH CONSTRUCTION MATERIALS. STAGGER CYPRESS WOOD AND WOOD BASED PANELS MORE THAN ONE PALLET HIGH. STACK MATERIALS OVER BEAMS AND JOIST GIRDERS WHERE POSSIBLE. COVER AND WEIGH DOWN ALL MATERIALS LEFT ON ROOF DURING CONSTRUCTION.

E. CONTRACTOR IS TO INSTALL ALL ROOFING IN A SINGLE FASHION WITH NO BACKWATER LAPS. PROVIDE SHOP DRAWINGS INCLUDING SNAPE LAYOUT PRIOR TO START OF THE WORK. ALL ROOFING SEAMS SHALL BE LAPPED A MINIMUM OF 6" WITH SEAM SEALANT.

F. THE WOOD BLOCKING AND NAILERS SHOWN IN THE DETAILS AND SECTIONS ARE PRESERVATIVE TREATED LUMBER. THE CONTRACTOR SHALL PROVIDE AND MAINTAIN SHALL BE PROVIDED TO MATCH ROOF INSULATION AT THE THICKEST POINT AND MAINTAIN THE SAME ELEVATION FOR THE ENTIRE PERIMETER OF THE ROOF UNLESS OTHERWISE INDICATED.

G. CONTRACTOR SHALL PROVIDE PRESERVATIVE TREATED LUMBER. ALL LUMBER TO BE PRESERVATIVE TREATED EXCEPT FOR PL WOOD, UNLESS OTHERWISE SPECIFIED. USE ONLY HOT DIP GALVANIZED OR STAINLESS STEEL FASTENERS AS APPROPRIATE FOR PRESERVATIVE TREATED LUMBER. COUNTERSINK ALL FASTENERS FOR WOOD BLOCKING AND NAILERS.

H. STAGGER ACCESSORIES SUCH AS SUBSTRATE, INSULATION AND COVER BOARD JOINTS IN BOTH DIRECTIONS.

I. TAPE FIELD INSULATION A MINIMUM OF 1/4" PER FOOT OVER THE ROOF DECK IS REQUIRED. TAPE COVER BOARD JOINTS A MINIMUM OF 1/2" PER FOOT. STAGGER SUBSTRATE, INSULATION, AND COVER BOARD JOINTS. ALL GAPS 1/4" OR LARGER ARE TO BE FILLED WITH MINIMALLY EXPANDED JOINTY FOAM INSULATION. ALL FASTENERS TO BE 316 STAINLESS STEEL UNLESS OTHERWISE REQUIRED BY ROOF MANUFACTURER. COUNTERSINK ALL FASTENERS FOR WOOD BLOCKING AND NAILERS.

J. MEMBRANE SECUREMENT AND FLASHING DETAILS ARE TYPICAL OF ALL FOUR SIDES OF ROOF PENETRATIONS.

K. ALL DISSIMILAR METALS TO BE SEPARATED BY PAINT COAT TO AVOID ELECTROLYTIC REACTION.

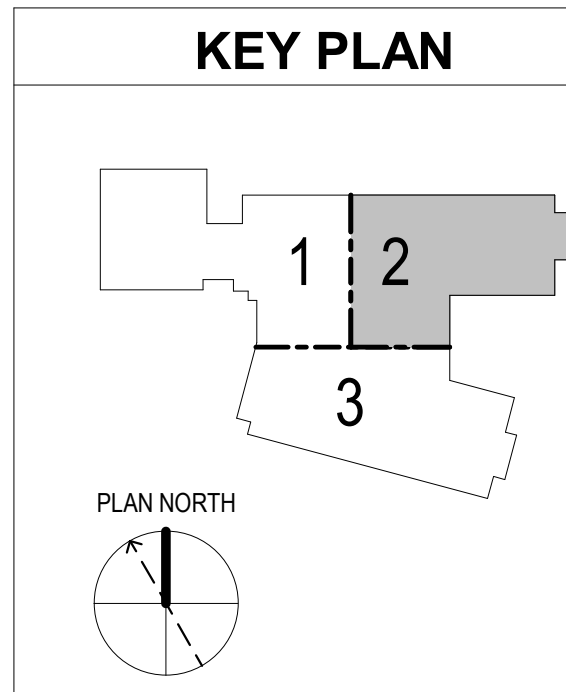
L. DESIGN FOR LOW SLOPE ROOF AREAS IS A FULLY ADHERED 60 MIL WHITE THERMOPLASTIC POLYOLEFIN (TPO) MEMBRANE ROOF SYSTEM. THE USE OF ANY OTHER ROOF SYSTEM THAT REQUIRES ADDITIONAL MATERIAL AND LABOR TO INSTALL WILL BE SOLE RESPONSIBILITY OF THE ROOFING CONTRACTOR TO PROVIDE AT NO ADDITIONAL COST TO THE OWNER. CONTRACTOR IS TO PROVIDE A WARRANTED WEATHER TIGHT ROOF SYSTEM.

M. NO. CONTRACTOR SHALL PROVIDE DRAWINGS ARE SHOWN ON ROOF PLANS. REFER TO MEPT DRAWINGS AND SUBSEQUENT BID PACKAGES.

121 MECHANICAL EQUIPMENT ON CONCRETE HOUSEKEEPING PADS. REFER TO
MECHANICAL DRAWINGS.

125 LABORATORY EXHAUST FANS ON CURB. REFER TO MECHANICAL DRAWINGS.

07 5423 AN ROOF CRICKET.
07 5423 AC FLEXIBLE WALKWAYS.
07 6200 AD 4x5 RECTANGULAR DOWNSPOUT WITH BRACKETS AT 36" ON CENTER VERTICALLY. FINISH TO MATCH GUTTER. PROVIDE SPLASH BLOCK AT BOTTOM OF GUTTER.
07 6200 E SPRINGLOD COPING WITH FACTORY PAINTED FINISH AND CONTINUOUS CLEATS. OVERLAP 1CM OR INSULATED METAL PANELS 1-1/2" MINIMUM WITH SEALANT.
08 9119 A FIXED BLADE LOUVER WITH INTERIOR PERIMETER ATTACHMENT ANGLE. PROVIDE 2" THICK INSULATED METAL BLANK-OFF PANELS ON SECTIONS NOT UTILIZED BY MECHANICAL. PANELS SHALL BE PROVIDED BY LOUVER MANUFACTURER.





A. REFER TO G-SERIES FOR PROJECT GENERAL NOTES, CODE SYSTEM, LIFE SAFETY INFORMATION, AND FIRE RATED ASSEMBLY LOCATIONS.

B. TYPICAL PLAN OR SECTION INDICATES THE FOLLOWING: (1) 3" (CIVIL) = 100'-0" (ARCH) HALF-TONED ELEMENTS ARE GRAPHIC REPRESENTATION OF ITEMS INCLUDED IN THE CONSTRUCTION. (2) DIMENSIONS ARE TO FACE UNLESS OTHERWISE INDICATED.

C. REFER TO A17.0.1 SERIES SHEETS FOR SLAB PLANS SHOWING DIMENSIONS OF PERIMETER, OPENINGS, ETC.

D. DIMENSIONS ON PLANS ARE FROM FACE TO FACE OF WALL, CONCRETE, MASONRY, OR COLUMN CENTERLINE, UNLESS OTHERWISE INDICATED.

E. OPENING DIMENSIONS ON PLAN ARE TO ROUGH OPENING OR TO CENTERLINE OF INTERMEDIATE CURB OR RAMP OR STOREFRONT MEETING OR UNLESS OTHERWISE INDICATED.

F. ROOM NAMES AND NUMBERS ARE FOR REFERENCE ONLY.

G. DO NOT SCALE DIMENSIONS FROM THE DRAWING. DO NOT INTERFERE WITH DIMENSIONS BEFORE PROCEEDING WITH CONSTRUCTION.

Raaf ROOF ASSEMBLY TYPE

A. REFER TO SHEET A501.1 FOR ROOF TYPE ASSEMBLIES.

B. REFER TO SHEET A501.1 AND SECTION DETAILS SHEETS FOR ROOF DETAILS.

C. CONTRACTOR SHALL REVIEW CONDITIONS AT THE UNDERSIDE OF THE ROOF DECK TO IDENTIFY CONDUITS, PIPING, AND OTHER UTILITIES / EQUIPMENT WHICH ARE AT RISK OF BEING DAMAGED BY THE ROOFING MATERIALS. CONTRACTOR SHALL MAINTAIN THE LOCATIONS OF THE EXISTING AT-RISK ITEMS TO ENSURE THE PLACEMENT OF THE ROOF SYSTEM FASTENERS DOES NOT DAMAGE THE EXISTING ITEMS. ITEMS DAMAGED BY THE ROOFING SYSTEM SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.

D. DISTRIBUTE STAGED ROOFING MATERIALS OVER ROOF SURFACE TO AVOID CONCENTRATED LOADING. DO NOT EXCEED THE STRUCTURAL LOADING CAPACITY OF THE ROOF WITH CONSTRUCTION. STAGING SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. NO JOBS OTHER THAN ONE PALLET HIGH. STACK MATERIALS OVER BEAMS AND JOIST SPINDERS WHERE POSSIBLE. COVER AND WEIGH DOWN ALL MATERIALS LEFT ON ROOF.

E. CONTRACTOR IS TO INSTALL ALL ROOFING IN A SINGLE FASHION WITH NO BACKWATER LAPS. PROVIDE SHOP DRAWINGS INDICATING SEAM LAYOUT PRIOR TO STARTING WORK. ALL ROOFING SEAMS SHALL BE LAPPED A MINIMUM OF 6" WITH BEAM SEALING.

F. THE ROOF BLOCKING AND RAFTERS SHOWN IN THE DETAILS AND SECTIONS ARE REPRESENTATIVE. CONTRACTOR SHALL PROVIDE A MINIMUM OF 14" PER FOOT STAGGER SHALL BE PROVIDED TO MATCH ROOF INSULATION AT THE THICKEST POINT AND MAINTAIN THE SAME ELEVATION FOR THE ENTIRE PERIMETER OF THE ROOF UNLESS OTHERWISE INDICATED. CONTRACTOR TO INSTALL NAILERS HEAD OF NEW ROOFING WORK. ONLY INSTALL NAILERS THAT CAN BE COVERED THE SAME DAY. ALL LUMBER TO BE PRESERVATIVE TREATED EXCEPT FOR PLYWOOD, UNLESS OTHERWISE SPECIFIED. USE ONLY HOT DIP GALVANIZED OR STAINLESS STEEL FASTENERS AS APPROPRIATE FOR PRESERVATIVE TREATED LUMBER. COUNTERSINK ALL FASTENERS FOR ROOF BLOCKING AND NAILERS.

G. CONTRACTOR TO ACCESS ALL SUBSTRATE, INSULATION AND COVER BOARD JOINTS IN BOTH DIRECTIONS.

H. TAPE FILL INSULATION A MINIMUM OF 1/4" PER FOOT FOR THE ROOF DECK IS REQUIRED. TAPE FILL INSULATION A MINIMUM OF 1/4" PER FOOT FOR STAGGER ALL SUBSTRATE, INSULATION, AND COVER BOARD JOINTS, ALL GAPS 1/4" OR LARGER ARE TO BE FILLED WITH MINIMALLY EXPANDING SPRAY FOAM INSULATION. CONTRACTOR TO PROVIDE PROTECTIVE COVERING TO PROTECT ROOFING FROM ROOF MANUFACTURER. COUNTERSINK ALL FASTENERS FOR ROOF BLOCKING AND NAILERS.

I. MEMBRANE SECUREMENT AND FLASHING DETAILS ARE TYPICAL OF ALL FOUR SIDES OF ALL ROOF PENETRATIONS.

J. ALL DISSIMILAR METALS TO BE SEPARATED BY PAINT COAT TO AVOID ELECTROLYTIC REACTION.

K. BASIS OF DESIGN FOR LOW SLOPE ROOF AREAS IS A FULLY ADHERED 60 MIL WHITE THERMOPLASTIC POLYOLEFIN (TPO) MEMBRANE ROOF SYSTEM. THE USE OF ANY OTHER ROOF SYSTEM THAT REQUIRES ADDITIONAL MATERIAL AND LABOR TO INSTALL SHALL BE THE SOLE RESPONSIBILITY OF THE ROOFING CONTRACTOR TO PROVIDE NO ADDITIONAL COST TO THE OWNER. CONTRACTOR IS TO PROVIDE A WARRANTED WEATHER TIGHT ROOF SYSTEM.

L. NOT TO BE USED FOR PENETRATIONS SHOWN ON ROOF PLANS. REFER TO MEPT DRAWINGS AND SUBSEQUENT BID PACKAGES.

177 RUN ROOF ASSEMBLY VERTICALLY BETWEEN LOW ROOF AND HIGH ROOF. TYP ALL 4 SIDES.

| | |
|------------|--|
| 07 5423 AN | ROOF CRICKET. |
| 07 6200 AE | THRU-WALL SCUPPER AND SCUPPER BOX TO DOWNSPOUT. |
| 07 6200 E | SPRINGLOCK COPING WITH FACTORY PAINTED FINISH AND CONTINUOUS CLEATS. OVERLAP 100MM OR INSULATED METAL PANELS 1-1/2" MINIMUM WITH SEALANT. |
| 11 2429 A | STAINLESS-STEEL U-BAR SAFETY ANCHOR ON BOTTOMED ROUND STEEL PIER WELDED DIRECTLY TO STEEL ROOF FRAMING. GYOTOWN OF U-BAR A MINIMUMUM OF 10 INCHES ABOVE ROOF SURFACE |

A diagram labeled "PLAN NORTH" showing a circle with a vertical line and a dashed line at 45 degrees.



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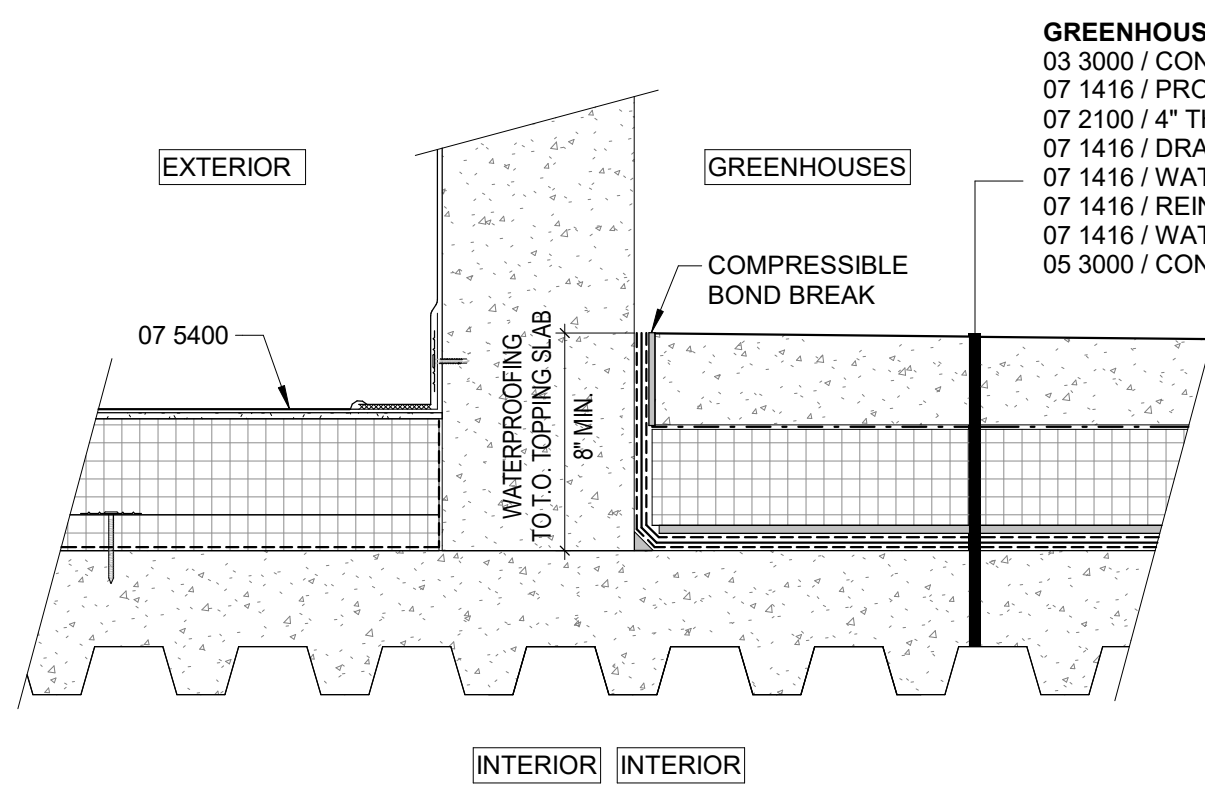
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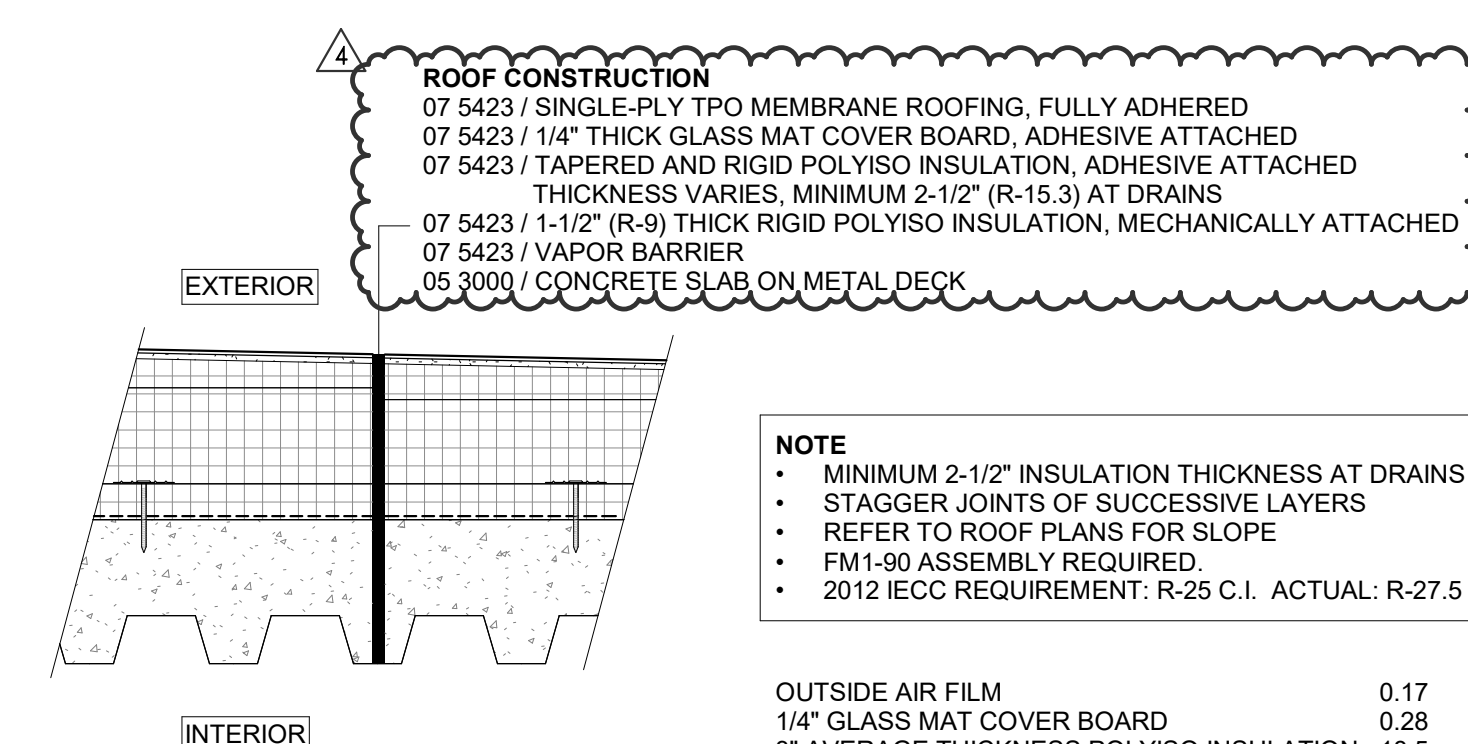
A



RA3 GREENHOUSE FLOOR / ROOF ASSEMBLY
CONCRETE TOPPING SLAB
RIGID INSULATION
CONCRETE SLAB ON METAL DECK

- NOTE**
- MINIMUM 2" INSULATION THICKNESS AT DRAINS
 - STAGGER JOINTS OF SUCCESSIVE LAYERS
 - REFER TO ROOF PLANS FOR SLOPE
 - FM-1-90 ASSEMBLY REQUIRED.
 - 2012 IECC REQUIREMENT: R-25 C.I. ACTUAL: R-25 C.I.

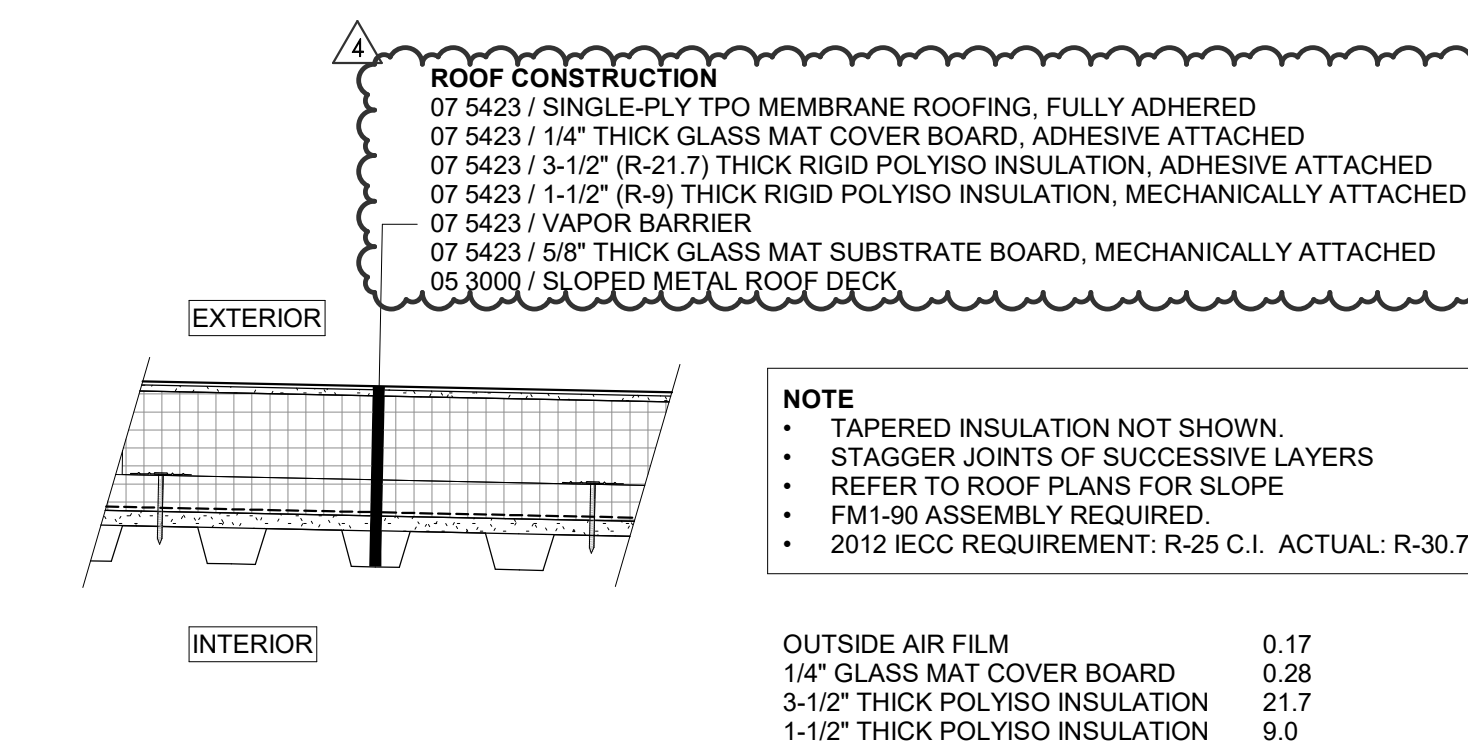
| | |
|--------------------------|--------------|
| OUTSIDE AIR FILM | 0.17 |
| 3" CONCRETE TOPPING SLAB | 0.45 |
| 4" THICK XPS INSULATION | 25.0 |
| 4" CONCRETE SLAB | 0.6 |
| INSIDE AIR FILM | 0.61 |
| TOTAL OF R-VALUES | 26.83 |
| ASSEMBLY U-VALUE | 0.037 |



RA2 ROOF ASSEMBLY
SINGLE-PLY THERMOPLASTIC POLYOLEFIN (TPO) MEMBRANE, FULLY ADHERED
TAPERED AND RIGID INSULATION
CONCRETE SLAB ON METAL DECK

- NOTE**
- MINIMUM 2-1/2" INSULATION THICKNESS AT DRAINS
 - STAGGER JOINTS OF SUCCESSIVE LAYERS
 - REFER TO ROOF PLANS FOR SLOPE
 - FM-1-90 ASSEMBLY REQUIRED.
 - 2012 IECC REQUIREMENT: R-25 C.I. ACTUAL: R-27.5 C.I.

| | |
|---|--------------|
| OUTSIDE AIR FILM | 0.17 |
| 1/4" GLASS MAT COVER BOARD | 0.28 |
| 3" AVERAGE THICKNESS POLYISO INSULATION | 18.5 |
| 1-1/2" THICK POLYISO INSULATION | 9.0 |
| 4" CONCRETE SLAB | 0.6 |
| INSIDE AIR FILM | 0.61 |
| TOTAL OF R-VALUES | 29.16 |
| ASSEMBLY U-VALUE | 0.034 |



RA1 ROOF ASSEMBLY
SINGLE-PLY THERMOPLASTIC POLYOLEFIN (TPO) MEMBRANE, FULLY ADHERED
RIGID INSULATION
METAL DECK

- NOTE**
- TAPERED INSULATION NOT SHOWN.
 - STAGGER JOINTS OF SUCCESSIVE LAYERS
 - REFER TO ROOF PLANS FOR SLOPE
 - FM-1-90 ASSEMBLY REQUIRED.
 - 2012 IECC REQUIREMENT: R-25 C.I. ACTUAL: R-30.7 C.I.

