

SECTION 00 91 13.2 – ADDENDUM 2

1.1 PROJECT INFORMATION

- A. Project Name: ANIMAL SHELTER STORAGE BUILDING.
- B. Owner: Hendricks County, Indiana.
- C. Architect: arcDESIGN, PC.
- D. Architect Project Number: 23133.
- E. Date of Addendum: April 19, 2024.

1.2 NOTICE TO BIDDERS

- A. This Addendum is issued to all registered plan holders pursuant to the Instructions to Bidders. This Addendum serves to clarify, revise, and supersede information in the Project Manual, Drawings, and previously issued Addenda. Portions of the Addendum affecting the Contract Documents will be incorporated into the Contract by enumeration of the Addendum in the Owner/Contractor Agreement.
- B. The Bidder shall acknowledge receipt of this Addendum in the appropriate space on the Bid Form.
- C. The date for receipt of bids is unchanged by this Addendum 2, at same time and location.

1.3 ATTACHMENTS

- A. This Addendum includes the following attached Documents and Specification Sections:
 - 1. Section 03 30 00 – Cast-in-place Concrete, dated 03.01.2024, **(reissued)**.
- B. This Addendum includes the following attached Sheets:
 - 1. Civil Sheet C100 – Electric Service Routing, dated 04.15.2024, (new).
 - 2. Architectural Sheet A121 – Floor, Ceiling, & Roof Plans, dated 03.01.2024, (reissued).
 - 3. Architectural Sheet A201 – Elevations / Building Sections, dated 03.01.2024, (reissued).

1.4 REVISIONS TO DIVISIONS 02-49 SPECIFICATION SECTIONS

- A. Specification Section 07 21 13 – Plywood Faced Board Insulation, (not reissued).
 - 1. Paragraph 2.1.B – Add “Hunter Panels LLC” as an acceptable manufacturer.
 - 2. Paragraph 2.2.A.10 – Replace “3.625 inches, R-value 19.3” with “2.75 inches, R-value 12.9”
- B. Specification Section 07 31 13 – Asphalt Shingles, (not reissued).
 - 1. Paragraph 2.1.A.1 – Add “Malarkey Roofing Products” as an acceptable manufacturer.

1.5 Questions and Answers

- A. Questions: Clarification for pathway for new building service from existing transformer.
1. Answer: See attached Sheet C100 – Electric Service Routing.
- B. Question: Is Malarkey an acceptable shingle manufacturer?
1. Answer: Yes. Revise specifications as noted in the addendum Paragraph 1.4.B.
- C. Question: Are the control joints in the concrete slab to be filled with a joint filler?
1. Answer: Yes. See specification Section 03 30 00 – Cast-in-Place Concrete (reissued).
- D. Question: Can you clarify as to what the base area is inside the fence enclosure? Is it stone or concrete? Also I assume the 7 circles are pipe bollards but can you clarify that also?
1. Answer: The area inside the fence enclosure is concrete as indicated in the Civil drawings. The circles within the enclosure indicate bollards. See attached sheet A121 – Floor, Ceiling, & Roof plans (reissued).
- E. Question: Are there any expansion joints in the masonry walls?
1. Answer: Yes. See exterior elevations on sheet A201 – Elevations/Building Sections (reissued).
- F. Question: Is there any waterproofing applied to the outside of the block walls?
1. Answer: No waterproofing applied to the outside of the block walls.
- G. Question: Would blown in R38 fiberglass insulation be acceptable for the attic area?
1. Answer: Blown-in insulation would be an acceptable alternative. Current R-value requirements must still be met.
- H. Question: Is an attic access needed?
1. Answer: Yes. For the location, see sheet A121 Floor, Ceiling, & Roof Plans (reissued).
- I. Question: Detail 6E on sheet A311 call for the insulation to be 2 1/2" thick plus the 5/8" plywood. Specifications on the product call for it to be a total thickness of 3.625 inches with an R value of 19.3. Can you clarify as to what we should bid?
1. Answer: After review, the minimum R-value for the plywood faced insulation can be reduced to R-12.9. This will decrease the thickness of the insulation to 2.75" overall. See paragraph 1.4.A.
- J. Question: The shelter has an insulated wall panel on the inside of the walls. Can the electric conduit be ran in that 2.5" rigid insulation, or does the conduit need to be ran in the cmu block?
1. Answer: Electric conduit can be located inside or outside of the plywood faced board insulation.
- K. Question: Specs call for roof decking to be 3/4" CDX plywood structural 1. Would standard 3/4" CDX plywood be an acceptable alternate?
1. Answer: The standard 3/4" CDX plywood would be an acceptable alternate.

- L. Question: Is finish grade with seed and straw an acceptable alternative to the sodded lawn called out in the civil drawings?
1. Answer: Yes. This is an acceptable alternative.

END OF DOCUMENT 00 91 13.2

SECTION 03 30 00 - CAST-IN-PLACE CONCRETE

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Cast-in-place concrete, including concrete materials, mixture design, placement procedures, and finishes.
- B. Related Requirements:
 - 1. Section 03 10 00 "Concrete Forming and Accessories" for form-facing materials, form liners, insulating concrete forms, and waterstops.
 - 2. Section 03 20 00 "Concrete Reinforcing" for steel reinforcing bars and welded-wire reinforcement.
 - 3. Section 31 20 00 "Earth Moving" for drainage fill under slabs-on-ground.

1.2 DEFINITIONS

- A. Cementitious Materials: Portland cement alone or in combination with one or more of the following: blended hydraulic cement, fly ash, slag cement, and other pozzolans materials subject to compliance with requirements.
- B. Water/Cement Ratio (w/cm): The ratio by weight of water to cementitious materials.

1.3 PREINSTALLATION MEETINGS

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

1.4 ACTION SUBMITTALS

- A. Product Data: For each of the following.
 - 1. Portland cement.
 - 2. Aggregates.
 - 3. Admixtures:
 - a. Include limitations of use, including restrictions on cementitious materials, supplementary cementitious materials, air entrainment, aggregates, temperature at time of concrete placement, relative humidity at time of concrete placement, curing conditions, and use of other admixtures.
 - 4. Vapor retarders.
 - 5. Liquid floor treatments.
 - 6. Curing materials.
 - 7. Joint fillers.
- B. Design Mixtures: For each concrete mixture, include the following:
 - 1. Mixture identification.
 - 2. Minimum 28-day compressive strength.

3. Durability exposure class.
4. Maximum w/cm.
5. Calculated equilibrium unit weight, for lightweight concrete.
6. Slump limit.
7. Air content.
8. Nominal maximum aggregate size.
9. Indicate amounts of mixing water to be withheld for later addition at Project site if permitted.
10. Intended placement method.
11. Submit alternate design mixtures when characteristics of materials, Project conditions, weather, test results, or other circumstances warrant adjustments.

C. Shop Drawings:

1. Construction Joint Layout: Indicate proposed construction joints required to construct the structure.
 - a. Location of construction joints is subject to approval of the Architect.

1.5 INFORMATIONAL SUBMITTALS

A. Material Certificates: For each of the following, signed by manufacturers:

1. Cementitious materials.
2. Admixtures.
3. Curing compounds.
4. Vapor retarders.
5. Joint-filler strips.

B. Material Test Reports: For the following, from a qualified testing agency:

1. Portland cement.
2. Aggregates.
3. Admixtures:

C. Field quality-control reports.

D. Minutes of preinstallation conference.

1.6 QUALITY ASSURANCE

A. Ready-Mixed Concrete Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C94/C94M requirements for production facilities and equipment.

1. Manufacturer certified in accordance with NRMCA's "Certification of Ready Mixed Concrete Production Facilities."

1.7 DELIVERY, STORAGE, AND HANDLING

A. Comply with ASTM C94/C94M and **ACI 301**.

1.8 FIELD CONDITIONS

- A. Cold-Weather Placement: Comply with **ACI 301** and ACI 306.1.
- B. Hot-Weather Placement: Comply with **ACI 301** and **ACI 305.1**.

PART 2 - PRODUCTS

2.1 CONCRETE, GENERAL

- A. ACI Publications: Comply with **ACI 301** unless modified by requirements in the Contract Documents.

2.2 CONCRETE MATERIALS

- A. Cementitious Materials:
 - 1. Portland Cement: ASTM C150/C150M, Type I/II , gray .
 - 2. Fly Ash: ASTM C618, Class C or F.
 - 3. Slag Cement: ASTM C989/C989M, Grade 100 or 120.
- B. Normal-Weight Aggregates: ASTM C33/C33M, Class 3M coarse aggregate or better, graded. Provide aggregates from a single source.
 - 1. Maximum Coarse-Aggregate Size: **3/4 inch** nominal.
 - 2. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.
- C. Air-Entraining Admixture: ASTM C260/C260M.
- D. Chemical Admixtures: Certified by manufacturer to be compatible with other admixtures that do not contribute water-soluble chloride ions exceeding those permitted in hardened concrete. Do not use calcium chloride or admixtures containing calcium chloride in steel-reinforced concrete.
 - 1. Water-Reducing Admixture: ASTM C494/C494M, Type A.
 - 2. High-Range, Water-Reducing Admixture: ASTM C494/C494M, Type F.
- E. Water and Water Used to Make Ice: ASTM C94/C94M, potable

2.3 VAPOR RETARDERS

- A. Sheet Vapor Retarder, Class A: ASTM E1745, Class A ; not less than **15 mils** thick. Include manufacturer's recommended adhesive or pressure-sensitive tape.
 - 1. **Manufacturers:** Subject to compliance with requirements, provide products by one of the following:
 - a. Reef Industries, Inc.
 - b. Stego Industries, LLC.
 - c. W. R. Meadows, Inc.

2.4 LIQUID FLOOR TREATMENTS

- A. Penetrating Liquid Floor Treatment: Clear, chemically reactive, waterborne solution of inorganic silicate or silicate materials and proprietary components; odorless; that penetrates, hardens, and densifies concrete surfaces.
 - 1. **Manufacturers:** Subject to compliance with requirements, provide products by one of the following:
 - a. ChemMasters, Inc.
 - b. Dayton Superior Corporation.
 - c. Euclid Chemical Company (The); a subsidiary of RPM International, Inc.
 - d. MAPEI Corporation.
 - e. Master Builders Solutions; brand of MBCC Group.
 - f. Penetron USA, Inc.
 - g. W. R. Meadows, Inc.

2.5 CURING MATERIALS

- A. Water: Potable or complying with ASTM C1602/C1602M.
- B. Clear, Waterborne, Membrane-Forming, Curing and Sealing Compound: ASTM C1315, Type 1, Class A.
 - 1. **Manufacturers:** Subject to compliance with requirements, provide products by one of the following:
 - a. ChemMasters, Inc.
 - b. Dayton Superior Corporation.
 - c. Euclid Chemical Company (The); a subsidiary of RPM International, Inc.

2.6 RELATED MATERIALS

- A. Expansion- and Isolation-Joint-Filler Strips: ASTM D1751, asphalt-saturated cellulosic fiber .

