



Addendum #3

To: All Bid Document Holders

From: Glick/Boehm & Associates, Inc.
493 King Street, Suite 100
Charleston, SC 29403
Voice (V): 843.577.6377
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Date: April 18, 2017

Re: Beaufort County Animal Shelter and Hilton Head Humane Association Animal Services Complex
Beaufort County, SC
10 Pritcher Point Road, Okatie, SC 29909
Bid Number: #041817E

This Addendum forms a part of the Contract Documents and modifies the original drawings and specifications dated 03/02/2017. Contractor shall be responsible to review changes to all portions of the work as changes of one portion may affect the work of another. Contractor shall indicate receipt of this addendum on the bid form.

CLARIFICATIONS

1. **Question:** We just wanted to verify that all the cabinets, upper and lower and the drawers have locks on them as indicated on the plans. That is how we are pricing this out.
Answer: As called out on drawings, all cabinets are to have locks.
2. **Question:** Clarify requested area for temporary fencing.
Answer: This comment is believed to be in regards to temporary construction fencing. It is up to the contractor to determine what needs to be secure and kept safe. The fence should be located within the Limit of Disturbance.
3. **Question:** Is flush header curb required at the contact of pervious concrete to asphalt or it is just required if the pavers option is being priced?
Answer: The header curb is only required around end parking stalls for the pervious paver option.
4. **Question:** Please provide detail for the gravel areas, thickness and materials to be used, or please indicate if same detail of Aggregate Paving section of the Parking stalls is to be used.
Answer: The gravel at the Pump Station and Drive shall be as per BJWSA Details and Specifications. The gravel area under the covered structure (near the pump station) will be the same detail as the Aggregate Paving Section.

ARCHITECTURE / PLANNING / INTERIOR DESIGN

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PROJECT MANUAL

Item ADD3-PM1: Section 02 315 – Earthquake Drains

1. Add paragraph 1.06 Quality Control.
2. Clarify Materials as shown
3. Refer to updated Spec Section.

Item ADD3-PM2: Section 07 2726 – Fluid Applied Membrane Air Barrier

1. ADD GE Elemax 2600 AWB system as an Acceptable Product.

Item ADD3-PM3: Section 07 4113 – Metal Roof Panels

1. ADD DMI Span-Lock Panel, SL20 as an Acceptable Product.

Item ADD3-PM4: Section 08 7100 – Door Hardware

1. Revise Paragraph 2.7 Keying to be:
 - A. Provide keyed cylinders by Lori as listed in the HW Sets All cylinders shall be furnished with a Lori “90 Keyway”. Allow for Grandmaster key and Master key for all cylinders. The Hardware Supplier shall provide the cylinders keyed per the Owner’s direction. All keying requirements will be reviewed at the Keying Meeting. The Owner’s Locksmith shall furnish the Hardware Supplier the Grandmaster bitting requirements. No Grandmaster Keys shall be cut.
 - B. Provide for six master keys for each master keyed set. Provide two change keys for each lock. Provide one extra key blank per cylinder. Keys and cylinders/cores shall be marked with applicable blind code for identification. Visual key control marks or codes shall not include actual key cuts. The Hardware Supplier shall furnish the Owner a bitting list of all keying for this project.
 - C. The Hardware Supplier shall meet with the Owner to finalize keying requirements and obtain keying instructions in writing. The Keying Schedule shall be established in compliance with specific requirements from the Owner. Submit proposed keying schedule to the GC and the Architect. If requested, meet with Owner and Architect to review schedule.

Item ADD3-PM5: Section 11 6500 – Animal Health Industry Equipment

2. ADD Suburban Surgical to Approved Manufacturers. Suburban Surgical is not approved for the cat cage equipment.

Item ADD3-PM6: Section 26 7020 – Fire Alarm System, Addressable

1. ADD Kidde United Technologies: Intelligent Fire Alarm Systems VS1, VS4 to list of approved products.

Item ADD3-PM7: Section 31 2000 – Earthwork

1. ADD Paragraph in Section to clarify muck and fill quantities to be included in bid.
2. Refer to attached updated Section. Revision is highlighted.

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Item ADD3-PM8: Oxygen Line Information

MEDICAL GAS SYSTEMS

Systems and equipment shall be produced by firms regularly engaged in manufacturing of medical gas piping and equipment, of types and sizes required, whose products have been in satisfactory use in similar service for not less than five (5) years.

Systems shall be installed and tested under the direction of a qualified manufacturer's representative or contractor with expertise in that specialty.

All equipment shall be by one manufacturer.

The complete medical gas systems shall conform in strict accordance with the recommendations governing the installation of medical gas piping systems in health care facilities as contained in the National Fire Protection Association (N.F.P.A.) pamphlet no. 99 and in accordance with local and/or state ordinances, and other agencies having jurisdiction.

Provide electrical components which have been listed and labeled by Underwriter's Laboratories.

VALVES

All valves shall be especially prepared for the gas service and shall conform the NFPA 99. All valves shall be of ball-type, stainless steel or chrome plated brass ball, Teflon or neoprene seats, with double o-ring seal rated at not less than 400 psig, actuated from full "on" to full "off" by 90 degrees turn of valve handle. Valve handles shall be color coded to denote service. Remove internal parts of valves prior to brazing. Furnish with type "K" copper tube piping connection extensions.

STATION OUTLETS

All outlets shall be installed for concealed piping. Refer to medical gas piping layout for outlet locations, medical gas services and mounting heights.

Medical Gas wall outlets shall be gas specific for the services indicated and accept only corresponding, geometrically shaped quick-connect or DISS adapters. All outlets shall be UL listed, CSA certified and meet NFPA-99 Standard (formally NFPA 56F). All outlets shall be tested and cleaned for oxygen service prior to shipping. A complete outlet shall consist of a gas specific rough-in assembly for installation before walls are finished and a matching gas-specific finishing assembly consisting of a gas-specific latch valve assembly and cover plate for installation after walls are finished.

The rough-in assembly shall be of modular design and include a gas specific 16-gauge steel mounting plate designed to permit on-site ganging of multiple outlets in any order on 5" center line spacing. A machined brass outlet block shall be permanently attached to the mounting plate in such a manner to permit the 8" long, 3/8" O.D., type K copper inlet tube to be swiveled 360° for attachment to the piping system. Gas service identification shall be affixed to the inlet tube and the face of the mounting plate.

AUTOMATIC MANIFOLDS

System Design and specifications. Manifold systems cleaned, tested and prepared for the indicated gas service and shall be built in accordance with the National Fire Protection Association (NFPA 99), Compressed Gas Association, and Canadian Standards Association (CSA Z305.1-92) guidelines. The manifold shall consist of a

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manifold control and two supply bank headers, one service and one secondary supply, to provide an uninterrupted supply of gas for the specific gas application. The control shall be designed and built with features providing automatic changeover from the depleted "Service" supply bank to the "Reserve" (secondary) supply with no loss or drop in delivery pressure. All systems shall be monitored electrically and cabinet lights display which side is "in-service" and the status of the stand-by bank as "replace depleted cylinders" or "ready for use". A circuit board in the power supply box (rated NEMA 3R) isolates remote alarm terminals for hook-up to all remote alarms regardless of voltage (up to 3 amps 30 VDC or 2 amps 250 VAC). In event of power failure - solenoid valves automatically open to assure continued gas flow. The unit shall require no manual resetting of levers or valves. The only manual operation shall be the periodic replacement of empty cylinders.

All functional components shall be (regulators, pressure switches, and check valves) enclosed in a fiberglass reinforced polyester case approximately 19"H x 17"W x 9"D (NEMA rating 4X, 3, 12). Large hinged door permits easy maintenance.

TESTING

Pressure test in strict accordance with N.F.P.A. No. 56F shall be required. Specific attention is directed to the absolute prohibition of the use of oil pumped compressed air or oil pumped nitrogen, and the prohibition of the use of hydrostatic test. Testing medium shall be Water Pumped Compressed Air or Vapor Pumped Nitrogen, and testing cylinder must be so labeled.

A 24-hour standing pressure test with oil-free (water pumped) air or nitrogen at one and one-half times maximum working pressure, but in no case less than 150 psi, shall be made to final standing test, the system shall be thoroughly flushed with the gas to be used in the system to assure the removal of all air or nitrogen.

After installation of station outlet valves and completion of final pressure testing and flushing of the piping systems, the outflow from each medical gas outlet station shall be tested by the Plumbing Contractor, and medical gas equipment manufacturer's representative, using an analyzer to confirm the presence of the desired concentration.

Written certification to the Architect by the Plumbing Contractor and medical gas equipment manufacturer's representative of compliance with Sections 53 and 54 of N.F.P.A. Pamphlet No. 56F will be required. This Contractor shall bear all cost for gases, etc. required for testing.

The Contractor shall examine for leakage by means of soapy water using a soap solution mixed in the following proportions, one ounce of castile or palm oil soap, eight ounces of water and four ounces of glycerin. Dissolve the soap in water, add the glycerin and mix thoroughly. Wipe joints clean after testing. Should leaks occur, they shall be repaired and the section retested.

CIVIL

Item ADD3-C1: Sheet C603 – Utility Details

1. Revise the BJWSA Standard Detail. The lining is required for the wetwell and receiving MH.
2. Refer to attached Sheet.

Item ADD3-C2: Sheet C702 – Drainage Details

1. Revise the underdrain detail to add the location of the underdrains.
2. Refer to attached Sheet.

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Item ADD3-C3: Sheet C901 – Paving Plan

1. Revise the covered area (located near the Pump Station) to be Aggregate Paving in lieu of Gravel.
2. Refer to attached Sheet.

Item ADD3-C4: Sheet C902 – Paving Details

1. Revise details to show thickness of concrete paving base.
2. Refer to attached Sheet.

LANDSCAPE

1. None

STRUCTURAL

1. None

ARCHITECTURAL

Item ADD3-A1: Sheet AS200 – Covered Storage Elevations

1. Revise Keynotes 6.34 and 6.41 to be Keynote 6.49. Keynote description as shown on attached Sheet.
2. Revise Keynote 6.07 to read as shown on attached Sheet.
3. Refer to attached Sheet.

Item ADD3-A2: Sheet A501 – Wall Types and Typical Details

1. In Details 21 and 22, Revise lower work surface counter top to read “P-Lam Countertop”. Refer to Interior Elevations for finishes.
2. Refer to attached Sheet.

Item ADD3-A3: Sheet A601 – Frame Elevations

1. Frames F3, F4, F8, F9, F10, F11, F12, F13, F15, F16, F19, F20, F22, F23, F24, W8, W17 are to have 2” or 2 ½” tall sill frame in lieu of 8” sill frame as shown.
2. Revise Frame F17 as shown.
3. Refer to attached Sheet.

Item ADD3-A4: Sheet A612 – Frame Details

1. In Details 20 and 26, revise sill frame to be 2 ½” in height.
2. Refer to attached Sheet.

FIRE PROTECTION

1. None

PLUMBING

1. None

MECHANICAL

1. None

ELECTRICAL

Item ADD3-E1: Sheet E100 – Symbols and Schedules

1. Revise Lighting Schedule to add the following approved manufacturers:

A2	H.E. Williams LPT
A2F	H.E. Williams LPT
A3	H.E. Williams LPT
A4	H.E. Williams LPT
BS	H.E. Williams 75L
V1	H.E. Williams 96
WF2	H.E. Williams SLF
WLE-OPT1	H.E. Williams VWPH
WLE-OPT2	U.S Architectural Lighting RZR-WM2
EX	H.E. Williams EXIT/STEEL

Sincerely,



Patrick Orefice
PROJECT ARCHITECT

GLICK/BOEHM ARCHITECTURE

End of Addendum No. 1

SECTION 02315
EARTHQUAKE DRAINS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specifications, apply to this Section.
- B. Geotechnical report. Refer to Section 02 0000.

1.02 SCOPE OF WORK

- A. This section shall include but is not limited to providing all equipment, material, labor, supervision and related services for installation of Earthquake Drains in accordance with these specifications and other contract documents.
- B. Liquefaction mitigation by Earthquake Drains will be limited to the approximate areas as specified. In general, this consists of installing corrugated pipe with slot type perforations enclosed by a filter sock.
- C. Contractor is responsible for design of earthquake drain layout, spacing and depth. Refer to Geotechnical Report.

1.03 BID REFERENCE

- A. Earthquake Drain work shall be based on all applicable drawings, reports and specifications included in the contracts documents. This includes, but is not limited to the following:
 - 1. Foundation plan for the building shown on sheet S-101.
 - 2. All foundation and slab details shown on various sheets in the contract documents.
 - 3. Applicable Civil drawings showing existing and final grades and utilities.
 - 4. Geotechnical Report by ECS dated May 18, 2016.

1.04 CONTRACTOR QUALIFICATIONS

- A. The Earthquake Drain installation shall be performed by a Specialist Earthquake Drain Contractor with at least ten continuous years of documented experience in their installation. The specialist Contractor will be required to submit a list of projects of similar scope and purpose for approval. The list shall include a description of the project, relative size, and a contact person with phone number. The Specialist Contractor will provide experienced management, supervisory and key personnel as required to implement the Earthquake Drain program. The Specialist Contractor will submit, for approval, resumes of the management, supervisory, and key personnel to be engaged on this project. The project manager must have at least five years of continuous experience in Earthquake Drain installation and the superintendent shall have at least five years on experience both with at least the last three years in the employ of the Specialist Contractor.

1.05 SUBMITTALS

- A. The Contractor shall furnish a shop drawing for review prior to the work indicating the spacing and location of the Earthquake Drains to achieve the criteria outlined in the specification.
- B. A sample of the vertical drain shall be submitted for evaluation at least 21 days prior to installation. In addition, the Contractor shall submit details of the sequence and method proposed for the installation of the Earthquake Drains for the Geotechnical Engineer's review and approval. Approval shall not relieve the Contractor of the responsibility to install the Earthquake Drains in conformance with the plans and these specifications.

- C. A daily log shall be prepared by the Geotechnical Engineer. Such logs will include recording of drain number, start/finish time of installation, and depth of drain.
- D. Any change in the predetermined Earthquake Drain program necessitated by a change in the subsurface conditions will be immediately reported and submitted to the Geotechnical Engineer.
- E. The Contractor shall submit information on qualifications as listed in Section 1.04.

1.06 QUALITY CONTROL

- A. The earthquake drains shall be installed with equipment that will maintain the mandrel in a vertical position. The Contractor shall consider the subsoils at the site when selecting equipment and developing the earthquake drain installation plan. The equipment shall generate sufficient pressure necessary to install the earthquake drains through all existing subsurface material to the depths shown on the plans. The equipment shall have the capability of installing the earthquake drains to a depth of not less than four feet greater than the maximum earthquake drain depth shown on the plans

PART 2 – PRODUCTS

2.01 MATERIALS

- A. Pipe shall have an annular-corrugated interior and exterior. Three through 8 inch pipe shall meet the requirements of ASTM F-405. All pipe sizes shall also meet the requirements of SCS 806. Pipe material shall be high-density polyethylene (HDPE) meeting the requirements of ASTM D3350 Cell Classification 324420C; or ASTM D 1248 Type III, Class C, Category 4, Grade P33. Pipe splices shall be in a workmanlike manner, so as to assure concentricity and continuity of the pipe conduit.
- B. The filter fabric sock shall be non-woven and made of thermally spunbonded polypropylene with a minimum weight of 3.4oz/yd², maximum apparent opening size (AOS) of 0.21mm, minimum grab strength of 100lbs. The vertical drain shall not be exposed to sunlight for more than 72 hours.

PART 3 EXECUTION

3.01 SITE PREPARATION

- A. The General Contractor shall ensure firm base on which heavy equipment can be operated without platform maintenance.
- B. The General Contractor shall accurately locate footing location and underground utilities prior to start of Earthquake Drain work.
- C. After initial rough grading of the treatment area, the General Contractor shall accurately layout grid lines for use by the Specialist Contractor to locate drain location based on the shop drawings generated by the Specialist Contractor.

3.02 EQUIPMENT AND PROCEDURES

- A. Specific equipment and procedural specifications are left to the Specialist Contractor performing the Earthquake Drain installation work to achieve the specified criteria. However, the following general guidelines shall be used.
 - 1. The prefabricated vertical drains shall be installed using a mandrel that will be advanced through the soil to the required depth. The installation rig shall utilize a vibrator with an eccentric moment of at least 500 in-lbs. to apply vertical vibration to the mandrel during installation. The mandrel shall protect the drains and filter sock from tears, cuts, and

- abrasions during installation and shall be retracted after each drain is installed.
2. A drain may be abandoned before reaching design penetration if the rate of mandrel movement is less than 3 inches per second with the full static force and maximum vibrator output. Falling weight impact hammers or jetting will not be allowed to install vertical drains. Where obstructions are encountered which cannot be penetrated the Contractor shall notify the Geotechnical Engineer. At the direction of the Geotechnical Engineer the Contractor shall then install a new drain within 18 inches of the obstructed drain.
 3. Equipment for installing vertical drains shall be plumbed prior to each drain and shall not be deviated from the vertical by more than 1 inch per foot during installation. The location of the drains shall not vary by more than 6 inches from the locations indicated on the plan or as directed by the Geotechnical Engineer.
 4. The Contractor shall provide a suitable means for the Geotechnical Engineer to determine the depth of the drain at any given time.

3.03 TESTING AND INSPECTION

- A. All testing to determine specification compliance will be provided by the Geotechnical Engineer and paid for by the owner. The Geotechnical Engineer of record on this project is ESC. IBC 2015 Chapter 17 Special Instructions are required for this project.

3.04 COMPLETION REPORT

- A. Upon completion of the Earthquake Drain work, the Geotechnical Engineer will prepare a report stating to the owner the observations and stating that based on the results of the inspections and testing, the Earthquake Drains have been installed in conformance with the requirements of the specifications.

END OF SECTION

SECTION 31 20 00

EARTHWORK

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Preparation of subgrade for building slabs, walks, and pavements;
 - 2. Performing all grading, excavation, filling and compaction operations;
 - 3. Remove and replace topsoil;
 - 4. Finish grading, including shoulders and banks.

- B. Excavation and backfilling of trenches for water, sewer, storm drains and other utility lines is not included in this section but may be found in Section 31 23 23, Trenching, Backfilling for Utilities.

- C. Related Sections:
 - 1. Section 31 10 00 – Site Clearing
 - 2. Section 31 23 23 – Trenching, Backfilling For Utilities
 - 3. Section 31 25 00 – Erosion Control
 - 4. Section 32 11 23 – Aggregate Base Course
 - 5. Section 32 12 16 – Hot Mixed Asphalt Pavement
 - 6. Section 32 13 13 – Portland Cement Concrete Pavement, Sidewalk, Curb, and Gutter

1.2 REFERENCES

- A. American Society of Testing and Materials (ASTM):
 - 1. ASTM C136 - Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.
 - 2. ASTM D1556 - Standard Test Method for Density of Soil in Place by the Sand-Cone Method.
 - 3. ASTM D1557 - Standard Test Method for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft³ (2,700 kN-m/m³)).
 - 4. ASTM D2487 - Standard Classification of Soils for Engineering Purposes (Unified Soil Classification System)
 - 5. ASTM D2922 - Standard Test Method for Density of Soil and Soil-Aggregate in Place by Nuclear Methods (Shallow Depth).
 - 6. ASTM D3017 - Standard Test Method for Water Content of Soil and Rock in Place by Nuclear Methods (Shallow Depth).

1.3 DEFINITIONS

- A. Subgrade: The undisturbed earth or the compacted soil layer immediately below granular base course, subbase course, drainage fill, structure foundations or topsoil materials.

- B. Structure: Buildings, foundations, slabs, tanks, curbs, or other man-made stationary features occurring above or below ground surface.

1.4 SUBMITTALS

- A. Section 010000 - General Requirements: Submittal Procedures:.

- B. Samples: Furnish samples of fill material to testing laboratory.

- C. Materials Source: Furnish information to Engineer identifying source for all fill materials. Include location of borrow areas.
- D. Test Reports:
 - 1. Laboratory test reports for all materials proposed for use in embankments or backfill.
 - a. sieve analysis
 - b. moisture/density curves
 - c. optimum moisture analysis
 - 2. Field test reports:
 - a. In-place density tests
 - b. Moisture content

PART 2 PRODUCTS

2.1 SOILS

- A. Satisfactory soil materials are defined as those complying with ASTM D2487-00 soil classification groups GW, GP, GM, SM, SW, and SP. Soils classified as SM-SP with not more than 15% passing the #200 sieve may be considered acceptable.
- B. Unsatisfactory soil materials are defined as those complying with ASTM D2487 soil classification groups GC, SC, ML, MH, CL, CH, OL, OH, and PT. Clays, silts and organic soils will be considered unsatisfactory.

PART 3 EXECUTION

3.1 EXCAVATION

- A. Excavate topsoil to the depths indicated on the plans and place in stockpile on site.
- B. Excavation is unclassified and includes excavation to subgrade elevations indicated, regardless of character of materials and obstructions encountered.
- C. Unauthorized excavation consists of removal of materials beyond indicated subgrade elevations shown on the Drawings or directed by the Engineer.
 - 1. Material removed by unauthorized excavation shall be replaced with suitable material.
 - 2. No payment will be made for unauthorized excavation or the replacement of material removed by unauthorized excavation.
- D. Satisfactory excavated material may be transported directly to and placed in fill areas within the limits of the work, subject to the requirements for moisture control as specified in subsequent sections of this specification. Stockpiling of satisfactory excavated material for later placement in fill areas on the site may be permitted subject to approval by the Engineer. No additional payment will be made for moving satisfactory material into or out of stockpiles. No satisfactory material shall be removed from the site without the express permission of the Owner.
- D. Unsatisfactory material shall be transported directly off-site to a suitable disposal area.
- E. Additional Excavation:
 - 1. Unsatisfactory material encountered at subgrade in areas to be paved shall be excavated to a minimum of 2 feet below finished subgrade and replaced with

satisfactory material from on-site or borrow excavations. As indicated in the geotechnical report, due to the uncertainty of the existing site soils, excavation and disposal of 1.5 feet (in addition to topsoil removal) of unsuitable material under the floor slab, sidewalks, and pavements should be assumed prior to construction. Actual amount of removal required to be field determined by Geotechnical Engineer based on field testing and observation. The Contractor to field measure all unsuitable materials removed and provide as-built survey of actual quantities.

2. Provide unit price of muck and fill (\$/cubic yard) at time of bid. Unit price will be used to determine cost of required excavation if different from above. Actual amount of removal required to be field determined by Geotechnical Engineer based on field testing and observation.
 3. When excavation has reached required subgrade elevations, notify Engineer, who will make an inspection of conditions. If Engineer determines that bearing materials at required subgrade elevations are unsuitable, continue excavation until suitable bearing materials are encountered and replace excavated material as directed by Engineer.
- F. Slope sides of excavations to comply with local codes, ordinances, and requirements of agencies having jurisdiction. Shore and brace where sloping is not possible because of space restrictions or stability of material excavated. Maintain sides and slopes of excavations in safe condition until completion of backfilling.

3.2 DEWATERING

- A. Prevent surface water and subsurface or ground water from flowing into excavations and from flooding project site and surrounding area.
- B. Do not allow water to accumulate in excavations. Remove water to prevent softening of foundation bottoms, undercutting footings, and soil changes detrimental to stability of subgrades and foundations. Provide and maintain pumps, well points, sumps, suction and discharge lines, and other dewatering system components necessary to convey water away from excavations.
- C. Establish and maintain temporary drainage ditches and other diversions outside excavation limits to convey rain water and water removed from excavations to collecting or runoff areas. Do not use trench excavations as temporary drainage ditches.

3.3 STORAGE OF EXCAVATED MATERIALS

- A. When the Contractor's operations necessitate stockpiling acceptable excavated materials for later placement in fills, locate stockpiles at a location acceptable to Owner. Grade, and shape stockpiles for proper drainage.
- B. Locate and retain soil materials away from edge of excavations. Do not store within drip line of trees indicated to remain.

3.4 PLACEMENT

- A. Ground Surface Preparation: Remove vegetation, debris, unsatisfactory soil materials, obstructions, and deleterious materials from ground surface prior to placement of fills. Do not place backfill or fill material on surfaces that are muddy, frozen, or contain frost or ice. Plow strip, or break up sloped surfaces steeper than 1 vertical to 4 horizontal so that fill material will bond with existing surface.

- B. When existing ground surface has a density less than that specified under "Compaction" for particular area classification, break up ground surface, pulverize, moisture-condition to optimum moisture content, and compact to required depth and percentage of maximum density.
- C. Place backfill and fill materials in layers not more than 8 inches in loose depth for material compacted by heavy compaction equipment, and not more than 4 inches in loose depth for material compacted by hand-operated tampers.
- D. Place backfill and fill materials evenly adjacent to structures, piping, or conduit to required elevations. Prevent wedging action of backfill against structures or displacement of piping or conduit by carrying material uniformly around structure, piping, or conduit to approximately same elevation in each lift.
- E. Control soil and fill compaction, providing minimum percentage of density specified for each area classification. Correct improperly compacted areas or lifts as directed by Engineer.

3.5 COMPACTION

- A. Moisture Control:
 1. Moisture tempering of the soils used for embankment/fills/backfill shall be the responsibility of the Contractor. No additional payment will be made for moisture tempering of soils.
 2. Embankment/fill material shall be within +/- 4 percent of optimum moisture content before rolling to obtain the prescribed compaction. In order to achieve uniform moisture content throughout the layer, wetting or drying of the material and manipulation shall be required when necessary.
 3. The Contractor shall make the necessary corrections and adjustments in methods, materials or moisture content in order to achieve the correct density.
- B. Compaction Requirements: Compact soil to not less than the following percentages of maximum density as determined in accordance with ASTM D1557 (modified effort) in the areas indicated:
 1. Under structures, building slabs and steps, curbs/gutters, and pavements, compact top 24 inches of subgrade to 98 percent of maximum density. Compact soils below the top 24 inches to a density of 95 percent of maximum density.
 2. Under lawn or unpaved areas (lagoon banks), compact top 12 inches of subgrade in cut areas and each layer of backfill or fill material to 90 percent maximum density;
 3. Under walkways, compact top 12 inches of subgrade to 98 percent maximum density. Layers below the top 12 inches may be compacted to 95 percent maximum density;

3.6 FINISH GRADING

- A. General: Finish grading includes the placing of topsoil in areas outside the building lines or paved areas as indicated on the drawings.
- B. Uniformly grade areas within limits of grading, including adjacent transition areas and any areas disturbed by Contractor's operations. Smooth finished surface within specified tolerances, compact with uniform levels or slopes between points where elevations are indicated or between such points and existing grades.

- C. Grading Outside Building Lines: Grade areas adjacent to building lines to drain away from structures and to prevent ponding. Finish surfaces free from irregular surface changes and as follows:
 - 1. Lawn or Unpaved Areas: Finish areas to receive topsoil to within not more than 0.10 foot above or below required subgrade elevations;
 - 2. Walks: Shape surface of areas under walks to line, grade, and cross-section, with finish surface not more than 0.10 foot above or below required subgrade elevation;
 - 3. Pavements: Shape surface of areas under pavement to line, grade, and cross-section, with finish surface not more than 1/2 inch above or below required subgrade elevation.
- D. Compaction: After grading, compact subgrade surfaces to the depth and indicated percentage of maximum or relative density for each area classification.
- E. Topsoil Placement:
 - 1. Place topsoil on all finish graded areas outside building lines and outside of paved or other surfaced areas
 - 2. Loosen subgrade to a minimum depth of 4 inches. Remove stones measuring over 1 1/2 inches in any dimension. Remove sticks, roots, rubbish and other extraneous matter. Limit preparation to areas which will be planted after preparation.
 - 3. Spread top soil to minimum depth of 4" or as indicated on the plans over all disturbed areas and lightly roll.

3.7 FIELD QUALITY CONTROL

- A. Quality Control Testing During Construction: Allow testing service to inspect and approve each subgrade and fill layer before further backfill or construction work is performed.
 - 1. Perform field density tests in accordance with ASTM D1556 or ASTM D2922.
 - 2. Building Pads: Perform at least two field density tests for every 2,000 square feet (SF) or portion thereof for each layer placed and for finished subgrade.
 - 3. Streets and roadways: Perform at least one field density test for every 200 linear feet, alternating lanes, for each layer placed and for finished subgrade.
 - 4. Parking fields: Perform at least one field density test for every 4800 square feet , or portion thereof, for each layer placed and for finished subgrade.
 - 5. Curb and Gutter: Perform at least one field density tests for every 300 linear feet (LF) or portion thereof for each layer placed and for finished subgrade.
 - 6. If in the opinion of the Engineer, based on testing service reports and inspection, subgrade or fills that have been placed are below specified density, perform additional compaction and testing until specified density is obtained.