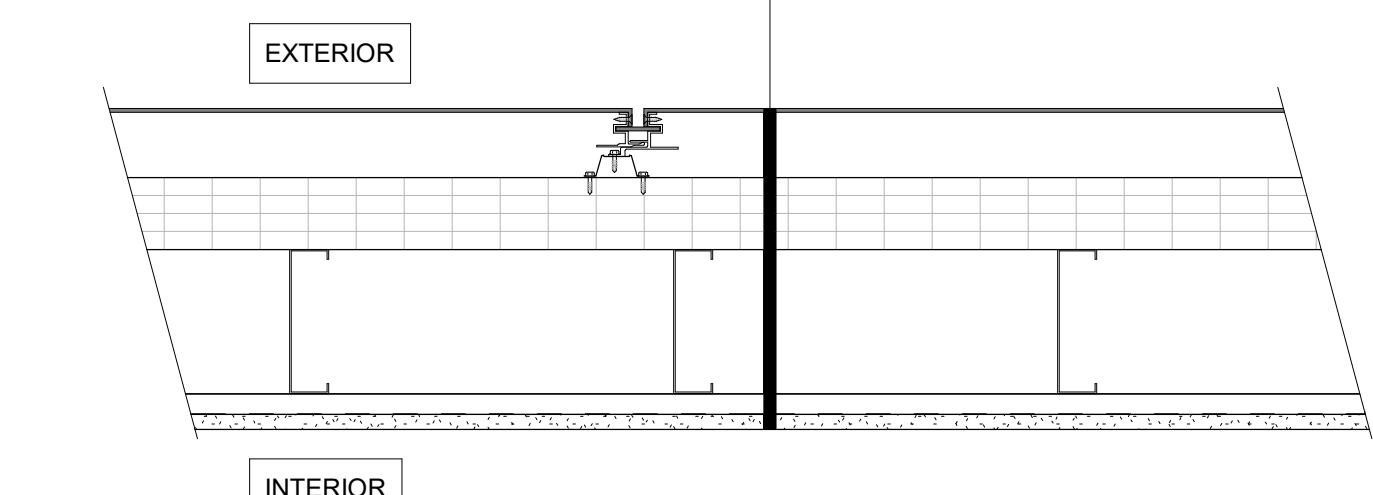
| | |
|---------------------------------|--------------|
| OUTSIDE AIR FILM | 0.17 |
| 1/4" GLASS MAT COVER BOARD | 0.28 |
| 3-1/2" THICK POLYISO INSULATION | 21.7 |
| 1-1/2" THICK POLYISO INSULATION | 9.0 |
| 5/8" GLASS MAT SUBSTRATE BOARD | 0.67 |
| INSIDE AIR FILM | 0.61 |
| TOTAL OF R-VALUES | 32.43 |
| ASSEMBLY U-VALUE | 0.031 |

- NOTE**
- REFER TO ELEVATIONS FOR LOCATIONS OF MCM PANEL JOINTS

| | |
|--------------------------------|--------------|
| OUTSIDE AIR FILM | 0.17 |
| MCM PANELS | 0.00 |
| 7/8" AIR SPACE (HAT CHANNELS) | 0.00 |
| 3" THICK INSULATED METAL PANEL | 24.00 |
| METAL STUD AIR SPACE | 1.00 |
| 5/8" GYPSUM BOARD | 0.56 |
| INSIDE AIR FILM | 0.68 |
| TOTAL OF R-VALUES | 26.41 |
| ASSEMBLY U-VALUE | 0.038 |

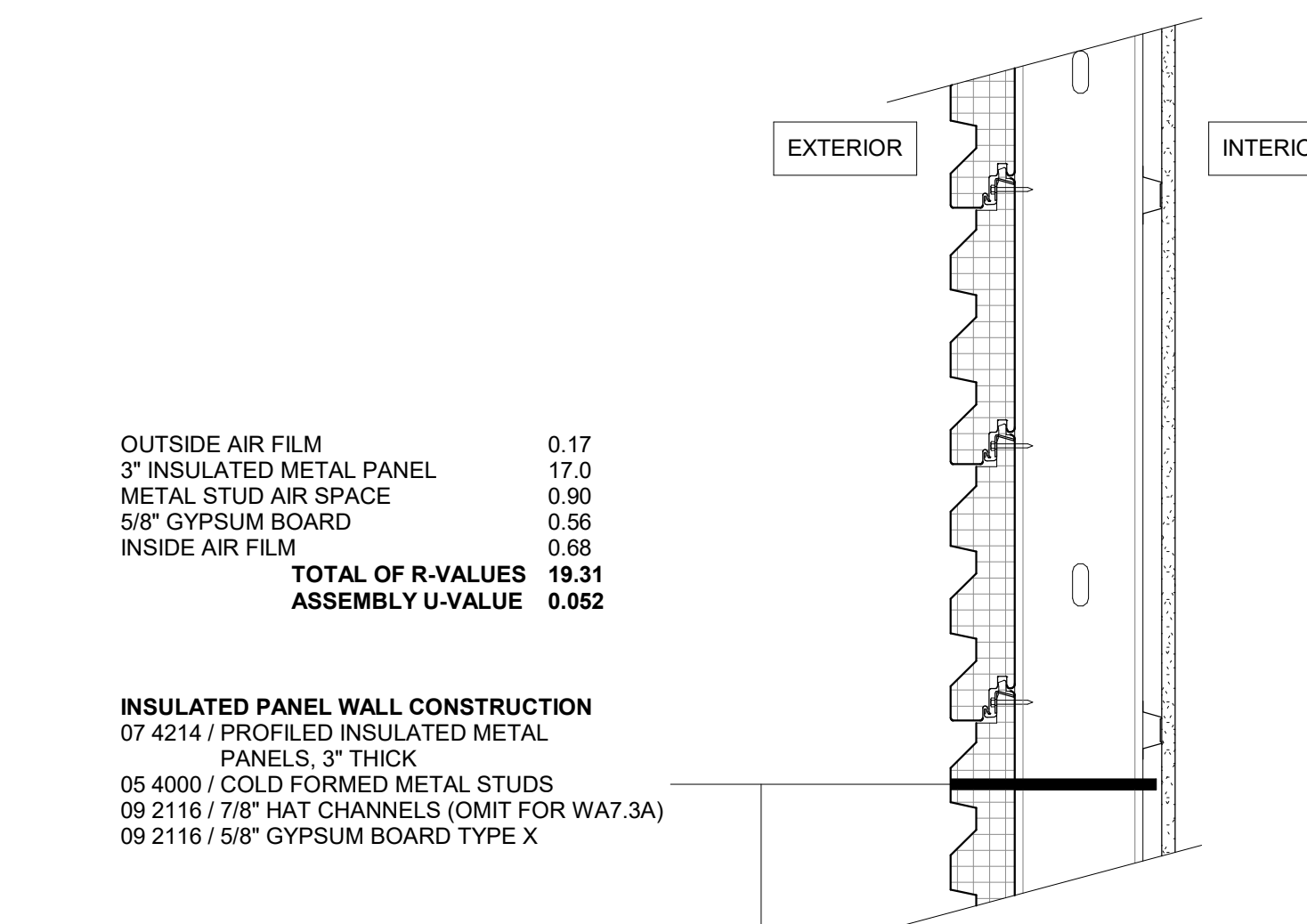
SPRAY FOAM INSULATION TO SPOT COVER EXPOSED THRU-WALL SCREWS, TYPICAL

MCM WALL CONSTRUCTION
07 4213.23 / MCM PANELS ON METAL CLIP SYSTEM
07 4213.23 / 7/8" 18 GAUGE MIN. VERTICAL HAT CHANNELS
07 4214 / 3" INSULATED UTILITY METAL PANELS
KINGSPAN KARRIER PANEL AND FLAT RAILS
05 4000 / COLD FORMED METAL STUDS
09 2116 / 7/8" HAT CHANNELS (OMIT FOR WA7.4)
09 2116 / 5/8" GYPSUM BOARD TYPE X



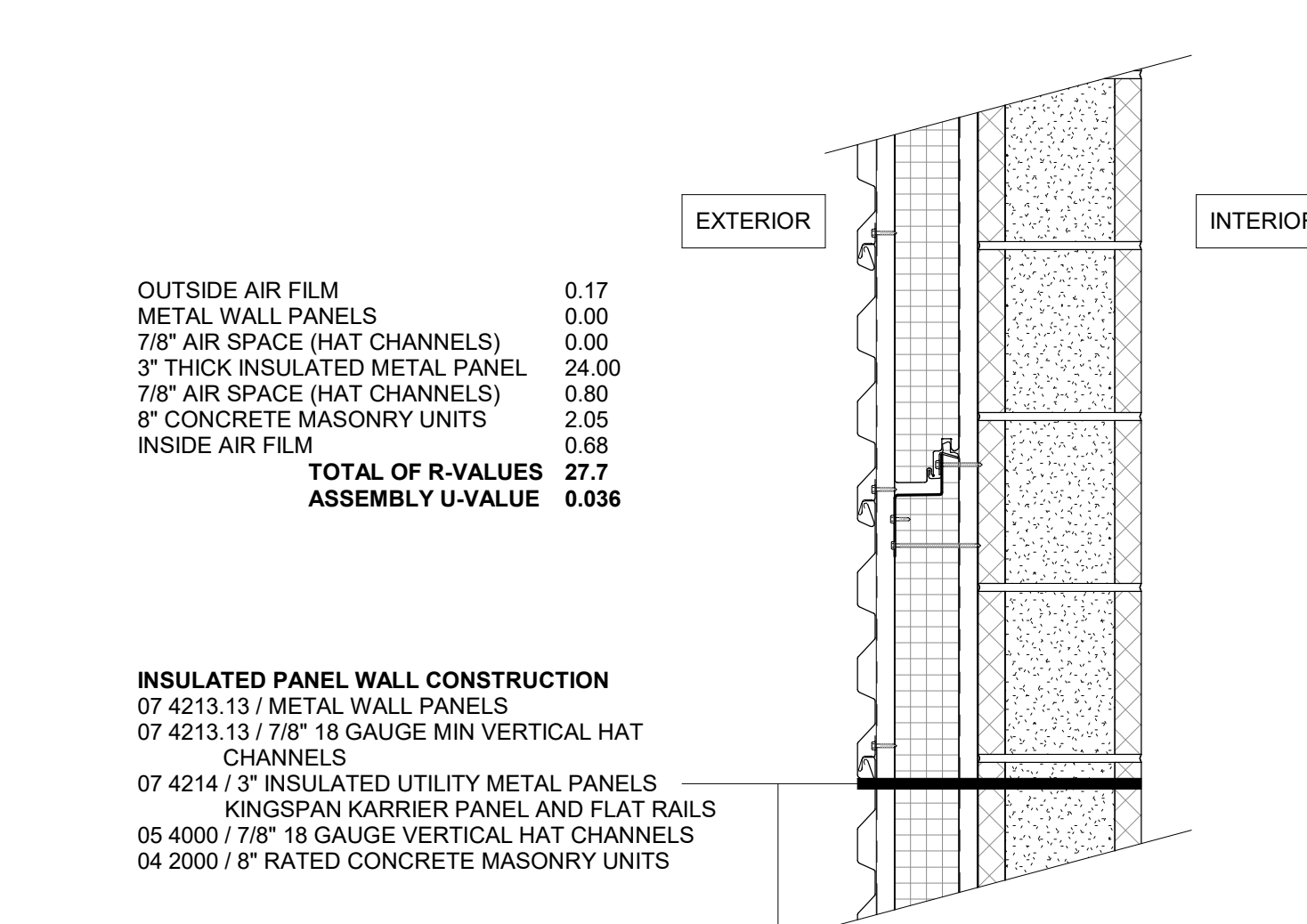
WA7.4 EXTERIOR WALL ASSEMBLY
MCM PANELS
INSULATED METAL PANELS
COLD FORMED METAL FRAMING

WA7.4A EXTERIOR WALL ASSEMBLY
MCM PANELS
INSULATED METAL PANELS
COLD FORMED METAL FRAMING



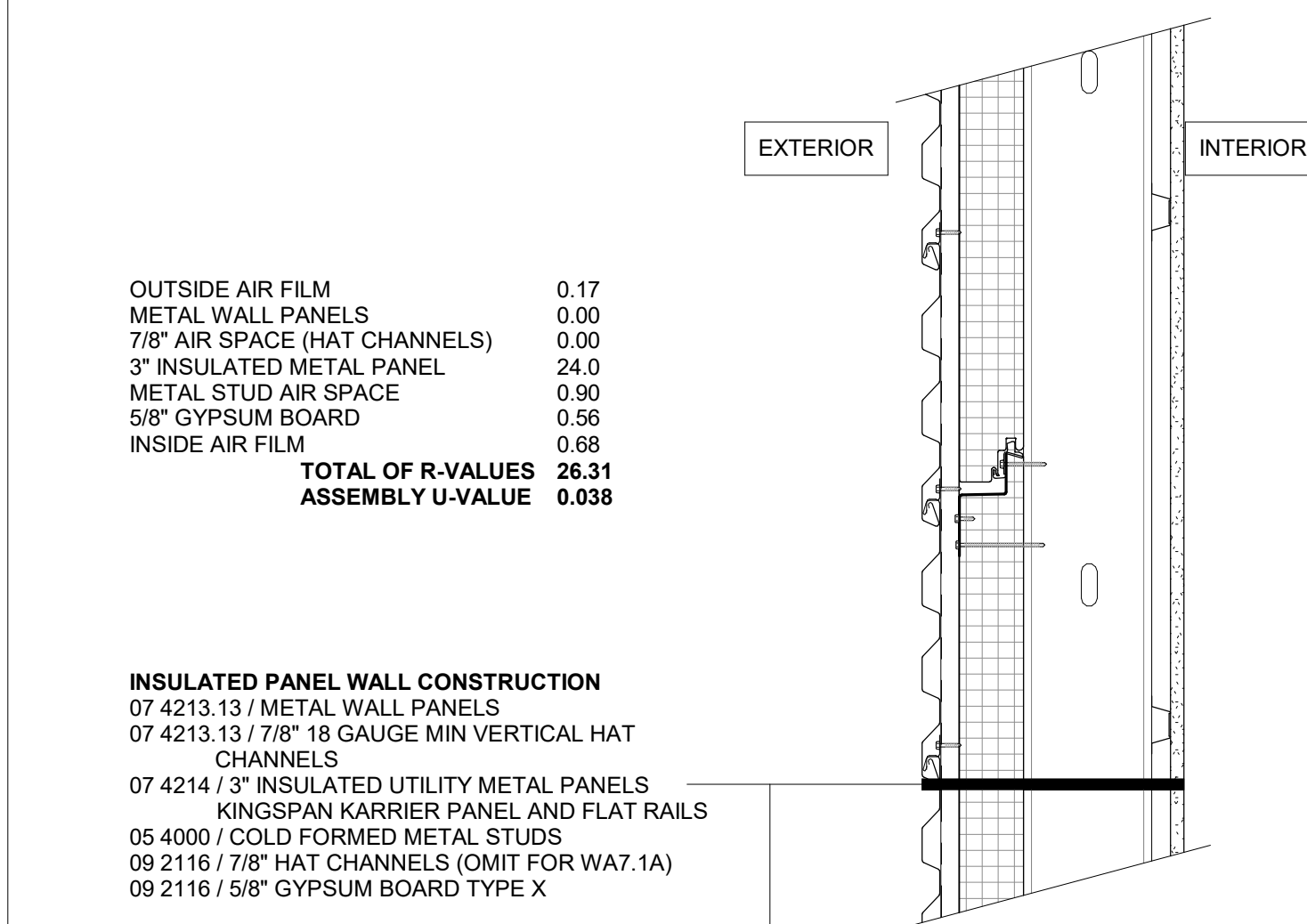
WA7.3 EXTERIOR WALL ASSEMBLY
LOUVERED INSULATED METAL PANELS
COLD FORMED METAL FRAMING

WA7.3A EXTERIOR WALL ASSEMBLY
LOUVERED INSULATED METAL PANELS
COLD FORMED METAL FRAMING



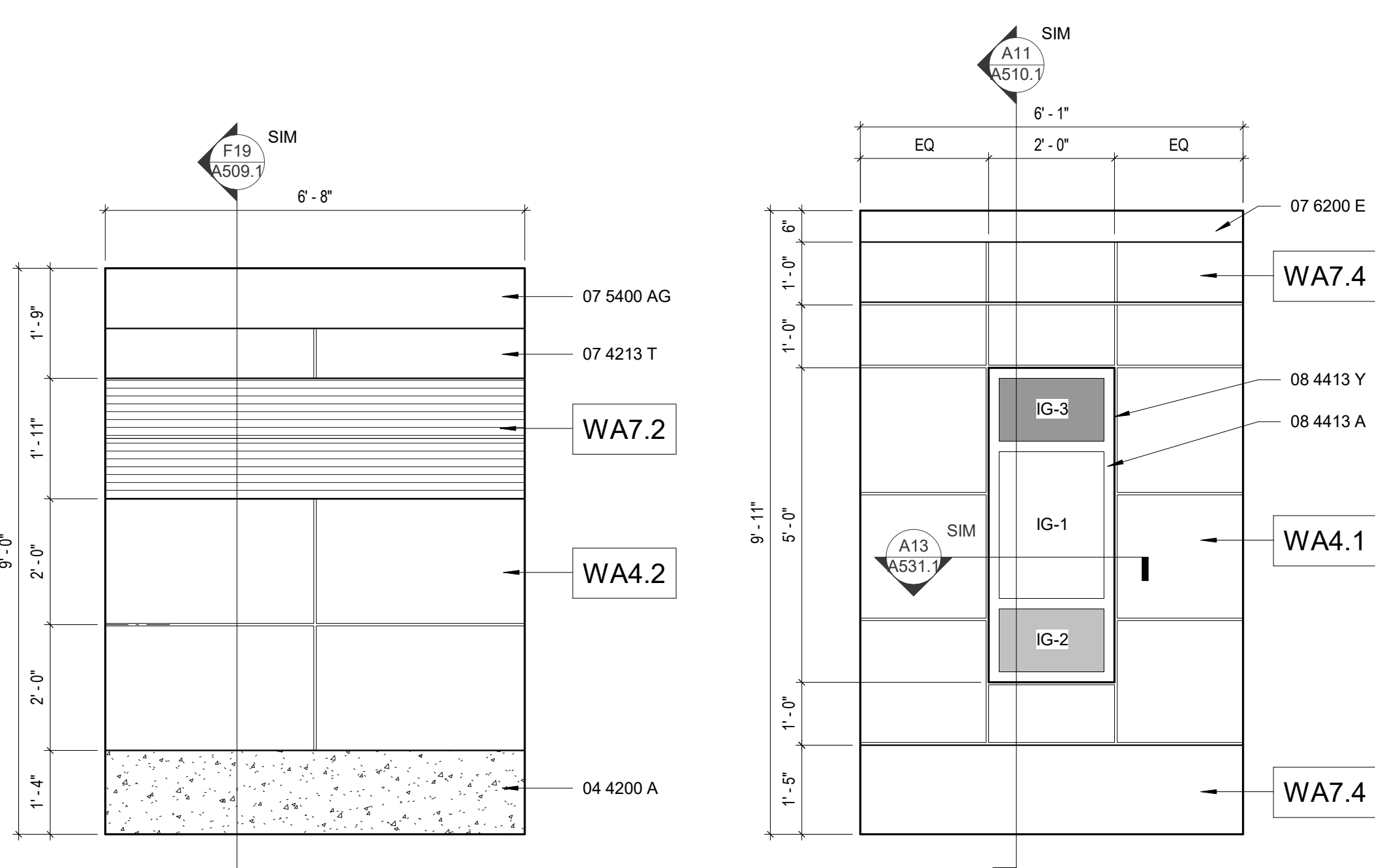
WA7.2 EXTERIOR WALL ASSEMBLY
MCM PANELS
INSULATED METAL PANELS
CONCRETE MASONRY UNITS

WA7.2A NOT USED



WA7.1 EXTERIOR WALL ASSEMBLY
MCM PANELS
INSULATED METAL PANELS
COLD FORMED METAL FRAMING

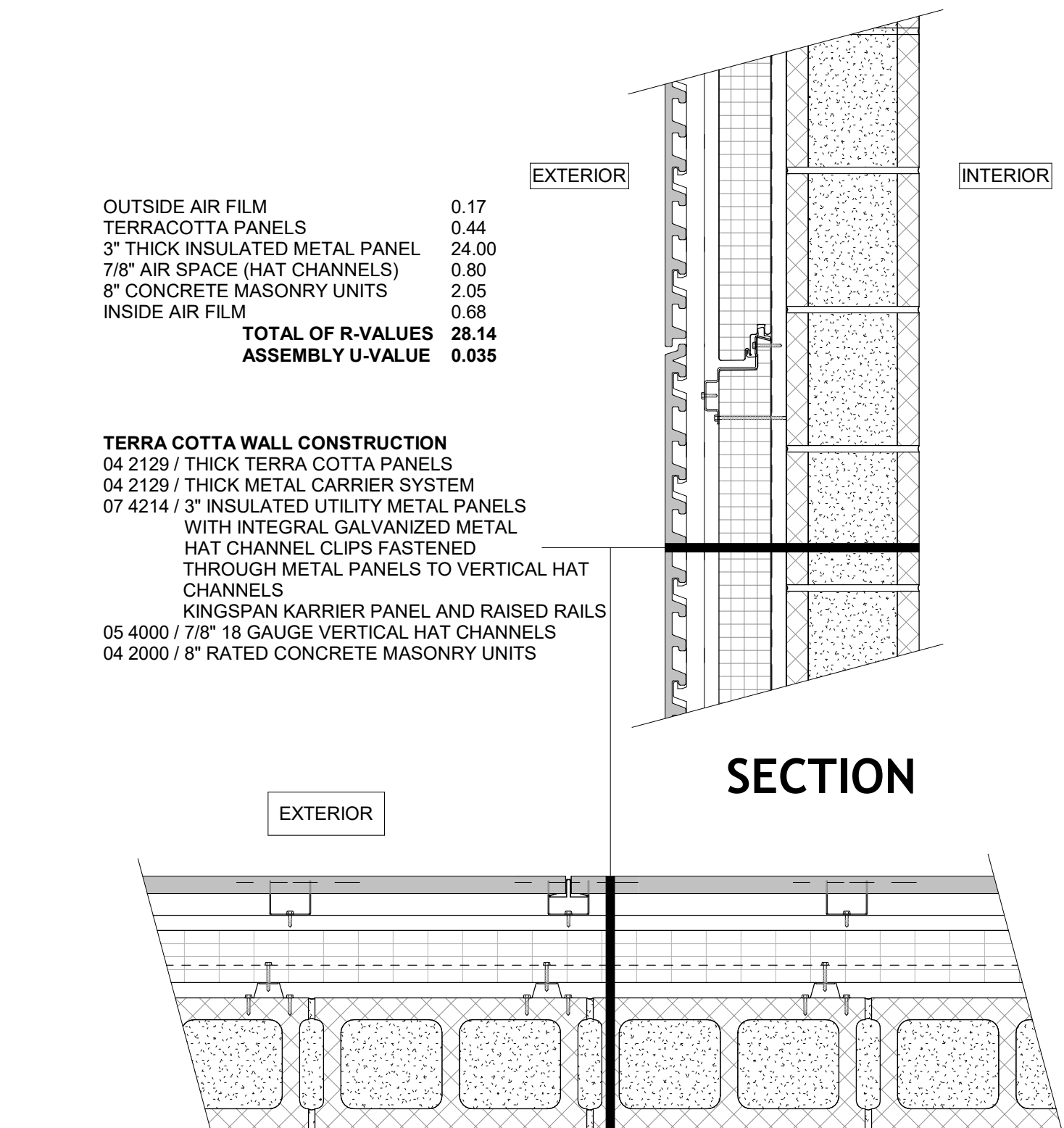
WA7.1A EXTERIOR WALL ASSEMBLY
MCM PANELS
INSULATED METAL PANELS
COLD FORMED METAL FRAMING



A17 EXTERIOR WALL MOCK-UPS
A501.1 1/2" = 1'-0"

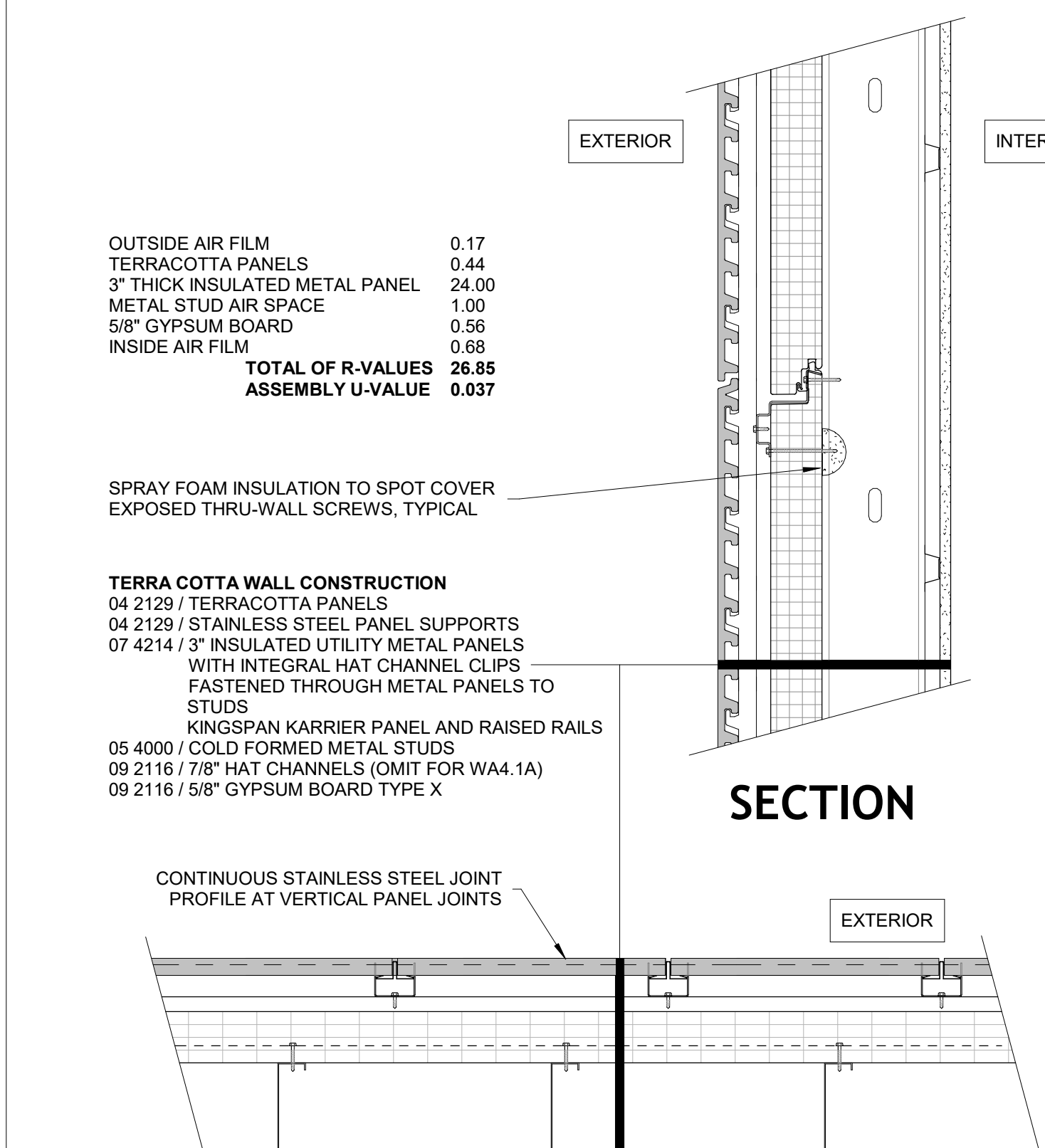
REFER TO WALL SECTIONS (SIM) FOR REFERENCES TO SECTION DETAILS.

- EXTERIOR MOCK-UP NOTES:**
1. BEFORE INSTALLING PORTIONS OF THE WORK WHERE MOCK-UPS ARE REQUIRED, CONSTRUCT MOCK-UPS IN LOCATION AND SIZE AS INDICATED IN DETAILS FOR CONSTRUCTION AND FINISH REQUIRED TO COMPLY WITH THE SPECIFIED REQUIREMENTS. USING MATERIALS INDICATED FOR THE COMPLETED WORK. THE PURPOSE OF THE MOCK-UP IS TO DEMONSTRATE THE PROPOSED RANGE OF AESTHETIC EFFECTS AND WORKMANSHIP. ACCEPTED MOCK-UPS ESTABLISH THE STANDARD OF QUALITY THE ARCHITECT WILL USE TO JUDGE THE WORK. CONSTRUCT INTEGRATED EXTERIOR MOCK-UP AS INDICATED IN THE DRAWINGS AND ASSOCIATED WALL SECTIONS AND DETAILS. COORDINATE INSTALLATION OF EXTERIOR ENVELOPE MATERIALS AND PRODUCTS AS REQUIRED IN INDIVIDUAL SPECIFICATION SECTIONS. PROVIDE ADEQUATE SUPPORTING STRUCTURE FOR MOCK-UP MATERIALS AS NECESSARY.
 2. ASSEMBLE AND ERECT SPECIFIED MATERIALS WITH SPECIFIED ATTACHMENT AND ANCHORAGE DEVICES, FLASHINGS, THERMAL AND WEATHER BARRIER LAYERS, SEALS, AND FINISHES.
 3. CONSTRUCT MOCK-UPS IN THE FOLLOWING STAGES TO BE REVIEWED WITH THE ARCHITECT AND APPROVED AT EACH STAGE PRIOR TO INSTALLING THE NEXT STAGE. COORDINATE MOCK-UP CONSTRUCTION SCHEDULE WITH ARCHITECT.
 4. WALL CONSTRUCTION UP TO THE FLUID-APPLIED WEATHER BARRIER LAYER.
 5. HEAD, JAMB, AND SILL FLASHINGS.
 6. CURTAINWALL INSTALLATION.
 7. WALL FINISH/CLADDING AND COPING.
- ARCHITECT WILL USE ACCEPTED MOCK-UPS AS A COMPARISON STANDARD FOR THE REMAINING WORK. REMOVE MOCK-UP AND CLEAR AREA WHEN DIRECTED TO DO SO BY ARCHITECT.



WA4.2 EXTERIOR WALL ASSEMBLY
TERRA COTTA PANELS
INSULATED METAL PANELS
CONCRETE MASONRY UNITS

WA4.2A NOT USED



WA4.1 EXTERIOR WALL ASSEMBLY
TERRA COTTA PANELS
INSULATED METAL PANELS
COLD FORMED METAL FRAMING

WA4.1A EXTERIOR WALL ASSEMBLY
TERRA COTTA PANELS
INSULATED METAL PANELS
COLD FORMED METAL FRAMING



10/21/2024
05/05/2024
05/28/2024
Date

NO. 1
CORE AND SHELL PACKAGE - BID AND PERMIT
Issue/Revision/Submission

ADDITIONAL SHEET 11
MADISON, KY 40403
WWW.FLAD.COM

FLAD ARCHITECTS
BC&E ENGINEERING, DAYTON, OH
DELMAC CONSTRUCTION, URBANA, OH
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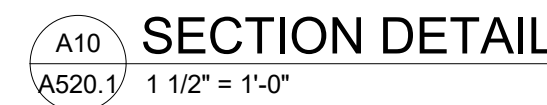
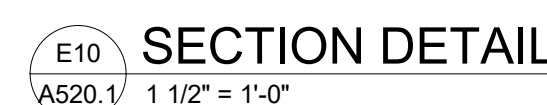
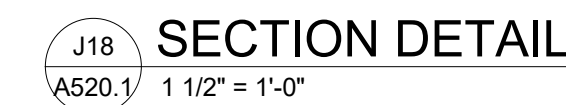
UNIVERSITY OF KENTUCKY
AGRICULTURE RESEARCH FACILITY 1
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EXTERIOR WALL AND ROOF ASSEMBLIES



Project Manager
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C. KEMP
Title/Date
K. DENMAN
06/28/2024

Project Number
UKX05.00

A501.1
10/21/2024 8:36:26 AM



GENERAL DETAIL NOTES

A. NOTE: NOT ALL SPRAY APPLIED FIRE-RESISTIVE MATERIALS MAY BE SHOWN. REFER TO SHEET G100.1 AND UL DETAILS FOR FIRE RATED CONSTRUCTION REQUIREMENTS.