2.7 CONCRETE MIXTURES, GENERAL

- A. Prepare design mixtures for each type and strength of concrete, proportioned on the basis of laboratory trial mixture or field test data, or both, in accordance with **ACI 301**.
 - 1. Use a qualified testing agency for preparing and reporting proposed mixture designs, based on laboratory trial mixtures.
- B. Cementitious Materials: Limit percentage, by weight, of cementitious materials other than portland cement in concrete as follows:
 - 1. Fly Ash or Other Pozzolans: 25 percent by mass.
 - 2. Total of Fly Ash or Other Pozzolans, Slag Cement: 50 percent by mass, with fly ash or pozzolans not exceeding 25 percent by mass.
 - 3. Total of Fly Ash or Other Pozzolans: 35 percent by mass with fly ash or pozzolans not exceeding 25 percent by mass.
- C. Admixtures: Use admixtures in accordance with manufacturer's written instructions.

1. Use water-reducing high-range water-reducing admixture in concrete, as required, for placement and workability.
2. Use water-reducing admixture in pumped concrete, and concrete with a w/cm below 0.50.

2.8 CONCRETE MIXTURES

- A. Class A : Normal-weight concrete used for footings, grade beams, and tie beams.
 1. Minimum Compressive Strength: **4000 psi** at 28 days.
 2. Maximum w/cm: 0.45 .
 3. Slump Limit: **5 inches** , plus or minus **1 inch** .
 4. Air Content: 0-3 percent.
- B. Class C : Normal-weight concrete used for interior slabs-on-ground.
 1. Minimum Compressive Strength: **4000 psi** at 28 days.
 2. Minimum Cementitious Materials Content: **520 lb/cu. yd.** .
 3. Slump Limit: **5 inches** , plus or minus **1 inch** .
 4. Air Content:
 - a. Do not use an air-entraining admixture or allow total air content to exceed 3 percent for concrete used in trowel-finished floors.

2.9 CONCRETE MIXING

- A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete in accordance with ASTM C94/C94M and ASTM C1116/C1116M, and furnish batch ticket information.

PART 3 - EXECUTION

3.1 INSTALLATION OF EMBEDDED ITEMS

- A. Place and secure anchorage devices and other embedded items required for adjoining Work that is attached to or supported by cast-in-place concrete.
 1. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
 2. Install anchor rods, accurately located, to elevations required and complying with tolerances in Section 7.5 of ANSI/AISC 303.
 3. Install reglets to receive waterproofing and to receive through-wall flashings in outer face of concrete frame at exterior walls, where flashing is shown at lintels, shelf angles, and other conditions.

3.2 INSTALLATION OF VAPOR RETARDER

- A. Sheet Vapor Retarders: Place, protect, and repair sheet vapor retarder in accordance with ASTM E1643 and manufacturer's written instructions.
 1. Install vapor retarder with longest dimension parallel with direction of concrete pour.
 2. Face laps away from exposed direction of concrete pour.
 3. Lap vapor retarder over footings and grade beams not less than **6 inches**, sealing vapor retarder to concrete.

4. Lap joints **6 inches** and seal with manufacturer's recommended tape.
5. Terminate vapor retarder at the top of floor slabs, grade beams, and pile caps, sealing entire perimeter to floor slabs, grade beams, foundation walls, or pile caps.
6. Seal penetrations in accordance with vapor retarder manufacturer's instructions.
7. Protect vapor retarder during placement of reinforcement and concrete.
 - a. Repair damaged areas by patching with vapor retarder material, overlapping damages area by **6 inches** on all sides, and sealing to vapor retarder.

3.3 JOINTS

- A. Construct joints true to line, with faces perpendicular to surface plane of concrete.
- B. Construction Joints: Coordinate with floor slab pattern and concrete placement sequence.
 1. Install so strength and appearance of concrete are not impaired, at locations indicated on Drawings or as approved by Architect.
 2. Place joints perpendicular to main reinforcement.
 - a. Continue reinforcement across construction joints unless otherwise indicated.
 - b. Do not continue reinforcement through sides of strip placements of floors and slabs.
 3. Form keyed joints as indicated. Embed keys at least **1-1/2 inches** into concrete.
 4. Locate joints for beams, slabs, joists, and girders at third points of spans. Offset joints in girders a minimum distance of twice the beam width from a beam-girder intersection.
 5. Locate horizontal joints in walls and columns at underside of floors, slabs, beams, and girders and at the top of footings or floor slabs.
- C. Control Joints in Slabs-on-Ground: Form weakened-plane control joints, sectioning concrete into areas as indicated. Construct control joints for a depth equal to at least one-fourth of concrete thickness as follows:
 1. Sawed Joints: Form control joints with power saws equipped with shatterproof abrasive or diamond-rimmed blades. Cut **1/8-inch-** wide joints into concrete when cutting action does not tear, abrade, or otherwise damage surface and before concrete develops random cracks.
 - a. Joint Sealant: Provide self-leveling traffic-rated elastomeric sealant at sawed control joints.

3.4 CONCRETE PLACEMENT

- A. Before placing concrete, verify that installation of formwork, reinforcement, embedded items, and vapor retarder is complete and that required inspections are completed.
 1. Immediately prior to concrete placement, inspect vapor retarder for damage and deficient installation, and repair defective areas.
 2. Provide continuous inspection of vapor retarder during concrete placement and make necessary repairs to damaged areas as Work progresses.
- B. Notify Architect and testing and inspection agencies 24 hours prior to commencement of concrete placement.

- C. Do not add water to concrete during delivery, at Project site, or during placement unless approved by Architect in writing, but not to exceed the amount indicated on the concrete delivery ticket.
 - 1. Do not add water to concrete after adding high-range water-reducing admixtures to mixture.
- D. Before test sampling and placing concrete, water may be added at Project site, subject to limitations of **ACI 301**, but not to exceed the amount indicated on the concrete delivery ticket.
 - 1. Do not add water to concrete after adding high-range water-reducing admixtures to mixture.
- E. Deposit concrete continuously in one layer or in horizontal layers of such thickness that no new concrete is placed on concrete that has hardened enough to cause seams or planes of weakness.
 - 1. If a section cannot be placed continuously, provide construction joints as indicated.
 - 2. Deposit concrete to avoid segregation.
 - 3. Deposit concrete in horizontal layers of depth not to exceed formwork design pressures and in a manner to avoid inclined construction joints.
 - 4. Consolidate placed concrete with mechanical vibrating equipment in accordance with **ACI 301**.
 - a. Do not use vibrators to transport concrete inside forms.
 - b. Insert and withdraw vibrators vertically at uniformly spaced locations to rapidly penetrate placed layer and at least **6 inches** into preceding layer.
 - c. Do not insert vibrators into lower layers of concrete that have begun to lose plasticity.
 - d. At each insertion, limit duration of vibration to time necessary to consolidate concrete, and complete embedment of reinforcement and other embedded items without causing mixture constituents to segregate.
- F. Deposit and consolidate concrete for floors and slabs in a continuous operation, within limits of construction joints, until placement of a panel or section is complete.
 - 1. Do not place concrete floors and slabs in a checkerboard sequence.
 - 2. Consolidate concrete during placement operations, so concrete is thoroughly worked around reinforcement and other embedded items and into corners.
 - 3. Maintain reinforcement in position on chairs during concrete placement.
 - 4. Screed slab surfaces with a straightedge and strike off to correct elevations.
 - 5. Level concrete, cut high areas, and fill low areas.
 - 6. Slope surfaces uniformly to drains where required.
 - 7. Begin initial floating using bull floats or darbies to form a uniform and open-textured surface plane, before excess bleedwater appears on the surface.
 - 8. Do not further disturb slab surfaces before starting finishing operations.

3.5 FINISHING FORMED SURFACES

- A. As-Cast Surface Finishes:
 - 1. **ACI 301** Surface Finish SF-1.0: As-cast concrete texture imparted by form-facing material.

- a. Patch voids larger than **1-1/2 inches** wide or **1/2 inch** deep.
- b. Remove projections larger than **1 inch**.
- c. Tie holes do not require patching.
- d. Surface Tolerance: **ACI 117** Class D.
- e. Apply to concrete surfaces not exposed to public view .

3.6 FINISHING FLOORS AND SLABS

- A. Comply with ACI 302.1R recommendations for screeding, restraightening, and finishing operations for concrete surfaces. Do not wet concrete surfaces.
- B. Trowel Finish:
 1. After applying float finish, apply first troweling and consolidate concrete by hand or power-driven trowel.
 2. Continue troweling passes and restraighten until surface is free of trowel marks and uniform in texture and appearance.
 3. Grind smooth any surface defects that would telegraph through applied coatings or floor coverings.
 4. Do not add water to concrete surface.
 5. Do not apply hard-troweled finish to concrete, which has a total air content greater than 3 percent.
 6. Apply a trowel finish to surfaces exposed to view or to be covered with resilient flooring, carpet, ceramic or quarry tile set over a cleavage membrane, paint, or another thin-film-finish coating system .
 7. Finish and measure surface, so gap at any point between concrete surface and an unlevelled, freestanding, **10-ft.-** long straightedge resting on two high spots and placed anywhere on the surface does not exceed **1/8 inch** and also no more than **1/16 inch** in **2 feet**.

3.7 INSTALLATION OF MISCELLANEOUS CONCRETE ITEMS

- A. Filling In:
 1. Fill in holes and openings left in concrete structures after Work of other trades is in place unless otherwise indicated.
 2. Mix, place, and cure concrete, as specified, to blend with in-place construction.
 3. Provide other miscellaneous concrete filling indicated or required to complete the Work.

3.8 CONCRETE CURING

- A. Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.
 1. Comply with **ACI 301** and ACI 306.1 for cold weather protection during curing.
 2. Comply with **ACI 301** and **ACI 305.1** for hot-weather protection during curing.
 3. Maintain moisture loss no more than **0.2 lb/sq. ft. x h**, calculated in accordance with ACI 305.1, before and during finishing operations.

- B. Curing Formed Surfaces: Comply with **ACI 308.1** as follows:
1. Cure formed concrete surfaces, including underside of beams, supported slabs, and other similar surfaces.
 2. Cure concrete containing color pigments in accordance with color pigment manufacturer's instructions.
 3. If forms remain during curing period, moist cure after loosening forms.
 4. If removing forms before end of curing period, continue curing for remainder of curing period, as follows:
 - a. Continuous Fogging: Maintain standing water on concrete surface until final setting of concrete.
 - b. Continuous Sprinkling: Maintain concrete surface continuously wet.
 - c. Water-Retention Sheeting Materials: Cover exposed concrete surfaces with sheeting material, taping, or lapping seams.
 - d. Membrane-Forming Curing Compound: Apply uniformly in continuous operation by power spray or roller in accordance with manufacturer's written instructions.
 - 1) Recoat areas subject to heavy rainfall within three hours after initial application.
 - 2) Maintain continuity of coating and repair damage during curing period.
- C. Curing Unformed Surfaces: Comply with **ACI 308.1** as follows:
1. Begin curing immediately after finishing concrete.
 2. Interior Concrete Floors:
 - a. Floors to Receive Floor Coverings Specified in Other Sections: Contractor has option of the following:
 - 1) Ponding or Continuous Sprinkling of Water: Maintain concrete surfaces continuously wet for not less than seven days, utilizing one, or a combination of, the following:
 - a) Water.
 - b) Continuous water-fog spray.
 - b. Floors to Receive Penetrating Liquid Floor Treatments: Contractor has option of the following:
 - 1) Ponding or Continuous Sprinkling of Water: Maintain concrete surfaces continuously wet for not less than seven days, utilizing one, or a combination of, the following:
 - a) Water.
 - b) Continuous water-fog spray.
 - c. Floors to Receive Polished Finish: Contractor has option of the following:
 - 1) Ponding or Continuous Sprinkling of Water: Maintain concrete surfaces continuously wet for not less than seven days, utilizing one, or a combination of, the following:
 - a) Water.
 - b) Continuous water-fog spray.
 - d. Floors to Receive Chemical Stain:
 - 1) As soon as concrete has sufficient set to permit application without marring concrete surface, install curing paper over entire area of floor.
 - e. Floors to Receive Urethane Flooring:

