



April 19, 2024

## ADDENDUM NO. 04

TO THE CONTRACT DOCUMENTS

**FOR**

MOUNTAIN TRANSIT MAINTENANCE FACILITY

**FOR THE**  
MOUNTAIN AREA REGIONAL TRANSIT AUTHORITY (MARTA)

RCA Project No. 5-08-01

### **NOTICE TO BIDDERS**

This Addendum forms a part of the Contract and modifies the original documents, City Approved in February 2024 (INC 02). It is intended that all work affected by the following modifications shall conform with related provisions and general conditions of the contract of the original drawings and specifications. Modify the following items wherever appearing in any drawing or sections of the specifications. Acknowledge receipt of Addendum No. 4 in the space provided on the Bid Form. Failure to do so may subject bidder to disqualification.

### **GENERAL**

- Item No. 4.1      Substitution Request related to Specification Section 10 51 13 Metal Lockers –Manufacturer All Welded Metal Lockers shall be added to list of approved manufacturers.
- Item No. 4.2      Substitution Request related to Specification Section 10 51 13 Metal Lockers, section 2.05 Locker Benches –Manufacturer Scranton Products shall be added to list of approved manufacturers.
- Item No. 4.3      Substitution Request related to Specification Section 03 30 00 Cast-In-Place Concrete, section 2.07 Curing Materials –Manufacturer Sinak LithiumCure 2000 shall be added to list of approved manufacturers.
- Item No. 4.4      Substitution Request related to Specification Section 09 05 61 Common Work Results for Flooring Preparation, section 2.01 Materials, C. 2. Products –Manufacturer Sinak VECT-R shall be added to list of approved manufacturers.
- Item No. 4.5      Reference Specification Section 27 50 00 – IP Integrated Electronic Communications  
4.5.1      Reference Section 1.08 Manufacturers, A. 1. – Add “b. Or Equal”.

### **CHANGES TO SPECIFICATIONS**

#### **INCREMENT #2**

#### **SPECS**

- Item No. 4.6      Reference Specification Section 00 01 10 – Table of Contents  
4.6.1      Replace Section in its entirety
- Item No. 4.7      Reference Specification Section 09 67 00 – Fluid-Applied Flooring  
4.7.1      Added Section in its entirety.

- Item No. 4.8 Reference Specification Section 09 96 00 – High-Performance Coating  
4.8.1 Replace Section in its entirety.
- Item No. 4.9 Reference Specification Section 11 11 00 – Vehicle Service Equipment  
4.9.1 Replace Section in its entirety.
- Item No. 4.10 Reference Specification Section 14 45 13.10 – Vertical Rise Vehicle Service Lift  
4.10.1 Replace Section in its entirety.
- Item No. 4.11 Reference Specification Section 14 45 13.19 – Vehicle Service Lifts  
4.11.1 Replace Section in its entirety.
- Item No. 4.12 Reference Specification Section 14 45 13.35 – In-Ground Heavy Duty 3-Post Vehicle  
4.12.1 Replace Section in its entirety.
- Item No. 4.13 Reference Specification Section 27 53 00 – Paging System  
4.13.1 Added Section in its entirety.

## **CHANGES TO DRAWINGS**

### **GENERAL**

- Item No. 4.14 Reference sheet T-1 – Title Sheet and Sheet Index  
4.14.1 Replace Sheet T-1 and revise per clouded area listed below:  
a) Revised Project Name per clouded area.  
b) Revised Contact List per clouded areas.

### **CIVIL**

- Item No. 4.15 Reference Sheet 1 – Title Sheet  
4.15.1 Replace Sheet 1 and revise per clouded areas listed below:  
c) Revised “Construction Items” and updated quantities.  
d) Revised ‘Sewer Improvements Items’ and updated quantities.  
e) Revised “Water Improvements Items” and updated quantities.
- Item No. 4.16 Reference Sheet 3 – Grading Plan  
4.16.1 Replace Sheet 3 and revise per clouded areas listed below:  
a) Added retaining wall grades to plans.  
b) Revised ‘Construction Items’.
- Item No. 4.17 Reference Sheet 5 – Utility Plan  
4.17.1 Replace Sheet 5 and revise per clouded areas.  
a) Adding 1” landscape water meter and backflow device.  
b) Adding 2” domestic water meter and backflow device.  
c) Addition of an 8” DDCA backflow device with FDC.  
d) Separate domestic feed to the building to the proposed domestic meter.  
e) Addition of fire hydrant (to be utilized by Increment #3).  
f) Water line locations revised.  
g) Sewer line location and inverts revised and updated.  
h) Revised “Sewer Improvements items”.  
i) Revised Water Improvements items”.  
j) Added proposed gas line and labels.
- Item No. 4.18 Reference Sheet 6 – Storm Drain Plan  
4.18.1 Replace Sheet 6 and revise per clouded areas listed below:  
a) Revised Storm Drain Chambers size and locations.  
b) Revised drain pipe sizes, slopes, and inverts.  
c) Revised “Storm Drain Items”.

### **ARCHITECTURE - SITE**

- Item No. 4.19 Reference Sheet ASD-1.2 – Floor Plan
- 4.19.1 Replace Sheet ASD-1.2 and revise per clouded areas listed below:
- a) Revised detail 1/ASD-1.2 – Yard Gate Drop Latch per clouded area.
  - b) Revised detail 3/ASD-1.2 – MTL Service Gate-DBL-ELEV. per clouded area.
  - c) Revised detail 6/ASD-1.2 – Gate Drop Latch Det. per clouded area.

## ARCHITECTURE

- Item No. 4.20 Reference Sheet A1-1.2 – Floor Plan
- 4.20.1 Replace Sheet A1-1.2 and revise per clouded areas listed below:
- a) Revised Floor Plan 1/A1-1.2 per clouded area.
    - a. Relocated floor drain in Mechanics Bay #113.
    - b. Revised Locker RM. #107 wall type and dimensions.

- Item No. 4.21 Reference Sheet A1-1.3 – Equipment Plan
- 4.21.1 Replace Sheet A1-1.3 and revise per clouded areas listed below:
- a) Revised Equipment Schedule per clouded areas.
    - a. Revised Purchase / Installation column per clouded area.
    - b. Revised Keynote #1 per clouded areas.
    - c. Revised Keynote #12 per clouded area.
    - d. Revised Keynote #13 per clouded area.
    - e. Revised Keynote #15 per clouded area. Misspelling error.
    - f. Revised Keynote #19 per clouded area.
    - g. Revised Keynote #30 per clouded area.
  - b) Revised Equipment Plan 1/A1-1.3 per clouded area.
    - a. Added equipment keynote #39 to plan.
    - b. Relocated floor drain in Mechanics Bay #113

## INTERIOR DESIGN

- Item No. 4.22 Reference Sheet ID-1.0 – Finishes Plan / Sched. & CMF
- 4.22.1 Replace Sheet ID-1.0 and revise per clouded areas listed below:
- a) Added MWP-4 finish to Colors, Materials and Finishes Legend (CMF) Schedule per clouded areas.
  - b) Revised CONC-1 & CONC-2 descriptions per clouded area.
  - c) Revised SV-1 description per clouded area.
  - d) Revised PL-2 description per clouded area.
  - e) Revised MWP-4 description per clouded area.
  - f) Revised T-4 description per clouded area.
  - g) Revised ACT-1 description per clouded area.
  - h) Revised RES-1, RES-2, & RES-3 per clouded area.
  - i) Revised P-8 & P-9 per clouded area. Not used.

## ARCHITECTURE DETAILS

- Item No. 4.23 Reference Sheet AD-1.0 – Accessibility & Signage Details
- 4.23.1 Revise Sheet AD-1.0 and per attached sketch listed below:
- a) Revised detail 1/AD-1.0 – Signage Requirements per clouded areas in attached sketch ASK-4.01.
- Item No. 4.24 Reference Sheet AD-2.0 – Details Wall Types
- 4.24.1 Replace Sheet AD-2.0 and revise per clouded areas listed below:
- b) Revised detail 1/AD-2.0 – Wall type A1 per clouded area. Added 7/8" furring hat channel.
  - c) Revised detail 2/AD-2.0 – Wall Type A2 per clouded area. Added 7/8" furring hat channel.
  - d) Revised detail 3/AD-2.0 – Wall Type A3 per clouded area. Added 7/8" furring hat channel.
  - e) Revised detail 4/AD-2.0 – Wall type A4 per clouded area. Added blanket batt insulation.
  - f) Revised detail 9/AD-2.0 – Wall Type D1 per clouded area. Added 7/8" furring hat channel.
  - g) Revised detail 11/AD-2.0 – Wall Type E1 per clouded area. Added 7/8" furring hat channel.
  - h) Revised detail 12/AD-2.0 – Wall Type B2 per clouded area. Added 7/8" furring hat channel.
- Item No. 4.25 Reference Sheet AD-2.1 – Details Wall Types
- 4.25.1 Replace Sheet AD-2.1 and revise per clouded areas listed below:

- a) Revised detail 2/AD-2.1 – Metal Wall @ Curb-Vert per clouded area. Added 7/8" furring hat channel and blanket batt insulation.
- b) Revised detail 3/AD-2.1 – Metal Wall @ Curb-Horiz. per clouded area. Added 7/8" furring hat channel and blanket batt insulation.
- c) Revised detail 4/AD-2.1 – Fire Rated Base Assembly per clouded area. Added 7/8" furring hat channel.
- d) Revised detail 11/AD-2.1 – Interior Fire Rated Wall Detail per clouded areas.
- e) Revised detail 12/AD-2.1 – Non-Bearing MTL Stud Part. Top (Full Height Wall) per clouded areas.
- f) Revised detail 13/AD-2.1 – Metal Wall @ Curb-Vert. per clouded area. Added blanket batt insulation.
- g) Revised detail 18/AD-2.1 – Outside Corner @ H. MWP per clouded area. Added 7/8" furring hat channel.
- h) Revised detail 20/AD-2.1 – Outside Corner @ V. MWP. per clouded area. Added blanket batt insulation.
- i) Revised detail 22/AD-2.1 – Panel Transition @ H. & V. per clouded areas. Added blanket batt insulation & 7/8" furring hat channel.

Item No. 4.26 Reference Sheet AD-6.0 – Details Door & Window Details

4.26.1 Replace Sheet AD-6.0 and revise per clouded areas listed below:

- a) Revised detail 1/AD-6.0 – Coiling Door Head per clouded area. Added blanket batt insulation.
- b) Revised detail 2/AD-6.0 – Coiling Door Jamb per clouded area. Added blanket batt insulation.
- c) Revised detail 15/AD-6.0 –PEMB Win. Head per clouded areas. Added 7/8" furring hat channel.
- d) Revised detail 16/AD-6.0 –PEMB Win. Jamb per clouded area. Added blanket batt insulation.
- e) Revised detail 27/AD-6.0 –PEMB Win. Jamb II per clouded area. Added 7/8" furring hat channel.
- f) Revised detail 28/AD-6.0 –PEMB Win. Sill per clouded area. Added 7/8" furring hat channel.

Item No. 4.27 Reference Sheet AD-6.1 – Details Door & Window Details

4.27.1 Replace Sheet AD-6.1 and revise per clouded areas listed below:

- a) Revised detail 7/AD-6.1 – Ext. HM. Door Head per clouded area. Added blanket batt insulation.
- b) Revised detail 8/AD-6.1 – Ext. HM. Door Jamb per clouded area. Added blanket batt insulation.
- c) Revised detail 9/AD-6.1 – Ext. HM. Door Jamb 2 per clouded area. Added 7/8" furring hat channel.
- d) Revised detail 10/AD-6.1 – Ext. HM. Window Head per clouded area. Added blanket batt insulation.
- e) Revised detail 11/AD-6.1 – Ext. HM. Window Jamb per clouded area. Added blanket batt insulation.
- f) Revised detail 13/AD-6.1 – Ext. HM. Door Head 2 per clouded area. Added 7/8" furring hat channel.
- g) Revised detail 14/AD-6.1 – Ext. HM. Door Jamb 2 per clouded area. Added 7/8" furring hat channel.
- h) Revised detail 21/AD-6.1 – PEMB Win. Head Inset per clouded area. Added 7/8" furring hat channel.
- i) Revised detail 23/AD-6.1 – PEMB C.W. Door Jamb per clouded area. Added 7/8" furring hat channel.

Item No. 4.28 Reference Sheet AD-6.2 – Details Door & Window Details

4.28.1 Replace Sheet AD-6.2 and revise per clouded areas listed below:

- a) Revised detail 1/AD-6.2 – PEMB Win. Head 2 per clouded area. Added 7/8" furring hat channel.
- b) Revised detail 3/AD-6.2 – Sectional Door Head per clouded area. Added blanket batt insulation.
- c) Revised detail 4/AD-6.2 – Sectional Door Jamb per clouded area. Added blanket batt insulation.



## STRUCTURAL

- Item No. 4.29 Reference Sheet S0-1.5 – Typical Masonry & Steel Details  
4.29.1 Replace Sheet S0-1.5 and revise per clouded areas listed below:  
a) Added typical reinforcing at CMU openings detail. See detail 15/S0-1.5.
- Item No. 4.30 Reference Sheet S2-1.1 – Trash & Electrical Yard Foundation & Roof Framing Plan.  
4.30.1 Replace Sheet S2-1.1 and revise per clouded areas listed below:  
a) Revised 2/S2-1.1 to show revised, larger gate & columns.  
a. Removed portion of wall outline at North most gate along east wall.  
b. Removed middle portion of CMU wall between gates.  
c. Added detail 10/S0-1.5 for HSS to roof deck connection.  
b) Revised 1/S2-1.1 to show revised walls and gate connections.  
a. Removed portions of CMU wall along east wall.  
b. Added detail reference 11/SD-1.2 at N-E corner for foundation & gate post.  
c. Added detail reference 9/SD-1.2 for centered E-side foundation & gate post.  
d. Added detail reference 12/SD-1.2 for S-E corner foundation & gate post.
- Item No. 4.31 Reference Sheet SD-1.1 – Foundation Details  
4.31.1 Replace Sheet SD-1.1 and revise per clouded areas listed below:  
a) Added PF-4 option to detail 1/SD-1.1
- Item No. 4.32 Reference Sheet SD-1.2 – Foundation Details  
4.32.1 Replace Sheet SD-1.2 and revise per clouded areas listed below:  
a) Added details 9-12/SD-1.2.

## PLUMBING

- Item No. 4.33 Reference Sheet P1-0.1 – Plumbing Legend Notes & Schedules  
4.33.1 Replace Sheet P1-0.1 and revise per clouded areas listed below:  
a) Revised Pipe Material Schedule per clouded area. Added lube oil to the pipe material schedule.  
b) Revised Plumbing Legend Symbols per clouded area. Added lube oil abbreviations to the plumbing legend.
- Item No. 4.34 Reference Sheet P1-1.1 – Plumbing Floor & Roof Plans  
4.34.1 Replace Sheet P1-1.1 and revise per clouded areas listed below:  
a) Revised Plumbing Floor Plan – Waste, Vent & Condensate detail 1/P1-1.1 per clouded area. Moved floor drain in Mechanics Bay 1.
- Item No. 4.35 Reference Sheet P1-1.2 – Plumbing Floor & Roof Plans  
4.35.1 Replace Sheet P1-1.2 and revise per clouded areas listed below:  
a) Revised General Notes per clouded area. Added general note 19.  
b) Revised Construction Notes per clouded area.  
a. Added construction notes 27 and 28.  
b. Revised construction notes 20, 21, 26.  
c) Revised Plumbing Floor Plan – Domestic Water, Compressed Air & Gas 1/P1-1.2 per clouded area.  
a. Added lube piping from fluid storage tank in the Fluid Storage Room 105 to the hose reels in the Mechanic Bays.  
b. Moved floor drain in Mechanics Bay 1.
- Item No. 4.36 Reference Sheet P2.02 – Plumbing Details  
4.36.1 Replace Sheet P2.02 and revise per clouded areas listed below:  
a) Added detail Compressed Air Connection 4/P2.02 per clouded area.

## ELECTRICAL

- Item No. 4.37 Reference Sheet E1-0.1 – Symbol List and General Notes  
4.37.1 Replace Sheet E1-0.1 and revise per clouded areas listed below:  
a) Revised General Notes 3.A, 3.B, 3.C and 3.D.
- Item No. 4.38 Reference Sheet E1-0.2 – Electrical Details  
4.38.1 Replace Sheet E1-0.2 and revise per clouded areas listed below:

- a) Revised Details 3/E1-0.2 per clouded areas.
  - b) Revised Detail 4/E1-0.2 per clouded areas
- Item No. 4.39 Reference Sheet E1-0.3 – Single Line Diagram and Lighting Fixture Schedule
- 4.39.1 Replace Sheet E1-0.3 and revise per clouded areas listed below:
    - a) Revised Lighting Fixture Schedule per clouded areas.
    - b) Revised Single Line Diagram per clouded areas.
- Item No. 4.40 Reference Sheet E1-1.1 – Lighting and Power Plans
- 4.40.1 Replace Sheet E1-1.1 and revise per clouded areas listed below:
    - a) Revised Lighting Plan 1/E1-1.1 per clouded areas.
      - a. Revised Exterior Fixture “WP1”
      - b. Revised Break Room’s lighting per clouded areas.
    - b) Revised Power Plan 2/E1-1.1 per clouded areas.
      - a. Relocated tri-plug cord reel banks (Item #9) to its location.
      - b. Provided power for cut-off saw (Item #38)
      - c. Provided power for fire alarm bell.
      - d. Revised power on workstation.
    - c) Revised Plan Notes per clouded areas.
      - a. Revise Plan Note #2.
      - b. Added Plan Note #35
      - c. Added Plan Note #36
- Item No. 4.41 Reference Sheet E1-1.2 – Panel Schedules
- 4.41.1 Replace Sheet E1-1.2 and revise per clouded areas listed below:
    - a) Revised detail 1/E1-1.2 per clouded areas.
      - a. Added card reader on doors of break room 100.
      - b. Revised smoke and heat detectors in Locker Rooms.
      - c. Indicated fire sprinkler riser.
      - d. Indicated Grid Lines “G”, “H”, “I” and “J”.
    - b) Revised detail 2/E1-1.2 per clouded areas.
      - a. Added access control system controller and power supply.
      - b. Added detail reference to Ufer Ground.
      - c. Added Grid Lines “I” and “J”.
    - c) Added Plan Notes per clouded areas.
      - a. Added Plan Note #21
      - b. Added Plan Note #40.
- Item No. 4.42 Reference Sheet E1-2.1 – Panel Schedules
- 4.42.1 Replace Sheet E1-2.1 and revise per clouded areas listed below:
    - a) Revised Panel “LLA” panel schedule per clouded areas.
    - b) Revised Panel “LPB” panel schedule per clouded areas
    - c) Revised Panel “LPC” panel schedule per clouded areas
- Item No. 4.43 Reference Sheet E1-2.2 – Panel Schedules
- 4.43.1 Replace Sheet E1-2.2 and revise per clouded areas listed below:
    - a) Revised Panel “LPE” panel schedule per clouded areas.
- Item No. 4.44 Reference Sheet ES-1.1 – SITE ELECTRICAL PLAN
- 4.44.1 Replace Sheet ES-1.1 and revise per clouded areas listed below:
    - a) Revised Site Electrical Plan per clouded areas
    - b) Revised Plan Notes per clouded areas.

**ATTACHMENTS:**

**Exhibit:** N/A

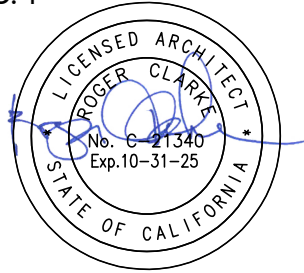
**Specifications:** 00 01 00, 09 67 00, 09 96 00, 11 11 00, 14 45 13.10, 14 45 13.19, 14 45 13.35, 27 53 00.

**Sketches:** ASK-4.01.

**Sheets:** T-1, 1, 3, 5, 6, ASD-1.2, A1-1.2, A1-1.3, ID-1.0, AD-2.0, AD-2.1, AD-6.0, AD-6.1, AD-6.2, S0-1.5 S2-1.1, SD-1.1, SD-1.2, P0-0.1, P1-1.1, P1-1.2, P2.02, E1-0.1, E1-0.2, E1-0.3, E1-1.1, E1-1.2, E1-2.1, E1-2.2, ES-1-1

**END OF ADDENDUM NO. 4**

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Roger Clarke, Principal  
C-21340



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**DIVISION 28 -- ELECTRONIC SAFETY AND SECURITY**

- 28 31 21 - Occupancy Motion Sensors
- 28 46 00 - Fire Alarm System

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**DIVISION 31 -- EARTHWORK**

- 31 10 00 - Site Clearing
- 31 22 00 - Grading
- 31 23 16 - Excavation
- 31 23 16.13 - Trenching
- 31 23 23 - Fill

**DIVISION 32 -- EXTERIOR IMPROVEMENTS**

- 32 11 23 - Aggregate Base Courses
- 32 12 16 - Asphalt Paving
- 32 13 13 - Site Concrete (Paving)
- 32 13 16 - Decorative Concrete Paving
- 32 14 13 - Precast Concrete Unit Paving
- 32 15 00 - Aggregate Surfacing
- 32 17 13 - Concrete Wheel Stops
- 32 17 23 - Pavement Markings
- 32 17 26 - Tactile Warning Surfacing
- 32 31 13 - Chain Link Fences and Gates
- 32 31 19 - Decorative Metal Fences and Gates
- 32 84 00 - Planting Irrigation
- 32 90 00 - Planting
- 32 90 05 - Landscape Maintenance

**DIVISION 33 -- UTILITIES**

- 33 01 10.58 - Disinfection of Water Utility Piping Systems
- 33 05 43 - Corrosion Protection
- 33 14 16 - Site Water Distribution Piping
- 33 31 13 - Site Sanitary Sewerage Piping
- 33 42 11 - Stormwater Gravity Piping
- 33 42 30 - Stormwater Drains
- 33 52 16 - Site Gas Piping

**END OF SECTION**

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**SECTION 09 67 00  
FLUID-APPLIED FLOORING**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Fluid-applied flooring and base.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 61 16 - Volatile Organic Compound (VOC) Content Restrictions.
- B. Section 07 92 00 - Joint Sealants: Sealing joints between fluid-applied flooring and adjacent construction and fixtures.
- C. Section 09 05 61 - Common Work Results for Flooring Preparation: Concrete slab moisture and alkalinity testing and remediation procedures.

**1.03 REFERENCE STANDARDS**

- A. ADA Standards - 2010 ADA Standards for Accessible Design.
- B. ANSI/NFSI B101.3 - Test Method for Measuring the Wet DCOF of Hard Surface Walkways.
- C. ASTM D1308 - Standard Test Method for Effect of Household Chemicals on Clear and Pigmented Coating Systems.
- D. ASTM D2047 - Standard Test Method for Static Coefficient of Friction of Polish-Coated Flooring Surfaces as Measured by the James Machine.
- E. ASTM D2240 - Standard Test Method for Rubber Property--Durometer Hardness.
- F. ASTM D2794 - Standard Test Method for Resistance of Organic Coatings to the Effects of Rapid Deformation (Impact).
- G. ASTM D3363 - Standard Test Method for Film Hardness by Pencil Test.
- H. ASTM D4060 - Standard Test Method for Abrasion Resistance of Organic Coatings by the Taber Abraser.
- I. ASTM D4541 - Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers.
- J. ASTM D4585/D4585M - Standard Practice for Testing Water Resistance of Coatings Using Controlled Condensation.
- K. CBC Ch. 11B - California Building Code-Chapter 11B.
- L. ICRI 310.2R - Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, Polymer Overlays, and Concrete Repair.

**1.04 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide data on specified products, describing physical and performance characteristics; sizes, patterns and colors available.

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- C. Samples: Submit two samples, 8 by 8 inch in size illustrating color and pattern for each floor material for each color specified.
- D. Concrete Subfloor Test Report: Submit a copy of the moisture and alkalinity (pH) test reports.
- E. Manufacturer's Installation Instructions: Indicate special procedures, perimeter conditions requiring special attention, and application rate for each coat.
- F. Manufacturer's Qualification Statement.
- G. Applicator's Qualification Statement.
- H. Maintenance Data: Include maintenance procedures, recommended maintenance materials, procedures for stain removal, repairing surface, and suggested schedule for cleaning.
- I. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
  - 1. See Section 01 60 00 - Product Requirements, for additional provisions.
  - 2. Extra Top Coat Materials: 2 gallons.

**1.05 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with minimum three years documented experience.
- B. Applicator Qualifications: Company specializing in performing the work of this section.
  - 1. Minimum three years of documented experience.
  - 2. Approved by manufacturer.
- C. Supervisor Qualifications: Trained by product manufacturer.

**1.06 MOCK-UPS**

- A. See Section 01 40 00 - Quality Requirements for additional requirements.
- B. Construct mock-up(s) of fluid applied flooring to serve as basis for evaluation of texture and workmanship.
  - 1. Number of Mock-Ups to be Prepared: One.
  - 2. Use same materials and methods for use in the work.
  - 3. Use approved design samples as basis for mock-ups.
  - 4. Locate where directed.
  - 5. Minimum Size: 48 inches by 48 inches.
- C. See Section 01 40 00 - Quality Requirements for additional requirements.
- D. Obtain approval of mock-up by Architect before proceeding with work.
- E. Approved mock-up may remain as part of the work.

**1.07 DELIVERY, STORAGE, AND HANDLING**

- A. Store resin materials in a dry, secure area.
- B. Store materials for three days prior to installation in area of installation to achieve temperature stability.

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## 1.08 FIELD CONDITIONS

- A. Maintain minimum temperature in storage area of 55 degrees F.
- B. Store materials in area of installation for minimum period of 24 hours prior to installation.
- C. Maintain ambient temperature required by manufacturer 72 hours prior to, during, and 24 hours after installation of materials.

## PART 2 PRODUCTS

### 2.01 REGULATORY REQUIREMENTS

- A. All products used Must comply with VOC requirements listed in Section 01 61 16 - Volatile Organic Compound (VOC) Content Restrictions.
- B. Requirements for persons with disabilities: Provide flooring meeting slip-resistant requirements of California Code of Regulations (CCR), Title 24, Part 2, CBC Ch. 11B and ADA Standards, latest amendment.
  - 1. Flooring surface shall be stable, firm, and slip resistant. CBC Section 11B-302.1 General.
  - 2. Flooring Surface shall demonstrate a dynamic coefficient of friction of at least 0.42 per DCOF AcuTest ANSI/NFSI B101.3 (using a BOT-3000 testing unit) will be accepted as meeting the intent of slip resistance; CBC 11B-302 Floor or Ground Surfaces and ADA Standards.
    - a. Ramp surface: Provide DCOF value of 0.46.

### 2.02 MANUFACTURERS

- A. Fluid-Applied Flooring:
  - 1. Tnemec Company, Inc: [www.tnemec.com/#sle](http://www.tnemec.com/#sle).
  - 2. Concrete Solutions by Rhino Linings: [www.concretesolutions.com](http://www.concretesolutions.com).
  - 3. Crossfield Products Corp: [www.crossfieldproducts.com/#sle](http://www.crossfieldproducts.com/#sle).
  - 4. Elite Crete Systems: [www.elitecrete.com/#sle](http://www.elitecrete.com/#sle).
  - 5. DUR-A-FLEX. Inc.; Dur-A-Quartz: [www.dur-a-flex.com](http://www.dur-a-flex.com).
  - 6. Sherwin-Williams Company; Armorseal 100% Solids Epoxy/Polyurethane: [www.protective.sherwin-williams.com](http://www.protective.sherwin-williams.com).
  - 7. Sherwin-Williams Company: General Polymers Brand: [www.generalpolymers.com](http://www.generalpolymers.com).
  - 8. Stonhard, an RPM Company: [www.stonhard.com](http://www.stonhard.com).
  - 9. Substitutions: See Section 01 60 00 - Product Requirements.

### 2.03 FLUID-APPLIED FLOORING SYSTEMS

- A. Fluid-Applied Flooring: Epoxy, with aggregate.
  - 1. Basis of Design Product: Series 208 Epoxoprime MVT / Series 210 Even-Flow SL / Series 248 EverThane as manufactured by Tnemec, or approved equal.
  - 2. Aggregate: Silica sand.
  - 3. System Thickness: 58 mils to 73 mils, nominal, dry film thickness (DFT).

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- a. First Coat: Series 208 Epoxoprime MVT at 16 mils to 20 mils DFT (80 sq. ft. to 100 sq. ft. per gallon)
  - b. Second Coat: Series 210 Even-Flow SL at 40 mils to 50 mils DFT (30 sq. ft. to 40 sq. ft. per gallon).
  - c. Topcoat: Series 248 EverThane at 2 mils to 3 mils DFT (500 sq. ft. to 700 sq. ft. per gallon).
4. Texture: Smooth.
5. Sheen: High gloss.
6. Color: As selected by Architect.
7. Materials:
- a. Series 208 Epoxoprime MVT
    - 1) Modified Polyamine Epoxy
    - 2) Usage: Moisture Tolerant Low Viscosity Primer for Resilient Polymer Flooring Systems
  - b. Series 210 Even-Flow SL.
    - 1) Aggregate-Filled Modified Polyamine Epoxy
    - 2) Color: Available in the 16 standard StrataShield colors, as selected by Architect.
    - 3) Finish: Gloss
    - 4) Performance:
      - (a) Adhesion, ASTM D4541: Exceeds the cohesive strength of the concrete substrate (approximately 400 psi).
      - (b) Abrasion Method, ASTM D4060, CS-17 Wheel, 1,000 grams load: 125.17 mg loss after 1,000 cycles.
      - (c) Chemical Resistance: Requirement, No blistering, cracking or delamination of film after seven days continuous exposure to the following reagents.
        - (1) Sulfuric Acid 5%
        - (2) Hydrogen Peroxide 30%
        - (3) Chromic Acid 5%
        - (4) Gasoline (unleaded)
        - (5) Hydrochloric Acid 5%
        - (6) Mineral Spirits
        - (7) Sodium Hypochlorite 6%
        - (8) Ammonium Hydroxide 5%
      - (d) Coefficient of Friction ASTM D2047: 0.77 static coefficient of friction.
      - (e) Hardness ASTM D2240 (Shore D): HB.
      - (f) Humidity: ASTM D4585/D4585M.
        - (1) Requirement: No blistering, cracking, rusting or delamination of film after 1,500 hours exposure.
      - (g) Impact ASTM D2794: 40 inch pounds, direct impact.
  - c. Series 211 Glass Beads Additive for Series 248 EverThane topcoat

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- 1) Added slip resistance, add 2–4 ounces (by volume) per mixed gallon of topcoat.
- d. Series 237 Power-Tread: Modified Polyamine Epoxy
  - 1) Usage: Multi-purpose epoxy for building cove base when mixed with 30/50 mesh clean, bagged silica sand to form a trowelable mortar.
- e. Series 248 EverThane
  - 1) Aliphatic Moisture Cured Urethane
  - 2) Colors: Clear, may be field tinted with available in Series 821 color pack in the 16 standard StrataShield colors and limited custom colors.
    - (a) Color: As selected by Architect.
  - 3) Finish: Semi-Gloss
  - 4) Performance:
    - (a) Abrasion, ASTM D4060, CS-17 Wheel, 1,000 grams load: No more than 18 mg loss after 1,000 cycles.
    - (b) Adhesion, ASTM D4541 (Method B): Exceeds the cohesive strength of the concrete substrate (400 psi).
    - (c) Coefficient of Friction, ASTM D2047: No less than 0.67 static coefficient of friction.
    - (d) Graffiti Resistance: The following graffiti materials applied to coating and allowed to dry for seven days. Complete and easy removal of the following graffiti materials:
      - (1) Acrylic Spray Paint
      - (2) Epoxy Spray Paint
      - (3) Ballpoint Ink
      - (4) Crayon
      - (5) Markette Marker
      - (6) Lipstick
    - (e) Chemical Resistance, TTM-59: No blistering, cracking or delamination of film after seven days continuous exposure to the following reagents:
      - (1) 30% Sulfuric Acid
      - (2) 10% Hydrochloric Acid
      - (3) 50% Phosphoric Acid
      - (4) 10% Acetic Acid
      - (5) 50% Sodium Hydroxide
      - (6) 10% Ammonium Hydroxide
      - (7) Methyl Ethyl Ketone
      - (8) Ethyl Alcohol
      - (9) Hexane Xylene
      - (10) Gasoline
      - (11) Ethylene Glycol
      - (12) Skydrol
      - (13) Brake Fluid

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- (14) Transmission Fluid
- (15) Aviation Gas
- (16) Jet Fuel (JP4)
- (f) Hardness, ASTM D3363: No less than 2H (gouge).
- (g) Stain Resistance, ASTM D1308 (Covered Spot Test): No effect after 24 hours exposure to the following reagents:
  - (1) 5% Soap Solution
  - (2) Ethyl Alcohol
  - (3) 5% Sodium Hydroxide
  - (4) 5% Ammonium Hydroxide
  - (5) Black Shoe Polish
  - (6) Catsup
  - (7) 6% Sodium Hypochlorite
  - (8) Coffee
  - (9) Tea
  - (10) Crayon
  - (11) Dish Soap
  - (12) Lime Juice
  - (13) Lipstick
  - (14) Lysol Concentrate
  - (15) Mustard
  - (16) Vegetable Oil
  - (17) Vinegar
  - (18) Lighter Fluid
  - (19) 409 Cleaner

**2.04 ACCESSORIES**

- A. Base Caps: Zinc with projecting base of 1/8 inch; color as selected.
- B. Fillet Strips: Molded of flooring resin material.
- C. Subfloor Filler: Type recommended by fluid-applied flooring manufacturer.
- D. Primer: Type recommended by fluid-applied flooring manufacturer.

**PART 3 EXECUTION**

**3.01 EXAMINATION**

- A. Verify that subfloor surfaces are smooth and flat within the tolerances specified for that type of work and are ready to receive flooring.
- B. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive flooring.
- C. Verify that subfloor surfaces are dust-free and free of substances that could impair bonding of materials to subfloor surfaces.

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- D. Cementitious Subfloor Surfaces: Verify that substrates are ready for fluid-applied flooring installation by testing for moisture and alkalinity (pH).
  - 1. Test in accordance with Section 09 05 61.
  - 2. Obtain instructions if test results are not within limits recommended by fluid-applied flooring manufacturer.
  - 3. Follow moisture and alkalinity remediation procedures in Section 09 05 61.
- E. Verify that required floor-mounted utilities are in correct location.

**3.02 PREPARATION**

- A. Remove subfloor ridges and bumps. Fill low spots, cracks, joints, holes, and other defects with subfloor filler.
- B. Prepare concrete surfaces according to ICRI 310.2R, CSP 3.
- C. Apply, trowel, and float filler to achieve smooth, flat, hard surface. Grind irregularities above the surface level. Prohibit traffic until filler is cured.
- D. Vacuum clean substrate.
- E. Apply primer to surfaces required by flooring manufacturer.

**3.03 INSTALLATION - ACCESSORIES**

- A. Install access panel recess frames.
- B. Install fillet strips at base of walls where flooring is to be extended up wall as base.
- C. Install terminating cap strip at top of base; attach securely to wall substrate.

**3.04 INSTALLATION - FLOORING**

- A. Apply in accordance with manufacturer's instructions.
- B. Apply each coat to minimum thickness required by manufacturer.
- C. Finish to smooth level surface.
- D. Cove at vertical surfaces.

**3.05 FIELD QUALITY CONTROL**

- A. See Section 01 40 00 - Quality Requirements, for additional requirements.

**3.06 PROTECTION**

- A. Prohibit traffic on floor finish for 48 hours after installation.
- B. Barricade area to protect flooring until fully cured.

**END OF SECTION**

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**SECTION 09 96 00  
HIGH-PERFORMANCE COATINGS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. High performance coatings.
  - 1. Exterior Steel: AESS, exterior steel, metal canopies, exposed steel decks, hollow metal doors and frames, metal stair stringers and treads, guardrails/handrails, metal copings/flashings (not prefinished), and equipment screens,
- B. Surface preparation.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 61 16 - Volatile Organic Compound (VOC) Content Restrictions.
- B. Section 09 91 13 - Exterior Painting.
- C. Section 09 91 23 - Interior Painting: Requirements for mechanical and electrical equipment surfaces.
- D. Section 09 67 00-Fluid-Applied Flooring: High performance fluid-applied flooring systems.**

**1.03 REFERENCE STANDARDS**

- A. 40 CFR 59, Subpart D - National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency.
- B. ASTM D2486 - Standard Test Methods for Scrub Resistance of Wall Paints.
- C. ASTM D4587 - Standard Practice for Fluorescent UV-Condensation Exposures of Paint and Related Coatings.
- D. CARB (SCM) - Suggested Control Measure for Architectural Coatings; California Air Resources Board.
- E. MPI (APL) - Master Painters Institute Approved Products List; Master Painters and Decorators Association.
- F. MPI (APSM) - Master Painters Institute Architectural Painting Specification Manual.
- G. SCAQMD 1113 - Architectural Coatings.
- H. SSPC-SP 1 - Solvent Cleaning.
- I. SSPC-SP 2 - Hand Tool Cleaning.
- J. SSPC-SP 6 - Commercial Blast Cleaning.

**1.04 ADMINISTRATIVE REQUIREMENTS**

- A. Preinstallation Meeting: Conduct a preinstallation meeting at least one week prior to the start of the work of this section; require attendance by all affected installers.

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1. Require attendance of parties directly affecting work of this section, including Contractor, Architect, applicator, and manufacturer's representative. Review the following:
  - a. Environmental requirements.
  - b. Protection of surfaces not scheduled to be coated.
  - c. Surface preparation.
  - d. Application.
  - e. Repair.
  - f. Field quality control.
  - g. Cleaning.
  - h. Protection of coating systems.
  - i. One-year inspection.
  - j. Coordination with other work.

**1.05 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide complete list of all products to be used, with the following information for each:
  1. Manufacturer's name, product name and/or catalog number, and general product category (e.g. "alkyd enamel").
  2. MPI product number (e.g. MPI #47).
  3. Cross-reference to specified coating system(s) product is to be used in; include description of each system.
  4. Manufacturer's installation instructions.
  5. If proposal of substitutions is allowed under submittal procedures, explanation of all substitutions proposed.
- C. Samples: Submit two samples 8 by 8 inch in size illustrating colors available for selection.
- D. Manufacturer's Certificate: Certify that high-performance coatings comply with VOC limits specified.
- E. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.
- F. Manufacturer's Installation Instructions: Indicate special procedures and perimeter conditions requiring special attention.
- G. Maintenance Data: Include cleaning procedures and repair and patching techniques.
  1. Submit data including finish schedule showing where each product/color/finish was used, product technical data sheets, material safety data sheets (MSDS), care and cleaning instructions, touch-up procedures, repair of painted and coated surfaces, and color samples of each color and finish used.
- H. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
  1. See Section 01 60 00 - Product Requirements, for additional provisions.

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2. Extra Coating Materials: 1 gallon of each type and color.
3. Label each container with manufacturer's name, product number, color number, and room names and numbers where used.

**1.06 QUALITY ASSURANCE**

- A. Maintain one copy of each referenced document that applies to application on site.
- B. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with minimum three years documented experience.
- C. Applicator Qualifications: Company specializing in performing the work of this section approved by manufacturer.

**1.07 MOCK-UPS**

- A. See Section 01 40 00 - Quality Requirements for general requirements for mock-ups.
- B. Locate where directed.
- C. Mock-up may remain as part of the work.

**1.08 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.
- B. Container Label: Include manufacturer's name, type of coating, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.
- C. Coating Materials: Store at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and as required by manufacturer's instructions.

**1.09 FIELD CONDITIONS**

- A. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.
- B. Do not apply exterior coatings during rain or snow, or when relative humidity is outside the humidity ranges required by the coating product manufacturer.
- C. Do not install materials when temperature is below 55 degrees F or above 90 degrees F.
- D. Maintain this temperature range, 24 hours before, during, and 72 hours after installation of coating.
- E. Provide lighting level of 80 ft candles measured mid-height at substrate surface.
- F. Restrict traffic from area where coating is being applied or is curing.

**1.10 WARRANTY**

- A. See Section 01 78 00 - Closeout Submittals for additional warranty requirements.
- B. Correct defective Work within a five year period after Date of Substantial Completion.
- C. Warranty: Include coverage for bond to substrate.

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**PART 2 PRODUCTS**

**2.01 MANUFACTURERS**

- A. Provide high performance coating products from the same manufacturer to the greatest extent possible.
  - 1. In the event that a single manufacturer cannot provide specified products, minor exceptions will be permitted provided approval by Architect is obtained using the specified procedures for substitutions.
  - 2. Substitution of other products by the same manufacturer is preferred over substitution of products by a different manufacturer.
- B. High-Performance Coatings:
  - 1. Carboline: [www.carboline.com](http://www.carboline.com).
  - 2. Dunn Edwards : [www.dunnedwards.com](http://www.dunnedwards.com).
  - 3. PPG Paints: [www.ppgpaints.com/#sle](http://www.ppgpaints.com/#sle).
    - a. Local representative Susan L. Giampietro 949.410.2452.
  - 4. Sherwin-Williams Company: [www.protective.sherwin-williams.com/industries/#sle](http://www.protective.sherwin-williams.com/industries/#sle).
    - a. Local Representative: John Dumesnil, 619.665.9341.
  - 5. Tnemec Company, Inc: [www.tnemec.com/#sle](http://www.tnemec.com/#sle).
    - a. Local Representative: Tony Hobbs, 310.637.2363.
  - 6. Substitutions: Section 01 60 00 - Product Requirements.

**2.02 HIGH-PERFORMANCE COATINGS**

- A. Provide coating systems that meet the following minimum performance criteria, unless more stringent criteria are specified:
  - 1. Surface Burning Characteristics: Flame spread/Smoke developed index of 0/0, maximum, when tested in accordance with ASTM E84.
  - 2. Lead Content: None.
  - 3. No intentionally added cadmium.
  - 4. Scrubbability: Excellent, when tested in accordance with ASTM D2486.
  - 5. Gloss and Color Retention: Excellent, when tested in accordance with ASTM D4587.

**2.03 TOP COAT MATERIALS**

- A. Coatings - General: Provide complete multi-coat systems formulated and recommended by manufacturer for the applications indicated, in the thicknesses indicated; number of coats specified does not include primer or filler coat.
  - 1. Lead Content: Not greater than 0.06 percent by weight of total nonvolatile content.
  - 2. Chromium Content, as Hexavalent Chromium, Zinc Chromate, or Strontium Chromate: None.
  - 3. Volatile Organic Compound (VOC) Content: See Section 01 61 16.
  - 4. Volatile Organic Compound (VOC) Content:

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- a. Provide coatings that comply with the most stringent requirements specified in the following:
    - 1) 40 CFR 59, Subpart D--National Volatile Organic Compound Emission Standards for Architectural Coatings.
    - 2) SCAQMD 1113 Rule.
    - 3) CARB (SCM).
    - 4) Architectural coatings VOC limits of California.
  - b. Determination of VOC Content: Testing and calculation in accordance with 40 CFR 59, Subpart D (EPA Method 24), exclusive of colorants added to a tint base and water added at project site; or other method acceptable to authorities having jurisdiction.
5. Colors: As indicated.
- B. Urethane Coating:
- 1. Number of Coats: Two.
  - 2. Product Characteristics:
    - a. Comply with the performance requirements specified above for moderate exposure.
  - 3. Top Coat(s): Acrylic Urethane, Water Based, Two-Component.
    - a. Sheen: High Gloss.
    - b. Products:
      - 1) Sherwin-Williams; Pro Industrial Waterbased Acrolon 100: [www.protective.sherwin-williams.com/#sle](http://www.protective.sherwin-williams.com/#sle).
      - 2) Dunn Edwards; Endura-Coat ENCT60: [www.dunnedwards.com](http://www.dunnedwards.com).
      - 3) Benjamin Moore; Ultra Spec HP D.T.M. Acrylic Gloss HP28: [www.benjaminmoore.com](http://www.benjaminmoore.com).
      - 4) Tnemec Company, Inc; Series 1080 Endurashield: [www.tnemec.com/#sle](http://www.tnemec.com/#sle).
      - 5) Substitutions: Section 01 60 00 - Product Requirements.
  - 4. Primer: As recommended by coating manufacturer for specific substrate.

**2.04 PRIMERS**

- A. Primers: Provide the following unless other primer is required or recommended by coating manufacturer.
  - 1. Rust-Inhibitive, Water Based; MPI #107.
    - a. Products:
      - 1) Benjamin Moore; Ultra Spec HP Acrylic Metal Primer HP04: [www.benjaminmoore.com](http://www.benjaminmoore.com).
      - 2) Dunn Edwards; EnduraPrime ENPR00: [www.dunnedwards.com](http://www.dunnedwards.com).
      - 3) Sherwin-Williams; Pro Industrial Pro-Cryl Universal Primer: [www.protective.sherwin-williams.com/#sle](http://www.protective.sherwin-williams.com/#sle). (MPI #107)
      - 4) Tnemec Company, Inc; Series 115 Uni-Bond DF: [www.tnemec.com/#sle](http://www.tnemec.com/#sle).

5) Substitutions: Section 01 60 00 - Product Requirements.

**2.05 ACCESSORY MATERIALS**

- A. Accessory Materials: Provide primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials as required for final completion of coated surfaces.

**PART 3 EXECUTION**

**3.01 EXAMINATION**

- A. Verify existing conditions before starting work.
- B. Do not begin application of coatings until substrates have been properly prepared.
- C. Verify that substrate surfaces are ready to receive work as instructed by the coating manufacturer. Obtain and follow manufacturer's instructions for examination and testing of substrates.
- D. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.
- E. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
- F. Test shop-applied primer for compatibility with subsequent cover materials.
- G. Proceed with coating application only after unacceptable conditions have been corrected.
  - 1. Commencing coating application constitutes Contractor's acceptance of substrates and conditions.

**3.02 PREPARATION**

- A. Clean surfaces of loose foreign matter.
- B. Remove substances that would bleed through finished coatings. If unremovable, seal surface with shellac.
- C. Remove finish hardware, fixture covers, and accessories and store.
- D. Galvanized Surfaces:
  - 1. Remove surface contamination and oils and wash with solvent according to SSPC-SP 1.
  - 2. Prepare surface according to SSPC-SP 2.
- E. Ferrous Metal:
  - 1. Solvent clean according to SSPC-SP 1.
  - 2. Shop-Primed Surfaces: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces. Re-prime entire shop-primed item.
  - 3. Remove rust, loose mill scale, and other foreign substances using methods recommended in writing by paint manufacturer and blast cleaning according to SSPC-SP 6 "Commercial Blast Cleaning", and protect from corrosion until coated.

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**3.03 PRIMING**

- A. Apply primer to all surfaces, unless specifically not required by coating manufacturer. Apply in accordance with coating manufacturer's instructions.

**3.04 COATING APPLICATION**

- A. Apply coatings in accordance with manufacturer's written instructions, to thicknesses specified and recommendations in MPI - Architectural Painting and Specification Manual.
- B. Apply in uniform thickness coats, without runs, drips, pinholes, brush marks, or variations in color, texture, or finish. Finish edges, crevices, corners, and other changes in dimension with full coating thickness.

**3.05 FIELD QUALITY CONTROL**

- A. See Section 01 40 00 - Quality Requirements for general requirements for field inspection.
- B. Owner will provide field inspection.
- C. Dry Film Thickness Testing: Owner will engage the services of a qualified testing and inspecting agency to inspect and test coatings for dry film thickness.

**3.06 CLEANING**

- A. Collect waste material that could constitute a fire hazard, place in closed metal containers, and remove daily from site.
- B. Clean surfaces immediately of overspray, splatter, and excess material.
- C. After coating has cured, clean and replace finish hardware, fixtures, and fittings previously removed.

**3.07 PROTECTION**

- A. Protect finished work from damage.

**END OF SECTION**

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**SECTION 11 11 00  
VEHICLE SERVICE EQUIPMENT**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. Vehicle service equipment.
- B. Connection to utilities.
- C. Service fittings and outlets.

**1.02 RELATED REQUIREMENTS**

- A. Section 05 50 00 - Metal Fabrications:: Placement of rough-in frame and anchors.
- B. Section 14 45 13.10 - Vertical Rise Vehicle Service Lift.**
- C. Section 14 45 13.19 - Vehicle Service Lifts.**
- D. Section 14 45 13.35 - In-Ground Heavy Duty 3-Post Vehicle Service Lift.**

**1.03 ADMINISTRATIVE REQUIREMENTS**

- A. Large Components: Ensure that large components can be moved into final position without damage to other construction.
- B. Preinstallation Meeting: Convene four weeks before starting work of this section.

**1.04 SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide equipment dimensions and construction, equipment capacities, physical dimensions, utility and service requirements and locations, point loads and anchorage .
  - 1. Preparation instructions and recommendations.
  - 2. Storage and handling requirements and recommendations.
  - 3. Installation manual.
  - 4. Operations manual.
  - 5. Maintenance manual.
  - 6. Safety manual.
- C. Shop Drawings: Indicate equipment locations, large scale plans, elevations, cross sections, rough-in and anchor placement dimensions and tolerances, clearances required.
- D. Manufacturer's Installation Instructions: Indicate special installation requirements.
- E. Manufacturer's Certificate: Certify that products meet or exceed specified requirements.
- F. Operation Data: Include description of equipment operation and required adjusting and testing .

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1. Training Materials: Provide minimum 6 copies of prerecorded video in DVD format and Training Materials printed in PDF format for use by future teaching staff and students.
  - a. These recordings and training materials shall be done for the actual equipment models installed in this project.
  - b. If no prerecorded training is available, the contractor shall provide professionally recorded and edited video demonstrating the proper operation and use of the equipment. this recording shall be done on the actual equipment model installed in this project.
    - 1) Professional video recording and editing shall be done by a company specializing in video recording services.
- G. Maintenance Data: Identify system maintenance requirements, servicing cycles, lubrication types required and local spare part sources.
- H. Project Record Documents: Record actual locations of concealed utility connections.
- I. Warranty: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

**1.05 QUALITY ASSURANCE**

- A. Manufacturer: Company specializing in manufacturing the types of products specified in this section, with minimum three years of documented experience.
- B. Lift Installer Qualifications:
  1. Factory trained authorized company.
  2. Company insured for completed operations of installing lift.
- C. In addition to the other requirements outlined **in other sections and** herein, the lift or lifts, shall comply with all applicable requirements of ANSI standards. "Safety Requirements for the Construction, Care and Use of Automotive Lifts " as published by the American national Standards Institute. The lift company Quality Management System shall be ISO9001 certified.

**1.06 PROJECT CONDITIONS**

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

**1.07 REGULATORY REQUIREMENTS**

- A. Conform to applicable code for ~~woodworking~~service equipment.
- B. Conform to UL requirements for fabrication and installation of woodworking equipment.
- C. **Comply with seismic design requirements in accordance with ASCE 7 and applicable local codes.**
  1. **Project Seismic Risk: As indicated on drawings.**

**1.08 WARRANTY**

- A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.
- B. Correct defective Work within a Two year period after Date of Substantial Completion.

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1. Contractor/manufacturer/installer shall promptly and without inconvenience and cost to Owner correct said deficiencies:
  - a. Failure due to defective materials and workmanship.

~~C. Provide five year manufacturer warranty for all equipment.~~

## **PART 2 - PRODUCTS**

### **2.01 OWNER-FURNISHED OWNER INSTALLED PRODUCTS**

- A. Provide all backing and provide for anchorage to structure as required.
- B. New Products: Note: Owner furnished products are subject to change without notice.
  1. None Identified at this time .
- C. Existing Products: Note: Owner Furnished products may be changed to new products without notice.

### **2.02 OWNER-FURNISHED CONTRACTOR INSTALLED PRODUCTS**

- A. Provide all backing and provide for anchorage to structure as required.
- B. New Products: Note: Owner furnished products are subject to change without notice.

### **2.03 CONTRACTOR PROVIDED AND INSTALLED PRODUCTS**

- A. Equipment: See Schedule on Drawings.
- B. **Lifts (Add for MOD352 air controls)**
  1. Graco Model 244844 Air Regulator with gauge.1/2" diameter.
  2. Graco Model 106149 1/2" Air Line Filter.
- C. **Lubrication Section**
  1. **PUMPS AND PUMP ACCESSORIES**
    - a. Graco Model 225852 Fireball 300, 5:1 Lubrication Pump package. For medium to high volume transfer of MO, ATF and GO to multiple metered dispense points. Includes pump and hose and fitting kit.
    - b. Graco Model 203688 Low Oil Pump Cut-Off Valve. Shuts down lubrication pump when tank capacity drops below critical levels.
    - c. Graco Model 237893 Thermal Relief Valve. Includes valve, hose and fitting kit.
    - d. Graco Model 109075 3/8" Air Regulator and Gauge Set. For controlling Fireball 300 pumps.
    - e. Graco Model 106149 1/2" Air Line Filter. For general air control to pump feed line.
    - f. Graco Model 214848 1/2" Air Lubricator. For general air control to pump feed line.
    - g. Graco Model 244844 Air Regulator with gauge.1/2" diameter for general air control to pump feed line.
  - h. **METERS AND ACCESSORIES**

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- i. Graco Model 25M410 SD Series electronic meter for motor oils. Manual Operation, rigid extension, 1/2" inlet, 0.25-18-gpm flow range, auto quick-close nozzle, large LCD high-contrast display.
- j. Graco Model 25M413 SD Series electronic meter for gear oil and ATF. Manual Operation, rigid extension, 1/2" inlet, 0.25-18-gpm flow range, auto quick-close nozzle, large LCD high-contrast display.

**2. REELS AND ACCESSORIES**

- a. Graco Model SDL25B Low Pressure Water Reel, 3/8" diameter x 50 Ft. long delivery hose, spring retracting reel and ball stop. (Connecting hose and swivel not included). Color: Blue.
- b. Graco Model SDL25B Low Pressure Air Reel, 3/8" diameter x 50 Ft. long delivery hose, spring retracting reel and ball stop. (Connecting hose and swivel not included). Color: Blue.
- c. Graco Model SDM65B 2,000-psi Pressure Oil Reel, 1/2" diameter x 50 Ft. long delivery hose, spring retracting reel and ball stop. (Connecting hose and swivel not included). Color: Blue.
- d. Graco Model 24Y864 Heavy Duty Electric Reels, Tri-plug GFI receptacle 120-V, 15A with 50' of 12-gauge cord and triple Industrial receptacle.
- e. Graco Model 218549 Inlet Hose Kit, 1/2" diameter x 24" long hose (2,000 PSI) and 90-degree swivel fitting. For low and medium pressure reels.
- f. 1/2" Shut-off Valves for overhead reel and lubrication pumps maintenance and isolation.
- g. Prevost Model USI081202 3/8" air couplers.
- h. Milton Model 209 Milton 1/4" NPT water hose bibb with 1/4" NPT male x 3/8" NPT female bushing adapter.
- i. Provide Graco mounting rails as needed.

**3. AIR DROP COMPONENTS**

- a. 1 each of the following for each air drop: SOV.75 3/4" shot-off valve, Graco model 244844 1/2" regulator, 106149 1/2" filter, 214848 1/2" lubricator, Prevost model US I081202 3/8" air coupler, USI111204 1/2" air coupler.

**4. MOBILE DISPENSORS**

- a. **GREASE**
  - 1) Graco Model 225773 High Pressure Mobile Grease Dispenser for 35 to 50-lb pail. Includes Fireball 300 series 50:1 grease pump, dispensing kit, drum cover, grease dispensing valve, z-swivel, holster and portable base.
- b. **LUBRICATION**

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- 1) Graco Model 226942 drum mounted Fast-Flo 1:1 pump, 200326 Drum cover for a 55-gal container. Drum cover mounts on top of an open drum, with mounting for a 1:1 pump, 217359 Sealed bung adapter for Fast-Flo pumps, 236054 6 ft suction kit for 55 gal drums, 222119 hose and fitting kit, (includes 109125 6 ft air hose and 155541 swivel elbow, 109105 fluid hose and 160327 swivel elbow for use with drum-mounted Fast-Flo 1:1 pumps. Graco Model 25M410 SD Series electronic meter. Provide Graco model 24F915 drum cart.

**D. AIR COMPRESSOR SECTION**

1. Saylor Beall Model X-755-120-FP 10 HP Duplex Performance Package Compressor on 120 Gallon Tank, Includes: Dual starters, Air cooled aftercoolers, low oil controls, and vibration isolators. 230V 3 Phase Unit 68.8-cfm @ ~~125~~175-psi in duplex mode. Provide dual tank-mounted disconnects – one for each starter.
2. Great Lakes Model ERF-100A-116 Refrigerated Air Dryer, Non-cycling operation, UL approved, 115-cfm capacity at 120 PSI, 1" inlet and outlet, 120-volt, 1 phase, 5/8-hp.
3. Norgren Model F17-A00A1DA Compressed Air Pre-Filter. Protects dryer from debris and particles, SCFM 445, 1 1/2" NPT inlet and outlet ports.
4. Norgren Model F46-A01A0DA Compressed Air Coalescing Filter. Protects dryer from oil blow-by, SCFM 125, 1 1/4" NPT inlet and outlet ports.
5. Model SOV1.25 1-1/4" Diameter Shut-Off Valve. For Air compressor system bypass and emergency shut-off.
6. Dixon Emergency Fitting Kit. Includes shut-off valve and Dixon fitting for connecting portable air compressor for emergency backup.

**E. WORK BENCH SECTION**

1. Shure Model R-2 Workbench, 72"W x 34"D x Adjustable Height Legs, Stationary with Stainless Steel Top & Accessory Kit, All-Welded(1) – 72"W x 36"D x adjustable height.
2. Shure Model RD-3667-b1 13' Freestanding System with Lower Drawer Storage Cabinet consisting of: (2) 52"W SHURETECH® Tool Storage Stationary, Double Bank, (14) Full-Extension 400lb. Capacity Locking Drawers Including (1) Full-Width Top Drawer, Drawer Liners, Leg Levelers, 52"W x 27 3/4"D x 40-3/32"H, (1) 52"W SHURETECH® Tool Storage Stationary, Single Bank, (3) Full-Extension 400lb. Capacity Locking Drawers all Full-Width, Drawer Liners, Leg Levelers, 52"W x 27 3/4"D x 40-3/32"H, (4) 30"W Dual Swing-Out Door Upper Storage Cabinet (2) Locking Swing-Out Doors, (1) Adjustable Shelf, 30"W x 15"D x 24"H, (1) 36"W Monitor Cabinet Keyboard / Mouse Pad Stand, 24"W x 15"D x 24"H, Stainless Steel over wood tops, Stainless Steel Chase Panels, LED Lights, Power strips, uprights, painted front and side skirts.

**F. TIRE SERVICE EQUIPMENT SECTION**

1. Rotary Model R560 Heavy Duty Truck Tire Changer, Steel and alloy rims, Fast cycle times, for 17.5 and 19.5 Tires, Wheel Diameter 11" to 27" Max, Tire Diameter 51" Max Tire Width 37" (Depending on offset). Includes: (1) tub mounting paste w/ brush and VSG108A2 ALU Adapters. Site Requirements: 220V 1Ø 60 Hz.

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- Rotary Model R544 Plus PRO TRUCK 3D tire balancer with Laser, Light, Passenger and LT Truck Adapters. Computer balancer with Laser Line and light for adhesive weights, Digital caliper and width Arm for 3 D Data entry, Specific balancing programs for static, dynamic and ALU wheels, Passenger/Lt Truck/HD capable with Standard adapters, Stop on Top and Auto Indexing, Position Air Brake. Site Requirements: 110v/60Hz NEMA 5-15P/AIR.

**G. PARTS BIN SECTION**

- Model K Shure Mfg. HD Heavy Duty Pallet Style Tire Rack 84”H, 60”W X 24”D, (2) Levels. Tire racks are adjustable every 1 ½” up and down the upright.
- Model H2 Shure Mfg. Clip Style Shelving System, 48”W x 18”D x 7’-3”H, seven (7) shelves (five (5) adjustable) and two (2) bin fronts. Weight capacity: 500-lbs per shelf. Color: Blue, with gray shelves and posts.
- Model B7 Shure Mfg. Clip Style Shelving Units, 36”W x 24”D x 8’H. Equipped with two (2) 6” drawers with (25) compartments each and four (4) 9” drawers with (20) compartments each ,five (5) shelves (two (2) adjustable) and locking upper½ doors. Weight capacity: 500-lbs per shelf. Color: Blue, with gray.

**H. STORAGE TANK SECTION**

- Model LC1100DW6C Containment Solutions Double Wall Storage Tank. Features 1100-gallon six compartment tank divide as follows: 2 each 200-gal for waste oil and coolant, 2 each 225-gal for 5-30 and 5-20 motor oil, and 2 each 125-gal for gear oil and ATF. U.L. listed per UL 142 standard, double wall tank.
- Graco Model 24E166 Waste Evacuation Pump Package, one for waste oil and one for waste coolant. Features the following: U.L. Listed 1" Diaphragm style evacuation pump, wall mounting bracket, air installation kit and fluid installation kit. Additionally, equipment with dry-break waste product coupler for drain evacuation.
- Model PLE836A Two product Overfill Alarm Panel. Overfill alarm and automatic shut-off system for waste oil and coolant fill station. Includes UL Listed panel and Relay, tank probes, and shut-off solenoid valves for waste oil and waste coolant.
- Graco Model 238866 Deluxe Waste Oil Drain. Features 25-gallon polyethylene tank, used filter tray, tool holder, sight gauge and oversized rear wheels for easy portability. Color: Black. Include HGF6 3/4" NPT dry break coupler plug for waste oil.
- Graco Model 248632 Deluxe Waste Coolant Drain. Features 25-gallon polyethylene tank, used filter tray, tool holder, sight gauge and oversized rear wheels for easy portability. Color: Green. Include H4F4 1/2" NPT dry break coupler plug for waste coolant.
- Oberg Model P-100WM Heavy Duty Wall Mounted Filter Crusher. Features electric operation, safety interlock and 5 filter capacity (31,416 lbs. of crushing force). 115 volt, 15 amps.35" H. x 26.5" W x 11" D. Include an Oberg Model CS-100 Floor Mounted Stand for P-100 Filter Crusher.
- Model ~~80895~~**PLE80895** 16 Gallon, 120 lbs. Oil Drum, and model ~~80896~~**PLE80896** 16 Gallon, 120 lbs. Oil Drum Cover. For use as a collection point for filter crusher drainage or portable fresh product dispensing.
- Graco Model 203622 Portable Dolly Base for 16 Gallon Drum.

**I. WASH EQUIPMENT SECTION**

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1. Alkota Model 4308 Hot/Electric HP washer, 3.5-gpm @ 3000-psi, 7.5-hp pump motor, 240V, 3 PH, 160 A. Water heater Replaceable, 6 - 10,000-Watt, Stainless Steel, Immersion Heater, Temperature Control – Standard. Heat rise 90°, trigger wand, metered chemical, SS float tank, L-34" x W-24" x H-37".
2. Model 8534-350-55 RAASM SS Pressure Wash Bare Reel, Model 853006-55 RAASM SS Reel Swivel Bracket and Model 995.520-55 RAASM 65' x 3/8" HP Hose. 3,000 PSI.
3. Wall-mounted 22: stainless steel wand holder.

**J. EXHAUST SECTION**

1. Harvey Model RHR-5R retracting hose reels with automatic recoil, lock, and latch, High temperature (600°F) silicone/fiberglass flexible rubber coated hose with internal wire helix, Rubber adapter or tapered S.S. adapter with spring closing cover, Stop collar with S.S. straps. 5" x 24' hose.
2. Harvey Model BD-11-3Roof-mounted Blower - 2-hp, 230 v, 3-phase. 3,059/2,716/2,250-cfm, depending on selected fan pulley. Include Model REER-11 Roof equip rails, BDD-11 Backdraft damper, DC-11 Drive cover, IOF-11 In/Out flex connectorVP-11 Vibration pads, IR-11 Inlet reducer and STRTR-11 manual on/off starter.

**K. MISCELLANEOUS**

1. Just-Rite Model 894520 Flammable Storage Cabinet. 43" W x 65" H x 18" D, 18 ga. CR steel construction, 45-gal capacity, self-closing doors, two adjustable shelves.
2. Baldor Model 1021WD Electric Bench Grinder. Cast iron exhaust-type guards accommodate a 4" vent pipe. Adjustable cast iron tool rest, spark breaks and eye shields. Wheels 10" diameter, 7/8" arbor hole. Base mounted on/off switch. Wheel guards and tool rests: cast iron. Lighted eye shields, GA25 Tool tray, GA24 Water pot. 36 grit and 60 grit wheels. Factory connected for 208-230 volts, no power cord, Light bulbs are not supplied. 1-1/2 HP, 208-230/460 v, 50/60 Htz, 3 Phase, 2.7-2.6/1.3 Amps. 1800-RPM. Max Wheel Size 10 inches.
3. Baldor Model GA16 Bench Grinder Pedestal Base.32-7/8" High x 15-3/4 wide x 14" deep at base. Color: blue.
4. Jet 354400 Model J-2500 15 Floor Model Drill Press, 115V, 1-Phase, 3/4-HP, Spindle speeds: 200, 290, 350, 430, 500, 580, 640, 720, 800, 870, 1,440, 1,630, 1,820, 2,380 rpm. Cast iron head, large quill. Permanently lubricated ball bearing spindle assembly, four heavy duty ball bearings mounted in an enclosed quill. Table tilts 45°. Hinged metal belt and pulley cover. Depth stop displays inch/mm and quick set bolt. 5/8 drill chuck and arbor.
5. Makita Model LW1401 14" Cut-off saw. 15A motor, 3800-rpm. Cuts up to 5" round stock, 4-11/16" square tube, and 4" x 7-5/8" or 2-3/4" x 9-1/8" rectangular tubing. Fence adjustment up to 45 degrees right or left, "tool-less" vice adjustment, Max. Cutting Capacity (at 90°) : 5", 1" arbor.

**2.04 SOURCE QUALITY CONTROL AND TESTS**

- A. Provide shop inspection and testing for all equipment items.

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**PART 3 EXECUTION**

**3.01 EXAMINATION**

- A. Verify that rough-in frames, anchors and supports are accurately placed.

**3.02 PREPARATION**

- A. Provide rough-in frame and anchors for placement by Section 05 5000 - Metal Fabrications.
- B. Do not begin installation until supporting structures have been properly prepared.
- C. If supporting structure preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

**3.03 INSTALLATION**

- A. Install in accordance with manufacturer's instructions.
- B. Install in accordance with standards required by authority having jurisdiction.
- C. Anchor equipment securely in place.
- D. Sequence installation to ensure utility connections are achieved in an orderly and expeditious manner.
- E. Touch-up minor damaged surfaces caused during installation. Replace damaged components as directed by Architect.

**3.04 INTERFACE WITH OTHER PRODUCTS**

- A. Coordinate installation of all equipment with air compressor system.
- B. Demonstrate equipment operation and related maintenance requirements.

**3.05 PROTECTION**

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

**3.06 CLOSEOUT ACTIVITIES**

- A. Adjust operating Equipment to efficient operation.

**END OF SECTION**

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**SECTION 14 45 13.10  
VERTICAL RISE VEHICLE SERVICE LIFT**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Vertical rise drive-on recess mounted platform lift.

**1.02 RELATED REQUIREMENTS**

- A. Section 05 50 00 - Metal Fabrications: Curb angles at edges of recesses.
- B. Division 26 - Electrical: Conduit, wiring devices, and electrical power requirements for vehicle service lifts.

**1.03 REFERENCES**

- A. ASCE 7 - Minimum Design Loads and Associated Criteria for Buildings and Other Structures.**

~~A~~.B. CBC - California Building Code.

~~B~~.C. CEC - California Electrical Code.

~~C~~.D. ISO 9001 - Quality Management Systems — Requirements.

~~D~~.E. NFPA 70 - National Electrical Code.

~~E~~.F. Automotive Lift Institute (ALI): [www.autolift.org](http://www.autolift.org):

- 1. ANSI/ALI ALCTV Standard: Safety Requirements for the Construction, Testing, and Validation.
- 2. ANSI/ALI ALCTV: Safety Requirements for the Construction, Testing, and Validation of Automotive Lifts.

~~F~~.G. Underwriters Laboratories Inc. (UL): [www.ul.com](http://www.ul.com):

- 1. UL 201 – UL Standard for Safety Garage Equipment.

**1.04 ADMINISTRATIVE REQUIREMENTS**

- A. Preinstallation Conference: Conduct conference at Project site. Participants to include representatives from all trades with work affecting or affected by vehicle service lifts. Refer to Section 01 30 00 - Administrative Requirements for agenda topics and minutes requirements for conference. Include coordination of the following:
  - 1. Concrete structural considerations.
  - 2. Opening preparation.
  - 3. Power and control requirements.
  - 4. Overhead clearances required.

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**1.05 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Approved ISO 9001-certified manufacturer listed in this Section with minimum five years' experience in manufacture of similar products in successful use in similar applications.
  - 1. Provide documentation indicating manufacturer's membership in Automotive Lift Institute.
- B. Approval of Comparable Manufacturer and Products: Submit the following in accordance with project substitution requirements, prior to bid date:
  - 1. Product data, including certified independent test data indicating compliance with requirements.
  - 2. Engineering information verifying compatibility of proposed product with space constraints and structural conditions for project.
  - 3. Sample submittal from similar project.
  - 4. Project references: Minimum of five installations not less than five years old, with Owner contact information.
  - 5. Sample warranty.
  - 6. Substitutions following award of contract are not allowed except as stipulated in Division 01 General Requirements.
  - 7. Approved manufacturers must meet separate requirements of Submittals Article.
- C. Installer Qualifications: Manufacturer of vehicle service lift, or authorized local distributor licensed by the manufacturer.

**1.06 INFORMATIONAL SUBMITTALS**

- A. Product Test Reports: For each vehicle service lift, by qualified independent agency, indicating compliance of products with performance requirements.
  - 1. Indicate compliance of vehicle service lifts with testing and inspection requirements in ANSI/ALI ALCTV.
- B. Coordination Drawings: Reflected ceiling plans and other drawings as required to coordinate vertical lift work with work by other Installers, illustrating the following:
  - 1. Overhead structural members.
  - 2. Ceiling-mounted and ceiling-suspended fixtures and equipment.
  - 3. Sprinkler heads.
  - 4. Light fixtures.
  - 5. HVAC components.
  - 6. Plumbing components.
- C. Qualification Information: For Installer firm.
- D. Manufacturer's warranty: Unexecuted sample copy of manufacturer's warranty.
- E. Field quality control reports.

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**1.07 CLOSEOUT SUBMITTALS**

- A. Maintenance data, in accordance with requirements of Section 01 78 00 - Closeout Submittals.
- B. Manufacturer's Warranty: Executed copy of manufacturer's warranty.

**1.08 COORDINATION**

- A. Clear Area Requirements: Coordinate work of facility services installers, including piping, ductwork, and conduit, to ensure clear area at ceiling pockets meets manufacturer's requirements for installation of vehicle service lift.
- B. Coordinate installation of cast-in-place items. Furnish setting drawings and templates.
- C. Electrical Wiring Requirements: Coordinate installation of power and control conduit, wiring, and device installation requirements specified in other Sections consistent with requirements indicated on approved shop drawings.

**1.09 DELIVERY, STORAGE, AND HANDLING**

- A. Protect vehicle service lift components during shipping, handling, and storage to prevent staining, denting, deterioration of components, or other damage.
  - 1. Deliver, unload, store, and erect vehicle service lift and accessory items without misshaping components or exposing components to surface damage from weather or construction operations.
  - 2. Store in accordance with Manufacturer's written instruction.

**1.10 WARRANTY**

- A. Manufacturer's Warranty: Provide manufacturer's standard form in which manufacturer agrees to repair or replace components of vehicle service lifts that fail in materials or workmanship under normal use within rated capacity within warranty period.
  - 1. Failures include, but are not limited to, the following:
    - a. Structural failures including cracked or broken supports or welds.
    - b. Faulty operation of operating and control system.
    - c. Failure of hydraulic seals and cylinders.
  - 2. Warranty Period for Structural Components: Five years from date of Substantial Completion.
  - 3. Warranty Period for Hydraulic System: Five years from date of Substantial Completion.

**PART 2 PRODUCTS**

**2.01 MANUFACTURER**

- A. Basis of Design Manufacturer: Rotary Lift, Madison, IN 47250; (800) 640-5438; [info@rotarylif.com](mailto:info@rotarylif.com); [www.rotarylif.com](http://www.rotarylif.com).

**2.02 PERFORMANCE REQUIREMENTS**

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in CEC / NFPA 70, by a qualified testing agency, and marked for intended location and application.

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- B. Industry Standard: ANSI/ALI ALCTV as certified by qualified independent testing laboratory.
- C. Code Compliance: CBC Chapter 30 section 3001.3 and additional requirements of authorities having jurisdiction where applicable.
- D. **Comply with seismic design requirements in accordance with ASCE 7 and applicable local codes.**
  - 1. **Project Seismic Risk: As indicated on drawings.**

**2.03 VERTICAL RISE PLATFORM LIFTS**

- A. Basis of Design: Model VR64 Series as manufactured by Rotary Lift.
  - 1. VR6448 44,000lbs (29,030kg) lifting capacity 48-foot (14630mm) runway length. 2-foot (610mm) extensions can be added to increase runway length. ~~Two extensions maximum one at each set at each end. 2 foot (610mm) extensions are only available for 28 foot (8534mm) runways.~~
  - 2. The 48’ runways shall be designed with sufficient strength and steel, using a tubing and torque box design with a minimum 241MM thick cross section, weighing no less than 9,000-lbs per runway to minimize the need for vehicle positioning to prevent deflection. C channel box cross section shall not be allowed.
- B. Lift System Design:
  - 1. A vertical rise heavy-duty platform lift to raise large trucks, buses, and other heavy-duty vehicles for inspection, maintenance, servicing and cleaning. Lift shall rise in a vertical fashion.
  - 2. The lift system shall be capable of being ~~flush~~recess mounted ~~recessed~~, as indicated on the drawings.
  - 3. The lift system shall be totally open floor design with no obstructions between lifting platforms and no crossbeams either in the front or the rear of the platforms.
  - 4. Lift system shall incorporate a hydraulic driven cylinder in each lifting leg assembly.
  - 5. The maximum lifting height of the lift system shall be programmable.
  - 6. Lift platforms shall be painted with Marine Grade paint, using a 2-step covering system to provide maximum wear for normal and for wash bay applications. The covering system must have a zinc primer and epoxy component with a textured finish.
- C. Lifting Height: The lift shall have a minimum lifting height of 77-3/4 inches (1975mm) from the bottom of the lifting legs to the top of the runways at full extension.
  - 1. Width of the platforms for all models shall be 32 inches (813mm).
  - 2. The lowered height shall be a maximum of 16.5 inches (419mm)
  - 3. Concrete Thickness: As indicated on Drawings.
  - 4. Installation shall be accommodated by 4 lifting leg plates with 4 anchor bolts per plate. Total installation shall not require more than 16 anchor bolts for anchorage to the floor.
- D. Drive Mechanism:
  - 1. The drive system shall be hydraulic drive and shall permit lifting without any pulsations, jerks or unsteady lifting. Lifting shall be smooth. Hydraulic system shall be comprised of an electrically powered pump, flow control valves, and a fluid reservoir.

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2. Hydraulic lifting cylinders shall be of a piston type to prevent leakage in the case of piston damage.
3. Each lifting leg shall utilize no less than four (4) 2" thick high-strength steel hinge links. Tube legs and sliding links shall not be used due to higher wear factor.
4. When used in a wash bay application, each piston shall have an air exchange line to the control panel to prevent water from being drawn into the cylinder, improving life cycle, and eliminating downtime.
5. All rotating axles shall be hardened for long life and wear and use 2" and 3" pins for increased surface area and load reduction on the pivoting members.

E. Lift Controls:

1. The lift operating system shall have microprocessor controls within the printed circuit board to provide various safety and operational requirements.
2. The lift system shall have control voltage rated to a maximum of 24 VDC.
3. Each control box shall have as a minimum:
  - a. System disconnect.
  - b. "Power-on" pilot lamp.
  - c. "Up" button.
  - d. "Down" button.
  - e. "Lower to Lock" button.
  - f. Lighting switch.
  - g. Height limit switch.
4. The lift, when fitted with the proper electrical motor, shall operate at 208/230V (3 phase)
  - a. Control Panel: Rated IP65 or better.

F. Safety Devices:

1. An independent and fail-safe mechanical safety device shall be present on each lifting leg system. This safety device shall be totally independent from the lifting drive system. A negative rake mechanical locking catch shall be free to engage the teeth of the locking strip attached to the lifting leg system.
2. Each lifting device shall be provided with a position measuring device identified as an inclinometer whose function it is to calculate and synchronize the height of the 4 lifting devices.
3. The lift system shall incorporate a splash proof electrical system (IP 65) so that the lift can be used in a washroom environment without damage to electrical components.
4. The lift system shall have an automatic foot-guard protection.
5. Locking mechanism shall be activated before the runways leave the recessed pit or approximately 25 inches (635 mm) of runway height. Any locking operation below this height is allowed but not required by the ANSI ALCTV standard.

G. Accessories:

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1. Remote Operating Panel in stainless steel control panel and wall mounting control to be located in the washbay. Control panel shall be rated IP65 or better
2. Built-In Air Line Kit 100 psi minimum - 120 psi maximum required.
3. Safety Tape Switch Edges – Inside and outside edges, to be installed at the factory.
4. ~~VR32RJ32BK~~ Series ~~Rolling Bridges~~**rolling bridge jack** double piston with a total capacity of up to 32,000 lbs. (two 32,000 lbs. bridges). Air requirements 100psi (690kPa) minimum 120 psi (827kPa) maximum. **Repair Bay only, not Wash Bay.**

#### 2.04 FINISHES

- A. Baseplates:
  1. Primer: Zinc
  2. Top Coat: Epoxy - Red, RAL3002.
- B. Control Panel, Lift Legs, and Runways:
  1. Top Coat: Epoxy - Red, RAL3002.

### PART 3 EXECUTION

#### 3.01 EXAMINATION

- A. Examine conditions to verify compliance with manufacturer's written installation instructions, approved shop drawings, and project documents. Confirm that vehicle service lift location is constructed within tolerances acceptable to lift manufacturer.
- B. Examine electrical rough-in for proper location of connections.
- C. Structural Requirements: Consult manufacturer's written instructions and structural engineering drawings for requirements for unit support and required recesses.
  1. Examine floor recesses for suitable conditions where recessed vehicle service equipment is to be installed. Recesses shall be plumb and square.
- D. Correct out-of-tolerance work and other deficient conditions prior to proceeding with installation.

#### 3.02 INSTALLATION

- A. General: Attach vehicle service lifts securely to concrete floor slab in locations indicated on Drawings. Comply with manufacturer's written instructions and approved shop drawings.
- B. Install vehicle service lifts after adjacent finishing work including painting has been completed.
- C. Refer to Division 26 electrical sections for requirements for electrical power and control wiring.

#### 3.03 ADJUSTING AND CLEANING

- A. Adjust and service operating mechanisms. Verify lift and safety device operation.
- B. Clean finished surfaces as recommended by partition manufacturer.

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**3.04 DEMONSTRATION**

- A. Engage a manufacturer-authorized representative to train Owner's personnel to adjust, operate, and maintain vehicle service lifts.

**END OF SECTION**

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**SECTION 14 45 13.19  
VEHICLE SERVICE LIFTS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Heavy duty wireless-controlled mobile column vehicle service lifts.

**1.02 RELATED REQUIREMENTS**

- A. Division 26 - Electrical: Conduit, wiring devices, and electrical power requirements for vehicle service lifts.

**1.03 REFERENCES**

**A. ASCE 7 - Minimum Design Loads and Associated Criteria for Buildings and Other Structures.**

~~A.B.~~ CEC - California Electrical Code.

~~B.C.~~ ISO 9001 - Quality Management Systems — Requirements.

~~C.D.~~ NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum).

~~D.E.~~ NFPA 70 - National Electrical Code.

~~E.F.~~ Automotive Lift Institute (ALI): [www.autolift.org](http://www.autolift.org):

- 1. ANSI/ALI ALCTV Standard: Safety Requirements for the Construction, Testing, and Validation.

~~F.G.~~ American Society for Mechanical Engineers (ASME): [www.asme.org](http://www.asme.org):

- 1. ASME PASE requirements for portable service equipment.

~~G.H.~~ Underwriters Laboratories Inc. (UL): [www.ul.com](http://www.ul.com):

- 1. UL 201 – UL Standard for Safety Garage Equipment.

**1.04 QUALITY ASSURANCE**

A. Manufacturer Qualifications: Approved ISO 9001-certified manufacturer listed in this Section with minimum five years' experience in manufacture of similar products in successful use in similar applications.

- 1. Provide documentation indicating manufacturer's membership in Automotive Lift Institute.

B. Approval of Comparable Manufacturer and Products: Submit the following in accordance with project substitution requirements, prior to bid date:

- 1. Product data, including certified independent test data indicating compliance with requirements.
- 2. Engineering information verifying compatibility of proposed product with space constraints and structural conditions for project.
- 3. Project references: Minimum of five installations not less than five years old, with Owner contact information.

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4. Sample warranty.
5. Substitutions following award of contract are not allowed except as stipulated in Division 01 General Requirements.
6. Approved manufacturers must meet separate requirements of Submittals Article.

**1.05 INFORMATIONAL SUBMITTALS**

- A. Product Test Reports: For each vehicle service lift, by qualified independent agency, indicating compliance of products with performance requirements.
  1. Indicate compliance of vehicle service lifts with testing and inspection requirements in ANSI/ALI ALCTV.
- B. Manufacturer's warranty: Unexecuted sample copy of manufacturer's warranty.

**1.06 CLOSEOUT SUBMITTALS**

- A. Maintenance data, in accordance with requirements of Section 01 78 00 - Closeout Submittals.
- B. Manufacturer's Warranty: Executed copy of manufacturer's warranty.

**1.07 DELIVERY, STORAGE, AND HANDLING**

- A. Protect vehicle service lift components during shipping, handling, and storage to prevent staining, denting, deterioration of components, or other damage.
  1. Deliver, unload, store, and erect vehicle service lift and accessory items without misshaping components or exposing components to surface damage from weather or construction operations.
  2. Store in accordance with Manufacturer's written instruction.

**1.08 WARRANTY**

- A. Manufacturer's Warranty: Provide manufacturer's standard form in which manufacturer agrees to repair or replace components of vehicle service lifts that fail in materials or workmanship under normal use within rated capacity within warranty period.
  1. Failures include, but are not limited to, the following:
    - a. Structural failures including cracked or broken supports or welds.
    - b. Faulty operation of operating and control system.
    - c. Failure of hydraulic seals and cylinders.
  2. Warranty Period for Structural Components: Five years from date of Substantial Completion.
  3. Warranty Period for Hydraulic System: Five years from date of Substantial Completion.

**PART 2 PRODUCTS**

**2.01 MANUFACTURER**

- A. Basis of Design Manufacturer: Rotary Lift, Madison, IN 47250; (800) 640-5438; info@rotarylift.com; www.rotarylift.com.

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## 2.02 PERFORMANCE REQUIREMENTS

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in CEC / NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. Standard: ANSI/ALI ALCTV.
- C. **Comply with seismic design requirements in accordance with ASCE 7 and applicable local codes.**
  - 1. **Project Seismic Risk: As indicated on drawings.**

## 2.03 WIRELESS MOBILE COLUMN VEHICLE SERVICE HYDRAULIC LIFTS

- A. Mobile column surface-mounted wheel-engaging lifting system designed to elevate service vehicles for inspection and maintenance. A single lifting system consists of from four to eight individual electric-hydraulic mobile columns sustaining specified rated loads per mobile column. Mobile columns are battery operated, with built-in DC charging system in each column.
- B. 18,800 lb (8527 kg) Capacity Wireless Mobile Column Hydraulic Lift:
  - 1. Basis of Design: Rotary Lift, Model MCHM19FLEX.
  - 2. Lift Capacity, Single Column Lift: 18,800 lbs (8165 kgs).
  - 3. Weight per Column: 1400 lbs. (635 kg).
  - 4. Column Width: 45.5 inches (1156 mm).
  - 5. Lifting Fork Length: 14 inches (356 mm).
  - 6. Wheel Rim Size Capacity: 9 to 24 inches (228 to 610 mm).
  - 7. Wireless Remote Controller: Hand-held unit with joystick up/down control, protective lock, and single lower-to-lock button in industrial protective housing.
  - 8. Hydraulic Tank Capacity: 10.5 quarts (10 liters).
  - 9. Power Characteristics:
    - a. Motor: 3KW/24VDC.
    - b. Built-in Battery Charger Voltage: 110V-240V/ 50/60 Hz charger.
    - c. Batteries: Two 12VDC Group 24 batteries of type recommended by manufacturer.
    - d. Control Voltage: 24VDC.
    - e. Charger: 110V automatic weather tight marine type.
  - 10. Operating Characteristics:
    - a. Full Rise: 78 seconds.
    - b. Full Lowered: 54 seconds.
    - c. Rise: 70 Inches (1778 mm).
    - d. Overall Height at Full Lower: 102 inches (2591 mm).
    - e. Overall Height at Full Rise: 144-3/8 inches (3677 mm).
    - f. Overall Width: 45-1/2 inches (1156 mm).
    - g. Overall Length: 48-9/16 inches (1234 mm).

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- h. Turning Radius: 45 inches (1143 mm).
- C. Set of 4: 75,200 lb (32658kg) Capacity, Wireless Control Mobile Column Hydraulic Lifts:
  - 1. Basis of Design: Rotary Lift, Model MCHM419U100BK.

**2.04 SYSTEM DESCRIPTION**

- A. Column Assemblies: Columns consist of a seamless formed channel fabrication from a single steel plate reinforced externally along back face with structural steel angle. Columns are supported by a set of legs sitting on floor when under load and by a set of retractable wheels when not under load. Legs are configured to allow addition of longer forks when required by service conditions. Columns are equipped with the following:
  - 1. Lift Locks: Rated at same capacity as corresponding jacking unit, with gravity-activated locking latch with a spring-loaded assist to locking position and releasable by an air cylinder controlled at control console air cylinder. Locks meet ANSI/ALI ALCTV, with maximum of 3 inches (76 mm) between locking positions
  - 2. Wheels: Two fixed heavy-duty steel wheels and a dual rubber coated steering wheel mounted at the rear.
  - 3. Hoisting hook.
  - 4. Fork lift pocket lifting points.
- B. Carriage Assemblies: Assemblies configured to provide minimum 12 inches safety clearance between column and body of vehicle. Carriages move on four UHMW bearings, permanently oil-impregnated,
  - 1. Adjustable Lifting Forks: With spring-loaded locks, to enable adjustment to a range of tire sizes and widths without use of adapters.
- C. Electric hydraulic power unit, enclosed, consisting of a DC motor, gear pump, reservoir, check valve, pressure relief valve, and two control valves. Direct drive lifting cylinder configured to push carriage up, without use of chains or cables; extension of cylinder occurs inside of protective carriage. Self-lubricating hydraulic system circulated in zinc-plated steel pipes. Hydraulic check valve and redundant mechanical safety lock continuously engaged during lifting and holding. Two control valves maintain synchronous operation with other columns in lifting system. System protected by pressure relief valve and velocity fuse preventing system lowering caused by cylinder leak.
- D. Control System, General: Column-mounted and hand-held remote control wireless service lift operation with alpha-numeric display, audible alarm, and visual indicators display error codes and other diagnostic information, including height of column fork, system id and per-column bearing weight displayed in SI and Metric units. Circuit board programming upgradeable via SD card or wireless connection without board replacement. 12VDC control panels in NEMA 250 Type 4 waterproof enclosures, with the following functions:
  - 1. Continuous control through hydraulic correction to maintain level synchronization, Columns synchronize within tolerance of 1 inch.
  - 2. Programmable height limit settings with no external limit switches.
  - 3. Lower to lock function.
  - 4. Slow lowering function.

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5. Column mounted "UP" and "Down" buttons and remote control joystick utilize momentary function "Dead Man" type switches while depressed.
  6. "Emergency Stop Button" on each column or remote control will shut down all connected mobile columns.
  7. Manual lowering override due to loss of power to the unit.
- E. Remote Control: Handheld wireless remote control, battery powered, with one-handed operation capable of controlling a system of 2, 4, 6, or 8 column with battery life of 16 hours of continuous operation on full charge. Class I Division 2 Group D rated.
1. "Resume" button to recall previous system ID and column assignments
  2. "Press Protect" mode enables after 5 seconds. Waking the system from this mode results in all the columns in the system beeping and flashing, to confirm to the user which columns are being controlled, with a second button press required to start motion and protect against inadvertent button presses.
  3. Guided quick set-up process.
  4. Charging cradle, with 50 percent re-charge in 30 minutes.
  5. Recessed motion buttons to guard against accidental press.
  6. Remote control includes icon visual representations of positions of lift columns and vehicle.
- F. Battery Charger: Each column equipped with 110 volt, two (5) amp, 2-bank battery smart-charger with two independent 12 VDC output leads. Charger incorporates automatic 3-stage charging. Total recovery time for completely discharged system less than 12 hours. All battery chargers in a lift system may be connected to a single 110V receptacle.

**2.05 FINISHES**

- A. Baked-on Factory Finish: Clean, pretreat, and apply manufacturer's standard two-coat, baked-on finish consisting of prime coat and thermosetting topcoat.
1. Color: As selected by Architect from manufacturer's full range.

**PART 3 EXECUTION**

**3.01 EXAMINATION**

- A. Examine conditions to verify compliance with manufacturer's written installation instructions, approved shop drawings, and project documents. Confirm that vehicle service lift location is constructed within tolerances acceptable to lift manufacturer.
- B. Structural Requirements: Consult manufacturer's written instructions and structural engineering drawings for requirements for unit support and required recesses.
1. Examine floor requirements including recesses for suitable conditions where recessed vehicle service equipment is to be installed. Recesses shall be plumb and square.

**3.02 ADJUSTING AND CLEANING**

- A. Adjust and service operating mechanisms. Verify lift and safety device operation.
- B. Clean finished surfaces as recommended by partition manufacturer.

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**3.03 DEMONSTRATION**

- A. Engage a manufacturer-authorized representative to train Owner's personnel to adjust, operate, and maintain vehicle service lifts.

**END OF SECTION**

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**SECTION 14 45 13.35**  
**IN-GROUND HEAVY DUTY 3-POST VEHICLE SERVICE LIFT**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Heavy-duty two post in-ground modular vehicle service axel engaging hydraulic lifts.

**1.02 RELATED REQUIREMENTS**

- A. Section 05 50 00 - Metal Fabrications: Curb angles at edges of recessed pits.
- B. Division 26 - Electrical: Conduit, wiring devices, and electrical power requirements for vehicle service lifts.

**1.03 REFERENCES**

- A. Automotive Lift Institute (ALI): [www.autolift.org](http://www.autolift.org):
- B. ASCE 7 - Minimum Design Loads and Associated Criteria for Buildings and Other Structures.**
- ~~B.C.~~ C. CEC - California Electrical Code.
- ~~C.D.~~ D. NFPA 70 - National Electrical Code.
- ~~D.E.~~ E. Underwriters Laboratories Inc. (UL): [www.ul.com](http://www.ul.com):
  - 1. UL 201 – UL Standard for Safety Garage Equipment.

**1.04 ADMINISTRATIVE REQUIREMENTS**

- A. Preinstallation Conference: Conduct conference at Project site. Participants to include representatives from all trades with work affecting or affected by vehicle service lifts. Refer to Section 01 30 00 - Administrative Requirements for agenda topics and minutes requirements for conference. Include coordination of the following:
  - 1. Concrete structural considerations.
  - 2. Opening preparation.
  - 3. Power and control requirements.
  - 4. Overhead clearances required.

**1.05 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Approved ISO 9001-certified manufacturer listed in this Section with minimum five years' experience in manufacture of similar products in successful use in similar applications.
  - 1. Provide documentation indicating manufacturer's membership in Automotive Lift Institute.
- B. Approval of Comparable Manufacturer and Products: Submit the following in accordance with project substitution requirements, prior to bid date:

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1. Proposed substitution must satisfactorily meet or exceed the performance and safety standards specified herein.
  2. Product data, including certified independent test data indicating compliance with requirements.
  3. Engineering information verifying compatibility of proposed product with space constraints and structural conditions for project.
  4. Sample submittal from similar project.
  5. Project references: Minimum of five installations not less than five years old, with Owner contact information.
  6. Sample warranty.
  7. Substitutions following award of contract are not allowed except as stipulated in Division 01 General Requirements.
  8. Approved manufacturers must meet separate requirements of Submittals Article.
- C. Installer Qualifications: Manufacturer of vehicle service lift, or authorized local distributor licensed by the manufacturer.

**1.06 INFORMATIONAL SUBMITTALS**

- A. Product Test Reports: For each vehicle service lift, by qualified independent agency, indicating compliance of products with performance requirements.
1. Indicate compliance of vehicle service lifts with testing and inspection requirements in ANSI/ALI ALCTV.
- B. Coordination Drawings: Reflected ceiling plans and other drawings as required to coordinate vertical lift work with work by other Installers, illustrating the following:
1. Overhead structural members.
  2. Ceiling-mounted and ceiling-suspended fixtures and equipment.
  3. Sprinkler heads.
  4. Light fixtures.
  5. HVAC components.
  6. Plumbing components.
- C. Qualification Information: For Installer firm.
- D. Manufacturer's warranty: Unexecuted sample copy of manufacturer's warranty.
- E. Field quality control reports.

**1.07 CLOSEOUT SUBMITTALS**

- A. Maintenance data, in accordance with requirements of Division 01 Section "Operation and Maintenance Data."
- B. Manufacturer's Warranty: Executed copy of manufacturer's warranty.

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**1.08 COORDINATION**

- A. Clear Area Requirements: Coordinate work of facility services installers, including piping, ductwork, and conduit, to ensure clear area at ceiling pockets meets manufacturer's requirements for installation of vehicle service lift.
- B. Coordinate installation of cast-in-place items. Furnish setting drawings and templates.
- C. Electrical Wiring Requirements: Coordinate installation of power and control conduit, wiring, and device installation requirements specified in other Sections consistent with requirements indicated on approved shop drawings.

**1.09 DELIVERY, STORAGE, AND HANDLING**

- A. Protect vehicle service lift components during shipping, handling, and storage to prevent staining, denting, deterioration of components, or other damage.
  - 1. Deliver, unload, store, and erect vehicle service lift and accessory items without misshaping components or exposing components to surface damage from weather or construction operations.
  - 2. Store in accordance with Manufacturer's written instruction.

**1.10 WARRANTY**

- A. Manufacturer's Warranty: Provide manufacturer's standard form in which manufacturer agrees to repair or replace components of vehicle service lifts that fail in materials or workmanship under normal use within rated capacity within warranty period.
  - 1. Failures include, but are not limited to, the following:
    - a. Structural failures including cracked or broken supports or welds.
    - b. Faulty operation of operating and control system.
    - c. Failure of hydraulic seals and cylinders.
    - d. Deterioration due to electrolysis or corrosion resulting from failure of environmental containment coating.
  - 2. Warranty Period for Structural Components: Five years from date of Substantial Completion.
  - 3. Warranty Period for Hydraulic System: Five years from date of Substantial Completion.
  - 4. Warranty Period for Enviroguard Treated Components: 10 years from date of Substantial Completion.

**PART 2 PRODUCTS**

**2.01 MANUFACTURER**

- A. Basis of Design Manufacturer: Rotary Lift, Madison, IN 47250; (800) 640-5438; info@rotarylif.com; www.rotarylif.com.

**2.02 PERFORMANCE REQUIREMENTS**

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in CEC / NFPA 70, by a qualified testing agency, and marked for intended location and application.

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- B. Standard: ANSI/ALI ALCTV.
- C. Fleet Vehicle Wheelbase Dimensions: Provide vehicle service lifts properly sized with movable posts to provide proper engagement for vehicles ranging in the following wheel bases:
  - 1. From 114 inches minimum to 264 inches maximum.
- D. **Comply with seismic design requirements in accordance with ASCE 7 and applicable local codes.**
  - 1. **Project Seismic Risk: As indicated on drawings.**

**2.03 HEAVY DUTY INGROUND MODULAR VEHICLE SERVICE LIFTS**

- A. Vertical Oriented, Piston Type, In-Ground Modular Vehicle Service Electrohydraulic Lifts: In-ground modular, drive-on, frame contact, two-post mechanical vehicle lifting devices configured to provide wheels-free under-carriage service access, with one-piece, coated steel in-ground hydraulics containment, liquid detection system, and bio-based hydraulic fluid compatible.
  - 1. In-Ground Two-Post Modular Service Electrohydraulic Lift, with one stationary post, and one movable post, arranged in-line with the longitudinal axis of the vehicle, each lifting cylinder configured to engage the axle and suspension. Trench cover is fixed, with automatic movable shutter plates at movable post, providing complete trench coverage and unobstructed clear floor when lowered.
    - a. Basis of Design: Rotary Lift, Model MOD235X3D2BK.
    - b. Lifting Capacity: 70,000 lbs. (31751 kg).
    - c. Rise: 70 inches (1803 mm). Rise time 72 seconds.
    - d. Power Unit: 2 at 5 HP each with explosion proof three-phase motor.
    - e. System Monitoring and Controls: Wall mounted, with 25 preset vehicle locations.
    - f. Lift Controller: Variable speed (piston raise and lower, and horizontal movement) computer-controlled equalization system using direct measurement of the piston movement by means of a string potentiometer at each piston.
    - g. 21' Movable Post (One): Mounted on carriage assembly utilizing a 1/2 HP explosion proof electric motor, protected by a slip clutch, with permanently lubricated bearing wheels. Casing coated with minimum 0.10 inch (2.5 mm) thick EnviroGuard.
    - h. Automatic moveable shutter plates shall be constructed of nitride-coated steel, and shall be double hinged, which allows debris to discharge into the containment unit.
    - i. Stationary Post: In stationary frame at floor level, with integral wheel locating chocks at floor level on each side of module.
    - j. Lift locks: Rated at same capacity as corresponding pistons, two-stage telescoping, with minimum 18 locking positions. Spring-loaded locking latch, gravity activated with a spring-loaded assist, and released at control console by air cylinder.
    - k. The locking mechanism of the stationary piston shall be positioned on opposite side of the moveable piston(s) to equalize the vertical forces on each piston and prevent the possibility of torque force on the piston shafts.

Mountain Area Regional Transit Authority <b>Mount Transit Maintenance Facility -Phase 1</b> RCA Project No. 5-08-01	<b>Addendum 4</b>	In-Ground Heavy Duty 3-Post Vehicle Service Lift 14 45 13.35 - 4
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- d. When each piston is fully recessed.
- 4. Automatic Operational Positioning: Accessible with single button press once vehicle profile has been selected.
- D. Saddle and Adapter Kit: Configured for properly lifting and engaging vehicles identified under Performance Requirements:
  - 1. Saddles: Standard rear saddle and Low profile type universal moveable saddle.
  - 2. Lift Superstructure: Equip with sliding adapters including flip up inserts and pinned stackable inserts.
  - 3. Adapters: Pivot 360 degrees; cast aluminum, clear anodized, with single locating pin.
  - 4. AK-ULP70-2 low profile transit bus Adapter Package application.
- E. Proposed Accessories to be priced separately for Add/Alt consideration:
  - 1. Mobile adapter cart.
  - 2. Automatic Fluid Evacuation System: Pneumatically operated. Fluid displacement 4 gpm at 90 psi. **Coordinate with location of drain to clarifier on Plumbing Drawings.**
  - 3. Model MC1000040 Cord reel for wired pendant.

**2.04 FABRICATION**

- A. Movable Post Modular: Mounted on carriage assembly, with permanently lubricated bearing wheels. Casing coated with minimum 0.10 inch (2.5 mm) thick EnviroGuard.
  - 1. Movable Post Recessed Track: Sized to provide proper engagement for vehicles ranging in wheel bases specified, with recessed pocket housing saddle and adapter assembly when lift is in lowered position allowing low-profile superstructure and adapters to be stored below floor level and allowing pit covers to be closed.
    - a. Movable Post Carriage Motorized Drive: 1/2 hp explosion proof electric motor, protected by a slip clutch.
- B. Stationary Post Modular: Mounted on stationary frame with integral vehicle-locating wheel chocks and spotting dishes embedded level with floor, and with recessed pocket housing saddle and adapter assembly when lift is in lowered position allowing low-profile superstructure and adapters to be stored below floor level.
- C. Hydraulic Pistons: Two-stage mid-pressure pistons with chrome surface not exposed to fluids in containment, accessible for maintenance from floor level. The piston shall be self-lubricating and not require grease fittings. A traditional bearing/gland style design shall be used for ease of maintenance for and longevity.
  - 1. Minimum Full Rated Capacity: 35,000 lbs. (15,876 kg) each.
- D. Electro-Hydraulic Power Unit: 5 HP explosion proof 3-phase motor. The bio-fluid compatible hydraulic system shall be completely housed within the modular containment unit to prevent any possible leakage of hydraulic fluid into an uncontained area.
- E. Lift Locks: Rated at same capacity as corresponding jacking unit, with two-stage telescoping lock leg with 18 locking positions.
  - 1. Locking Latch: Gravity-activated, with a spring-loaded assist to locking position and releasable by an air cylinder controlled at control console air cylinder.

Mountain Area Regional Transit Authority <b>Mount Transit Maintenance Facility -Phase 1</b> RCA Project No. 5-08-01	<b>Addendum 4</b>	In-Ground Heavy Duty 3-Post Vehicle Service Lift 14 45 13.35 - 6
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- F. Modular Containment: Coated internally and externally with EnviroGuard at minimum 0.10 inch (2.5 mm) thick forming an impermeable watertight shell, encapsulating hydraulic system against corrosion and electrolysis.
- G. Liquid Detection System: Including evacuation pipe (Refer to section 2.03, E, 2, above for add/alt option, automatic evacuation kit). Provide visual notification to lift control system upon detection of liquid accumulation in containment.

**2.05 SOURCE QUALITY CONTROL**

- A. Test modular containment units against electrolysis utilizing 30,000-volt stray current test.
- B. Submit written report of test.

**PART 3 EXECUTION**

**3.01 EXAMINATION**

- A. Examine conditions to verify compliance with manufacturer's written installation instructions, approved shop drawings, and project documents. Confirm that vehicle service lift location is constructed within tolerances acceptable to lift manufacturer and meet the following:
- B. Examine electrical rough-in for proper location of connections.
- C. Structural Requirements: Consult manufacturer's written instructions and structural engineering drawings for requirements for unit support and required recesses.
  - 1. Examine floor requirements including recesses for suitable conditions where recessed vehicle service equipment is to be installed. Recesses shall be plumb and square.
- D. Correct out-of-tolerance work and other deficient conditions prior to proceeding with installation.

**3.02 INSTALLATION**

- A. General: Attach vehicle service lifts securely to concrete floor slab in locations indicated on Drawings. Comply with manufacturer's written instructions and approved shop drawings.
- B. Install vehicle service lifts after adjacent finishing work including painting has been completed.
- C. Install manufacturer-provided drive motors and mechanisms and adjust for quiet, smooth operation of the lifting and lowering mechanism.
- D. Refer to Division 26 electrical sections for requirements for electrical power and control wiring.

**3.03 ADJUSTING AND CLEANING**

- A. Adjust and service operating mechanisms. Verify lift and safety device operation.
- B. Clean finished surfaces as recommended by partition manufacturer.

Mountain Area Regional Transit Authority <b>Mount Transit Maintenance Facility -Phase 1</b> RCA Project No. 5-08-01	<b>Addendum 4</b>	In-Ground Heavy Duty 3-Post Vehicle Service Lift 14 45 13.35 - 7
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**3.04 DEMONSTRATION**

- A. Engage a manufacturer-authorized representative to train Owner's personnel to adjust, operate, and maintain vehicle service lifts.

**END OF SECTION**

Mountain Area Regional Transit Authority <b>Mount Transit Maintenance Facility -Phase 1</b> RCA Project No. 5-08-01	<b>Addendum 4</b>	In-Ground Heavy Duty 3-Post Vehicle Service Lift 14 45 13.35 - 8
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**SECTION 27 53 00**  
**PAGING SYSTEM**

**PART 1 - GENERAL**

**1.01 SCOPE**

- A. Work Included: All labor, materials, appliances tools, equipment, facilities transportation, and services necessary for and incidental to performing all operations in connection with furnishing, delivery, and installation of the work of this Section, complete as shown on the Drawings and/or specified herein. Work includes, but is not necessarily limited to the following:
  - 1. Examine all other Sections for work related to those other Sections and required to be included as work under Division 26.
  - 2. General Provisions and Requirements for electrical work.

**1.02 SUBMITTALS (ADDITIONAL REQUIREMENTS)**

- A. Submit Product Data Sheets and descriptive literature for all component parts.
- B. Submit Block Wiring Diagrams of the clock and paging systems. Showing head-end equipment, terminal cabinets, remote power supplies, and speakers.

**1.03 EQUIPMENT QUALIFICATION**

- A. The Specification is based on the equipment of Manufacturers who have been approved by the District and the Manufacturers herein named shall be considered as meeting the Requirements of this Specification. For all items which are identified by part number and Manufacturer the Performance Specifications which are published in the most recent Manufacturer's data sheets available at the time of bidding this Project shall be applicable to the present work as though fully written out herein.
- B. All Equipment shall conform to all local applicable Codes and Ordinances and shall be listed by Underwriters Laboratories.
- C. The Supplier of the Equipment shall be the Factory Authorized Distributor and service facility for the brand of equipment provided.
- D. The Paging System Equipment shall be as manufactured by Valcom to match existing equipment on the site. No substitutions will be approved.

**1.04 INSTALLER QUALIFICATIONS**

To qualify as an acceptable Bidder, whether the bid is submitted to the District, his Agent, a General Contractor or a Sub-Contractor, the System Bidder or Contractor shall be qualified Sound Contractor and shall hold a valid C61 License issued by the Contractors State License Board of California. The System Bidder or Contractor shall hereinafter be referred to as the Contractor. The Contractor shall hold all other licenses required by the legally constituted authorities having jurisdiction over the work. The Contractor shall be the factory authorized Distributor for the brand of equipment offered and shall have been engaged in the business of supplying and installing the specified type of system for at least 5-years. The Contractor shall maintain a fully equipped service organization capable of furnishing adequate repair service to the equipment.

The Contractor shall be financially able to provide a performance bond covering the work and the guarantee described. The Contractor shall provide that bond if requested.

## **PART 2 - PRODUCTS**

### **2.01 MATERIALS**

Comply with Pertinent Provisions of Section 26 05 01.

### **2.02 VALCOM PAGING SYSTEM**

- A. Add three new Paging Zones to the existing system, each of which may be programmed in software to belong to any combination of zones. Initially zones shall be provided and programmed as follows:
  - 1. One zone for administrative area of the new building.
  - 2. One zone for outside speakers.
  - 3. One zone for the service bays of the new building.
- B. Power Amplifiers shall be UL listed, compatible with and equal to existing amplifiers on the site.
  - 1. Exterior building-mounted speakers shall be driven by amplifier separate from the interior speakers. Quantity and output rating of amplifiers driving exterior speakers shall be based on each speaker tapped at 3-watts. Provide spare amplifier capacity for the future addition of 25% additional exterior speakers.
  - 2. Quantity and output rating of amplifiers driving indoor speakers shall be based on each speaker tapped at ½-watt. Provide spare amplifier capacity for the future addition of 25% additional interior speakers.

### **2.03 CABLING**

- A. Cable Run in conduits below grade shall be approved by the Manufacturer for the purpose.
- B. Cable Serving Speakers and clocks shall be Category 6A copper computer grade cable with overall jacket.

### **2.04 SPEAKERS**

- A. Interior Speakers shall be 2-way and mounted in metal backbox with white baffle.
- B. Exterior Assembly shall be exterior type with backbox and cover. Housing shall include a baffle and shall be painted to match surrounding surface.

### **2.05 PARTIAL PART LIST**

- A. Talkback Intercom System: Valcom V-2924A
- B. Intercom Expansion Unit: Valcom V-2925A
- C. 45 OHM Talkback Ceiling Speaker: Valcom V-1060A
- D. Paging Horn 15 Watt: Valcom V-1036C2
- E. Backbox: Valcom V-9915M
- F. Bridge: Valcom V-9914M

- G. Three-Watt One-Way Paging Horn: Valcom V-1080 Flexhorn-W
- H. Vandal Resistant Enclosure: Valcom V-9805
- I. 8-inch One-Way Ceiling Speaker: V-1020C
- J. Talkback Wall Speaker (White): V-1061W
- K. Power Supply: 24 VDC 6-amp VP-6124

## **PART 3 - EXECUTION**

### **3.01 MATERIALS**

Comply with Pertinent Provisions of Section 26 05 01.

### **3.02 WIRING DESIGNATION AND TERMINAL CABINET MAKE UP**

- A. All #22AWG and #24AWG connections throughout the system shall be made by spring tension clip "punch block" Siemen type 66-terminal or equal. Wires of #16 gauge and larger shall be terminated on barrier screw terminals. All conductors in terminal cabinets shall be carefully formed and harnessed in a workmanlike manner.
- B. All Wiring for complete communications system shall be new wire. Multi-pair cables may be used between buildings. Any wires pulled through in ground junction boxes shall be continuous with no splices. The wiring shall be intact with no cuts in the protective outer jacket. All splices shall be made in above ground junction boxes, using terminal strips in all cases.
- C. Provide all cabling from building terminal cabinets to each outlet shown on the Plans. Provide underground cabling between central equipment and each terminal cabinet as required to observe all outlets shown plus 25% spare pairs.
- D. "Bridle Rings" shall not be used to support cables.
- E. Cables shall not lie directly on ceilings, ceiling hangers, lighting fixtures, air ducts, piping, or equipment.

### **3.03 CABLING INSTALLED WITHOUT RACEWAYS OR CABLE TRAY SUPPORTS**

- A. The portions of cabling installed without raceways or cable tray supports shall be installed with "j-hook" cable supports.
  - 1. The "j-hooks" shall provide multi-tiered "treed" "j" shaped hooks, with wide flat cable support base (0.5-inch wide minimum) and smooth rounded corners, specifically designed for Category-5 and fiber optic cable support. As manufactured by Erico Inc.
  - 2. The individual "j-hook" attachment to the building structure shall be "beam clamp", "hanger rod", clevis hanger styles.
  - 3. Install "j-hooks" not more than 35-inches on center along the entire cable length, at each cable change in direction, to ensure less than 6-inches of cable sag between adjacent hooks. Secure cables to "j-hooks" with cable tie wraps. "J-hook" supported cables, bundle cables together with tie wraps.

### **3.04 PROGRAMMING**

Contractor shall provide all programming including reprogramming of existing system as required to interface the new construction.

### **3.05 DRAWINGS AND MANUALS**

- A. The Contractor shall provide four copies of the complete As-Built Drawings and Service Manuals. The Drawings and Manuals shall include the following:
1. Identification of all components and cable runs in the system shall match District standards. The identification numbers must match those used in construction.
  2. Service Manuals and Schematic Dioramas of all active components used in the system.
  3. A Complete Manual must be assembled and organized to permit any reference to cross-checking and to facilitate future servicing.
  4. A Complete Block Diagram.
  5. All Information shall be printed or typewritten.

### **3.06 INSTRUCT DISTRICT**

Provide a minimum of 2-hour period to instruct District Personnel in proper operation of all systems.

### **3.07 DISTRICT MAINTENANCE PERSONNEL**

District Maintenance Personnel shall be provided with continuous technical support, manuals, software, and hardware packages for the paging system. The Manufacturer or Installing Contractor must provide complete software and technical manuals. All training or factory certification required of Maintenance Personnel to maintain system will be at the expense of the Installing Contractor. Certification and training shall be for two persons, including transportation and housing, at factory training facility, and shall provide Maintenance Personnel with capability to perform all future programming changes and additions or deletions to the system.

END OF SECTION 27 53 00  
041824/8741055



CHARACTER TYPE: CHARACTERS ON SIGNS SHALL BE RAISED 1/32" MINIMUM AND SHALL BE SANS SERIF UPPERCASE CHARACTERS ACCOMPANIED BY CONTRACTED GRADE 2 BRAILLE.

CHARACTER SIZE: RAISED CHARACTERS SHALL BE A MINIMUM OF 5/8" AND A MAXIMUM OF 2" HIGH.

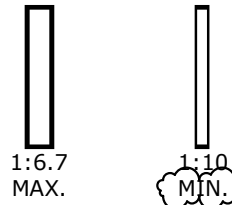
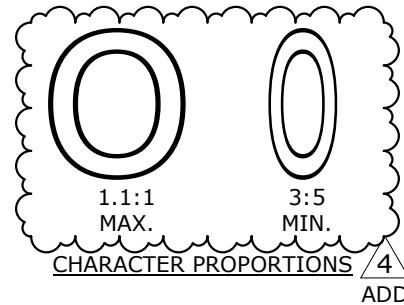
FINISH AND CONTRAST: CONTRAST BETWEEN CHARACTERS, SYMBOLS, AND THEIR BACKGROUNDS MUST BE 70% MINIMUM AND HAVE A NON-GLARE FINISH.

PROPORTIONS: VISUAL CHARACTERS ON SIGNS SHALL BE SELECTED FROM FONTS WHERE THE WIDTH OF THE UPPERCASE LETTER "O" IS 60 PERCENT MINIMUM AND 110 PERCENT MAXIMUM OF THE HEIGHT OF THE UPPERCASE LETTER "I". STROKE THICKNESS OF THE UPPERCASE LETTER "I" SHALL BE 10 PERCENT MINIMUM AND 15 PERCENT MAXIMUM OF THE HEIGHT OF THE CHARACTER. (CBC 11B-703.2.6)

BRAILLE: CONTRACTED CALIFORNIA GRADE 2 BRAILLE SHALL BE USED WHENEVER CONTRACTED BRAILLE IS REQUIRED. FOR MORE INFO SEE DET.



MOUNTING HEIGHT : SIGNS WITH RAISED CHARACTERS AND BRAILLE SHALL BE LOCATED 48" MINIMUM ABOVE THE FINISH FLOOR OR GROUND SURFACE MEASURED FROM THE BASELINE OF THE LOWEST LINE OF BRAILLE, AND 60" MAXIMUM ABOVE THE FINISH FLOOR OR GROUND SURFACE MEASURED FROM THE BASELINE OF THE HIGHEST LINE OF RAISED CHARACTERS.



