

**SECTION 00 91 13.01**  
**ADDENDA #01**

**1.1 PROJECT INFORMATION**

- A. Project Name: Royal C. Johnson Veterans Memorial Medical Center New Front Lobby & Primary Care Addition.
- B. Owner: U.S. Department of Veterans Affairs.
- C. Owner Project Number: 438-480
- D. Architect: Stone Group Architects.
- E. Architect Project Number: 201909.
- F. Date of Addendum: February 13, 2024.

**1.2 NOTICE TO BIDDERS**

- A. This Addendum is issued pursuant to the Instructions to Bidders and Conditions of the Contract. This Addendum serves to clarify, revise, and supersede information in the Project Manual, Drawings, and previously issued Addenda. Portions of the Addendum affecting the Contract Documents will be incorporated into the Contract by enumeration of the Addendum in the Owner/Contractor Agreement.
- B. The Bidder shall acknowledge receipt of this Addendum in the appropriate space on the Bid Form.

**1.3 ATTACHMENTS**

- A. This Addendum includes the following attached Documents and Specification Sections:
  - 1. Document Special Inspection and Testing Schedule (new).
  - 2. Specification Section 00 01 10 - Table of Contents, (reissued).
  - 3. Specification Section 01 32 16.15 - Project Schedules (Small Projects - Design/Bid/Build), (new).
  - 4. Specification Section 01 45 29 - Testing and Laboratory Services, (reissued).
  - 5. Specification Section 04 05 13 - Masonry Mortaring, (new).
  - 6. Specification Section 04 05 16 - Masonry Grouting, (new).
  - 7. Specification Section 04 20 00 - Unit Masonry, (new).
  - 8. Specification Section 07 22 00 - Roof and Deck Insulation, (reissued).
  - 9. Specification Section 09 54 16 - Luminous Ceilings, (new).
  - 10. Specification section 26 05 13 - Medium-Voltage Cables, (reissued).
  - 11. Specification section 26 05 19 - Low-Voltage Electrical Power Conductors and Cables, (reissued).

B. This Addendum includes the following attached Sheets:

1. Sheet V001 - TOPOGRAPHIC SURVEY, dated 2/13/2024(reissued).
2. Sheet C101 - DEMOLITION PLAN - DEDUCT ALTERNATE, dated 2/13/2024 (reissued).
3. Sheet C210 - CONCRETE JOINTING PLAN BASE, dated 2/13/2024 (reissued).
4. Sheet C300 - GRADING PLAN - BASE, dated 2/13/2024 (reissued).
5. Sheet C301 - ENLARGED GRADING PLAN - BASE, dated 2/13/2024 (reissued).
6. Sheet C600 - UTILITY PLAN - BASE, dated 2/13/2024 (reissued).
7. Sheet C601 - UTILITY PLAN - DEDUCT ALTERNATE, dated 2/13/2024 (reissued).
8. Sheet AD101 - GROUND LEVEL DEMOLITION PLAN & RCP, dated 2/13/2024 (reissued).
9. Sheet AD102 - ROOF DEMOLITION PLAN, dated 2/13/2024 (reissued).
10. Sheet AE100 - ARCHITECTURAL SITE PLAN, dated 2/13/2024 (reissued).
11. Sheet AE313 - WALL SECTIONS, dated 2/13/2024(reissued).
12. Sheet AE314 - WALL SECTIONS, dated 2/13/2024 (reissued).
13. Sheet AE315 - WALL SECTIONS, dated 2/13/2024 (reissued).
14. Sheet AE402 - BUS STOP DETAILS, dated 2/13/2024 (reissued).
15. Sheet AE502 - DETAILS, dated 2/13/2024(reissued).
16. Sheet AE601 - SCHEDULES, dated 2/13/2024 (reissued).
17. Sheet AE602 - WINDOW TYPES, dated 2/13/2024 (reissued).

**1.4 REVISIONS TO SPECIFICATIONS**

- A. Specification Section 00 01 10 - Table of Contents, (reissued).
1. Remove Section 01 32 16.13 - Network Analysis Schedules - Major Construction Project Design-Bid Build.
  2. Add Section 01 32 16.15 - Project Schedules (Small Projects - Design/Bid/Build).
  3. Add Division 04 - Masonry.
  4. Add Section 04 05 13 - Masonry Mortaring.
  5. Add Section 04 05 16 - Masonry Grouting.
  6. Add Section 04 20 00 - Unit Masonry.
  7. Add Section 09 54 16 - Luminous Ceilings.
- B. Specification Section 01 00 00 - General Requirements, (not reissued).
1. Paragraph 1.3.B: Change to read "ALTERNATE NO.1: Delete terrazzo flooring (RES-1) and recessed concrete slab at all locations and replace with rubber flooring (RF-2).
- C. Section 01 32 16.13 - Network Analysis Schedules - Major Construction Project Design-Bid Build, (deleted).
1. Remove this section in its entirety.
- D. Specification Section 01 32 16.15 - Project Schedules (Small Projects - Design/Bid/Build), (new).
1. Add new attached section in its entirety.
- E. Section 01 45 29 - Testing and Laboratory Services, (reissued).
1. Replace existing section with attached revised section in its entirety.

- F. Specification Section 04 05 13 - Masonry Mortaring, (new).
  - 1. Add new attached section in its entirety.
- G. Specification Section 04 05 16 - Masonry Grouting, (new).
  - 1. Add new attached section in its entirety.
- H. Specification Section 04 20 00 - Unit Masonry, (new).
  - 1. Add new attached section in its entirety.
- I. Specification Section 07 22 00 - Roof and Deck Insulation, (reissued).
  - 1. Replace existing section with attached revised section in its entirety.
- J. Specification Section 07 54 23 - Thermoplastic Polyolefin (TPO) Roofing, (not reissued).
  - 1. Add new paragraph 1.10.B.2 "Warranty shall cover damage or leaks caused by ordinary wear and tear of the elements and damage due to winds up to 90 mph."
- K. Specification Section 09 54 16 - Luminous Ceilings, (new).
  - 1. Add new attached section in its entirety.
- L. Specification section 12 24 00 - Window Shades, (not reissued).
  - 1. Delete paragraph 1.2.B.
- M. Specification section 26 05 13 - Medium-Voltage Cables, (reissued).
  - 1. Add Medium Voltage Cables section.
- N. Specification section 26 05 19 - Low-Voltage Electrical Power Conductors and Cables, (reissued).
  - 1. Revise part 2.2 SPLICES

#### 1.5 REVISIONS TO DRAWING SHEETS

- A. Sheet V001 - TOPOGRAPHIC SURVEY (reissued).
  - 1. Drawing scale revised.
- B. Sheet C101 - DEMOLITION PLAN - DEDUCT ALTERNATE (reissued).
  - 1. Drawing scale revised.
- C. Sheet C200 - SITE PAVING PLAN BASE (not reissued).
  - 1. Callout note for ADA parking signage should read "ALL PARKING SIGNS TO BE MOUNTED ON BOLLARDS - SEE DETAIL 1/C905 FOR REQUIRED DIMENSIONS AND DETAIL 2/C905 FOR BOLLARD MOUNTING TYPE."
- D. Sheet C210 - CONCRETE JOINTING PLAN BASE (reissued).
  - 1. Drawing scale revised.
- E. Sheet C300 - GRADING PLAN - BASE (reissued).
  - 1. Drawing scale revised.
- F. Sheet C301 - ENLARGED GRADING PLAN - BASE (reissued).
  - 1. Drawing scale revised.