- 1) As soon as concrete has sufficient set to permit application without marring concrete surface, install prewetted absorptive cover over entire area of floor.
 - 2) Rewet absorptive cover, and cover immediately with polyethylene moisture-retaining cover with edges lapped **6 inches** and sealed in place.
 - 3) Secure polyethylene moisture-retaining cover in place to prohibit air from circulating under polyethylene moisture-retaining cover.
 - 4) Leave absorptive cover and polyethylene moisture-retaining cover in place for duration of curing period, but not less than 28 days.
- f. Floors to Receive Curing Compound:
- 1) Apply uniformly in continuous operation by power spray or roller in accordance with manufacturer's written instructions.
 - 2) Recoat areas subjected to heavy rainfall within three hours after initial application.
 - 3) Maintain continuity of coating, and repair damage during curing period.
 - 4) Removal: After curing period has elapsed, remove curing compound without damaging concrete surfaces by method recommended by curing compound manufacturer unless manufacturer certifies curing compound does not interfere with bonding of floor covering used on Project.
- g. Floors to Receive Curing and Sealing Compound:
- 1) Apply uniformly to floors and slabs indicated in a continuous operation by power spray or roller in accordance with manufacturer's written instructions.
 - 2) Recoat areas subjected to heavy rainfall within three hours after initial application.
 - 3) Repeat process 24 hours later, and apply a second coat. Maintain continuity of coating, and repair damage during curing period.

3.9 TOLERANCES

- A. Conform to **ACI 117**.

3.10 APPLICATION OF LIQUID FLOOR TREATMENTS

- A. Penetrating Liquid Floor Treatment: Prepare, apply, and finish penetrating liquid floor treatment in accordance with manufacturer's written instructions.
1. Remove curing compounds, sealers, oil, dirt, laitance, and other contaminants and complete surface repairs.
 2. Do not apply to concrete that is less than three seven days' old.
 3. Apply liquid until surface is saturated, scrubbing into surface until a gel forms; rewet; and repeat brooming or scrubbing.
 4. Rinse with water; remove excess material until surface is dry.
 5. Apply a second coat in a similar manner if surface is rough or porous.
- B. Sealing Coat: Uniformly apply a continuous sealing coat of curing and sealing compound to hardened concrete by power spray or roller in accordance with manufacturer's written instructions.

3.11 FIELD QUALITY CONTROL

- A. Testing Agency: Owner will engage a qualified testing and inspecting agency to perform tests and inspections and to submit reports.
 - 1. Testing agency to be responsible for providing curing container for composite samples on Site and verifying that field-cured composite samples are cured in accordance with ASTM C31/C31M.
 - 2. Testing agency to immediately report to Architect, Contractor, and concrete manufacturer any failure of Work to comply with Contract Documents.
 - 3. Testing agency shall report results of tests and inspections, in writing, to Owner, Architect, Contractor, and concrete manufacturer within 48 hours of inspections and tests.
 - a. Test reports to include reporting requirements of ASTM C31/C31M, ASTM C39/C39M, and ACI 301, including the following as applicable to each test and inspection:
 - 1) Project name.
 - 2) Name of testing agency.
 - 3) Names and certification numbers of field and laboratory technicians performing inspections and testing.
 - 4) Name of concrete manufacturer.
 - 5) Date and time of inspection, sampling, and field testing.
 - 6) Date and time of concrete placement.
 - 7) Location in Work of concrete represented by samples.
 - 8) Date and time sample was obtained.
 - 9) Truck and batch ticket numbers.
 - 10) Design compressive strength at 28 days.
 - 11) Concrete mixture designation, proportions, and materials.
 - 12) Field test results.
 - 13) Information on storage and curing of samples before testing, including curing method and maximum and minimum temperatures during initial curing period.
 - 14) Type of fracture and compressive break strengths at seven days and 28 days.
- B. Batch Tickets: For each load delivered, submit three copies of batch delivery ticket to testing agency, indicating quantity, mix identification, admixtures, design strength, aggregate size, design air content, design slump at time of batching, and amount of water that can be added at Project site.
- C. Inspections:
 - 1. Headed bolts and studs.
 - 2. Verification of use of required design mixture.
 - 3. Concrete placement, including conveying and depositing.
 - 4. Curing procedures and maintenance of curing temperature.
 - 5. Verification of concrete strength before removal of shores and forms from beams and slabs.
 - 6. Batch Plant Inspections: On a random basis, as determined by Architect.

- D. Concrete Tests: Testing of composite samples of fresh concrete obtained in accordance with ASTM C 172/C 172M shall be performed in accordance with the following requirements:
1. Testing Frequency: Obtain one composite sample for each day's pour of each concrete mixture exceeding 5 cu. yd., but less than 25 cu. yd., plus one set for each additional 50 cu. yd. or fraction thereof.
 - a. When frequency of testing provides fewer than five compressive-strength tests for each concrete mixture, testing to be conducted from at least five randomly selected batches or from each batch if fewer than five are used.
 2. Slump: ASTM C143/C143M:
 - a. One test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mixture.
 - b. Perform additional tests when concrete consistency appears to change.
 3. Slump Flow: ASTM C1611/C1611M:
 - a. One test at point of placement for each composite sample, but not less than one test for each day's pour of each concrete mixture.
 - b. Perform additional tests when concrete consistency appears to change.
 4. Air Content: ASTM C231/C231M pressure method, for normal-weight concrete; ASTM C173/C173M volumetric method, for structural lightweight concrete.
 - a. One test for each composite sample, but not less than one test for each day's pour of each concrete mixture.
 5. Concrete Temperature: ASTM C1064/C1064M:
 - a. One test hourly when air temperature is 40 deg F and below or 80 deg F and above, and one test for each composite sample.
 6. Unit Weight: ASTM C567/C567M fresh unit weight of structural lightweight concrete.
 - a. One test for each composite sample, but not less than one test for each day's pour of each concrete mixture.
 7. Compression Test Specimens: ASTM C31/C31M:
 - a. Cast and laboratory cure two sets of two 6-inch by 12-inch or 4-inch by 8-inch cylinder specimens for each composite sample.
 - b. Cast, initial cure, and field cure two sets of two standard cylinder specimens for each composite sample.
 8. Compressive-Strength Tests: ASTM C39/C39M.
 - a. Test one set of two laboratory-cured specimens at seven days and one set of two specimens at 28 days.
 - b. Test one set of two field-cured specimens at seven days and one set of two specimens at 28 days.
 - c. A compressive-strength test to be the average compressive strength from a set of two specimens obtained from same composite sample and tested at age indicated.
 9. When strength of field-cured cylinders is less than 85 percent of companion laboratory-cured cylinders, Contractor to evaluate operations and provide corrective procedures for protecting and curing in-place concrete.
 10. Strength of each concrete mixture will be satisfactory if every average of any three consecutive compressive-strength tests equals or exceeds specified compressive strength, and no compressive-strength test value falls below specified compressive strength by more than 500 psi if specified compressive strength is 5000 psi, or no

compressive strength test value is less than 10 percent of specified compressive strength if specified compressive strength is greater than **5000 psi**.

11. Nondestructive Testing: Impact hammer, sonoscope, or other nondestructive device may be permitted by Architect but will not be used as sole basis for approval or rejection of concrete.
12. Additional Tests:
 - a. Testing and inspecting agency to make additional tests of concrete when test results indicate that slump, air entrainment, compressive strengths, or other requirements have not been met, as directed by Architect.
 - b. Testing and inspecting agency may conduct tests to determine adequacy of concrete by cored cylinders complying with ASTM C42/C42M or by other methods as directed by Architect.
 - 1) Acceptance criteria for concrete strength to be in accordance with **ACI 301**, Section 1.6.6.3.
13. Additional testing and inspecting, at Contractor's expense, will be performed to determine compliance of replaced or additional work with specified requirements.
14. Correct deficiencies in the Work that test reports and inspections indicate do not comply with the Contract Documents.

- E. Measure floor and slab flatness and levelness in accordance with **ASTM E1155** within 48 hours of completion of floor finishing and promptly report test results to Architect.

3.12 PROTECTION

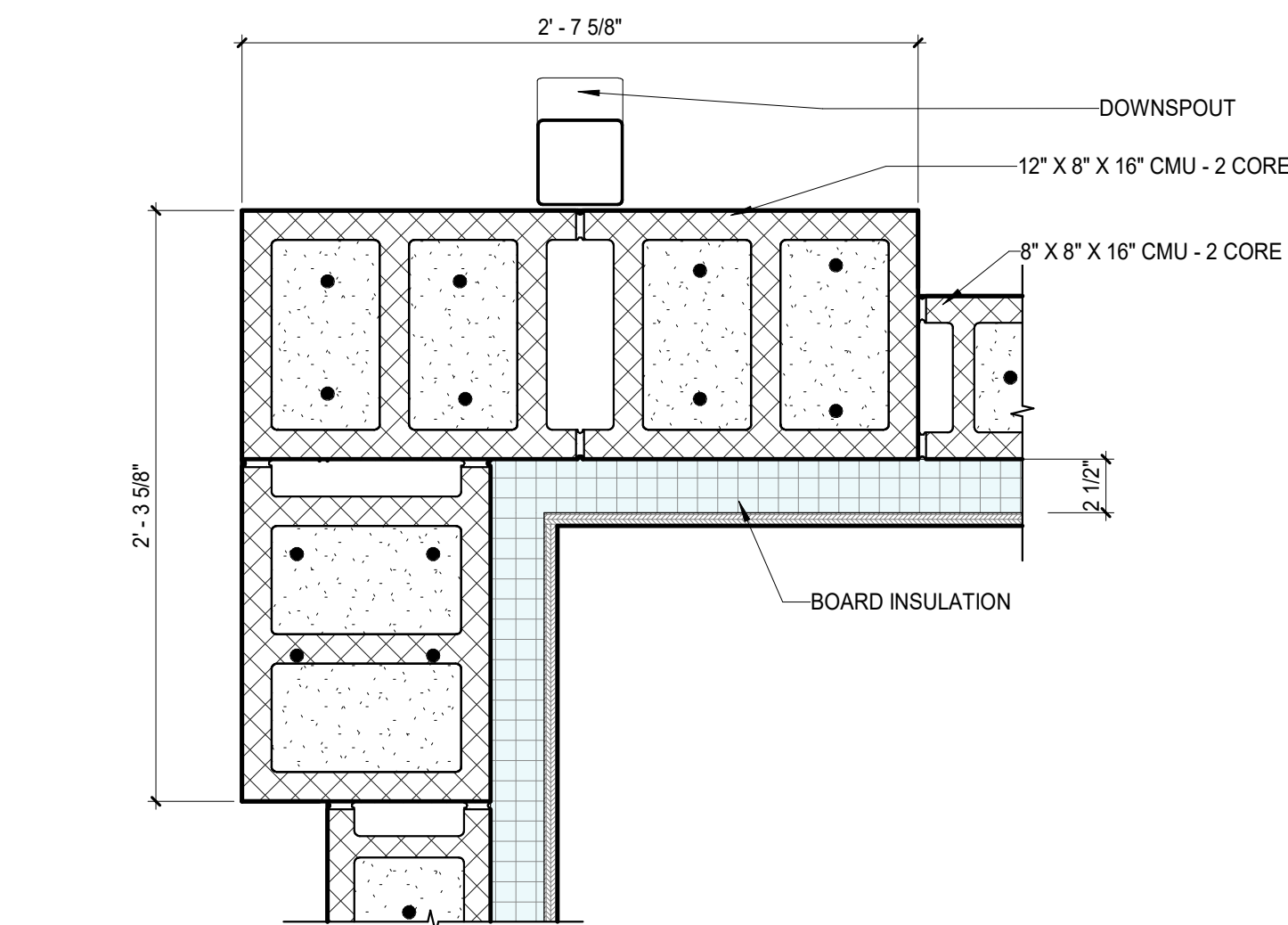
- A. Protect concrete surfaces as follows:
 1. Protect from petroleum stains.
 2. Diaper hydraulic equipment used over concrete surfaces.
 3. Prohibit vehicles from interior concrete slabs.
 4. Prohibit use of pipe-cutting machinery over concrete surfaces.
 5. Prohibit placement of steel items on concrete surfaces.
 6. Prohibit use of acids or acidic detergents over concrete surfaces.
 7. Protect liquid floor treatment from damage and wear during the remainder of construction period. Use protective methods and materials, including temporary covering, recommended in writing by liquid floor treatments installer.
 8. Protect concrete surfaces scheduled to receive surface hardener or polished concrete finish using Floor Slab Protective Covering.