STROKE PROPORTIONS

# SIGNAGE REQUIREMENTS

SCALE:  
1" = 1'-0"  
REF.: /

1

DELTA # 4 DATE 04/18/24  ADD  AFO  CCD  REV

## 1/AD-1.0 - SIGNAGE REQUIREMENTS

Scale: 1" = 1'-0"

### PHASE 1

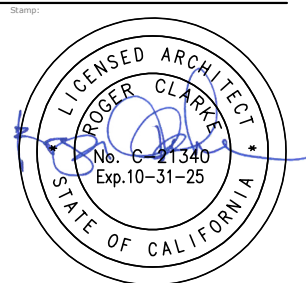
MOUNT TRANSIT MAINTENANCE FACILITY  
BIG BEAR LAKE

4/18/2024 10:57:13 AM

RUHNAUCLARKE.COM  
3775 TENTH STREET, RIVERSIDE CALIFORNIA 92501(951) 684 4664  
5751 PALMER WAY, SUITE C, CARLSBAD CALIFORNIA 92010(760) 438 5899

RUHNAU  
CLARKE  
ARCHITECTS

DSA APN #:  
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DSA File #:  
\_\_\_\_\_  
Date:  
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Project #:  
50801  
Sheet #:  
ASK-4.01





# MOUNTAIN TRANSIT MAINTENANCE FACILITY

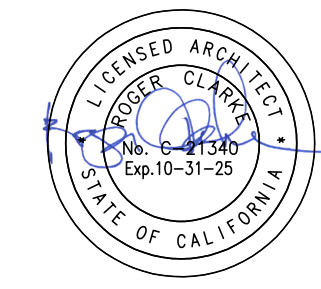
## PHASE 1

### 170 BUSINESS CENTER DR. BIG BEAR LAKE, CA

### BIG BEAR LAKE

## RUHNAU CLARKE ARCHITECTS

3775 TENTH STREET, RIVERSIDE CALIFORNIA 92501 (951) 684 4664 / 5751 PALMER WAY, SUITE C, CARLSBAD CALIFORNIA 92010 (760) 438 5899



**RUHNAU CLARKE ARCHITECTS**

### CONTACT LIST

**Owner:** Mountain Area Regional Transit Authority  
 41938 Fox Farm Road  
 Big Bear Lake, CA, 92315  
 Contact: Sandy Benson  
 sbenson@mountainttransit.org

**Architect:** Ruhnau Clarke Architects  
 3775 Tenth St., Riverside, CA 92501  
 Phone: 951-684-4664  
 Contact: Byron Duma  
 bduma@ruhnauclarke.com  
 Contact: Roger Clarke  
 rclarke@ruhnauclarke.com

**Specifications:** Spec Studio  
 9783 E. Maplewood Avenue  
 Englewood, CO, 80111  
 Phone: 969.374.2011  
 Contact: Richard L. Gosler Jr.  
 rlgosler@specstudio.com

**Structural:** TRM Engineering Consultants  
 1 Ada, Suite 100  
 Irvine, CA, 92618  
 Phone: 949.462.3000  
 Contact: Larry Kaprielian  
 lkaprielian@trmconsulting.com

**Landscapes:** Community Works Design Group  
 4649 Brockton Avenue  
 Riverside, CA, 92506  
 Phone: 951.369.0200  
 Contact: Scott (BOB) ADD  
 scott@cwdesign.com

**Electrical:** FBA Engineering  
 150 Palmarino Avenue Suite A120  
 Costa Mesa, CA, 92626  
 Phone: 949.852.9995  
 Contact: Alan Bravo  
 abravo@fbaengr.com

**Fire Sprinklers:** Design West Engineering  
 412 E. Vandenberg Way  
 San Bernardino, CA, 92408  
 Phone: 909.890.3700  
 Contact: Carol Devillier  
 cdevillier@designwesteng.com



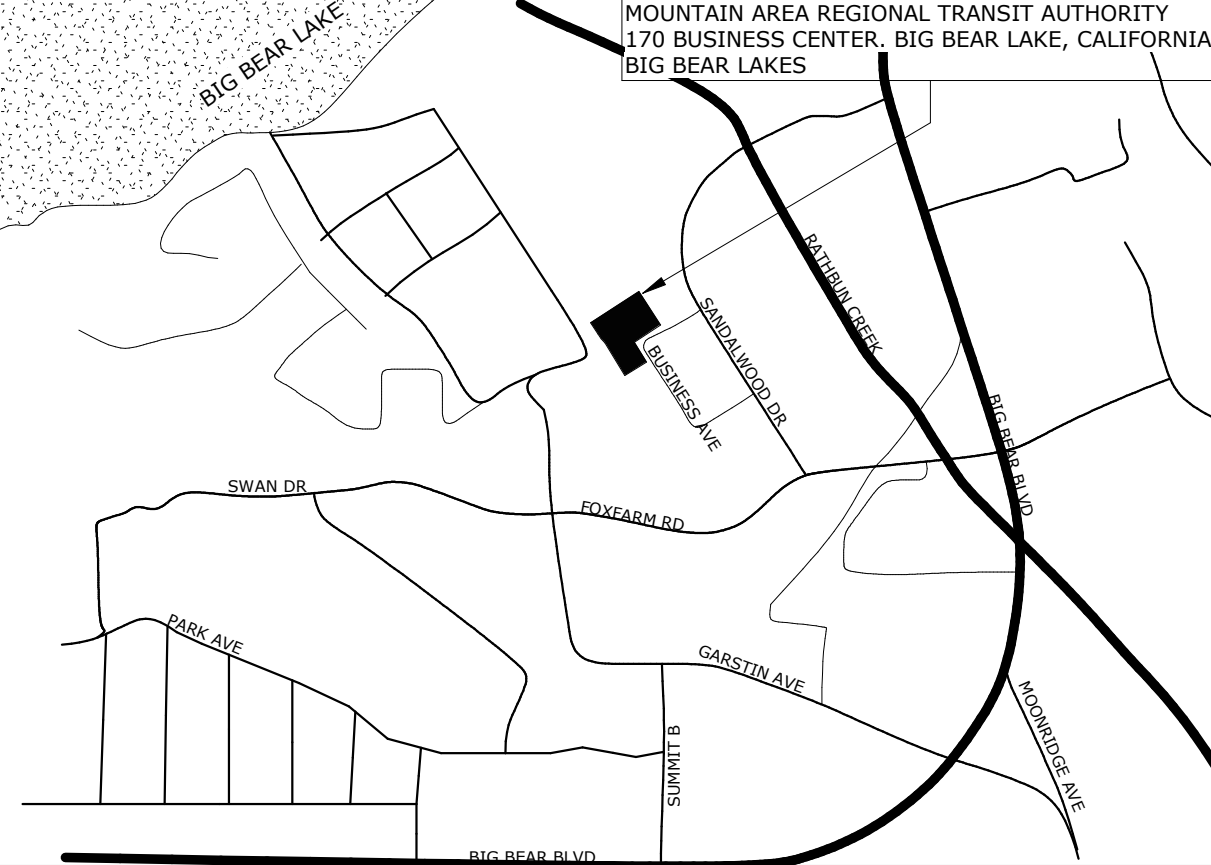
### TYPICAL ABBREVIATIONS

AT	ANGLE	GA	GAUGE	RSLB	RESILIENT BASE
ACPL	ACOUSTIC PLASTER	GL	GLASS	RT	RUBBER TREAD
ACT	ACOUSTIC TILE	GLU LAM	GLUE LAMINATED	RWL	RAIN WATER LEADER
AF	ABOVE FINISHED FLOOR	GB	GRAB BAR	O	ROUND
BLKG	BLOCKING	GPL	GYPSPUM PLASTER	SRF	SEAMLESS RESILIENT FLOORING
BD	BOARD	GWB	GYPSPUM WALLBOARD	SS	SERVICE SINK/STAINLESS STEEL
BOS	BOTTOM OF STRUCTURE	QMW	WATER RESISTANT GWB	SHT	SHEET
BB	BULLETIN BOARD	H	HIGH	SHT	SHEET
CAB	CABINET	HDW	HARDWARE	SHTH	SHEATHING
CPT	CARPET	HORIZ	HORIZONTAL	SC	SOLID CORE
CSWK	CASEWORK	HR	HOUR	SB	SPLASH BLOCK
CLG	CEILING	HT	HEIGHT	STN	STAIN
CPN	CERAMIC TILE	ID	INSIDE DIAMETER	STD	STANDARD
CPL	CEMENT PLASTER	INSUL	INSULATION	STR	STEEL
CL	CERAMIC TILE	INT	INTERIOR	STR	STRUCTURAL/STRUCTUR
CLF	CHAIN LINK FENCE	JH	JOIST HANGER	SUSP	SUSPENDED
CLR	CLEAR	JT	JOINT	SM	SHEET METAL
COL	COLUMN	JST	JOIST	SIM	SIMILAR
CONC	CONCRETE	LAM	LAMINATE	TB	TACK BOARD
CONT	CONTINUOUS	LT	LIGHT	TC	TOP OF CONCRETE CURB
CF	CUBIC FEET	LVR	LOUVER	TS	TUBE STEEL
CMF	COLORS, MATERIALS, AND FINISHES	MACH	MACHINE	TYP	TYPICAL
DP	DECOLORS MASONRY UNIT	MDF	MEDIUM DENSITY FIBERBOARD	TEL	TELEPHONE
DET	DETAIL	MECH	MECHANICAL	TOC	TOP OF CANOPY
DIM	DIMENSION	MH	MINIMUM	TOR	TOP OF ROOF
DR	DOOR	MNL	MANHOLE	TOR	TOP OF STRUCTURE
DRF	DOOR FRAME	MFR	MANUFACTURER	TOP	TOP OF PARAPET
DN	DOWN	MO	MASONRY OPENING	TOW	TOP OF WALL
DSL	DOWN SPOUT	ML	METAL LATH	UNDER CUT/	UNDER CUT/
DS	DRINKING FOUNTAIN	MS	METAL STUD	UNDO	UNLESS NOTED
DSA	DIVISION OF STATE ARCHITECT DRAWINGS	MTD	MOUNTED	UNO	UNLESS NOTED
DWGS	DRAWINGS	NIC	NOT IN CONTRACT	VERT	VERTICAL
EA	EACH	NTC	NOT IN CONTRACT	VERT	VERTICAL
ELEC	ELECTRIC	NTS	NOT TO SCALE	VCT	VINYL COMPOSITION
EWC	ELECTRIC WATER COOLER	NO	NUMBER	VCT	VINYL COMPOSITION
ELEV	ELEVATION	OC	ON CENTER	VCT	VINYL COMPOSITION
ENCL	ENCLOSURE	OD	OUTSIDE DIAMETER	VCT	VINYL COMPOSITION
EQ	EQUAL	OFCI	OWNER FURNISHED/CONTRACTOR INSTALLED	VFC	VINYL SHEET FLOORING
EQUIP	EQUIPMENT	OFI	OWNER FURNISHED/CONTRACTOR INSTALLED	VFC	VINYL SHEET FLOORING
EXP	EXPANSION JOINT	OH	OPPOSITE HAND/OVERHEAD	VWF	WELD WIRE FABRIC
EXP	EXPANSION JOINT	OPP	OPPOSITE	WI	WOODWORKING
EXT	EXTERIOR	PA	PLANTING AREA	WIN	WINDOW
FS	FLOOR SINK	PFN	PRE-FINISHED	W/	WITH
FDF	FACE OF FINISH	PL	PLYWOOD	WD	WOOD
FOM	FACE OF MASONRY	PLAS	PLASTIC	W/O	WITHOUT
FS	FLOOR SINK	PLWD	PLYWOOD	W/O	WITHOUT
FC	FINISH CEILING	PTD	PAINTED	W/O	WITHOUT
FF	FINISH FLOOR GRADE	PTN	PAINTITION	W/O	WITHOUT
FFC	FIRE EXTINGUISHER CABINET	R	RADIUS/RISER	W/O	WITHOUT
FHC	FIRE HOSE CABINET	RD	ROOF DRAIN	W/O	WITHOUT
FRP	FIREPROOF/FIREPROOFING	REF	REFERENCE	W/O	WITHOUT
FD	FLOOR DRAIN	REIN	REINFORCED	W/O	WITHOUT
FLR	FLOOR	REQD	REQUIRED	W/O	WITHOUT
FURN	FURNISH/FURNITURE	RO	ROUGH OPENING	W/O	WITHOUT

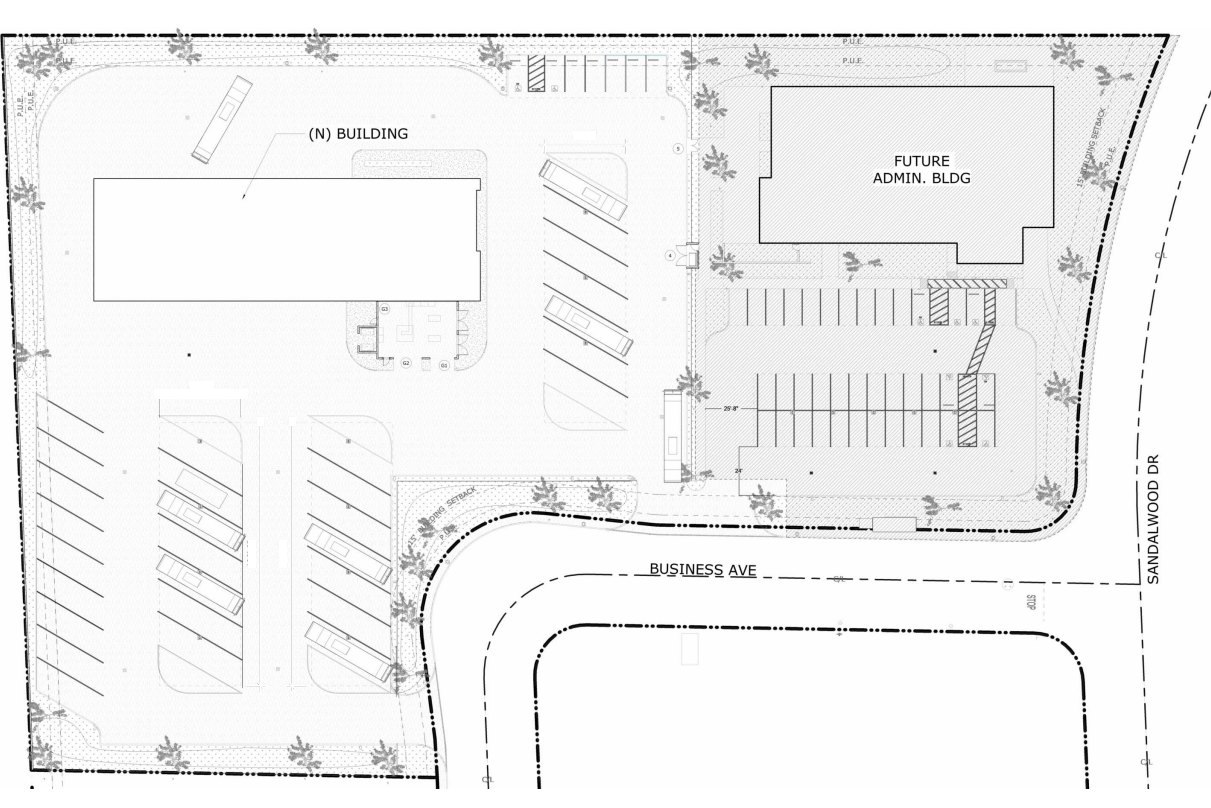
### GENERAL NOTES

- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR MEANS, METHODS, SEQUENCE, TECHNIQUES OR PROCEDURES NECESSARY FOR PERFORMING, SUPERINTENDING OR COORDINATING ALL PORTIONS OF THE WORK OF CONSTRUCTION IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND ANY HEALTH OR SAFETY PRECAUTIONS REQUIRED BY ANY REGULATORY AGENCIES.
- THE CONTRACTOR SHALL COMPLY WITH CALIFORNIA FIRE CODE, CHAPTER 33 FOR FIRE SAFETY DURING CONSTRUCTION.
- CONTRACTOR WILL BE REQUIRED TO PROVIDE AND INSTALL ALL EQUIPMENT AND RELATED ITEMS AS SHOWN IN THESE DOCUMENTS AND AS SPECIFIED. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL EXISTING CONDITIONS IN THE FIELD PRIOR TO BID AND TO DETERMINE THE WORK NECESSARY TO COMPLETE THE PROJECT.
- ALL WORK SHALL CONFORM TO TITLE 24, CALIFORNIA CODE OF REGULATIONS (C.C.R.) AND CALIFORNIA ADMINISTRATIVE CODE SECTION 4-333.
- STRUCTURAL MODIFICATIONS SHALL BE MADE BY ADDENDUM OR CONSTRUCTION CHANGE DOCUMENT (C.C.D.) APPROVED BY DSA PER SECTION 4-338, PART 1, TITLE 24.
- A PROJECT INSPECTOR, EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY THE DIVISION OF THE STATE ARCHITECT, SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR IS DEFINED IN SECTION 4-342, PART 1, TITLE 24, C.C.R. THE INSPECTOR SHALL BE ESPECIALLY QUALIFIED IN MECHANICAL AND ELECTRICAL WORK AND HAVE SUCCESSFULLY COMPLETED THE REQUIRED DSA CERTIFICATION PROCESS FOR CLASS 2 INSPECTOR OF RECORD AND A.R.B.I.P.
- THE ARCHITECT OF RECORD SHALL HAVE THE RIGHT TO MAKE FINAL JUDGMENTS RELATIVE TO SUBMITTAL DRAWING REVISIONS IN ORDER TO ENSURE COMPLIANCE WITH ENGINEERING STANDARDS, APPLICABLE CODES, AND ARCHITECTURAL INTENT.
- CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND LOCATIONS OF EXISTING CONDITIONS ON THE JOB SITE PRIOR TO THE START OF ANY WORK. NOTIFY THE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES BETWEEN ACTUAL FIELD CONDITIONS AND CONSTRUCTION DOCUMENTS. EXISTING CONDITIONS ARE INDICATED AS A RESULT OF INFORMATION SHOWN ON AVAILABLE DOCUMENTS. ANY DAMAGE TO EXISTING CONDITIONS IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- THE EXISTENCE OR LOCATION OF ANY UNDERGROUND UTILITIES, PIPES, OR STRUCTURE SHOWN ON THESE PLANS WERE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE, EXISTING UTILITIES ARE AS SHOWN ON THESE PLANS. THE CONTRACTOR SHALL ASCERTAIN THE TRUE VERTICAL AND HORIZONTAL LOCATION AND SIZE OF ALL UNDERGROUND UTILITIES AND SHALL BE RESPONSIBLE FOR DAMAGE TO ANY PUBLIC OR PRIVATE UTILITIES SHOWN OR NOT SHOWN HEREON.
- THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ADEQUACY AND SAFETY OF THE DESIGN/ERECTION OF BRACING, SHORING, TEMPORARY SUPPORTS AND SCAFFOLDING.
- UNDER NO CIRCUMSTANCE SHALL WORKING DIMENSIONS BE SCALED FROM PLANS, SECTIONS, OR DETAILS ON THE DRAWINGS.
- ALL STANDARDS, MATERIALS AND WORKMANSHIP SHALL COMPLY WITH THE STATE BUILDING CODES, ORDINANCES, REGULATIONS, AND LAWS.
- WHERE ANY CONFLICT OCCURS BETWEEN THE REQUIREMENTS OF FEDERAL, STATE AND LOCAL LAWS, CODES, ORDINANCES, RULES AND REGULATIONS, THE MOST STRINGENT SHALL GOVERN.
- ITEMS MARKED "TYP." OR "TYPICAL" SHALL APPLY IN ALL CASES UNLESS SPECIFICALLY INDICATED OTHERWISE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF REQUIREMENTS BETWEEN THE DISCIPLINES (ARCHITECTURAL, STRUCTURAL, PLUMBING, MECHANICAL, AND ELECTRICAL, ETC.) AND BETWEEN DRAWINGS AND SPECIFICATION IN ORDER TO ENSURE THAT ALL ITEMS SHOWN IN RELATIONSHIP TO ONE ANOTHER OR SHOWN IN MULTIPLE LOCATIONS ARE IN AGREEMENT. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT REGARDING ANY DISCREPANCIES, ERRORS, OMISSIONS OR INCONSISTENCIES AND SHALL NOT PROCEED WITH THE WORK UNTIL CLARIFICATION HAS BEEN ISSUED BY THE ARCHITECT.
- ALL WORK SHALL BE DONE IN ACCORDANCE WITH TITLE 24 CALIFORNIA CODE OF REGULATIONS (CCR)
- GRADING PLANS DRAINAGE IMPROVEMENTS, ROAD & ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH ALL LOCAL ORDINANCES, INSPECTOR OF RECORD (IOR CLASSIFICATION 1).

### REGIONAL MAP



### SITE MAP



### APPLICABLE CODES

**PARTIAL LIST OF APPLICABLE CODES AS OF JANUARY 1, 2023**

2022 CALIFORNIA ADMINSTRATIVE CODE (CAC), PART 1, TITLE 24 C.C.R.  
 2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 C.C.R.  
 2022 INTERNATIONAL BUILDING CODE (IBC) VOLUMES 1 & 2 WITH 2022 CALIFORNIA AMENDMENTS)  
 2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 C.C.R.  
 2023 IS THE CURRENT USE. USE THE CEC BASED ON THE NFPA 70-NEC 2020 EDITION AS MODIFIED)  
 2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 C.C.R.  
 2021 CALIFORNIA PLUMBING CODE WITH 2022 CALIFORNIA AMENDMENTS)  
 2022 CALIFORNIA ENERGY CODE (CEC), PART 5, TITLE 24 C.C.R.  
 2021 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 C.C.R.  
 2021 INTERNATIONAL FIRE CODE WITH 2022 CALIFORNIA AMENDMENTS)  
 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE, PART 11, TITLE 24 C.C.R.  
 2022 CALIFORNIA REFERENCED STANDARDS, PART 12, TITLE 24 C.C.R.  
 TITLE 19 C.C.R., PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS.

**PARTIAL LIST OF APPLICABLE STANDARDS**

NFPA 13	AUTOMATIC FIRE SPRINKLER SYSTEMS	2022 EDITION
NFPA 14	STANDPIPE AND HOSE SYSTEMS	2019 EDITION
NFPA 17	DRY CHEMICAL EXTINGUISHING SYSTEMS	2021 EDITION
NFPA 17A	WET CHEMICAL EXTINGUISHING SYSTEMS	2021 EDITION
NFPA 20	STATIONARY PUMPS FOR FIRE PROTECTION	2022 EDITION
NFPA 22	WATER TANKS FOR PRELATIVE FIRE PROTECTION	2023 EDITION
NFPA 24	PRIVATE FIRE MAINS & THEIR APPURTENANCES	2022 EDITION
NFPA 25	STANDARD FOR INSPECTION, TESTING AND MAINTENANCE OF WATER-BASED FIRE PROTECTION SYSTEMS	2023 EDITION
NFPA 72	NATIONAL FIRE ALARM CODE & SIGNALING CODE	2022 EDITION
NFPA 80	FIRE DOORS AND OTHER OPENING PROTECTIVES	2022 EDITION
NFPA 92	STANDARD FOR SMOKE CONTROL SYSTEMS	2021 EDITION
NFPA 241	STANDARD FOR SAFEGUARDING CONSTRUCTION, ALTERATION, AND DEMOLITION OPERATIONS	2022 EDITION
NFPA 253	CRITICAL RADIANT FLUX OF FLOOR COVERING SYSTEMS	2022 EDITION
NFPA 2001	CLEAN AGENT FIRE EXTINGUISHING SYSTEMS	2022 EDITION
ICC 300	INTERNATIONAL FIRE EXTINGUISHING SYSTEMS	2017 EDITION
UL 300	FIRE TESTING OF FIRE EXTINGUISHING SYSTEMS FOR PROTECTION OF RESTAURANT COOKING AREAS	2005 EDITION
UL 464	AUDIBLE SIGNAL APPLIANCES	2003 EDITION
UL 521	HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS	1999 EDITION

REFERENCE CODE SECTION FOR NFPA STANDARDS - 2022 CBC (SFM) CHAPTER 35. SEE CHAPTER 35 FOR STATE OF CALIFORNIA AMENDMENTS TO NFPA STANDARDS.

### SHEET INDEX

GENERAL	T-1	TITLE SHEET AND SHEET INDEX	PLUMBING	P0-0.1	PLUMBING LEGEND NOTES AND SCHEDULES
	T-2	CONDITIONS OF APPROVAL	P0-0.2	P0-0.2	PLB T24 COMPLIANCE FORMS
CIVIL	1	TITLE SHEET	P1-1.1	P1-1.1	PLUMBING FLOOR AND ROOF PLANS
	2	DEMOLITION - PHASE 1	P1-1.2	P1-1.2	PLUMBING FLOOR PLAN AND ENLARGED PLANS
	3	PRECISE GRADING - PHASE 1	P2-0.1	P2-0.1	PLUMBING DETAILS
	4	HORIZONTAL CONTROL - PHASE 1			
	5	UTILITIES - PHASE 1			
	6	STORM DRAIN - PHASE 1			
	7	EROSION CONTROL - PHASE 1			
	8	SECTIONS - PHASE 1			
	9	STORM DRAIN DETAILS			
	10	CONSTRUCTION DETAILS			
LANDSCAPE					
	LI-1.0	IRRIGATION DETAILS			
	LI-2.0	IRRIGATION DETAILS			
	LI-3.0	IRRIGATION DETAILS			
	LI-4.0	IRRIGATION DETAILS			
	LI-5.0	IRRIGATION DETAILS			
	LI-6.0	IRRIGATION DETAILS			
ARCHITECTURE - SITE					
	AS-1.0	DEMOLITION SITE PLAN			
	AS-1.1	ENLARGED SITE PLAN			
	AS-1.2	FIRE AUTHORITY PLAN			
	AS-2.0	ENLARGED SITE PLAN			
	AS-2.1	ENLARGED PLANS			
	ASD-1.1	DETAILS			
	ASD-1.2	DETAILS			
ARCHITECTURE					
	A1-1.1	EGRESS & SIGMAGE PLAN			
	A1-1.2	FLOOR PLAN			
	A1-1.3	EQUIPMENT PLAN			
	A1-2.1	REFLECTED CEILING PLAN			
	A1-3.1	FLOOR PLAN			
	A1-4.1	BUILDING ELEVATIONS			
	A1-5.1	BUILDING SECTIONS			
	A1-6.1	WALL SECTIONS			
	A1-6.2	WALL SECTIONS			
	A1-6.3	WALL SECTIONS			
	A1-6.4	WALL SECTIONS			
	A1-7.1	ENLARGED PLANS / INTERIOR ELEVATIONS			
	A1-7.2	INTERIOR ELEVATIONS			
	A1-7.3	INTERIOR ELEVATIONS			
	A1-8.1	DOOR & WINDOW SCHEDULE			
INTERIOR DESIGN					
	ID-1.0	FINISHES PLAN / SCHED & CMF			
ARCHITECTURE - DETAILS					
	AD-1.0	ACCESSIBILITY & SIGNAGE DETAILS			
	AD-1.1	ACCESSIBILITY, SIGNAGE, & MISC.			
	AD-2.0	WALL TYPES			
	AD-2.1	WALL DETAILS			
	AD-3.0	ROOF DETAILS			
	AD-4.0	CEILING DETAILS			
	AD-5.0	CASEWORK DETAILS			
	AD-6.0	DOOR & WINDOW DETAILS			
	AD-6.1	DOOR & WINDOW DETAILS			
	AD-6.2	DOOR & WINDOW DETAILS			
STRUCTURAL					
	SD-1.1	GENERAL NOTES			
	SD-1.2	EQUIPMENT ANCHORAGE DETAILS			
	SD-1.3	TYPICAL CONCRETE AND REINFORCING DETAILS			
	SD-1.4	TYPICAL METAL STUD DETAILS			
	SD-1.5	TYPICAL MASONRY AND STEEL DETAILS			
	S1-1.1	FOUNDATION PLAN			
	S2-1.1	TRASH & ELEC. YARD FOUNDATION AND ROOF FRAMING			
	S3-1.1	EQUIPMENT ANCHORAGE DETAILS			
	S3-1.2	EQUIPMENT ANCHORAGE DETAILS			
	S3-1.3	EQUIPMENT ANCHORAGE DETAILS			
	SD-1.6	WASH BAY LIFT ENLARGED PLAN			
	SD-1.7	FOUNDATION DETAILS			
	SD-1.8	FOUNDATION DETAILS			
	SD-1.9	FOUNDATION DETAILS			
	SD-1.2	FOUNDATION DETAILS			
MECHANICAL					
	M0-0.1	MECHANICAL LEGENDS NOTES AND SCHEDULES			
	M0-0.2	MECHANICAL SCHEDULES CONT.			
	M0-0.3	ENV T24 COMPLIANCE FORMS			
	M0-0.4	ENV T24 COMPLIANCE FORMS			
	M0-0.5	ENV T24 COMPLIANCE FORMS			
	M0-0.6	WATER SQUARE COMPLIANCE FORMS			
	M0-0.7	MCH T24 COMPLIANCE FORMS			
	M1-1.1	MECHANICAL FLOOR AND ROOF PLANS			
	M1-1.2	MECHANICAL ENLARGED PLAN			
	M2-0.1	MECHANICAL DETAILS			
	M2-0.2	MECHANICAL DETAILS CONT.			
	M2-0.3	MECHANICAL CONTROLS			
	M3-0.1	REHAU SNOW MELT SYSTEM			
	M3-0.2	REHAU SNOW MELT SYSTEM			
	M3-0.3	REHAU SNOW MELT SYSTEM			
	MS-1.0	MECHANICAL SITE PLAN			

### SCOPE OF WORK

**PHASE 1 - MAINTENANCE BUILDING**  
 SITE GRADING AND UTILITIES, LANDSCAPE, ELECTRICAL, STRUCTURAL FOOTINGS AND FOUNDATIONS, MECHANICAL, PLUMBING, ARCHITECTURE, FIRE SPRINKLER

**PHASE 2**  
 ADMINISTRATION BUILDING COMPLETE BUILDING AND SITE RELATED TO ADMIN. BUILDING

### DEFERRED APPROVALS

None listed.

### PROJECT DATA

Parcel: 2328-021-12 & 2328-021-13  
 Zoning: C-2  
 Land Type: 03 - COMMERCIAL  
 Access: 1 - Public Paved  
 RESPUNIT: COM = Commercial Zone or Use

**Project Set-Backs in Feet:**  
 Minimum Lot Area: 135 ft.  
 Front Side Yard: 30 ft.  
 Street Side Yard: 30 ft.  
 Side: 25 ft.  
 Rear: 25 ft.

### STATEMENT OF GENERAL CONFORMANCE

FOR ARCHITECT/ENGINEERS WHO UTILIZE PLANS, INCLUDING BUT NOT LIMITED TO SHOP DRAWINGS, PREPARED BY OTHER LICENSED DESIGN PROFESSIONALS AND/OR CONSULTANTS

THE DRAWINGS OR SHEETS LISTED ON THE INDEX SHEET

THIS DRAWING, PAGE OF SPECIFICATIONS/CALCULATIONS

HAVE BEEN PREPARED BY OTHER DESIGN PROFESSIONALS OR CONSULTANTS WHO ARE LICENSED AND/OR AUTHORIZED TO PREPARE SUCH DRAWINGS IN THIS STATE. IT HAS BEEN EXAMINED BY ME FOR:

1) DESIGN INTENT AND APPEARS TO MEET THE APPROPRIATE REQUIREMENT OF TITLE 24, CALIFORNIA CODE

2) OF REGULATIONS AND THE PROJECT SPECIFICATIONS PREPARED BY ME, AND

3) COORDINATION WITH THE PLANS AND SPECIFICATIONS AND IS ACCEPTABLE FOR INCORPORATION INTO THE

CONSTRUCTION OF THIS PROJECT

THE STATEMENT OF GENERAL CONFORMANCE "SHALL NOT BE CONSTRUED AS RELIEVING ME OF MY RIGHTS, DUTIES, AND RESPONSIBILITIES UNDER SECTIONS 17802 AND 81138 OF THE EDUCATION CODE AND SECTIONS 4-336, 4-341, AND 4-344" OF TITLE 24, PART 1, TITLE 24, PART 1, SECTION 4-317(b)(1)

I FIND THAT:



# PRECISE GRADING PLAN – PHASE 1

## MOUNTAIN REGIONAL TRANSIT AUTHORITY

### NEW ADMINISTRATION BUILDING AND MAINTENANCE FACILITY

#### 160-170 BUSINESS CENTER DRIVE

#### GRADING NOTES

1. ANY MODIFICATIONS OR CHANGES IN APPROVED GRADING PLANS MUST BE APPROVED BY THE CITY BUILDING OFFICIAL.
2. A COPY OF THE GRADING PERMIT AND APPROVED GRADING PLAN MUST BE IN THE POSSESSION OF A RESPONSIBLE PERSON AND AVAILABLE AT THE SITE WHILE WORK IS IN PROGRESS.
3. ENGINEER MUST SET GRADE STAKES FOR ALL DRAINAGE DEVICES AND OBTAIN INSPECTION APPROVAL BEFORE POURING.
4. PROVISIONS SHALL BE MADE FOR CONTRIBUTORY DRAINAGE AT ALL TIMES.
5. SECURE PERMISSION FROM CITY ENGINEER, EASEMENT GRANTEE, STATE HIGHWAY DEPARTMENT, AND/OR HOMEOWNERS ASSOCIATION FOR CONSTRUCTION, GRADING, AND/OR DISCHARGE OF DRAINAGE WITHIN STREET RIGHT-OF-WAY.
6. GRADING SHALL NOT BE STARTED WITHOUT FIRST NOTIFYING THE GRADING INSPECTOR.
7. CUT AND FILL SLOPES SHALL BE NO STEEPER THAN 2 UNITS HORIZONTAL TO 1 UNIT VERTICAL (2:1), EXCEPT WHERE SPECIFICALLY APPROVED OTHERWISE.
8. FILLS SHALL BE COMPACTED THROUGHOUT TO A MINIMUM OF 90% RELATIVE COMPACTION. AGGREGATE BASE FOR ASPHALTIC AREAS SHALL BE COMPACTED TO MINIMUM OF 95% RELATIVE COMPACTION. NO ROCKS GREATER THAN 6 INCHES IN DIAMETER MAY BE PLACED IN FILL.
9. AREAS TO RECEIVE FILL SHALL BE PROPERLY PREPARED AND APPROVED, IN WRITING, BY THE SOIL ENGINEER AND THE BUILDING OFFICIAL PRIOR TO PLACING FILL.
10. FILL SHALL BE BENCHED INTO COMPETENT MATERIAL.
11. ALL EXISTING FILLS SHALL BE APPROVED BY THE BUILDING OFFICIAL OR REMOVED PRIOR TO PLACING ADDITIONAL FILLS.
12. STOCK PILING OF EXCESS MATERIAL SHALL BE APPROVED BY THE BUILDING OFFICIAL PRIOR TO EXCAVATION.
13. CLEAR AND REMOVE FROM SITE ALL DEBRIS, EXCEPTING FOR EXISTING TREES IN DESIGNATED LANDSCAPE AREAS; STRIP SITE OF VEGETATION, LARGE ROOTS, SURFACE TRASH AND ROCKS. UNDER NO CIRCUMSTANCES SHALL THE CLEAN BEAR SITES BE USED FOR DISPOSAL. VIOLATORS ARE SUBJECT TO A \$500.00 FINE.
14. ALL TRENCH BACKFILLS SHALL BE TESTED AND APPROVED BY THE SOIL ENGINEER.
15. THE ENGINEERING GEOLOGIST AND SOIL ENGINEER SHALL, AFTER CLEARING AND PRIOR TO THE PLACEMENT OF FILL IN CANYONS, INSPECT EACH CANYON FOR AREAS OF ADVERSE STABILITY AND TO DETERMINE THE PRESENCE OR ABSENCE OF SUBSURFACE WATER OR SPRING FLOW. IF NEEDED, SUBDRAINS WILL BE DESIGNED AND CONSTRUCTED PRIOR TO THE PLACEMENT OF FILL IN EACH RESPECTIVE CANYON.
16. SUBDRAIN OUTLETS SHALL BE COMPLETED AT THE BEGINNING OF THE SUBDRAIN CONSTRUCTION.
17. THE EXACT LOCATION OF THE SUBDRAINS SHALL BE SURVEYED IN THE FIELD FOR LINE/GRADE AND REFLECTED ON AS-GRADED PLANS.
18. ALL CUT SLOPES SHALL BE INVESTIGATED BOTH DURING AND AFTER GRADING BY THE ENGINEERING GEOLOGIST TO DETERMINE IF ANY SLOPE STABILITY PROBLEM EXISTS. SHOULD EXCAVATION DISCLOSE ANY GEOLOGICAL HAZARDS OR POTENTIAL GEOLOGICAL HAZARDS, THE ENGINEERING GEOLOGIST SHALL SUBMIT RECOMMENDED REMEDIATION TO THE BUILDING OFFICIAL FOR APPROVAL.
19. WHERE SUPPORT OR BUTTRESSING OF CUT AND NATURAL SLOPES IS DETERMINED TO BE NECESSARY BY THE ENGINEERING GEOLOGIST AND SOIL ENGINEER, THE SOIL ENGINEER SHALL SUBMIT DESIGN, LOCATIONS, AND CALCULATIONS TO THE BUILDING OFFICIAL PRIOR TO CONSTRUCTION. THE ENGINEERING GEOLOGIST AND SOIL ENGINEER SHALL INSPECT AND CONTROL THE CONSTRUCTION OF THE BUTTRESSING AND CERTIFY TO THE STABILITY OF THE SLOPE AND ADJACENT STRUCTURES UPON COMPLETION.
20. WHEN CUT PADS ARE BROUGHT TO NEAR GRADE, THE ENGINEERING GEOLOGIST SHALL DETERMINE IF THE BEDROCK IS EXTENSIVELY FRACTURED OR FAULTED AND WILL READILY TRANSMIT WATER. IF CONSIDERED NECESSARY BY THE ENGINEERING GEOLOGIST AND SOIL ENGINEER, A COMPACTED FILL BLANKET WILL BE PLACED.
21. THE ENGINEERING GEOLOGIST SHALL PERFORM PERIODIC INSPECTIONS AND SUBMIT A COMPLETE REPORT AND MAP UPON COMPLETION OF THE ROUGH GRADING.
22. THE COMPACTION REPORT AND APPROVAL FROM THE SOIL ENGINEER SHALL INDICATE THE TYPE OF FIELD TESTING PERFORMED. EACH TEST SHALL BE IDENTIFIED WITH THE METHOD OF OBTAINING THE IN-PLACE DENSITY, WHETHER SAND CONE OR NUCLEAR GAUGE, AND SHALL BE SO NOTED FOR EACH TEST.
23. THE GRADING CONTRACTOR SHALL SUBMIT A WRITTEN STATEMENT VERIFYING THAT THE WORK DONE UNDER HIS DIRECTION WAS PERFORMED IN ACCORDANCE WITH THE APPROVED PLANS AND REQUIREMENTS OF APPENDIX 33 OF THE CITY OF BIG BEAR LAKE BUILDING CODE OR DESCRIBING ALL VARIANCES FROM THE APPROVED PLANS AND REQUIREMENTS OF THE CODE.
24. THE UNDERSIGNED DESIGN ENGINEER VERIFIES THAT THIS GRADING PLAN WAS PREPARED UNDER MY SUPERVISION IN ACCORDANCE WITH THE CITY OF BIG BEAR LAKE BUILDING CODE. ALL SOILS ENGINEER AND ENGINEERING GEOLOGY RECOMMENDATIONS WERE INCORPORATED IN THE PLAN. (MUST BE SIGNED AND DATED BY THE DESIGN ENGINEER.)
25. GRADING OPERATIONS MUST BE CONDUCTED UNDER PERIODIC GEOLOGIC INSPECTION WITH INSPECTION REPORTS TO BE SUBMITTED TO THE BUILDING DEPARTMENT.
26. EXPORT SOIL MUST BE TRANSPORTED TO A LEGAL DUMP OR TO A PERMITTED SITE SHOWN CLEARLY ON APPROVED PLANS.
27. SLOPES SHALL BE PLANTED WITH AN APPROVED PLANT MATERIAL AND PROVIDED WITH AN APPROVED IRRIGATION SYSTEM, UNLESS AN ALTERNATIVE HAS BEEN APPROVED BY THE CITY.
28. THE ENGINEER SHALL SUBMIT A LETTER OF CERTIFICATION TO THE BUILDING OFFICIAL STATING THAT THE GRADING WAS DONE IN COMPLIANCE WITH THE APPROVED GRADING PLAN.
29. ANY CONTRACTOR PERFORMING WORK ON THIS PROJECT SHALL FAMILIARIZE HIMSELF WITH THE SITE AND SHALL BE SOLELY RESPONSIBLE FOR ANY DAMAGE TO EXISTING FACILITIES RESULTING DIRECTLY OR INDIRECTLY FROM HIS OPERATION, WHETHER OR NOT SUCH FACILITIES ARE SHOWN ON THESE PLANS. PUBLIC STREETS SHALL BE KEPT CLEAR FROM DIRT AND/OR DEBRIS. THE GRADING CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS INCURRED IN STREET CLEANING NECESSITATED BY HIS OPERATION.
30. ALL ROADS USED BY CONSTRUCTION TRAFFIC SHALL BE KEPT CLEAR OF CONSTRUCTION DEBRIS RELATED TO THE SITE CONSTRUCTION. IF DEBRIS FROM THE PROJECT IS LEFT ON THE ROAD OVERNIGHT, THE CITY MAY CLEAN THE ROAD AND CHARGE THE PERMIT HOLDER A MINIMUM FEE OF \$100.00 PLUS \$100 PER HOUR SPENT CLEANING THE ROAD.
31. PRELIMINARY SOIL AND GEOLOGY REPORTS AND ALL SUBSEQUENT REPORTS, AS APPROVED BY THE CITY OF BIG BEAR LAKE, ARE CONSIDERED A PART OF THE APPROVED GRADING PLAN. ALL RECOMMENDATIONS CONTAINED ARE TO BE COMPLIED WITH OR REVISIONS SUBMITTED FOR REVIEW.
32. ALL EXISTING DRAINAGE COURSES THROUGH THIS SITE SHALL REMAIN OPEN UNTIL FACILITIES TO HANDLE STORM WATER ARE APPROVED AND FUNCTIONAL; HOWEVER, IN ANY CASE, THE PERMITTEE SHALL BE HELD LIABLE FOR ANY DAMAGE DUE TO OBSTRUCTING NATURAL DRAINAGE PATTERNS.
33. ROOF GUTTERS SHALL BE INSTALLED TO PREVENT ROOF DRAINAGE FROM FALLING ON MANUFACTURED SURFACES. GUTTERS SHALL BE CONNECTED TO NON-EROSIVE PIPING OR OTHER METHOD ACCEPTABLE TO THE BUILDING OFFICIAL.
34. ANY EXCAVATIONS ADJACENT TO OTHER PROPERTY OR STRUCTURES ARE SUBJECT TO THE PROVISIONS OF CALIFORNIA CIVIL CODE, SECTION 832, AND IS THE RESPONSIBILITY OF THE PERMITTEE AND/OR OWNER.

#### PLANTING AND IRRIGATION NOTES

35. ALL CUT AND FILL SLOPES WILL BE PLANTED WITH AN APPROVED GROUND COVER AND PROVIDED WITH AN IRRIGATION SYSTEM AS SOON AS PRACTICAL DURING GRADING. IN ADDITION TO THE GROUND COVER PLANTS SHALL BE INSTALLED ON ALL SLOPES. ALL PLANTING SHALL BE OF A TYPE APPROVED BY THE CITY.
36. THE PLANS FOR A DESIGNED IRRIGATION SYSTEM FOR FULL COVERAGE OF ALL PORTION OF THE SLOPES SHALL BE SUBMITTED AND APPROVED PRIOR TO ROUGH GRADING APPROVAL BY THE CITY.
37. PLANTING AND IRRIGATION PLANS FOR SLOPES MUST BE PREPARED AND SIGNED BY A CIVIL ENGINEER OR LANDSCAPE ARCHITECT.
38. FINISH GRADING WILL BE COMPLETED AND SLOPE PLANTING AND IRRIGATION SYSTEMS INSTALLED BEFORE OCCUPANCY OF BUILDINGS.

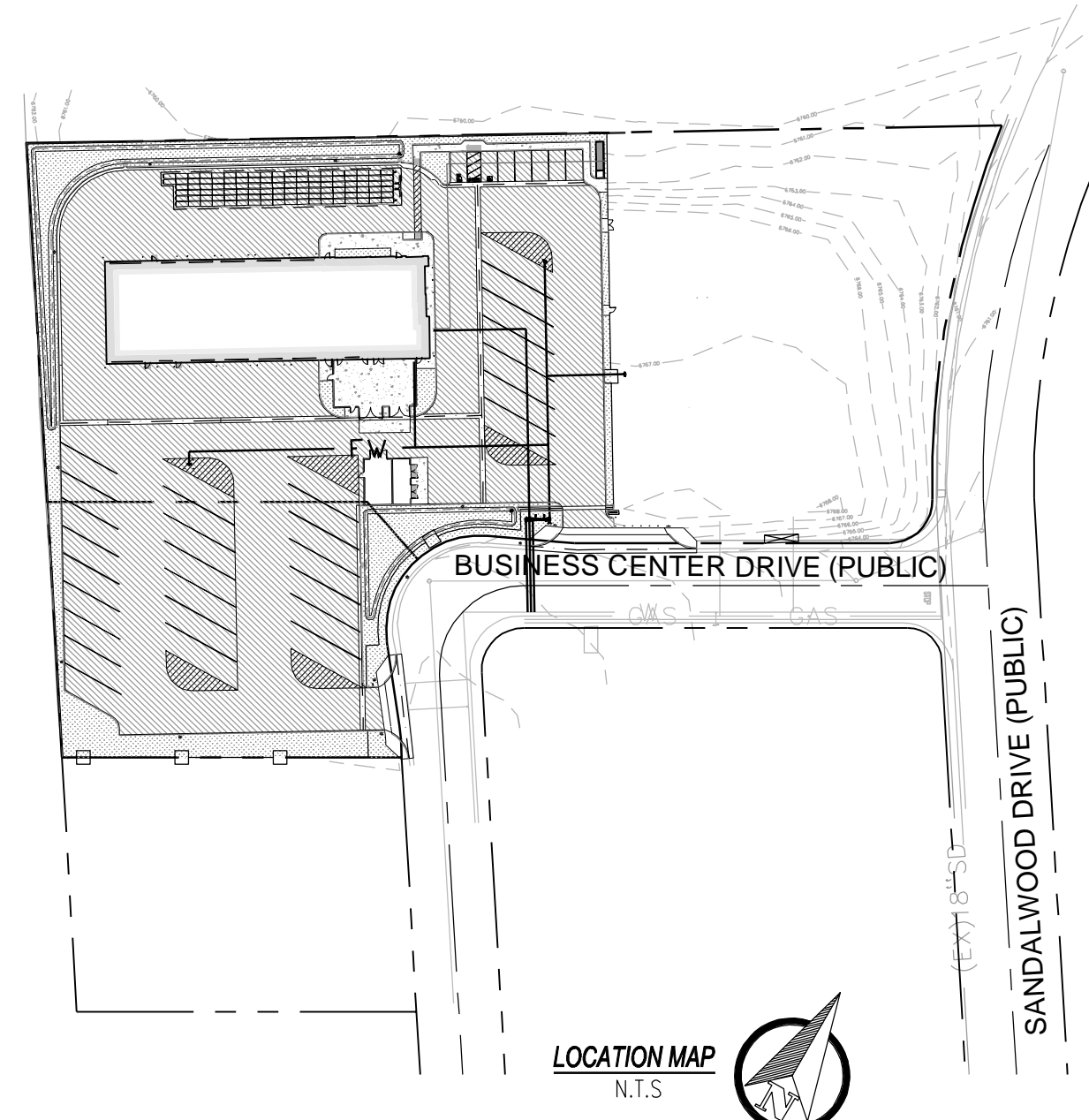
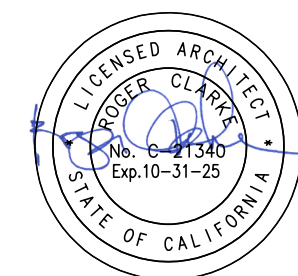
#### EROSION CONTROL PROVISIONS CERTIFICATE

39. STORM WATER MANAGEMENT PLANS INCORPORATING ALL THE PROVISIONS OF THE CITY OF BIG BEAR LAKE MUNICIPAL CODE SHALL BE SUBMITTED AND APPROVED PRIOR TO PERMIT ISSUANCE. SUCH PLANS ARE TO INCLUDE CONSTRUCTION AND POST CONSTRUCTION PHASE PROVISIONS REFLECTING "BEST MANAGEMENT PRACTICES".
40. SPECIFY ON PLANS:
 

IN CASE OF EMERGENCY CALL:	SANDY BENSON (GENERAL MANAGER)
WORK TELEPHONE NUMBER:	(909) 878-5200
HOME TELEPHONE NUMBER:	(909) 586-5073
41. EQUIPMENT AND WORKERS FOR EMERGENCY WORK SHALL BE MADE AVAILABLE AT ALL TIME DURING THE RAINY SEASON. NECESSARY MATERIALS SHALL BE AVAILABLE ON-SITE AND STOCKPILED AT CONVENIENT LOCATIONS TO FACILITATE RAPID CONSTRUCTION OF TEMPORARY DEVICES WHEN RAIN IS IMMINENT.
42. EROSION CONTROL DEVICES SHALL NOT BE MOVED OR MODIFIED WITHOUT THE APPROVAL OF THE CITY BUILDING OFFICIAL.
43. STOCKPILED MATERIALS SHALL BE PLACED TO BE ACCESSIBLE BY VEHICLE DURING PERIODS OF PRECIPITATION AND PROTECTED FROM PRECIPITATION AND RUNOFF AT THE END OF EACH WORKING DAY.
44. ALL REMOVABLE EROSION PROTECTIVE DEVICES SHALL BE IN PLACE AT THE END OF EACH WORKING DAY.
45. AFTER A RAINSTORM ALL SILT AND DEBRIS SHALL BE REMOVED FROM STREETS, CHECK BERMS, AND BASINS. NO STANDING WATER SHALL BE LEFT IN OPEN TRENCHES.
46. GRADED AREAS ON THE PERMITTED AREA PERIMETER MUST DRAIN AWAY FROM THE FACE OF SLOPES AT THE CONCLUSION OF EACH WORKING DAY. DRAINAGE TO BE DIRECTED TOWARD DESILTING FACILITIES.
47. ISSUANCE OF A GRADING PERMIT DOES NOT ELIMINATE THE NEED FOR PERMITS FROM OTHER AGENCIES WITH REGULATORY RESPONSIBILITIES FOR CONSTRUCTION ACTIVITIES ASSOCIATED WITH THE WORK AUTHORIZED ON THIS PLAN.
48. EROSION CONTROL MEASURES AND PLANTING SHALL BE INSTALLED AND MAINTAINED AS SOON AS PRACTICAL, IN AREAS NOT SUBJECT TO FREQUENT TRAFFIC.
49. ALL EROSION CONTROL, DESILTING BASINS, SILT FENCES, AND OTHER STORM WATER AND/OR EROSION CONTROL FEATURES SHALL BE INSPECTED BY THE RESPONSIBLE PARTY, ON A WEEKLY BASIS, CLEANED, AND MAINTAINED TO ENSURE THESE FEATURES FUNCTION AS DESIGNED.
50. THE UNDERSIGNED CIVIL ENGINEER AND CONTRACTOR SHALL INSPECT THE EROSION CONTROL WORK AND ENSURE THAT THE WORK IS IN ACCORDANCE WITH THE APPROVED PLANS.

SIGNATURE: \_\_\_\_\_ ENGINEER DATE: \_\_\_\_\_

SIGNATURE: \_\_\_\_\_ CONTRACTOR DATE: \_\_\_\_\_



#### SURVEY MONUMENT NOTE

SURVEY MONUMENTS THAT EXIST AS SHOWN ON RECORDED MAPS, HIGHWAY MAPS OR POINTS THAT PROVIDE SURVEY CONTROL WITHIN THE CONSTRUCTION AREA, SHALL BE LOCATED AND REFERENCED OUT BY A LICENSED LAND SURVEYOR OR REGISTERED CIVIL ENGINEER (AUTHORIZED TO PRACTICE LAND SURVEYING), AND CORNER RECORDS SHALL BE FILED WITH THE COUNTY SURVEYOR PRIOR TO THE START OF CONSTRUCTION. THESE CORNER RECORDS SHALL DESCRIBE THE MONUMENTS FOUND WITH THE DISTANCES TO REFERENCE POINTS FOR RESETTling OF THE SURVEY MONUMENT, WHEN CONSTRUCTION IS COMPLETED, MONUMENTS SHALL BE SET AND CORNER RECORDS SHALL BE FILED WITH THE COUNTY SURVEYOR SHOWING THE NEW MONUMENTS.

#### ENGINEER'S NOTE TO CONTRACTOR

THE EXISTENCE AND APPROXIMATE LOCATION OF ANY UNDERGROUND UTILITIES OR STRUCTURES SHOWN ON THESE PLANS WERE OBTAINED BY A SEARCH OF AVAILABLE RECORDS. TO THE BEST OF OUR KNOWLEDGE, THERE ARE NO EXISTING UTILITIES OR STRUCTURES EXCEPT AS SHOWN ON THESE PLANS. THE ENGINEER ASSUMES NO LIABILITY AS TO THE EXACT LOCATION OF SAID LINES NOR FOR UTILITIES OR IRRIGATION LINES WHOSE LOCATIONS ARE NOT SHOWN. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING ALL UTILITY AND IRRIGATION COMPANIES PRIOR TO WORK OR EXCAVATION TO DETERMINE EXACT LOCATION OF ALL LINES AFFECTING THIS WORK, WHETHER OR NOT SHOWN HEREON, AND FOR ANY DAMAGE OR PROTECTION OF THESE LINES.

#### CONTRACTOR'S RESPONSIBILITY FOR SAFETY

CONSTRUCTION CONTRACTOR AGREES THAT IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, CONSTRUCTION CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS, AND CONSTRUCTION CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD THE OWNER, ENGINEER, AND THE CITY OF BIG BEAR LAKE HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER, ENGINEER, OR THE CITY OF BIG BEAR LAKE.

ALL CONTRACTORS AND SUBCONTRACTORS PERFORMING WORK SHOWN ON OR RELATED TO THESE PLANS SHALL CONDUCT THEIR OPERATIONS SO THAT EMPLOYEES ARE PROVIDED A SAFE PLACE TO WORK AND THE PUBLIC IS PROTECTED. ALL CONTRACTORS AND SUBCONTRACTORS SHALL COMPLY WITH THE "OCCUPATIONAL SAFETY AND HEALTH REGULATIONS" OF THE U.S. DEPARTMENT OF LABOR AND WITH THE STATE OF CALIFORNIA DEPARTMENT OF INDUSTRIAL RELATIONS "CONSTRUCTION SAFETY ORDERS". THE CIVIL ENGINEER SHALL NOT BE RESPONSIBLE IN ANY WAY FOR THE CONTRACTOR OR SUBCONTRACTORS COMPLIANCE WITH SAID REGULATIONS AND ORDERS.

#### DESIGN PROFESSIONAL'S SPECIAL INSPECTIONS STATEMENT

THIS GRADING PLAN WAS PREPARED UNDER MY DIRECTION AND SPECIAL INSPECTIONS ARE IN ACCORDANCE WITH SECTION 1705.6 OF THE CALIFORNIA BUILDING CODE. THE SITE MATERIALS, SYSTEMS, COMPONENTS AND WORK REQUIRED TO HAVE SPECIAL INSPECTION OR TESTS BY BUILDING OFFICIAL OR REGISTERED GEO/SOIL AND CIVIL ENGINEER, WHERE APPLICABLE.

VALUED ENGINEERING, INC.  
 SIGNATURE: DATE: 04/15/2024 TITLE: CIVIL ENGINEER PCE # 64696

C.B.C. TABLE 1705.6  
REQUIRED SPECIAL INSPECTIONS AND TEST OF SOILS

TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION
1. VERIFY MATERIALS BELOW SHALLOW FOUNDATIONS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	---	X
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	---	X
3. PERFORM CLASSIFICATION AND TESTING OF COMPACTED FILL MATERIALS.	---	X
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESSES DURING PLACEMENT AND COMPACTION OF COMPACTED FILL.	X	---
5. PRIOR TO PLACEMENT OF COMPACTED FILL, INSPECT SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY.	---	X

#### LEGEND AND ABBREVIATIONS

	AC PAVEMENT	AC ASPHALTIC PAVEMENT
	PCC CONCRETE	FD FOUND FINISHED GRADE
	CLEAR AND GRUB	FL FLOW LINE
	GRASS/LANDSCAPING	FS FINISHED SURFACE
	PATH OF TRAVEL	GB GRADE BREAK
	DETAIL ID SHEET NUMBER	HC HANDICAP
	DIRECTION OF FLOW	HP HIGH POINT
	0.5% DIRECTION OF FLOW	HDPE HIGH-DENSITY POLYETHYLENE
	0.5% DIRECTION OF FLOW	HORIZ HORIZONTAL
	0.5% DIRECTION OF FLOW	ICV IRRIGATION CONTROL VALVE
	0.5% DIRECTION OF FLOW	INVERT
	0.5% DIRECTION OF FLOW	LENGTH
	0.5% DIRECTION OF FLOW	LANDSCAPE AREA
	0.5% DIRECTION OF FLOW	LINEAR FEET
	0.5% DIRECTION OF FLOW	LOW POINT
	0.5% DIRECTION OF FLOW	LIGHT
	0.5% DIRECTION OF FLOW	MAXIMUM
	0.5% DIRECTION OF FLOW	MANHOLE
	0.5% DIRECTION OF FLOW	MINIMUM
	0.5% DIRECTION OF FLOW	MARKED
	0.5% DIRECTION OF FLOW	NORTHING
	0.5% DIRECTION OF FLOW	NATURAL GROUND
	0.5% DIRECTION OF FLOW	ON CENTER
	0.5% DIRECTION OF FLOW	PORTLAND CONCRETE CEMENT
	0.5% DIRECTION OF FLOW	PEDESTAL
	0.5% DIRECTION OF FLOW	PROPOSED
	0.5% DIRECTION OF FLOW	PROPERTY LINE
	0.5% DIRECTION OF FLOW	RIGHT OF WAY
	0.5% DIRECTION OF FLOW	SEWER CLEAN OUT
	0.5% DIRECTION OF FLOW	SQUARE FEET
	0.5% DIRECTION OF FLOW	SEWER MANHOLE
	0.5% DIRECTION OF FLOW	TOP OF CURB
	0.5% DIRECTION OF FLOW	TOP OF FOOTING
	0.5% DIRECTION OF FLOW	TOP OF GRATE
	0.5% DIRECTION OF FLOW	TOP OF PIPE
	0.5% DIRECTION OF FLOW	TOP OF RETAINING WALL
	0.5% DIRECTION OF FLOW	TO OF WALL
	0.5% DIRECTION OF FLOW	TYPICAL
	0.5% DIRECTION OF FLOW	STANDARD PLANS FOR PUBLIC WORKS CONSTRUCTION

#### SHEET INDEX

1. TITLE SHEET
2. DEMOLITION
3. GRADING
4. HORIZONTAL CONTROL
5. UTILITY
6. STORM DRAIN
7. EROSION
8. SECTIONS
9. STORM DRAIN DETAILS
10. CONSTRUCTION DETAILS
11. CONDITIONS OF APPROVAL
12. CONDITIONS OF APPROVAL

#### CONTACT INFORMATION

**OWNER:** MOUNTAIN AREA REGIONAL TRANSIT AUTHORITY  
 41939 FOX FARM ROAD  
 BIG BEAR LAKE, CA 92315  
 PHONE: 909-878-5200

**CIVIL ENGINEER:** VALUED ENGINEERING, INC.  
 1529 W. 13TH STREET, UNIT G  
 UPLAND, CA 91762  
 PHONE: 909-982-4601  
 MR. JEFFREY D. MEITER

**ARCHITECT:** RHUNAU CLARKE ARCHITECTS  
 3775 TENTH STREET  
 RIVERSIDE, CA 92501  
 PHONE: 951-684-4664

**SOILS ENGINEER:** JOHN R. BYERLY, INC.  
 2257 SOUTH LILAC AVE  
 BLOOMINGTON, CA 2316  
 PHONE: 909-877-1324  
 MR. JOHN R. BYERLY

#### SEWER IMPROVEMENT ITEMS QUANTITIES

- |    |   |        |
|----|---|--------|
| 30 | FURNISH AND INSTALL 6" PVC SDR 35 SEWER LINE PER MANUFACTURERS SPECIFICATIONS   | 315 LF |
| 31 | FURNISH AND INSTALL 6" PVC SRD 35 SEWER LATERAL CONNECTION PER BIG BEAR CITY COMMUNITY SERVICES DISTRICT STD. DWG. NO. S-11           | 45 LF  |
| 32 | FURNISH AND INSTALL SEWER CLEANOUT PER BIG BEAR CITY COMMUNITY SERVICES DISTRICT STD. DWG. NO. S-9                                    | 3 EA   |
| 33 | CONSTRUCT BEDDING AND TRENCHING PER BIG BEAR CITY COMMUNITY SERVICES DISTRICT STD. DWG. NO. S-10 AND W-2                              | 45 LF  |
| 34 | CONTRACTOR TO POTHOLE AND VERIFY EXISTING PIPE LOCATION, SIZE, CONDITION AND INVERT PRIOR TO CONSTRUCTION/INSTALLATION OF SEWER LINES | 1 EA   |

#### WATER IMPROVEMENT ITEMS QUANTITIES

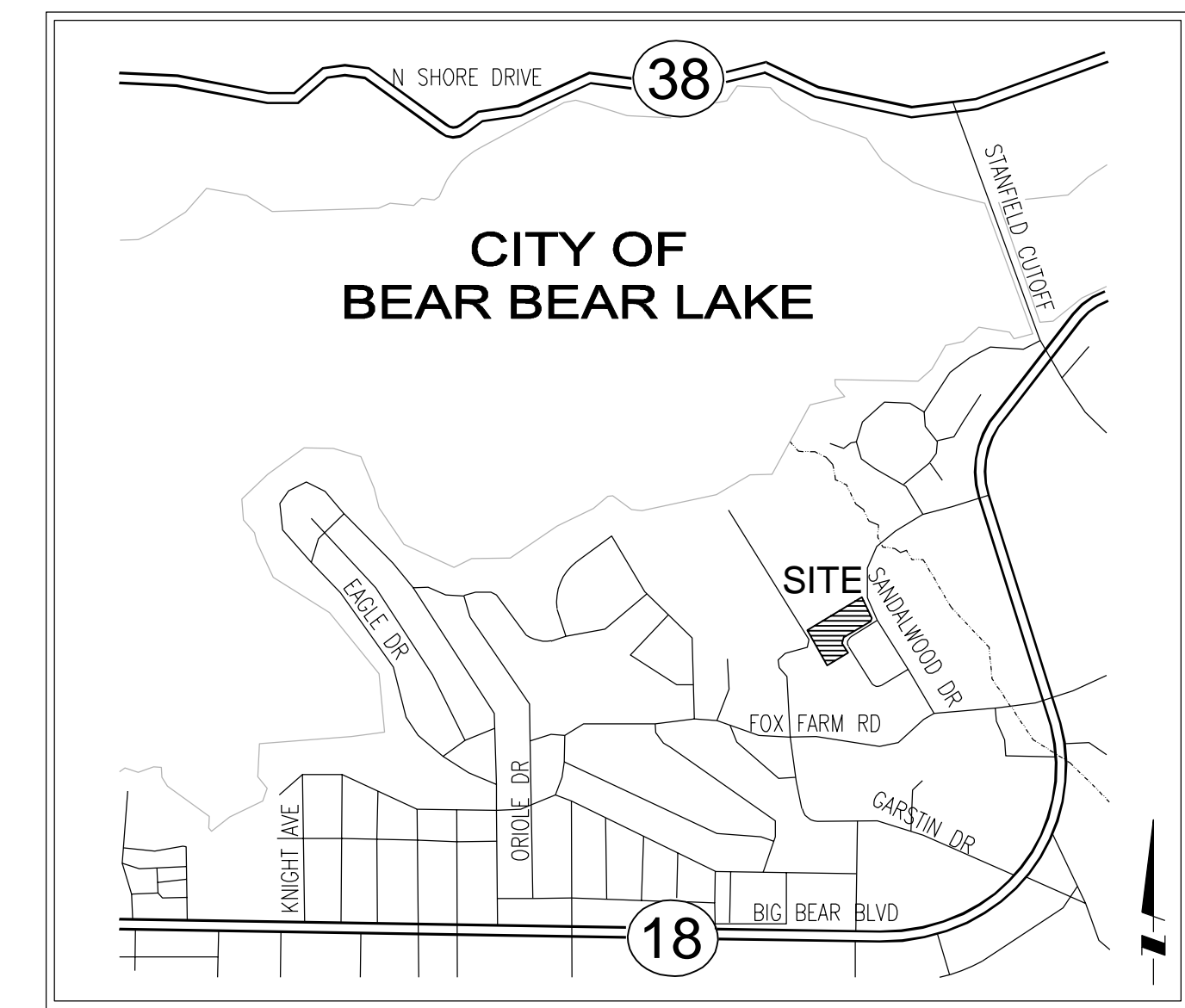
- |    |   |        |
|----|---|--------|
| 40 | INSTALL HOT TAP LATERAL CONNECTION PER DEPARTMENT OF WATER AND POWER CITY OF BIG BEAR LAKE STANDARD SPECIFICATIONS            | 3 EA   |
| 41 | FURNISH AND INSTALL 6" PVC CLASS C900 FIREWATER LINE PER MANUFACTURERS SPECIFICATIONS   | 486 LF |
| 42 | FURNISH AND INSTALL 6" TEE  | 2 EA   |
| 43 | FURNISH AND INSTALL 6" 90° BEND   | 1 EA   |
| 44 | CONSTRUCT THRUST BLOCK PER DEPARTMENT OF WATER AND POWER CITY OF BIG BEAR LAKE STD. PLAN NO. 3                                | 3 EA   |
| 45 | FURNISH AND INSTALL FIRE HYDRANT ASSEMBLY PER DEPARTMENT OF WATER AND POWER CITY OF BIG BEAR LAKE STD. PLAN NO. 6             | 2 EA   |
| 46 | CONSTRUCT BACKFILL AND TRENCHING PER DEPARTMENT OF WATER AND POWER CITY OF BIG BEAR LAKE STD. PLAN NO. 2                      | 40 LF  |
| 47 | FURNISH AND INSTALL 2" WATER METER/BACKFLOW AND LATERAL (DOMESTIC) PER DEPARTMENT OF WATER AND POWER CITY OF BIG BEAR LAKE    | 1 EA   |
| 48 | FURNISH AND INSTALL 2" DOMESTIC WATER LINE (DOMESTIC)   | 170 LF |
| 49 | FURNISH AND INSTALL 1" WATER METER/BACKFLOW AND LATERAL (LANDSCAPING) PER DEPARTMENT OF WATER AND POWER CITY OF BIG BEAR LAKE | 1 EA   |
| 50 | FURNISH AND INSTALL 6" DDCA PER DEPARTMENT OF WATER AND POWER CITY OF BIG BEAR LAKE   | 1 EA   |
| 51 | FURNISH AND INSTALL PIV PER SAN BERNARDINO COUNTY FIRE DEPARTMENT STANDARD  | 1 EA   |
| 52 | FURNISH AND INSTALL FDC PER SAN BERNARDINO COUNTY FIRE DEPARTMENT STANDARD  | 1 EA   |

#### BENCHMARK

NAVD 88  
 ELEVATION 6767.23'  
 CHISEL X AT BACK OF CONCRETE SIDEWALK.

#### BUILDING CODES

-2022 CBC/2021 IBC  
 -2022 CRC/2021 IRC  
 -2022 CPC/2021 UPC  
 -2022 CALGREEN



#### DEMOLITION ITEMS QUANTITIES

- |    |                                 |            |
|----|---------------------------------|------------|
| 11 | CLEAR, GRUB AND DISPOSE         | 107,189 SF |
| 99 | PROTECT IN PLACE, ITEM PER PLAN |            |

#### CONSTRUCTION ITEMS QUANTITIES

- |    |  |           |
|----|--|-----------|
| 1  | CONSTRUCT (DRIVE AISLE/BUS PARKING) 3" AC OVER 8" CAB SECTION COMPACTED TO 90% PER APPROVED SOILS REPORT | 67,853 SF |
| 2  | CONSTRUCT (PARKING STALL) 2.5" AC OVER 4" CAB SECTION OVER COMPACTED TO 90% PER APPROVED SOILS REPORT    | 1,405 SF  |
| 3  | CONSTRUCT 3.5" PCC OVER OVER 12" COMPACTED NATIVE 90% PER APPROVED SOILS REPORT                          | 2,120 SF  |
| 4  | CONSTRUCT 6" CURB ONLY PER SPPWC STANDARD PLAN 120-2, TYPE A1-6 AND DETAIL (A)10                         | 1,020 LF  |
| 5  | CONSTRUCT 6" CURB AND GUTTER (18" GUTTER) PER SPPWC STANDARD PLAN 120-2, TYPE A2-6 AND DETAIL (A)10      | 474 LF    |
| 6  | CONSTRUCT 4" PCC WALKWAY OVER COMPACTED NATIVE   | 1,825 SF  |
| 7  | CONSTRUCT (MODIFIED) CURB RAMP PER SPPWC STANDARD PLAN 111-4, CASE E, TYPE 2 AND DETAIL (B)10            | 1 EA      |
| 8  | CONSTRUCT TRUNCATED DOMES PER DETAIL (C)10   | 27 SF     |
| 9  | CONSTRUCT 3" WIDE CONCRETE RIBBON GUTTER PER DETAIL (D)10  | 908 LF    |
| 10 | PAINT ACCESSIBLE PARKING STRIPING  | LUMP SUM  |
| 11 | PAINT 4" SOLID WHITE STRIPING FOR PARKING STALL  | LUMP SUM  |
| 12 | CONSTRUCT TRASH ENCLOSURE PER ARCHITECTURAL PLANS  | ---       |
| 13 | CONSTRUCT METAL FENCE PER ARCHITECTURAL PLANS  | ---       |
| 14 | CONSTRUCT CMU WALL PER ARCHITECTURAL PLANS   | ---       |
| 15 | FURNISH AND INSTALL LIGHT STANDARD PER ARCHITECTURAL PLANS   | ---       |
| 16 | FURNISH AND INSTALL SIGN PER ARCHITECTURAL PLANS   | ---       |
| 17 | CONSTRUCT BOLLARD PER ARCHITECTURAL PLANS  | ---       |
| 18 | CONSTRUCT SCREEN BLOCK WALL PER ARCHITECTURAL PLANS  | ---       |
| 19 | CONSTRUCT CURB OPENING PER DETAIL (E)10  | 5 EA      |
| 20 | CONSTRUCT COMBINATION RETAINING WALL W/ METAL FENCE PER ARCHITECTURAL PLANS                              | ---       |
| 21 | CONSTRUCT COMMERCIAL DRIVE APPROACH PER COUNTY OF SAN BERNARDINO STD. PLAN NO. 129B PER DETAIL (F)10     | ---       |
| 97 | SEE SHEET 5 FOR UTILITIES  |           |
| 98 | SEE SHEET 6 FOR STORM DRAIN  |           |
| 99 | PROTECT IN PLACE, ITEM PER PLAN  |           |

#### GEOTECHNICAL SIGNATURE

THIS PLAN HAS BEEN REVIEWED AND CONFORMS TO THE TO THE RECOMMENDATIONS PROVIDED IN THE SOIL REPORT DATED APRIL 11, 2022

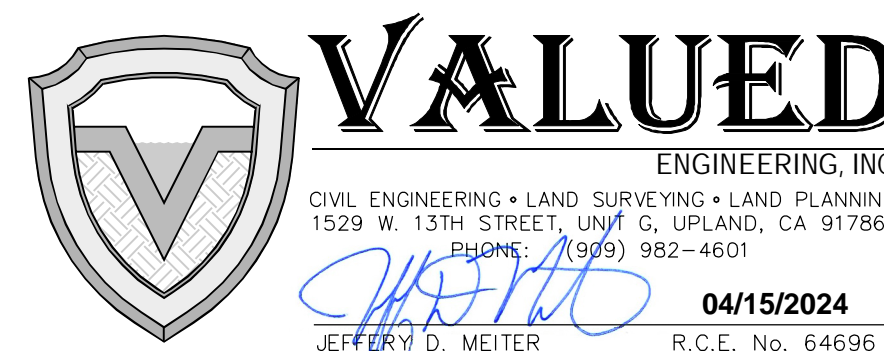
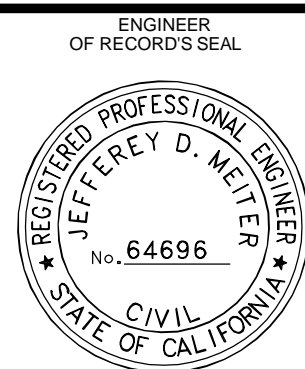
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#### GRADING NOTE

ALL OF THE GRADING PROCEDURES, RECOMMENDATIONS, AND SPECIFICATIONS THAT ARE INDICATED ON THE GEOTECHNICAL REPORT NO. 7341, DATED APRIL 11, 2022, PREPARED BY JOHN R. BYERLY INCORPORATED MUST BE ADHERED TO.

**PLAN CHECK NO: 22-00074**

**A** = ADDENDUM #4



**CITY OF BIG BEAR LAKE**  
ENGINEERING DIVISION

39707 BIG BEAR BLVD  
 BIG BEAR LAKE, CA 92315  
 PHONE (909) 866-5831  
 FAX (909) 866-7511

**CITY OF BIG BEAR LAKE**  
BIG BEAR LAKE, CALIFORNIA

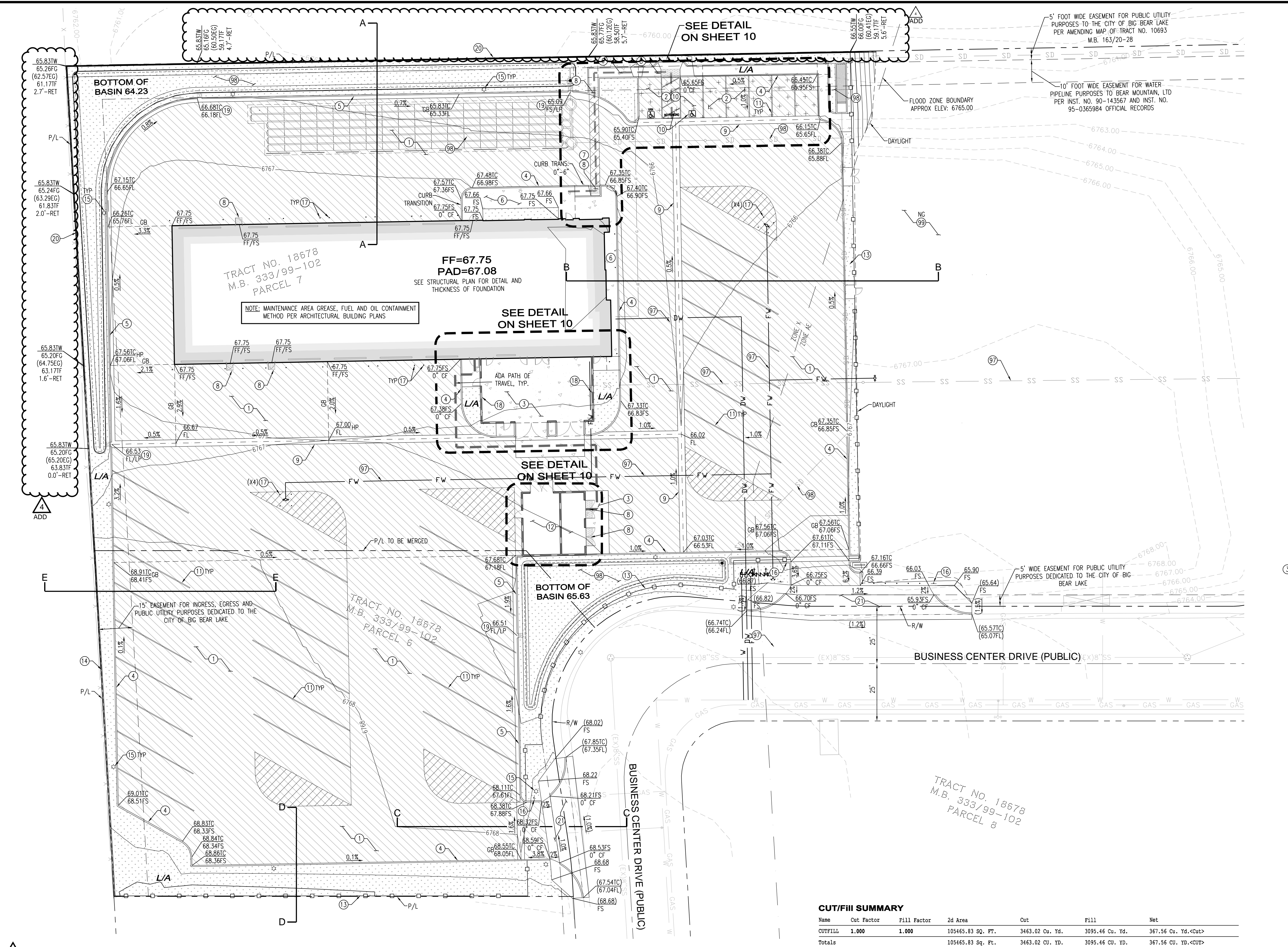
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R.C.E. \_\_\_\_\_ EXP. DATE \_\_\_\_\_

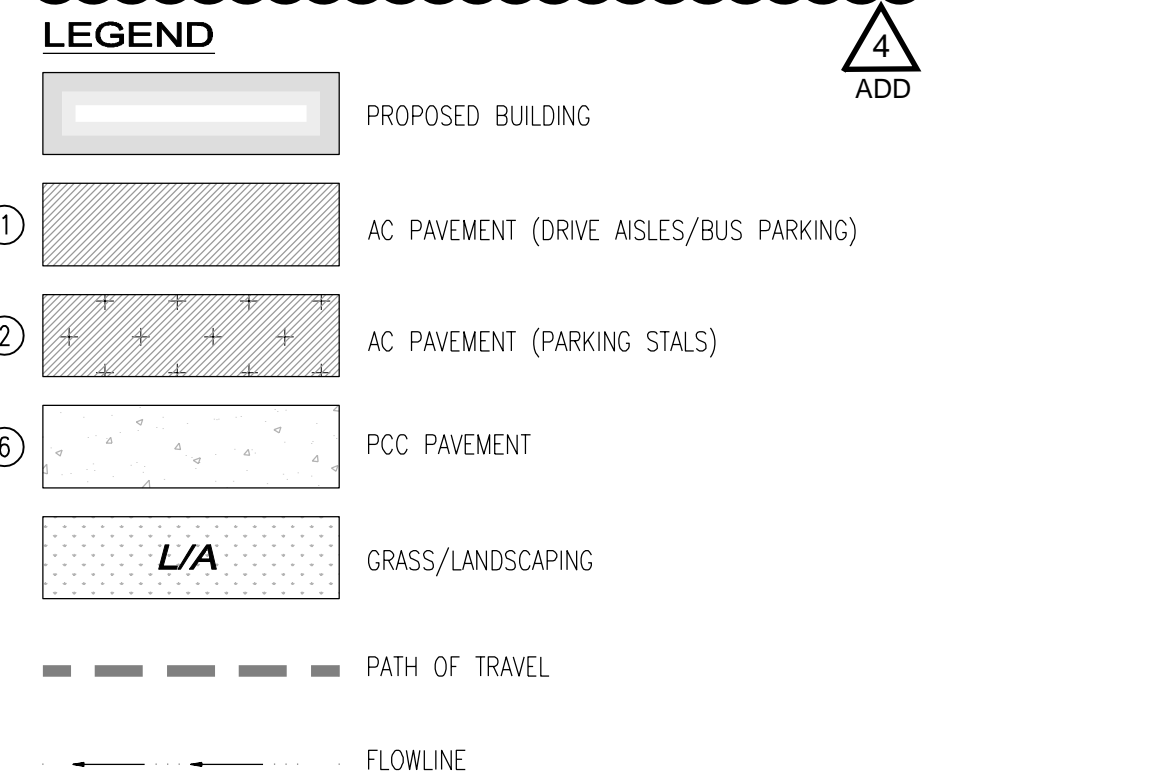
**CITY OF BIG BEAR LAKE**

**MOUNTAIN**





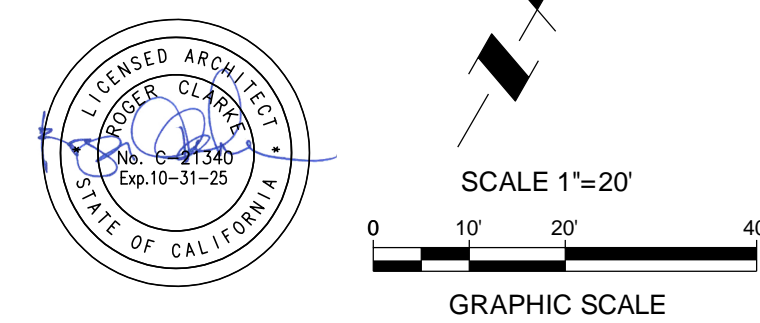
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  - 3 CONSTRUCT 3.5" PCC OVER OVER 12" COMPACTED NATIVE 90% PER APPROVED SOILS REPORT
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  - 97 SEE SHEET 5 FOR UTILITIES
  - 98 SEE SHEET 6 FOR STORM DRAIN
  - 99 PROTECT IN PLACE, ITEM PER PLAN



- ### NOTE
- SEE SHEET 8 FOR SECTIONS
- ADD 6700' TO ALL ELEVATIONS
- PROPOSED DETENTION BASINS USED AS SNOW STORAGE AREAS, 5,988 SQUARE-FEET
- SEE SHEET 4, HORIZONTAL CONTROL PLAN, FOR DETAIL OF MONUMENTS AND BEARING AND DISTANCE
- THE TOP OF ANY EXTERIOR FOUNDATION SHALL EXTEND ABOVE THE ELEVATION OF STREET GUTTER AT POINT OF DISCHARGE OR THE INLET OF AN APPROVED DRAINAGE DEVICE A MINIMUM OF 12" PLUS 2%
- PUBLIC SYSTEMS AND ANY PROPOSED WORK IN PUBLIC RIGHT OF WAYS ARE NOT PARTS OF THE CITY OF BIG BEAR, BUILDING DEPARTMENT REVIEW OR APPROVAL

### CUT/FILL SUMMARY

Name	Cut Factor	Fill Factor	2d Area	Cut	Fill	Net
CUT/FILL	1.000	1.000	105465.83 SQ. FT.	3463.02 Cu. Yd.	3095.46 Cu. Yd.	367.56 Cu. Yd. <Cut>
Totals			105465.83 Sq. Ft.	3463.02 CU. YD.	3095.46 CU. YD.	367.56 CU. YD. <CUT>



**811** Know what's below. Call 811 before you dig.

**VALUED** ENGINEERING, INC.  
 CIVIL ENGINEERING • LAND SURVEYING • LAND PLANNING  
 1529 W. 13TH STREET, UNIT G, UPLAND, CA 91786  
 PHONE (909) 866-5831 FAX (909) 866-4601  
 04/15/2024  
 JEFFREY D. MEITER R.C.E. No. 64696

**CITY OF BIG BEAR LAKE ENGINEERING DIVISION**  
 39707 BIG BEAR BLVD  
 BIG BEAR LAKE, CA 92315  
 PHONE (909) 866-5831  
 FAX (909) 866-7511

**CITY OF BIG BEAR LAKE**  
 BIG BEAR LAKE, CALIFORNIA

APPROVED BY: \_\_\_\_\_ DATE \_\_\_\_\_

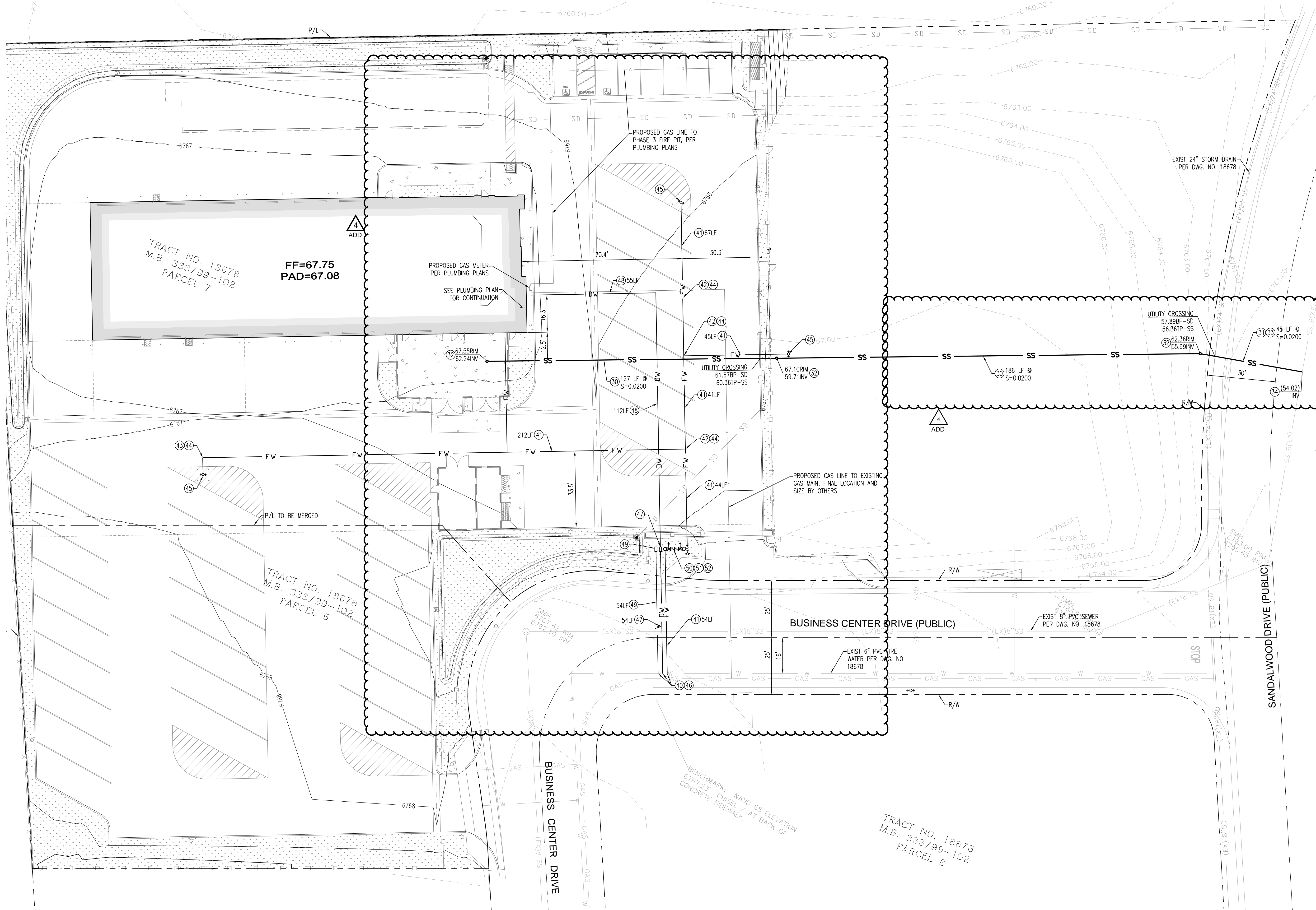
R.C.E. \_\_\_\_\_ EXP. DATE \_\_\_\_\_

**CITY OF BIG BEAR LAKE**  
 MOUNTAIN AREA REGIONAL TRANSIT AUTHORITY  
 160-170 BUSINESS CENTER DRIVE  
 PRECISE GRADING - PHASE 1

SEPTEMBER 2022  
 SHEET 3 OF 12  
 DRAWING NO. --

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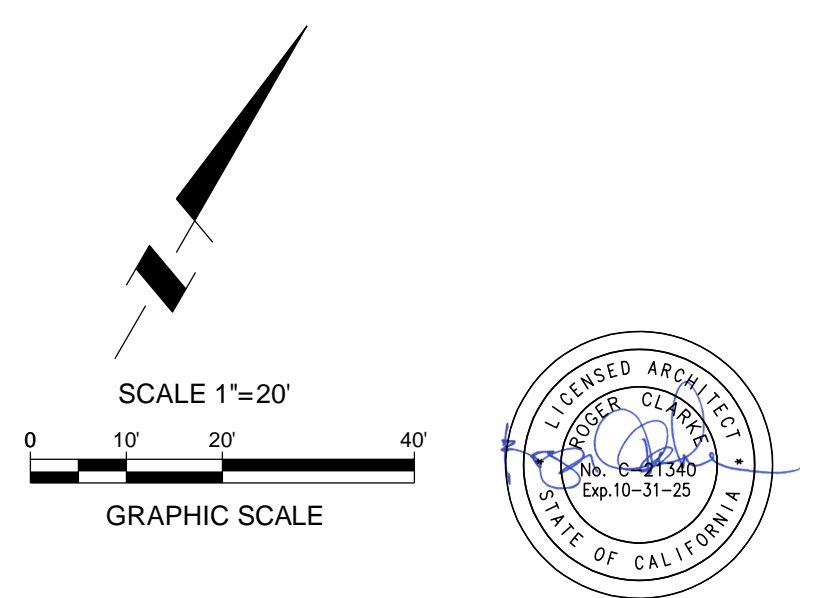
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  - (44) CONSTRUCT THRUST BLOCK PER DEPARTMENT OF WATER AND POWER CITY OF BIG BEAR LAKE STD. PLAN NO. 3
  - (45) FURNISH AND INSTALL FIRE HYDRANT ASSEMBLY PER DEPARTMENT OF WATER AND POWER CITY OF BIG BEAR LAKE STD. PLAN NO. 6
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  - (52) FURNISH AND INSTALL FDC PER SAN BERNARDINO COUNTY FIRE DEPARTMENT STANDARD

**NOTE** CONSTRUCTION WITHIN THE PUBLIC RIGHT-OF-WAY, INCLUDING DRIVE APPROACH AND UTILITIES REQUIRES A SEPARATE PERMIT AND APPROVAL

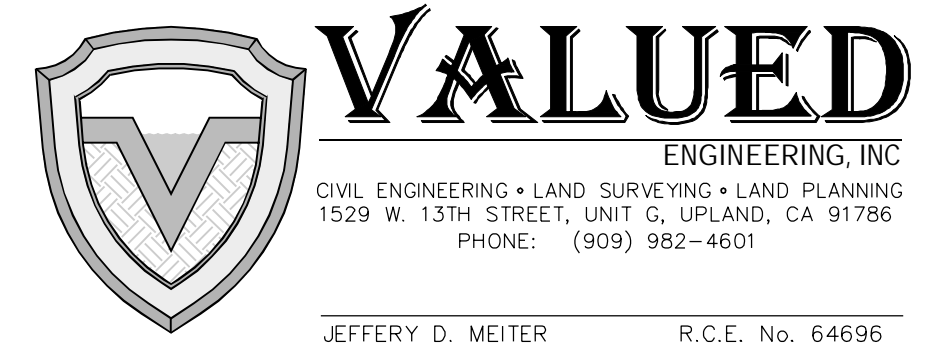
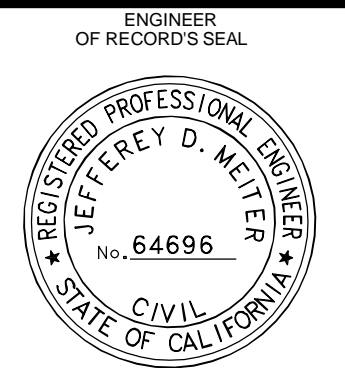
**NOTE** STORM WATER SHALL NOT BE DRAINED INTO SEWERS INTENDED FOR SANITARY DRAINAGE ONLY.

ALL INLETS AND OUTLETS INTO AND OUT OF THE MANHOLES SHALL INCORPORATE THE USE OF A FLEXIBLE COMPRESSION JOINTS LOCATED BETWEEN 12" AND 36" FROM THE MANHOLE. NO FLEXIBLE COMPRESSION JOINT SHALL BE EMBEDDED IN THE MANHOLE BASE.

THE TWO-WAY CLEANOUT MUST BE MUST BE AN APPROVED TYPE AS DEFINED IN THE CPC SECTION 203.0 AND PER SECTION 707.4 EXCEPTION (4).



4 = ADDENDUM #4



**CITY OF BIG BEAR LAKE ENGINEERING DIVISION**

39707 BIG BEAR BLVD  
BIG BEAR LAKE, CA 92315  
PHONE (909) 866-5831  
FAX (909) 866-7511

**CITY OF BIG BEAR LAKE**  
BIG BEAR LAKE, CALIFORNIA

APPROVED BY: \_\_\_\_\_ DATE \_\_\_\_\_

R.C.E. \_\_\_\_\_ EXP. DATE \_\_\_\_\_

**CITY OF BIG BEAR LAKE**

**MOUNTAIN AREA REGIONAL TRANSIT AUTHORITY**  
160-170 BUSINESS CENTER DRIVE  
UTILITIES - PHASE 1

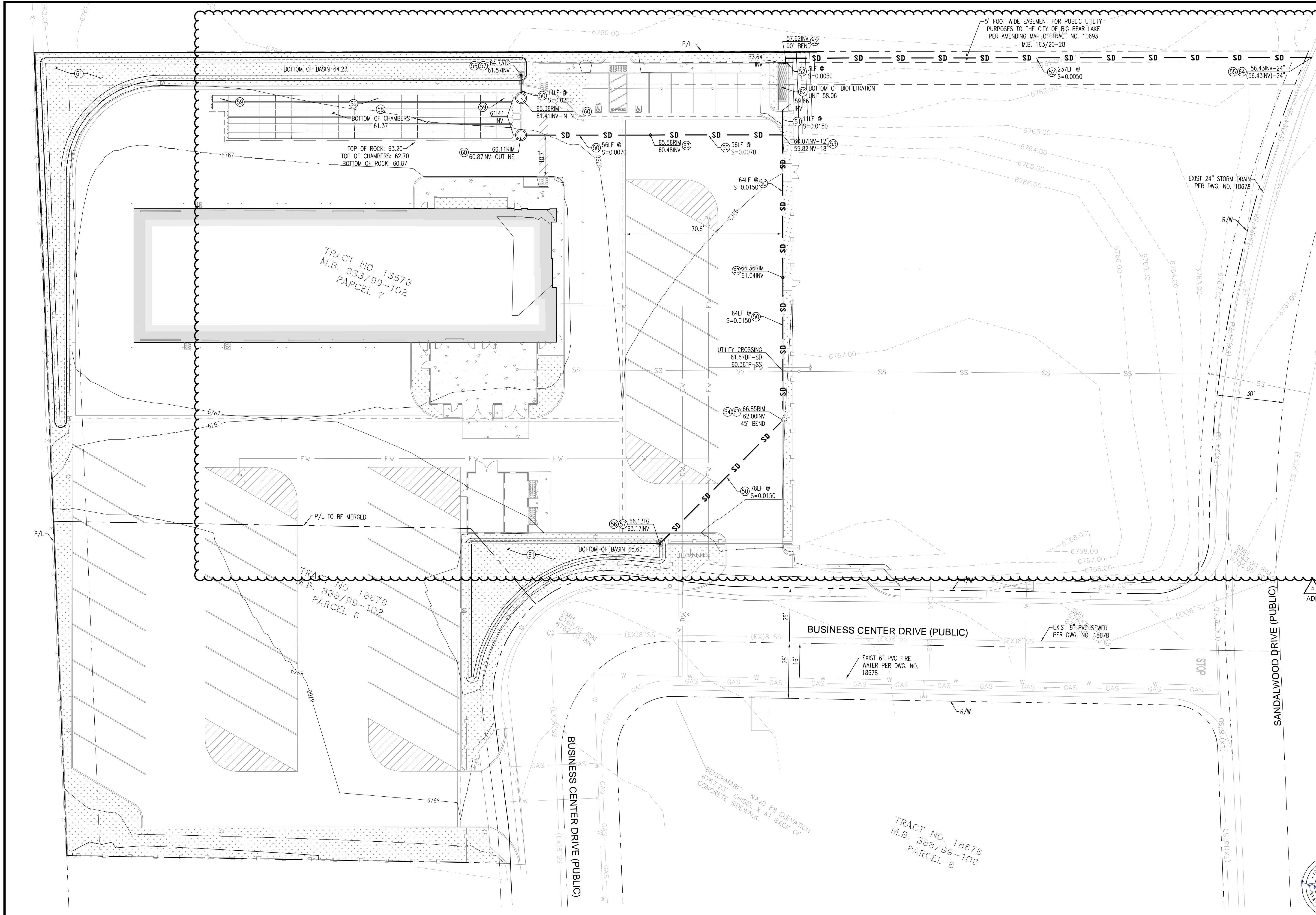
SEPTEMBER 2022

SHEET 5 OF 12

DRAWING NO. --

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**STORM DRAIN ITEMS**

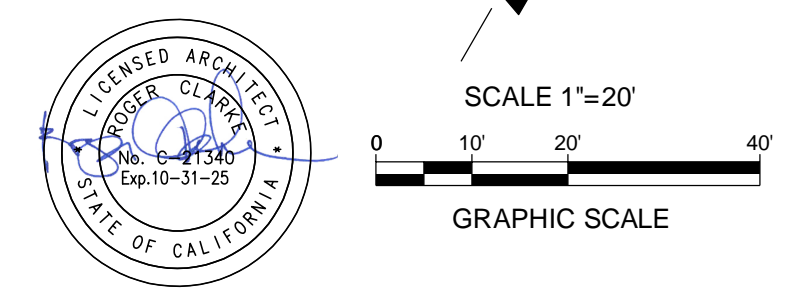
- 50 FURNISH AND INSTALL 12" HDPE STORM DRAIN PIPE BY ADVANCED DRAINAGE SYSTEMS
- 51 FURNISH AND INSTALL 18" HDPE STORM DRAIN PIPE BY ADVANCED DRAINAGE SYSTEMS
- 52 FURNISH AND INSTALL 24" HDPE STORM DRAIN BEND, ANGLE PER PLAN
- 53 FURNISH AND INSTALL 12"x12"x18" HDPE STORM DRAIN TEE
- 54 FURNISH AND INSTALL 12" HDPE STORM DRAIN BEND, ANGLE PER PLAN
- 55 FURNISH AND INSTALL 24"x24" CUT-IN WYE AND JOIN TO EXIST SD LINE
- 56 FURNISH AND INSTALL 12" (ROUND) FLEXSTORM INLET FILTER (OR APPROVED EQUAL) PER DETAIL (A)
- 57 FURNISH AND INSTALL 12" (ROUND) NYLOPLAST DRAIN BASIN, PERFORATED, WITH 12" DOMED GRATE (OR APPROVED EQUAL) PER DETAIL (B)
- 58 FURNISH AND INSTALL SC310 UNDERGROUND STORAGE CHAMBERS PER STORMTECH (OR APPROVED EQUAL) PER DETAIL (C)
- 59 INSTALL INSPECTION PORT PER DETAIL. CONTRACTOR MAY REVISE LOCATION IN COORDINATION WITH UNDERGROUND CHAMBER MANUFACTURER'S REPRESENTATIVE (D)
- 60 FURNISH AND INSTALL 48" MANHOLE PER ADVANCED DRAINAGE SYSTEMS PER DETAIL (E)
- 61 CONSTRUCT DETENTION BASIN PER DETAIL (F)
- 62 FURNISH AND INSTALL BIO CLEAN STORM WATER BIOFILTRATION SYSTEM UNIT, MODEL #MWS-L-4-21-V, PER MANUFACTURER'S SPECIFICATIONS
- 63 FURNISH AND INSTALL CLEANOUT PER BIG BEAR CITY COMMUNITY SERVICES DISTRICT STD. DWG. NO. S-9
- 64 CONTRACTOR TO POT HOLE AND VERIFY EXISTING PIPE LOCATION, SIZE, CONDITION AND INVERT PRIOR TO CONSTRUCTION/INSTALLATION OF STORM DRAIN LINES

**NOTE** CONSTRUCTION WITHIN THE PUBLIC RIGHT-OF-WAY, INCLUDING DRIVE APPROACH AND UTILITIES REQUIRES A SEPARATE PERMIT AND APPROVAL

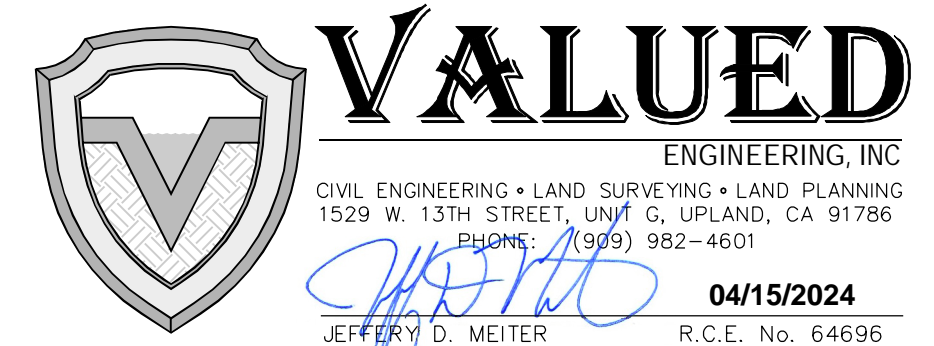
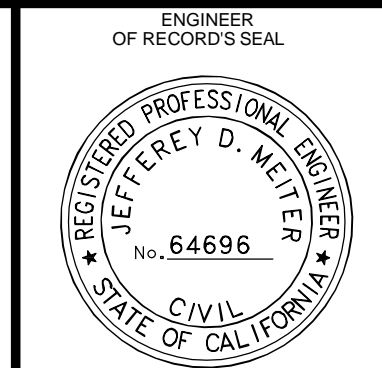
**NOTE** STORM WATER SHALL NOT BE DRAINED INTO SEWERS INTENDED FOR SANITARY DRAINAGE ONLY.

ALL INLETS AND OUTLETS INTO AND OUT OF THE MANHOLES SHALL INCORPORATE THE USE OF A FLEXIBLE COMPRESSION JOINTS LOCATED BETWEEN 12" AND 36" FROM THE MANHOLE. NO FLEXIBLE COMPRESSION JOINT SHALL BE EMBEDDED IN THE MANHOLE BASE.

THE TWO-WAY CLEANOUT MUST BE AN APPROVED TYPE AS DEFINED IN THE CPC SECTION 203.0 AND PER SECTION 707.4 EXCEPTION (4).



4 = ADDENDUM #4



**CITY OF BIG BEAR LAKE ENGINEERING DIVISION**

39707 BIG BEAR BLVD  
BIG BEAR LAKE, CA 92315  
PHONE (909) 866-5831  
FAX (909) 866-7511

**CITY OF BIG BEAR LAKE**  
BIG BEAR LAKE, CALIFORNIA

APPROVED BY: \_\_\_\_\_ DATE \_\_\_\_\_

R.C.E. \_\_\_\_\_ EXP. DATE \_\_\_\_\_

**CITY OF BIG BEAR LAKE**

**MOUNTAIN AREA REGIONAL TRANSIT AUTHORITY**  
160-170 BUSINESS CENTER DRIVE  
STORM DRAIN - PHASE 1

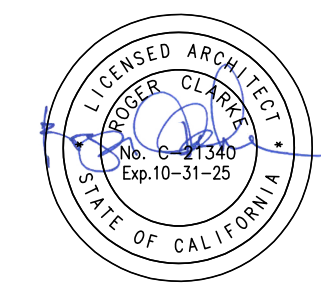
SEPTEMBER 2022

SHEET **6** OF **12**

DRAWING NO. --

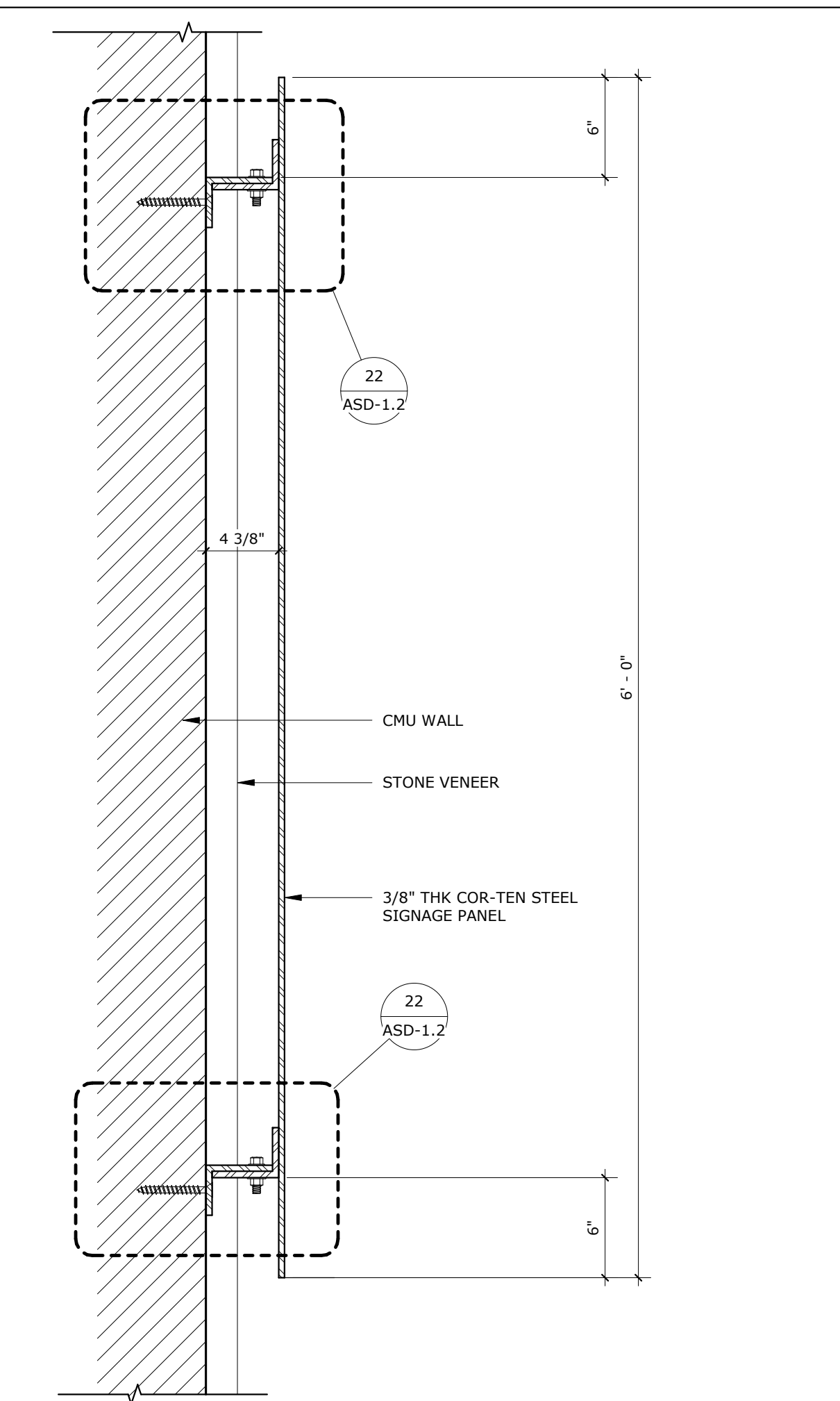
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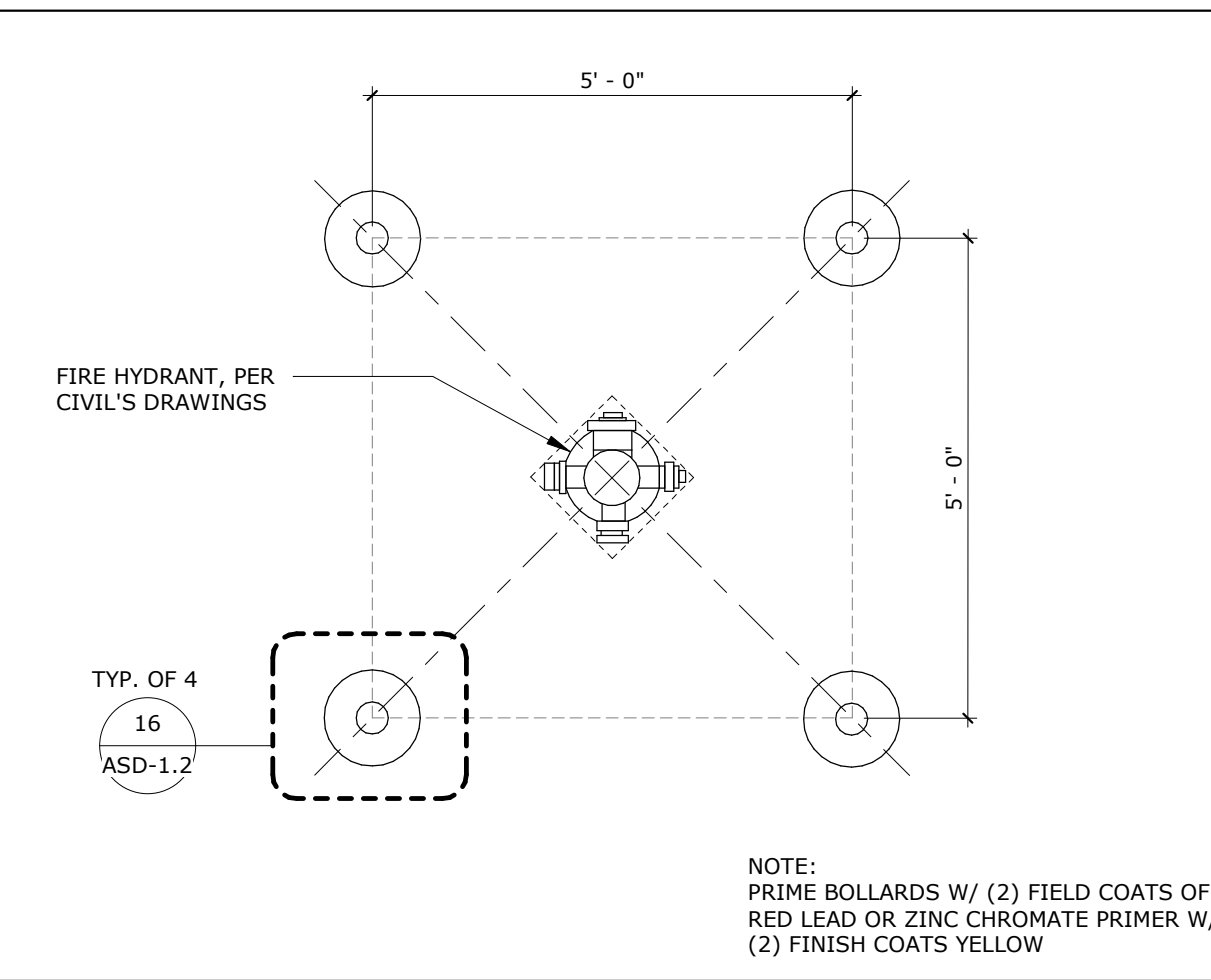


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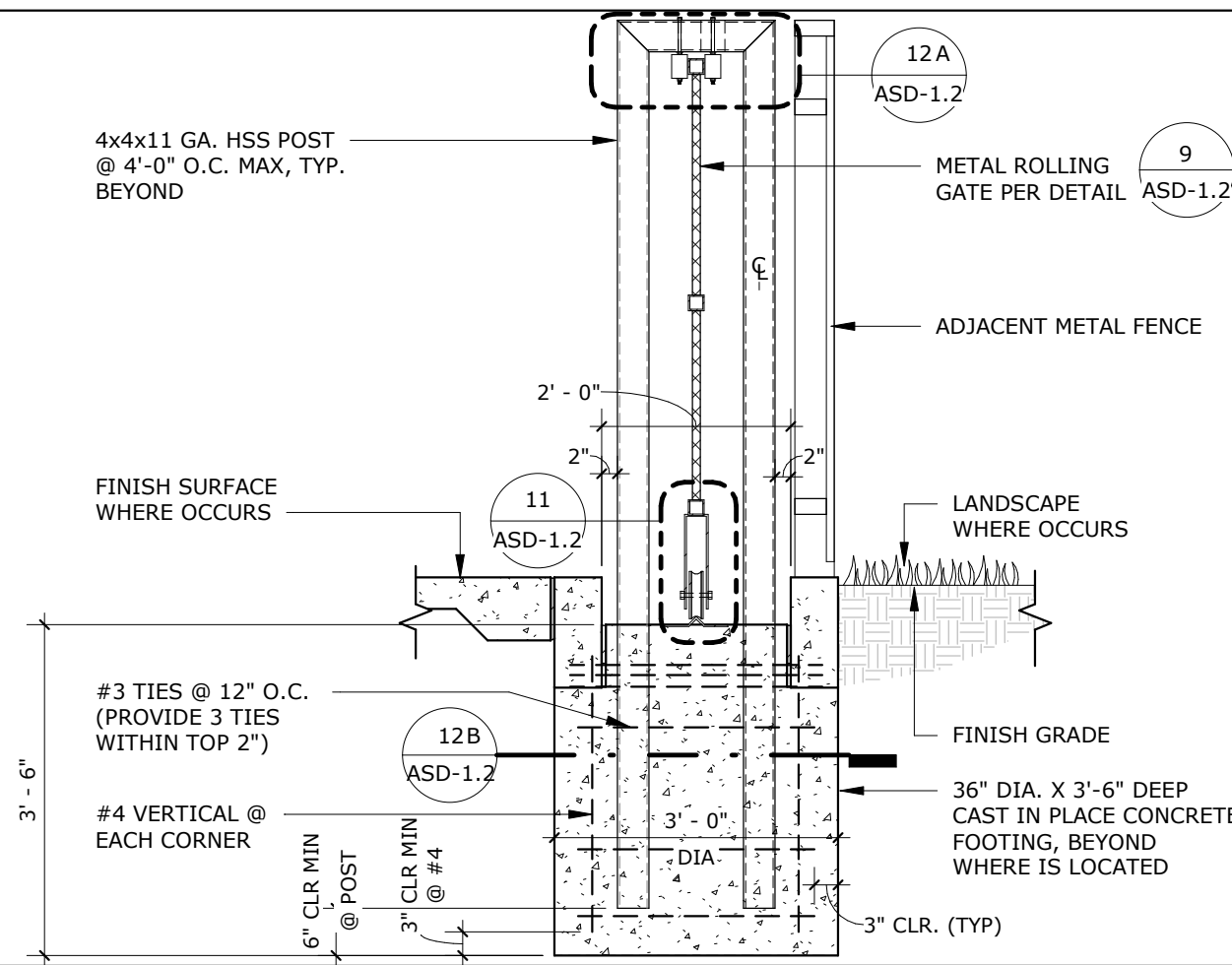
STAMPS  
AGENCY APPROVAL  
CONSULTANT BRANDING



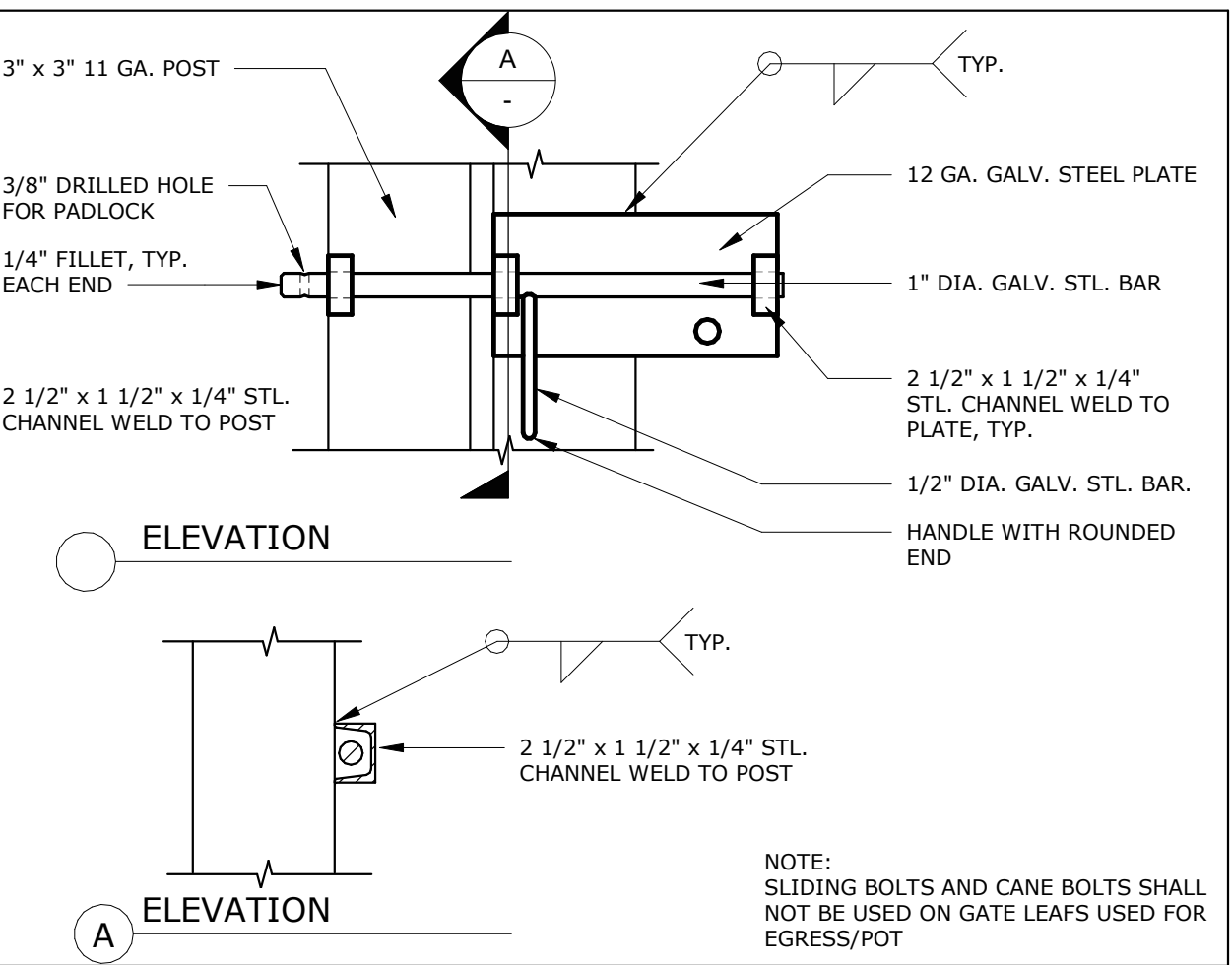
**SIGN ANCHORAGE** SCALE: 1/2" = 1'-0" REF: 9/AS-2.3



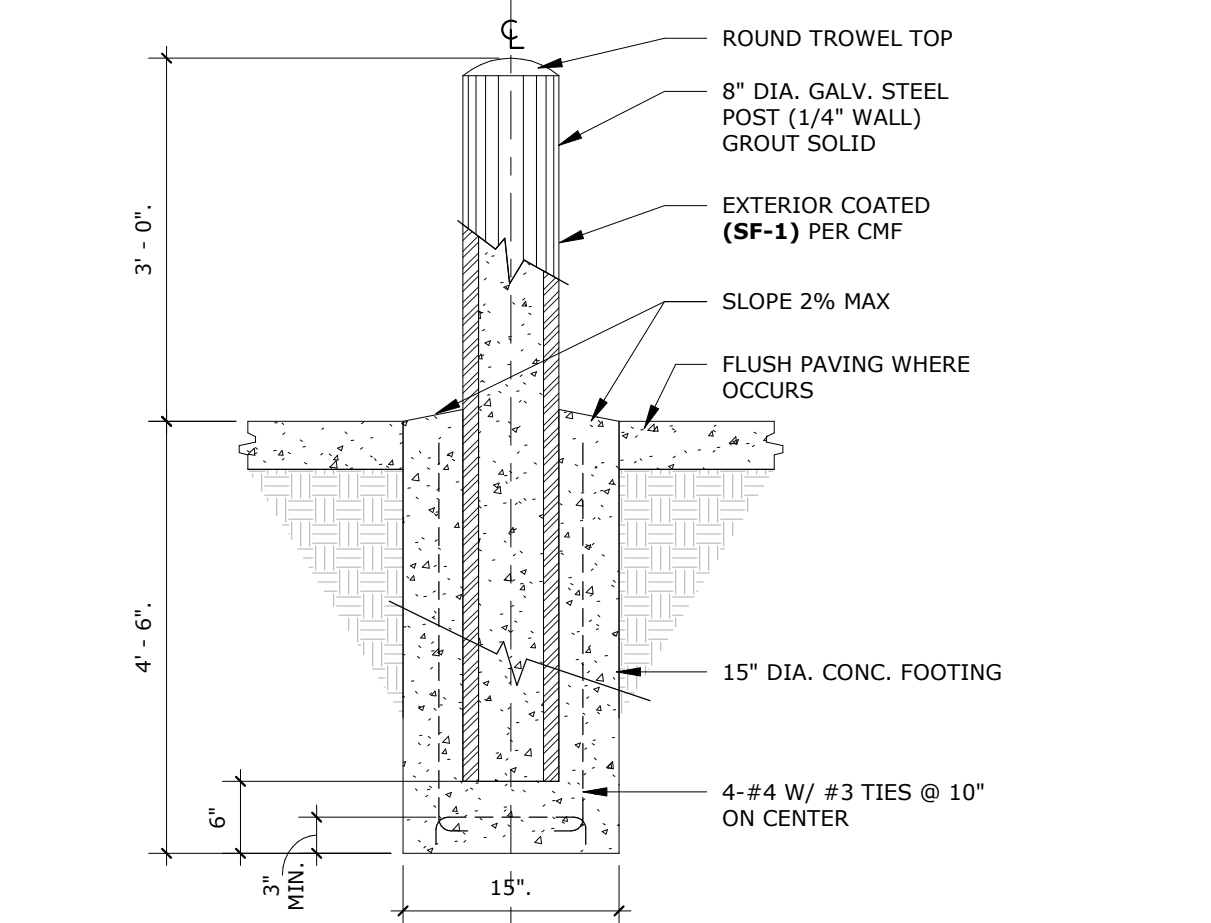
**FIRE HYDRANT BARRICADE** SCALE: 1/2" = 1'-0" REF: 1/AS-2.4



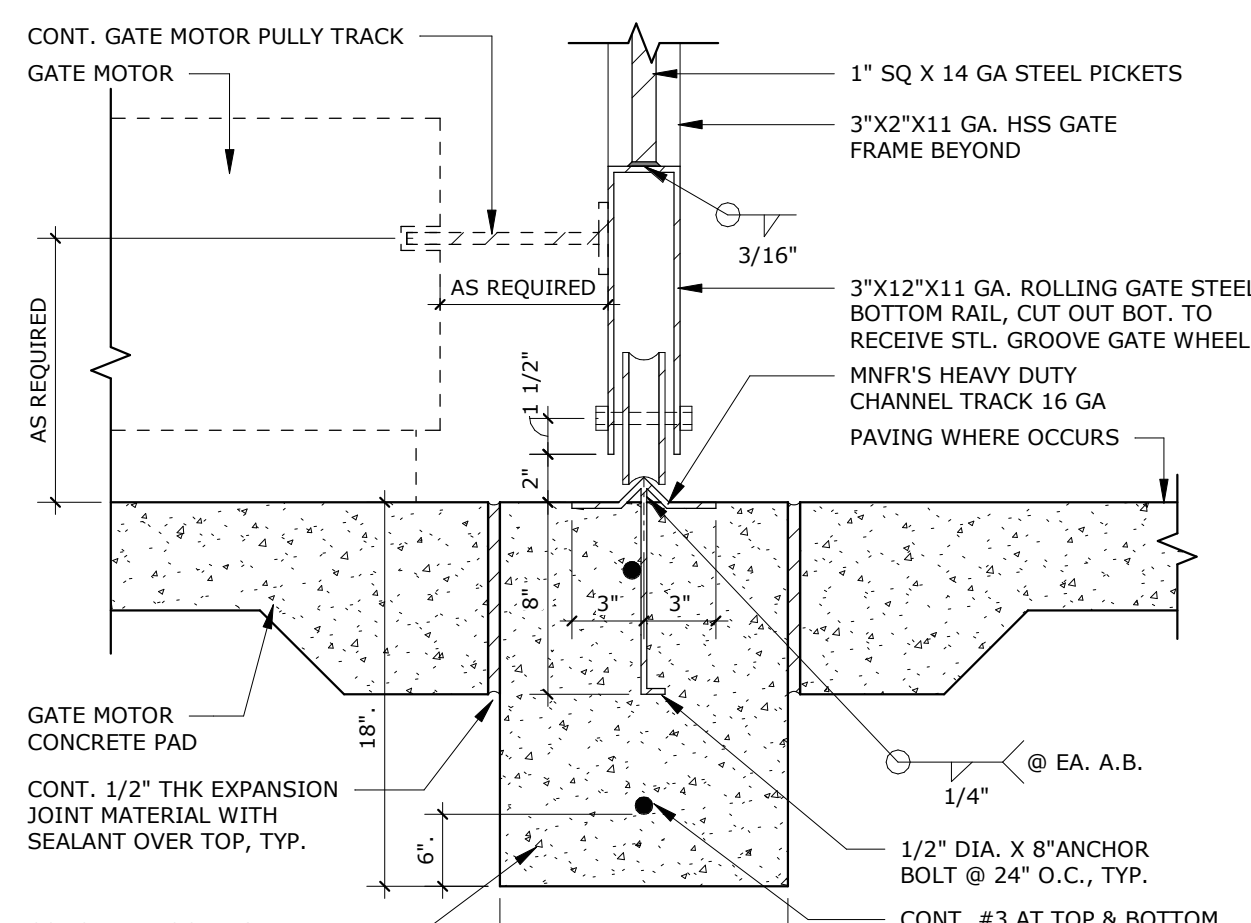
**MTL. ROLLING GATE POST FRM.** SCALE: 1/2" = 1'-0" REF: 9/ASD-1.2



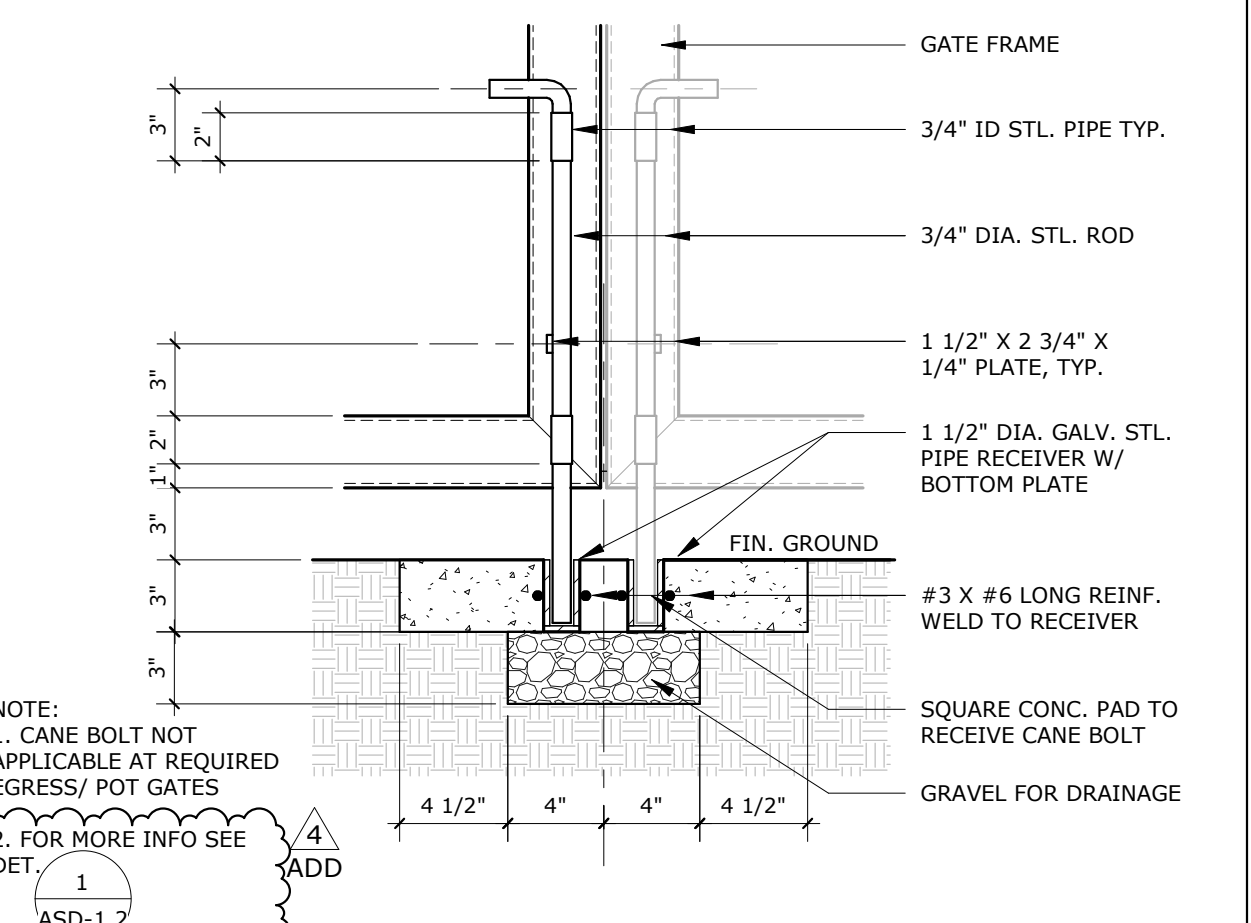
**GATE LATCH** SCALE: 1/2" = 1'-0" REF: 7



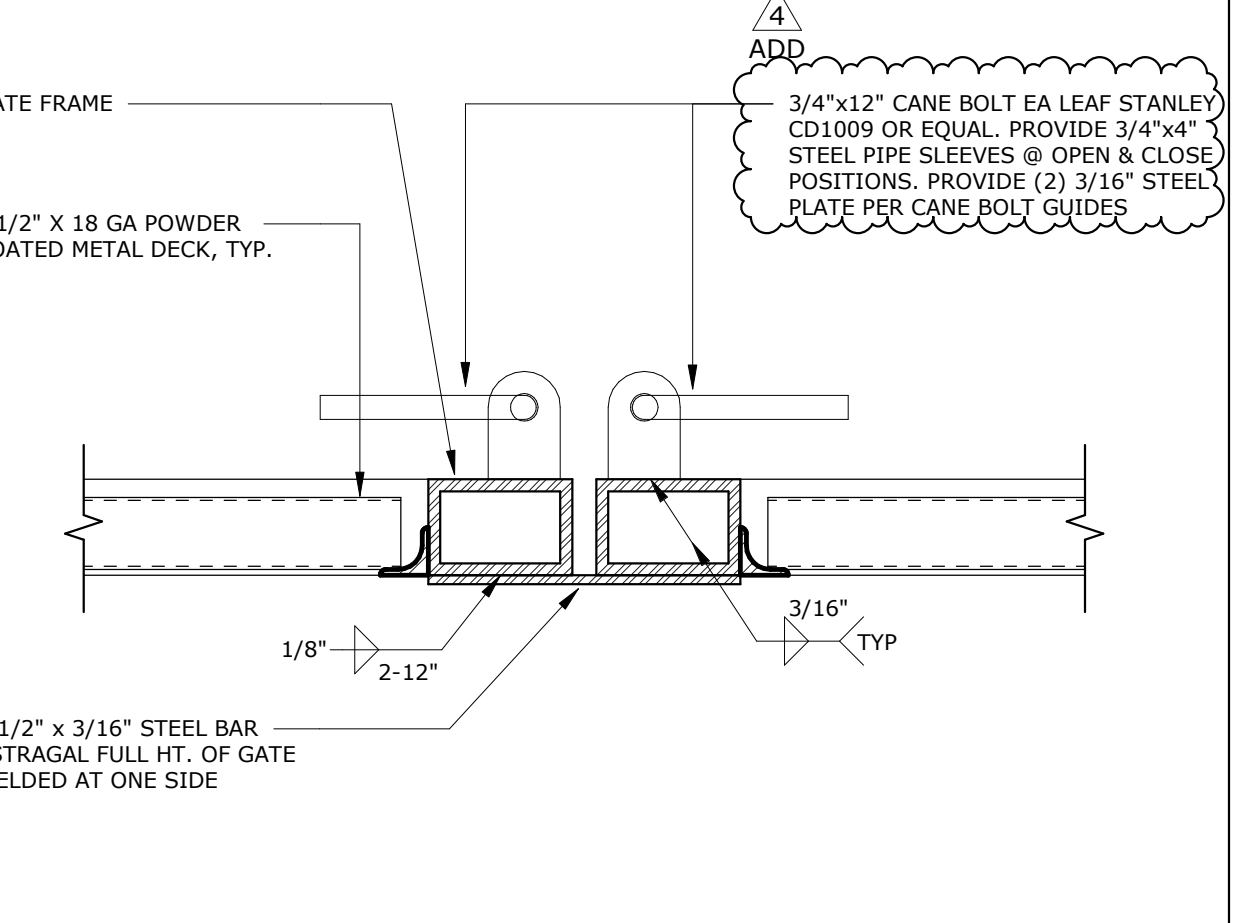
**METAL BOLLARD** SCALE: 3/4" = 1'-0" REF: 15/ASD-1.2