REFERENCE KEYNOTES

- 03 3000 A CONCRETE FOOTINGS AND FOUNDATIONS. REFER TO STRUCTURAL DRAWINGS.
- 03 3000 B CONCRETE SLAB-ON-GRADE OVER VAPOR BARRIER AND GRANULAR FILL. REFER TO STRUCTURAL DRAWINGS FOR FINISHES.
- 04 2000 A 8"INCH FIRE-RATED CONCRETE MASONRY UNITS. REFER TO STRUCTURAL DRAWINGS FOR REINFORCING.
- 04 2100 F RAKE PORTION OF BED JOINT ABOVE SLAB AND PROVIDE SEALANT TO ALLOW FOR VERTICAL SLAB DEFLECTION.
- 04 2200 D CONTINUOUS SUBGIRT SCREW FASTENED THROUGH INSULATED METAL PANEL. COVER EXPOSED SCREW POINTS WITH CLOSED CELL SPRAY FOAM INSULATION.
- 04 4200 A 1/32"INCH-THICK STONE PANELS WITH STAINLESS STEEL ANCHORS. PROVIDE BACKER ROD SEALANT FOR JOINTS.
- 04 4200 B STAINLESS STEEL SPLIT-LT ANCHOR IN VERTICAL JOINTS. SECURE TO CONCRETE WALL WITH MASONRY ANCHORS AND TO METAL STUDS WITH STAINLESS STEEL SCREWS.
- 04 4200 C STAINLESS STEEL "Z" ASHAR ANCHOR AT 16" ON CENTER. MINIMUM TWO PER PANEL. SECURE TO 7/8" IG GAUGE HAT CHANNEL WITH STAINLESS STEEL SCREWS OR TO MASONRY WALL WITH STAINLESS STEEL MASONRY SCREWS. PROVIDE KEYPERS IN STONE PANELS, GROUT ANCHORS SOLD.
- 04 4200 F STAINLESS STEEL SPLIT-LT ANCHORS AT 16" ON CENTER. MINIMUM TWO PER PANEL. PROVIDE KEYPERS IN STONE PANELS. PROVIDE KEYPERS SOLD.
- 05 1200 C PANEL JOINT PLACING STRIPS ON ELEVATION. PROVIDE BACKER ROD AND SEALANT.
- 05 1200 D STRUCTURAL STEEL ROOF FRAMING. REFER TO STRUCTURAL DRAWINGS.
- 05 1200 H CONTINUOUS BENT PLATES/LAB EDGE. REFER TO STRUCTURAL DRAWINGS.
- 05 1200 I STRUCTURAL STEEL. REFER TO STRUCTURAL DRAWINGS.
- 05 4000 D 7/8"INCH 18 GAUGE GALV. STEEL. PROVIDE WEAPERS AT 8" ON CENTER IN WALLS.
- 05 4000 I 8" COLD FORMED METAL STUDS AT 16" ON CENTER. BOTTOM TRACK TO FOLLOW SLOPE OF STEEL BEAM.
- 05 4000 J 8" COLD FORMED METAL STUDS. MATCH SPACING OF WALL STUDS AND FASTEN TO EACH OTHER THROUGH JOINTS.
- 05 4000 T DEFLECTION CLIP BY COLD FORMED FRAMING INSTALLATION.
- 06 1000 C CONTINUOUS FIRE-RETARDANT-TREATED WOOD BLOCKING/NAILER.
- 06 1000 D TWO LAYERS 3/4" THICK FIRE-RETARDANT-TREATED PLYWOOD MATERIAL. SCREW FASTEN LAYERS TOGETHER. FASTEN TO CONCRETE BOND BEAM WITH 3/8" DIAMETER ANCHOR BOLTS AT 16" ON CENTER.
- 06 1000 D TWO LAYERS 3/4" THICK FIRE-RETARDANT-TREATED PLYWOOD MATERIAL. SCREW FASTEN LAYERS TOGETHER. FASTEN TO CONCRETE BOND BEAM WITH 3/8" DIAMETER ANCHOR BOLTS AT 16" ON CENTER. DECREASE SPACING TO 12" ON CENTER WITHIN 8 FEET OF BUILDING CORNERS.
- 06 1000 L CONTINUOUS 2" PRESERVATIVE TREATED WOOD NAILERS. FASTEN BASE LAYER TO METAL STUDS. STAGGERED. DECREASE SPACING TO 12" ON CENTER WITHIN 8 FEET OF BUILDING CORNERS.
- 06 1000 M CONTINUOUS 2" PRESERVATIVE TREATED WOOD BLOCKING. SECURE TO BENT PLATE WITH TWO ROWS OF 3/8" HOT DIP GALVANIZED CARRIAGE BOLTS AT 16" ON CENTER MAX.
- 06 1000 N TWO LAYERS 2" PRESERVATIVE TREATED WOOD NAILERS. SECURE TO BENT PLATE WITH TWO ROWS OF 3/8" HOT DIP GALVANIZED CARRIAGE BOLTS AT 16" ON CENTER MAX. ALIGN FACE OF NAILERS WITH BACK FACE OF METAL PANELS.
- 06 1600 B 5/8" GLASS MAT EXTERIOR GYPSUM SHEATHING ON COLD FORMED METAL STUDS.
- 07 1320 A SELF ADHERING SHEET WATERPROOFING.
- 07 2100 A 1/2" THICK PERIMETER FLASHING. FASTEN TO CONCRETE OVER TOP OF FOUNDATION WALL, AND 18" IN FROM INSIDE FACE OF FOUNDATION WALL.
- 07 2119 I HIGH DENSITY SPRAY FOAM INSULATION. EQUAL TO DEPTH OF ROOF INSULATION WHERE AVAILABLE. PROVIDE SHEET METAL CLOSURES AS NEEDED TO CONTAIN LIMITS OF SPRAY FOAM AS SHOWN.
- 07 2119 J HIGH DENSITY SPRAY FOAM INSULATION WITH INTUMESCENT IGNITION BARRIER COATING.
- 07 4213 B FASTEN MCM PANELS WITH EXPOSED STAINLESS STEEL FASTENERS AND WASHERS TO 1/2"INCH FURRING.
- 07 4213 C MCM PANEL SYSTEM DIRECT APPLIED TO 3/4" FIRE-RETARDANT PLYWOOD SHEATHING ON COLD FORMED METAL STUD FRAMING.
- 07 4213 F SOFFIT CONSTRUCTION: MCM PANELS AND 7/8" IG GAUGE HAT CHANNELS ON 1" RIGID INSULATION OVER FLUOID APPLIED WEATHER BARRIER OR 1/2" GLASS MAT GYPSUM SHEATHING ATTACHED TO COLD FORM METAL FRAMING.
- 07 4214 B 3/4"INCH-THICK UTILITY GRADE INSULATED METAL PANELS.
- 07 4214 C TRIM TOP OF METAL PANEL AND FASTEN THROUGH INSULATION TO METAL FRAMING AS SHOWN.
- 07 4214 X INSULATE METAL PANEL AND FASTEN THROUGH INSULATION TO METAL FRAMING AS SHOWN. ADJACENT INSULATED METAL PANEL OR CURTAINWALL FRAMING C INSULATED PANEL TO ADJACENT CONSTRUCTION.
- 07 4214 Y INSULATE METAL PANEL AND FASTEN THROUGH INSULATED METAL PANEL. SET SCREW HEADS IN SILICONE SEALANT. COVER EXPOSED SCREW POINTS WITH CLOSED CELL SPRAY FOAM INSULATION.
- 07 5423 L EXTEND BASE FLASHING UP AND OVER TOP OF PARAPET AND DOWN FACE OF EXTERIOR WALL.
- 07 5423 M FULLY ADHERED MEMBRANE BASE FLASHING. EXTEND BASE FLASHING UP AND OVER TOP OF PARAPET AND DOWN FACE OF EXTERIOR WALL.
- 07 5423 N FULLY ADHERED MEMBRANE BASE FLASHING WITH CONTINUOUS FOM ROD FOR NON-DECK SUPPORTED WALL. EXTEND BASE FLASHING UP AND OVER TOP OF PARAPET AND DOWN FACE OF EXTERIOR WALL. SECURE ROOF MEMBRANE THROUGH INSULATION TO WOOD AND BLOCKING WITH CONTINUOUS SCREWS.
- 07 5423 O WELDED SPLICE WITH CONTINUOUS SEAM FLASHING.
- 07 5423 Z FULLY ADHERED MEMBRANE BASE FLASHING.
- 07 6200 A STAINLESS STEEL THRU-WALL FLASHING WITH KICKOUT FRONT EDGE (FOR PERMITE). SET IN GRAVEL BED. SET IN GRAVEL BED. SET IN GRAVEL BED. LEDEGE. LAP FLUOID-APPLIED WEATHER BARRIER OVER TOP OF BASE FLASHING.
- 07 6200 D THRU-WALL FLASHING WITH TURNED DOWN FRONT EDGE. FINISHED TO MATCH METAL PANELS. SET IN GRAVEL BED. SET IN GRAVEL BED. SET IN GRAVEL BED. LEDEGE. LAP FLUOID-APPLIED WEATHER BARRIER OVER TOP OF BASE FLASHING.
- 07 6200 F SPRINGLOCK COPING WITH FACTORY PAINTED FINISH AND CONTINUOUS CLEATS. OVERLAP MCM OR INSULATED METAL PANELS 1/2" MINIMUM WITH SEALANT.
- 07 6200 F EXTEND BACK LEGS OF COPING UP AND UNDER CLEAT AND SCREW FASTEN TO METAL PANEL AND SHEATHING.
- 07 6200 R GRAVEL SLOP WITH FACTORY PAINTED FINISH AND CONTINUOUS CLEATS. OVERLAP MCM PANELS 1/2" MINIMUM. MATCH HEIGHT OF ADJACENT COUNTERFLASHING.
- 07 6200 R GRAVEL SLOP DRIP EDGE WITH FACTORY PAINTED FINISH AND CONTINUOUS CLEATS.
- 07 6200 Y SELF-ADHERED MEMBRANE BASE FLASHING WITH CONTINUOUS FOM ROD OVER TRANSITION FROM INSULATED METAL PANEL TO FLUOID APPLIED WEATHER BARRIER.
- 07 6200 E CONTINUOUS SEALANT BED: A) ALONG TOP OF RIDG INSULATION B) INSULATED PANEL TO ADJACENT INSULATED METAL PANEL OR CURTAINWALL FRAMING C) INSULATED PANEL TO ADJACENT CONSTRUCTION.
- 07 9200 H STUFF GAP WITH COMPRESSED BATT INSULATION AND PROVIDE SEALANT ALONG TOP EDGE OF FLASHING.
- 08 4413 C 1/2"X10" DEEP 2 SIDED S2S GLAZED ALUMINUM CURTAIN WALL WITH FACTORY PAINTED FINISH.
- 08 6500 B SCHEDULED BASE. REFER TO INTERIORS DRAWINGS.
- 10 7313 A MANUFACTURED LOUVERED SUNSHADE WITH FACTORY PAINTED FINISH.
- 10 7313 A PERIMETER OUTRIGGER PANEL THROUGH MCM PANELS WITH STAINLESS STEEL LAG BOLTS AND WASHERS.
- 31 2000 A APPROXIMATE FINISHED GRADE. REFER TO CIVIL DRAWINGS.
- 33 4600 A PERFORATED DRAIN TILE AROUND PERIMETER OF FOUNDATION WALLS. SET IN PEA GRAVEL. PERFORATED DRAIN TILE TO BE 1/2" DIA. WITH 1/4" DIA. HOLES. CONNECT DRAIN TILE TO STORM SEWER SYSTEM. REFER TO PLUMBING AND CIVIL DRAWINGS.

ASSEMBLY SYMBOL KEY

REFER TO SHEETS A501.1 AND A502.1 FOR
ASSEMBLY INFORMATION

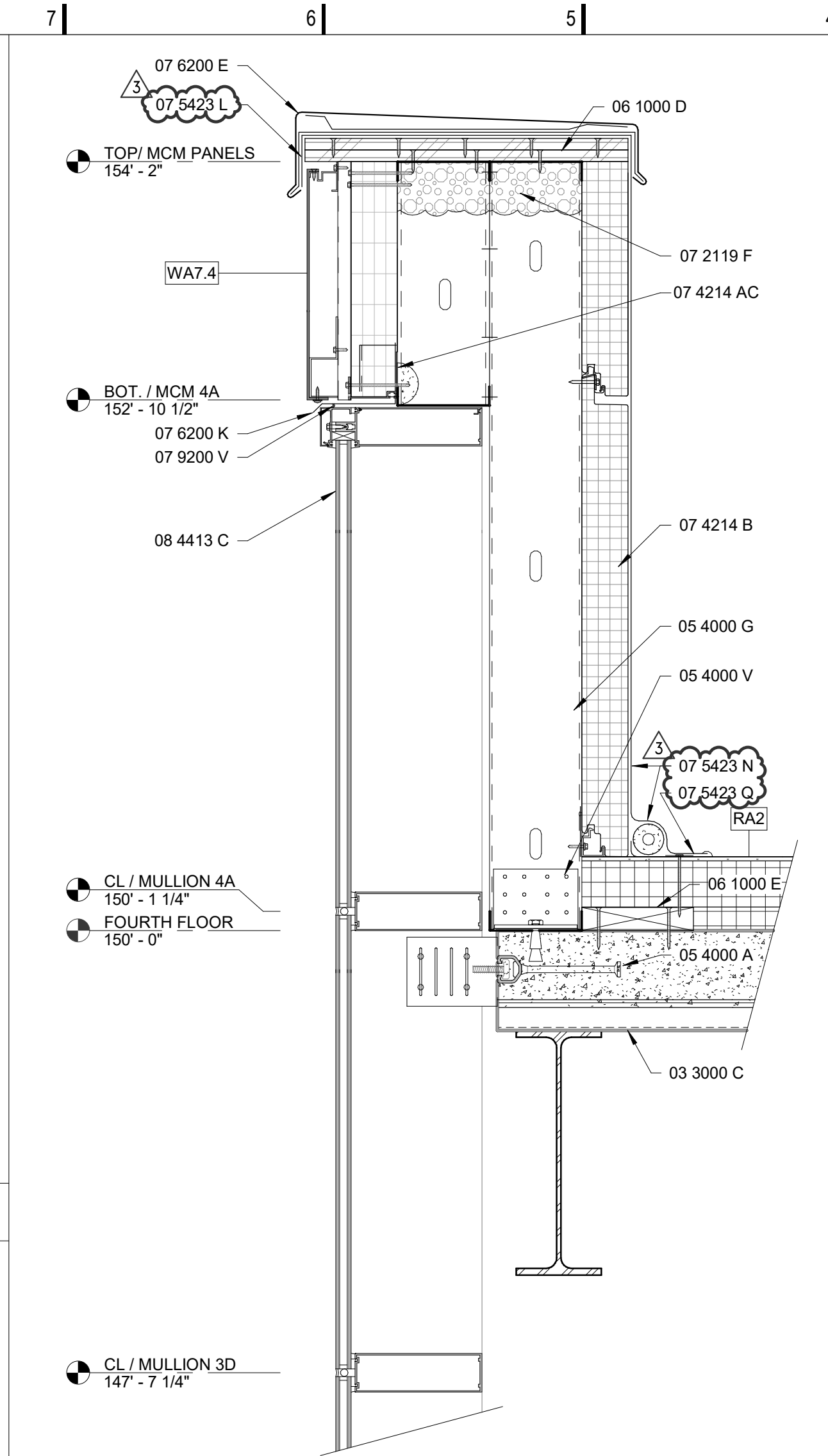
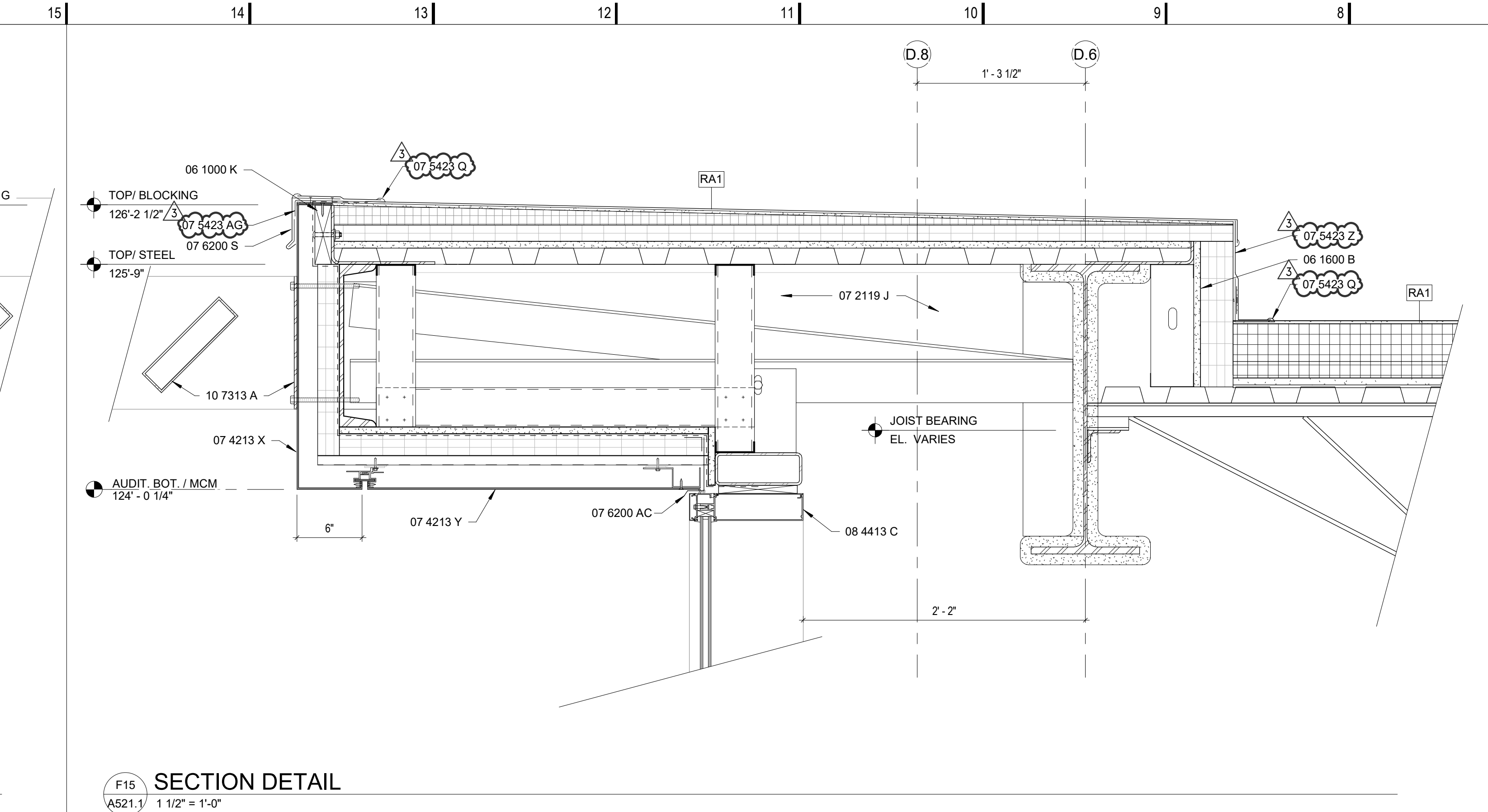
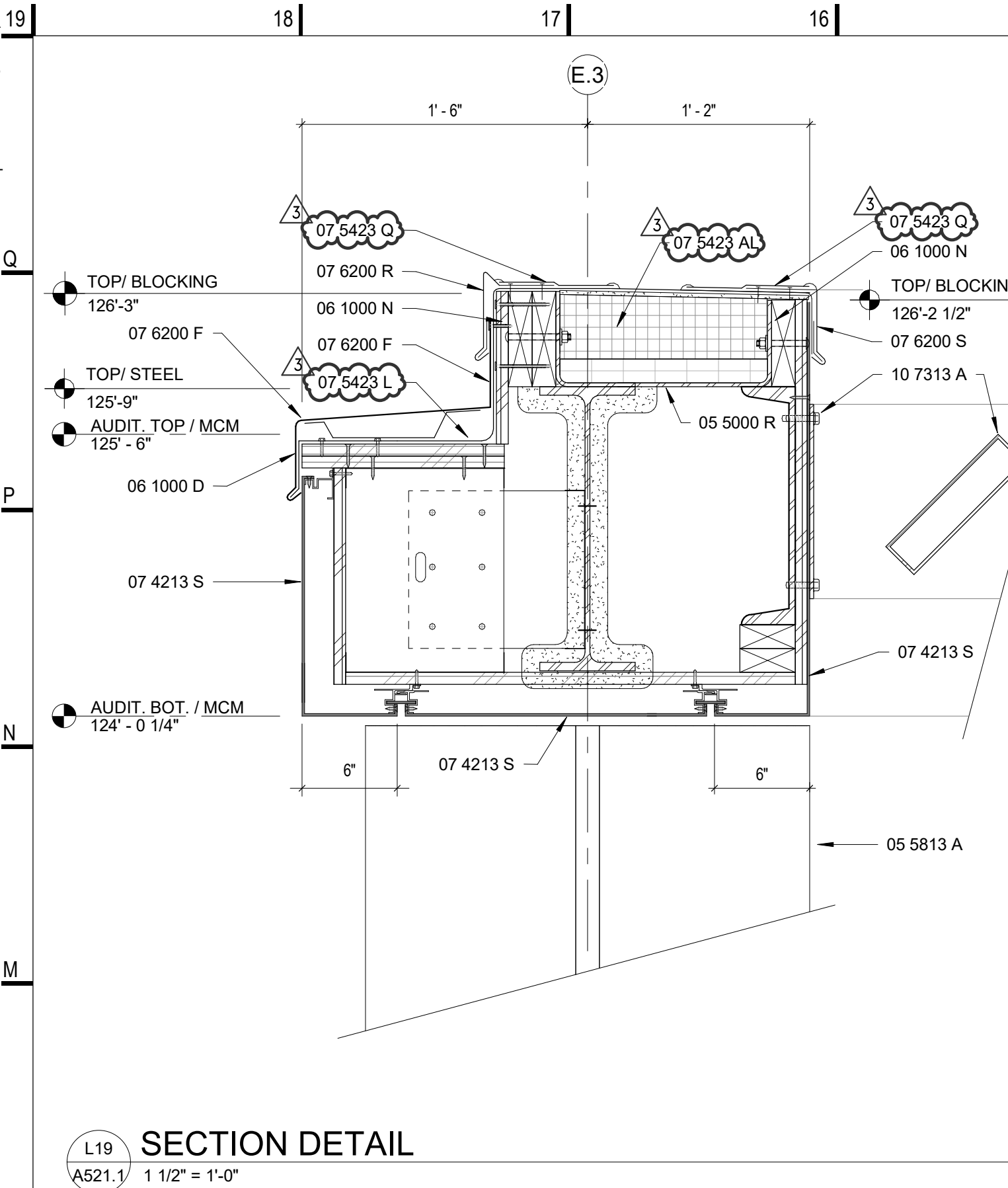
- ASSEMBLY TYPE
WA = WALL ASSEMBLY
RA = ROOF ASSEMBLY
MATERIAL TYPE OR RA NUMBER
1 = ROOF ASSEMBLY 1
2 = ROOF ASSEMBLY 2
3 = ROOF ASSEMBLY 3
4 = TERRACOTTA
7 = METAL PANEL
ASSEMBLY NUMBER
(WA TYPE ONLY)

19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1

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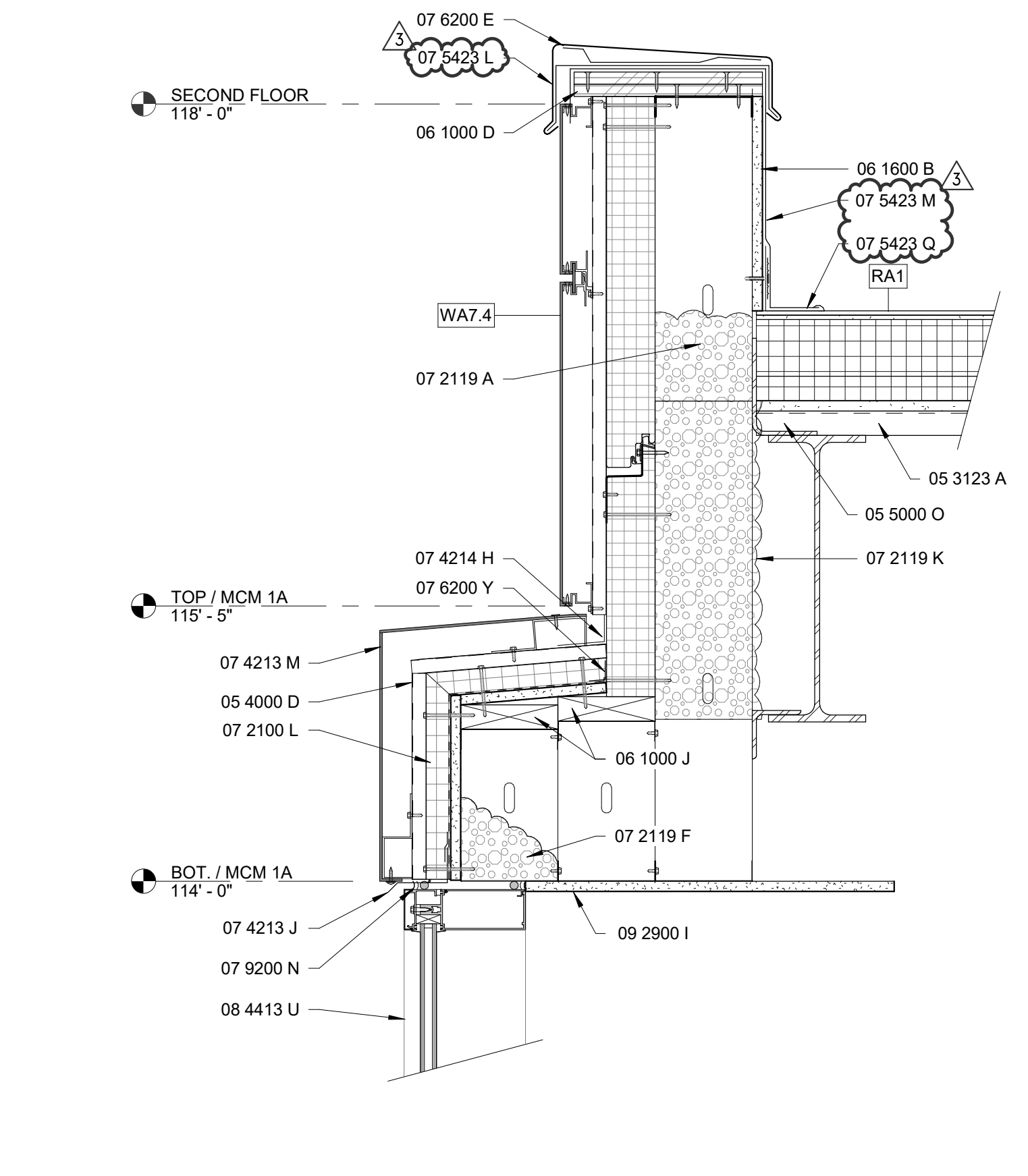
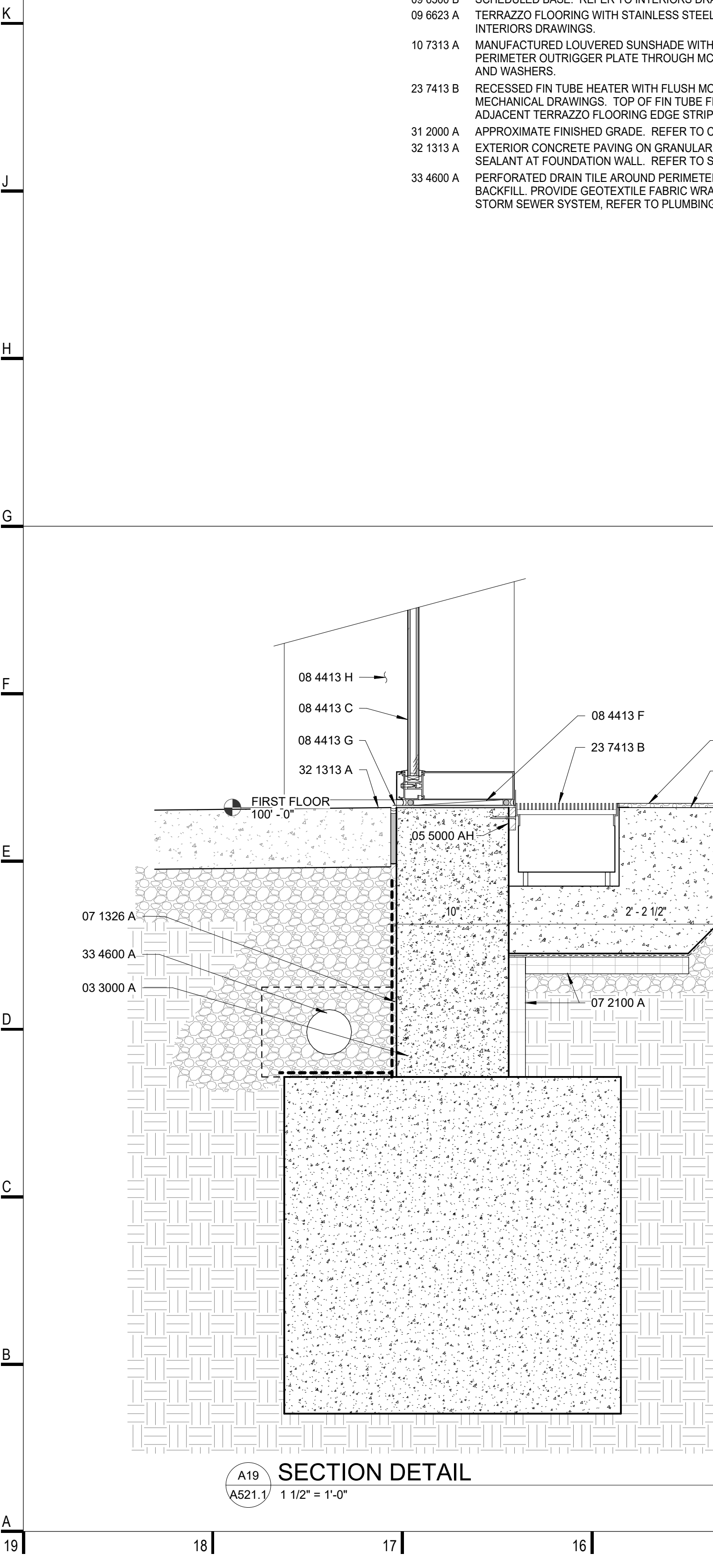
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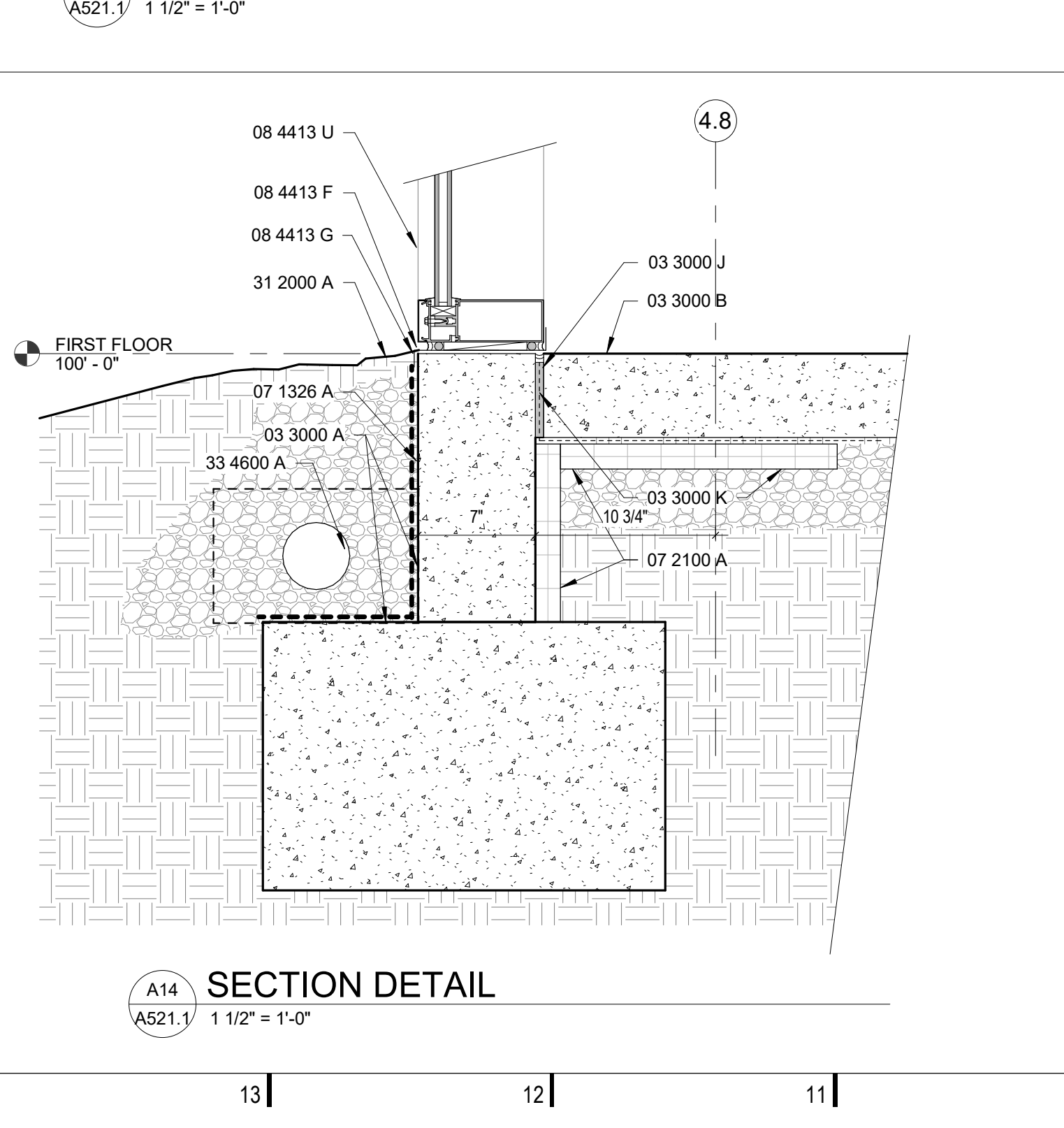


REFERENCE KEYNOTES

- 08 4413 R CURTAINWALL ATTACHMENT TO CONCRETE SLAB EDGE.
08 4413 U 7-1/2\"
09 2900 G GYPSUM BOARD CEILING/SOFFIT ON METAL FRAMING. REFER TO REFLECTED CEILING PLANS.
09 6500 B SCHEDULED BASE. REFER TO INTERIORS DRAWINGS.
09 6623 A TERRAZZO FLOORING WITH STAINLESS STEEL OR ALUMINUM EDGE STRIP. REFER TO INTERIORS DRAWINGS.
10 7313 A MANUFACTURED LOUVERED SUNSHADE WITH FACTORY PAINTED FINISH. ATTACH PERIMETER OUTRIGGER PLATE THROUGH MCM PANELS WITH STAINLESS STEEL LAG BOLTS AND WASHERS.
23 7413 B RECESSED FIN TUBE HEATER WITH FLUSH MOUNTED STAINLESS-STEEL GRILLE. REFER TO MECHANICAL DRAWINGS. TOP OF FIN TUBE FRAME AND GRILLE TO BE FLUSH WITH ADJACENT TERRAZZO FLOORING EDGE STRIP.
31 2000 A APPROXIMATE FINISHED GRADE. REFER TO CIVIL DRAWINGS.
32 1313 A EXTERIOR CONCRETE PAVING ON GRANULAR FILL WITH EXPANSION JOINT MATERIAL AND SEALANT AT FOUNDATION WALL. REFER TO SITE/CIVIL DRAWINGS.
33 4600 A PERFORATED DRAIN TILE AROUND PERIMETER OF FOUNDATION WALLS, SET IN PEA GRAVEL BACKFILL. PROVIDE GEOTEXTILE FABRIC WRAP AROUND TILE. CONNECT DRAIN TILE TO STORM SEWER SYSTEM. REFER TO PLUMBING AND CIVIL DRAWINGS.