- G. Sheet C600 - UTILITY PLAN - BASE (reissued).
  - 1. Drawing scale revised.
  
- H. Sheet C601 - UTILITY PLAN - DEDUCT ALTERNATE (reissued).
  - 1. Drawing scale revised.
  
- I. Sheet SB101 - GROUND LEVEL FOUNDATION PLAN - AREA A (not reissued).
  - 1. Foundation Plan Sheet Note D.5: Change to read "Pile foundations have been designed using 40 kip or 20 ton helical piles, based on the geotechnical report as noted in the General Structural Notes. Notify Structural Engineer of Record if alternate pile size or capacity is proposed."
  
- J. Sheet AD101 - GROUND LEVEL DEMOLITION PLAN & RCP (reissued).
  - 1. Plans C3 and F3 - Added demolition wall section call outs.
  
- K. Sheet AD102 - ROOF DEMOLITION PLAN (reissued).
  - 1. Plan F1 - Added demolition wall section call outs.
  - 2. Plan F1 - Added brick veneer notes.
  
- L. Sheet AE100 - ARCHITECTURAL SITE PLAN (reissued).
  - 1. Added notations and location dimensions for flag poles.
  
- M. Sheet AE111 - GROUND LEVEL REFLECTED CEILING PLAN - AREA B (not reissued).
  - 1. Keynote #9.24B: Change to read "LUMINOUS SKYCEILING SYSTEM BY SKY FACTORY. DEDUCT ALT. 2".
  
- N. Sheet AE313 - WALL SECTIONS (reissued).
  - 1. Section F1 - added "similar" clarification to roof type designation.
  - 2. Detail B4 - Revisions and clarifications to detail.
  - 3. Detail B6 - Revisions and clarifications to detail.
  
- O. Sheet AE314 - WALL SECTIONS (reissued).
  - 1. Section E1A - Added keynote for existing concrete wall to remain.
  - 2. Section E1B - Added clarification to new floor slab and removed insulation hatch in shaft wall assembly.
  - 3. Section E2A - Added keynote for existing beams to be removed.
  - 4. Section E2B - Removed insulation hatch in shaft wall assembly.
  - 5. Keynotes - Revised keynote 2.35.
  
- P. Sheet AE315 - WALL SECTIONS (reissued).
  - 1. Revisions to all wall sections.
  
- Q. Sheet AE402 - BUS STOP DETAILS (reissued).
  - 1. Updates to detailing and clarifications for deduct alternate requirements.
  
- R. Sheet AE502 - Details (reissued).
  - 1. Revisions to details C1, E1, F1 and F3.
  
- S. Sheet AE601 - Schedules (reissued).
  - 1. Roof Types - Added cover board to roof types R1, R3, R4, and R5.
  
- T. Sheet AE602 - WINDOW TYPES (reissued).

1. Clarification of SPG bus bar locations added to frames W16 and W17.
- U. Sheet MH101 - GROUND LEVEL HVAC PLAN - AREA A (reissued).
1. Clarified that bus stop equipment will be deleted under acceptance of deduct alternate #7.
- V. Sheet MH113 - FIRST FLOOR MECHANICAL ROOM HVAC PLAN (reissued).
1. Added locations for smoke detectors to be installed on duct mains for each AHU.
- W. Sheet M502 - MECHANICAL - ELECTRICAL SCHEDULES (reissued).
1. Updated basis-of-design air-cooled chiller model number and performance data.
- X. Sheet ED101 - ELECTRICAL SITE MEDIUM VOLTAGE DEMOLITION PLAN (reissued).
1. Revise demolition of Medium Voltage Feeder to Transformer 38.
- Y. Sheet ED300 - ELECTRICAL RISER DEMOLITION (reissued).
1. Remove MH-9A
  2. Revise Demolition of Medium Voltage Cabling.
- Z. Sheet EE100 - ELECTRICAL SITE PLAN (reissued).
1. Update keynote number to correct keynote.
  2. Revise keynote 3.
  3. Add keynote 9 Deduct 7 clarity
- AA. Sheet EE101 - ELECTRICAL SITE MEDIUM VOLTAGE PLAN (reissued).
1. Revise Medium Voltage Feeder to Transformer 38.
- BB. Sheet EP102 - GROUND LEVEL POWER PLAN AREA B (reissued).
1. Revise Keynote 2
- CC. Sheet EE301 - ELECTRICAL RISERS (reissued).
1. Revise general note J.
  2. Revise Camera Schedule.
- DD. Sheet EE302 - ELECTRICAL RISERS (reissued).
1. Revise Medium Voltage Cabling.
- EE. Sheet EE501 - ELECTRICAL DETAILS (reissued).
1. Detail 7 - Revise Keynotes 4 and 5
- FF. Sheet EE503 - ELECTRICAL DETAILS (reissued).
1. Detail 6 - Add new detail Bollard Base Detail

END OF DOCUMENT 00 91 13.01

**SECTION 01432 – SPECIAL INSPECTION AND TESTING SCHEDULE**

Project Name New Front Lobby and Primary Care Addition Project No. VA #438-480

Location Sioux Falls, South Dakota

Permit No. \_\_\_\_\_ (1)

**SPECIAL INSPECTION SCHEDULE**

<b>Specification Section (2)</b>	<b>Description (3)</b>	<b>Type of Inspector (4)</b>	<b>Report Frequency (5)</b>	<b>Assigned Firm (6)</b>
31-2000	Soils, IBC Table 1705.6	Per ITA	Monthly	ITA
31-6000	Helical Pile Foundations, IBC Section 1705.9	Per ITA	End of Project	ITA
03-3000, 03-4000	Concrete Construction, IBC Table 1705.3	Per ITA	Monthly	ITA
05-1200	Steel Construction, IBC Section 1705.2.1	Per ITA	Monthly	ITA
05-3000	Cold-formed steel deck, IBC Section 1705.2.2	Per ITA	Monthly	ITA
03-4000, 04-2000	Expansion Anchors, IBC Section 1705.1.1 Special inspection shall be as described in the manufacturer's ICC-ES Report.	Per ITA	End of Project	ITA
03-4000, 04-2000	Adhesive Anchors, IBC Section 1705.1.1 Special inspection shall be as described in the manufacturer's ICC-ES Report.	Per ITA	End of Project	ITA
05-2000	Open-web steel joists and joist girders, IBC Table 1705.2.3	Per ITA	Monthly	ITA

- (1) Permit No. to be provided by the Building Official.
- (2) Referenced to Specifications sections.
- (3) Descriptions per IBC Chapter 17.
- (4) Special Inspector – Technical, Special Inspector – Structural
- (5) Weekly, monthly, per-test/inspection, per floor, etc.
- (6) Firm contracted to perform services.