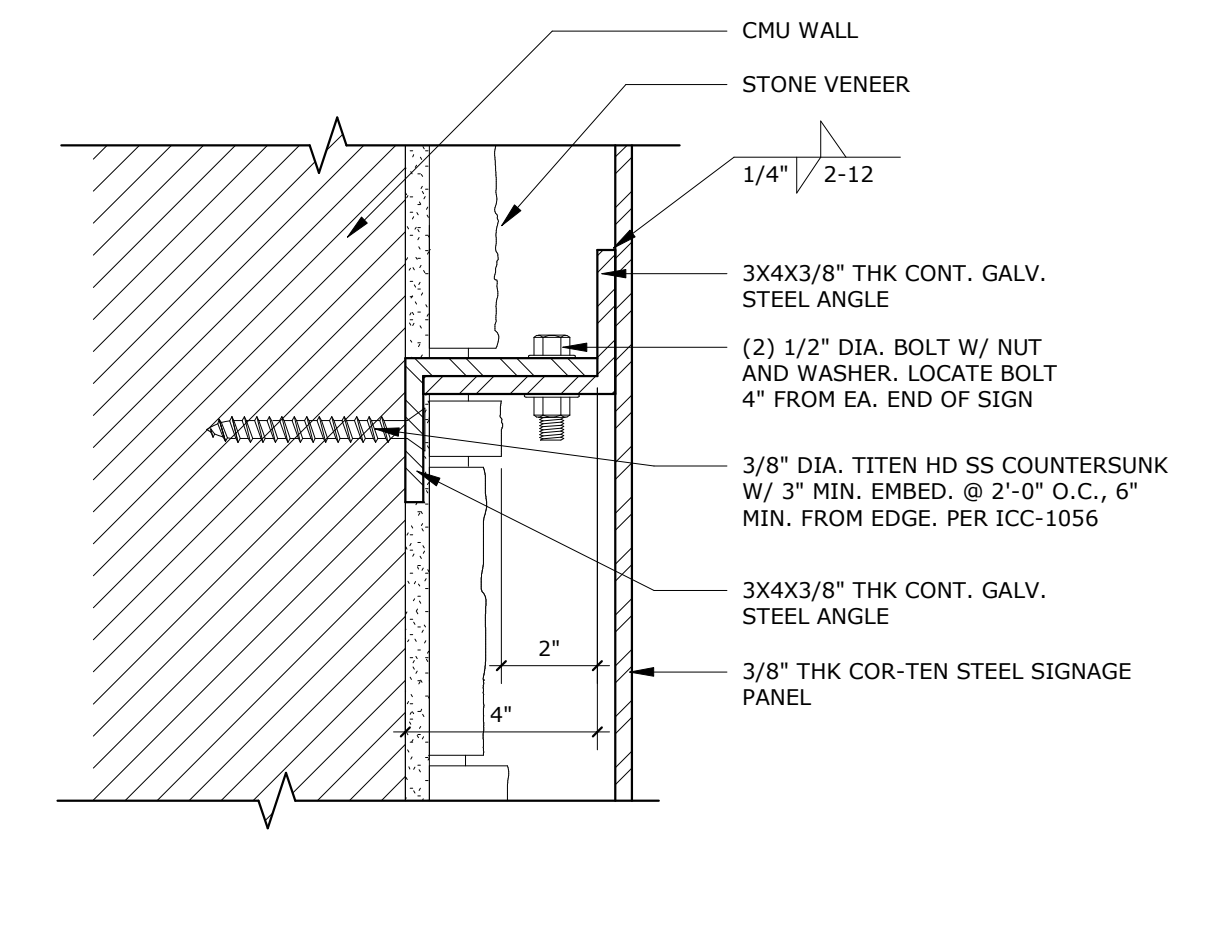
**MTL. ROLLING GATE BOT. RAIL** SCALE: 1/2" = 1'-0" REF: 9/ASD-1.2



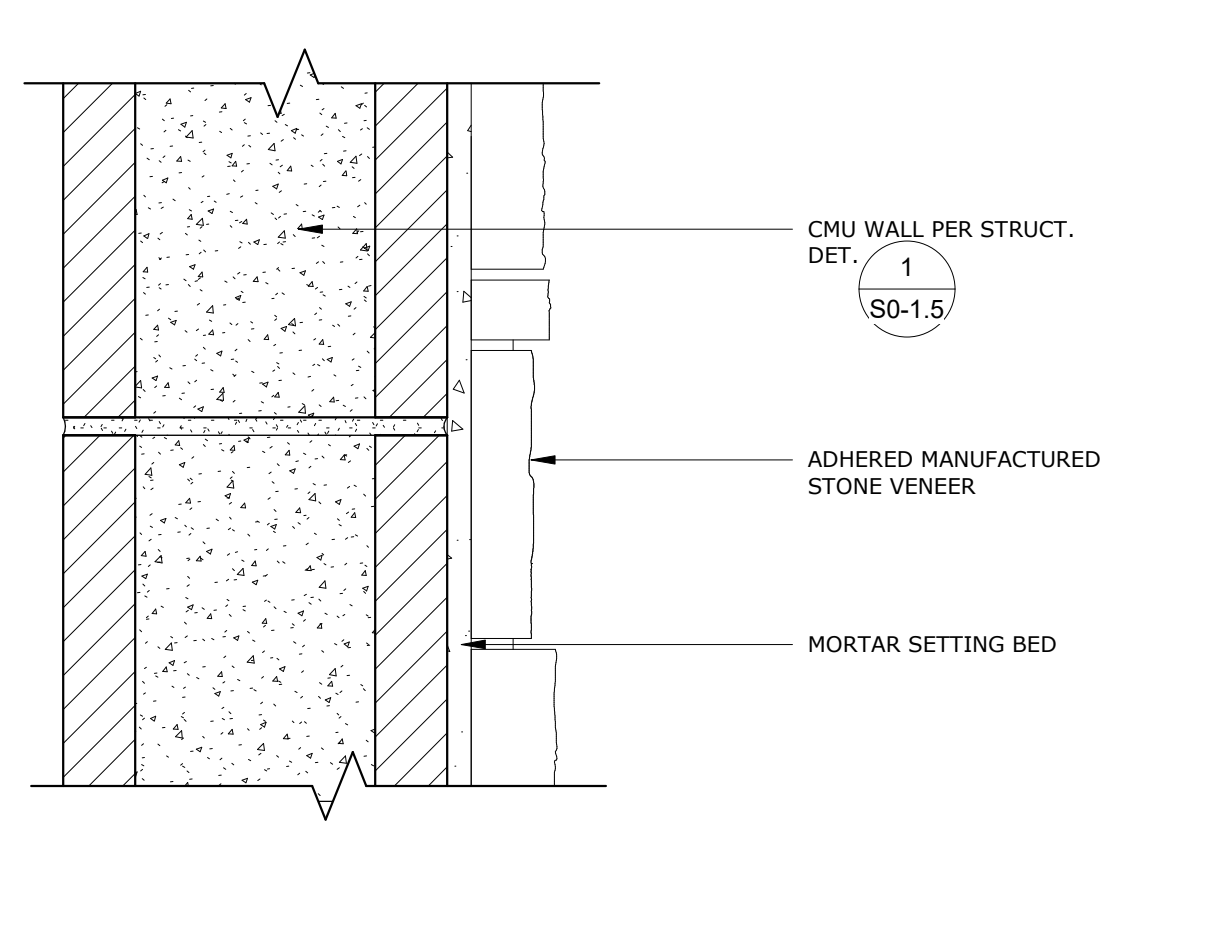
**GATE DROP LATCH DET.** SCALE: 3/8" = 1'-0" REF: 7



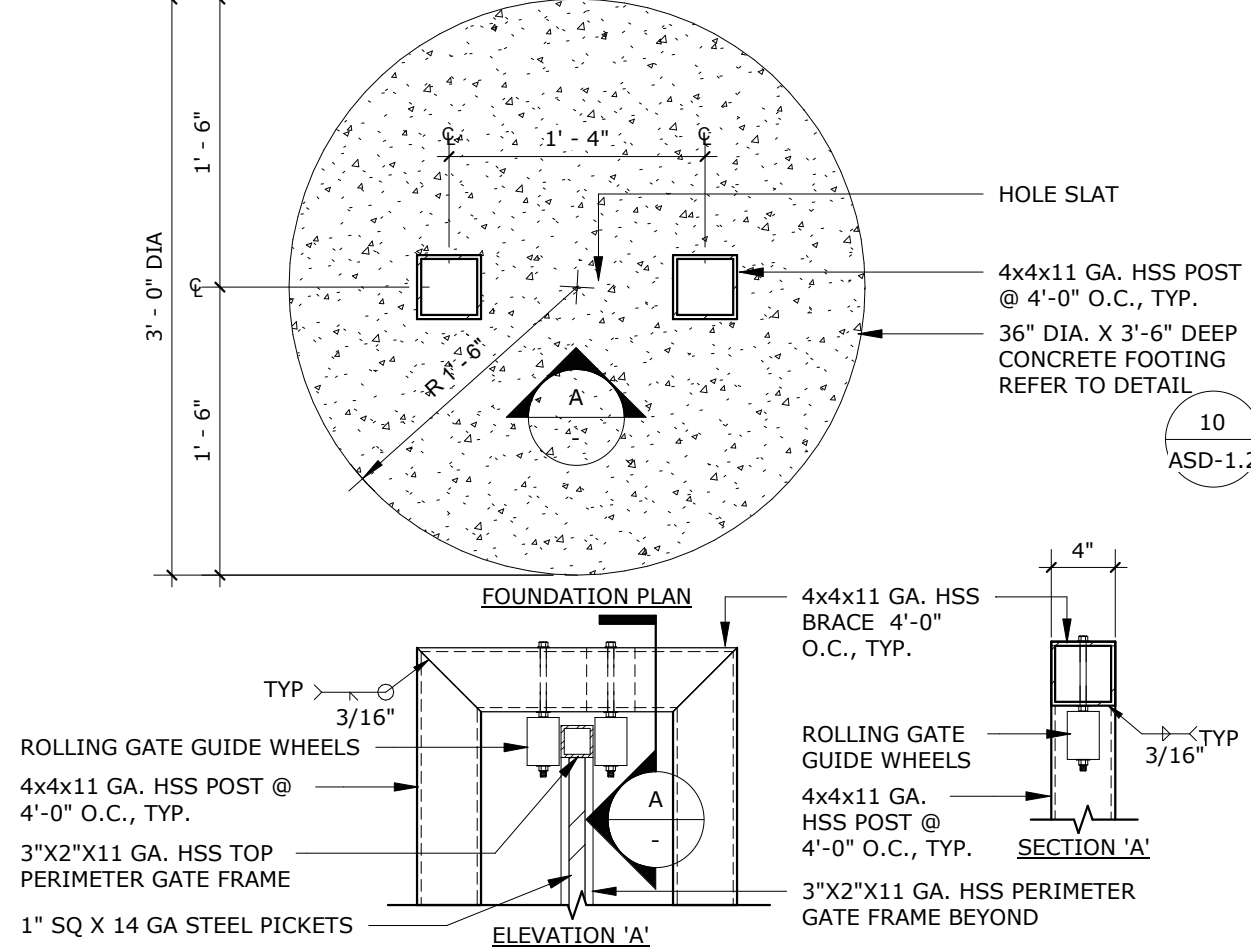
**YARD GATE DROP LATCH** SCALE: 3/8" = 1'-0" REF: 7



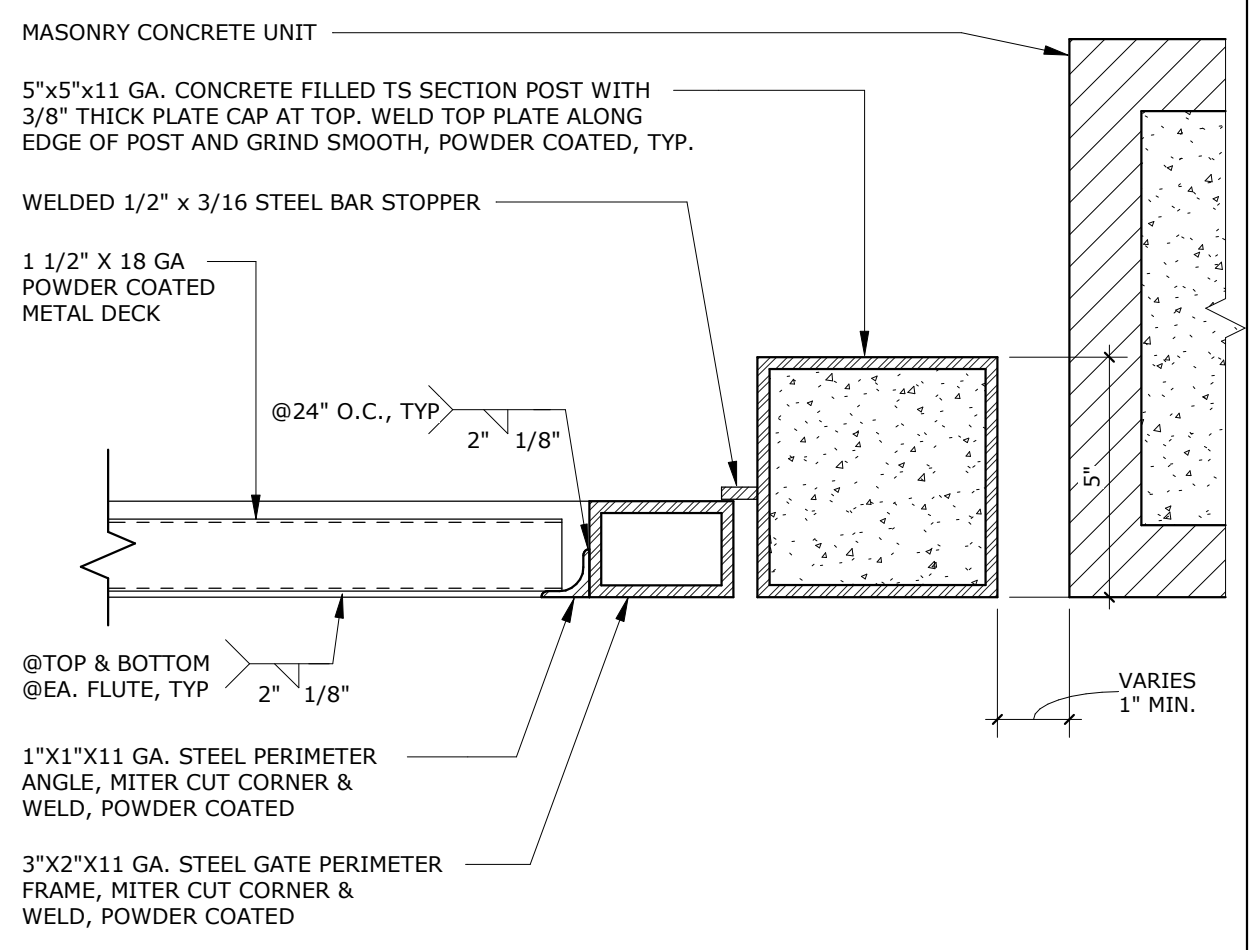
**CONNECTION @ CMU WALL** SCALE: 3/8" = 1'-0" REF: 21/ASD-1.2



**CMU W/ STONE VENEER** SCALE: 1" = 1'-0" REF: 7



**MTL. ROLLING GATE TOP RAIL** SCALE: 1" = 1'-0" REF: 10/ASD-1.2



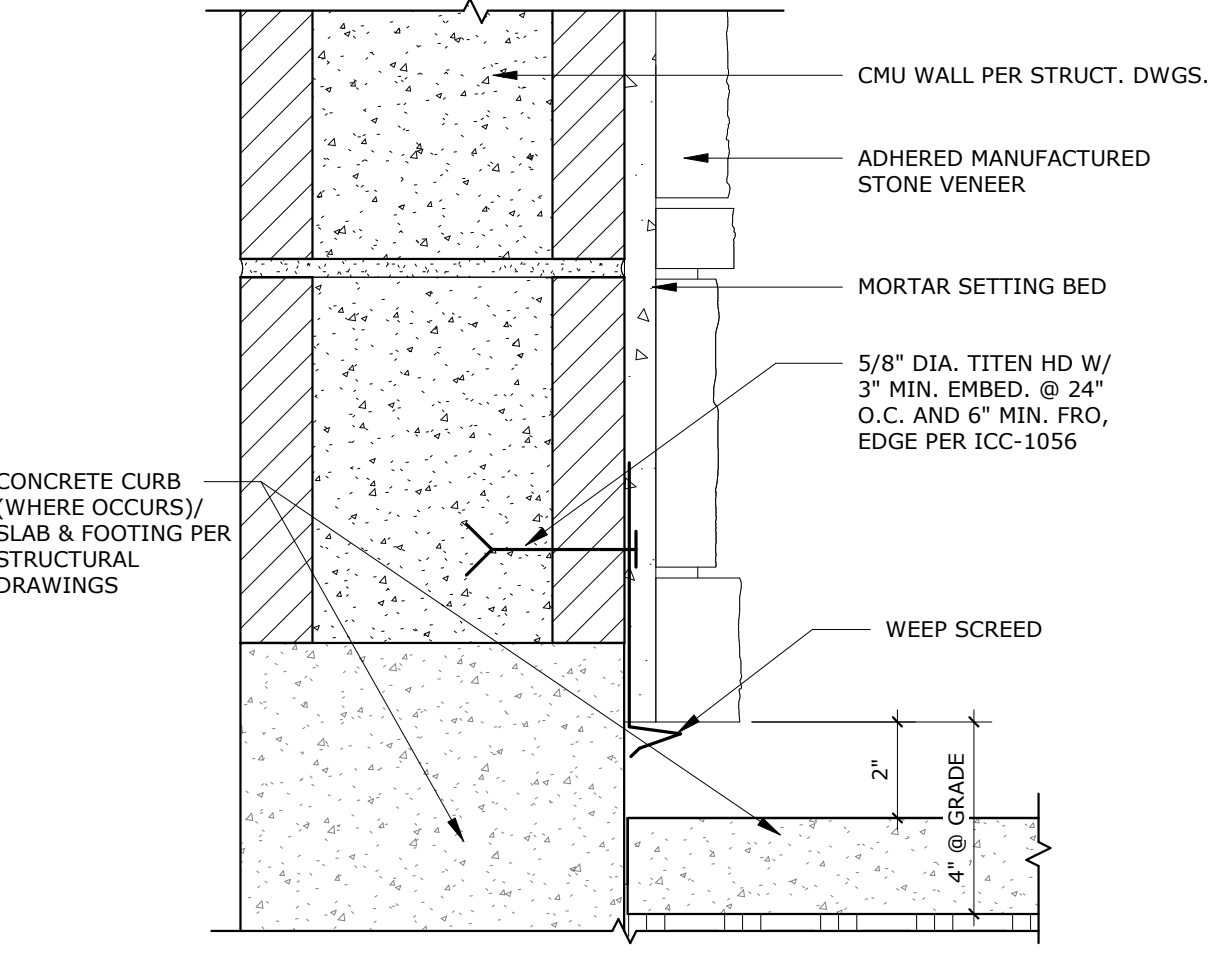
**ENCLOSURE GATE LATCH** SCALE: 3/8" = 1'-0" REF: 4/ASD-1.2



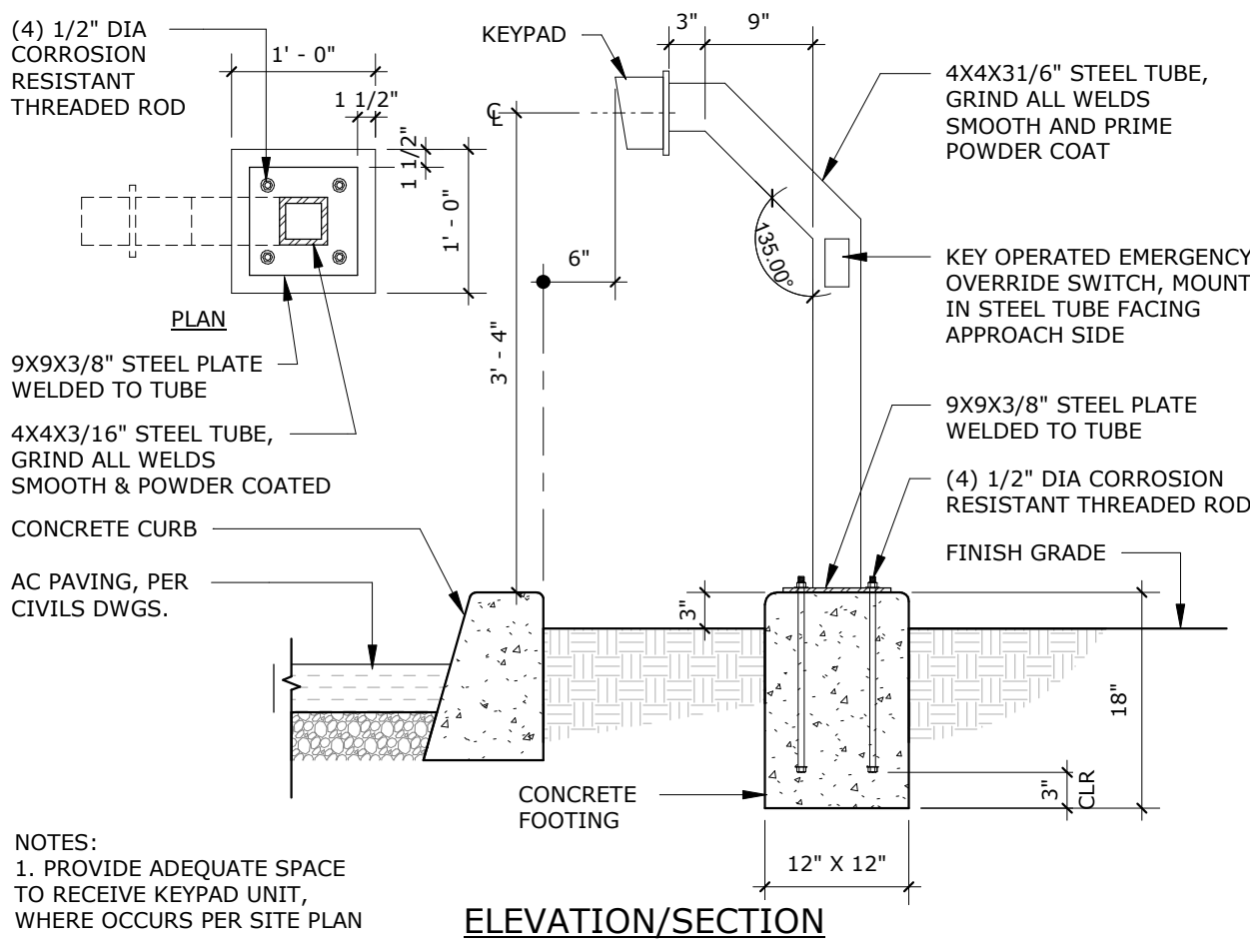
**MTL SERVICE GATE-DBL-ELEV.** SCALE: 3/8" = 1'-0" REF: 19/ASD-1.1



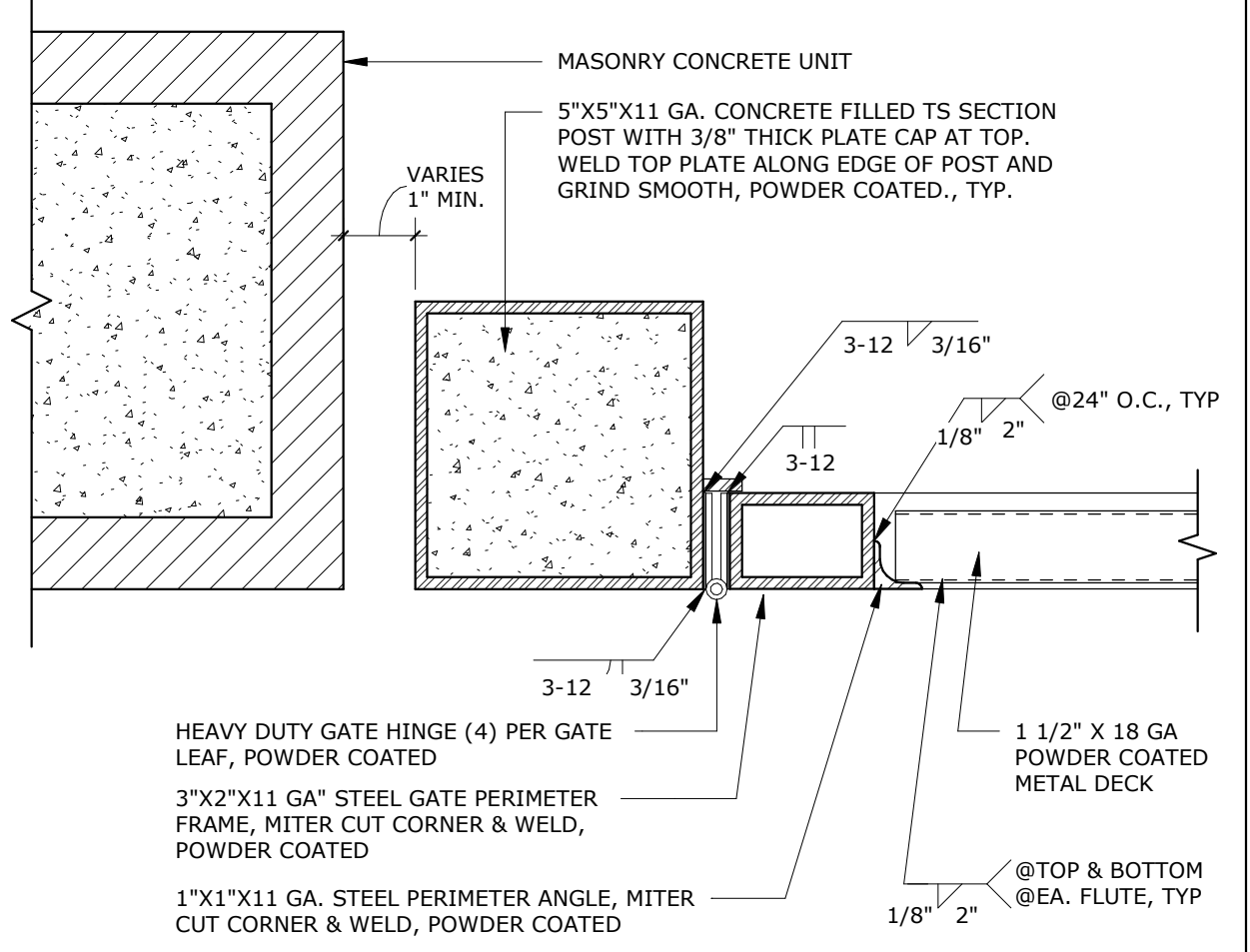
**STONE VENEER @ CURB** SCALE: 3/8" = 1'-0" REF: 9/AS-2.1



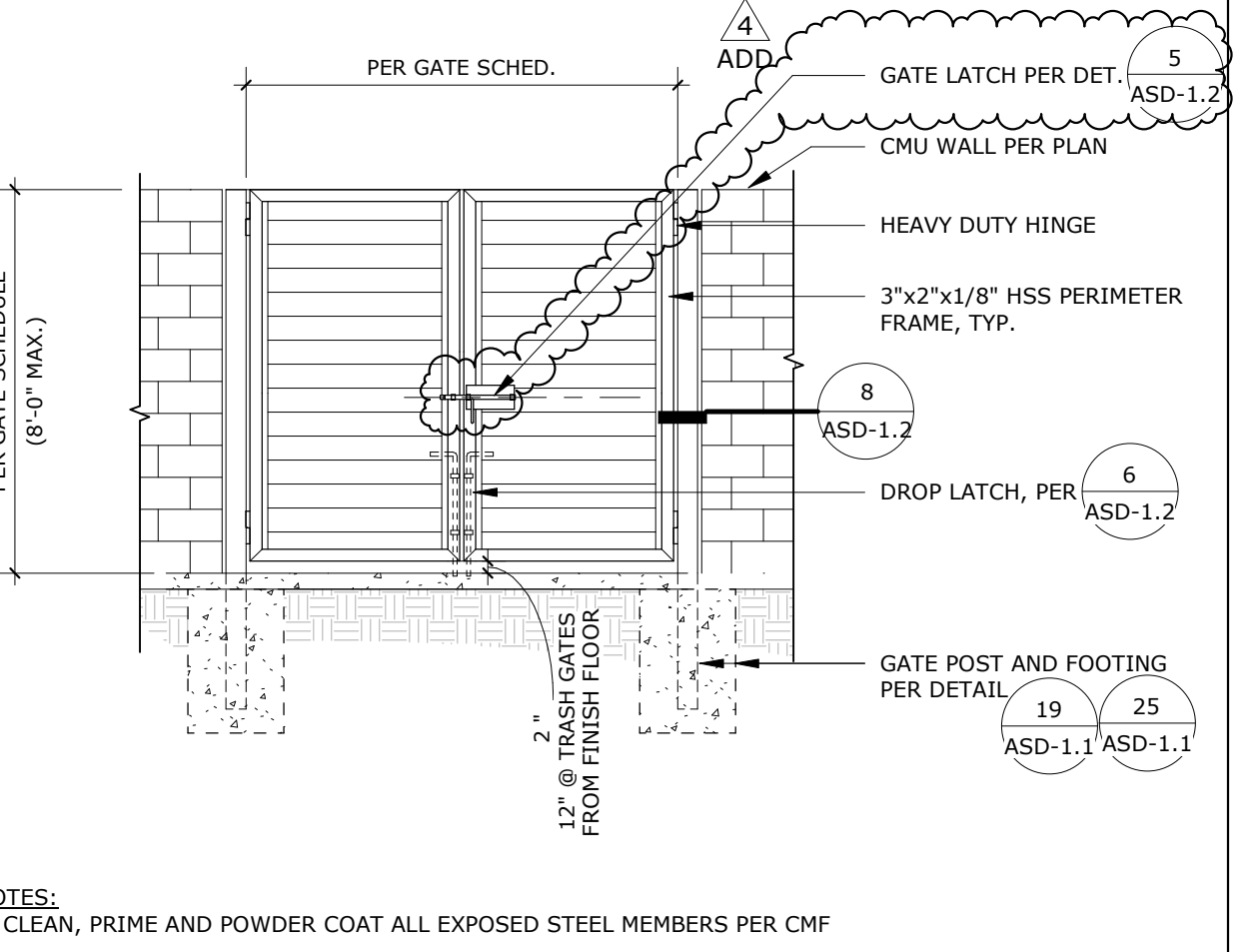
**GATE KEYPAD MOUNTING DET.** SCALE: 3/8" = 1'-0" REF: 10/ASD-1.2



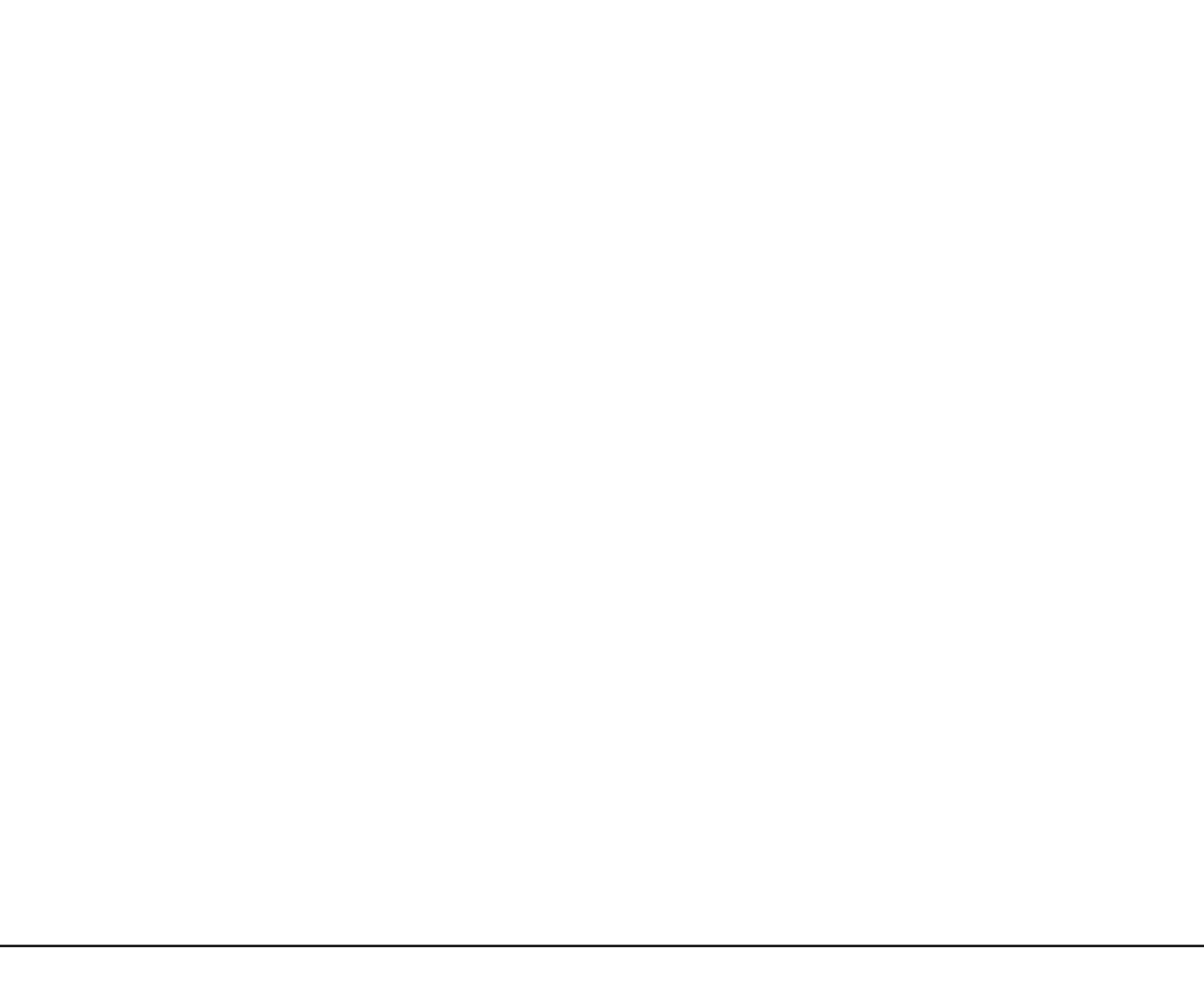
**ENCLOSURE GATE JAMB** SCALE: 3/8" = 1'-0" REF: 3/ASD-1.2



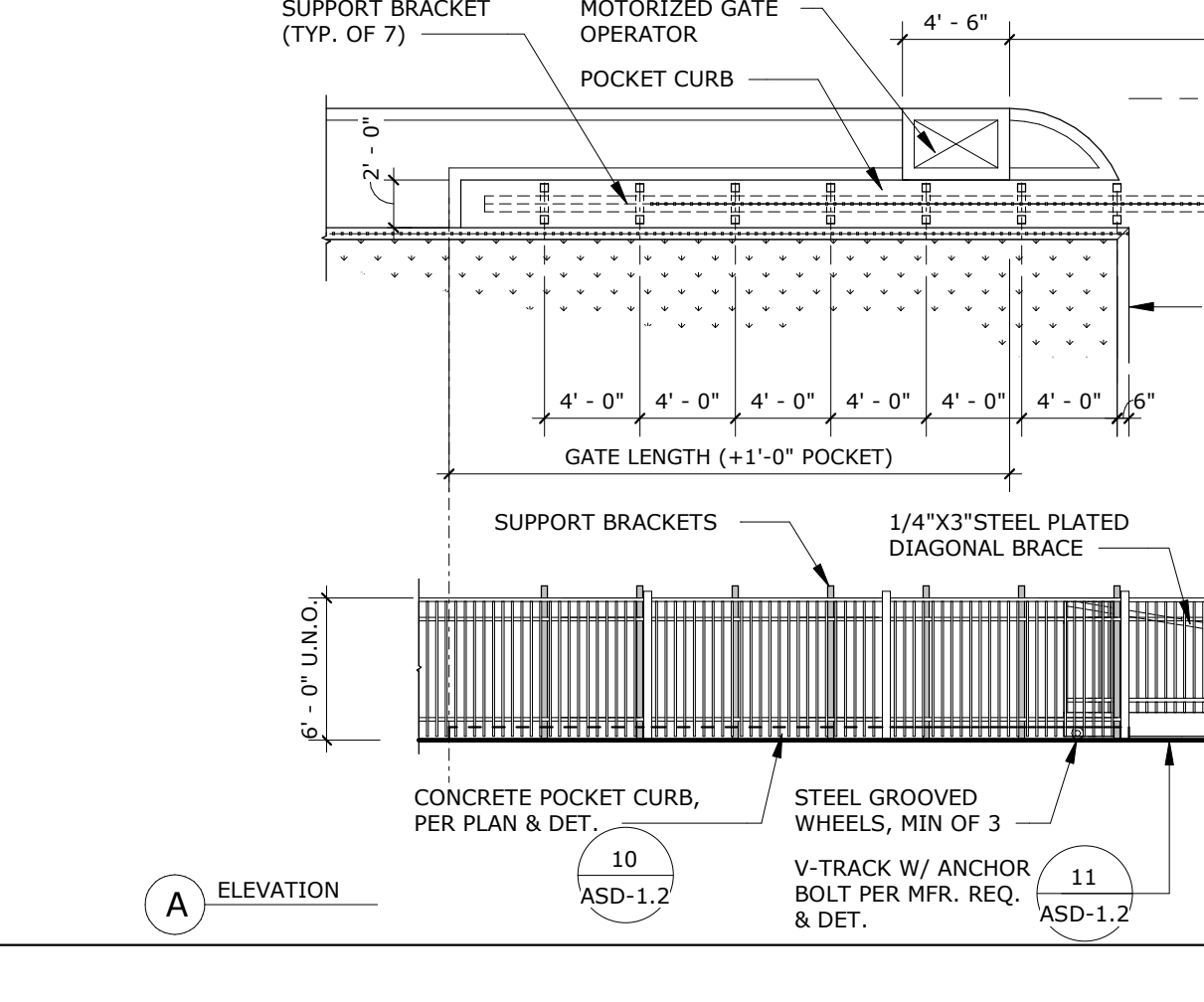
**DECORATIVE ROLLING GATE** SCALE: 1/8" = 1'-0" REF: 1/AS-2.3



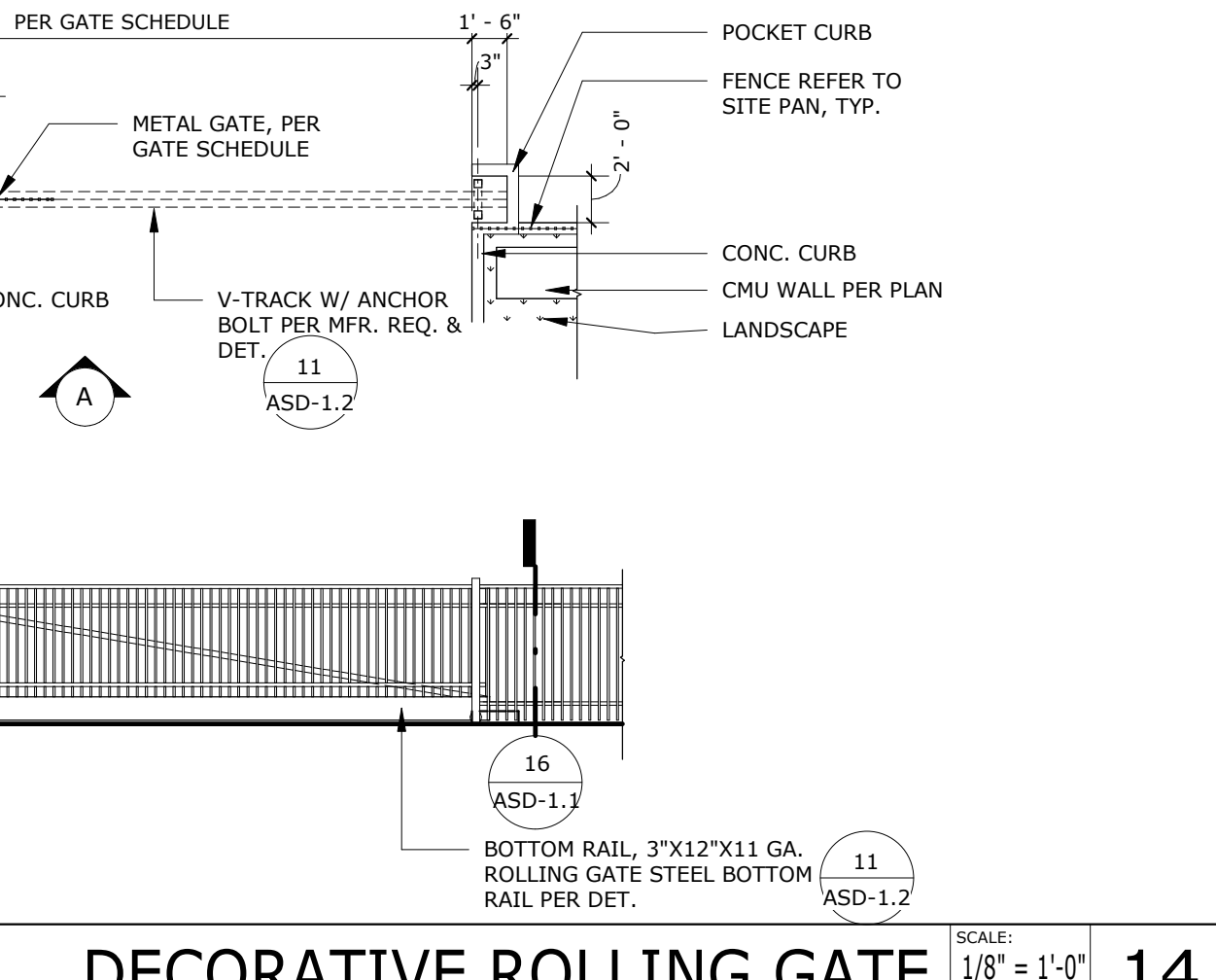
**METAL SERVICE GATE ELEV.** SCALE: 1/4" = 1'-0" REF: 7



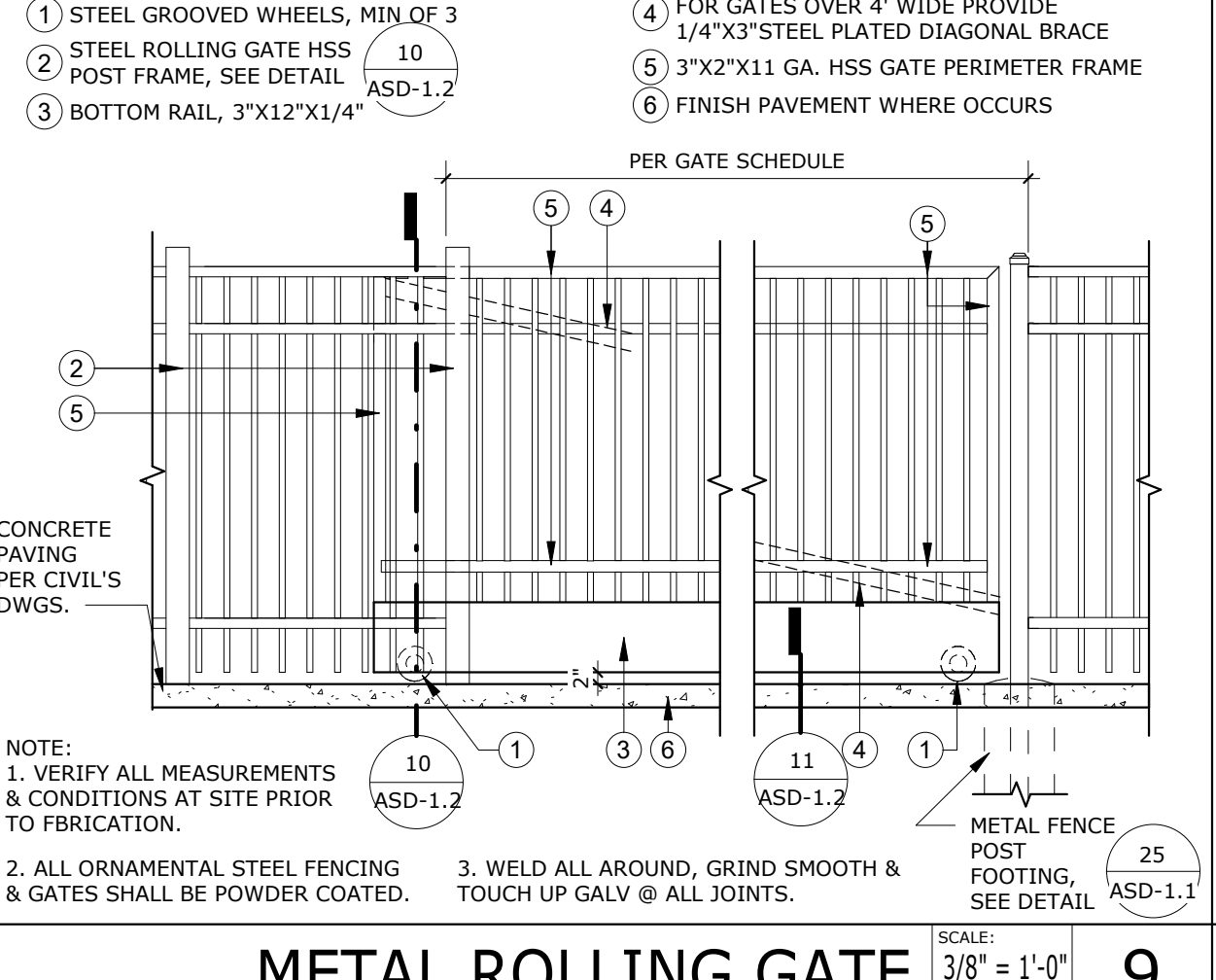
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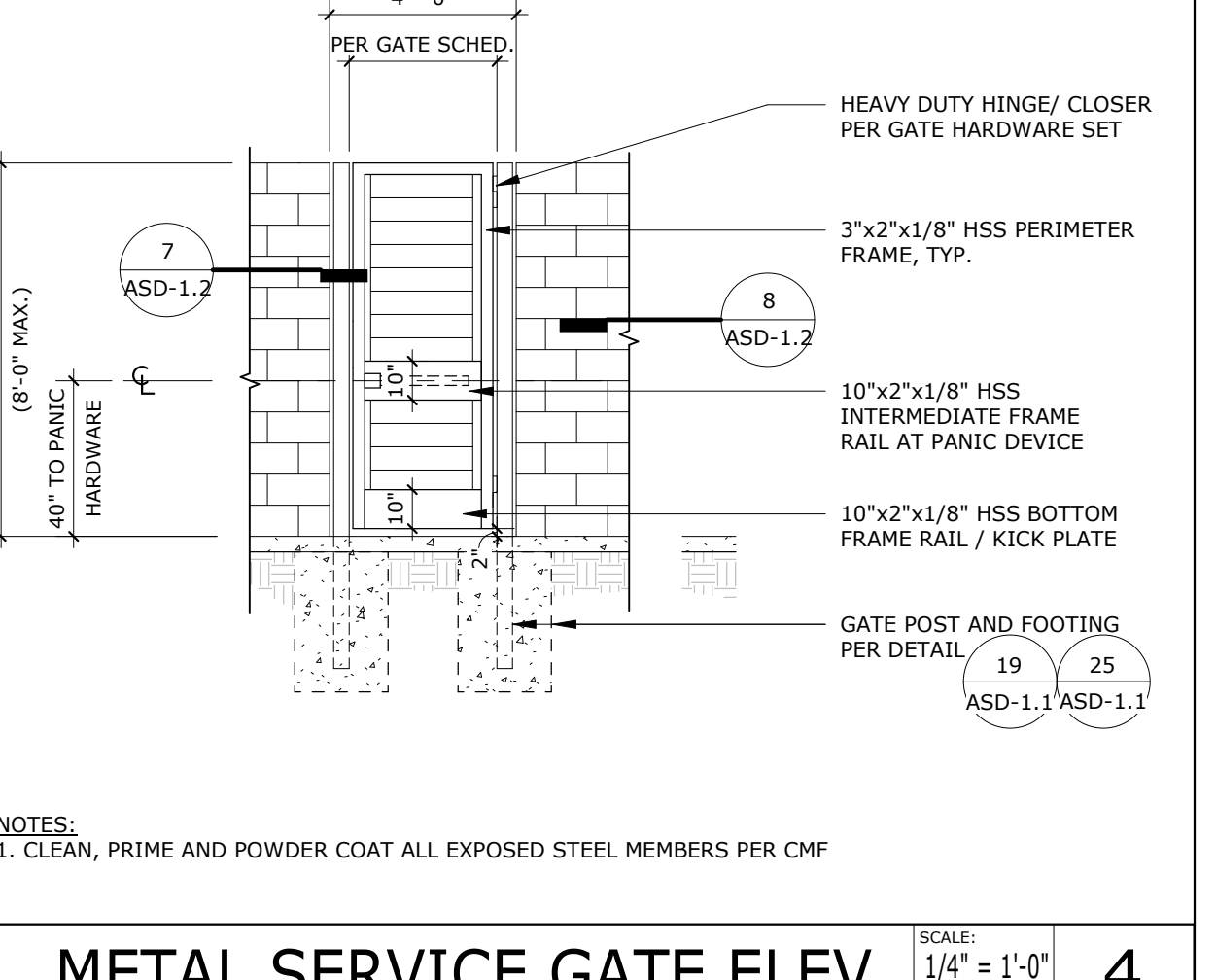
**METAL SERVICE GATE ELEV.** SCALE: 1/4" = 1'-0" REF: 7



**METAL SERVICE GATE ELEV.** SCALE: 1/4" = 1'-0" REF: 7



**METAL SERVICE GATE ELEV.** SCALE: 1/4" = 1'-0" REF: 7



**METAL SERVICE GATE ELEV.** SCALE: 1/4" = 1'-0" REF: 7

**PROJECT No. :50801**  
4/18/2024 11:02:11 AM

ISSUE No.	DATE	DESCRIPTION

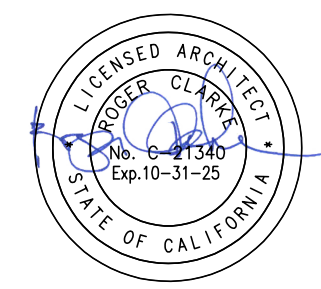
**RUHNAUCLARKE.COM**

**MOUNT TRANSIT MAINTENANCE FACILITY**  
170 BUSINESS CENTER, BIG BEAR LAKE, CALIFORNIA  
BIG BEAR LAKE

**ASD-1.2**

MOUNT TRANSIT MAINTENANCE FACILITY: PHASE 1 - 100% CD





AGENCY APPROVAL  
DATE: 08/14/24

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ARCHITECTS

STAMPS

CONSULTANT BRANDING

1. VERIFY ALL DIMENSIONS PRIOR TO CONSTRUCTION.
2. ALL DIMENSIONS ARE TO FACE OF STUD, CENTERLINE OF COLUMN OR EDGE OF SLAB, U.N.O.
3. SEE SHEET **AD-2.0** FOR WALL TYPE INFORMATION.
4. PROVIDE R-23 BATT INSULATION AT ALL EXTERIOR WALLS, U.N.O. GYPSUM BOARD AND INSULATION SHALL EXTEND FULL HEIGHT OF WALL TO UNDERSIDE OF ROOF STRUCTURE.
5. PROVIDE STUD BRACING AND SUPPORT FOR ALL WALL MOUNTED FIXTURES AND ACCESSORIES. PER DETAIL **5** **SD-1.4**
6. SEE SHEET **A1-8.1** FOR DOOR AND WINDOW INFORMATION
7. SET DOORS ADJACENT TO WALLS A MIN. OF 4" AWAY FROM WALL U.N.O.
8. CONCRETE CURBS AT WALLS SHOWN ON STRUCT. DWGS. TO BE 6" HIGH U.N.O.

### GENERAL NOTES

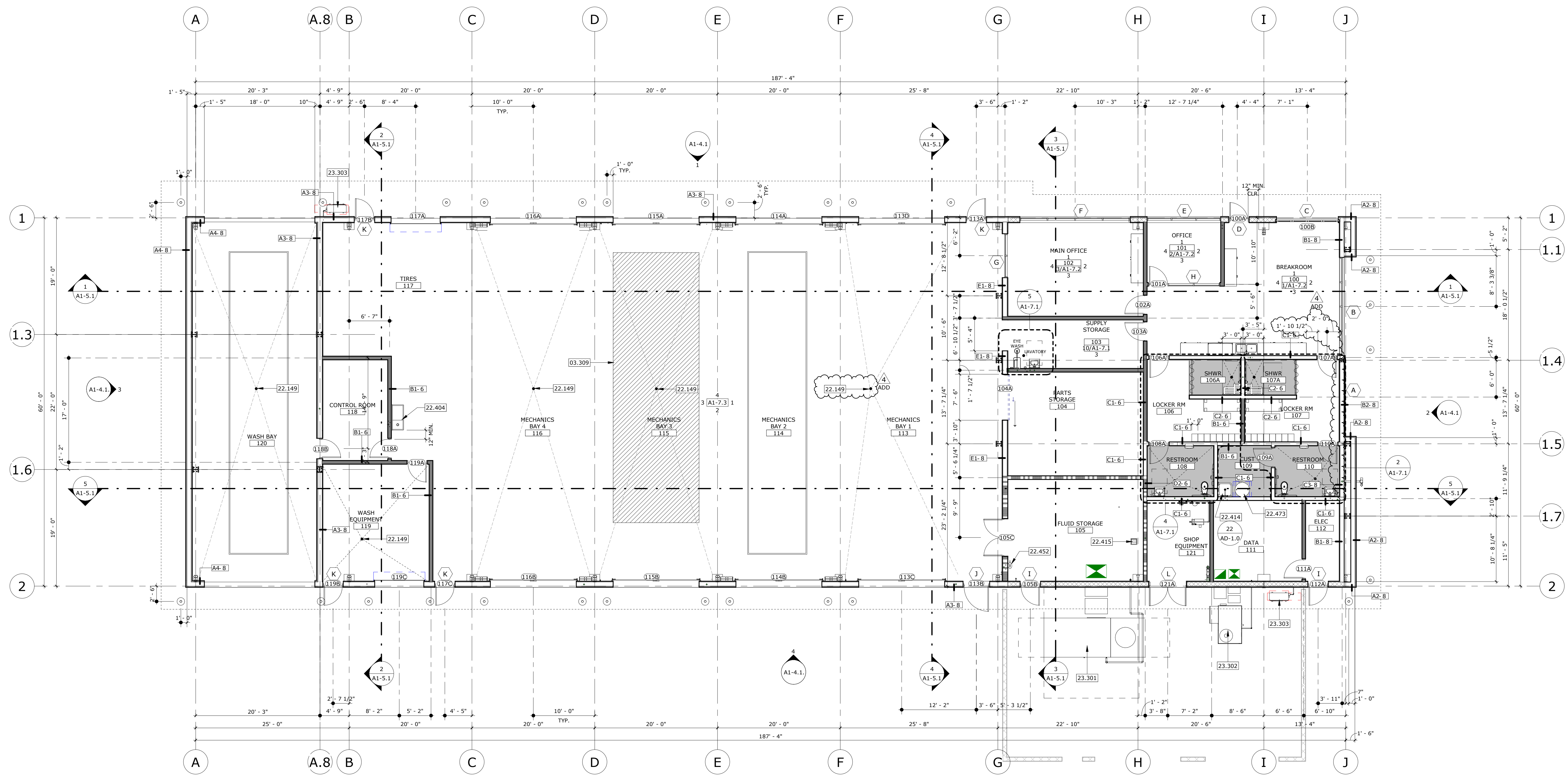
- 03.309 8" SLAB ON GRADE PER STRUCT. DWGS
- 22.149 FLOOR DRAIN PER PLUMBING DWGS.
- 22.404 LAVATORY
- 22.414 MOP SINK
- 22.415 FLOOR SINK PER PLUMBING DWGS.
- 22.452 EYE/FACE WASH EQUIPMENT PER PLUMBING DWGS.
- 22.473 WATER HEATER PER PLUMBING DWGS.
- 23.301 MAKE UP AIR UNIT PER MECH. DWGS.
- 23.302 AC CONDITIONER UNIT PER MECH. DWGS.
- 23.303 MECH. UNIT PER MECH. DWGS.

### KEYNOTES

- DEPRESSED FLOOR SLAB, NOTE THAT FINISHED FLOOR TO BE 2% SLOPE MAX. IN ALL DIRECTIONS.
- WALL TYPE
- WALL WIDTH
- FIRE RATING (BY HOUR)
- 0-A1-8 TYP. EXTERIOR WALL **1** **AD-2.0**
- 0-B1-6 TYP. INTERIOR WALL **5** **AD-2.0**
- 2-D1-6 2 HR RATED WALL **9** **AD-2.0**
- METAL BOLLARD, REF. DETAIL **16** **ASD-1.2**

### WALL TYPES:

- A2 - SEE DETAIL **2** **AD-2.0**
- A3 - SEE DETAIL **3** **AD-2.0**
- A4 - SEE DETAIL **4** **AD-2.0**
- B2 - SEE DETAIL **12** **AD-2.0**
- C1 - SEE DETAIL **6** **AD-2.0**
- C2 - SEE DETAIL **7** **AD-2.0**
- C3 - SEE DETAIL **8** **AD-2.0**
- D2 - SEE DETAIL **10** **AD-2.0**
- E1 - SEE DETAIL **11** **AD-2.0**



FLOOR PLAN **1**

FLOOR PLAN LEGEND

PROJECT No. :50801  
4/17/2024 4:56:17 PM

ISSUE No.	DATE	DESCRIPTION	REVISION No.	DATE	DESCRIPTION

**RUHNAUCLARKE.COM**

**MOUNT TRANSIT MAINTENANCE FACILITY**

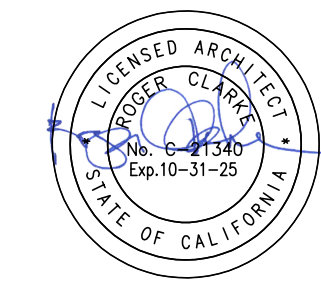
170 BUSINESS CENTER DR. BIG BEAR LAKE, CA  
BIG BEAR LAKE

**FLOOR PLAN**

**A1-1.2**

MOUNT TRANSIT MAINTENANCE FACILITY: PHASE 1 - 100% CD



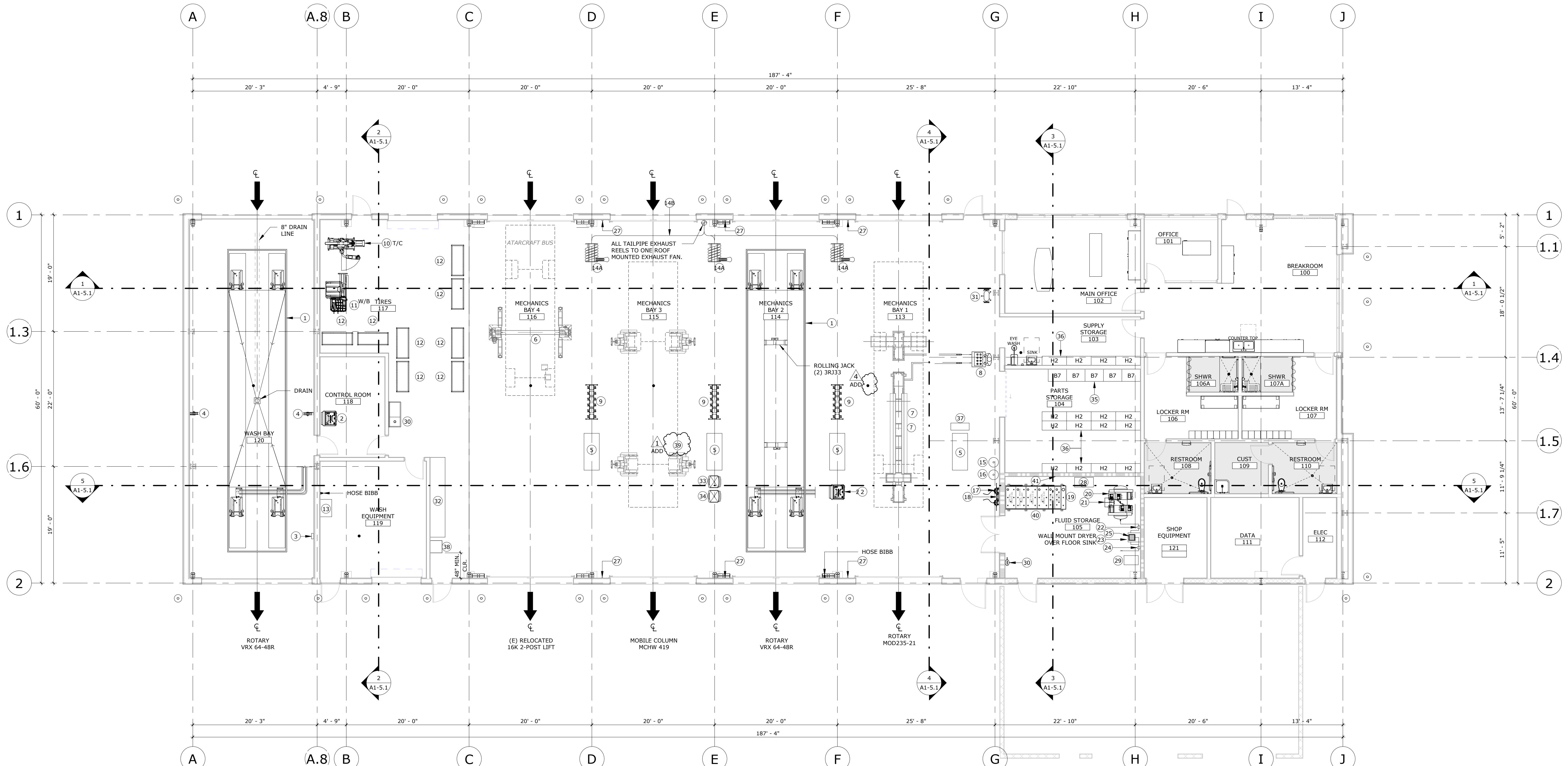


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ARCHITECTS**

STAMPS  
AGENCY APPROVAL  
CONSULTANT BRANDING

**EQUIPMENT SCHEDULE**

KEYNOTE NO.	EQUIPMENT NAME	SHOWN ON PLAN	PURCHASE	INSTALLATION
1	ROTARY VREX 64/48 RECESS MOUNT REQUIRES DRAIN LINES BY PLUMBING SUBCONTRACTOR TO CLARIFIER. INCLUDES TWO R32BK 32,000LB. CAPACITY ROLLING JACKS BUILT-IN AIR, LIFT SAFETY TAPE SWITCH, BOTH PALLETS, SUPPLEMENTARY SUPPLIED BY EQUIPMENT CONTRACTOR. (SEE JACOBS SHEET FOR REPAIR BAYS ONLY, NOT WASH BAY.)	Y	CFCI	ADD
2	ROTARY MODEL 20000000 CONTROL CONSOLE IN CONTROL ROOM. REQUIRES 20-HP, 230V, 3PH 54FLA, AND 120V, 1PH CONTROL POWER, AND 90-110-PSI COMPRESSED AIR.	Y	CFCI	
3	ROTARY VREX 64/48 CONTROL PANEL IN WASH BAY, MODEL V40011 STAINLESS STEEL NEMA4 CONTROL PANEL. FURNISHED AND INSTALLED BY EQUIPMENT CONTRACTOR.	Y	CFCI	
4	WALL MOUNTED WATER HOSE REEL IN WASH BAY. RASKIN MODEL 8534-350-55, WITH MODEL 853006-55 STAINLESS STEEL SWIVEL BRACKET, AND 995 520-55 HIGH PRESSURE HOSE, 22" 55 WALL-MOUNTED WAND HOLDER. FURNISHED AND INSTALLED BY EQUIPMENT CONTRACTOR.	Y	CFCI	
5	STATIONARY WORKBENCH MFG. BY SHURE. WITH STAINLESS STEEL TOP AND ACCESSORY KIT. INCLUDES MODEL #42, 70" X 34" X 40" ADJ. HEIGHT. FURNISHED AND INSTALLED BY EQUIPMENT CONTRACTOR.	Y	CFCI	
6	EXISTING RELOCATED 16K 2-POST LIFT. (DESCRIPTION TBD) RE-INSTALLED BY EQUIPMENT CONTRACTOR.	Y	CFCI	
7	IN-GROUND HEAVY DUTY 2 POST VEHICLE LIFT. MFG. BY ROTARY (VSG), MODEL MOD235-21. HEAVY DUTY 2-POST IN-GROUND LIFT WITH FLEX HAND-HELD WIRELESS REMOTE CONTROL AND SADDLES FOR TRANSIT VEHICLES, 70,000 LB. LIFT CAPACITY 21" MOVABLE POST. INCLUDES MODEL AK-ULP20-2 ADAPTER KIT. FURNISHED AND INSTALLED BY EQUIPMENT CONTRACTOR.	Y	CFCI	
8	HEAVY DUTY LIFT CONTROL PANEL FOR IN-GROUND MOD LIFT. MFG. BY ROTARY (VSG), MODEL MC235-AC WIRELESS REMOTE WITH PENDANT BACKUP. 2 EACH 5-HP MOTORS, 230 V 3PH, 3A, COMPRESSED AIR 1/2" SUPPLY @ 110-120-PSI. PROVIDE GRACO 244844 1/2" REGULATORS & 106149 1/2" FILTERS FOR AIR CONTROLS. FURNISHED AND INSTALLED BY EQUIPMENT CONTRACTOR.	Y	CFCI	
9	LUBRICATION REEL BANK - EACH BANK CONSISTS OF 2EA, GRACO MODEL 50M65B OIL REELS, ONE EACH 50M65B GEAR OIL REEL, ONE EACH 50M65B ATF, REEL ONE EACH 50L25B COMPRESSED AIR REEL AND ONE EACH 50L25B WATER REEL, 1 EACH, 247864 TRIL-FLO GEL REEL, INCLUDED: GRACO MODEL 25M413, METERS FOR MOTOR OIL REELS, MODEL 25M413, METERS FOR GEAR OIL AND ATF REELS AND 3/8" COUPLER FOR AIR REELS AND HOSE BIBB FOR THE WATER REELS. PROVIDE SHUT-OFF VALVES AND CONNECTING HOSES. FURNISHED AND INSTALLED BY EQUIPMENT CONTRACTOR.	Y	CFCI	
10	ROTARY TIRE CHANGER #R560 (MODEL RW26HW5B) 220V, 60HZ, 1PHASE. FURNISHED AND INSTALLED BY EQUIPMENT CONTRACTOR.	Y	CFCI	
11	ROTARY WHEEL BALANCER MODEL R544 PLUS PRO TRUCK 3D WITH LASER, 110V, 60HZ, 1PHASE, NEMA 5-15 AND COMPRESSED AIR. FURNISHED AND INSTALLED BY EQUIPMENT CONTRACTOR.	Y	CFCI	
12	TIRE RACK SHELVING SYSTEM. MFG BY SHURE MODEL #K_00-1/2" X 24-1/2" X 24-1/2" 2 LEVELS, ADJUSTABLE EVERY 1 1/2" UP OR DOWN THE UPRIGHT. FURNISHED AND INSTALLED BY EQUIPMENT CONTRACTOR.	Y	CFCI	
13	ALKOTA HOV/ELECTRIC PRESSURE WASHER MODEL 4308 - GPM 3.5, PSI 3000, PUMP MOTOR, 7.5-HP, 240V, 3 PHASE, 100 AMP, 4" CW SUPPLY LINES.	Y	CFCI	
14	HARVEY RHR-56 RETRACTING TAILPIPE EXHAUST HOSE REEL APPROX. 100 LBS., 3" X 24" HI-TEMP (500 F) SILICONE/FIBERGLASS FLEXIBLE RUBBER COATED HOSE, FURNISHED AND INSTALLED BY EQUIPMENT CONTRACTOR.	Y	CFCI	
15	MOBILE COOLANT DISPENSER INCLUDES GRACO MODEL 32694 (MOUNTED) FAST-FLO 1.1 PUMP FOR COOLANT WITH ADDITIONAL ACCESSORIES, AS SPECIFIED. FURNISHED AND INSTALLED BY EQUIPMENT CONTRACTOR.	Y	CFCI	
16	MOBILE GREASE DISPENSER GRACO MODEL 22573 CART-MOUNTED GREASE DISPENSER FOR 35-50 LB PALS SYSTEM INCLUDES FIREBALL 300 50:1 PUMP, 2 WHEEL HAND TRUCK, DRUM COVER, 16 GAL. PAIL, 12 FLUID MODEL, 24000 1/4" PRO-SHOT DISPENSER VALVE, 202577 Z-SWIVEL, AIR CONNECTION. FURNISHED AND INSTALLED BY EQUIPMENT CONTRACTOR.	Y	CFCI	
17	WASTE EVACUATION PUMP GRACO MODEL 24E166, 2 EACH, ONE FOR WASTE OIL & ONE FOR WASTE COOLANT. WALL MOUNTED. FURNISHED AND INSTALLED BY EQUIPMENT CONTRACTOR.	Y	CFCI	
18	WASTE EVACUATION OVERFILL ALARM PANEL, DEDICATED 110V, MODEL 200824-2 PRODUCT OVERFILL ALARM SYSTEM WITH AUTOMATIC CUT-OFF FOR WASTE OIL AND WASTE COOLANT STATIONS. FURNISHED AND INSTALLED BY EQUIPMENT CONTRACTOR.	Y	CFCI	
19	LUBE STORAGE TANK, 6 CELLS, 1 EACH 200-GAL WASTE OIL, 1 EACH 200-GAL WASTE COOLANT, 1 EACH 225-GAL 5-30 MO, 1 EACH 225-GAL 5-20 MO, 1 EACH 125-GAL GEAR OIL, 1 EACH 225-GAL ATF, FURNISHED AND INSTALLED BY EQUIPMENT CONTRACTOR.	Y	CFCI	
20	SAVOR BEALL DUPLEX AIR COMPRESSOR MODEL #X-755-120-FP (69" X 51" X 50" H) 2 EACH 10HP, 230V, 3PH, 28 FLA DUAL STARTERS, AIR COOLED AFTER COOLERS, 120-GAL. HORIZONTAL, 18" DIA. 68-HP @ 125-PSI IN LINE MOTOR. FURNISHED AND INSTALLED BY EQUIPMENT CONTRACTOR.	Y	CFCI	
21	AIR COMPRESSOR TANK MOUNTED FUSE DISCONNECTS (1) PER MOTOR	Y	CFCI	
22	NORGEN PRE FILTER MODEL #F1-400-A10A, PORT SIZE: 1 1/2" FURNISHED AND INSTALLED BY EQUIPMENT CONTRACTOR.	Y	CFCI	
23	GREAT LAKES AIR DRYER MODEL #EF-100A, WALL MOUNTED APPROX. 250 LBS., 120V 1 PHASE, 5/8-HP. FURNISHED AND INSTALLED BY EQUIPMENT CONTRACTOR.	Y	CFCI	
24	NORGEN POST FILTER MODEL #F6-AD-A00A, PORT SIZE: 1-1/4", FURNISHED AND INSTALLED BY EQUIPMENT CONTRACTOR.	Y	CFCI	
25	FLOOR SINK BY G.C. MUST DRAIN TO OIL/SAND SEPARATOR	Y	CFCI	
26	NOT USED			
27	AIR DROPS CONSISTING OF GRACO, 244844 1/2" REGULATOR, 106149 1/2" FILTER, 244848 1/2" LUBRICATOR, PREVOST US081202 3/8" COUPLER, US111204 1/2" COUPLER, SHUT OFF VALVES	Y	CFCI	
28	JUST-RITE EX FLAMMABLE SAFETY CABINET, MODEL #84520 (YELLOW) CAP. 45 GALLONS, 2 ADJUSTABLE SHELVES, 2 SELF-CLOSE DOORS (45"W X 18"D X 65"H) 18 GA. CR STEEL CONSTRUCTION, FURNISHED AND INSTALLED BY EQUIPMENT CONTRACTOR.	Y	CFCI	
29	FILTER CRUISER OBERG MODEL P-100WM, 115V, 15A, INCLUDE CS-100 FLOOR STAND, PLE MODEL 80895 16-GAL OIL DRUM FOR DRAINAGE COLLECTION, 80896 DRUM COVER AND GRACO 203622 PORTABLE DOLLY BASE FOR DRUM. FURNISHED AND INSTALLED BY EQUIPMENT CONTRACTOR.	Y	CFCI	
30	EYEWASH			
31	GRANDER BLOW, 3PH, 2.6A AND MODEL GA16 PEDESTAL. FURNISHED AND INSTALLED BY EQUIPMENT CONTRACTOR.	Y	CFCI	
32	13" WORKBENCH BY SHURE MFG. MODEL RD-367-61 WITH LED LIGHTS & POWER STRIPS, 120V, 1PH, POWER FOR 12 OUTLETS. FURNISHED AND INSTALLED BY EQUIPMENT CONTRACTOR.	Y	CFCI	
33	WASTE OIL KING GRACO MODEL 238866 AND HGFE ADAPTER COUPLER. FURNISHED AND INSTALLED BY EQUIPMENT CONTRACTOR.	Y	CFCI	
34	WASTE COOLANT KING GRACO MODEL 248632 AND H4F4 ADAPTER AND COUPLER. FURNISHED AND INSTALLED BY EQUIPMENT CONTRACTOR.	Y	CFCI	
35	BOROUGHES CABINET (36"W X 24"D X 8" 3/4") MODEL #B7 2 EACH, 6" DRAWERS WITH 25 COMPARTMENTS, 4 EACH 9" DRAWERS WITH 20 COMPARTMENTS, 5 SHELVES (TWO ADJUSTABLE), LOCKING UPPER 1/2" DOORS, BLUE WITH GREY SHELVES AND POSTS. FURNISHED AND INSTALLED BY EQUIPMENT CONTRACTOR.	Y	CFCI	
36	BOROUGHES (48" X 18" X 7" 3/4") MODEL #HS, SEVEN SHELVES (FIVE ADJUSTABLE) AND TWO BIN FRONTS, BLUE WITH GREY SHELVES AND POSTS, FURNISHED AND INSTALLED BY EQUIPMENT CONTRACTOR.	Y	CFCI	
37	JET FLOOR DRILL PRESS MODEL #J-2500 (26" X 14" X 64") 3/4HP, 115V, 1 HP, 14 SPEEDS, TABLE TILTS 45 DEGREES, 5/8" DRILL HUCK AND ARBOR. FURNISHED AND INSTALLED BY EQUIPMENT CONTRACTOR.	Y	CFCI	
38	CHOP SAW - MAKITA 14" CUT-OFF SAW, MODEL LU1401, 12V, 1HP 15A MOTOR, 3800-RPM, PROVIDE STAND. FURNISHED AND INSTALLED BY EQUIPMENT CONTRACTOR.	Y	CFCI	
39	ROTARY MOBILE COLUMN LIFTS, MODEL MCHM4191000K, SET OF 4, 75,200-LB TOTAL LIFT CAPACITY, WIRELESS HAND-HELD REMOTE CONTROL, PLUS OPERATIONS AT ANY COLUMN, REDFIRE WIRELESS TECHNOLOGY, BATTERY POWERED WITH INTERNAL CHARGING SYSTEM, LOWER TO LOCK LIGHT AND DIGITAL WEIGHT GAUGE. FURNISHED AND INSTALLED BY EQUIPMENT CONTRACTOR.	Y	CFCI	
40	GRACO MODEL 225852 FIREBALL 100 5:1 PUMPS FOR MO, GO AND ATF, INCLUDE MODEL 203688 LOW-OIL CUT-OFF, 237893 THERMAL RELIEF VALVE AND 100072 REGULATOR AND GAUGE.	Y	CFCI	
41	GRACO MODEL 106149 1/2" AIR FILTER, 214848 1/2" LUBRICATOR AND 244844 1/2" REGULATOR AND GAUGE FOR MAIN AIR SUPPLY TO PUMPS.	Y	CFCI	
42				



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ISSUE No.	DATE	DESCRIPTION	REVISION No.	DATE	DESCRIPTION

**RUHNA CLARKE**

3775 TENTH STREET, REVERDE CALIFORNIA 92508 (951) 684-4664 / 5753 PALMER WAY, SUITE C, CARLSBAD CALIFORNIA 92010 (619) 438-3899

FLOOR PLAN 1

**MOUNT TRANSIT MAINTENANCE FACILITY**

**EQUIPMENT PLAN**

**A1-1.3**

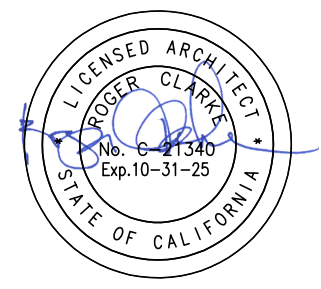
170 BUSINESS CENTER DR. BIG BEAR LAKE, CA  
BIG BEAR LAKE

MOUNT TRANSIT MAINTENANCE FACILITY - PHASE 1 - 100% CD







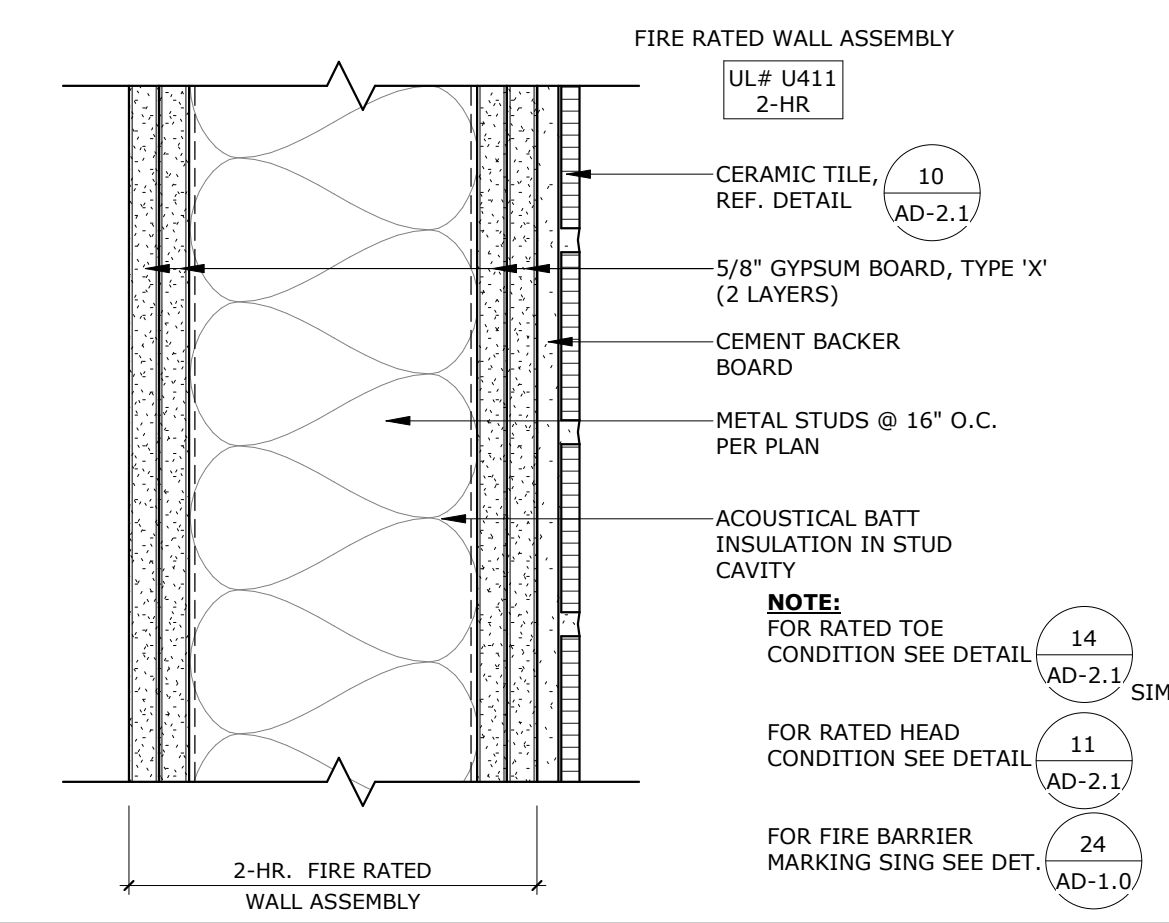


AGENCY APPROVAL

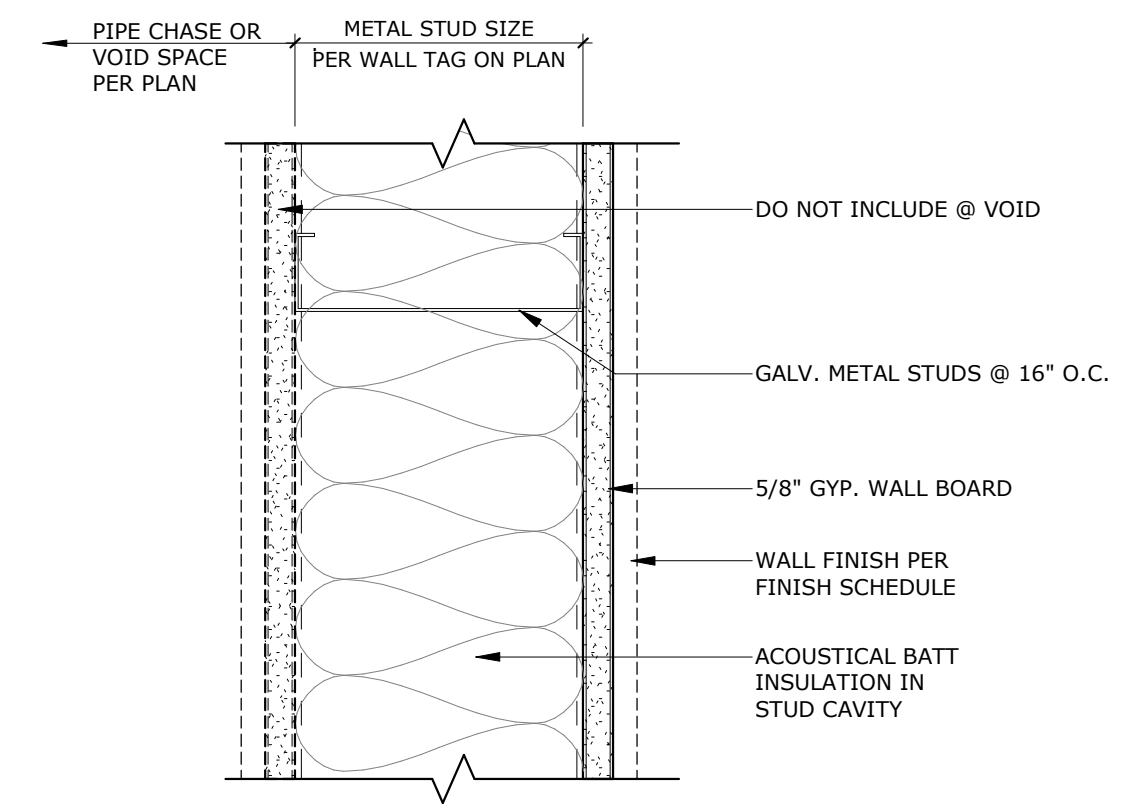
**RUHNAU  
CLARKE**  
ARCHITECTS

STAMPS

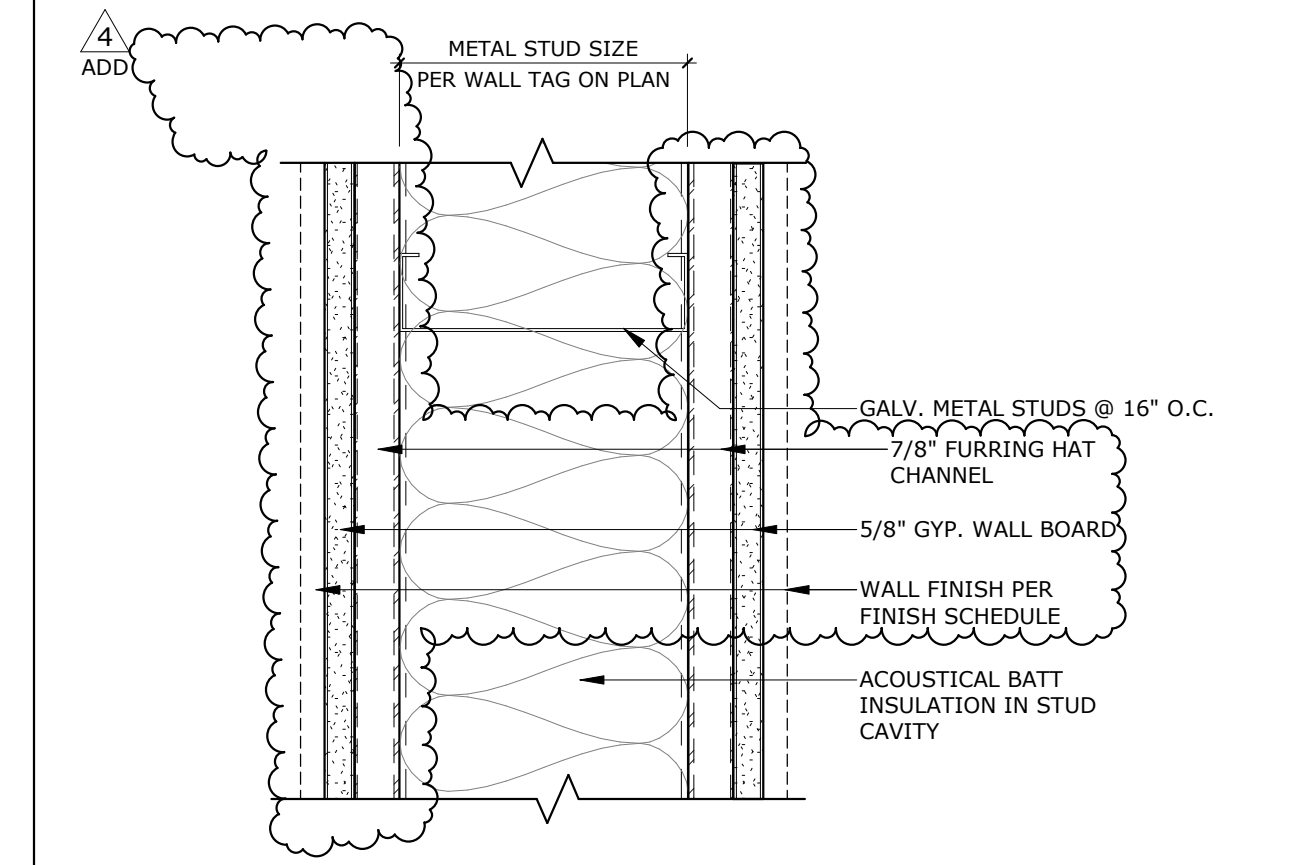
CONSULTANT BRANDING



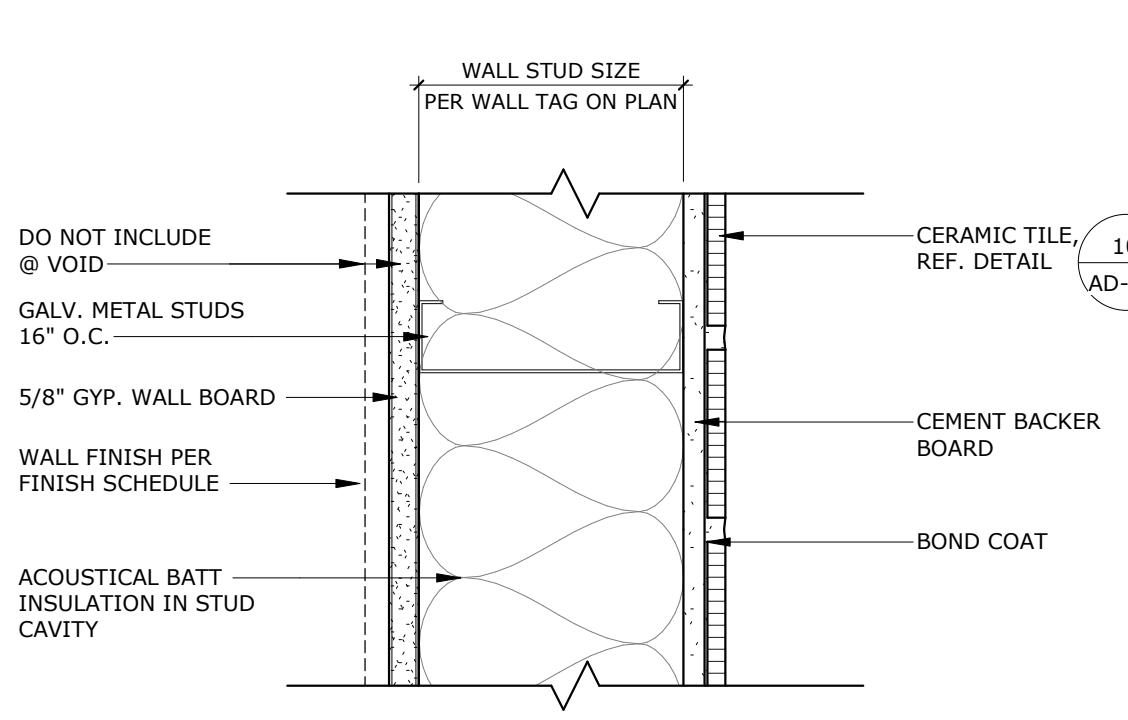
**WALL TYPE D2** SCALE: 3" = 1'-0" REF.: /



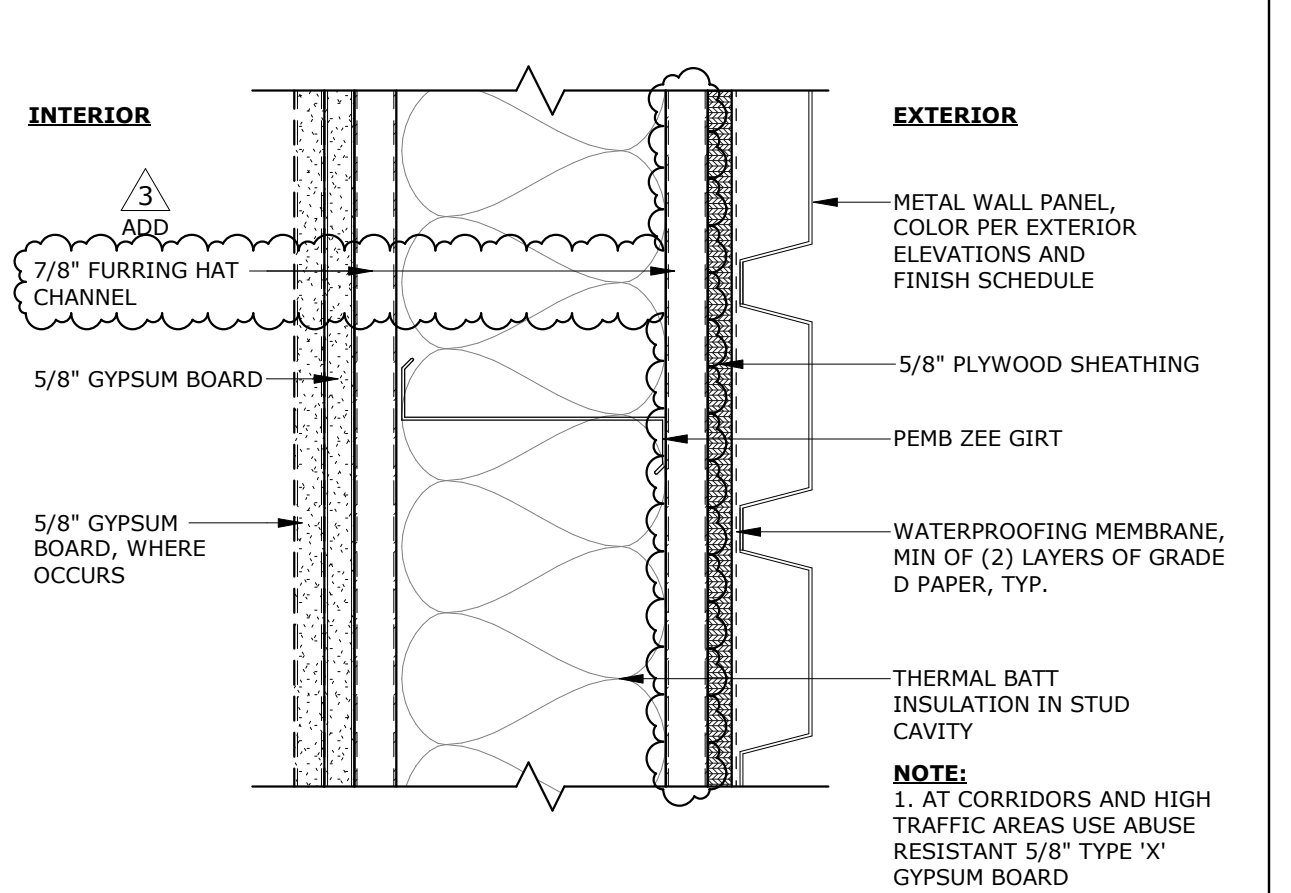
**WALL TYPE - B1** SCALE: 3" = 1'-0" REF.: /



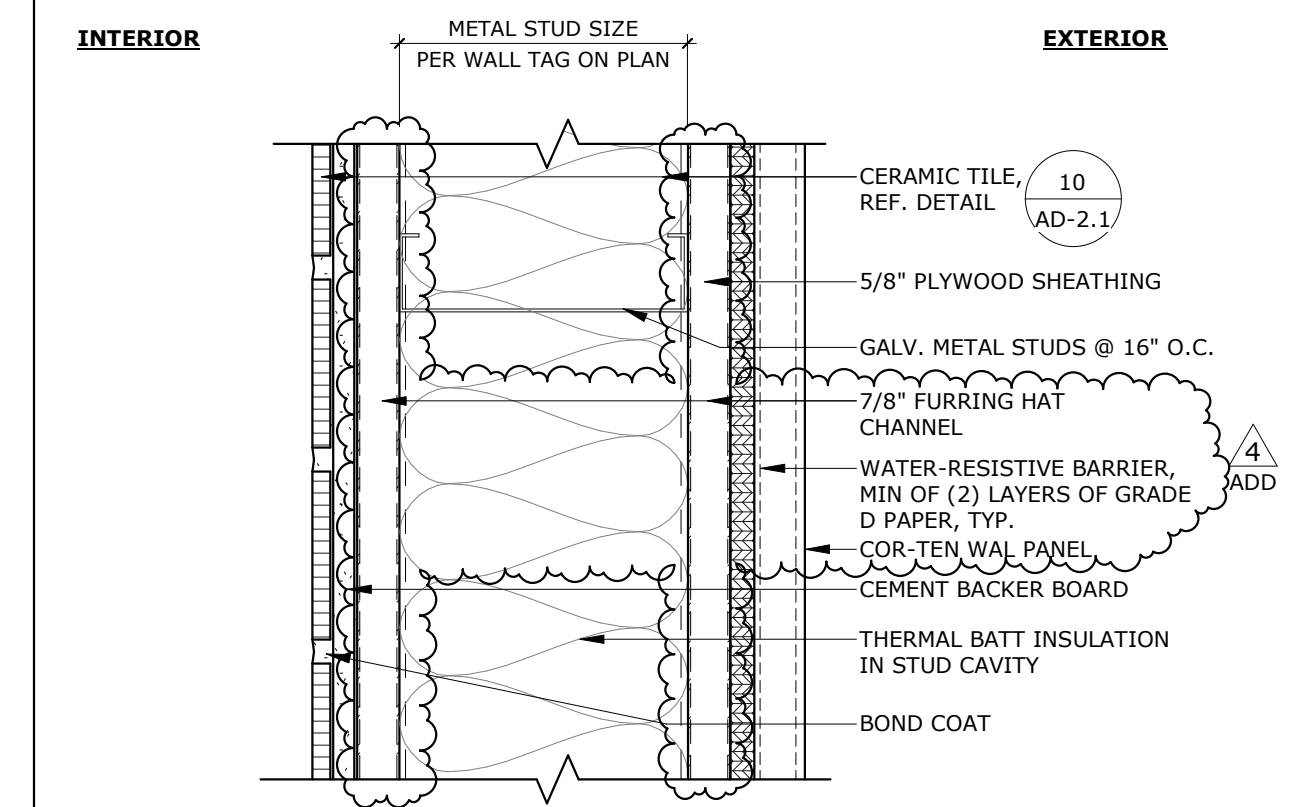
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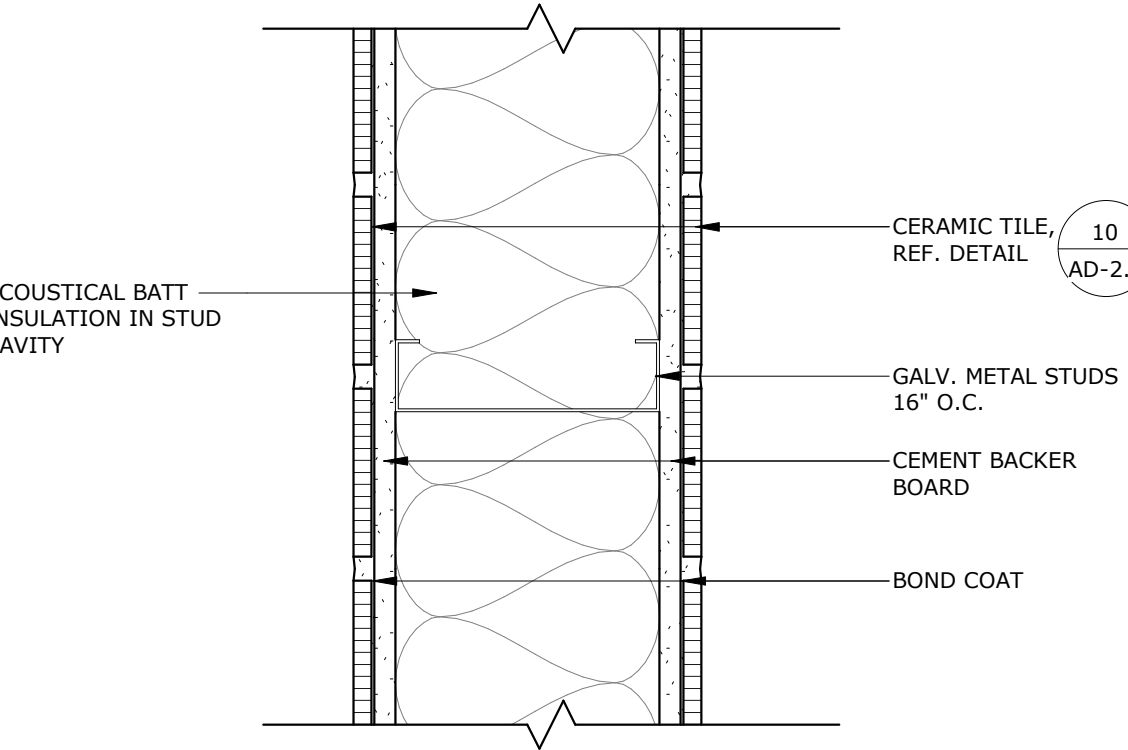
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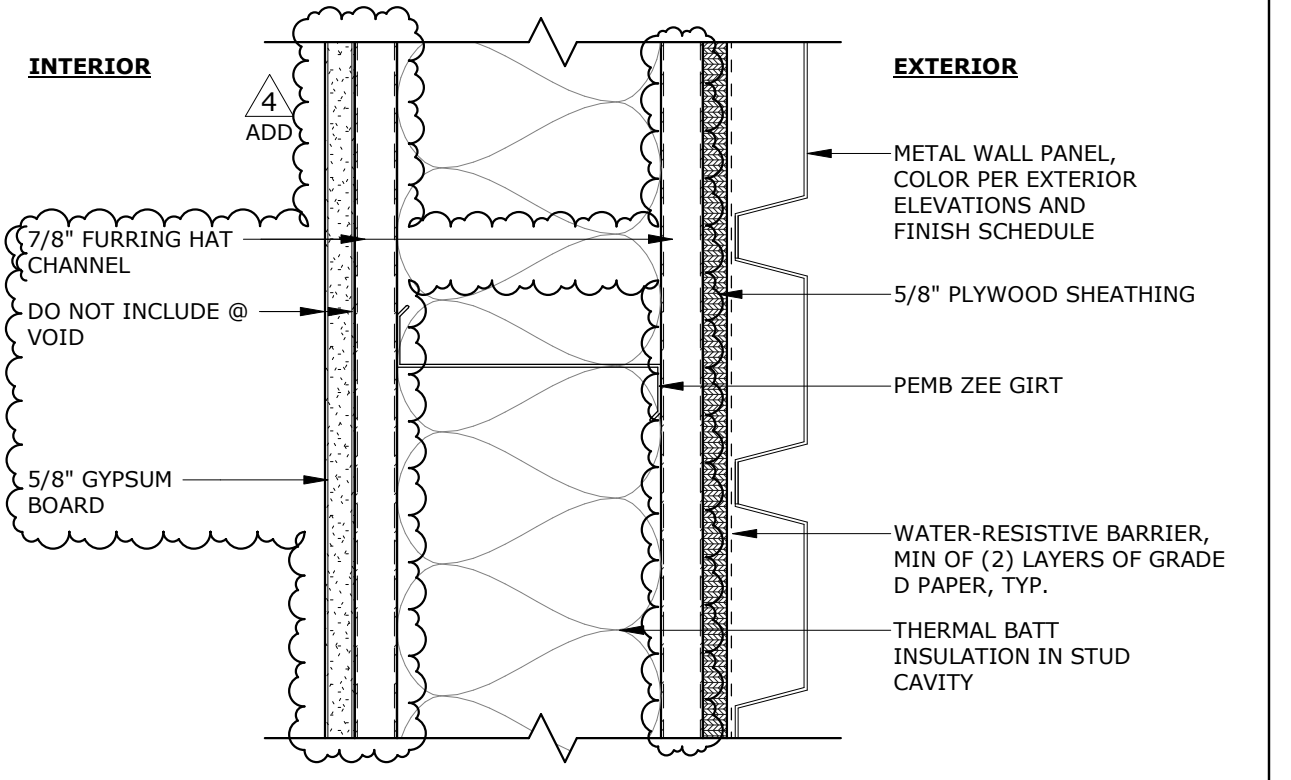
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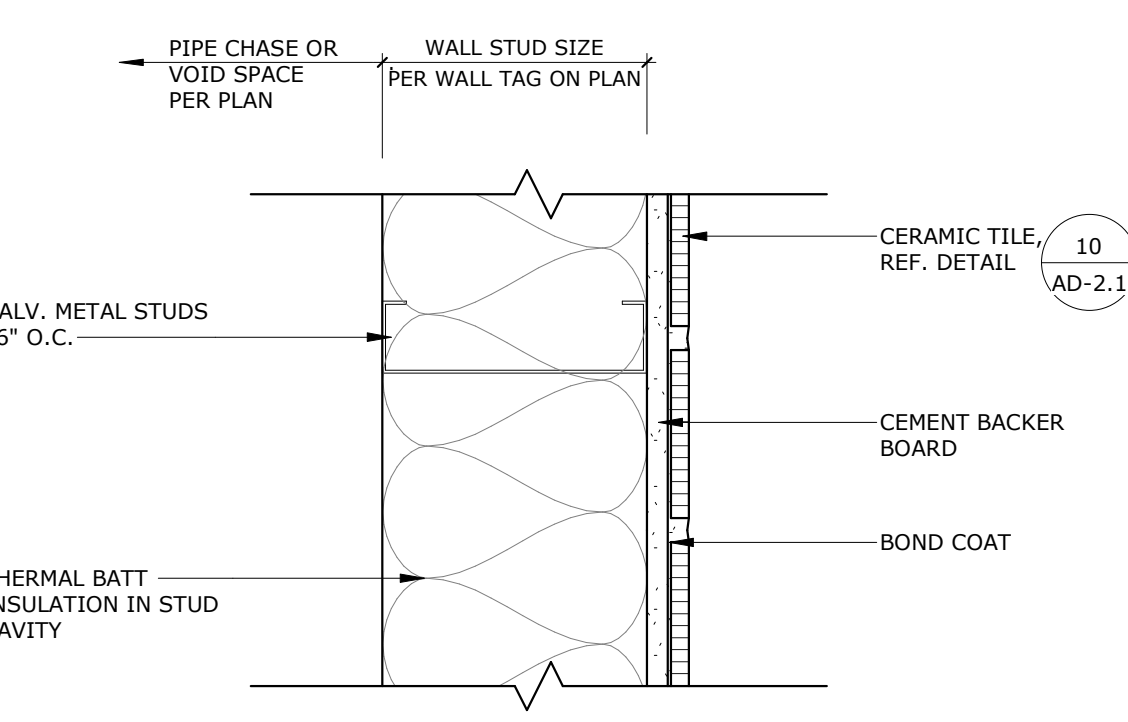
**WALL TYPE - B2** SCALE: 3" = 1'-0" REF.: /



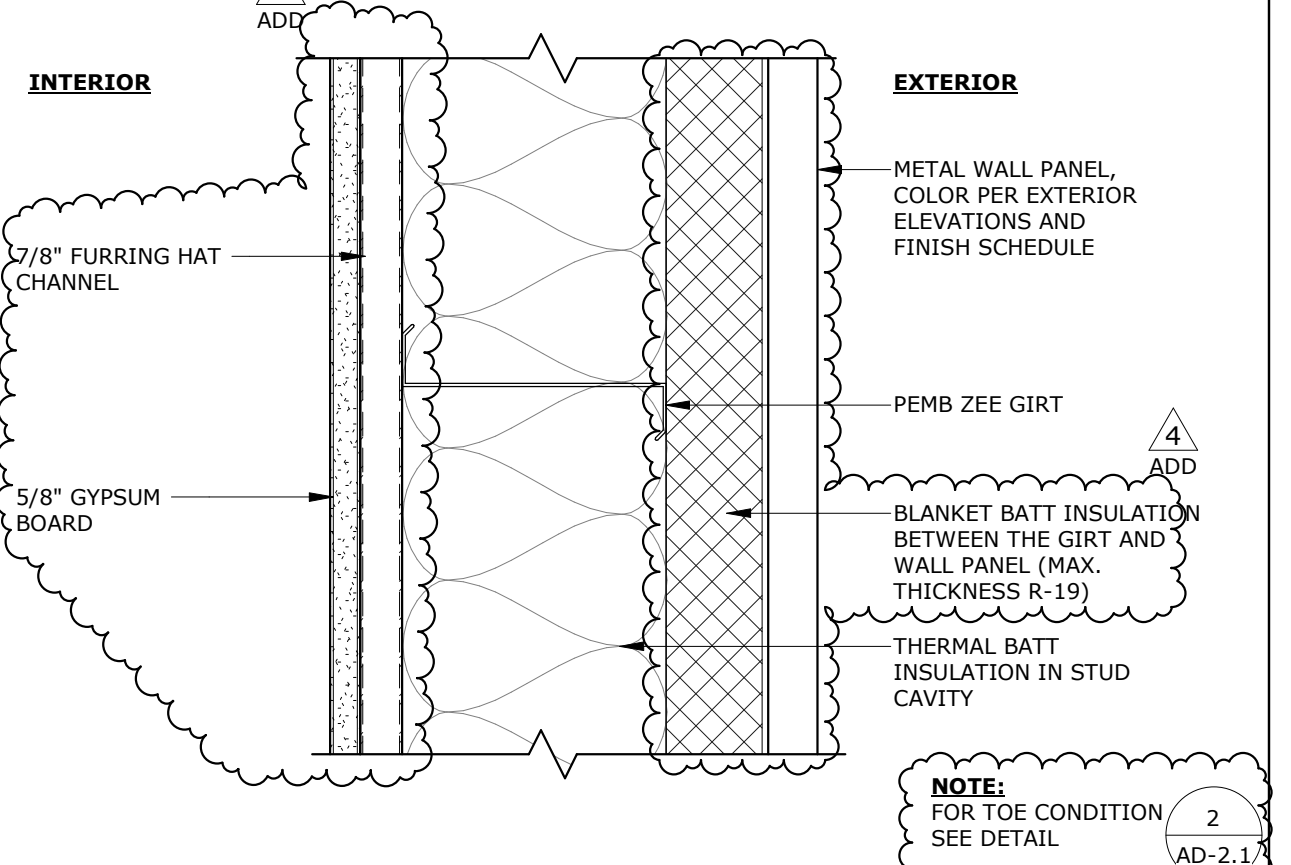
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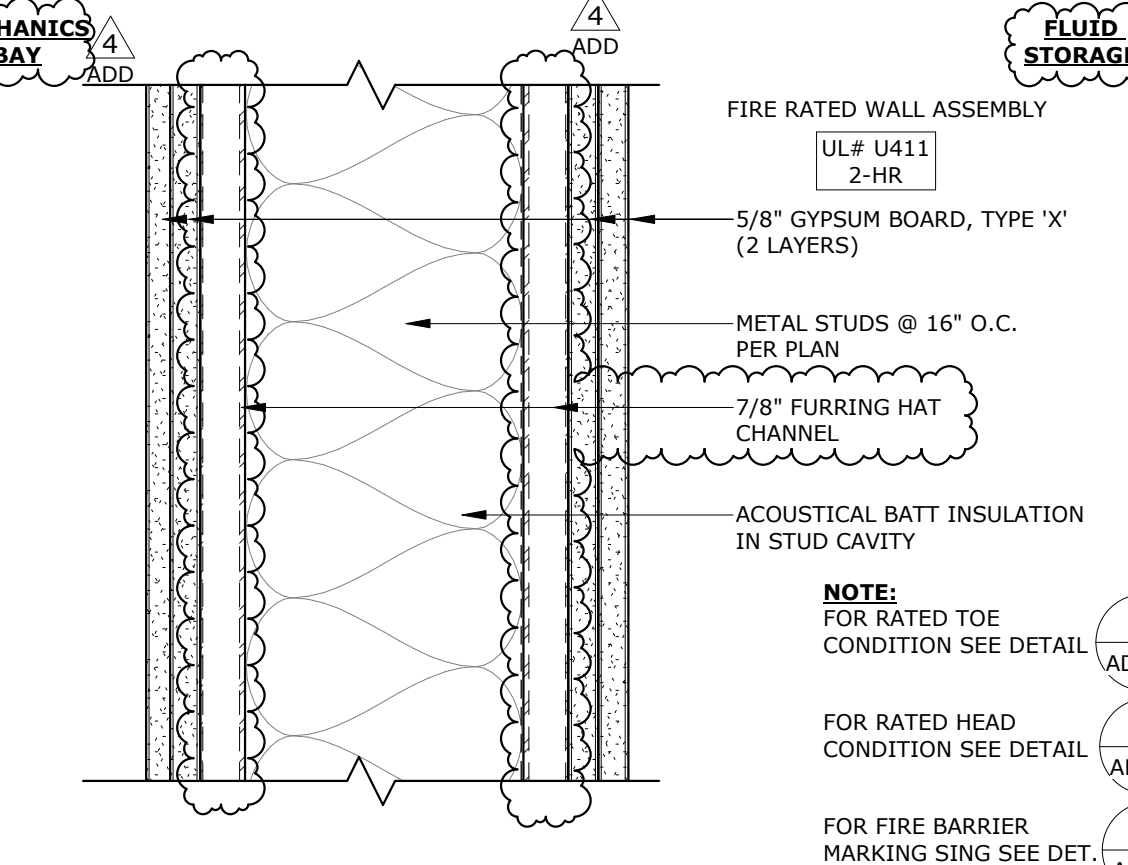
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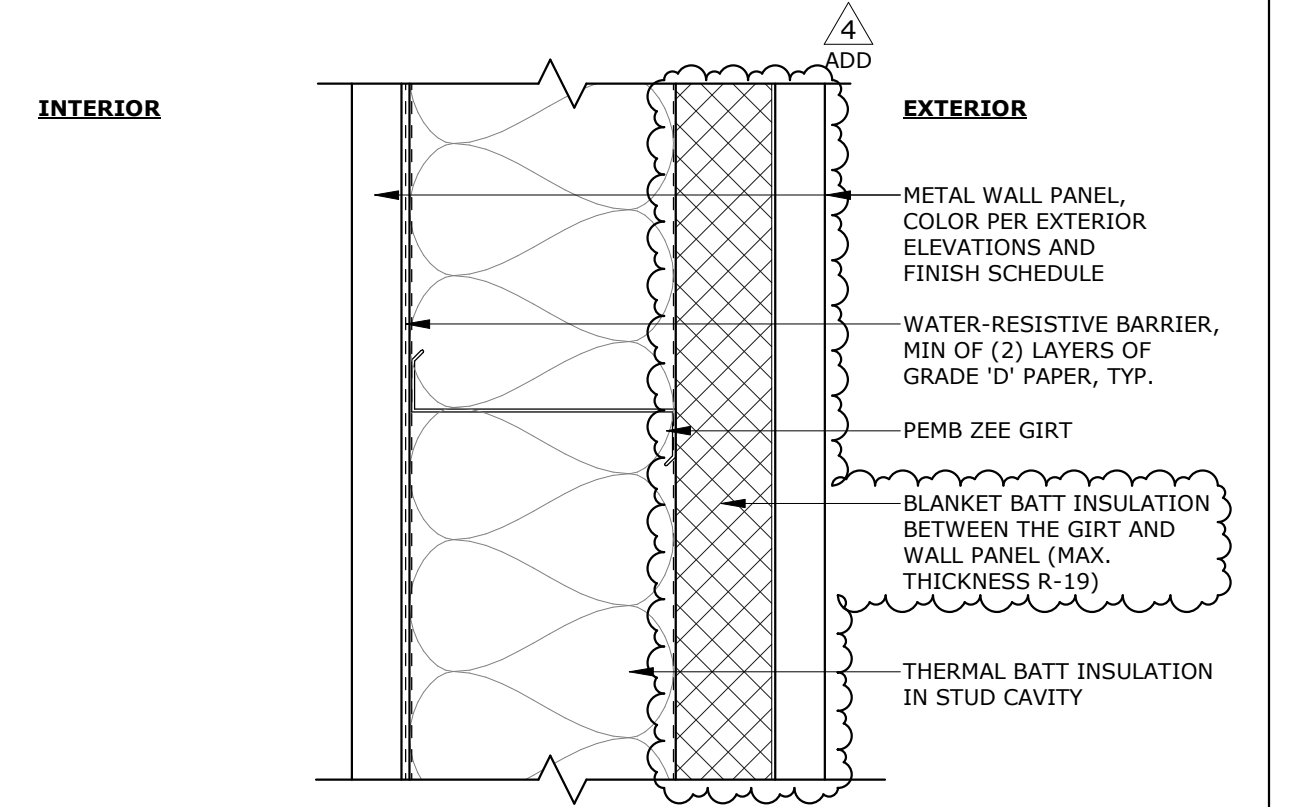
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**WALL TYPE A3** SCALE: 3" = 1'-0" REF.: /



**WALL TYPE D1** SCALE: 3" = 1'-0" REF.: /



**WALL TYPE A4** SCALE: 3" = 1'-0" REF.: /

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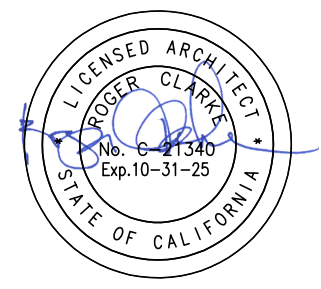
**RUHNAUCLARKE.COM**