3.8 PROTECTION AND MAINTENANCE OF FINISHED WORK

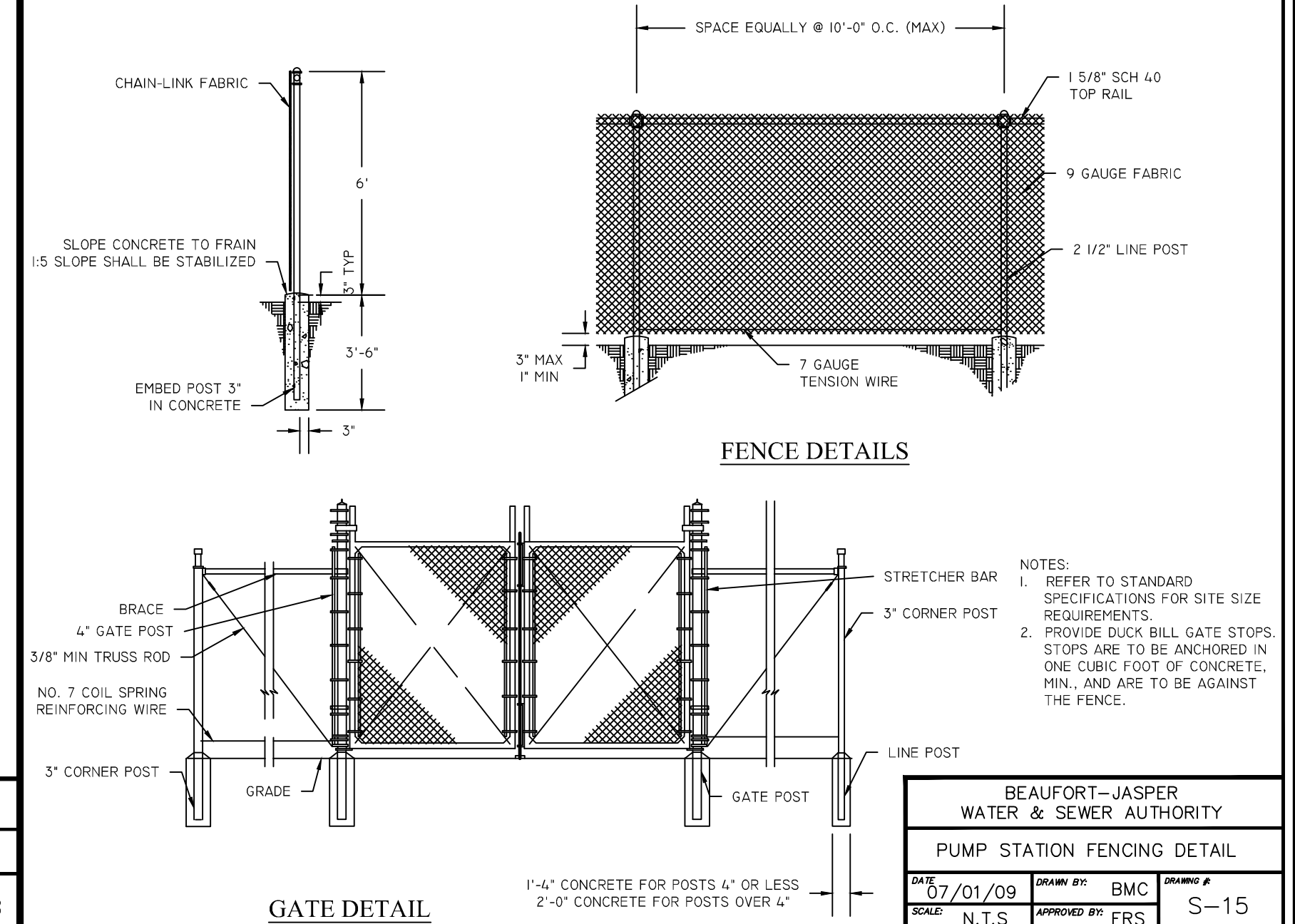
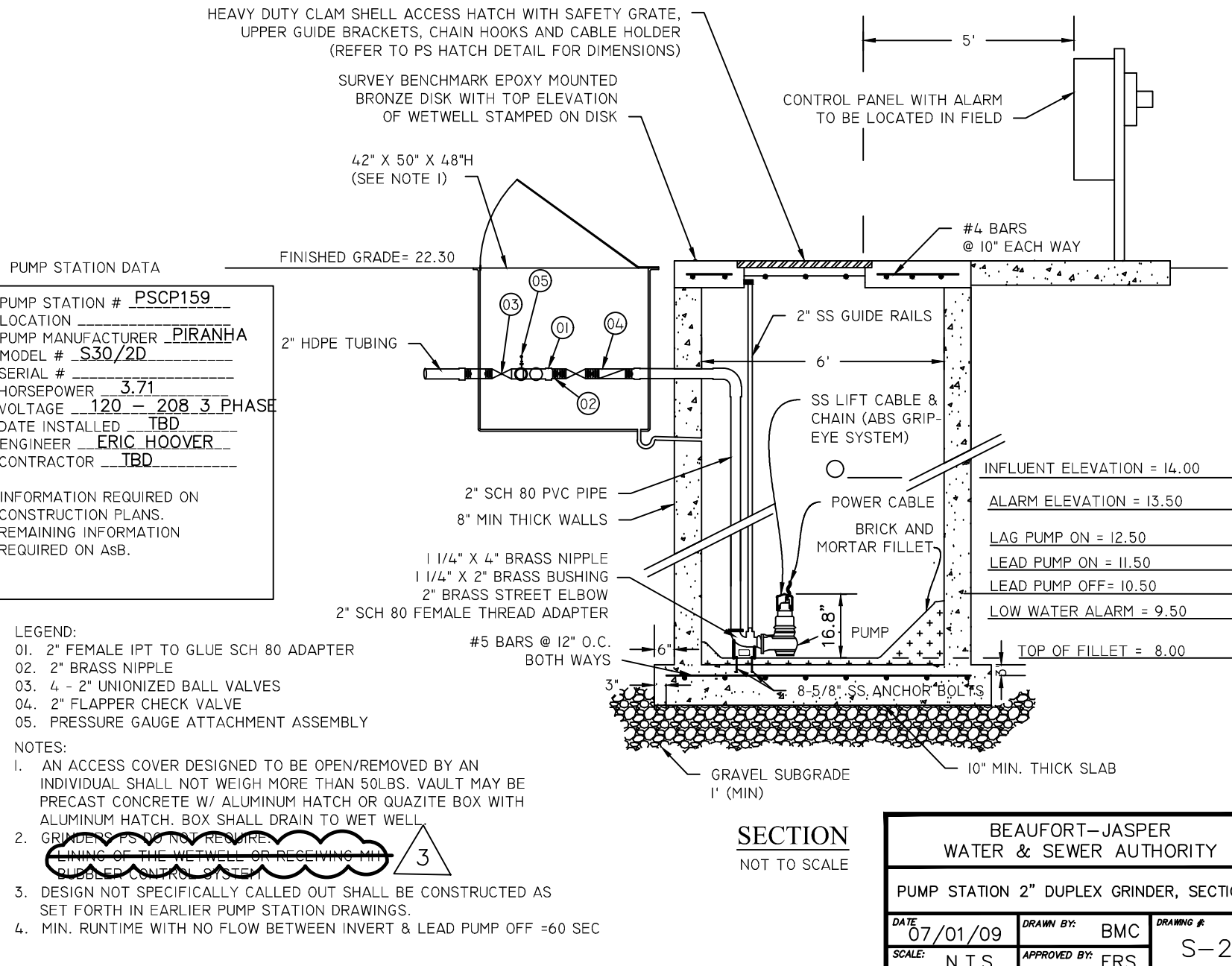
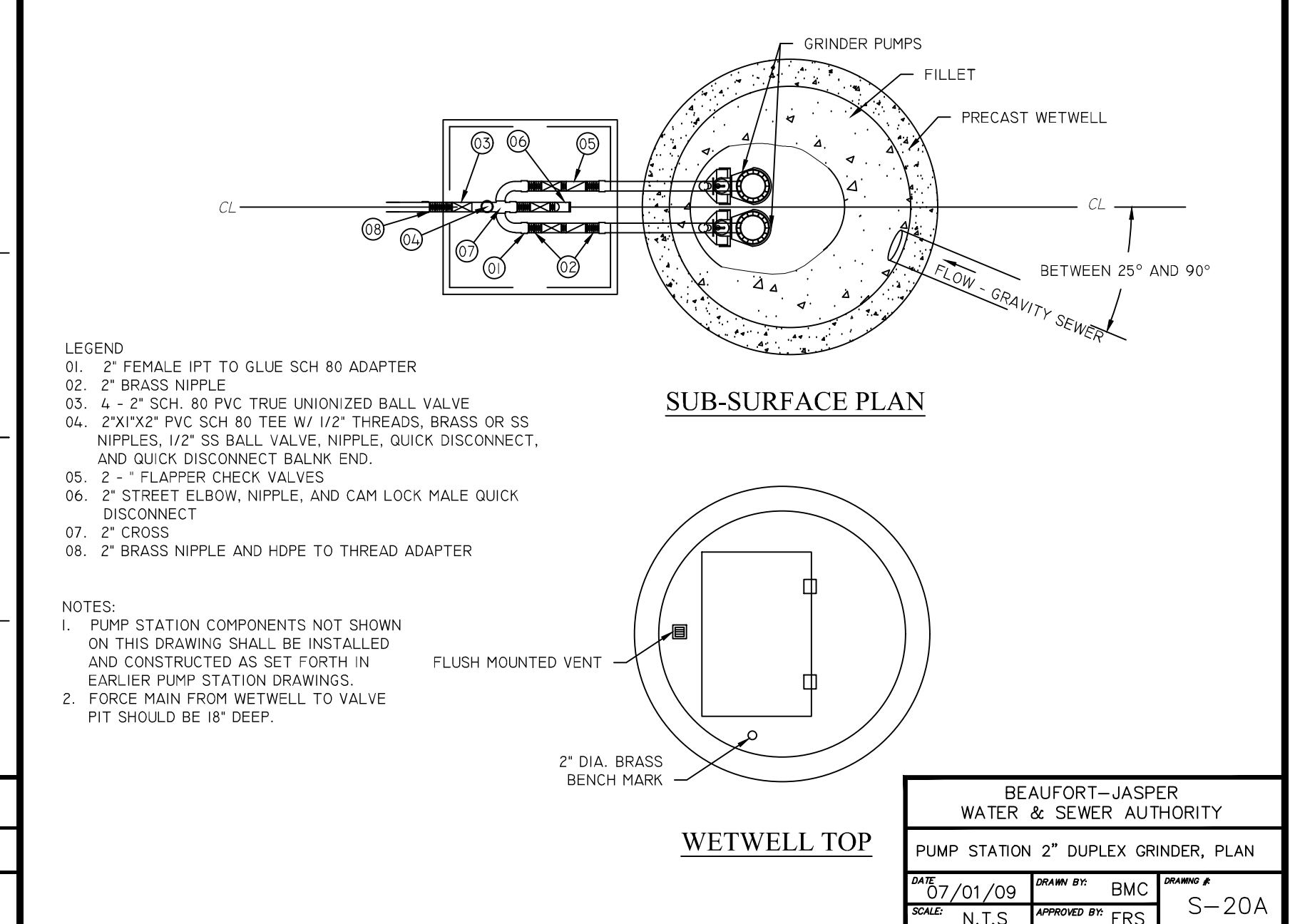
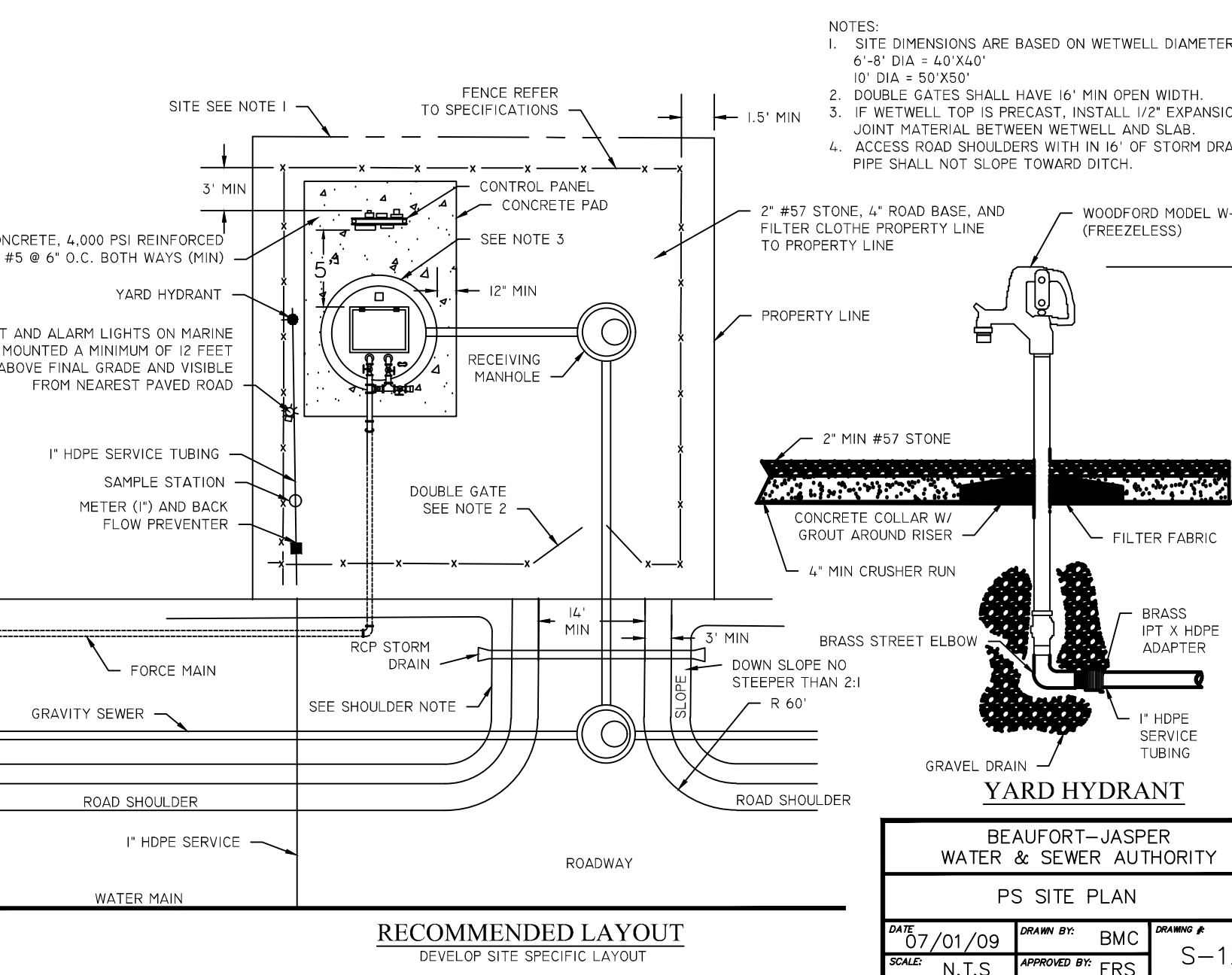
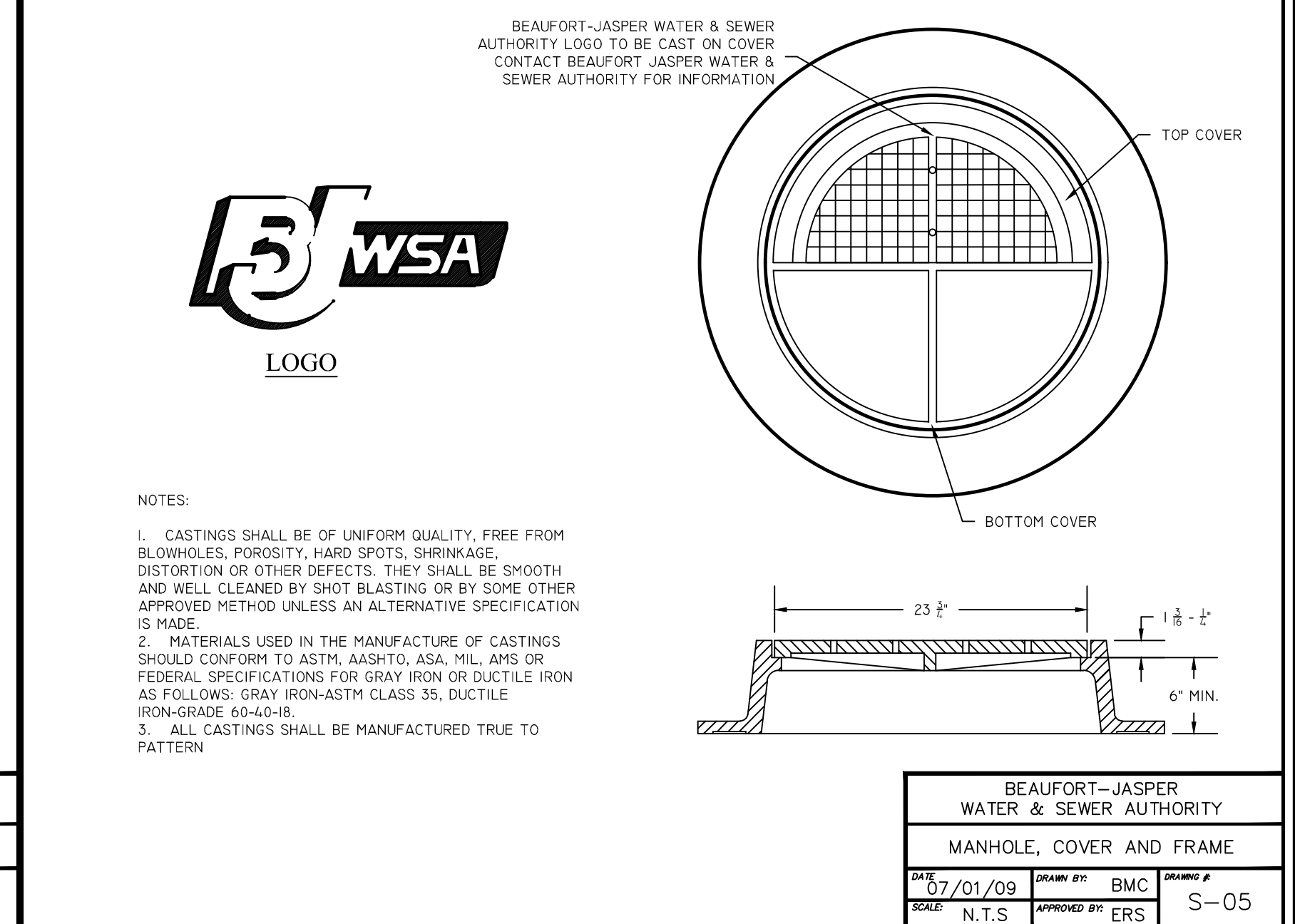
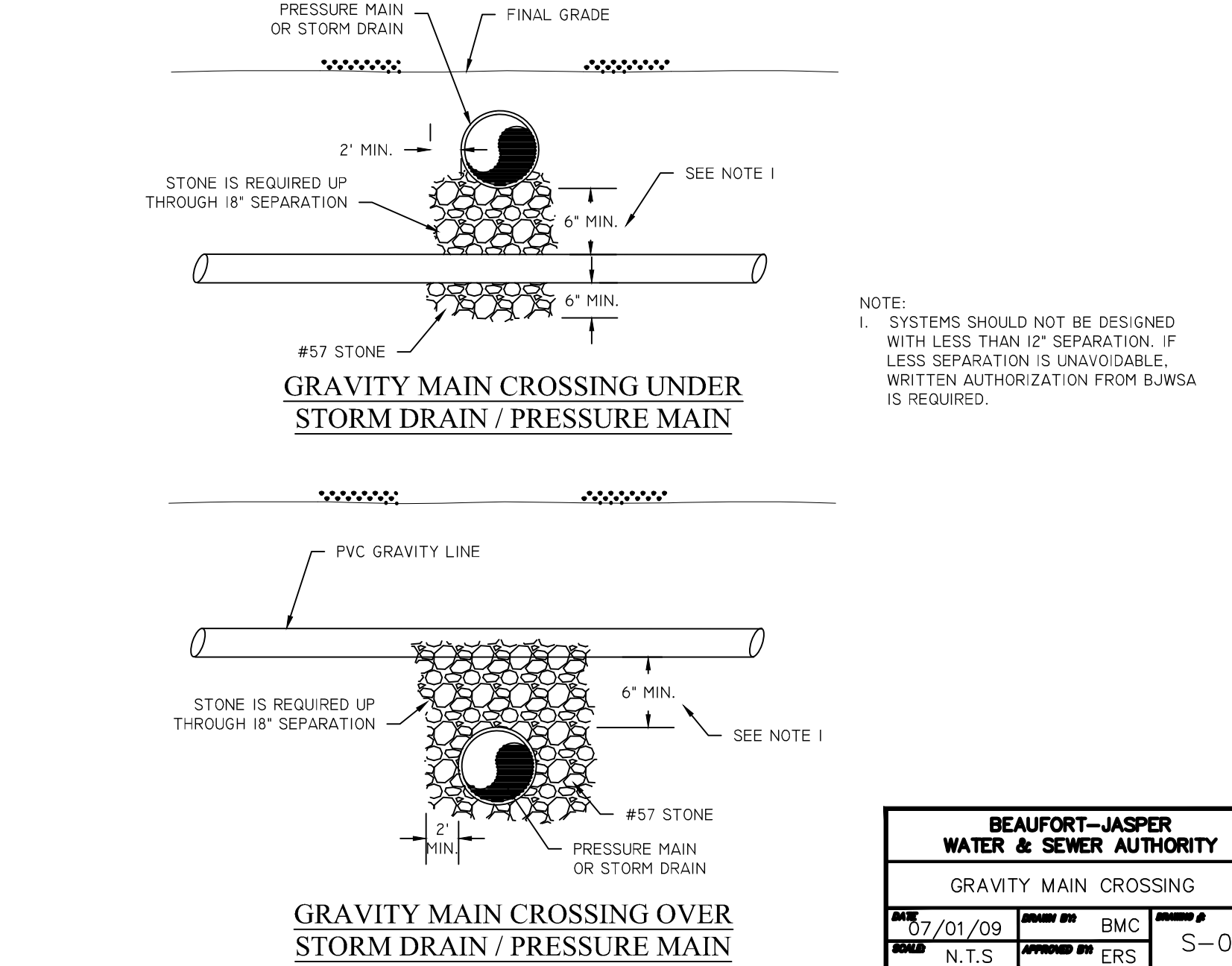
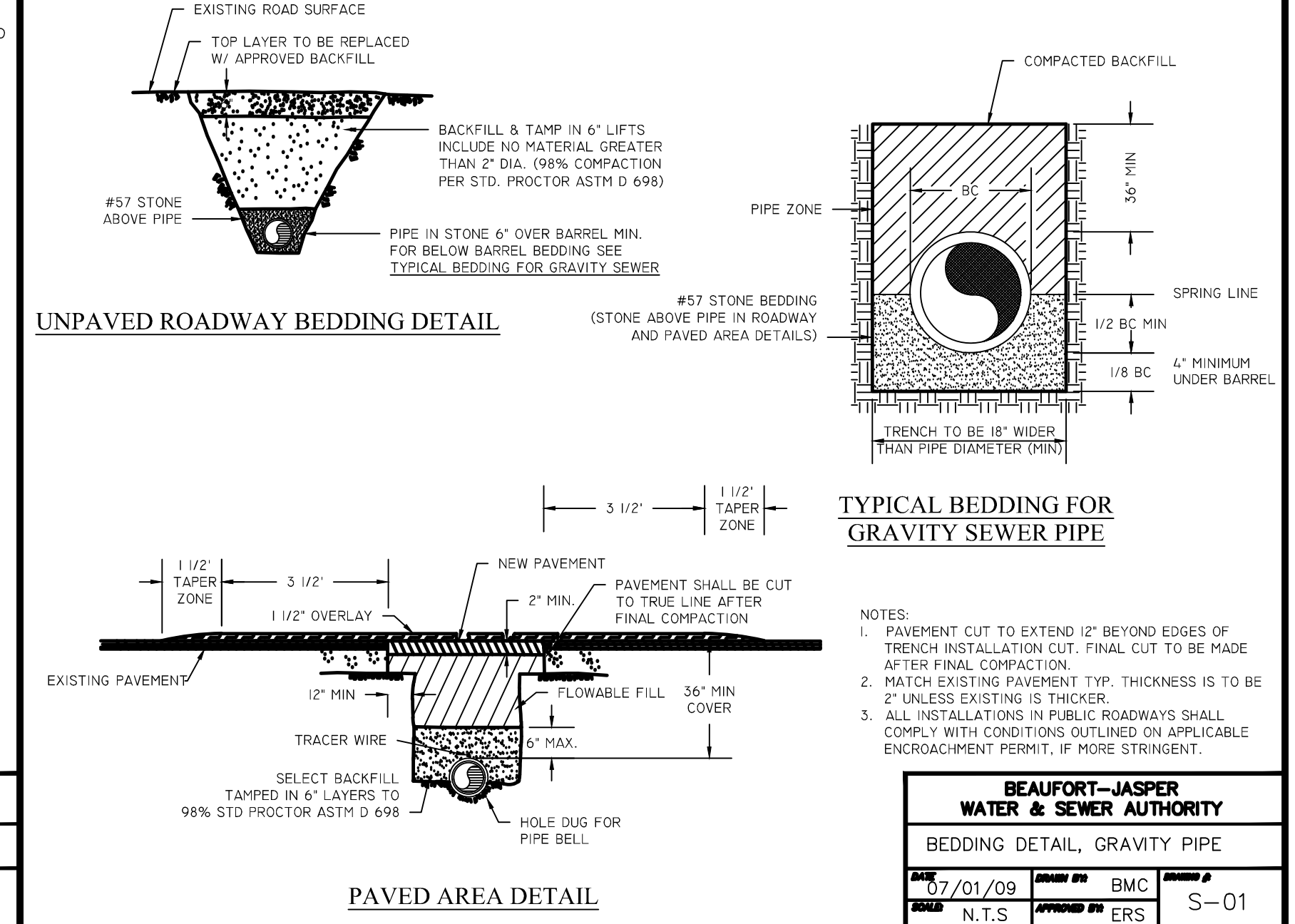
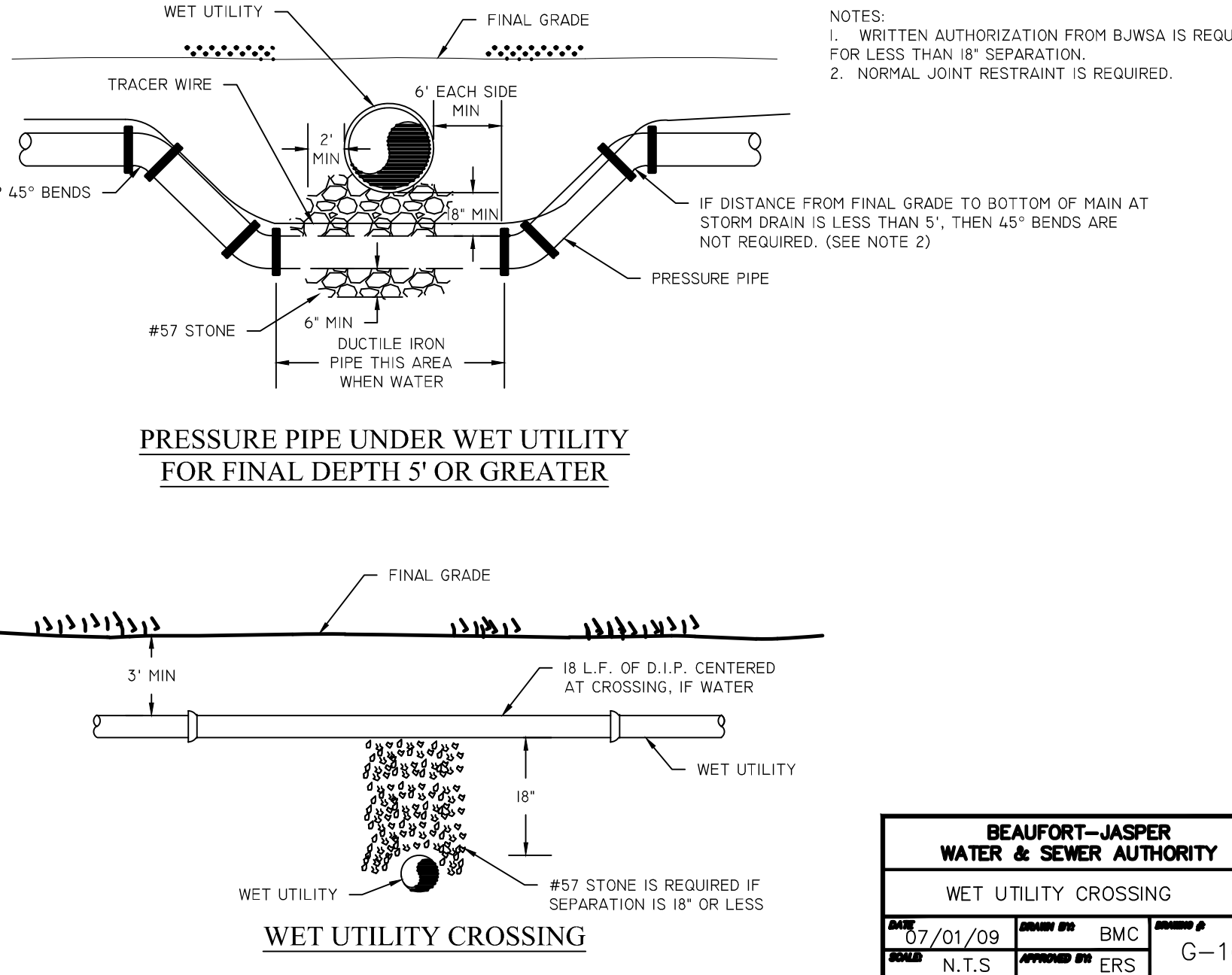
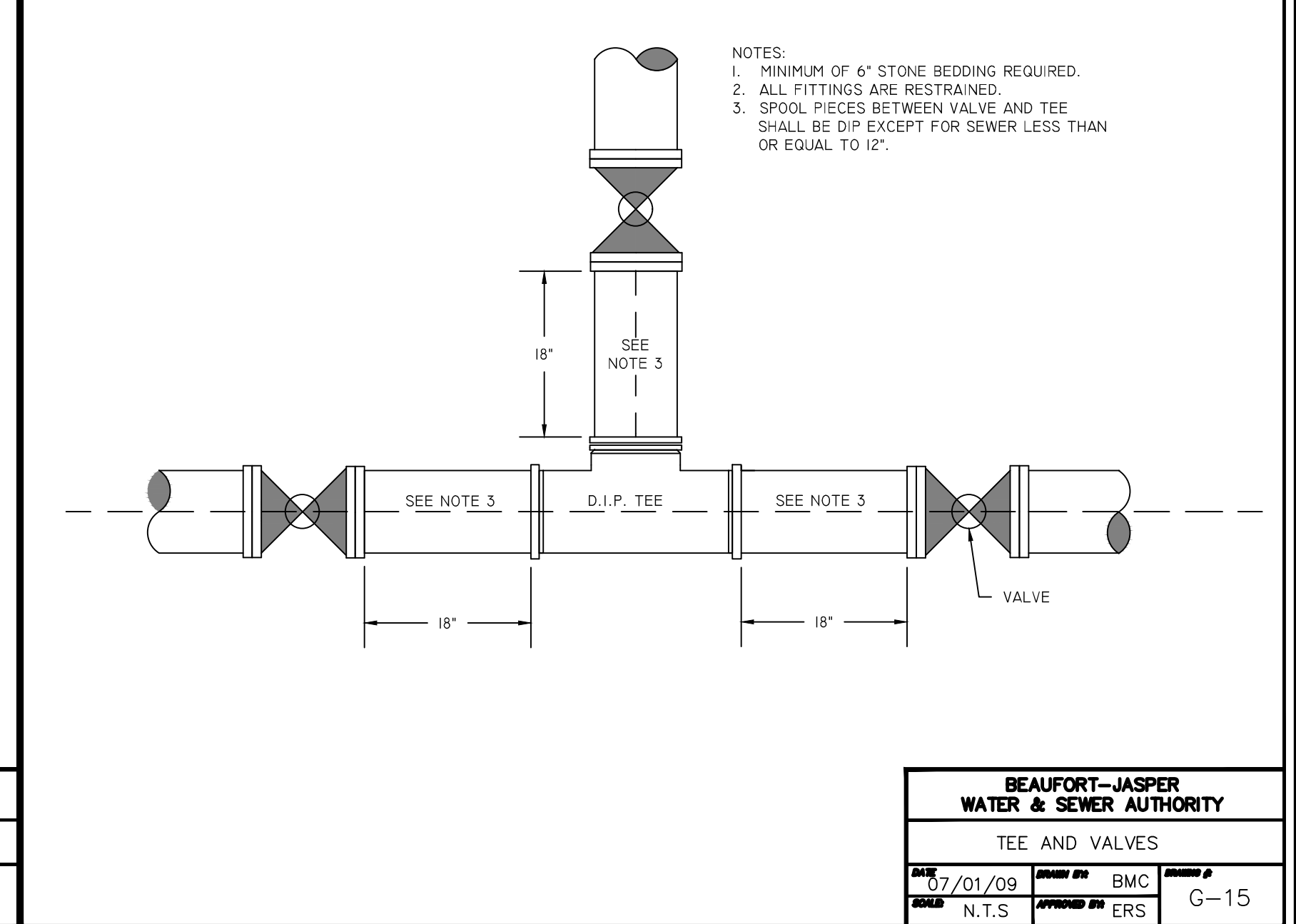
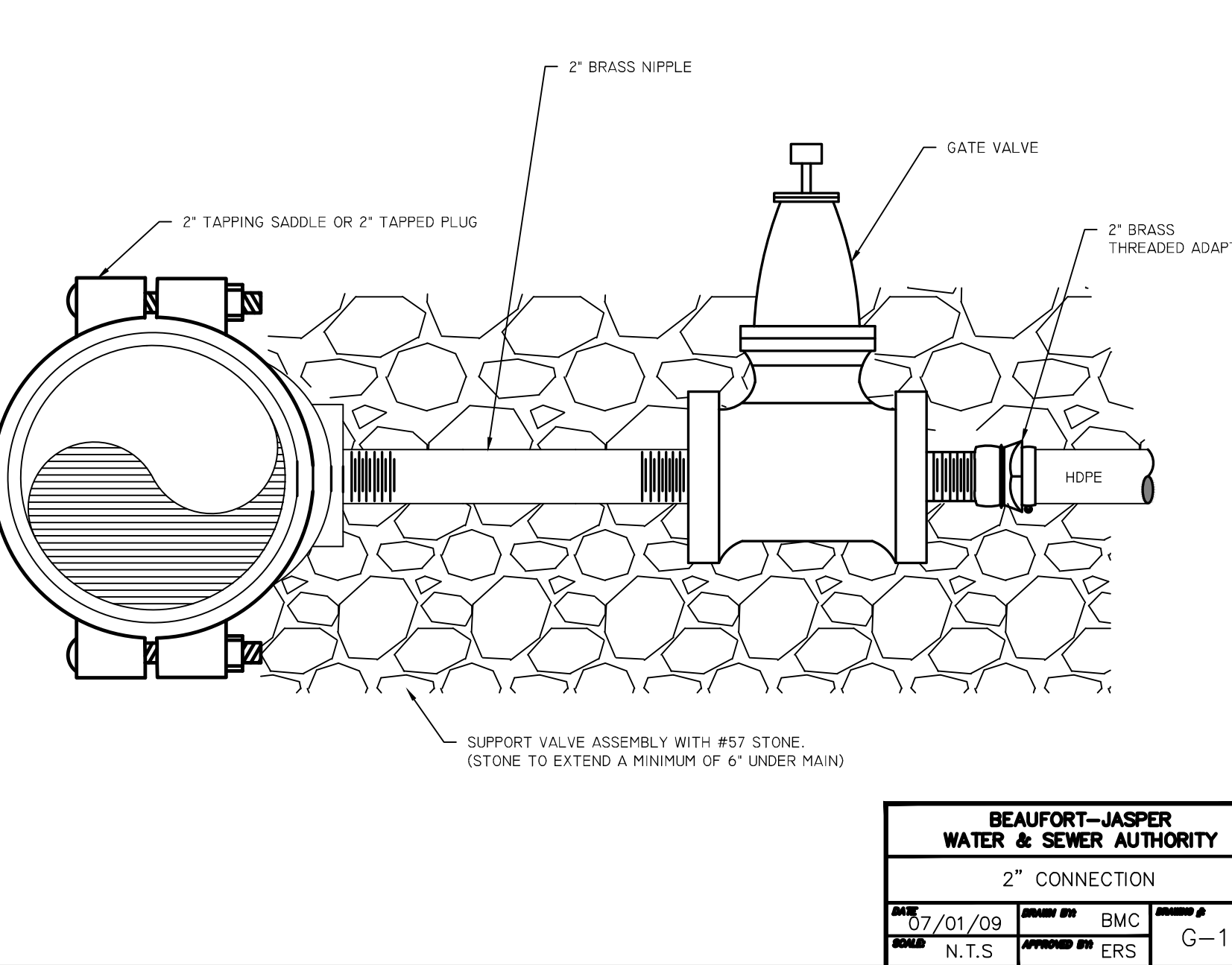
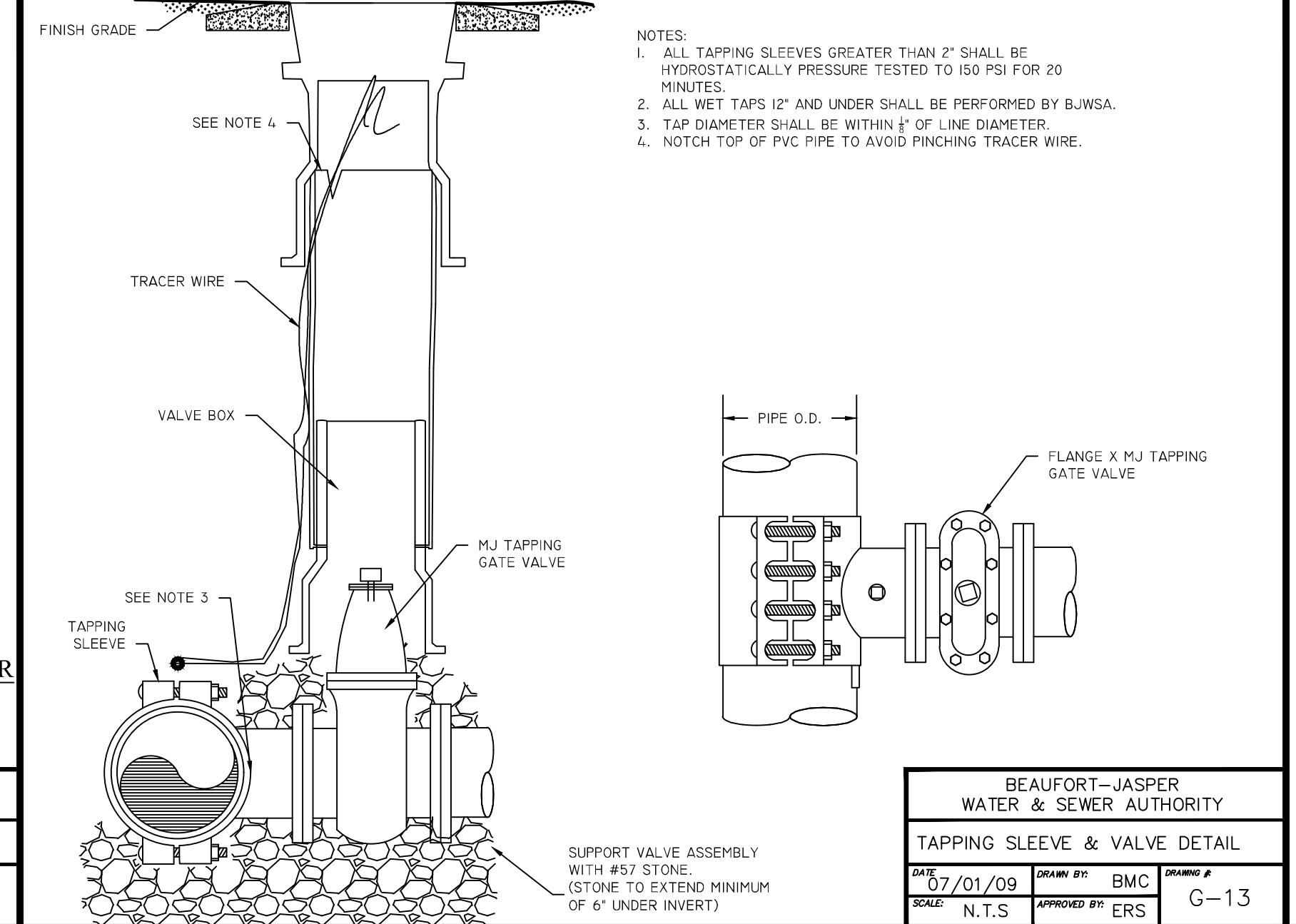
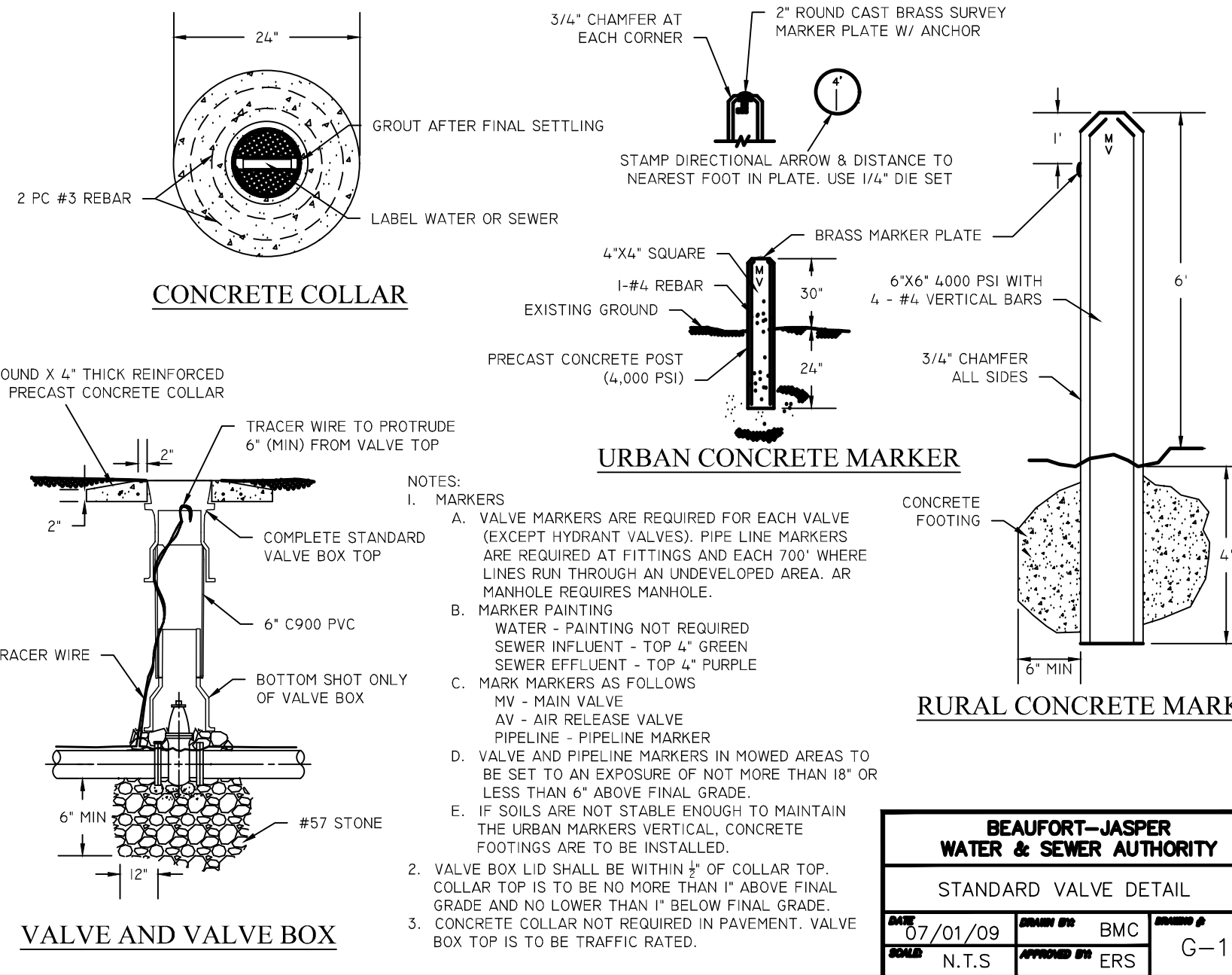
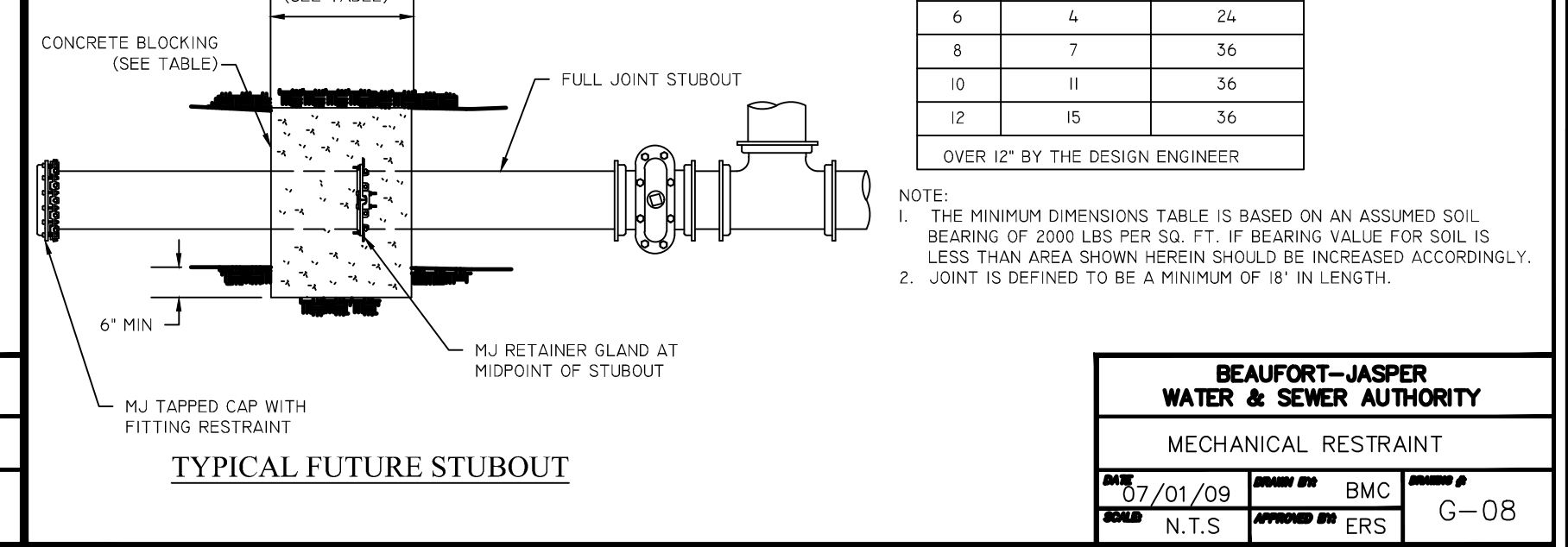
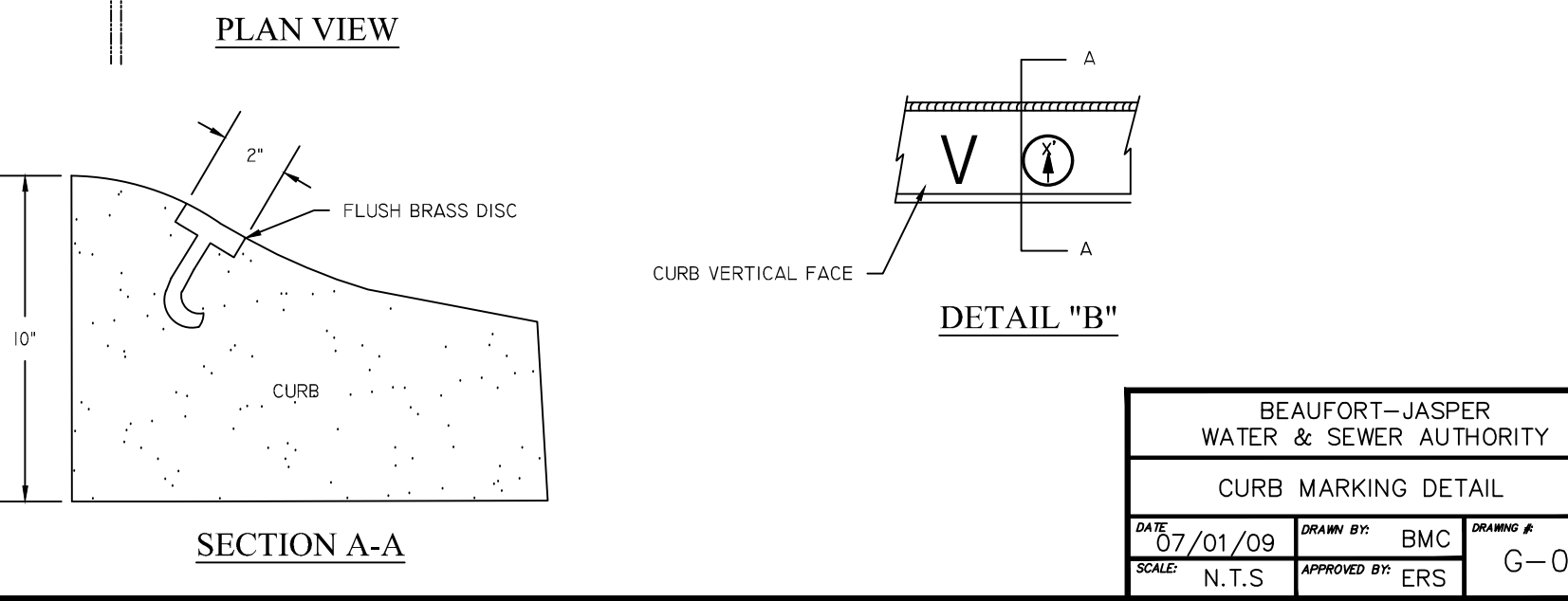
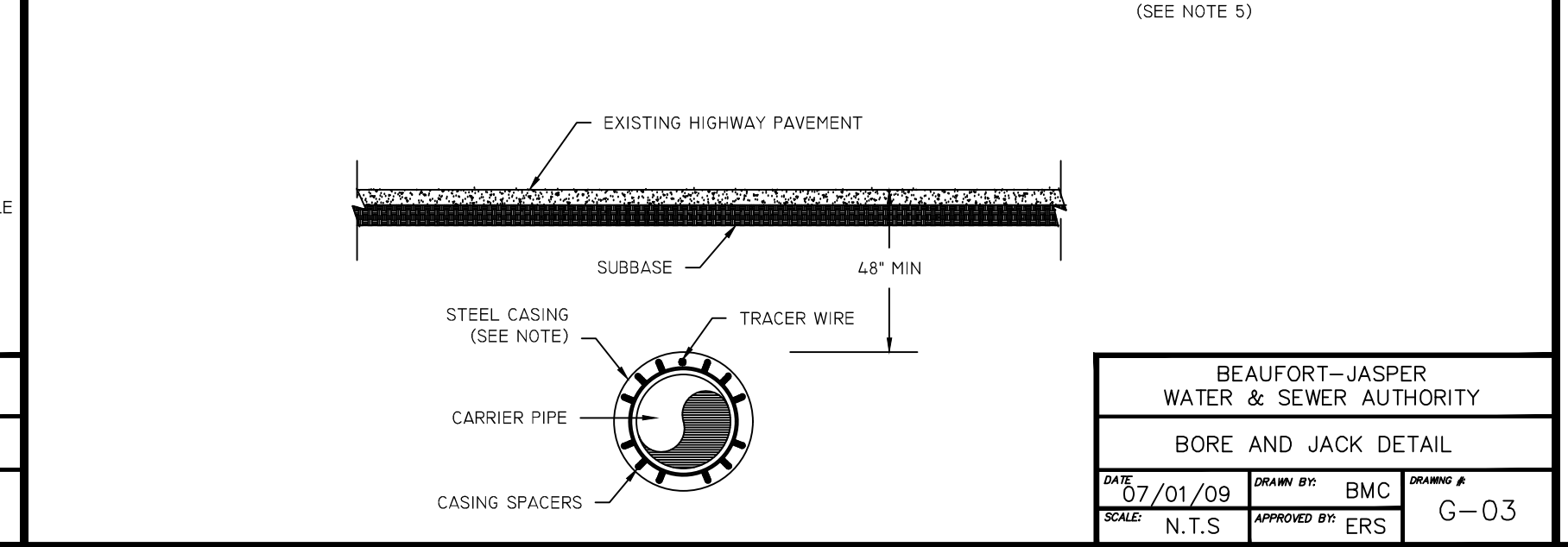
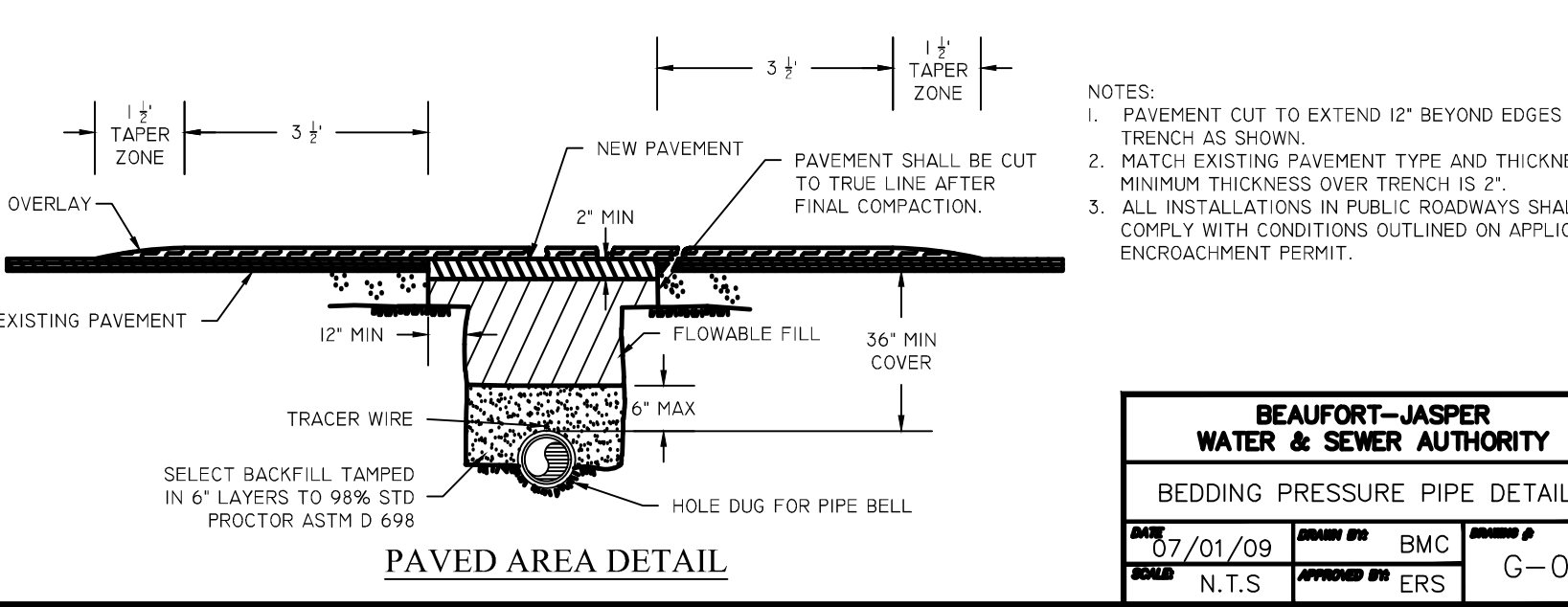
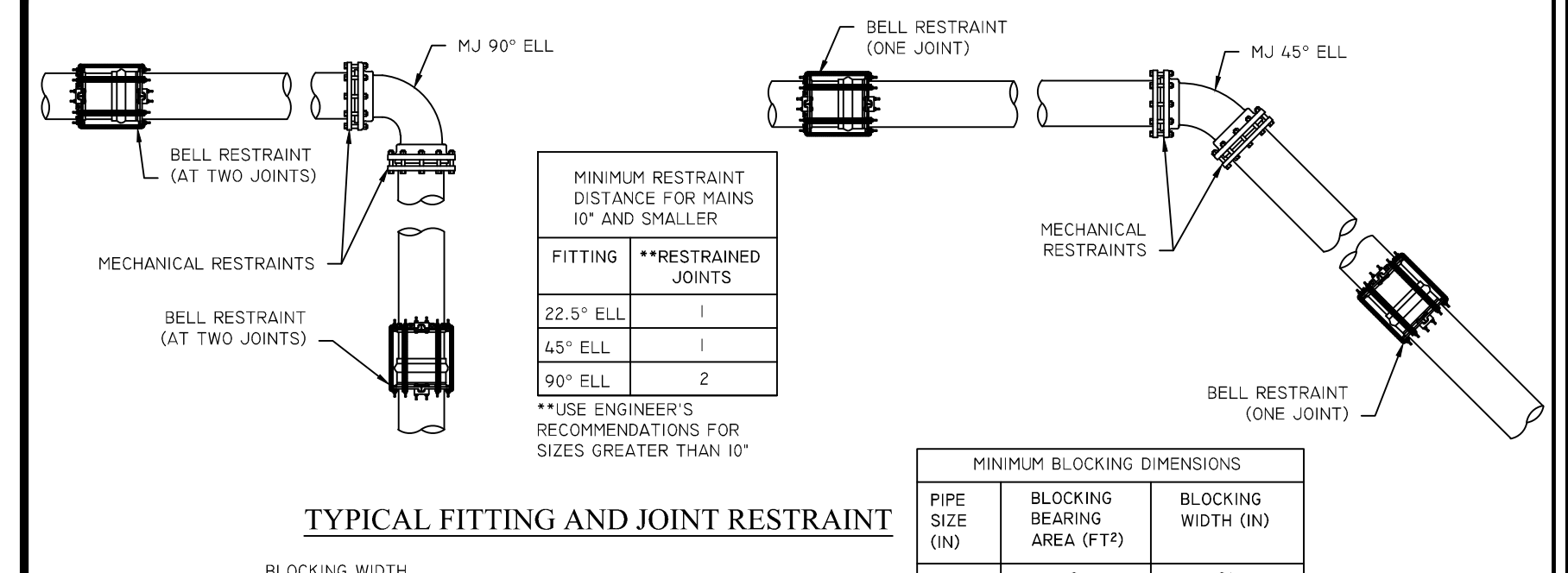
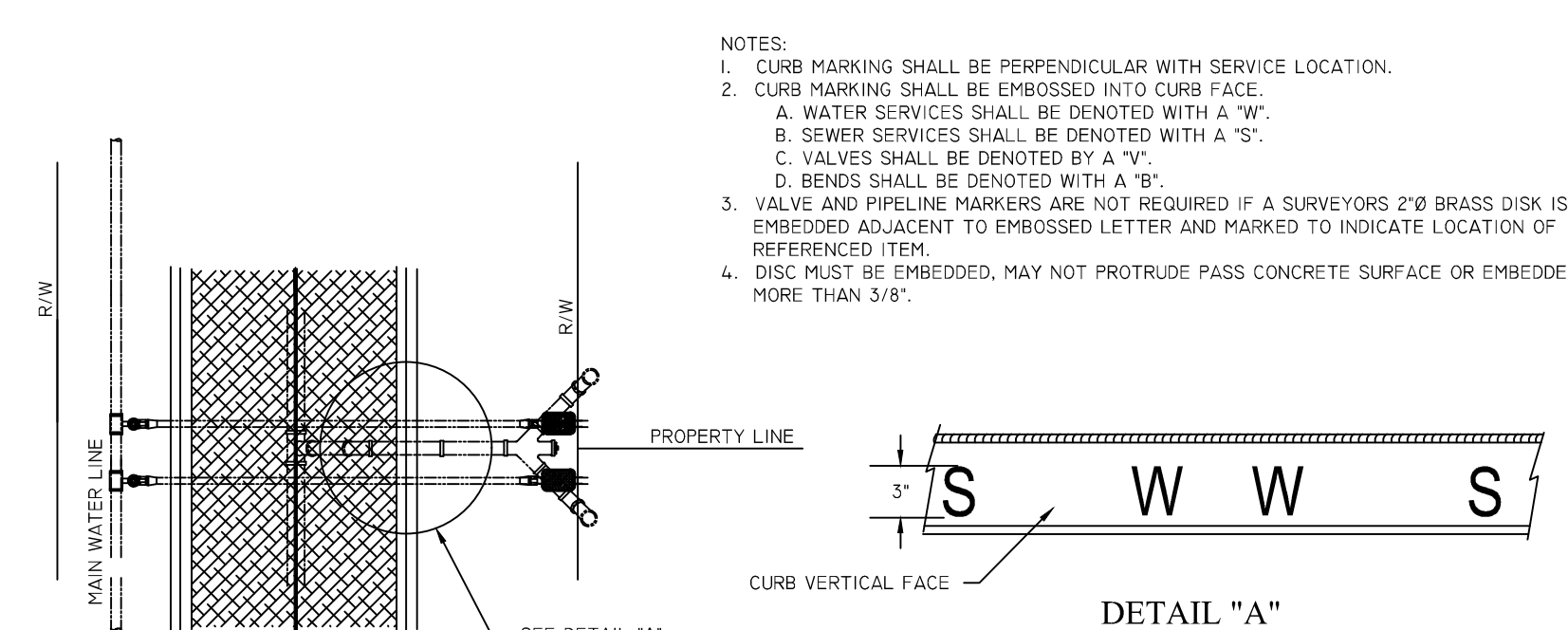
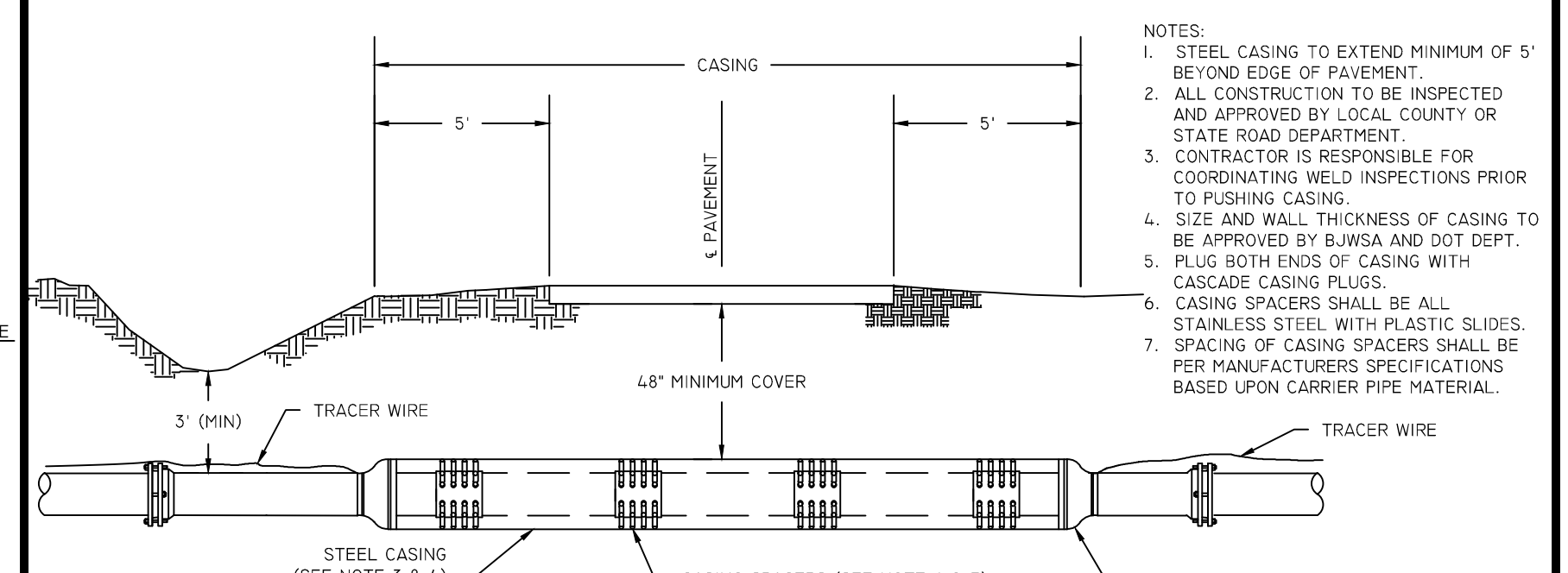
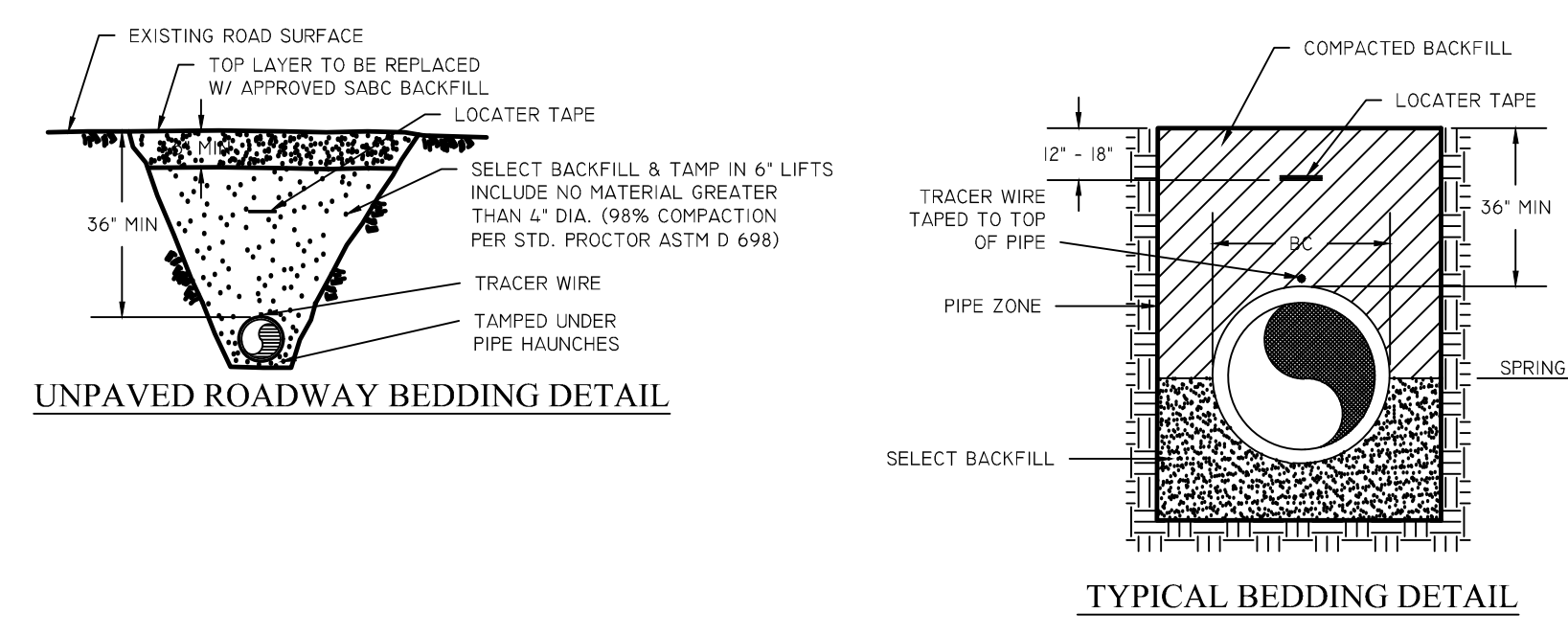
- A. Protection of Graded Areas: Protect newly graded areas from traffic and erosion. Keep free of trash and debris.
- B. Repair and reestablish grades in settled, eroded, and rutted areas to specified tolerances.
- C. Reconditioning Compacted Areas: Where completed compacted areas are disturbed by subsequent construction operations or adverse weather, scarify surface, reshape, and compact to required density prior to further construction.
- D. Settling: Where settling is measurable or observable at excavated areas during general project warranty period, remove surface (pavement, lawn, or other finish), add backfill material, compact, and replace surface treatment. Restore appearance, quality, and