**DEPARTMENT OF VETERANS AFFAIRS  
VHA MASTER SPECIFICATIONS**

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**SECTION 01 32 16.15**  
**PROJECT SCHEDULES**  
**(SMALL PROJECTS - DESIGN/BID/BUILD)**

**PART 1- GENERAL**

**1.1 DESCRIPTION:**

- A. The Contractor shall develop a Critical Path Method (CPM) plan and schedule demonstrating fulfillment of the contract requirements (Project Schedule), and shall keep the Project Schedule up-to-date in accordance with the requirements of this section and shall utilize the plan for scheduling, coordinating and monitoring work under this contract (including all activities of subcontractors, equipment vendors and suppliers). Conventional Critical Path Method (CPM) technique shall be utilized to satisfy both time and cost applications.

**1.2 CONTRACTOR'S REPRESENTATIVE:**

- A. The Contractor shall designate an authorized representative responsible for the Project Schedule including preparation, review and progress reporting with and to the Contracting Officer's Representative (COTR).
- B. The Contractor's representative shall have direct project control and complete authority to act on behalf of the Contractor in fulfilling the requirements of this specification section.
- C. The Contractor's representative shall have the option of developing the project schedule within their organization or to engage the services of an outside consultant. If an outside scheduling consultant is utilized, Section 1.3 of this specification will apply.

**1.3 CONTRACTOR'S CONSULTANT:**

- A. The Contractor shall submit a qualification proposal to the COTR, within 10 days of bid acceptance. The qualification proposal shall include:
1. The name and address of the proposed consultant.
  2. Information to show that the proposed consultant has the qualifications to meet the requirements specified in the preceding paragraph.
  3. A representative sample of prior construction projects, which the proposed consultant has performed complete project scheduling services. These representative samples shall be of similar size and scope.

- B. The Contracting Officer has the right to approve or disapprove the proposed consultant, and will notify the Contractor of the VA decision within seven calendar days from receipt of the qualification proposal. In case of disapproval, the Contractor shall resubmit another consultant within 10 calendar days for renewed consideration. The Contractor shall have their scheduling consultant approved prior to submitting any schedule for approval.

#### **1.4 COMPUTER PRODUCED SCHEDULES**

- A. The contractor shall provide monthly, to the Department of Veterans Affairs (VA), all computer-produced time/cost schedules and reports generated from monthly project updates. This monthly computer service will include: three copies of up to five different reports (inclusive of all pages) available within the user defined reports of the scheduling software approved by the Contracting Officer; a hard copy listing of all project schedule changes, and associated data, made at the update and an electronic file of this data; and the resulting monthly updated schedule in PDM format. These must be submitted with and substantively support the contractor's monthly payment request and the signed look ahead report. The COTR shall identify the five different report formats that the contractor shall provide.
- B. The contractor shall be responsible for the correctness and timeliness of the computer-produced reports. The Contractor shall also responsible for the accurate and timely submittal of the updated project schedule and all CPM data necessary to produce the computer reports and payment request that is specified.
- C. The VA will report errors in computer-produced reports to the Contractor's representative within ten calendar days from receipt of reports. The Contractor shall reprocess the computer-produced reports and associated diskette(s), when requested by the Contracting Officer's representative, to correct errors which affect the payment and schedule for the project.

#### **1.5 THE COMPLETE PROJECT SCHEDULE SUBMITTAL**

- A. Within 45 calendar days after receipt of Notice to Proceed, the Contractor shall submit for the Contracting Officer's review; three blue line copies of the interim schedule on sheets of paper 765 x 1070 mm (30 x 42 inches) and an electronic file in the previously approved CPM schedule program. The submittal shall also include three copies of a computer-produced activity/event ID schedule showing project

duration; phase completion dates; and other data, including event cost. Each activity/event on the computer-produced schedule shall contain as a minimum, but not limited to, activity/event ID, activity/event description, duration, budget amount, early start date, early finish date, late start date, late finish date and total float. Work activity/event relationships shall be restricted to finish-to-start or start-to-start without lead or lag constraints. Activity/event date constraints, not required by the contract, will not be accepted unless submitted to and approved by the Contracting Officer. The contractor shall make a separate written detailed request to the Contracting Officer identifying these date constraints and secure the Contracting Officer's written approval before incorporating them into the network diagram. The Contracting Officer's separate approval of the Project Schedule shall not excuse the contractor of this requirement. Logic events (non-work) will be permitted where necessary to reflect proper logic among work events, but must have zero duration. The complete working schedule shall reflect the Contractor's approach to scheduling the complete project. **The final Project Schedule in its original form shall contain no contract changes or delays which may have been incurred during the final network diagram development period and shall reflect the entire contract duration as defined in the bid documents.** These changes/delays shall be entered at the first update after the final Project Schedule has been approved. The Contractor should provide their requests for time and supporting time extension analysis for contract time as a result of contract changes/delays, after this update, and in accordance with Article, ADJUSTMENT OF CONTRACT COMPLETION.

- B. Within 30 calendar days after receipt of the complete project interim Project Schedule and the complete final Project Schedule, the Contracting Officer or his representative, will do one or both of the following:
1. Notify the Contractor concerning his actions, opinions, and objections.
  2. A meeting with the Contractor at or near the job site for joint review, correction or adjustment of the proposed plan will be scheduled if required. Within 14 calendar days after the joint review, the Contractor shall revise and shall submit three blue line copies of the revised Project Schedule, three copies of the revised

computer-produced activity/event ID schedule and a revised electronic file as specified by the Contracting Officer. The revised submission will be reviewed by the Contracting Officer and, if found to be as previously agreed upon, will be approved.

- C. The approved baseline schedule and the computer-produced schedule(s) generated there from shall constitute the approved baseline schedule until subsequently revised in accordance with the requirements of this section.

#### **1.6 WORK ACTIVITY/EVENT COST DATA**

- A. The Contractor shall cost load all work activities/events except procurement activities. The cumulative amount of all cost loaded work activities/events (including alternates) shall equal the total contract price. Prorate overhead, profit and general conditions on all work activities/events for the entire project length. The contractor shall generate from this information cash flow curves indicating graphically the total percentage of work activity/event dollar value scheduled to be in place on early finish, late finish. These cash flow curves will be used by the Contracting Officer to assist him in determining approval or disapproval of the cost loading. Negative work activity/event cost data will not be acceptable, except on VA issued contract changes.
- B. The Contractor shall cost load work activities/events for guarantee period services, test, balance and adjust various systems in accordance with the provisions in Article, FAR 52.232 - 5 (PAYMENT UNDER FIXED-PRICE CONSTRUCTION CONTRACTS) and VAAR 852.232 - Article 71 Including NAS-CPM for (PAYMENTS UNDER FIXED PRICE CONSTRUCTION).
- C. In accordance with FAR 52.236 - 1 (PERFORMANCE OF WORK BY THE CONTRACTOR), the Contractor shall submit, simultaneously with the cost per work activity/event of the construction schedule required by this Section, a responsibility code for all activities/events of the project for which the Contractor's forces will perform the work.
- D. The Contractor shall cost load work activities/events for all BID ITEMS including ASBESTOS ABATEMENT. The sum of each BID ITEM work shall equal the value of the bid item in the Contractors' bid.