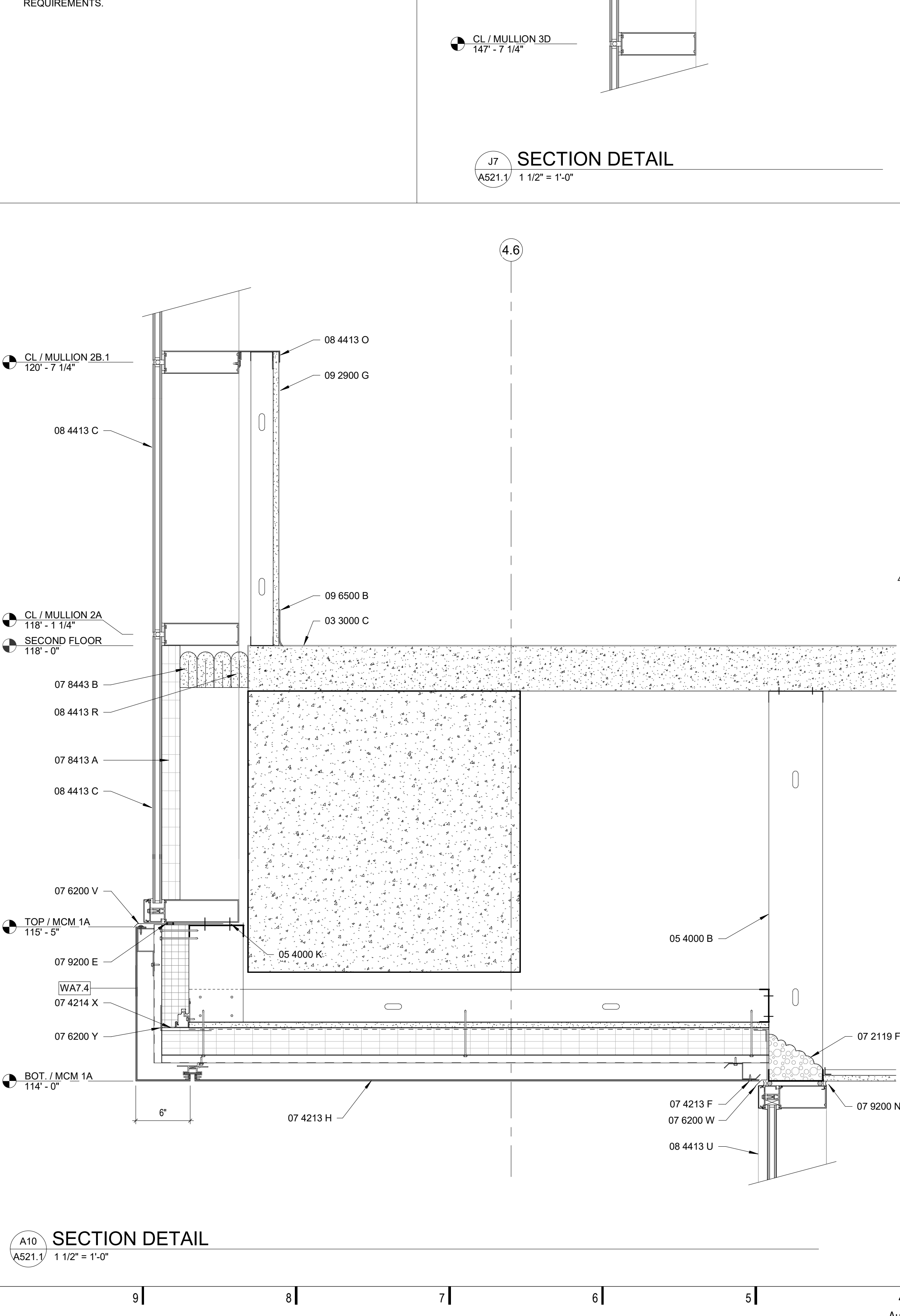


SECTION DETAIL



GENERAL DETAIL NOTES

- A. NOTE: NOT ALL SPRAY APPLIED FIRE-RESISTIVE MATERIALS MAY BE SHOWN. REFER TO SHEET G100.1 AND UL DETAILS FOR FIRE RATED CONSTRUCTION REQUIREMENTS.



REFERENCE KEYNOTES

- 03 3000 A CONCRETE FOOTINGS AND FOUNDATIONS. REFER TO STRUCTURAL DRAWINGS.
03 3000 B CONCRETE SLAB-ON-GRADE OVER VAPOR BARRIER AND GRANULAR FILL. REFER TO STRUCTURAL DRAWINGS.
03 3000 C ELEVATED CONCRETE FLOOR ASSEMBLY. REFER TO STRUCTURAL DRAWINGS.
03 3000 J 1/2\"
03 3000 K EXTEND BELOW-SLAB VAPOR BARRIER UP AND BEHIND EXPANSION JOINT MATERIAL AND SEAL TO INSIDE FACE OF FOUNDATION WALL.
05 3123 A STEEL ROOF DECKING. REFER TO STRUCTURAL DRAWINGS.
05 4000 A EMBEDDED SLAB EDGE ANCHOR FOR ATTACHMENT OF COLD FORMED STUD FRAMING OR CURTAINWALL. REFER TO STRUCTURAL DRAWINGS.
05 4000 B COLD FORMED METAL FRAMING. REFER TO STRUCTURAL DRAWINGS.
05 4000 D 7/8-INCH x 18 GAGE HAT CHANNELS.
05 4000 G 6\"
05 4000 K SCREW FASTEN STUD TRACK TO CURTAINWALL MULLION - 2 ROWS OF 2 SCREWS PER STUD BAY.
05 4000 V RIGID CLIP CONNECTION AT EACH COLD FORMED METAL STUD, SIZED AS REQUIRED FOR APPLICATION.
05 5000 AH 5/8\"
05 5000 R 1/4\"
05 5000 R CONTINUOUS BENT PLATE FOR SUPPORT OF METAL DECK OR ROOF INSULATION. REFER TO STRUCTURAL DRAWINGS.
05 5813 A ROUND COLUMN COVERS WITH FACTORY PAINTED FINISH, TYPICAL FOR CONCRETE BUILDING COLUMNS. REFER TO DETAIL F18/A330.1
06 1000 D TWO LAYERS 3/4\"
06 1000 E CONTINUOUS 2x PRESERVATIVE TREATED WOOD NAILER. FASTEN TO CONCRETE DECK WITH 2 ROWS #10 MASONRY SCREWS AT 24\"
06 1000 J CONTINUOUS 2x PRESERVATIVE TREATED WOOD NAILER. SECURE TO TOP STUD TRACK WITH TWO ROWS COUNTERSUNK SCREWS AT 16\"
06 1000 K (2) CONTINUOUS 2x PRESERVATIVE TREATED WOOD NAILERS. SECURE TO BENT PLATE WITH 3/8\"
06 1000 N (2) CONTINUOUS 2x PRESERVATIVE TREATED WOOD NAILERS. SECURE TO BENT PLATE WITH 3/8\"
06 1600 B 5/8\"
07 1326 A SELF ADHERING SHEET WATERPROOFING.
07 2100 A 2\"
07 2100 L 1/2\"
07 2100 L HIGH-DENSITY SPRAY FOAM INSULATION, EQUAL TO DEPTH OF ROOF INSULATION WHERE APPLICABLE. PROVIDE SHEET METAL CLOSURES AS NEEDED TO CONTAIN LIMITS OF SPRAY FOAM AS SHOWN.
07 2119 F HIGH DENSITY SPRAY FOAM INSULATION WITH INTUMESCENT IGNITION BARRIER COATING. MINIMUM 3\"
07 2119 J MINIMUM 2\"
07 2119 J BARRIER COATING OVER STRUCTURAL STEEL PENETRATING THERMAL ENVELOPE. INSULATE ALL STEEL MEMBERS AND CONNECTING STEEL TO A DISTANCE OF 6 FEET FROM THE THERMAL ENVELOPE.
07 2119 K MINIMUM 2\"
07 2119 K BARRIER COATING OVER COLD FORMED METAL STUDS, TO A DISTANCE OF 5 FEET IN FROM THE LINE OF THE THERMAL ENVELOPE.
07 4213 F FASTEN MCM PANELS WITH EXPOSED STAINLESS-STEEL FASTENERS AND WASHERS TO 1-3/4\"
07 4213 H SOFFIT CONSTRUCTION: MCM PANELS AND 7/8\"
07 4213 J WINDOW HEAD FLASHING BY MCM PANEL MANUFACTURER. FINISHED TO MATCH MCM METAL PANELS.
07 4213 M MCM PANEL WITH ROUT AND RETURN CORNER TO PRODUCE SLOPED SHAPE AS SHOWN.
07 4213 S MCM PANEL SYSTEM DIRECT APPLIED TO 3/4\"
07 4213 X MCM PANEL SYSTEM APPLIED OVER 2\"
07 4213 Y SOFFIT CONSTRUCTION: MCM PANELS AND 7/8\"
07 4214 AC THERMALLY BROKEN EXTRUSION. PROVIDE WEEPS WITH BASE EXTRUSIONS. SCREW FASTEN TO METAL STUDS.
07 4214 B 3-INCH-THICK UTILITY GRADE INSULATED METAL PANELS.
07 4214 H 22 GAUGE SHEET METAL COVERS AT STEP JOINTS AND TRANSITIONS BETWEEN INSULATED METAL PANELS. FASTEN WITH RIVETS TO METAL PANELS AND COVER WITH SELF-ADHERING BITUMINOUS SHEET MEMBRANE FLASHING.
07 5423 X CONTINUOUS SEALANT BEAD: A) ALONG TOP OF RIGID INSULATION B) INSULATED PANEL TO ADJACENT INSULATED METAL PANEL OR CURTAINWALL FRAMING C) INSULATED PANEL TO ADJACENT CONSTRUCTION.
07 5423 AC LAP ROOF MEMBRANE OVER ROOF EDGE AND DOWN FACE OF NAILERS. PROVIDE BONDING ADHESIVE BETWEEN ROOF MEMBRANE AND WOOD NAILERS.
07 5423 AL MECHANICALLY ATTACHED BASE LAYER OF RIGID, FULLY ADHERED TAPERED INSULATION WITH 1/4\"
07 5423 L EXTEND BASE FLASHING UP AND OVER TOP OF PARAPET AND DOWN FACE OF EXTERIOR WALL.
07 5423 M FULLY ADHERED MEMBRANE BASE FLASHING. EXTEND BASE FLASHING UP AND OVER TOP OF PARAPET AND DOWN FACE OF EXTERIOR WALL.
07 5423 N FULLY ADHERED MEMBRANE BASE FLASHING WITH CONTINUOUS FOAM ROD FOR NON-DECK SUPPORTED WALL. EXTEND BASE FLASHING UP AND OVER TOP OF PARAPET AND DOWN FACE OF EXTERIOR WALL. SECURE ROOF MEMBRANE THROUGH INSULATION TO WOOD BLOCKING WITH DISK FASTENERS AS SHOWN.
07 5423 Q WELDED SPlice WITH CONTINUOUS SEAM SEALANT.
07 5423 Z FULLY ADHERED MEMBRANE BASE FLASHING.
07 6200 AC STAINLESS STEEL THRU-WALL FLASHING WITH TURNED DOWN FRONT EDGE. LAP TOP LEG OF FLASHING WITH SELF-ADHERING SHEET FLASHING STRIP TO FLUID APPLIED WEATHER BARRIER.
07 6200 E SPRINGLOCK COPING WITH FACTORY PAINTED FINISH AND CONTINUOUS CLEATS. OVERLAP MCM OR INSULATED METAL PANELS 1-1/2\"
07 6200 F EXTEND BACK LEG OF COPING UP AND UNDER CLEAT AND SCREW FASTEN TO METAL PANEL OR SHEATHING.
07 6200 K THRU-WALL FLASHING WITH TURNED DOWN FRONT EDGE. FINISHED TO MATCH ADJACENT CURTAINWALL OR STOREFRONT. PROVIDE 4\"
07 6200 R GRAVEL STOP WITH FACTORY PAINTED FINISH AND CONTINUOUS CLEATS. OVERLAP MCM PANELS 1-1/2\"
07 6200 S GRAVEL STOP DRIP EDGE WITH FACTORY PAINTED FINISH AND CONTINUOUS CLEATS.
07 6200 V THRU-WALL FLASHING WITH TURNED DOWN FRONT EDGE, FINISHED TO MATCH MCM PANELS, SET IN BED OF SILICONE SEALANT TO INSULATED METAL PANEL.
07 6200 W FLASHING WITH TURNED DOWN FRONT EDGE, FINISHED TO MATCH MCM PANELS. LAP TOP LEG OF FLASHING WITH SELF-ADHERED SHEET BITUMINOUS FLASHING STRIP TO FLUID APPLIED WEATHER BARRIER.
07 6200 Y SELF-ADHERED BITUMINOUS FLASHING STRIP. APPLY OVER TRANSITION FROM INSULATED METAL PANEL TO FLUID APPLIED WEATHER BARRIER.
07 8413 A PERIMETER FIRE CONTAINMENT SYSTEM PER UL CW-D-2042.
07 8443 B SAFING INSULATION AT PERIMETER CONTAINMENT SYSTEM. PROVIDE 2 HOUR UL LISTED FIRE RATED PERIMETER WALL CONSTRUCTION. SEE SHEET G100.1.
07 9200 E CONTINUOUS SEALANT BEAD: A) ALONG TOP OF RIGID INSULATION B) INSULATED PANEL TO ADJACENT INSULATED METAL PANEL OR CURTAINWALL FRAMING C) INSULATED PANEL TO ADJACENT CONSTRUCTION.
07 9200 N BACKER ROD AND SEALANT ALL AROUND BOTH SIDES.
07 9200 V APPLY SEALANT BETWEEN FLASHING AND CURTAINWALL MULLION JUST BEHIND THE PRESSURE PLATE.
08 4413 C 10-1/2\"
08 4413 F SHIMS WITH BACKER ROD AND SEALANT BOTH SIDES. PROVIDE GAPS IN EXTERIOR SEALANT TO ALLOW WATER TO WEEP PER SYSTEM REQUIREMENTS.
08 4413 G SILL FLASHING FINISHED TO MATCH CURTAINWALL OR STOREFRONT FRAMING. PROVIDE UPTURNED BACK AND END LEGS AND SET IN FULL BED OF SEALANT. REFER TO DETAIL M8/A330.1
08 4413 H DEEP CURTAINWALL CAP BEYOND. REFER TO ELEVATIONS FOR TYPE.
08 4413 O EXTRUDED ALUMINUM WINDOW STOOL WITH RECEIVER CLIP, FINISHED TO MATCH CURTAINWALL FRAMING.



A. NOTE: NOT ALL SPRAY APPLIED FIRE-RESISTIVE MATERIALS MAY BE SHOWN. REFER TO SHEET G100.1 AND UL DETAILS FOR FIRE RATED CONSTRUCTION REQUIREMENTS.



03 3000 A CONCRETE FOOTINGS AND FOUNDATIONS. REFER TO STRUCTURAL DRAWINGS.

03 3000 B CONCRETE SLAB ON GRADE OVER VAPOR BARRIER AND GRANULAR FILL. REFER TO STRUCTURAL DRAWINGS.

03 000 C ELEVATED CONCRETE FLOOR ASSEMBLY. REFER TO STRUCTURAL DRAWINGS.

04 2129 D CONTINUOUS SUBGIRT SCREW FASTENED THROUGH INSULATED METAL PANEL. COVER EXPOSED SCREW POINTS WITH CLOSED CELL FOAM GROUT INSULATION.

04 4200 A 1/2" THICK METAL PANEL. PROVIDE 1/2" ANCHORS. PROVIDE BACKER ROD AND SEALANT FOR ALL JOINTS. PROVIDE WEEPS AT 8" ON CENTER IN BASE SEALANT JOINT.

04 4200 B STAINLESS STEEL SPILT-TAIL ANCHOR IN VERTICAL JOINTS. SECURE TO CONCRETE WALL WITH MASONRY ANCHORS AND TO METAL STUDS WITH STAINLESS STEEL SCREWS. PROVIDE KERFS IN STONE PANELS. GROUT ANCHORS SOLD.

04 4200 D STAINLESS STEEL CRAMP ANCHORS AT 16" ON CENTER. MINIMUM TWO PER STONE PANEL. GROUT INTO MASONRY JOINTS. PROVIDE KERFS IN STONE PANELS. GROUT ANCHORS SOLD.

05 4000 A EMBEDDED SLAB EDGE ANCHOR FOR ATTACHMENT OF COLD FORMED STUD FRAMING OR CURTAINWALL. REFER TO STRUCTURAL DRAWINGS.

06 1000 D TWO LAYERS 3/4" THICK FIRE-RETARDANT-TREATED PLYWOOD PANEL. SCREW FASTEN LAYERS TOGETHER AND TO C/F STUD TOP TRACK WITH TWO ROWS #10 GALVANIZED SHEET METAL SCREWS AT 16" ON CENTER. DECREASE SPACING TO 12" ON CENTER WITHIN 8 FEET OF BUILDING CORNERS.

06 1000 E CONTINUOUS 2x4 PRESERVATIVE TREATED WOOD NAIL. FASTEN TO CONCRETE DECK WITH 16D NAILS. PROVIDE 1/2" AIR GAP. PROVIDE 1/2" STAGGERED, DECREASE SPACING TO 12" ON CENTER WITHIN 8 FEET OF BUILDING CORNERS.

06 1600 E 1/2" COVERBOARD OVER 3" THICK RIGID INSULATION AND 5/8" FINISH MAT EXTERIOR GYPSUM SHEATHING ON COLD FORMED METAL STUDS. ADJUST HEIGHT AS NECESSARY FOR INSULATION. PROVIDE METAL PANEL PANEL TO ACCOMMODATE THE TAPER OF THE RIGID INSULATION AND ALLOW ADEQUATE CLEARANCE FOR FLASHINGS AND COUNTERFLASHING.

07 1326 A SELF ADHERING SHEET WATERPROOFING.

07 2100 B 1/2" THICK 2x4 TAIL PERMITTER INSULATION. EXTEND VERTICALLY DOWN TO TOP OF FOUNDATION WALL WHERE APPLICABLE.

07 2119 A HIGH-DENSITY SPRAY FOAM INSULATION, EQUAL TO DEPTH OF ROOF INSULATION WHERE APPLICABLE. PROVIDE SHEET METAL CLOSURES AS NEEDED TO COORDINATE WITH SPRAY FOAM SHOWN.

07 2119 F HIGH DENSITY SPRAY FOAM INSULATION WITH INTUMESCENT IGNITION BARRIER COATING. MINIMUM 3" THICKNESS UNLESS OTHERWISE INDICATED.

07 2119 K MINIMUM 2x4 TAIL PERMITTER INSULATION AND 7/8" 18 GAUGE HOT CHANNELS ON 3" RIGID INSULATION OVER FLUID APPLIED WEATHER BARRIER ON 5/8" GLASS MAT GYPSUM SHEATHING ON COLD FORMED METAL STUDS. ALIGN MCN PANEL JOINTS WITH VERTICAL JOINTS IN INSULATION.

07 4214 AA THRU-METAL ZEE FLASHING WITH TURNED DOWN FRONT EDGE. FINISHED TO MATCH INSULATED METAL PANELS. PROVIDE 4" TALL UPRIGHTED BACK BEHIND INSULATED PANELS. PROVIDE SEALANT BETWEEN INSULATED METAL PANELS AND FLASHING.

07 4214 AC THRU-METAL BROKEN EMISSION. PROVIDE WEEPS WITH BASE EXTRUSIONS. SCREW FASTEN TO METAL STUDS.

07 4214 B 3-INCH THRU METAL FLAT GRADE INSULATED METAL PANELS.

07 4214 C 3-INCH THRU METAL PANEL AND FASTENED THROUGH LIP TO METAL FRAMING AS SHOWN.

07 4214 X 3-INCH THRU METAL PANEL AND FASTENED THROUGH LIP TO METAL FRAMING AS SHOWN. PROVIDE SEALANT BETWEEN INSULATED METAL PANELS AND FLASHING. PROVIDE SEALANT TO ADJACENT INSULATED METAL PANEL OR CURTAINWALL FRAMING C) INSULATED PANEL TO ADJACENT CONSTRUCTION.

07 5000 C CONTINUOUS TERMINAL BAR.

07 5423 B EXTEND BASE FLASHING UP AND OVER TOP OF PARAPET AND DOWN FACE OF EXTERIOR WALL.

07 5423 N FULLY ADHERED MEMBRANE BASE FLASHING WITH CONTINUOUS FOAM ROD FOR NON-DECK APPLICATION. EXTEND WALL TO EXPOSED BASE FLASHING UP AND OVER TOP OF PARAPET AND DOWN FACE OF EXTERIOR WALL. SECURE ROOF MEMBRANE THROUGH INSULATION WITH FASTENERS WITH DISK FASTENERS AS SHOWN.

07 5423 O FULLY ADHERED MEMBRANE BASE FLASHING. FASTEN ALONG TOP EDGE WITH TERMINATION BAR WITH FASTENERS AT 8" ON CENTER MAX. SET TERM BAR IN BED OF SEALANT.

07 5423 P TURNED DOWN MEMBRANE 4" UP CURB, COLUMN, OR INSULATED METAL PANELS AND SECURE WITH SCREWS AND PLATE WASHERS.

07 5423 C WELDED SPlice WITH CONTINUOUS BASE FLASHING.

07 5423 Z FULLY ADHERED MEMBRANE BASE FLASHING.

07 6200 C 1/2" THICK FLASHING. FINISH TO MATCH POINTED FINISH. FINISHED TO MATCH MCN METAL PANELS. LAP TOP LEG OF FLASHING WITH SELF-ADHERED SHEET BITUMINOUS FLASHING STRIP TO INSULATED METAL PANEL.

07 6200 E SPRINKLER COPING WITH FACTORY PAINTED FINISH AND CONTINUOUS CLEATS. OVERLAP TOP AND BOTTOM CLEATS 1/2" MINIMUM WITH SEALANT.

07 6200 J STAINLESS STEEL COUNTERFLASHING WITH RUBBER GASKET TO INSULATED METAL PANEL. SECURE TO PANEL WITH FASTENERS AT 8" ON CENTER. PROVIDE SEALANT ALONG TOP EDGE.

07 6200 X THRU-METAL FLASHING WITH TURNED DOWN FRONT TUCKED AND SEALED BEHIND THE COUNTERFLASHING. FINISH TO MATCH INSULATED METAL PANELS. PROVIDE 4" TALL UPRIGHTED BACK LEG BEHIND INSULATED METAL PANELS. PROVIDE SEALANT TO MATCH CURTAINWALL FRAMING.

07 6200 Y SELF-ADHERED BITUMINOUS FLASHING STRIP. APPLY OVER TRANSITION FROM INSULATED METAL PANEL TO FLUID APPLIED WEATHER BARRIER.

07 6200 Z SELF-ADHERED BITUMINOUS FLASHING STRIP. APPLY OVER TRANSITION FROM INSULATED METAL PANEL TO CURTAINWALL FRAMING OR CURTAINWALL FRAMING.

07 8413 A PERIMETER FIRE CONTAINMENT SYSTEM PER UL CWO-2042.

07 8413 B SAFING INSULATION AT PERIMETER CONTAINMENT SYSTEM. PROVIDE 2 HOUR UL LISTED 2" THICK PERIMETER INSULATION. PROVIDE 1/2" AIR GAP. SET SHIM 1/2" ON CENTER.

07 8413 C 6" DEEP GLAZED ALUMINUM CURTAIN WALL WITH FACTORY PAINTED FINISH.

07 8413 D SHIMS WITH BACKER ROD AND SEALANT BOTH SIDES. PROVIDE GAPS IN EXTERIOR SEALANT TO ALLOW WATER TO WEEP PER SYSTEM REQUIREMENTS.

07 8413 F ALUMINUM FLASHING. FINISH TO MATCH CURTAINWALL FRAMING. PROVIDE UPRIGHTED BACK AND END LEGS AND SET IN FULL BED OF SEALANT. PROVIDE 1" TALL FRONT LEG TO EXCEED MCN PANEL FASTENERS (WHERE APPLICABLE).

07 8413 G EXTRUDED ALUMINUM WINDOW STOOL WITH RECEIVER CLIP. FINISHED TO MATCH CURTAINWALL FRAMING.

07 8413 H HEAD FLASHING FINISHED TO MATCH CURTAINWALL. PROVIDE TURNED DOWN FRONT LEGS AND VERTICAL BACK LEG. ATTACH TO BOTTOM STUD TRACK IN BED OF SILICONE BEAD. PROVIDE END NAIL IN BED OF SEALANT.

07 8413 J 0.063" BRAKE FORMED ALUMINUM TRIM FINISHED TO MATCH CURTAINWALL FRAMING. SECURE WITH CONCEALED FASTENERS.

07 2216 K 2" STUD BRIDGING. PROVIDE 1/2" AIR GAP FOR SUPPORT OF SAFING INSULATION.

09 2900 B 8" GYPSUM BOARD ON 7/8" METAL HOT HAT CHANNELS AT 24" ON CENTER ON COLD FORMED METAL FRAMING.

09 2900 D HALF GYPSUM BOARD 1/2" UP FROM CONCRETE SLAB WITH SEALANT JOINT (ONLY WHERE SHOWN). TYPICAL.

09 2900 F 8" GYPSUM BOARD ON 1-5/8" METAL STUD FRAMING AT 16" ON CENTER. ATTACH TO CURTAINWALL FRAMING WITH CLIPS.

09 6500 B SCHEDULED BASE. REFER TO INTERIOR DRAWINGS.

13 000 A GREENHOUSE EXTERIOR WALL PANEL ASSEMBLY BY GREENHOUSE MANUFACTURER.

13 000 B GREENHOUSE STEEL HSS SUPPORT POST BY GREENHOUSE MANUFACTURER.