**MOUNT TRANSIT MAINTENANCE FACILITY**  
170 BUSINESS CENTER DR. BIG BEAR LAKE, CA  
BIG BEAR LAKE

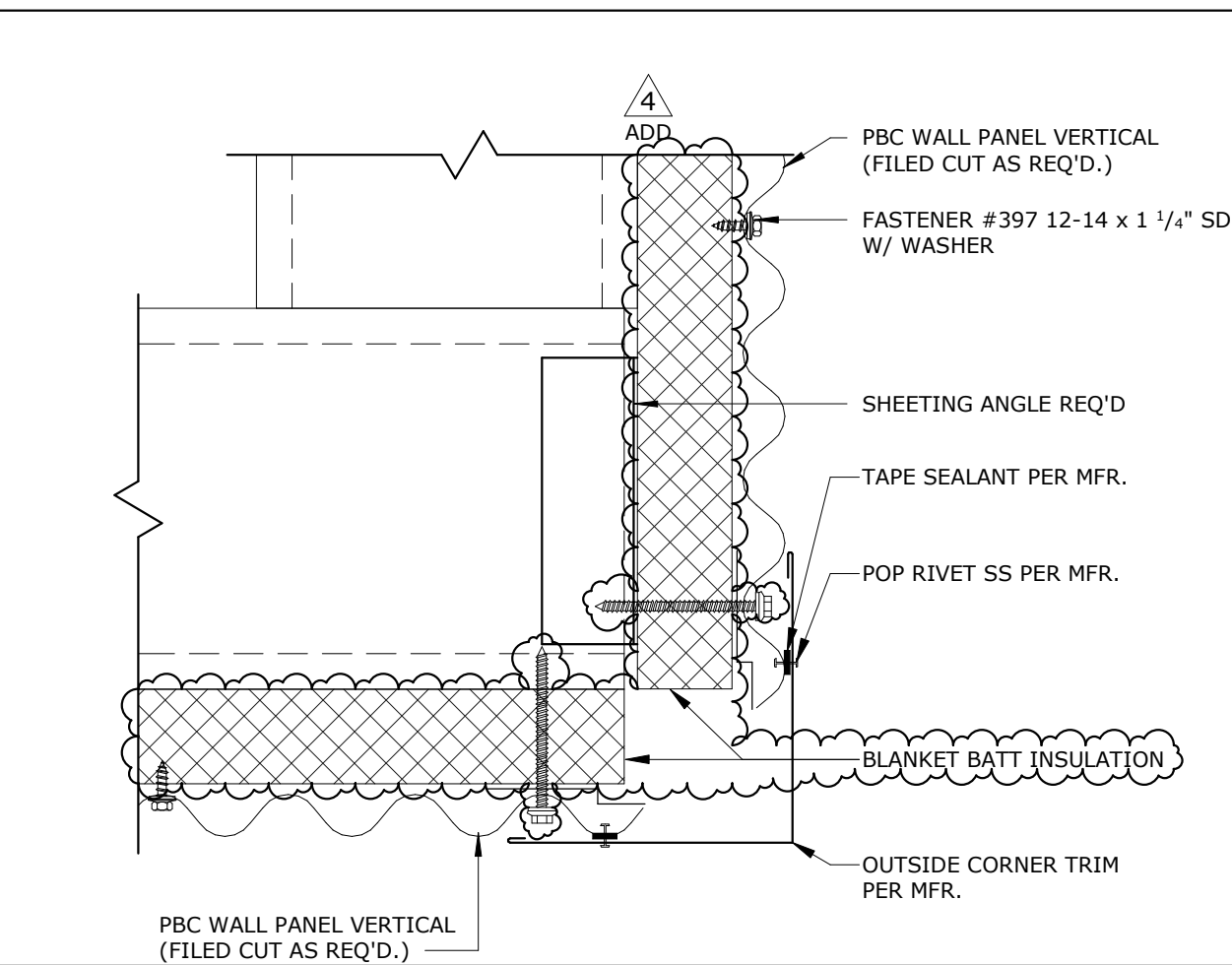
**DETAILS  
WALL TYPES**  
**AD-2.0**

MOUNT TRANSIT MAINTENANCE FACILITY - PHASE 1 - 100% CD

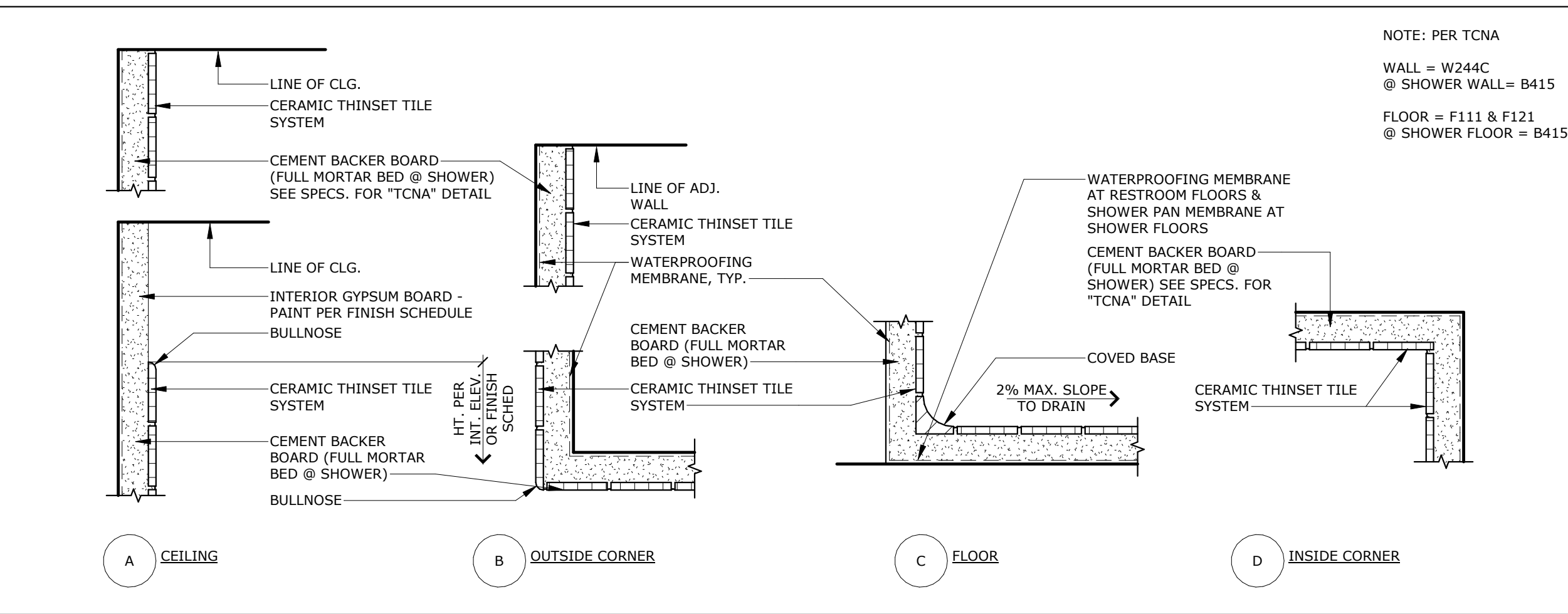




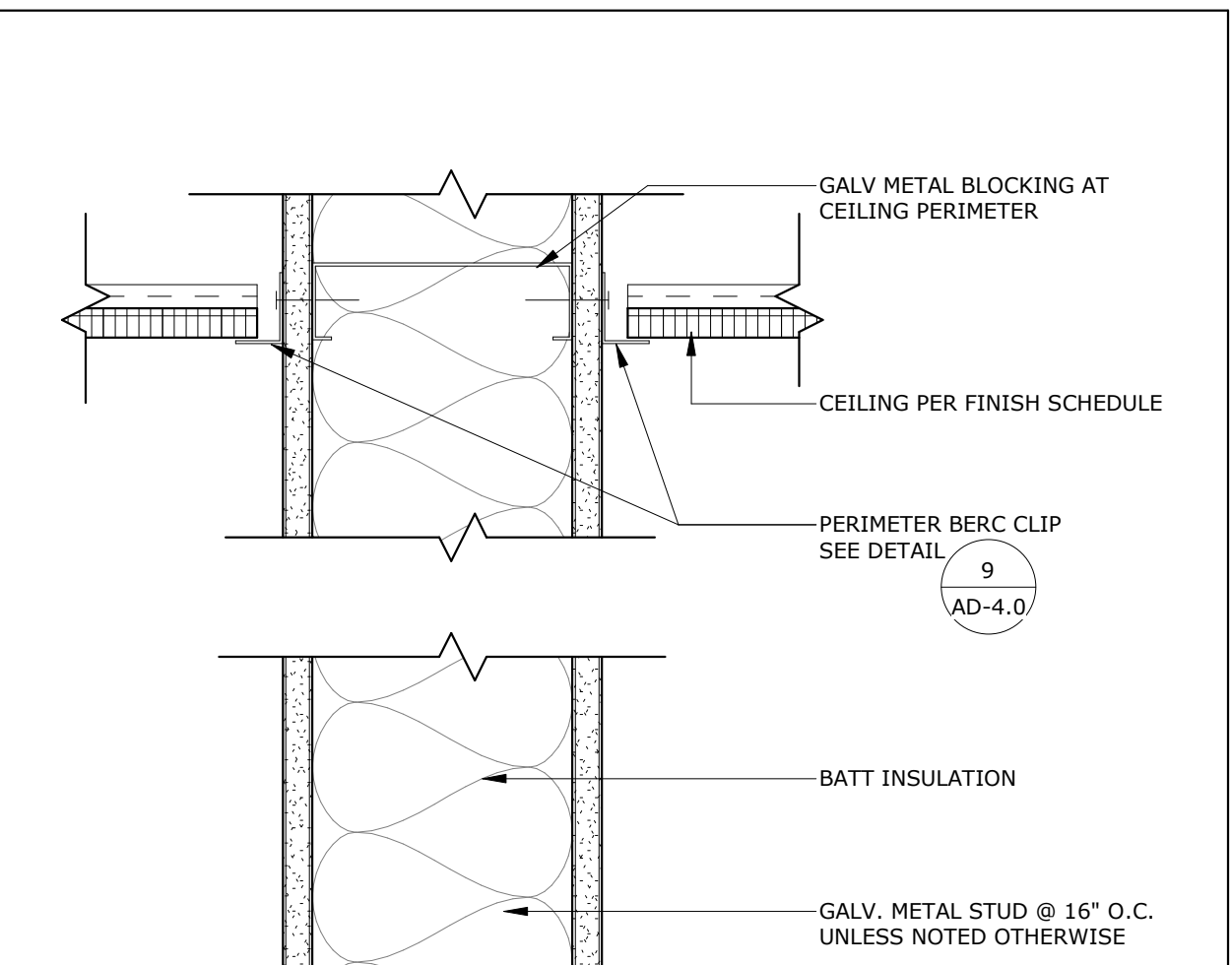
**RUHNAU  
CLARKE  
ARCHITECTS**



**OUTSIDE CORNER @ V. MWP** SCALE: 3\"/>



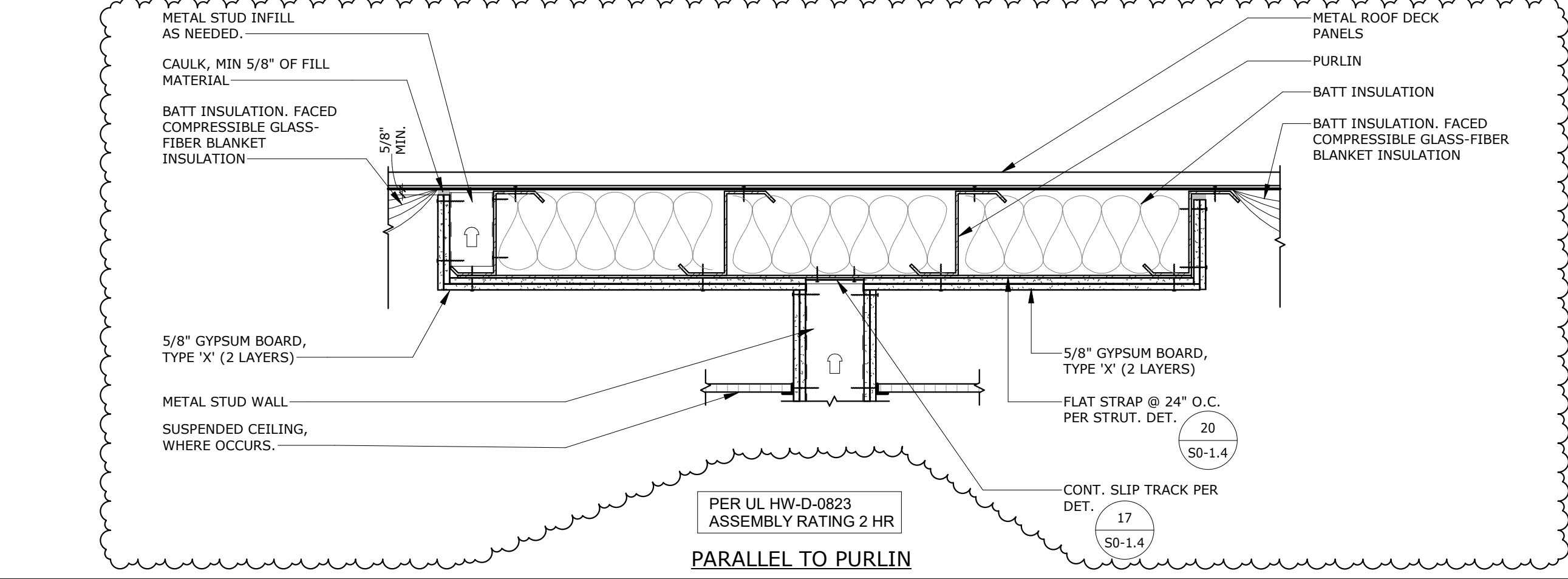
**CERAMIC TILE DETAILS** SCALE: 3\"/>



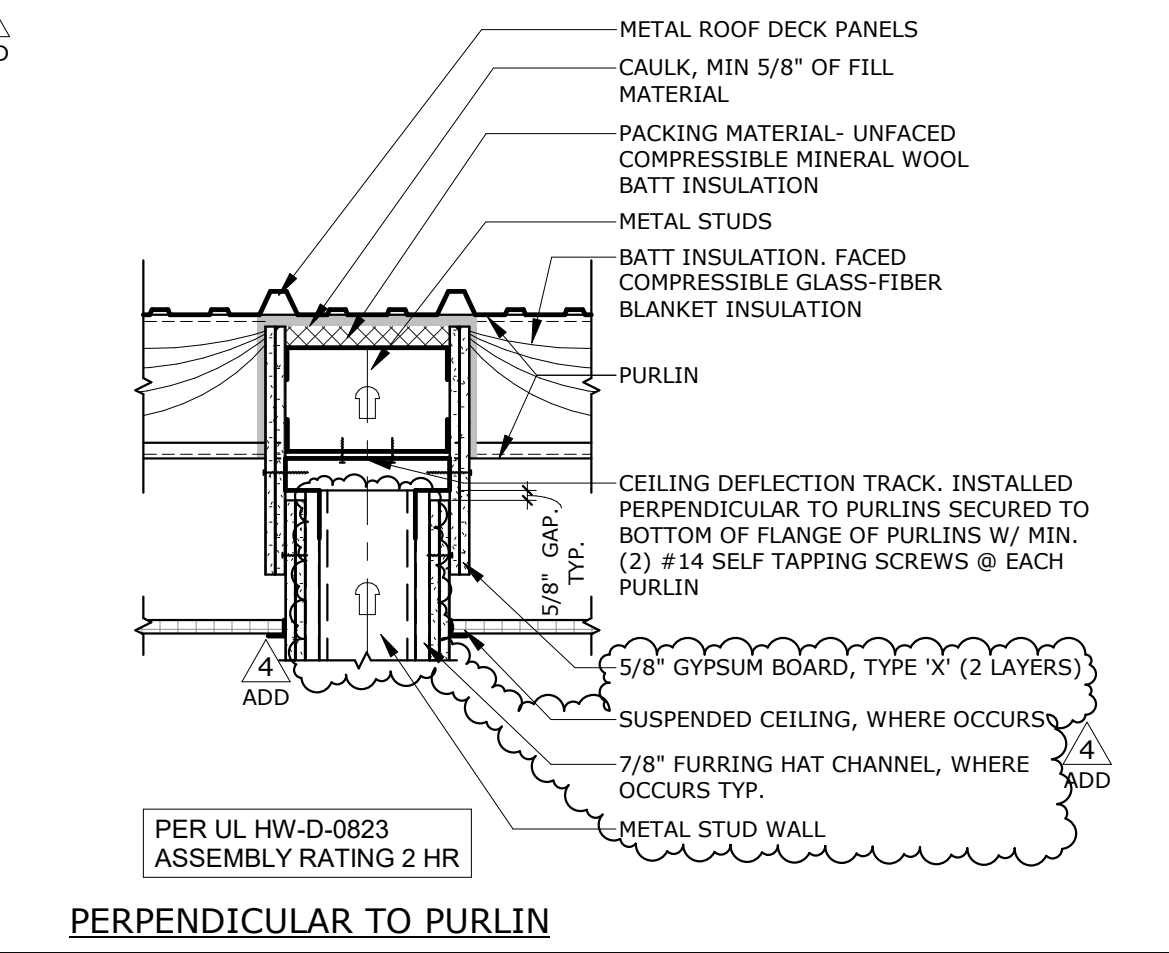
**TYPICAL INTERIOR WALL** SCALE: 3\"/>



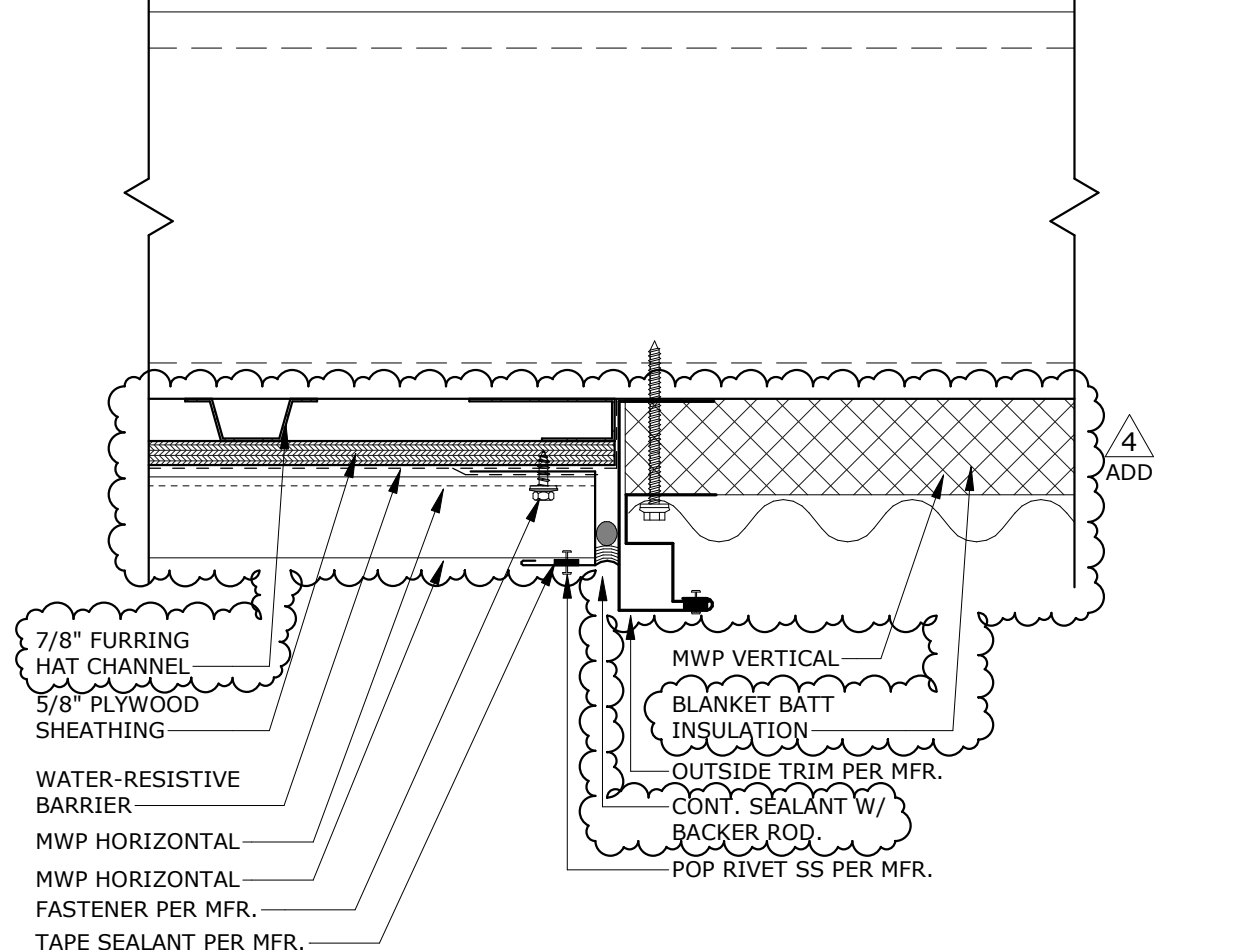
**MWP PENETRATION DETAIL** SCALE: 1/2\"/>



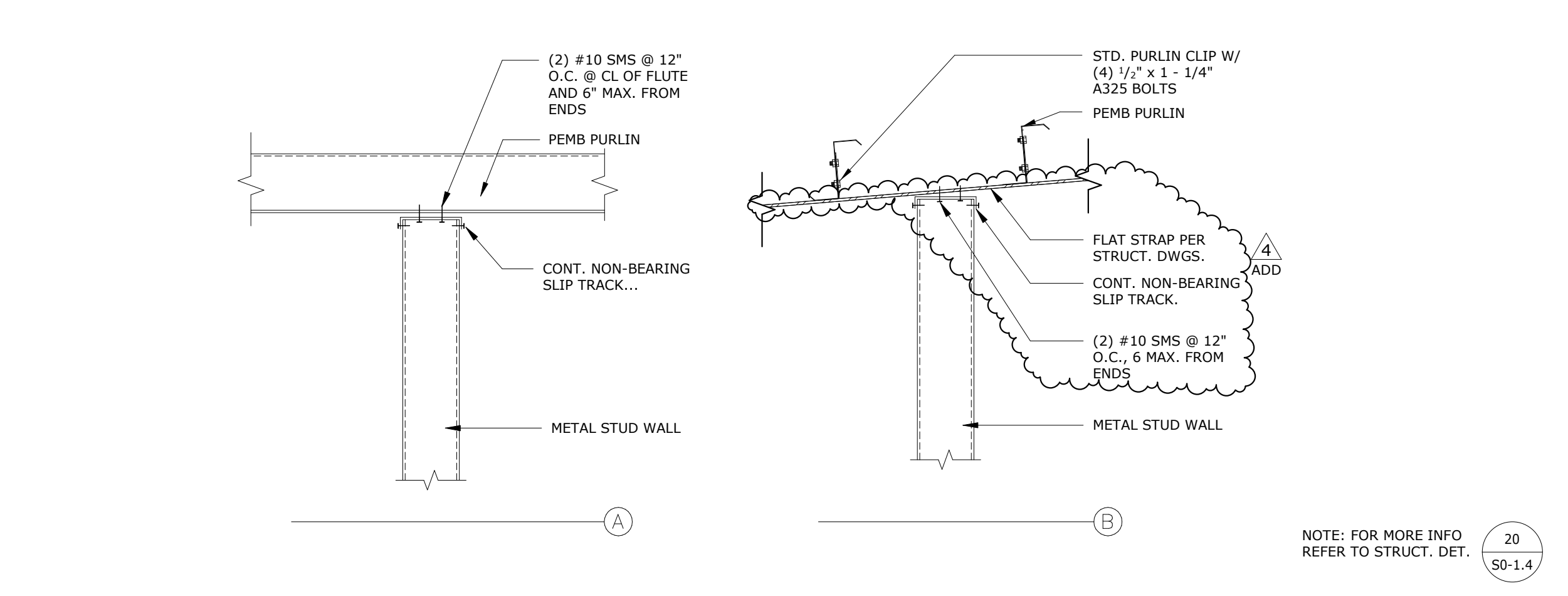
**PARALLEL TO PURLIN** SCALE: 3\"/>



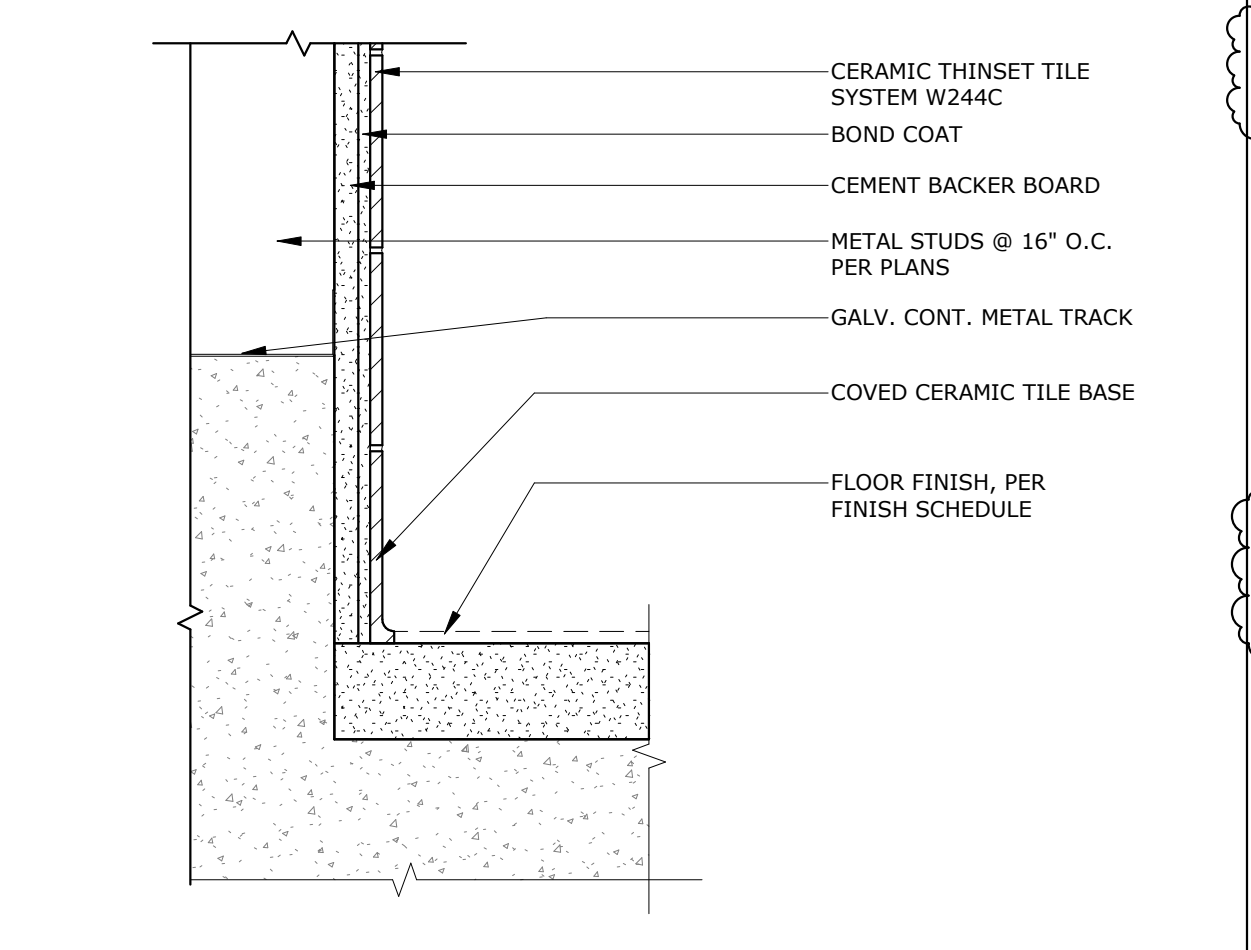
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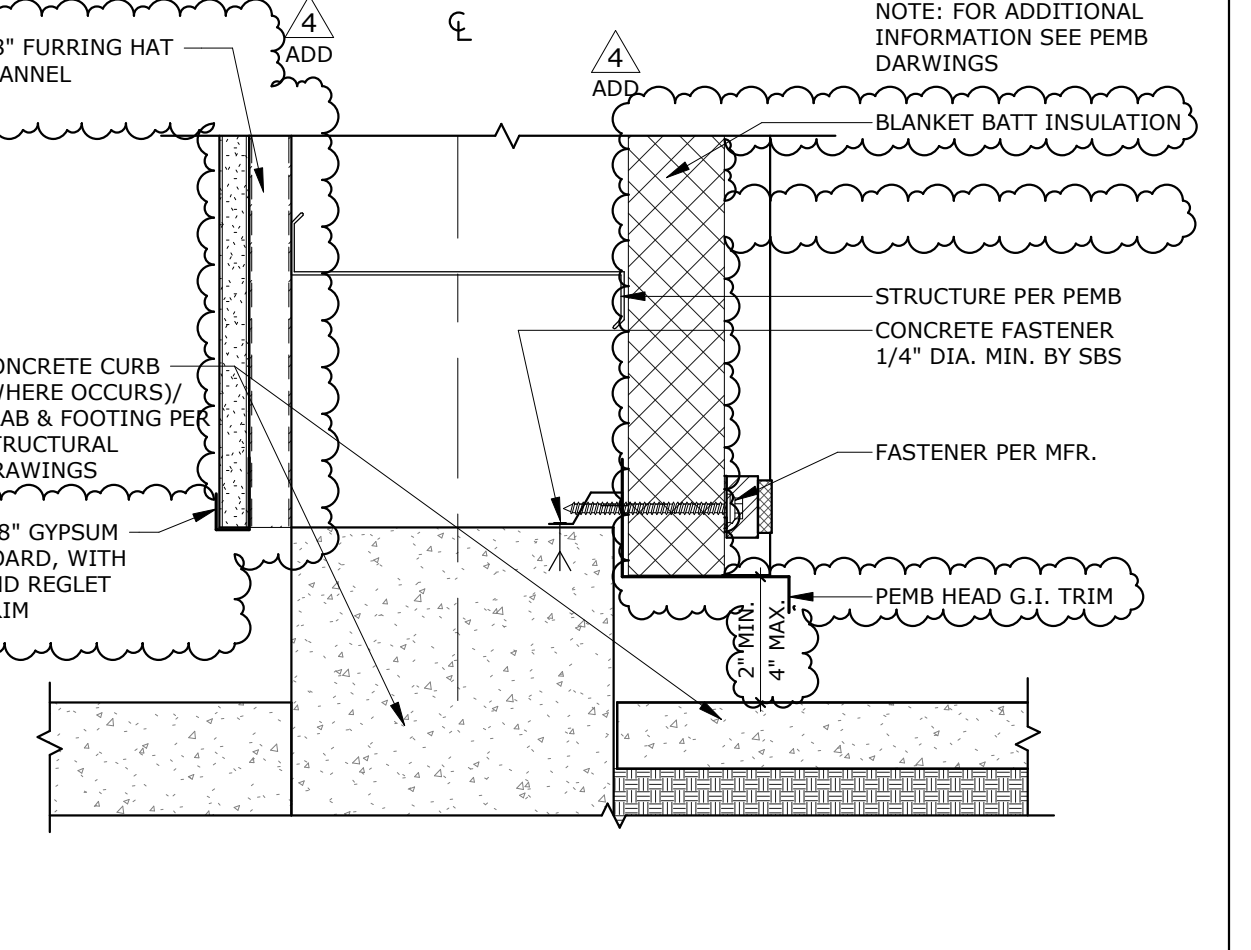
**PANEL TRANSITION @ H. & V.** SCALE: 3\"/>



**INTERIOR FIRE RATED WALL DETAIL** SCALE: 1\"/>



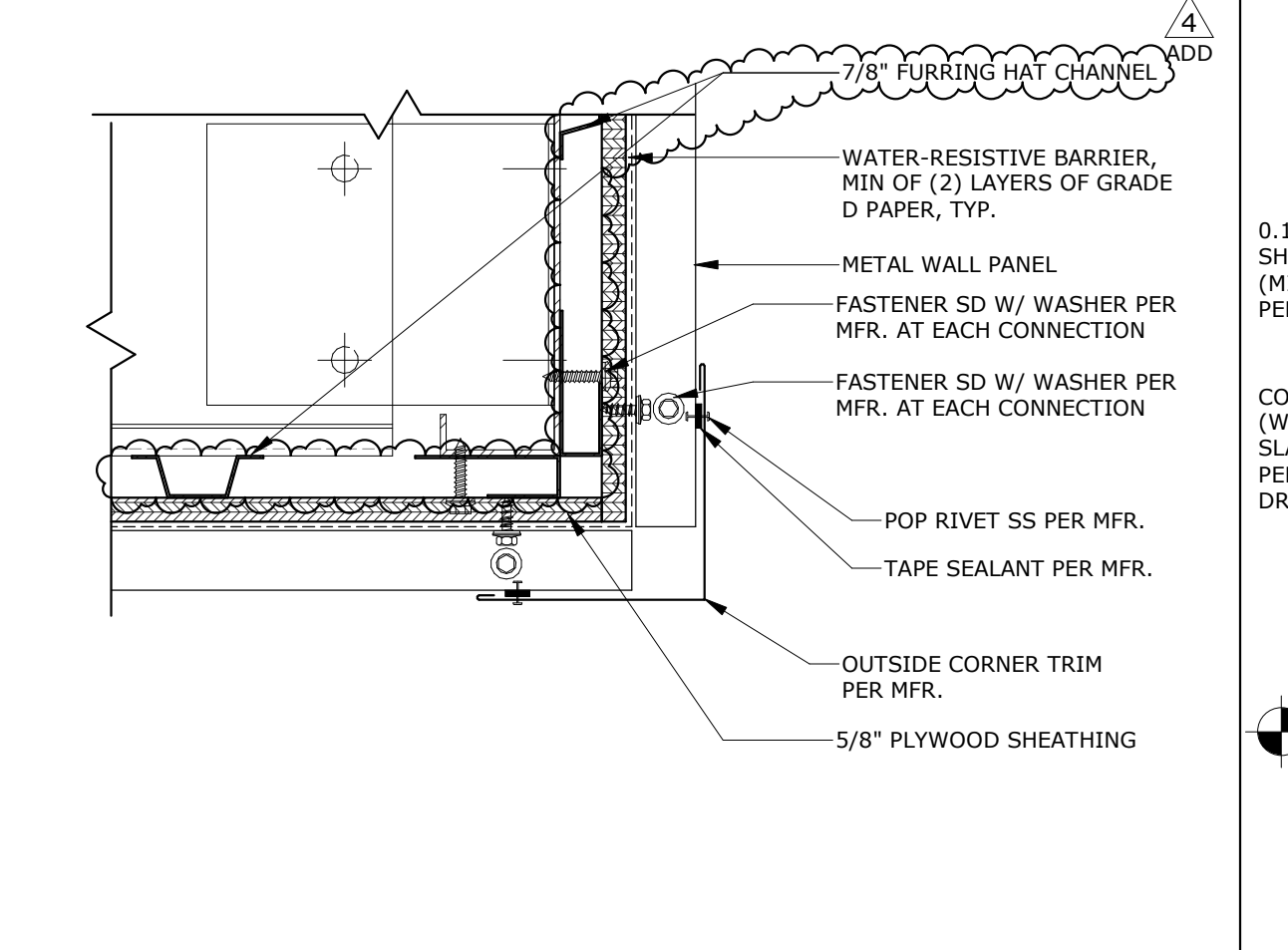
**CURB WALL DETAIL** SCALE: 3\"/>



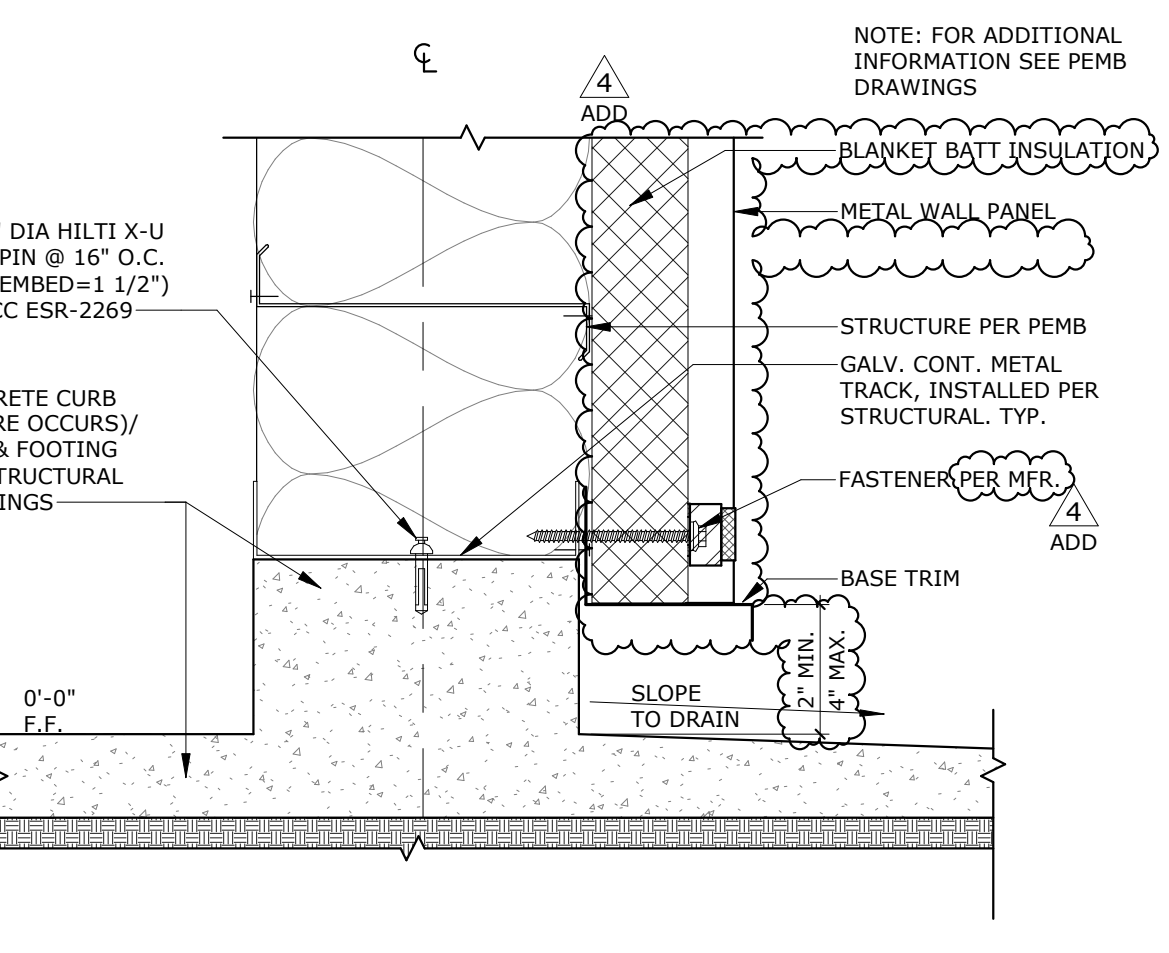
**METAL WALL @ CURB-VERT.** SCALE: 3\"/>



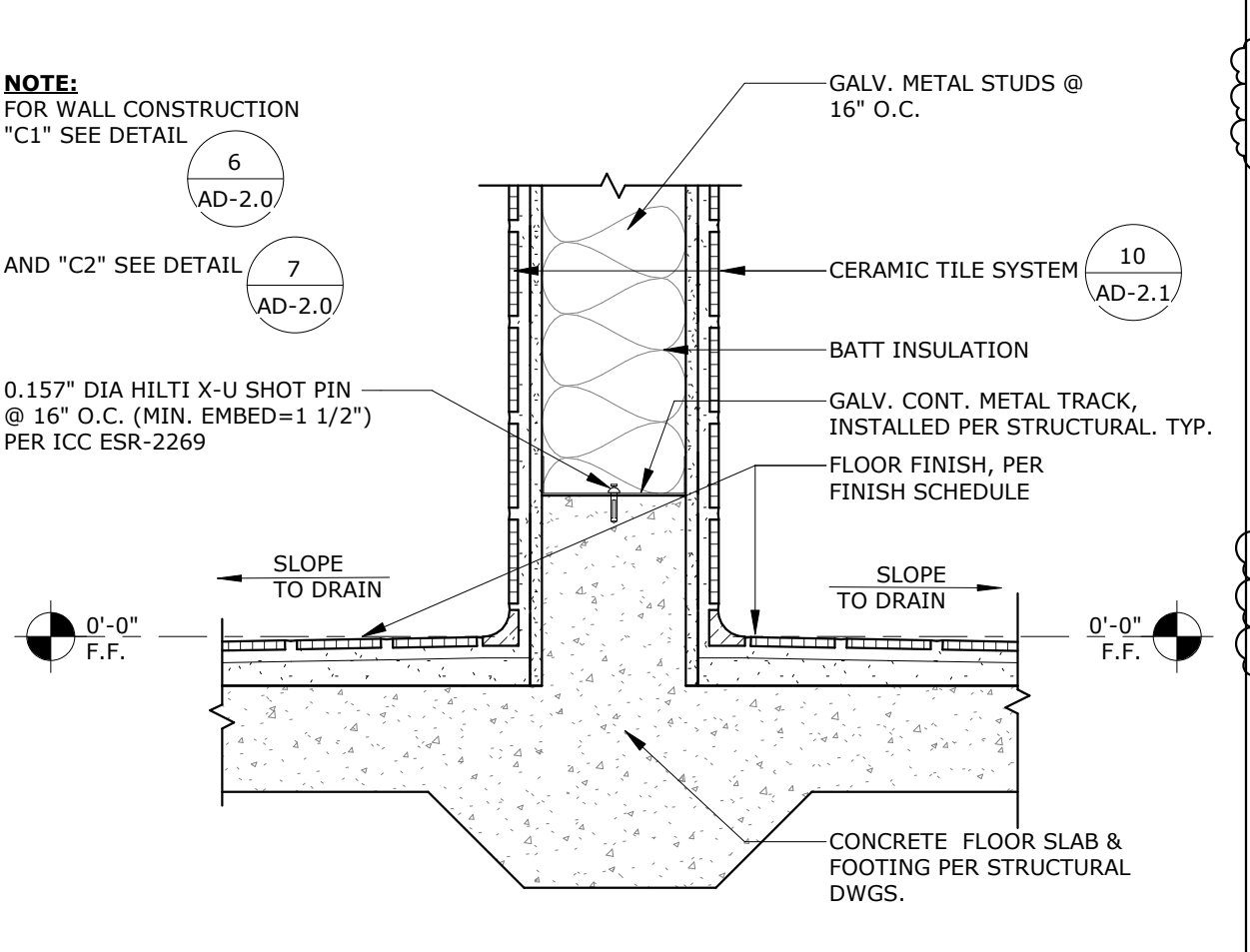
**OUTSIDE CORNER @ H. MWP** SCALE: 3\"/>



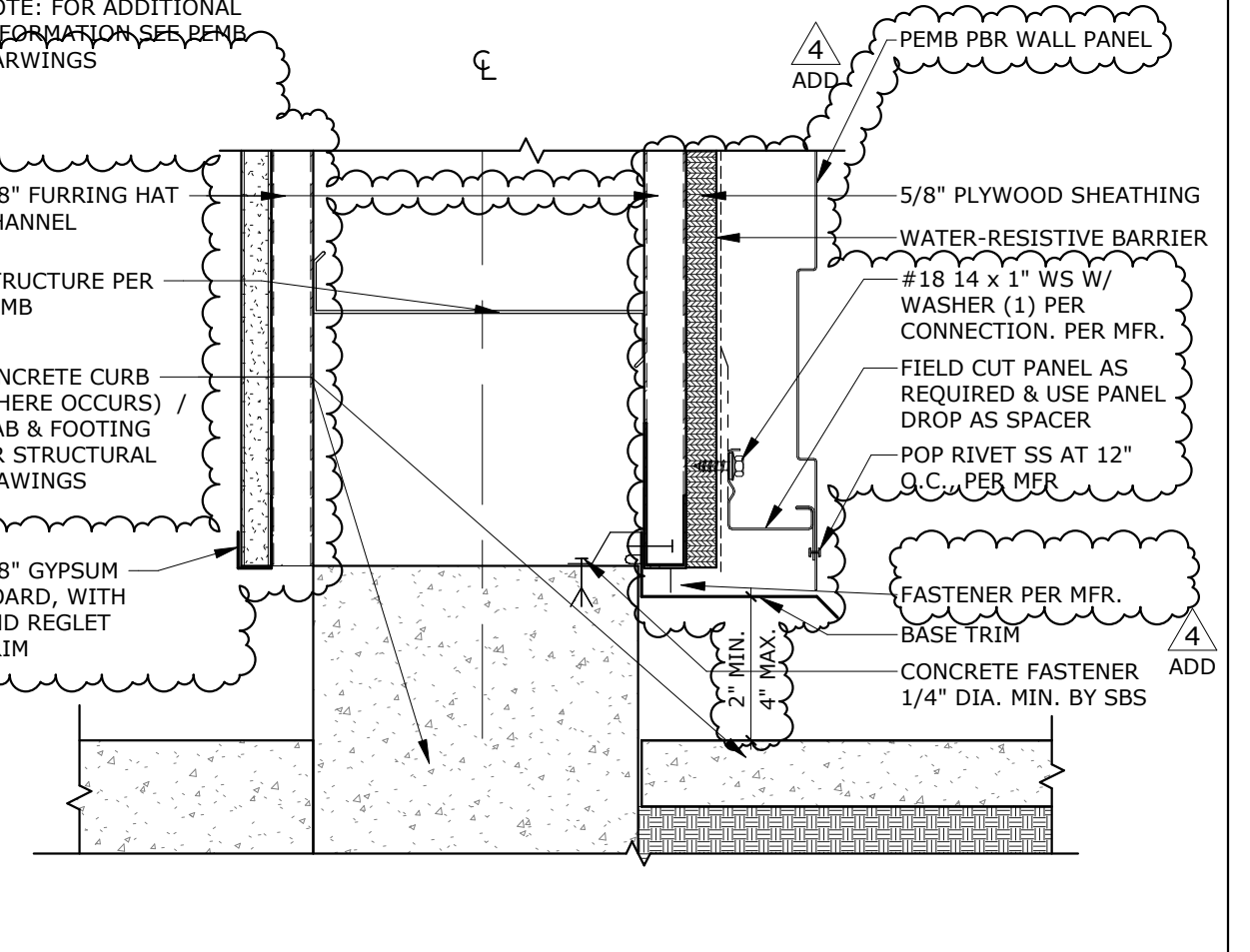
**NON-BEARING MTL STUD PART. TOP (FULL HEIGHT WALL)** SCALE: 3/4\"/>



**EXT. METAL WALL** SCALE: 3\"/>



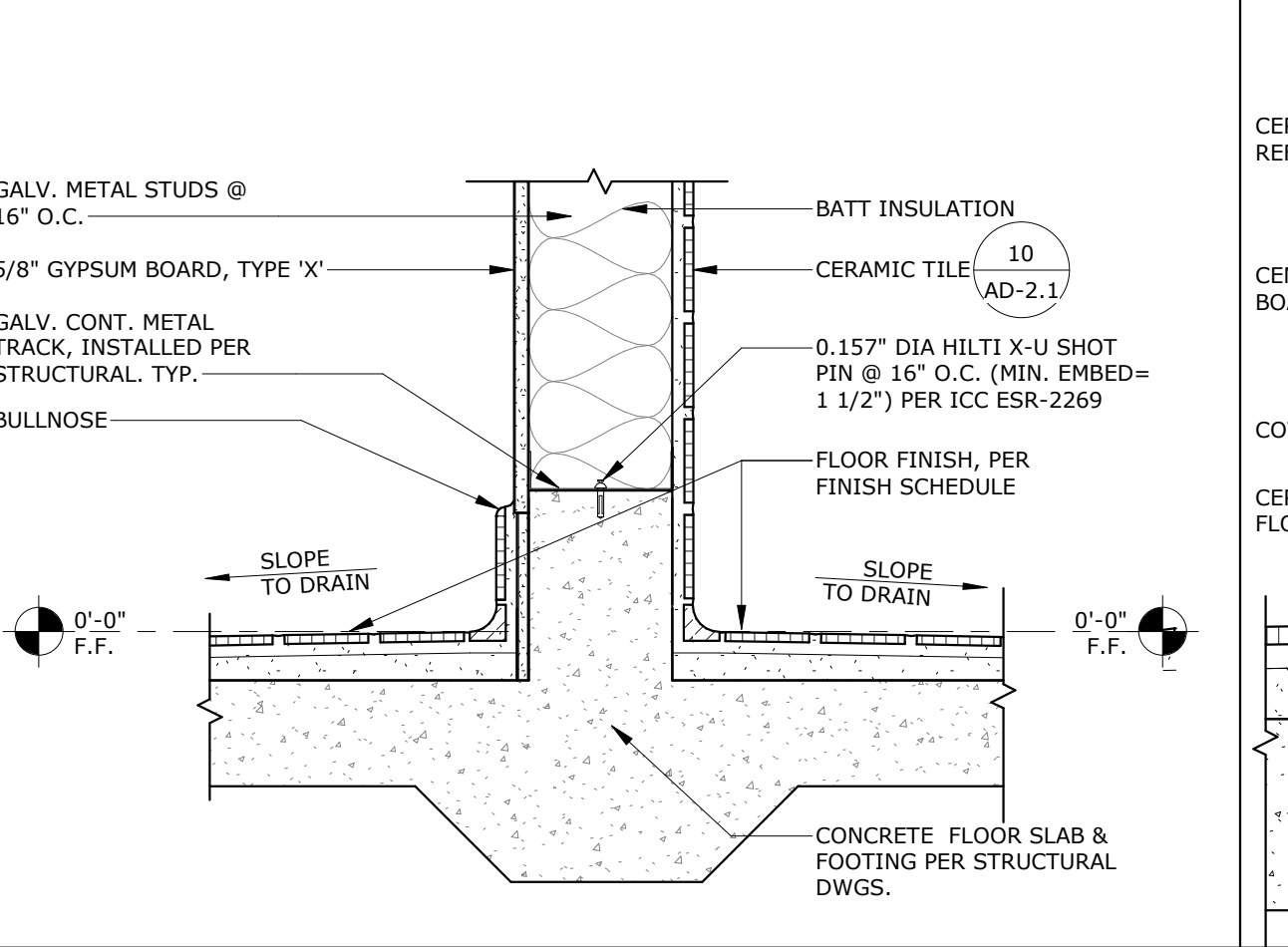
**INTERIOR WALL CURB @ TILE** SCALE: 1/2\"/>



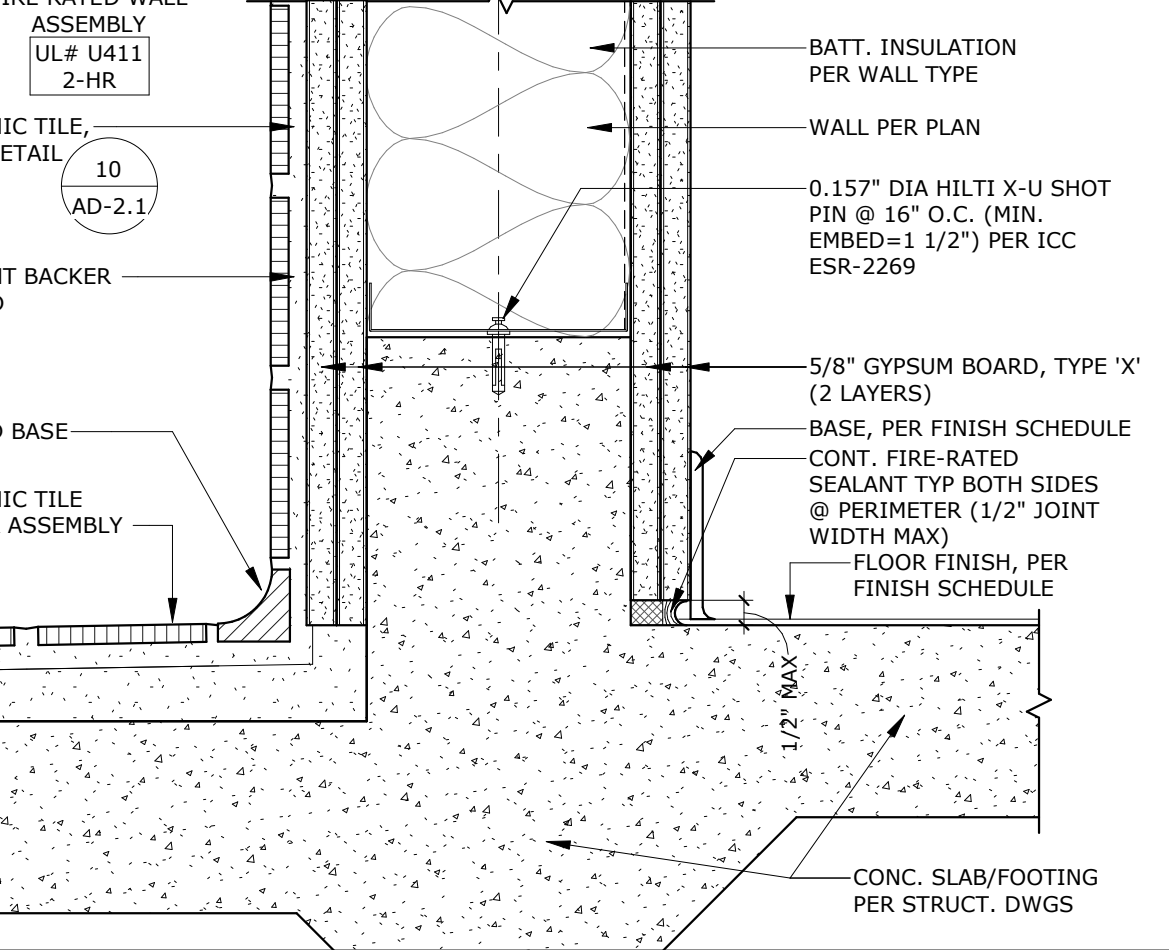
**METAL WALL @ CURB- HORIZ.** SCALE: 3\"/>



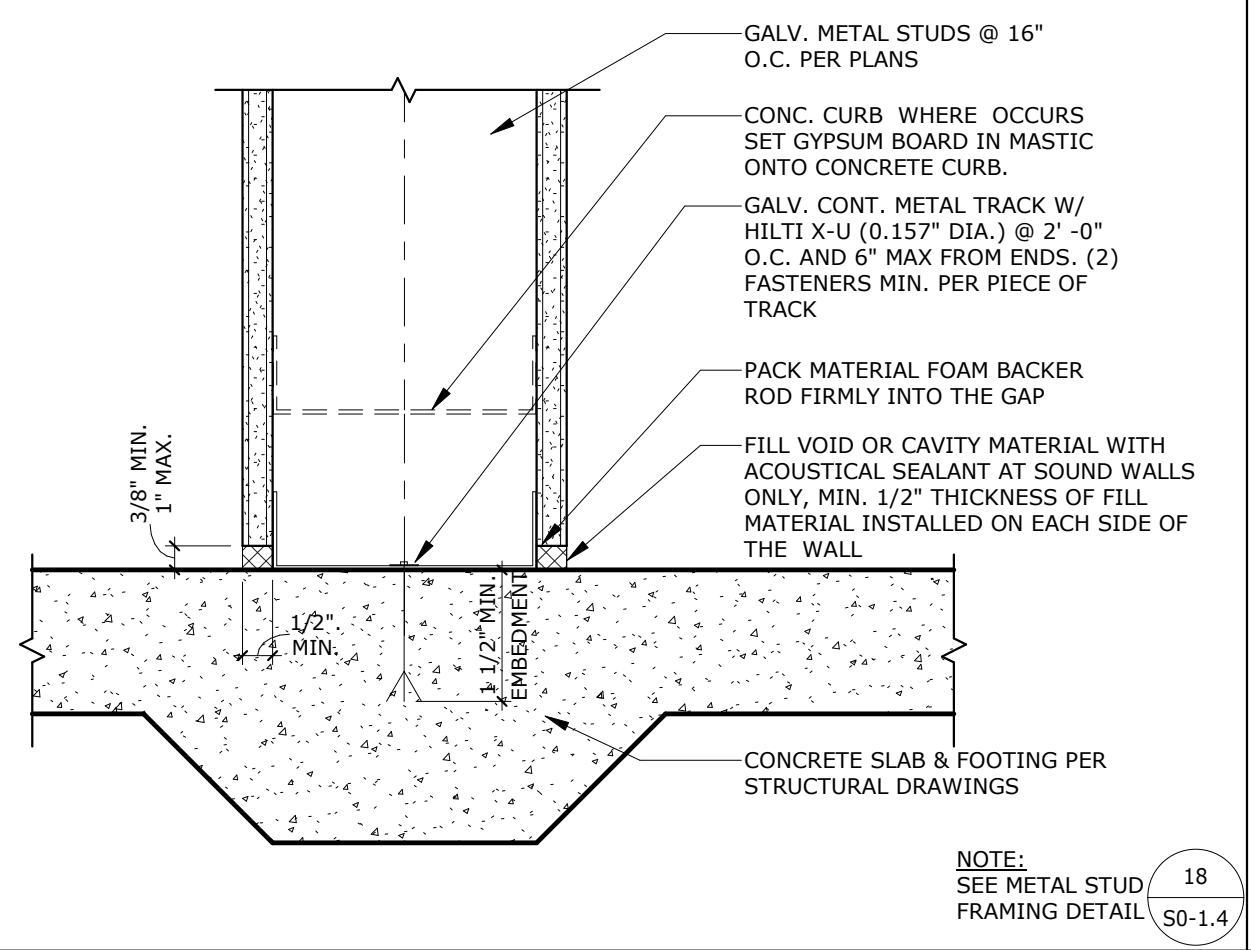
**INTERIOR WALL CURB @ TILE** SCALE: 1/2\"/>



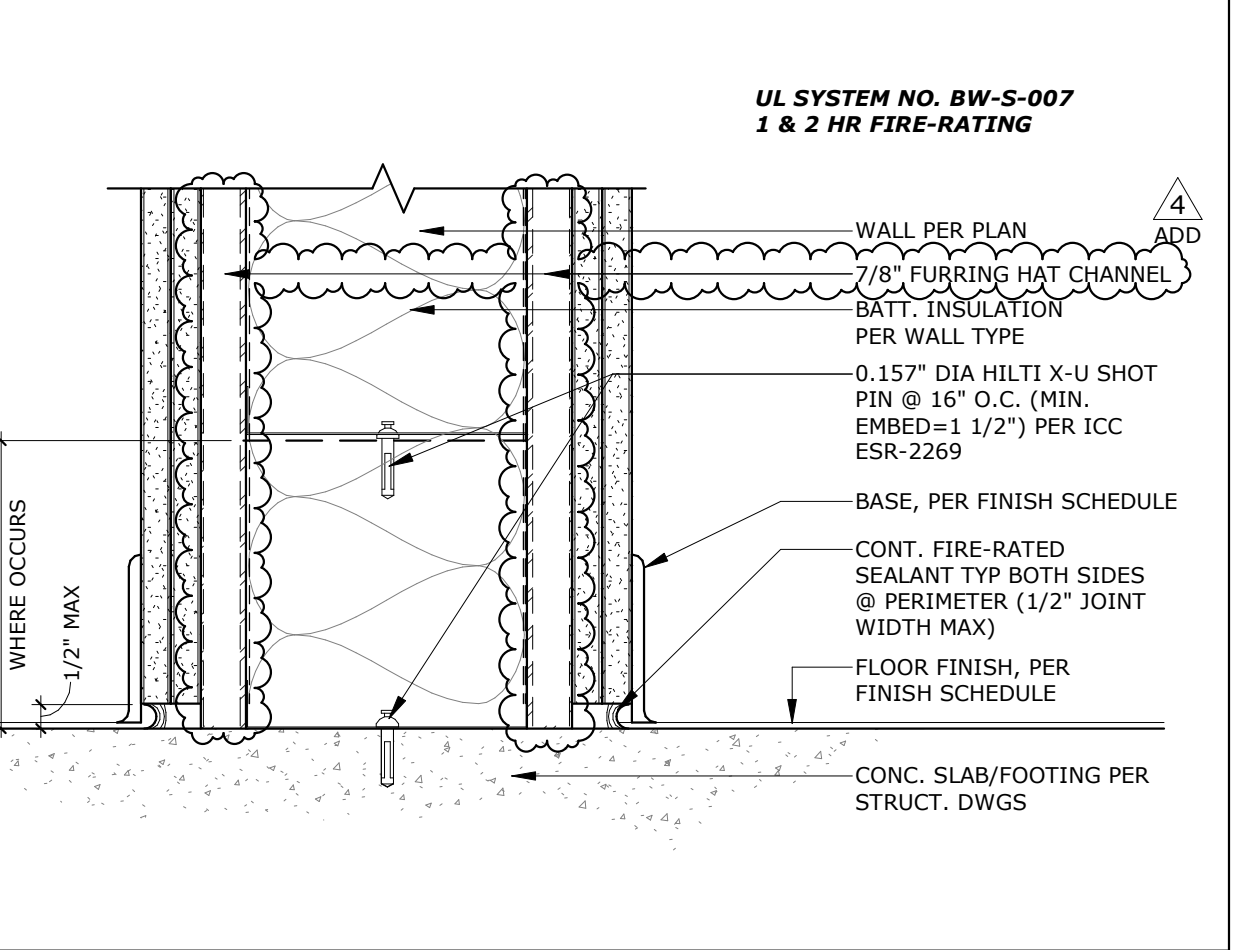
**OUTSIDE CORNER @ H. MWP** SCALE: 3\"/>



**FIRE RATED BASE ASSEMBLY** SCALE: 3\"/>



**TYP. INT. WALL BASE** SCALE: 3\"/>



**FIRE RATED BASE ASSEMBLY** SCALE: 3\"/>

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3775 TENTH STREET, AUBURN CALIFORNIA 95602 (916) 684-4664 / 5753 PALMER WAY, SUITE C, CARLSBAD CALIFORNIA 92008 (619) 430-5899

**MOUNT TRANSIT MAINTENANCE FACILITY**

PHASE 1  
170 BUSINESS CENTER DR. BIG BEAR LAKE, CA  
BIG BEAR LAKE

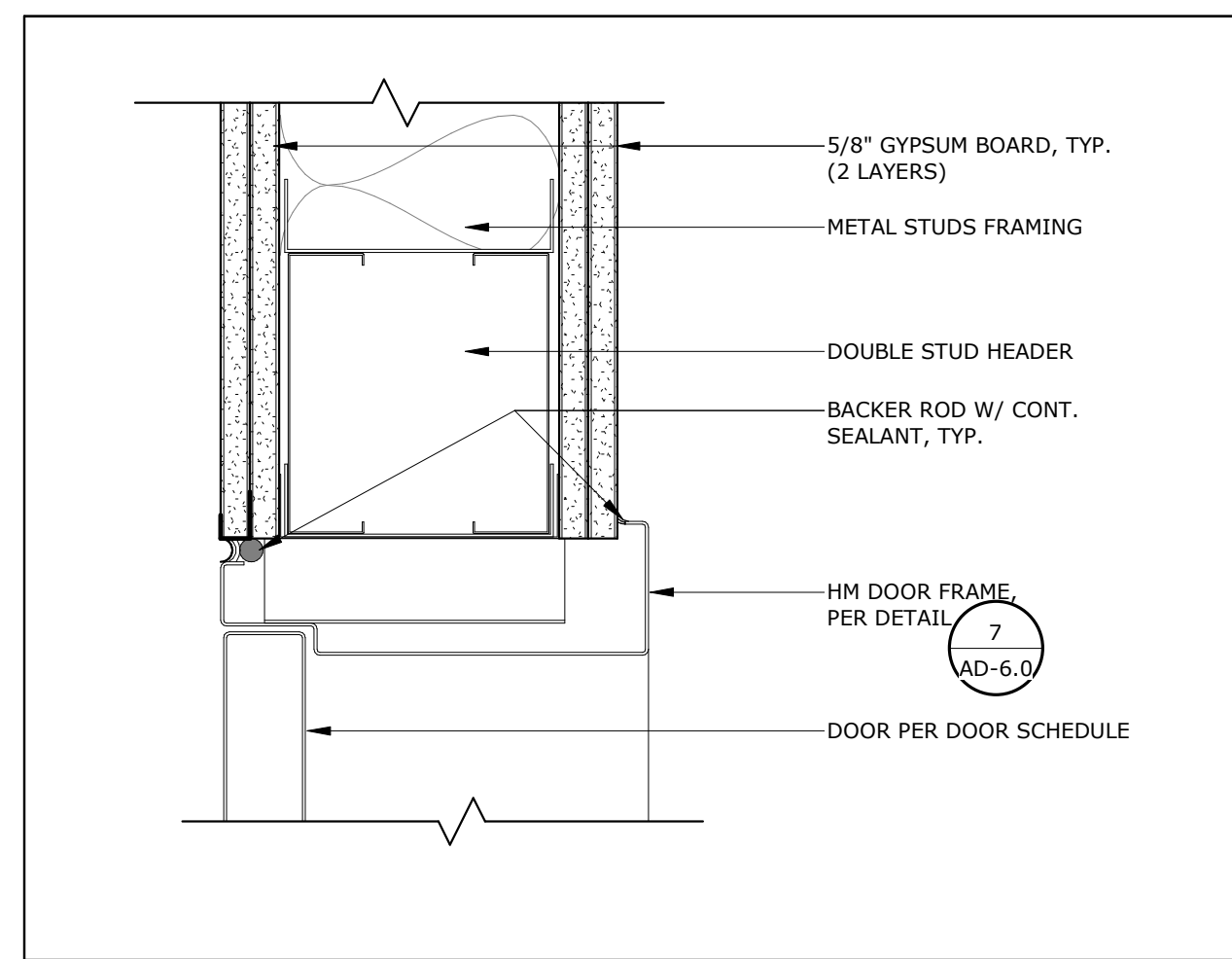
**WALL DETAILS**

**AD-2.1**

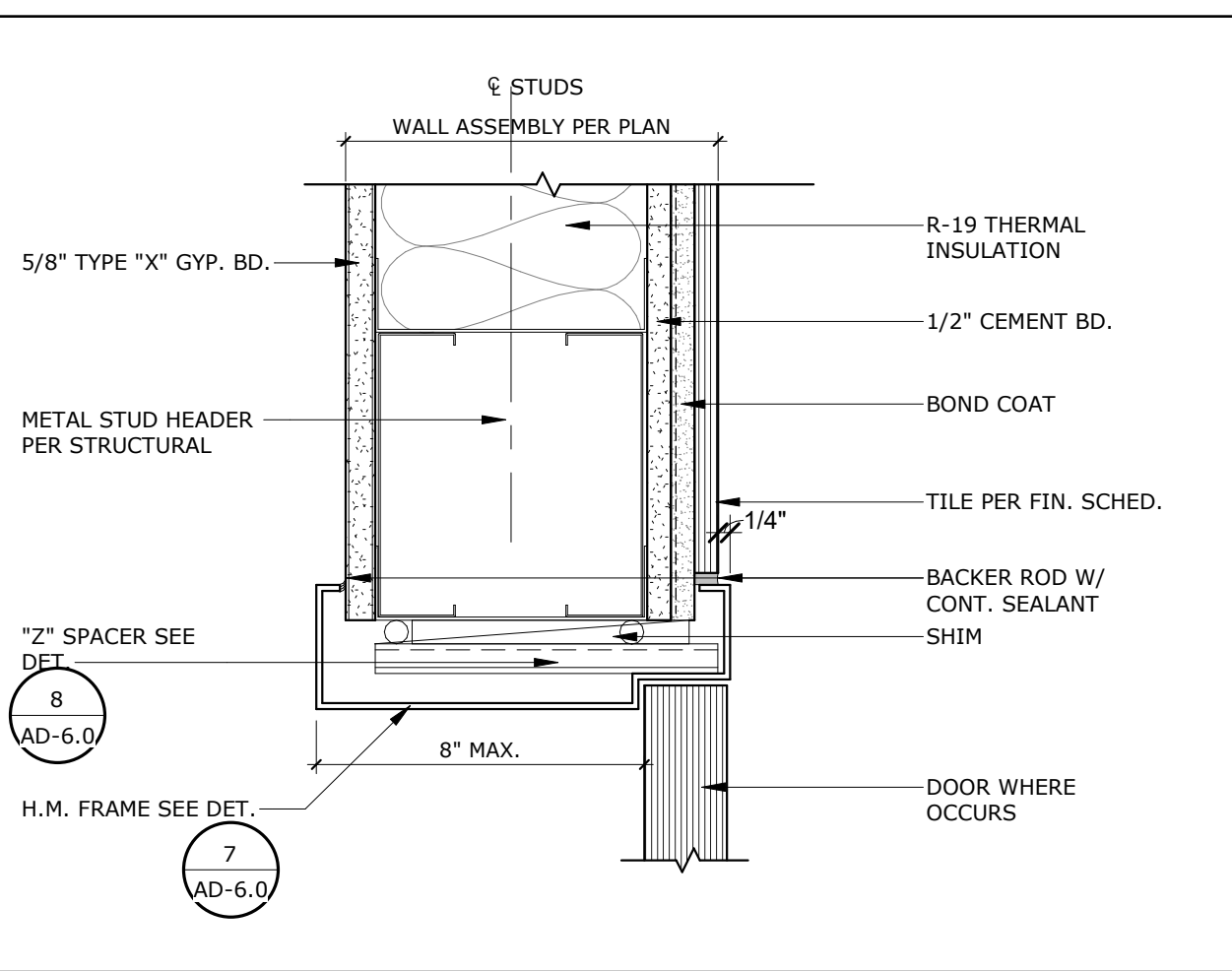
98061

MOUNT TRANSIT MAINTENANCE FACILITY: PHASE 1 - 100% CD

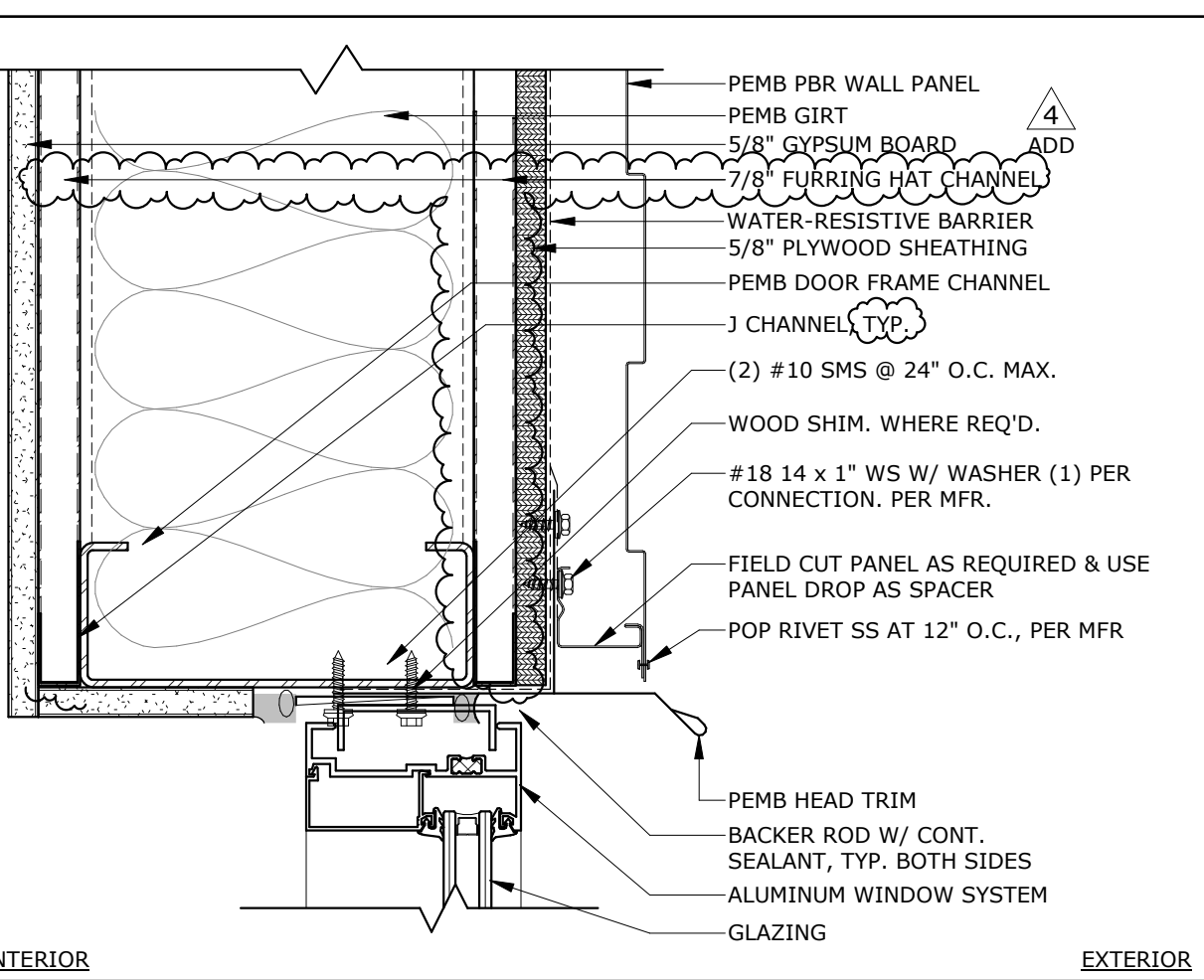




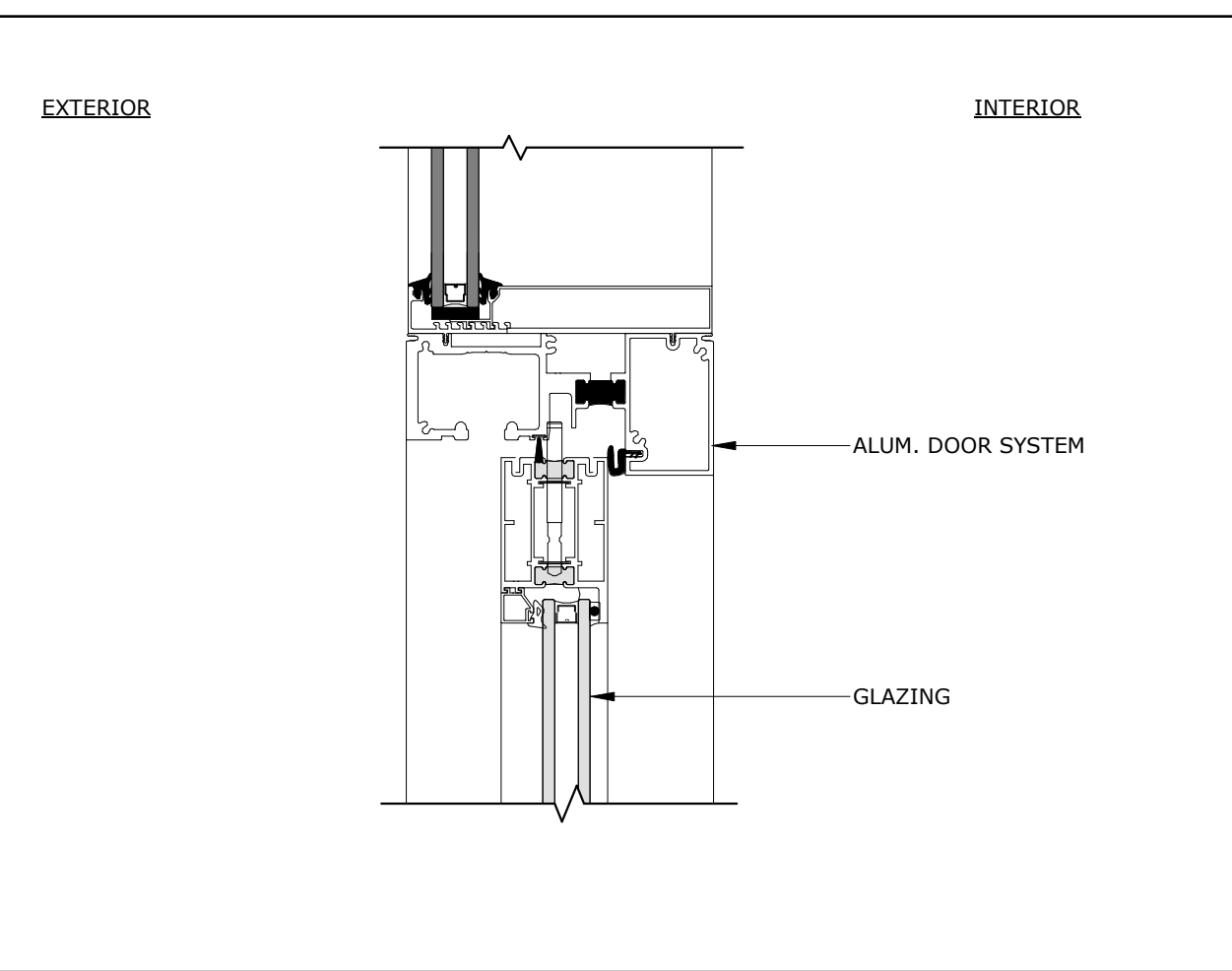
**INT. DOOR HEAD @ 2-HR** SCALE: 3" = 1'-0" REF.: 7



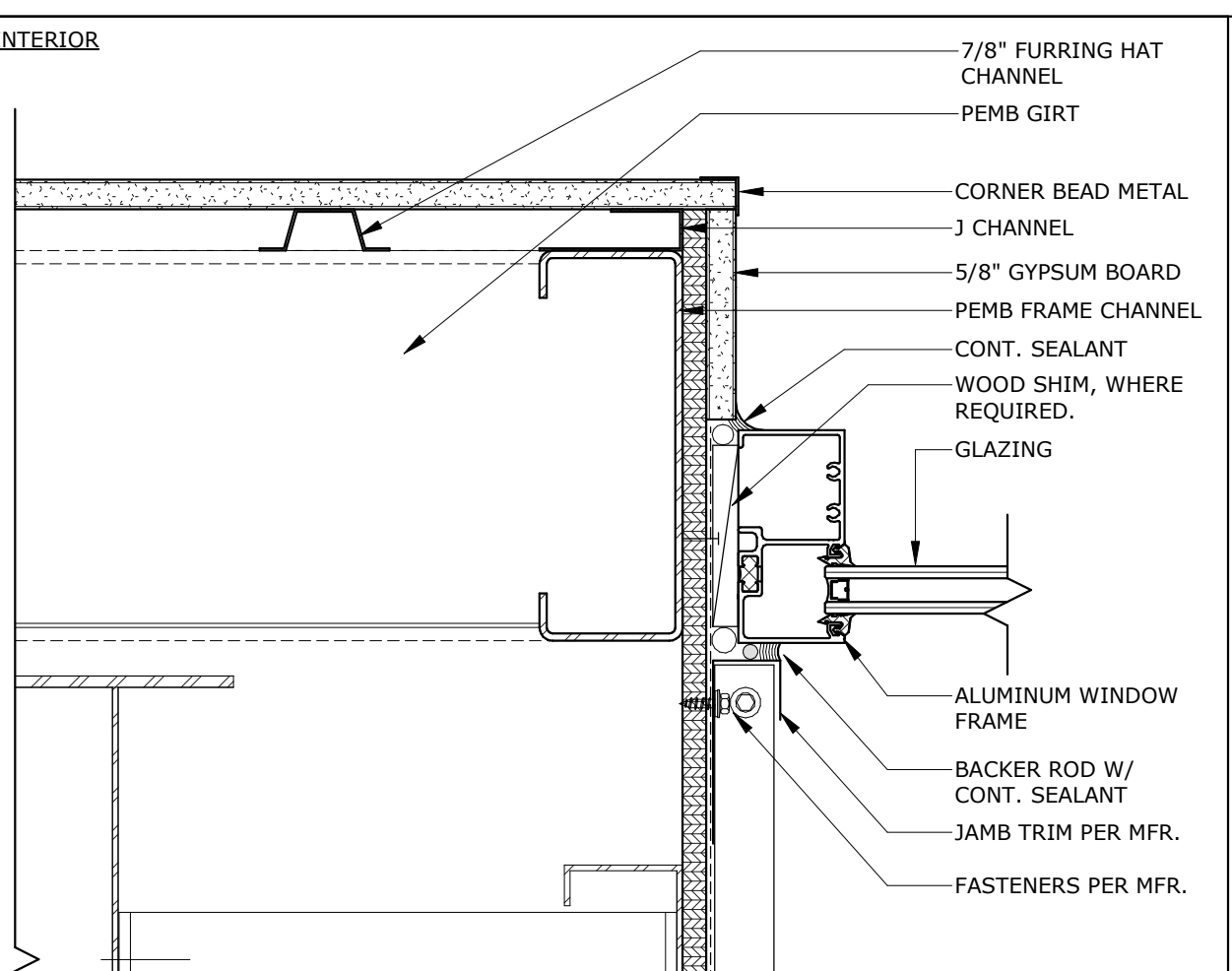
**INT. HM. DOOR HEAD W/ TILE** SCALE: 3" = 1'-0" REF.: 7



**PEMB WIN. HEAD** SCALE: 3" = 1'-0" REF.: 2/A1-8.1

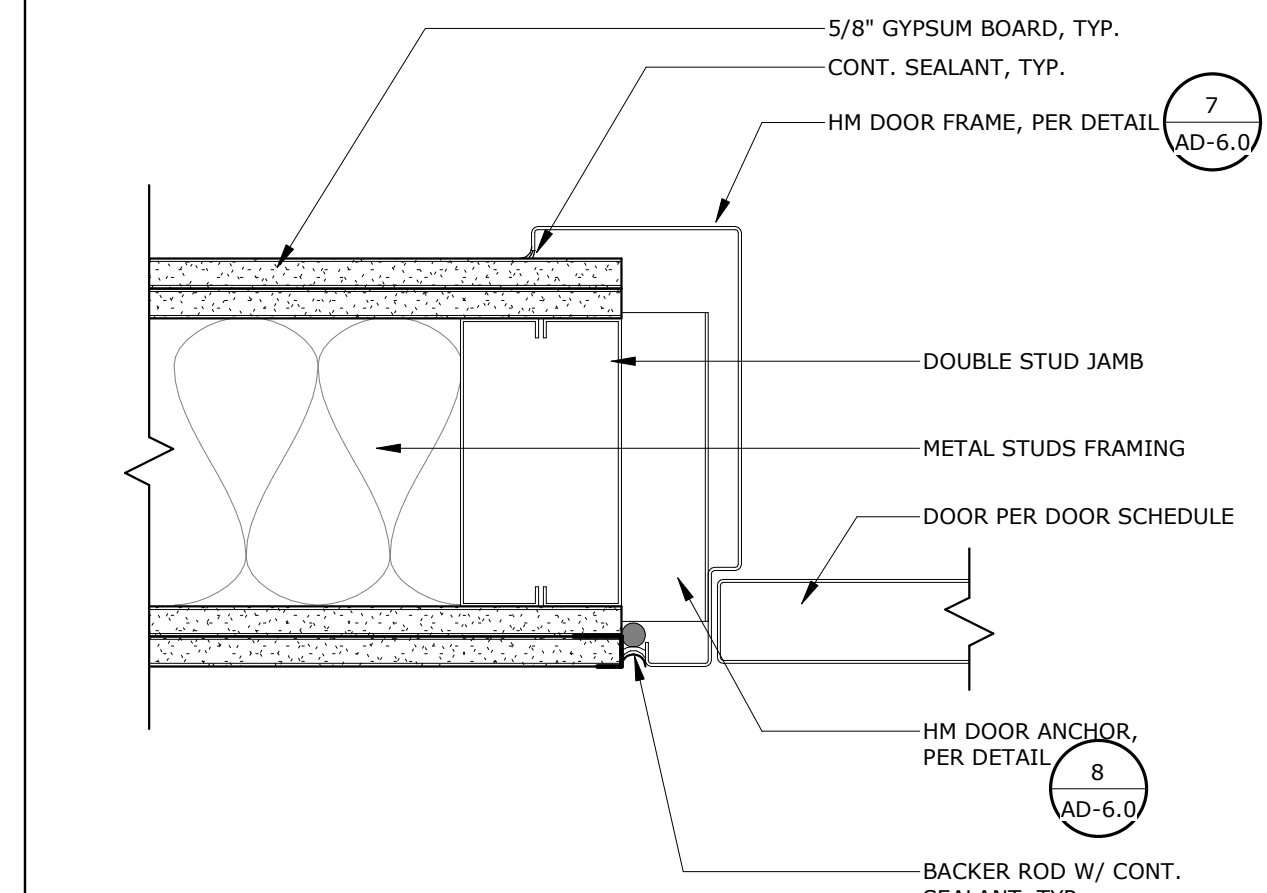


**EXT. ALUM. BI-FOLD DR HEAD** SCALE: 3" = 1'-0" REF.: 3/A1-8.1

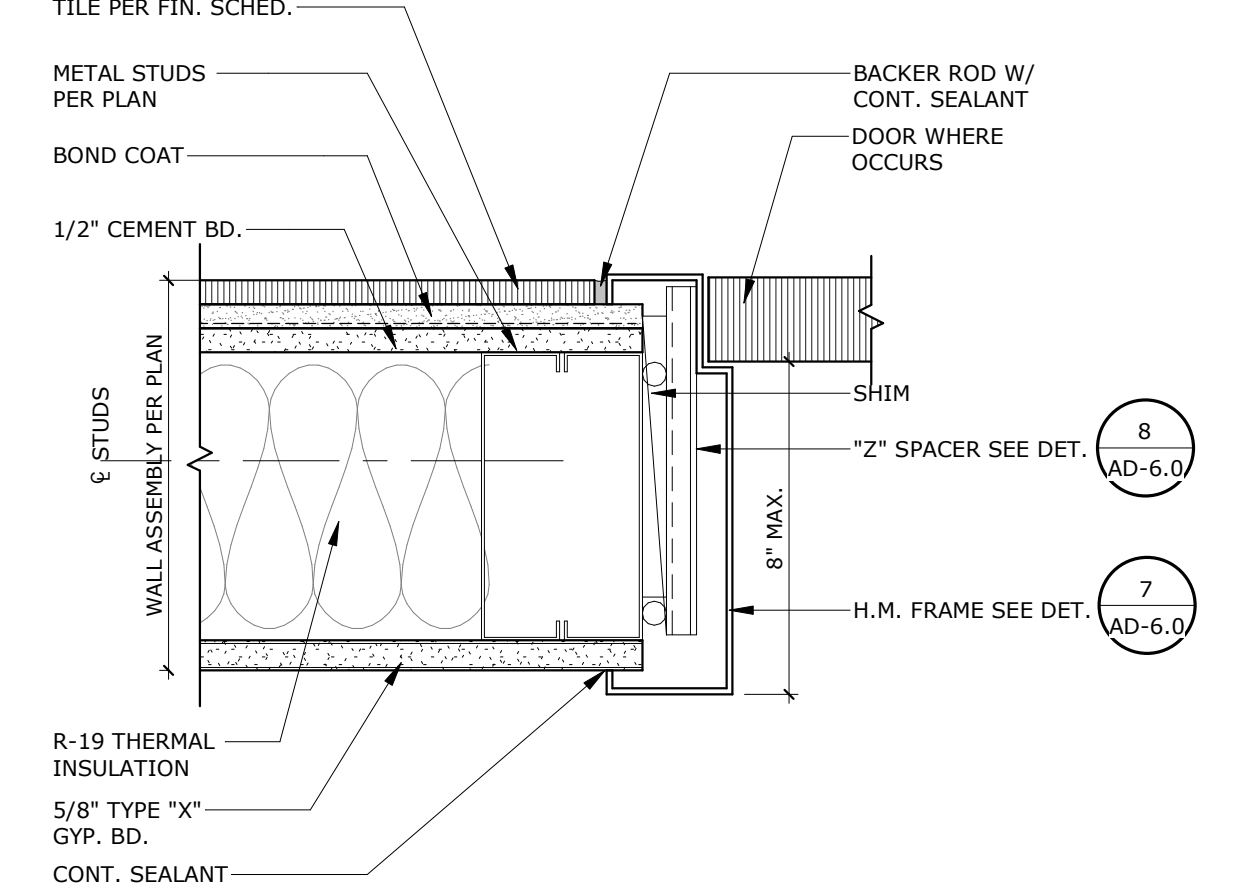


**ALUM. WIND. JAMB @ COR-TEN** SCALE: 3" = 1'-0" REF.: 14/A1-8.1

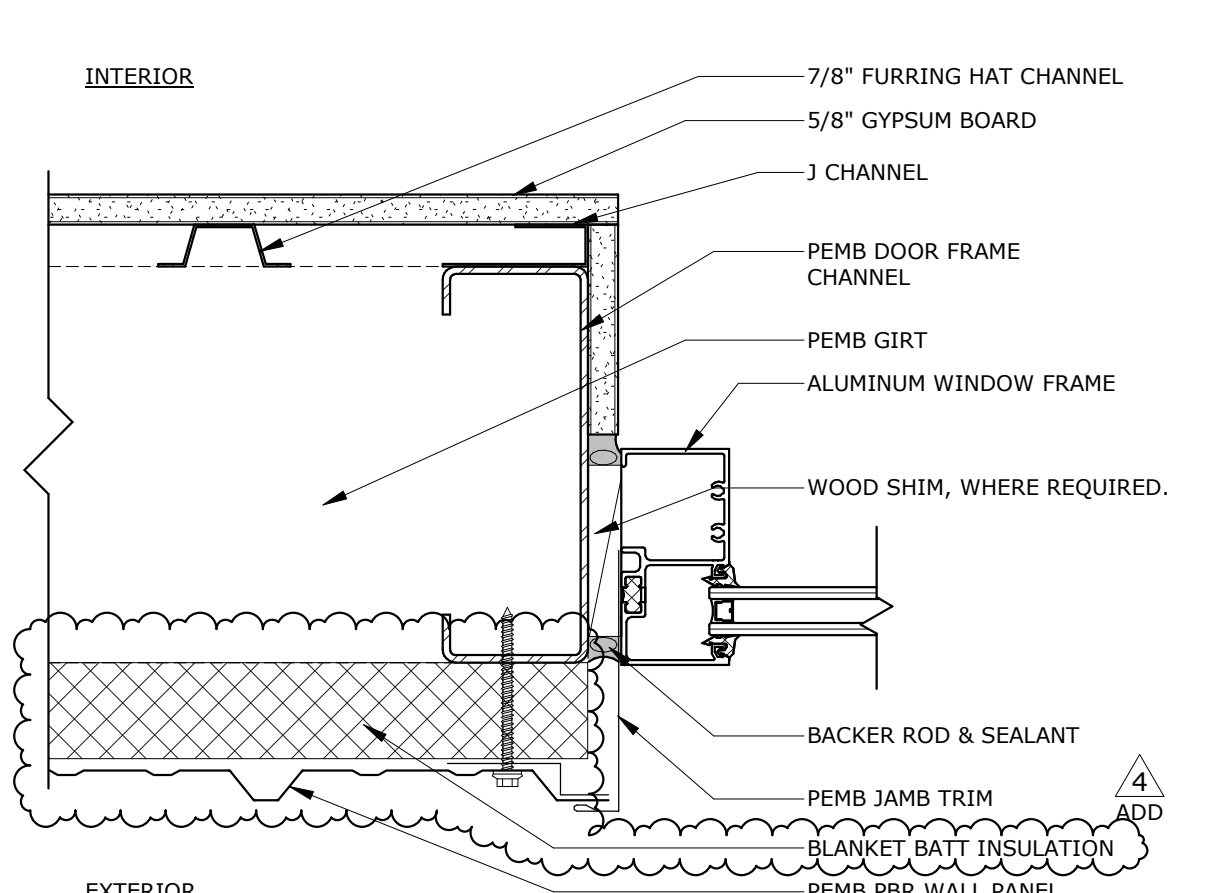
**RUHNAU CLARKE ARCHITECTS**



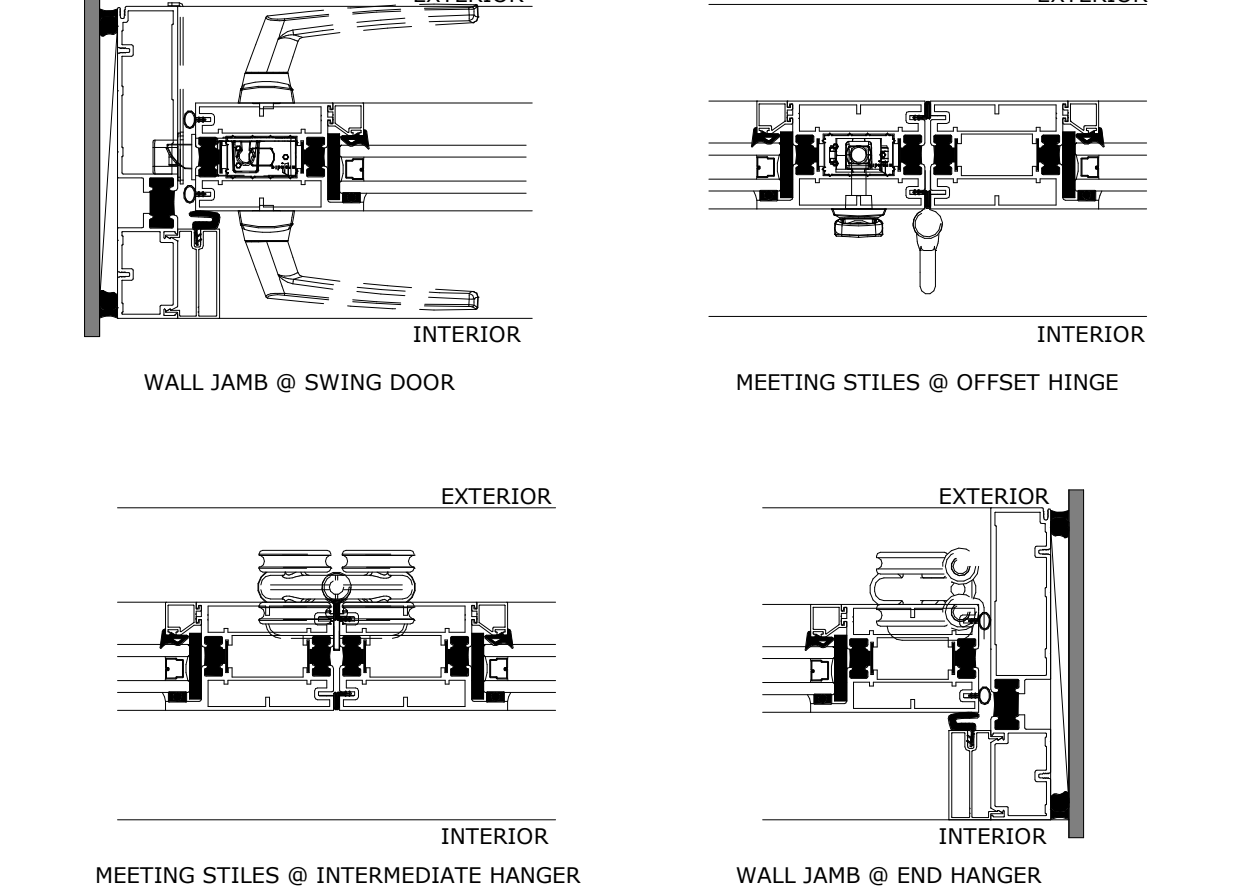
**INT. DOOR JAMB @ 2-HR** SCALE: 3" = 1'-0" REF.: 7



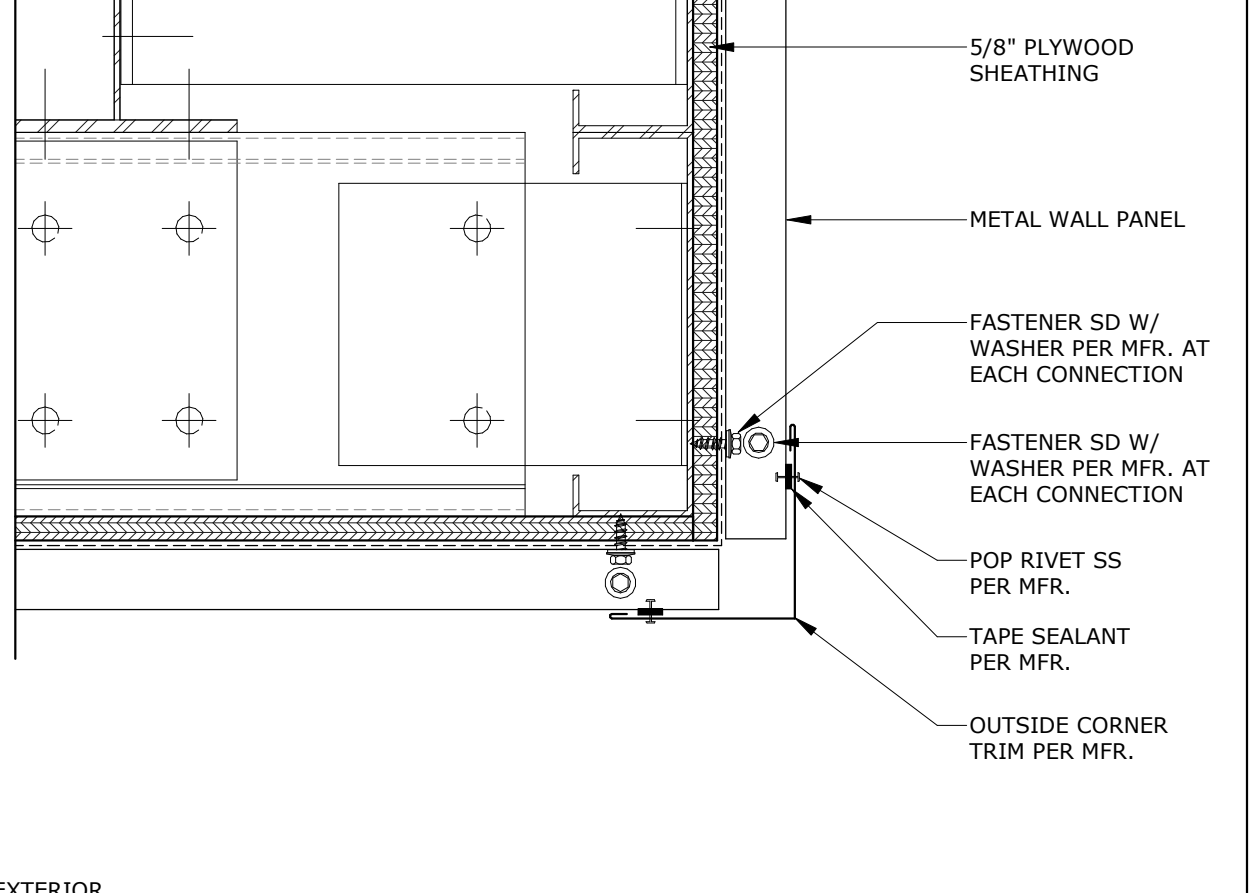
**INT. HM. DOOR JAMB W/ TILE** SCALE: 3" = 1'-0" REF.: 7



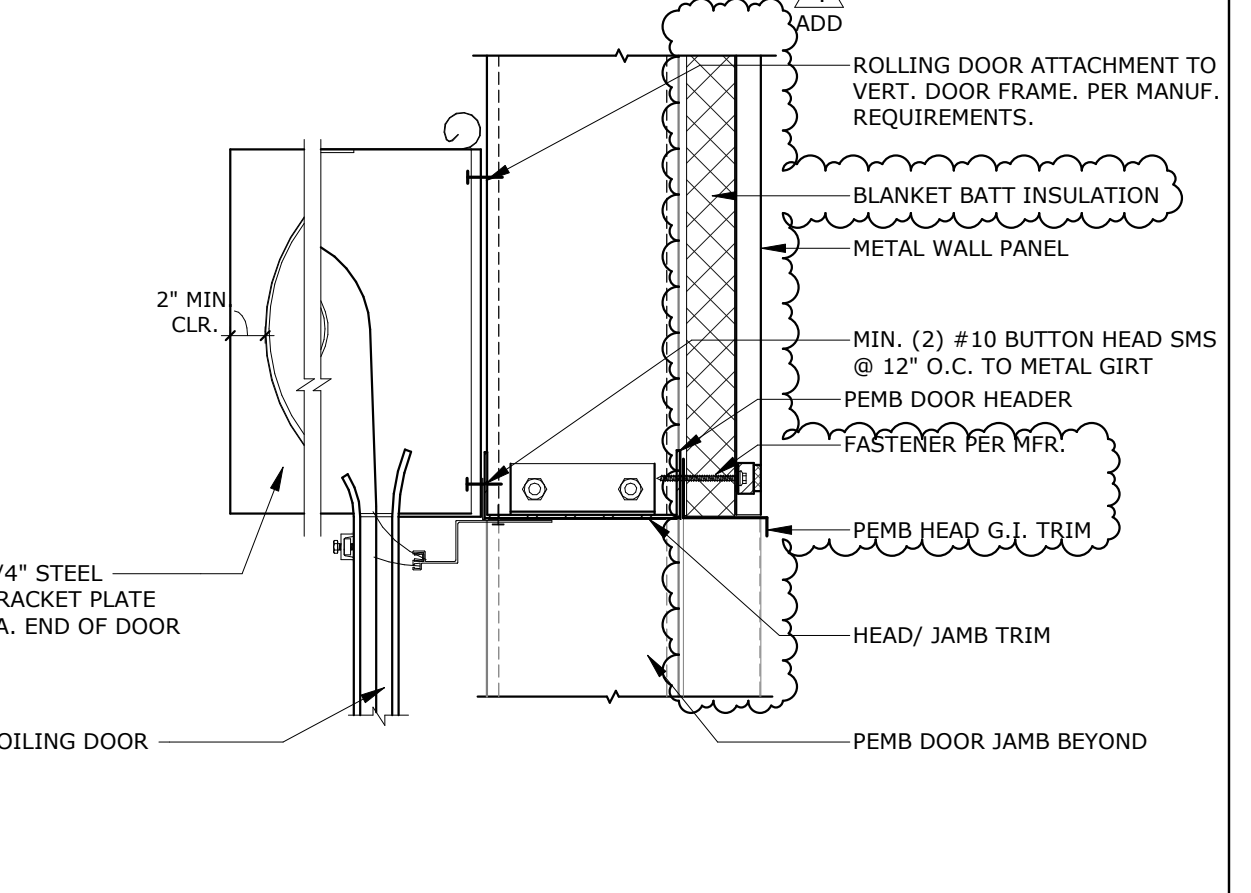
**PEMB WIN. JAMB** SCALE: 3" = 1'-0" REF.: 2/A1-8.1



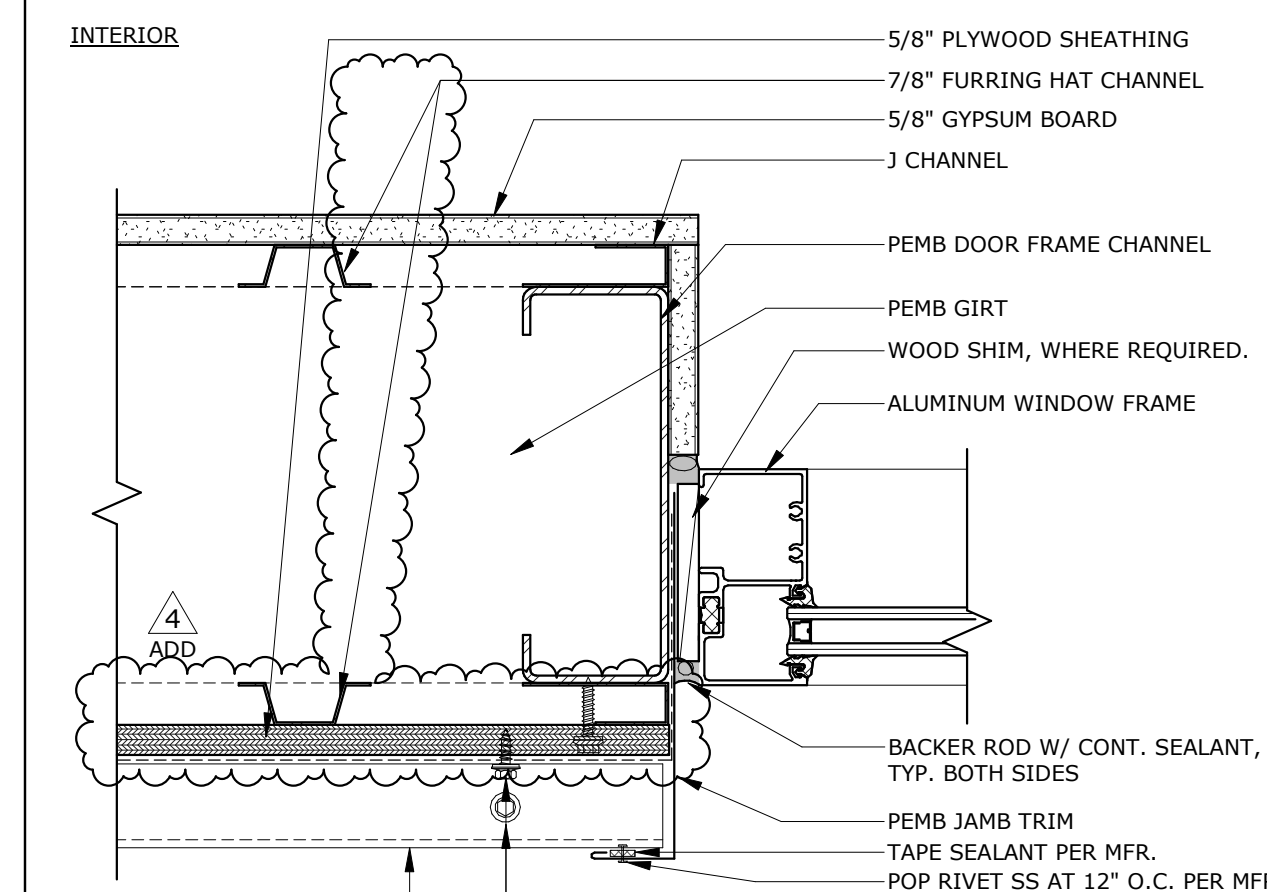
**EXT. ALUM. BI-FOLD DR JAMB** SCALE: 3" = 1'-0" REF.: 3/A1-8.1



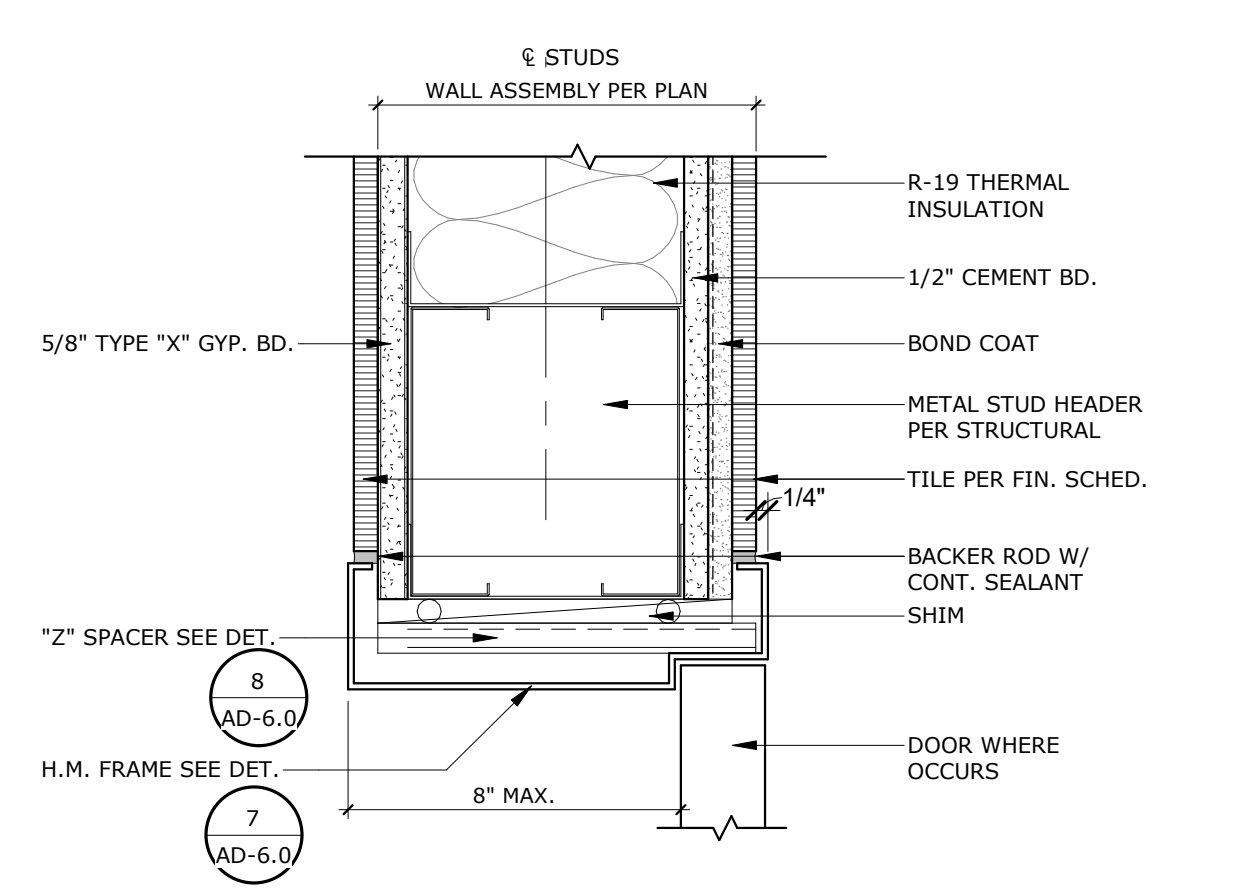
**COILING DOOR HEAD** SCALE: 1/2" = 1'-0" REF.: 5/A1-8.1



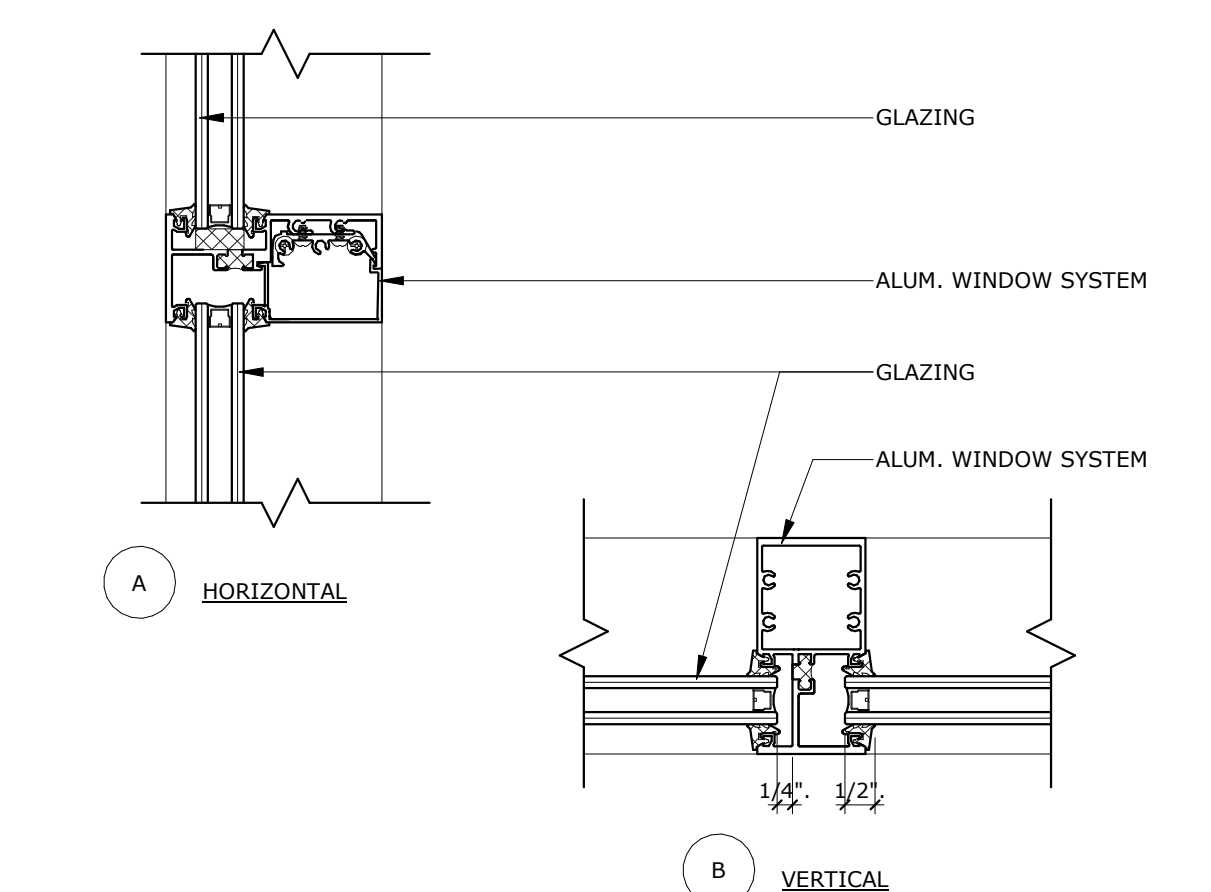
**COILING DOOR JAMB** SCALE: 3" = 1'-0" REF.: 7



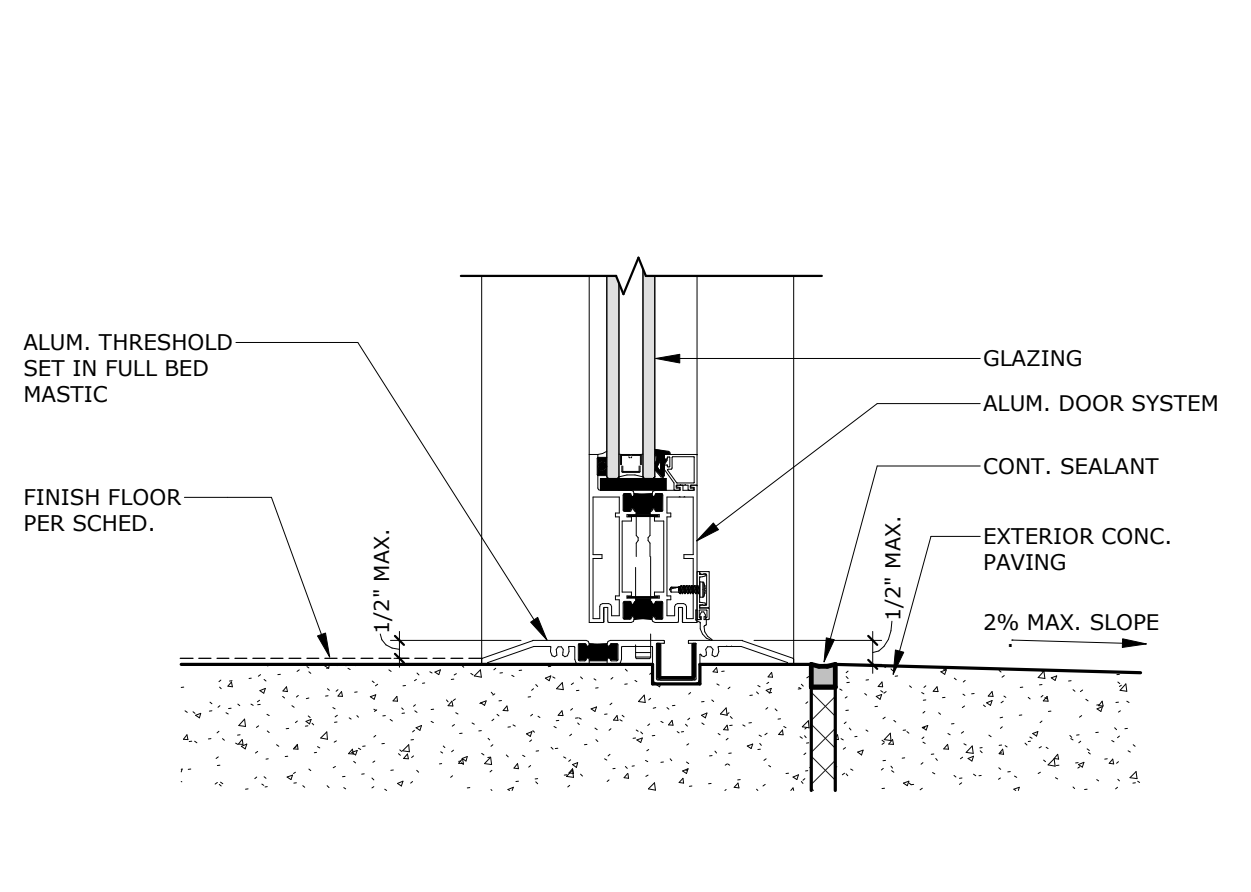
**PEMB WIN. JAMB II** SCALE: 3" = 1'-0" REF.: 1/A1-8.1



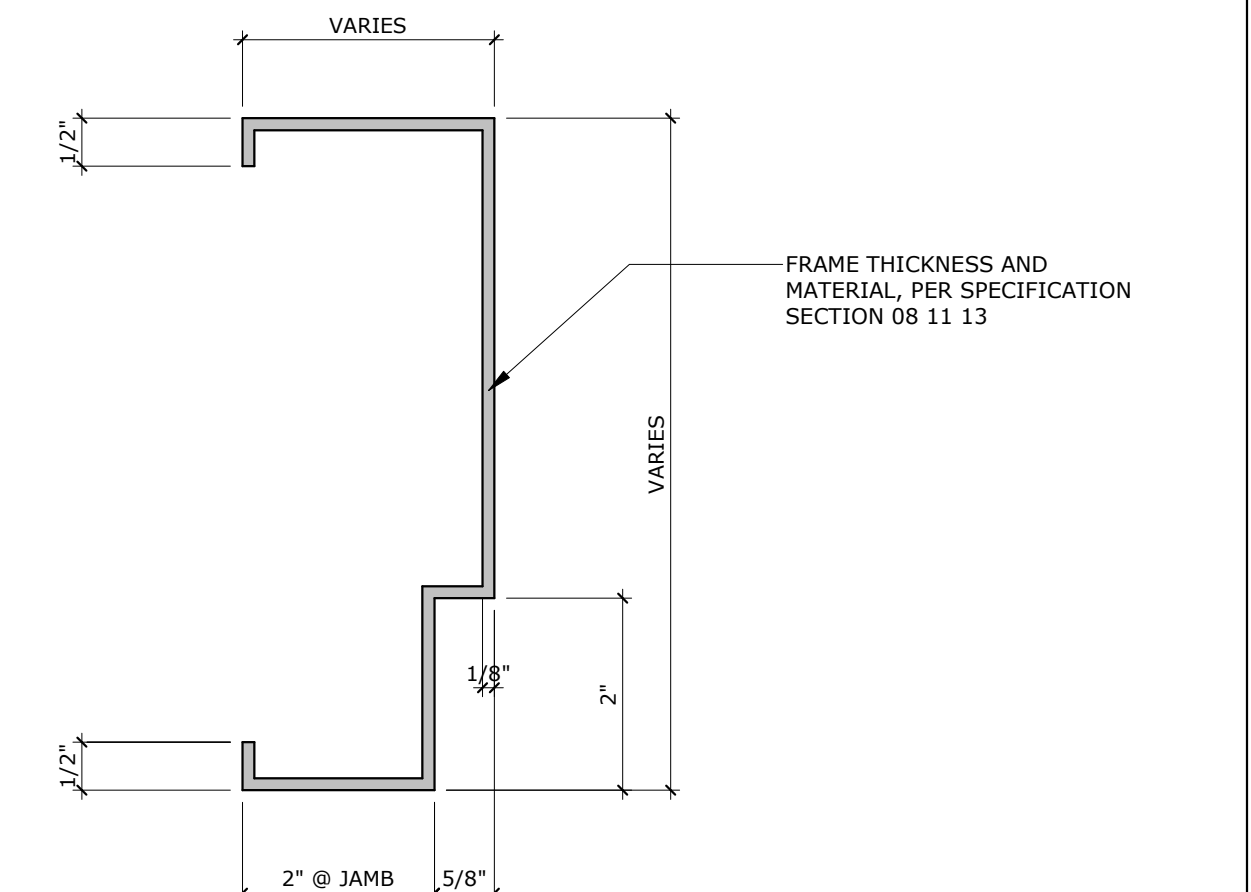
**INT. HM. DOOR HEAD TILE** SCALE: 3" = 1'-0" REF.: 7



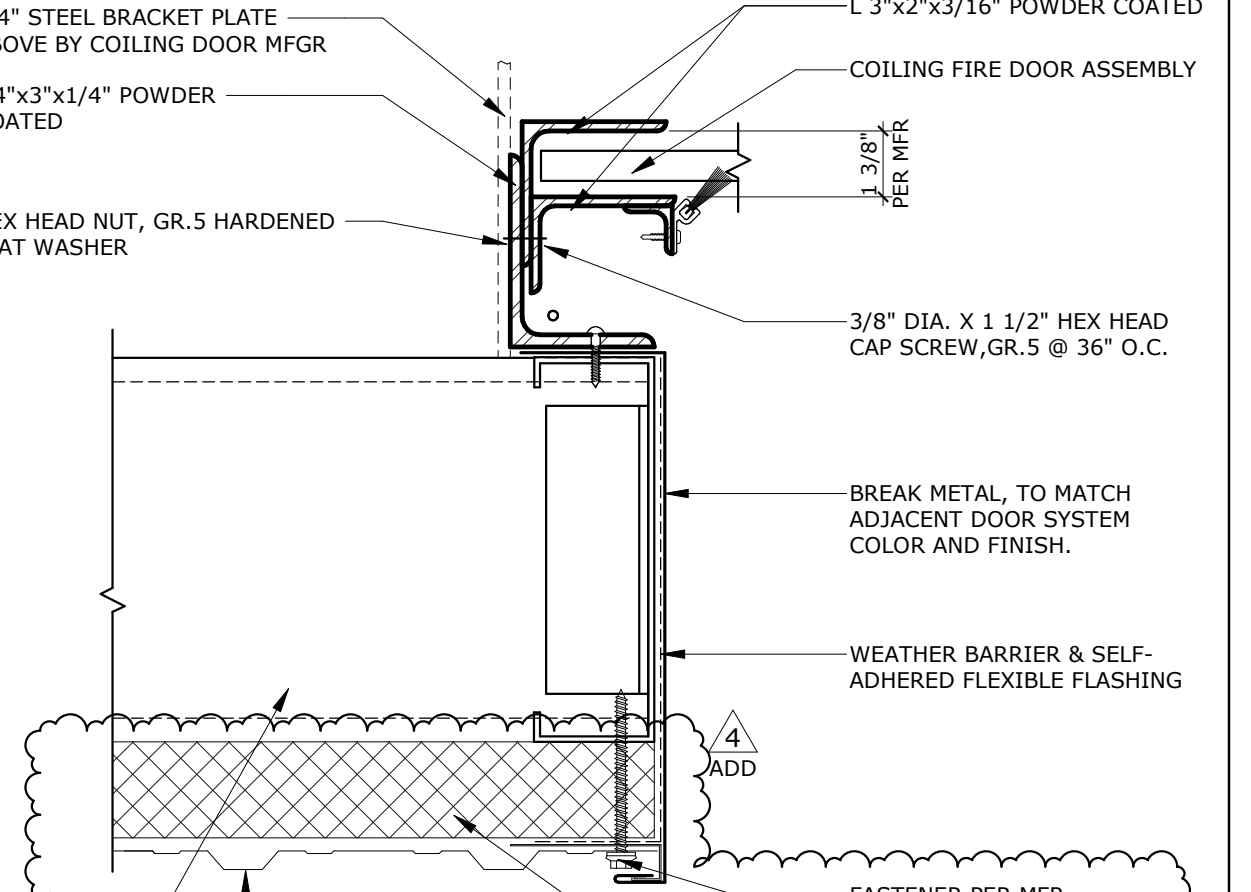
**EXT. ALUM. WINDOW MULLION** SCALE: 3" = 1'-0" REF.: 2/A1-8.1



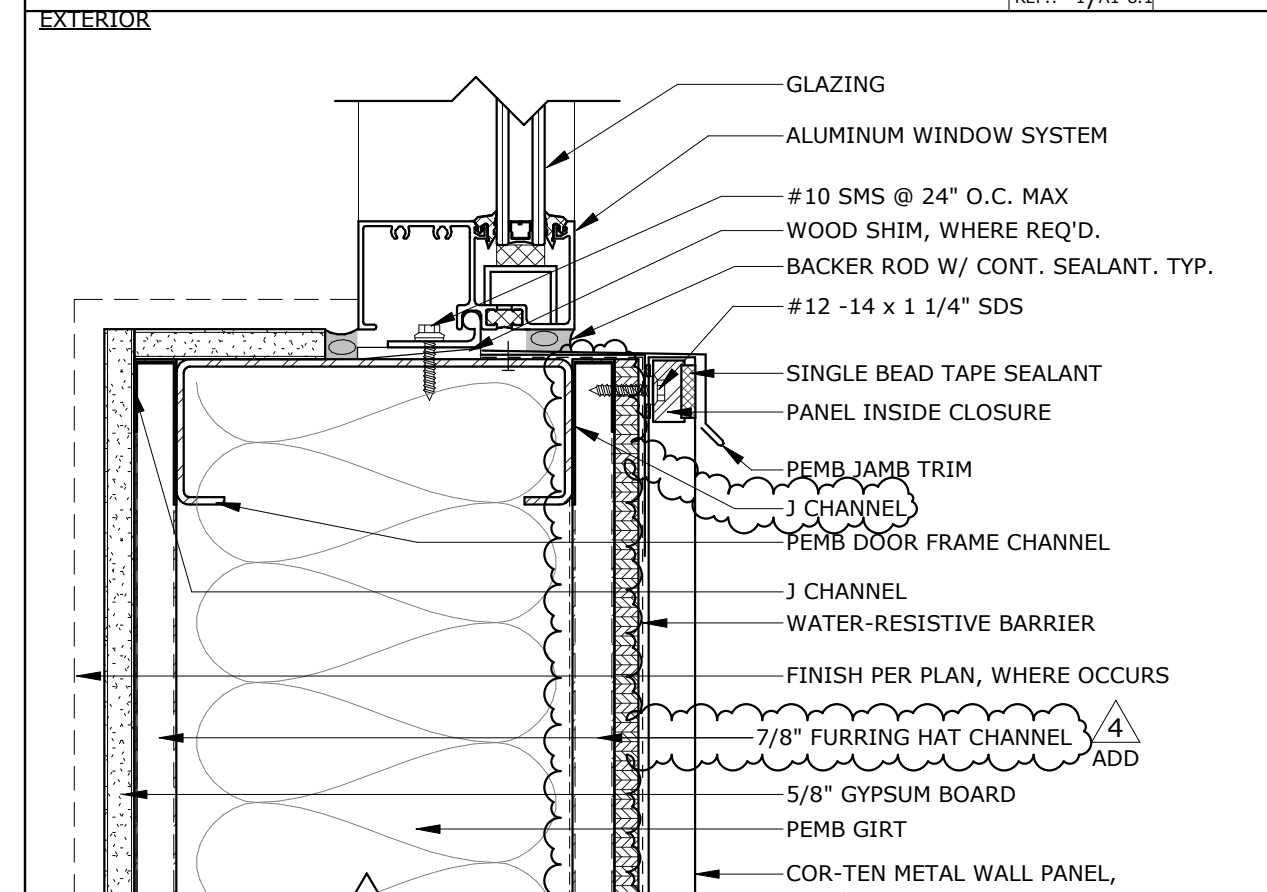
**EXT. ALUM. BI-FOLD DR SILL** SCALE: 3" = 1'-0" REF.: 7



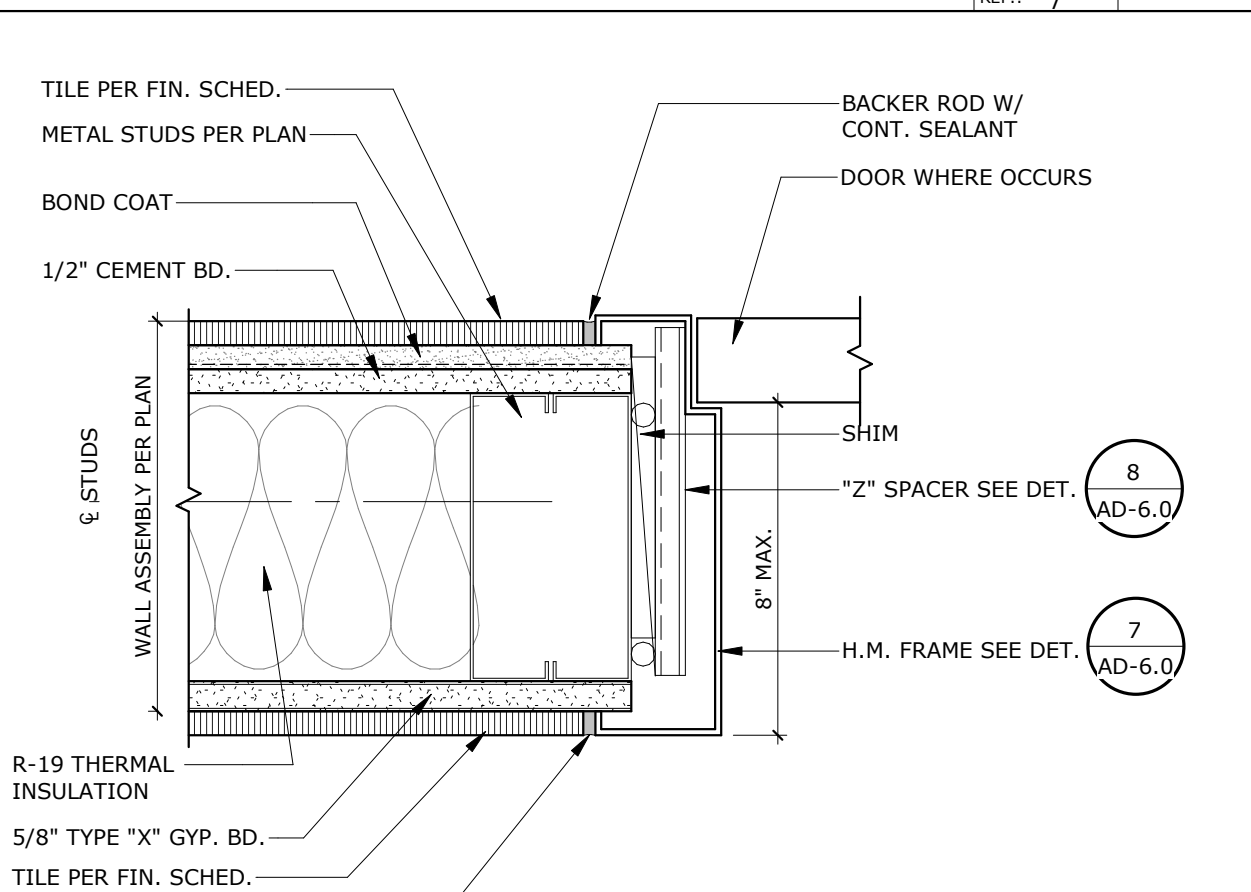
**H.M. DOOR & WINDOW FRAME** SCALE: 6" = 1'-0" REF.: 7