#### **1.7 PROJECT SCHEDULE REQUIREMENTS**

- A. Show on the project schedule the sequence of work activities/events required for complete performance of all items of work. The Contractor Shall:

1. Show activities/events as:
    - a. Contractor's time required for submittal of shop drawings, templates, fabrication, delivery and similar pre-construction work.
    - b. Contracting Officer's and Architect-Engineer's review and approval of shop drawings, equipment schedules, samples, template, or similar items.
    - c. Interruption of VA Facilities utilities, delivery of Government furnished equipment, and rough-in drawings, project phasing and any other specification requirements.
    - d. Test, balance and adjust various systems and pieces of equipment, maintenance and operation manuals, instructions and preventive maintenance tasks.
    - e. VA inspection and acceptance activity/event with a minimum duration of five work days at the end of each phase and immediately preceding any VA move activity/event required by the contract phasing for that phase.
  2. Show not only the activities/events for actual construction work for each trade category of the project, but also trade relationships to indicate the movement of trades from one area, floor, or building, to another area, floor, or building, for at least five trades who are performing major work under this contract.
  3. Break up the work into activities/events of a duration no longer than 20 work days each or one reporting period, except as to non-construction activities/events (i.e., procurement of materials, delivery of equipment, concrete and asphalt curing) and any other activities/events for which the COTR may approve the showing of a longer duration. The duration for VA approval of any required submittal, shop drawing, or other submittals will not be less than 20 work days.
  4. Describe work activities/events clearly, so the work is readily identifiable for assessment of completion. Activities/events labeled "start," "continue," or "completion," are not specific and will not be allowed. Lead and lag time activities will not be acceptable.
  5. The schedule shall be generally numbered in such a way to reflect either discipline, phase or location of the work.
- B. The Contractor shall submit the following supporting data in addition to the project schedule:



1. The appropriate project calendar including working days and holidays.
2. The planned number of shifts per day.
3. The number of hours per shift.

Failure of the Contractor to include this data shall delay the review of the submittal until the Contracting Officer is in receipt of the missing data.

- C. To the extent that the Project Schedule or any revised Project Schedule shows anything not jointly agreed upon, it shall not be deemed to have been approved by the COTR. Failure to include any element of work required for the performance of this contract shall not excuse the Contractor from completing all work required within any applicable completion date of each phase regardless of the COTR's approval of the Project Schedule.
- D. Compact Disk Requirements and CPM Activity/Event Record Specifications: Submit to the VA an electronic file(s) containing one file of the data required to produce a schedule, reflecting all the activities/events of the complete project schedule being submitted.

#### **1.8 PAYMENT TO THE CONTRACTOR:**

- A. Monthly, the contractor shall submit an application and certificate for payment using VA Form 10-6001a or the AIA application and certificate for payment documents G702 & G703 reflecting updated schedule activities and cost data in accordance with the provisions of the following Article, PAYMENT AND PROGRESS REPORTING, as the basis upon which progress payments will be made pursuant to Article, FAR 52.232 - 5 (PAYMENT UNDER FIXED-PRICE CONSTRUCTION CONTRACTS) and VAAR 852.232 - Article 71 Including NAS-CPM for (PAYMENTS UNDER FIXED PRICE CONSTRUCTION). The Contractor shall be entitled to a monthly progress payment upon approval of estimates as determined from the currently approved updated project schedule. Monthly payment requests shall include: a listing of all agreed upon project schedule changes and associated data; and an electronic file (s) of the resulting monthly updated schedule.
- B. Approval of the Contractor's monthly Application for Payment shall be contingent, among other factors, on the submittal of a satisfactory monthly update of the project schedule.

**1.9 PAYMENT AND PROGRESS REPORTING**

- A. Monthly schedule update meetings will be held on dates mutually agreed to by the COTR and the Contractor. Contractor and their CPM consultant (if applicable) shall attend all monthly schedule update meetings. The Contractor shall accurately update the Project Schedule and all other data required and provide this information to the COTR three work days in advance of the schedule update meeting. Job progress will be reviewed to verify:
1. Actual start and/or finish dates for updated/completed activities/events.
  2. Remaining duration for each activity/event started, or scheduled to start, but not completed.
  3. Logic, time and cost data for change orders, and supplemental agreements that are to be incorporated into the Project Schedule.
  4. Changes in activity/event sequence and/or duration which have been made, pursuant to the provisions of following Article, ADJUSTMENT OF CONTRACT COMPLETION.
  5. Completion percentage for all completed and partially completed activities/events.
  6. Logic and duration revisions required by this section of the specifications.
  7. Activity/event duration and percent complete shall be updated independently.
- B. After completion of the joint review, the contractor shall generate an updated computer-produced calendar-dated schedule and supply the Contracting Officer's representative with reports in accordance with the Article, COMPUTER PRODUCED SCHEDULES, specified.
- C. After completing the monthly schedule update, the contractor's representative or scheduling consultant shall rerun all current period contract change(s) against the prior approved monthly project schedule. The analysis shall only include original workday durations and schedule logic agreed upon by the contractor and COR for the contract change(s). When there is a disagreement on logic and/or durations, the Contractor shall use the schedule logic and/or durations provided and approved by the COR. After each rerun update, the resulting electronic project schedule data file shall be appropriately identified and submitted to the VA in accordance to the requirements listed in articles 1.4 and 1.7. This electronic submission is separate from the regular monthly

project schedule update requirements and shall be submitted to the COR within fourteen (14) calendar days of completing the regular schedule update. Before inserting the contract changes durations, care must be taken to ensure that only the original durations will be used for the analysis, not the reported durations after progress. In addition, once the final network diagram is approved, the contractor must recreate all manual progress payment updates on this approved network diagram and associated reruns for contract changes in each of these update periods as outlined above for regular update periods. This will require detailed record keeping for each of the manual progress payment updates.

- D. Following approval of the CPM schedule, the VA, the General Contractor, its approved CPM Consultant, RE office representatives, and all subcontractors needed, as determined by the SRE, shall meet to discuss the monthly updated schedule. The main emphasis shall be to address work activities to avoid slippage of project schedule and to identify any necessary actions required to maintain project schedule during the reporting period. The Government representatives and the Contractor should conclude the meeting with a clear understanding of those work and administrative actions necessary to maintain project schedule status during the reporting period. This schedule coordination meeting will occur after each monthly project schedule update meeting utilizing the resulting schedule reports from that schedule update. If the project is behind schedule, discussions should include ways to prevent further slippage as well as ways to improve the project schedule status, when appropriate.