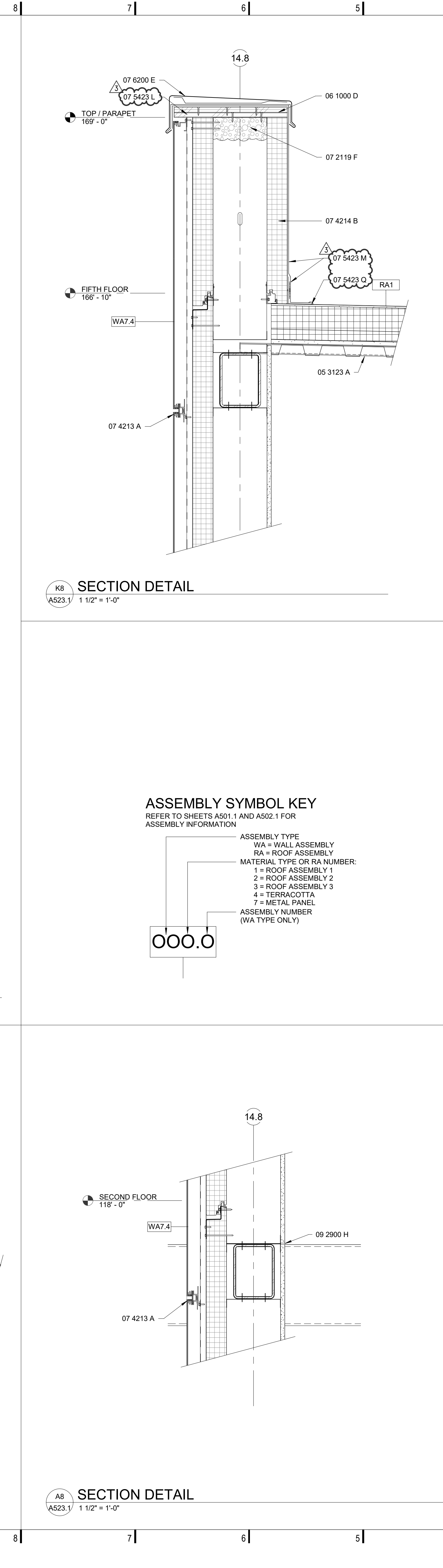
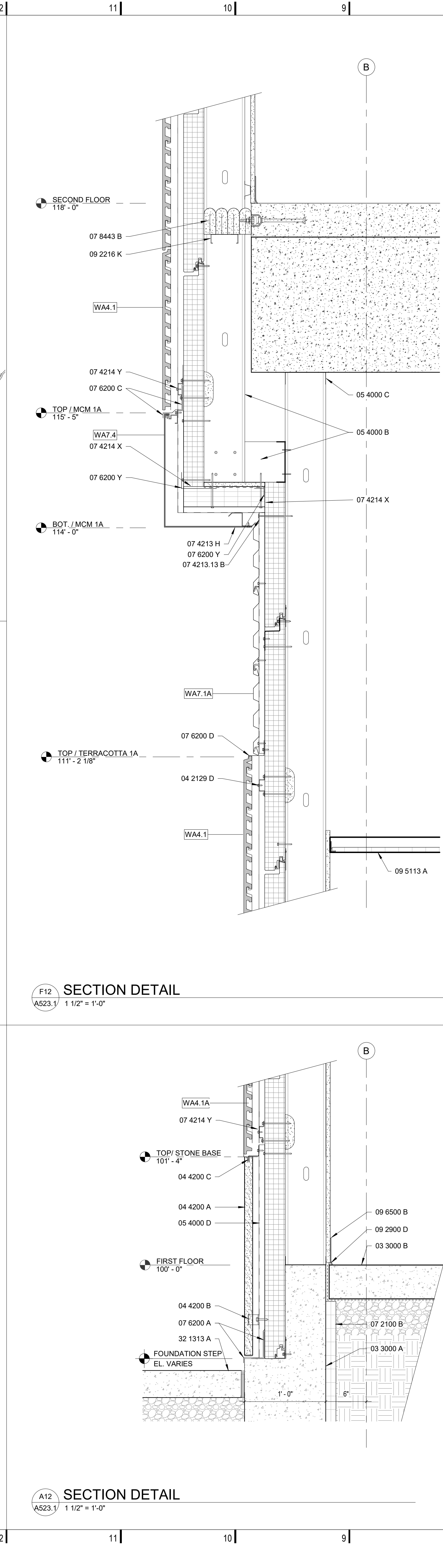
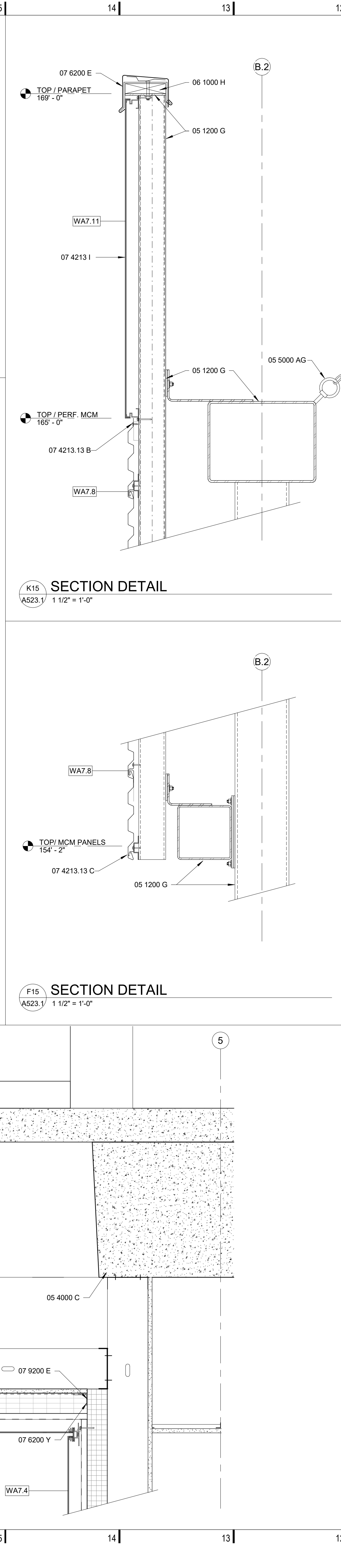
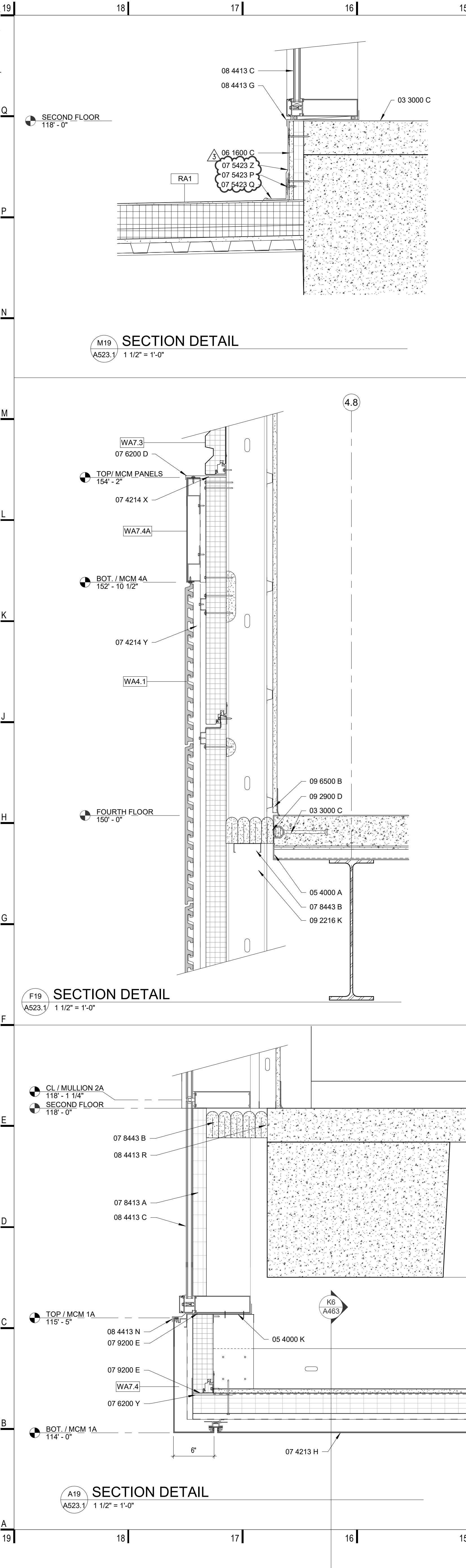
13 000 C ALUMINUM CLAD INSULATED PANEL BY GREENHOUSE MANUFACTURER.

13 000 D ALUMINUM FLASHING WITH FACTORY PAINTED FINISH. PROVIDED BY GREENHOUSE MANUFACTURER. SET IN FULL BED OF SEALANT. PROVIDE TO CONCRETE KNEEWALL.

31 2000 A APPROXIMATE FINISHED GRADE. REFER TO CIVIL DRAWINGS.

32 6000 A PERFORMED DRAIN TILE AROUND PERIMETER OF FOUNDATION WALLS. SET IN PEA GRADE BACKFILL. PROVIDE DRAIN TILE WITH 1/2" SLOPE TO STORM SEWER SYSTEM. PROVIDE DRAIN TILE TO STORM SEWER SYSTEM. REFER TO PLUMBING AND CIVIL DRAWINGS.

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REFERENCE KEYNOTES

03 3000 A CONCRETE FOOTINGS AND FOUNDATIONS. REFER TO STRUCTURAL DRAWINGS.
03 3000 B CONCRETE SLAB-ON-GRADE OVER VAPOR BARRIER AND GRANULAR FILL. REFER TO STRUCTURAL DRAWINGS.
03 3000 C ELEVATED CONCRETE FLOOR ASSEMBLY. REFER TO STRUCTURAL DRAWINGS.
04 2129 D CONTINUOUS SUBGIRT SCREW FASTENED THROUGH INSULATED METAL PANEL. COVER EXPOSED SCREW POINTS WITH CLOSED CELL SPRAY FOAM INSULATION.
04 4200 A 1-3/16-INCH-THICK STONE PANELS WITH STAINLESS STEEL ANCHORS. PROVIDE BACKER ROD AND SEALANT FOR ALL JOINTS. PROVIDE WEEPS AT 8" ON CENTER IN BASE SEALANT JOINT.
04 4200 B STAINLESS STEEL SPLIT-TAIL ANCHOR IN VERTICAL JOINTS. SECURE TO CONCRETE WALL WITH MASONRY ANCHORS AND TO METAL STUDS WITH STAINLESS STEEL SCREWS. PROVIDE KERFS IN STONE PANELS. GROUT ANCHORS SOLID.
04 4200 C STAINLESS STEEL 1/2" ASHLAR ANCHOR AT 16" ON CENTER. MINIMUM TWO PER PANEL. SECURE TO 7/8" 18 GAUGE HAT CHANNEL WITH STAINLESS STEEL SCREWS OR TO MASONRY WITH STAINLESS STEEL MASONRY SCREWS. PROVIDE KERFS IN STONE PANELS. GROUT ANCHORS SOLID.
05 1200 G HOT DIP GALVANIZED HSS SCREENWALL FRAMING SYSTEM. REFER TO STRUCTURAL DRAWINGS.
05 3123 A STEEL ROOF DECKING, REFER TO STRUCTURAL DRAWINGS.
05 4000 A EMBEDDED SLAB EDGE ANCHOR FOR ATTACHMENT OF COLD FORMED STUD FRAMING OR CURTAINWALL. REFER TO STRUCTURAL DRAWINGS.
05 4000 B COLD FORMED METAL FRAMING. REFER TO STRUCTURAL DRAWINGS.
05 4000 C DEEP LEG DEFLECTION TRACK.
05 4000 D 7/8-INCH X 18 GAUGE HAT CHANNELS.
05 4000 K SCREW FASTEN STUD TRACK TO CURTAINWALL MULLION - 2 ROWS OF 2 SCREWS PER STUD BAY.
05 5000 1-1/2" DIAMETER STAINLESS STEEL CAST EYEBOLTS FOR ATTACHMENT OF FAN STACK GUY WIRES. COORDINATE QUANTITY AND LOCATIONS WITH FAN INSTALLER. WELD EYEBOLTS TO SCREENWALL HSS MEMBER. REFER TO STRUCTURAL DRAWINGS.
06 1000 D TWO LAYERS 3/4" THICK FIRE-RETARDANT-TREATED PLYWOOD NAILER. SCREW FASTEN LAYERS TOGETHER AND TO CF STUD TOP TRACK WITH TWO ROWS #10 GALVANIZED SHEET METAL SCREWS AT 16" ON CENTER. DECREASE SPACING TO 12" ON CENTER WITHIN 8 FEET OF BUILDING CORNERS.
06 1000 H CONTINUOUS 2x PRESERVATIVE TREATED WOOD NAILER. SECURE TO STEEL PLATE WITH (2) 3/8" DIAMETER GALVANIZED CARRIAGE BOLTS. ONE EACH SIDE OF HSS POST. PROVIDE NAILERS IN 6' LENGTHS, WITH JOINT CENTERED OVER HSS POST.
06 1600 C 5/8" GLASS MAT EXTERIOR GYPSUM SHEATHING ON 1-1/2" THICK RIGID INSULATION. FULLY ADHERE INSULATION TO CONCRETE WALL. THRU-FASTEN SHEATHING WITH DISK HEAD MASONRY SCREWS.
07 2100 B 2" THICK X 24" TALL PERIMETER INSULATION. EXTEND VERTICALLY DOWN TO TOP OF FOUNDATION WALL WHERE APPLICABLE.
07 2119 F HIGH DENSITY SPRAY FOAM INSULATION WITH INTUMESCENT IGNITION BARRIER COATING. MINIMUM 2" THICKNESS UNLESS OTHERWISE INDICATED.
07 4213 A METAL COMPOSITE MATERIAL PANELS ON PANEL SUPPORT CLIPS WITH MCM REVEAL.
07 4213 H SOFFIT CONSTRUCTION: MCM PANELS AND 7/8" 18 GAUGE HAT CHANNELS ON 3" RIGID INSULATION OVER FLUID APPLIED WEATHER BARRIER ON 5/8" GLASS MAT GYPSUM SHEATHING ON COLD FORMED METAL STUDS. ALIGN MCM PANEL JOINTS WITH VERTICAL MULLIONS BELOW WHERE APPLICABLE.
07 4213 I MCM PANEL SYSTEM DIRECT ATTACHED TO VERTICAL HSS MEMBERS.
07 4213 J TRIM TOP PANEL AND FASTEN TO VERTICAL ALUMINUM HAT CHANNEL WITH STAINLESS STEEL OVAL HEAD SCREWS.
07 4213 K CONTINUOUS STARTER PANEL CLEAT FASTENED TO ALUMINUM HAT CHANNELS.
07 4214 B 3-INCH-THICK UTILITY GRADE INSULATED METAL PANELS.
07 4214 X CONTINUOUS SEALANT BEAD: A) ALONG TOP OF RIGID INSULATION B) INSULATED PANEL TO ADJACENT INSULATED METAL PANEL OR CURTAINWALL FRAMING C) INSULATED PANEL TO ADJACENT CONSTRUCTION.
07 4214 Y CONTINUOUS SUBGIRT SCREW FASTENED THROUGH INSULATED METAL PANEL. SET SCREW HEADS IN SILICONE SEALANT. COVER EXPOSED SCREW POINTS WITH CLOSED CELL SPRAY FOAM INSULATION.
07 5423 L EXTEND BASE FLASHING UP AND OVER TOP OF PARAPET AND DOWN FACE OF EXTERIOR WALL.
07 5423 M FULLY ADHERED MEMBRANE BASE FLASHING. EXTEND BASE FLASHING UP AND OVER TOP OF PARAPET AND DOWN FACE OF EXTERIOR WALL.
07 5423 N TURN ROOF MEMBRANE 4" UP CURB, COLUMN, OR INSULATED METAL PANELS AND SECURE WITH SCREWS AND PLATE WASHERS.
07 5423 O WELDED SPLICE WITH CONTINUOUS SEAM SEALANT.
07 5423 P FULLY ADHERED MEMBRANE BASE FLASHING.
07 6200 A STAINLESS STEEL THRU-WALL FLASHING WITH KICKOUT FRONT EDGE (FOR TERMITE CONTROL). SET IN BED OF SILICONE SEALANT TO FOUNDATION WALL LEDGE. LAP FLUID-APPLIED WEATHER BARRIER OVER TOP OF BASE FLASHING.
07 6200 C THRU-WALL FLASHING WITH TURNED DOWN FRONT EDGE. FINISHED TO MATCH MCM METAL PANELS. LAP TOP LEG OF FLASHING WITH SELF-ADHERED SHEET BITUMINOUS FLASHING STRIP TO INSULATED METAL PANEL.
07 6200 D THRU-WALL FLASHING WITH TURNED DOWN FRONT EDGE. FINISHED TO MATCH METAL PANELS. PROVIDE 4" TALL UPTURNED BACK LEG BEHIND METAL PANELS.
07 6200 E SPRINGLOCK COPING WITH FACTORY PAINTED FINISH AND CONTINUOUS CLEATS. OVERLAP MCM OR INSULATED METAL PANELS 1-1/2" MINIMUM WITH SEALANT.
07 6200 Y SELF-ADHERED BITUMINOUS FLASHING STRIP. APPLY OVER TRANSITION FROM INSULATED METAL PANEL TO FLUID APPLIED WEATHER BARRIER.
07 8413 A PERIMETER FIRE CONTAINMENT SYSTEM PER UL CW-D-2042.
07 8443 B SAFING INSULATION AT PERIMETER CONTAINMENT SYSTEM. PROVIDE 2 HOUR UL LISTED FIRE RATED PERIMETER WALL CONSTRUCTION JOINT DETAIL. SEE SHEET G100.1.
07 9200 E CONTINUOUS SEALANT BEAD: A) ALONG TOP OF RIGID INSULATION B) INSULATED PANEL TO ADJACENT INSULATED METAL PANEL OR CURTAINWALL FRAMING C) INSULATED PANEL TO ADJACENT CONSTRUCTION.
08 4413 C 10-1/2" DEEP 2-SIDED SSG GLAZED ALUMINUM CURTAIN WALL WITH FACTORY PAINTED FINISH. SILL FLASHING FINISHED TO MATCH CURTAINWALL OR STOREFRONT FRAMING. PROVIDE UPTURNED BACK AND END LEGS AND SET IN FULL BED OF SEALANT. REFER TO DETAIL MBAS20.1.
08 4413 N CURTAINWALL SILL FLASHING FINISHED TO MATCH MCM PANELS. PROVIDE UPTURNED BACK AND END LEGS AND SET IN FULL BED OF SEALANT. PROVIDE 1" TALL FRONT LEG TO CONCEAL MCM PANEL FASTENERS (WHERE APPLICABLE).
08 4413 R CURTAINWALL ATTACHMENT TO CONCRETE SLAB EDGE.
09 2216 K METAL STUD BRIDGING EACH STUD BAY FOR SUPPORT OF SAFING INSULATION.
09 2900 D HOLD GYPSUM BOARD 1/2" UP FROM CONCRETE SLAB WITH SEALANT JOINT (ONLY WHERE SHOWN), TYPICAL.
09 2900 H PROVIDE INVERTED STUD TRACK AS BACKUP FOR GYPSUM BOARD CONTROL JOINT.
09 5113 A SUSPENDED ACT CEILING. REFER TO RCP & FINISH SCHEDULE.
09 6500 B SCHEDULED BASE. REFER TO INTERIORS DRAWINGS.
32 1313 A EXTERIOR CONCRETE PAVING ON GRANULAR FILL WITH EXPANSION JOINT MATERIAL AND SEALANT AT FOUNDATION WALL. REFER TO SITE/CIVIL DRAWINGS.

ASSEMBLY SYMBOL KEY

REFER TO SHEETS A501.1 AND A502.1 FOR ASSEMBLY INFORMATION

ASSEMBLY TYPE
WA = WALL ASSEMBLY
RA = ROOF ASSEMBLY
MATERIAL TYPE OR RA NUMBER:
1 = ROOF ASSEMBLY 1
2 = ROOF ASSEMBLY 2
3 = ROOF ASSEMBLY 3
4 = TERRACOTTA
7 = METAL PANEL
ASSEMBLY NUMBER
(WA TYPE ONLY)

000.0

GENERAL DETAIL NOTES

A. NOTE: NOT ALL SPRAY APPLIED FIRE-RESISTIVE MATERIALS MAY BE SHOWN. REFER TO SHEET G100.1 AND UL DETAILS FOR FIRE RATED CONSTRUCTION REQUIREMENTS.

University of Kentucky

10.21.2024
06.05.2024
06.28.2024
Date

3 ROOF BID APPENDIX 1
CORE AND SHELL PACKAGE - ADDENDUM 2
1 CORE AND SHELL PACKAGE - BID AND PERMIT
Issue/Revision/Submission
No.

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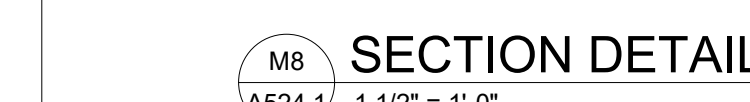
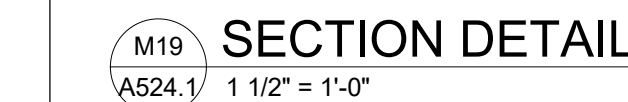
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C. KEMP / J. BEVERIDGE
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K. DENMAN
Issue/Revision/Submission
06.28.2024
Project Number
UKX05.00

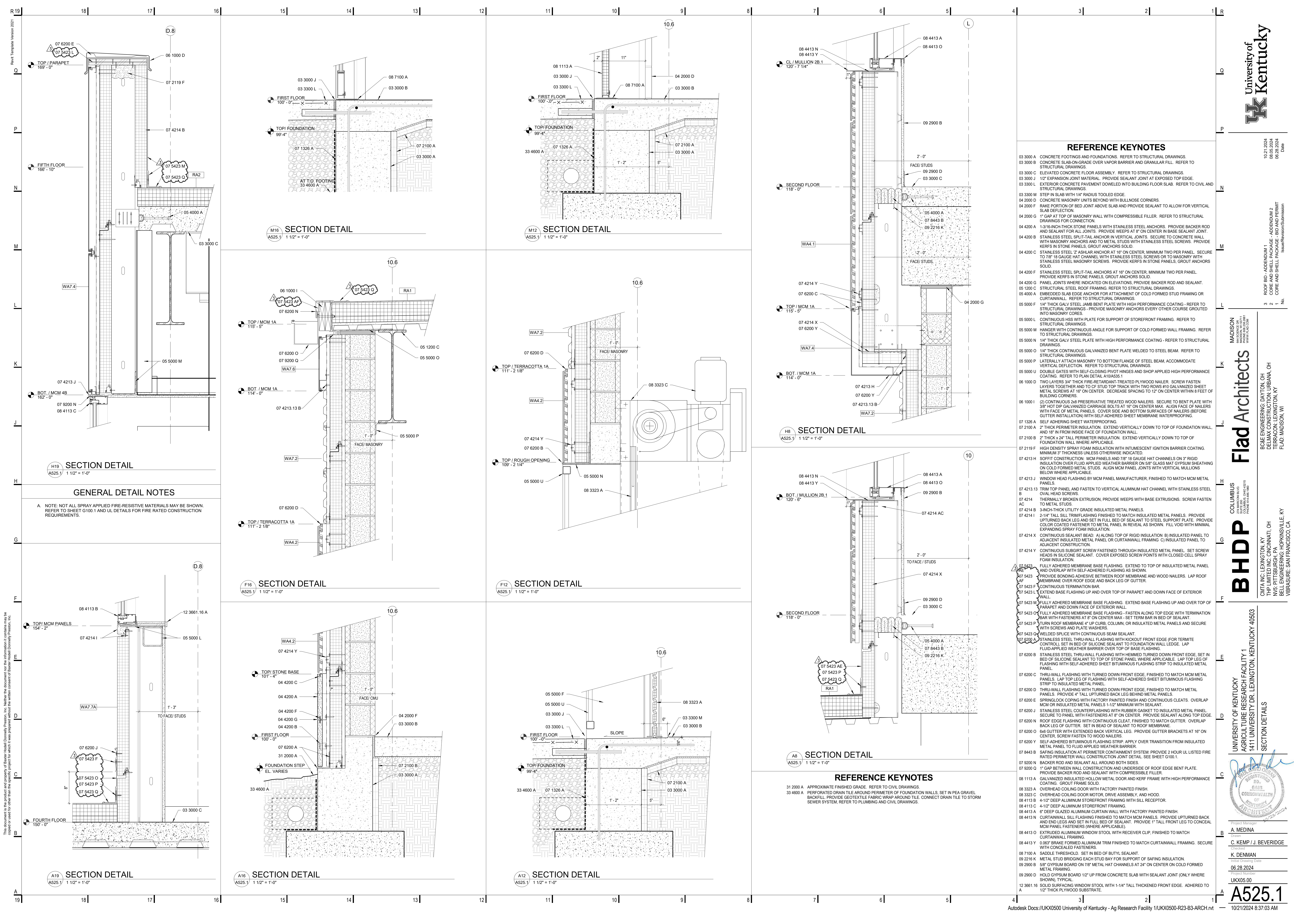
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04 4200 F STAINLESS STEEL SPLIT-TAIL ANCHORS AT 16" ON CENTER, MINIMUM TWO PER PANEL.
PROVIDE KERFS IN STONE PANELS, GROUT ANCHORS SOLID.

04 4200 G PANEL JOINTS WHERE INDICATED ON ELEVATIONS, PROVIDE BACKER ROD AND SEALANT.



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06.29.2024
Date

3

ROOF BID - APPENDIX 1
CORE AND SHELL PACKAGE - ADDENDUM 2
CORE AND SHELL PACKAGE - BID AND PERMIT
Issue/Revision/Submission

No.

MADISON

Flad Architects

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DELMAC CONSTRUCTION URBANA, OH
TERRACON: LEXINGTON, KY
FLAD: MADISON, WI