END OF SECTION 03 30 00

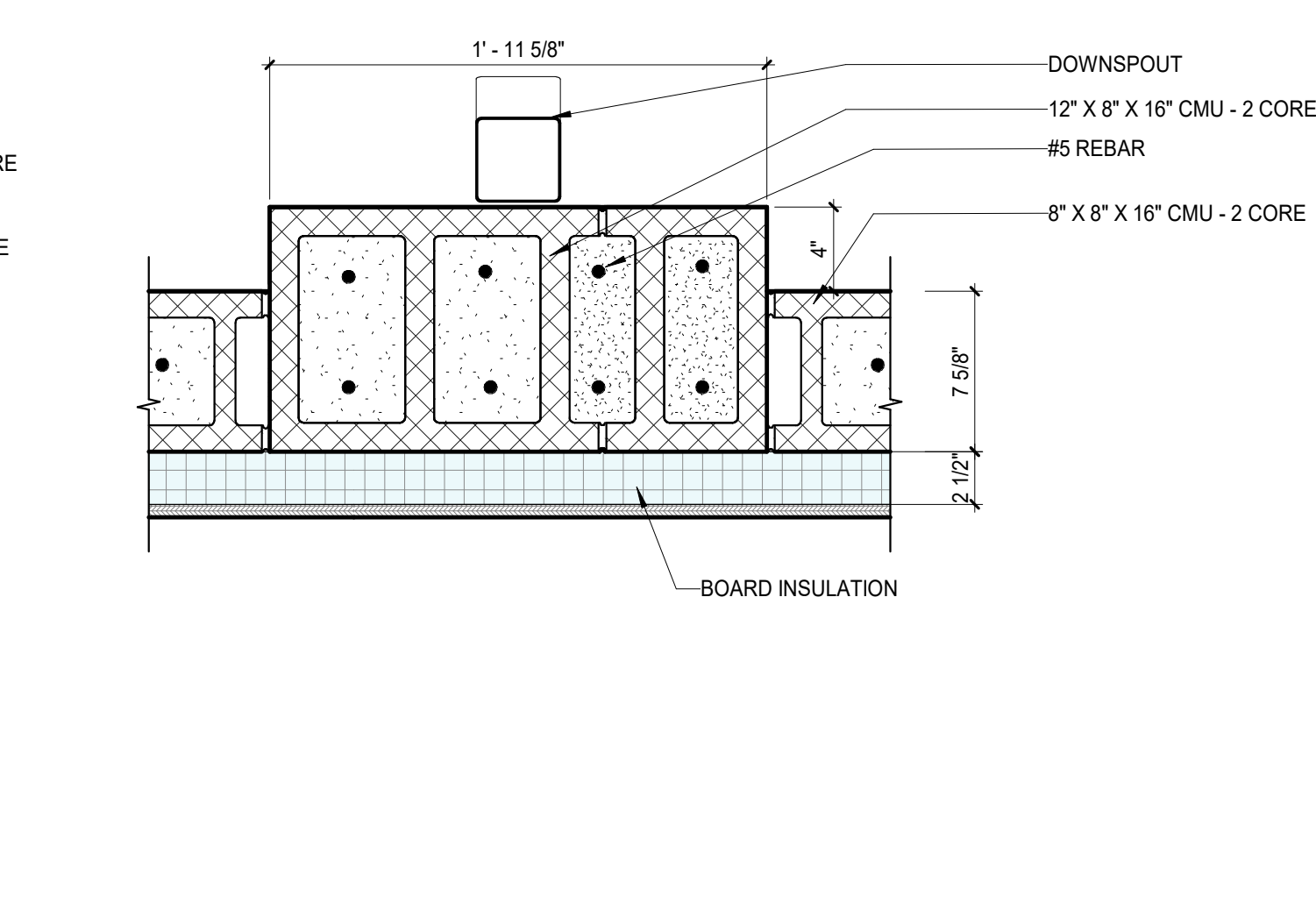
ROOM FINISH SCHEDULE									
LEVEL	ROOM		FLOOR		WALL FINISH				COMMENTS
	NUMBER	NAME	FLOOR FINISH	BASE FINISH	NORTH	SOUTH	EAST	WEST	
1ST FLOOR	101	STORAGE 1	CONC	--	P1	P1	P1	P1	
1ST FLOOR	102	STORAGE 2	CONC	--	P1	P1	P1	P1	

FINISH LEGEND 2021					
MARK	SPECIFICATION	MANUFACTURER	PRODUCT	ADDITIONAL INFORMATION	REP CONTACT
PAINT					
P1	09 91 00	SHERWIN WILLIAMS	SW 7005 - PURE WHITE		

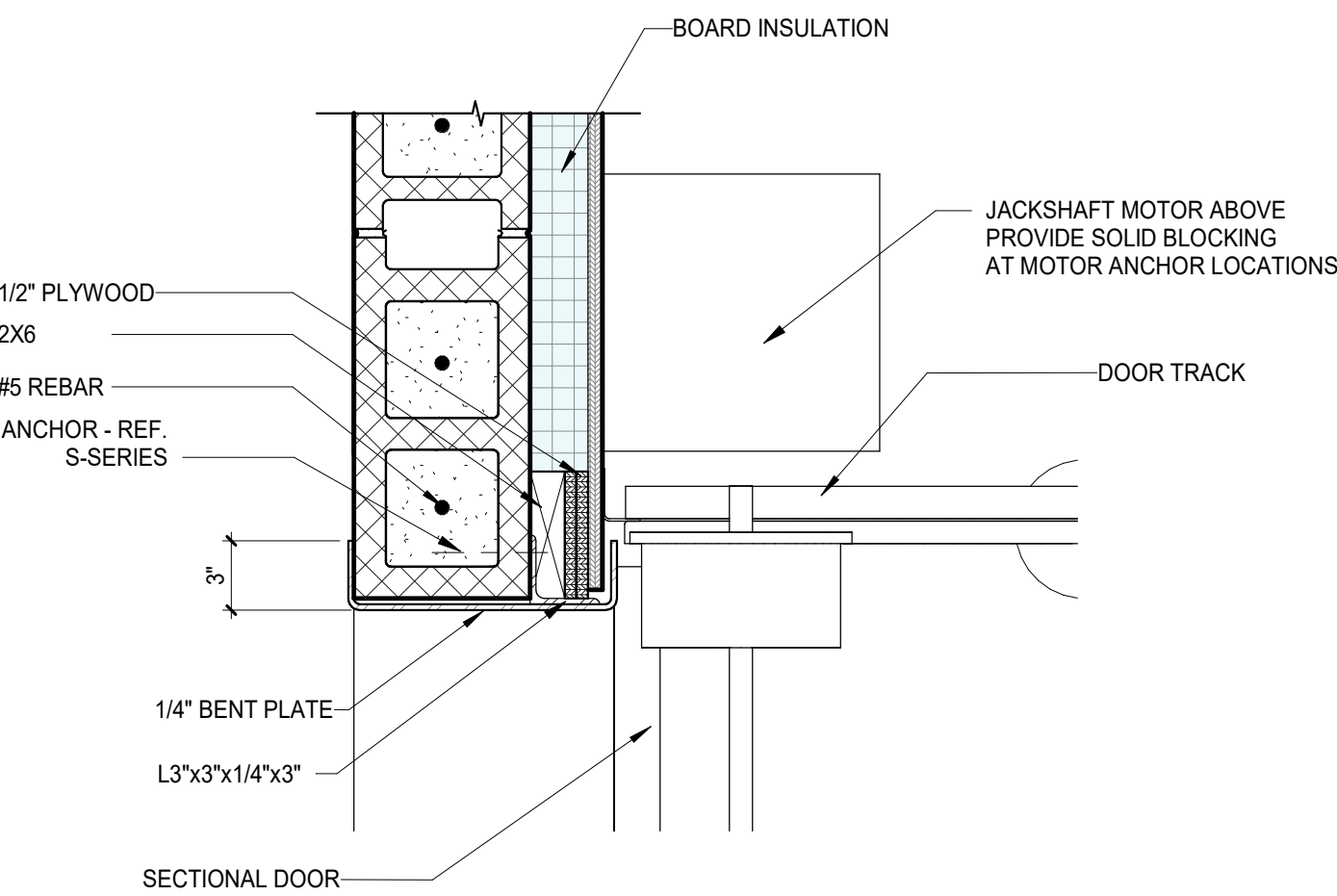
KEYNOTE LEGEND	
03 21 00 A3	#5 REBAR
04 22 00 A16	8" X 8" X 16" CMU - 2 CORE
04 22 00 A18	12" X 8" X 16" CMU - 2 CORE
06 50 00 B3	1/4" BENT PLATE
06 11 00 F1	2X6
06 16 00 D6	1/2" PLYWOOD
07 21 13 A1	BOARD INSULATION
07 31 13 A1	ASPHALT SHINGLE ROOFING SYSTEM
07 31 13 E4	ATTIC/ROOF VENT
07 62 00 H42	GUTTER
07 62 00 H43	DOWNSPOUT
08 36 13 A1	SECTIONAL DOOR
08 36 13 A2	DOOR TRACK
32 31 00 A2	CHAIN LINK FENCE W/ SLATS
32 31 00 A4	CHAIN LINK GATE W/ SLATS