#### **1.10 RESPONSIBILITY FOR COMPLETION**

- A. If it becomes apparent from the current revised monthly progress schedule that phasing or contract completion dates will not be met, the Contractor shall execute some or all of the following remedial actions:
1. Increase construction manpower in such quantities and crafts as necessary to eliminate the backlog of work.
  2. Increase the number of working hours per shift, shifts per working day, working days per week, the amount of construction equipment, or any combination of the foregoing to eliminate the backlog of work.
  3. Reschedule the work in conformance with the specification requirements.

- B. Prior to proceeding with any of the above actions, the Contractor shall notify and obtain approval from the COTR for the proposed schedule changes. If such actions are approved, the representative schedule revisions shall be incorporated by the Contractor into the Project Schedule before the next update, at no additional cost to the Government.

#### **1.11 CHANGES TO THE SCHEDULE**

- A. Within 30 calendar days after VA acceptance and approval of any updated project schedule, the Contractor shall submit a revised electronic file (s) and a list of any activity/event changes including predecessors and successors for any of the following reasons:
  - 1. Delay in completion of any activity/event or group of activities/events, which may be involved with contract changes, strikes, unusual weather, and other delays will not relieve the Contractor from the requirements specified unless the conditions are shown on the CPM as the direct cause for delaying the project beyond the acceptable limits.
  - 2. Delays in submittals, or deliveries, or work stoppage are encountered which make rescheduling of the work necessary.
  - 3. The schedule does not represent the actual prosecution and progress of the project.
  - 4. When there is, or has been, a substantial revision to the activity/event costs regardless of the cause for these revisions.
- B. CPM revisions made under this paragraph which affect the previously approved computer-produced schedules for Government furnished equipment, vacating of areas by the VA Facility, contract phase(s) and sub phase(s), utilities furnished by the Government to the Contractor, or any other previously contracted item, shall be furnished in writing to the Contracting Officer for approval.
- C. Contracting Officer's approval for the revised project schedule and all relevant data is contingent upon compliance with all other paragraphs of this section and any other previous agreements by the Contracting Officer or the VA representative.
- D. The cost of revisions to the project schedule resulting from contract changes will be included in the proposal for changes in work as specified in FAR 52.243 - 4 (Changes, and will be based on the complexity of the revision or contract change, man hours expended in analyzing the change, and the total cost of the change.

- E. The cost of revisions to the Project Schedule not resulting from contract changes is the responsibility of the Contractor.

#### **1.12 ADJUSTMENT OF CONTRACT COMPLETION**

- A. The contract completion time will be adjusted only for causes specified in this contract. Request for an extension of the contract completion date by the Contractor shall be supported with a justification, CPM data and supporting evidence as the COTR may deem necessary for determination as to whether or not the Contractor is entitled to an extension of time under the provisions of the contract. Submission of proof based on revised activity/event logic, durations (in work days) and costs is obligatory to any approvals. The schedule must clearly display that the Contractor has used, in full, all the float time available for the work involved in this request. The Contracting Officer's determination as to the total number of days of contract extension will be based upon the current computer-produced calendar-dated schedule for the time period in question and all other relevant information.
- B. Actual delays in activities/events which, according to the computer-produced calendar-dated schedule, do not affect the extended and predicted contract completion dates shown by the critical path in the network, will not be the basis for a change to the contract completion date. The Contracting Officer will within a reasonable time after receipt of such justification and supporting evidence, review the facts and advise the Contractor in writing of the Contracting Officer's decision.
- C. The Contractor shall submit each request for a change in the contract completion date to the Contracting Officer in accordance with the provisions specified under FAR 52.243 - 4 (Changes). The Contractor shall include, as a part of each change order proposal, a sketch showing all CPM logic revisions, duration (in work days) changes, and cost changes, for work in question and its relationship to other activities on the approved network diagram.
- D. All delays due to non-work activities/events such as RFI's, WEATHER, STRIKES, and similar non-work activities/events shall be analyzed on a month by month basis.

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**SECTION 04 05 13  
MASONRY MORTARING**

**PART 1 - GENERAL****1.1 SUMMARY**

## A. Section Includes:

1. Masonry mortar installed by other masonry sections.

**1.2 RELATED REQUIREMENTS**

## A. Mortar used in Section:

1. Section 04 05 16, MASONRY GROUTING.
2. Section 04 20 00, UNIT MASONRY.

**1.3 APPLICABLE PUBLICATIONS**

## A. Comply with references to extent specified in this section.

## B. ASTM International (ASTM):

1. C40/C40M-11 - Organic Impurities in Fine Aggregates for Concrete.
2. C91/C91M-12 - Masonry Cement.
3. C144-11 -Aggregate for Masonry Mortar.
4. C150/C150M-15 - Portland Cement.
5. C207-06(2011) - Hydrated Lime for Masonry Purposes.
6. C270-14a - Mortar of Unit Masonry.
7. C595/C595M-15e1 - Blended Hydraulic Cements.
8. C780-15 - Preconstruction and Construction Evaluation of Mortars for Plain and Reinforced Unit Masonry.
9. C1329/C1329M-15 - Mortar Cement.

**1.4 SUBMITTALS**

## A. Submittal Procedures: Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.

## B. Manufacturer's Literature and Data:

1. Description of each product.

## C. Certificates: Certify each product complies with specifications.

1. Portland cement.
2. Masonry cement.
3. Mortar cement.
4. Hydrated lime.
5. Fine aggregate.
6. Color admixture.

## D. Qualifications: Substantiate qualifications comply with specifications.

**1.5 DELIVERY**

- A. Deliver products in manufacturer's original sealed packaging.
- B. Mark packaging, legibly. Indicate manufacturer's name or brand, type, production run number, and manufacture date.
- C. Before installation, return or dispose of products within distorted, damaged, or opened packaging.

**1.6 STORAGE AND HANDLING**

- A. Store masonry materials under waterproof covers on planking clear of ground.
  - 1. Protect loose, bulk materials from contamination.
- B. Protect products from damage during handling and construction operations.

**1.7 WARRANTY**

- A. Construction Warranty: FAR clause 52.246-21, "Warranty of Construction."

**PART 2 - PRODUCTS****2.1 MATERIALS**

- A. Hydrated Lime: ASTM C207, Type S.
- B. Aggregate for Masonry Mortar: ASTM C144
- C. Blended Hydraulic Cement: ASTM C595/C595M, Type IS, IP.
- D. Masonry Cement: ASTM C91/C91M. Type N, S, Or M.
- E. Mortar Cement: ASTM C1329/C1329M, Type N, S or M.
- F. Portland Cement: ASTM C150/C150M, Type I.
- G. Water: Potable, free of substances that are detrimental to mortar, masonry, and metal.

**2.2 PRODUCTS - GENERAL**

- A. Provide each product from one manufacturer and from one production run.

**2.3 MIXES**

- A. Masonry Mortar: ASTM C270.
  - 1. Admixtures:
    - a. Do not use mortar admixtures, and color admixtures unless approved by Contracting Officer's Representative.
    - b. Do not use antifreeze compounds.