condition of surface or finish to match adjacent work, and eliminate evidence of restoration to greatest extent possible.

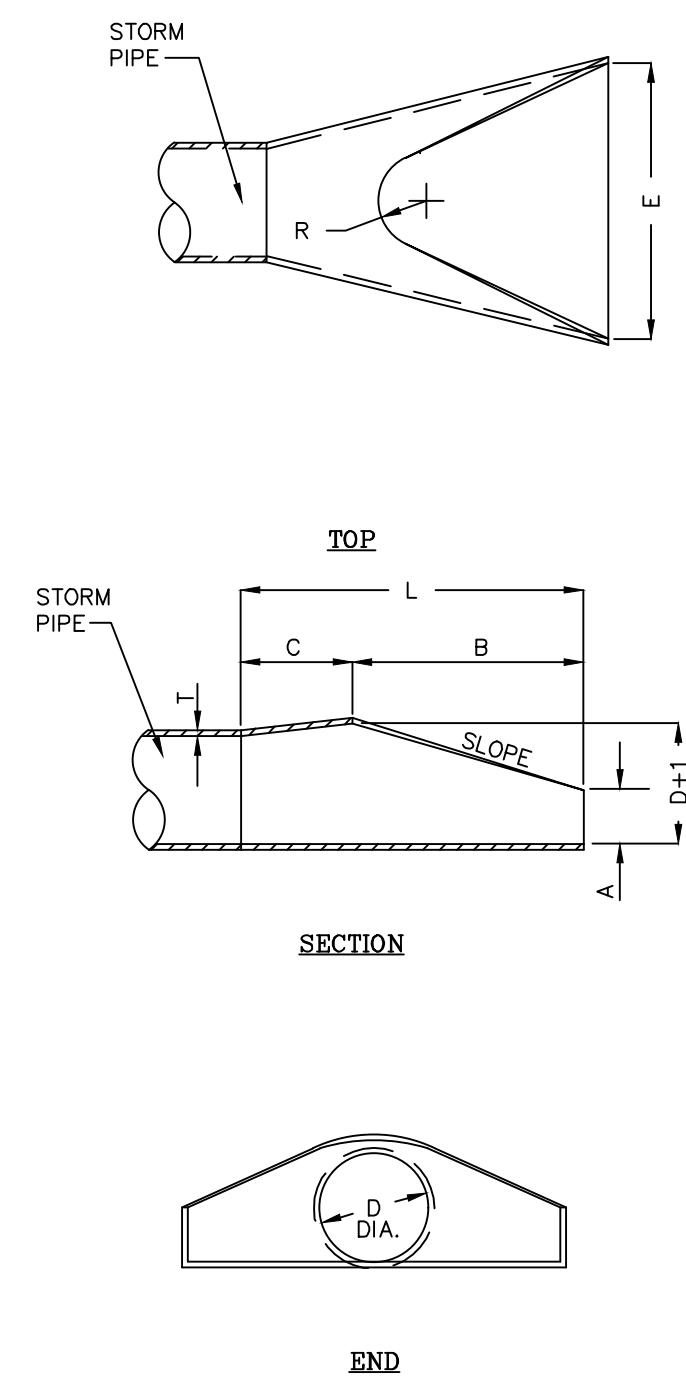
3.9 DISPOSAL OF WASTE MATERIAL

- A. Remove waste materials, including unsatisfactory excavated material, trash, and debris, and dispose of it off Owner's property.