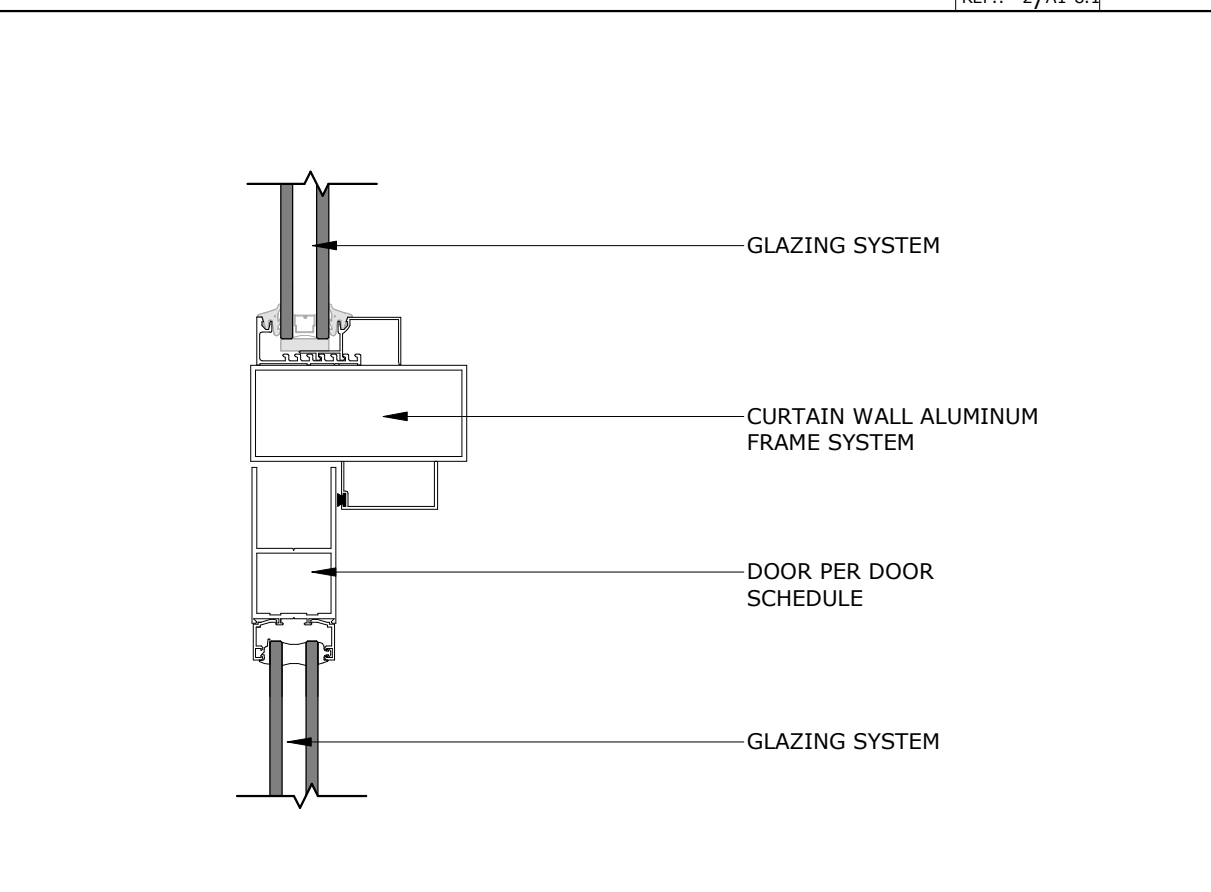
**COILING DOOR JAMB** SCALE: 3" = 1'-0" REF.: 7



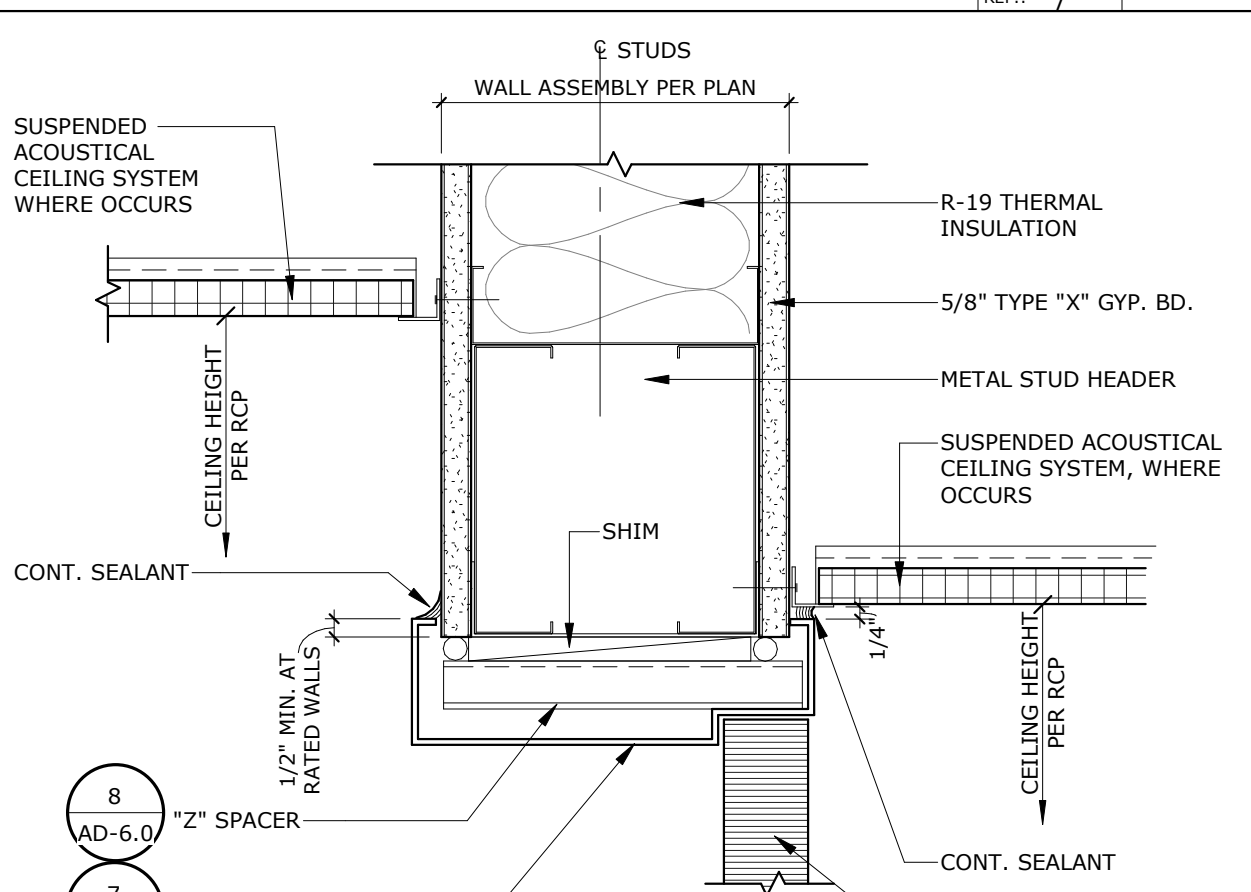
**PEMB WIN SILL** SCALE: 3" = 1'-0" REF.: 1/A1-8.1



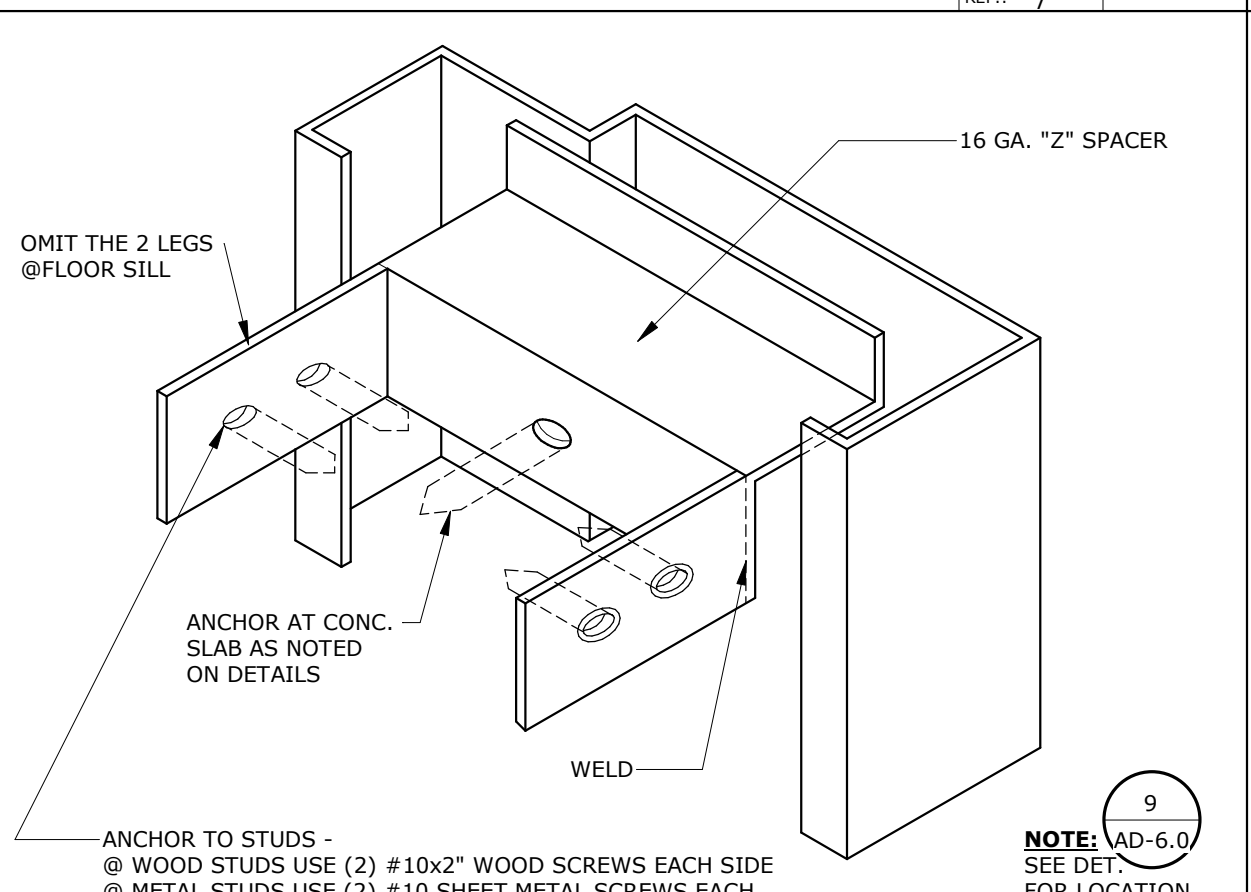
**INT. HM. DOOR JAMB TILE** SCALE: 3" = 1'-0" REF.: 7



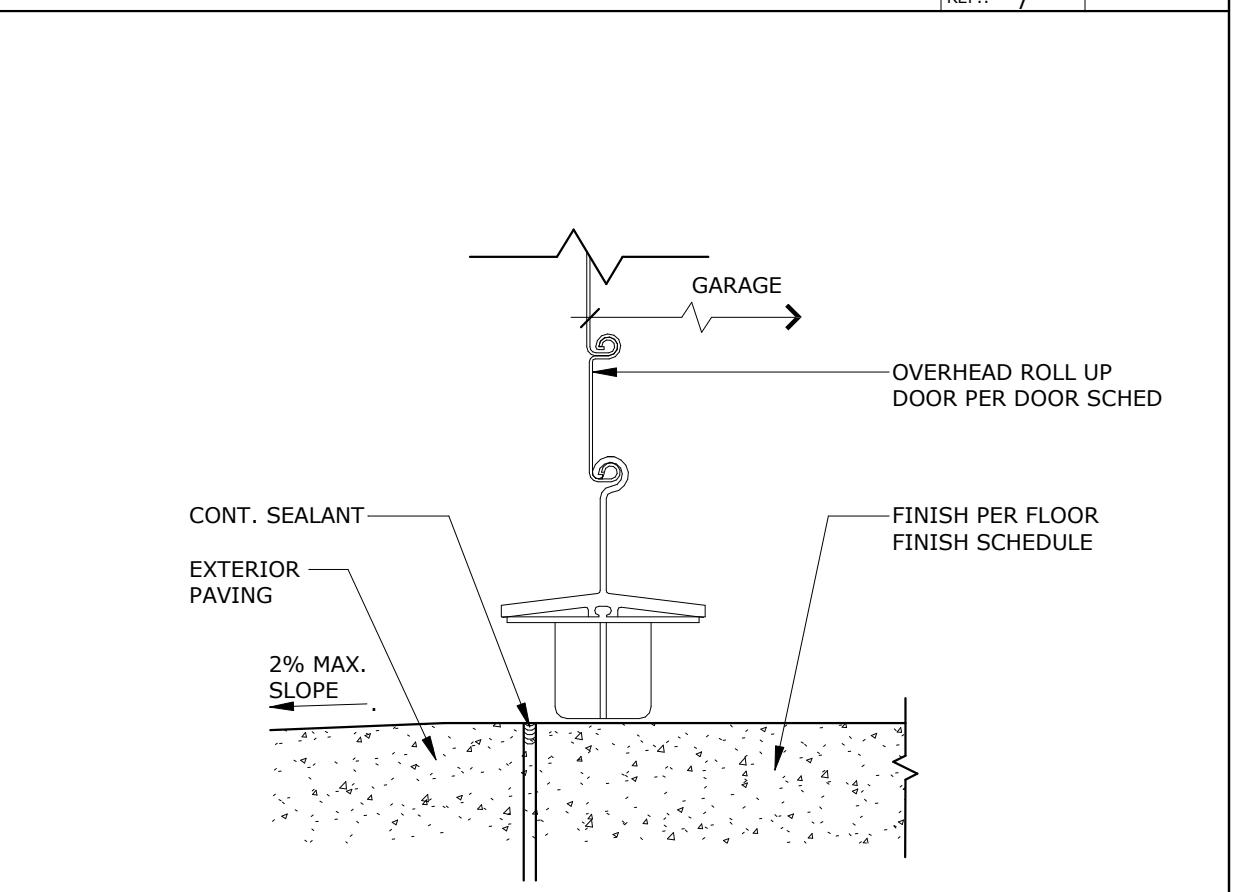
**ALUM. DR HEADER@TRANSOM** SCALE: 3" = 1'-0" REF.: 7



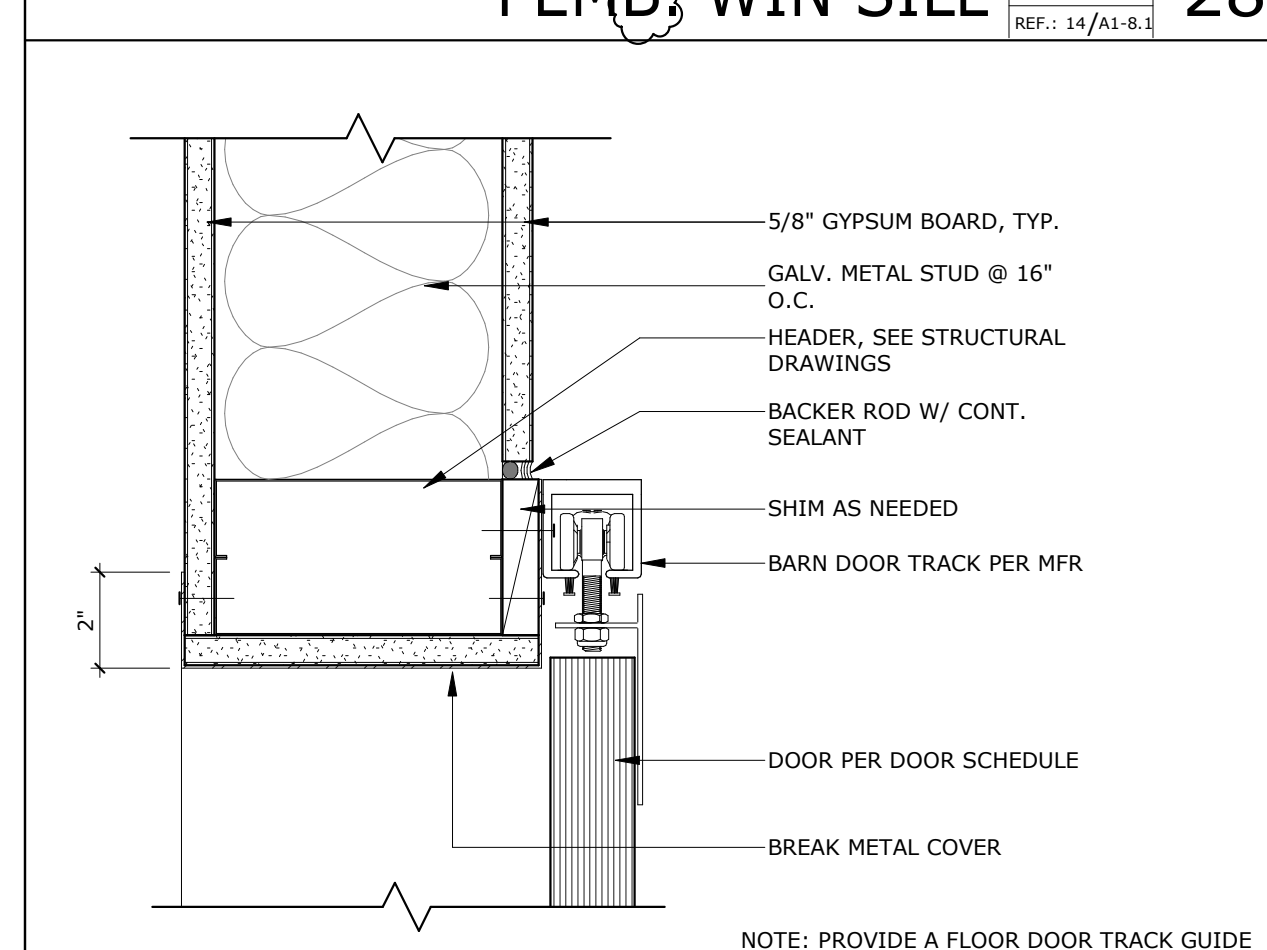
**INT. HM. DOOR HEAD** SCALE: 3" = 1'-0" REF.: 7



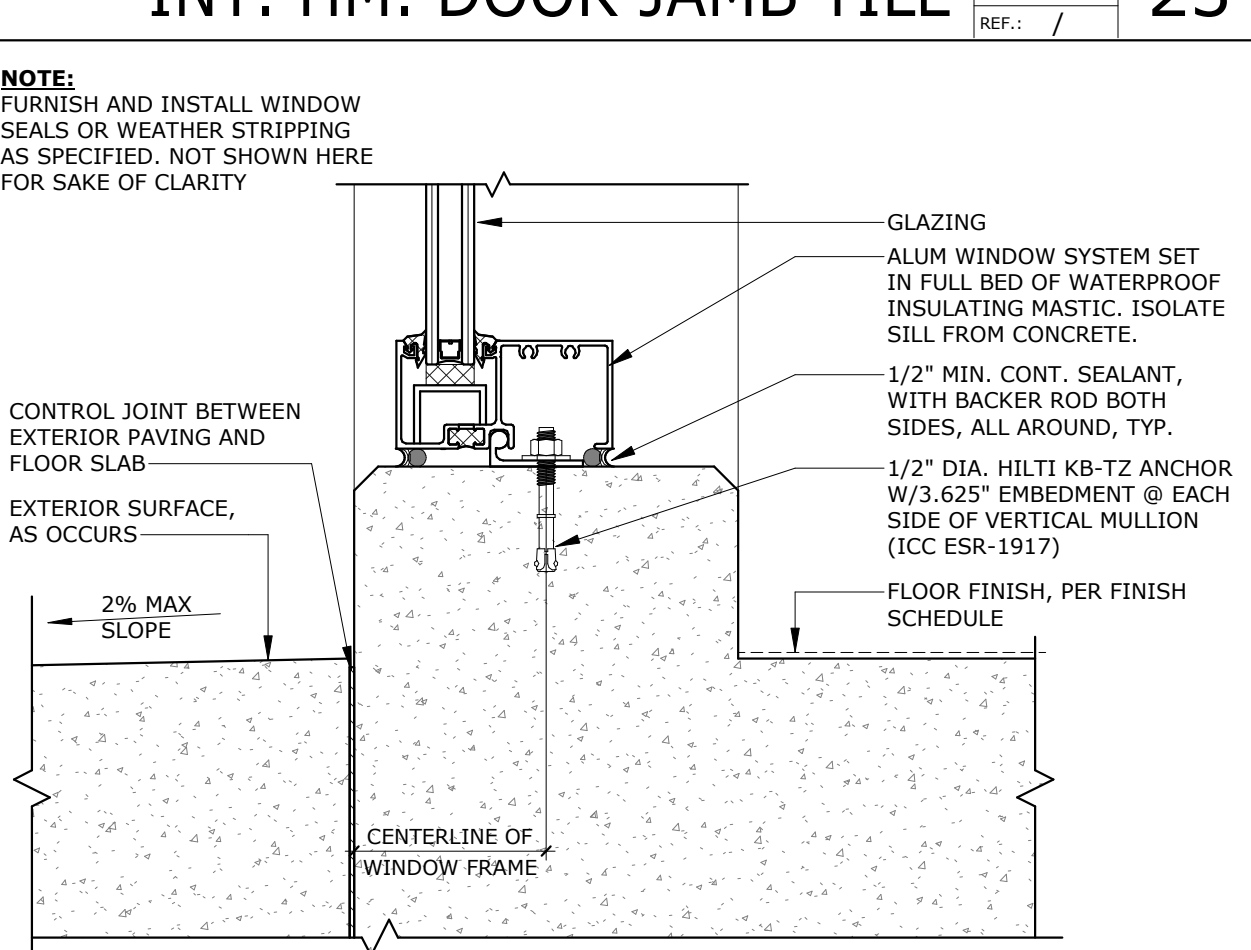
**H.M. FRAME ANCHOR** SCALE: 12" = 1'-0" REF.: 7



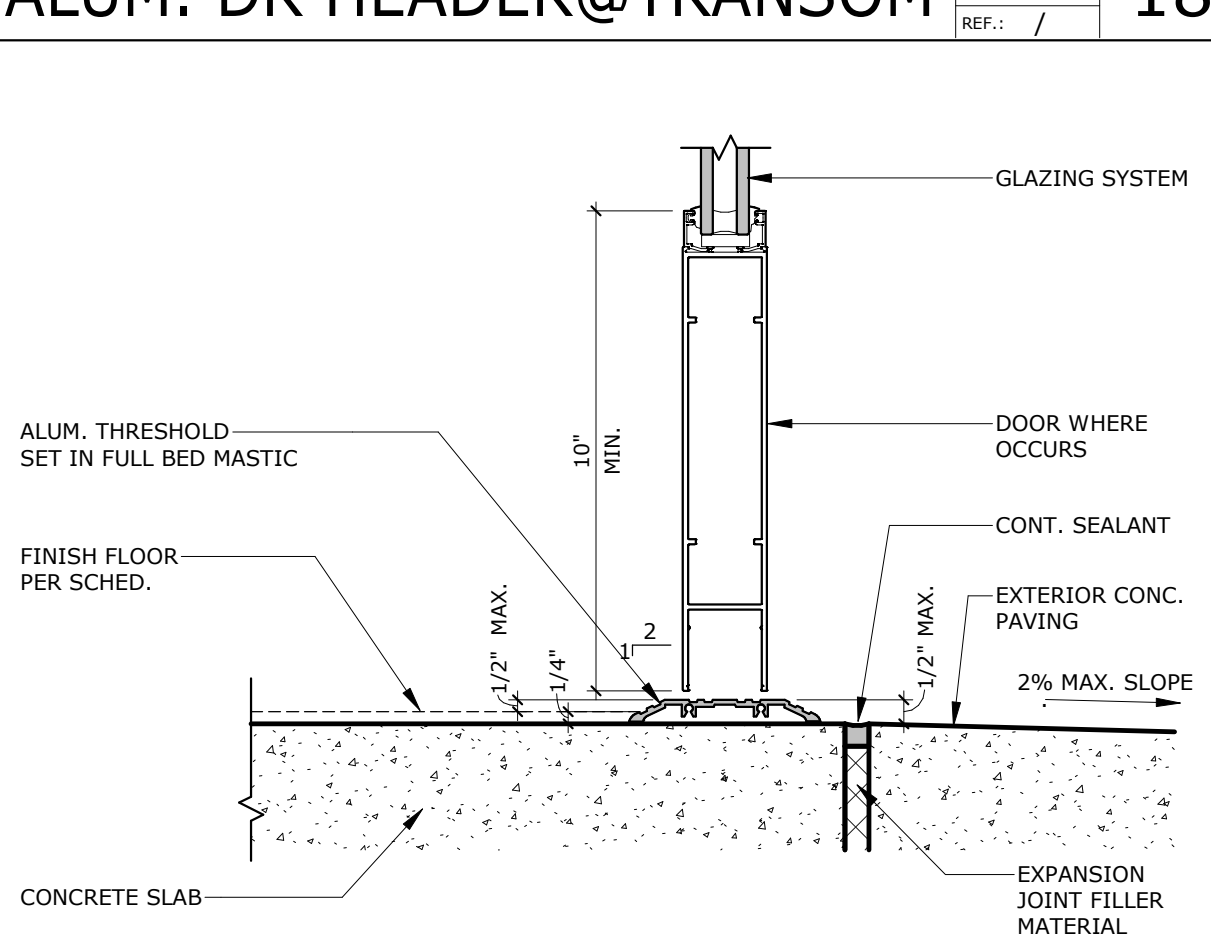
**ROLL UP DR. THRESHOLD** SCALE: 3" = 1'-0" REF.: 7



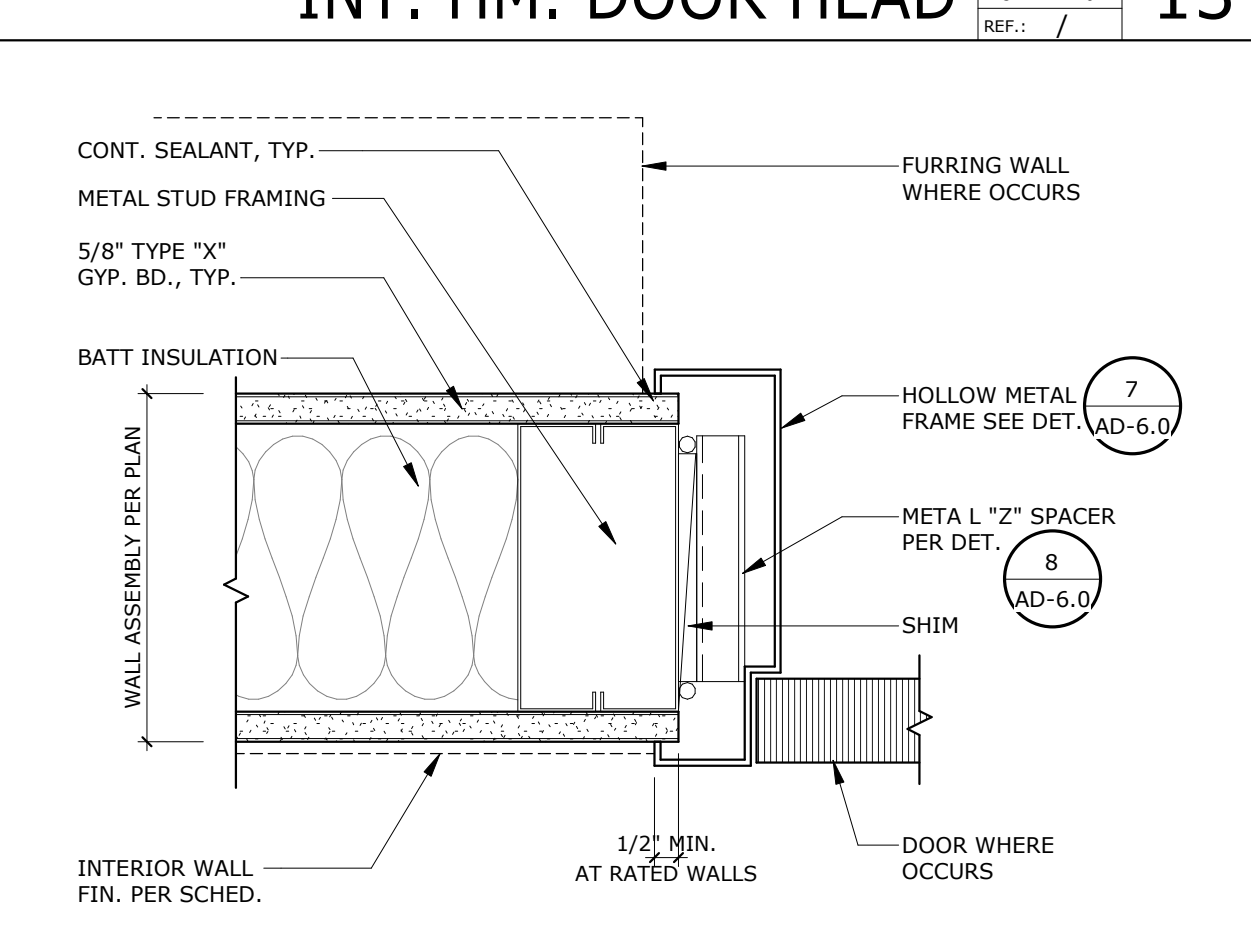
**BARN SLIDING DOOR HEADER** SCALE: 3" = 1'-0" REF.: 7



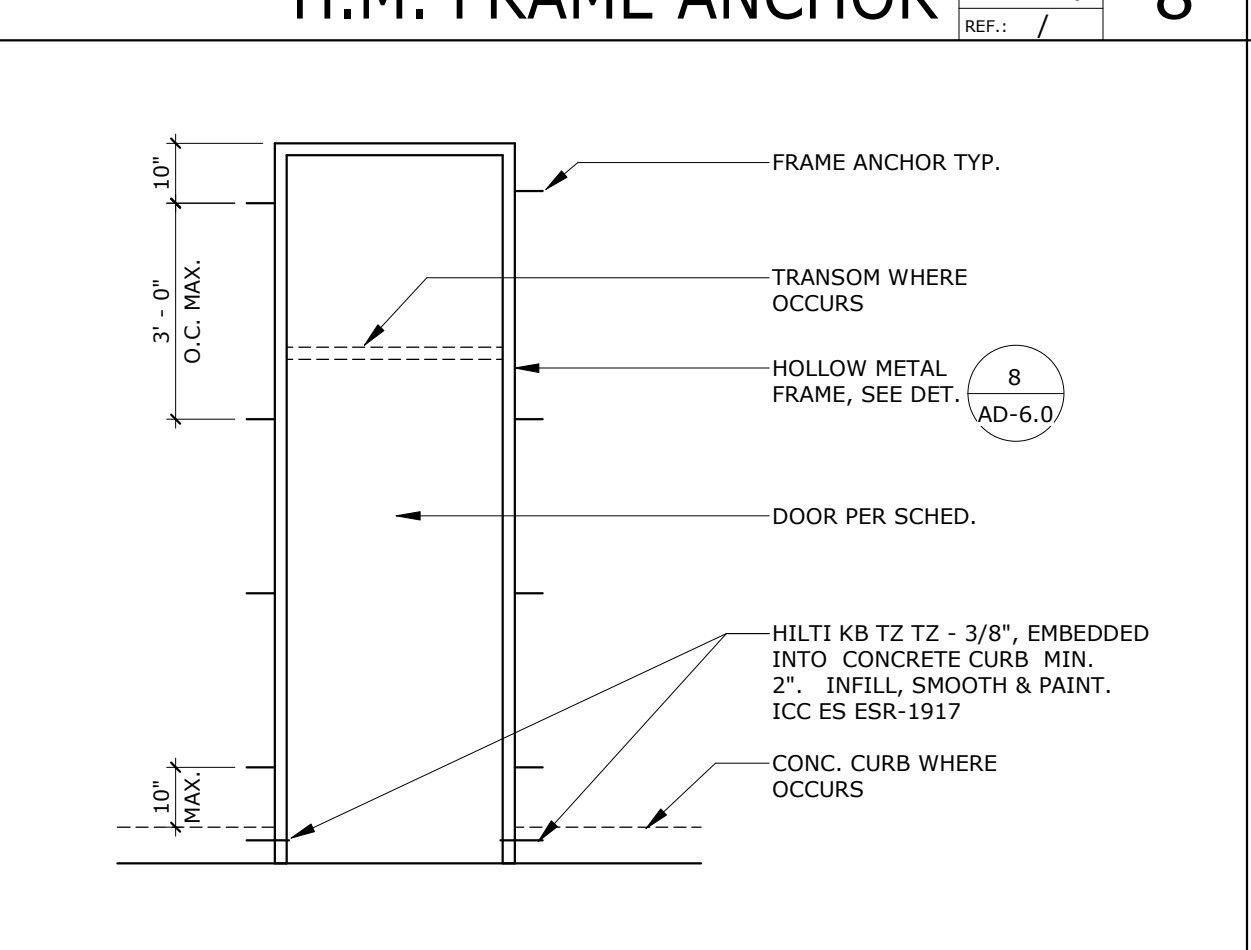
**EXT. ALUM. WINDOW SILL** SCALE: 3" = 1'-0" REF.: 2/A1-8.1



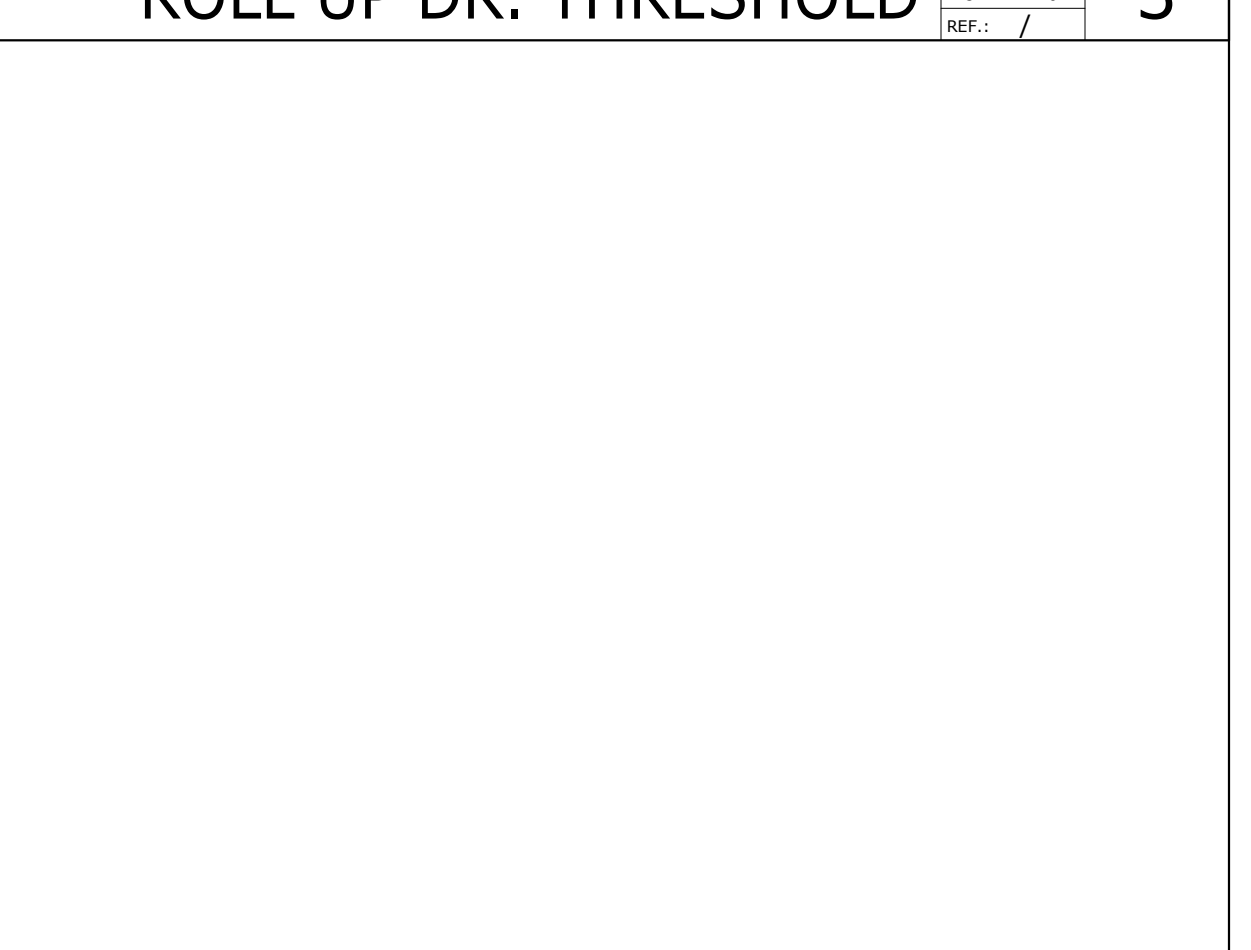
**ALUM. DOOR THRESHOLD** SCALE: 3" = 1'-0" REF.: 7



**INT. HM. DOOR JAMB** SCALE: 3" = 1'-0" REF.: 7



**HM. DOOR FRAME** SCALE: 3/8" = 1'-0" REF.: 7



**PROJECT NO. :50801**  
4/17/2024 4:56:23 PM

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ISSUE NO.	DATE	DESCRIPTION	REVISION NO.	DATE	DESCRIPTION

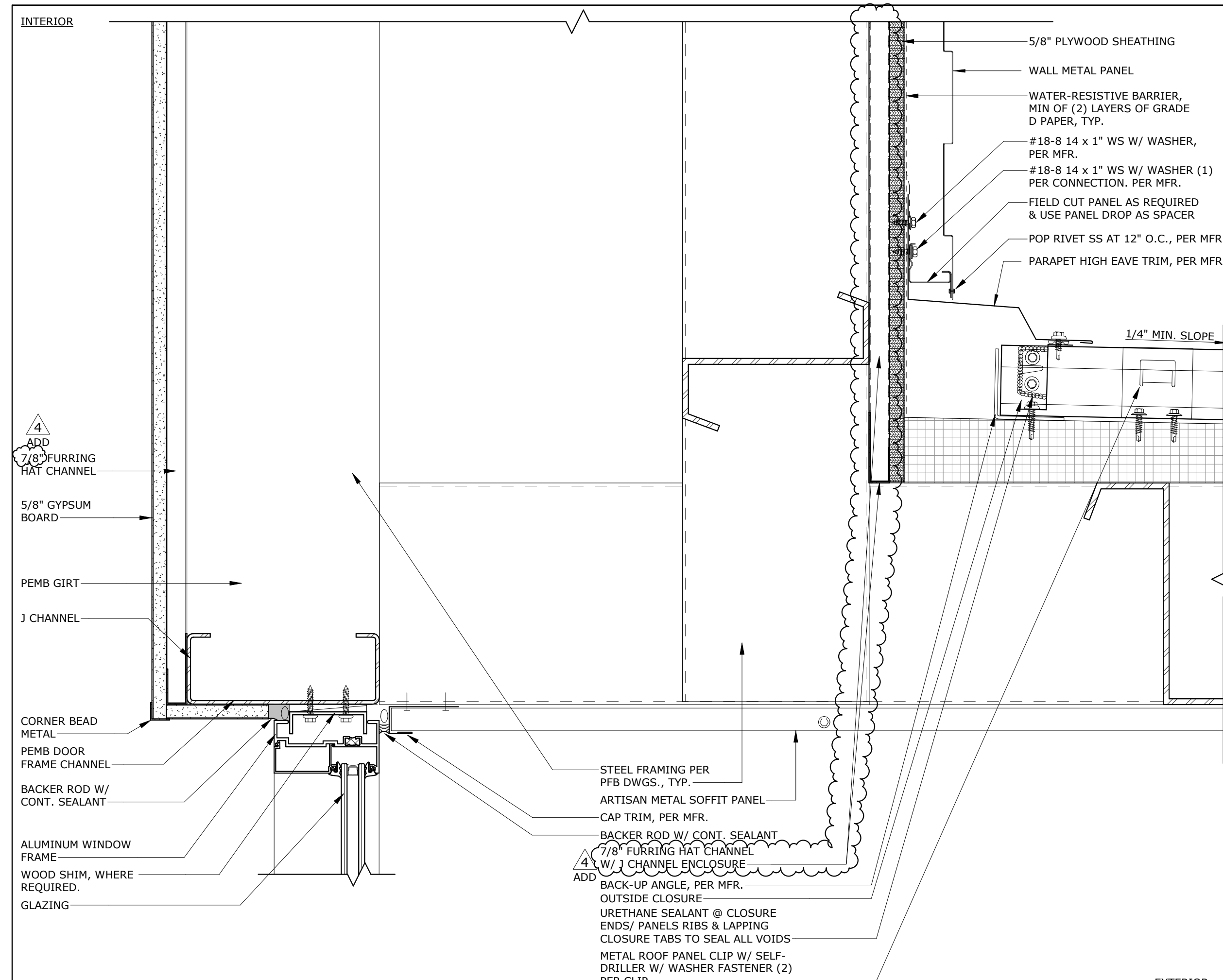
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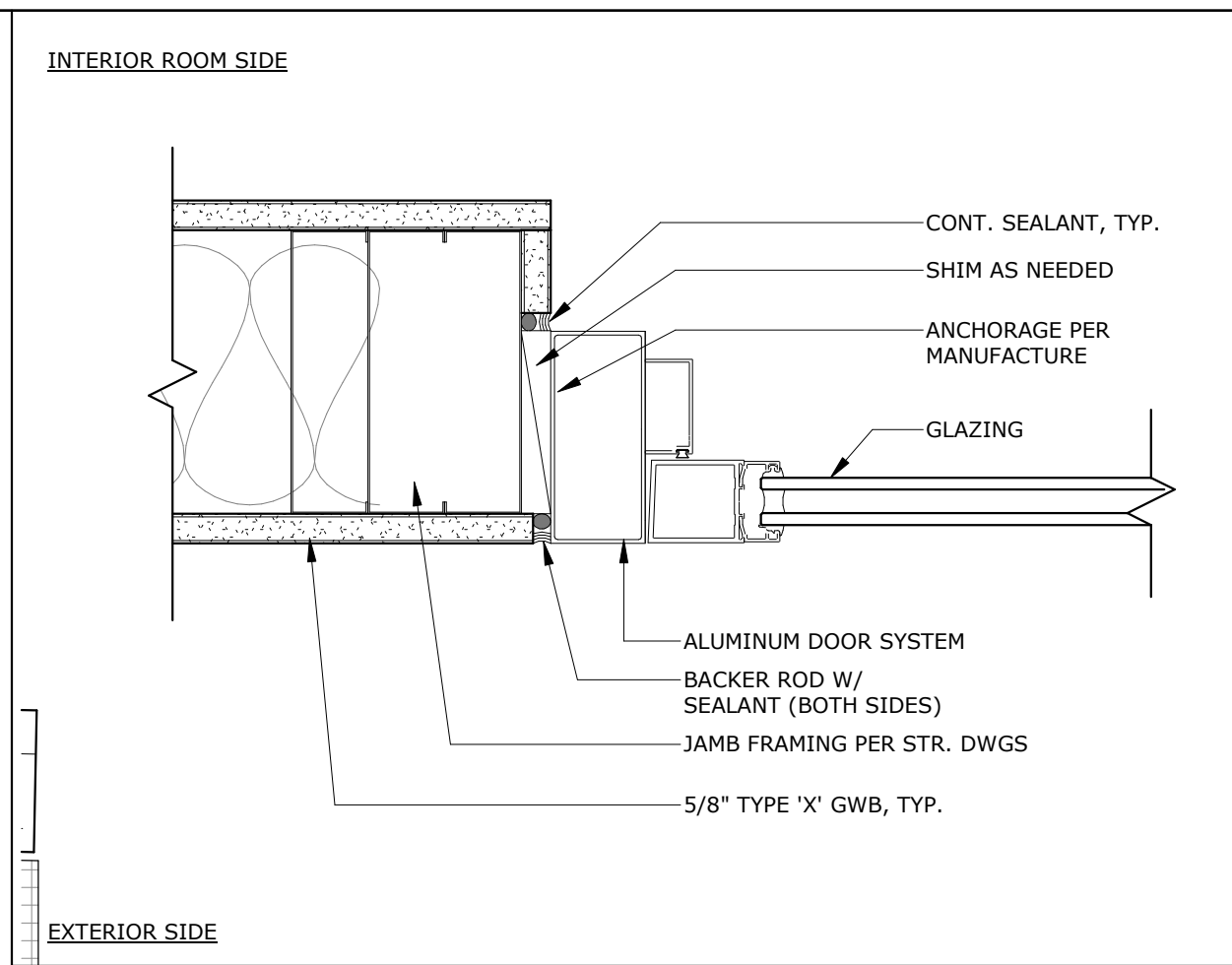
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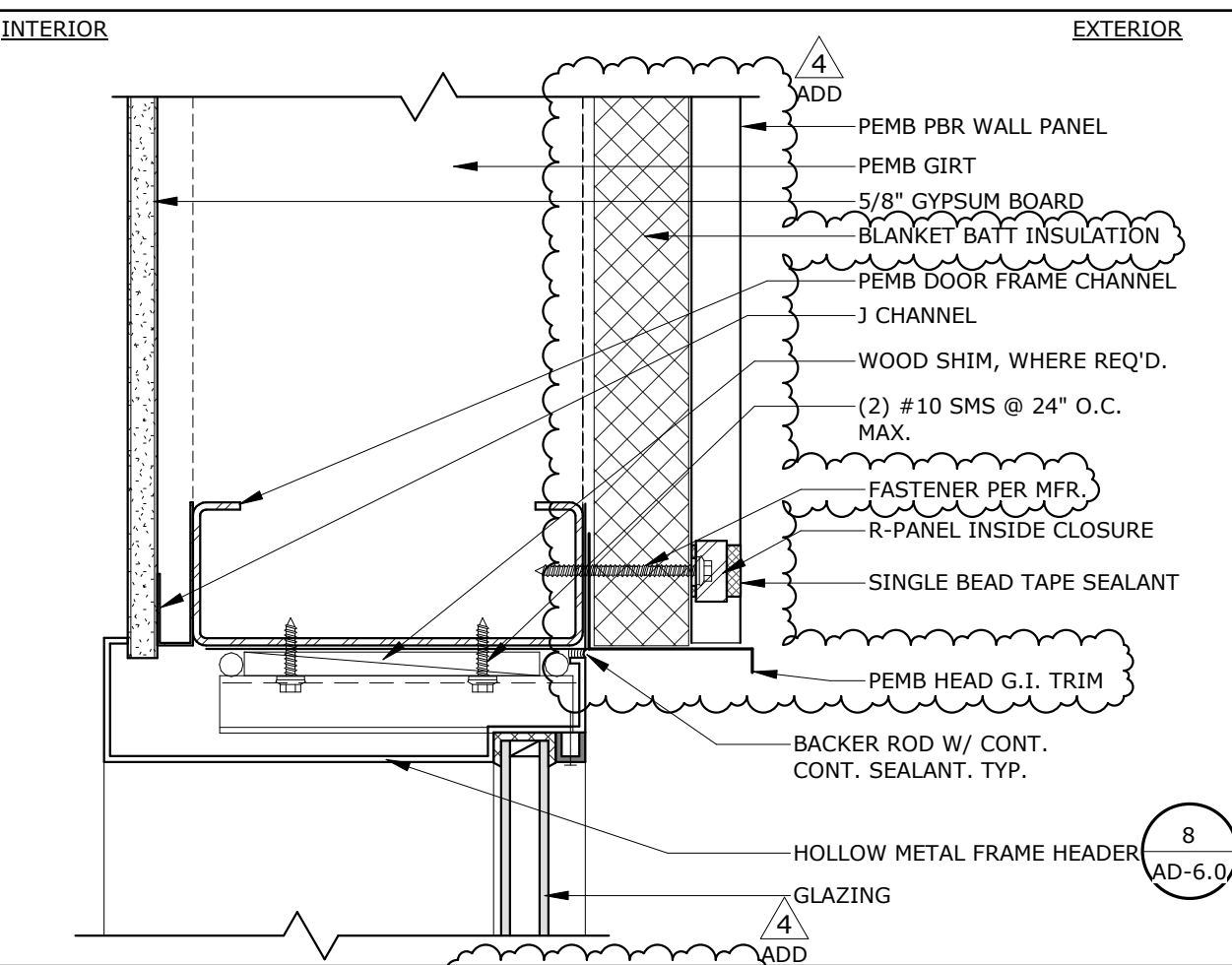




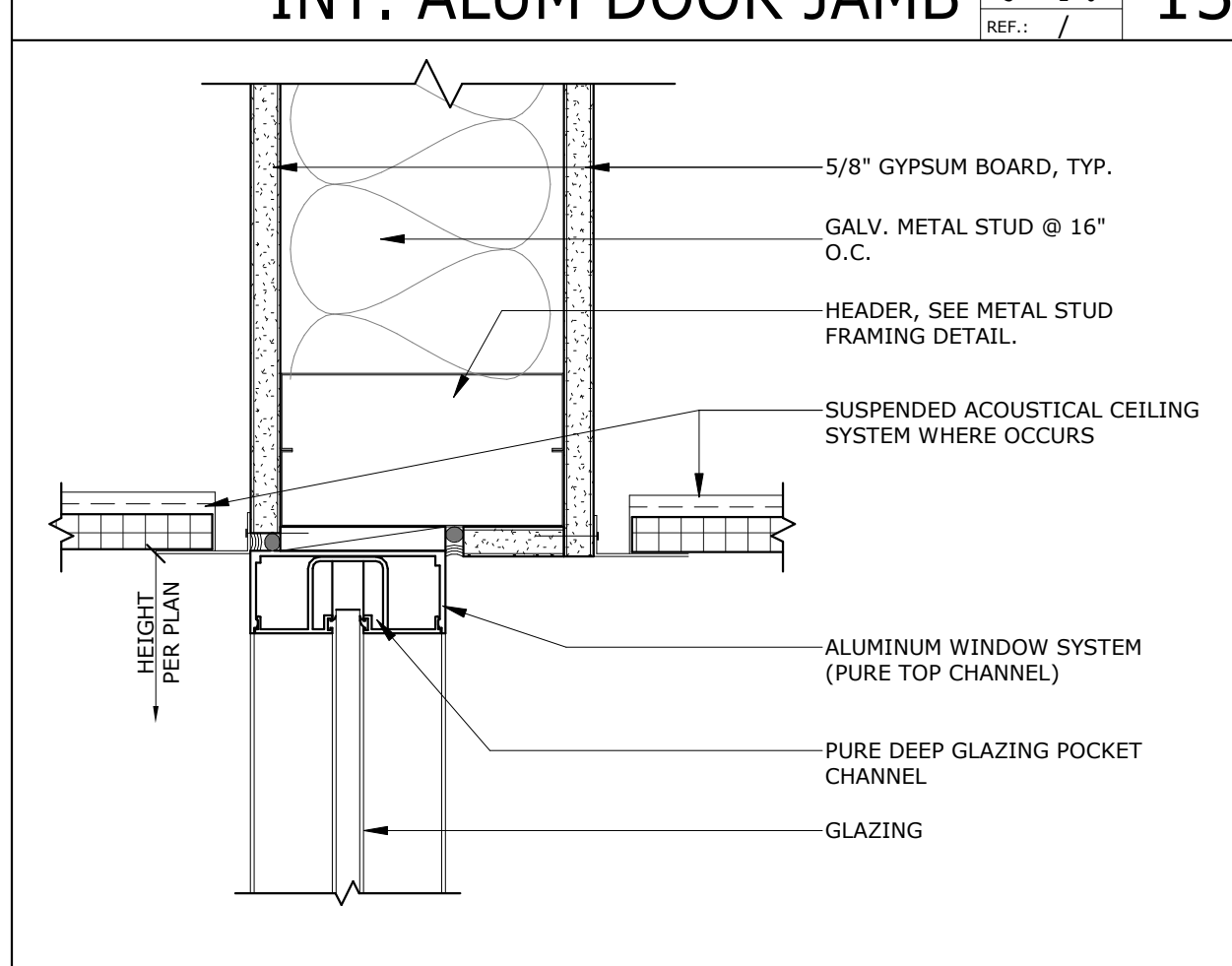
**PEMB WIN. HEAD INSET** SCALE: 3" = 1'-0" REF.: 1/A1.8.1



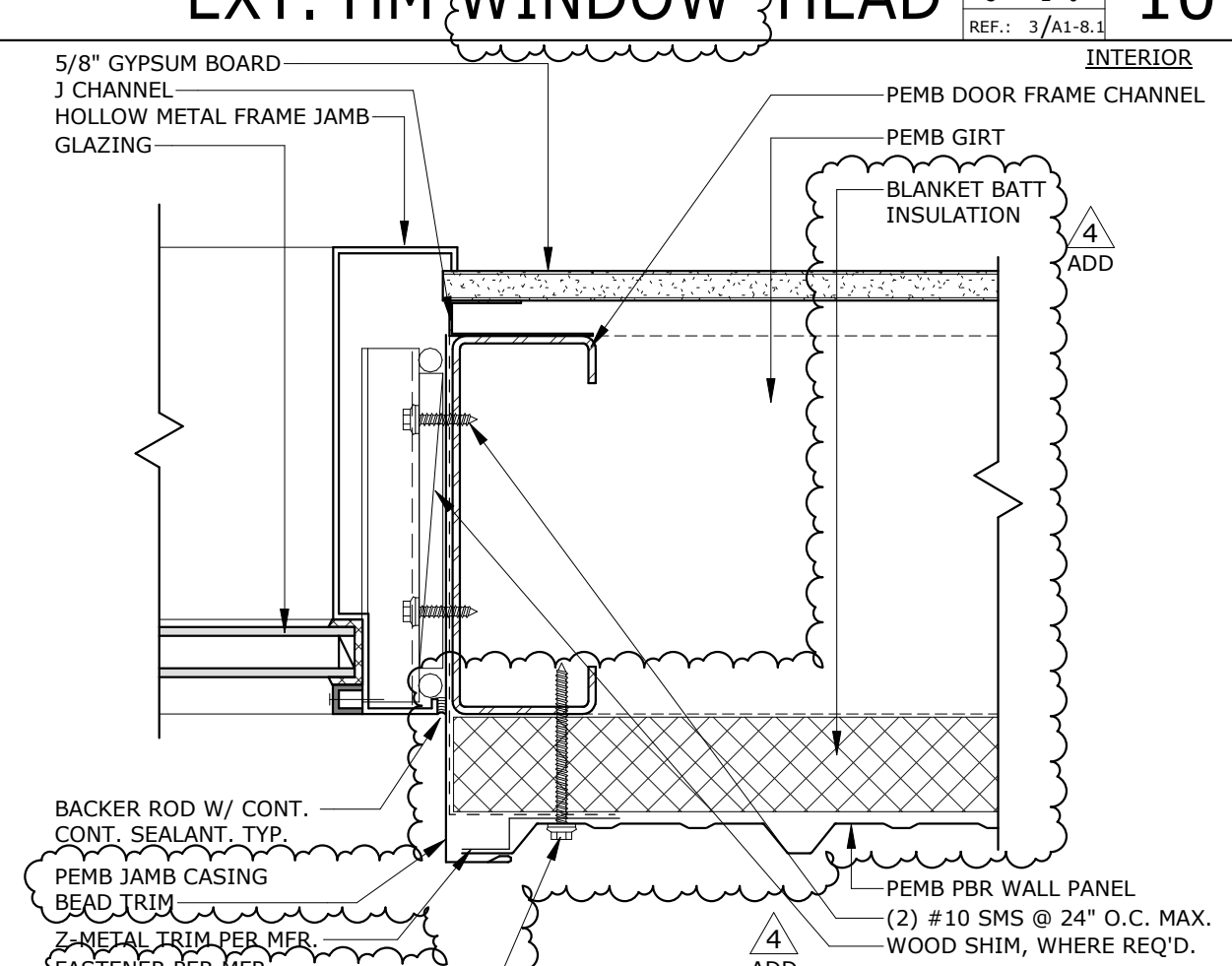
**INT. ALUM DOOR JAMB** SCALE: 3" = 1'-0" REF.: 7



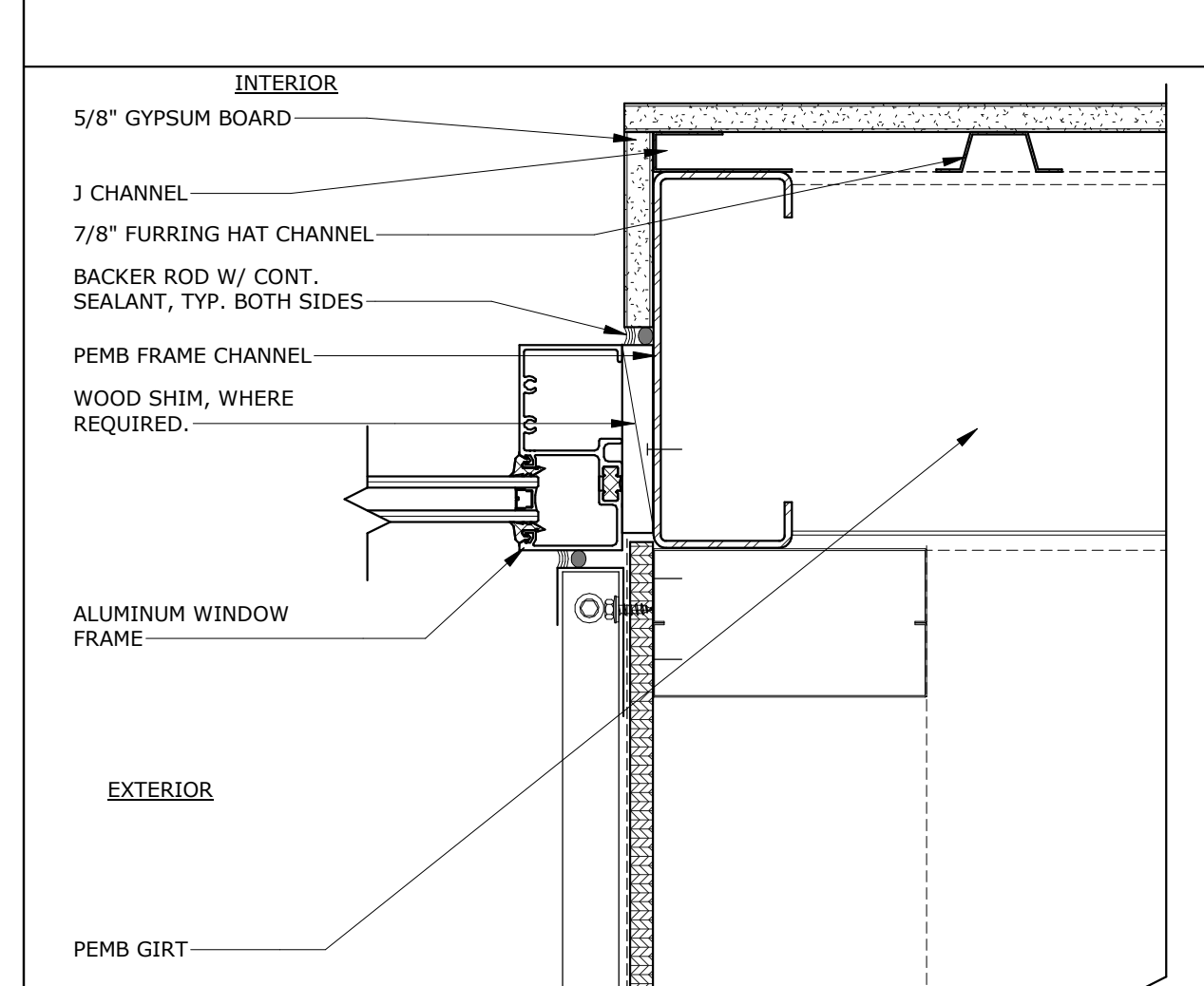
**EXT. HM WINDOW HEAD** SCALE: 3" = 1'-0" REF.: 3/A1.8.1



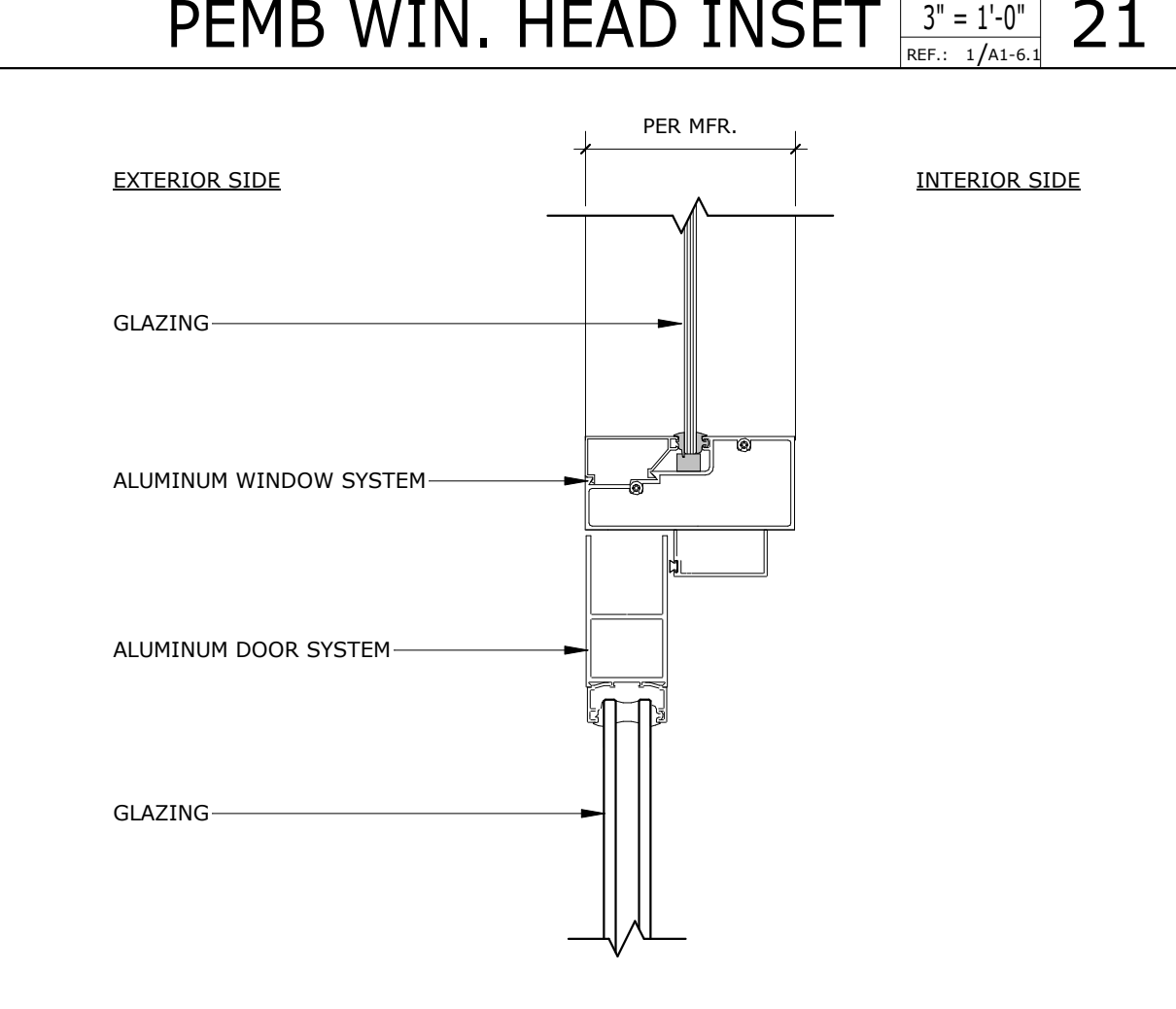
**INT. ALUM. WINDOW HEAD** SCALE: 3" = 1'-0" REF.: 7/A1.8.1



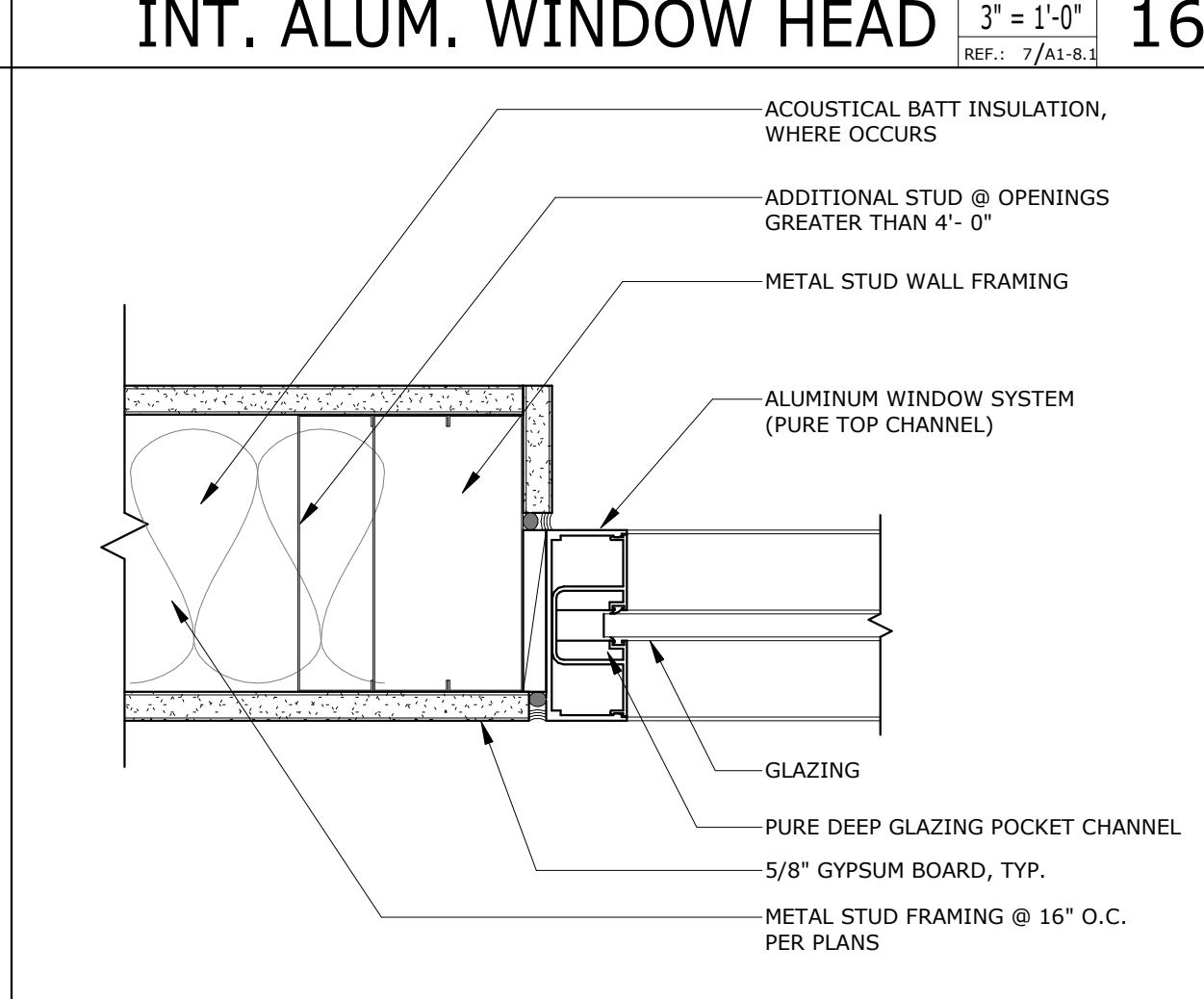
**EXT. HM WINDOW JAMB** SCALE: 3" = 1'-0" REF.: 3/A1.8.1



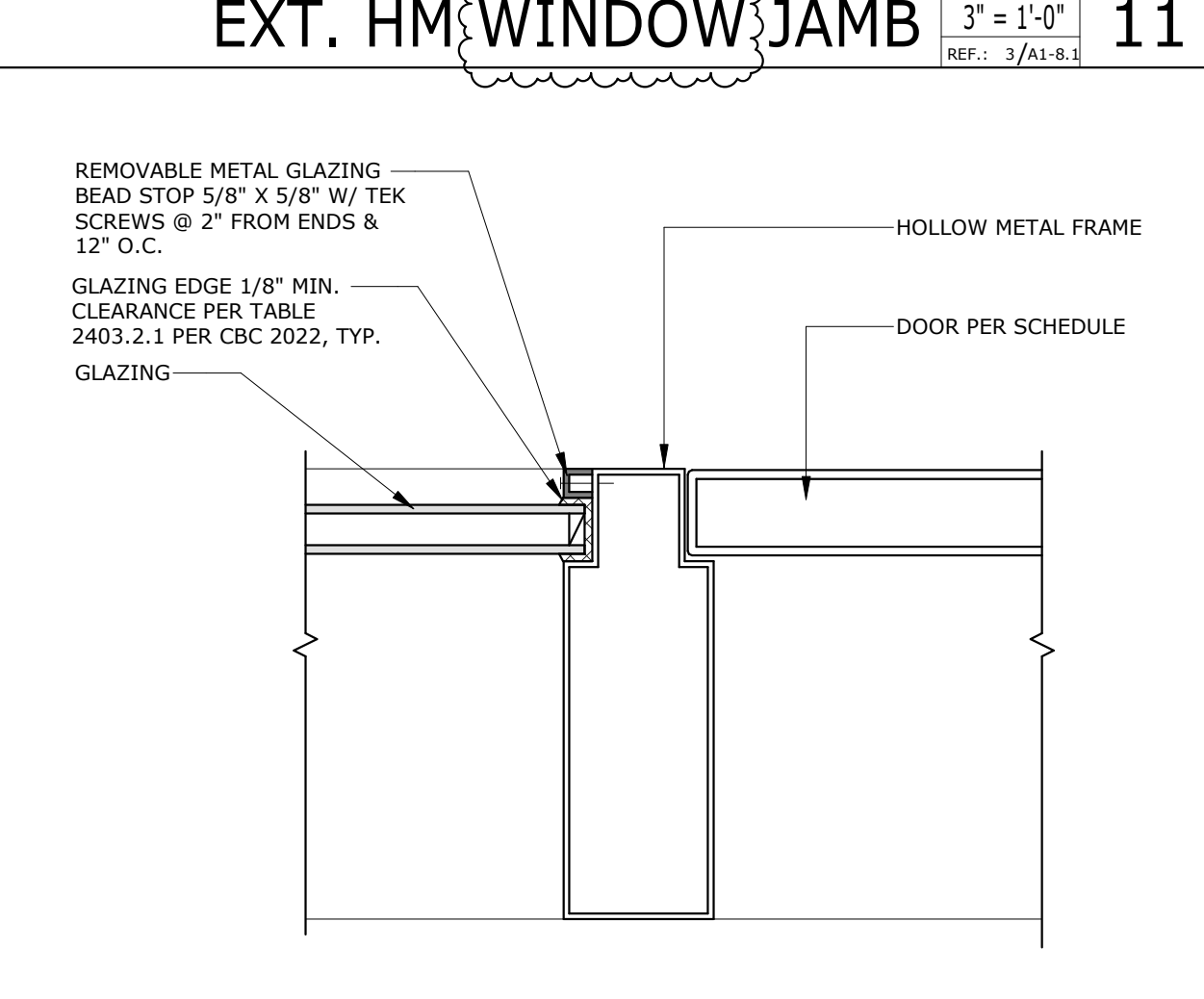
**PEMB WIN. JAMB INSET** SCALE: 3" = 1'-0" REF.: 15/A1.8.1



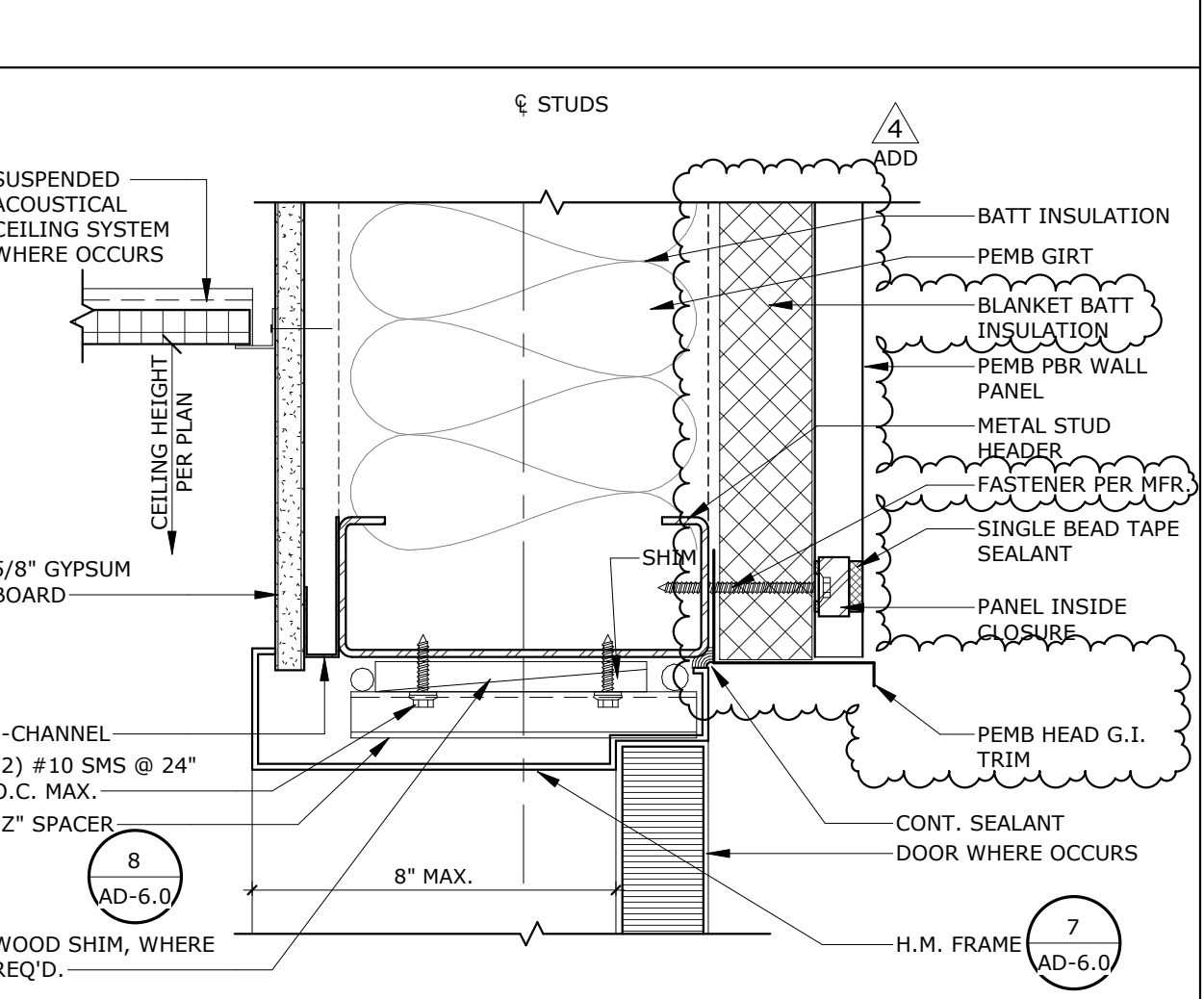
**PEMB. C.W. DOOR JAMB** SCALE: 3" = 1'-0" REF.: 1



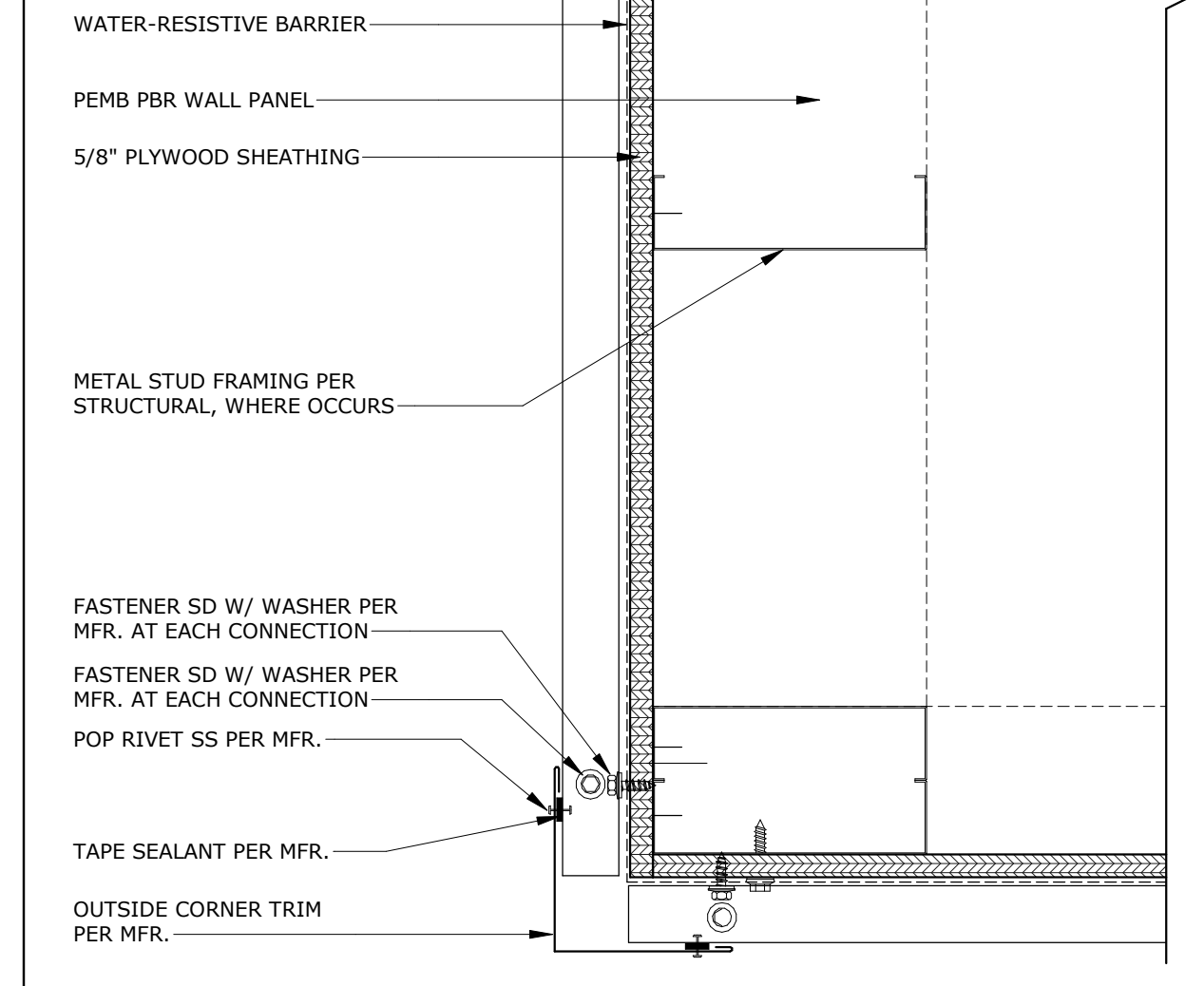
**INT. ALUM. WINDOW MULLION** SCALE: 3" = 1'-0" REF.: 7/A1.8.1



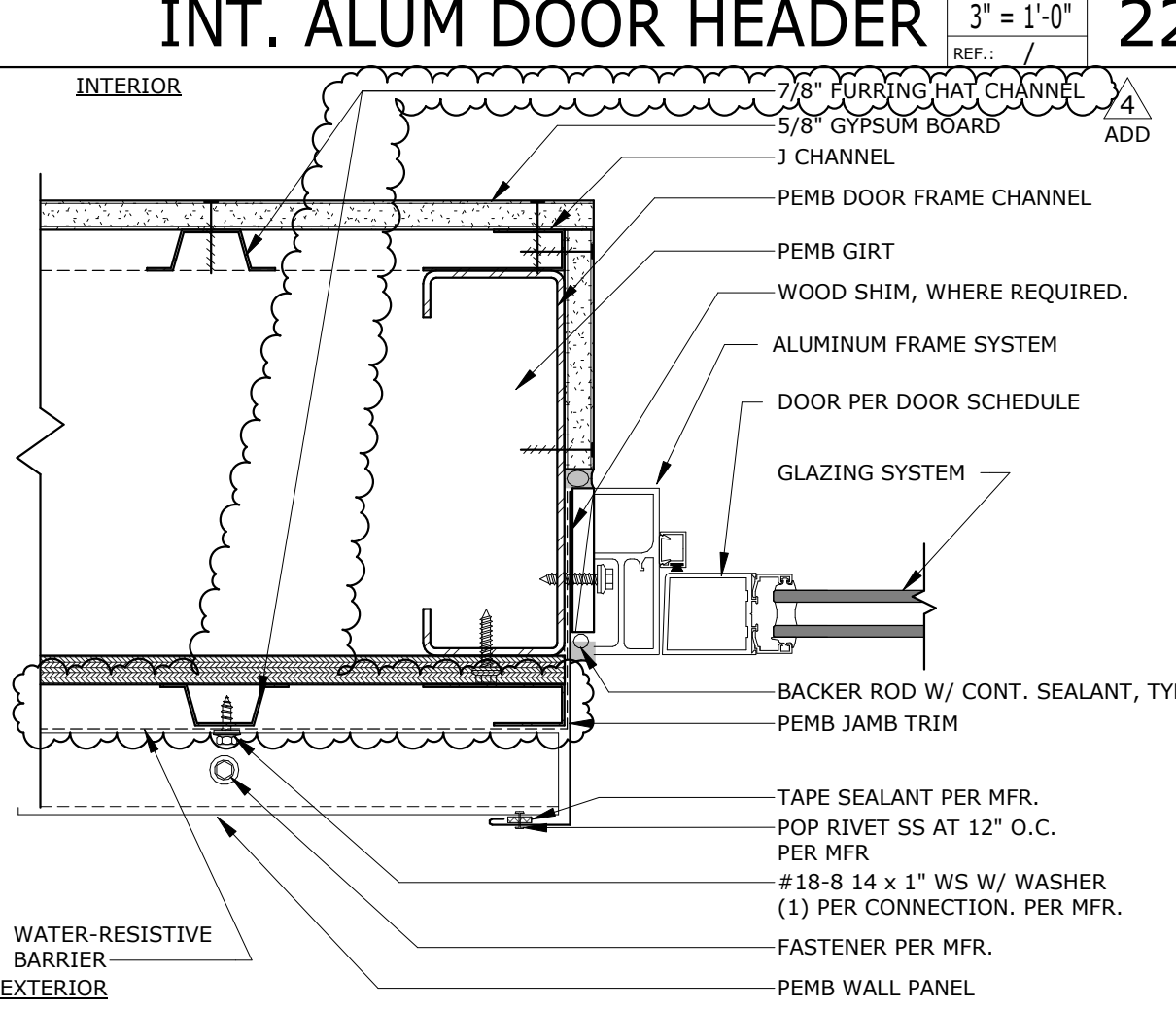
**EXT. H.M. DOOR HEAD/JAMB** SCALE: 3" = 1'-0" REF.: 7



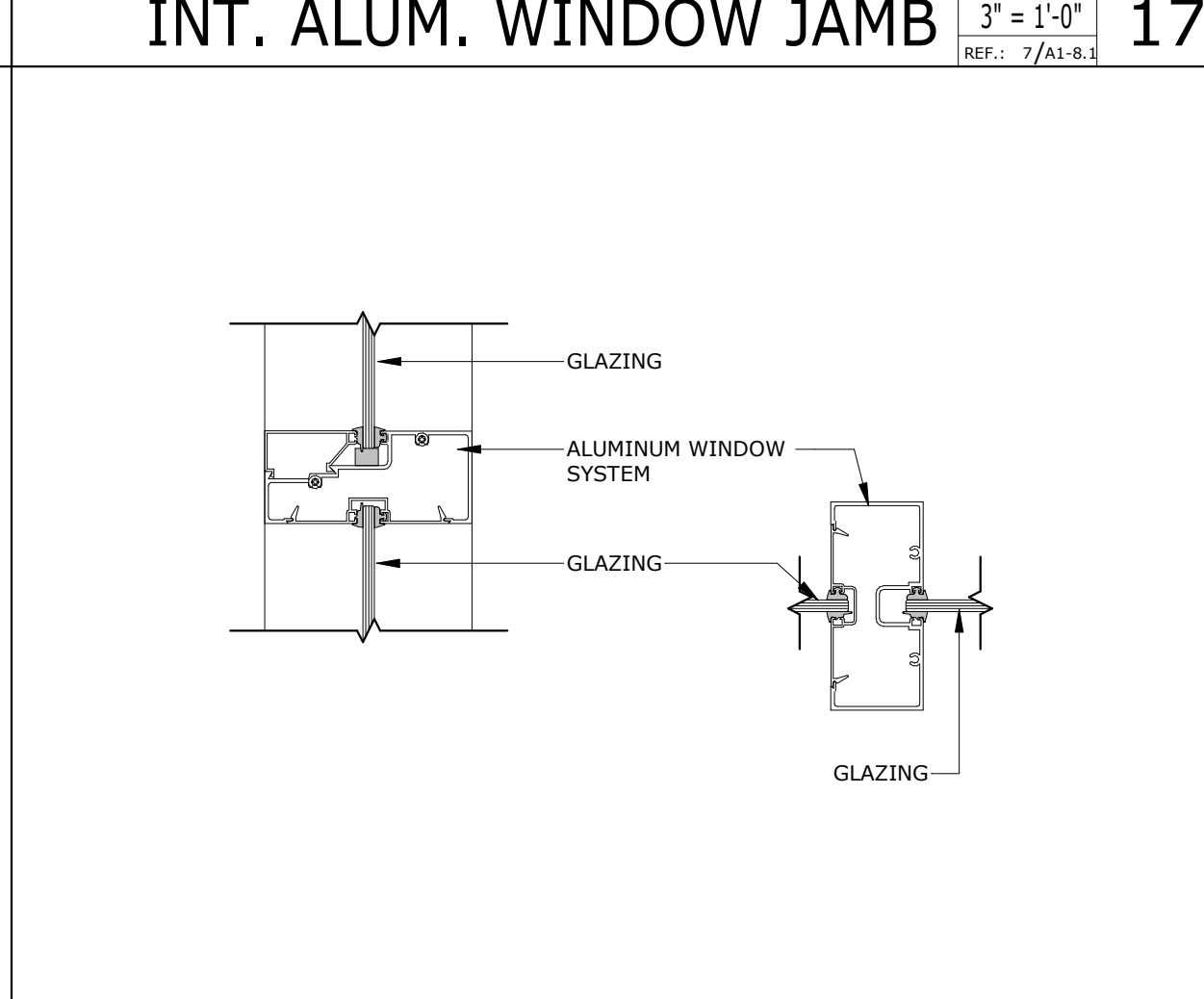
**EXT. HM. DOOR HEAD** SCALE: 3" = 1'-0" REF.: 7



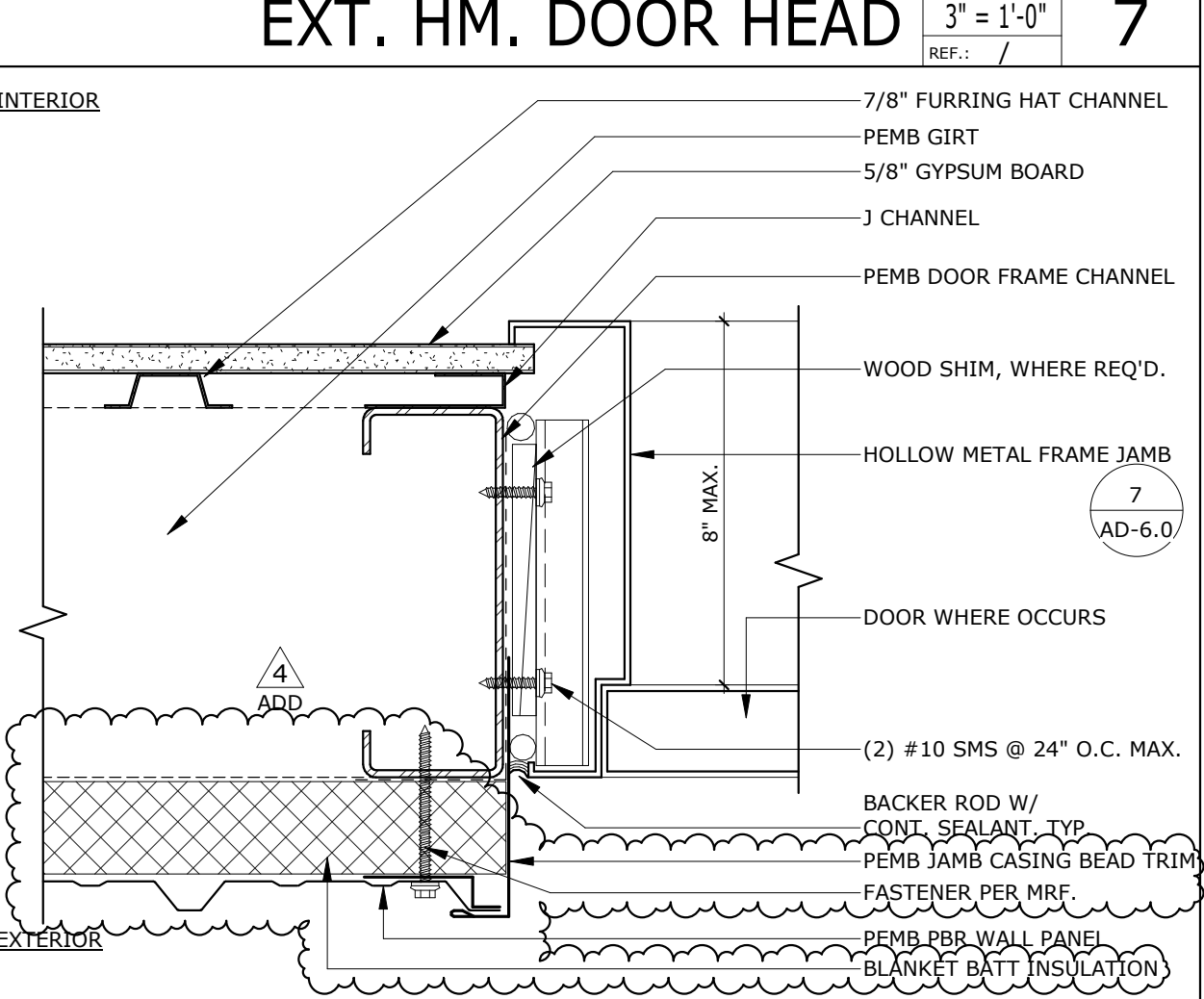
**PEMB WIN. CANOPY** SCALE: 3" = 1'-0" REF.: 1/A1.8.1



**INT. ALUM. WINDOW SILL** SCALE: 3" = 1'-0" REF.: 7/A1.8.1

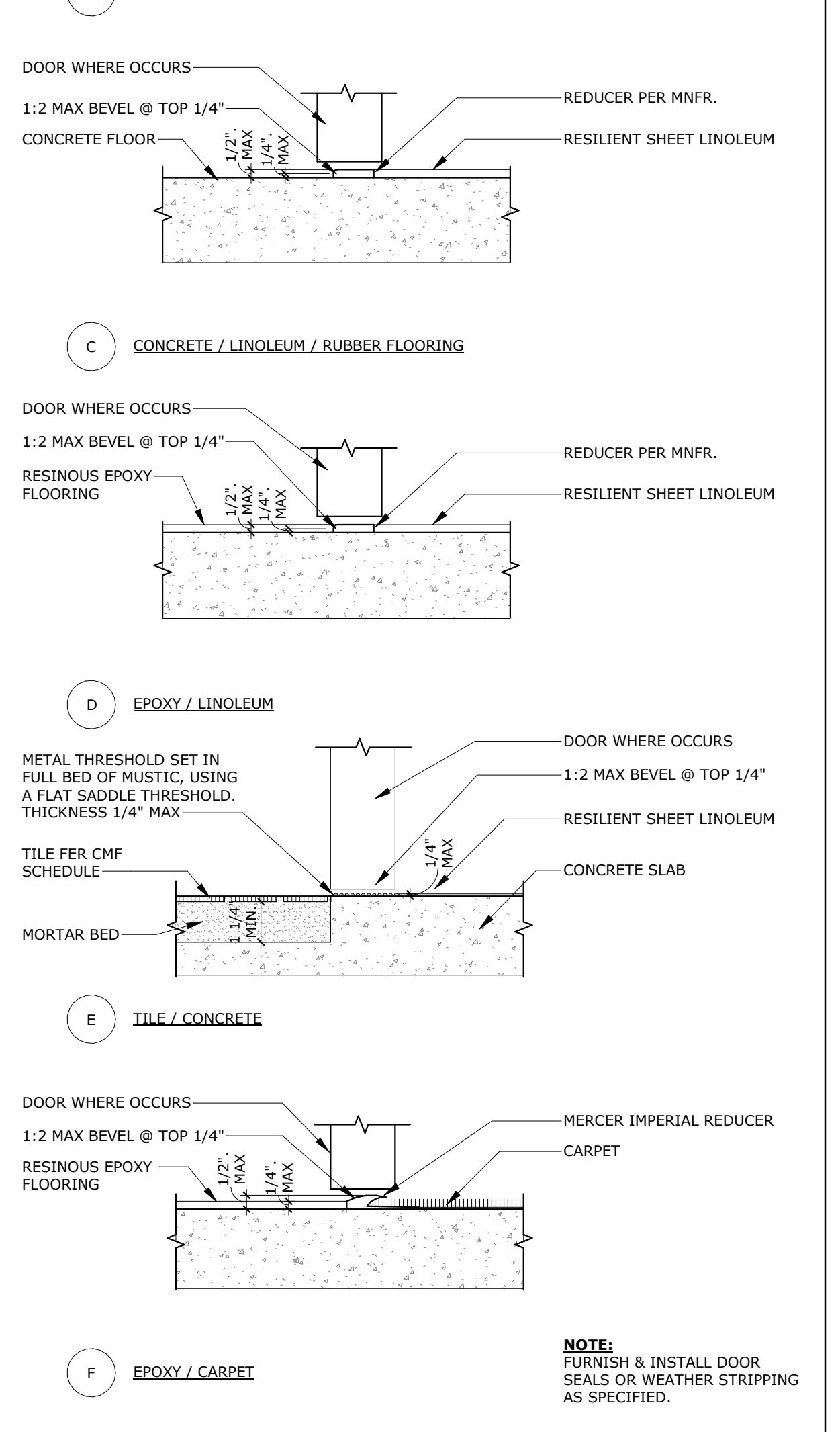
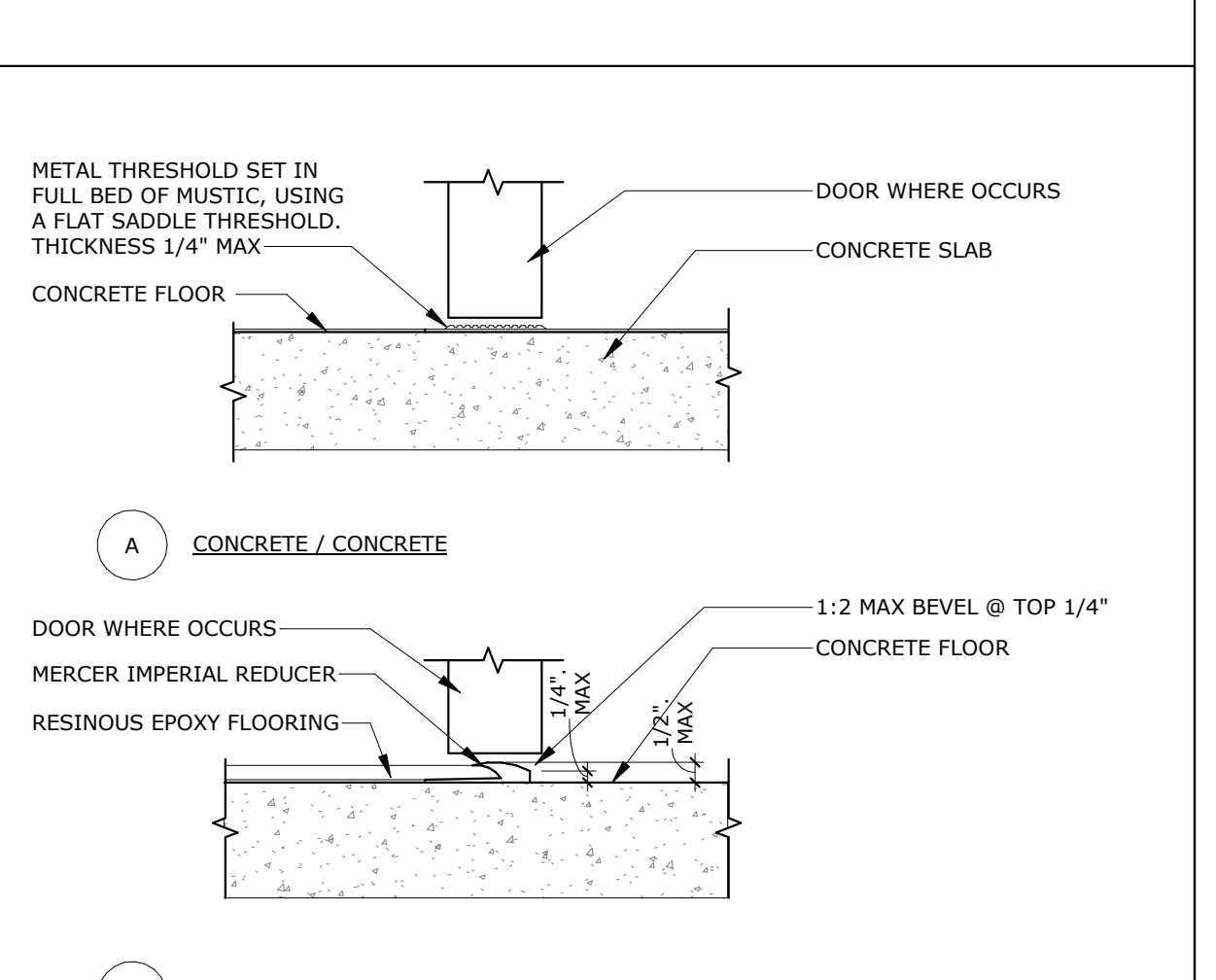


**EXT. HM. WINDOW JAMB 2** SCALE: 3" = 1'-0" REF.: 9/A1.8.1

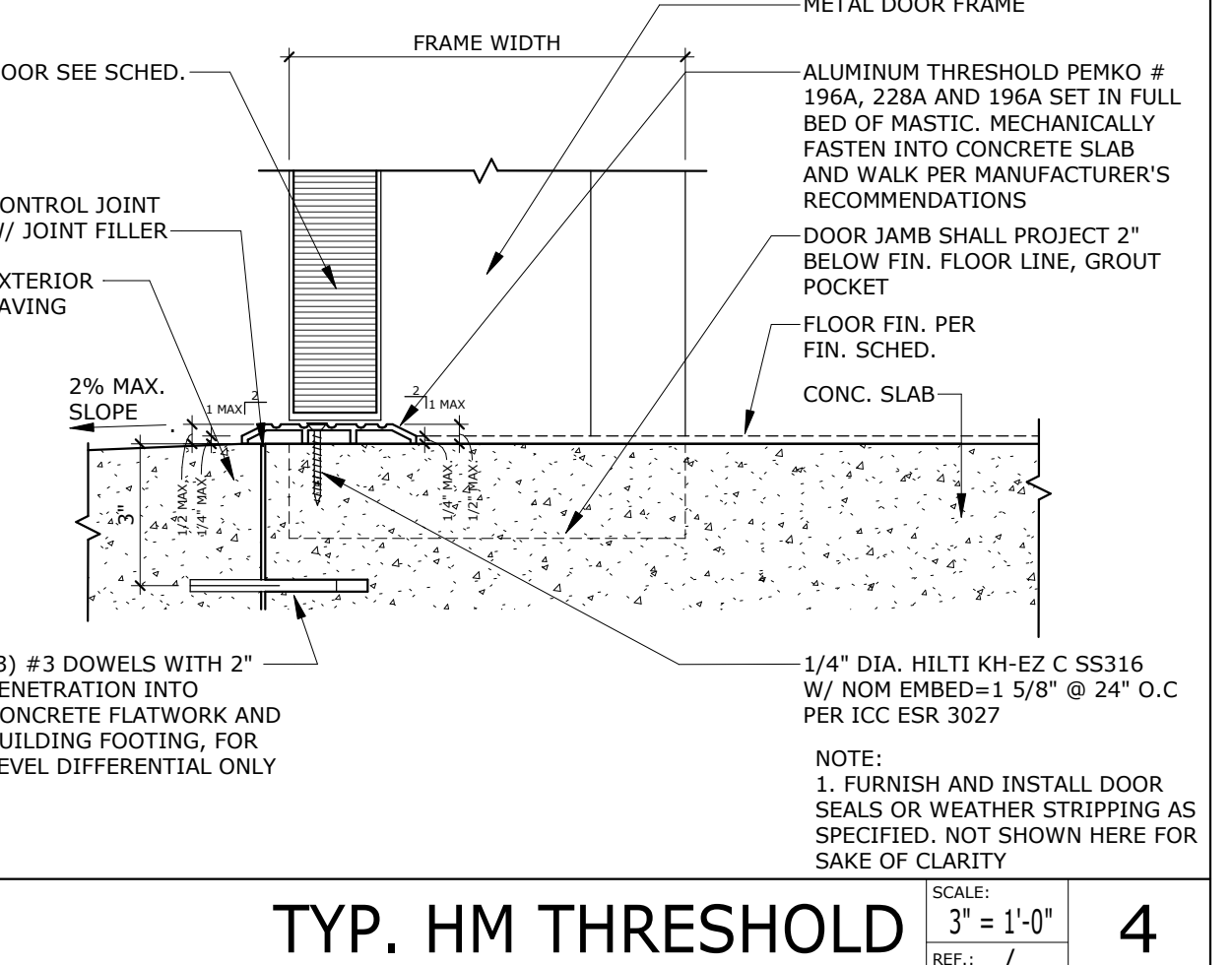


**EXT. HM. DOOR JAMB 2** SCALE: 3" = 1'-0" REF.: 9

**RUHNAU CLARKE ARCHITECTS**



**FLOOR TRANSITIONS** SCALE: 3" = 1'-0" REF.: 1



**TYP. HM THRESHOLD** SCALE: 3" = 1'-0" REF.: 7

**PROJECT No. :50801**  
4/17/2024 4:56:27 PM

ISSUE NO.	DATE	DESCRIPTION	REVISION NO.	DATE	DESCRIPTION

**PEMB WIN. CANOPY** SCALE: 3" = 1'-0" REF.: 1/A1.8.1

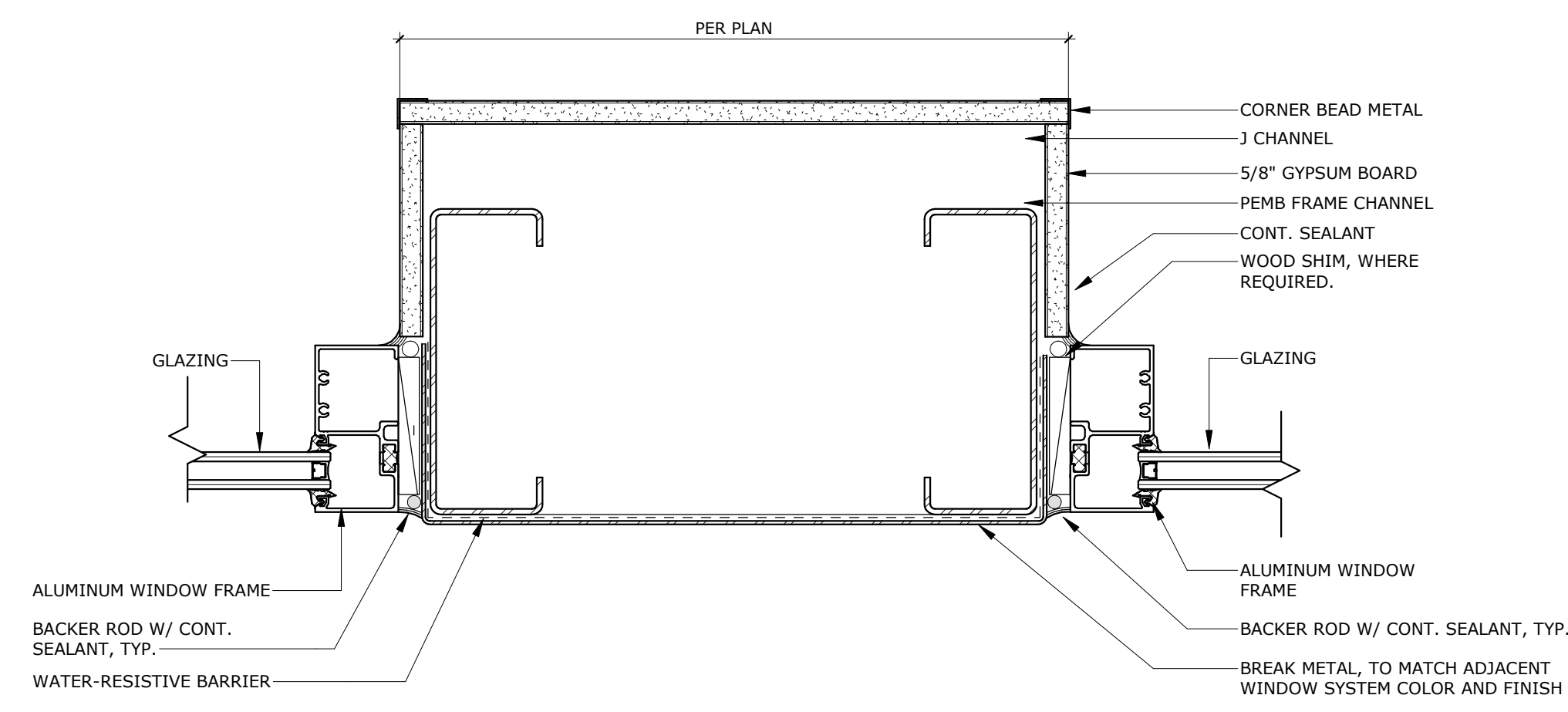
**INT. ALUM. WINDOW SILL** SCALE: 3" = 1'-0" REF.: 7/A1.8.1

**EXT. HM. WINDOW JAMB 2** SCALE: 3" = 1'-0" REF.: 9/A1.8.1

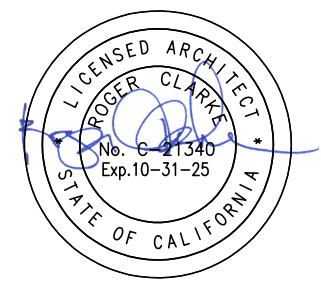
**EXT. HM. DOOR JAMB 2** SCALE: 3" = 1'-0" REF.: 9

**TYP. HM THRESHOLD** SCALE: 3" = 1'-0" REF.: 7

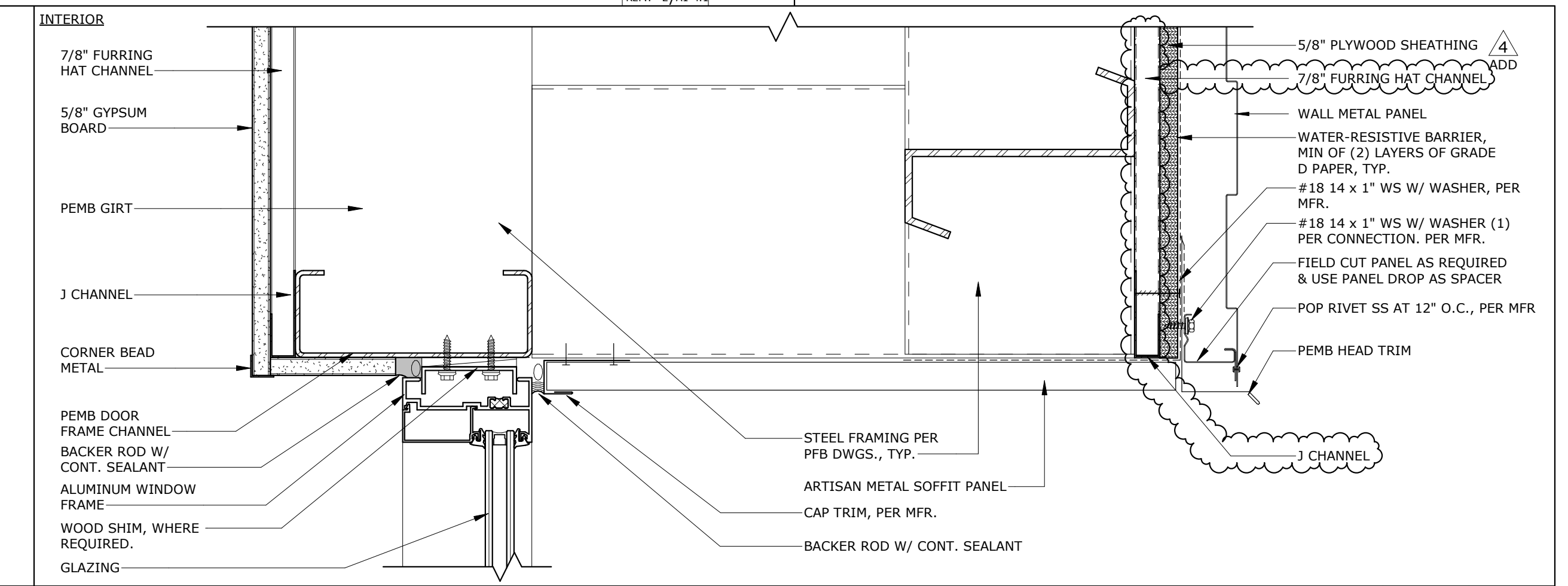




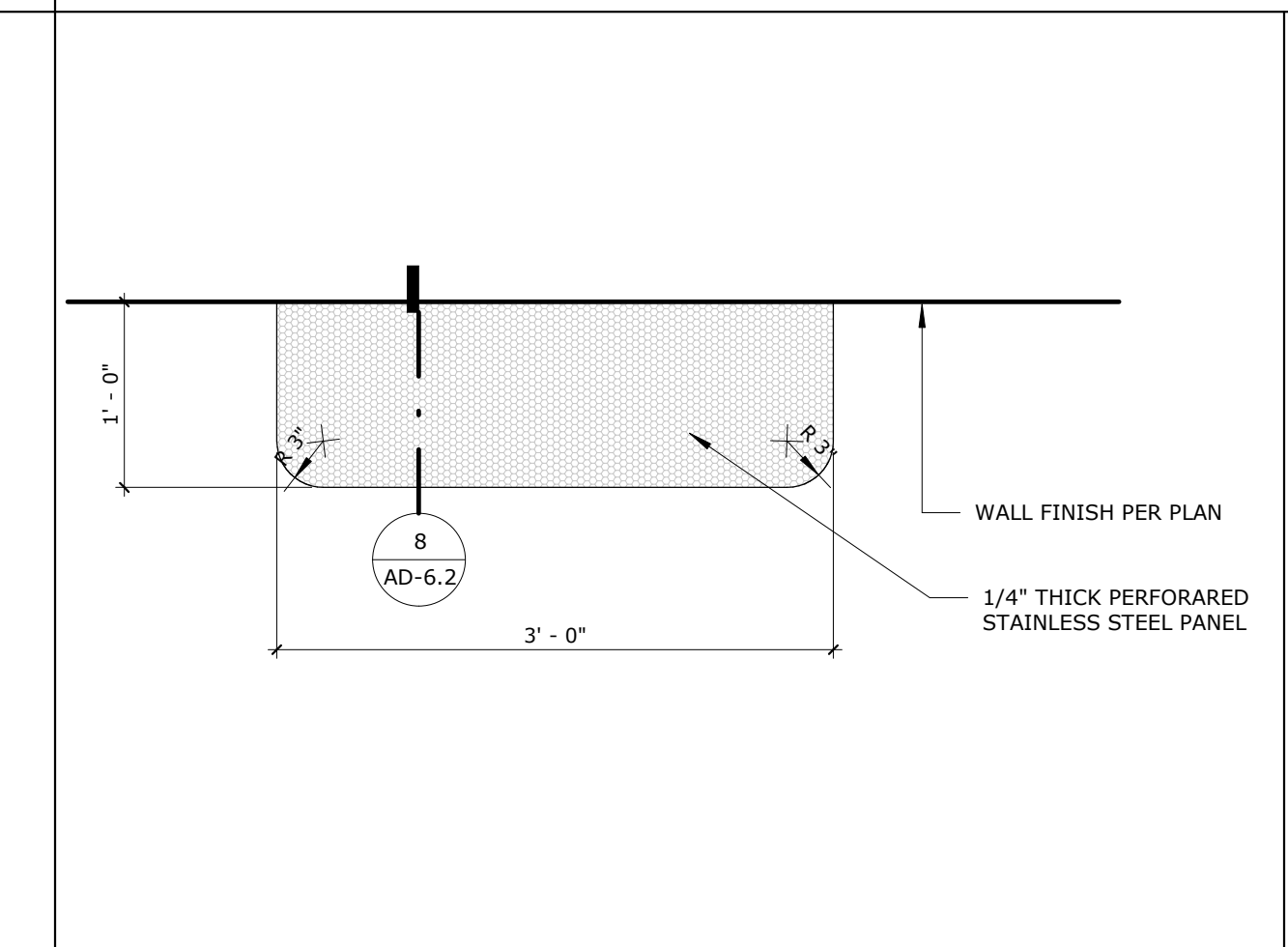
ALUM. WINDOW TO ALUM WINDOW JAMB SCALE: 3" = 1'-0" REF.: 2/A1-4.4 5



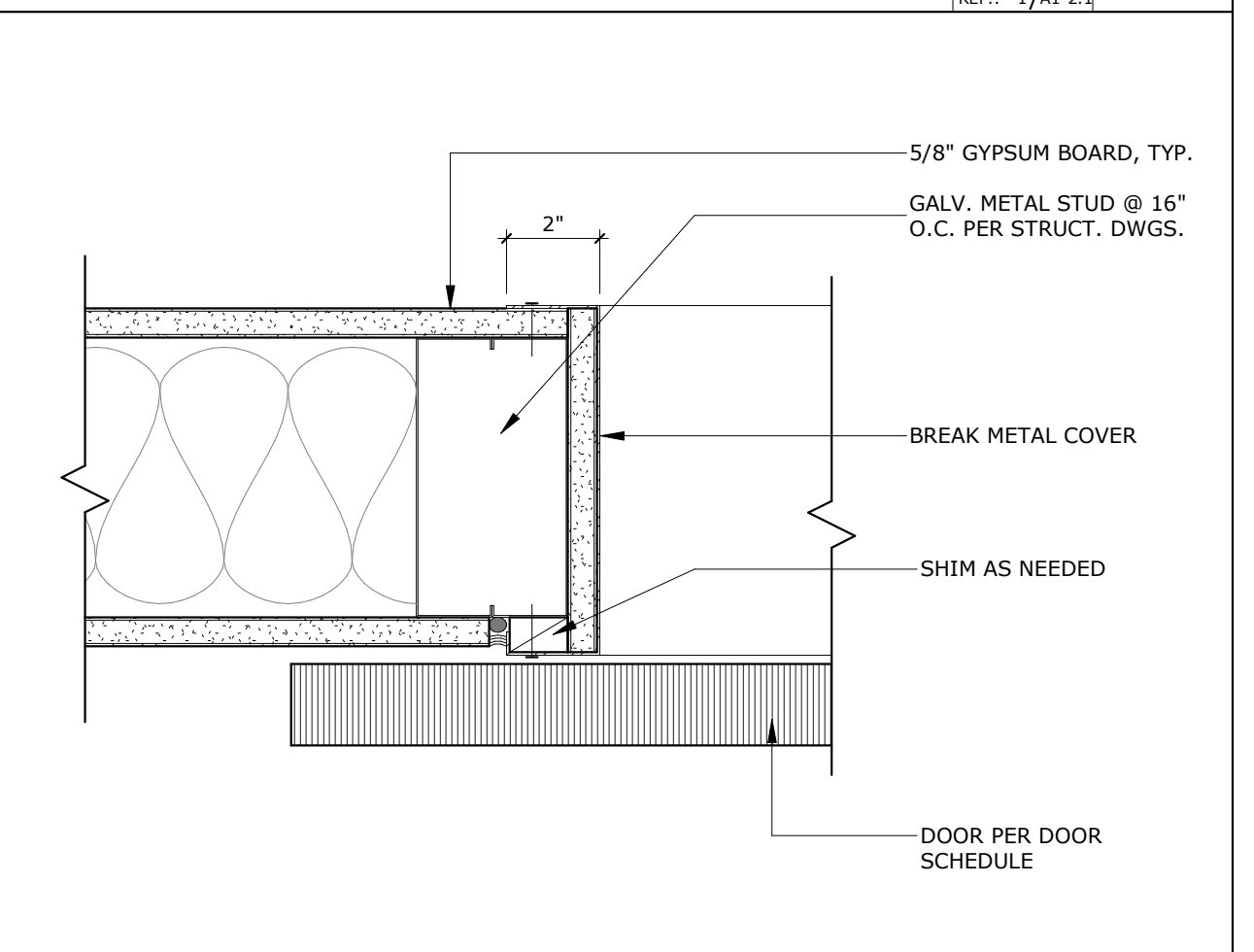
RUHNAU  
CLARKE  
ARCHITECTS



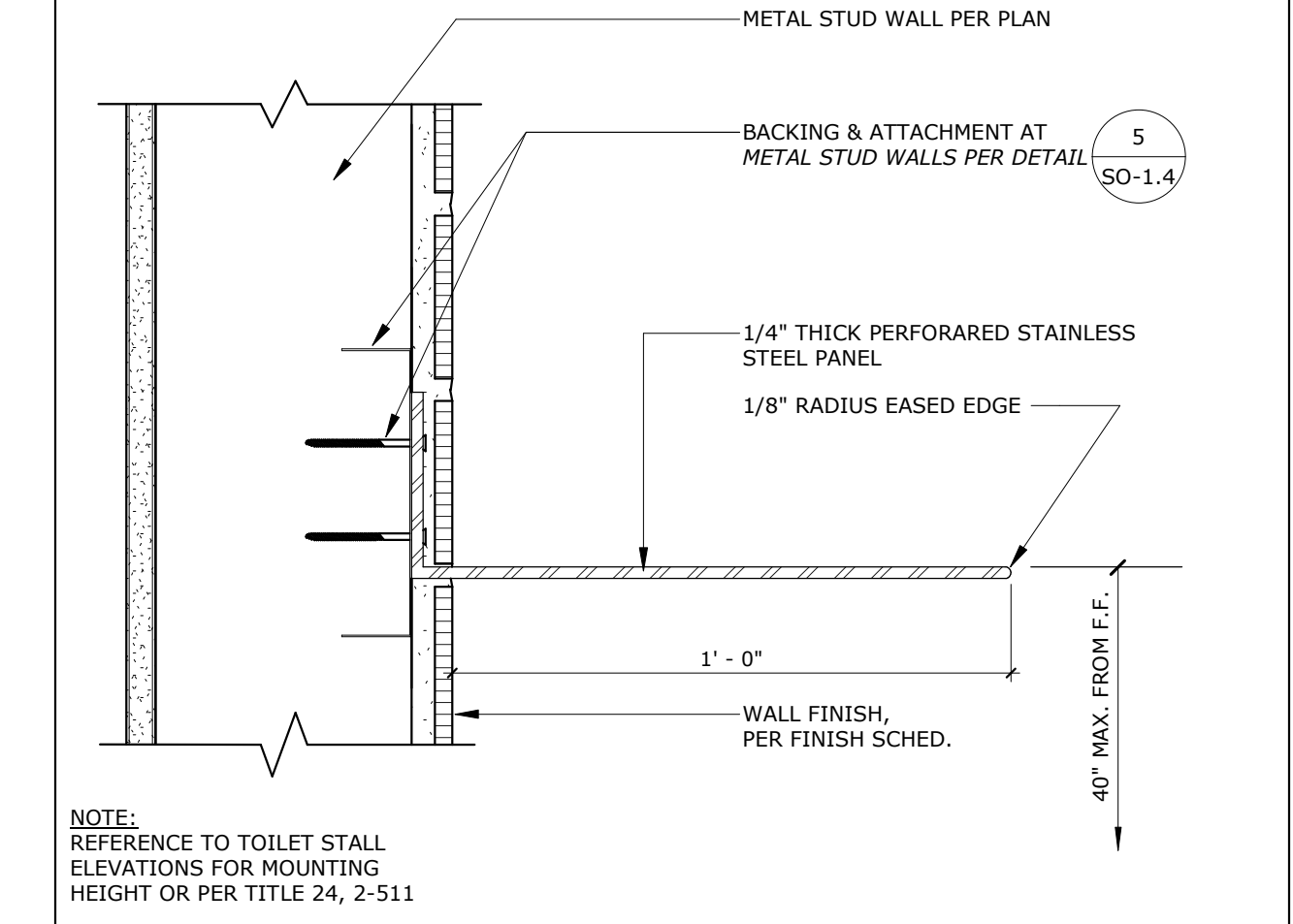
PEMB WIN. HEAD 2 SCALE: 3" = 1'-0" REF.: 1/A1-2.1 1