**PART 3 - EXECUTION**

**3.1 PREPARATION**

- A. Examine and verify substrate suitability for product installation.
- B. Protect existing construction and completed work from damage.

**3.2 MIXING**

- A. Measure ingredients by volume using known capacity container.
- B. Mix for 3 to 5 minutes in a mechanically operated mortar mixer.
- C. Mix water with dry ingredients in sufficient amount to provide a workable mixture which will adhere to vertical surfaces of masonry units.
- D. Mortar Stiffened Because of Water Loss Through Evaporation:
  - 1. Re-temper by adding water to restore to proper consistency and workability.
  - 2. Discard mortar reaching initial set or unused within two hours of mixing.

**3.3 MORTARING**

- A. Type N Mortar: Use for other masonry work.

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**SECTION 04 05 16  
MASONRY GROUTING**

**PART 1 - GENERAL**

**1.1 SUMMARY**

A. Section Includes: Grout for filling hollow concrete masonry cores.

**1.2 RELATED WORK**

A. Section 04 20 00, UNIT MASONRY: Grout

**1.3 APPLICABLE PUBLICATIONS**

- A. Comply with references to extent specified in this section  
American National Standards Institute (ANSI):  
A118.6-19 - .....Standard Cement Grouts for Tile Installation.
- B. ASTM International (ASTM):  
C40/C40M-20 - .....Organic Impurities in Fine Aggregates for  
Concrete.  
C150/C150M-20 - .....Portland Cement.  
C207-18 - .....Hydrated Lime for Masonry Purposes.  
C404-18 - .....Aggregates for Masonry Grout.  
C476-20 - .....Grout for Masonry.  
C595/C595M-20 - .....Blended Hydraulic Cement.

**1.4 SUBMITTALS**

- A. Submittal Procedures: Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA,  
AND SAMPLES. All items indicated below are required submittals  
requiring Contracting Officer's Representative (COR) review and  
approval.
- B. Manufacturer's Literature and Data:  
1. Description of each product.
- C. Test Reports: Certify each product complies with specifications.  
1. Grout, each type.  
2. Cement.  
3. Aggregate.
- D. Certificates: Certify each product complies with specifications.  
1. Blended hydraulic cement.  
2. Portland cement.  
3. Grout.  
4. Hydrated lime.  
5. Aggregate.

**1.5 DELIVERY**

A. Deliver products in manufacturer's original sealed packaging.

- B. Mark packaging, legibly. Indicate manufacturer's name or brand, type, production run number, and manufacture date.

#### **1.6 STORAGE AND HANDLING**

- A. Store masonry materials under waterproof covers on planking clear of ground, and protect damage from handling, dirt, stain, water and wind.
- B. Protect products from damage during handling and construction operations.

#### **1.7 WARRANTY**

- A. Construction Warranty: FAR clause 52.246-21, "Warranty of Construction."

### **PART 2 - PRODUCTS**

#### **2.1 MATERIALS**

- A. Grout Components:
  - 1. Hydrated Lime: ASTM C207, Type S.
  - 2. Aggregate For Masonry Grout: ASTM C404, Size 8.
  - 3. Blended Hydraulic Cement: ASTM C595, Type IS, IP.
  - 4. Portland Cement: ASTM C150, Type I.
  - 5. Water: Potable, free of substances that are detrimental to grout, masonry, and metal.

#### **2.2 PRODUCTS - GENERAL**

- A. Provide each product from one manufacturer.

#### **2.3 MIXES**

- A. Grout: ASTM C476; fine grout and coarse grout.
- B. Ready-Mixed Grout: ANSI A118.8.

### **PART 3 - EXECUTION**

#### **3.1 PREPARATION**

- A. Examine and verify substrate suitability for product installation.
- B. Protect existing construction and completed work from damage.
- C. Clean mortar from masonry cells protruding more than 13 mm (1/2 inch) to permit grout flow.
- D. Remove debris from grout spaces.
- E. Verify reinforcement is correctly placed before placing grout.

#### **3.2 MIXING**

- A. Mix grout in mechanically operated mixer.
  - 1. Mix grout for five minutes, minimum.
- B. Measure ingredients by volume using container of known capacity.
- C. Mix water with grout dry ingredients.
  - 1. Slump Range: 200 to 275 mm (8 to 11 inches).

**3.3 GROUTING**

- A. Install grout according to Section 04 20 00, UNIT MASONRY.
- B. Use fine grout for filling wall cavities and hollow concrete masonry units where smallest cell dimension is 50 mm (2 inches) or less.
- C. Use either fine grout or coarse grout for filling wall cavities and hollow concrete masonry units where smallest cell dimension is greater than 50 mm (2 inches).
- D. Use grout for filling bond beam or lintel units.

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**SECTION 04 20 00**  
**UNIT MASONRY**

**PART 1 - GENERAL**

**1.1 SUMMARY**

- A. Section Includes: Concrete masonry unit (CMU) assemblies for:
1. Exterior walls.

**1.2 RELATED REQUIREMENTS**

- A. Sealants and Sealant Installation: Section 07 92 00, JOINT SEALANTS.

**1.3 APPLICABLE PUBLICATIONS**

- A. Comply with references to extent specified in this section.
- B. American Concrete Institute (ACI):
1. 315-99 - Details and Detailing of Concrete Reinforcement.
  2. 530.1/ASCE 6/TMS 602-13 - Specification for Masonry Structures.
- C. ASTM International (ASTM):
1. A615/A615M-15a<sup>1</sup> - Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement.
  2. A951/A951M-14 - Steel Wire for Masonry Joint Reinforcement.
  3. A1064/A1064M-15 - Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete.
  4. C90-14 - Load-Bearing Concrete Masonry Units.
  5. F1667-15 - Driven Fasteners: Nails, Spikes, and Staples.
- D. American Welding Society (AWS):
1. D1.4/D1.4M-11 - Structural Welding Code - Reinforcing Steel.
- E. Federal Specifications (Fed. Spec.):
1. FF-S-107C(2) - Screws, Tapping and Drive.

**1.4 SUBMITTALS**

- A. Submittal Procedures: Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
- B. Submittal Drawings:
1. Fabrication, bending, and placement of reinforcing bars. Comply with ACI 315. Show bar schedules, diagrams of bent bars, stirrup spacing, lateral ties and other arrangements and assemblies.
  2. Special masonry shapes, profiles, and placement.
  3. Masonry units for typical window and door openings, and, for special conditions as affected by structural conditions.
- C. Manufacturer's Literature and Data:
1. Description of each product.