COLUMBUS

BHDP

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06.28.2024

Project Number

UKX05.00

A525.1

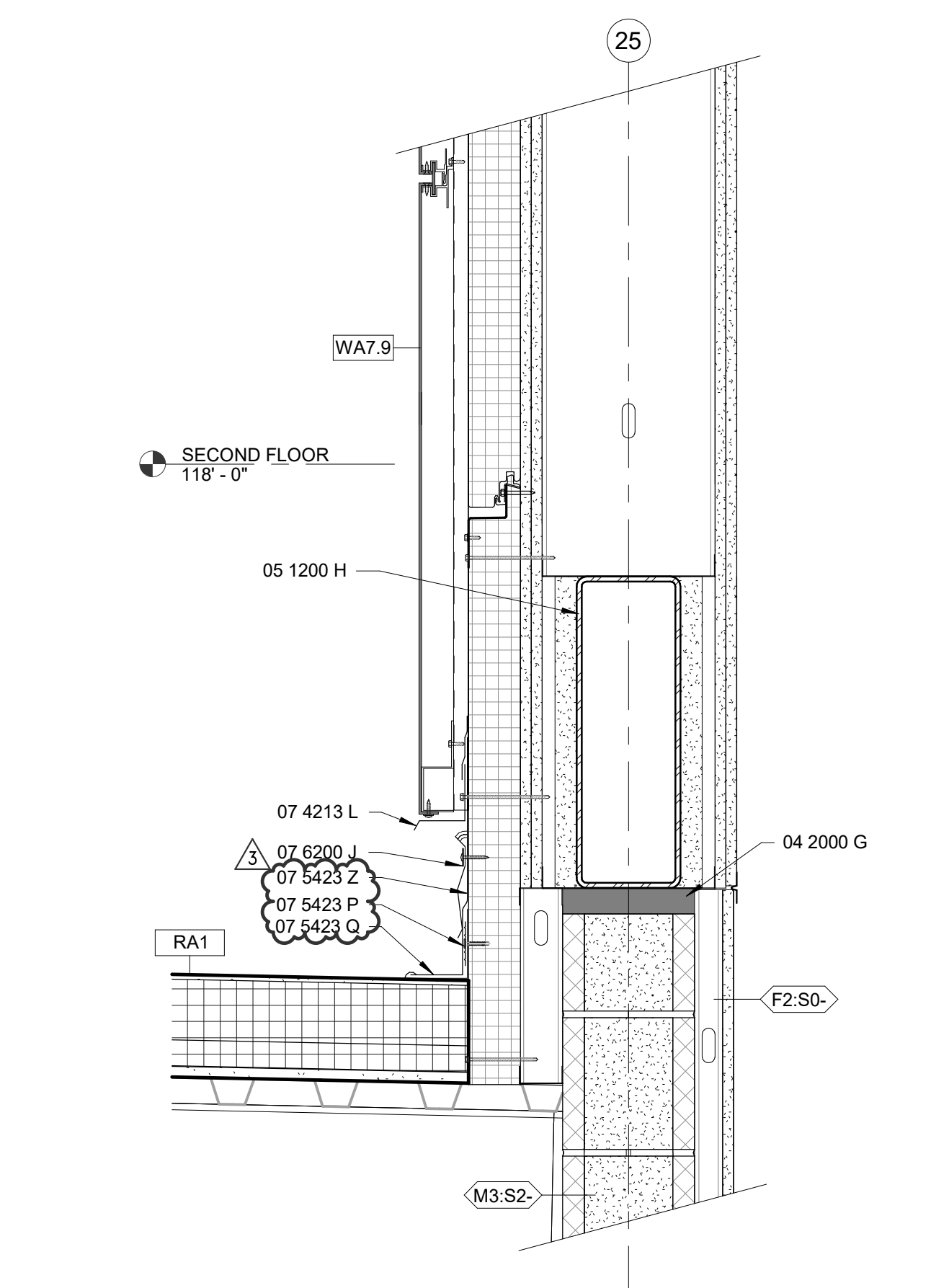
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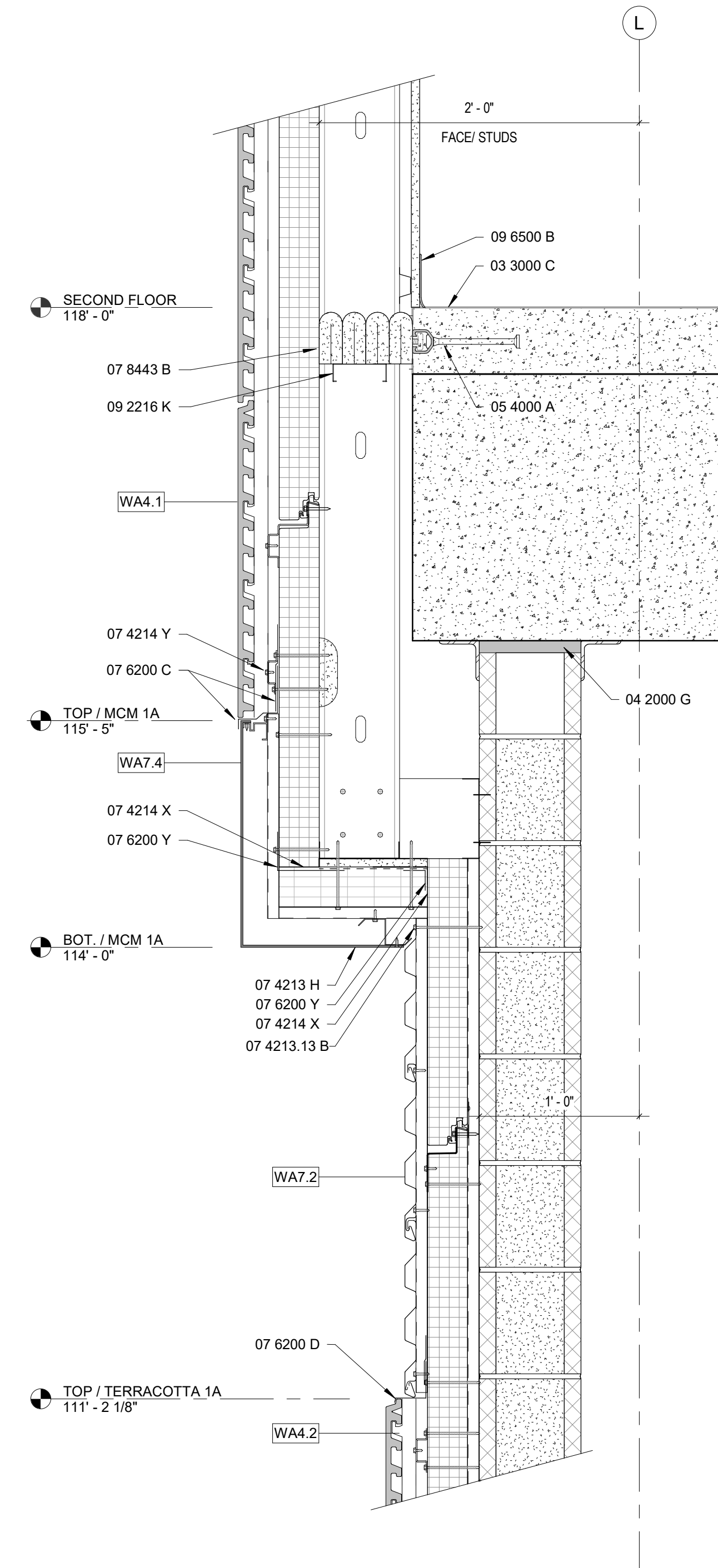
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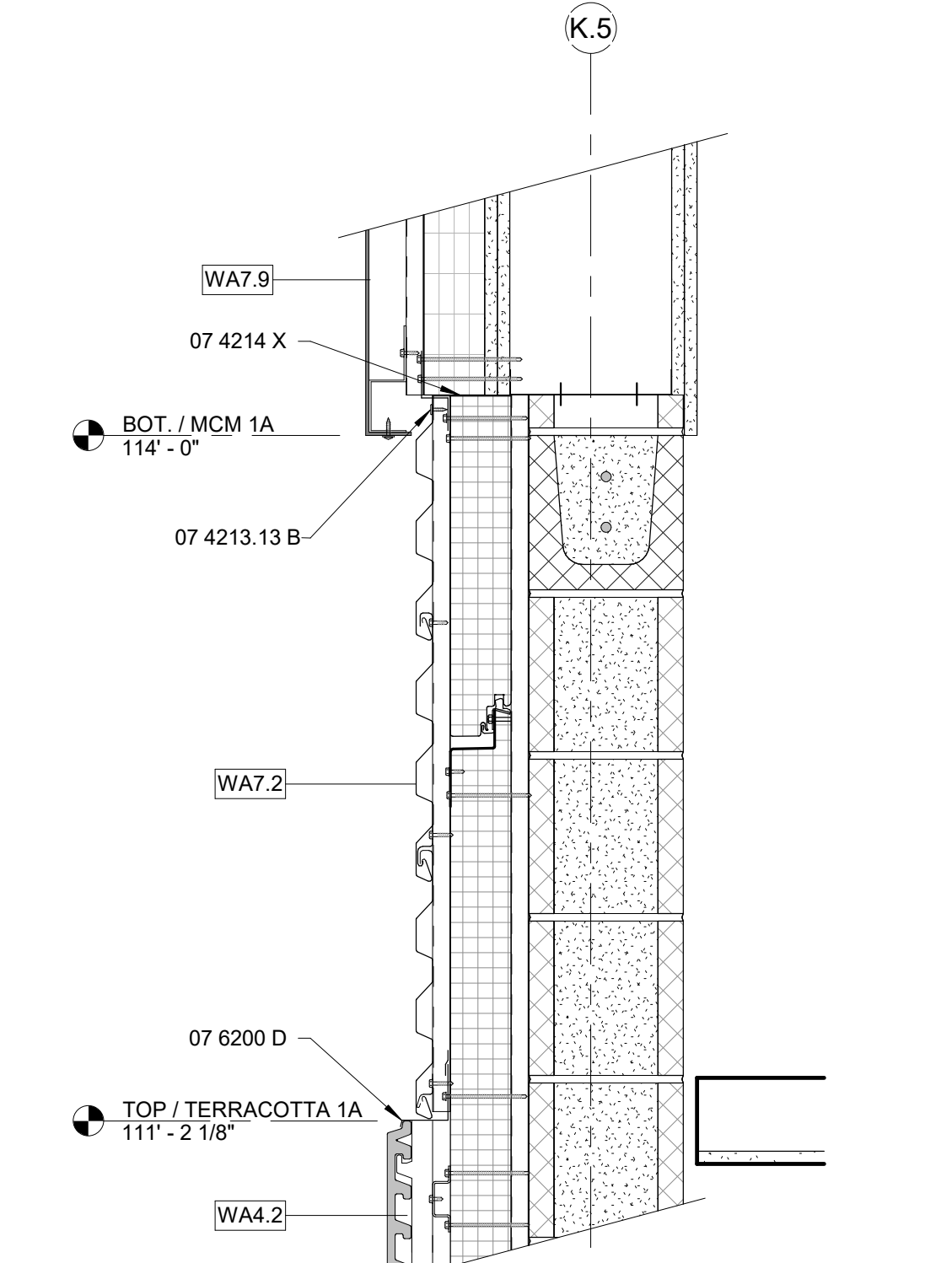
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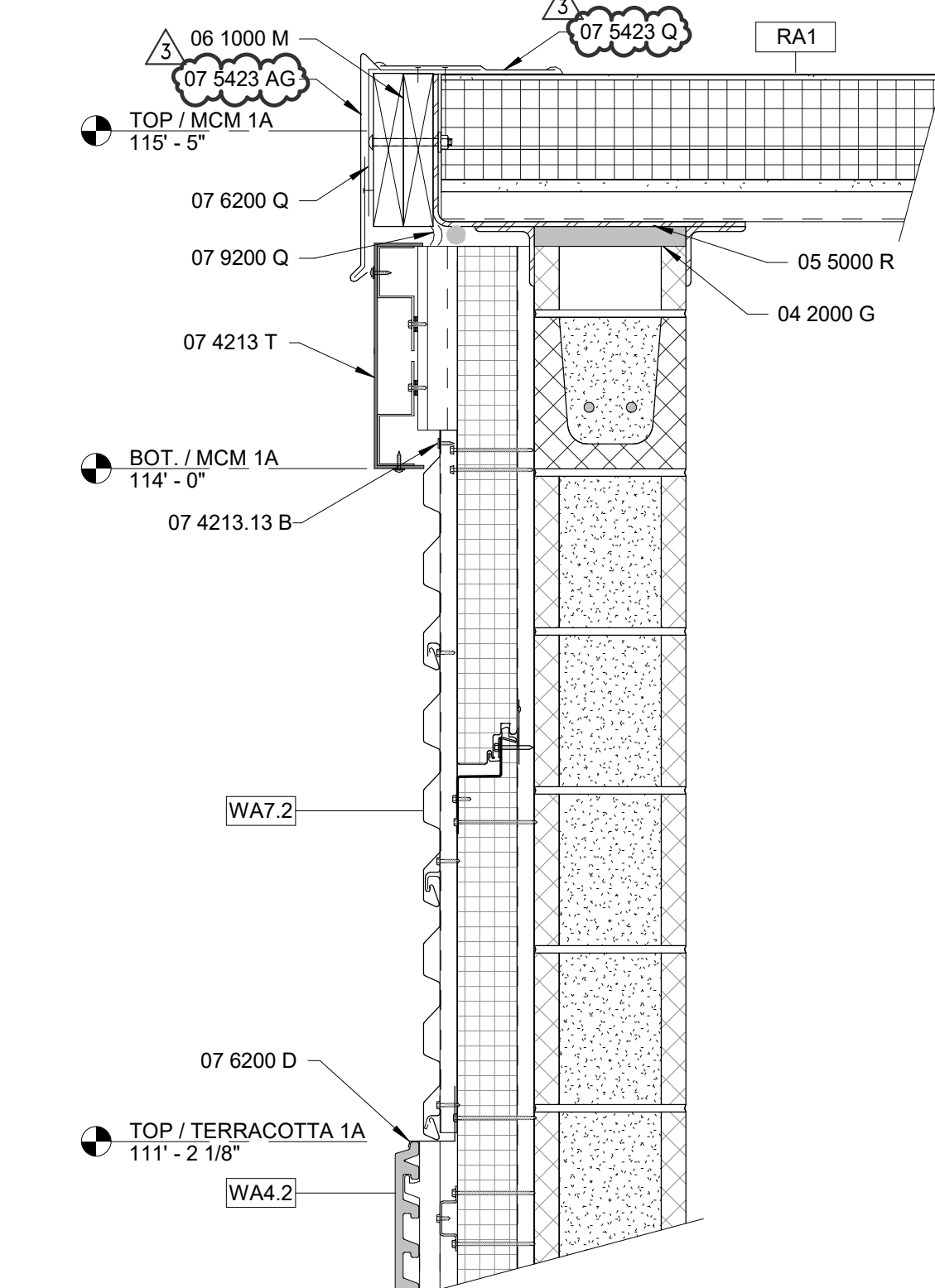
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GENERAL DETAIL NOTES

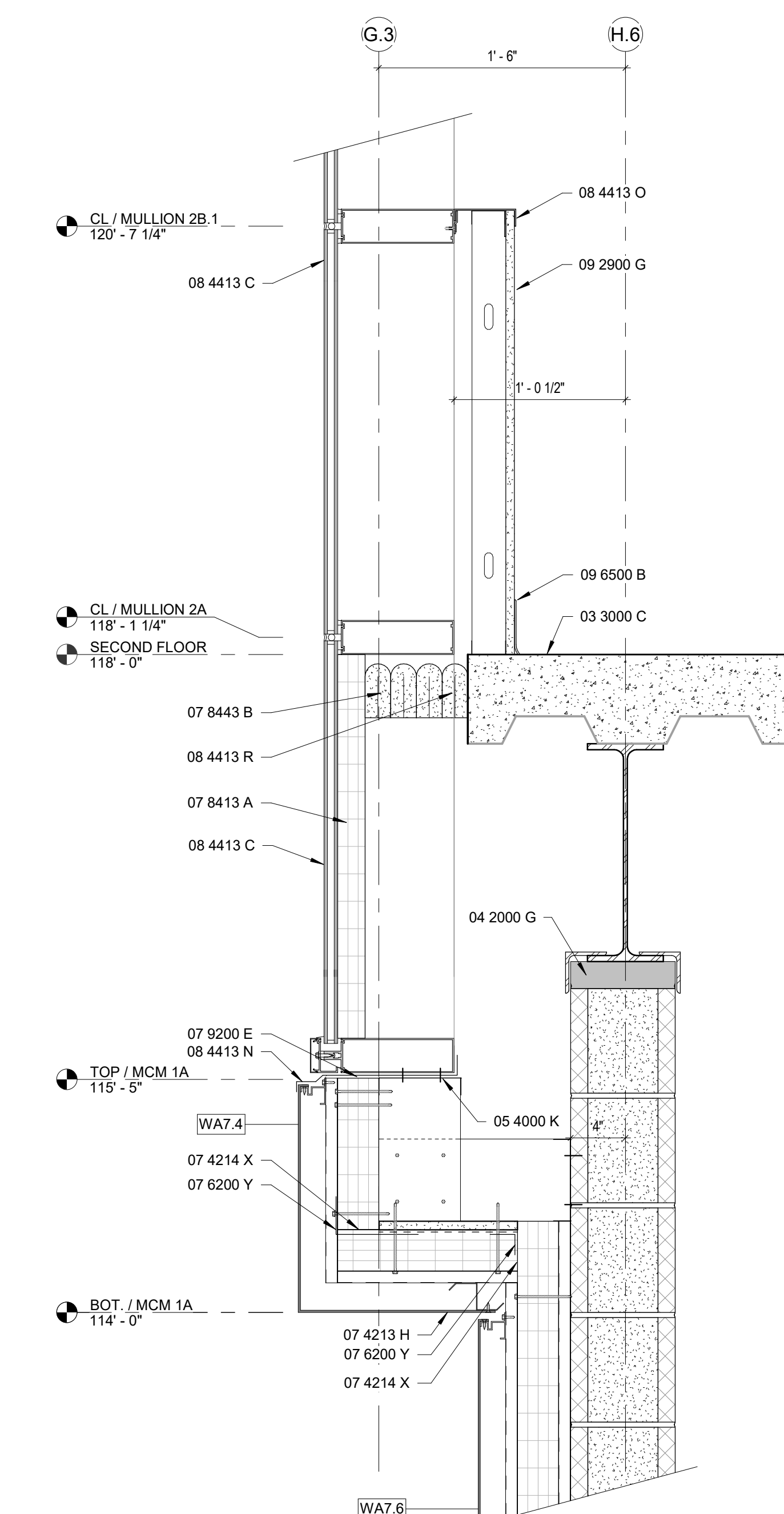
A. NOTE: NOT ALL SPRAY APPLIED FIRE-RESISTIVE MATERIALS MAY BE SHOWN. REFER TO SHEET G100.1 AND UL DETAILS FOR FIRE RATED CONSTRUCTION REQUIREMENTS.



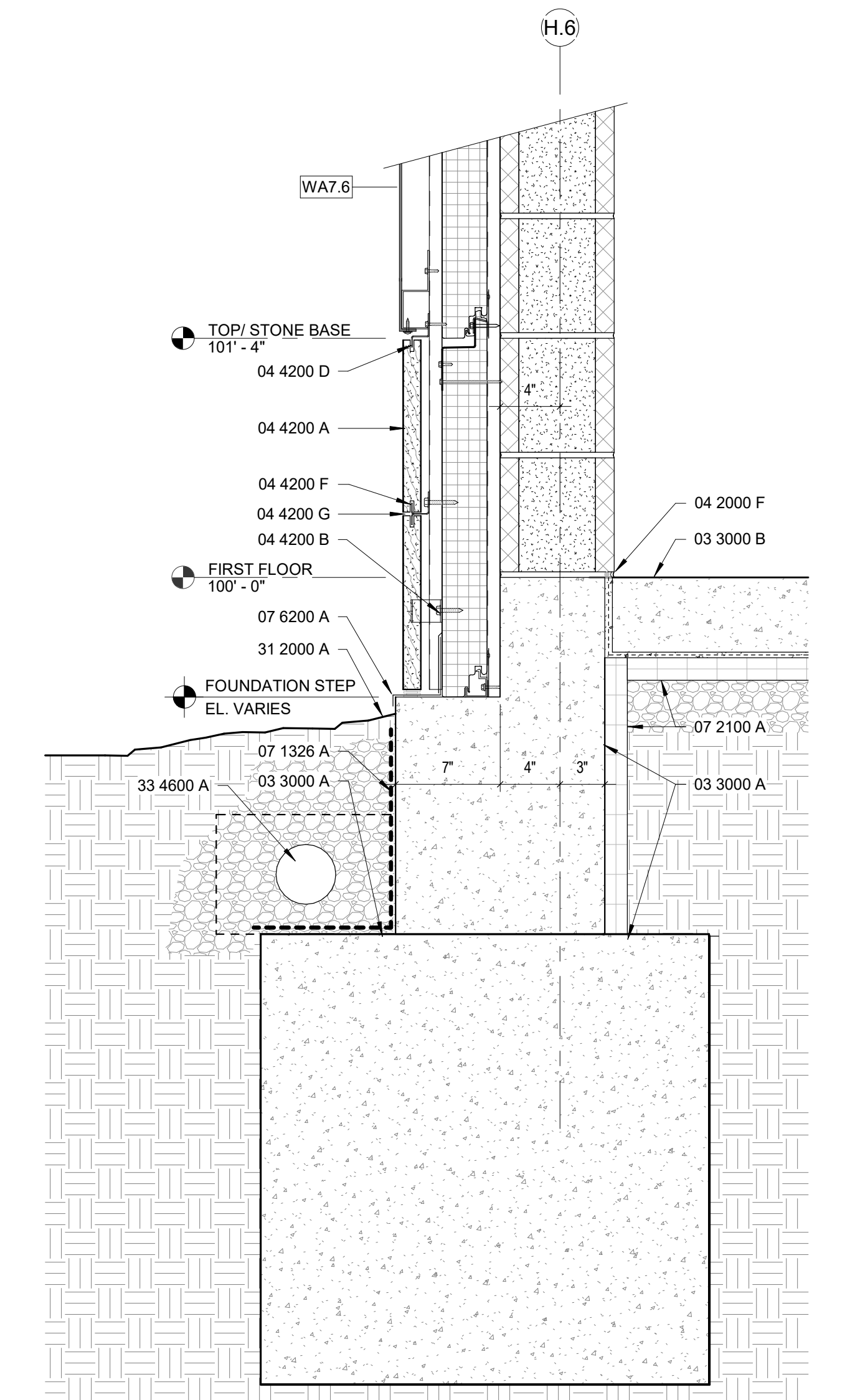
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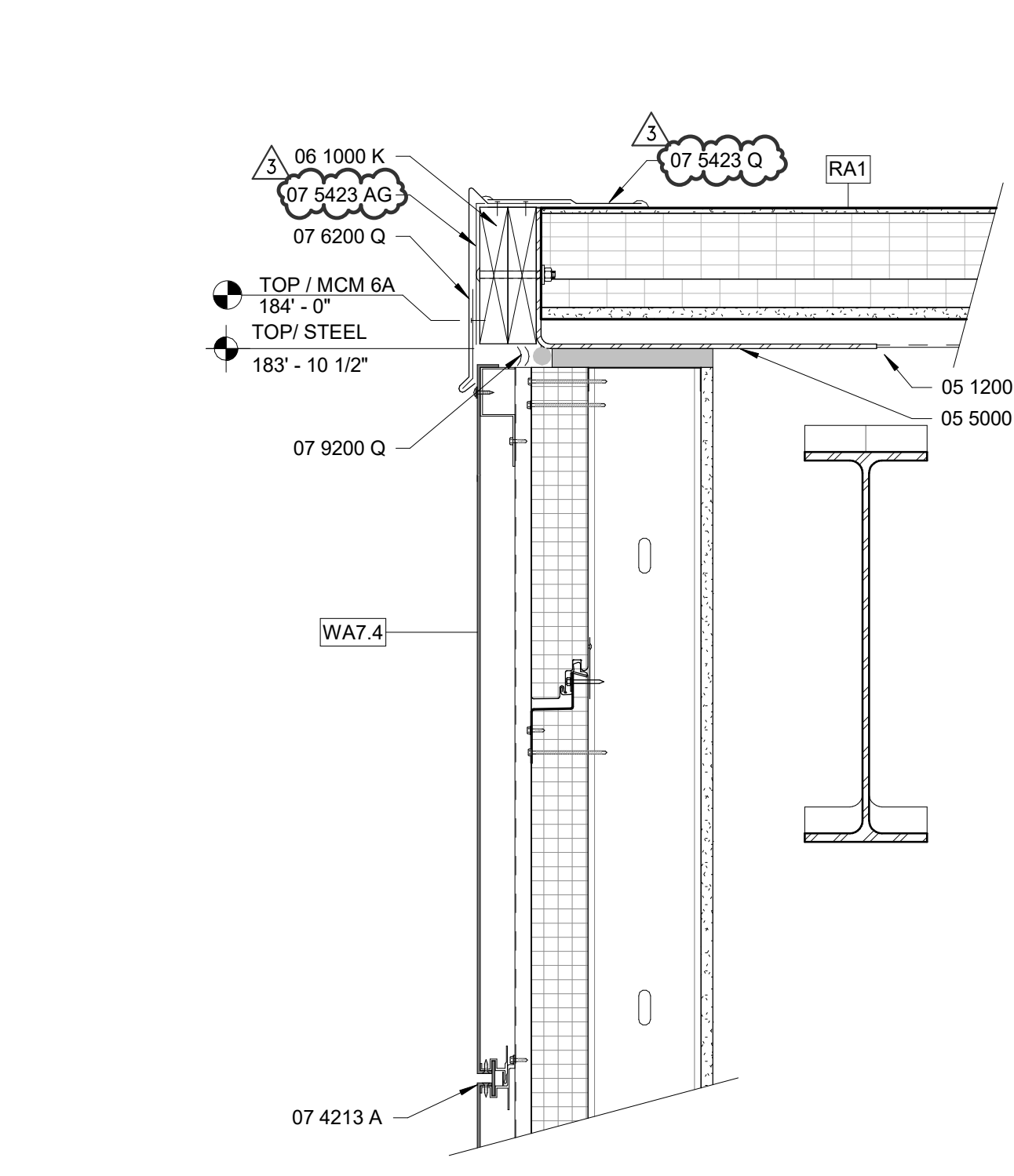
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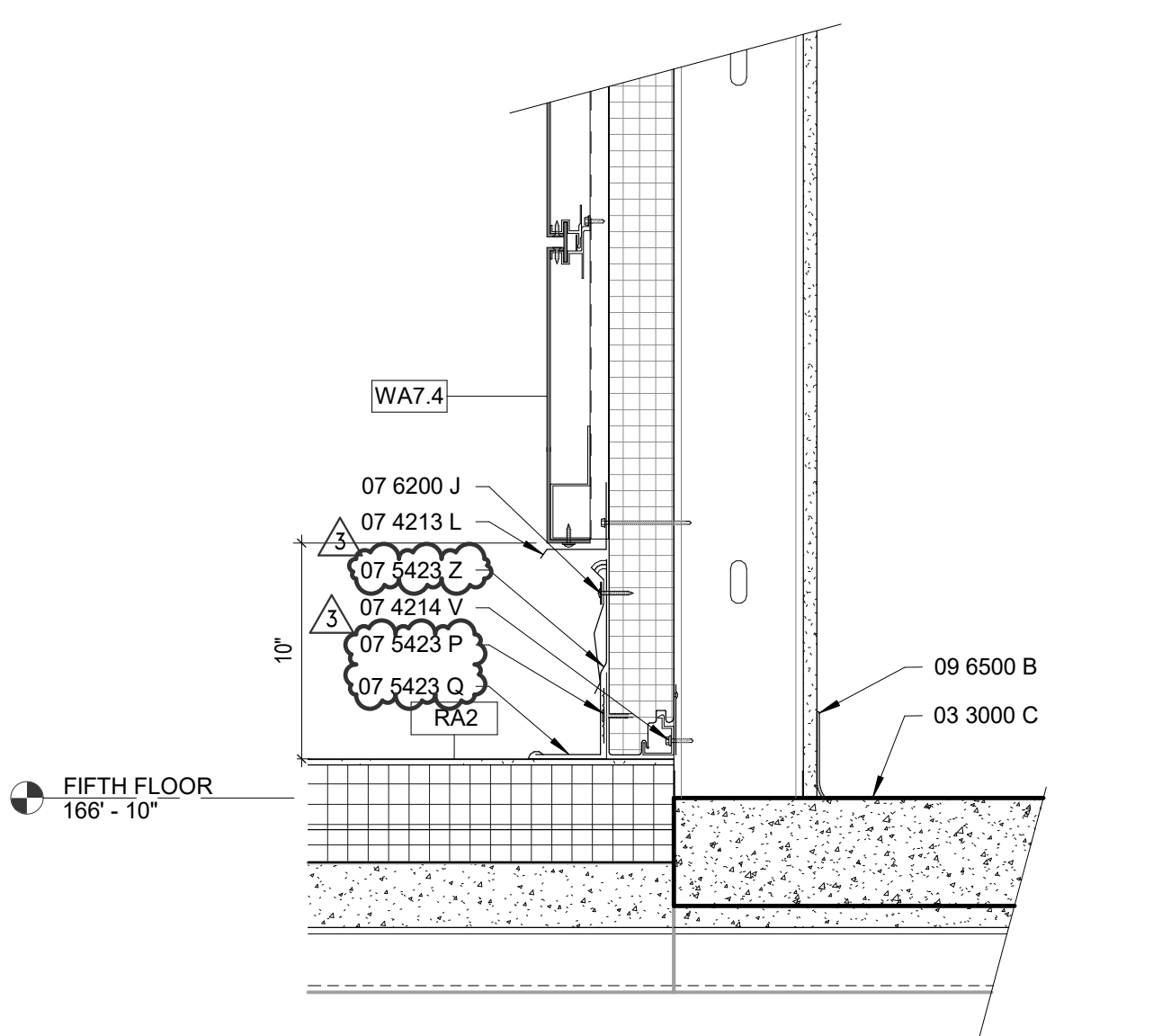
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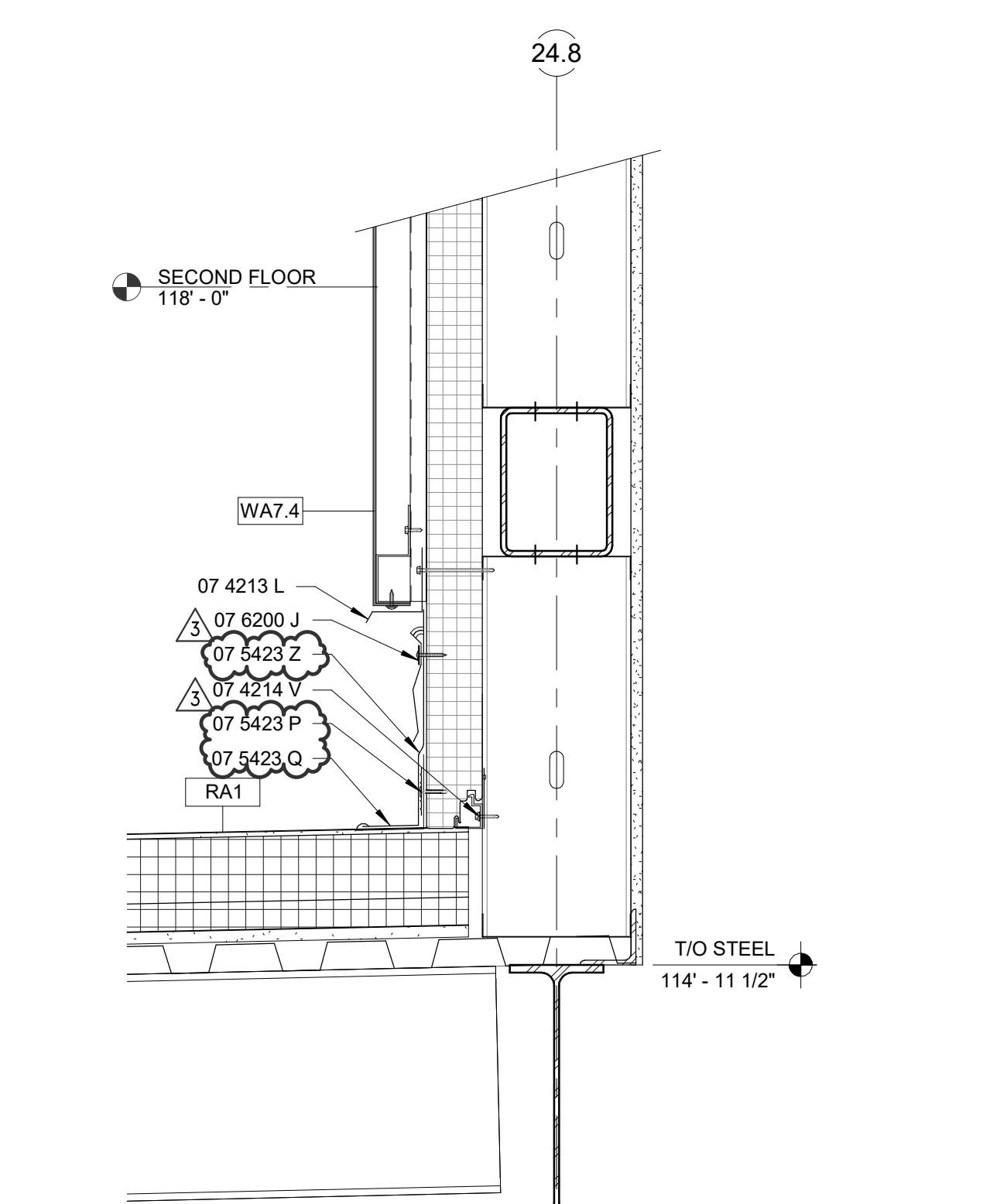
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A526.1 1 1/2" = 1'-0"



L8
A526.1 1 1/2" = 1'-0"



F8
A526.1 1 1/2" = 1'-0"



A8
A526.1 1 1/2" = 1'-0"