END OF SECTION



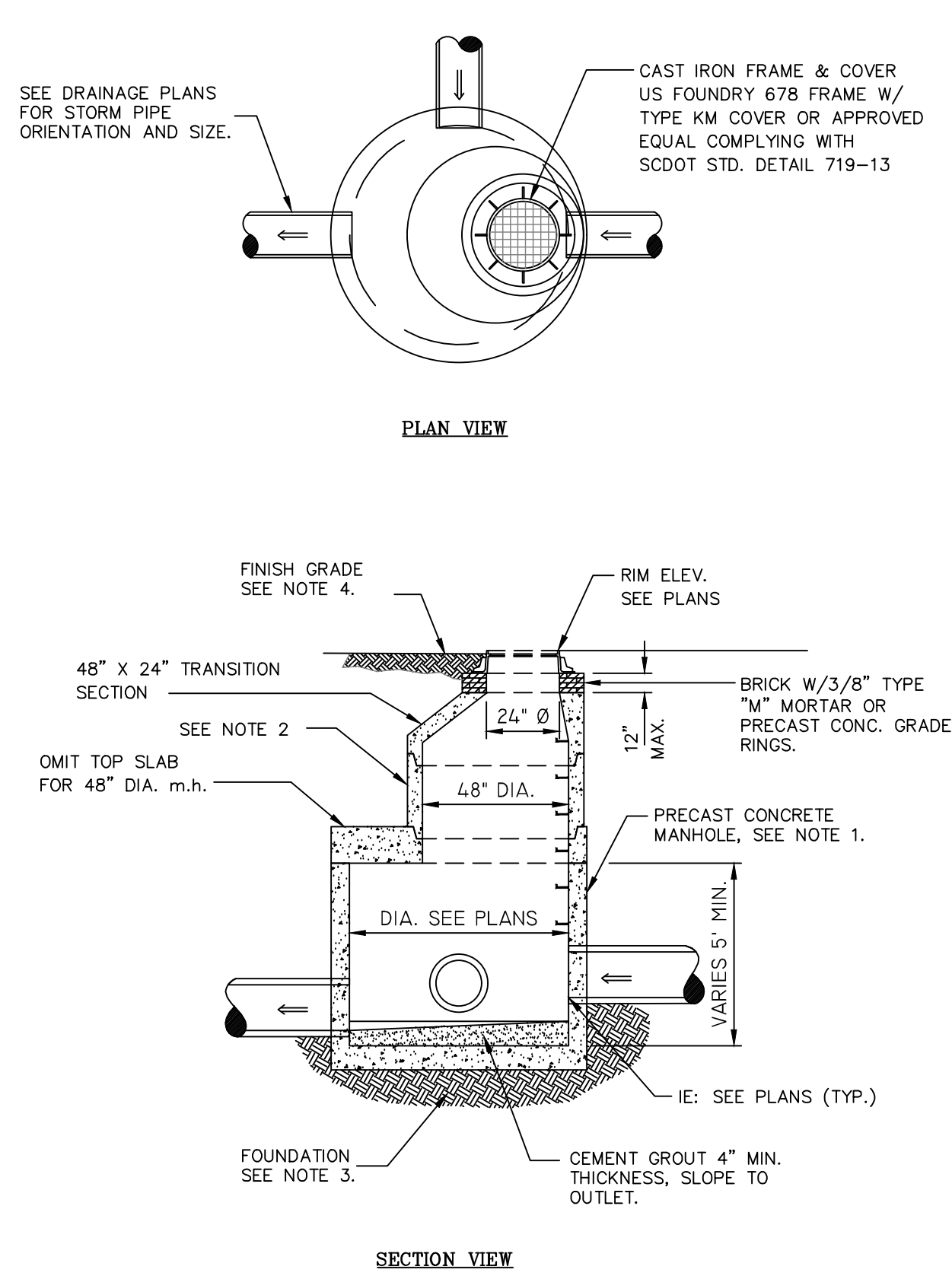
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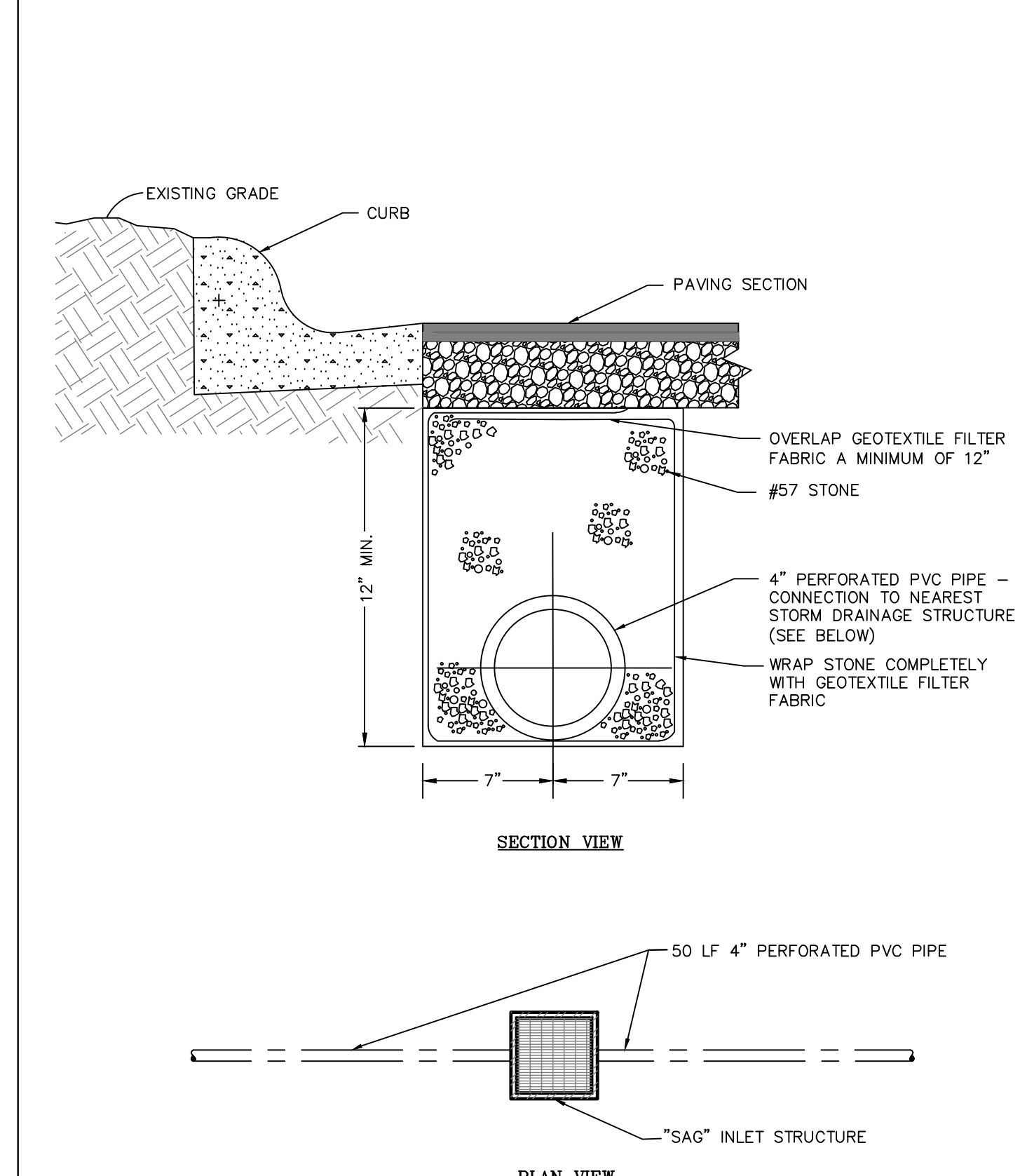
DIMENSIONS (IN INCHES)						
PIPE DIA.	SLOPE	A	B	C	L	R
12"	2:1	4"	2'-0"	4'-1"	8'-1"	2'-0"
15"	2:1	6"	2'-3"	5'-10"	9'-1"	2'-6"
18"	2:1	9"	2'-6"	7'-10"	10'-1"	3'-0"
24"	2:1	10"	3'-2"	10'-6"	12'-2"	4'-0"
30"	2:1	12"	4'-0"	14'-8"	15'-0"	5'-0"
36"	2:1	15"	5'-0"	19'-11"	18'-0"	6'-0"
42"	2:1	21"	6'-3"	27'-11"	24'-0"	8'-0"

T = PIPE WALL THICKNESS (0.0833D+1 TYPICAL)

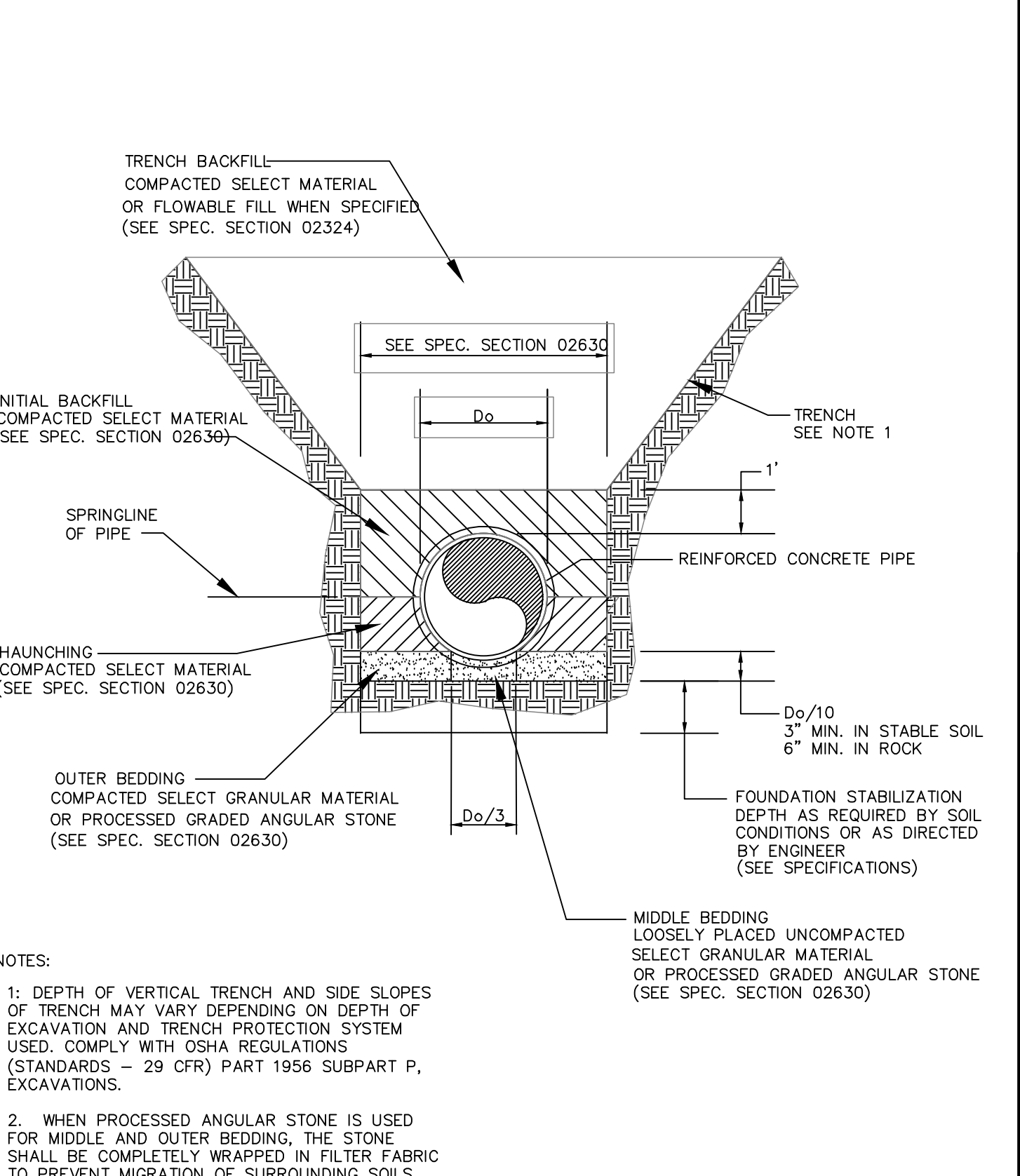
CONCRETE FLARED END SECTION
DETAIL 02630-005



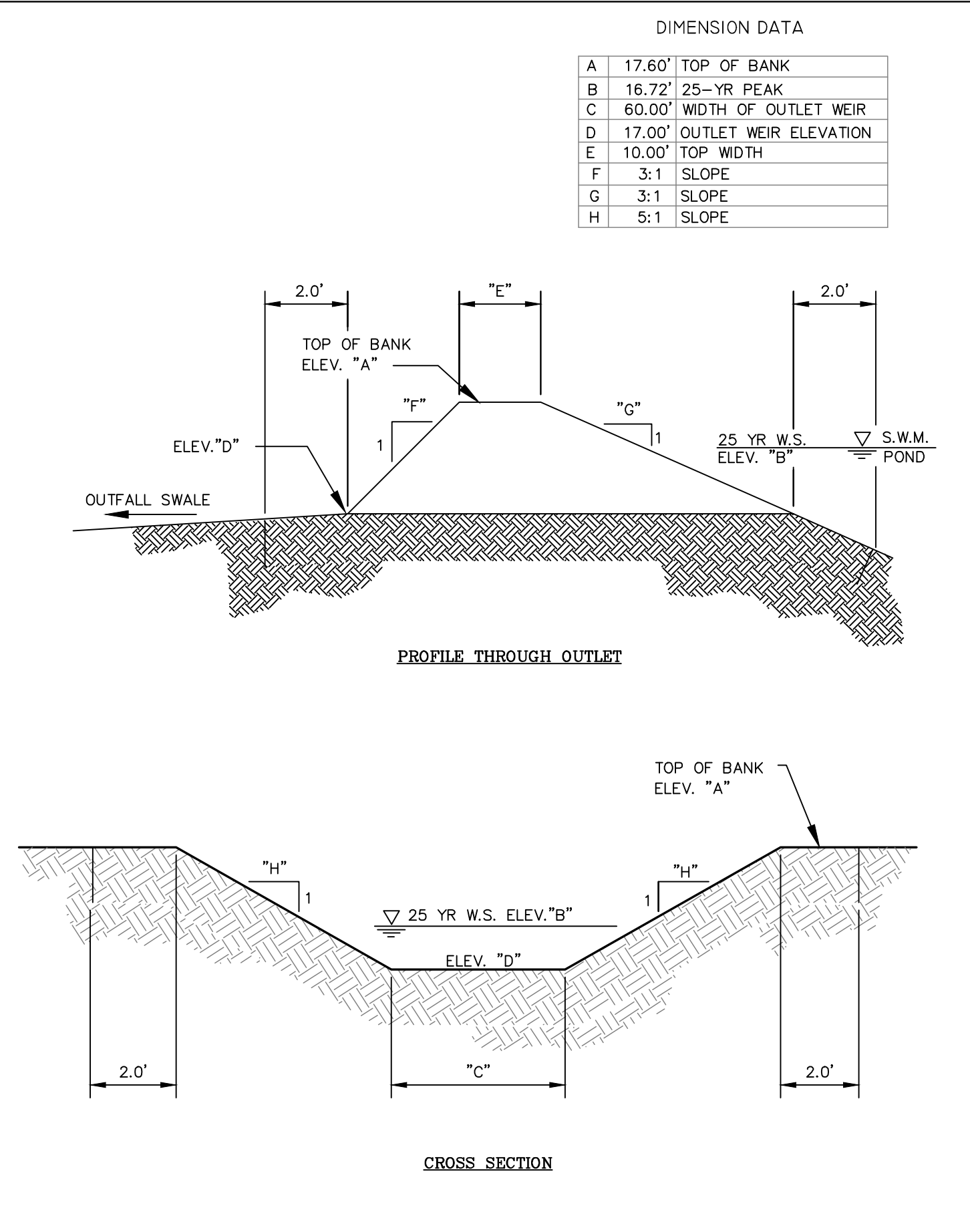
STORM DRAIN MANHOLE
DETAIL: 02630-037



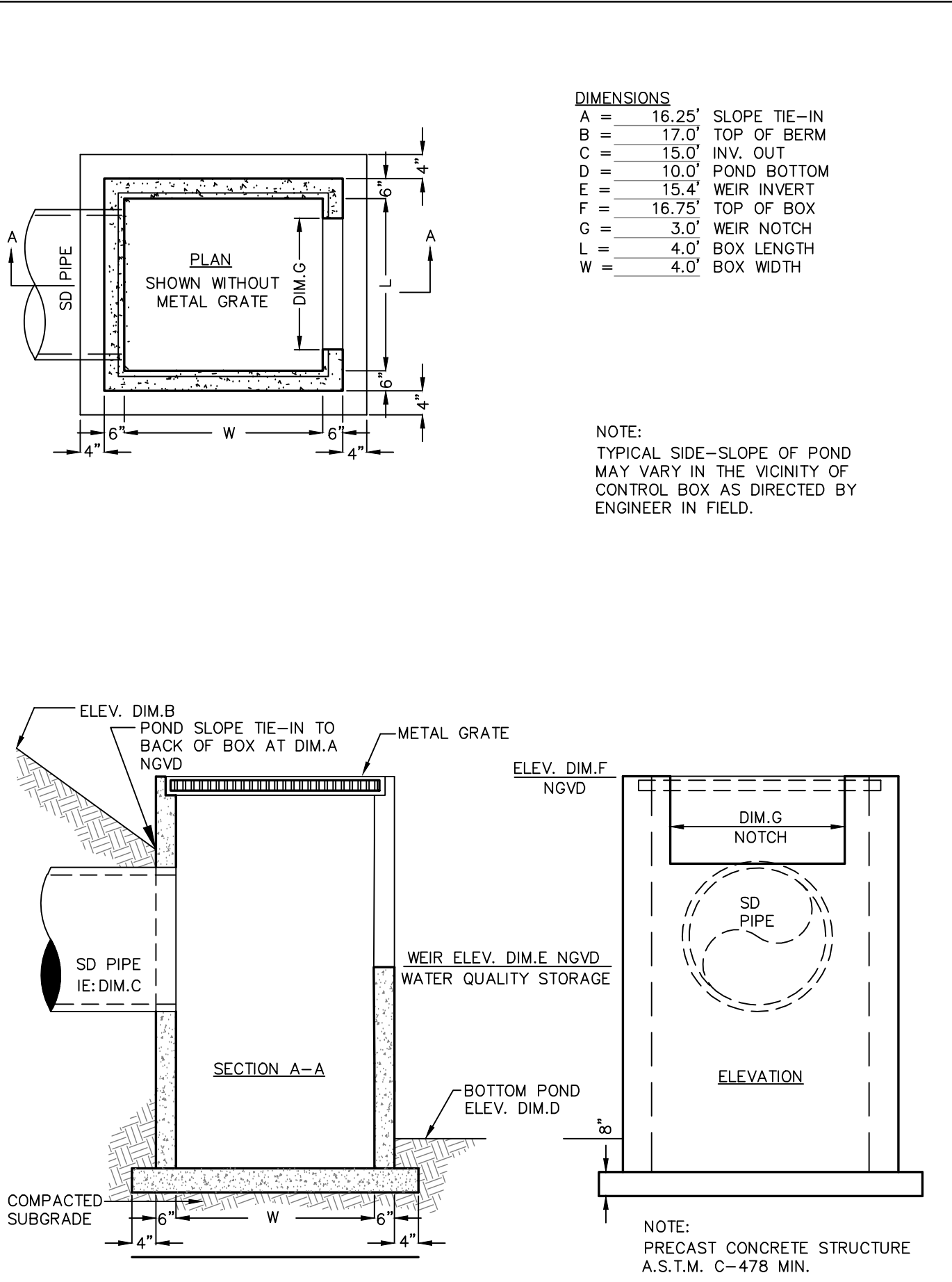
UNDERDRAIN DETAIL
DETAIL 02630-025



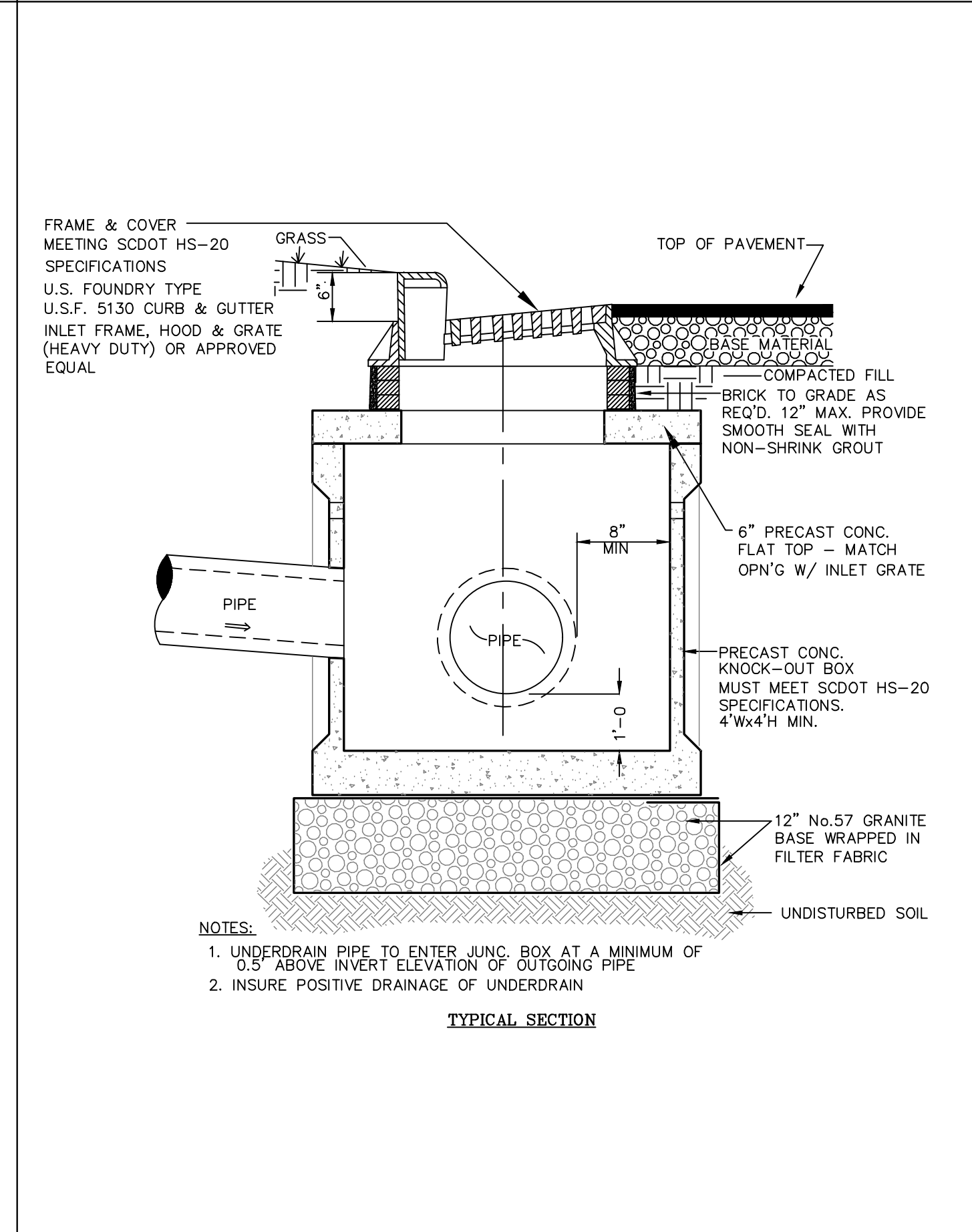
EMBEDMENT DETAIL FOR REINFORCED CONCRETE PIPE



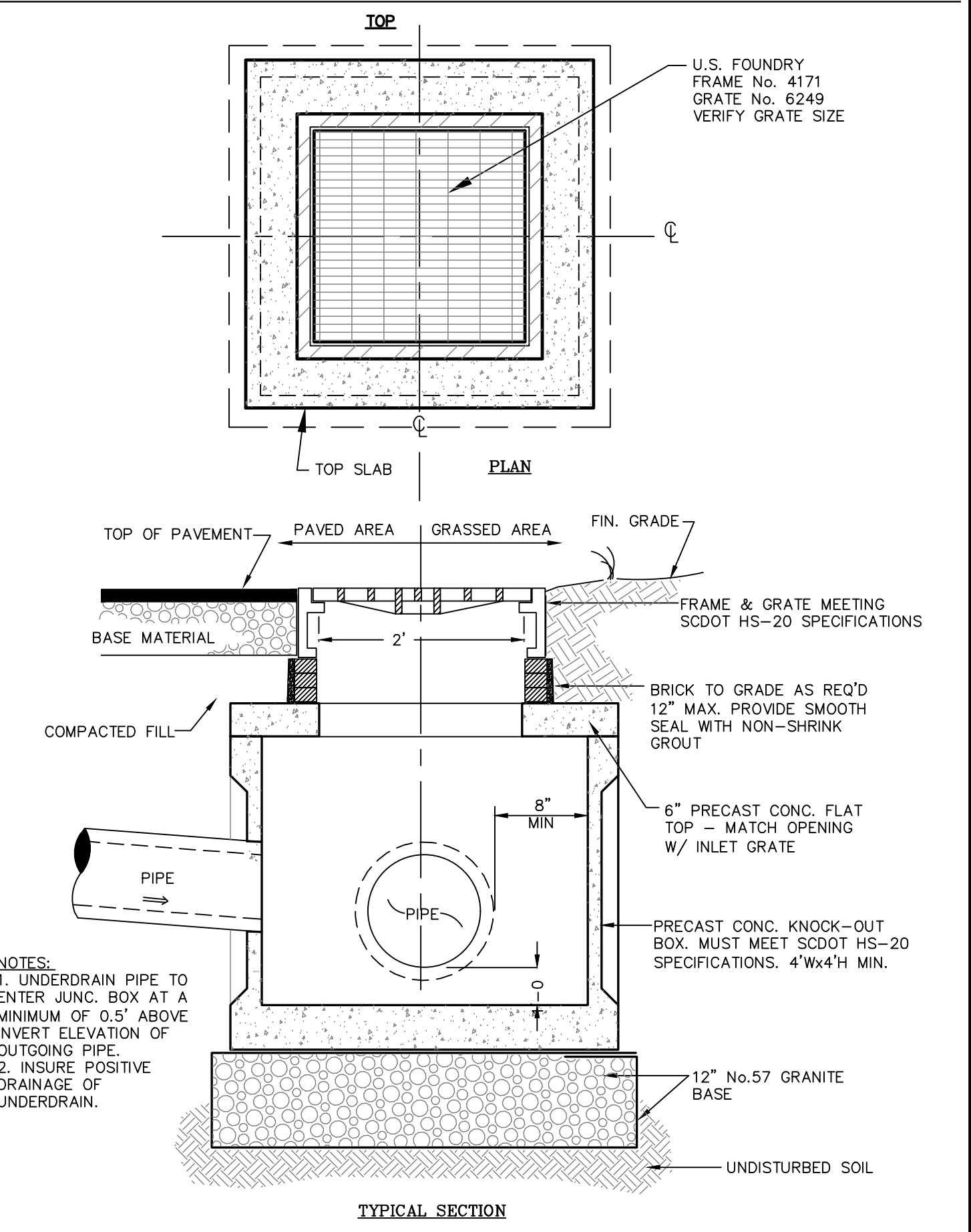
POND SPILLWAY DETAILS
DETAIL 02660-003



INFILTRATION STRUCTURE
DETAIL 02630-031

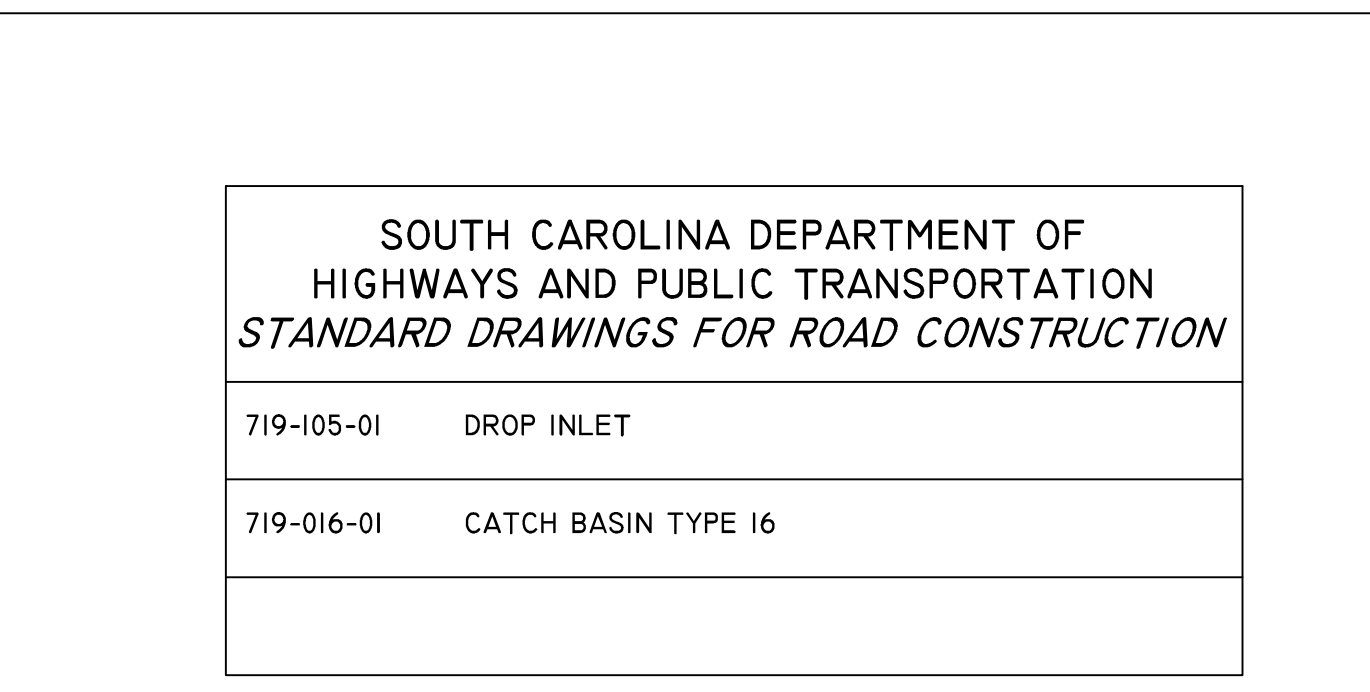


CURB INLET WITH FRAME AND COVER
DETAIL 02630-028

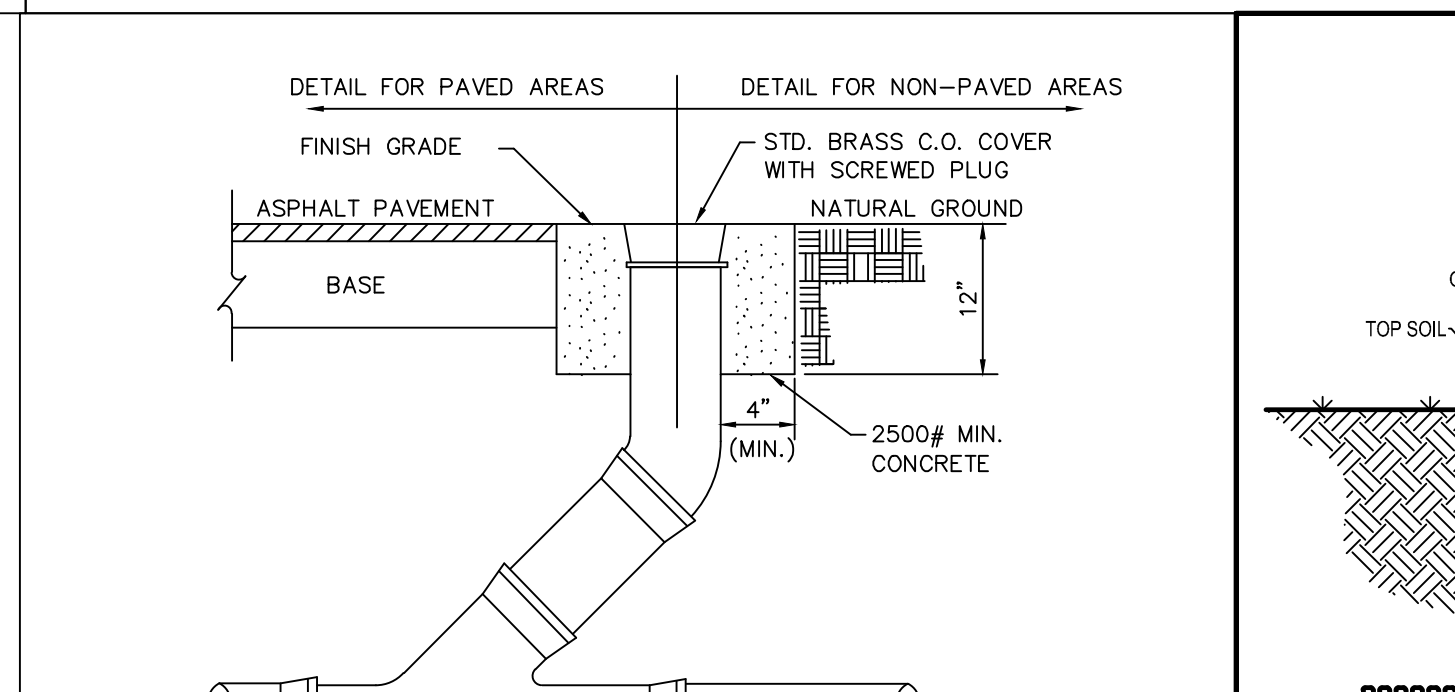


GRATE INLET
DETAIL 02630-027

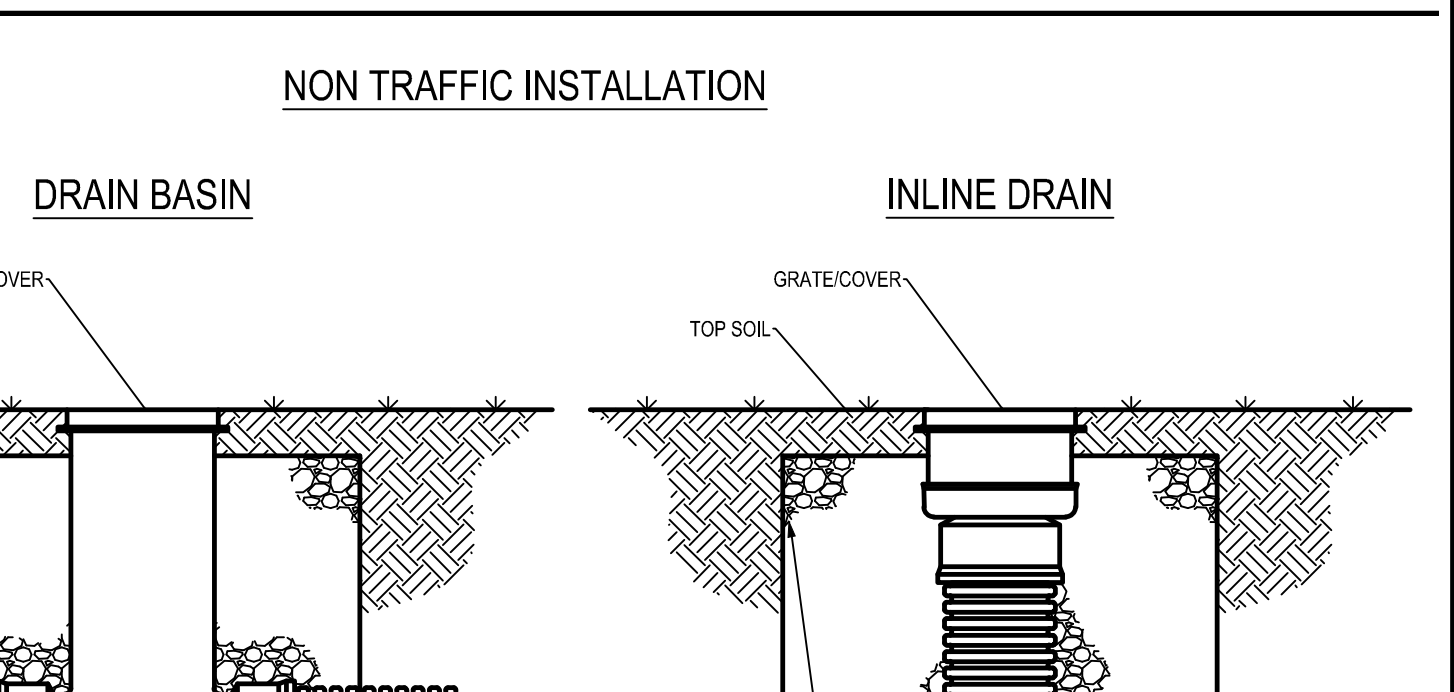
SOUTH CAROLINA DEPARTMENT OF HIGHWAYS AND PUBLIC TRANSPORTATION STANDARD DRAWINGS FOR ROAD CONSTRUCTION	
719-105-01	DROP INLET
719-016-01	CATCH BASIN TYPE 16