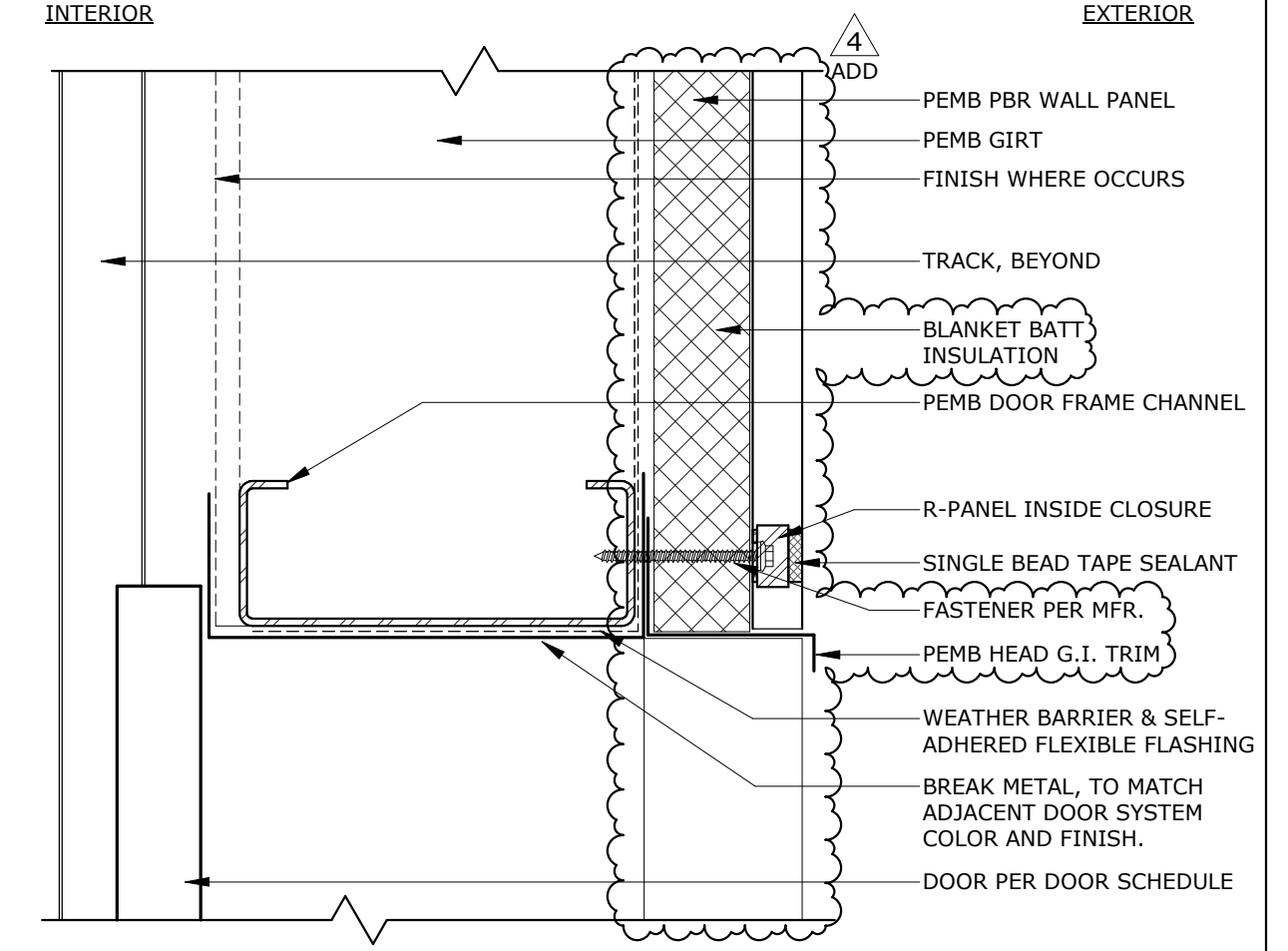
SHOWER SHELF PLAN VIEW SCALE: 1" = 1'-0" REF.: / 6



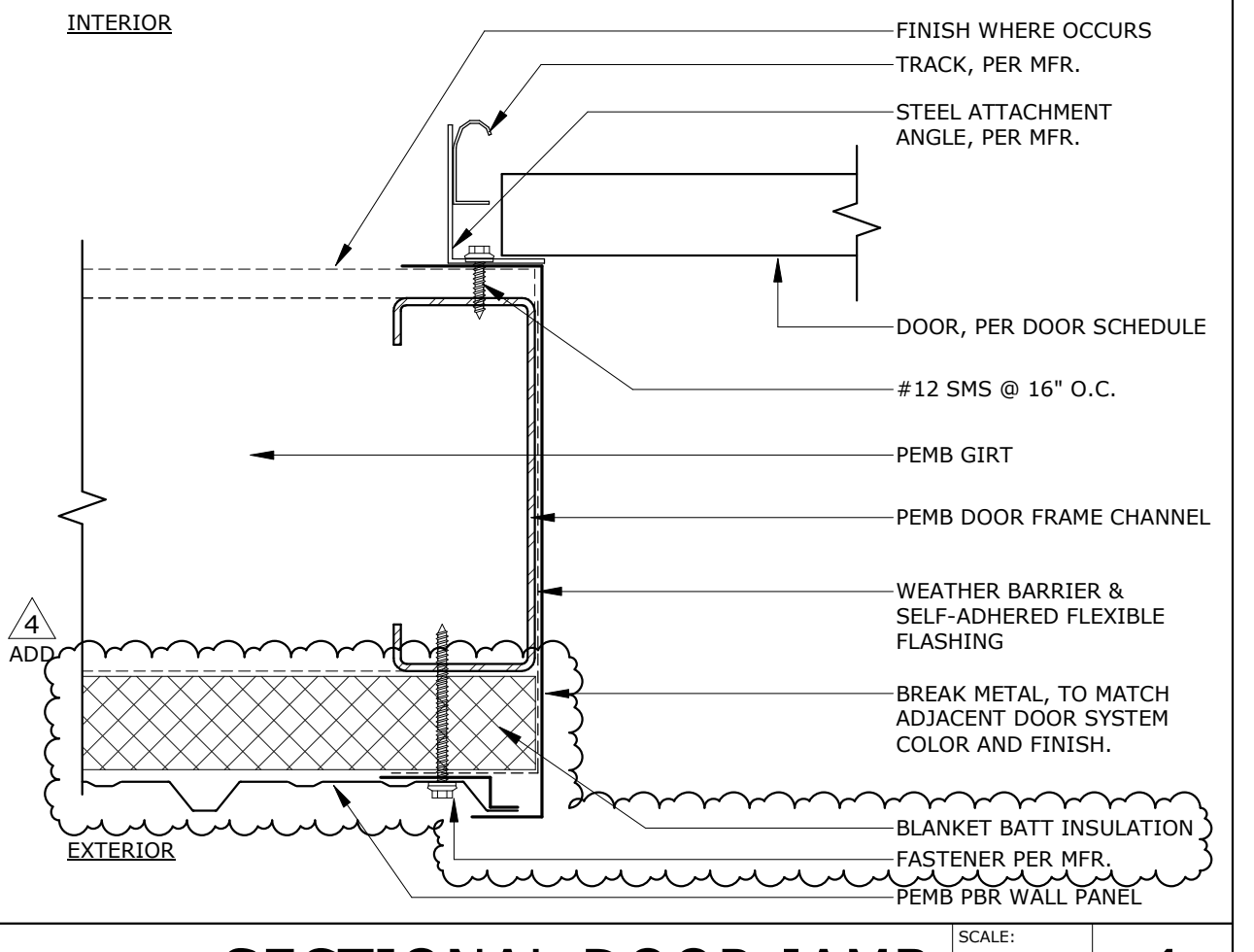
BARN SLIDING DOOR JAMB SCALE: 3" = 1'-0" REF.: / 2



SHOWER SHELF SCALE: 3" = 1'-0" REF.: 6/AD-6.1 8



SECTIONAL DOOR HEAD SCALE: 3" = 1'-0" REF.: / 3



SECTIONAL DOOR JAMB SCALE: 3" = 1'-0" REF.: / 4

PROJECT No. :50801  
4/17/2024 4:56:28 PM

ISSUE No.	DATE	DESCRIPTION	REVISION No.	DATE	DESCRIPTION

RUHNAUCLARKE.COM

MOUNT TRANSIT MAINTENANCE FACILITY  
170 BUSINESS CENTER DR. BIG BEAR LAKE, CA  
BIG BEAR LAKE

DOOR & WINDOW  
DETAILS  
AD-6.2

MOUNT TRANSIT MAINTENANCE FACILITY: PHASE 1 - 100% CD

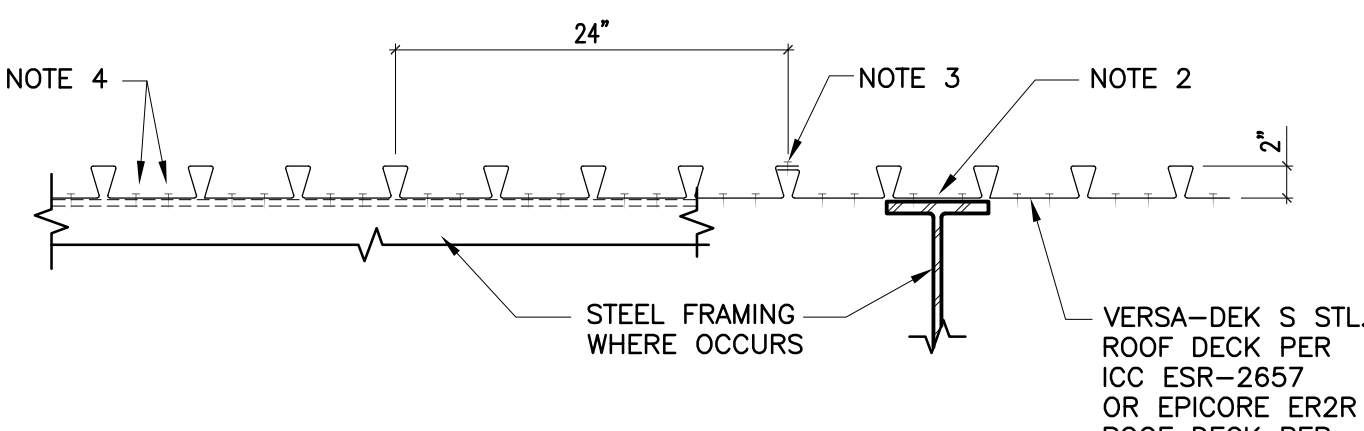


ROOF CONSTRUCTION SCHEDULE		
MARK	DECK CONSTRUCTION	DETAIL
D1	2"x18 GA. EPIC METALS TORIS ROOF DECK	18

S415-0

SCALE: NO SCALE

17 ROOF CONST. SCHEDULE

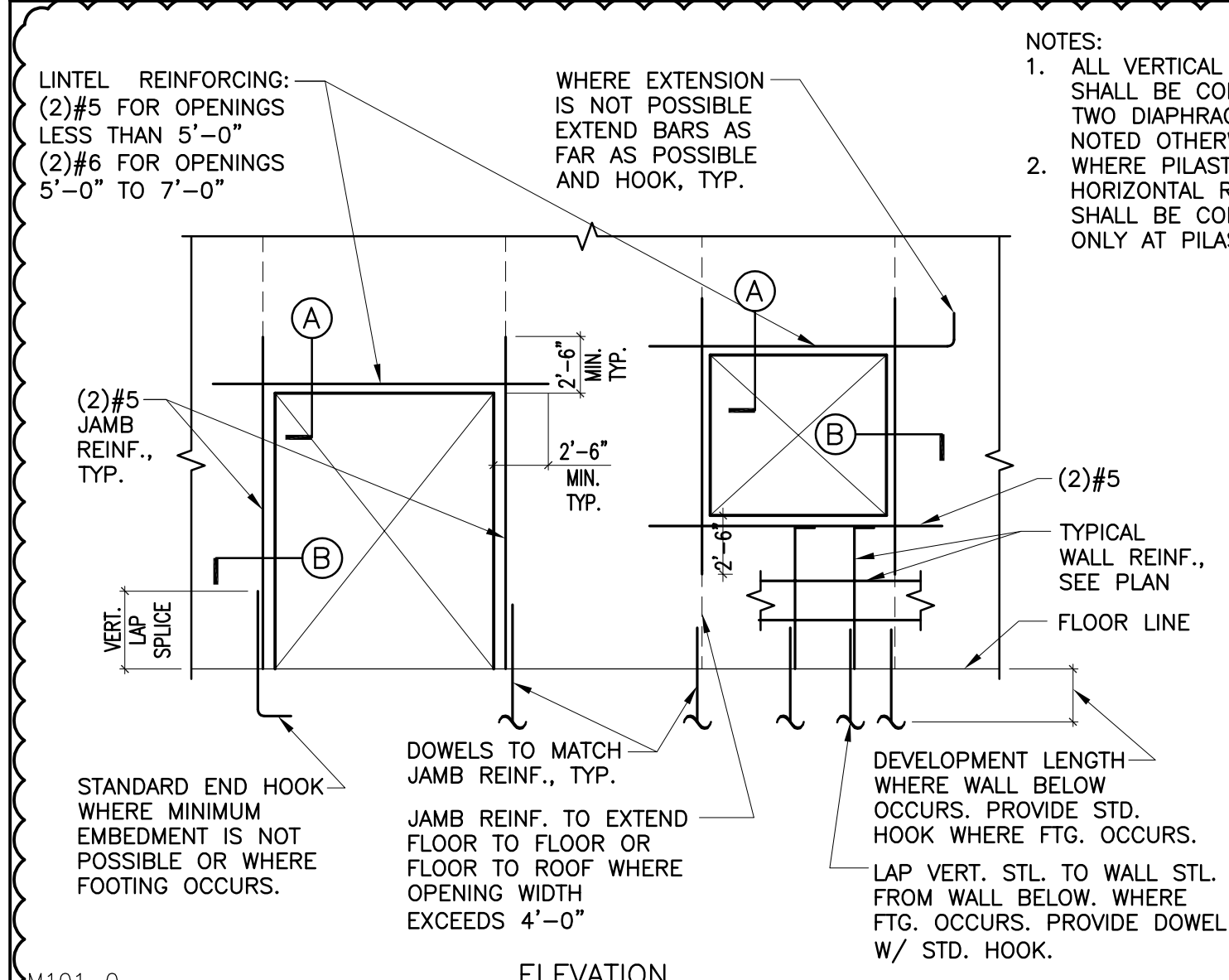


	MINIMUM DECK PROPERTIES	
	D1 (NON-ACOUSTICAL)	D1A ACOUSTICAL
GAUGE	18 GA.	18 GA.
1 in <sup>4</sup>	0.658	0.620
S+ (in <sup>3</sup> )	0.485	0.477
S- (in <sup>3</sup> )	0.462	0.463

MMT-058

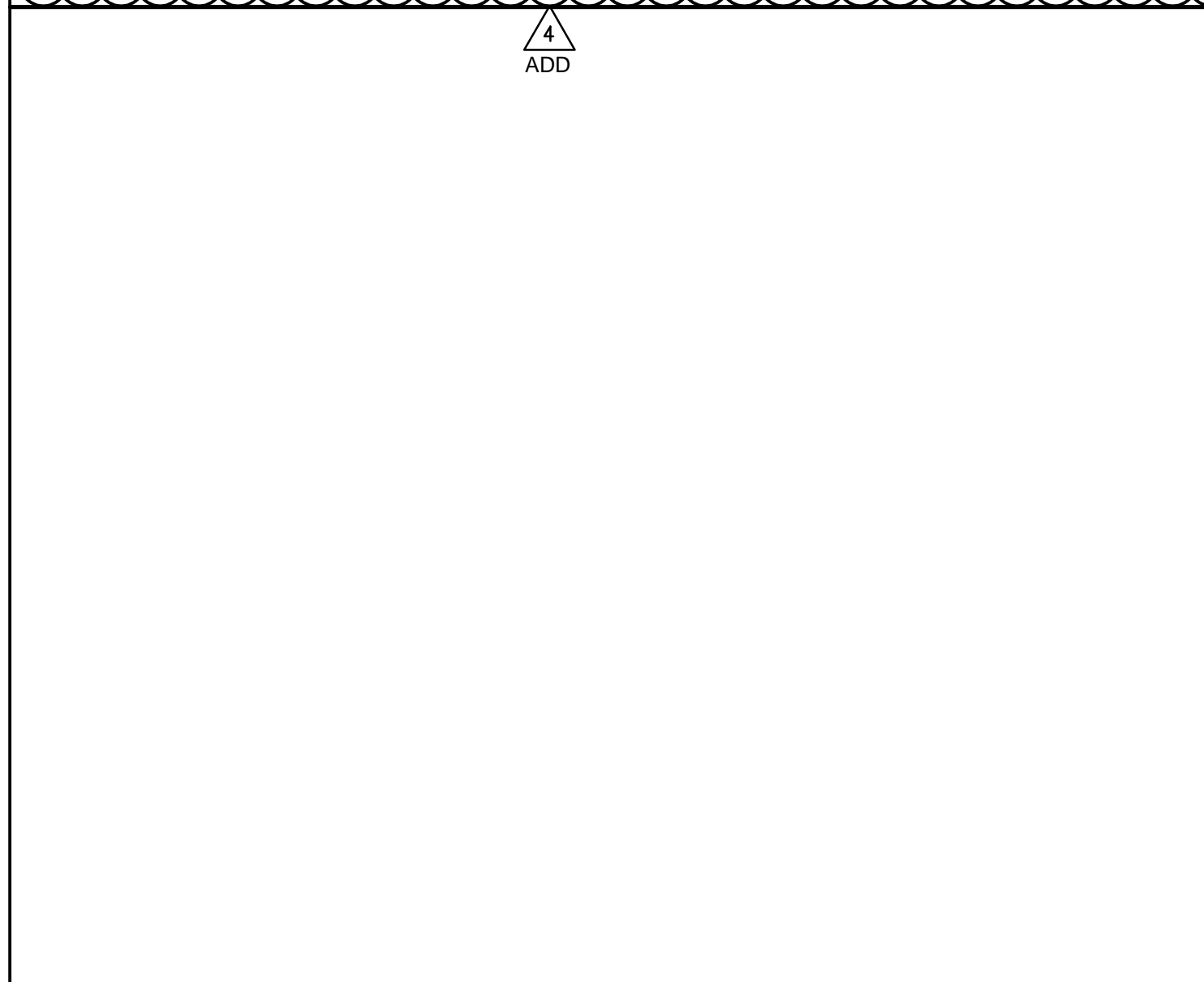
SCALE: NO SCALE

18 ROOF DECK FASTENING & SEC. PROP.



M101-0

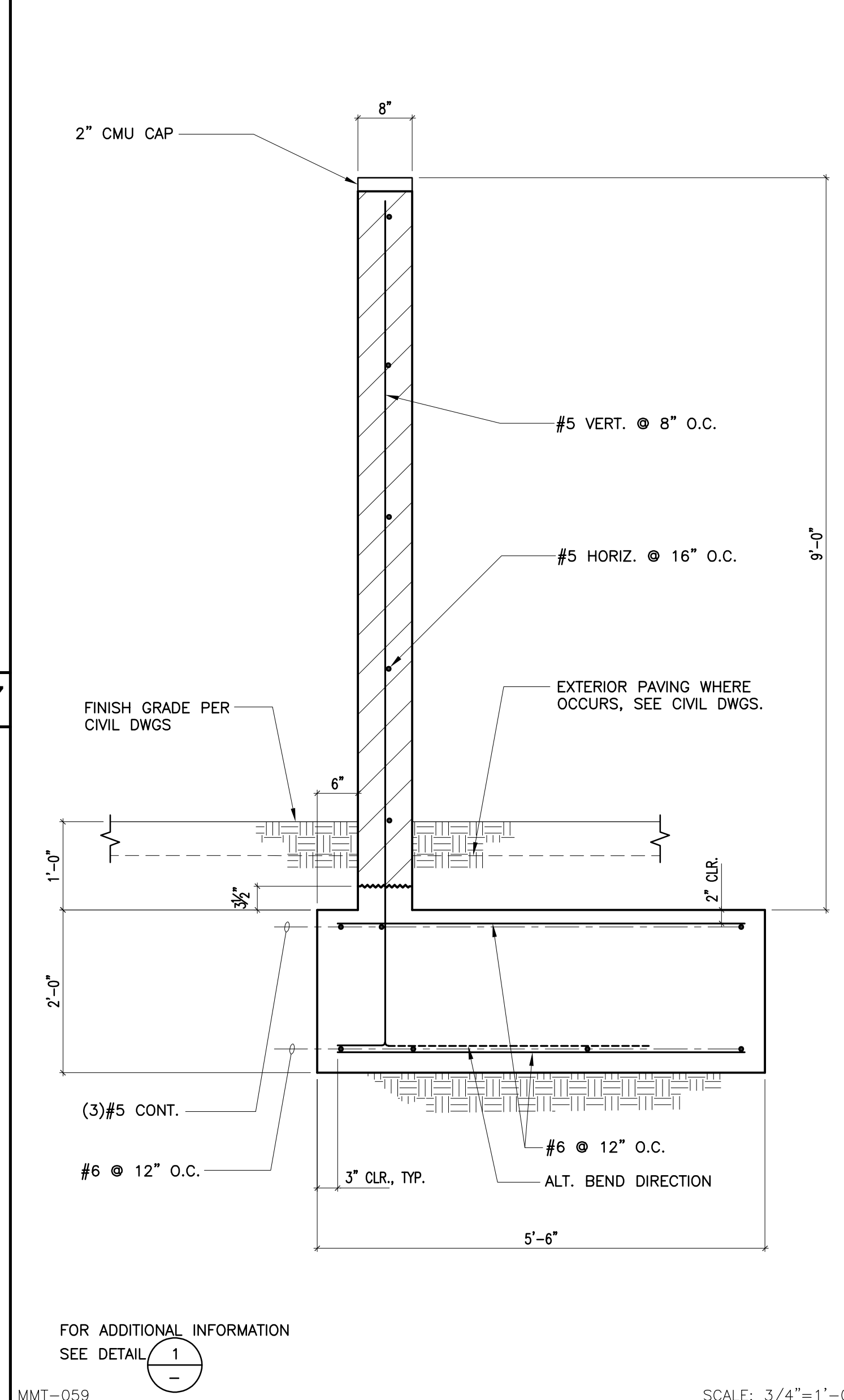
MINIMUM REINFORCING AT CONCRETE MASONRY WALL OPENINGS



MMT-060

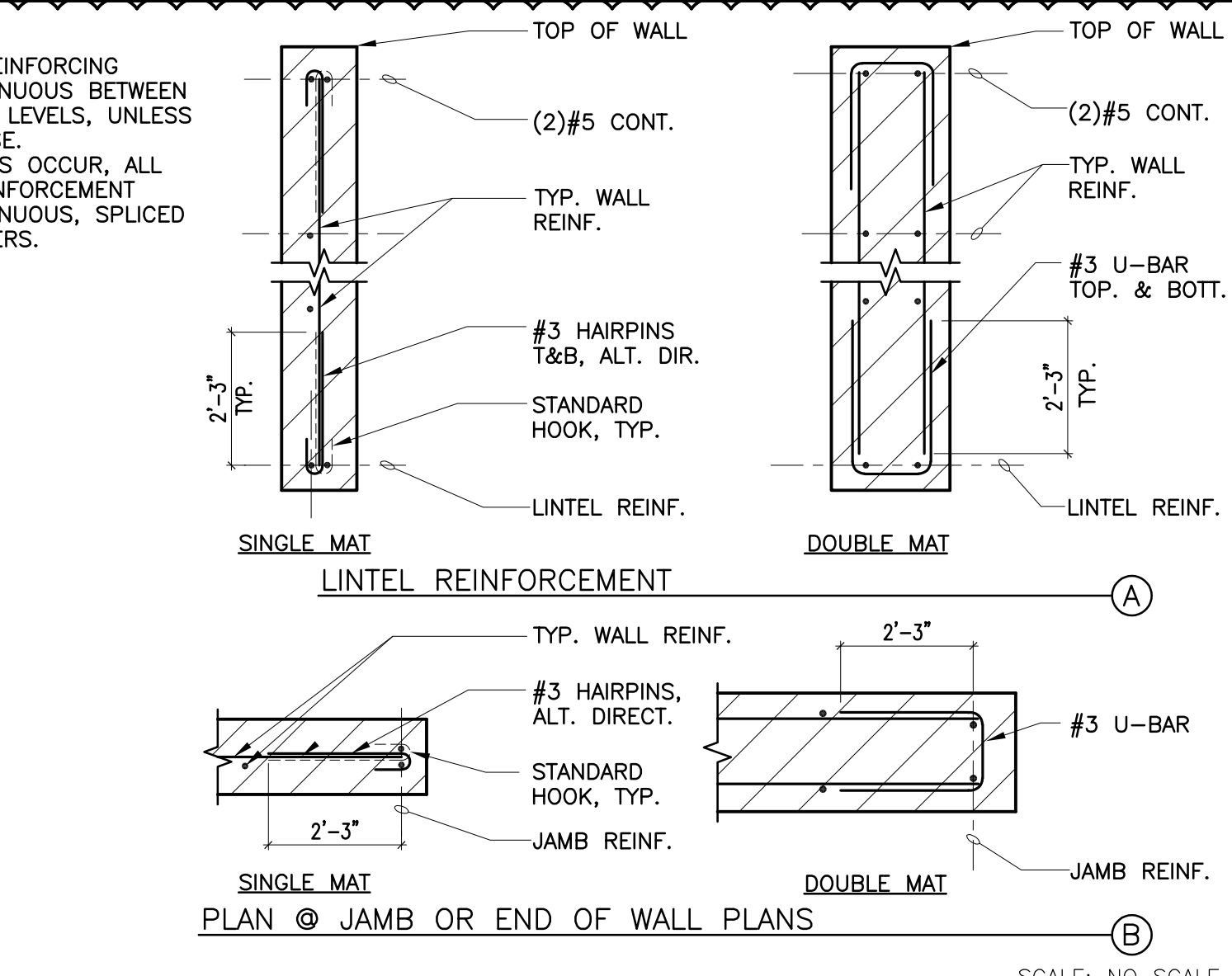
20 HSS TO HSS CONNECTION

ISSUE NO.	DATE	DESCRIPTION	ISSUED BY	CHECKED BY
REVISION NO. 4	DATE 3/16/2024	DESCRIPTION: ADDENDUM #4		
ISSUE NO.	DATE	DESCRIPTION	ISSUED BY	CHECKED BY
ISSUE NO.	DATE	DESCRIPTION	ISSUED BY	CHECKED BY
ISSUE NO.	DATE	DESCRIPTION	ISSUED BY	CHECKED BY



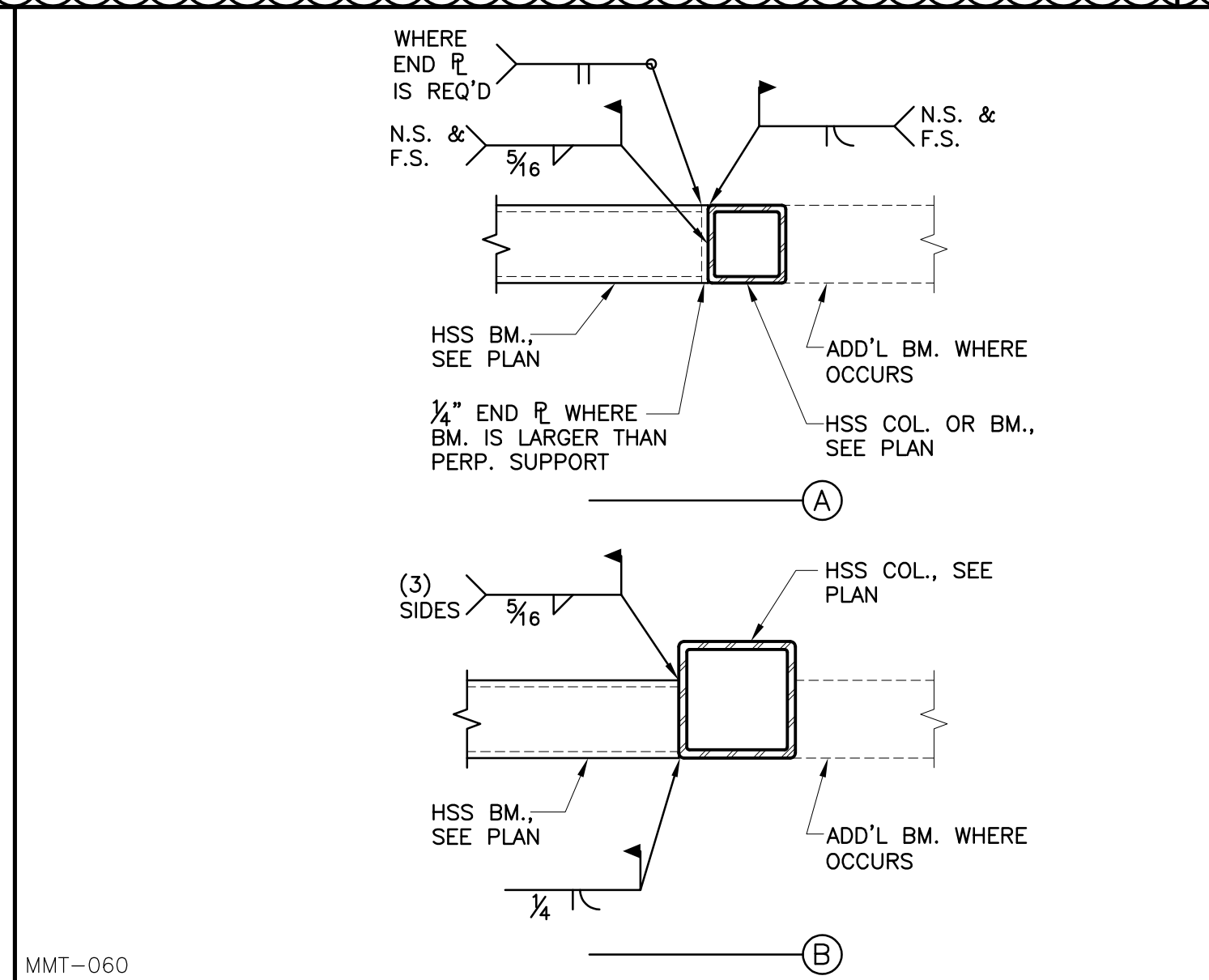
MMT-059

18 CMU SITE WALL



6505-0

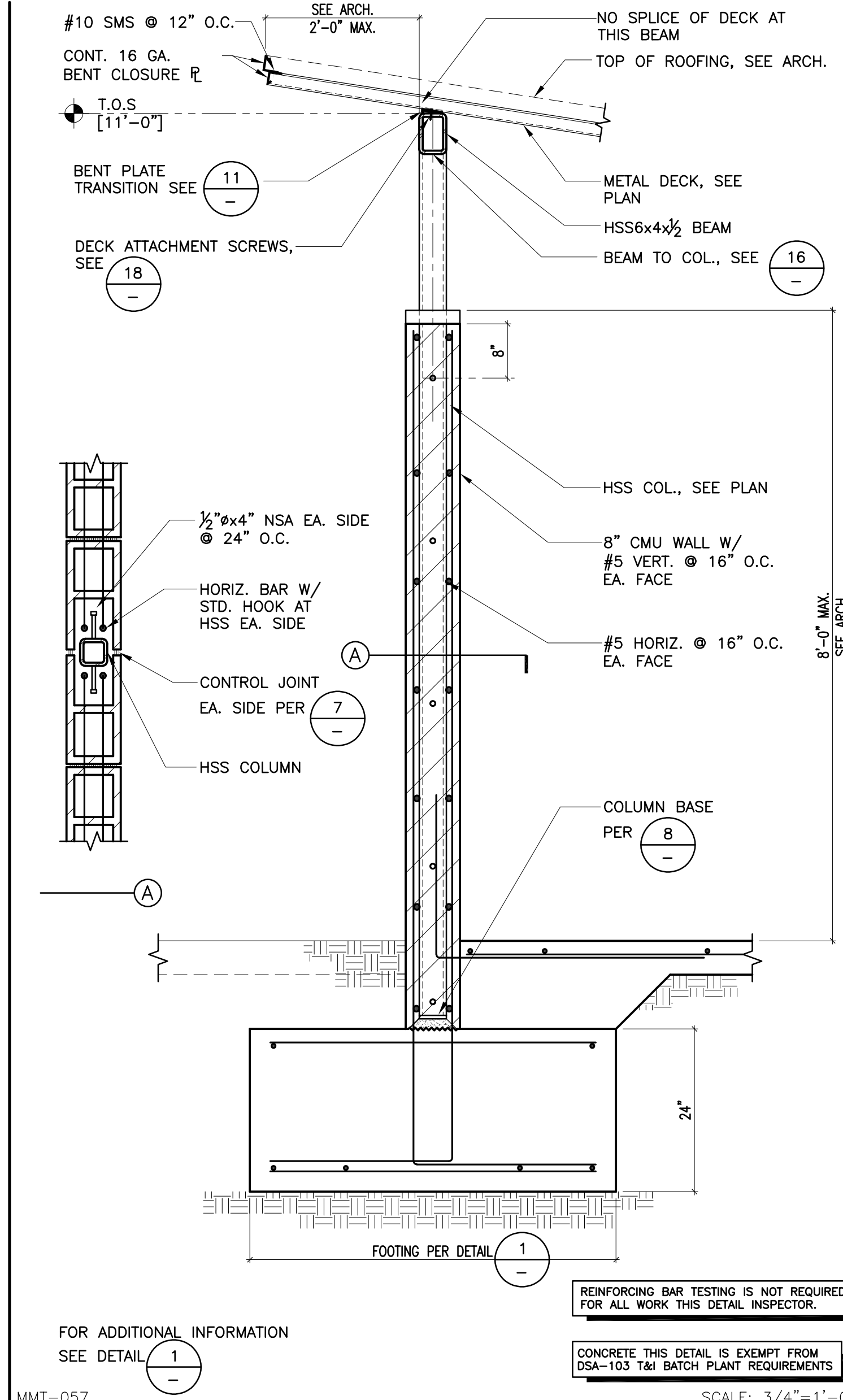
15 BEAM SLOPE TRANSITION PLATES



MMT-060

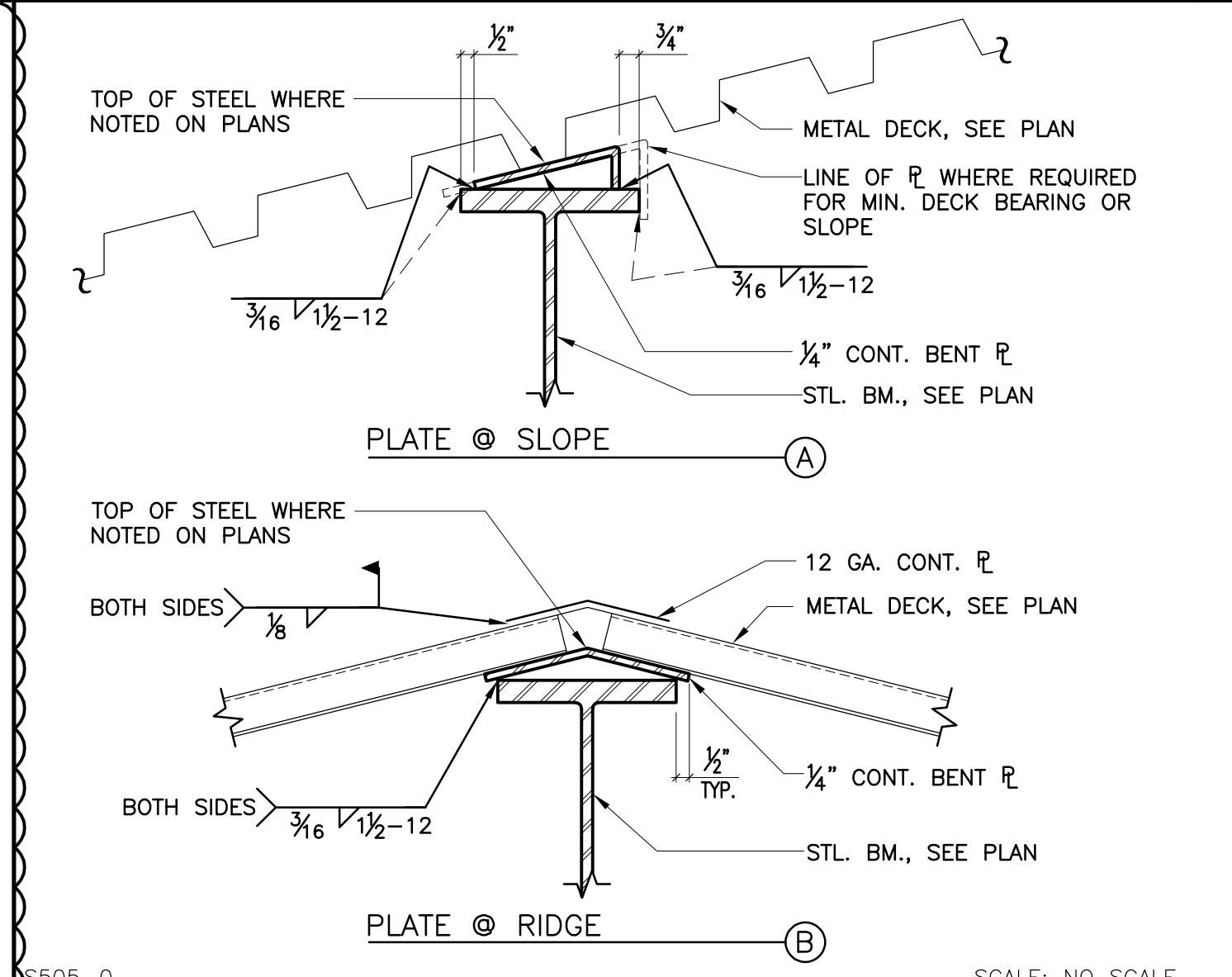
20 HSS TO HSS CONNECTION

ISSUE NO.	DATE	DESCRIPTION	ISSUED BY	CHECKED BY
REVISION NO. 4	DATE 3/16/2024	DESCRIPTION: ADDENDUM #4		
ISSUE NO.	DATE	DESCRIPTION	ISSUED BY	CHECKED BY
ISSUE NO.	DATE	DESCRIPTION	ISSUED BY	CHECKED BY
ISSUE NO.	DATE	DESCRIPTION	ISSUED BY	CHECKED BY



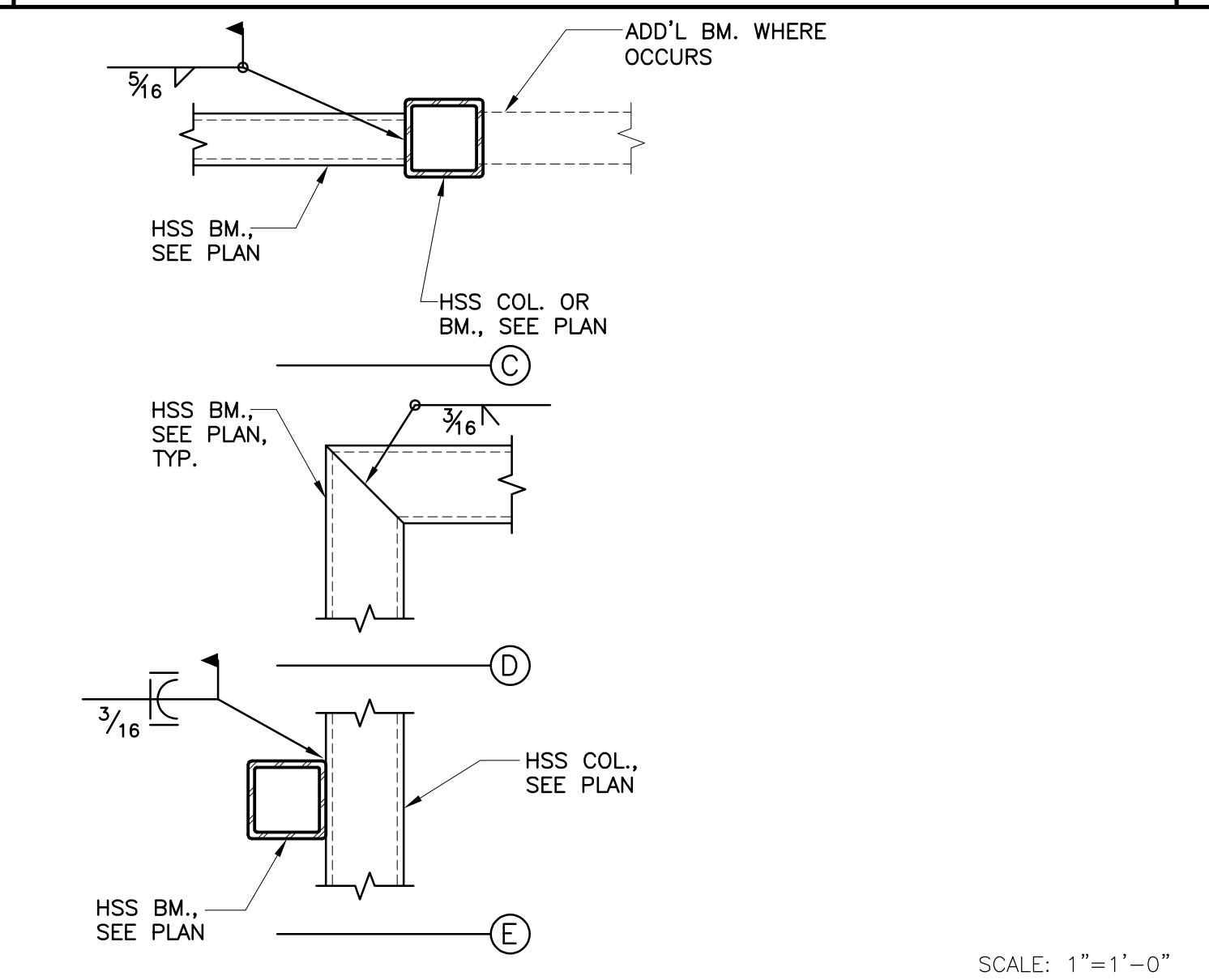
MMT-057

14 CMU CANOPY ENCLOSURE WALL



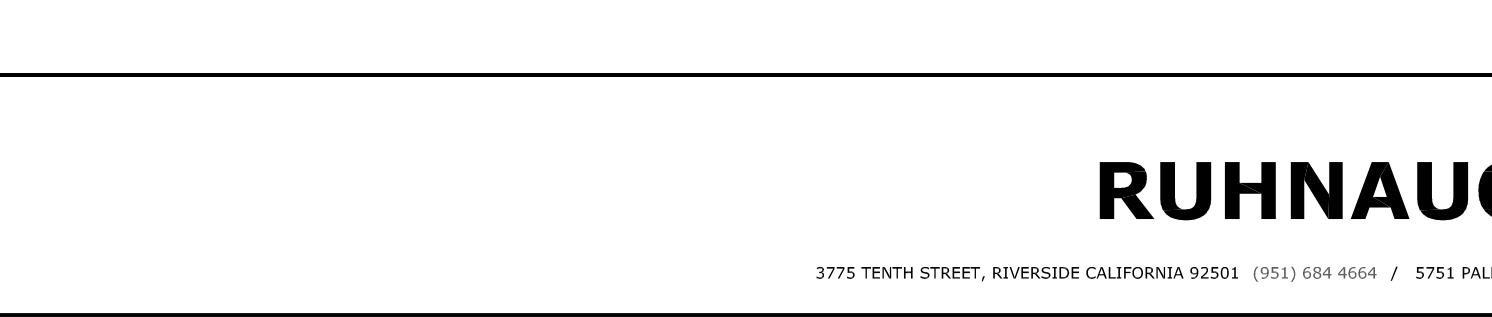
6505-0

15 BEAM SLOPE TRANSITION PLATES



M100-0

11 TYP. CONTROL JOINT IN CMU WALL



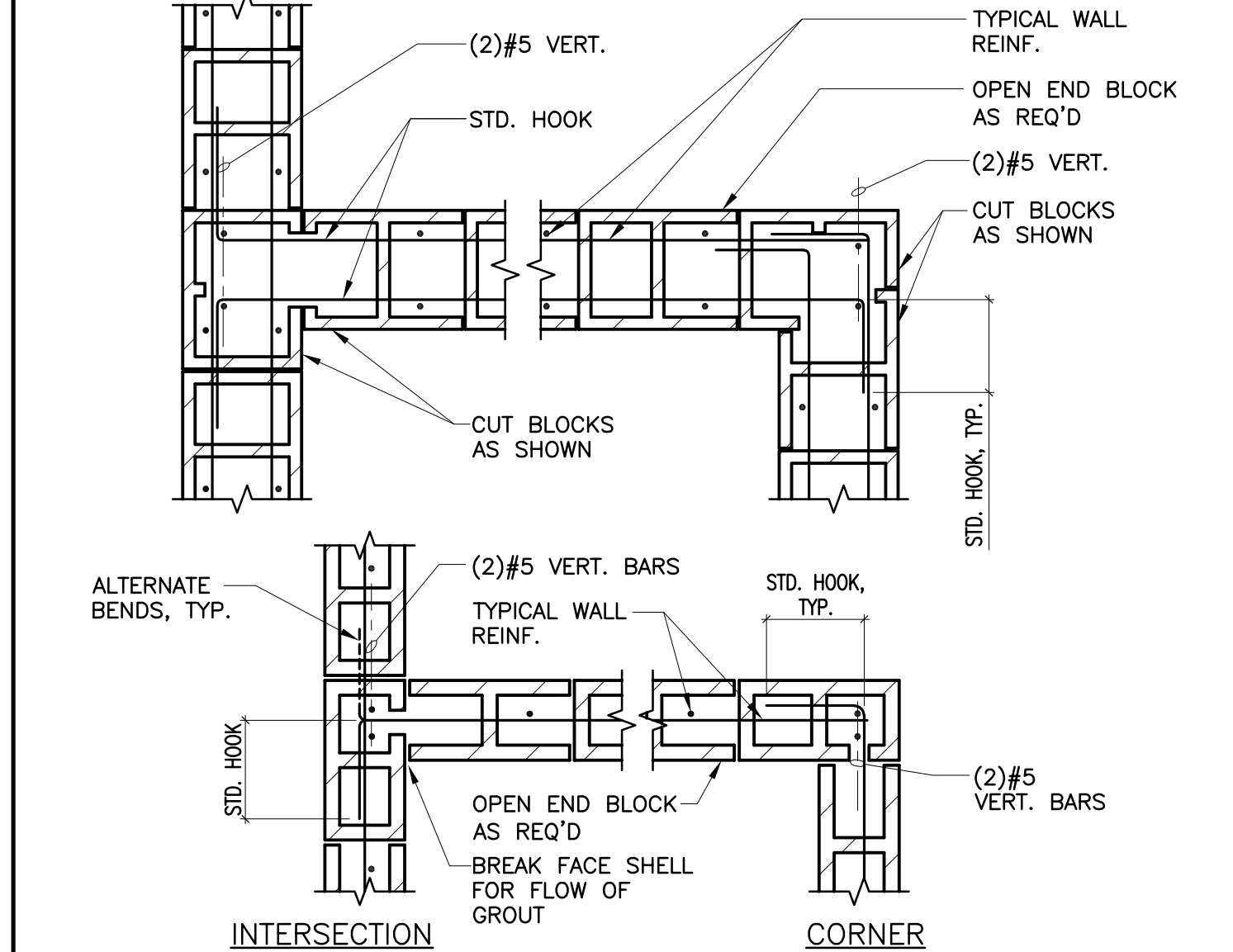
M102-0

7 VERT. REINF. LAP SPLICE-MASONRY



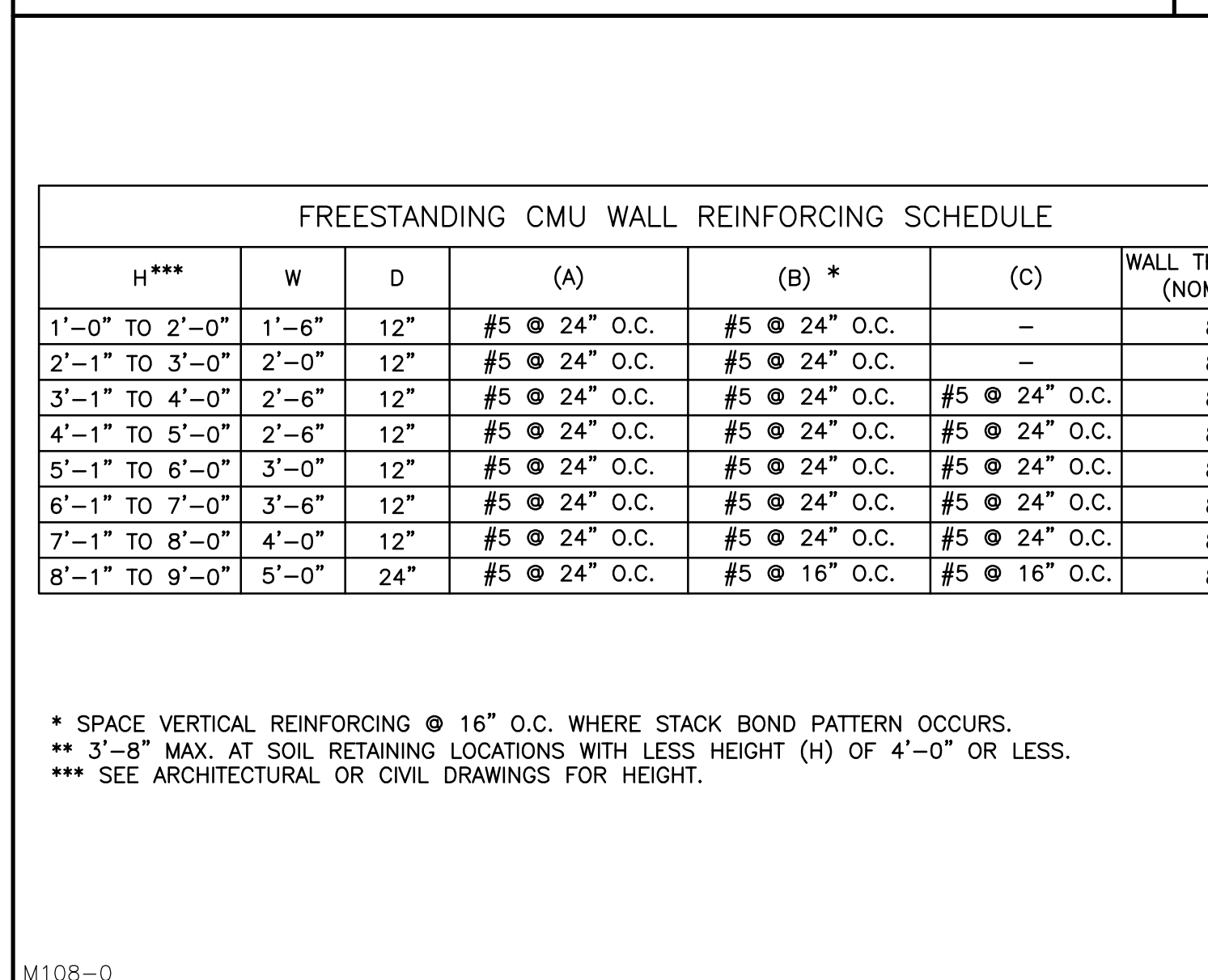
M103-0

8 HORIZ. REINF. LAP SPLICE - MASONRY



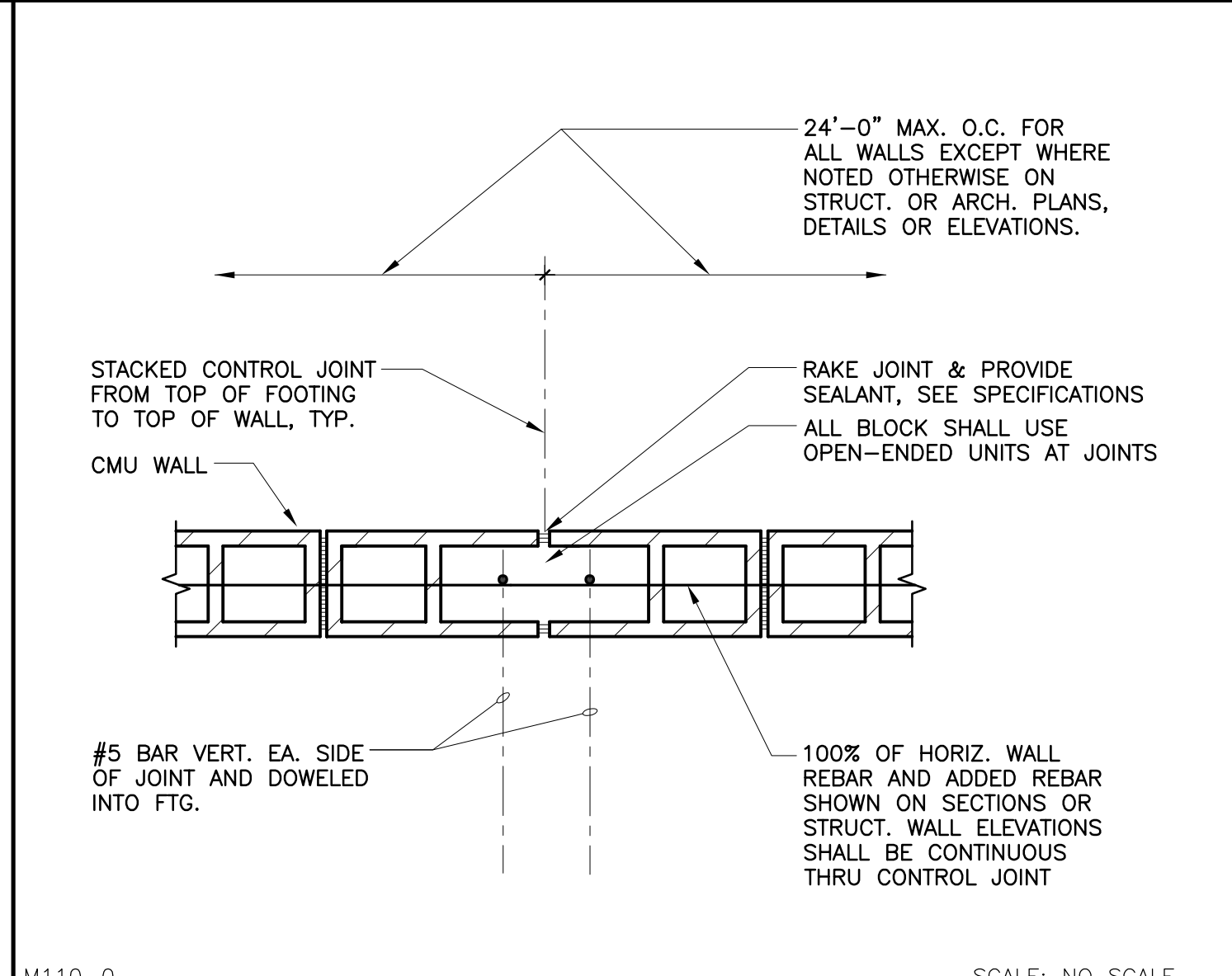
M104-0

5 CONC. MAS. WALL INTERSECTIONS



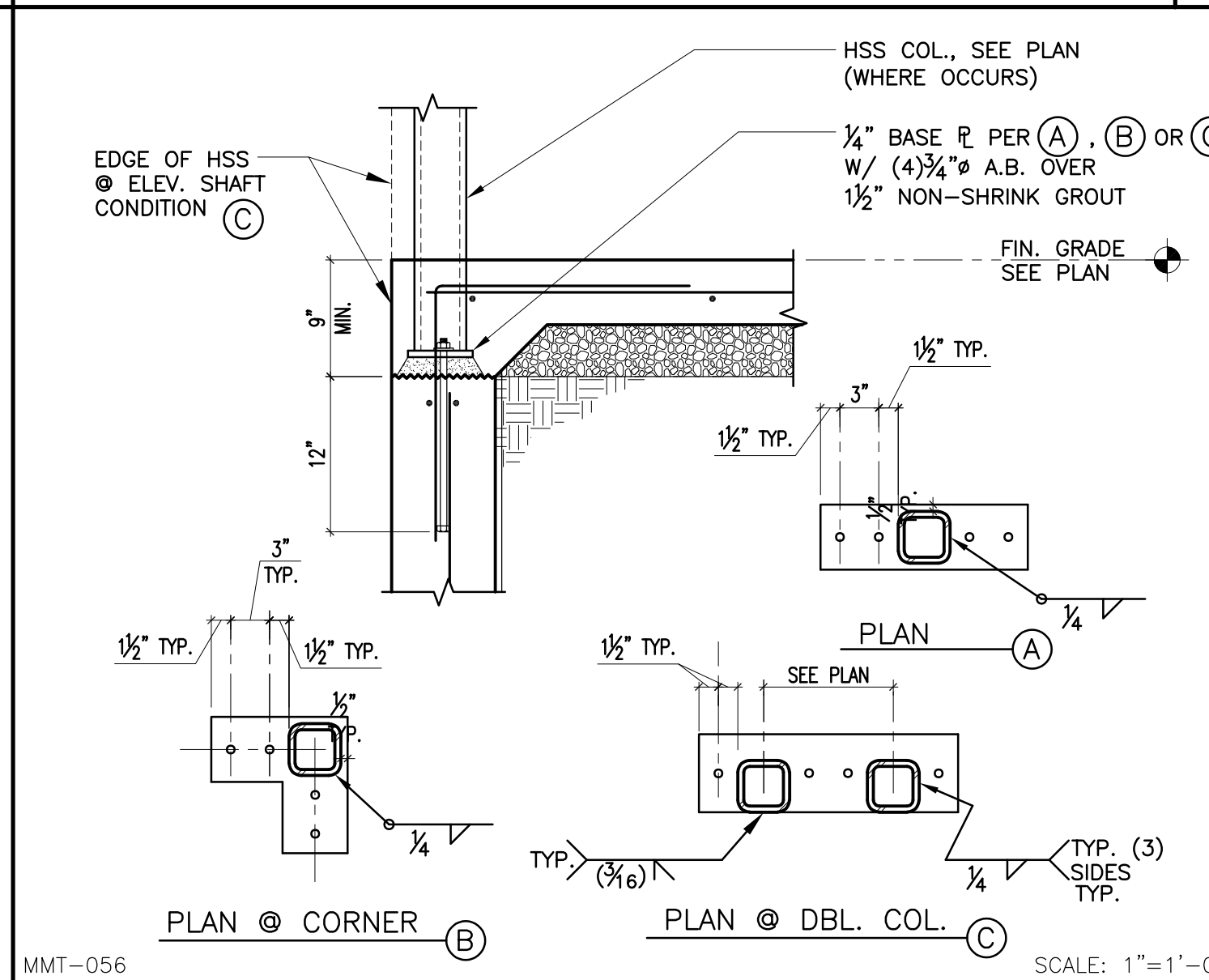
M108-0

10 FREESTANDING CMU WALL SCHEDULE



M100-0

11 TYP. CONTROL JOINT IN CMU WALL



M102-0

7 VERT. REINF. LAP SPLICE-MASONRY



M103-0

8 HORIZ. REINF. LAP SPLICE - MASONRY

STAMPS

AGENCY APPROVAL

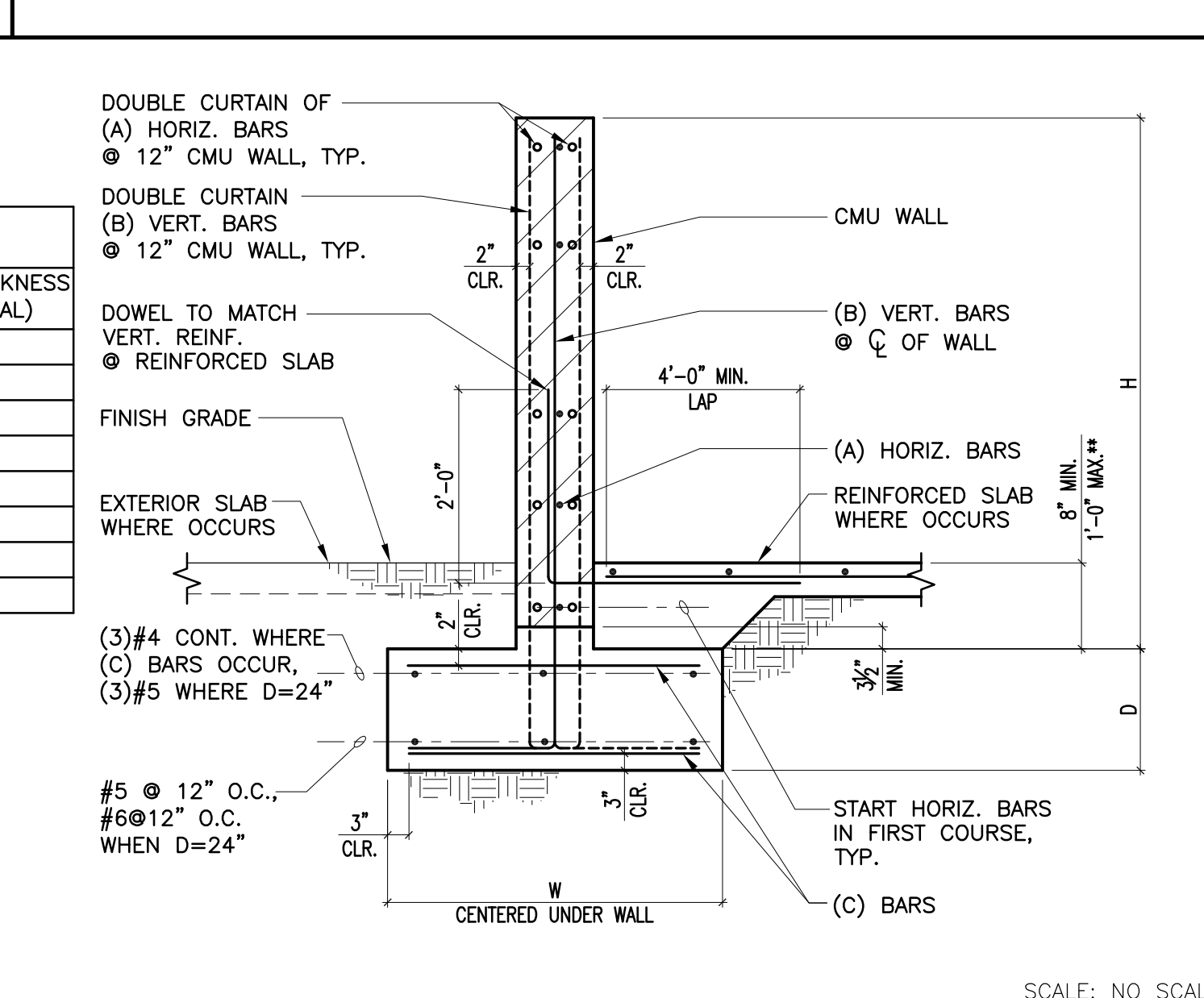
**KNA STRUCTURAL ENGINEERS**

9931 Muirlands Boulevard, Irvine, CA 92618  
 Tel (949) 462-3200, Fax (949) 462-3201

KNA 908 NO. 293.653 CONSULTANT

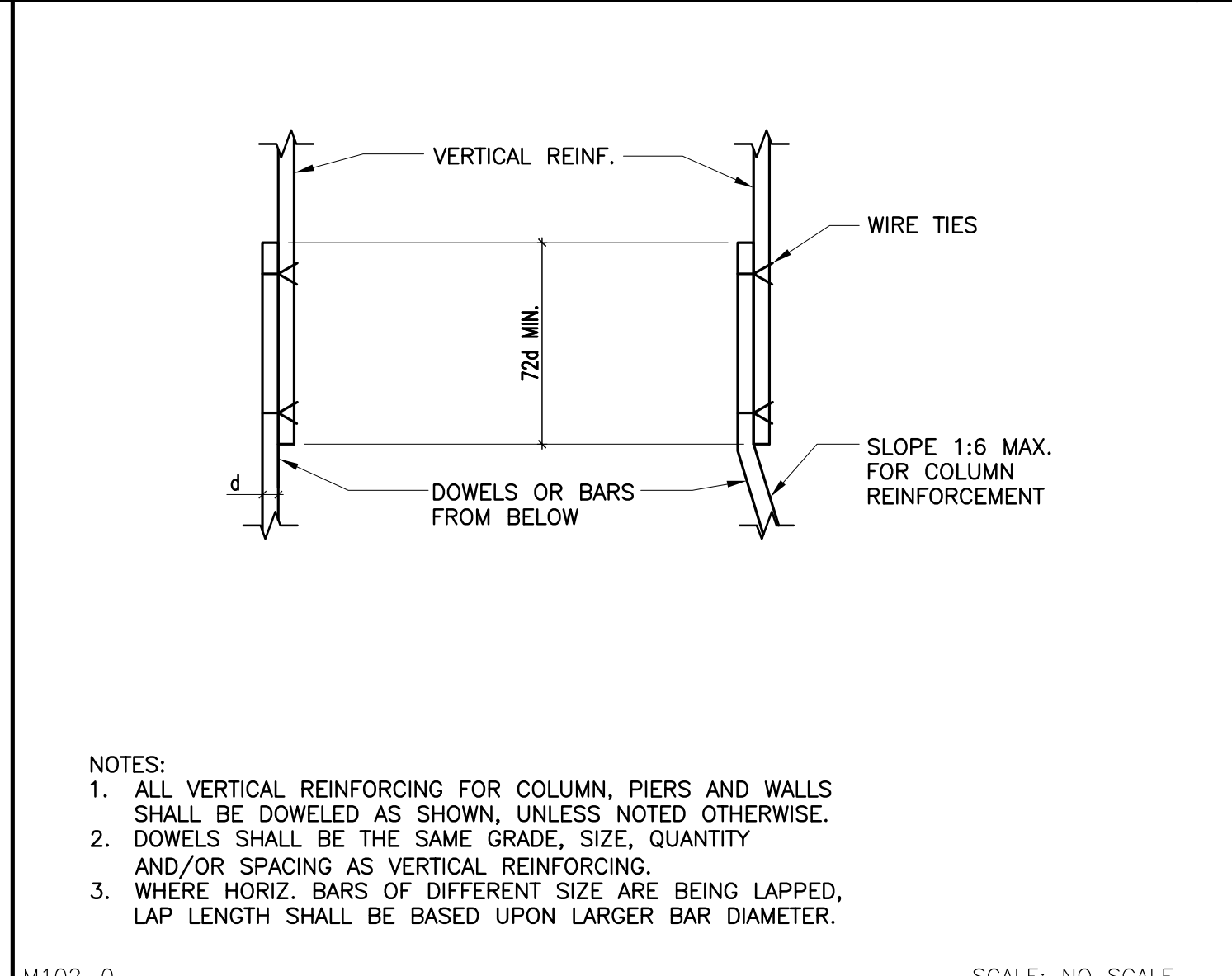
**RUHNA CLARKE ARCHITECTS**

CONC. MAS. WALL INTERSECTIONS



M104-0

5 CONC. MAS. WALL INTERSECTIONS







AGENCY APPROVAL

**KNA STRUCTURAL ENGINEERS**  
 9931 Muirlands Boulevard, Irvine, CA 92618  
 Tel (949) 462-3200 Fax (949) 462-3201  
 www.KNAstructural.com

**RUHNAU CLARKE ARCHITECTS**

KNA Job No.: 203.653  
 CONSULTANT BRANDING

**FOUNDATION PLAN NOTES**

- SEE SHEETS S0-1.1 THROUGH S0-1.5 FOR GENERAL NOTES AND TYPICAL DETAILS.
- SEE SPECIFICATIONS FOR ALL SITE AND SUBGRADE PREPARATIONS.
- SEE ARCHITECTURAL AND/OR CIVIL DRAWINGS FOR FINISH FLOOR ELEVATIONS.
- SEE ARCHITECTURAL AND CIVIL DRAWINGS FOR ALL EXTERIOR CONCRETE PAVING, SLABS, BASES, CURBS, SITE WALLS, ETC.
- FOR ANY DIMENSIONAL INFORMATION NOT SHOWN, SEE ARCHITECTURAL DRAWINGS.
- SEE PLANS AND ARCHITECTURAL DRAWINGS FOR DEPRESSIONS AND/OR SLOPES IN CONCRETE SLABS.
- ALL DIMENSIONS SHOWN ARE FROM FACE OF STUD, CENTER LINE OF COLUMN, OR CENTER LINE OF WALL, UNLESS NOTED OTHERWISE. ALL COLUMNS ARE CENTERED IN STUD WALL, UNLESS NOTED OTHERWISE.
- SEE ARCHITECTURAL DRAWINGS FOR SIZE AND LOCATION OF ALL DOOR AND WINDOW OPENINGS IN BEARING AND NON-BEARING WALLS.
- SEE ARCHITECTURAL DRAWINGS FOR LOCATION OF INTERIOR NON-BEARING PARTITIONS. INTERIOR NON-BEARING PARTITION WALLS THAT DO NOT REQUIRE CONCRETE CURBS ARE NOT SHOWN ON STRUCTURAL DRAWINGS.
- SEE ARCHITECTURAL, PLUMBING, MECHANICAL, ELECTRICAL, AND KITCHEN DRAWINGS FOR ADDITIONAL EMBEDDED ITEMS AND SLAB PENETRATIONS.
- FOR TYPICAL SLAB JOINTS, SEE DETAIL 7/S0-1.3.
- SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS OF VEHICLE LIFT AND EQUIPMENT.

**LEGEND**

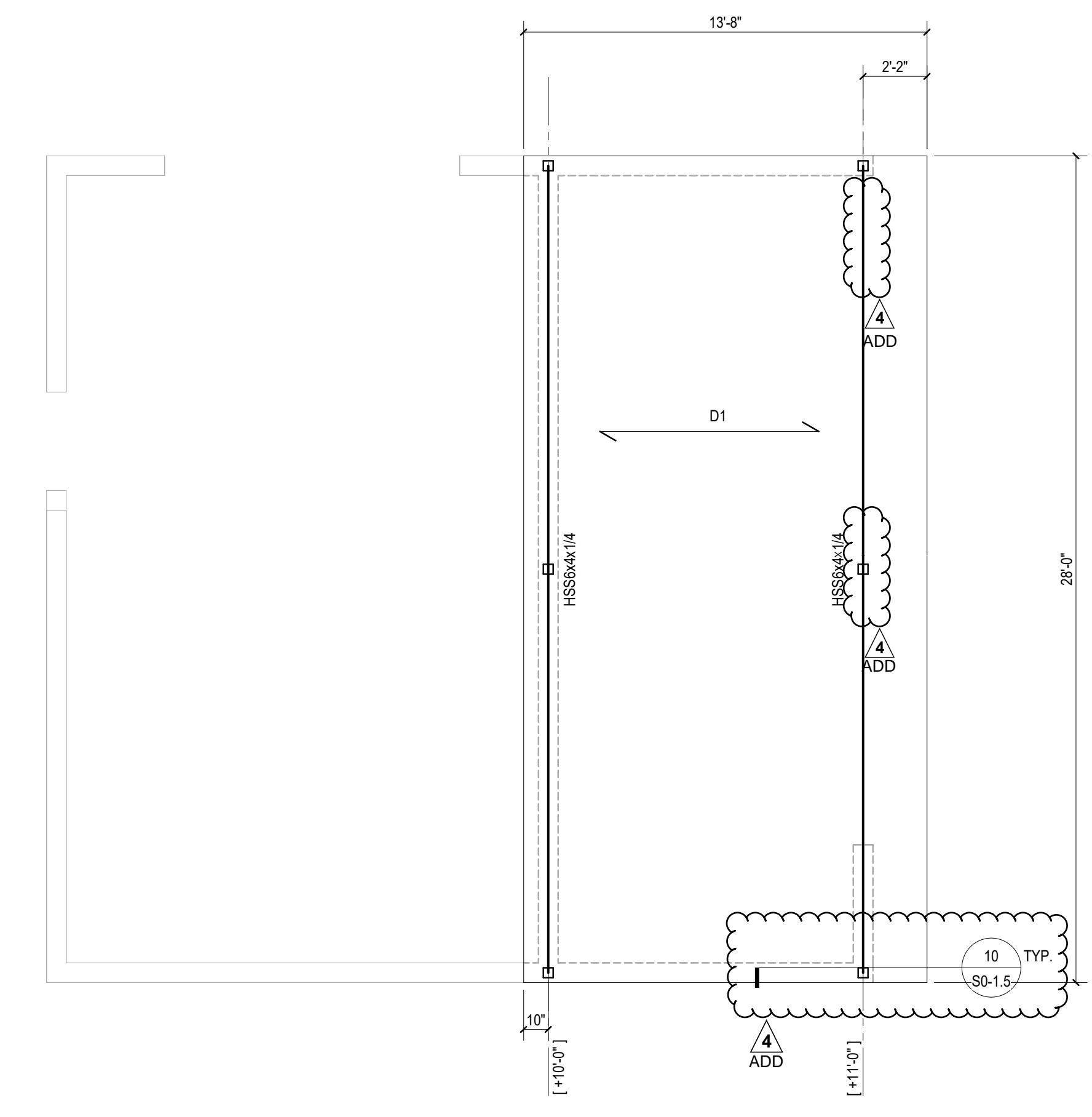
- : INDICATES CONCRETE FOOTING. SEE DETAIL 1/S0-1.1 FOR ADDITIONAL INFORMATION.
- : INDICATES DEPTH OF TOP OF FOOTING BELOW FINISH FLOOR.
- : INDICATES CONCRETE CURB. SEE PLANS AND DETAIL 3/S0-1.3 FOR ADDITIONAL INFORMATION.
- : INDICATES 8" MASONRY WALL. SEE DETAIL 11/S0-1.3 FOR REINFORCING.
- : INDICATES TOP OF SLAB ELEVATION (WHERE INDICATED).
- : INDICATES 4" SLAB ON GRADE. SEE PLAN AND DETAIL 12/S0-1.3 FOR ADDITIONAL INFORMATION.
- : INDICATES 4" TALL CONCRETE CURB. SEE PLANS, ARCHITECT. AND DETAIL 3/S0-1.3 FOR ADDITIONAL INFORMATION.

**ROOF FRAMING PLAN NOTES**

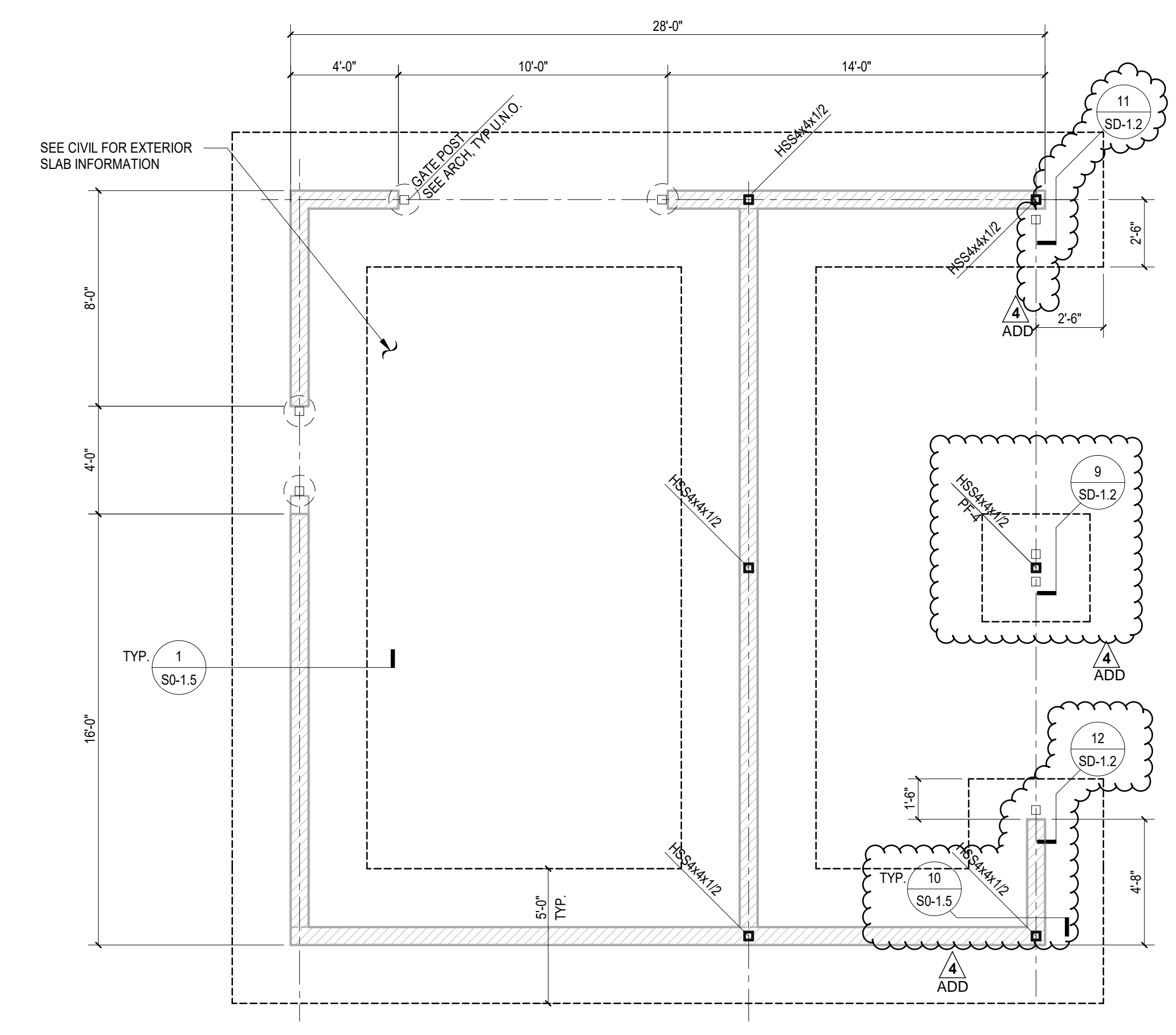
- SEE SHEETS S0-1.1 THROUGH S0-1.5 FOR GENERAL NOTES AND TYPICAL DETAILS.
- FOR ANY DIMENSIONAL INFORMATION NOT SHOWN, SEE ARCHITECTURAL DRAWINGS.
- ALL BEAMS SHALL BE EQUALLY SPACED BETWEEN COLUMNS, UNLESS NOTED OTHERWISE.

**LEGEND**

- : INDICATES TOP OF STEEL ELEVATION.
- : INDICATES SPAN OF METAL DECK. SEE 17/S0-1.5 FOR MORE INFORMATION.



**ROOF FRAMING PLAN**  
 SCALE: 1/4" = 1'-0"  
 2



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

PROJECT No. :

ISSUE No.	DATE	DESCRIPTION	REVISION No.	DATE	DESCRIPTION

**RUHNAUCLARKE.COM**

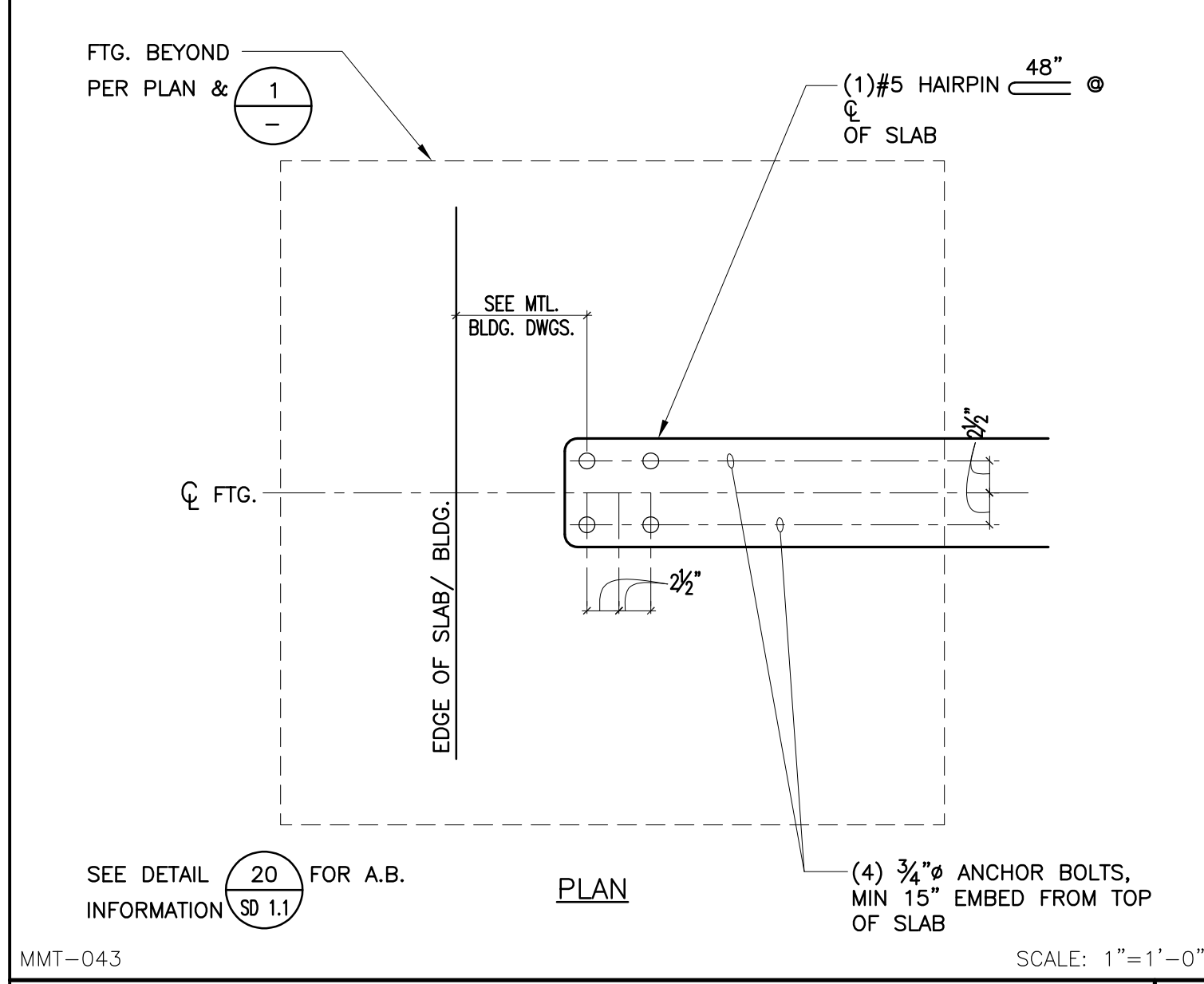
**MOUNT TRANSIT MAINTENANCE FACILITY**

**TRASH & ELEC. YARD FOUNDATION AND ROOF FRAMING PLAN**

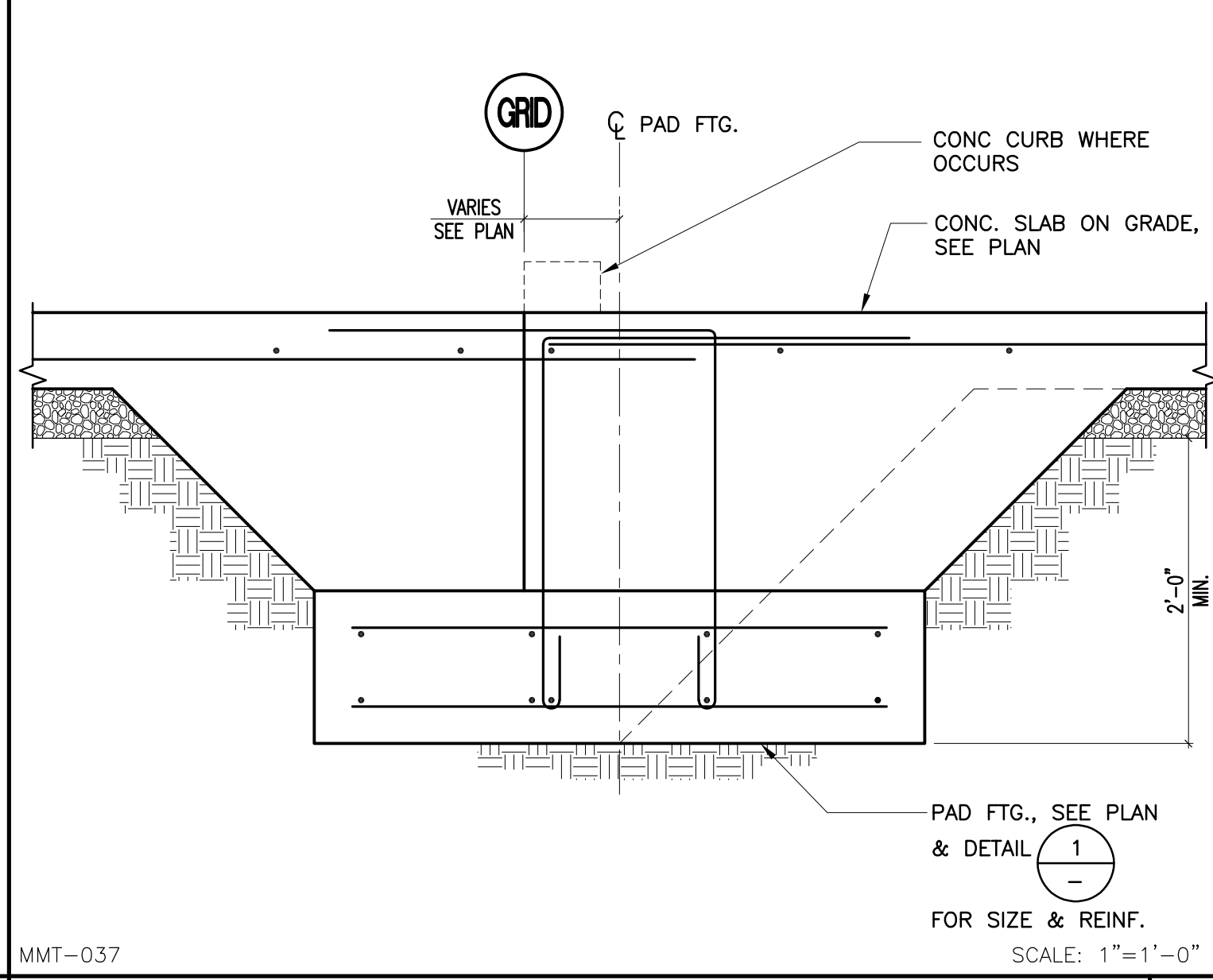
**S2-1.1**

MOUNTAIN AREA REGIONAL TRANSIT AUTHORITY: CITY SUBMITTAL 07/28/2023

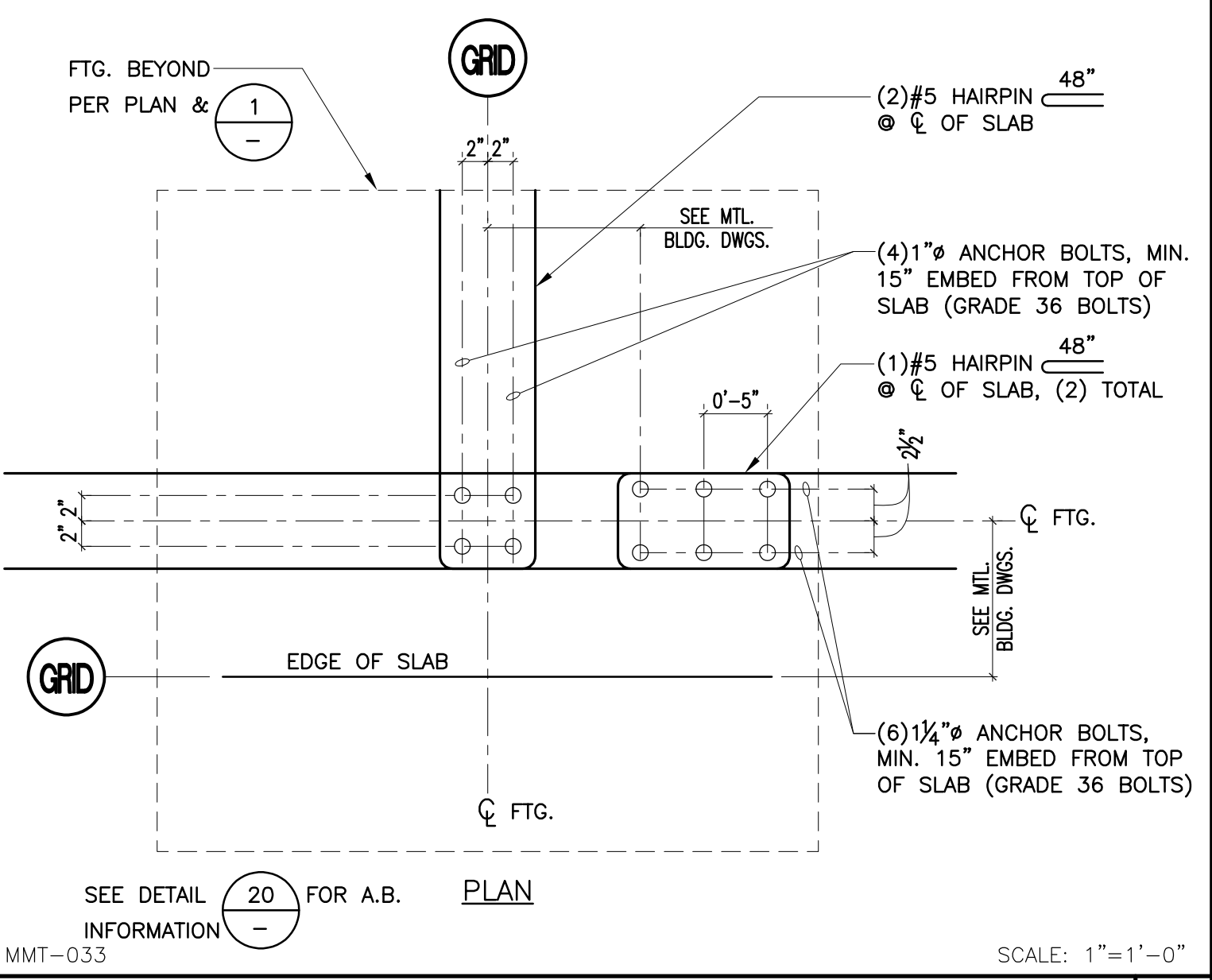




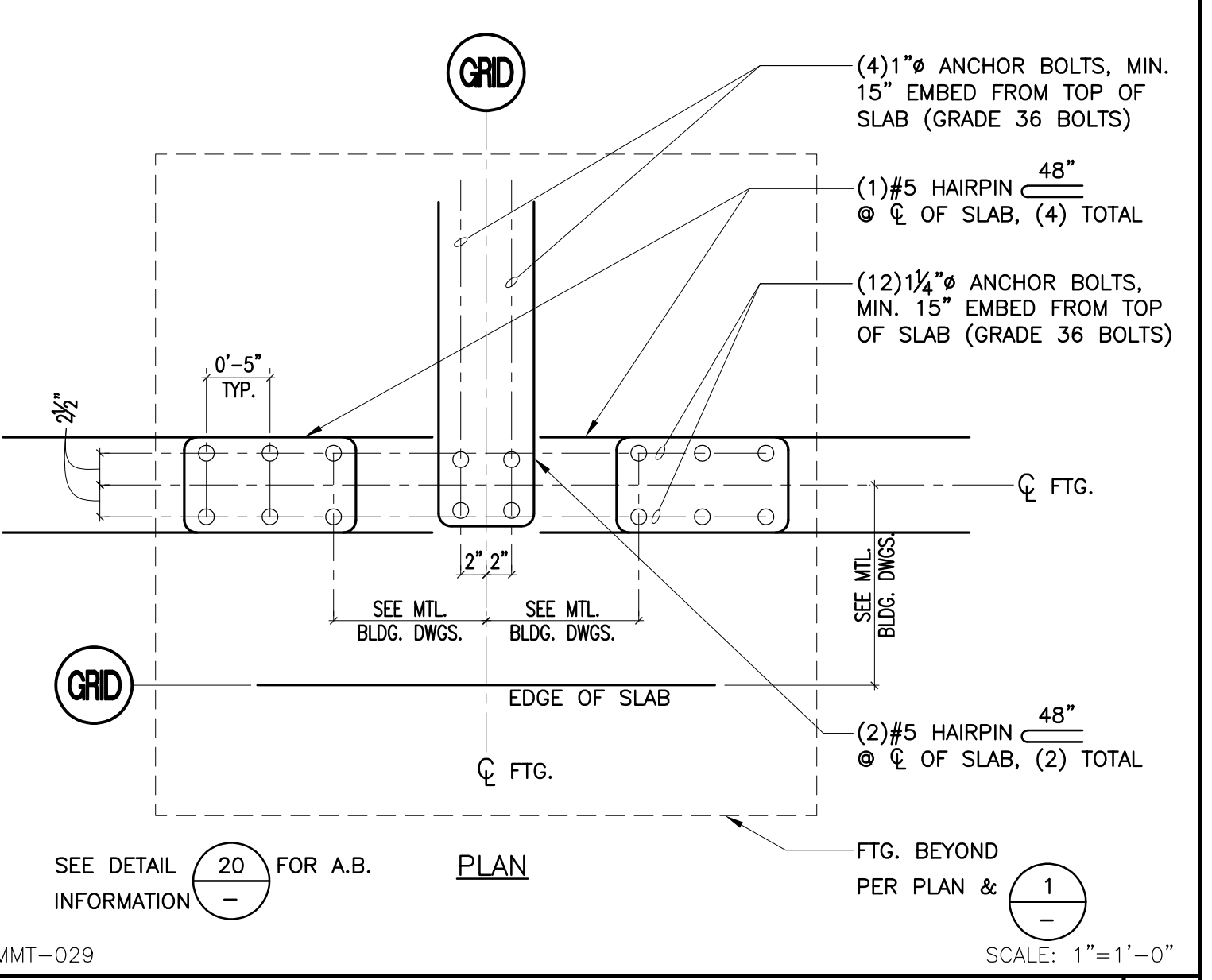
MMT-043 SCALE: 1"=1'-0" DETAIL 17



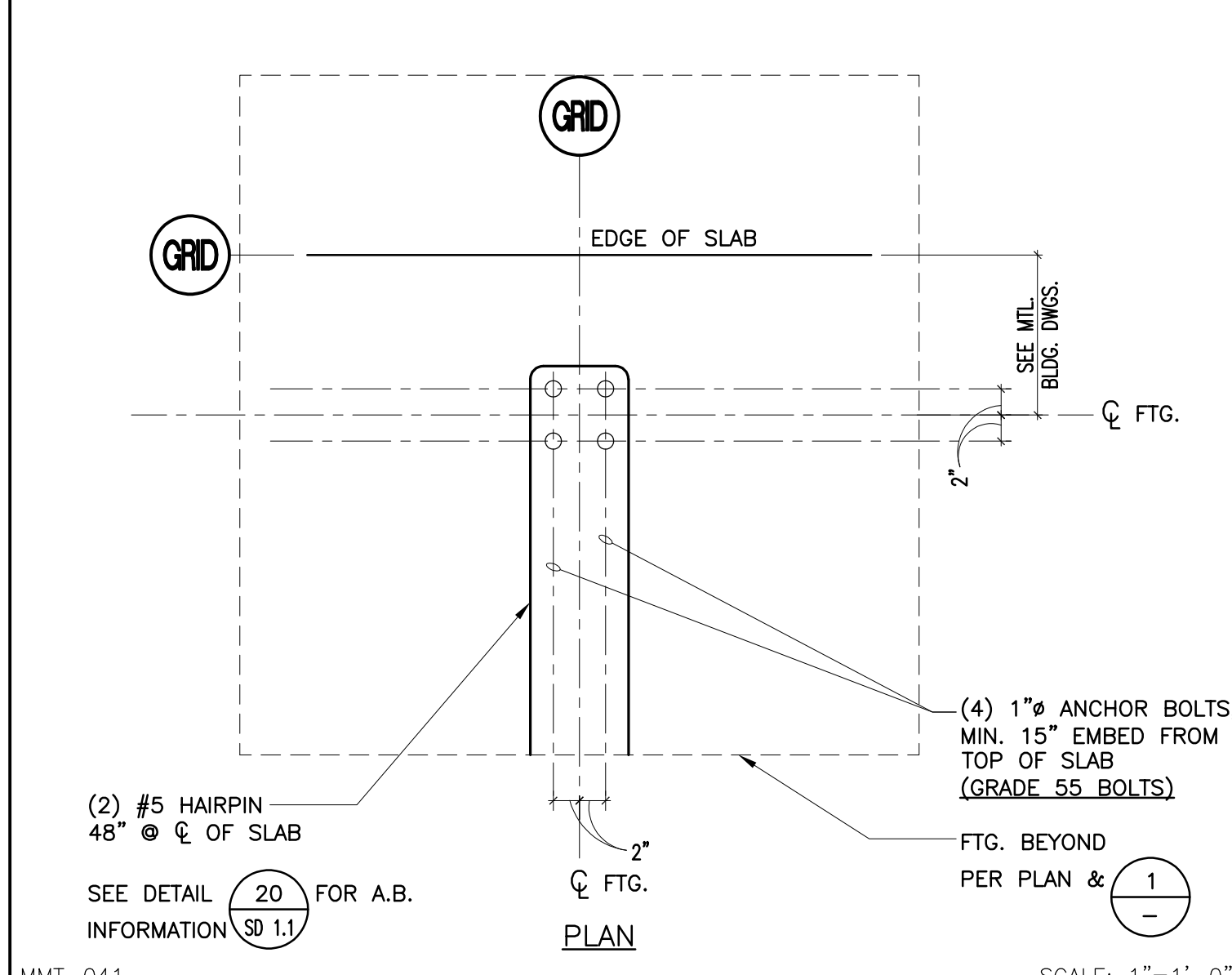
MMT-037 SCALE: 1"=1'-0" DETAIL 13



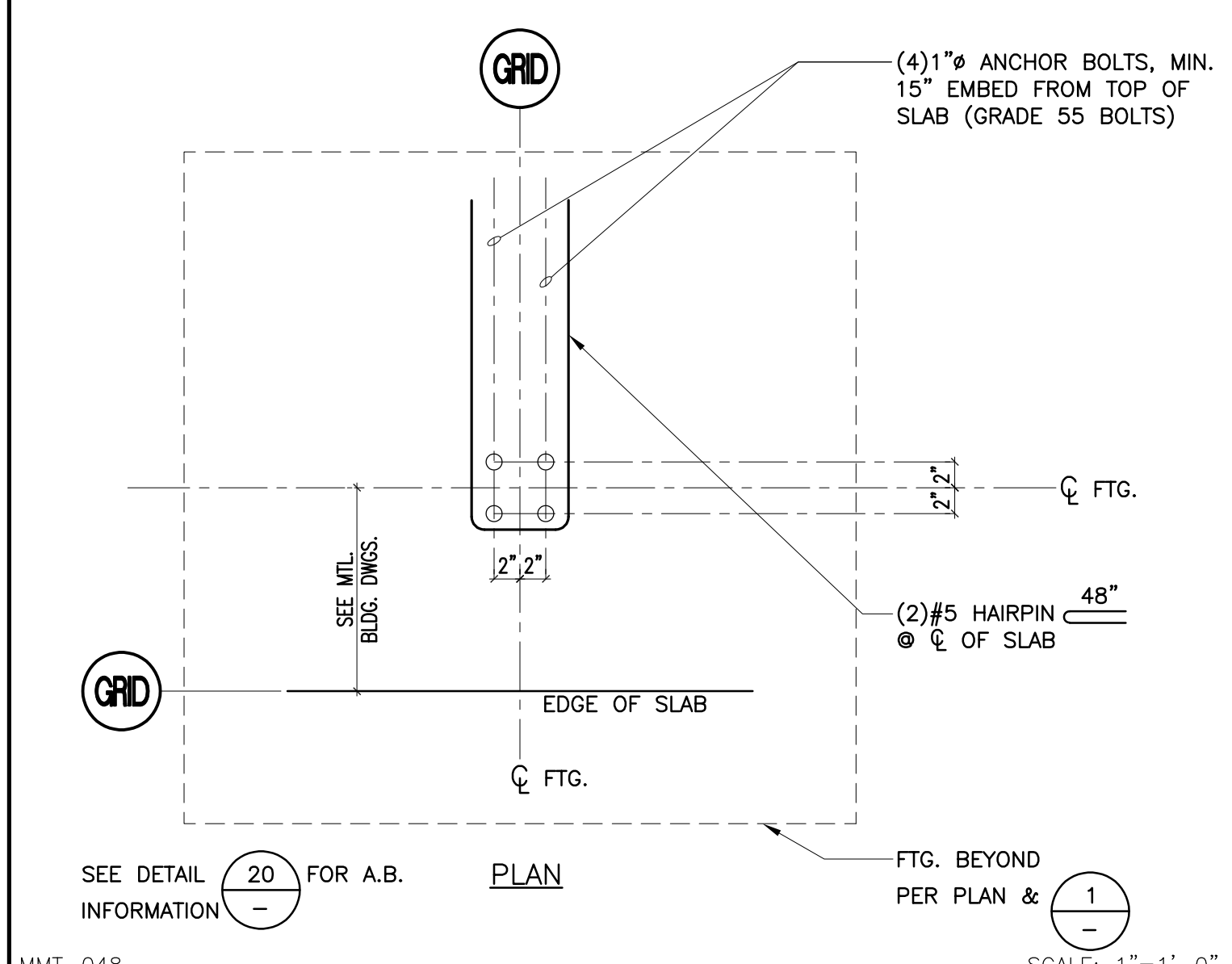
MMT-033 SCALE: 1"=1'-0" DETAIL 9



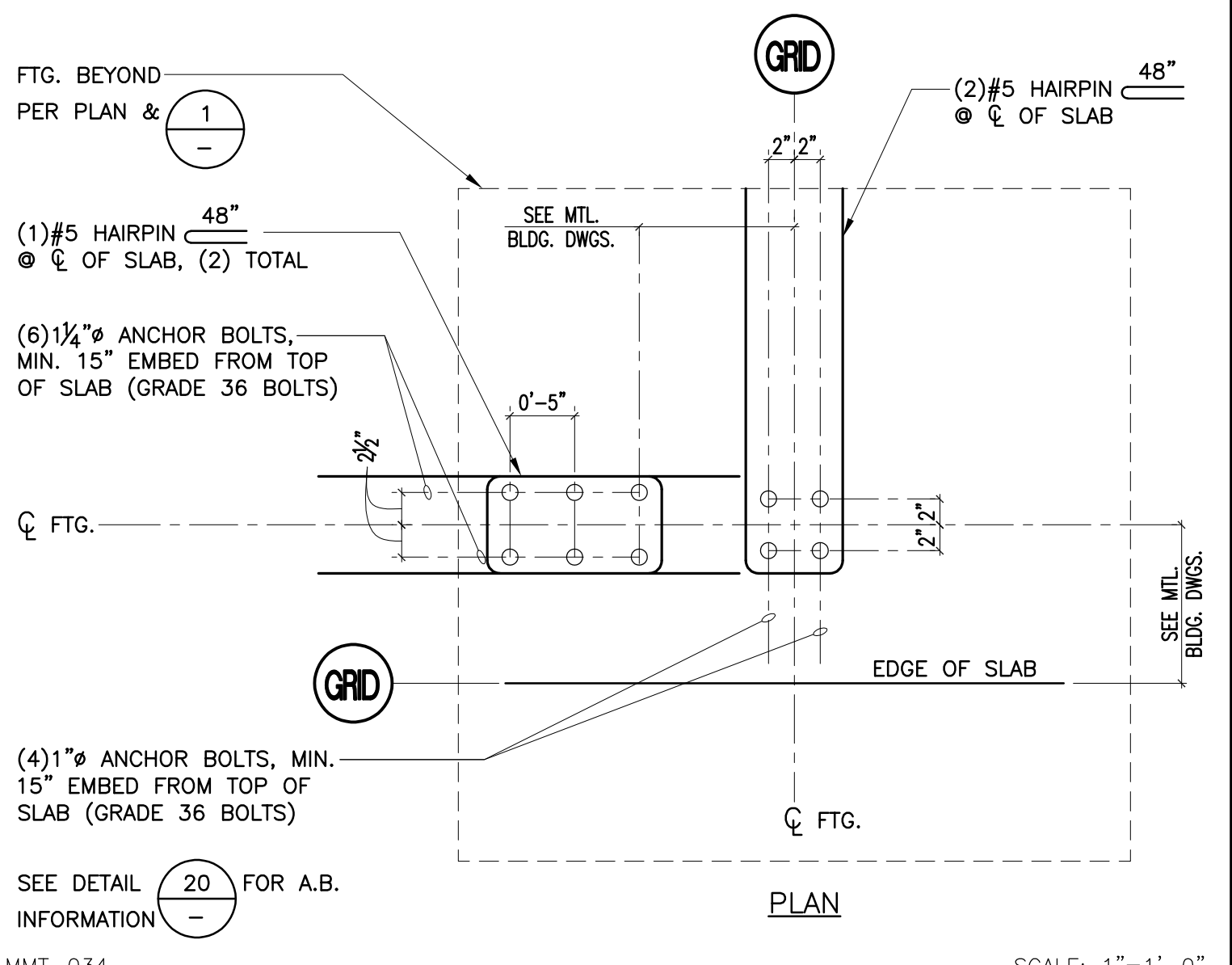
MMT-029 SCALE: 1"=1'-0" DETAIL 5



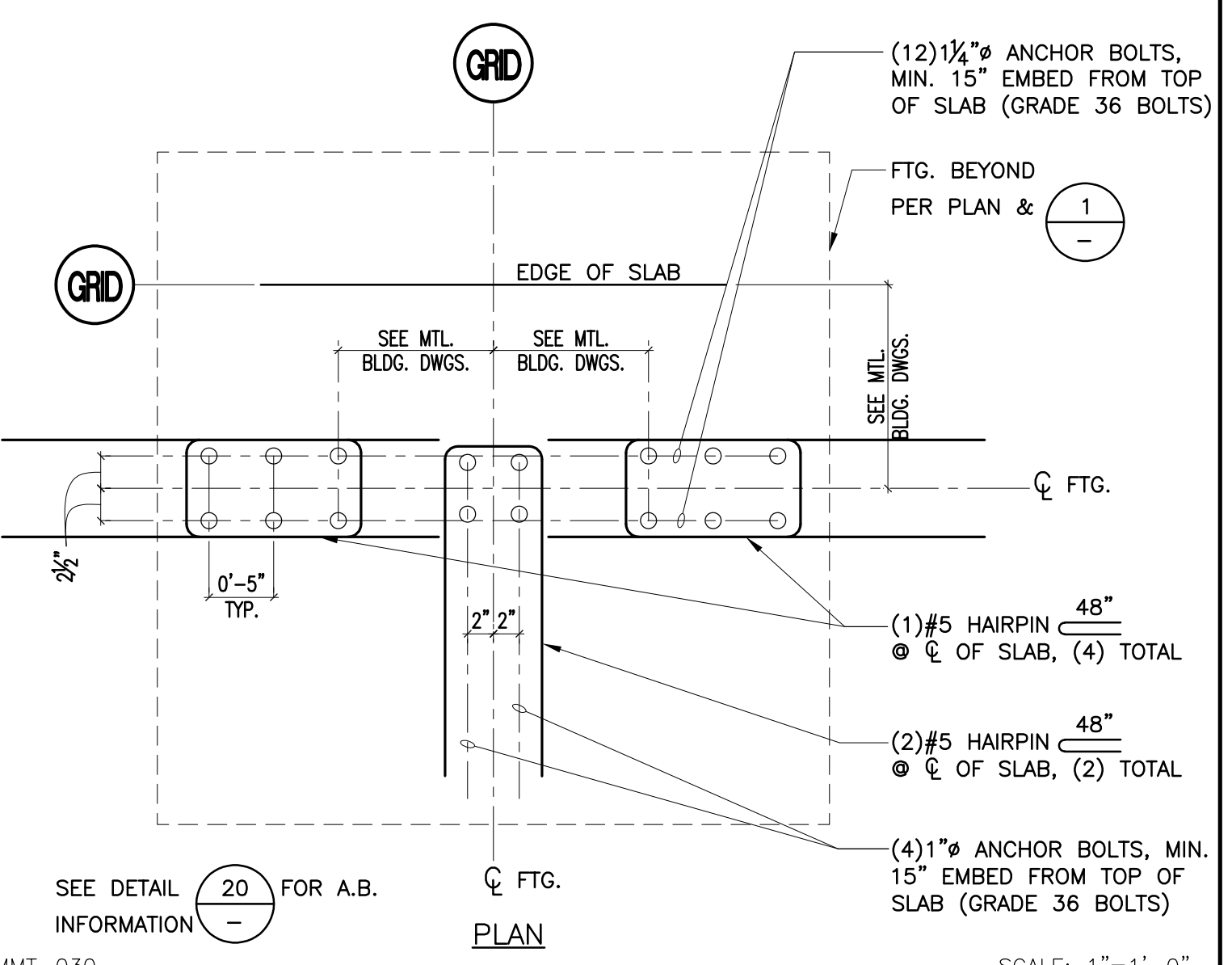
MMT-041 SCALE: 1"=1'-0" DETAIL 18



MMT-048 SCALE: 1"=1'-0" DETAIL 14



MMT-034 SCALE: 1"=1'-0" DETAIL 10



MMT-030 SCALE: 1"=1'-0" DETAIL 6

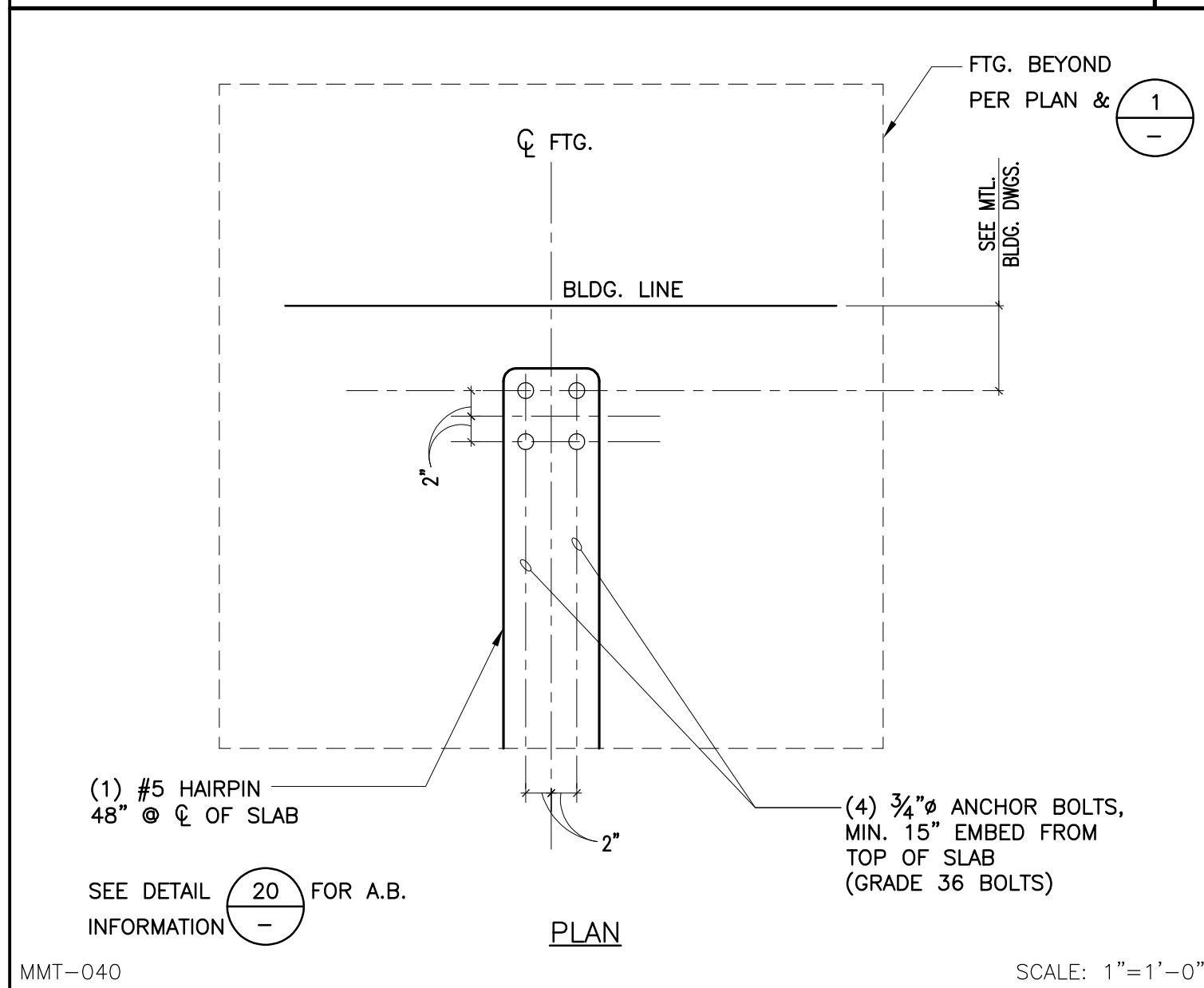
REINFORCING WHERE OCCURS, SEE SCHEDULE

REINFORCING, SEE SCHEDULE

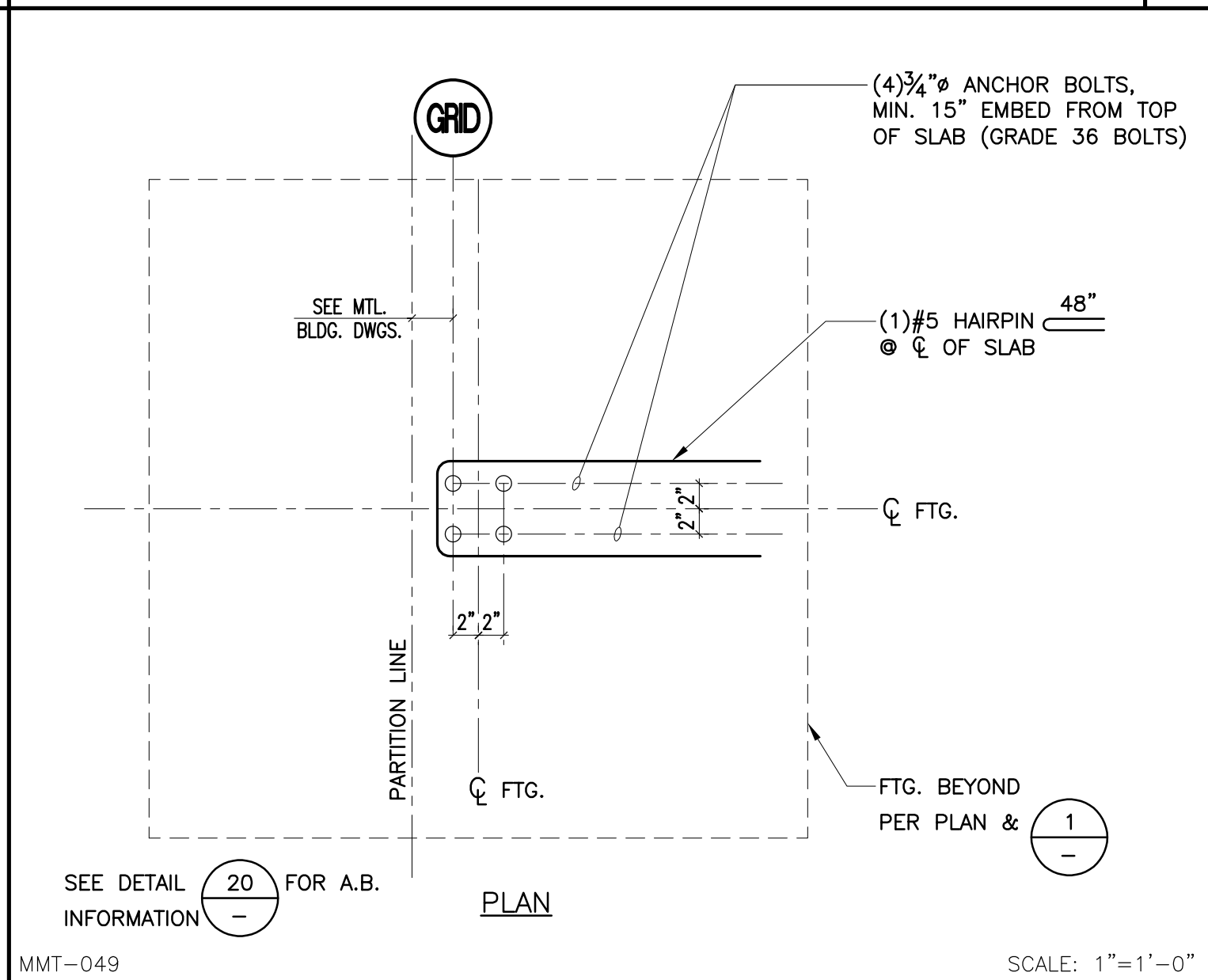
PAD FOOTING SCHEDULE

ADD.	A	B	REINFORCING	REMARKS
PF-4	4'-0"	1'-6"	(5) #5 EA. WAY	T&B
PF-6	6'-0"	1'-6"	(8) #5 EA. WAY	T&B
PF-8	8'-0"	1'-6"	(11) #5 EA. WAY	T&B
PF-9	9'-0"	1'-6"	(12) #5 EA. WAY	T&B, <math>\phi</math> OF FTG. CENTERED BETWEEN THE (2) COLS.
PF-11	11'-0"	1'-6"	(14) #5 EA. WAY	T&B, <math>\phi</math> OF FTG. CENTERED BETWEEN THE (2) COLS.