REFERENCE KEYNOTES

- 03 3000 A CONCRETE FOOTINGS AND FOUNDATIONS. REFER TO STRUCTURAL DRAWINGS.
- 03 3000 B CONCRETE SLAB-ON-GRADE OVER VAPOR BARRIER AND GRANULAR FILL. REFER TO STRUCTURAL DRAWINGS.
- 03 3000 C ELEVATED CONCRETE FLOOR ASSEMBLY. REFER TO STRUCTURAL DRAWINGS.
- 04 2000 F RAKE PORTION OF BED JOINT ABOVE SLAB AND PROVIDE SEALANT TO ALLOW FOR VERTICAL SLAB DEFLECTION.
- 04 2000 G 1" GAP AT TOP OF MASONRY WALL WITH COMPRESSIBLE FILLER. REFER TO STRUCTURAL DRAWINGS FOR CONNECTION.
- 04 4200 A 1-3/16-INCH-THICK STONE PANELS WITH STAINLESS STEEL ANCHORS. PROVIDE BACKER ROD AND SEALANT FOR ALL JOINTS. PROVIDE WEEPS AT 8" ON CENTER IN BASE SEALANT JOINT.
- 04 4200 B STAINLESS STEEL SPLIT-TAIL ANCHOR IN VERTICAL JOINTS. SECURE TO CONCRETE WALL WITH MASONRY ANCHORS AND TO METAL STUDS WITH STAINLESS STEEL SCREWS. PROVIDE KERFS IN STONE PANELS. GROUT ANCHORS SOLID.
- 04 4200 D STAINLESS STEEL CRAMP ANCHORS AT 16" ON CENTER. MINIMUM TWO PER STONE PANEL. GROUTED INTO MASONRY CORES. PROVIDE KERFS IN STONE PANELS. GROUT ANCHORS SOLID.
- 04 4200 F STAINLESS STEEL SPLIT-TAIL ANCHORS AT 16" ON CENTER. MINIMUM TWO PER PANEL. PROVIDE KERFS IN STONE PANELS. GROUT ANCHORS SOLID.
- 04 4200 G PANEL JOINTS WHERE INDICATED ON ELEVATIONS. PROVIDE BACKER ROD AND SEALANT. STRUCTURAL STEEL ROOF FRAMING. REFER TO STRUCTURAL DRAWINGS.
- 05 1200 H STRUCTURAL STEEL. REFER TO STRUCTURAL DRAWINGS.
- 05 4000 A EMBEDDED SLAB EDGE ANCHOR FOR ATTACHMENT OF COLD FORMED STUD FRAMING OR CURTAINWALL. REFER TO STRUCTURAL DRAWINGS.
- 05 4000 K SCREW FASTEN STUD TRACK TO CURTAINWALL MULLION - 2 ROWS OF 2 SCREWS PER STUD BAY.
- 05 5000 O 1/4" THICK CONTINUOUS GALVANIZED BENT PLATE WELDED TO STEEL BEAM. REFER TO STRUCTURAL DRAWINGS.
- 05 5000 R CONTINUOUS BENT PLATE FOR SUPPORT OF METAL DECK OR ROOF INSULATION. REFER TO STRUCTURAL DRAWINGS.
- 06 1000 K (2) CONTINUOUS 2x6 PRESERVATIVE TREATED WOOD NAILERS. SECURE TO BENT PLATE WITH 3/8" HOT DIP GALVANIZED CARRIAGE BOLTS AT 16" ON CENTER MAX. ALIGN FACE OF NAILERS WITH FACE OF METAL PANELS OR PLYWOOD SUBSTRATE. COVER SIDE AND BOTTOM SURFACES OF NAILERS WITH SELF-ADHERED SHEET MEMBRANE WATERPROOFING.
- 06 1000 M CONTINUOUS 2x PRESERVATIVE TREATED WOOD BLOKING. SECURE TO BENT PLATE WITH TWO ROWS OF 3/8" HOT DIP GALVANIZED CARRIAGE BOLTS AT 16" ON CENTER MAX. SELF ADHERING SHEET WATERPROOFING.
- 07 1326 A 2" THICK PERIMETER INSULATION. EXTEND VERTICALLY DOWN TO TOP OF FOUNDATION WALL, AND 16" IN FROM INSIDE FACE OF FOUNDATION WALL.
- 07 4213 A METAL COMPOSITE MATERIAL PANELS ON PANEL SUPPORT CLIPS WITH MCM REVEAL. SOFFIT CONSTRUCTION: MCM PANELS AND 7/8" 18 GAUGE HAT CHANNELS ON 3" RIGID INSULATION OVER FLUID APPLIED WEATHER BARRIER ON 5/8" GLASS MAT GYPSUM SHEATHING ON COLD FORMED METAL STUDS. ALIGN MCM PANEL JOINTS WITH VERTICAL MULLIONS BELOW WHERE APPLICABLE.
- 07 4213 L STAINLESS STEEL BASE FLASHING BY MCM MANUFACTURER/INSTALLER.
- 07 4213 T MCM PANEL SYSTEM ATTACHED USING 2 CLIPS AND WASHERS AS NEEDED ON 2" Z FRAMING ON 3" THICK UTILITY GRADE INSULATED METAL PANELS ON 7/8" 18 GAUGE HAT CHANNELS. TRIM TOP PANEL AND FASTEN TO VERTICAL ALUMINUM HAT CHANNEL WITH STAINLESS STEEL OVAL HEAD SCREWS.
- 07 4214 V METAL PANEL STARTER EXTRUSION CLIP.
- 07 4214 X CONTINUOUS SEALANT BEAD: A) ALONG TOP OF RIGID INSULATION B) INSULATED PANEL TO ADJACENT INSULATED METAL PANEL OR CURTAINWALL FRAMING C) INSULATED PANEL TO ADJACENT CONSTRUCTION.
- 07 4214 Y CONTINUOUS SUBMIT SCREW FASTENED THROUGH INSULATED METAL PANEL. SET SCREW HEADS IN SILICONE SEALANT. COVER EXPOSED SCREW POINTS WITH CLOSED CELL SPRAY FOAM INSULATION.
- 07 5423 AB LAP ROOF MEMBRANE OVER ROOF EDGE AND DOWN FACE OF NAILERS. PROVIDE BONDING ADHESIVE BETWEEN ROOF MEMBRANE AND WOOD NAILERS.
- 07 5423 P TURN ROOF MEMBRANE 4" UP CURB, COLUMN, OR INSULATED METAL PANELS AND SECURE WITH SCREWS AND PLATE WASHERS.
- 07 5423 Q WELDED SPICE WITH CONTINUOUS SEAM SEALANT.
- 07 5423 Z FULLY ADHERED MEMBRANE BASE FLASHING.
- 07 6200 K STAINLESS STEEL THRU-WALL FLASHING WITH KICKOUT FRONT EDGE (FOR TERMITE CONTROL), SET IN BED OF SILICONE SEALANT TO FOUNDATION WALL LEDGE. LAP FLUID-APPLIED WEATHER BARRIER OVER TOP OF BASE FLASHING.
- 07 6200 C THRU-WALL FLASHING WITH TURNED DOWN FRONT EDGE. FINISHED TO MATCH MCM METAL PANELS. LAP TOP LEG OF FLASHING WITH SELF-ADHERED SHEET BITUMINOUS FLASHING STRIP TO INSULATED METAL PANEL.
- 07 6200 D THRU-WALL FLASHING WITH TURNED DOWN FRONT EDGE. FINISHED TO MATCH METAL PANELS. PROVIDE 4" TALL UPTURNED BACK LEG BEHIND METAL PANELS.
- 07 6200 J STAINLESS STEEL COUNTERFLASHING WITH RUBBER GASKET TO INSULATED METAL PANEL. SECURE TO PANEL WITH FASTENERS AT 8" ON CENTER. PROVIDE SEALANT ALONGS TOP EDGE.
- 07 6200 Q ROOF EDGE FLASHING WITH CONTINUOUS CLEAT. FINISHED TO MATCH MCM PANELS. SET IN BEAD OF SEALANT TO ROOF MEMBRANE.
- 07 6200 Y SELF-ADHERED BITUMINOUS FLASHING STRIP. APPLY OVER TRANSITION FROM INSULATED METAL PANEL TO FLUID APPLIED WEATHER BARRIER.
- 07 8413 A PERIMETER FIRE CONTAINMENT SYSTEM PER UL CW-D-2042.
- 07 8443 B SAFING INSULATION AT PERIMETER CONTAINMENT SYSTEM. PROVIDE 2 HOUR UL LISTED FIRE RATED PERIMETER WALL CONSTRUCTION JOINT DETAIL. SEE SHEET G100.1.
- 07 9200 A CONTINUOUS SEALANT BEAD: A) ALONG TOP OF RIGID INSULATION B) INSULATED PANEL TO ADJACENT INSULATED METAL PANEL OR CURTAINWALL FRAMING C) INSULATED PANEL TO ADJACENT CONSTRUCTION.
- 07 9200 Q 1" GAP BETWEEN WALL CONSTRUCTION AND UNDERSIDE OF ROOF EDGE BENT PLATE. PROVIDE BACKER ROD AND SEALANT WITH COMPRESSIBLE FILLER.
- 08 4413 C 10-1/2" DEEP 2-SIDED SSG GLAZED ALUMINUM CURTAIN WALL WITH FACTORY PAINTED FINISH.
- 08 4413 N CURTAINWALL SILL FLASHING FINISHED TO MATCH MCM PANELS. PROVIDE UPTURNED BACK AND END LEGS AND SET IN FULL BED OF SEALANT. PROVIDE 1" TALL FRONT LEG TO CONCEAL MCM PANEL FASTENERS (WHERE APPLICABLE).
- 08 4413 O EXTRUDED ALUMINUM WINDOW STOOL WITH RECEIVER CLIP. FINISHED TO MATCH CURTAINWALL FRAMING.
- 08 4413 R CURTAINWALL ATTACHMENT TO CONCRETE SLAB EDGE.
- 09 2216 K METAL STUD BRIDGING EACH STUD FOR SUPPORT OF SAFING INSULATION.
- 09 2900 G GYPSUM BOARD ON METAL STUD FRAMING. REFER TO INTERIOR FIT-OUT PLANS FOR PARTITION TYPE.
- 09 6500 B SCHEDULED BASE. REFER TO INTERIORS DRAWINGS.
- 31 2000 A APPROXIMATE FINISHED GRADE. REFER TO CIVIL DRAWINGS.
- 33 4600 A PERFORATED DRAIN TILE AROUND PERIMETER OF FOUNDATION WALLS. SET IN PEA GRAVEL BACKFILL. PROVIDE GEOTEXTILE FABRIC WRAP AROUND TILE. CONNECT DRAIN TILE TO STORM SEWER SYSTEM. REFER TO PLUMBING AND CIVIL DRAWINGS.

ASSEMBLY SYMBOL KEY

REFER TO SHEETS A501.1 AND A502.1 FOR ASSEMBLY INFORMATION

- ASSEMBLY TYPE
- WA = WALL ASSEMBLY
- RA = ROOF ASSEMBLY
- MATERIAL TYPE OR RA NUMBER:
- 1 = ROOF ASSEMBLY 1
- 2 = ROOF ASSEMBLY 2
- 3 = ROOF ASSEMBLY 3
- 4 = TERRACOTTA
- 7 = METAL PANEL
- ASSEMBLY NUMBER (WA TYPE ONLY)

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University of Kentucky

10.01.2024
05.05.2024
06.29.2024

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ROOF BID, APPENDIX 1
CORE AND SHELL PACKAGE - ADDENDUM 2
CORE AND SHELL PACKAGE - BID AND PERMIT
Issue/Revision/Submission

No.

BHPD

COLUMBUS

MADISON

BCAE ENGINEERING DAYTON, OH
DELMAX CONSTRUCTION URBANA, OH
TERRACON LEXINGTON, KY
FLAD-MADISON, WI

CMTA INC. LEXINGTON, KY
THP LIMITED INC. CINCINNATI, OH
NVS PITTSBURGH PA
BELL ENGINEERING HOPKINSVILLE, KY
VIBRASURE SAN FRANCISCO, CA

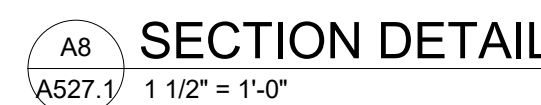
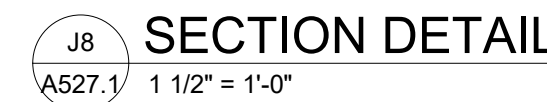
UNIVERSITY OF KENTUCKY
AGRICULTURE RESEARCH FACILITY 1
1411 UNIVERSITY DR. LEXINGTON, KENTUCKY 40503

SECTION DETAILS

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Project Manager
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06.28.2024
Project Number
UKX05.00

A526.1

10/21/2024 8:37:09 AM



GENERAL DETAIL NOTES

A. NOTE: NOT ALL SPRAY APPLIED FIRE-RESISTIVE MATERIALS MAY BE SHOWN. REFER TO SHEET G100.1 AND UL DETAILS FOR FIRE RATED CONSTRUCTION REQUIREMENTS.

ASSEMBLY SYMBOL KEY

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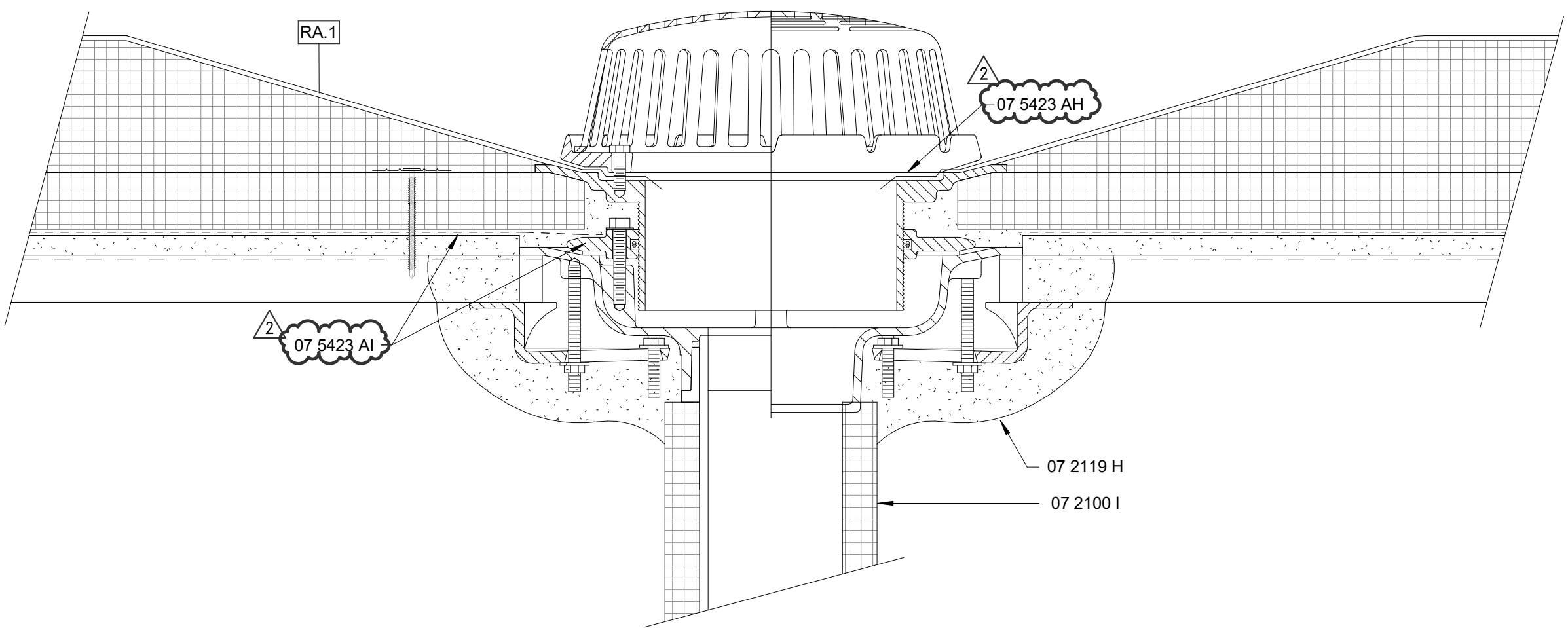
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(WA TYPE ONLY)

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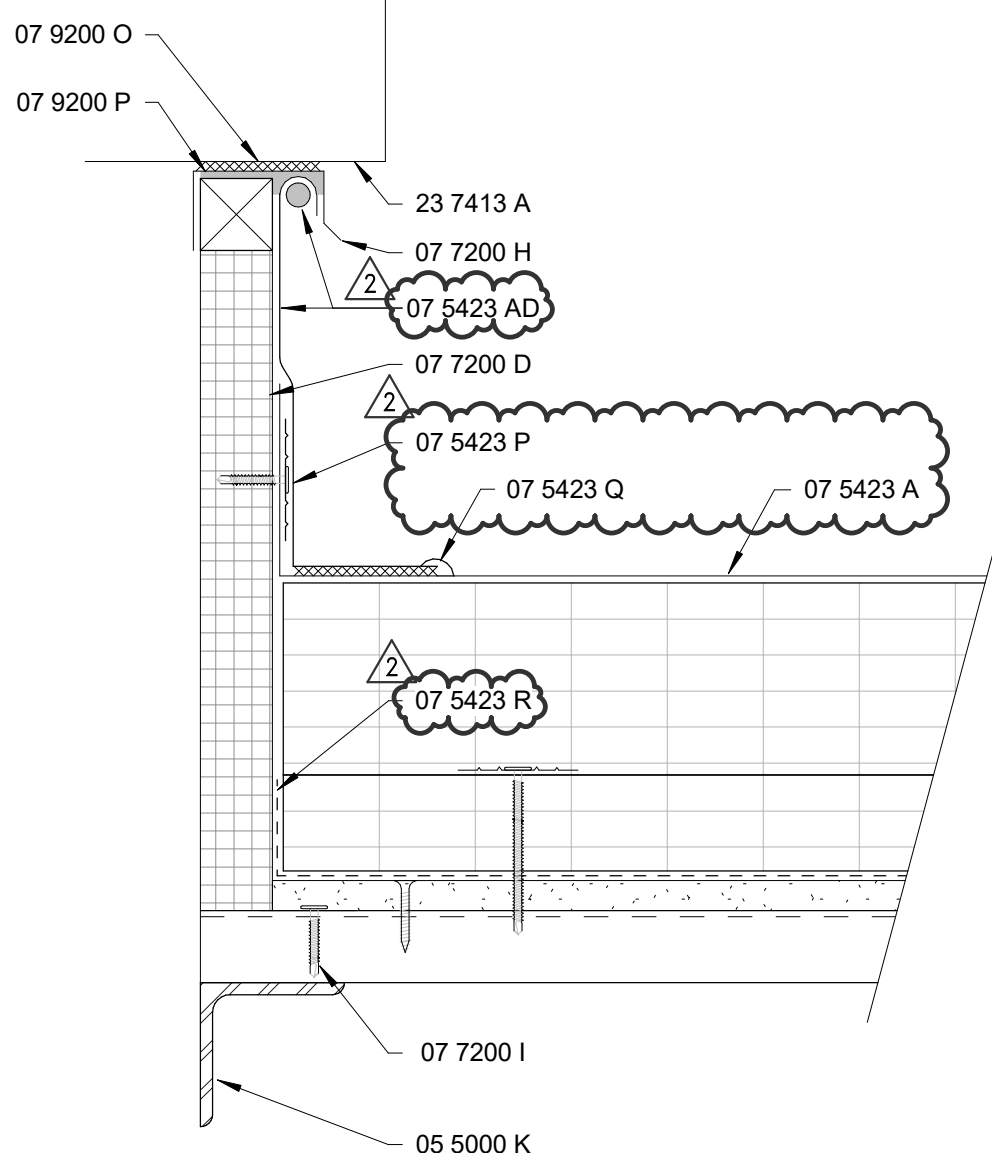
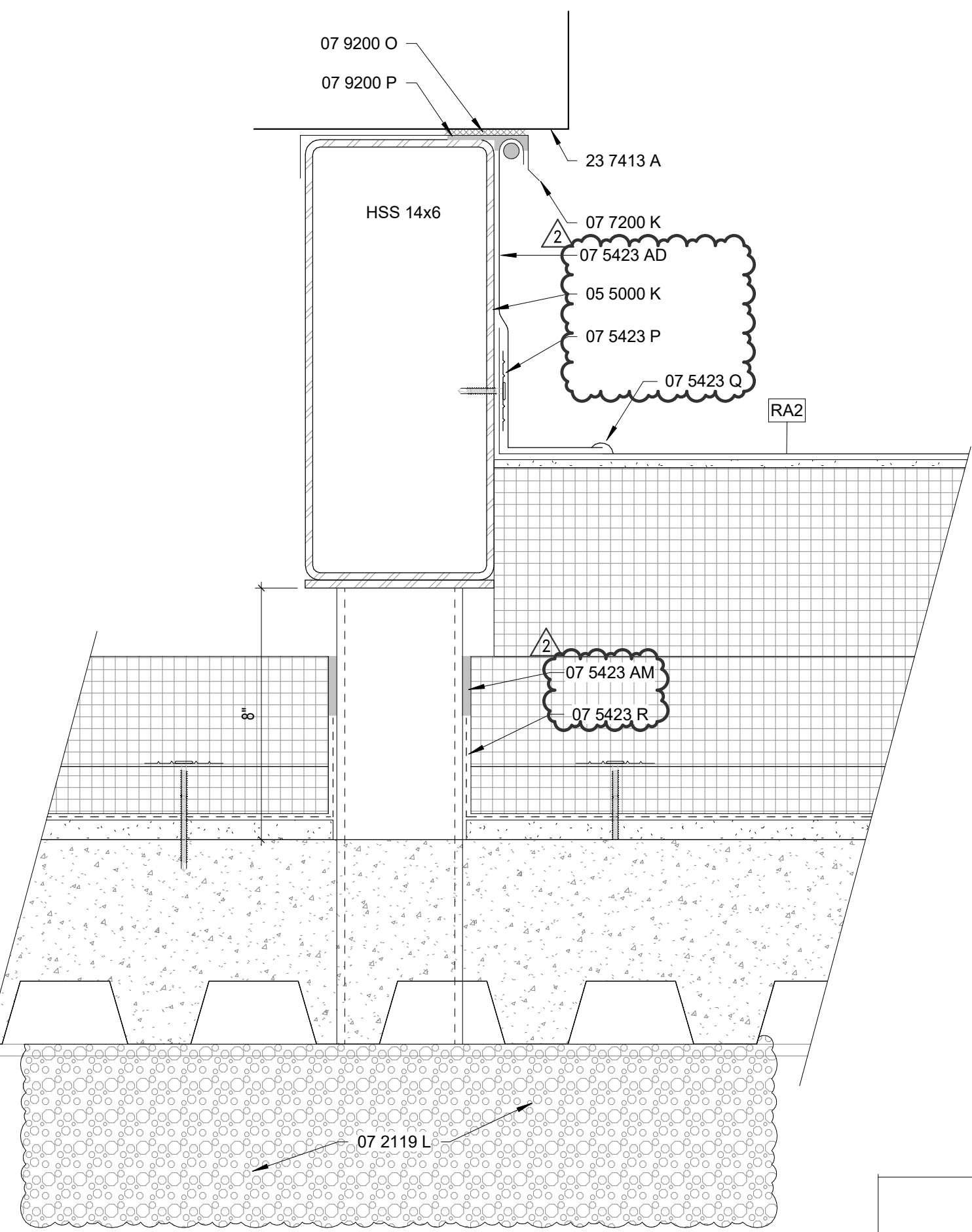
Revised Template Version 2021

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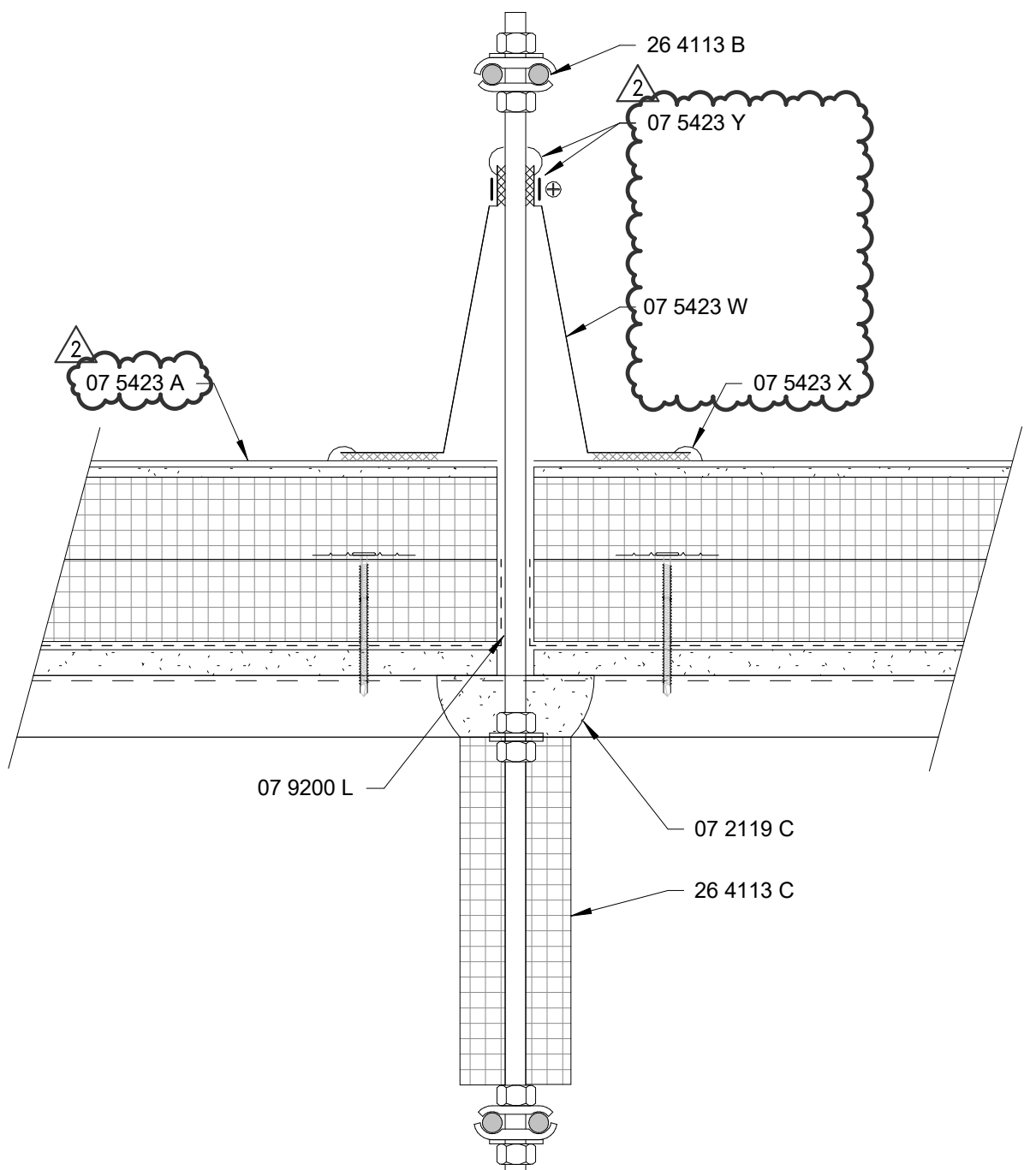
M19
A550.1
3" = 1'-0"

ROOF/OVERFLOW DRAIN DETAIL



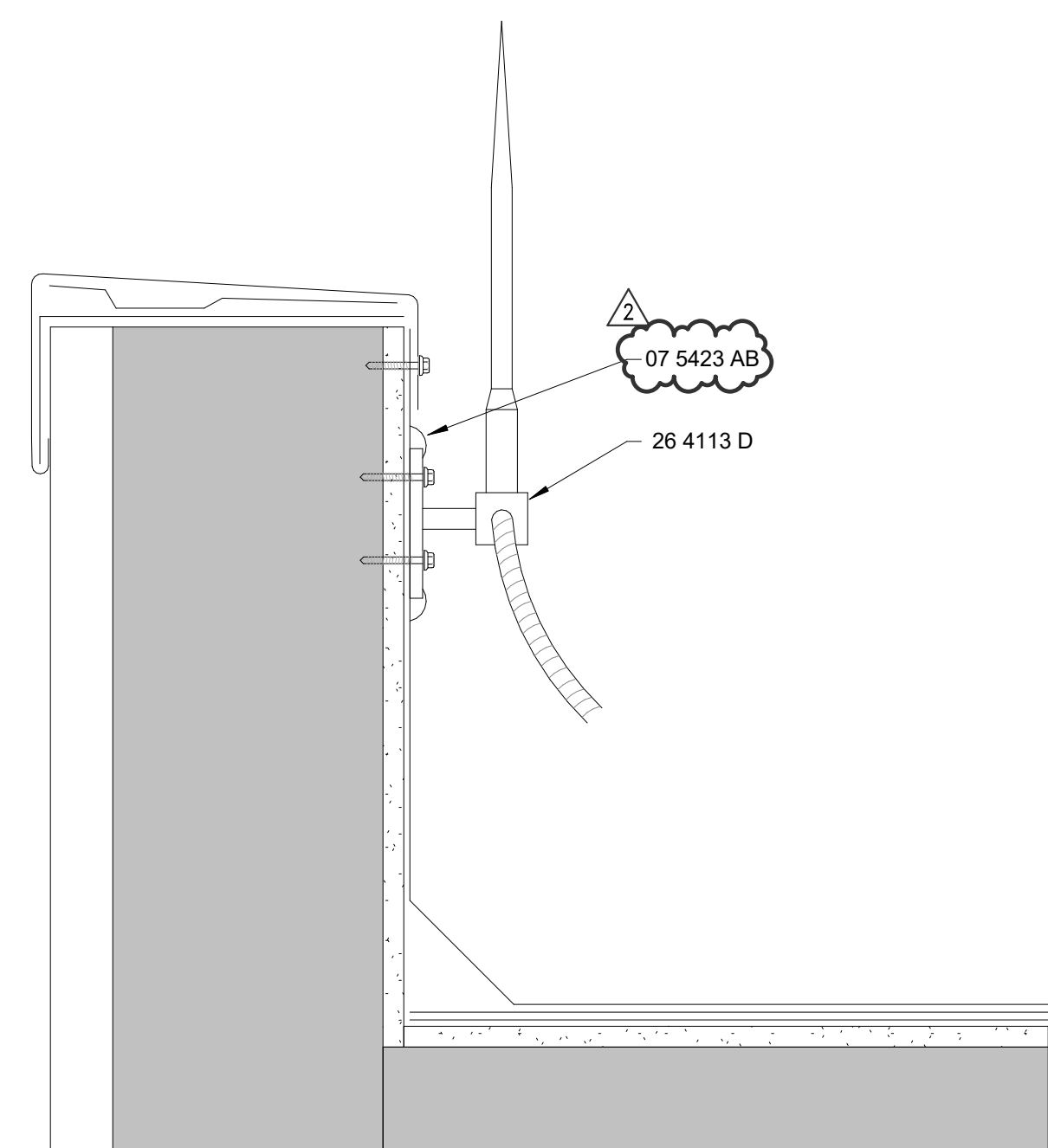
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ROOF CURB DETAIL



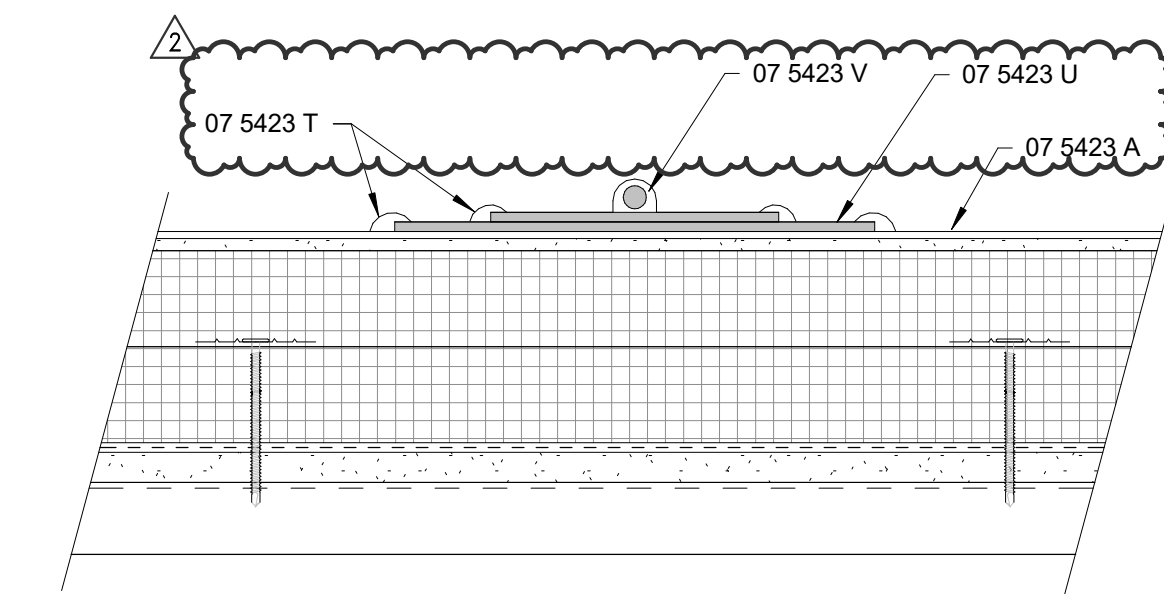
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DOWN CONDUCTOR DETAIL