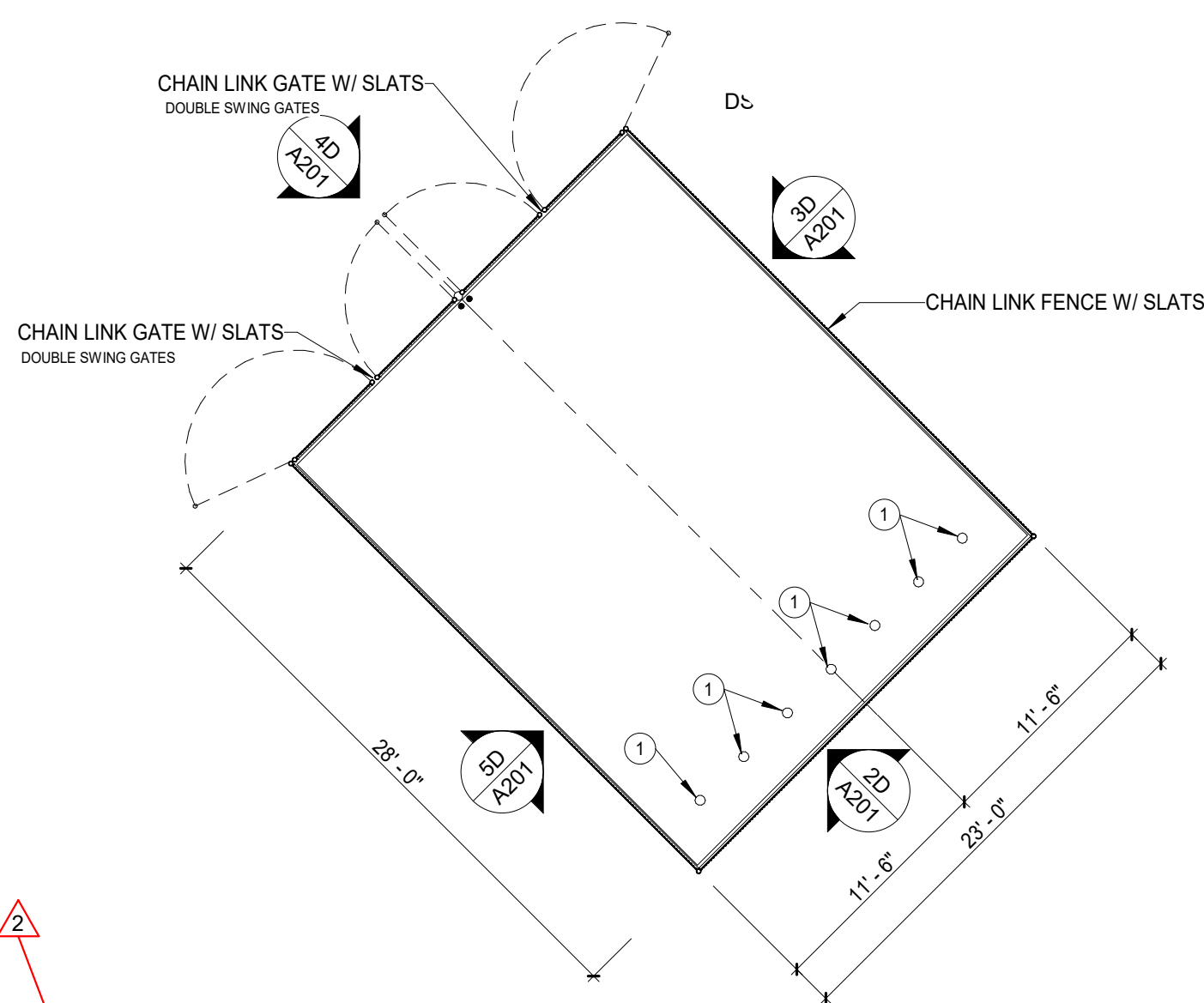
6E PLAN DETAIL



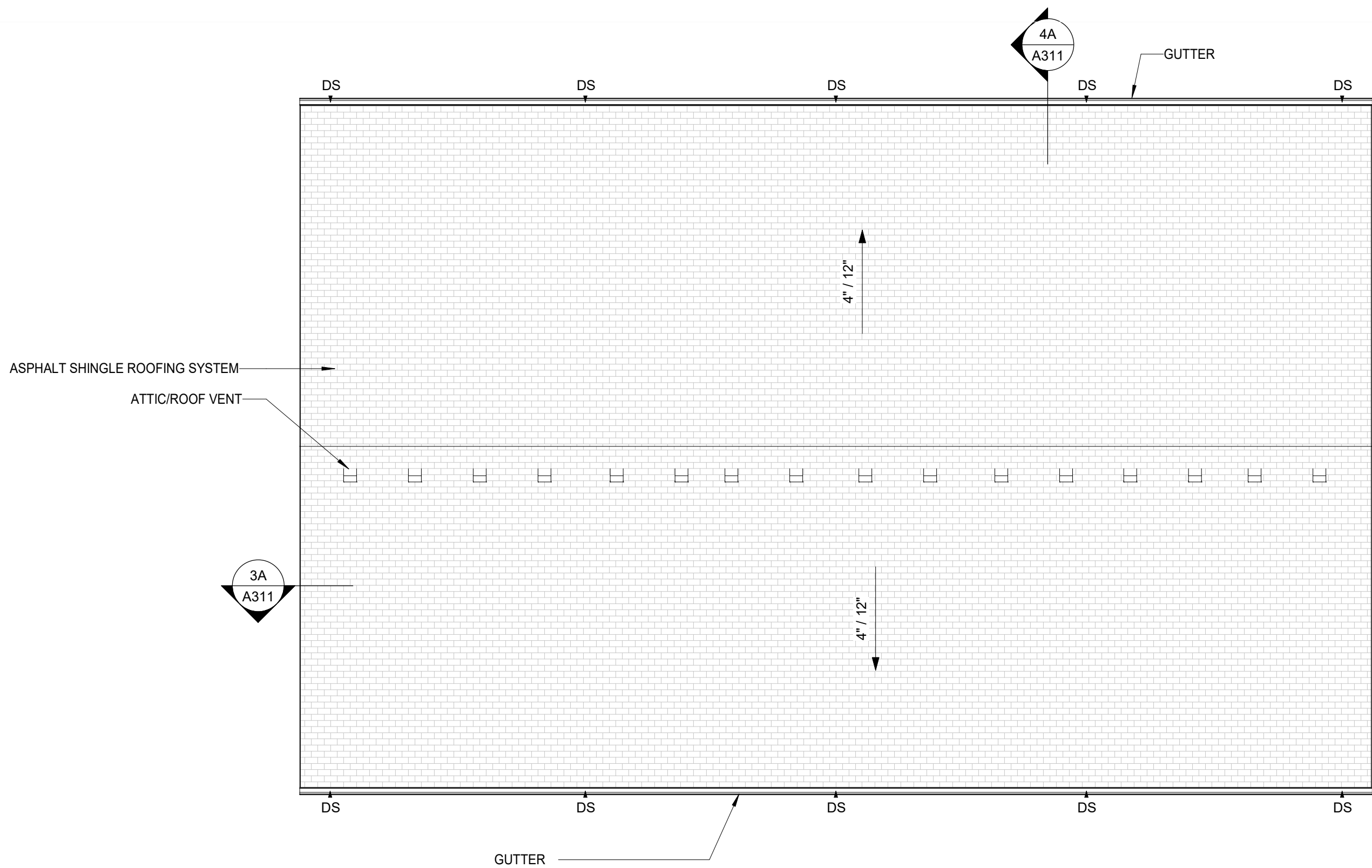
5E PLAN DETAIL



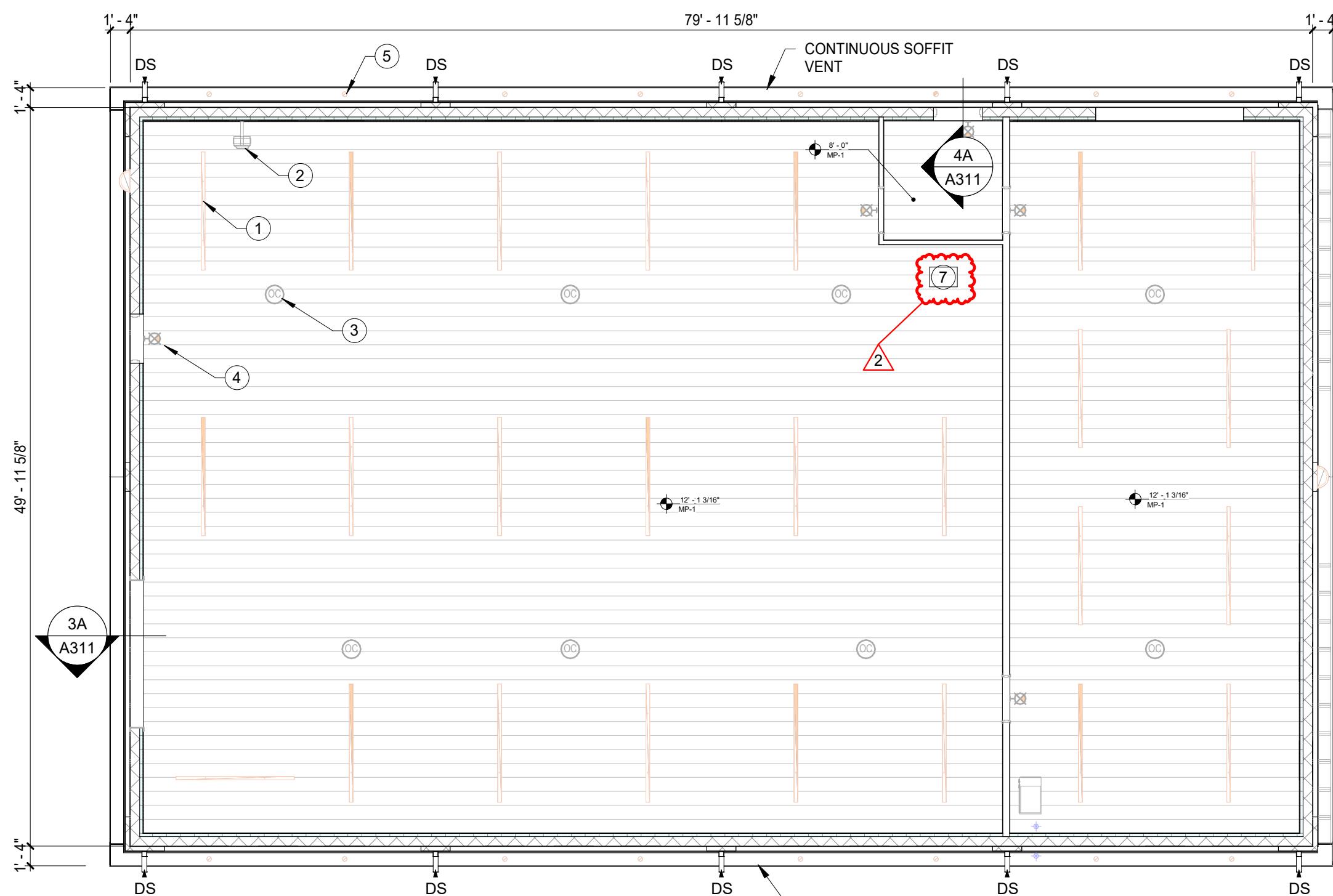
6D FLOOR PLAN - FIRST FLOOR - OHSD JAMB



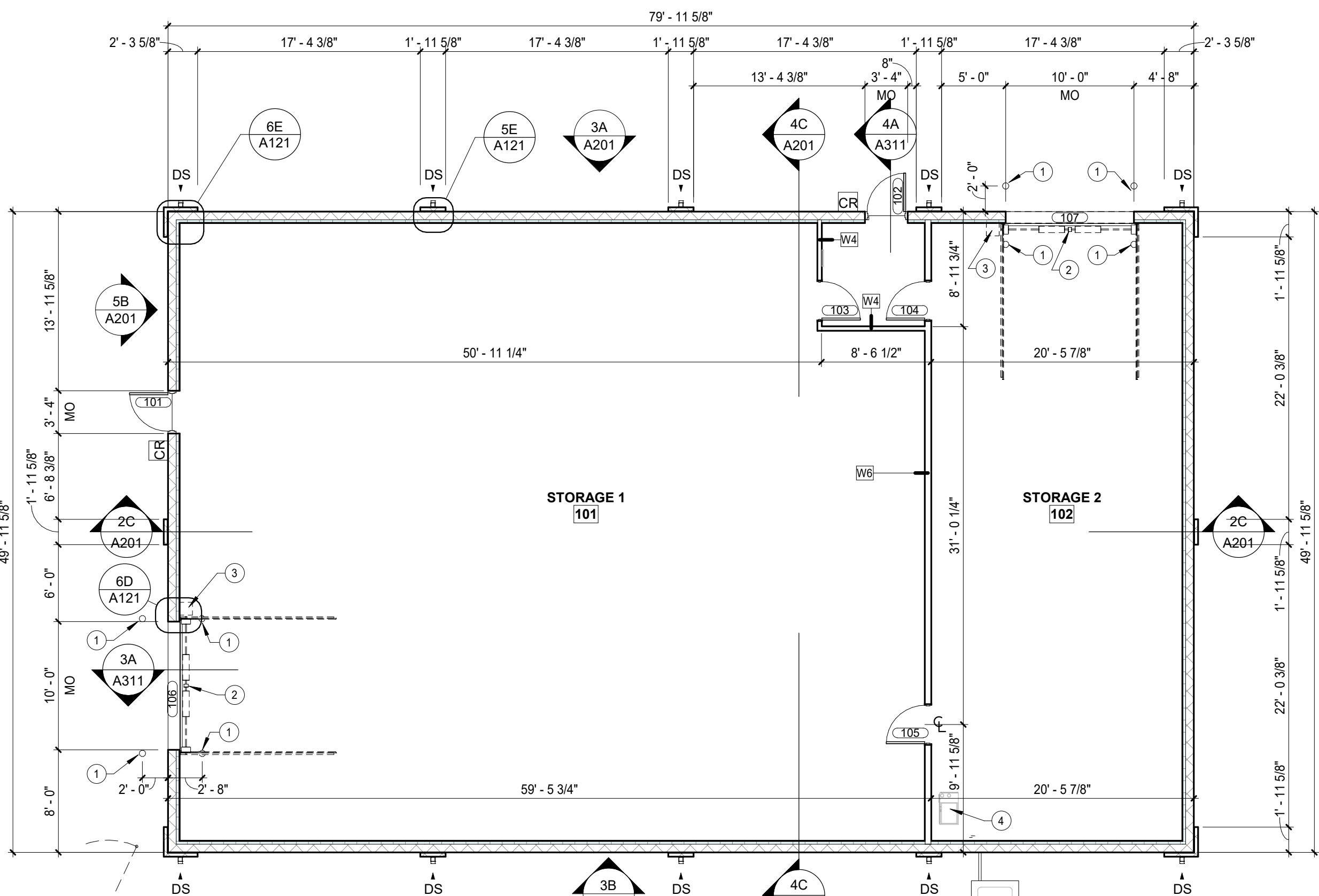
5B SOLID WASTE ENCLOSURE



2D ROOF PLAN



2B REFLECTED CEILING PLAN



2A FLOOR PLAN - FIRST FLOOR

GENERAL NOTES: ROOF PLAN

- A. REFER TO A011 FOR ALL ROOF TYPE DESIGNATIONS.
B. REFER TO STRUCTURAL DRAWINGS FOR STEEL SLOPES.

GENERAL NOTES: REFLECTED CLNG PLANS

- A. REFERENCE SHEET A001 FOR CEILING TYPES INDICATED BY CEILING TYPE & ELEVATION TAGS.
B. CEILING ELEVATIONS INDICATED ARE APPROXIMATE WHERE MATERIALS ATTACH DIRECTLY TO STRUCTURE.
C. SEE ELECTRICAL LIGHTING PLAN FOR LIGHT FIXTURES SHOWN IN REFLECTED CEILING PLANS.
D. SEE MECHANICAL PLAN FOR EQUIPMENT DEPICTED IN REFLECTED CEILING PLANS.
E. PROVIDE 1X6 FIBER CEMENT TRIM AT ALL CEILING PERIMETERS. PAINT WHITE.

PLAN NOTES - REFLECTED CEILING PLAN

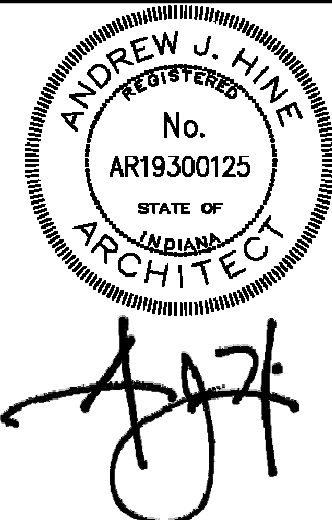
- 1 CEILING MOUNT STRIP LIGHT FIXTURE (TYPICAL) - REFERENCE E-SERIES DRAWINGS.
2 MECHANICAL UNIT - REFERENCE MECHANICAL SERIES DRAWINGS AND SPECIFICATIONS.