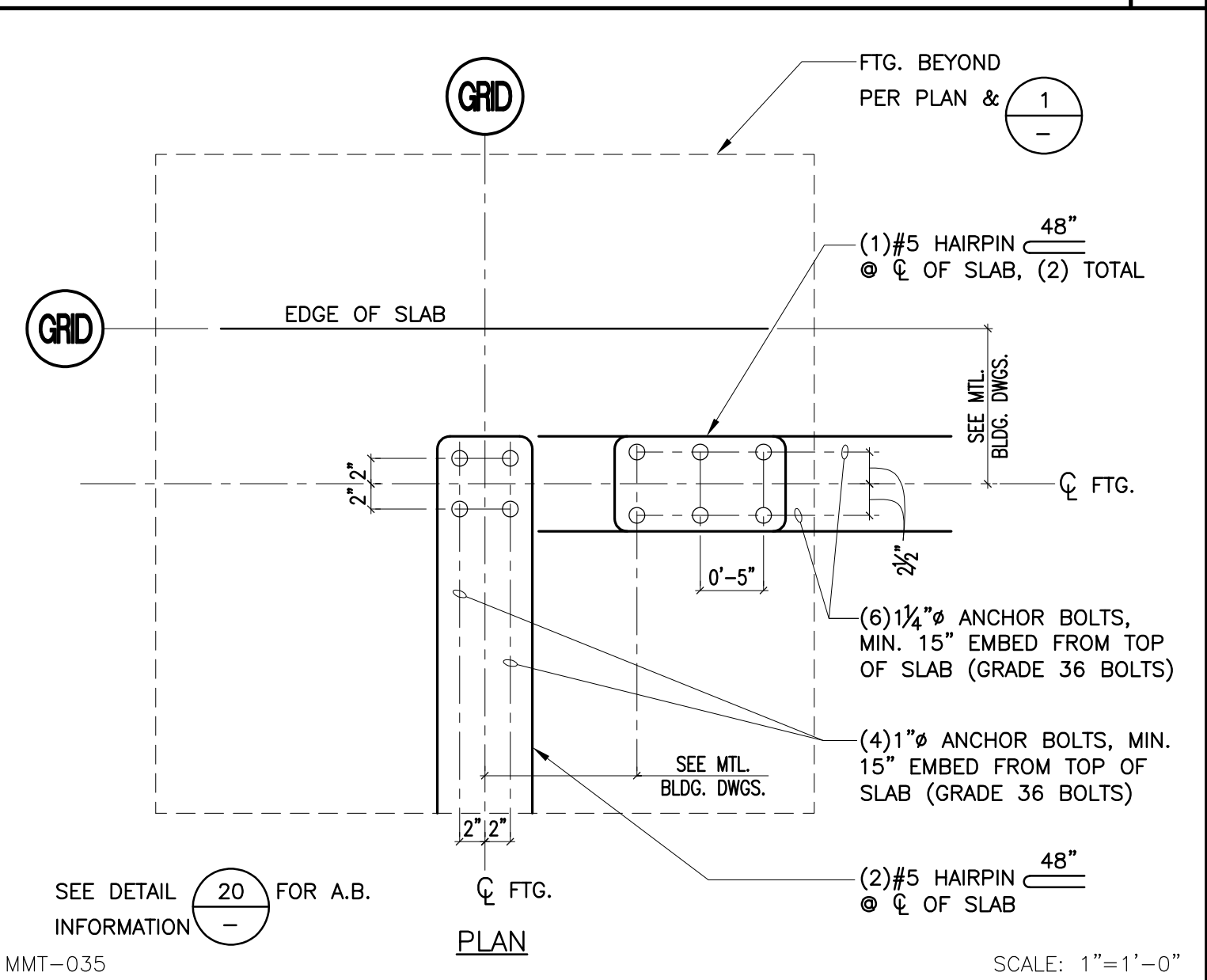
SCALE: 1"=1'-0" DETAIL 1



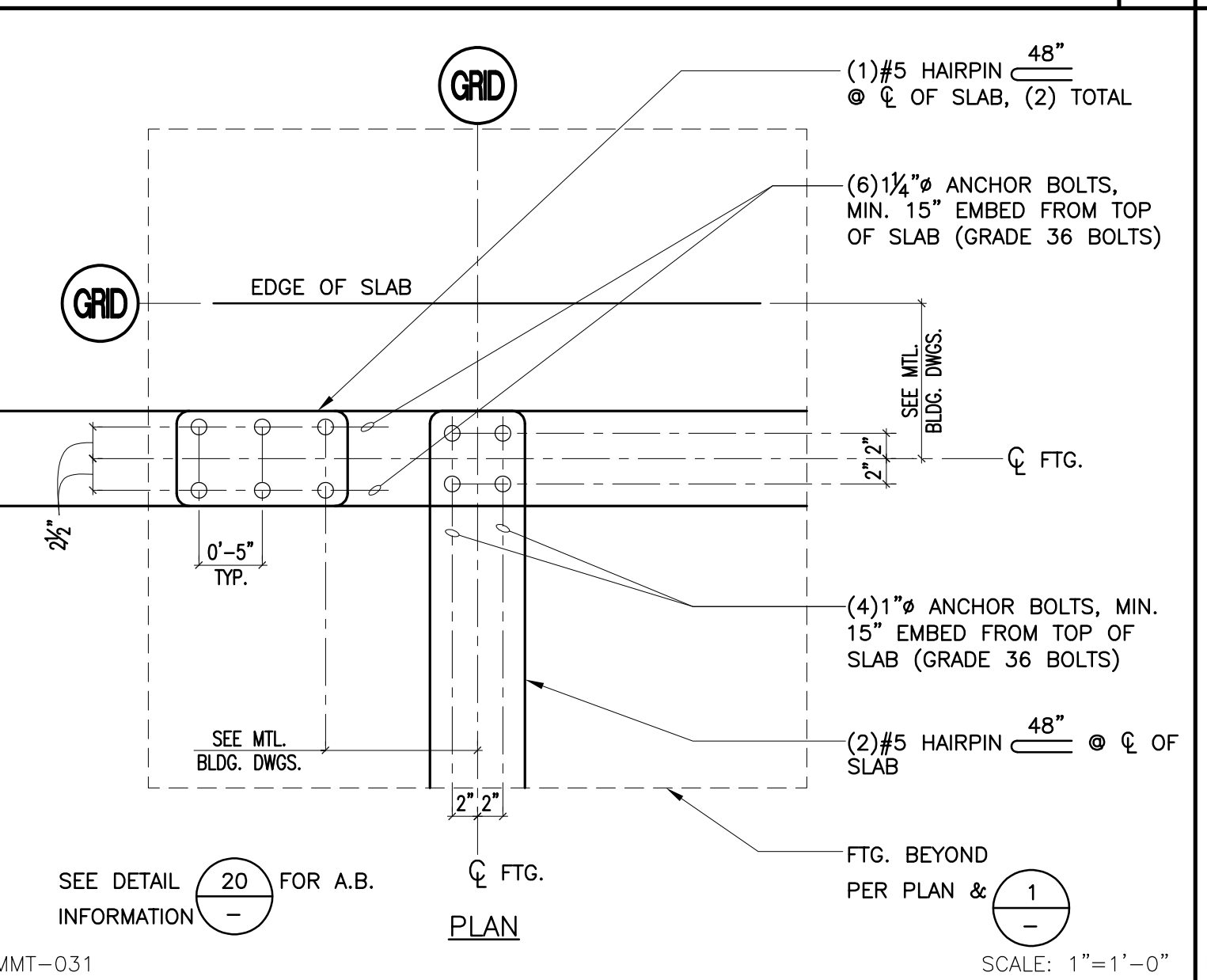
MMT-040 SCALE: 1"=1'-0" DETAIL 19



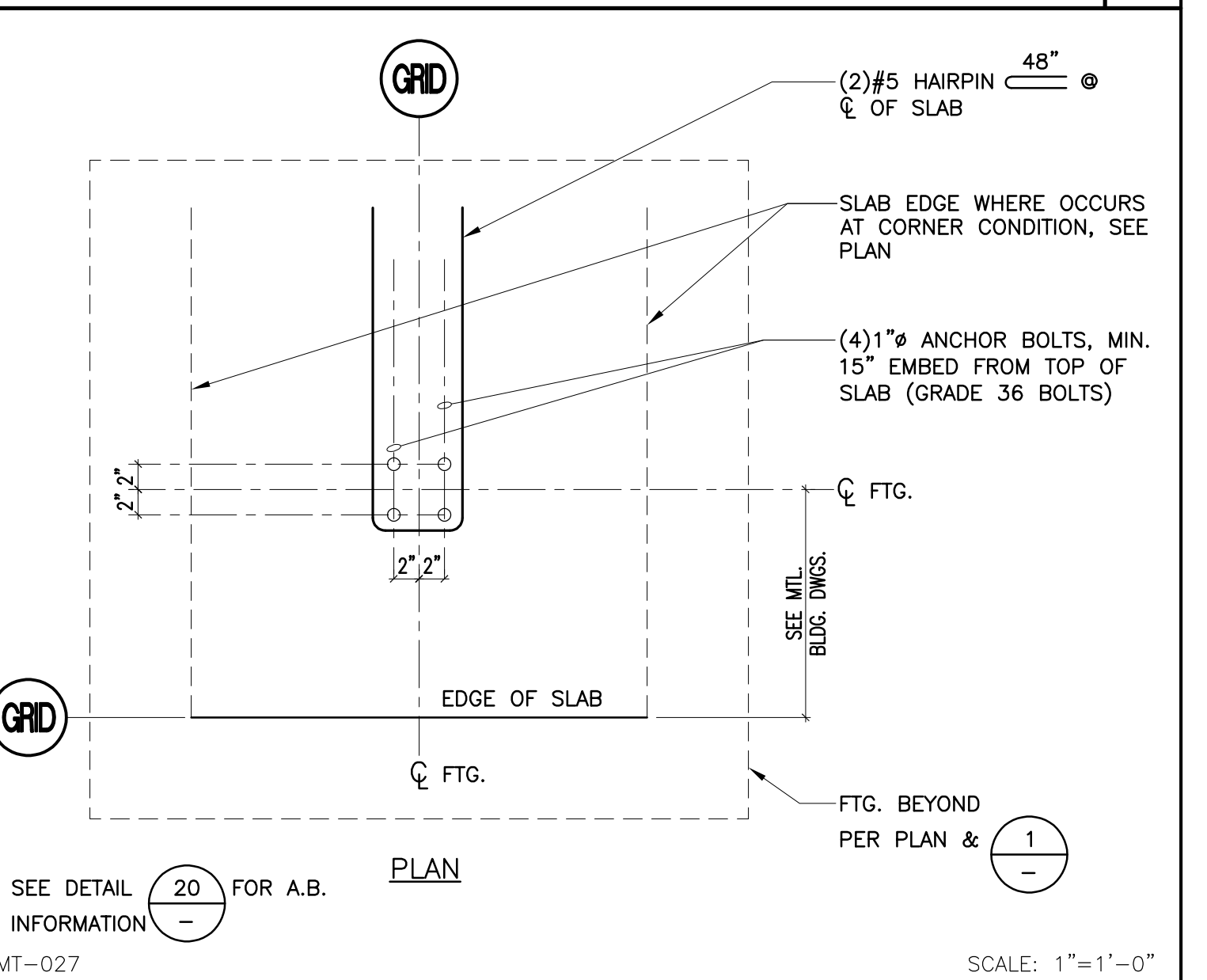
MMT-049 SCALE: 1"=1'-0" DETAIL 15



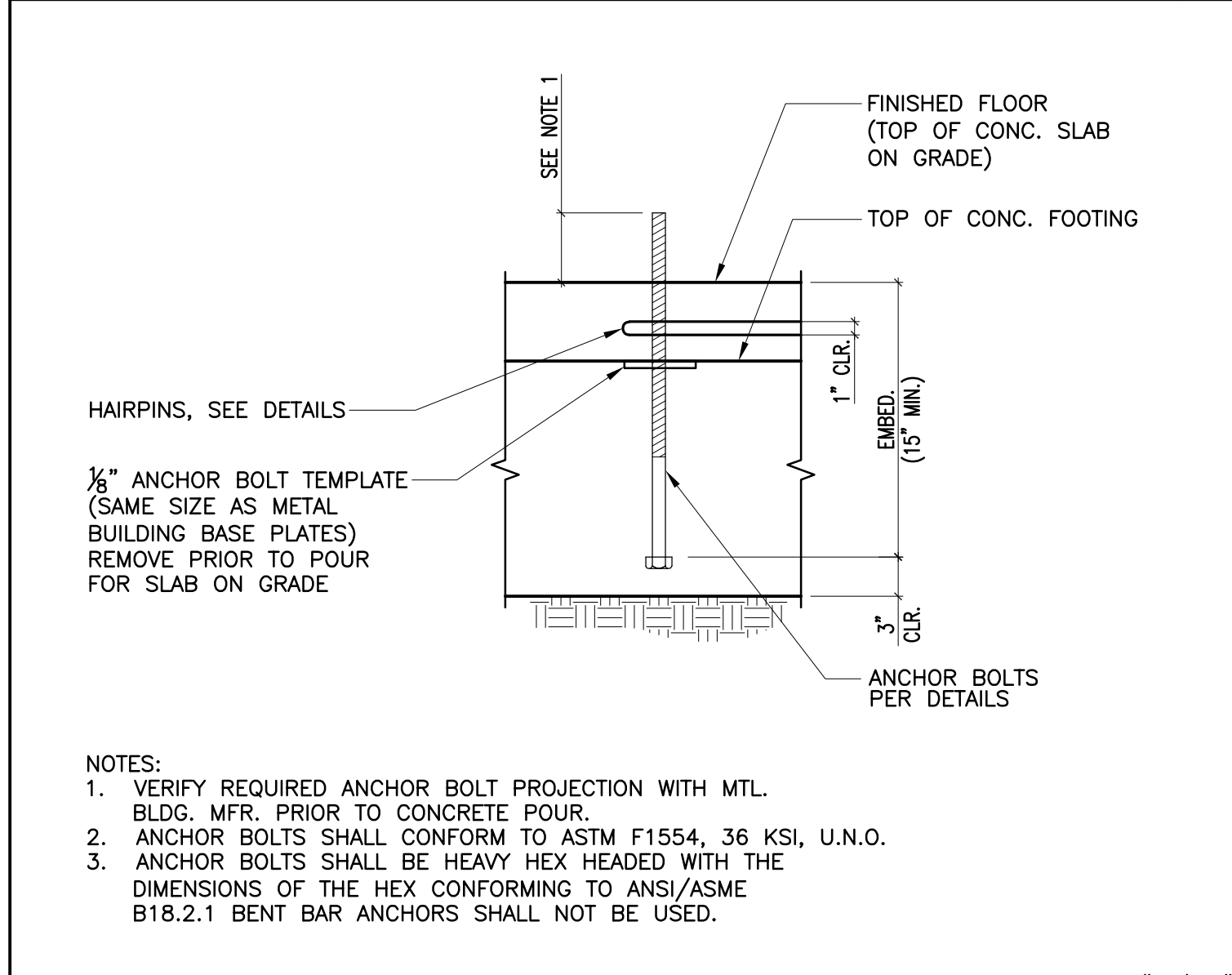
MMT-031 SCALE: 1"=1'-0" DETAIL 11



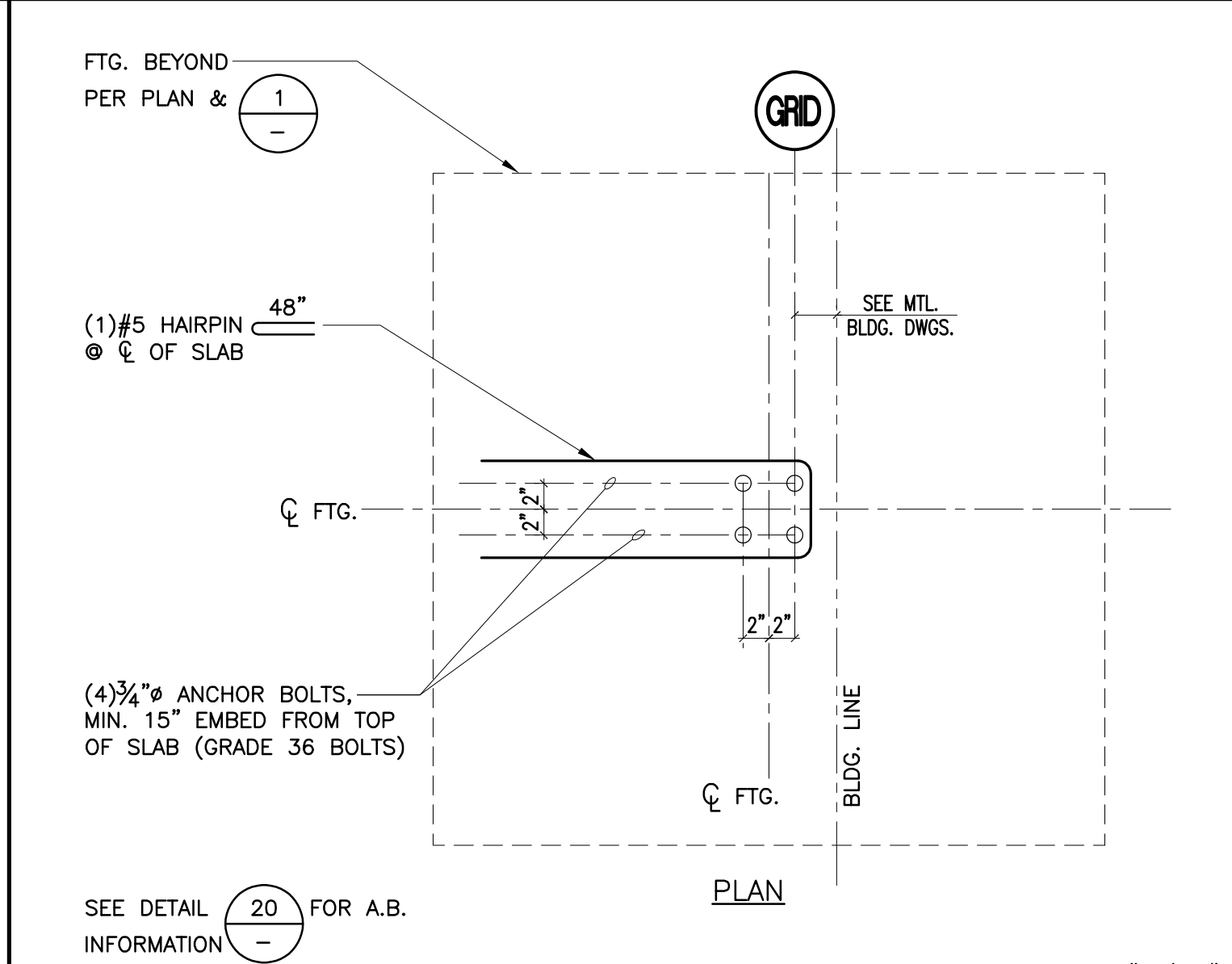
MMT-027 SCALE: 1"=1'-0" DETAIL 7



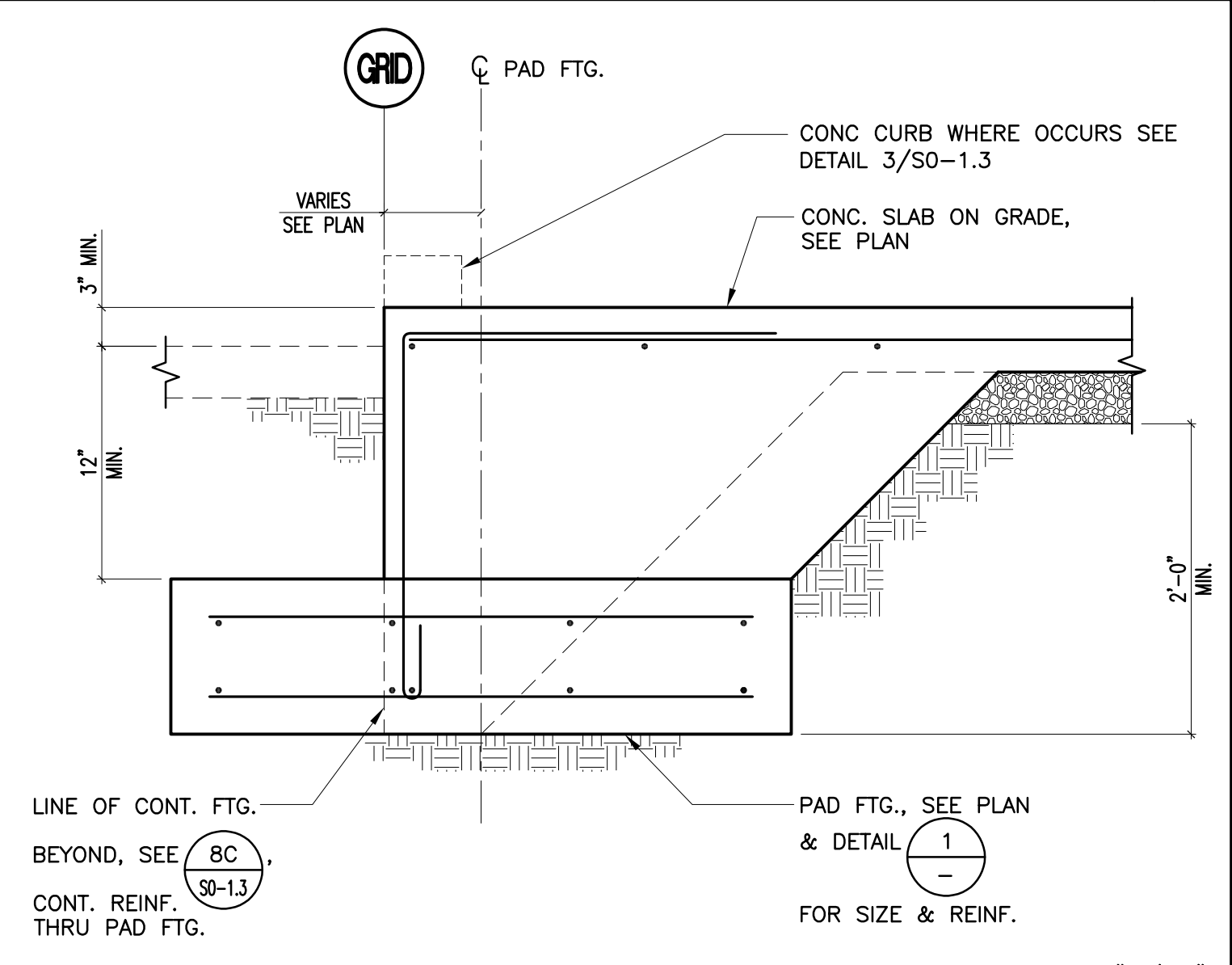
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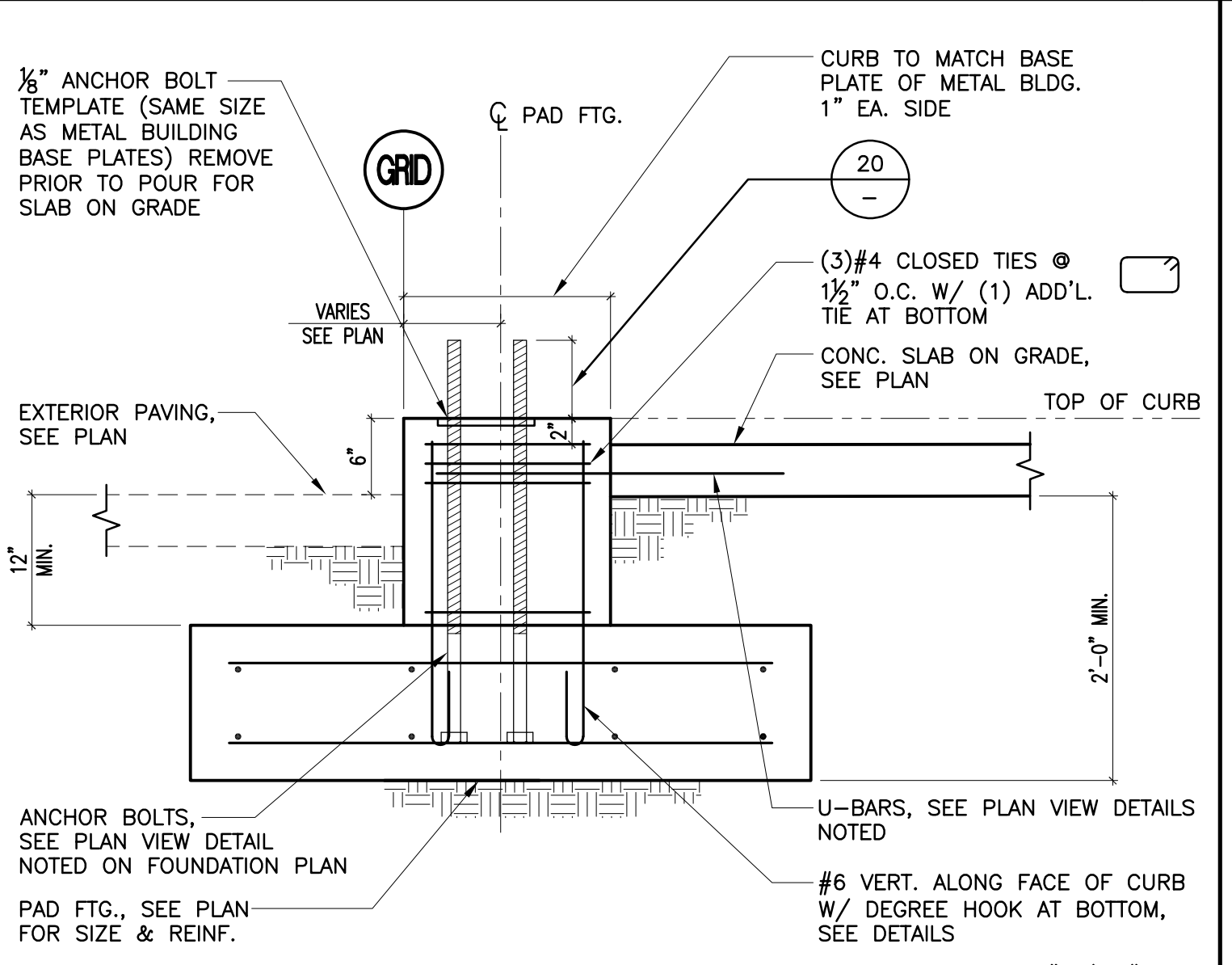
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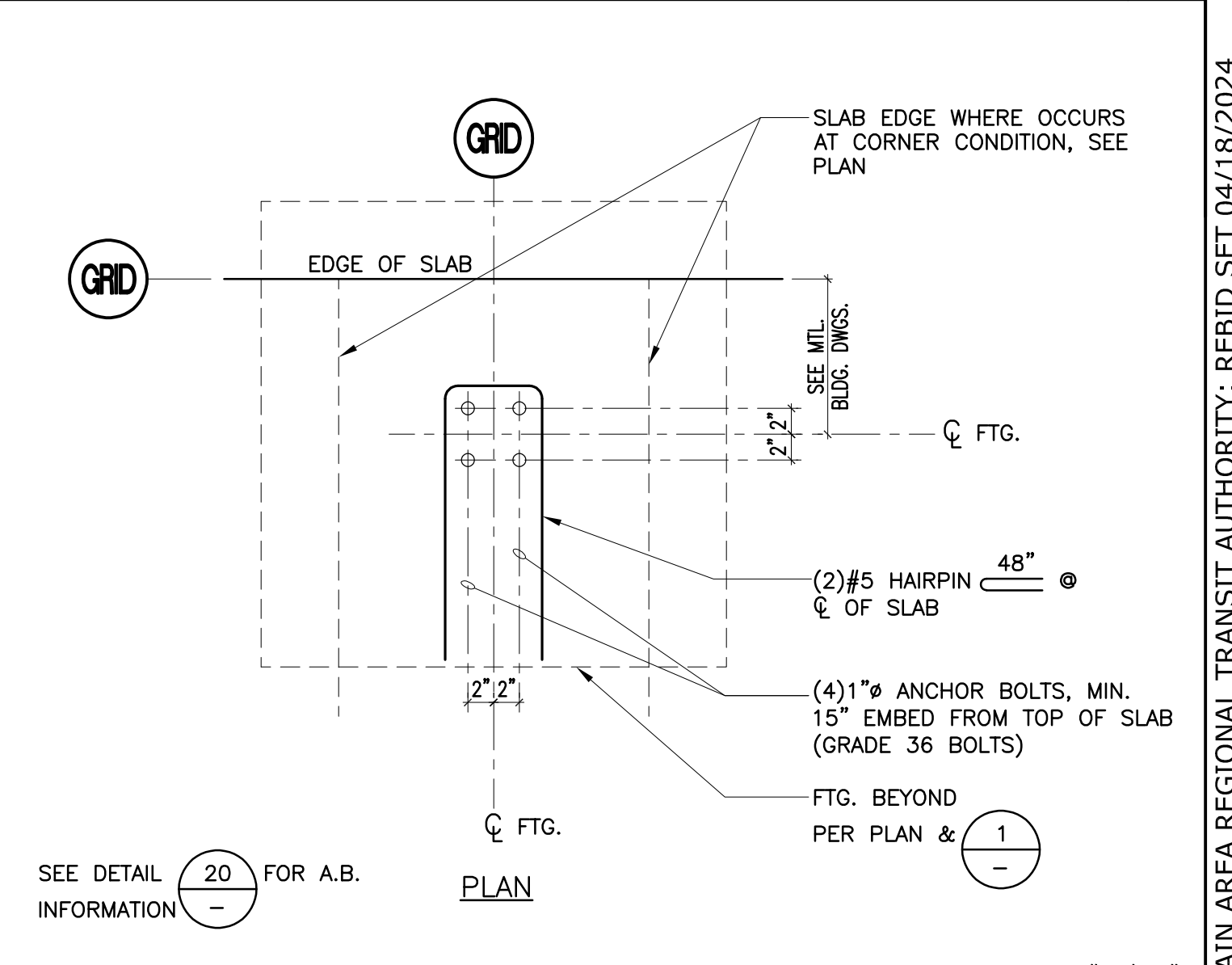
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MMT-025 SCALE: 1"=1'-0" DETAIL 8



MMT-028 SCALE: 1"=1'-0" DETAIL 3

PROJECT No. :50801

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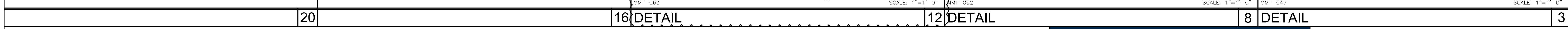
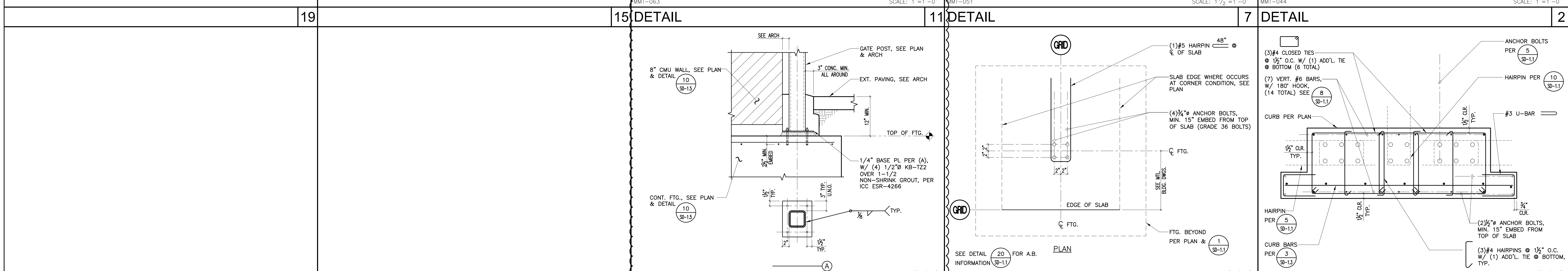
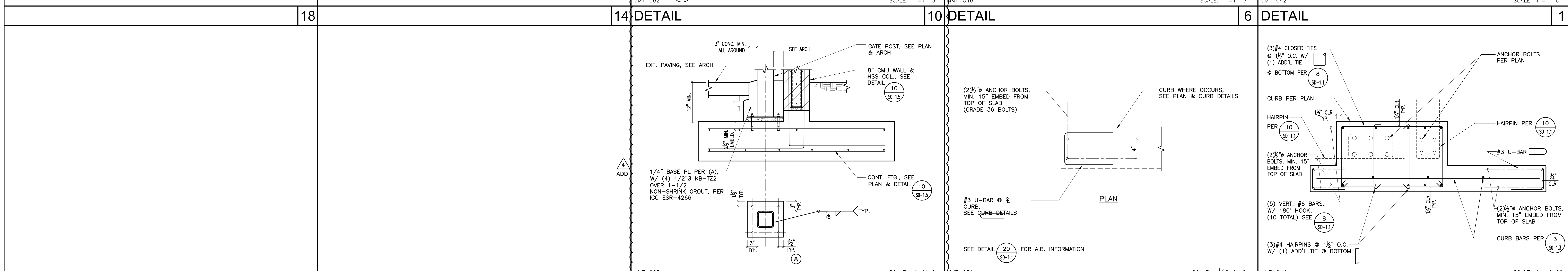
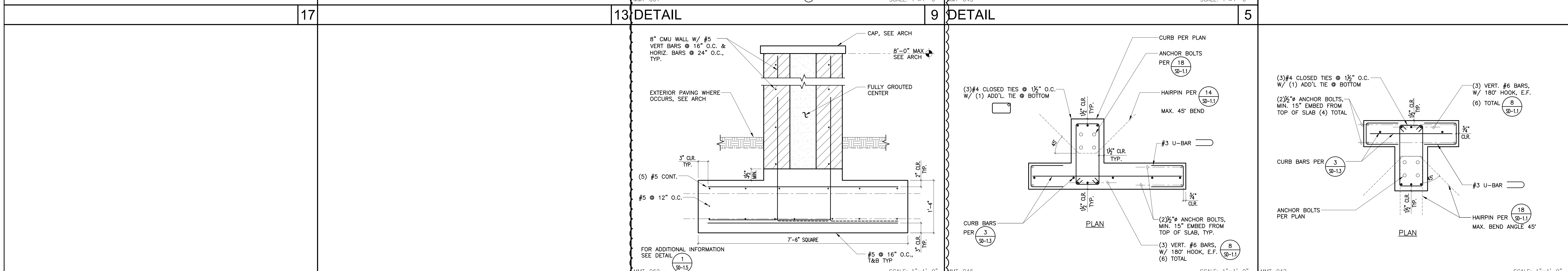
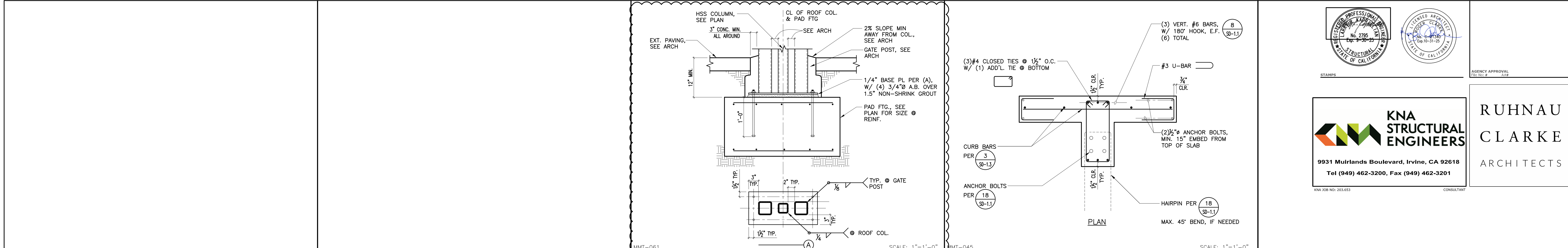
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**KNA STRUCTURAL ENGINEERS**
  
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**RUHNA CLARKE ARCHITECTS**

MOUNTAIN AREA REGIONAL TRANSIT AUTHORITY: REBID SET 04/18/2024



**PLUMBING FIXTURE SCHEDULE**

TAG	SPECIFICATION	CONNECTION SIZE:					
		WASTE	TRAP	VENT	CW	HW	ELEC.
EEW 1	EMERGENCY EYE WASH: HAWS 386WCC, BARRIER FREE RECESSED SHOWER AND EYEWASH WASH, DRENCH SHOWER & EYEWASH W/ STAINLESS STEEL, 20 GPM SHOWERHEAD, 4.2 GPM EYEWASH WASH, STAINLESS STEEL CABINET, INDOOR APPLICATIONS REQUIRE A FLOOR DRAIN FD-1 WITH TRAP PRIMER TP-1. HAWS 8201E THERMOSTATIC MIXING VALVE.	2"	1-1/4"	1-1/2"	1-1/4"	1"	-
EEW 2	EMERGENCY EYE WASH: HAWS 768WCC, BARRIER FREE RECESSED EYEWASH WASH, EYEWASH W/ STAINLESS STEEL 4.2 GPM EYEWASH WASH, STAINLESS STEEL CABINET, HAWS 8201E THERMOSTATIC MIXING VALVE.	2"	1-1/4"	1-1/2"	1-1/4"	1"	-
FD 1	FLOOR DRAIN: JOSAM 30002-5A FLOOR DRAIN W/EOC CAST IRON BODY W/CLAMP RING, FLANGE, ADJUSTABLE NIKALOY STRAINER, POLISHED BRONZE GRATE, PROVIDED WITH TRAP PRIMER CONNECTION FOR TP-1.	2"	2"	1-1/2"	-	-	-
FD 2	FLOOR DRAIN: JOSAM 30003-5A FLOOR DRAIN W/EOC CAST IRON BODY W/CLAMP RING, FLANGE, ADJUSTABLE NIKALOY STRAINER, POLISHED BRONZE GRATE, PROVIDED WITH TRAP PRIMER CONNECTION FOR TP-1.	3"	3"	1-1/2"	-	-	-
FD 3	FLOOR DRAIN: JOSAM 30004-5A FLOOR DRAIN W/EOC CAST IRON BODY W/CLAMP RING, FLANGE, ADJUSTABLE NIKALOY STRAINER, POLISHED BRONZE GRATE, PROVIDED WITH TRAP PRIMER CONNECTION FOR TP-1.	4"	4"	2"	-	-	-
FS 1	FLOOR SINK: JOSAM 49302 FLOOR SINK, 8" SQUARE TOP-MEDIUM RECEPTOR, 5-7/8" DEEP SUMP, ACID RESISTANT COATED INTERIOR AND GRATE. PROVIDED WITH TRAP PRIMER CONNECTION FOR TP-1.	2"	2"	1-1/2"	-	-	-
HB 1	HOSE BIBB: WOODFORD 69P-1-4 RECESSED ANTI-SIPHON FREEZELESS WALL HYDRANT, CHROME FINISH WITH VACUUM BREAKER, METAL WHEEL HANDLE AND LOOSE TEE KEY OPERATED CONTROL VALVE.	-	-	-	3/4"	-	-
JS 1	SERVICE LINE SINK: KOHLER "WHITBY" K6710 WHITE ENAMEL CAST IRON FLOOR MOUNTED CORNER BASKET SINK W/ K-8940 SINK RIM GUARD, CHICAGO 897-CP WALL MOUNTED 8" BODY SERVICE SINK FAUCET W/ VACUUM BREAKER, HOSE THREADED OUTLET, PAUL HOOK, INTEGRAL STOPS & WALL BRACE.	3"	3"	1-1/2"	1/2"	1/2"	-
L 1	LAVATORY: KOHLER "KINGSTON" K-2005, WHITE VITREOUS CHINA, WALL HUNG LAVATORY W/ FAUCET HOLE ON CENTER, SLOAN 3382133 DECK MOUNTED SINGLE HOLE E-TRONIC TRADITIONAL SINK FAUCET, HARD WIRED DUAL BEAM INFRARED SENSOR, W/ 0.5 GPM ERATOR, THERMOSTATIC MIXING VALVE, PRESSURE ASSE, 100% APPROVED T/MV SET TO 110", GRID STRAINER DRAIN W/ 1-1/2" CAST BRASS P-TRAP WITH CHROME FINISH, ANGLE STOPS W/ RIGID RISER. PROVIDE JOSAM 1700 SERIES WALL CARRIER ON ADA COMPLIANT PROVIDE TRUEBRO LAV GUARD PER ADA CODE SEC. 506.5 & CBC SEC. 11B-606.5	2"	1-1/2"	1-1/2"	1/2"	1/2"	120V
S 1	TWO COMPARTMENT SINK: ELKAY "LUSTERTONE" LR4031965PD, 33 X 19-1/2" X 16-1/2" STAINLESS STEEL DOUBLE BOWL SINK, 18 GAUGE, SELF RIM FAUCET HOLES ON 4" CENTERS, CHICAGO 2300-8E34BCP DECK MOUNTED 8" FIXED CENTERS SINGLE LEVER W/ 1.5 GPM ERATOR, PROVIDE ASSE, 100% APPROVED T/MV SET TO 110", CHROME BASKET STRAINERS W/ 1-1/2" CAST BRASS L.A. PATTERN P-TRAP WITH CHROME FINISH, ANGLE STOPS W/ RIGID RISER.	2"	1-1/2"	1-1/2"	1/2"	1/2"	-
S 2	ONE COMPARTMENT SINK: ELKAY ESS424RFC 48-1/2" X 24" X 10" STAINLESS STEEL SINGLE BOWL SINK W/ BUFFED SATIN FINISH, 14 GAUGE, WALL MOUNTED, LASSER FOOT CONTROL, LASSER SPOUT, LK18B GRID DRAIN, CENTER DRAIN PLACEMENT, PROVIDE ASSE, 100% APPROVED T/MV SET TO 110", CHROME BASKET STRAINERS W/ 1-1/2" CAST BRASS L.A. PATTERN P-TRAP WITH CHROME FINISH, ANGLE STOPS W/ RIGID RISER.	2"	1-1/2"	1-1/2"	1/2"	1/2"	-
SH 1	SHOWER: ARCHITECT SPECIFICATIONS, BRADLEY HX200-TMV-SF-HS-VL-LB/ST-SB-NS-SC, RECESS MOUNTED ADA COMPLIANT WALL SHOWER, SHOWERHEAD HEIGHT 8'-0", THERMOSTATIC MIXING VALVE SET TO 120", DELUXE SHOWERHEAD W/ BALL JOINT (1.50 GPM), HAND SHOWER HEAD, 80" FLEX HOSE, WALL HOOK, VACUUM BREAKER AND QUICK DISCONNECT, VALVE ON LEFT SIDE, LOCKABLE BALL JOINT, STOPS IN EACH SUPPLY, 24" SLIDE BAR, NO SEAT (SEAT ARCHITECT SPECIFICATIONS), STANDARD SCREWS, JOSAM 3000A-5A-CP-2 FLOOR DRAIN, CHROME PLATED STRAINER, NO-HUB OUTLET, INSTALL PER CPC (SEC. 411.10)	2"	2"	1-1/2"	1/2"	1/2"	-
SH 2	SHOWER: ARCHITECT SPECIFICATIONS, BRADLEY HX200-TMV-SF-HS-VL-LB/ST-SB-NS-SC, RECESS MOUNTED ADA COMPLIANT WALL SHOWER, SHOWERHEAD HEIGHT 8'-0", THERMOSTATIC MIXING VALVE SET TO 120", DELUXE SHOWERHEAD W/ BALL JOINT (1.50 GPM), HAND SHOWER HEAD, 80" FLEX HOSE, WALL HOOK, VACUUM BREAKER AND QUICK DISCONNECT, VALVE ON RIGHT SIDE, LOCKABLE BALL JOINT, STOPS IN EACH SUPPLY, 24" SLIDE BAR, NO SEAT (SEAT ARCHITECT SPECIFICATIONS), STANDARD SCREWS, JOSAM 3000A-5A-CP-2 FLOOR DRAIN, CHROME PLATED STRAINER, NO-HUB OUTLET, INSTALL PER CPC (SEC. 411.10)	2"	2"	1-1/2"	1/2"	1/2"	-
TD 1	TRENCH DRAIN: JOSAM PRO PLUS 100C - SMC/GRP TRENCH DRAIN CHANNELS 100C THRU 100C-03 BOTTOM OUTLET, END CAPS, 100-GRP-C CLASS C HEAL PROOF TRENCH DRAIN GRATE, GREEN DRAIN GEE TRAP PRIMER.	3"	3"	1-1/2"	-	-	-
TP 1	TRAP PRIMER: MIFAB MODEL "M-500" 1/2" INLET AND 1/2" OUTLET WITH OPTIONAL DISTRIBUTION UNIT, MAY BE LOCATED AS INDICATED ON DRAWINGS OR AS REQUIRED BY CODE. UPC LISTED, PROVIDED WITH A 12X 12" ACCESS PANEL OR LARGER DEPENDING ON THE REQUIRED ACCESS TO THE EQUIPMENT AND SHUT-OFF VALVE. (CONTRACTOR TO VERIFY).	-	-	-	1/2"	-	-
TP 2	TRAP PRIMER: MIFAB MODEL "M-100-500-120VAC" 1/2" INLET AND 1/2" OUTLET, HARD WIRED POWERED, MAY BE LOCATED AS INDICATED ON DRAWINGS OR AS REQUIRED BY CODE. UPC LISTED, PROVIDED WITH A 12X 12" ACCESS PANEL OR LARGER DEPENDING ON THE REQUIRED ACCESS TO THE EQUIPMENT AND SHUT-OFF VALVE. (CONTRACTOR TO VERIFY).	-	-	-	1/2"	-	120V
WC 1	WATERCLOSET: KOHLER "HIGHCLIFF ULTRA" K-8605T, ADA COMPLIANT, 16-5/8" HIGH RIM, (1.28 GPF), FLOOR MOUNTED, ELONGATED BOWL, SIPHON, 5-1/2" TOP SPID, WHITE VITREOUS CHINA, SLOAN 111-SFSM-128-HW EXPOSED SENSOR FLUSH VALVE (1.28 GPF), -BEMIS PLASTIC SEAT MODEL 2L2155T, ELONGATED, OPEN FRONT, STAIN & CHEMICAL RESISTANT.	3"	INT.	2"	1"	-	120V
WHA 1	WATER HAMMER ARRESTOR: MIFAB, INC. MODEL "MWH" (SEE PLANS FOR SIZE), INSTALLED ON ALL QUICK CLOSING VALVES AND ALL VALVES WHICH CLOSE WITH THE FLOW OF FLUID, OR ON HEADERS SERVING MORE THAN ONE FIXTURE. PROVIDED WITH A 12X 12" ACCESS PANEL.	-	-	-	-	-	-

**SAND OIL INTERCEPTOR SCHEDULE**

TAG	MANUFACTURER & MODEL NO.	CAPACITY	ACCESSORIES
OI 1	JENSEN PRECAST JPT50EE-TP	750 GALLONS	W/ TRAFFIC RATED LIDS AND RISER RINGS AS REQ'D TO FLUSH W/ GRADE INSPECTION STATION

**EXPANSION TANK SCHEDULE**

TAG	MANUFACTURER & MODEL NO.	CAPACITY	AIR PRE-CHARGE	WATER SIDE VOLUME	WEIGHT
ET 1	WATTS PLE-12	4.5 GALLONS	20 PSI	3.42 GALLONS	10 LBS DRY 39 LBS WET

**GARBAGE DISPOSAL SCHEDULE**

TAG	MANUFACTURER & MODEL NO.	CONSTRUCTION	ELECTRICAL	WEIGHT	REMARKS
GD 1	IN-SINK ERATOR BADGER 5	GALVANIZED STEEL	120V-1ø-60Hz 6.9 AMPS 1/2 HP	15 LBS	QUIET DURA-DRIVE INDUCTION MOTOR

**PIPE MATERIAL SCHEDULE**

SERVICE	PIPE MATERIAL & WEIGHT	TYPE OF JOINTS	PRESSURE FITTINGS MATERIAL	SHUT-OFF RATINGS PSI-SWP	VALVE
COLD WATER ABOVE GROUND	COPPER L TUBE	SOLDERED	CAST BRONZE/ WROUGHT COPPER	125	BALL GATE CHECK
COLD WATER BELOW GROUND TO 5' OUTSIDE BUILDING	COPPER K TUBE	BRAZED	CAST BRONZE/ WROUGHT COPPER	125	BALL GATE
COLD WATER BELOW GROUND BEYOND 5'-0"	SCHEDULE 80 PVC	SOLVENT-WELD	PVC	125	GATE
HOT WATER ABOVE GROUND	COPPER L TUBE	SOLDERED	CAST BRONZE/ WROUGHT COPPER	125	BALL CHECK
FUEL GAS	STEEL 40, BLACK STEEL 40, BLACK POLYETHYLENE PIPING STAINLESS STEEL TUBING	SCREWED WELDED PER MANF.	MALL IRON STEEL WELD STAINLESS STEEL TUBING	150 PER MANF.	SQR HEAD COCK PER MANF.
VENT	NO-HUB CAST IRON	NO-HUB	N/A	N/A	N/A
WASTE, SOIL & ROOF DRAINS BELOW GRADE	SCHEDULE 40 ABS	SOLVENT-WELD	ABS	N/A	N/A
WASTE, SOIL & ROOF DRAINS BELOW GRADE	NO-HUB CAST IRON	NO-HUB	N/A	N/A	N/A
CONDENSATE	COPPER L TUBE	SOLDERED	BRONZE	125	N/A
AIR SYSTEMS	COPPER K TUBE	BRAZED	CAST BRONZE/ WROUGHT COPPER	125	BALL
GREASE	STEEL SCHEDULE 80	THREADED	LENZ O-RING STYLE STEEL TUBING	11,950	SQR HEAD COCK
GEAR OIL	STEEL SCHEDULE 40	THREADED	LENZ O-RING STYLE STEEL TUBING	11,400	SQR HEAD COCK
MOTOR OIL/ ANTIFREEZE	STEEL SCHEDULE 40	THREADED	MALLEABLE IRON	150	SQR HEAD COCK

NOTE: ALL EXPOSED FUEL GAS PIPING SHALL BE PRIME AND PAINTED. COORDINATE COLOR WITH ARCHITECT.

**GAS LOAD SCHEDULE**

SYMBOL	ITEM	LOCATION	DEMAND (IN CFH)
AC-1	AIR CONDITIONER	MECHANICAL YARD	43.2
B-1	BOILER	SHOP EQUIPMENT 121	220
MAU-1	MAKE UP AIR UNIT	MECHANICAL YARD	600
WH-1	WATER HEATER	CUST 109	125
-	PATIO HEATER	ADJACENT BUILDING	350
-	PATIO HEATER	ADJACENT BUILDING	350
TOTAL GAS LOAD			1,688.2 CFH
BUILDING LONGEST DEVELOPED PIPE LENGTH (LOW PRESSURE GAS)			<150 FT.
SITE LONGEST DEVELOPED PIPE LENGTH (LOW PRESSURE GAS)			<500 FT.

**COLD WATER SCHEDULE**

PLUMBING SYSTEM FRICTION LOSS			
F.U.'S	41.5	GPM	47
MIN. FRICTION LOSS (PSI)	A=	35	(35 PSI FOR FLUSHVALVE & PRESSURE ASSISTED TANK) (FOR CIVIL PLANS)
ELEV. ABOVE ST. MAIN (FT.)	B=	21.5	(FOR CIVIL PLANS)
DAILY ST. HIGH PRESSURE (PSI)	C=	120	(FROM LOCAL WATER DISTRICT)
DIST. FROM ST. TO HIGHEST FIXTURE	D=	494	(FROM PLANS, IN FEET)
1-1/2" METER PRESSURE LOSS (PSI)	E=	5.4	(UPC APPENDIX A.1)
BACKFLOW DEVICE LOSS (PSI)	F=	13	
PRV DEVICE LOSS (PSI)	G=	6	
SYSTEM STATIC PRESSURE LOSS (FT. HD.)	H=	9.245	H= (B) (0.43)
FRICTION LOSS AVAILABLE TO SYSTEM	I=	61.355	I=C-A-E-F-G-H
TOTAL DEVELOPED LENGTH - DIST. FROM ST. TO HIGHEST FIXTURE PLUS FITTING LOSS	J=	691.6	J=(D) (1.4)
FRICTION LOSS/100 FT.	K=	7.426	K=(J)/(100)
MAXIMUM VELOCITY NOT TO EXCEED 8 FPS. (MAX. FRICTION LOSS ALLOWABLE)			

**PLUMBING SIZING FORM**

PIPE SIZE IS BASED ON CHART A.105 (11) @ 3.0 P.S.I. / 100 FT.  
FIXTURE UNITS ARE BASED ON TABLE A.103 (12) FROM APPENDIX A.

SIZE	FIXTURE UNITS			FIXTURE UNITS		
	F. TANK	F. VALVE	GPM	VELOCIT	NUMBER	FIXTURE UNIT
1/2"	1	0	1.8	2.5	2	WC
3/4"	5	0	4.8	3.0	3	L
1"	13	0	10	4.0	2	SH
1-1/4"	24	0	17	4.5	1	S-1
1-1/2"	47	10	27	5.0	1	S-2
2"	158	64	56	6.0	1	JS
2-1/2"	380	250	100	7.5	1	1st HB
3"	850	800	160	8.0	6	2nd HB
4"	1750	1750	230	8.0	1	WASHBAY

VELOCITY FOR COLD WATER PIPING LESS THAN 8 FT. PER SECOND  
VELOCITY FOR HOT WATER PIPING LESS THAN 5 FT. PER SECOND

TOTAL FIXTURE UNITS: 41.5  
TOTAL G.P.M.: 47

**COMPRESSED AIR SCHEDULE**

PIPE SIZE	FLOW RATE (@ 175 PSIG)	PRESSURE DROP RANGE
1/2"	0-20 SCFM	0-0.833 PSI/100 FT
3/4"	8-45 SCFM	0.03-0.992 PSI/100 FT
1"	15-80 SCFM	0.28-0.794 PSI/100 FT
1-1/4"	25-175 SCFM	0.19-0.902 PSI/100 FT
1-1/2"	128-197 SCFM	0.40-1.0 PSI/100 FT

NOTE: THE ABOVE CAPACITIES ARE BASED ON A MAXIMUM PRESSURE DROP OF 1 PSI PER 100 FT. TO DETERMINE CFM OF AIR AT 100 PSIG, MULTIPLY BY 14.7/114.7 - 0.128 (FOR EXAMPLE, 1,000 CFM OF FREE AIR WILL BE 128 CFM AT 100 PSIG)

**GENERAL NOTES**

- THE TOTAL INSTALLATION SHALL COMPLY WITH ANY AND REQUIREMENTS OF THE LEGALLY CONSTITUTED AUTHORITIES HAVING JURISDICTION INCLUDING 2022 CBC (CALIFORNIA BUILDING CODE), 2022 CAL GREEN REQUIREMENTS AND 2022 CMIC/CPIC (CALIFORNIA MECHANICAL AND PLUMBING CODE).
- THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BID AND SHALL THOROUGHLY FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS UNDER WHICH HE WILL BE REQUIRED TO WORK. INDICATED DIMENSIONS ARE APPROXIMATE AND ARE GIVEN FOR ESTIMATE PURPOSES ONLY.
- BEFORE PROCEEDING WITH THE WORK THIS CONTRACTOR SHALL CAREFULLY CHECK AND VERIFY DIMENSIONS, SIZES, REQUIRED CLEARANCES AND SHALL ASSUME FULL RESPONSIBILITY FOR THE FITTING OF EQUIPMENT AND MATERIALS HEREIN REQUIRED TO OTHER PARTS OF THE WORK OF OTHER TRADES.
- THE DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC TO THE EXTENT THAT OFFSETS, BENDS, SPECIAL FITTINGS AND LOCATIONS ARE NOT EXACTLY LOCATED. IN THE PREPARATION OF THESE DOCUMENTS, CERTAIN ASSUMPTIONS ARE MADE REGARDING EXISTING CONDITIONS. SOME OF THESE ASSUMPTIONS MAY NOT BE VERIFIABLE WITHOUT EXPENDING ADDITIONAL SUMS OF MONEY OR DESTROYING OTHERWISE ADEQUATE OR SERVICEABLE PORTIONS OF EXISTING BUILDINGS AND/OR EQUIPMENT. THEREFORE, THE ENGINEER SHALL NOT BE HELD RESPONSIBLE FOR ANY CHANGES OR ADDITIONAL COSTS INCURRED DUE TO EXISTING CONDITIONS.
- ITEMS RELATED TO PLUMBING UTILITIES AND/OR OTHER SERVICES (I.E. MATERIALS, LABOR, PERMITS, FEES, ETC.) SHALL BE VERIFIED WITH THE RESPECTIVE SERVING UTILITY COMPANY PRIOR TO SUBMISSION OF A BID. THE ACT OF SUBMITTING A BID SHALL CONSTITUTE FULL RESPONSIBILITY OF THE CONTRACTOR TO INSTALL SERVICES IN COMPLIANCE WITH THE REQUIREMENTS OF THE SERVING UTILITY COMPANY AND THE MECHANICAL ENGINEER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CHARGES LEVIED BY THE SERVING UTILITY COMPANY EXCEPTING THE FIRST BILLING DEPOSIT.
- THE CONTRACTOR SHALL COMPLY WITH CONTRACT DOCUMENTS IN LAYING OUT THEIR WORK AND EQUIPMENT. THEY SHALL COORDINATE THE WORK OF THIS SECTION WITH THE WORK OF OTHER TRADES AND JOB CONDITIONS.
- THE INSTALLATION OF ACCESS PANELS OR OTHER INDICATING EQUIPMENT OR SPECIALTIES REQUIRING READING, ADJUSTMENT, INSPECTION, REPAIRS, REMOVAL OR REPLACEMENT SHALL BE CONVENIENTLY LOCATED WITH REFERENCE TO THE FINISHED BUILDING.
- EQUIPMENT AND FIXTURES INSTALLED UNDER THIS CONTRACT SHALL BE HUNG OR ANCHORED IN ACCORDANCE WITH 2022 CPIC/CBC.
- THE INTENT OF THE DRAWINGS AND SPECIFICATIONS IS TO CONSTRUCT THE PROJECT IN ACCORDANCE WITH TITLE 24, CALIFORNIA CODE OF REGULATIONS.
- WHERE MATERIAL IS SHOWN ON THE DRAWINGS BUT NOT SPECIFIED, IT SHALL BE OF THE SAME TYPE AND QUALITY AS EXISTING MATERIAL.
- THE FIRE PROTECTION CONTRACTOR SHALL PROVIDE REQUIRED HYDRAULIC CALCULATIONS AND FIRE SPRINKLER HEAD LOCATION IN ACCORDANCE WITH NFPA 13 TO THE LOCAL FIRE DEPARTMENT FOR REVIEW AND APPROVAL OF THE FIRE PROTECTION SYSTEM.
- TEST SYSTEMS) IN ACCORDANCE WITH REQUIREMENTS OF THE GOVERNING AUTHORITIES.
- CLEANOUTS SHALL BE INSTALLED WHERE READILY ACCESSIBLE AND LOCATED AS PER CODE REQUIREMENTS. THE CONTRACTOR SHALL COORDINATE CLEANOUT LOCATIONS WITH EQUIPMENT CABINETS, ETC. AND THE ARCHITECT PRIOR TO ANY INSTALLATION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR PATCHING AND REPAIRING PAVED AREAS WHICH ARE EXCAVATED AND/OR DAMAGED BY THEIR OPERATIONS. IN ADDITION, THE CONTRACTOR SHALL RESTORE TO ORIGINAL CONDITION PLANTED AREAS DAMAGED BY THEIR OPERATIONS.
- CONNECTIONS TO EXISTING SERVICES SHALL BE MADE SUCH THAT INTERRUPTION TIME WILL BE AS SHORT AS POSSIBLE. THE CONTRACTOR SHALL GIVE THE OWNERS REPRESENTATIVE SUFFICIENT NOTICE OF SUCH INTERRUPTIONS AND THE ACTUAL SHUT-DOWN TIME SHALL BE AT A TIME DESIGNATED BY THE OWNERS REPRESENTATIVE.
- EXTERIOR WATER SHUT-OFF VALVES BELOW GROUND SHALL BE INSTALLED IN YARD BOXES WITH COVERS CONSPICUOUSLY MARKED "WATER SHUT-OFF" RESPECTIVELY.
- WHEN REQUIRED BY THE AUTHORITY HAVING JURISDICTION, POTABLE WATER SYSTEMS SHALL BE DISINFECTED AND FLUSHED PRIOR TO USE BY WATER-CHLORINATION SOLUTION AND HAVE BACTERIOLOGICAL EXAMINATION MADE BY AN APPROVED AGENCY PER 2022 CPC SEC. 809.9 AND AS PRESCRIBED IN AWWA C651 METHODS OF CLEANING/ DISINFECTING FOR NEW OR REPAIR PIPING AS DESCRIBED IN C651 OR NFPA 24.
- PLUMBING PIPE, FITTINGS AND FIXTURES USED TO CONVEY OR DISPENSE WATER FOR HUMAN CONSUMPTION SHALL COMPLY WITH AS 1853.
- ANY SUBSTITUTION MADE BY THE CONTRACTOR THAT IS DIFFERENT FROM WHAT IS SPECIFIED ON THE DRAWINGS SHALL BE CLEARLY INDICATED ON THE SUBMITTAL AS TO THAT IS BEING SUBSTITUTED.
- SHUT-OFF VALVES SHALL BE PROVIDED IN MAIN BRANCHES, RUNS TO RISERS AND WHERE INDICATED ON DRAWINGS.
- NEW NON-RESIDENTIAL WATER CLOSETS SHALL COMPLY WITH 2022 CAL-GREEN 5.303.3.1 AND SHALL NOT EXCEED 1.28 GALLONS PER FLUSH. TANK-TYPE WATER CLOSETS SHALL BE CERTIFIED TO THE PERFORMANCE CRITERIA OF THE U.S. EPA WATERSENSE SPECIFICATION FOR TANK-TYPE TOILETS.
- NEW NON-RESIDENTIAL LAVATORY FAUCETS SHALL COMPLY WITH 2022 CAL-GREEN 5.303.3.4 AND SHALL NOT EXCEED 0.5 GALLONS PER MINUTE AT 60 PSI.

**APPLICABLE CODES**

- 2022 CALIFORNIA ADMINISTRATIVE CODE (CAC), PART 1, TITLE 24 CCR
- 2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 CCR (2018 INTERNATIONAL BUILDING CODE, VOL. 1 & 2, AND 2022 CALIFORNIA AMENDMENTS)
- 2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 CCR (2017 NATIONAL ELECTRICAL CODE AND 2022 CALIFORNIA AMENDMENTS)
- 2022 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 CCR (2018 IAPMO UNIFORM MECHANICAL CODE AND 2022 CALIFORNIA AMENDMENTS)
- 2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 CCR (2018 IAPMO UNIFORM PLUMBING CODE AND 2022 CALIFORNIA AMENDMENTS)
- 2022 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 CCR
- 2022 CALIFORNIA FIRE CODE (CFC), PART 9, TITLE 24 CCR (2018 INTERNATIONAL FIRE CODE AND 2022 CALIFORNIA AMENDMENTS)
- 2022 CALIFORNIA EXISTING BUILDING CODE (CEBC), PART 10, TITLE 24 CCR (2018 INTERNATIONAL EXISTING BUILDING CODE AND 2022 CALIFORNIA AMENDMENTS)
- 2022 CALIFORNIA GREEN BUILDING STANDARDS CODE (CALGREEN), PART 11, TITLE 24 CCR
- 2022 CALIFORNIA REFERENCED STANDARDS CODE (PART 12, TITLE 24 CCR
- TITLE 19 CCR, PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS

**PIPE INSULATION SCHEDULE**

FLUID TEMPERATURE RANGE (°F)	CONDUCTIVITY Y RANGE (IN BTU-IN/HR PER SQ FT °F)	INSULATION TEMPERATURE E (°F)	PIPE SIZE (IN DIA)					
			<1	1 to < 1.5	1.5 to < 4	4 to < 8	8 AND LARGER	8 AND LARGER
105° - 140°	0.22 - 0.28	100°	R-10	R-7.5	R-12.5	R-11	R-9	R-8

NOTE: WHERE INSULATED PIPING IS EXPOSED OUTDOORS, IT SHALL BE COVERED. COVER OUTDOOR EXPOSED INSULATED PIPING WITH 0.016 INCH THICK CORRUGATED ALUMINUM JACKET. PROVIDE VALVE STEM EXTENSIONS SUCH THAT INSULATION IS NOT DAMAGED WHEN VALVE IS CYCLED

**PLUMBING LEGEND SYMBOLS**

SYMBOL	ABBREVIATIONS	DESCRIPTION
DETAIL No. SHEET No. EQUIPMENT I.D. No.		DETAIL REFERENCE
		EQUIPMENT REFERENCE
CW		COLD WATER
HW		HOT WATER
HWR		HOT WATER RETURN
- - - - -		POFF-OFF DRAIN LINE OR HIDDEN WATER LINE
S or W		SOIL or WASTE BELOW GRADE (or FLOOR)
OW		OIL WASTE BELOW GRADE (or FLOOR)
RD/OW		ROOF & OVERFLOW DRAIN ABOVE & BELOW GRADE (or FLOOR)
SD		STORM DRAIN
S or V		SOIL or WASTE ABOVE GRADE (or FLOOR)
V		PLUMBING VENT
COND		CONDENSATE DRAIN
SEC COND		SECONDARY CONDENSATE DRAIN
G		GAS LOW PRESSURE
MPG		GAS MEDIUM PRESSURE
CA		COMPRESSED AIR
CAO		COMPRESSED AIR OUTLET
BV		BALL VALVE
SOV		SHUT OFF VALVE
SOV or GC		SHUT OFF VALVE OR GAS COCK ON RISER
CV		SWING CHECK VALVE
PRV		PRESSURE REDUCING VALVE
PTR		PRESSURE-TEMPERATURE RELIEF VALVE
RPBFP		REDUCED PRESSURE BACKFLOW PREVENTER
DN		PIPE DOWN
UP		PIPE UP
DN		TEE DOWN
UP		TEE UP
		PIPE RISER & PIPE DROP (UP AND DOWN)
FOO		FLOOR CLEANOUT
WCO		WALL CLEANOUT
CO		CLEANOUT PLUG
COTG		YARD CLEANOUT or CLEANOUT TO GRADE
		CAP ON END OF PIPE
HB		HOSE BIBB WITH VACUUM BREAKER
WHA & TP		WATER HAMMER ARRESTOR & TRAP PRIMER
CS		CIRCUIT SETTER
GR		GAS REGULATOR
GC		GAS COCK (or GAS STOP)
AP		ACCESS PANEL
ABV		ABOVE
BEL		BELOW
AGA		AMERICAN GAS ASSOCIATION
CONN		CONNECTION
CONT		CONTINUATION
EXISTING		EXIST



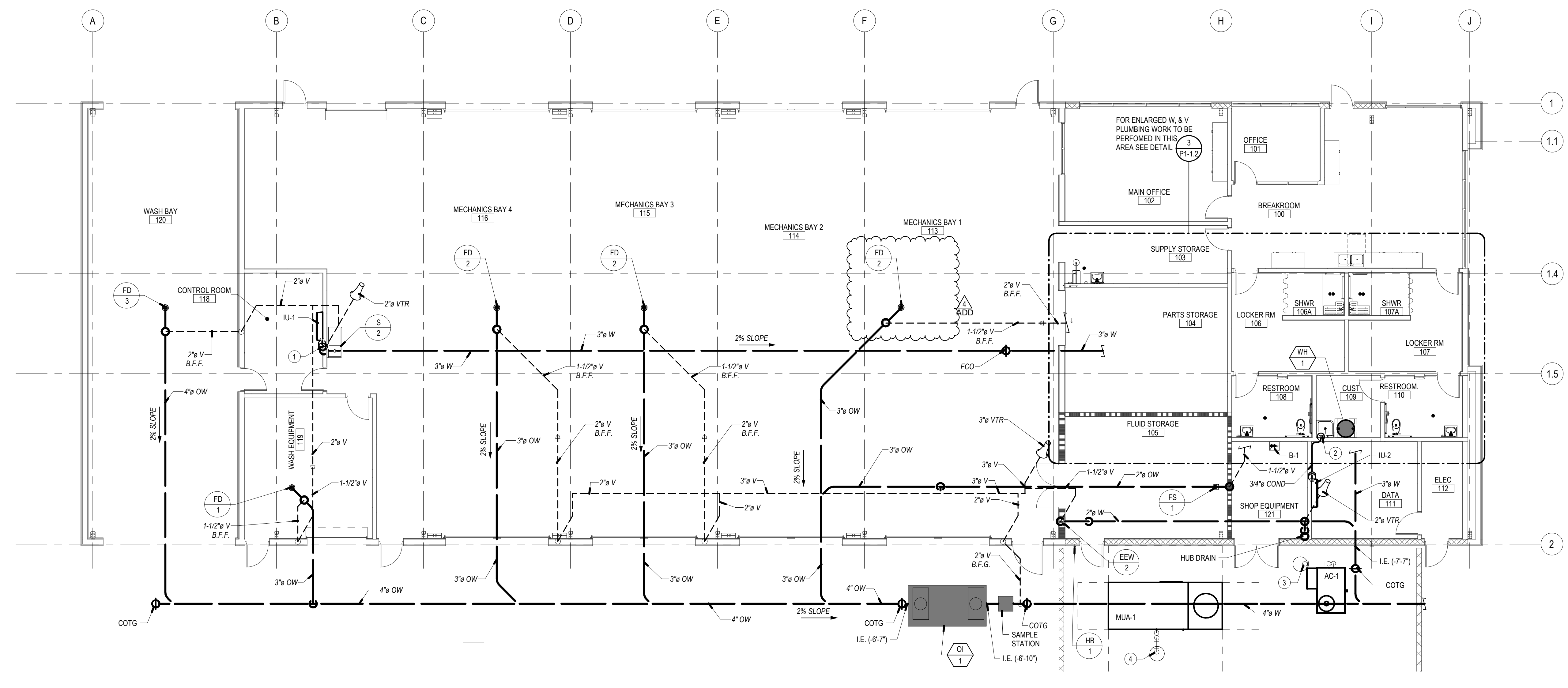


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**RUHNAU CLARKE ARCHITECTS**

**GENERAL NOTES**

- FOR LINE TYPES, SYMBOLS & ABBREVIATIONS SEE LEGEND ON P0-0.1.
- ALL VENTING SHALL HAVE A MIN. OF 10' CLEARANCE FROM ANY FORCED AIR INLET W/ A MIN. OF 3' CLEARANCE ABOVE & A MIN OF 4' CLEARANCE FROM ANY PROPERTY LINE EXCEPT A PUBLIC WAY PER CPC SEC. 906.
- COORDINATE EXACT LOCATION OF SAND OIL INTERCEPTOR WITH ARCHITECT.
- CONDENSATE LINES SHALL HAVE A MINIMUM 1% SLOPE.
- WASTE LINES SHALL HAVE A MINIMUM 2% SLOPE.
- FOR PIPE SUPPORT SEE DETAILS (1) (5) (6) (P2-0.1) (P2-0.1) (P2-0.1)
- FOR VENT THROUGH ROOF SEE DETAIL (3) (P2-0.1)
- FOR CLEAN OUT SEE DETAIL (3) (P2-0.1)
- FOR SAND-OIL INTERCEPTOR SEE DETAIL (1) (P2-02)
- FOR CONDENSATE CONNECTION SEE DETAIL (13) (14) (15) (P2-0.1) (P2-0.1) (P2-0.1)

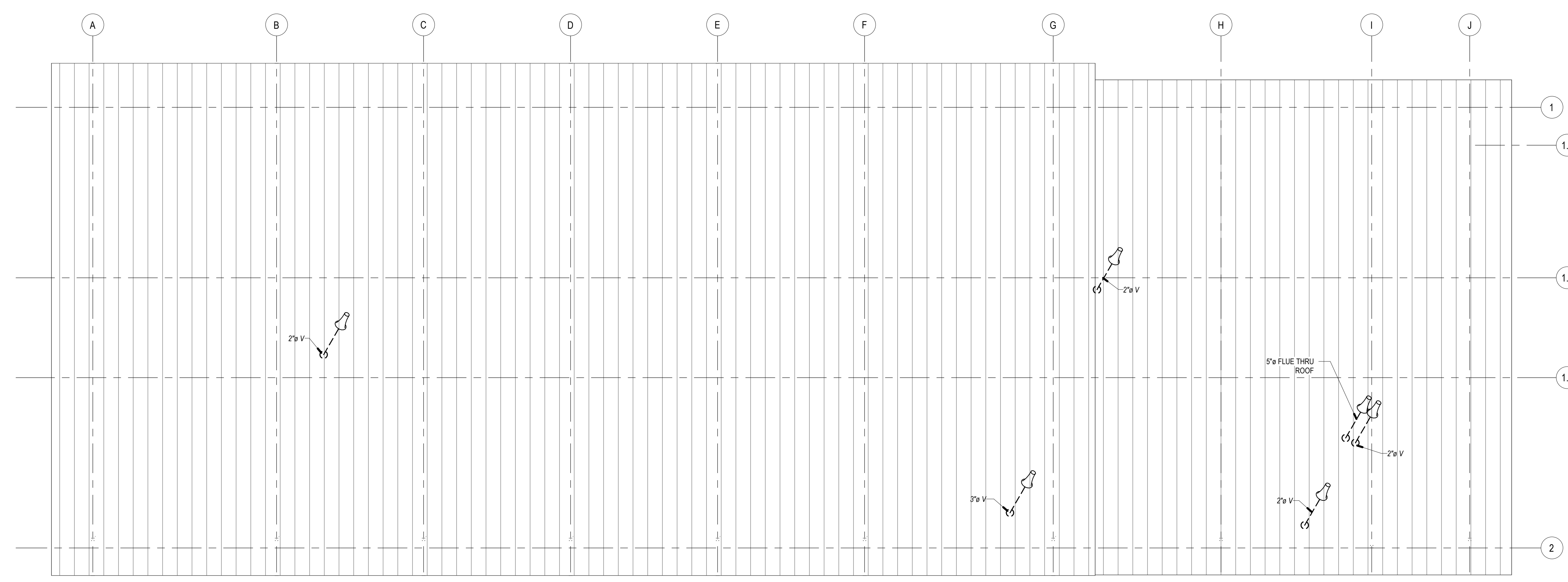


PLUMBING FLOOR PLAN - WASTE, VENT & CONDENSATE

1/8" = 1'-0" 1

**CONSTRUCTION NOTES**

- 3/4" COND DN IN WALL TO SINK TAILPIECE.
- 3/4" COND DN IN WALL TO 1" MINIMUM AIR BREAK ABOVE JANITORS SINK.
- 3/4" COND ROUTED TO DRYWELL.
- 1" COND ROUTED TO DRY WELL.



PLUMBING ROOF PLAN

1/8" = 1'-0" 2

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**PLUMBING FLOOR & ROOF PLANS**

**P1-1.1**

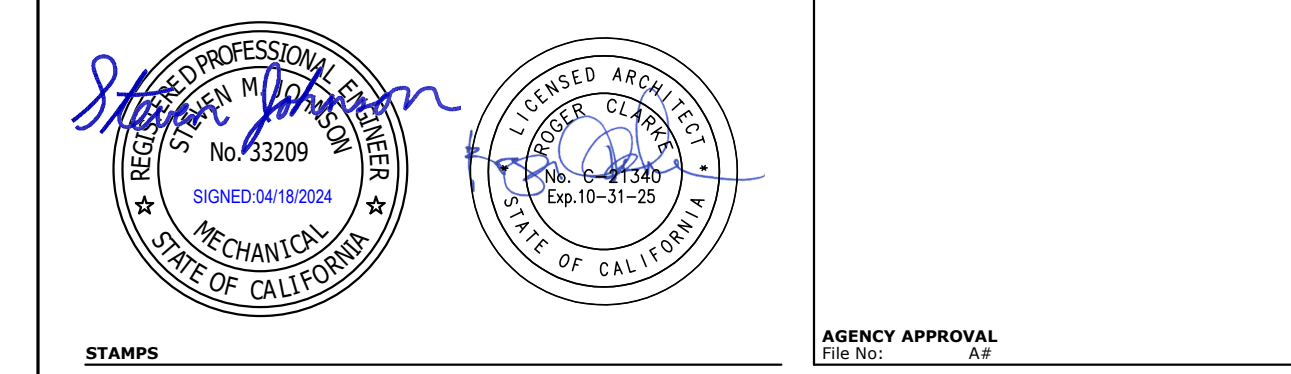
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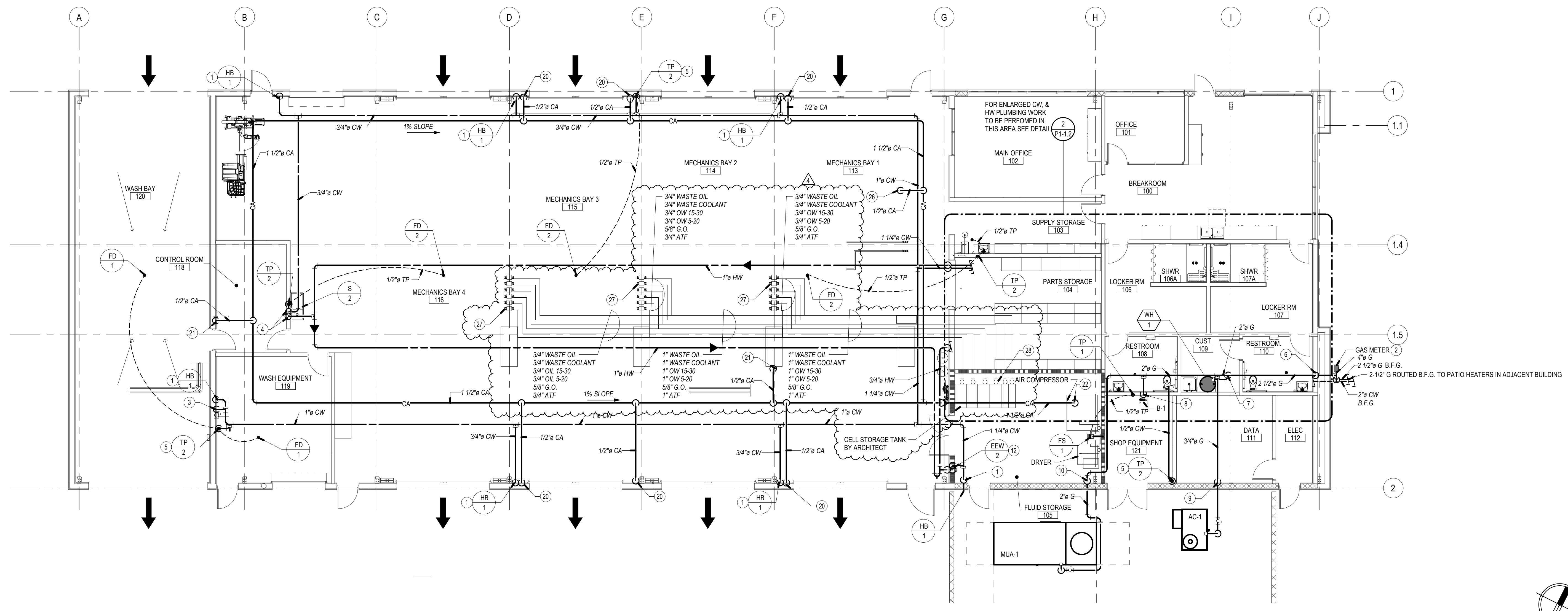
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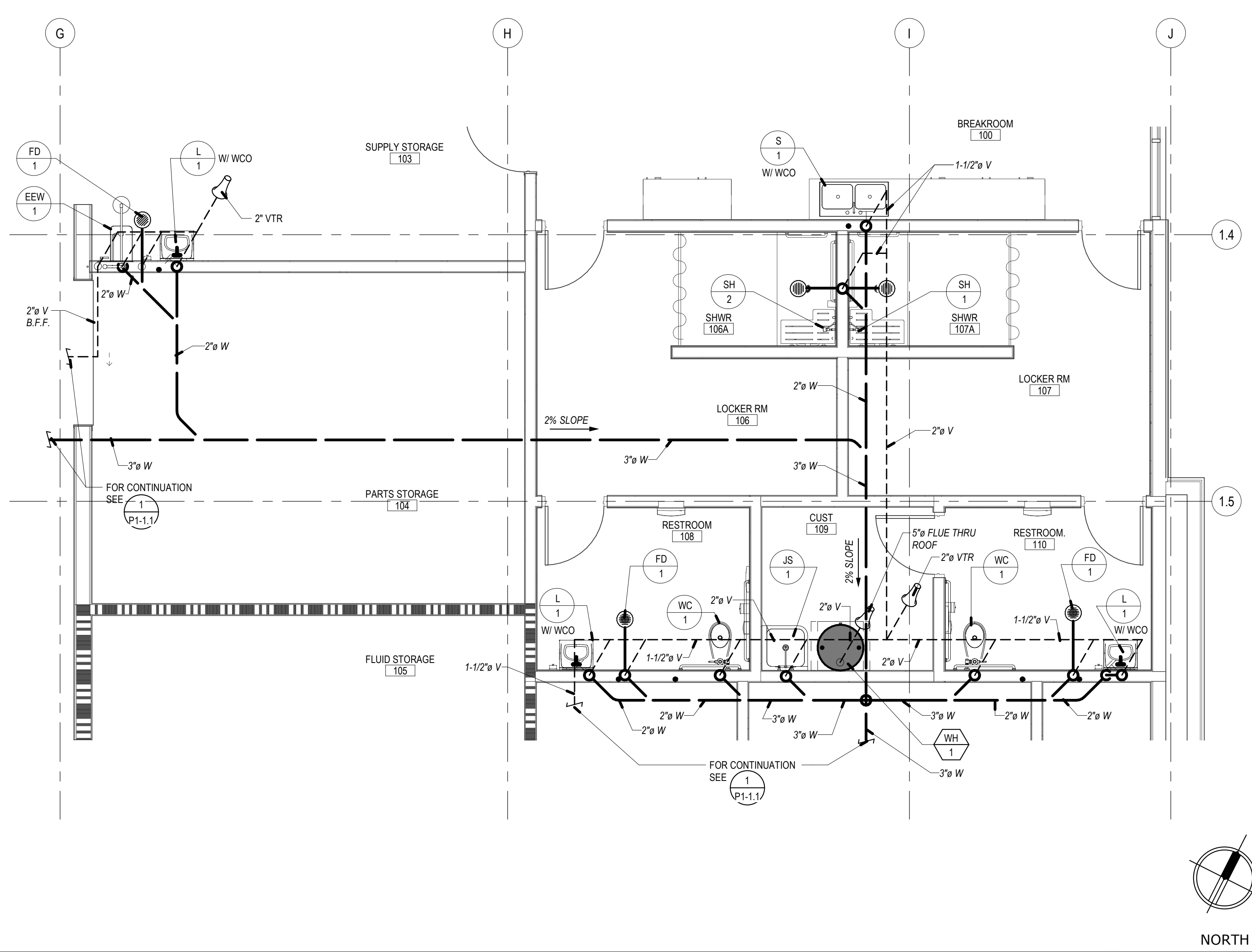
- ### GENERAL NOTES
- FOR LINE TYPES, SYMBOLS & ABBREVIATIONS SEE LEGEND ON PD-0.1.
  - ROUTE HOT WATER LOOP AS CLOSE AS POSSIBLE TO ALL FIXTURES.
  - VENTING SHALL HAVE A MIN. OF 10' CLEARANCE FROM ANY FORCED AIR INLET W/ A MIN. OF 3' CLEARANCE ABOVE & A MIN. OF 4' CLEARANCE FROM ANY PROPERTY LINE EXCEPT A PUBLIC WAY PER CPC SEC. 906.
  - NEW POTABLE WATER SYSTEMS SHALL BE DISINFECTED PRIOR TO USE, ACCORDING TO THE METHOD SET IN SECTION 609.9 OF THE CPC.
  - SHUT-OFF VALVES SHALL BE PROVIDED ON ALL MAIN BRANCHES, RUNS TOO RISERS AND WHERE SHOWN ON DRAWING. LOCATE SHUT-OFF VALVES OVER 1" BAR CEILING WHEN POSSIBLE. PROVIDE ACCESS PANELS WHEN SHUT-OFF VALVES ARE LOCATED OVER HARD LID CEILINGS.
  - ALL WASTE LINES SHALL HAVE A MINIMUM 2% SLOPE.
  - FOR PIPE SUPPORT SEE DETAILS (1) (5) (6) (P2-0.1) (P2-0.1) (P2-0.1)
  - FOR VENT THROUGH ROOF SEE DETAIL (2) (P2-0.1)
  - FOR CLEAN OUT SEE DETAIL (3) (P2-0.1)
  - FOR WATER HAMMER ARRESTOR SEE DETAIL (11) (P2-0.1)
  - FOR FIRE SPRINKLER HUB DRAIN SEE DETAIL (4) (P2-0.1)
  - FOR TRAP PRIMER CONNECTION SEE DETAIL (8) (16) (P2-0.1) (P2-0.1)
  - FOR WATER HEATER SEE DETAIL (12) (P2-0.1)
  - COMPRESSED AIR (CA) PIPES SHALL BE SLOPED AT 1% BACK TO AIR COMPRESSOR
  - COMPRESSED AIR BRANCH LINES SHALL CONNECT AT TOP OF MAIN PIPE
  - ALL WATER PIPING IN THE MAINTENANCE BAYS AND WASH EQUIPMENT ROOM SHALL HAVE HEAT TRACING AND INSULATION.
  - FOR AIR COMPRESSOR PIPING DIAGRAM SEE DETAIL (3) (P2-0.1)
  - FOR COMPRESSOR AIR QUICK DISCONNECT PIPING DIAGRAM SEE (2) (4) (P2-0.1) (P2-0.1)
  - PIPING MATERIAL AND SIZING FOR LUBE LINES ARE BASED ON INFORMATION PROVIDED BY THE EQUIPMENT CONTRACTOR/CONSULTANT.

PLUMBING FLOOR PLAN - DOMESTIC WATER, COMPRESSED AIR & GAS

1/8" = 1'-0" 1

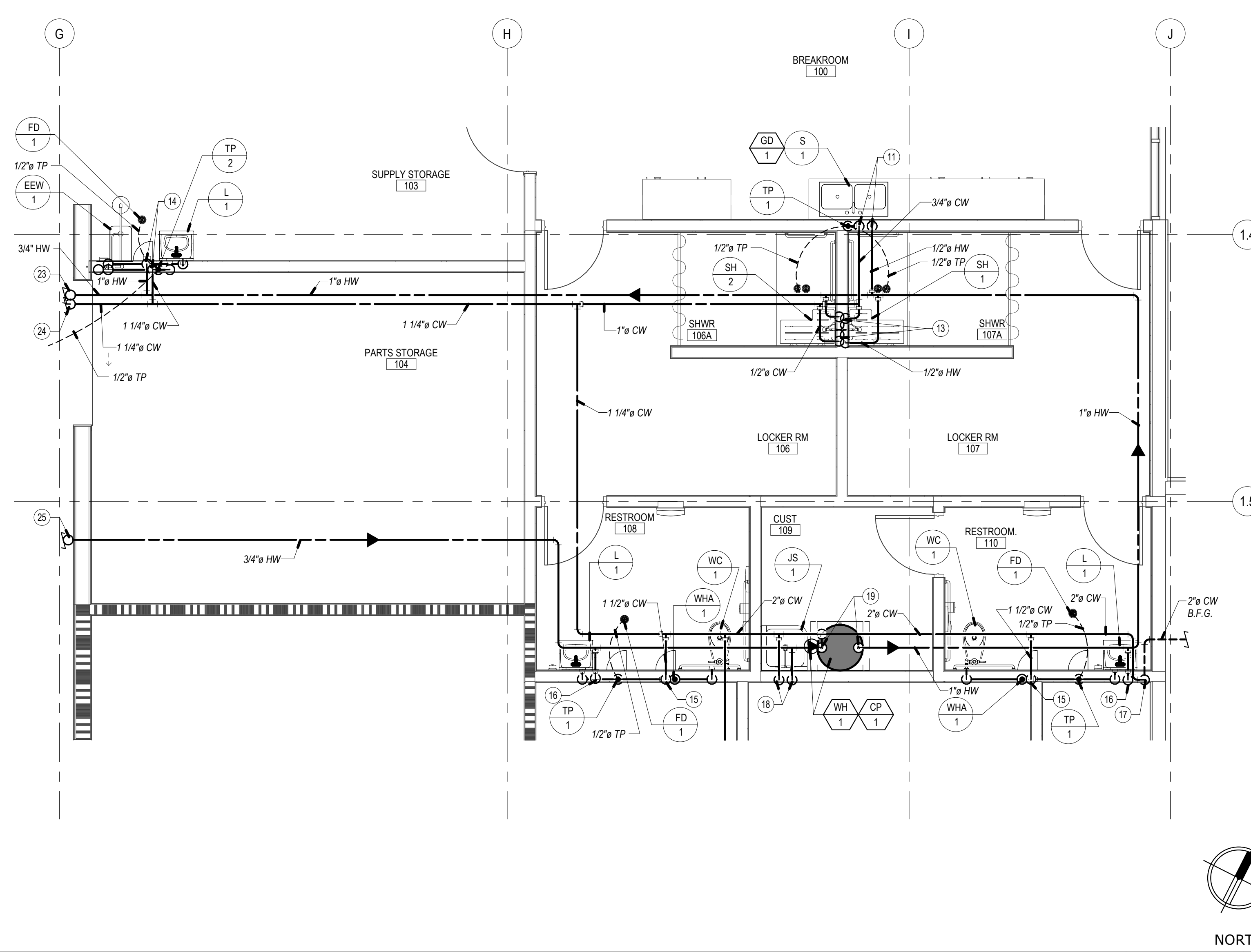
### CONSTRUCTION NOTES

- 3/4" CW DN FACE OF WALL TO HOSE BIBB.
- OWNER TO MAKE APPLICATION & PAY ALL FEES TO LOCAL GAS CO. FOR NEW GAS METER ASSEMBLY. OWNER/CONTRACTOR TO COORDINATE WITH LOCAL GAS CO. TO PROVIDE GAS PIPING FROM STREET MAIN TO METER (988.2 CFH).
- 1" CW ROUTED DN FACE OF WALL & CAPPED W/ SOV FOR WASH EQUIPMENT ITEM #13. COORDINATE LOCATION WITH EQUIPMENT PLAN SHEET A1-1.3. WASH EQUIPMENT PROVIDED BY EQUIPMENT CONTRACTOR.
- 3/4" CW & HW DN IN WALL TO FIXTURE W/ 1/2" CW TAP-OFF TO TP-2.
- 1/2" CW DN FACE OF WALL TO TP-2.
- 2-1/2" GAS (988.2 CFH) UP IN WALL TO ABOVE CEILING.
- 1" GAS (125 CFH) DN TO WATER HEATER.
- 1-1/4" GAS (220 CFH) DN IN WALL TO BOILER.
- 3/4" GAS (43.2 CFH) DN FACE OF WALL TO ABOVE GRADE.
- 2" GAS (600 CFH) DN FACE OF WALL TO ABOVE GRADE.
- 3/4" CW & 1/2" HW DN IN WALL TO FIXTURE AND TRAP PRIMER.
- 1-1/4" CW & 1" HW DN IN WALL TO EMERGENCY EYE WASH TMV.
- 1/2" CW & HW DN IN WALL TO SHOWER VALVE.
- 1-1/4" CW & 1" HW DN IN WALL TO FULL SIZE HEADER.
- 1-1/2" CW DN IN WALL TO FULL SIZE HEADER.
- 1/2" HW DN IN WALL TO FIXTURE.
- 2" CW UP IN WALL TO ABOVE CEILING.
- 3/4" CW & HW DN IN WALL TO FIXTURE.
- 1" CW, 1" HW & 3/4" HWR TO WATER HEATER.
- 1/2" CA DN FACE OF WALL TO QUICK DISCONNECT LOCATED 5' A.F.F. CONFIRM W/ ARCHITECT FOR FINAL MOUNTING HEIGHT. PIPE ROUTING AND SIZING BETWEEN COMPRESSOR AND HOSE REELS TO BE CONFIRMED BY EQUIPMENT CONTRACTOR.
- 1/2" CA DN FACE OF WALL TO CONTROL CONSOLE ITEM #2. COORDINATE LOCATION WITH EQUIPMENT PLAN SHEET A1-1.3. CONTROL CONSOLE PROVIDED BY EQUIPMENT CONTRACTOR. SUPPORT OF CA PIPING BETWEEN COMPRESSOR AND HOSE REELS TO BE COORDINATED W/ EQUIPMENT CONTRACTOR.
- 1-1/2" CA UP FROM COMPRESSOR. ITEM #20. COORDINATE LOCATION WITH EQUIPMENT PLAN SHEET A1-1.3. AIR COMPRESSOR PROVIDED BY EQUIPMENT CONTRACTOR.
- 3/4" HW UP FACE OF WALL TO ABOVE.
- 1-1/4" CW UP FACE OF WALL TO ABOVE.
- 3/4" HW DN FACE OF WALL FROM ABOVE.
- 1/2" CA DN TO LIFT CONTROL CONSOLE ITEM #8. COORDINATE LOCATION WITH EQUIPMENT PLAN SHEET A1-1.3. LIFT CONTROL CONSOLE PROVIDED BY EQUIPMENT CONTRACTOR.
- HOSE REEL LOCATION PER EQUIPMENT PLAN SHEET A1-1.3. HOSE REELS PROVIDED BY EQUIPMENT CONTRACTOR. SUPPORT OF LUBE PIPING BETWEEN STORAGE TANK AND HOSE REELS TO BE COORDINATED WITH EQUIPMENT CONTRACTOR.
- 1" WASTE OIL, 1" WASTE COOLANT, 1" CW 15-30, 1" CW 5-20, 5/8" G.O., 1" ATF DN FACE OF WALL TO STORAGE TANK PROVIDED BY EQUIPMENT CONTRACTOR. SUPPORT OF LUBE PIPING BETWEEN STORAGE TANK AND HOSE REELS TO BE COORDINATED WITH EQUIPMENT CONTRACTOR.



ENLARGED PLUMBING WASTE AND VENT

1/4" = 1'-0" 3



ENLARGED PLUMBING DOMESTIC WATER

1/4" = 1'-0" 2

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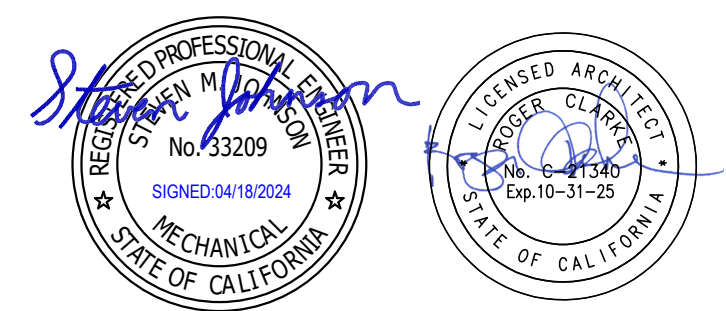
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PLUMBING FLOOR PLAN & ENLARGED PLANS P1-1.2





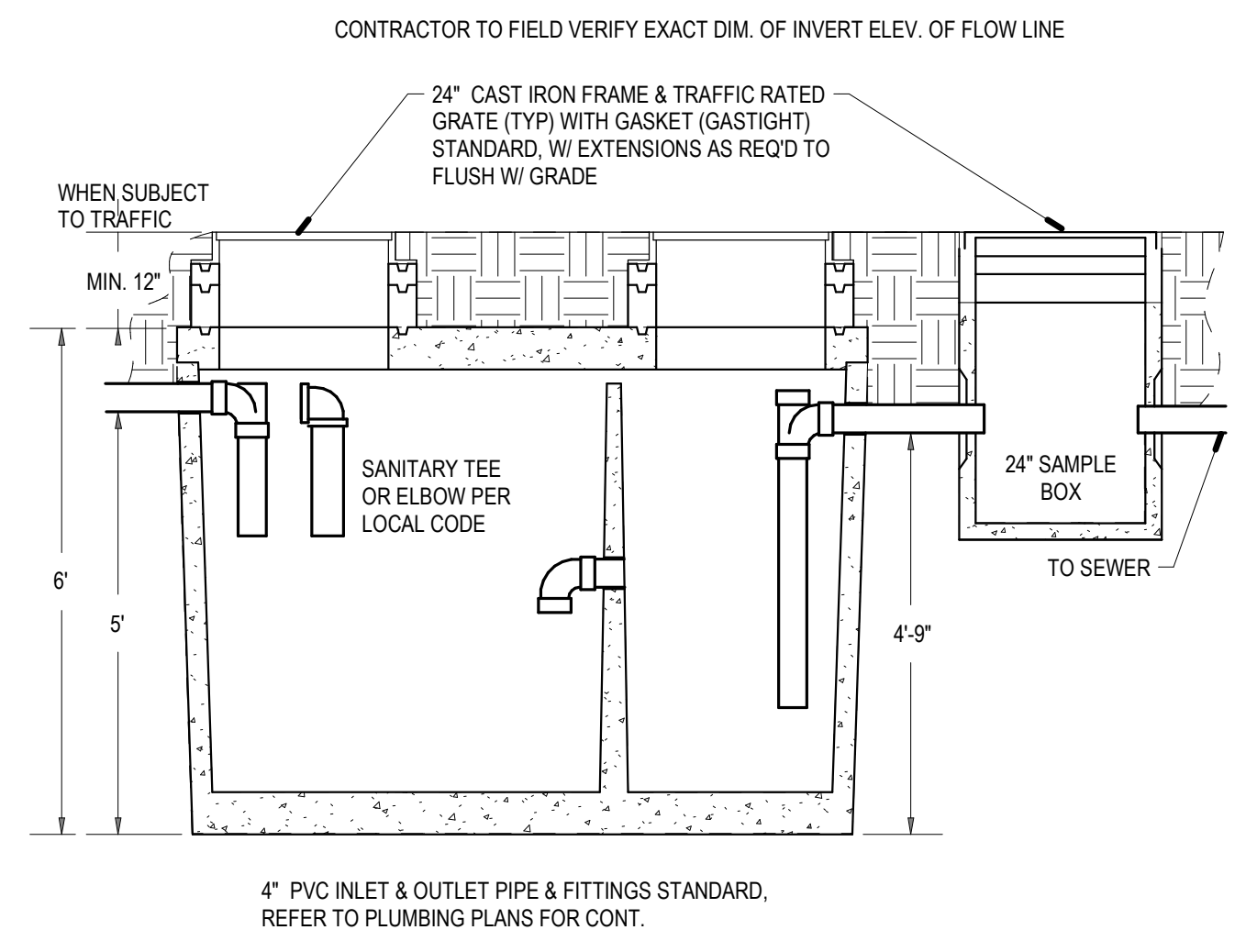
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AND ENERGY  
CONSULTANTS

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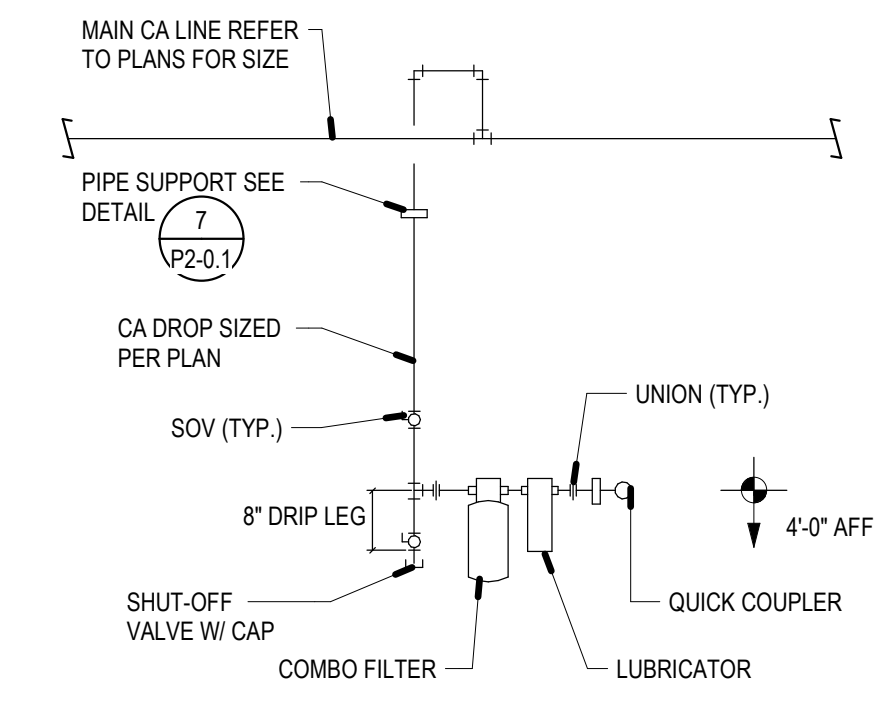
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CONSULTANT BRANDING

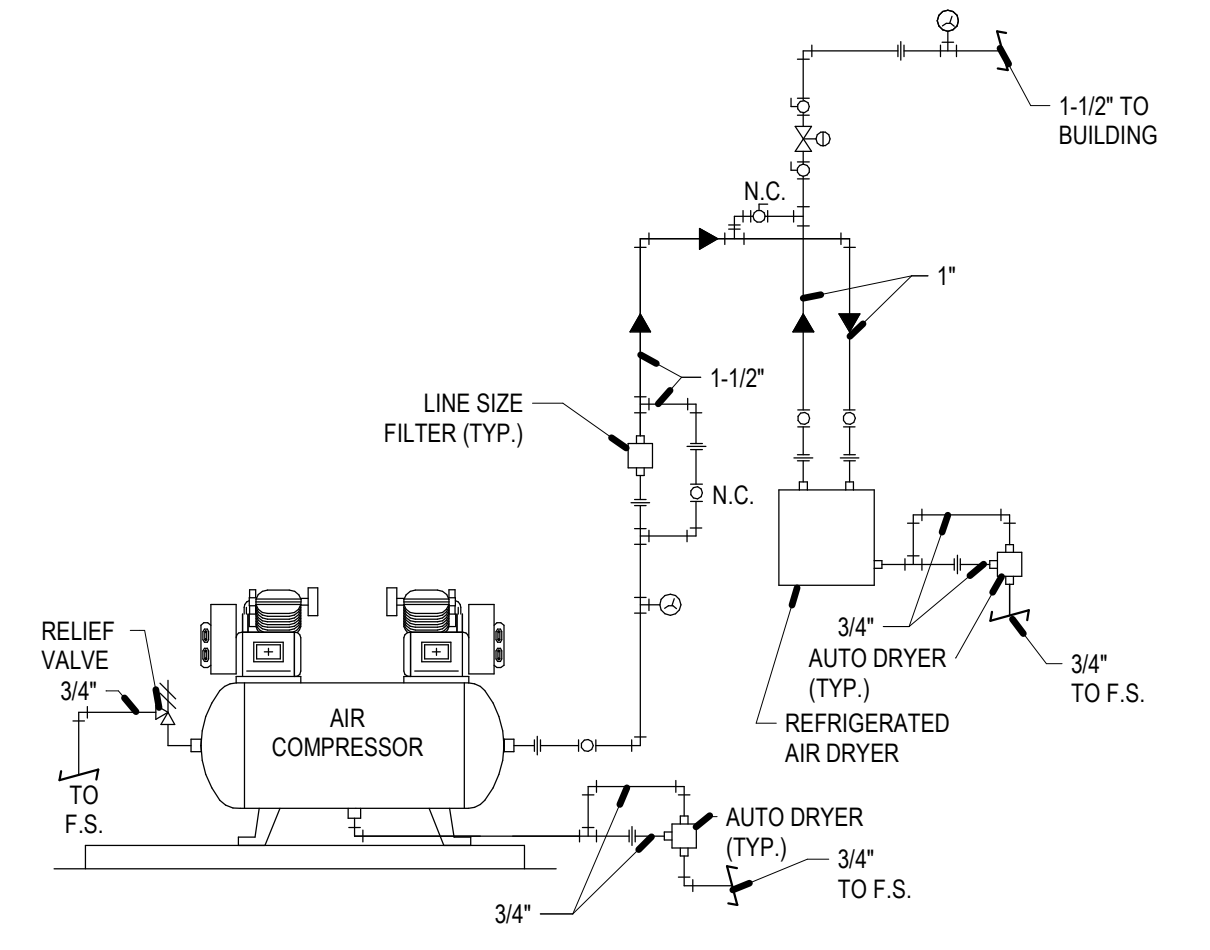
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ARCHITECTS



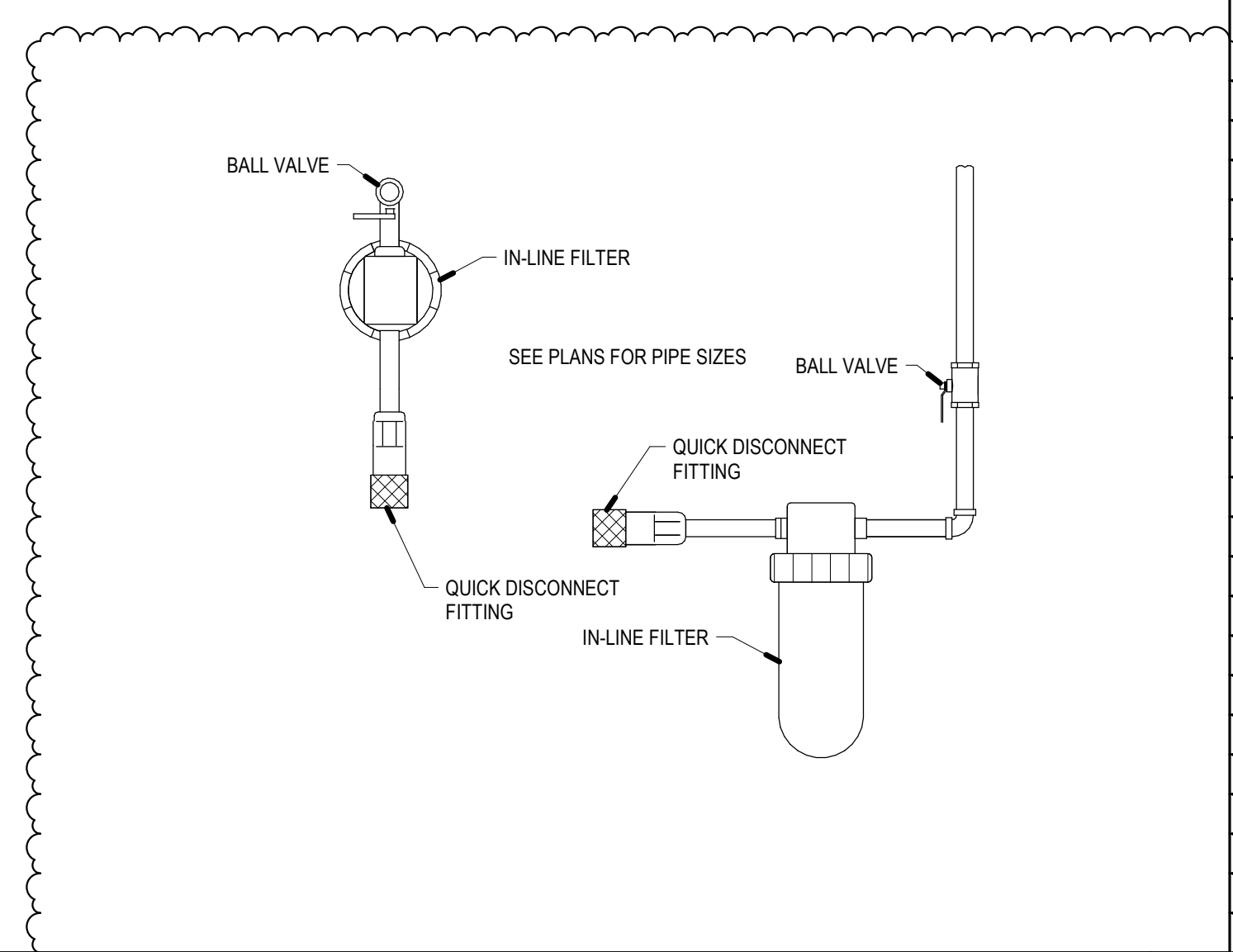
SAND-OIL INTERCEPTOR 1



COMPRESSED AIR PIPING DIAGRAM 2



COMPRESSED AIR PIPING DIAGRAM 3



COMPRESSED AIR CONNECTION 4

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**MOUNT TRANSIT MAINTENANCE FACILITY**

PLUMBING DETAILS

**P2.02**

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MOUNT TRANSIT MAINTENANCE FACILITY



GENERAL NOTES

- 1. THESE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO COVER A COMPLETE INSTALLATION OF SYSTEMS. THE OMISSION OR EXPRESSED REFERENCE TO ANY ITEM OF LABOR OR MATERIALS REQUIRED FOR THE PROPER EXECUTION OF THE WORK IN ACCORDANCE WITH PRESENT PRACTICE OF THE TRADE SHALL NOT RELIEVE THE CONTRACTOR FROM PROVIDING SUCH ADDITIONAL MATERIALS AND MATERIALS.
2. THIS PROJECT IS A COMPLETE NEW BUILDING CONSTRUCTION. REFER TO THE ARCHITECTURAL DRAWINGS FOR NOTES AND REQUIREMENT NOT SHOWN ON THE ELECTRICAL DRAWINGS. IF THERE ARE OMISSIONS OR CONFLICTS BETWEEN THE ELECTRICAL DOCUMENTS AND THE DOCUMENTS OF OTHER TRADES, CLARIFY THESE POINTS WITH THE ARCHITECT BEFORE SUBMITTING A BID. NO EXTRA PAYMENT WILL BE ALLOWED FOR FAILURE TO OBTAIN THIS INFORMATION.
3. THESE PLANS, SPECIFICATIONS, AND ALL MATERIALS SHALL BE IN FULL ACCORDANCE WITH ALL LEGAL AND INDUSTRY REQUIREMENTS, AND STANDARDS INCLUDING WITHOUT LIMITATION TO THE FOLLOWING:
A. CALIFORNIA CODE OF REGULATIONS TITLE 24, PARTS 1 AND 2 (CALIFORNIA BUILDING CODE), 2022 EDITION.
B. CALIFORNIA CODE OF REGULATIONS TITLE 24, PART 3 (CALIFORNIA ELECTRICAL CODE), 2022 EDITION.
C. CALIFORNIA CODE OF REGULATIONS TITLE 24, PART 6 (CALIFORNIA ENERGY CODE), 2022 EDITION.
D. CALIFORNIA CODE OF REGULATIONS TITLE 24, PART 9 (CALIFORNIA FIRE CODE), 2022 EDITION.
E. OTHER REGULATING AGENCIES WHICH MAY HAVE AUTHORITY OVER ANY PORTION OF THE WORK, INCLUDING THE STATE OF CALIFORNIA DIVISION OF INDUSTRIAL SAFETY, AND THOSE CODES AND STANDARDS LISTED IN THESE NOTES AND SPECIFICATIONS.
F. THE ELECTRICAL SYSTEMS FUNCTIONALITY STANDARDS SET FORTH IN TITLE 7 OF THE CALIFORNIA CIVIL CODE THE "RIGHT TO REPAIR".
G. THE MANUFACTURER'S REQUIREMENTS OR RECOMMENDATIONS FOR ANY INCORPORATED PRODUCTS.
H. THE MOST CURRENT APPROVED ISSUES OF ANY NOTED SPECIFICATIONS, CODES AND STANDARDS, INCLUDING SUPPLEMENTS, UNLESS NOTED OTHERWISE.

- 4. IN USING THE PLANS FOR BIDDING OR CONSTRUCTION PURPOSES, THE CONTRACTOR IS REQUIRED TO REVIEW ALL OF THE PROJECT'S CONSTRUCTION DOCUMENTS AS A WHOLE IN ORDER TO IDENTIFY ALL REQUIREMENTS THAT DIRECTLY OR INDIRECTLY AFFECT ITS PORTION OF THE ELECTRICAL WORK, EVEN REQUIREMENTS LOCATED IN SECTIONS DESIGNATED AS APPLICABLE TO OTHER TRADES. IN CASE OF CONFLICTS, THE CONTRACTOR SHALL EITHER OBTAIN DIRECTION FROM AN APPROPRIATE OWNER REPRESENTATIVE OR OTHERWISE APPLY THE MORE STRINGENT REQUIREMENT.
5. THE PLANS REPRESENT ONLY THE FINISHED ELECTRICAL, FIRE ALARM, AND LOW VOLTAGE SYSTEMS, AND THEY ARE NOT INTENDED TO INDICATE OR REQUIRE ANY CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES OR PROCEDURES.
6. WHEN INTERPRETING THE PLANS, THE FOLLOWING GENERAL RULES APPLY:
A. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALED DRAWINGS.
B. SCALED DIMENSIONS AND GRAPHICALLY SHOWN LOCATIONS ARE TO BE CONSIDERED ONLY APPROXIMATE. FIELD VERIFY DIMENSIONS PRIOR TO BID.
7. IN IMPLEMENTING THE PLANS, THE FOLLOWING GENERAL RULES APPLY:
A. BECAUSE THE PLANS ARE INTENDED TO SET FORTH THE REQUIREMENTS FOR CONSTRUCTION IN ONLY AN INDUSTRY-STANDARD LEVEL OF QUALITY AND DETAIL, AND THEREFORE ARE INTENDED TO BE SUPPLEMENTED BY APPROPRIATE REQUESTS FOR CLARIFICATION AND INFORMATION, ERRORS AND OMISSIONS ARE TO BE EXPECTED AND ANTICIPATED, AND THE CONTRACTOR IS REQUIRED TO CAREFULLY REVIEW THE PLANS FOR ERRORS AND OMISSIONS AND TO BRING THESE ERRORS AND OMISSIONS TO THE ATTENTION OF AN APPROPRIATE OWNER REPRESENTATIVE IN A TIMELY MANNER AN ASSUMES THE RISK OF THE CONSEQUENCES OF FAILING TO DO SO BEFORE BIDDING OR OTHERWISE PROCEEDING.
B. THE CONTRACTOR SHALL REVIEW AND VERIFY ALL DIMENSIONS PRIOR TO STARTING CONSTRUCTION, AND NOTIFY THE ARCHITECT IMMEDIATELY OF ANY DISCREPANCIES OR INCONSISTENCIES.
8. SUBMITTALS WILL BE REVIEWED BY THE ELECTRICAL ENGINEER, IF AT ALL, ONLY PURSUANT TO THE INDUSTRY STANDARD PROTOCOL SET FORTH IN SECTION 010500-1.01, AND IN NO EVENT WILL THE SUBMITTAL REVIEW PROCESS RELIEVE OR LESSEN THE SUBMITTING CONTRACTOR'S RESPONSIBILITY FOR AN INAPPROPRIATE SUBMITTAL.
9. IN NO EVENT WILL ANY SITE VISITS BY THE ELECTRICAL ENGINEER CONCERN CONSTRUCTION MEANS AND METHODS OR CONSTRUCTION SAFETY, AND ALL SUCH MATTERS SHALL REMAIN THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
10. COPIES OF THE PLANS PROVIDED IN ANY ELECTRONIC FORM ARE SUBJECT TO THE SAME NON-FUSIONS AS THE INSTRUMENTS OF SERVICE PREPARED BY OR ON BEHALF OF ELECTRICAL ENGINEER FOR THE PROJECT, INCLUDING WITHOUT LIMITATION THE ENGINEER'S COMMON LAW, STATUTORY OR OTHER RESERVED RIGHTS, INCLUDING COPYRIGHTS. A RECIPIENT IS GRANTED A TRANSFERABLE NON-EXCLUSIVE LICENSE TO RE-USE THE PLANS SOLELY FOR PROJECT PURPOSES, AND NO RECIPIENT IS AUTHORIZED TO USE OR TO ALLOW THE USE OF ALL OR ANY PORTION OF THESE PLANS FOR ANY OTHER PURPOSE, AND ANY USE FOR ANY OTHER PURPOSE WOULD CONSTITUTE ACTUABLE PLAGIARISM. ELECTRICAL ENGINEER PROVIDES DOCUMENTS IN AN ELECTRONIC FORM ONLY IN ITS STANDARD FORMATS AND CONVENTIONS AND WITH NO GUARANTEE OF COMPATIBILITY WITH ANY RECIPIENT'S SOFTWARE OR HARDWARE, AND ANY USE WITH OR CONVERSION TO OTHER FORMATS OR CONVENTIONS, OR THE USE WITH ANY PARTICULAR SOFTWARE OR HARDWARE, IS AT THE RECIPIENT'S SOLE RISK.

- 11. REFER TO THE DRAWINGS AND SHOP DRAWINGS OF OTHER TRADES FOR ADDITIONAL DETAILS WHICH AFFECT THE PROPER INSTALLATION OF THIS.
12. BEFORE SUBMITTING A BID, THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH ALL FEATURES OF THE EXISTING BUILDINGS AND SITE, AND ALL DRAWINGS WHICH MAY AFFECT THE EXECUTION OF THE WORK. NO EXTRA PAYMENT WILL BE ALLOWED FOR FAILURE TO OBTAIN THIS INFORMATION.
13. PROTECT ALL WORK, MATERIALS AND EQUIPMENT FROM DAMAGE FROM ANY CAUSE WHATSOEVER AND PROVIDE ADEQUATE AND PROPER STORAGE FACILITIES DURING THE PROGRESS OF THE WORK. PROVIDE FOR THE SAFETY AND GOOD CONDITION OF ALL THE WORK UNTIL FINAL ACCEPTANCE OF THE WORK BY THE OWNER AND REPLACE ALL DAMAGED OR DEFECTIVE WORK, MATERIALS AND EQUIPMENT BEFORE REQUESTING FINAL ACCEPTANCE.
14. THE DRAWINGS INDICATE IN A DIAGRAMMATIC MANNER, THE DESIRED LOCATIONS OF ARRANGEMENT OF THE COMPONENTS OF ELECTRICAL WORK, DETERMINE EXACT CONDUIT ROUTING, CONDUIT BEING AUXILIARY JUNCTION BOXES, SUPPORTS, AND UNDERPINED CONSTRUCTION DETAILS AS A JOB CONDITION TO BE INSTALLED IN ACCORDANCE WITH THE APPLICABLE CODE REQUIREMENTS. PROPER JUDGMENT MUST BE EXERCISED IN EXECUTING THE WORK SO AS TO SECURE THE BEST POSSIBLE INSTALLATION IN THE AVAILABLE SPACE, AND TO OVERCOME LOGICAL DIFFICULTIES DUE TO SPACE LIMITATIONS OR INTERFERENCE OF CONDITIONS ENCOUNTERED.
15. IN THE EVENT CHANGES IN THE INDICATED LOCATIONS OR ARRANGEMENTS ARE NECESSARY, DUE TO DEVELOPED CONDITIONS IN THE BUILDING CONSTRUCTION OR REARRANGEMENT OF EQUIPMENT, SUCH CHANGES SHALL BE MADE WITHOUT COST PROVIDING THE CHANGE IS ORDERED BEFORE THE CONDUIT RUNS, ETC., AND WORK DIRECTLY CONNECTED TO SAME IS INSTALLED AND NO EXTRA MATERIALS ARE REQUIRED.
16. THE DRAWINGS INDICATE APPROXIMATE LOCATIONS OF EXISTING CONDUITS. THE EXACT ROUTING SHALL BE VERIFIED IN FIELD AND LENGTH OF CONDUCTORS SHALL BE ADJUSTED TO THE LENGTH REQUIRED.
17. PERFORM CUTTING AND PATCHING ON THE CONSTRUCTION WORK WHICH MAY BE REQUIRED FOR THE PROPER INSTALLATION OF THE ELECTRICAL WORK. EXISTING PANELBOARDS, THE SAME MATERIAL, WORKMANSHIP AND FINISH AS SPECIFIED AND ACCURATELY MATCH SURROUNDING WORK TO SATISFACTION OF THE ARCHITECT.
18. PROVIDE ALL EQUIPMENT WITH ENCLOSURES LISTED OR LABELED FOR USE AND LOCATION WHERE SUCH EQUIPMENT IS INSTALLED.
19. PROVIDE UL LISTED FIRE STOP FOR ALL PENETRATIONS THROUGH FIRE RATED WALLS AND CEILINGS TO MAINTAIN ALL FIRE RATINGS. THE FIRE STOP MATERIALS SHALL BE RE-ENTERABLE AND REUSABLE.
20. PROVIDE COORDINATED SHOP DRAWINGS, INDICATING DIMENSIONED LOCATIONS AND SIZES OF ALL CORE DRILLS FOR REVIEW AND APPROVAL. ALL CORE DRILL LOCATIONS SHALL BE VERIFIED AND APPROVED WITH OWNERS REPRESENTATIVE, STRUCTURAL AND ARCHITECT PRIOR TO CORE DRILL. UTILIZE X-RAY EQUIPMENT TO LOCATE AND VERIFY EXISTING STRUCTURAL ELEMENTS WITHIN SLAB.

- 21. WHERE EXISTING CIRCUITS ARE SHOWN ON PLANS, THE INFORMATION WAS OBTAINED FROM RECORD DRAWINGS. WHERE NEW CIRCUITS ARE SHOWN ON EXISTING PANELBOARDS, THE CONTRACTOR SHALL VERIFY THAT THE INDICATED CIRCUITS ARE AVAILABLE IN THE EXISTING PANELBOARDS(S), THE CONTRACTOR SHALL RELOCATE SUCH CIRCUITS TO AN AVAILABLE SPACE IN THE EXISTING PANELBOARDS(S), AND AS BUILT PLANS. IF NO CIRCUIT SPACE IS AVAILABLE IN THE EXISTING PANELBOARDS(S), THE CONTRACTOR SHALL REPORT THE DISCREPANCY TO THE ARCHITECT.
22. GROUNDING SHALL BE EXECUTED IN ACCORDANCE WITH ALL APPLICABLE CODES AND REGULATIONS, BOTH OF THE STATE OF CALIFORNIA AND LOCAL AUTHORITIES HAVING JURISDICTION.
23. PROVIDE GROUND WIRE IN EACH CONDUIT CONTAINING CIRCUITS FEEDING RECEPTACLES. THE CONDUIT SHALL NOT BE PERMITTED TO SERVE AS THE ONLY ELECTRICAL GROUND RETURN PATH.
24. WHERE CIRCUIT CHANGES OR ADDITIONS OCCUR IN EXISTING PANELBOARDS, UPDATE PANEL DIRECTORY CARDS WITH NEW TYPEWRITTEN CARDS INDICATING DESCRIPTION OF ALL CIRCUITS.
25. PROVIDE HANDLE TIES AT CIRCUIT BREAKERS TO SIMULTANEOUSLY DISCONNECT ALL UNGROUNDED CONDUCTORS OF MULTI-WIRE BRANCH CIRCUITS WITH A SHARED NEUTRAL.

- 26. UNLESS NOTED OTHERWISE ALL 120 VOLT HOMERUNS OVER 100 FEET SHALL BE #10 AWG MINIMUM. ADJUST CONDUIT SIZE ACCORDINGLY.
27. UNLESS NOTED OTHERWISE ALL 277 VOLT HOMERUNS OVER 200 FEET SHALL BE #10 AWG MINIMUM. OVER 300 FEET SHALL BE #8 AWG MINIMUM. ADJUST CONDUIT SIZE ACCORDINGLY.
28. CONDUIT FOR DATA/VOICE CABLEING SHALL COMPLY WITH THE FOLLOWING ADDITIONAL REQUIREMENTS:
A. INSIDE BEND RADIUS SHALL BE AT LEAST 10 TIMES ITS INTERNAL DIAMETER.
B. PROVIDE PULL BOXES WHENEVER CONDUIT LENGTH EXCEEDS 150 FEET AND WHEN COMBINED BENDS ARE GREATER THAN 180 DEGREES.
C. ALL CONDUIT SHALL BE PROVIDED WITH INSULATED BUSHINGS.
D. MAINTAIN A MINIMUM CLEARANCE OF 4 FEET FROM MOTORS AND TRANSFORMERS.
E. MAINTAIN A MINIMUM CLEARANCE OF 12 INCHES FROM POWER CIRCUITS.
F. MAINTAIN A MINIMUM CLEARANCE OF 12 INCHES FROM LIGHT FIXTURES.
29. COORDINATE MOUNTING HEIGHTS OF RECEPTACLES, SWITCHES, AV DEVICES, SECURITY DEVICES, ETC. MOUNTED ON COMMON WALLS SO THAT ALL OUTLETS ARE MOUNTED TO ALIGN HORIZONTALLY.
30. NOTIFY THE ARCHITECT IN WRITING WHEN INSTALLATION IS COMPLETE AND THAT A FINAL INSPECTION OF THIS WORK CAN BE PERFORMED. IN THE EVENT DEFECTS OR DEFICIENCIES ARE FOUND DURING THIS FINAL INSPECTION, THEY SHALL BE CORRECTED TO THE SATISFACTION OF THE ARCHITECT BEFORE FINAL ACCEPTANCE CAN BE ISSUED.
31. SHOULD, AT ANY GIVEN TIME DURING CONSTRUCTION, THE FIRE ALARM SYSTEM IS INOPERABLE, THE CONTRACTOR SHALL PROVIDE A FIRE WATCH DURING THE ENTIRE DOWNTIME. INCLUDE ALL COSTS IN BID TO COMPLY WITH THIS PROVISION.

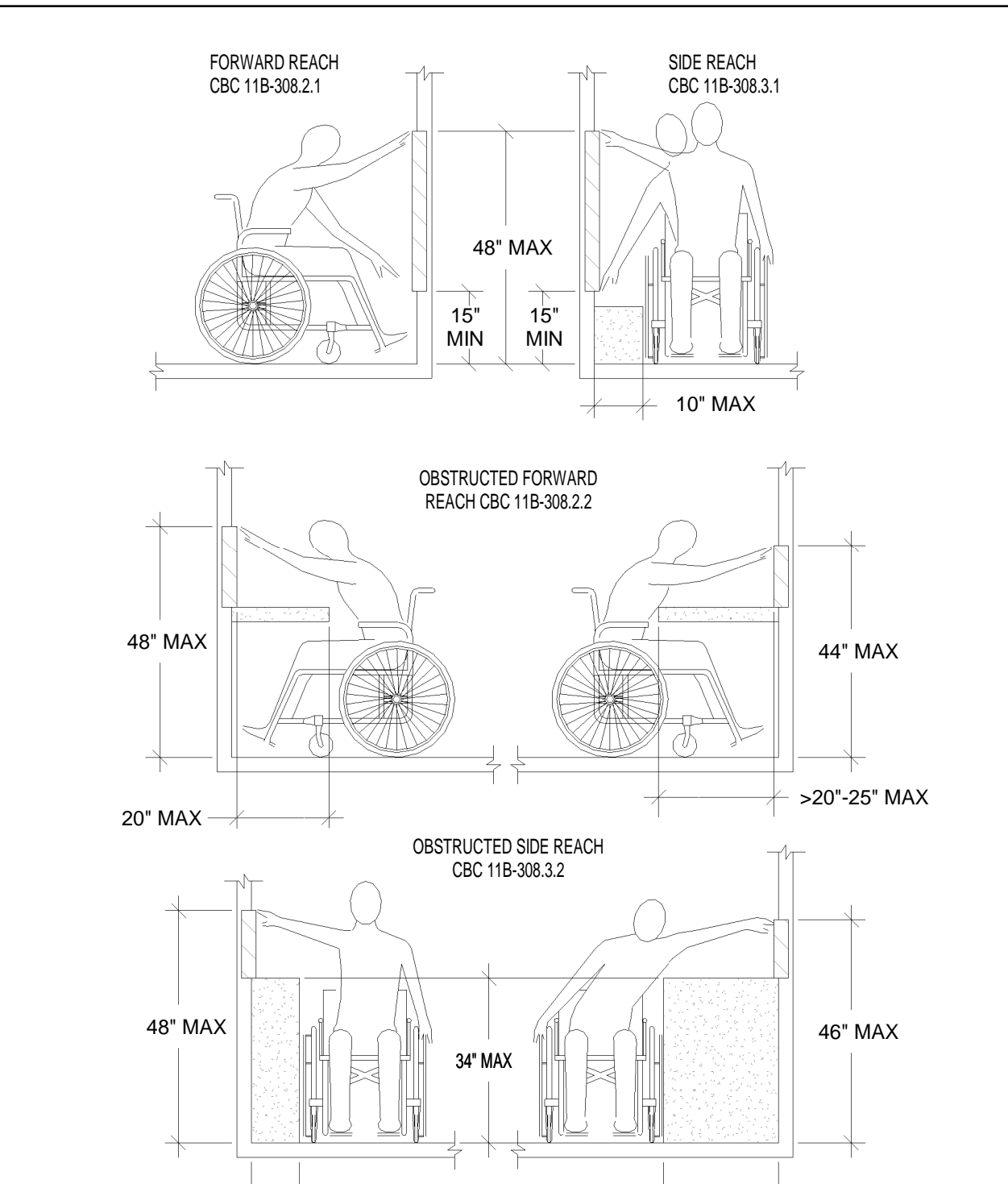
FIRE ALARM SYSTEM SYMBOLS

- 1. FIRE ALARM SMOKE DETECTOR ON FLUSH CEILING OUTLET BOX.
2. HEAT DETECTOR ON SURFACE OUTLET BOX LOCATED IN ATTIC SPACE.
3. FIRE ALARM VISUAL ON FLUSH WALL OUTLET BOX AT +80".
4. FIRE ALARM VISUAL STROBE ON FLUSH CEILING MOUNTED OUTLET BOX.
5. FIRE ALARM HORN/STROBE ON FLUSH CEILING MOUNTED OUTLET BOX.
6. FIRE ALARM CONTROL PANEL AND/OR EXPANDER PANEL SURFACE MOUNTED ON WALL +72" A.F.F. TO TOP OF CABINET.
7. FIRE ALARM PULL STATION ON FLUSH WALL MOUNTED OUTLET BOX AT +48".
8. FIRE ALARM EXTERIOR WEATHERPROOF HORN ON FLUSH WALL MOUNTED OUTLET BOX AT +90".

FIRE ALARM SYSTEM GENERAL NOTE

- 1. THE FIRE ALARM SYSTEM IS NOT BEING PERMITTED VIA THIS BUILDING PERMIT AND IS DEFERRED SUBMITTAL. ANY NOTES REFERENCING A FIRE ALARM AND DEVICES ARE NOT BEING REVIEWED OR PERMITTED AND ARE SOLELY AS REFERENCE.