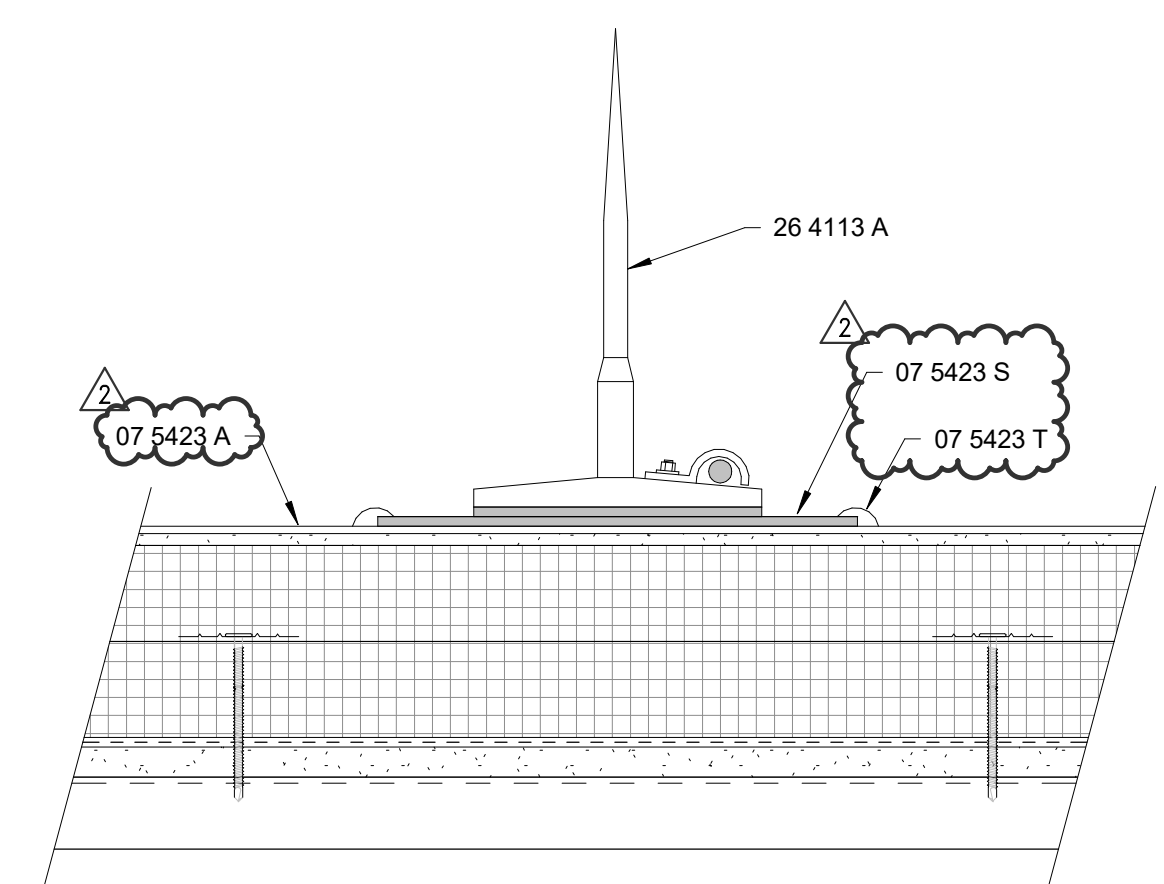
G12
A550.1
3" = 1'-0"

AIR TERMINAL PARAPET DETAIL



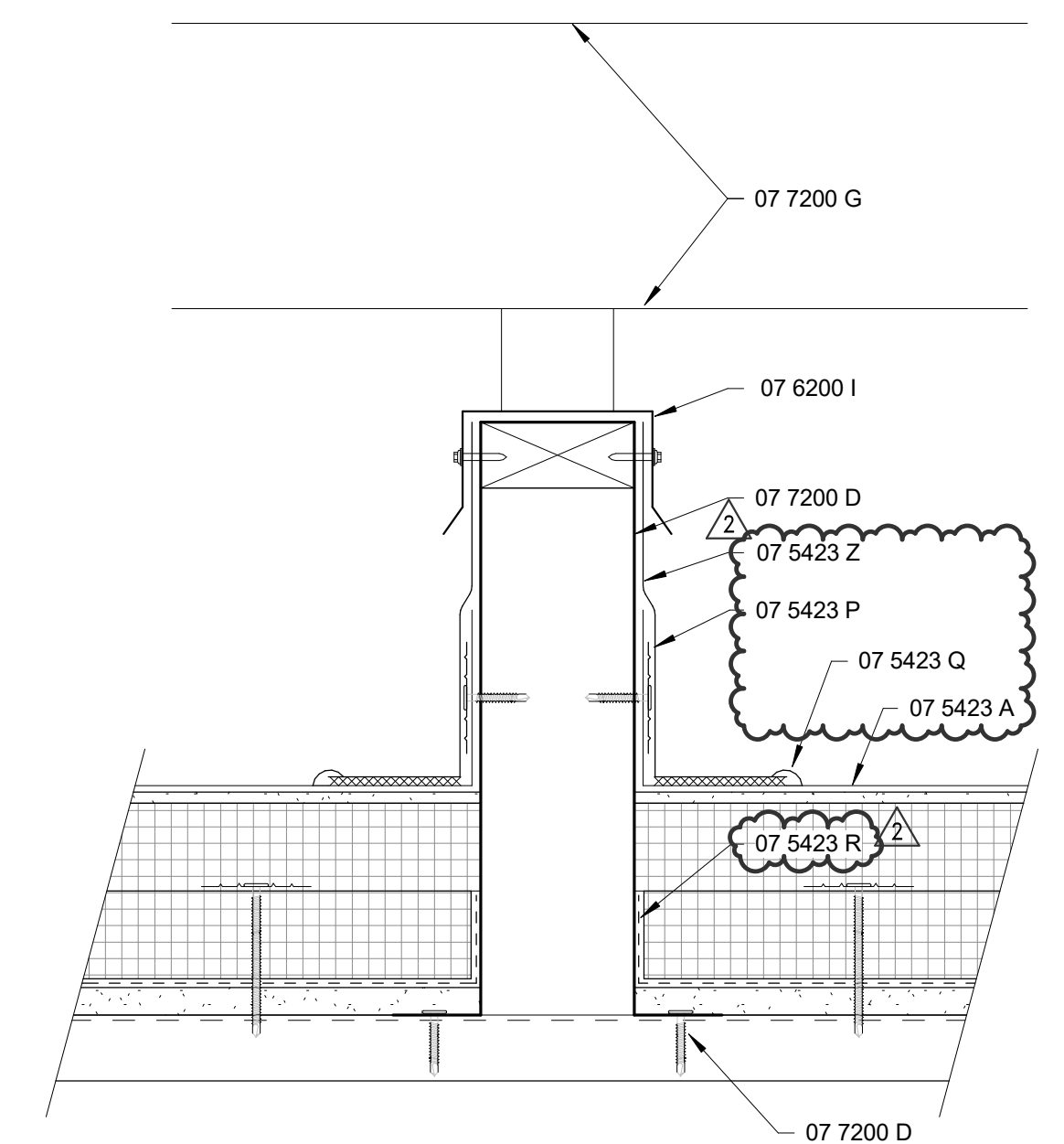
P8
A550.1
3" = 1'-0"

CABLE TIE-DOWN DETAIL



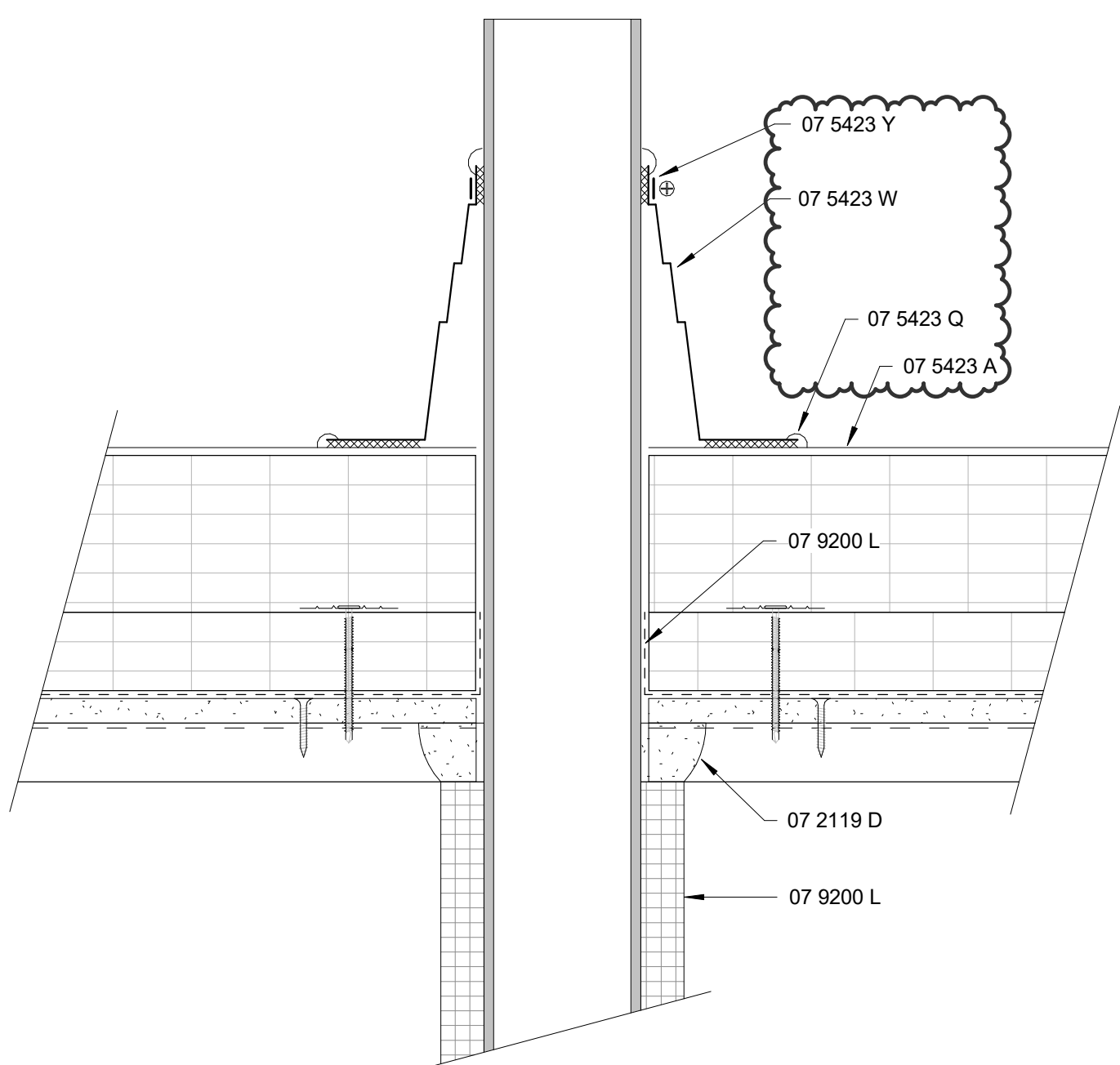
K8
A550.1
3" = 1'-0"

AIR TERMINAL DETAIL



F8
A550.1
3" = 1'-0"

PIPE CURB FLASHING DETAIL



A8
A550.1
3" = 1'-0"

VENT THRU ROOF DETAIL

REFERENCE KEYNOTES

- 03 3000 C ELEVATED CONCRETE FLOOR ASSEMBLY. REFER TO STRUCTURAL DRAWINGS.
05 5000 K REFER TO STRUCTURAL DRAWINGS FOR PERIMETER SUPPORT FRAME.
07 2100 I FOIL FACED PIPE INSULATION FOR 5' ALONG LENGTH OF PIPE FROM BELOW ROOF DECK - TAPE AND SEAL ALL JOINTS TO MAINTAIN VAPOR BARRIER - REFER TO PLUMBING DRAWINGS.
07 2100 J FIBERGLASS BATT INSULATION IN POLY SLEEVE.
07 2100 K INTEGRAL VAPOR BARRIER INSULATION SUPPORT.
07 2119 C CLOSED CELL SPRAY FOAM SEALANT. SEAL BETWEEN ROD, INSULATION, AND METAL DECK FLUTES.
07 2119 D CLOSED CELL SPRAY FOAM SEALANT. SEAL BETWEEN PIPE INSULATION AND METAL DECK FLUTES.
07 2119 H HIGH DENSITY SPRAY FOAM INSULATION WITH INTUMESCENT IGNITION BARRIER COATING - SEAL BETWEEN PIPE INSULATION AND METAL DECK FLUTES. COVERING CLAMPING RING.
07 2119 L MINIMUM 2" THICK HIGH DENSITY SPRAY FOAM INSULATION WITH INTUMESCENT IGNITION BARRIER COATING OVER STRUCTURAL STEEL BEAM AT POST SUPPORT LOCATIONS. INSULATE ALL STEEL MEMBERS AND CONNECTING STEEL TO A DISTANCE OF 3 FEET FROM THE POST ATTACHMENT LOCATION.
07 5423 A SINGLE-PLY TPO MEMBRANE ROOFING SYSTEM. REFER TO PLANS AND SECTIONS FOR TYPE.
07 5423 AB SEAM SEALANT ALL AROUND MOUNTING PLATE.
07 5423 AD FULLY ADHERED MEMBRANE BASE FLASHING. TUCK UNDER COUNTER-FLASHING AND SET IN BED OF SEALANT WITH FOAM ROD. ALSO SECURED WITH SEALANT.
07 5423 AH EXTEND ROOFING MEMBRANE INTO THROAT OF DRAIN FLANGE.
07 5423 AI VAPOR BARRIER OVER SUBSTRATE BOARD AND METAL DECK - SEAL VAPOR BARRIER TIGHT TO DRAIN FLANGE.
07 5423 AM FIT ROOF INSULATION TIGHTLY AROUND PENETRATION AND PROVIDE SEALANT OR MINIMAL EXPANDING FOAM SEALANT ALL AROUND.
07 5423 O FULLY ADHERED MEMBRANE BASE FLASHING - FASTEN ALONG TOP EDGE WITH TERMINATION BAR WITH FASTENERS AT 6" ON CENTER MAX. SET TERM BAR IN BED OF SEALANT.
07 5423 P TURN ROOF MEMBRANE 4" UP CURB, COLUMN, OR INSULATED METAL PANELS AND SECURE WITH SCREWS AND PLATE WASHERS.
07 5423 Q WELDED SPLICE WITH CONTINUOUS SEAM SEALANT.
07 5423 R TURN VAPOR BARRIER UP AND SEAL TO FACE OF CONCRETE, STEEL, OR EQUIPMENT SUPPORT CURB.
07 5423 S TPO ROOF MEMBRANE PAD BENEATH AIR TERMINAL BASE. 2" LARGER THAN BASE ALL AROUND - SET IN BED OF ELASTOMERIC SEALANT.
07 5423 T CONTINUOUS SEAM SEALANT ALL AROUND AIR TERMINAL PADS, CABLE HOLD-DOWN STRAPS, AND CONTINUOUS CABLE PADS.
07 5423 U CONTINUOUS TPO ROOF MEMBRANE BASE PAD BENEATH CABLE RUNS AND STRIPPING PLIES. 4" WIDER THAN STRIPPING PLIES. SET IN BED OF ELASTOMERIC SEALANT.
07 5423 V LIGHTNING PROTECTION CABLE SECURED WITH 9" WIDE x 36" LONG STRIPPING PLIES OF ROOFING MEMBRANE. 3" GAPS BETWEEN EACH RUN. SECURE TO BASE PAD WITH ELASTOMERIC SEALANT.
07 5423 W PRE-MOLDED CONDUIT OR PIPE FLASHING BOOT. CUT TO SUIT CONDUIT OR PIPE DIAMETER.
07 5423 X WELDED SPLICE ALL AROUND BASE OF BOOT WITH SEAM SEALANT.
07 5423 Y APPLY SEALANT BETWEEN ROD AND BOOT BEFORE TIGHTENING STAINLESS STEEL CLAMPING RING. WITH CONTINUOUS BEAD OF SEALANT AROUND TOP OF BOOT.
07 5423 Z FULLY ADHERED MEMBRANE BASE FLASHING.
07 6200 I CAST-IRON METAL REGLET - MITER AT CORNERS.
07 6200 H SHEET METAL COUNTERFLASHING - SET IN REGLET WITH WEDGES WITH SEALANT ALONG OPENING.
07 6200 I STAINLESS STEEL CAP FLASHING. WELD ALL SEAMS. SECURE TO WOOD BLOCKING WITH DOME HEAD GASKETED FASTENERS.
07 7129 B EXPANSION JOINT COVER FLANGE SET IN CONTINUOUS SEALANT. SECURE WITH DOME HEAD GASKETED FASTENERS AT 8" ON CENTER.
07 7129 C EXPANSION JOINT COVER ASSEMBLY.
07 7200 D INSULATED EQUIPMENT RAIL CURB(S) WITH WOOD TOP NAILER. ATTACH TO METAL ROOF DECK OR CONCRETE DECK WITH SCREWS THROUGH CURB FLANGE.
07 7200 G MECHANICAL EQUIPMENT OR PIPE ROLLER SUPPORT ON EQUIPMENT RAIL - REFER TO MECHANICAL DRAWINGS.
07 7200 H STAINLESS STEEL CAP FLASHING AROUND PERIMETER OF ROOF CURB BY CURB MFR - WELD ALL SEAMS.
07 7200 I ATTACH EQUIPMENT CURB TO METAL ROOF DECK WITH SCREWS THROUGH SCREWS THROUGH FLANGE.
07 7200 J INSULATED EXPANSION JOINT CURB WITH TOP NAILER. SCREW FASTEN THROUGH FLANGES TO METAL ROOF DECK AT 12" ON CENTER MAX.
07 7200 K 18 GAUGE STAINLESS STEEL CAP FLASHING AROUND PERIMETER OF HSS ROOF CURB. WELD FLASHING TO HSS ON BOTH SIDES.
07 9200 L SEAL VAPOR BARRIER TIGHT TO CONDUIT OR PIPE.
07 9200 O FOAM TAPE SEALANT BETWEEN EQUIPMENT AND TOP OF CURB.
07 9200 P SEALANT BETWEEN TOP OF CURB AND CAP FLASHING.
23 7413 A ROOFTOP EQUIPMENT. REFER TO MECHANICAL DRAWINGS.
26 4113 A AIR TERMINAL WITH BASE SET IN BED OF ELASTOMERIC MASTIC. DO NOT PENETRATE ROOF MEMBRANE WITH CABLE CLAMP HARDWARE.
26 4113 B PARALLEL CABLE CONNECTIONS EACH END OF 1/2" THREADED ROD.
26 4113 C EXTEND ROD MINIMUM 24" BELOW METAL DECK. ENCLOSE IN FOIL FACED INSULATION - TAPE AND SEAL ALL JOINTS TO MAINTAIN VAPOR BARRIER.
26 4113 D PARAPET MOUNTED AIR TERMINAL WITH BASE SET IN BED OF SILICONE SEALANT. USE STAINLESS STEEL FASTENERS APPROPRIATE FOR PARAPET WALL CONSTRUCTION.

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ASSEMBLY SYMBOL KEY

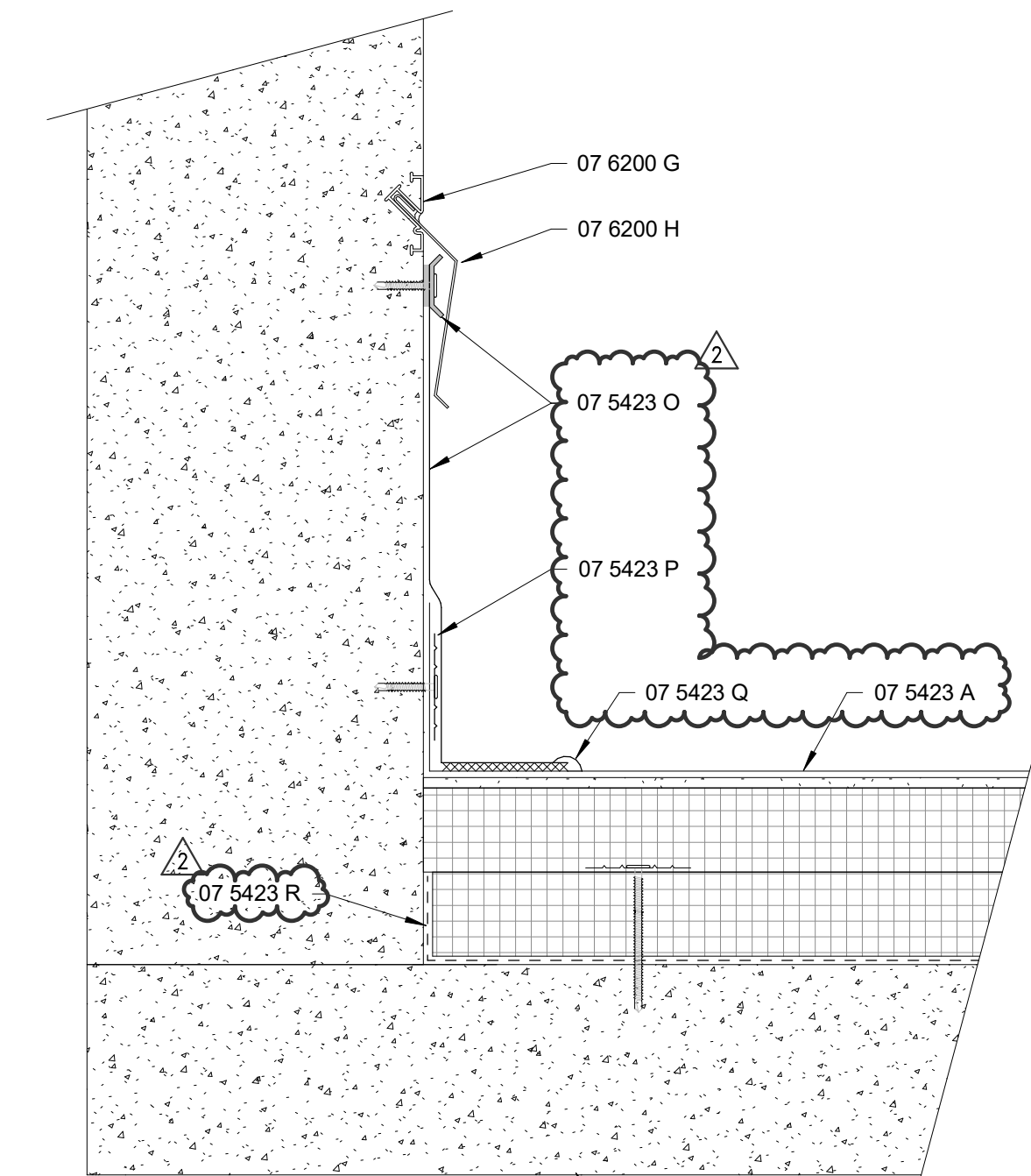
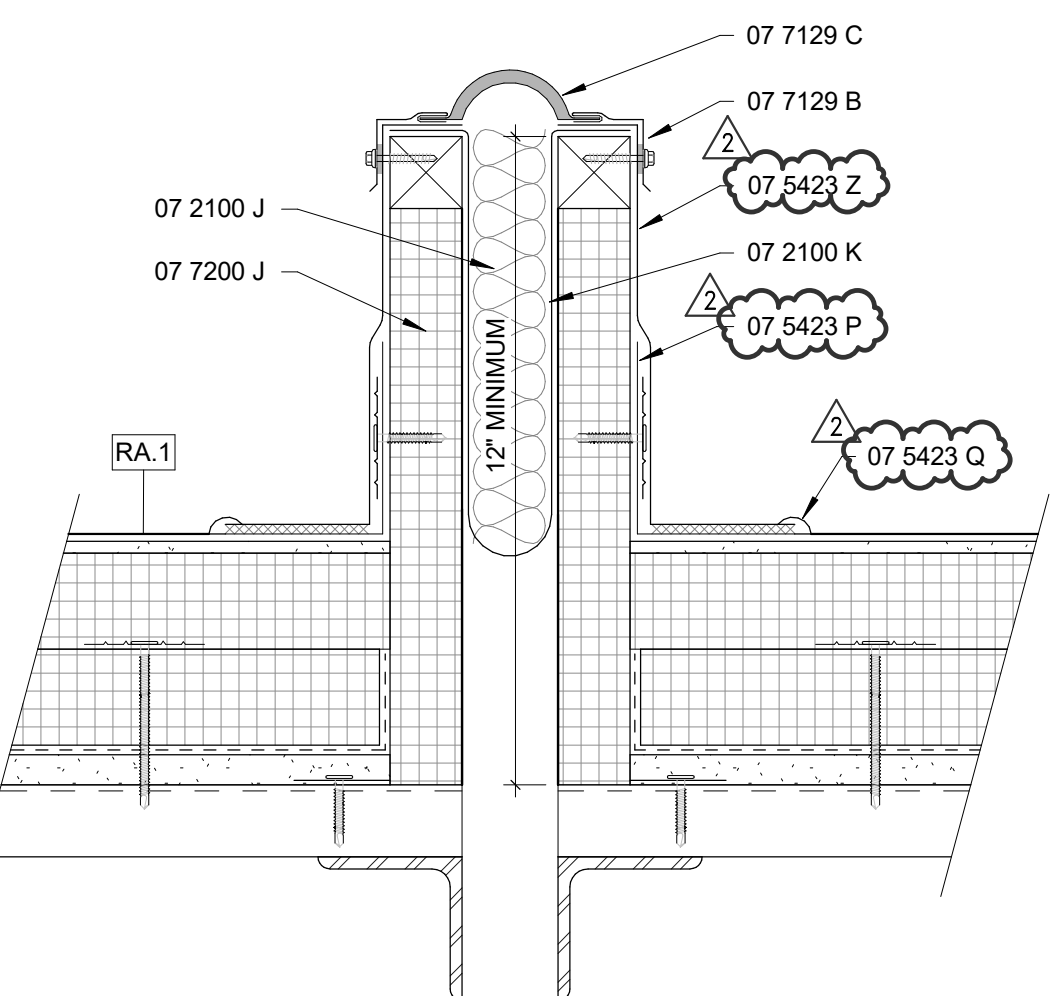
REFER TO SHEETS A501.1 AND A502.1 FOR ASSEMBLY INFORMATION

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RA = ROOF ASSEMBLY
MATERIAL TYPE OR RA NUMBER:
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3 = ROOF ASSEMBLY 3
4 = TERRACOTTA
7 = METAL PANEL
ASSEMBLY NUMBER
(WA TYPE ONLY)

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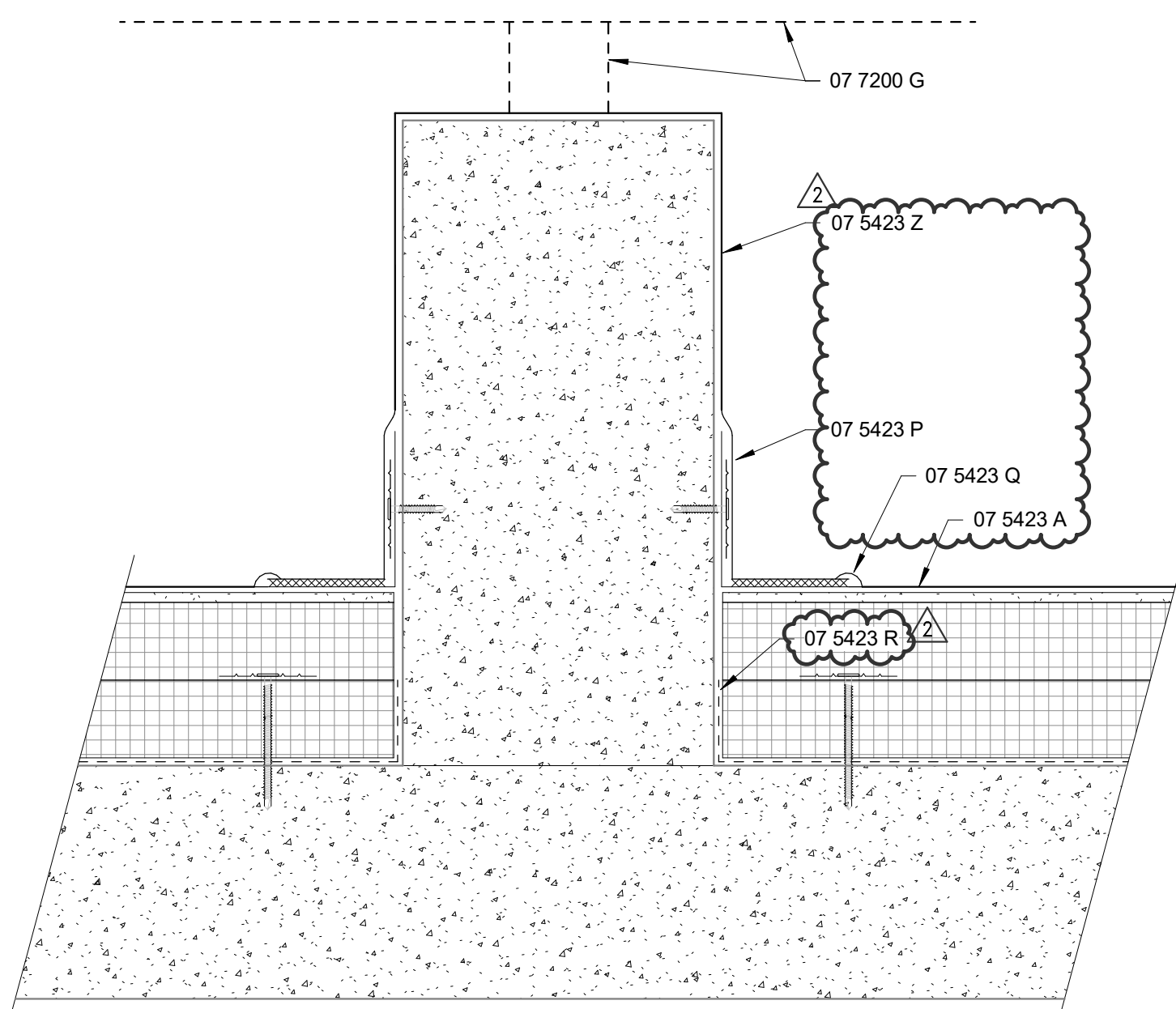
A19
A550.1
3" = 1'-0"

EXPANSION JOINT DETAIL



A15
A550.1
3" = 1'-0"

BASE FLASHING DETAIL



A12
A550.1
3" = 1'-0"

CURB FLASHING DETAIL