3 CEILING MOUNTED OCCUPANCY SENSOR (TYPICAL) - REFERENCE ELECTRICAL SERIES DRAWINGS.
4 EXIT SIGNAGE (TYPICAL) - REFERENCE ELECTRICAL DRAWINGS AND SPECIFICATIONS.
5 RECESSED LIGHTING AT SOFFITS (TYPICAL) - REFERENCE ELECTRICAL SERIES DRAWINGS AND SPECIFICATIONS.
7 16x24 ACCESS PANEL.

GENERAL NOTES: ARCHITECTURAL PLANS

- A. REFERENCE SHEET A001 FOR INTERIOR WALL TYPES INDICATED BY WALL TYPE TAGS.
B. REFERENCE S-SERIES DRAWINGS AND SPECIFICATIONS FOR CONCRETE SLAB ON GRADE CONSTRUCTION.

PLAN NOTES - FLOOR PLAN

- 1 8" DIA CONCRETE-FILLED SCHEDULE 80 STEEL PIPE BOLLARD SET IN CONCRETE. PAINT SAFETY YELLOW.
2 OVERHEAD SECTIONAL DOOR
3 JACK-SHAFT TYPE MOTORIZED OPENER FOR OVERHEAD SECTIONAL DOOR.
4 HVAC EQUIPMENT - REFERENCE MECHANICAL PLANS
5 CONDENSING UNIT. REFERENCE MECHANICAL SERIES DRAWINGS AND SPECIFICATIONS.



CONSTRUCTION DOCUMENTS

REVISIONS:

- 1 04.12.2024 ADDENDUM 1
2 04.19.2024 ADDENDUM 2

DATE:

03.01.2024

arcDESIGN PROJECT NUMBER:

23133

CLIENT PROJECT NUMBER:

DRAWN BY:

aD

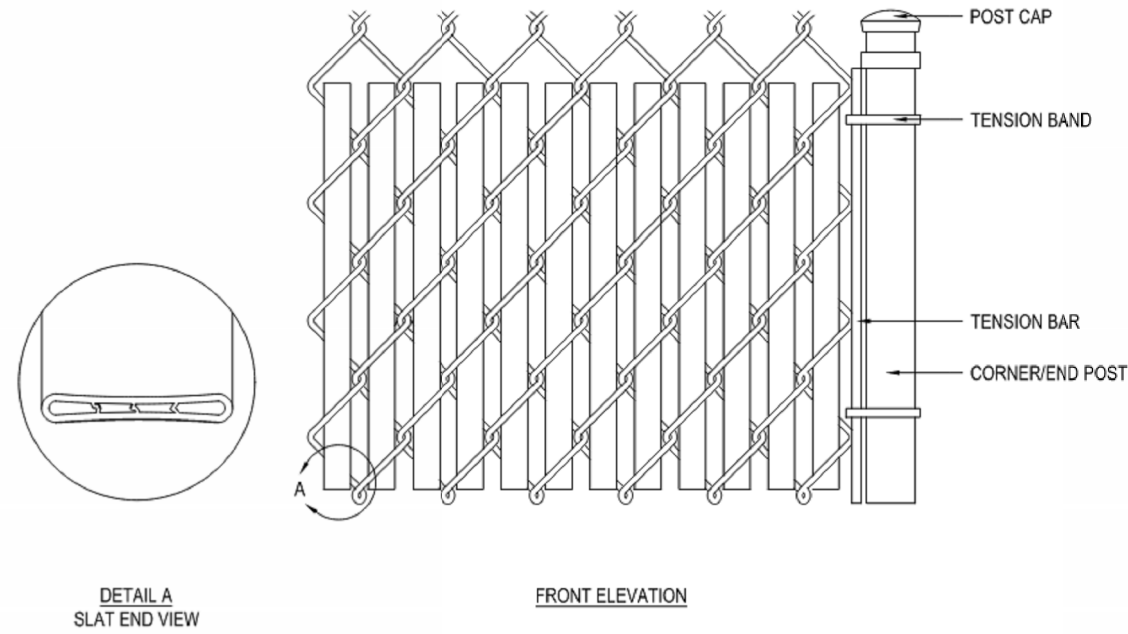
DRAWING TITLE:

FLOOR, CEILING,
& ROOF PLANS

DRAWING NUMBER:

A121



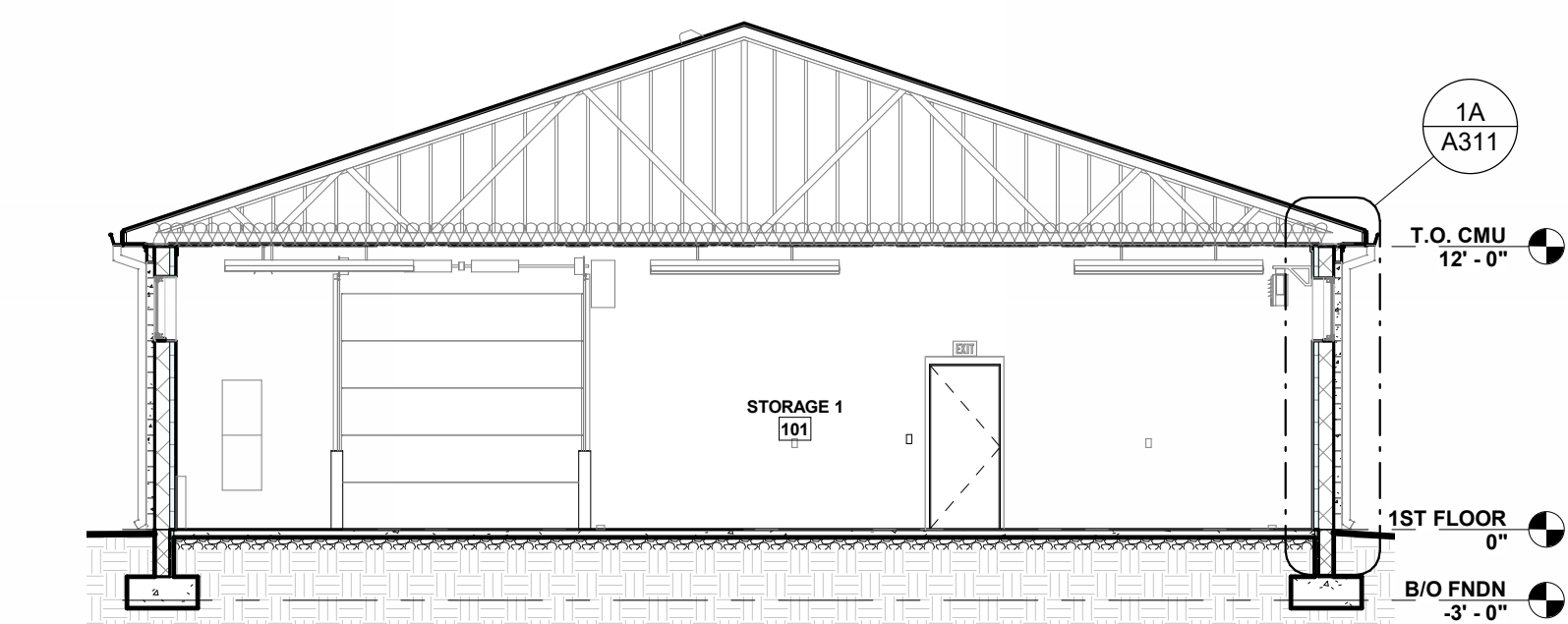


5D ELEVATION
1/8" = 1'-0" REF: SB / A121

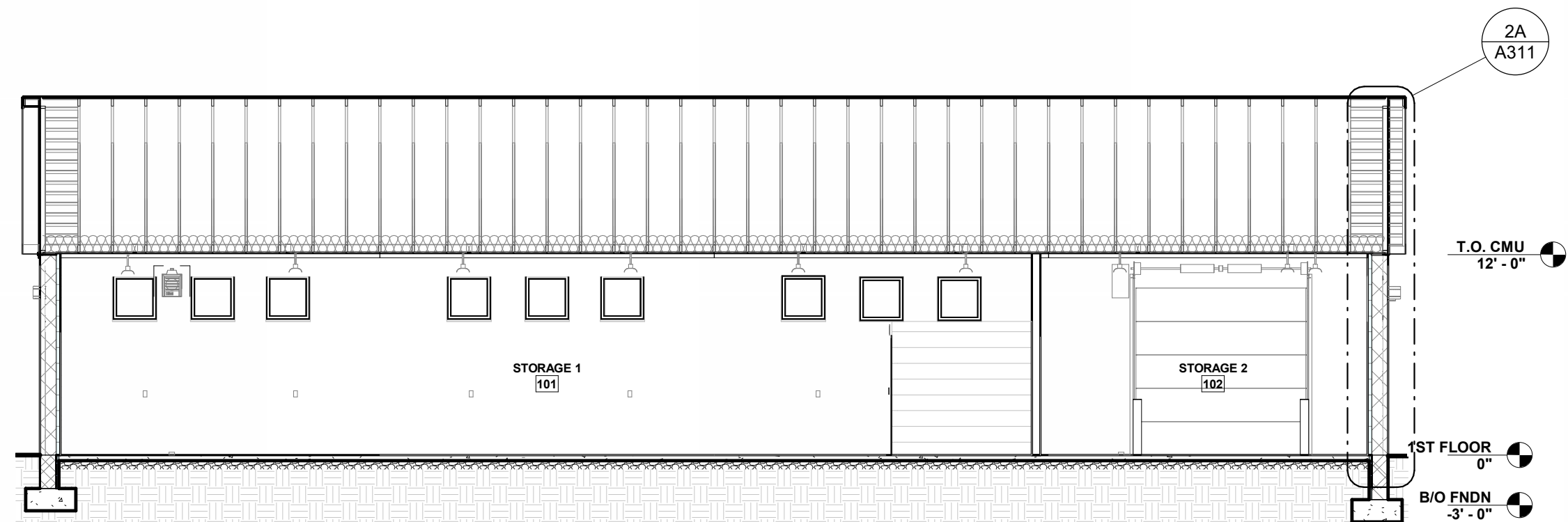
4D ELEVATION
1/8" = 1'-0" REF: SA / A121

3D ELEVATION
1/8" = 1'-0" REF: SB / A121

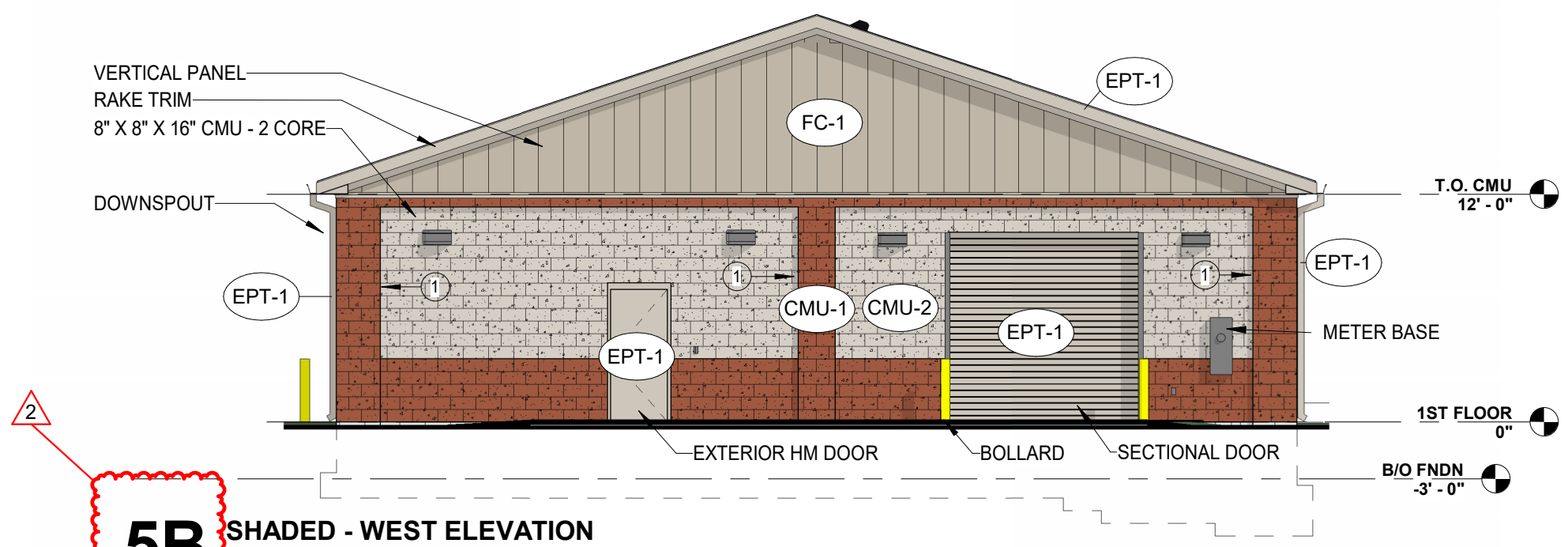
2D ELEVATION
1/8" = 1'-0" REF: SB / A121



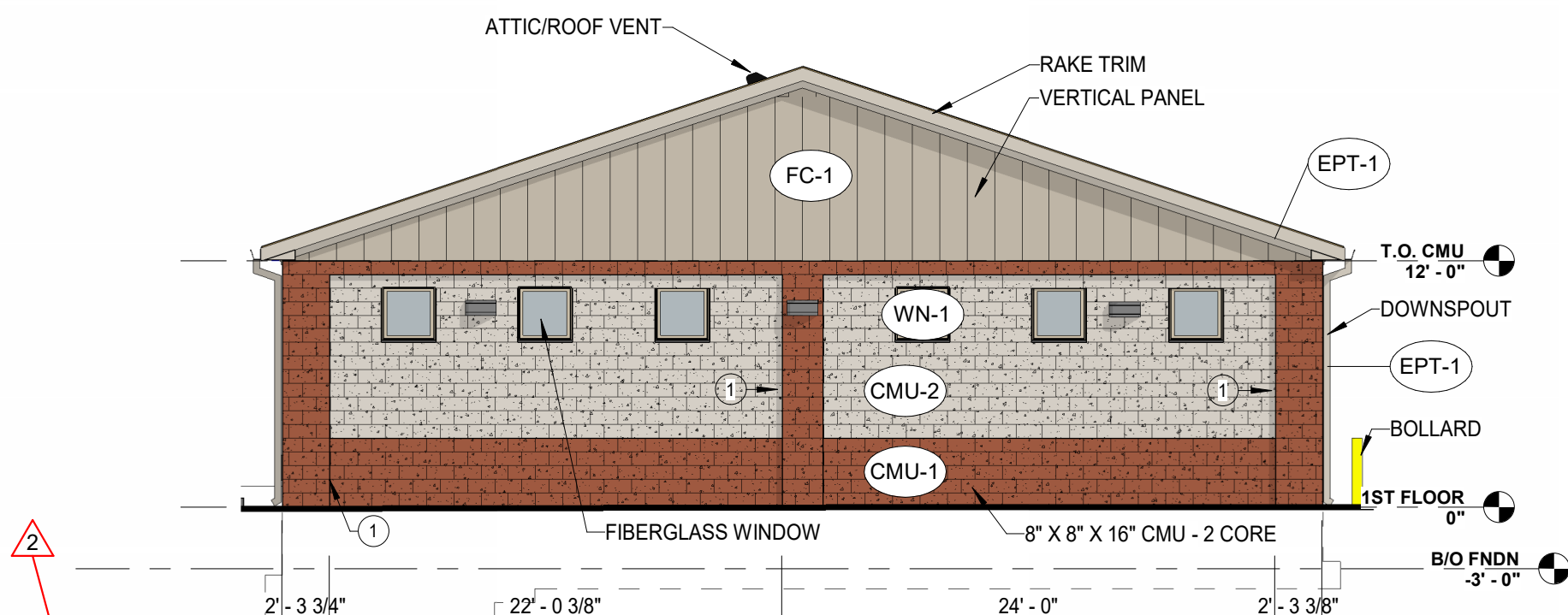
4C BUILDING SECTION
1/8" = 1'-0" REF: SA / A121



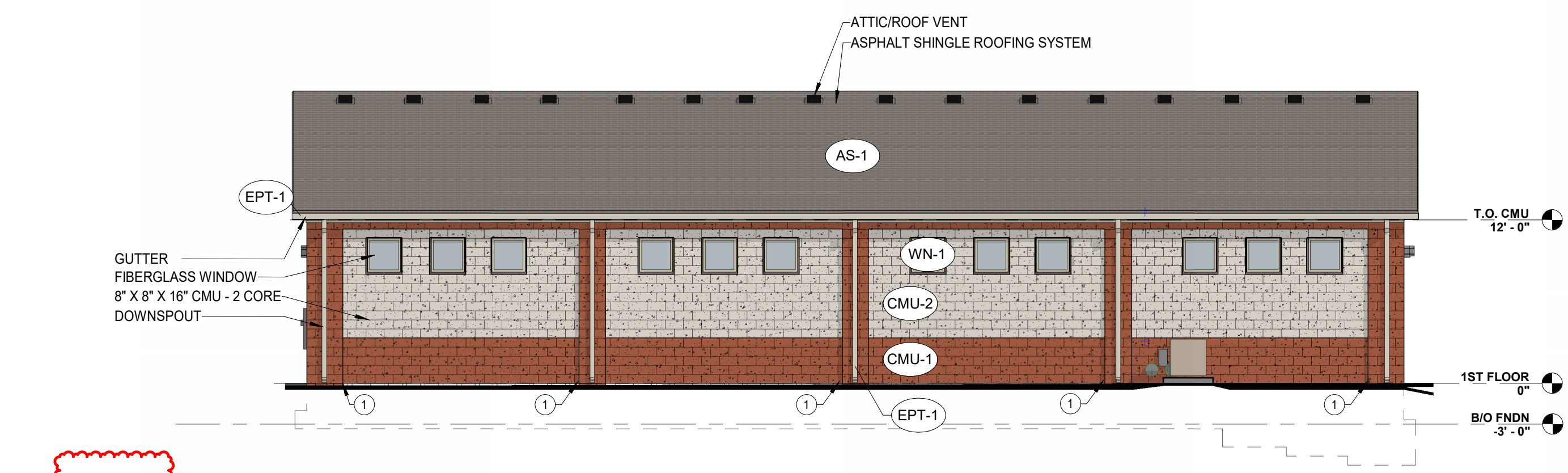
2C BUILDING SECTION
1/8" = 1'-0" REF: SA / A121