DRAINAGE CLEANOUT DETAIL
NOT TO SCALE



NON TRAFFIC INSTALLATION



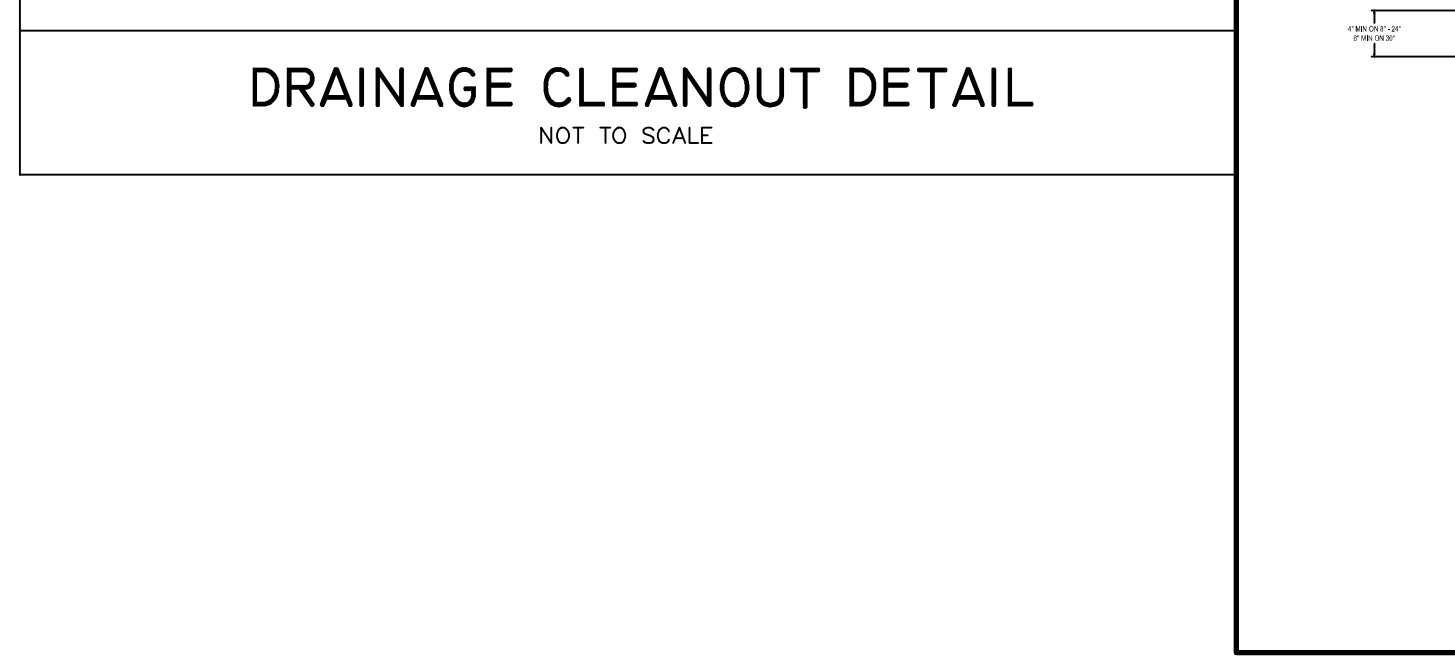
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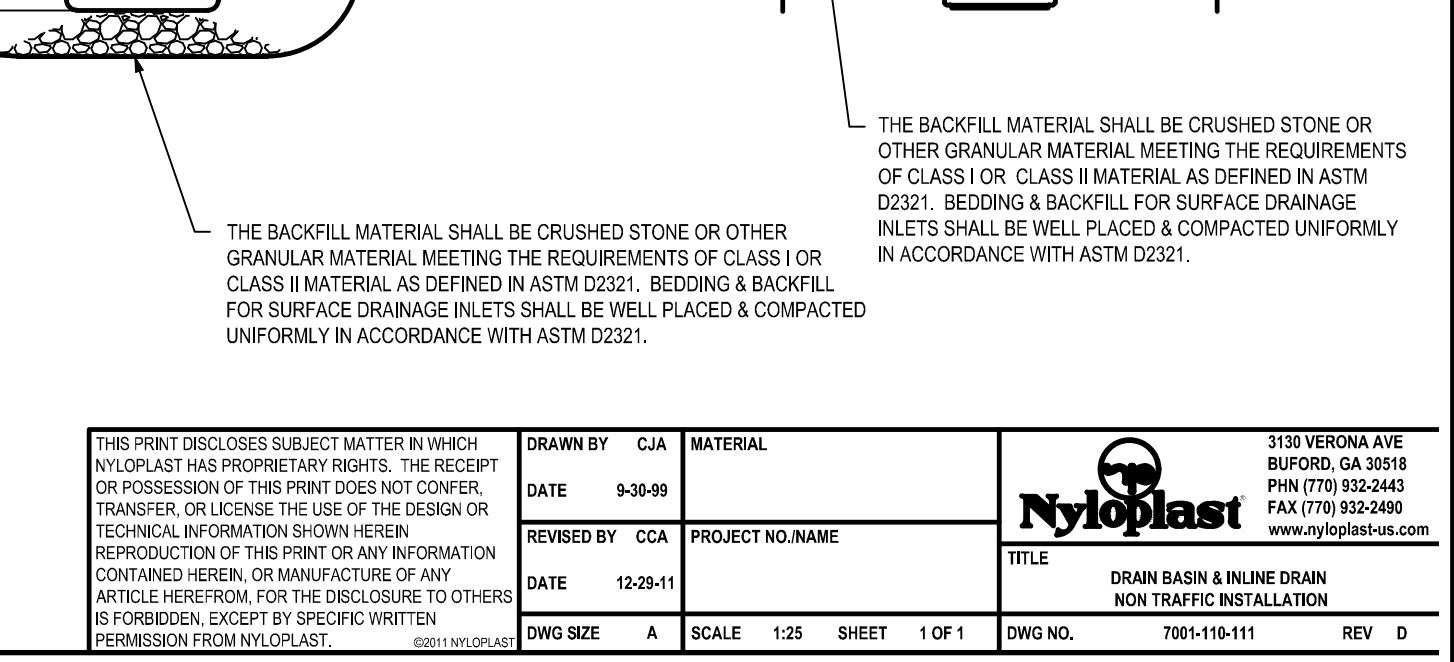
DRAINAGE CLEANOUT DETAIL
NOT TO SCALE



DRAINAGE CLEANOUT DETAIL
NOT TO SCALE

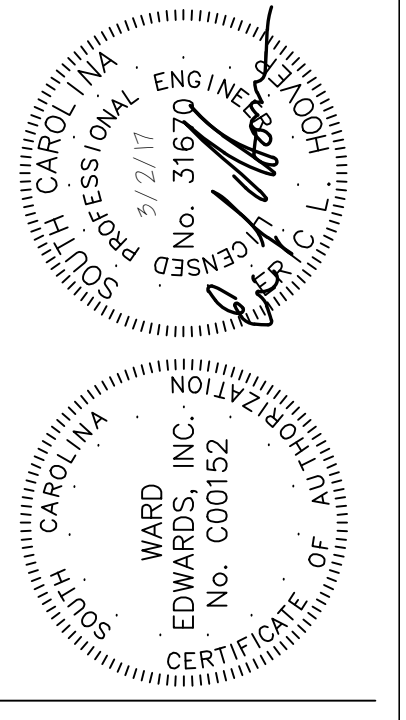


DRAINAGE CLEANOUT DETAIL
NOT TO SCALE



DRAINAGE CLEANOUT DETAIL
NOT TO SCALE

REV. NO.	DATE	DESCRIPTION
3	1/19/17	ADDENDUM #3



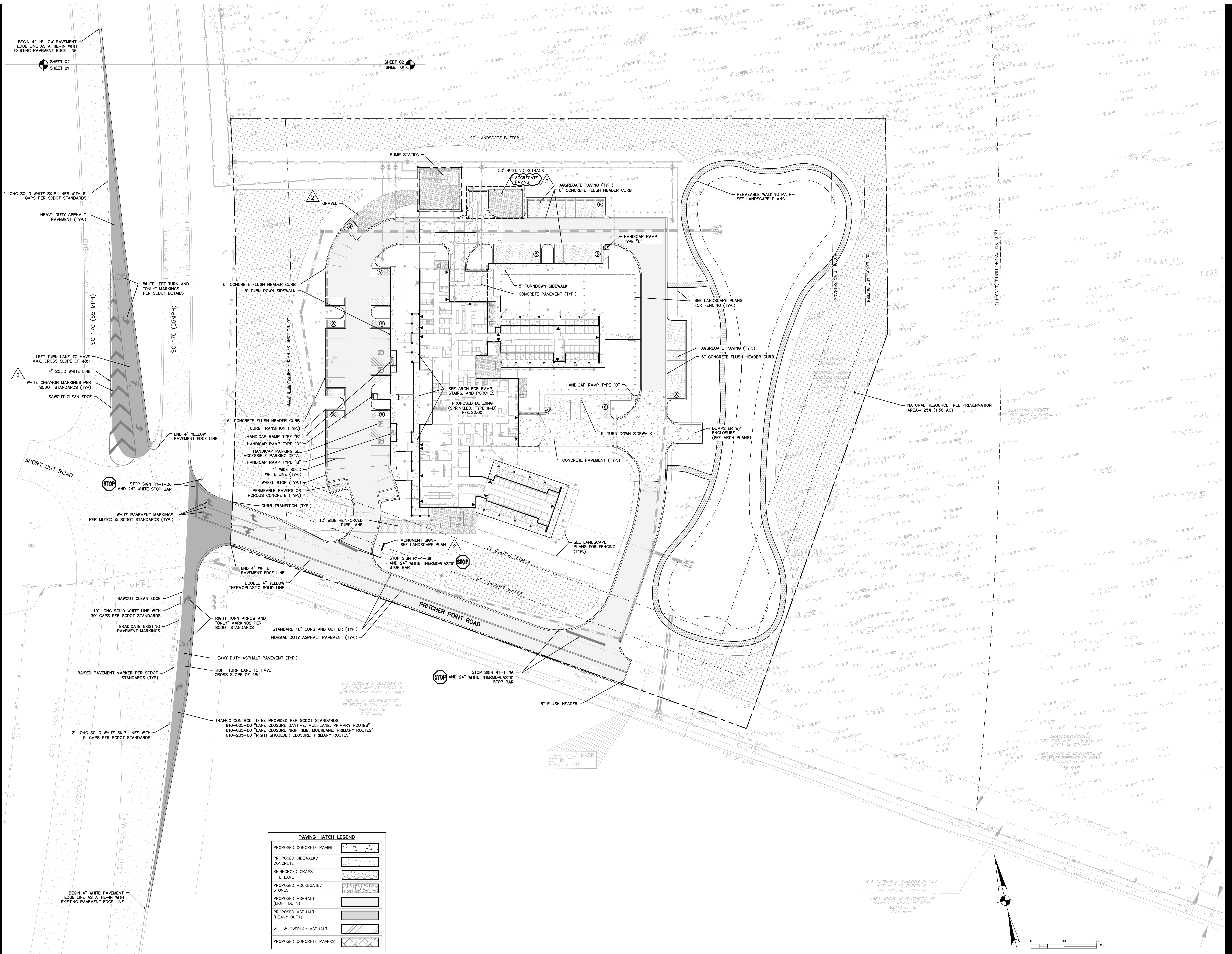
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WE-JOB NUMBER: 140251
PROJECT MGR.: GAB
DRAWN BY: RDB
CHECKED BY: GAB
APPROVED BY: ELH
DATE ISSUED FOR: Submittal Phase 03/2017

DRAINAGE DETAILS

DATE	BY	CL	MATERIAL
9-30-09	CA		
12-28-11	CA		

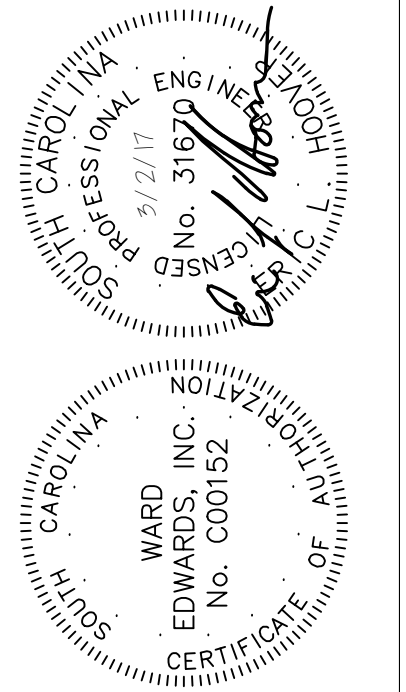
DATE: 12-28-11 SHEET: 1 OF 1 DWG NO.: 1005-110-111 REV: D

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PAVING HATCH LEGEND	
PROPOSED CONCRETE PAVING	[Hatch pattern]
PROPOSED SIDEWALK/CONCRETE	[Hatch pattern]
REINFORCED GRASS	[Hatch pattern]
FIRE LANE	[Hatch pattern]
PROPOSED AGGREGATE/STONES	[Hatch pattern]
PROPOSED ASPHALT (LIGHT DUTY)	[Hatch pattern]
PROPOSED ASPHALT (HEAVY DUTY)	[Hatch pattern]
MILL & OVERLAY ASPHALT	[Hatch pattern]
PROPOSED CONCRETE PAVERS	[Hatch pattern]

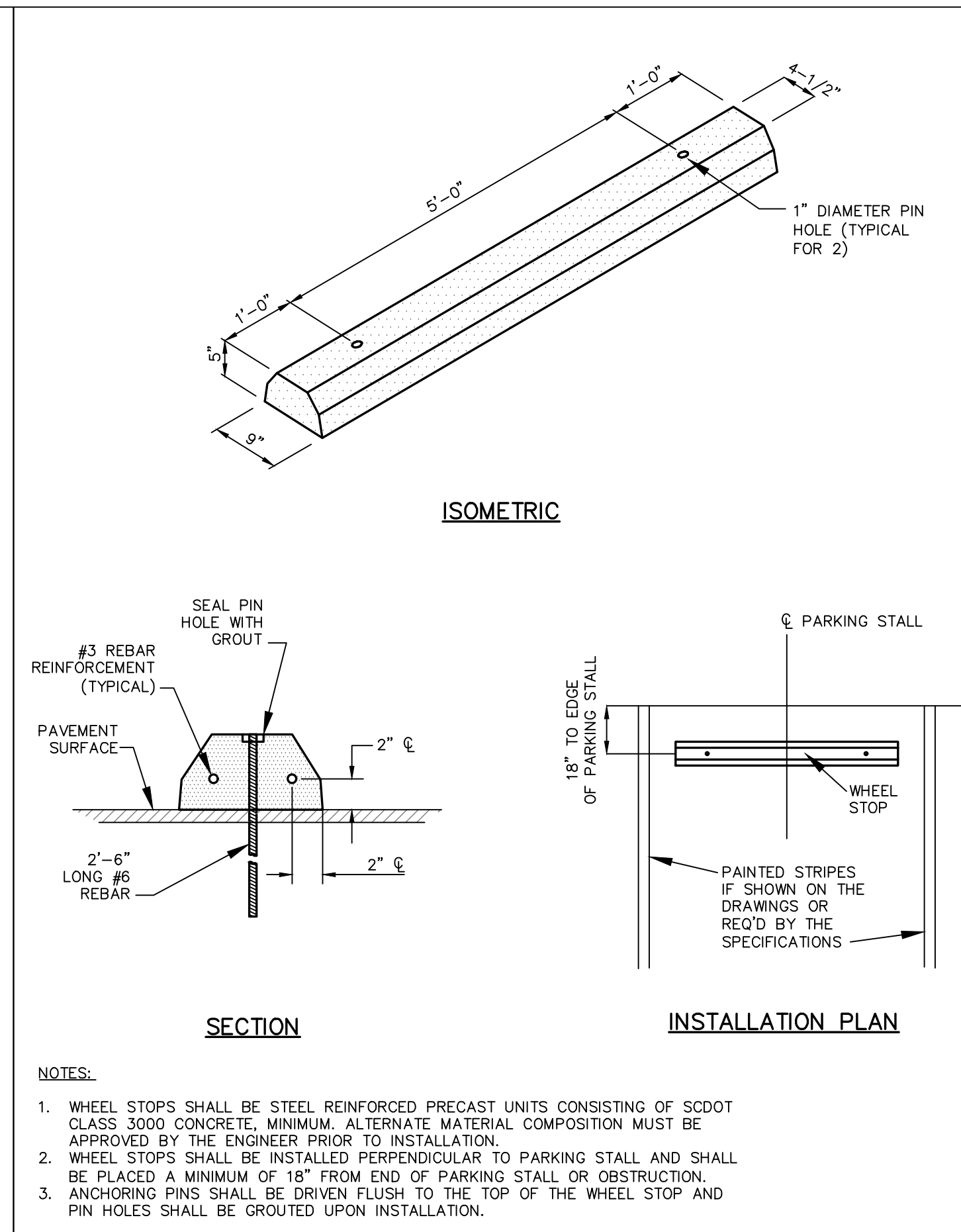
REV. NO.	DATE	DESCRIPTION
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2	4/19/17	ADDENDUM #3



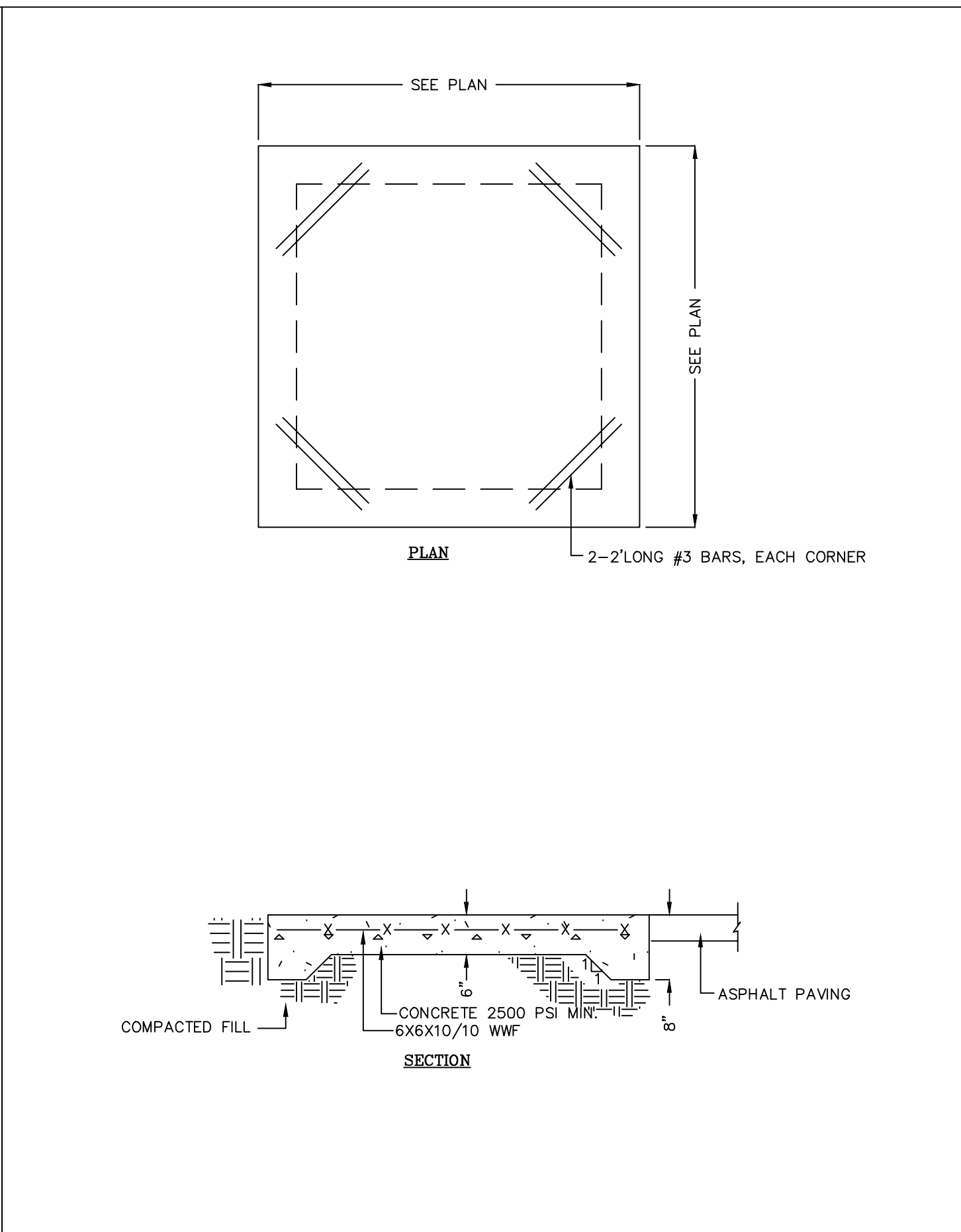
BCAS/HHA ANIMAL SERVICES COMPLEX
COUNTY OF BEAUFORT, SC
10 PRITCHER POINT ROAD, BEAUFORT, SC 29906

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PROJECT MGR: GAB
DRAWN BY: RDB
CHECKED BY: GAB
APPROVED BY: ELH
DATE ISSUED FOR: Submittal Phase 03/02/17

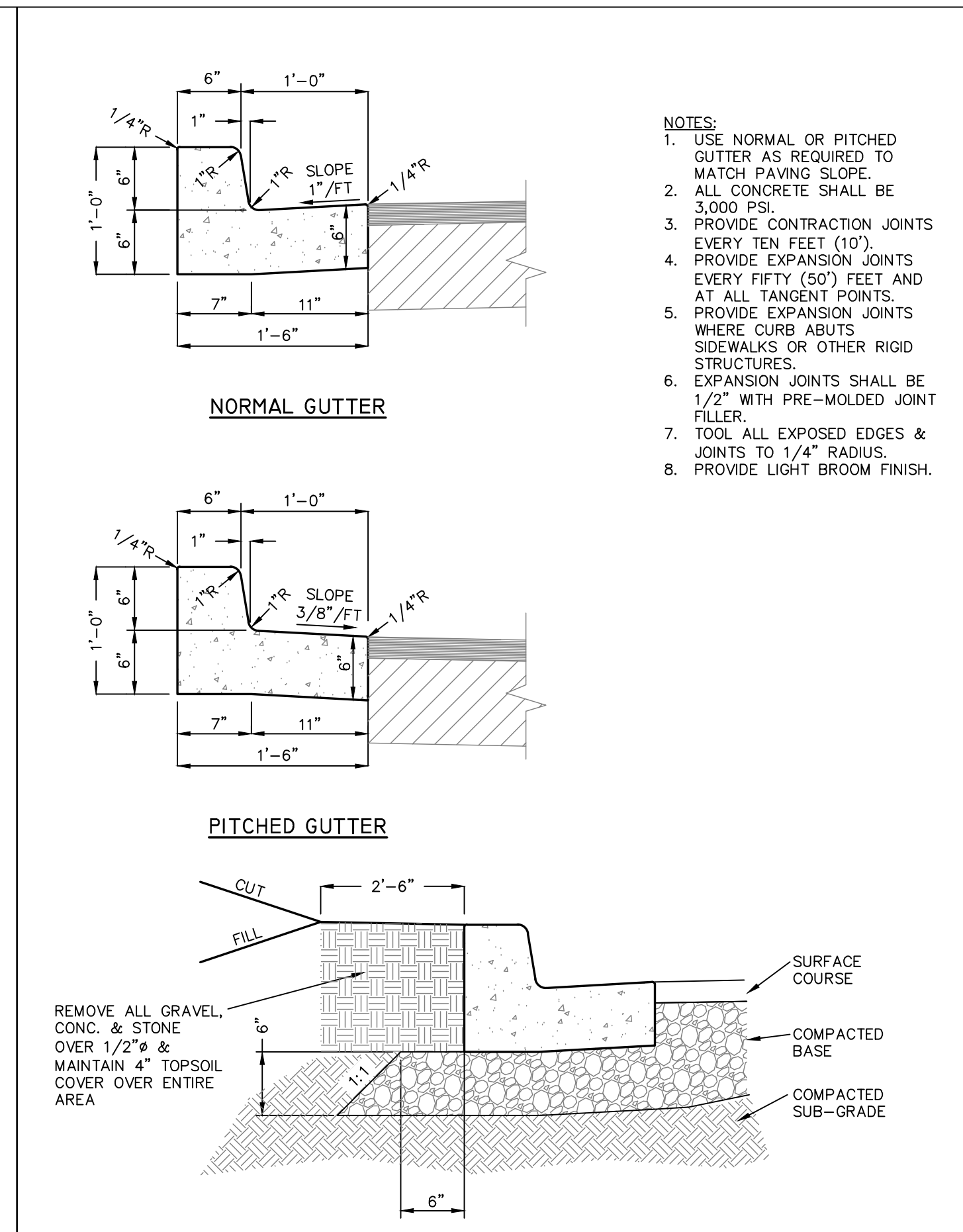
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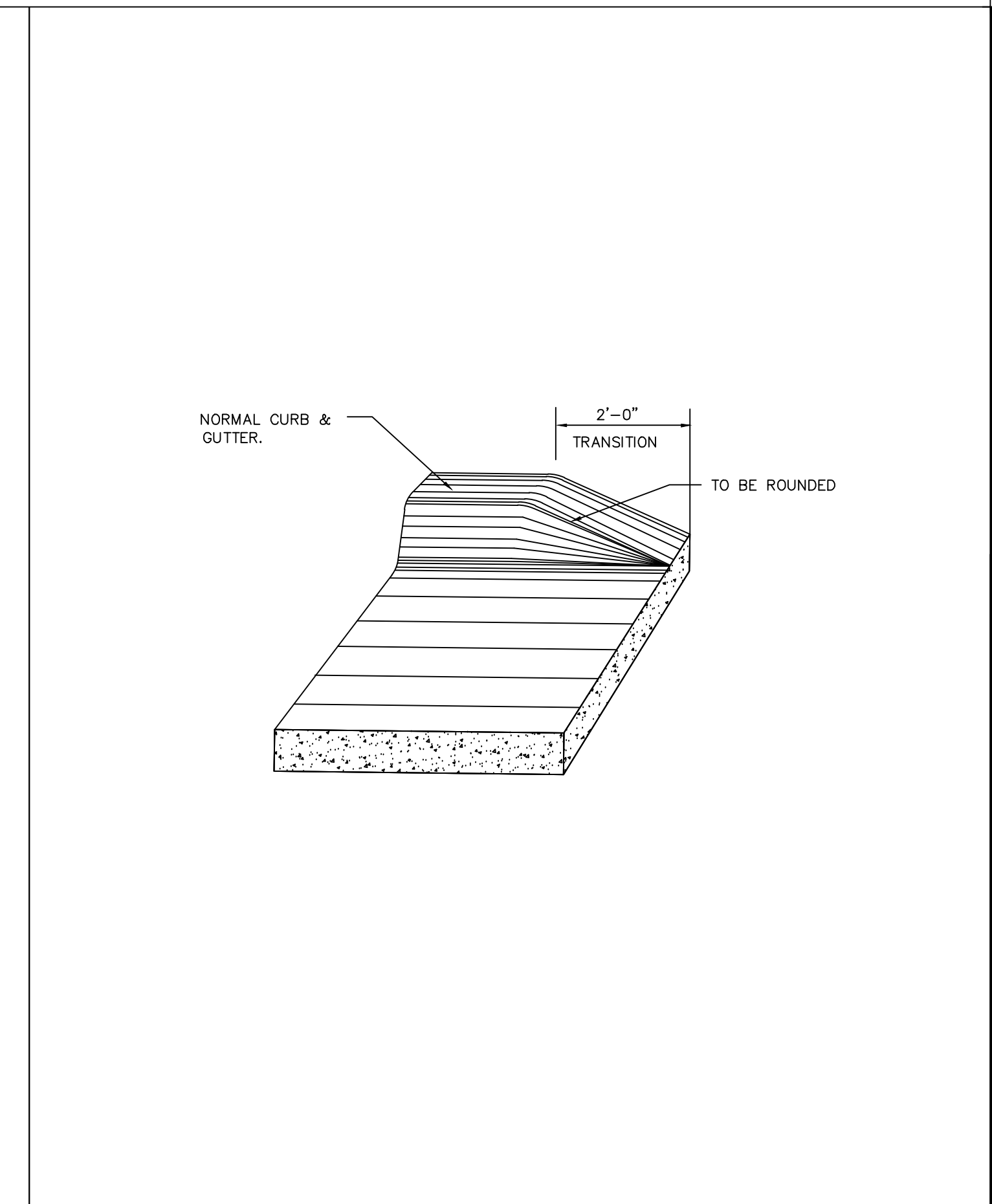
PRECAST CONCRETE WHEEL STOP
DETAIL 03300-009A



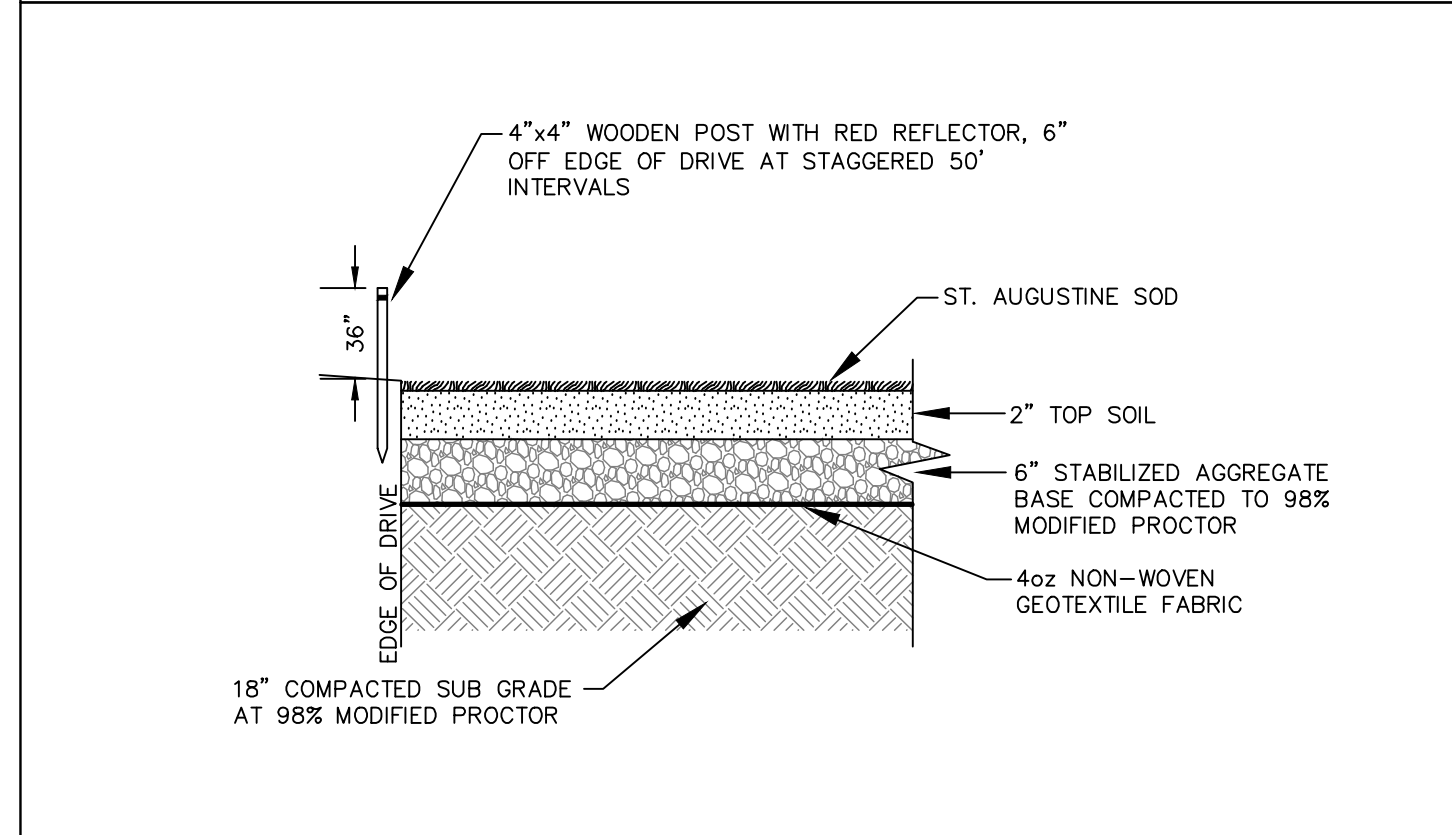
HEAVY DUTY CONCRETE DUMPSTER PAD
DETAIL 03300-017



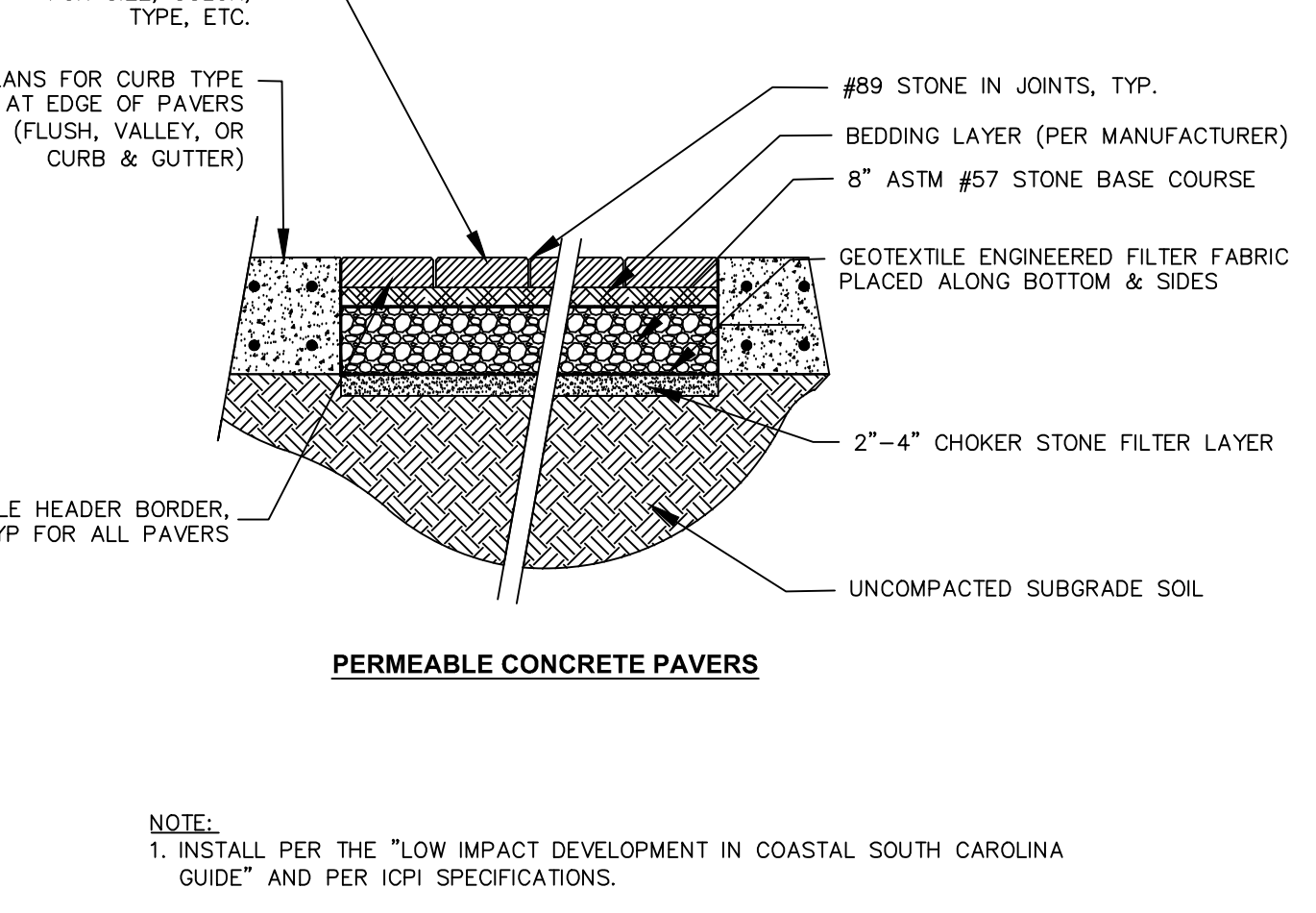
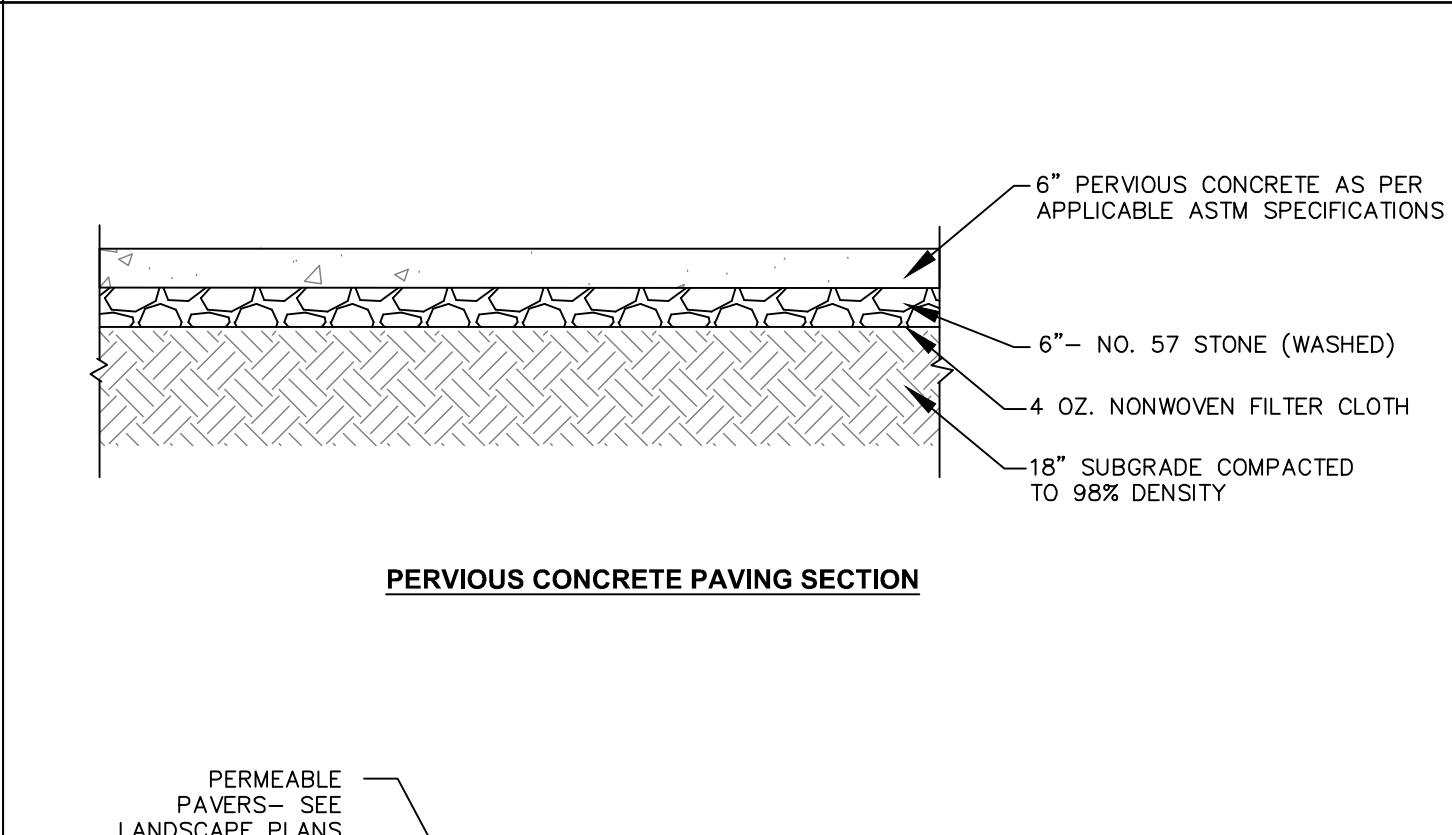
18" CURB AND GUTTER
DETAIL 03300-004A