2. Installation instructions.

D. Samples:

1. Joint Reinforcing: 1200 mm (48 inches) long each type.

E. Test reports: Certify products comply with specifications.

F. Certificates: Certify products comply with specifications.

1. Solid and load-bearing concrete masonry units.

#### **1.5 DELIVERY**

A. Deliver products in manufacturer's original sealed packaging.

B. Mark packaging, legibly. Indicate manufacturer's name or brand, type, production run number, and manufacture date.

C. Before installation, return or dispose of products within distorted, damaged, or opened packaging.

#### **1.6 STORAGE AND HANDLING**

A. Store products above grade, protected from contamination.

B. Protect products from damage during handling and construction operations.

#### **1.7 FIELD CONDITIONS**

A. Hot and Cold Weather Requirements: Comply with ACI 530.1/ASCE 6/TMS 602.

#### **1.8 WARRANTY**

A. Construction Warranty: FAR clause 52.246-21, "Warranty of Construction."

### **PART 2 - PRODUCTS**

#### **2.1 PRODUCTS - GENERAL**

A. Provide each product from one manufacturer.

#### **2.2 UNIT MASONRY PRODUCTS**

A. Concrete Masonry Units (CMU):

1. Hollow Load-Bearing Concrete Masonry Units: ASTM C90.

a. Unit Weight: Normal weight .

2. Sizes: Modular, 200 mm by 400 mm (8 inches by 16 inches) nominal face dimension; thickness as indicated on drawings.

#### **2.3 ANCHORS, TIES, AND REINFORCEMENT**

A. Steel Reinforcing Bars: ASTM A615/A615M; Grade 60, deformed bars.

B. Joint Reinforcement:

1. Form from wire complying with ASTM A951/A951M.

2. Hot dipped galvanized after fabrication.
3. Width of joint reinforcement 40 mm (1.6 inches) less than nominal thickness of masonry wall or partition.
4. Cross wires welded to longitudinal wires.
5. Joint reinforcement minimum 3000 mm (10 feet) long, factory cut.
6. Joint reinforcement with crimp formed drip is not acceptable.
7. Maximum spacing of cross wires 400 mm (16 inch) to longitudinal wires.
8. Multiple Wythes and Cavity Wall Ties:
  - a. Longitudinal wires 4 mm (0.16 inch), two in each wythe with ladder truss wires 4 mm (0.16 inch) overlay, welded to each longitudinal wire.

#### **2.4 ACCESSORIES**

- A. Preformed Compressible Joint Filler:
  1. Thickness and depth to fill joint.
  2. Closed Cell Neoprene: ASTM D1056, Type 2, Class A, Grade 1, B2F1.
  3. Non-Combustible Type: ASTM C612, Type 5, Max. Temp.1800 degrees F.
- B. Fasteners:
  1. Concrete Nails: ASTM F1667, Type I, Style 11, 19 mm (3/4 inch) minimum length.
  2. Masonry Nails: ASTM F1667, Type I, Style 17, 19 mm (3/4 inch) minimum length.
  3. Screws: FS-FF-S-107, Type A, AB, SF thread forming or cutting.
- C. Welding Materials: AWS D1.4/D1.4M, type to suit application.

### **PART 3 - EXECUTION**

#### **3.1 INSTALLATION - GENERAL**

- A. Install products according to manufacturer's instructions and approved submittal drawings.
  1. When manufacturer's instructions deviate from specifications, submit proposed resolution for Contracting Officer's Representative consideration.
- B. Keep finish work free from mortar smears or spatters, and leave neat and clean.
- C. Wall Openings:
  1. When items are not available when walls are built, prepare openings for subsequent installation.
- D. Wall, Furring, and Partition Units:

1. Lay out field units to provide running bond to match existing.
  2. Align head joints of alternate vertical courses.
  3. At sides of openings, balance head joints in each course on vertical center lines of openings.
  4. Minimum Masonry Unit Length: 100 mm (4 inches).
- E. Before connecting new masonry with previously laid masonry, remove loosened masonry or mortar, and clean and wet work in place as specified under wetting.
- F. Wetting and Wetting Test:
1. Test and wet brick and clay tile according to BIA TN 11B.
  2. Do not wet concrete masonry units before laying.
- G. Temporary Formwork: Provide formwork and shores as required for temporary support of masonry elements.
- H. Masonry Facing to Backup and Cavity Wall Ties:
1. Install joint reinforcing for multiple wythes and cavity wall ties spaced maximum 400 mm (16 inches) vertically.

### **3.2 INSTALLATION - REINFORCEMENT**

- A. Joint Reinforcement:
1. Install joint reinforcement in CMU wythe of combination CMU and CMU cavity walls, and single wythe concrete masonry unit walls or partitions.
  2. Locate joint reinforcement in mortar joints at 400 mm (16 inch) maximum vertical intervals.
  3. Additional joint reinforcement is required in mortar joints at both 200 mm (8 inches) and 400 (16 inches) above and below windows, doors, louvers and similar openings in masonry.
- B. Steel Reinforcing Bars:
1. Install reinforcing bars in cells of hollow masonry units where required for vertical reinforcement and in bond beam units for horizontal reinforcement. Install in wall cavities of reinforced masonry walls where indicated on drawings.
  2. Bond Beams:
    - a. Form Bond beams of load-bearing concrete masonry units filled with grout and reinforced with two No. 15m (No. 5) reinforcing bars unless shown otherwise. Do not cut reinforcement.
    - b. Brake bond beams only at expansion joints and at control joints, if shown.
- C. Cavity Walls:

1. Keep air space clean of mortar accumulations and debris.
2. Lay the interior wythe of the masonry wall full height before laying outer wythe.
3. Insulated Cavity Type Exterior Walls:
  - a. Install insulation against cavity face of inner masonry wythe.
  - b. Place insulation between rows of ties or joint reinforcing.  
Adhere insulation to masonry surface with a bonding agent as recommended by insulation manufacturer.
  - c. Lay outer masonry wythe up with air space between insulation and

### 3.3 INSTALLATION - CONCRETE MASONRY UNITS

#### A. Types and Uses:

1. Provide special concrete masonry shapes as required, including lintel and bond beam units and corner units. Provide solid concrete masonry units, where full units cannot be installed, or where needed for anchorage of accessories.
2. Provide solid load-bearing concrete masonry units or grout cell of hollow units at jambs of openings in walls, where structural members impose loads directly on concrete masonry, and where shown.

#### B. Laying:

1. Lay concrete masonry units with 9 mm (3/8 inch) joints, with a bond overlap of minimum 1/4 of unit length, except where stack bond is indicated on drawings.
2. Do not wet concrete masonry units before laying.
3. Bond external corners of partitions by overlapping alternate courses.
4. Lay first course in a full mortar bed.
5. Set anchorage items as work progress.
6. Where ends of anchors, bolts, and other embedded items, project into voids of units, completely fill voids with mortar or grout.
7. Lay concrete masonry units with full face shell mortar beds and fill head joint beds for depth equivalent to face shell thickness.
8. Lay concrete masonry units so cores of units, that are to be filled with grout, are vertically continuous with joints of cross webs of such cores completely filled with mortar. Unobstructed core openings minimum 50 mm (2 inches) by 75 mm (3 inches).
9. Do not wedge masonry against steel reinforcing. Minimum 13 mm (1/2 inch) clear distance between reinforcing and masonry units.
10. Install deformed reinforcing bars of sizes indicated on drawings.