ELECTRICAL MOUNTING REACH RANGES



SYMBOL LIST

Table listing electrical symbols and their descriptions. Includes categories like Lighting Fixture, Intronusion Detection System, Telephone System, Public Address System, Computer/Data Processing System, Audio/Visual System, Microphone System, Autonomous Public Address System, Priority Page Sensor Kit, Ceiling Mount Long Throw Projector, Ceiling Mount Speaker and Grille, Exterior Speaker and Vandalproof Grille, Lighting Control System, Standard Size Combination IP/Spaker Unit, IP Clock on Flush in Wall, Intronusion Detection System Motion Sensor, Intronusion Detection System Motion Sensor, Receptacle Controller, Room Lighting Controller, Room Lighting Controller in Accessible Ceiling Space, Wireless Mic in Receiver, Standard Size Combination IP/Spaker Unit, Double Data Drop Location, Computer/Data Outlet, Computer Outlet with Single Computer Connector, Computer/Data Outlet with Two (2) Computer Connectors, Computer/Data Outlet with Four (4) Computer Connectors, Computer Outlet with Three (3) Computer Connectors, Computer Outlet with One (1) Computer Connector, Computer Outlet, "R" Indicates Recessed Floor Box with Multi-Service Fittings, Computer Voice Outlet, Computer Voice Outlet with One (1) Voice Connector, Computer Voice Outlet with Two (2) Computer Connectors and One (1) Voice Connector, Computer Voice Outlet with Three (3) Computer Connectors and One (1) Voice Connector, Video Control Outlet with Touch Screen Controller, Audio Video Outlet with Audio Video Inputs, Audio/Video System Flush in Ceiling Speaker, Assistive Listening Outlet Box, Audio/Visual System Mounting Assembly, CFI Double Data Outlet, Data Drop Location with Connectors and 15 Feet of Slack Cables, Lighting Fixture, Intronusion Detection System, Telephone System, Public Address System, Computer/Data Processing System, Audio/Visual System, Microphone System, Autonomous Public Address System, Priority Page Sensor Kit, Ceiling Mount Long Throw Projector, Ceiling Mount Speaker and Grille, Exterior Speaker and Vandalproof Grille, Lighting Control System, Standard Size Combination IP/Spaker Unit, IP Clock on Flush in Wall, Intronusion Detection System Motion Sensor, Intronusion Detection System Motion Sensor, Receptacle Controller, Room Lighting Controller, Room Lighting Controller in Accessible Ceiling Space, Wireless Mic in Receiver, Standard Size Combination IP/Spaker Unit, Double Data Drop Location, Computer/Data Outlet, Computer Outlet with Single Computer Connector, Computer/Data Outlet with Two (2) Computer Connectors, Computer/Data Outlet with Four (4) Computer Connectors, Computer Outlet with Three (3) Computer Connectors, Computer Outlet with One (1) Computer Connector, Computer Outlet, "R" Indicates Recessed Floor Box with Multi-Service Fittings, Computer Voice Outlet, Computer Voice Outlet with One (1) Voice Connector, Computer Voice Outlet with Two (2) Computer Connectors and One (1) Voice Connector, Computer Voice Outlet with Three (3) Computer Connectors and One (1) Voice Connector, Video Control Outlet with Touch Screen Controller, Audio Video Outlet with Audio Video Inputs, Audio/Video System Flush in Ceiling Speaker, Assistive Listening Outlet Box, Audio/Visual System Mounting Assembly, CFI Double Data Outlet, Data Drop Location with Connectors and 15 Feet of Slack Cables.

Professional seals for FBA Engineering and RUHNAU CLARKE ARCHITECTS. Includes contact information for FBA Engineering: 150 Palmdale Avenue Suite A120, Palmdale, CA 91361, 818.252.3916.

ABBREVIATIONS table listing electrical symbols and their corresponding descriptions, such as A.F.F. ABOVE FINISH FLOOR, A.F.G. ABOVE FINISH GRADE, A.I.C. AMPERES INTERRUPTING CAPACITY (SYMMETRICAL), etc.

ELECTRICAL SHEET INDEX table with columns for Sheet Number and Sheet Name. Lists sheets E1-0.1 through E1-2.1 with their respective titles.

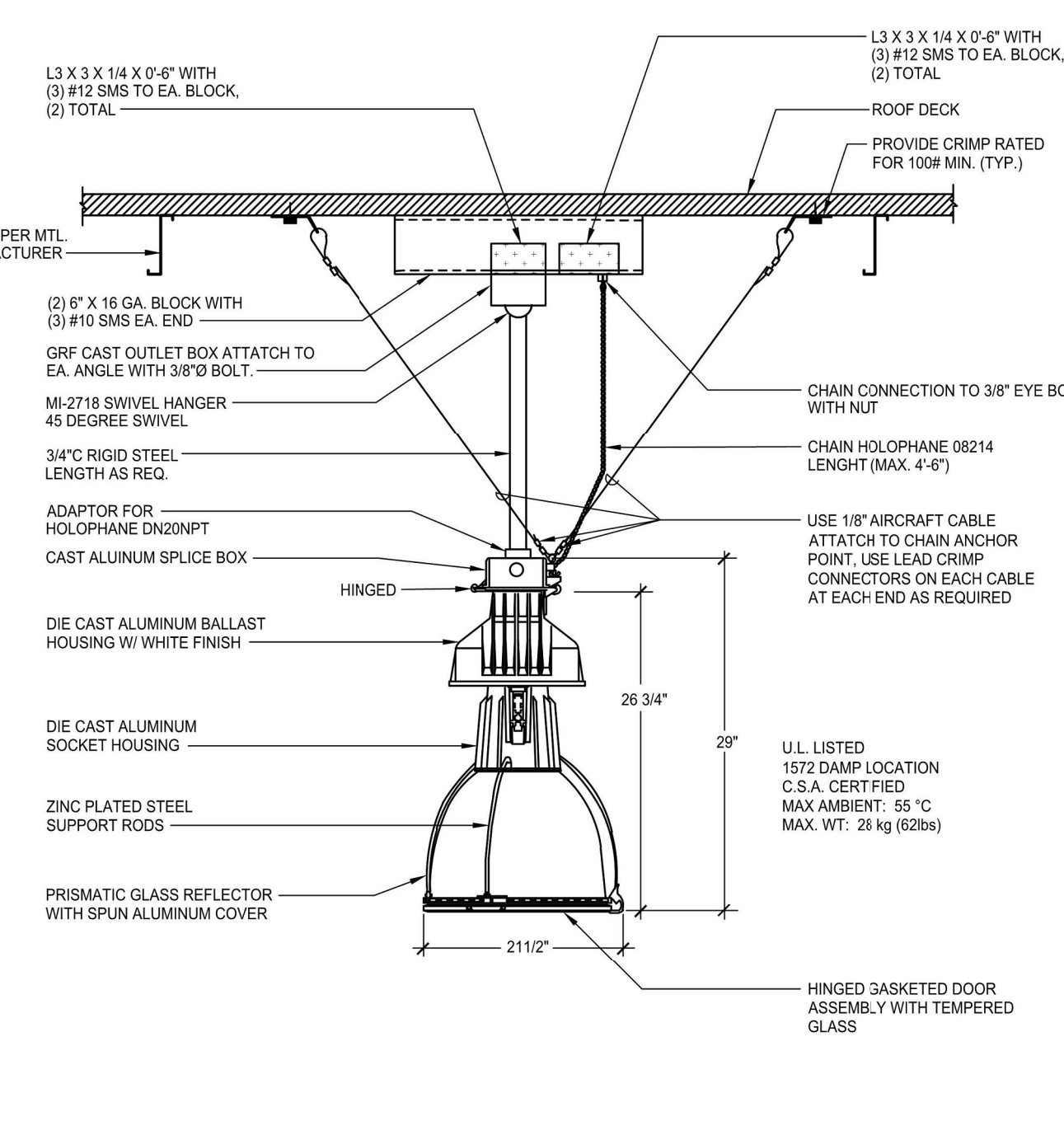
PROJECT No. :50801, 4/18/2024 11:42:40 AM. Includes a revision table with columns for Issue No., Date, Description, and Revision No.

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SYMBOL LIST AND GENERAL NOTES. E1-0.1. MOUNT TRANSIT MAINTENANCE FACILITY :100% CD.

MOUNT TRANSIT MAINTENANCE FACILITY :100% CD

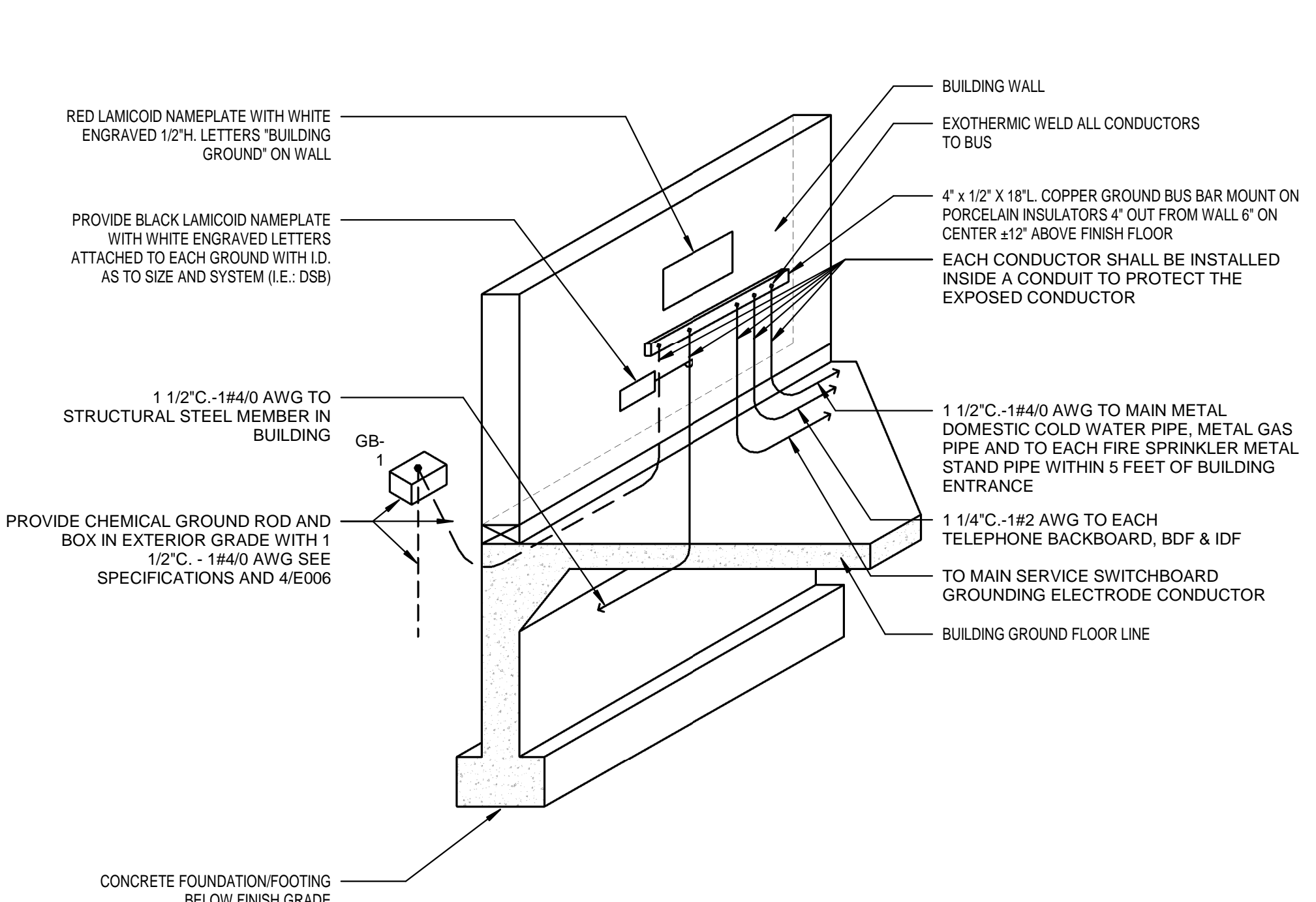




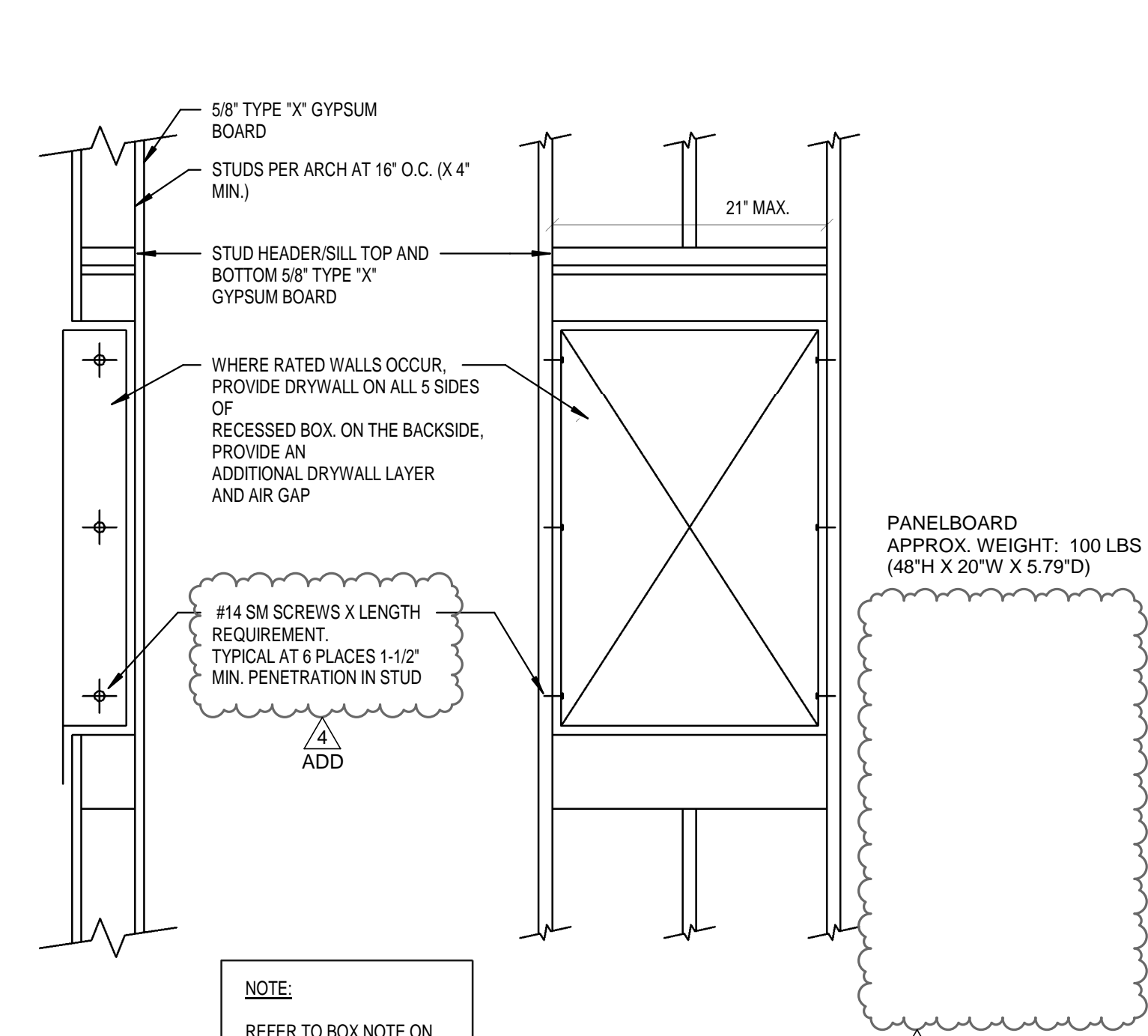
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**FIXTURE TYPE F**

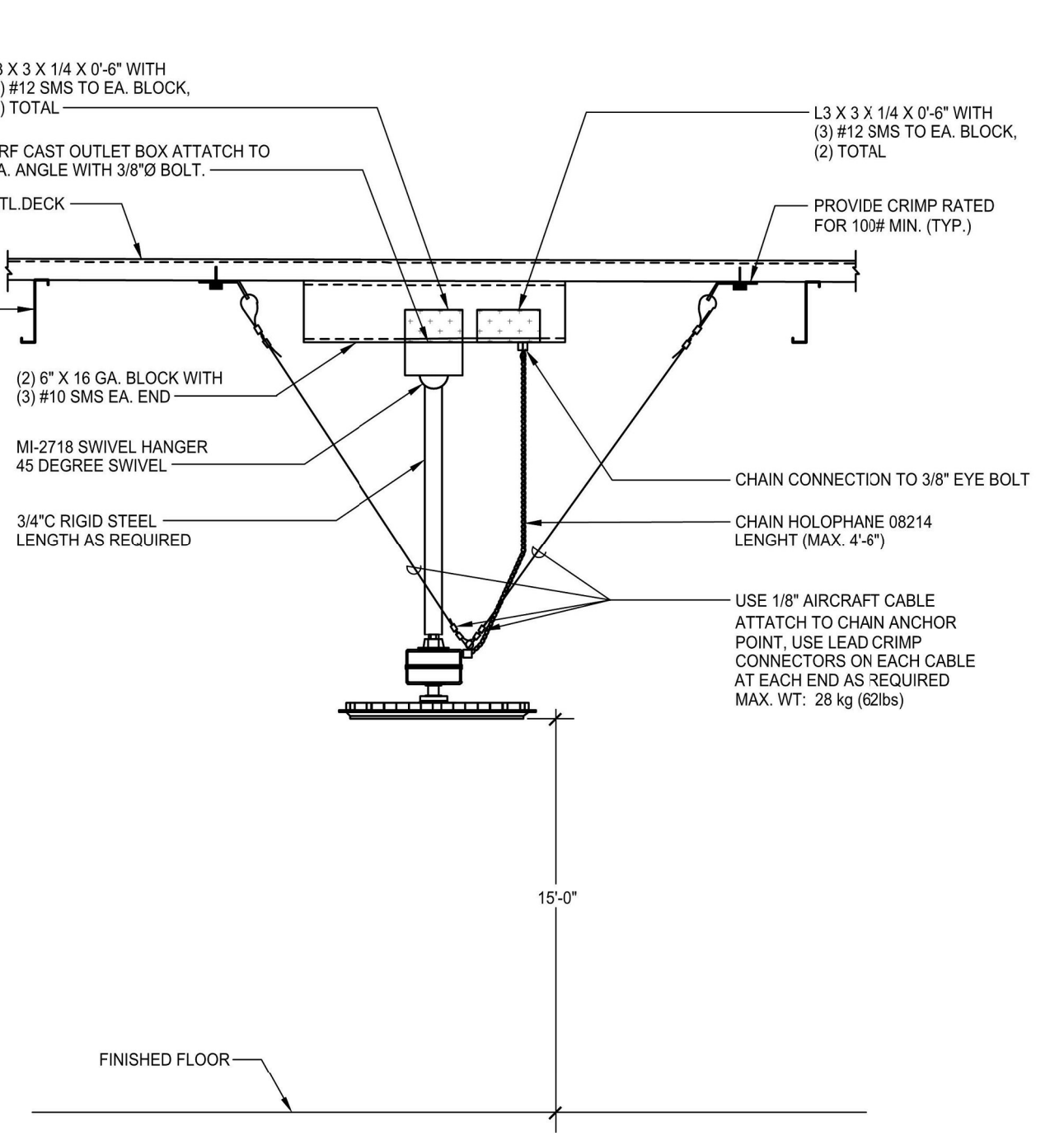
PENDANT MOUNTING ANCHORAGE DETAIL - FIXTURE F N.T.S. 8



BUILDING ELECTRICAL SERVICE GROUND BUS N.T.S. 6



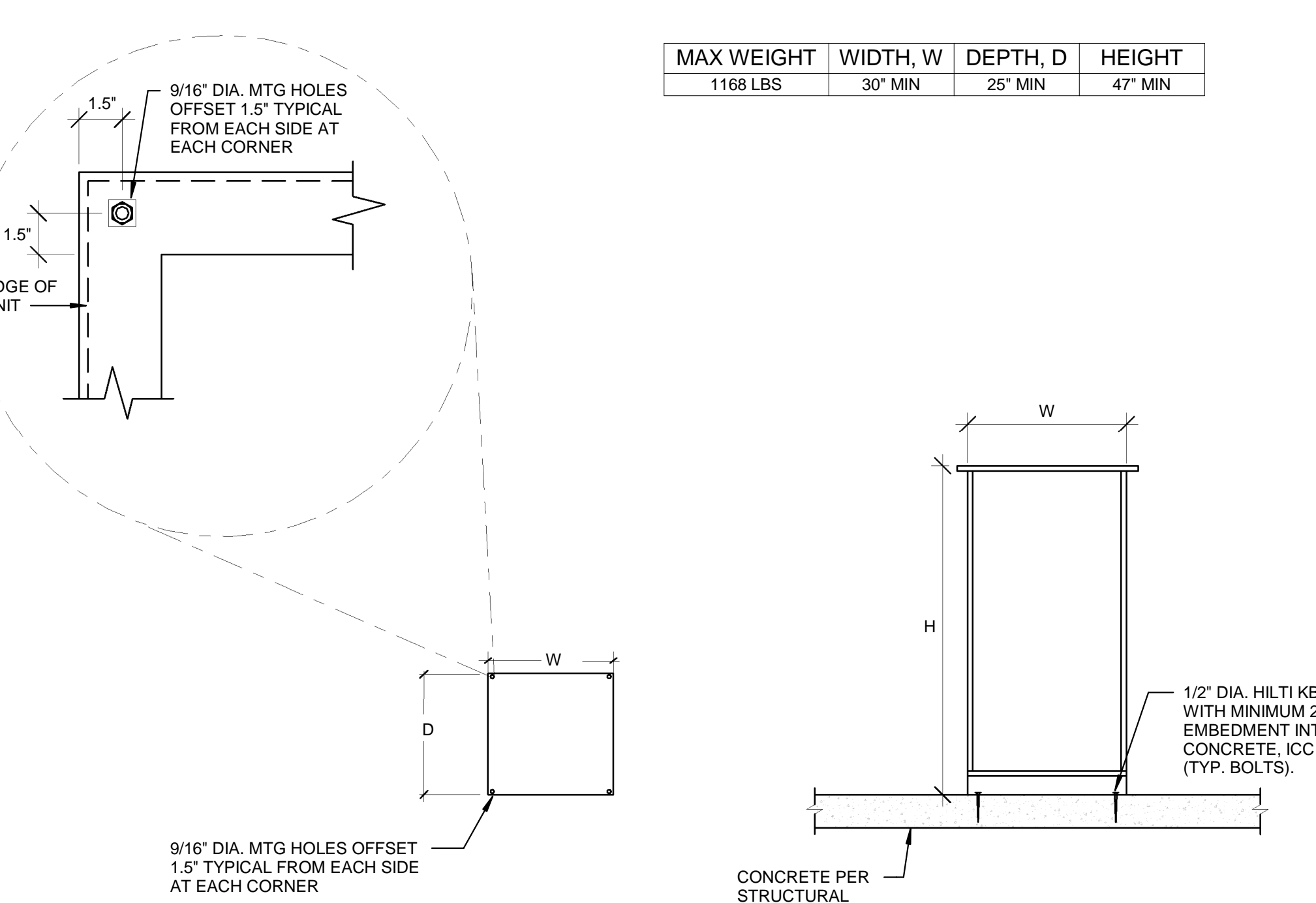
PANELBOARD/ TERMINAL CABINET ANCHORAGE-FLUSH N.T.S. 3



FIXTURE MOUNTING HEIGHT:  
@19'-0\"/>

**FIXTURE TYPE H**

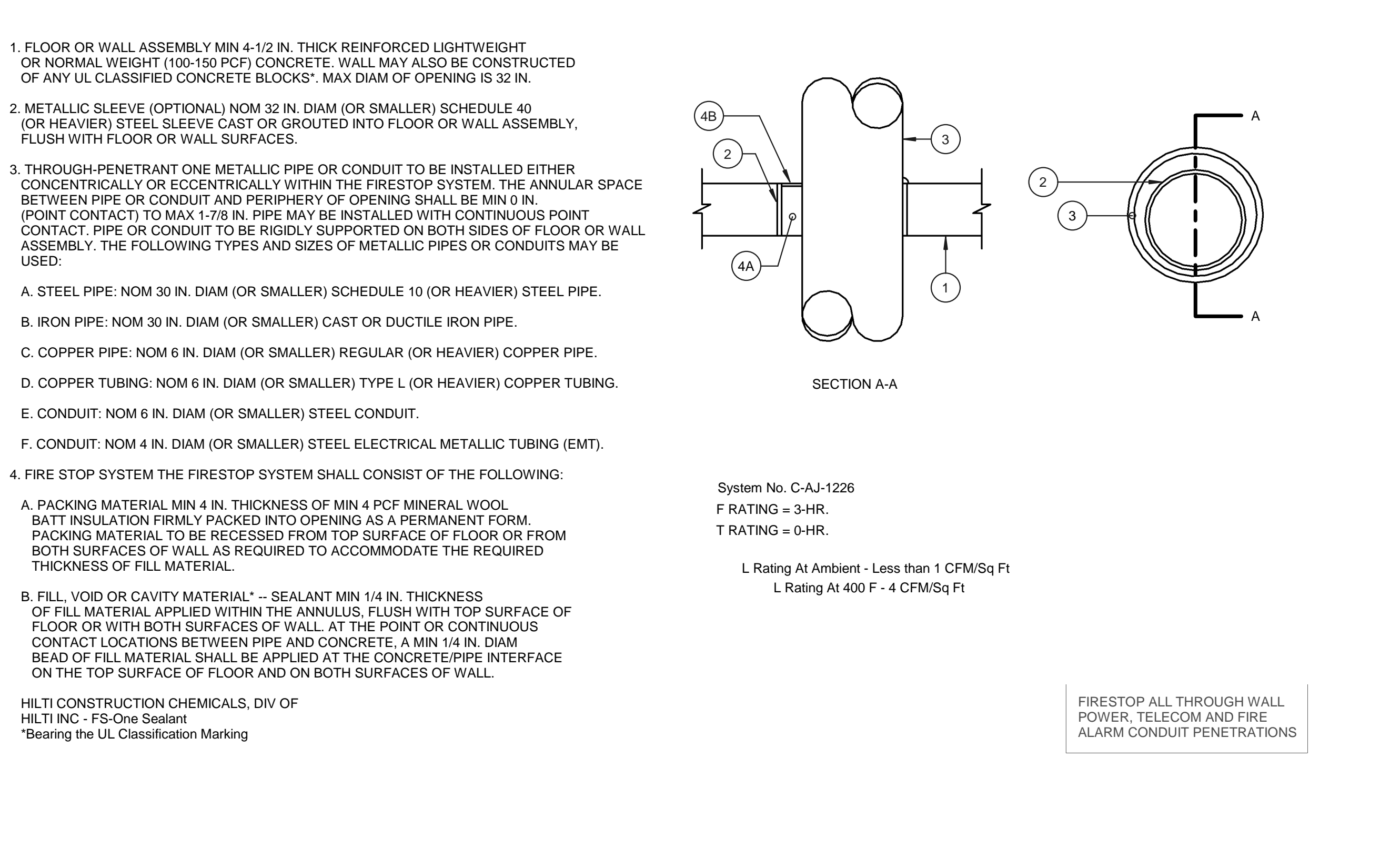
PENDANT MOUNTING ANCHORAGE DETAIL - FIXTURE H N.T.S. 9



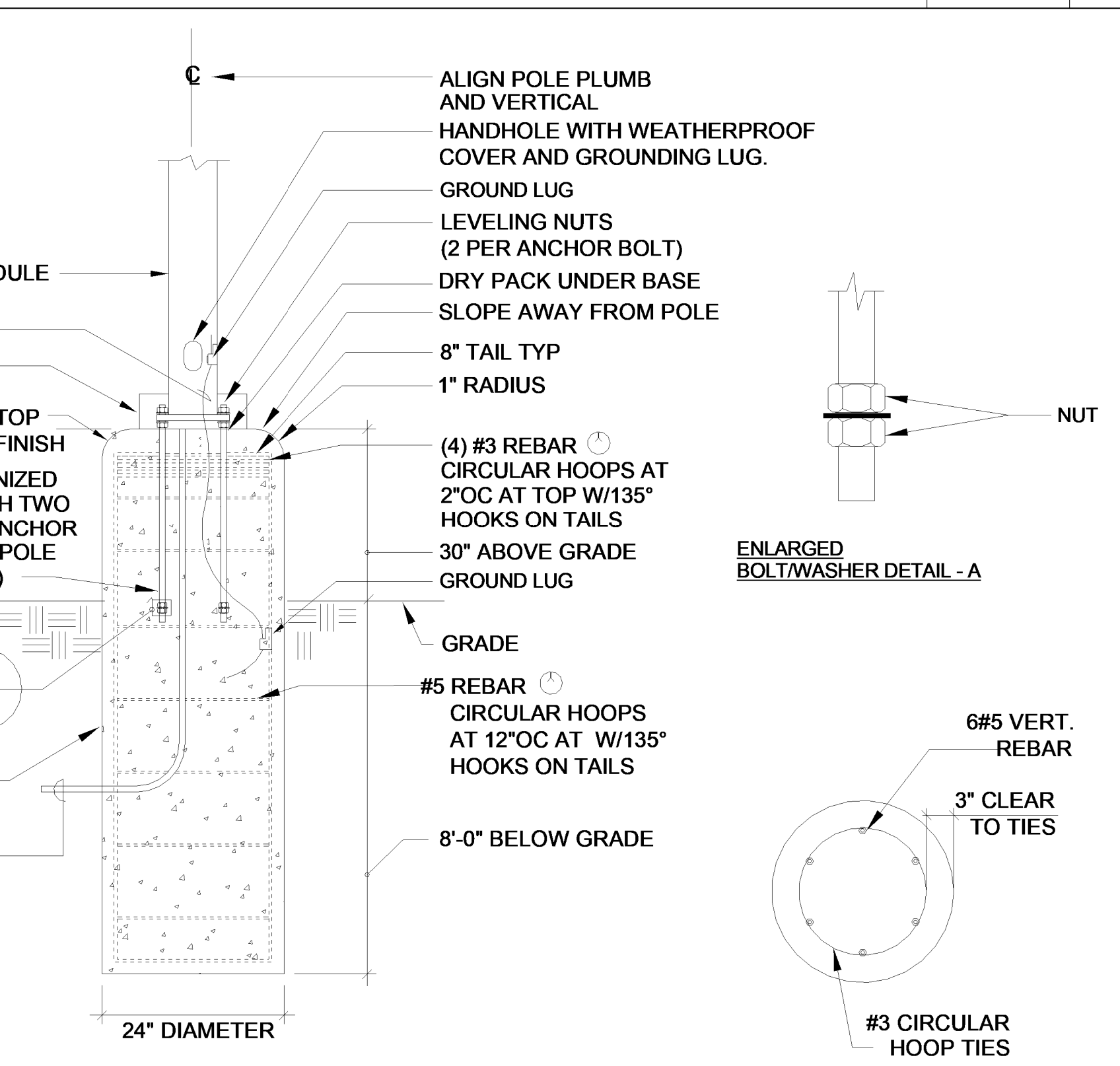
PLAN VIEW

ELEVATION

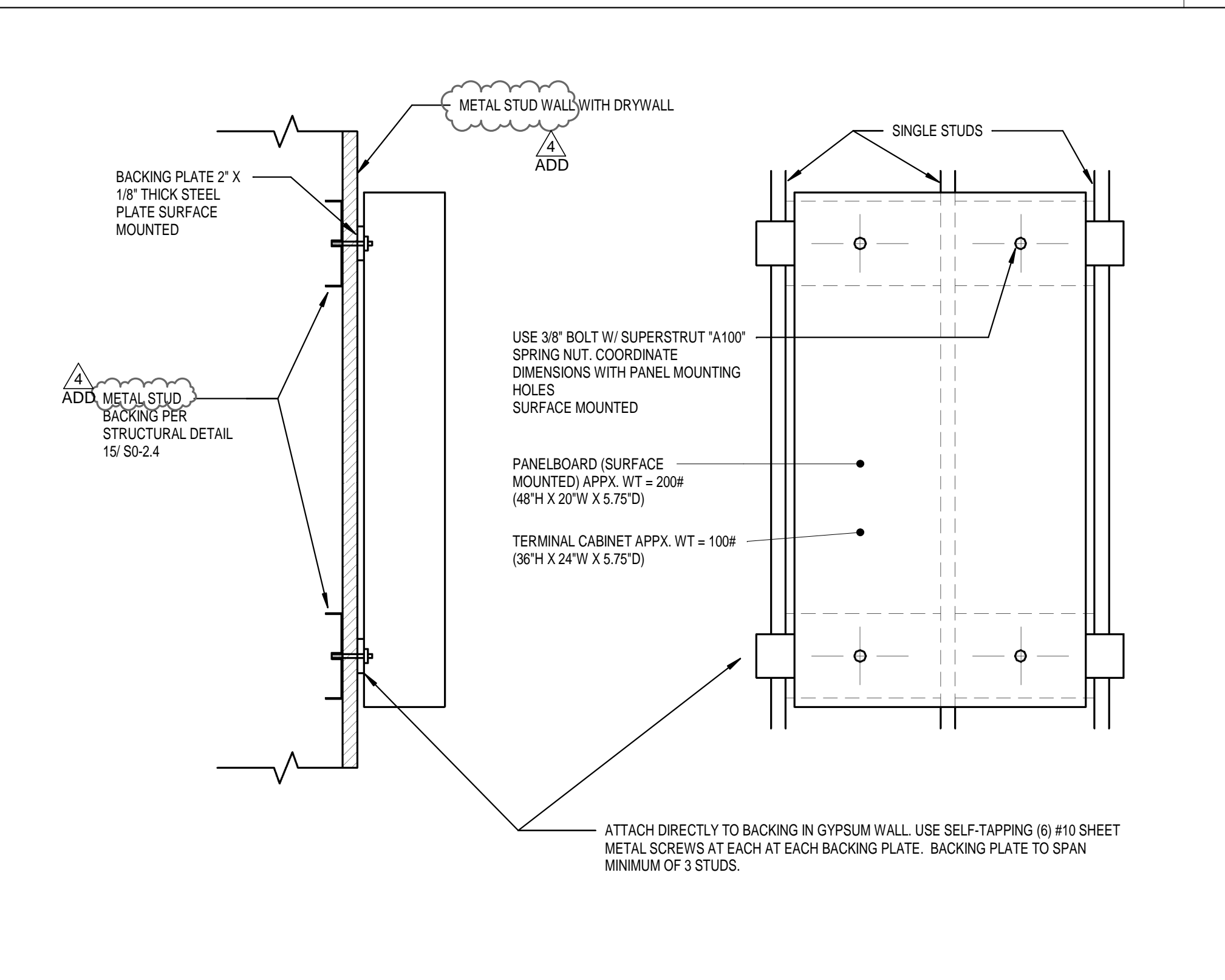
INVERTER ANCHORAGE N.T.S. 5



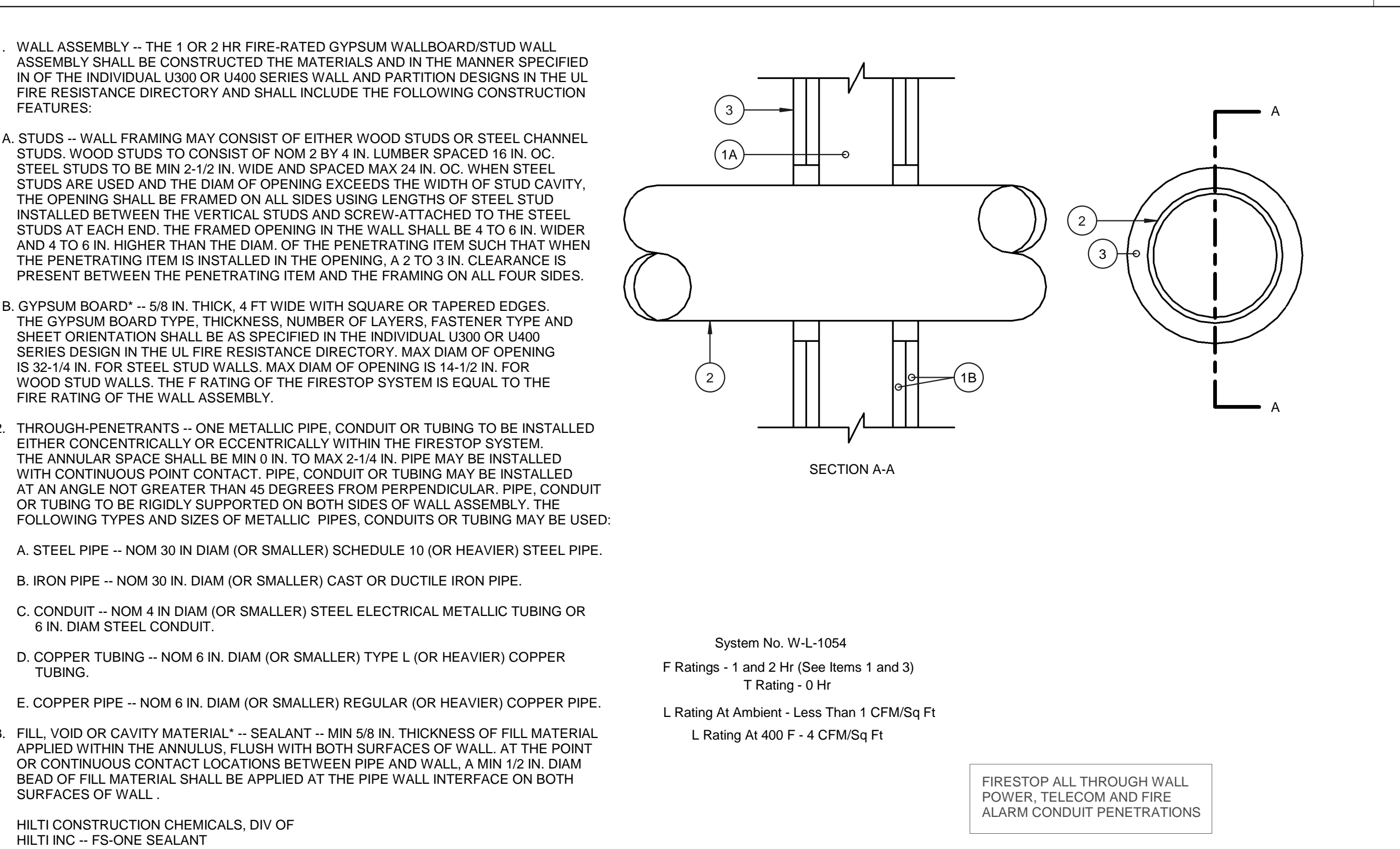
RATED CONCRETE FLOOR/WALL SINGLE CONDUIT FIRE STOP N.T.S. 2



RAISED POLE BASE DETAIL (MAX 32' POLE) N.T.S. 7



SURFACE MOUNTED PANELBOARD/TERMINAL CABINET ANCHORAGE N.T.S. 4



RATED STUD WALL FIRE STOP N.T.S. 1



# ADDITIONAL SUBMITTAL REQUIREMENT FOR LED LIGHT FIXTURES

**PART 1:** THE MANUFACTURERS AND MODEL NUMBER OF THE LED LUMINAIRE INDICATED IN THE LUMINAIRE SCHEDULE HAS BEEN SPECIFIED BECAUSE THE PERFORMANCE OF THE LUMINAIRE HAS BEEN ANALYZED IN DETAIL AND DETERMINED TO ADEQUATELY MEET THE REQUIREMENTS OF THE PROJECT. LUMINAIRES OTHER THAN THE SPECIFIED ITEM MAY BE PROPOSED AS EQUAL, PROVIDED THE CONTRACTOR COMPLIES WITH THE FOLLOWING ADDITIONAL REQUIREMENTS:

**A.** AS PART OF THE SHOP DRAWINGS SUBMITTAL PROCESS, CONTRACTOR SHALL PROVIDE DOCUMENTATION FOR APPROVAL IN ACCORDANCE WITH PART 2 BELOW. ALL SUBMITTALS SHALL BE MADE IN A TIMELY MANNER TO ALLOW AT LEAST TWO WEEKS OF ENGINEERING REVIEW WITHOUT JEOPARDIZING THE PROJECT SCHEDULE.

**B.** CONTRACTOR SHALL NOT ACQUIRE THE PROPOSED EQUAL LUMINAIRE BEFORE OBTAINING WRITTEN APPROVAL OF SUBMITTALS.

**C.** CONTRACTOR SHALL REMOVE AND REPLACE WITHOUT CHANGE TO CONTRACT PRICE, ANY INSTALLED LUMINAIRE WHICH DOES NOT PERFORM AS INDICATED IN THE CONTRACTOR'S APPROVED SUBMITTALS.

**PART 2:** SHOULD THE CONTRACTOR CHOOSE TO PROPOSE AN LED LUMINAIRE OTHER THAN THE SPECIFIED ITEM, CONTRACTOR SHALL PREPARE AND SUBMIT FOR APPROVAL OF THE FOLLOWING ITEMS IN ADDITION TO MANUFACTURERS SPECIFICATION SHEETS:

- A.** FOR INTERIOR LUMINAIRES, SCALED DRAWINGS OF EACH ROOM WHERE THE LUMINAIRE(S) ARE TO BE INSTALLED SHOWING COMPUTER GENERATED POINT-BY-POINT CALCULATIONS OF THE MAINTAINED HORIZONTAL FOOTCANDLE LEVELS AT 30-INCHES ABOVE THE FLOOR. FOR CLASSROOMS, SUBMITTALS SHALL ALSO INDICATE VERTICAL FOOTCANDLE LEVELS ON THE PRIMARY TEACHING WALL / WHITE BOARD IN EACH ROOM. THE CALCULATIONS SHALL BE BASED ON THE IES LIGHT DISTRIBUTION FOR THE LUMINAIRE(S) PROPOSED USING 80% CEILING REFLECTANCE, 20% WALL REFLECTANCE, AND 10% FLOOR REFLECTANCE.

# FIXTURE NOTES:

(NOTE: REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS)

- FIXTURES LOCATED OUTDOORS SHALL BE RATED FOR STARTING AND OPERATING TEMPERATURES BELOW 0-DEGREES FAHRENHEIT.
- FIXTURES WITH THE SAME TYPE # SHALL BE THE PRODUCTS OF THE SAME MANUFACTURER, I.E., TYPE #1, 1A, 1B, ETC., SHALL BE THE SAME MANUFACTURER.
- THE CONTRACTOR SHALL VERIFY ACTUAL CEILING AND WALL CONSTRUCTION TYPE AS DEFINED ON THE ARCHITECTURAL DRAWINGS AND FURNISH LIGHTING FIXTURES WITH THE CORRECT AND COMPLETE MOUNTING HARDWARE AND MOUNTING DEVICES TO ACCOMMODATE BUILDING CONSTRUCTION AT EACH INSTALL LOCATION, WHETHER OR NOT SUCH VARIATIONS ARE INDICATED BY THE FIXTURE CATALOG NUMBER.
- THE CONTRACTOR SHALL VERIFY DEPTH OF ALL RECESSED LIGHTING FIXTURES WITH ARCHITECTURAL DRAWINGS PRIOR TO ORDERING FIXTURES. ANY DISCREPANCIES THAT WILL CAUSE RECESSED FIXTURES NOT TO FIT INTO CEILING/WALL SPACES SHALL BE REPORTED TO THE OWNER'S REPRESENTATIVE PRIOR TO SUBMITTING SHOP DRAWINGS AND PRIOR TO ORDERING FIXTURES.
- LIGHT FIXTURES RECESSED IN CEILING OR WALL WITH A ONE HOUR OR MORE FIRE RATING BUILDING CONSTRUCTION, EACH FIXTURE SHALL BE ENCLOSED IN A BOX WHICH HAS A FIRE RATING EQUAL TO THAT OF THE BUILDING CONSTRUCTION, PROVIDE MINIMUM OF 3" CLEAR FROM ALL SIDES AND TOP OF RECESSED LIGHT FIXTURES.
- WALL AND CEILING INSULATION SHALL BE INSTALLED TO ALLOW 3" MINIMUM CLEARANCE FROM BOTTOM, SIDES AND TOP OF RECESSED LIGHT FIXTURES.
- VERIFY MOUNTING HEIGHT OF ALL WALL MOUNTED FIXTURES WITH ARCHITECT PRIOR TO ROUGH-IN.
- REFER TO ARCHITECTURAL REFLECTED CEILING PLANS AND WALL ELEVATIONS FOR EXACT INSTALL LOCATION OF ALL FIXTURES.
- VERIFY VOLTAGE BEING SUPPLIED TO FIXTURES PRIOR TO SUBMITTING SHOP DRAWINGS AND PRIOR TO ORDERING FIXTURE. VOLTAGE SHALL MATCH BRANCH CIRCUITS CONNECTING TO RESPECTIVE FIXTURE.
- SUSPENDED MOUNT LIGHT FIXTURES THAT MAY STRIKE STRUCTURAL ELEMENTS, WALL OR MECHANICAL DUCT WORK IF SWIVLED AT +45-DEGREES SHALL BE SWAY BRACKET WITH AIR CRAFT CABLE TO PREVENT STRIKING SAID APPURTENANCES DURING SEISMIC EVENTS, AS REQUIRED.
- OCCUPANCY MOTION SENSOR SYSTEM SHALL BE PROVIDED IN EVERY ROOM/SPACE LOCATION THROUGHOUT THE FACILITY AND AS DESCRIBED IN THE SPECIFICATIONS, WHETHER SYMBOLS ARE SHOWN OR NOT SHOWN ON THE PLANS.
- PROVIDE TESTING CERTIFICATION AND COMMISSIONING OF LIGHTING FIXTURES, INSTALLATION, LIGHTING CONTROL SYSTEM AND LIGHTING SYSTEM OPERATION.
- CONTRACTOR SHALL COORDINATE INSTALLATION OF RECESSED LIGHTING FIXTURES IN HARD LID OR STUCCO CEILING AREAS WITH FRAMING CONTRACTOR.
- ALL 'EDGE-LIT' EXIT SIGN SHALL BE EQUIPPED WITH MIRRORRED BACKGROUND.
- ALL LED DRIVERS SHALL BE COMPATIBLE WITH THE SPECIFIED LIGHTING CONTROLS.
- PROVIDE 3/4" C. BETWEEN ALL LUMINAIRES AND CONTROL DEVICES LOCATED IN NON-ACCESSIBLE CEILING SPACES.

# LIGHTING FIXTURE SCHEDULE

IMAGE	TYPE	DESCRIPTION	MANUFACTURER	LAMP	POWER	MOUNTING	NOTES					
			NAME	CATALOG NO.	TYPE	LUMENS	CCT	CRI (MIN)	VOLTAGE	INPUT WATTAGE	TYPE	NOTES
	A	2' X 4' LED RECESSED T-BAR MOUNT, END CAPS DIE-FORMED CODE-GAUGE ROLLED STEEL HOUSING, REGRESSED ALUMINUM HINGED DOORFRAME ASSEMBLY RETAINS, PATTERN 12 ACRYLIC LENS, 0.125" NOMINAL, STANDARD DIMMING 0-10V.	COLUMBIA LIGHTING	LJT24 SERIES OR EQUAL	LED	5528	4000	80	120	45	RECESSED T-BAR	CONFIRM HOUSING FINISH WITH ARCHITECT
	B	1' X 4' LED RECESSED LUMINAIRE, END CAPS DIE-FORMED CODE-GAUGE ROLLED STEEL HOUSING, REGRESSED ALUMINUM HINGED DOORFRAME ASSEMBLY RETAINS, PATTERN 12 ACRYLIC LENS, 0.125" NOMINAL, STANDARD DIMMING 0-10V.	COLUMBIA LIGHTING	LJT14 SERIES OR EQUAL	LED	4834	4000	80	120	45	RECESSED	CONFIRM HOUSING FINISH WITH ARCHITECT
	C	4' LED MARINE GRADE ALUMINUM WITH DIE-CAST END CAPS, MATTE WHITE POLYESTER POWDER COAT FINISHED, PEARLESCENT POLYCARBONATE LENS, DIMMING CONSTANT CURRENT (LED).	KENALL	MLHA 12 SERIES OR EQUAL	LED	5341	4000	80	120	49	SURFACE	CONFIRM HOUSING FINISH WITH ARCHITECT
	D	LED STRIP/LIGHT 48" LENGTH, CODE-GAUGE STEEL WIREWAY HOUSING, CURVE AND FROSTED ACRYLIC LENS, WIDE DISTRIBUTION, STANDARD 0-10V DIMMING.	COLUMBIA LIGHTING	MPS SERIES OR EQUAL	LED	2090	4000	80	120	26.7	SURFACE/CHAIN HUNG	CONFIRM HOUSING FINISH WITH ARCHITECT
	E	4' LED LINEAR ENCLOSED AND GASKETED, UL 5VA FIBERGLASS HOUSING, LINEAR RIBBED FROSTED ACRYLIC LENS, STANDARD DIMMING 0-10V.	COLUMBIA LIGHTING	LXEM SERIES OR EQUAL	LED	6500	4000	80	120	47	PENDANT @ 12'-0" AND 15'-0" A.F.F.	CONFIRM HOUSING FINISH WITH ARCHITECT
	F	LED PENDANT HIGH BAYS, DIE-CAST HOUSING, FROSTED ACRYLIC LENS, STANDARD DIMMING 0-10V.	PEACHTREE LIGHTING	UTB2 HIGH BAY SERIES OR EQUAL	LED	17971	4000	80	120	119	PENDANT @ 15'-0" A.F.F.	CONFIRM HOUSING FINISH WITH ARCHITECT
	G	LED SURFACE CANOPY LUMINAIRE, STANDARD DIMMING 0-10V.	LITHONIA LIGHTING	D SERIES GARAGE OR EQUAL	LED	5409	4000	80	120	46	SURFACE	CONFIRM HOUSING FINISH WITH ARCHITECT
	H	PENDANT MOUNTED COMPACT WET LOCATION HIGH BAY LED LIGHT FIXTURE, DIE-CAST WITH DIE-CAST ALUMINUM HOUSING AND POLYCARBONATE LENS.	HUBBEL LIGHTING	CRB-40M-EDU SERIES OR EQUAL	LED	21349	N/A	N/A	120	152	PENDANT @ 15'-0" A.F.F.	CONFIRM HOUSING FINISH WITH ARCHITECT
	I	ADD 6" DIAMETER RECESSED DOWN LIGHT, WITH MEDIUM SPREAD BEAM, GALVANIZED STEEL FRAME WITH INTEGRAL JUNCTION BOX, THE FIXTURE SHALL BE U.L. LISTED FOR WET LOCATION UNDER CANOPY.	VANTAGELED	VVR6R/VEFL-U-30-40X-VVRL601 4P-WHT OR EQUAL	LED	40000	3000	80	120	30	RECESS	CONFIRM HOUSING FINISH WITH ARCHITECT
	SP1	LED AREA LIGHT WITH DIE-CAST ALUMINUM HOUSING, ACRYLIC LENSES, TYPE 3M LIGHT DISTRIBUTION, MOUNTED TO 30-FEET HIGH X 5-INCH DIAMETER NON-TAPERED STEEL POLE, ALL FINISHED WITH COLOR AS SELECTED BY ARCHITECT. ENTIRE ASSEMBLY RATED FOR STEADY 60MPH WIND WITH 1.3 GUST FACTOR.	LITHONIA LIGHTING	DSX1-SERIES OR EQUAL	LED	19049	4000	80	120	163	POST	CONFIRM HOUSING FINISH WITH ARCHITECT
	SP2	SAME AS TYPE SP1 EXCEPT TWO LUMINAIRES MOUNTED 90-DEGREES APART.	LITHONIA LIGHTING	DSX1-SERIES OR EQUAL	LED	19049	4000	80	120	326	POST	CONFIRM HOUSING FINISH WITH ARCHITECT
	SP3	SAME AS TYPE SP1 EXCEPT TWO LUMINAIRES MOUNTED 180-DEGREES APART.	LITHONIA LIGHTING	DSX1-SERIES OR EQUAL	LED	19049	4000	80	120	326	POST	CONFIRM HOUSING FINISH WITH ARCHITECT
	WP1	DECORATIVE EXTERIOR 2" DIAMETER CYLINDRICAL WALL SCONCE WITH DOWNLIGHT WIRE OPTIC, INTEGRAL LED DRIVER, EXTRUDED ALUMINUM HOUSING, RECESSED GEAR HOUSING, SUITABLE FOR WET LOCATION, STANDARD 0-10V DIMMING.	GOTHAM LIGHTING	EV02WC SERIES OR EQUAL	LED	1073	4000	80	120	12.7	WALL MOUNTED	CONFIRM HOUSING FINISH WITH ARCHITECT
	WP2	MINI LED LIGHT FIXTURE WALL PACK WITH INJECTION MOLDED POLYCARBONATE ENCLOSURE.	BARRON LIGHTING	BARRON SERIES OR EQUAL	LED	-	35000	1839	120	16	SURFACE/WALL	CONFIRM HOUSING FINISH WITH ARCHITECT
	X1	LED EDGE-LIT EXIT SIGN FIXTURE WITH EXTRUDED BRUSHED ALUMINUM FINISH, CLEAR ACRYLIC PANELS, GREEN LETTERS, OR DOUBLE FACES AS INDICATED ON PLANS	EVENLITE	RAZOR MK3 SERIES OR EQUAL	LED	-	N/A	N/A	120	3	SURFACE/WALL	CONFIRM HOUSING FINISH WITH ARCHITECT

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FBA Job Number: 874-1055

**RUHNAU CLARKE ARCHITECTS**

# PLAN NOTES

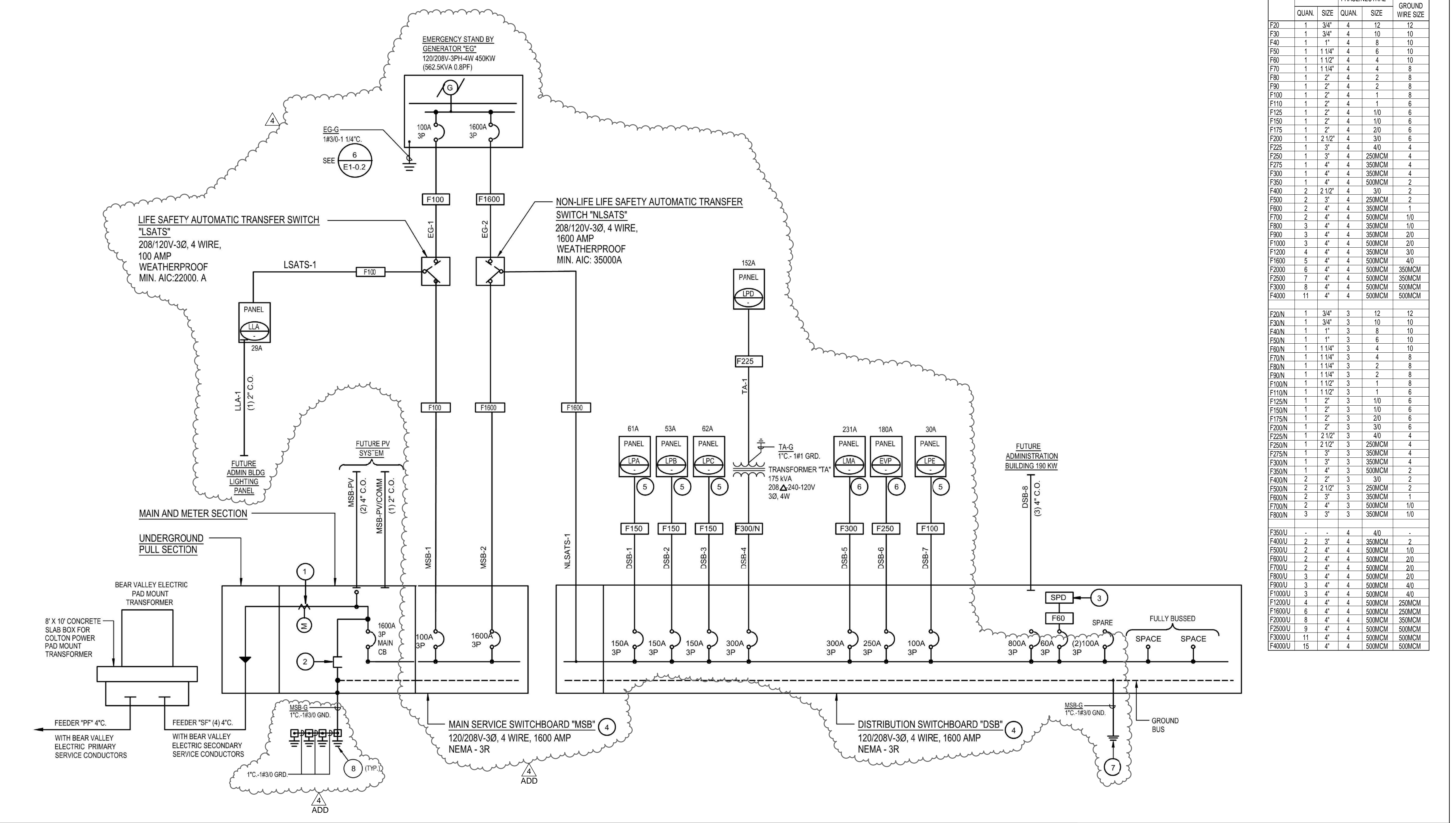
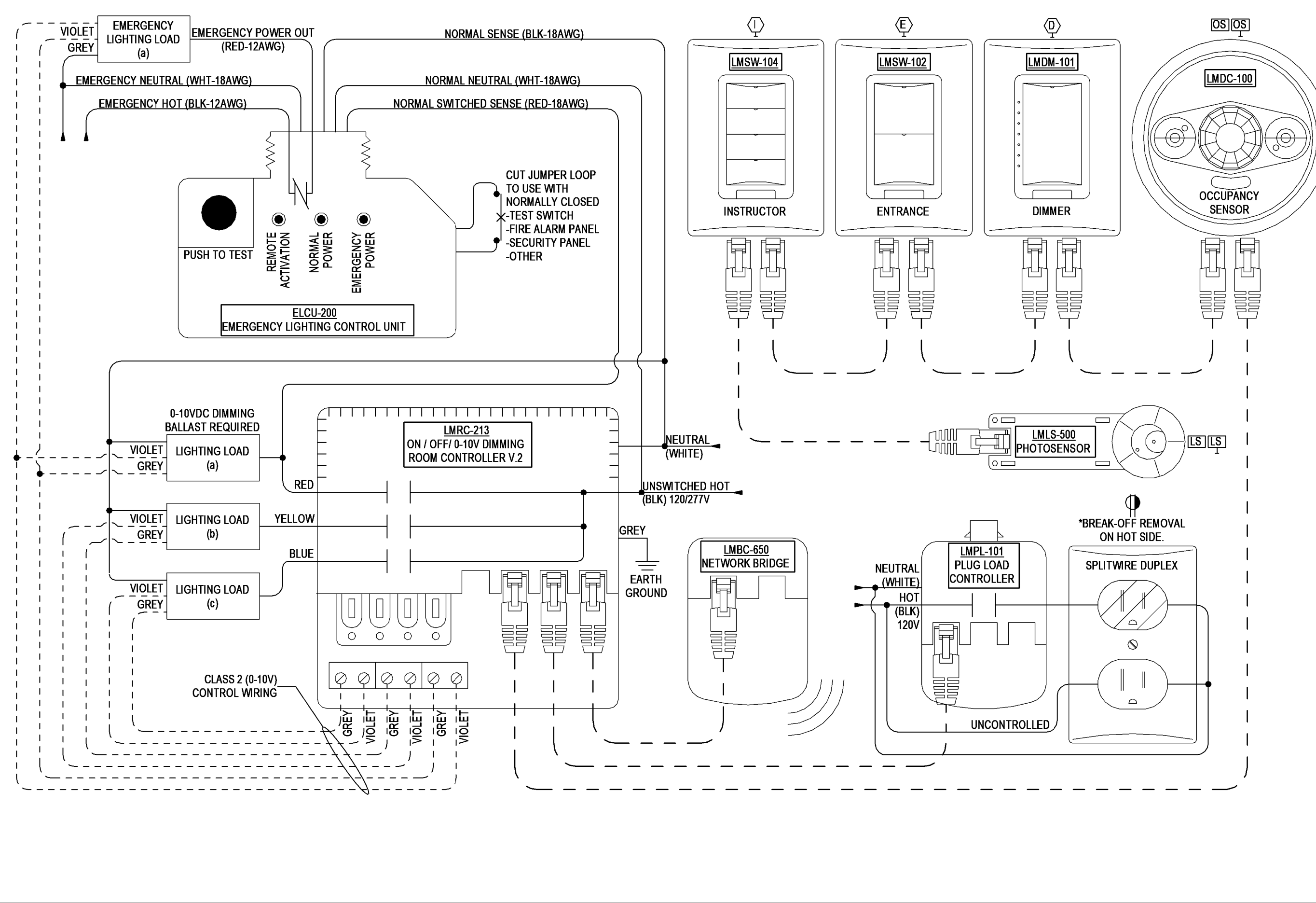
- METERING PROVISIONS SHALL COMPLY WITH CITY OF BEAR VALLEY POWER COMPANY SERVICE REQUIREMENTS.
- NEUTRAL TO GROUND REMOVABLE BUS LINK FOR SERVICE ENTRANCE EQUIPMENT.
- SURGE PROTECTION DEVICE SHALL BE MOUNTED AS PART OF THE SWITCHBOARD ASSEMBLY.
- THE SWITCHBOARD AND ITS CIRCUIT BREAKERS SHALL BE RATED FOR MINIMUM OF 30.00KA.
- PANELBOARD SHALL BE RATED FOR MINIMUM OF 14.00KA.
- PANELBOARD SHALL BE RATED FOR MINIMUM OF 22.00KA.
- CONNECT TO MAIN SWITCHBOARD GROUNDING SYSTEM.
- PROVIDE 12" X 12" X 1/2" BOTTOMLESS CONCRETE PULL BOX WITH PE4 GRAVEL BASE AND CHEMICAL ASSEMBLY GROUND ROD. MOUNT PULL BOX FLUSH ON GRADE AND ENGRAVE COVER "GROUND". QUANTITY AS REQUIRED TO ACHIEVE 25 OHMS TO GROUND MAXIMUM.

LOAD DESCRIPTION	CONNECTED LOAD (A)	CONNECTED CURRENT (A)
PANEL LLA	81	10480
PANEL LPA	51	29160
PANEL LPB	53	19080
PANEL LPC	62	22320
PANEL LPD	175	63900
PANEL LMA	231	83160
PANEL LMP	180	64800
FUTURE ADMIN BUILDING	528	190000
<b>TOTAL CONNECTED LOADS</b>	<b>1339</b>	<b>481960</b>

PROPOSED SERVICE SIZE: 208/120V-3PHASE-4W-1600A

# FEEDER SCHEDULE

FEEDER TYPE	CONDUIT SIZE AND QUANTITY	CONDUCTORS IN EACH CONDUIT			
		PHASE	NEUTRAL	EQUIPMENT GROUND	WIRE SIZE
F20	1 3/4"	4	12	12	12
F20	1 3/4"	3	10	10	10
F40	1 1"	4	8	10	10
F50	1 1 1/4"	4	6	10	10
F60	1 1 1/2"	4	4	10	10
F70	1 1 1/4"	4	4	8	8
F80	1 2"	4	2	8	8
F90	1 2"	4	1	6	6
F100	1 2"	4	1	8	8
F110	1 2"	4	1	6	6
F120	1 2"	4	1	6	6
F150	1 2"	4	1	6	6
F175	1 2"	4	2	6	6
F200	2 2 1/2"	4	3	6	6
F225	1 3/4"	4	4	4	4
F250	1 3/4"	4	250MCM	4	4
F275	1 3/4"	4	350MCM	4	4
F300	1 3/4"	4	350MCM	4	4
F350	1 3/4"	4	500MCM	2	2
F400	2 2 1/2"	4	30	2	2
F500	2 3/4"	4	250MCM	2	2
F600	2 3/4"	4	350MCM	1	1
F700	2 3/4"	4	500MCM	10	10
F800	3 3/4"	4	350MCM	10	10
F900	3 3/4"	4	350MCM	20	20
F1000	3 3/4"	4	500MCM	20	20
F1100	4 3/4"	4	350MCM	30	30
F1600	5 3/4"	4	500MCM	40	40
F2000	6 3/4"	4	500MCM	350MCM	350MCM
F2500	7 3/4"	4	500MCM	500MCM	500MCM
F3000	8 3/4"	4	500MCM	500MCM	500MCM
F4000	11 3/4"	4	500MCM	500MCM	500MCM
F20N	1 3/4"	3	12	12	12
F30N	1 3/4"	3	10	10	10
F40N	1 1"	3	8	10	10
F50N	1 1 1/4"	3	6	10	10
F60N	1 1 1/4"	3	4	10	10
F70N	1 1 1/4"	3	4	8	8
F80N	1 1 1/4"	3	2	8	8
F90N	1 1 1/2"	3	1	8	8
F100N	1 1 1/2"	3	1	6	6
F110N	1 1 1/2"	3	1	6	6
F120N	1 2"	3	1	6	6
F150N	1 2"	3	1	6	6
F175N	1 2"	3	2	6	6
F200N	1 2"	3	3	6	6
F225N	1 2 1/2"	3	4	4	4
F250N	1 2 1/2"	3	250MCM	4	4
F275N	1 3/4"	3	350MCM	4	4
F300N	1 3/4"	3	350MCM	2	2
F400N	1 3/4"	3	500MCM	2	2
F500N	2 2 1/2"	3	250MCM	2	2
F600N	2 3/4"	3	350MCM	1	1
F700N	2 3/4"	3	500MCM	10	10
F800N	3 3/4"	3	350MCM	10	10
F350U	-	4	40	-	-
F400U	2 3/4"	4	350MCM	2	2
F500U	2 3/4"	4	500MCM	10	10
F600U	2 3/4"	4	500MCM	20	20
F700U	2 3/4"	4	500MCM	20	20
F800U	3 3/4"	4	500MCM	20	20
F900U	3 3/4"	4	500MCM	40	40
F1000U	3 3/4"	4	500MCM	40	40
F1200U	4 3/4"	4	500MCM	250MCM	250MCM
F1600U	6 3/4"	4	500MCM	350MCM	350MCM
F2000U	8 3/4"	4	500MCM	500MCM	500MCM
F2500U	9 3/4"	4	500MCM	500MCM	500MCM
F3000U	11 3/4"	4	500MCM	500MCM	500MCM
F4000U	15 3/4"	4	500MCM	500MCM	500MCM



**PROJECT No. :50801**  
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**LIGHTING CONTROL WIRING DIAGRAM** N.T.S. 2

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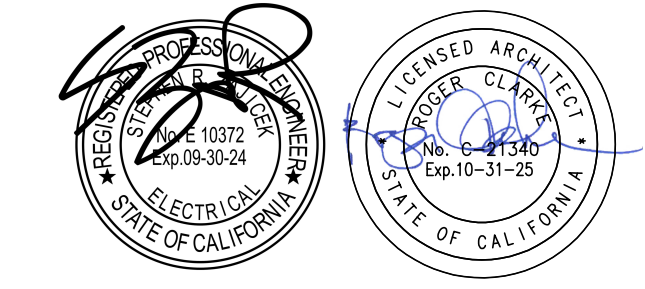
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**MOUNT TRANSIT MAINTENANCE FACILITY**  
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BIG BEAR LAKES

**SINGLE LINE DIAGRAM & LIGHTING FIXTURE SCHEDULE**  
**E1-0.3**

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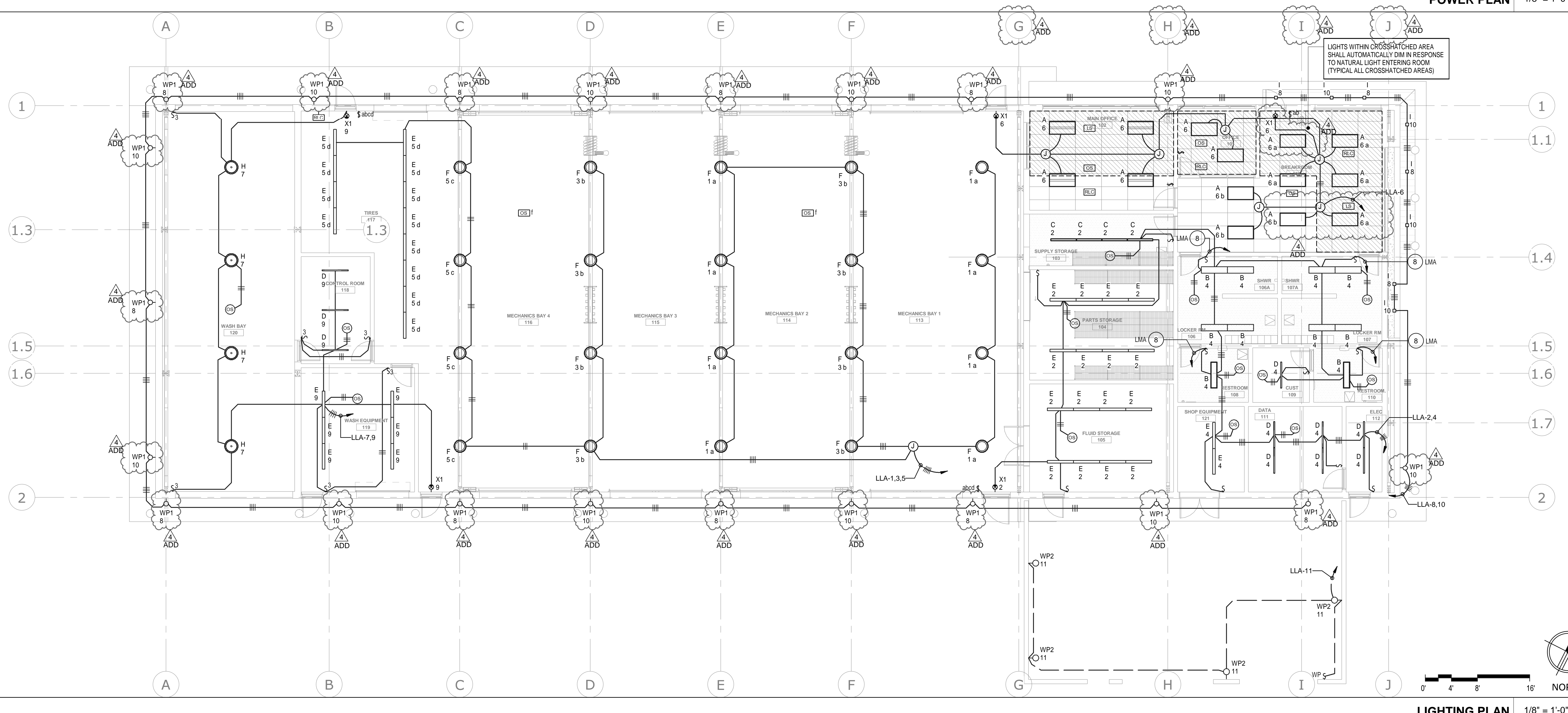
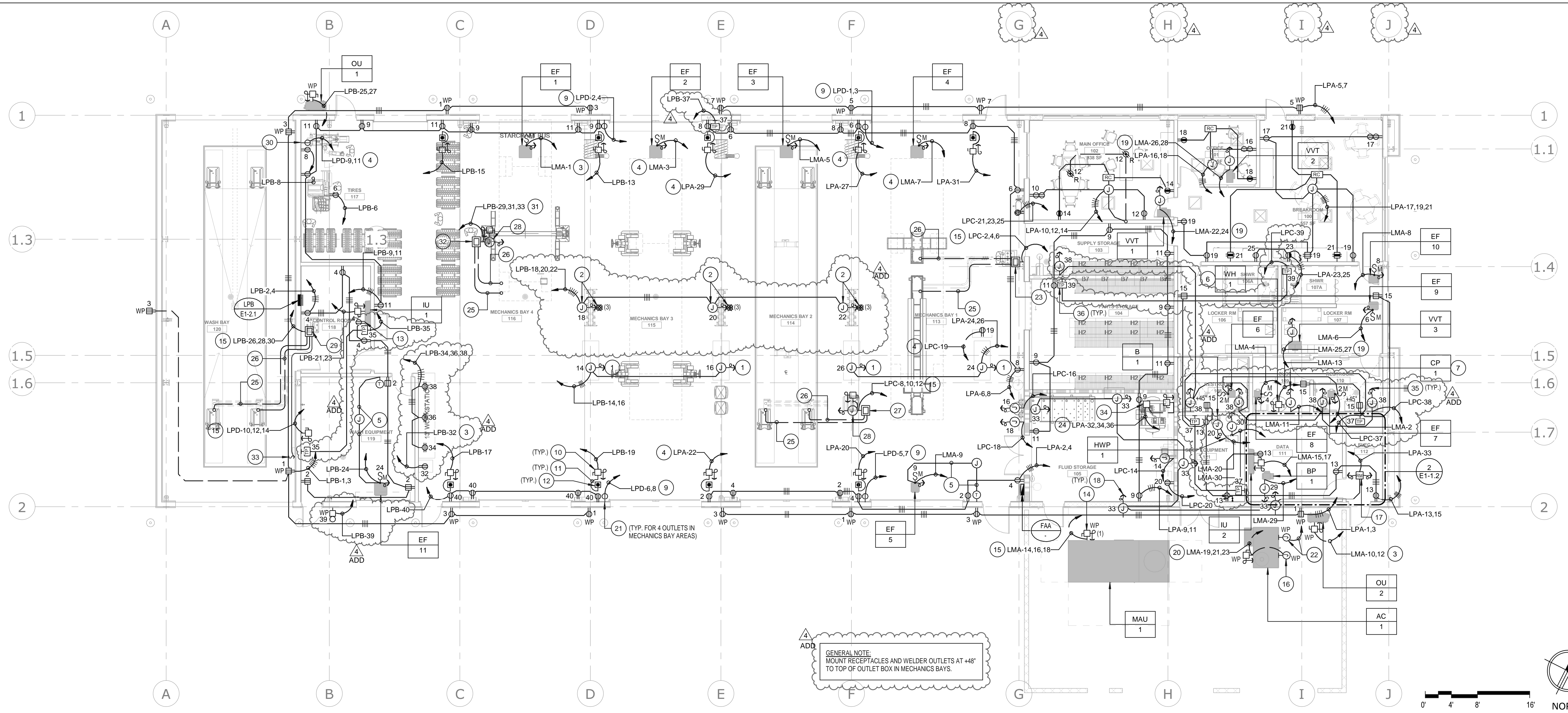


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**PLAN NOTES**

- 1 PROVIDE 120V CONNECTION TO MOTORIZED HOSE REEL ASSEMBLY FOR STATIONARY WORKBENCH AS PER MANUFACTURER REQUIREMENTS.
- 2 PROVIDE 120V CONNECTION OUTLET WITH TRIP-PLUS GFCI RECEPTACLE POWER TO MOTORIZED DROP REEL SD CORD AND LIGHT REELS MODEL GRACO #24984 FOR LUBRICATION REEL BANK. PROVIDE SHUT-OFF VALVES AND CONNECTING HOSES. REFER TO LUBRICATION REEL BANK SPECIFICATION FOR MANUFACTURER REQUIREMENTS.
- 3 PROVIDE 3/4" - 2#10, 1#10 GRD.
- 4 PROVIDE 3/4" - 2#10, 1#10 GRD.
- 5 PROVIDE 3/4" CONDUIT FROM THE THERMOSTAT TO THE ROOM EXHAUST FAN IN THE ROOM. CONTROL WIRING PROVIDED BY MECHANICAL CONTRACTOR. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION AND REQUIREMENTS.
- 6 CONNECT POWER TO WATER HEATER AS REQUIRED. VERIFY EXACT LOCATION AND REQUIREMENTS WITH PLUMBING DRAWINGS PRIOR TO ANY ROUGH-IN.
- 7 CONNECT POWER TO WATER HEATER CIRCULATION PUMP, ROUTED THROUGH MECHANICAL OVERRIDE TIMER AS REQUIRED. VERIFY EXACT LOCATION WITH PLUMBING DRAWINGS PRIOR TO ANY ROUGH-IN.
- 8 PROVIDE 3/4" - 2#12, 1#12 GRD. TO RELAY FOR ROOM'S EXHAUST FAN IN THE PANEL INDICATED. SEE PANEL 'LMA' ON SHEET E1-2.2 FOR MORE INFORMATION.
- 9 PROVIDE 1" - 2#4, 1#8 GRD.
- 10 CONNECT POWER TO ROLL-UP DOOR.
- 11 PROVIDE 3/4" WITH CONTROL WIRING.
- 12 PROVIDE AND INSTALL CONTROL STATION FOR ROLL-UP DOOR AND CONNECT AS REQUIRED.
- 13 CONNECT RECEPTACLE TO THE SIDE OF THE UNIT FOR CONDENSING PUMP. VERIFY LOCATION WITH PUMP INSTALLER.
- 14 PROVIDE NEW FUSED COMBINATION MAGNETIC MOTOR STARTER NEMA SIZE 1. REFER TO MECHANICAL PLANS FOR MORE INFORMATION.
- 15 PROVIDE 1 1/4" - 3#2, 1#8 GRD.
- 16 PROVIDE A J-BOX WITH 3/4" AND CONNECT TO POWER EXHAUST.
- 17 ROUTE SMOKE FIRE DAMPER POWER THROUGH FIRE ALARM CONTROL RELAY MODULE. SEE SHEET E1-1.2 FOR MORE INFORMATION.
- 18 CONNECT POWER TO SMOKE FIRE DAMPER/ZONE DAMPER ON HVAC DUCT.
- 19 PROVIDE 1 1/4" - 2#2, 1#8 GRD.
- 20 PROVIDE 1" - 3#6, 1#10 GRD.
- 21 POWER OUTLETS FOR THE WELDERS WILL BE PROVIDED THROUGHOUT THE SERVICE AREA SO THAT THE WELDER WITH 25'-0" LONG POWER CORD CAN BE USED IN ALL AREAS. PROVIDE 240V-2P-40A TWIST LOCK SPECIAL TYPE RECEPTACLE (NEMA L15-50) FOR THE WELDERS(S) THAT WILL BE UTILIZED FOR THE ENTIRE FACILITY.
- 22 PROVIDE A J-BOX WITH 3/4" CONDUIT FROM THE AC UNIT TO THE PROGRAMMABLE THERMOSTAT LOCATED IN THE BUILDING. CONTROL WIRING PROVIDED BY MECHANICAL CONTRACTOR. REFER TO MECHANICAL DRAWINGS FOR EXACT LOCATION AND REQUIREMENTS.
- 23 PROVIDE AND INSTALL WALL MOUNTED CONTROL CONSOLE FOR HEAVY DUTY LIFT. SEE EQUIPMENT SCHEDULE OF "PACIFIC LIFT" EQUIPMENT COMPANY FOR MANUFACTURER'S REQUIREMENTS.
- 24 PROVIDE 1" - 3#8, 1#10 GRD.
- 25 UNDERGROUND CONDUITS FOR POWER CONNECTION PROVIDED BY "PACIFIC LIFT AND EQUIPMENT COMPANY". SEE "ROTARY (VSG) VEHICLE LIFT" DRAWINGS FOR MORE INFORMATION.
- 26 UNDERGROUND CONDUITS FOR CONTROL CONNECTION PROVIDED BY "PACIFIC LIFT AND EQUIPMENT COMPANY". SEE "ROTARY (VSG) VEHICLE LIFT CONTROL" DRAWINGS FOR MORE INFORMATION.
- 27 PROVIDE AND INSTALL IN-GROUND CONTROL CONSOLE FOR ROTARY LIFT. SEE EQUIPMENT SCHEDULE OF "PACIFIC LIFT" EQUIPMENT COMPANY FOR MANUFACTURER'S REQUIREMENTS.
- 28 PROVIDE 208/120V-3 PHASE CONNECTION TO MOTORIZED DROP REEL TO ROTARY CONTROL CONSOLE. POWER SHOULD BE DROPPED DOWN FROM OVERHEAD TO A DISCONNECT ATTACHED TO THE SIDE OF THE CONSOLE. SEE EQUIPMENT SCHEDULE OF "PACIFIC LIFT" EQUIPMENT COMPANY FOR MANUFACTURER'S REQUIREMENTS.
- 29 PROVIDE AND INSTALL WALL MOUNTED CONTROL CONSOLE IN CONTROL ROOM FOR ROTARY LIFT. SEE EQUIPMENT SCHEDULE OF "PACIFIC LIFT" EQUIPMENT COMPANY FOR MANUFACTURER'S REQUIREMENTS.
- 30 PROVIDE 240V-2P-20A TWIST LOCK SPECIAL TYPE RECEPTACLE (NEMA L6-20P) FOR THE ROTARY TIRE CHANGER MACHINE INDICATED.
- 31 PROVIDE 3/4" - 3#10, 1#10 GRD.
- 32 INSTALL RELOCATED IN-GROUND CONTROL CONSOLE FOR VEHICLE LIFT. SEE EQUIPMENT SCHEDULE OF "PACIFIC LIFT" EQUIPMENT COMPANY FOR MANUFACTURER'S REQUIREMENTS.
- 33 PROVIDE ON/OFF SWITCH IN WASH BAY AREA FOR ROTARY LIFT.
- 34 PROVIDE 1" X 1/2" R/D. PULL BOX FOR ROUTING UNDERGROUND POWER FROM WALL MOUNTED DISCONNECT TO AIR COMPRESSOR EQUIPMENT.
- 35 PROVIDE A J-BOX AND CONNECT POWER TO LAVATORY SENSOR AND WATER CLOSET SENSOR AS REQUIRED. REFER TO PLUMBING DRAWINGS FOR EXACT LOCATION AND REQUIREMENTS.
- 36 PROVIDE A J-BOX AND CONNECT POWER TO TRAP PRIMER AS REQUIRED. REFER TO PLUMBING DRAWINGS FOR EXACT LOCATION AND REQUIREMENTS.



**PROJECT No. :50801**  
 4/18/2024 11:42:52 AM

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**MOUNT TRANSIT MAINTENANCE FACILITY**

**LIGHTING AND POWER PLANS**

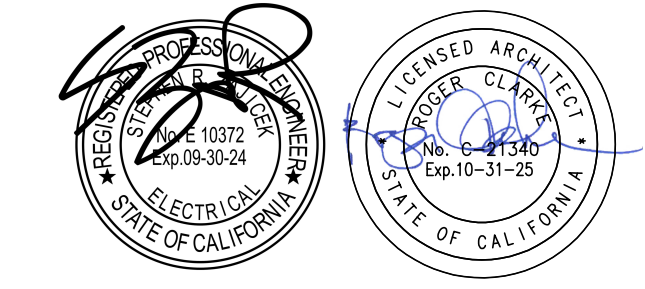
**E1-1.1**

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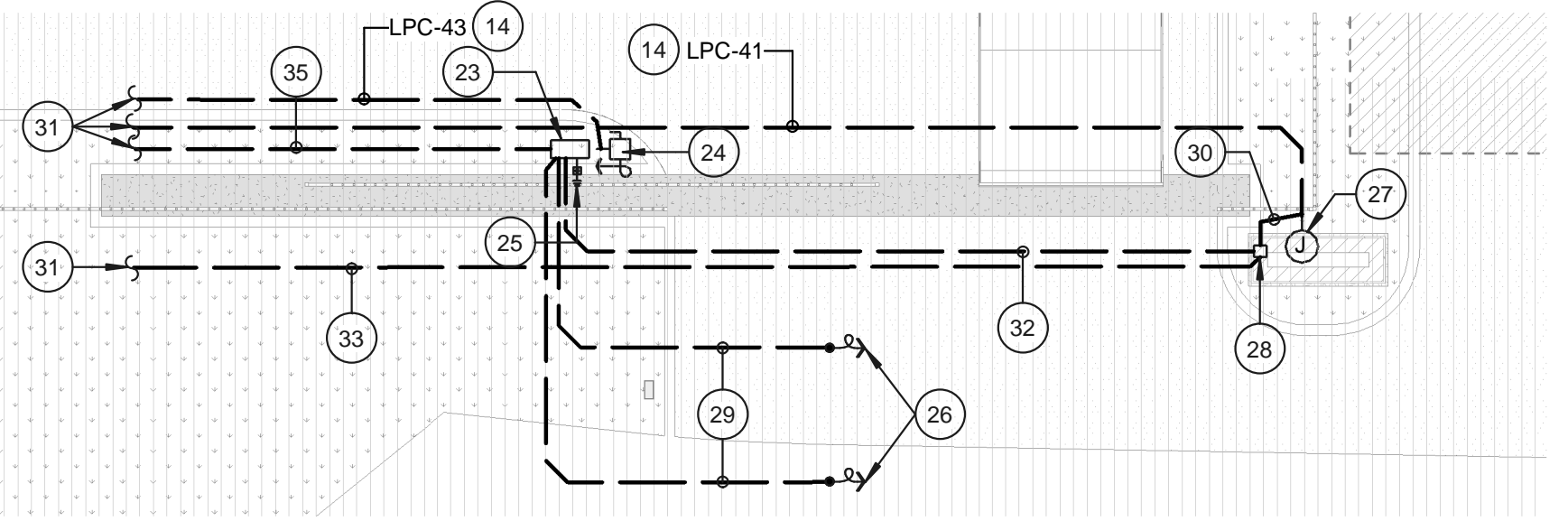


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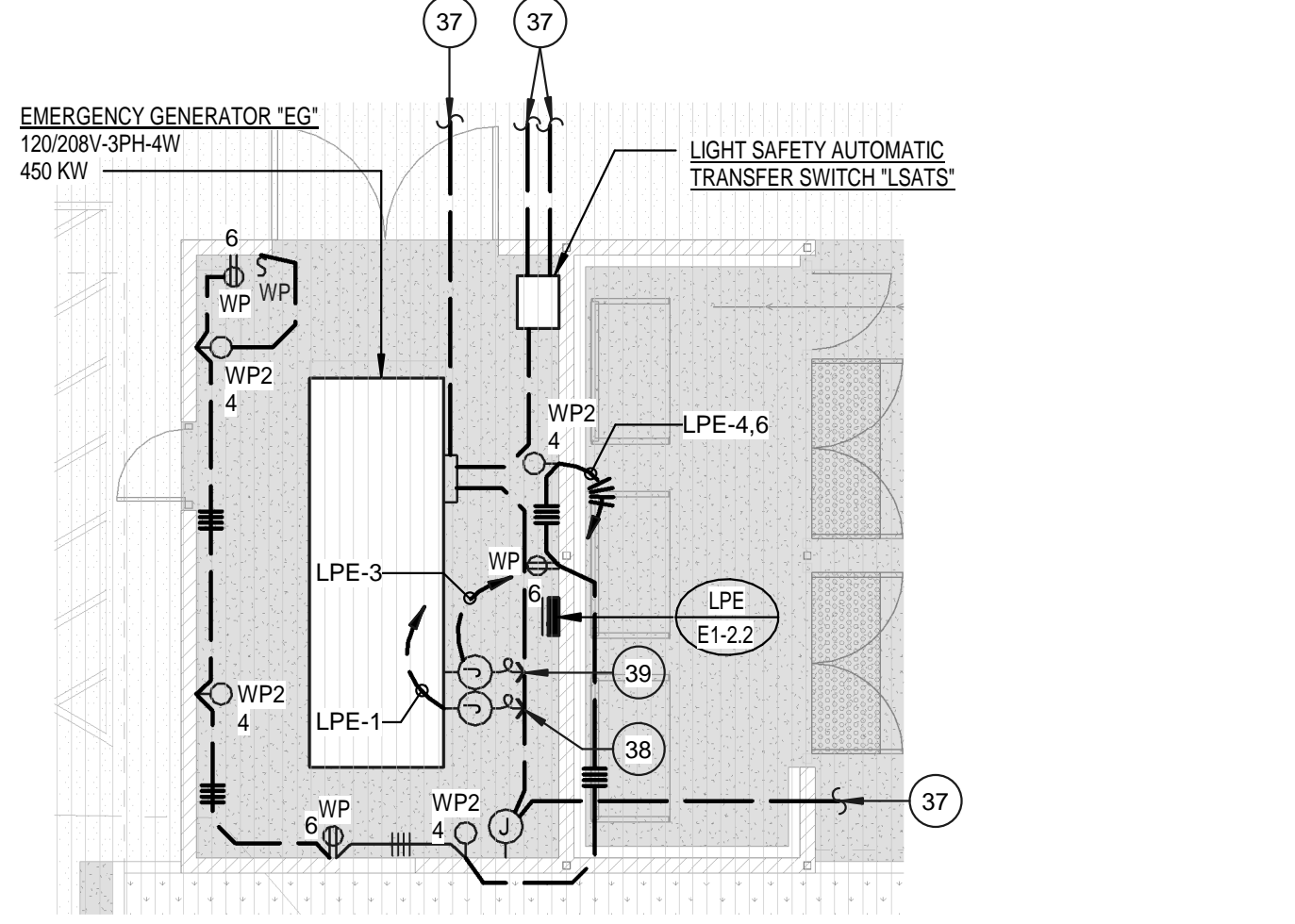
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**PLAN NOTES**

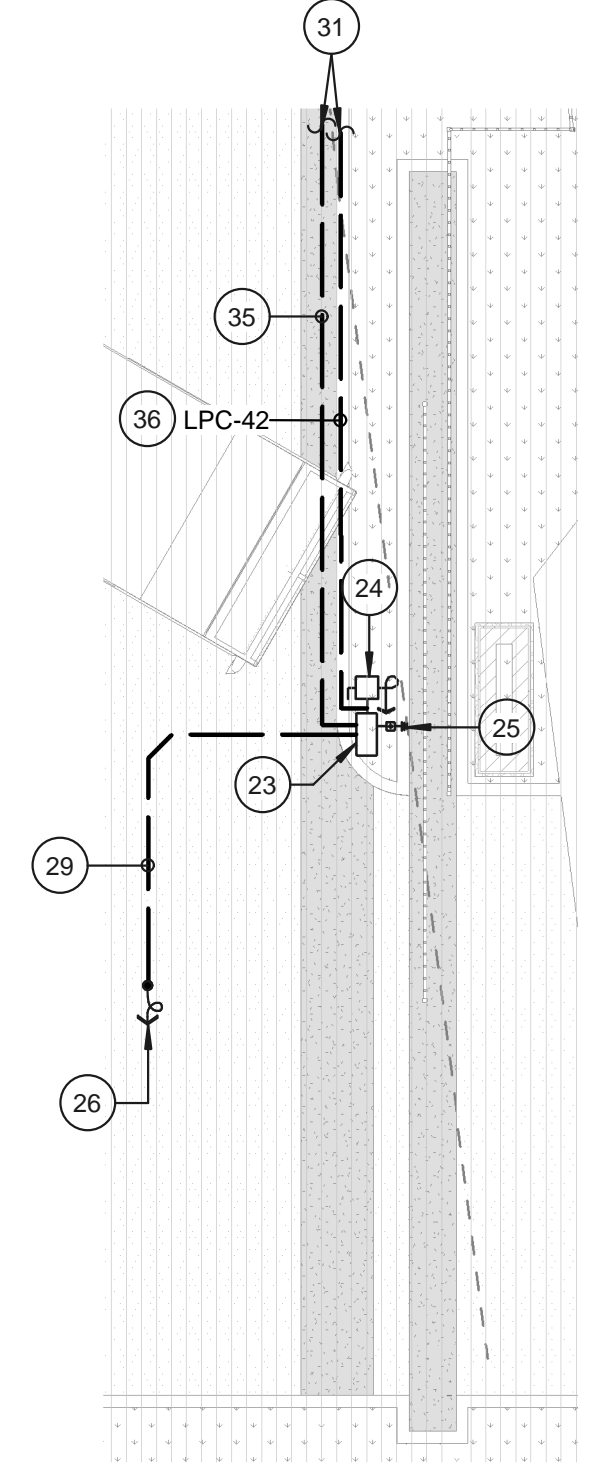
- 1 PROVIDE 5' X 8' X 3/4" PLYWOOD BACKBOARD FOR INTERNET SERVICE CONDUIT TERMINATION.
- 2 PROVIDE 6' X 8' X 3/4" PLYWOOD BACKBOARD FOR DATA NETWORK CONDUIT TERMINATION.
- 3 PROVIDE 6' X 8' X 3/4" PLYWOOD BACKBOARD FOR DATA/VOICE NETWORK CONDUIT TERMINATION.
- 4 PROVIDE 4' X 8' X 3/4" PLYWOOD BACKBOARD FOR PUBLIC ADDRESS/PAGING SYSTEM CONDUIT TERMINATION.
- 5 PROVIDE TWO (2) FLOOR STANDING, 4-PORT, DATA/VOICE NETWORK MAIN DISTRIBUTION FRAME "MDF" EQUIPMENT RACKS.
- 6 FIRE ALARM CONTROL PANEL.
- 7 PROVIDE 24" X 24" X 6"D. TERMINAL CABINET FOR FIRE ALARM SYSTEM CONDUIT TERMINATION.
- 8 PROVIDE 24" X 24" X 6"D. TERMINAL CABINET FOR ENERGY MANAGEMENT SYSTEM CONDUIT TERMINATION.
- 9 PROVIDE 24" X 24" X 6"D. TERMINAL CABINET FOR INTRUSION DETECTION SYSTEM CONDUIT TERMINATION.
- 10 WALL MOUNTED PUBLIC ADDRESS/PAGING SYSTEM EQUIPMENT RACK.
- 11 LIGHTING CONTROL SYSTEM CABINET.
- 12 PROVIDE CABLE TRAY AS INDICATED.
- 13 MOUNT RECEPTACLE INSIDE TERMINAL CABINET.
- 14 PROVIDE 3/4" X 2-1/2" X 1-1/2" GRD.
- 15 PROVIDE 209V-2P-30A TWIST LOCK TYPE RECEPTACLE (NEMA L5-30R) FOR MDF RACK. MOUNT RECEPTACLE ON THE CABLE TRAY.
- 16 MOUNT RECEPTACLE ON THE CABLE TRAY FOR MDF RACK INDICATED.
- 17 PROVIDE 1" C-196 GRD. TO BUILDING'S MAIN GROUNDING SYSTEM.
- 18 HEAT TRACE CHROMA-RG-OD CONTROL PANEL FOR ROOF AND GLITTER DE-ICING APPLICATION WHEN THE SNOW SENSOR SENSES A TEMPERATURE BELOW THE SET-POINT. IT ACTIVATES THE CONTACTOR ENERGIZING THE HEATING ELEMENTS.
- 19 PROVIDE TWO (2) 3" CONDUIT SLEEVES FOR ROUTING SIGNAL SYSTEM CONDUCTOR.
- 20 PROVIDE THREE (3) 3" CONDUIT SLEEVES FOR ROUTING SIGNAL SYSTEM CONDUCTOR.
- 21 PROVIDE ACCESS CONTROL SYSTEM'S POWER SUPPLY AND CONNECT POWER AS REQUIRED.
- 22 PROVIDE ACCESS CONTROL PANEL FOR ACCESS CONTROL SYSTEM.
- 23 SLIDE GATE OPERATOR CONTROLLER. VERIFY EXACT LOCATION WITH ARCHITECTURAL PLANS.
- 24 CONNECT POWER TO GATE CONTROLLER AS REQUIRED.
- 25 PROVIDE 12" X 12" X 1/2" DEEP BOTTOMLESS CONCRETE PULL BOX WITH 12" DEEP PEA-GRAVEL BASE AND 10' LONG X 3/4" DIAMETER COPPER GROUND ROD. MOUNT PULL BOX FLUSH WITH FINISH GRADE AND ENGRAVE COVER: "GROUND".
- 26 POWER CONDUIT STUB-OUT TO OBSTRUCTION LOOP. VERIFY EXACT LOCATION.
- 27 PROVIDE WEATHERPROOF JUNCTION BOX MOUNTED AT +24" WITH DUPLEX GFCI RECEPTACLE AND POWER SUPPLY FOR RF CARD READER.
- 28 PROVIDE LONG-RANGE GATE KEYPAD/RF CARD READER 1833-80 SERIES TELEPHONE ENTRY SYSTEM MOUNTED TO POLE ON REINFORCED CONCRETE BASE. VERIFY EXACT LOCATION PRIOR TO ROUGH-IN. PROVIDE MOUNTING HARDWARE KIT FOR READER TO ATTACH TO POLE. POLE SHALL BE 4 INCHES ROUND X 3/4" STEEL TUBE. GRIND ALL WELDS SMOOTH AND PRIME POWDER COAT WITH (4) 1/2" DIA. THREAD ROD. ANCHOR BASE AND COLOR FINISH TO MATCH PARKING LOT LIGHTS. PROVIDE 1/2" DIA. REINFORCED CONCRETE ANCHOR BASE SET 18 INCHES DEEP INTO GRADE AND 3" ABOVE GRADE.
- 29 PROVIDE 3/4" CONDUIT FROM GATE CONTROLLER TO OBSTRUCTION LOOP INSTALLED BY GATE CONTROLLER.
- 30 PROVIDE 3/4" X 2-1/2" X 1-1/2" GRD. FOR LOW VOLTAGE POWER DUPPLY TO RF CARD READER.
- 31 SEE SHEET ES-1 SITE ELECTRICAL PLAN FOR CONTINUATION.
- 32 PROVIDE 3/4" X 2-1/2" X 1-1/2" GRD. FOR GATE CONTROLLER.
- 33 PROVIDE 1" CONDUIT WITH ONE (1) CAT5 CABLE TO TWO WAY COMMUNICATION CONTROLLER IN MAIN OFFICE ROOM #102. SEE NOTE #23 ON SHEET ES-1 FOR MORE INFORMATION.
- 34 PROVIDE 3/4" CONDUIT AND CABLE FROM DOOR'S CARD READER TO CARD READER ACCESS CONTROL IN DATA ROOM #111.
- 35 PROVIDE 1" C-196 WITH 2#12, #1/2 GRD. FROM ACCESS CONTROL IN DATA ROOM #111 TO GATE OPERATING MECHANISM.
- 36 PROVIDE 3/4" X 2-1/2" X 1-1/2" GRD.
- 37 SEE SITE PLAN ON SHEET ES-1 FOR CONTINUATION.
- 38 CONNECT POWER TO BATTERY CHARGER.
- 39 CONNECT POWER TO JACKET WATER HEATER.
- 40 GENERATOR'S CONTROL PANEL. VERIFY EXACT LOCATION.



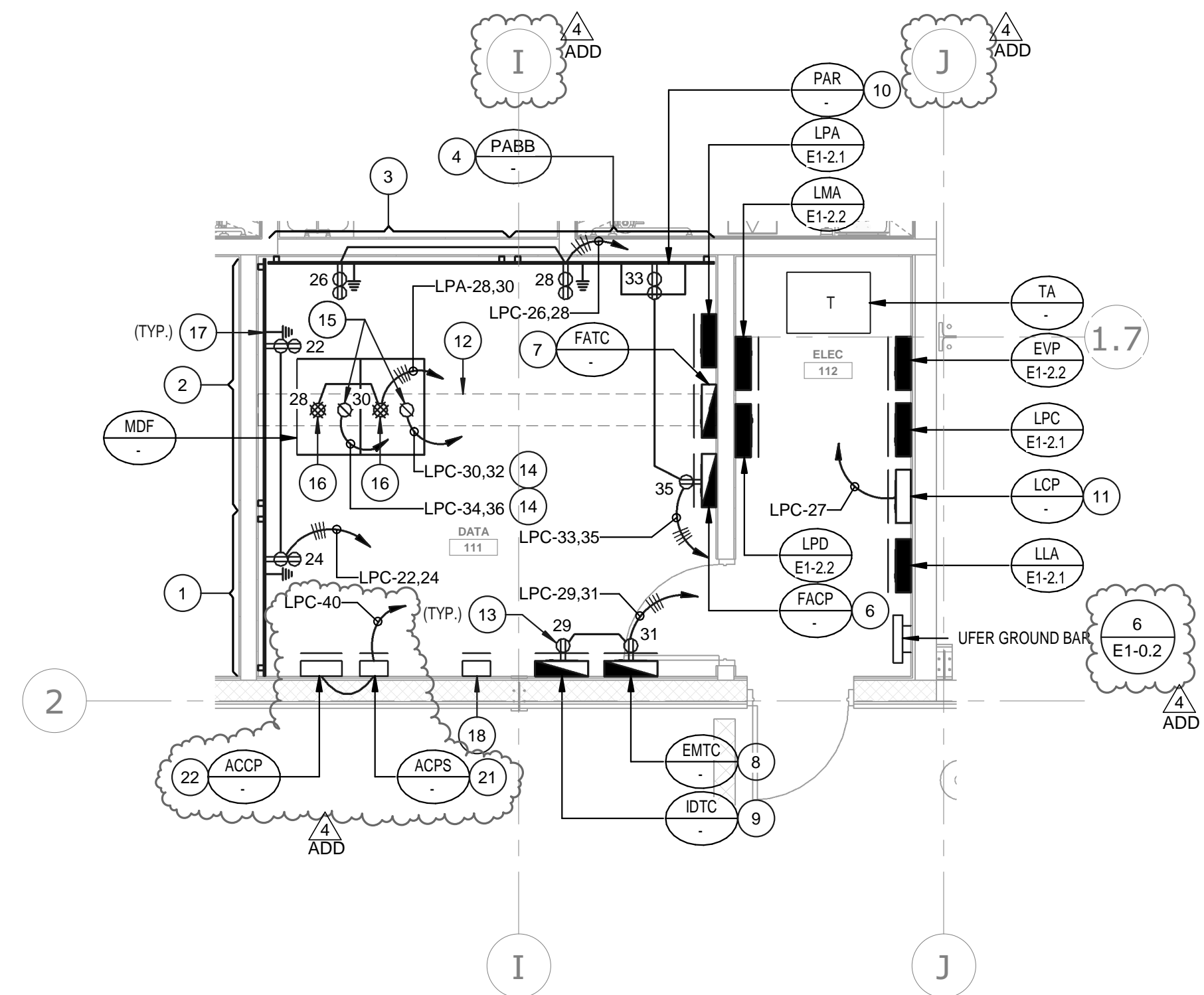
**ENTRY GATE ENLARGED ELECTRICAL PLAN** 1/8" = 1'-0" 4



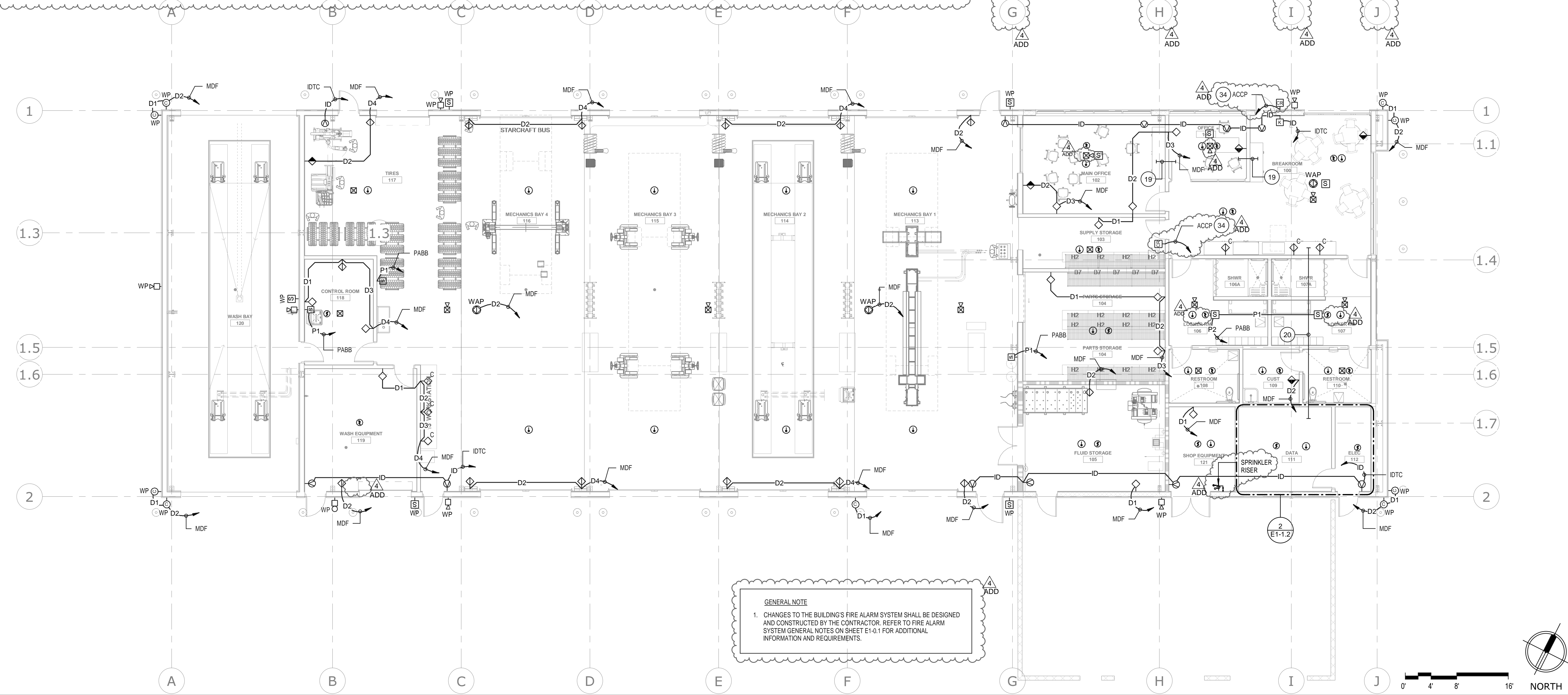
**ELECTRICAL EMERGENCY ENCLOSURE** 1/8" = 1'-0" 5



**EXIT GATE ENLARGED ELECTRICAL PLAN** 1/8" = 1'-0" 3



**ENLARGED ELECTRICAL ROOM** 1/4" = 1'-0" 2



**SIGNAL PLAN AND FIRE ALARM PLANS** 1/8" = 1'-0" 1

**GENERAL NOTE**  
 1. CHANGES TO THE BUILDING'S FIRE ALARM SYSTEM SHALL BE DESIGNED AND CONSTRUCTED BY THE CONTRACTOR. REFER TO FIRE ALARM SYSTEM GENERAL NOTES ON SHEET E1-0.1 FOR ADDITIONAL INFORMATION AND REQUIREMENTS.

ISSUE No.	DATE	DESCRIPTION	REVISION No.	DATE	DESCRIPTION
1	04/18/2024	ISSUE 1	1	04/18/2024	ISSUE 1
2	05/18/24	ADDENDUM 4	2	05/18/24	ADDENDUM 4

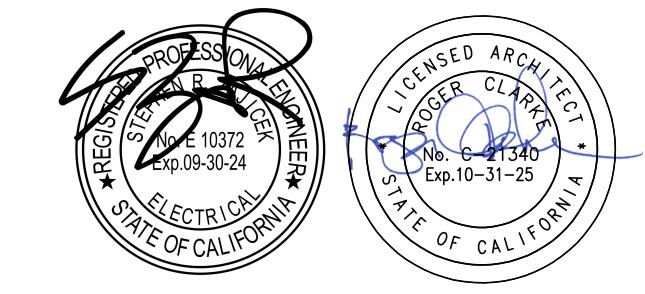
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**MOUNT TRANSIT MAINTENANCE FACILITY**

**ELECTRICAL PLAN  
 AND ENLARGED  
 ELECTRICAL ROOM**

**E1-1.2**





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CONSULTANT BRANDING

Branch Panel: LPB MOUNT TRANSIT MAINTENANCE FACILITY. Location: CONTROL ROOM 118. Volts: 120/208 Wye. Phases: 3. Wires: 4. A.I.C. Rating: 14,000. Mains Type: Mains Rating: 150 A. MCB Rating: 225 A. Table with 30 columns (CKT, Circuit Description, Note, Quan, Trip, Pole, A, B, C, A, B, C, Pole, Trip, Quan, Note, Circuit Description, CKT) and 54 rows of circuit data.

Branch Panel: LLA MOUNT TRANSIT MAINTENANCE FACILITY. Location: ELEC 112. Volts: 120/208 Wye. Phases: 3. Wires: 4. A.I.C. Rating: 10,000. Mains Type: Mains Rating: 100 A. MCB Rating: 100 A. Table with 30 columns (CKT, Circuit Description, Note, Quan, Trip, Pole, A, B, C, A, B, C, Pole, Trip, Quan, Note, Circuit Description, CKT) and 30 rows of circuit data.

Branch Panel: LPC MOUNT TRANSIT MAINTENANCE FACILITY. Location: ELEC 112. Volts: 120/208 Wye. Phases: 3. Wires: 4. A.I.C. Rating: 14,000. Mains Type: Mains Rating: 150 A. MCB Rating: 225 A. Table with 30 columns (CKT, Circuit Description, Note, Quan, Trip, Pole, A, B, C, A, B, C, Pole, Trip, Quan, Note, Circuit Description, CKT) and 54 rows of circuit data.

Branch Panel: LPA MOUNT TRANSIT MAINTENANCE FACILITY. Location: Space B228. Volts: 120/208 Wye. Phases: 3. Wires: 4. A.I.C. Rating: 14,000. Mains Type: Mains Rating: 150 A. MCB Rating: 225 A. Table with 30 columns (CKT, Circuit Description, Note, Quan, Trip, Pole, A, B, C, A, B, C, Pole, Trip, Quan, Note, Circuit Description, CKT) and 42 rows of circuit data.

PROJECT No. :50801 4/18/2024 11:43:00 AM

Table with 2 columns: DRAWS BY, CHECKED BY. Includes fields for ISSUE No., DATE, DESCRIPTION, REVISION No., DATE, DESCRIPTION, Addendum #.

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MOUNT TRANSIT MAINTENANCE FACILITY PANEL SCHEDULES

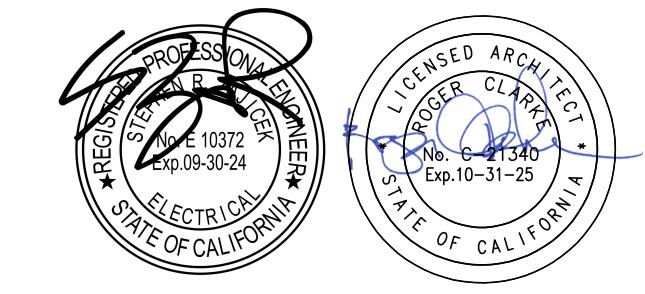
E1-2.1

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CONSULTANT BRANDING

Branch Panel: EVP MOUNT TRANSIT MAINTENANCE FACILITY. Location: ELEC 112. Supply From: Surface. Mounting: Surface. Includes circuit schedule table with columns for CKT, Circuit Description, Note, Quan, Trip, Pole, A, B, C, Pole, Trip, and Circuit Description. Total Load: 21600 VA, Total Amps: 180 A.

Branch Panel: LPD MOUNT TRANSIT MAINTENANCE FACILITY. Location: ELEC 112. Supply From: Surface. Mounting: Surface. Includes circuit schedule table with columns for CKT, Circuit Description, Trip, Pole, A, B, C, Pole, Trip, and Circuit Description. Total Load: 25440 VA, Total Amps: 122 A.

Branch Panel: LPE MOUNT TRANSIT MAINTENANCE FACILITY. Location: EMERGENCY ENCLOSURE. Supply From: Surface. Mounting: Surface. Includes circuit schedule table with columns for CKT, Circuit Description, Trip, Pole, A, B, C, Pole, Trip, and Circuit Description. Total Load: 1200 VA, Total Amps: 11 A.

Branch Panel: LMA MOUNT TRANSIT MAINTENANCE FACILITY. Location: ELEC 112. Supply From: Surface. Mounting: Surface. Includes circuit schedule table with columns for CKT, Circuit Description, Note, Quan, Trip, Pole, A, B, C, Pole, Trip, and Circuit Description. Total Load: 29057 VA, Total Amps: 248 A.

PROJECT No.: 50801 4/18/2024 11:43:00 AM. Revision table with columns for Issue No., Date, Description, and Revision No.

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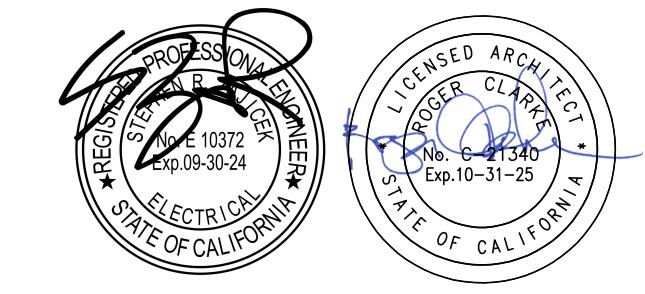
E1-2.2

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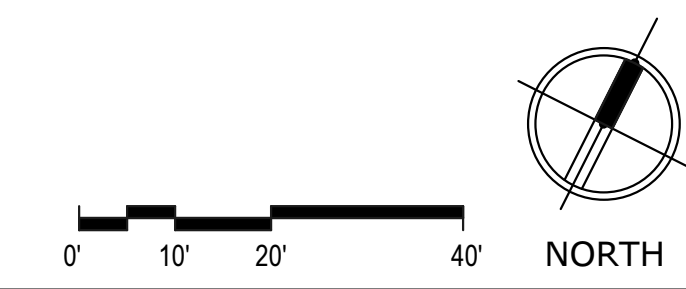
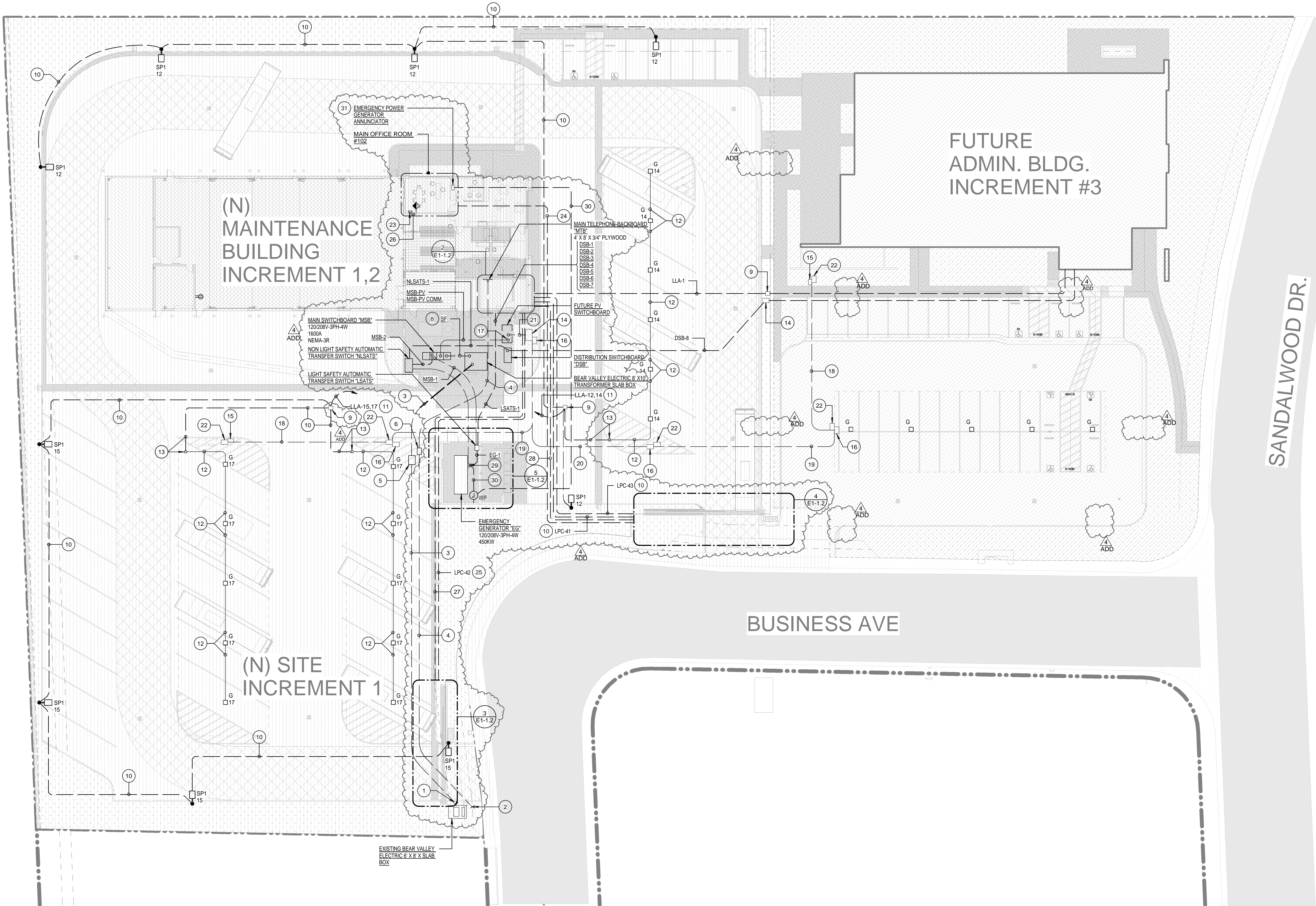
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FBA Job Number: 8741055

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**PLAN NOTES**

- 1 INTERCEPT EXISTING CONCRETE SLAB BOX AS PER BEAR VALLEY SERVICE REQUIREMENTS AND EXTEND NEW CONDUITS AS INDICATED.
- 2 INTERCEPT EXISTING SPECTRUM COMMUNICATIONS SERVICE CONDUITS AND EXTEND AS INDICATED. COMPLY WITH ALL SPECTRUM COMMUNICATIONS SERVICE REQUIREMENTS.
- 3 PROVIDE TWO (2) 5" C. WITH BEAR VALLEY ELECTRIC PRIMARY SERVICE CONDUCTORS.
- 4 PROVIDE TWO (2) 4" C. WITH SPECTRUM COMMUNICATIONS SERVICE CONDUCTORS.
- 5 PROVIDE 3' X 5' X 4" CONCRETE PULLBOX WITH BOLT-DOWN TRAFFIC RATED COVER. COMPLY WITH ALL BEAR VALLEY ELECTRIC SERVICE REQUIREMENTS.
- 6 PROVIDE 2' X 3' X 3" CONCRETE PULLBOX WITH BOLT-DOWN TRAFFIC RATED COVER. COMPLY WITH ALL SPECTRUM COMMUNICATIONS SERVICE REQUIREMENTS.
- 7 CONCRETE TRENCH WITH TRAFFIC RATED DIAMOND PLATE COVER FOR ROUTING OF BEAR VALLEY ELECTRIC SECONDARY SERVICE CONDUCTORS. COMPLY WITH ALL BEAR VALLEY ELECTRIC SERVICE REQUIREMENTS.
- 8 SECONDARY FEEDER CONDUIT PER UTILITY COMPANY.
- 9 PROVIDE 18" X 12" X 24" DEEP CONCRETE PULL BOX WITH BOLT-DOWN TRAFFIC RATED COVER ENGRAVED "LIGHTING".
- 10 PROVIDE 3/4" C.-2#10, 1#10 GRD.
- 11 PROVIDE 3/4" C.-4#10, 1#10 GRD.
- 12 PROVIDE 3/4" C.-2#10, 1#10 GRD. LIGHTING CONDUIT ON THE CANOPY. REFER TO CANOPY STRUCTURE FOR CANOPY STRUCTURE'S MANUFACTURER REQUIREMENTS.
- 13 ROUTE CONDUIT DOWN INSIDE THE CANOPY COLUMN AND EXTEND UNDERGROUND CONDUIT TO THE LIGHTING PULL BOX INDICATED. REFER TO CANOPY STRUCTURE FOR CANOPY STRUCTURE'S MANUFACTURER REQUIREMENTS.
- 14 PROVIDE 1' X 5' X 3' DEEP CONCRETE PULL BOX WITH BOLT-DOWN TRAFFIC RATED COVER ENGRAVED "PV-POWER". INSTALL PULL BOX LID AND COVER FLUSH WITH THE ADJACENT FINISH GRADE.
- 15 PROVIDE 18" X 30" X 24" DEEP CONCRETE PULL BOX WITH BOLT-DOWN TRAFFIC RATED COVER ENGRAVED "PV-COMM". INSTALL PULL BOX LID AND COVER FLUSH WITH THE ADJACENT FINISH GRADE.
- 16 PROVIDE 2' X 3' X 2' DEEP CONCRETE PULL BOX WITH BOLT-DOWN TRAFFIC RATED COVER ENGRAVED "PV-COMM". INSTALL PULL BOX LID AND COVER FLUSH WITH THE ADJACENT FINISH GRADE.
- 17 INDICATED CONDUITS SHALL EXTEND INTO THE ENCLOSURE BELOW GRADE. STUB UP AND CAP AT FUTURE PV SYSTEM SWITCHBOARD. VERIFY THE EXACT LOCATION PRIOR TO ROUGH-IN.
- 18 PROVIDE ONE (1) 4" C.O. FOR FUTURE PV POWER CONDUCTORS AND ONE (1) 2" C.O. FOR PV COMMUNICATIONS.
- 19 PROVIDE TWO (2) 4" C.O. FOR FUTURE PV POWER CONDUCTORS AND TWO (2) 2" C.O. FOR PV COMMUNICATIONS.
- 20 PROVIDE THREE (3) 4" C.O. FOR FUTURE PV POWER CONDUCTORS AND THREE (3) 2" C.O. FOR PV COMMUNICATIONS.
- 21 PROVIDE FIVE (5) 4" C.O. FOR FUTURE PV POWER CONDUCTORS AND FIVE (5) 2" C.O. FOR PV COMMUNICATIONS.
- 22 PROVIDE 2' X 3' X 2' DEEP CONCRETE PULL BOX WITH BOLT-DOWN TRAFFIC RATED COVER ENGRAVED "PV-POWER". INSTALL PULL BOX LID AND COVER FLUSH WITH THE ADJACENT FINISH GRADE.
- 23 PROVIDE AND INSTALL DKS 1833-80 SERIES CONTROLLER FOR ENTRY GATE TWO WAY COMMUNICATION SYSTEM.
- 24 PROVIDE 1" CONDUIT WITH 2#12, 1#12 GRD. FROM GATE OPERATOR TO TWO WAY COMMUNICATION IN MAIN OFFICE ROOM #102. SEE DETAIL "4" ON SHEET E1-1.2 FOR CONTINUATION.
- 25 PROVIDE 3/4" C.-2#8, 1#10 GRD.
- 26 INTERCONNECT THE CONTROLLER WITH PHONE SYSTEM.
- 27 PROVIDE 1" C.- WITH 2#12, 1#12 GRD. FROM ACCESS CONTROL IN DATA ROOM #111 TO GATE OPERATING MECHANISM. SEE DETAIL "3" ON SHEET E1-1.2 FOR CONTINUATION.
- 28 PROVIDE 1" C.- WITH 2#12, 1#12 GRD. FROM ACCESS CONTROL IN DATA ROOM #111 TO GATE OPERATING MECHANISM. SEE DETAIL "4" ON SHEET E1-1.2 FOR CONTINUATION.
- 29 GENERATOR'S CONTROL PANEL. VERIFY EXACT LOCATION.
- 30 PROVIDE 1" C. WITH GENERATOR'S ANNUNCIATOR WIRING.
- 31 PROVIDE EMERGENCY POWER GENERATOR ANNUNCIATOR AS INDICATED. VERIFY EXACT LOCATION.



**SITE ELECTRICAL PLAN** 1" = 20'-0" 1

**PROJECT No. :50801**  
4/18/2024 11:43:12 AM

ISSUE No.	DATE	DESCRIPTION	REVISION No.	DATE	DESCRIPTION

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**MOUNT TRANSIT MAINTENANCE FACILITY**

**SITE ELECTRICAL PLAN**

**ES1-1**

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