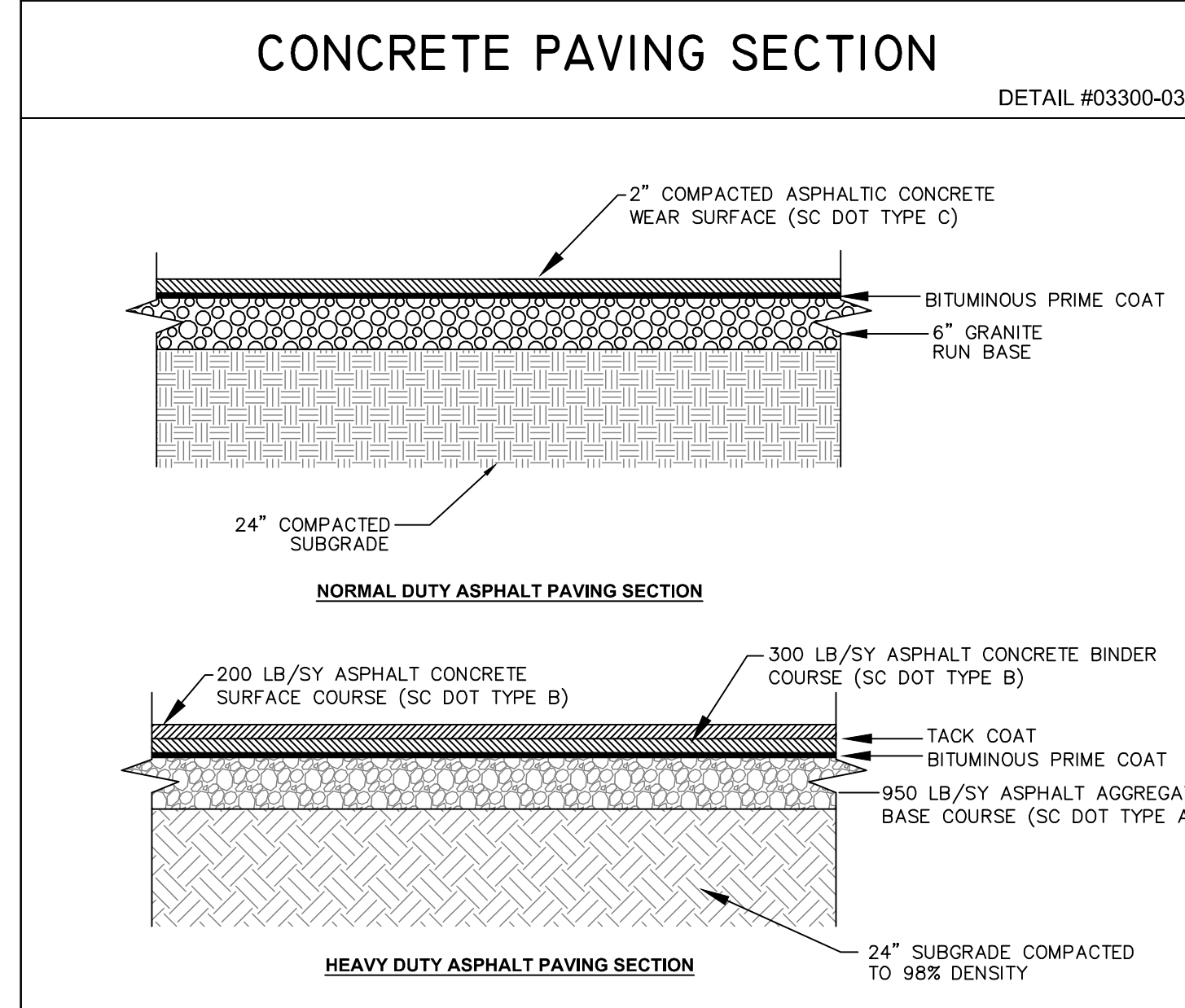
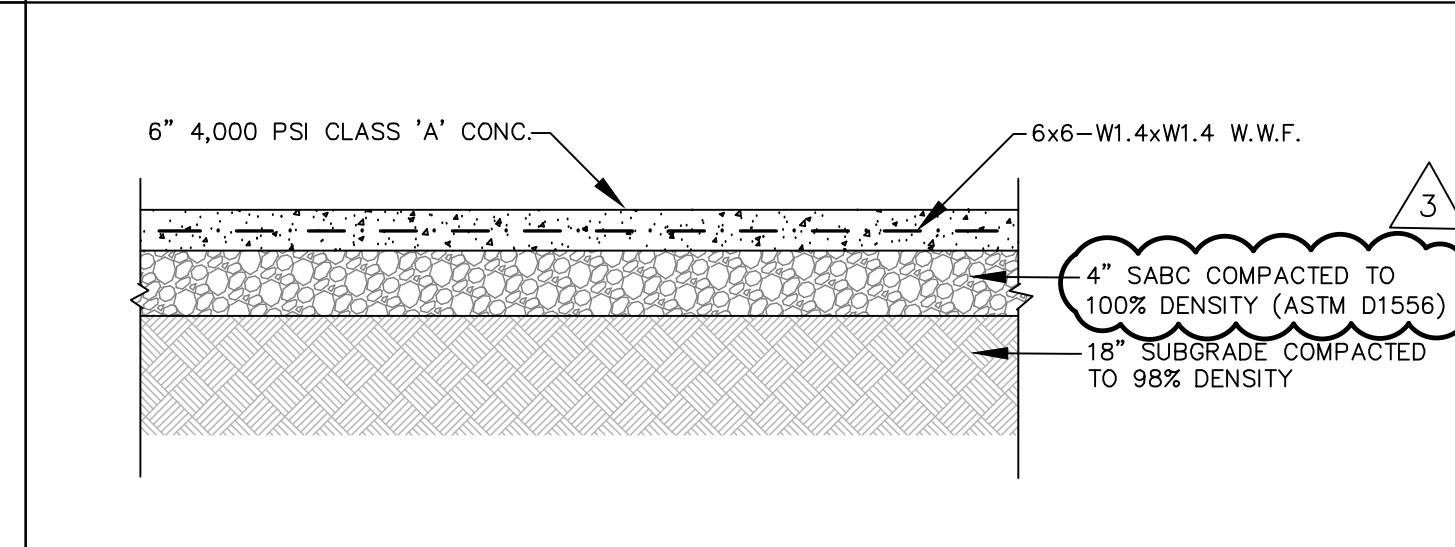
CURB AND GUTTER TRANSITION DETAIL
DETAIL 03300-020



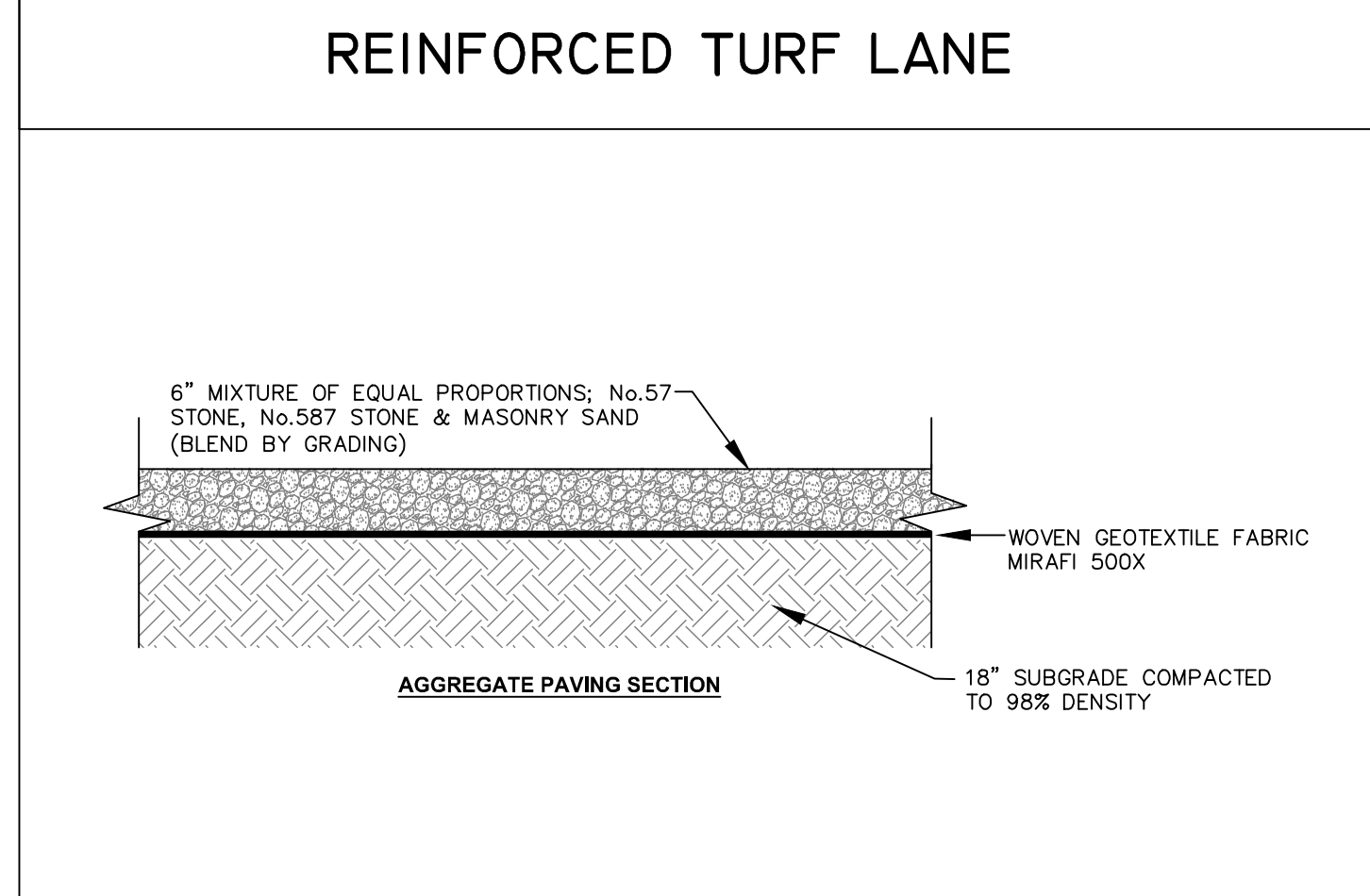
REINFORCED TURF LANE



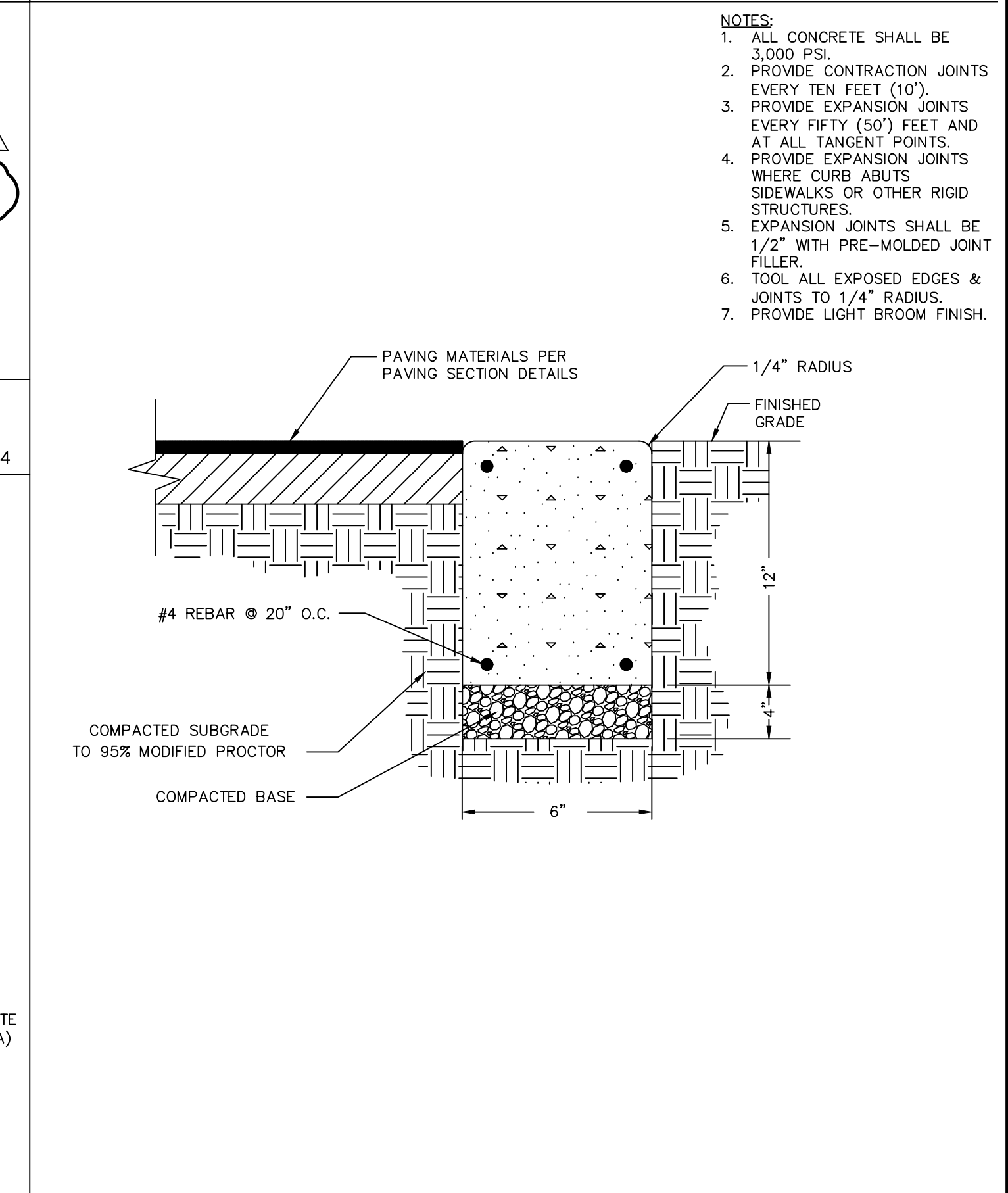
PERMEABLE PAVING DETAILS



ASPHALT PAVING SECTIONS
DETAIL 02740-006

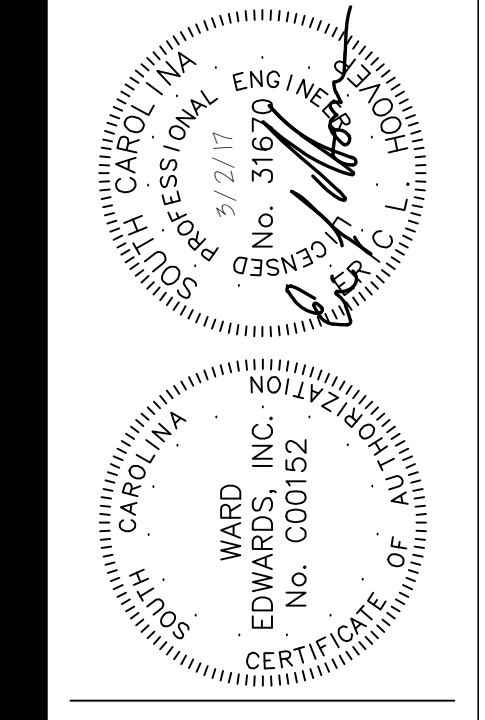


AGGREGATE PAVING SECTIONS
DETAIL 02740-016

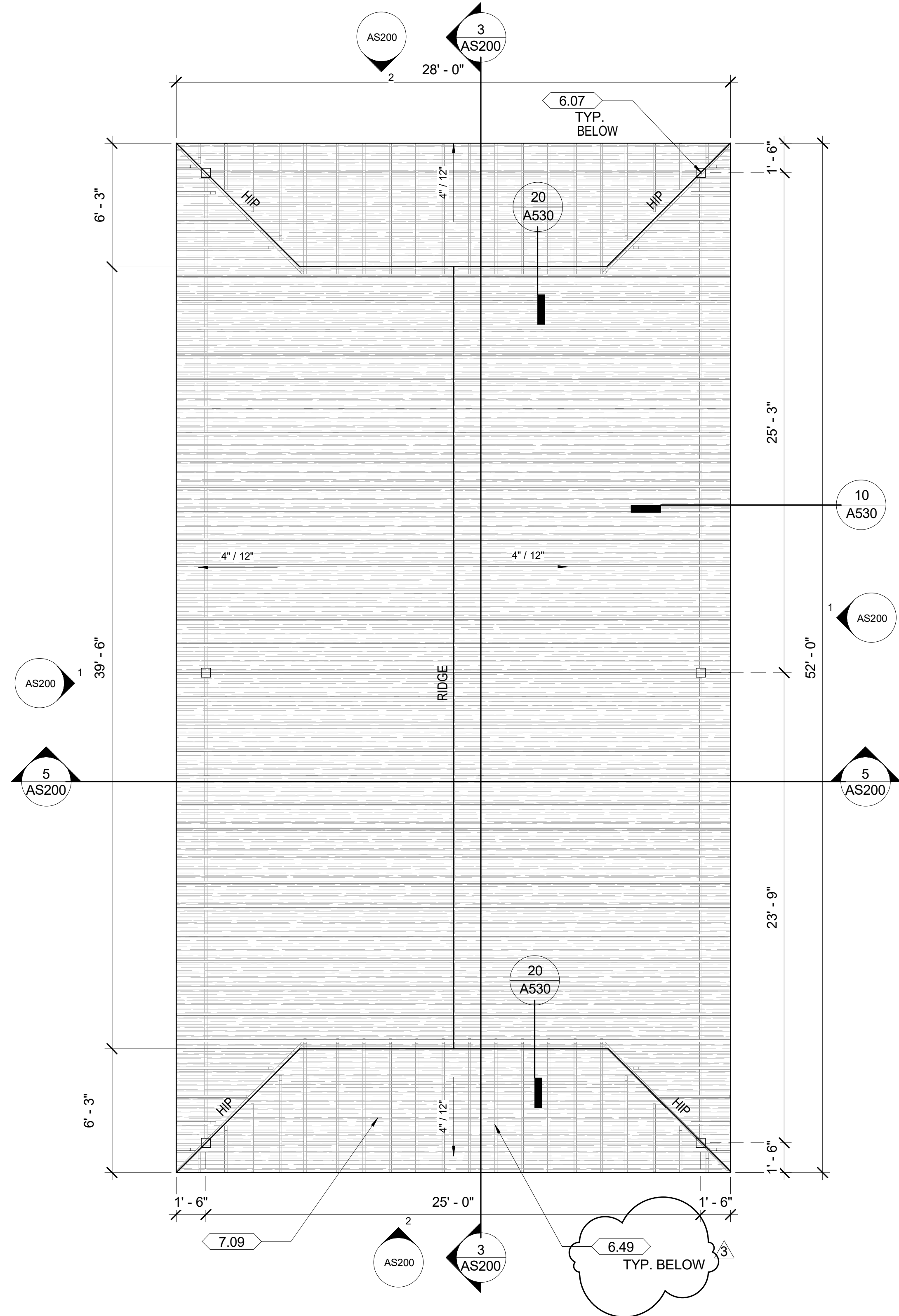


FLUSH HEADER CURB
DETAIL 03300-005

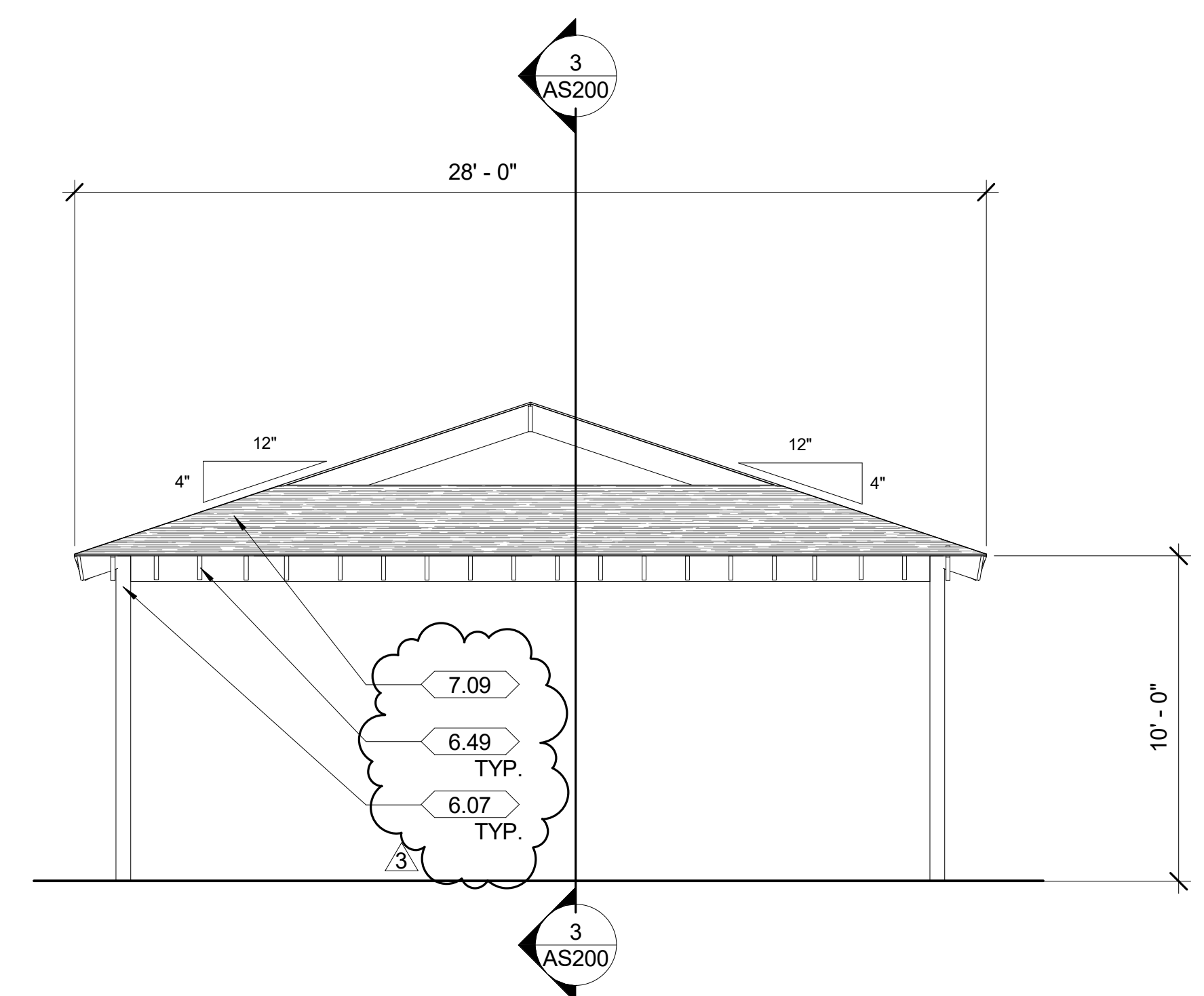
REV. NO.	DATE	DESCRIPTION
3	1/19/17	ADDENDUM #3



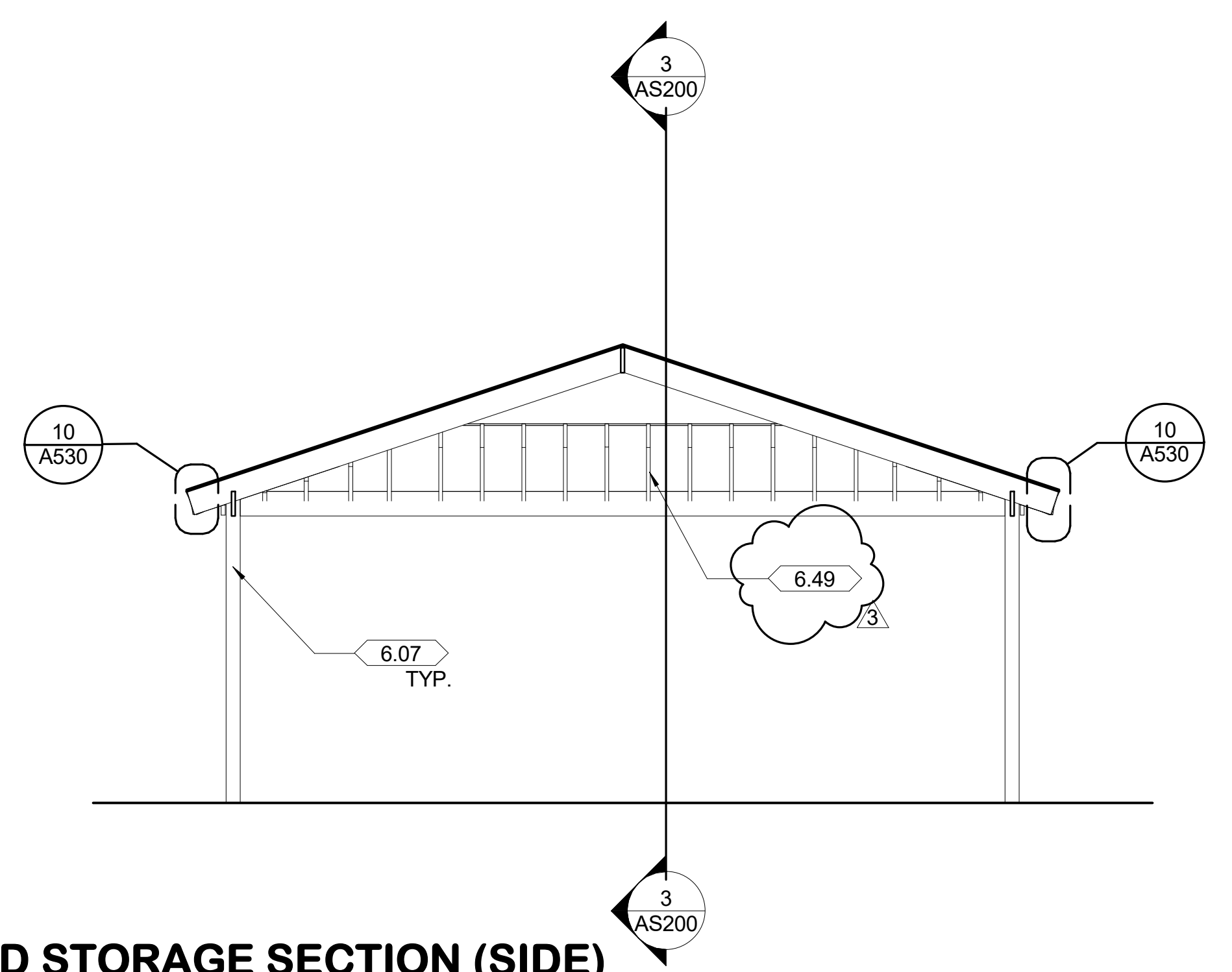
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DATE ISSUED FOR: Submittal Phase 03/02/17



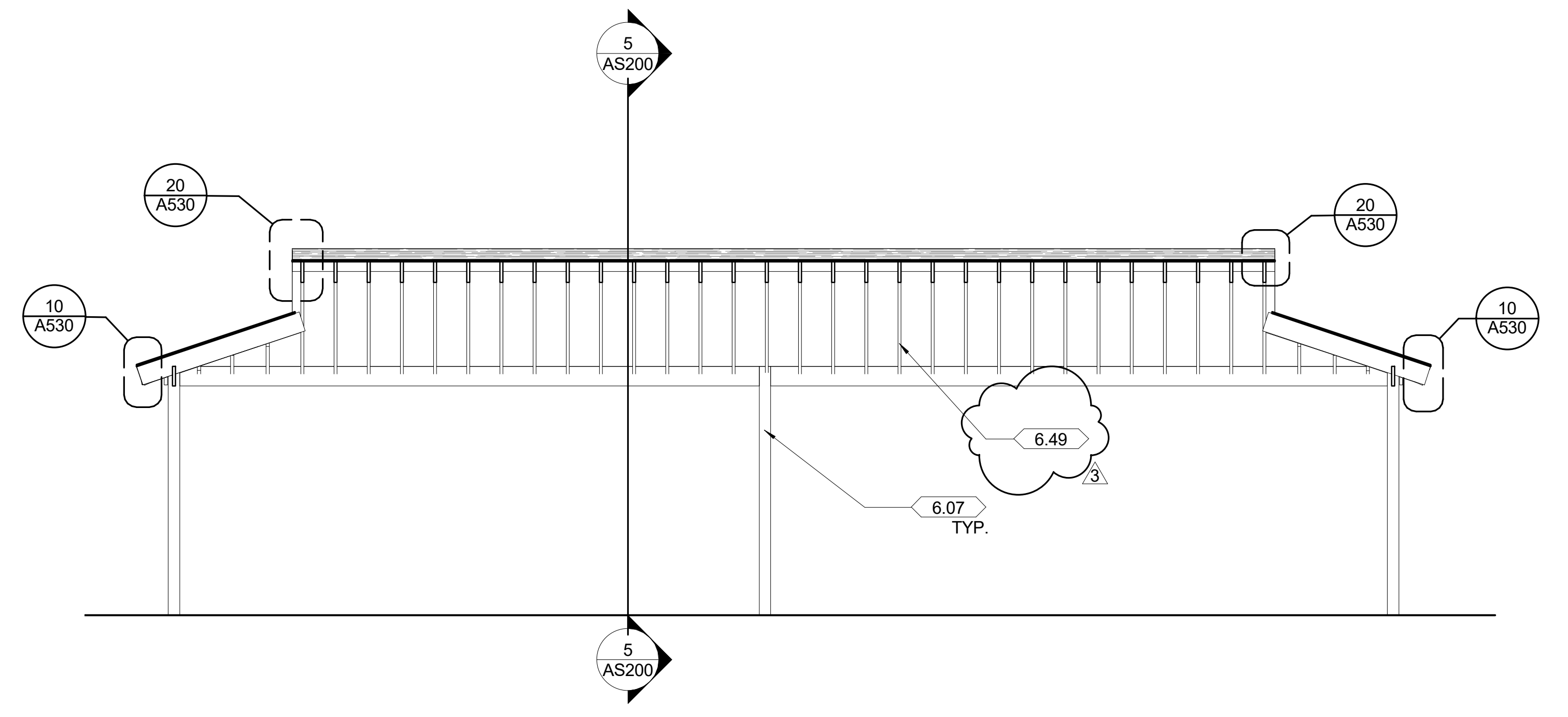
4 OUTDOOR STORAGE/WASH ROOF PLAN
SCALE: 1/4" = 1'-0"