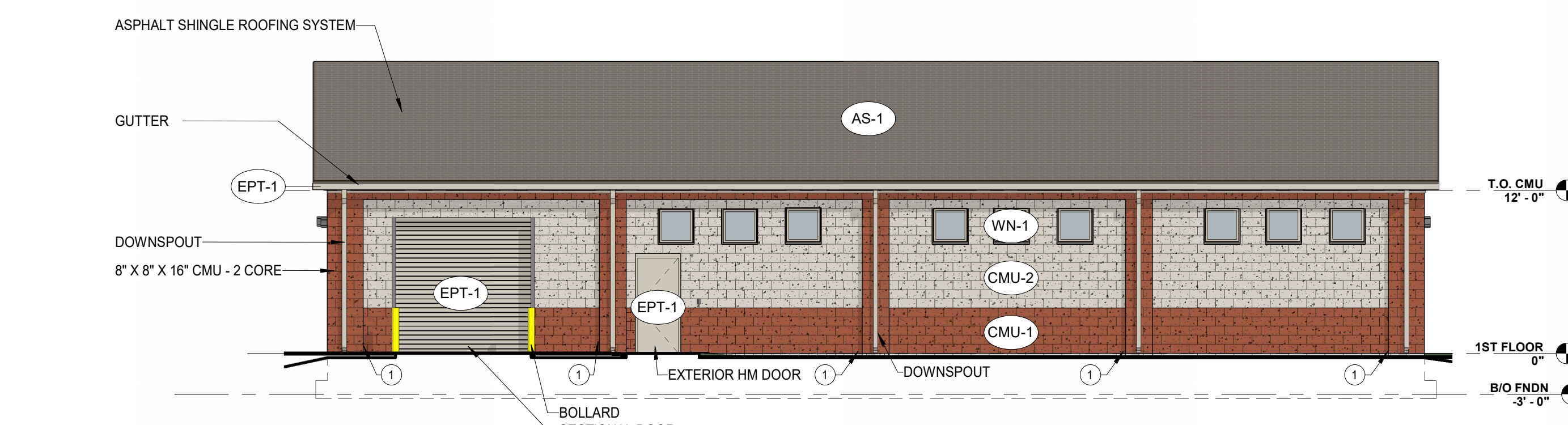
5B SHADED - WEST ELEVATION
1/8" = 1'-0" REF: SA / A121



5A SHADED - EAST ELEVATION
1/8" = 1'-0" REF: SA / B1



3B SHADED - SOUTH ELEVATION
1/8" = 1'-0" REF: SA / A121



3A SHADED - NORTH ELEVATION
1/8" = 1'-0" REF: SA / A121

EXTERIOR MATERIAL LEGEND

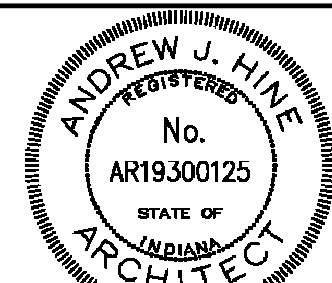
MARK	TYPE	MFR.	PRODUCT	FINISH	COMMENTS
04 22 00 A10	CONCRETE MASONRY UNIT				
CMU-1	8" BLOCK	ECHOLON	SMOOTH FACE CONCRETE BLOCKS	RED - GARNETT	
CMU-2	8" BLOCK	ECHOLON	SMOOTH FACE CONCRETE BLOCKS	BEIGE - SOFT COTTON	
07 31 00 A1	ASPHALT SHINGLE				
AS-1	ASPHALT SHINGLE	GAF	TIMBERLINE HDZ	WEATHERED WOOD	ROOF VENTS TO MATCH PRIMARY SHINGLE COLOR
07 46 00 S3	SIDING				
FC-1	FIBER CEMENT PANEL - BOARD AND BATTEN	JAMES HARDIE	VERTICAL PANEL	SMOOTH - SW7051 ANALYTICAL GRAY	FACTORY PRIMED. TRIM TO MATCH
08 53 13 A3	FIBERGLASS WINDOW				
WN-1	FIBERGLASS FIXED WINDOW	PELLA	IMPERVIA - PICTURE WINDOW	TAN	
09 91 13 A1	EXTERIOR PAINT				
EPT-1	EXTERIOR PAINT	SHERWIN WILLIAMS		SW7051 - ANALYTICAL GRAY	DOWNSPOUT AND GUTTERS: DOOR PANEL AND FRAME.

GENERAL NOTES: EXTERIOR ELEVATIONS

- REFERENCE FIRST FLOOR PLAN FOR EXTERIOR BUILDING ELEVATION CALLOUTS.
- SEE SHEETS A601 FOR PUNCHED OPENINGS, ENTRANCES, HOLLOW METAL DOORS AND FRAMES, DOOR SCHEDULE.
- KEYNOTE REFERENCE LEGEND SHOWN IS SHEET-SPECIFIC. ITEMS ARE DENOTED BY SPECIFICATION SECTION.
- ALL DIMENSIONS ARE FOR REFERENCE ONLY. REFER TO DIMENSION PLANS FOR ACTUAL BUILDING DIMENSIONS.

EXTERIOR ELEVATION NOTES

- CONTROL JOINT



HENDRICKS COUNTY
ANIMAL SHELTER STORAGE BUILDING
250 E CAMPUS BLVD
DANVILLE IN 46122

CONSTRUCTION DOCUMENTS

- REVISIONS:
- | | | |
|---|------------|------------|
| 2 | 04.19.2024 | ADDENDUM 2 |
|---|------------|------------|

DATE:
03.01.2024
arcDESIGN PROJECT NUMBER:
23133
CLIENT PROJECT NUMBER:

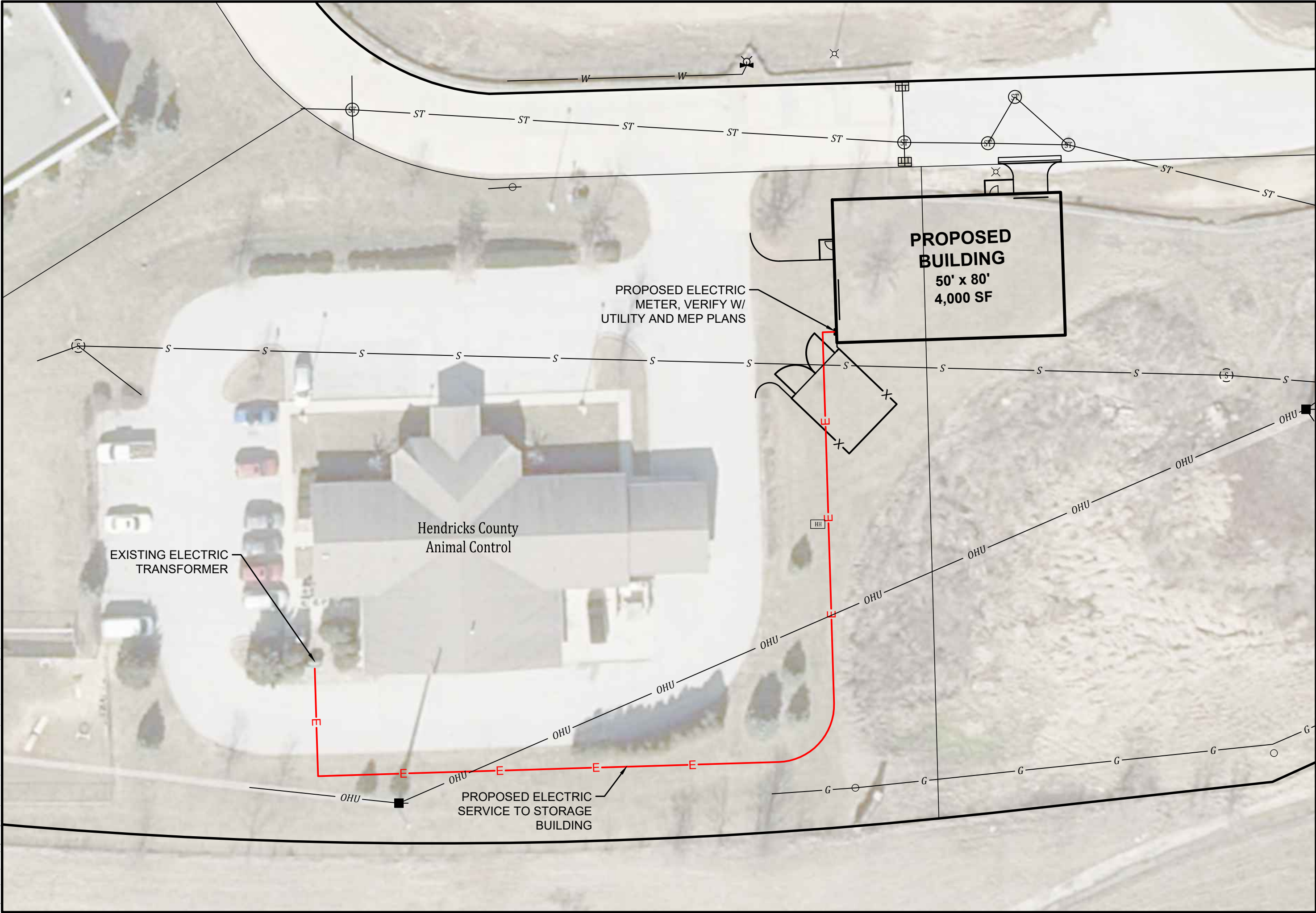
DRAWN BY:
Author
DRAWING TITLE:

ELEVATIONS / BUILDING SECTIONS

DRAWING NUMBER:

A201

shope P:\2023\23116\Engineering\Grid\Sheet Files\Construction Plans\23116_cp_Elec Servicing.dwg Apr 15, 2024 - 9:04am



Project No:		23116	
Sheet No:		C100	
BANNING ENGINEERING		853 COLUMBIA ROAD, SUITE #101 PLAINFIELD, IN 46168 BUS: (317) 707-3700, FAX: (317) 707-3800 E-MAIL: Banning@BanningEngineering.com WEB: www.BanningEngineering.com	
ELECTRIC SERVICE HENDRICKS COUNTY STORAGE BUILDING CENTER TOWNSHIP DANVILLE, INDIANA			
Designed:	Drawn:	Checked:	Scale:
	SJH	RRL	1"=30'
Date:	04-15-2024		
Revisions			
Date			