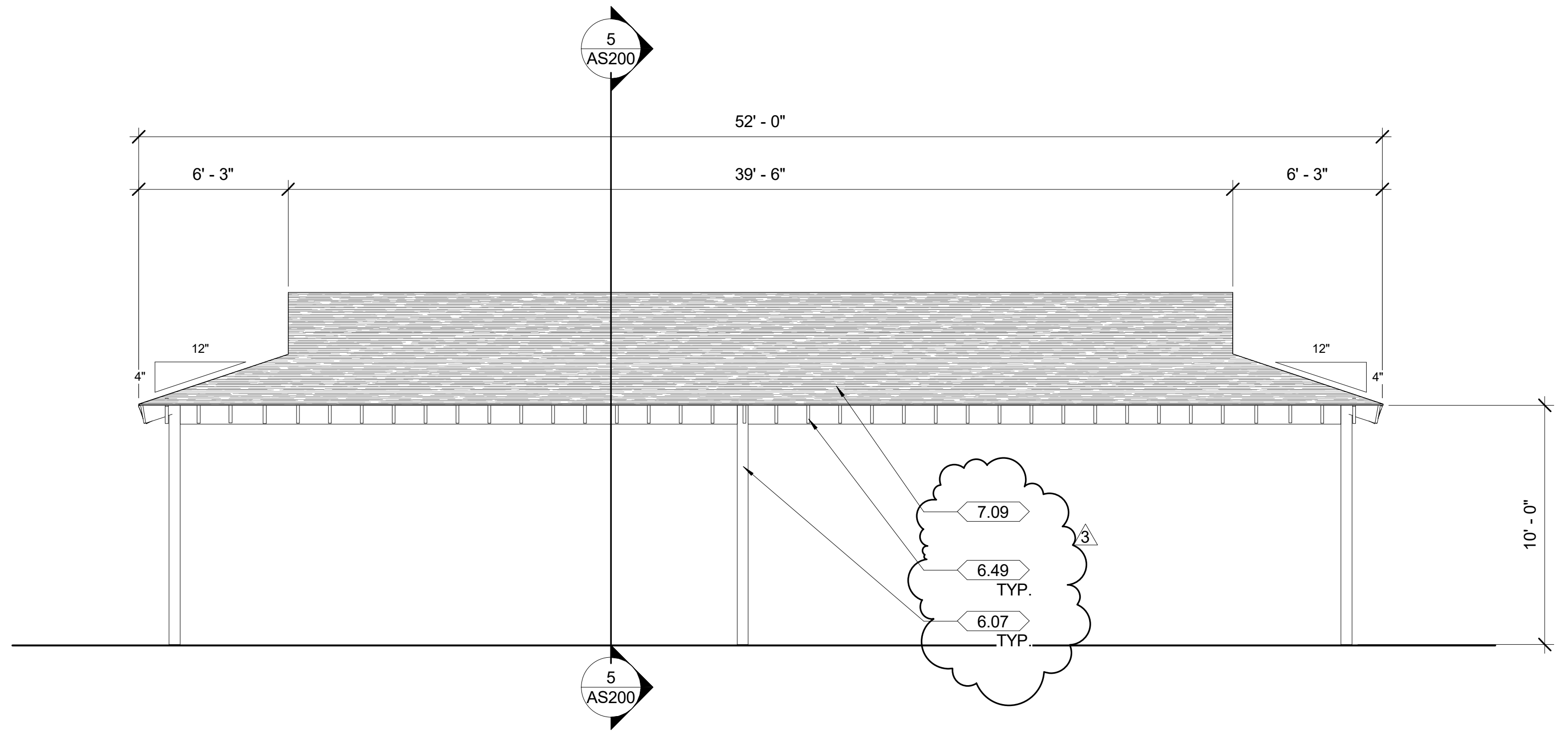
2 COVERED STORAGE ELEVATION (SIDE)
SCALE: 1/4" = 1'-0"



5 COVERED STORAGE SECTION (SIDE)
SCALE: 1/4" = 1'-0"



3 COVERED STORAGE SECTION
SCALE: 1/4" = 1'-0"

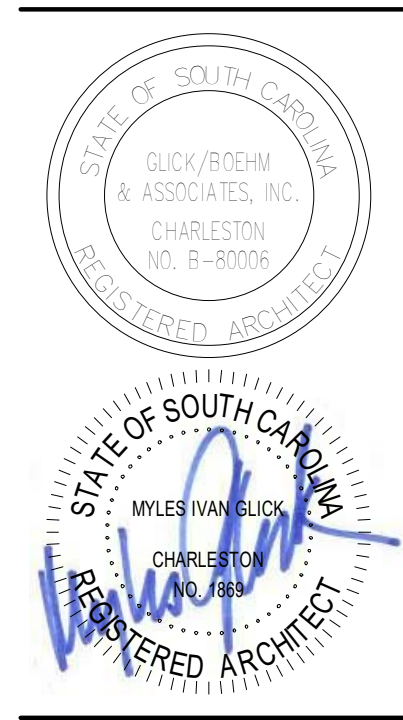


1 COVERED STORAGE ELEVATION
SCALE: 1/4" = 1'-0"

KEYNOTE LEGEND	
Key Value	Keynote Text
6.07	6X6 WOOD COLUMN, PT. PAINT. 5'-0" EMBEDMENT INTO 18" DIA. CONCRETE FOOTING AT COVERED STORAGE.
6.49	PRE-MANUFACTURED WOOD TRUSS, PT. PAINT WHITE. ATTACHMENTS TO BE MADE USING STINSON STRAPS. PRE-MANUFACTURED WOOD TRUSS MANUFACTURER TO DESIGN TRUSS AND CONNECTIONS PER LOCAL CODES.
7.09	ASPHALT SHINGLES



REV. NO.	DATE	DESCRIPTION
3	4/18/17	ADDENDUM #3

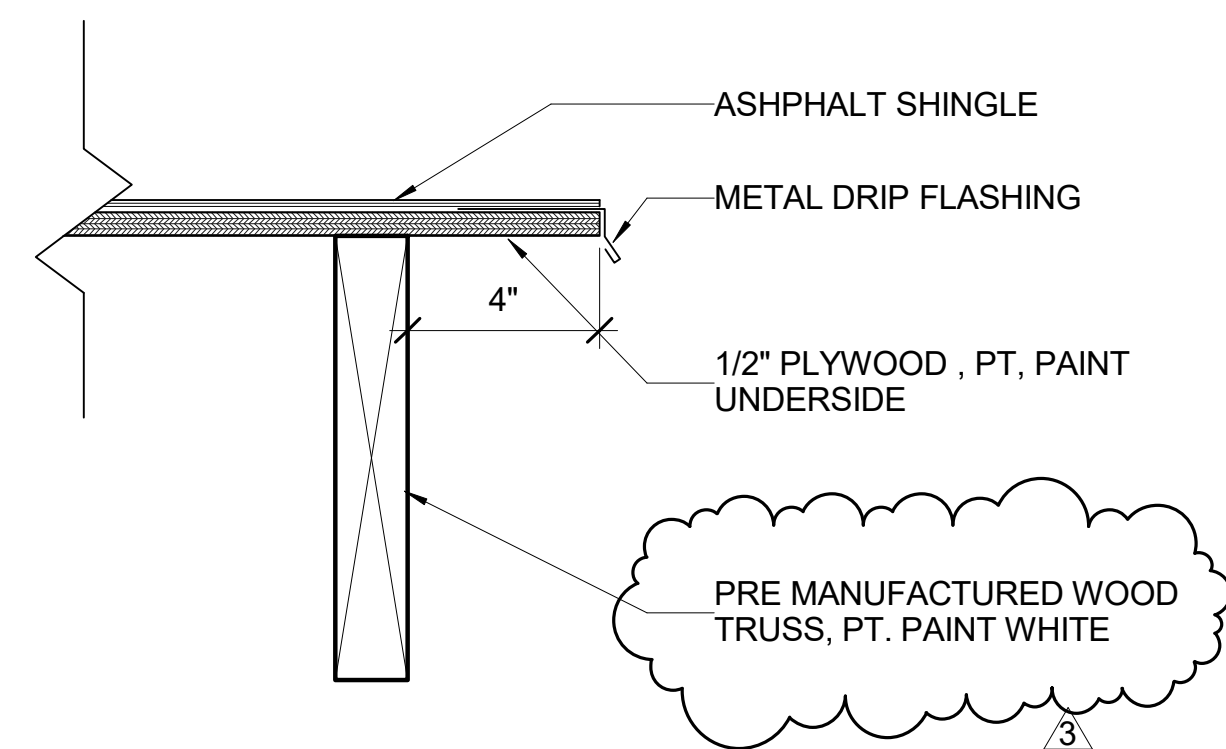


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COUNTY OF BEAUFORT, SC
10 PRITCHER POINT ROAD, OKATIE, SC 29909

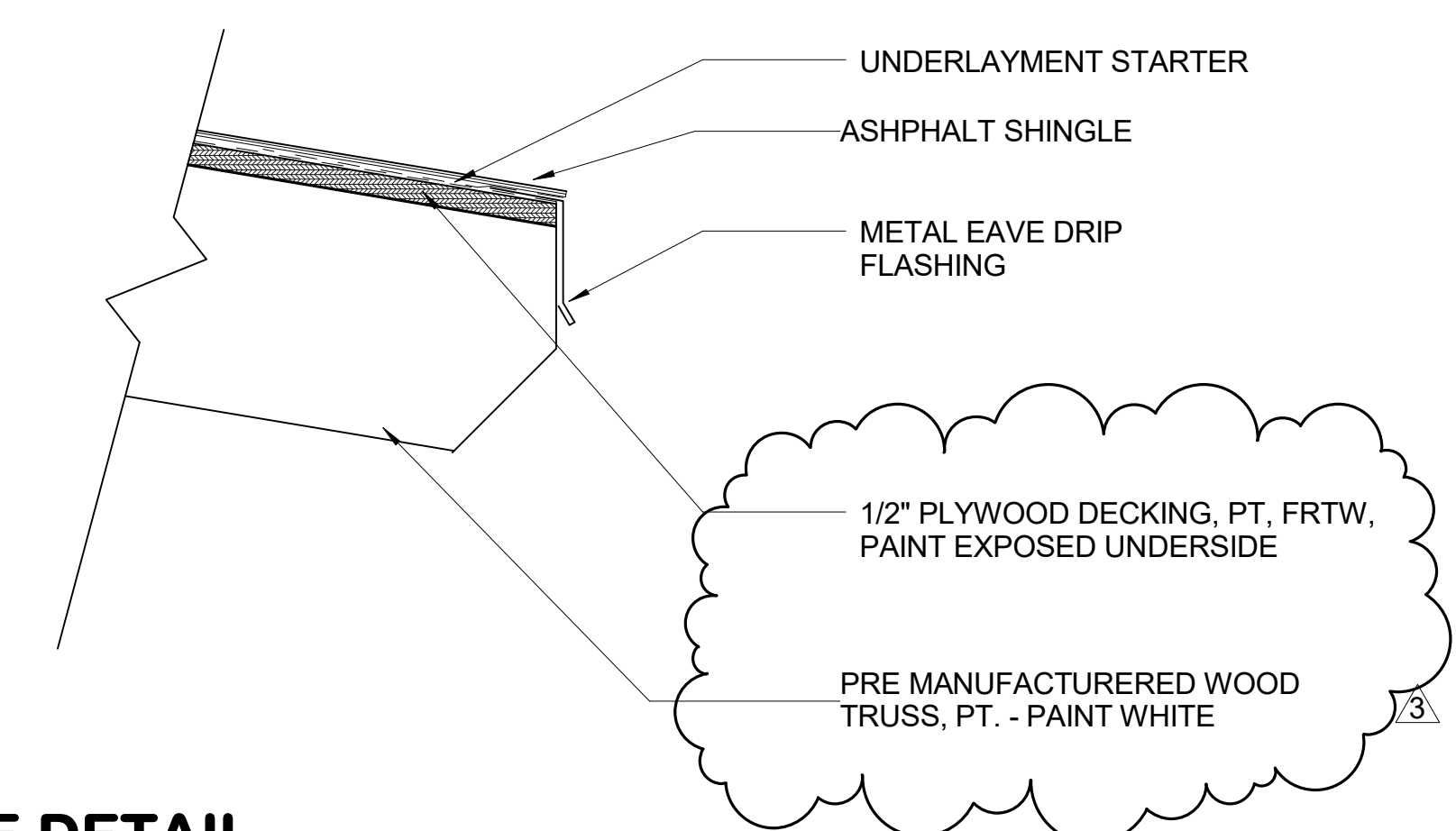
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PROJECT MGR.:	SM
DRAWN BY:	DR
CHECKED BY:	PO
APPROVED BY:	MIG
DATE ISSUED FOR:	
CONSTRUCTION	03/02/2017

COVERED STORAGE ELEVATIONS

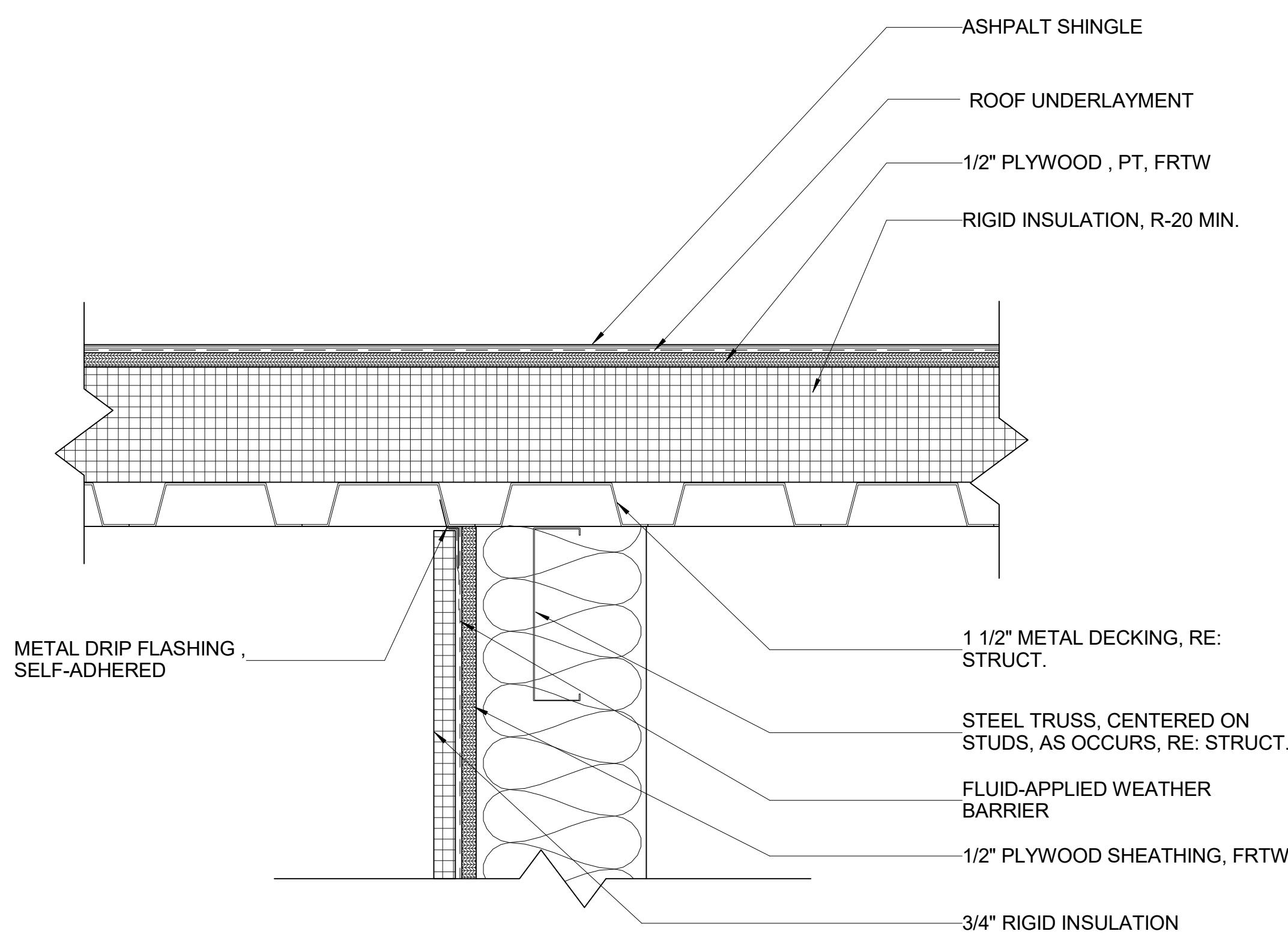
AS200



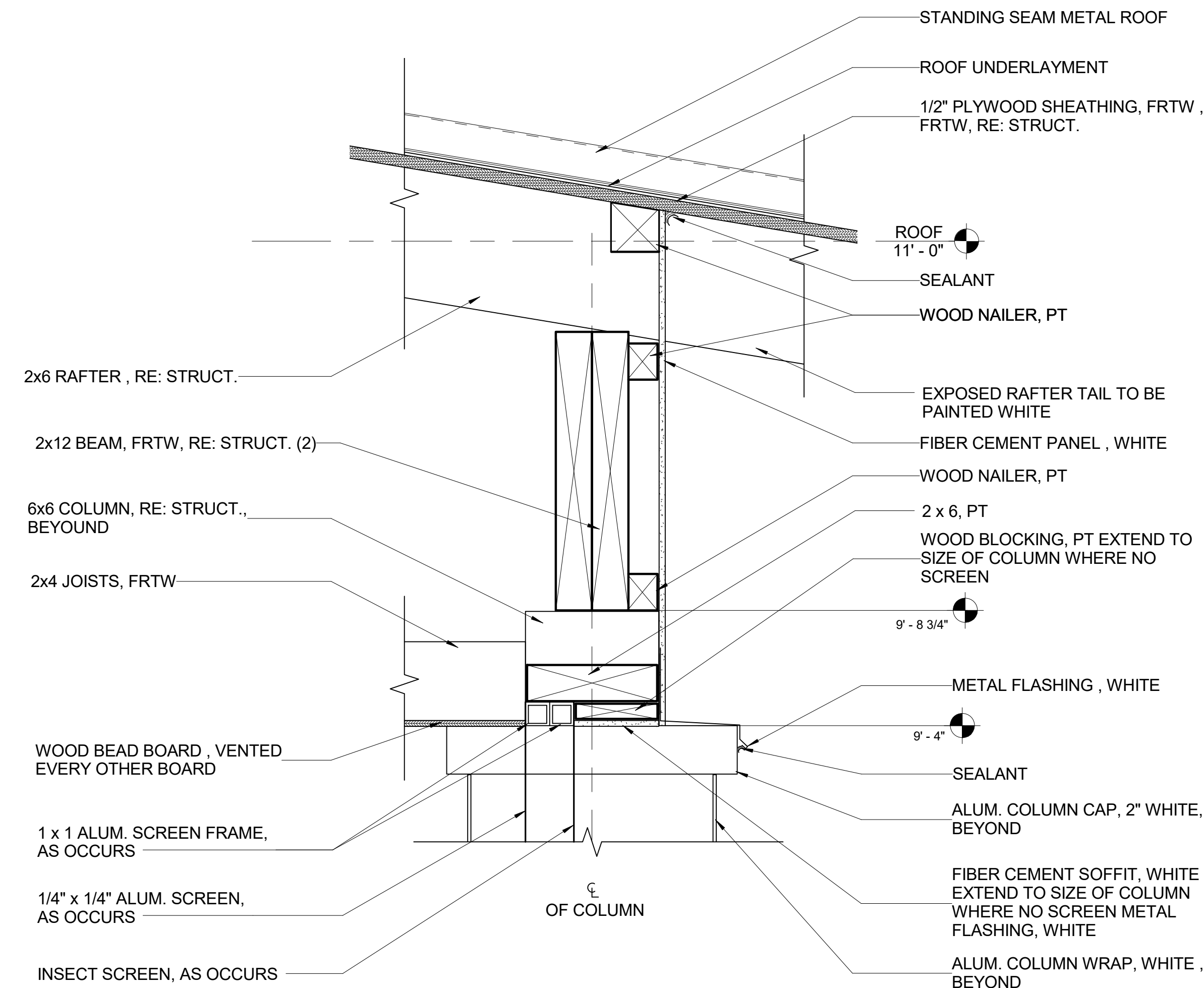
20 RAKE DETAIL @ COVERED STORAGE
SCALE: 3" = 1'-0"



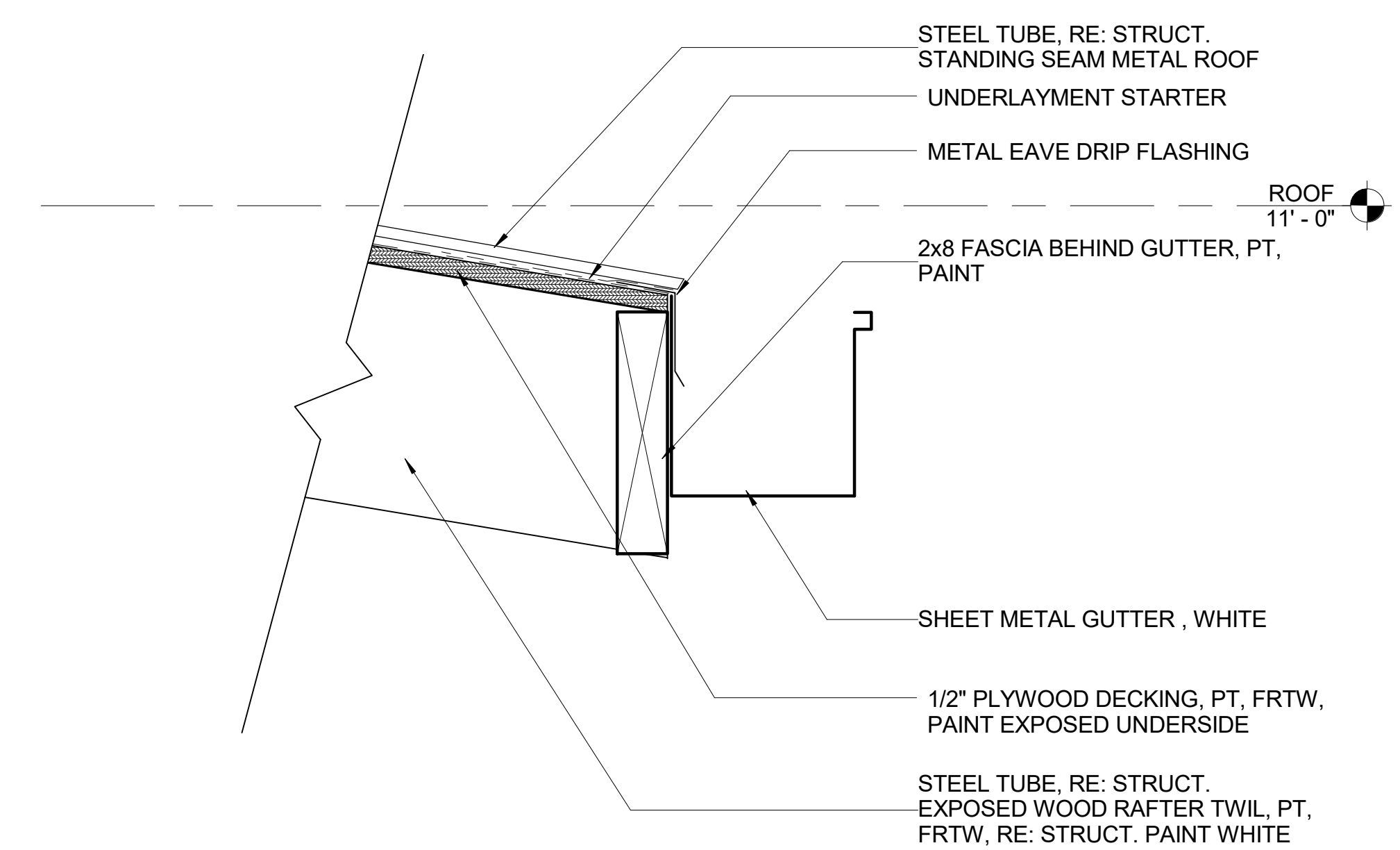
10 EAVE DETAIL
SCALE: 3" = 1'-0"



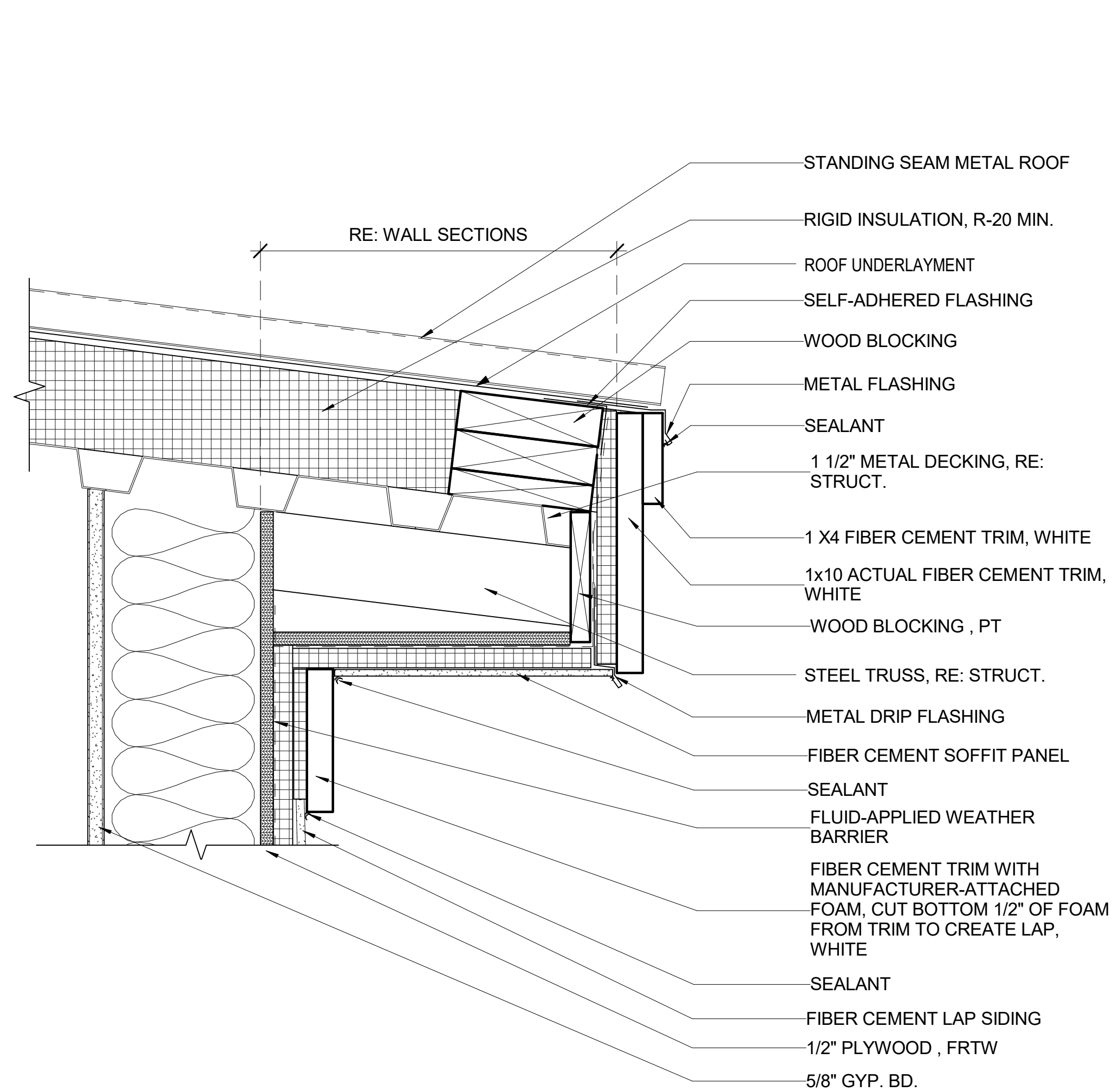
28 ROOF DETAIL
SCALE: 3" = 1'-0"



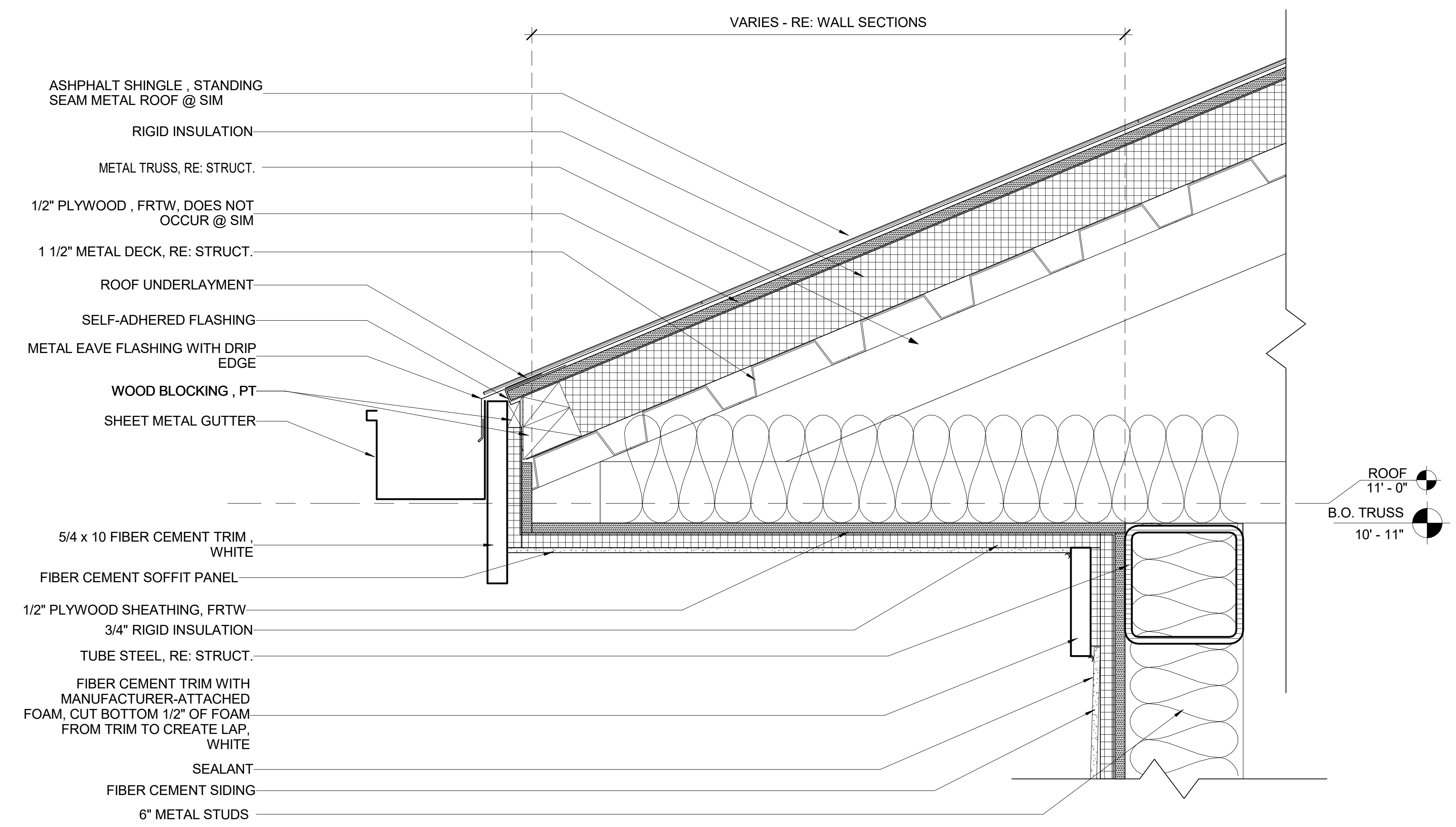
18 ROOF DETAIL
SCALE: 3" = 1'-0"



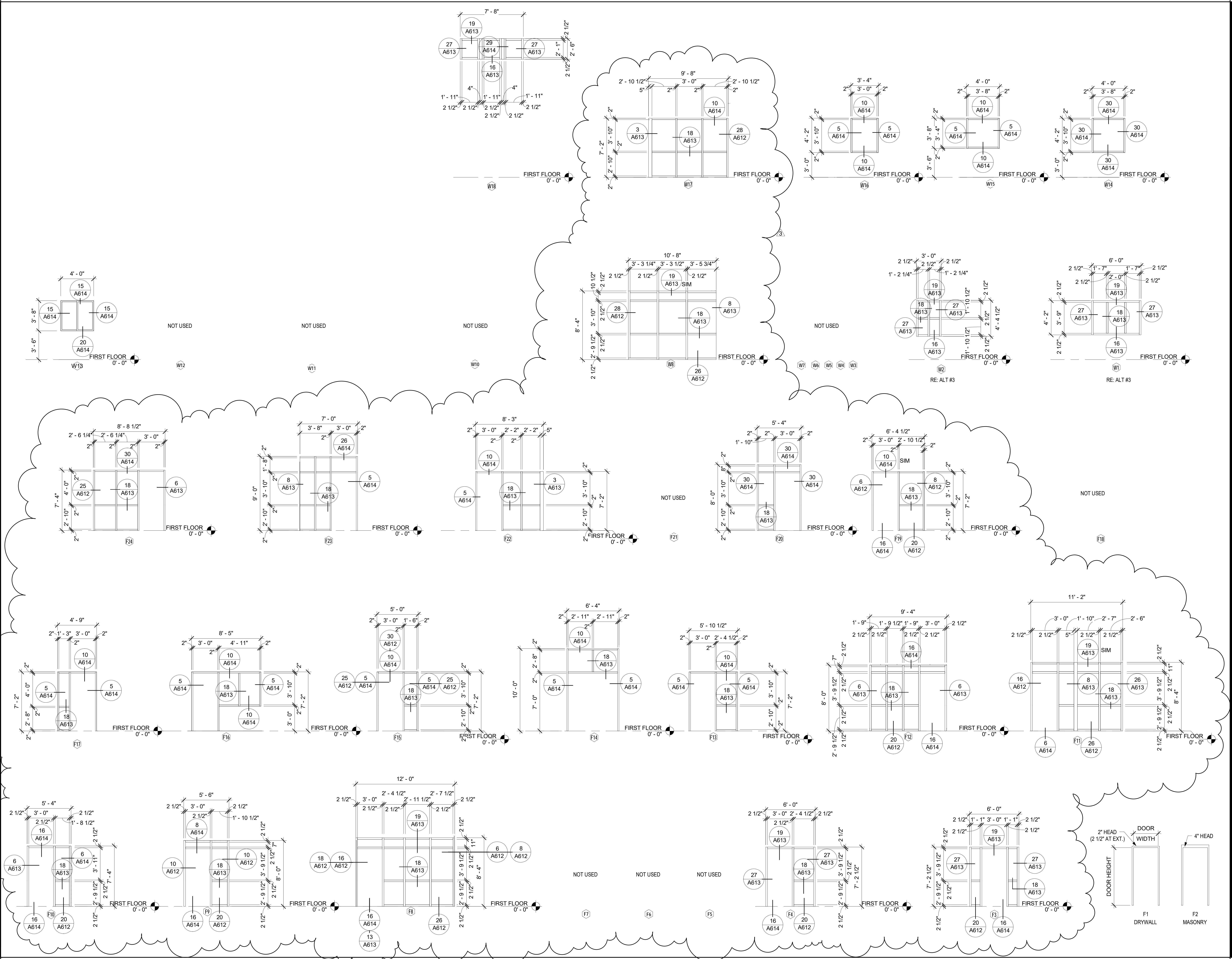
8 ROOF DETAIL
SCALE: 3" = 1'-0"



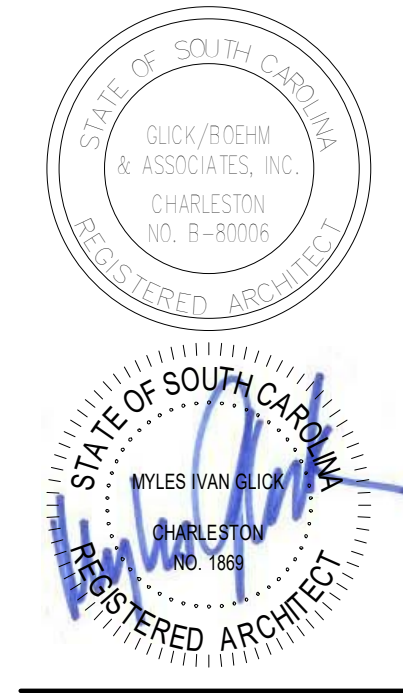
21 EAVE DETAIL
SCALE: 3" = 1'-0"



11 GUTTER DETAIL
SCALE: 3" = 1'-0"



REV. NO.	DATE	DESCRIPTION
1	4/10/17	ADDENDUM #1
2	4/18/17	ADDENDUM #3

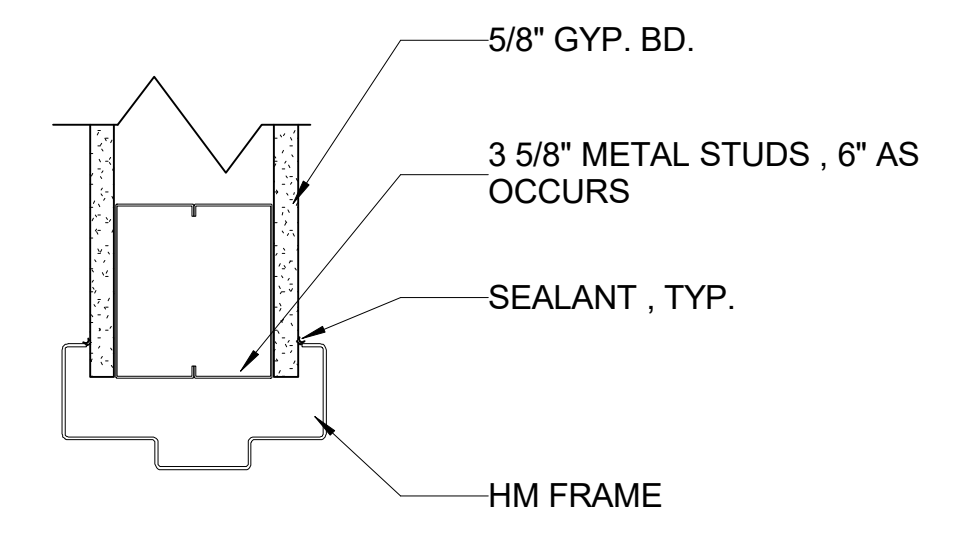


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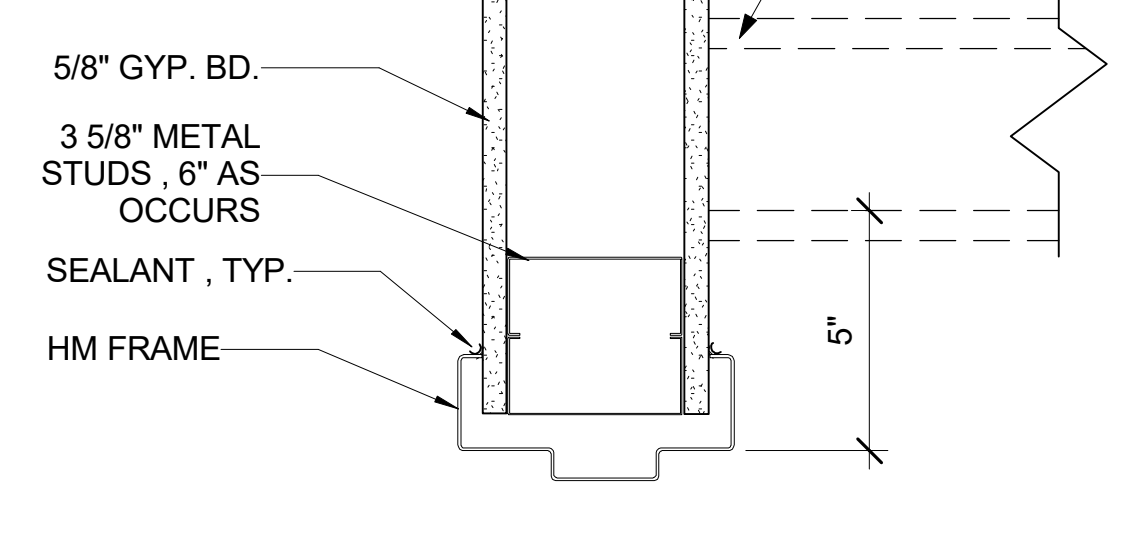
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 JOB NUMBER: 1502
 PROJECT MGR.: SM
 DRAWN BY: DR
 CHECKED BY: PD
 APPROVED BY: MIM
 DATE ISSUED FOR: CONSTRUCTION 03/02/2017

FRAME ELEVATIONS

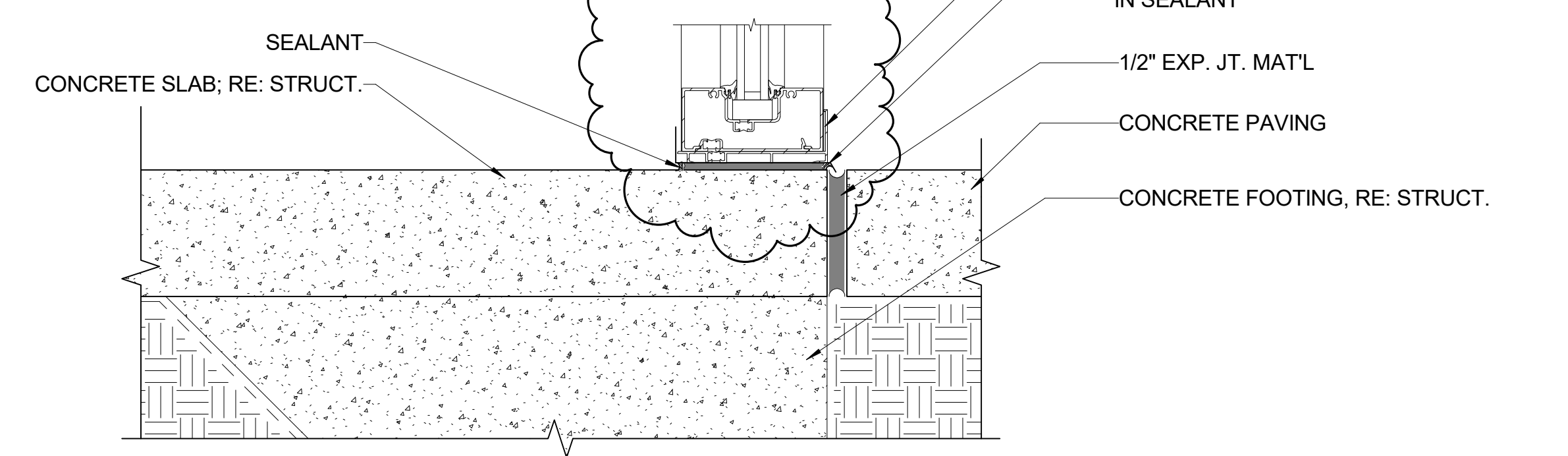
A601



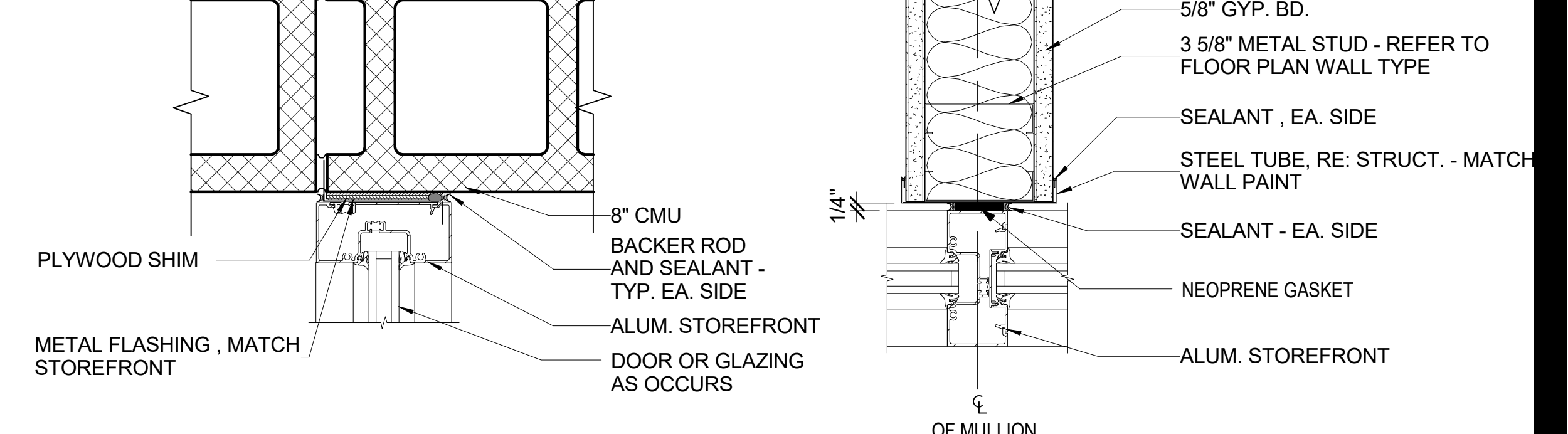
30 HM HEAD DETAIL
SCALE: 3" = 1'-0"



25 HM JAMB DETAL
SCALE: 3" = 1'-0"

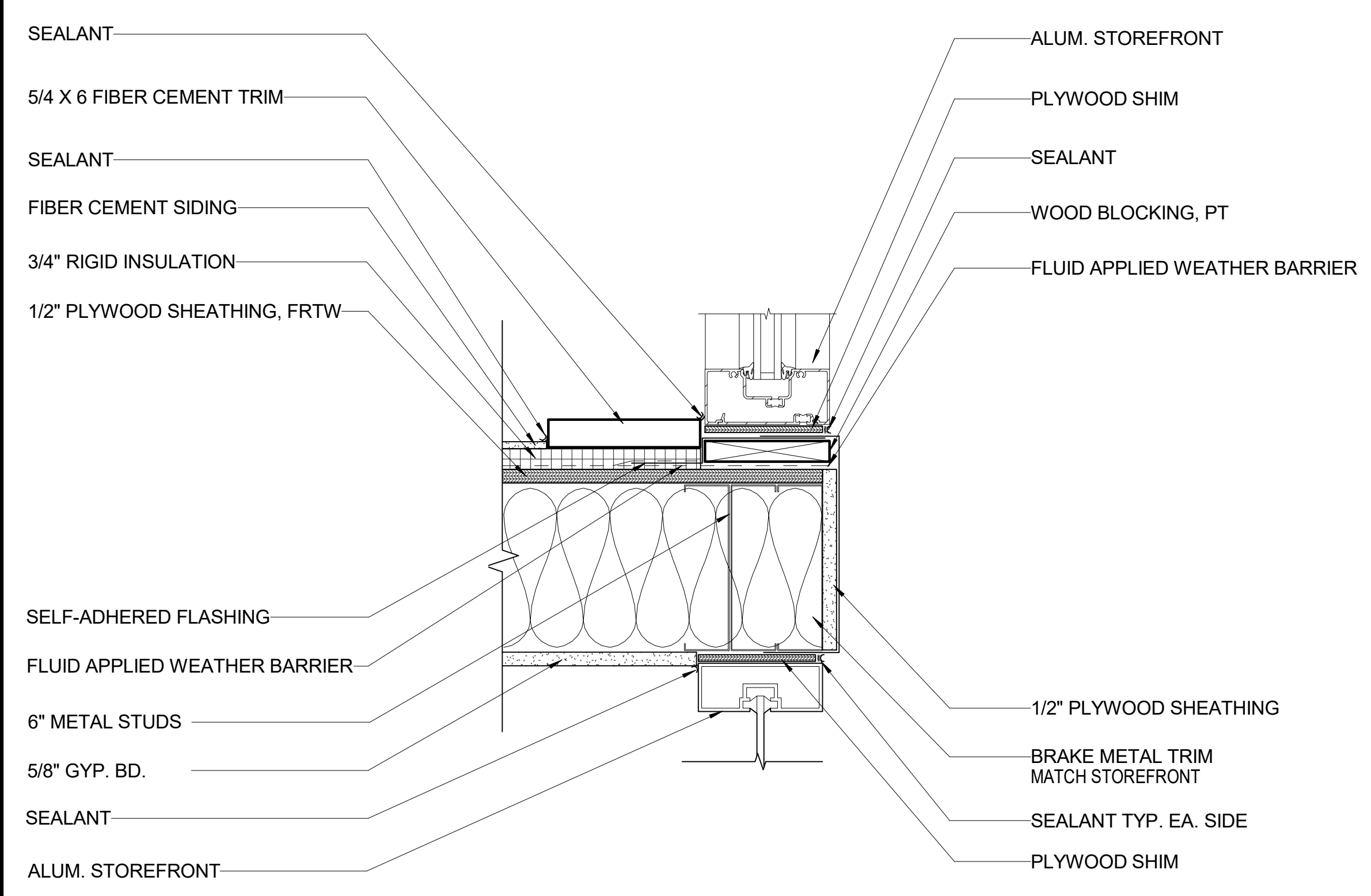


20 ALUM SILL DETAIL
SCALE: 3" = 1'-0"

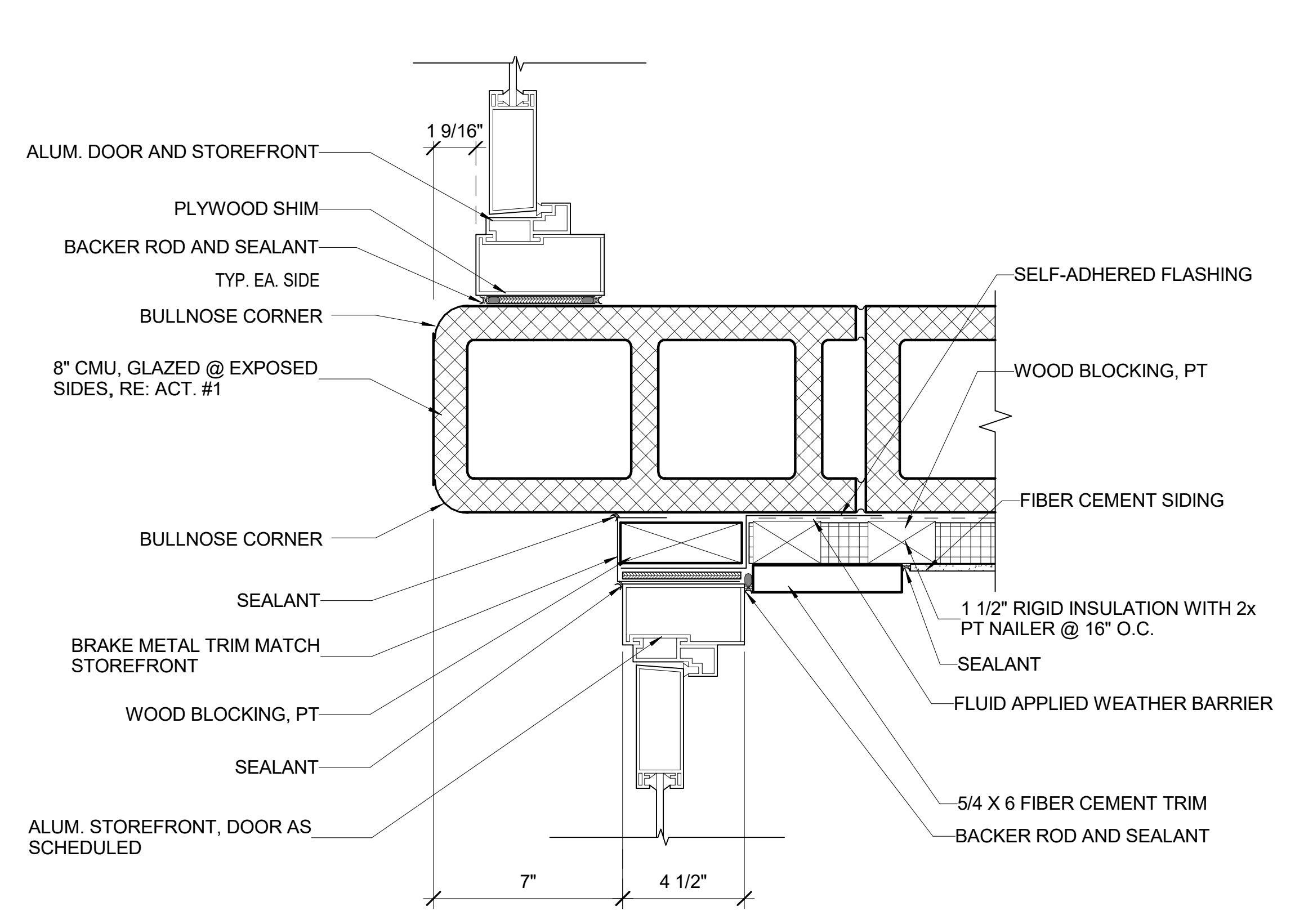


10 ALUM. S. F. JAMB DETAIL
SCALE: 3" = 1'-0"

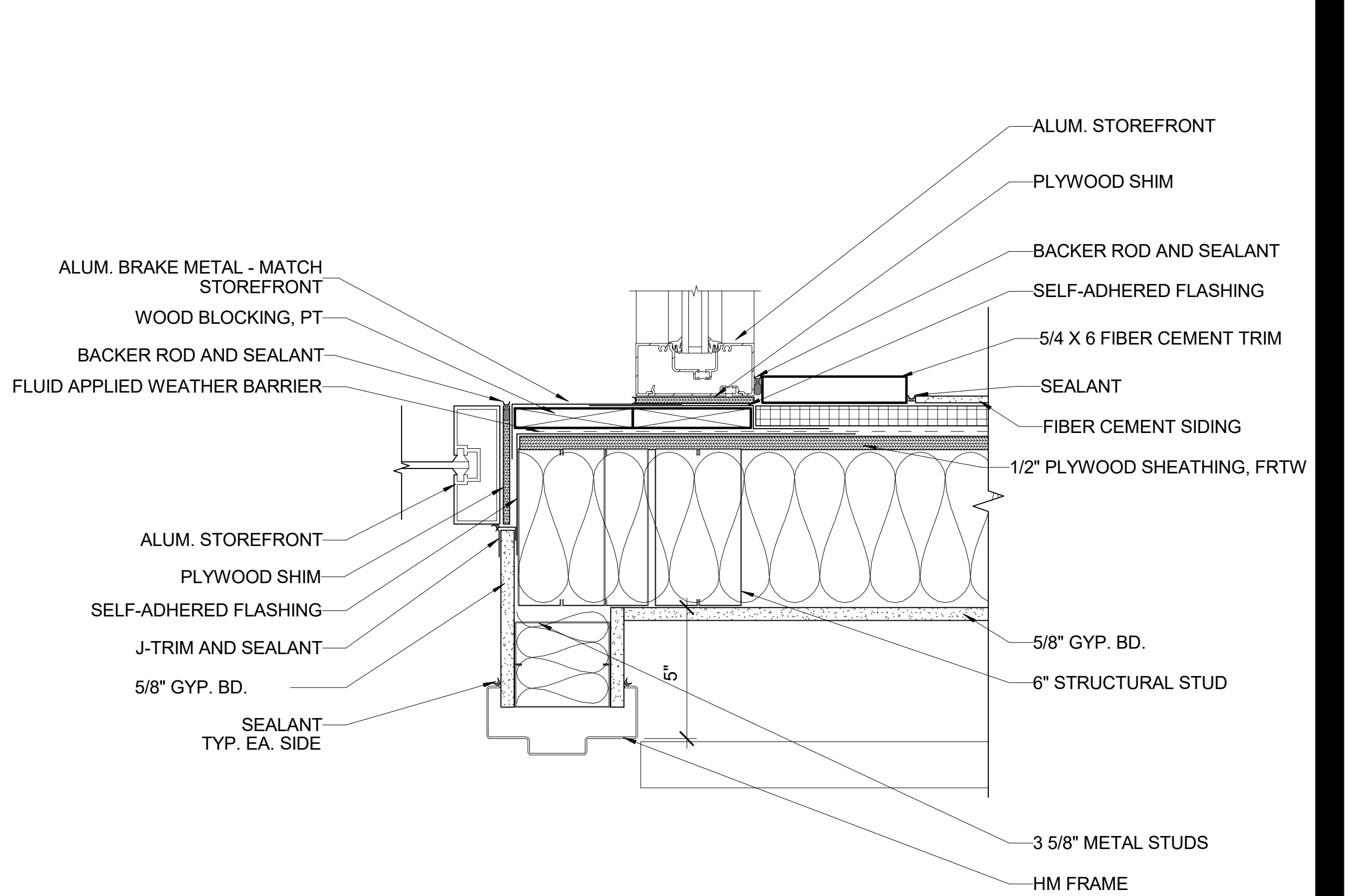
5 WALL/WINDOW MULLION
SCALE: 3" = 1'-0"



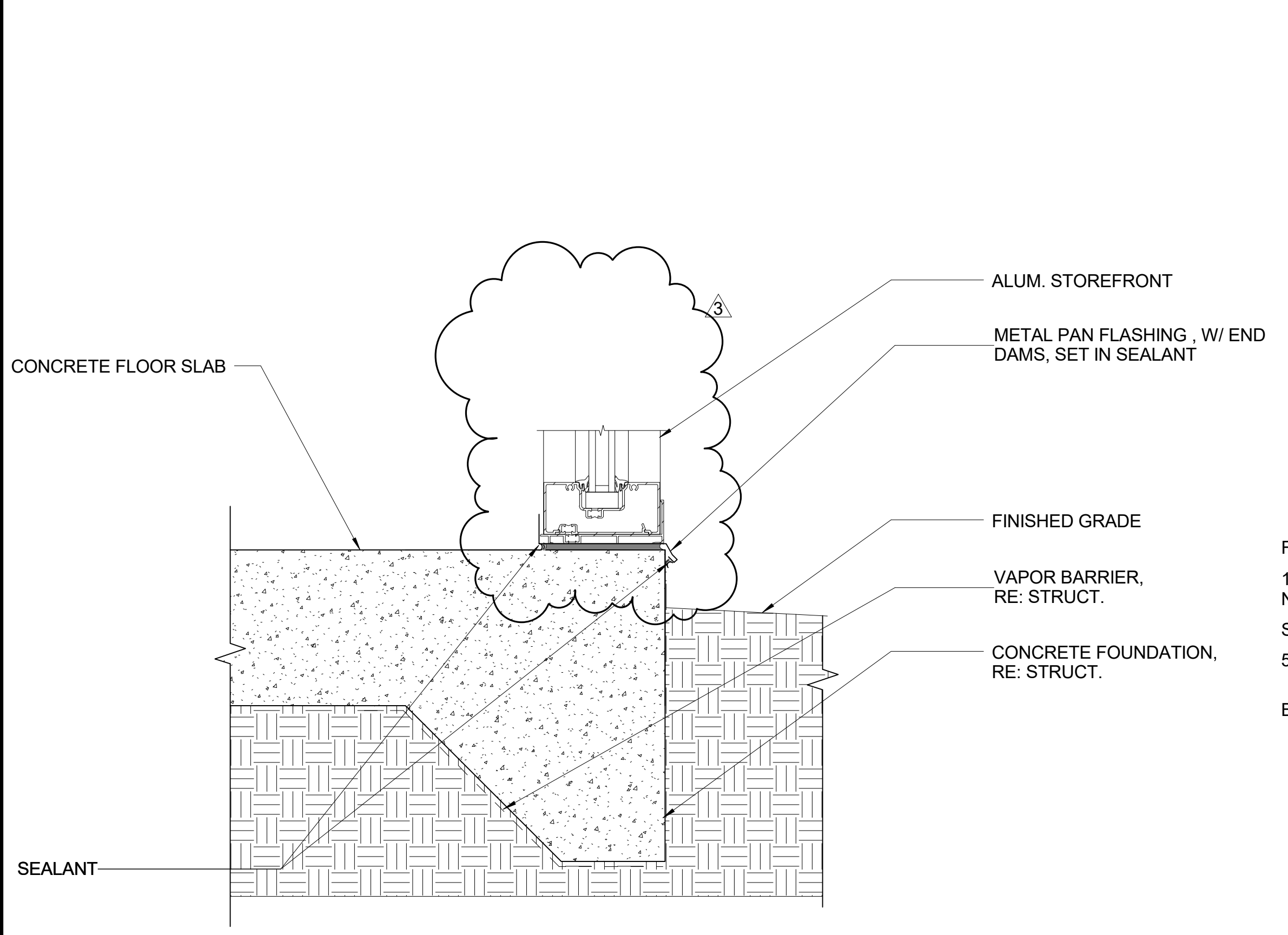
28 JAMB DETAIL
SCALE: 3" = 1'-0"



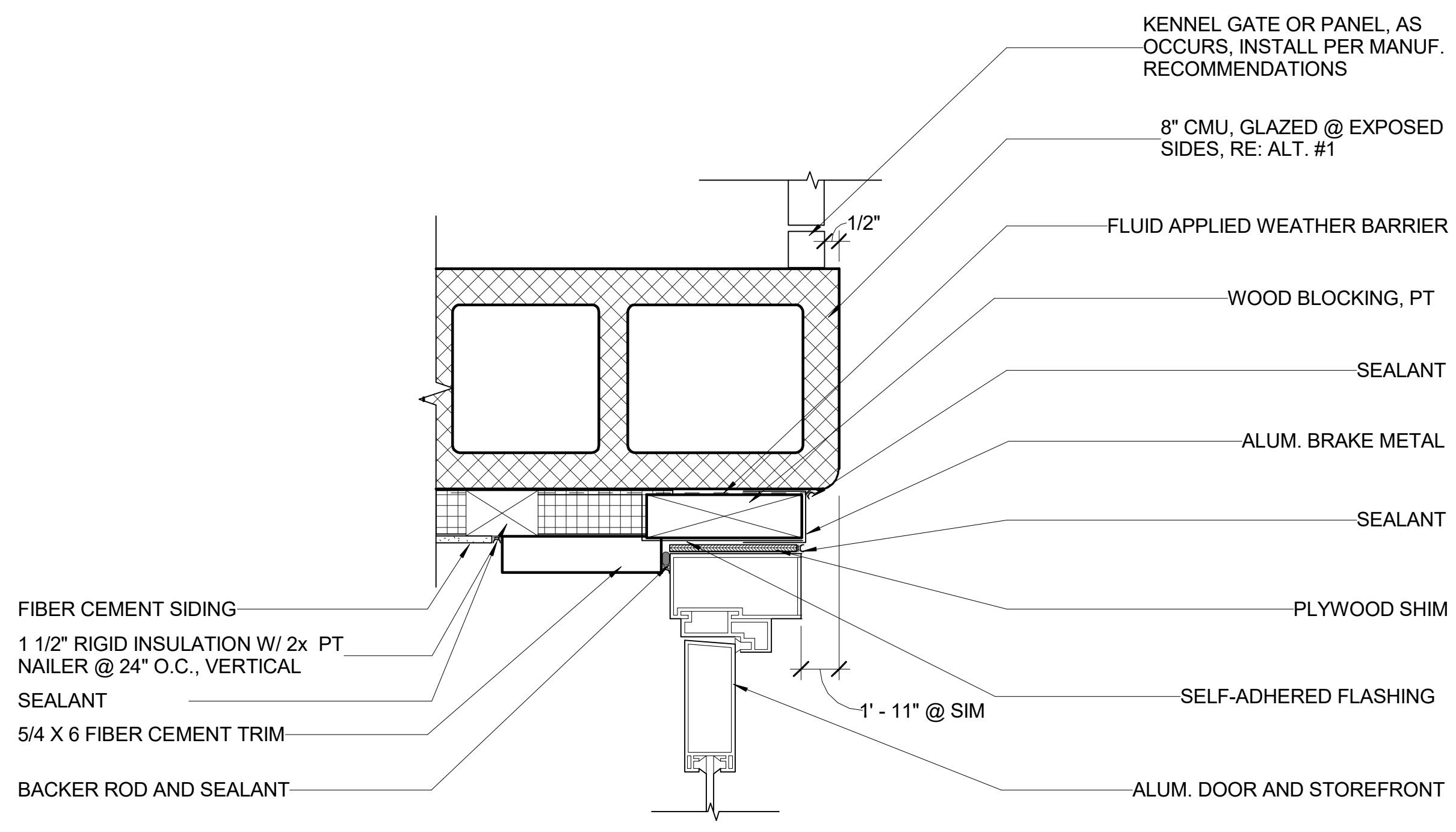
18 JAMB DETAIL
SCALE: 3" = 1'-0"



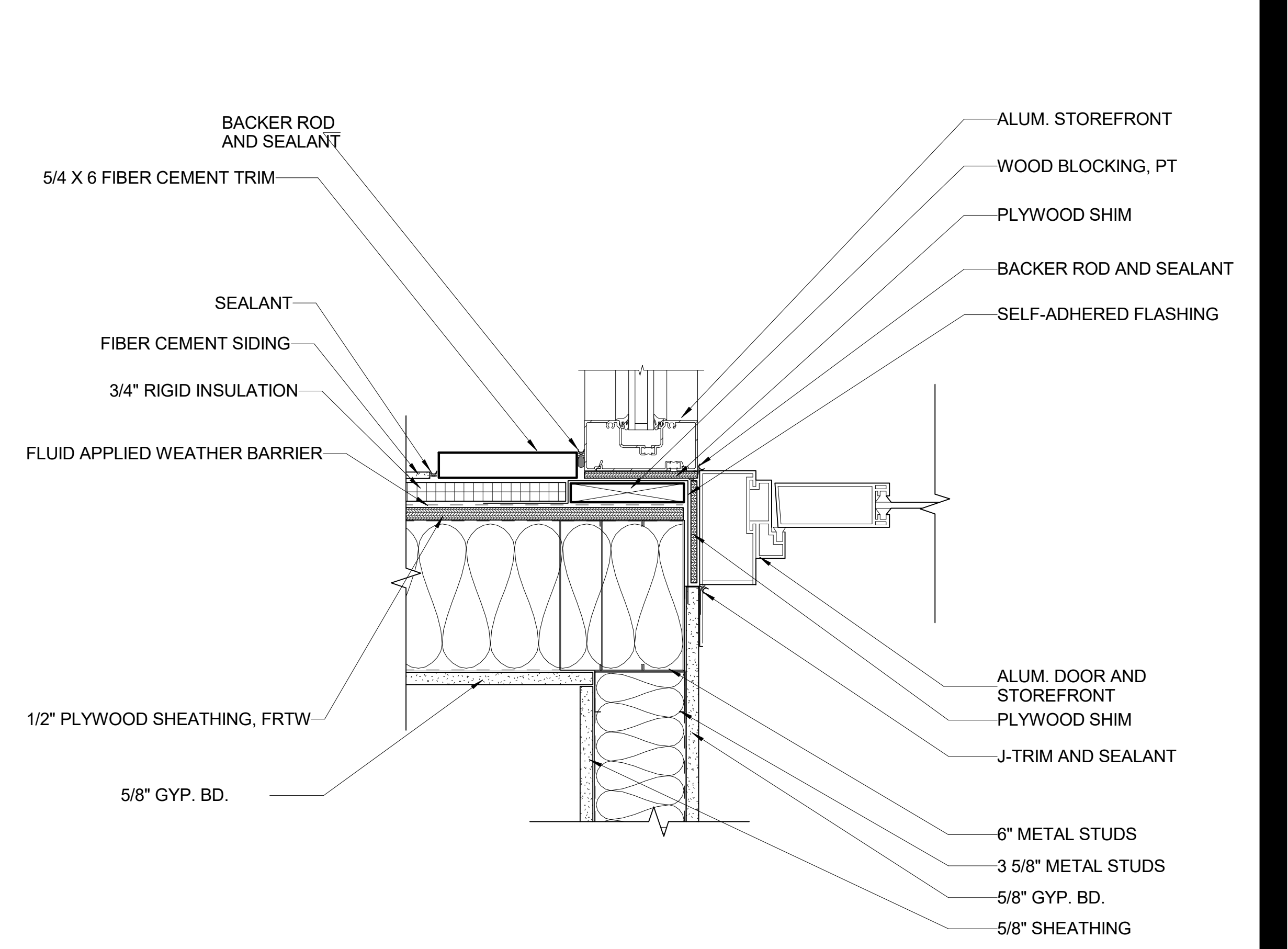
8 JAMB DETAIL
SCALE: 3" = 1'-0"



26 ALUM SILL DETAIL
SCALE: 3" = 1'-0"

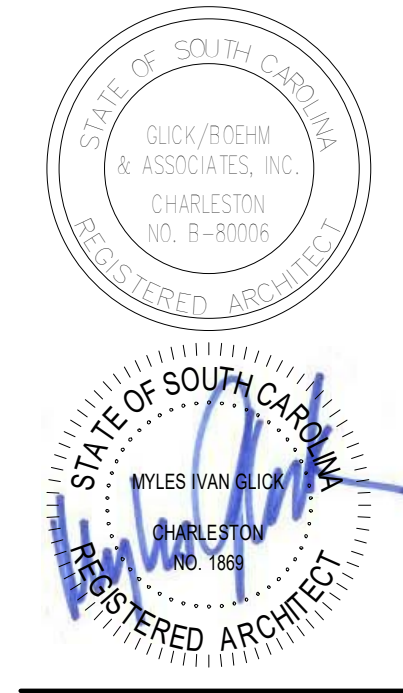


16 JAMB DETAIL
SCALE: 3" = 1'-0"



6 JAMB DETAIL @ DOOR 143A
SCALE: 3" = 1'-0"

REV. NO.	DATE	DESCRIPTION
1	4/10/17	ADDENDUM #2
2	4/10/17	ADDENDUM #2
3	4/18/17	ADDENDUM #5



BCAS/HHA ANIMAL SERVICES COMPLEX
COUNTY OF BEAUFORT, SC
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JOB NUMBER:	1502
PROJECT MGR.:	SM
DRAWN BY:	DR
CHECKED BY:	PO
APPROVED BY:	MIG
DATE ISSUED FOR:	CONSTRUCTION
	03/02/2017

FRAME DETAILS