11. At time of placement, ensure steel reinforcement is free of loose rust, mud, oil, and other contamination capable of affecting bond.
12. Place steel reinforcement at spacing indicated on drawings before grouting.
13. Minimum clear distance between parallel bars: One bar diameter.
14. Hold vertical steel reinforcement in place vertically by centering clips, caging devices, tie wire, or other approved methods.
15. Support vertical bars near each end and at maximum 192 bar diameter on center.
16. Splice reinforcement or attach reinforcement to dowels by placing in contact and securing with wire ties.
17. Stagger splices in adjacent horizontal reinforcing bars. Lap reinforcing bars at splices a minimum of 40 bar diameters.
18. Grout cells of concrete masonry units, containing reinforcing bars, solid as specified.
19. Install cavity and joint reinforcement as masonry work progresses.
20. Rake joints 6 to 10 mm (1/4 to 3/8 inch) deep for pointing with colored mortar when colored mortar is not full depth.

#### **3.4 POINTING**

- A. Fill joints with pointing mortar using rubber float trowel to apply mortar solidly into raked joints.
- B. Wipe off excess mortar from joints of glazed masonry units with dry cloth.
- C. Tool exposed joints flush with surface of CMU.
- D. At joints with existing work, match existing joint.

#### **3.5 GROUTING**

- A. Preparation:
  1. Clean grout space of mortar droppings before placing grout.
  2. Close cleanouts.
  3. Install vertical solid masonry dams across grout space for full height of wall at intervals of maximum 9000 mm (30 feet). Do not bond dam units into wythes as masonry headers.
  4. Verify reinforcing bars are installed as indicated on drawings.
- B. Placing:
  1. Place grout in grout space in lifts as specified.
  2. Consolidate each grout lift after free water has disappeared but before plasticity is lost.

3. Do not slush with mortar or use mortar with grout.
4. Interruptions:
  - a. When grouting must be stopped for more than an hour, top off grout 40 mm (1-1/2 inches) below top of last masonry course.
  - b. Grout from dam to dam on high lift method.
  - c. Longitudinal run of masonry may be stopped off only by raking back one-half masonry unit length in each course and stopping grout 100 mm (4 inches) back of rake on low lift method.
- C. Puddling Method:
  1. Consolidate by puddling with grout stick during and immediately after placing.
  2. Grout cores of concrete masonry units containing reinforcing bars solid as masonry work progresses.
- D. Low Lift Method:
  1. Construct masonry to 1.5 m (5 feet) maximum height before grouting.
  2. Grout in one continuous operation and consolidate grout by mechanical vibration and reconsolidate after initial water loss and settlement has occurred.

### **3.6 PLACING REINFORCEMENT**

- A. General: Clean reinforcement of loose rust, mill scale, earth, ice or other materials which will reduce bond to mortar or grout. Do not use reinforcement bars with kinks or bends not shown on drawings or approved submittal drawings, or bars with reduced cross-section due to excessive rusting or other causes.
- B. Position reinforcement accurately at spacing indicated on drawings. Support and secure vertical bars against displacement. Install horizontal reinforcement as masonry work progresses. Where vertical bars are shown in close proximity, provide clear distance between bars of minimum one bar diameter or 25 mm (1 inch), whichever is greater.
- C. Splice reinforcement bars only where indicated on drawings, unless approved by Contracting Officer's Representative. Provide lapped splices. In splicing vertical bars or attaching to dowels, lap ends, place in contact and wire tie.
- D. Provide minimum lap as indicated on approved submittal drawings, or if not indicated, minimum 48 bar diameters.
- E. Embed metal ties in mortar joints as work progresses, with minimum mortar cover of 15 mm (5/8 inch) on exterior face of walls and 13 mm (1/2 inch) at other locations.

- F. Embed prefabricated horizontal joint reinforcement as work progresses, with minimum cover of 15 mm (5/8 inch) on exterior face of walls and 13 mm (1/2 inch) at other locations. Lap joint reinforcement minimum 150 mm (6 inches) at ends. Use prefabricated "L" and "T" sections to provide continuity at corners and intersections. Cut and bend joint reinforcement for continuity at returns, offsets, column fireproofing, pipe enclosures and other special conditions.
- G. Anchoring: Anchor reinforced masonry work to supporting structure as indicated on drawings.
- H. Anchor reinforced masonry walls at intersections with non-reinforced masonry.

### 3.7 CONSTRUCTION TOLERANCES

- A. Lay masonry units plumb, level and true to line within tolerances according to ACI 530.1/ASCE 6/TMS 602 and as follows:
- B. Maximum variation from plumb:
  - 1. In 3000 mm (10 feet) - 6 mm (1/4 inch).
  - 2. In 6000 mm (20 feet) - 9 mm (3/8 inch).
  - 3. In 12,000 mm (40 feet) or more - 13 mm (1/2 inch).
- C. Maximum variation from level:
  - 1. In any bay or up to 6000 mm (20 feet) - 6 mm (1/4 inch).
  - 2. In 12,000 mm (40 feet) or more - 13 mm (1/2 inch).
- D. Maximum variation from linear building lines:
  - 1. In any bay or up to 6000 mm (20 feet) - 13 mm (1/2 inch).
  - 2. In 12,000 mm (40 feet) or more - 19 mm (3/4 inch).
- E. Maximum variation in cross-sectional dimensions of columns and thickness of walls from dimensions shown:
  - 1. Minus 6 mm (1/4 inch).
  - 2. Plus 13 mm (1/2 inch).
- F. Maximum variation in prepared opening dimensions:
  - 1. Accurate to minus 0 mm (0 inch).
  - 2. Plus 6 mm (1/4 inch).

### 3.8 CLEANING AND REPAIR

- A. General:
  - 1. Clean exposed masonry surfaces on completion.
  - 2. Protect adjoining construction materials and landscaping during cleaning operations.

3. Cut out defective exposed new joints to depth of approximately 19 mm (3/4 inch) and repoint.
4. Remove mortar droppings and other foreign substances from wall surfaces.

B. Concrete Masonry Units:

1. Immediately following setting, brush exposed surfaces free of mortar or other foreign matter.
2. Allow mud to dry before brushing.

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**SECTION 07 22 00  
ROOF AND DECK INSULATION**

**PART 1 - GENERAL**

**1.1 SUMMARY**

- A. Section Includes:
- B. Roof and deck insulation, vapor retarder, and cover board on new and existing metal deck substrates ready to receive roofing membrane.
- C. Repairs and alteration work to existing roof insulation.

**1.2 RELATED WORK**

- A. Section 06 10 00, ROUGH CARPENTRY: Wood Blocking and Edge Strips.

**1.3 APPLICABLE PUBLICATIONS**

- A. Comply with references to extent specified in this section.
- B. American Society of Civil Engineers
  - ASCE 7-16.....Minimum Design Loads and Associated Criteria  
for Buildings and Other Structures
- C. American Society of Heating, Refrigeration and Air Conditioning  
(ASHRAE):
  - Standard 90.1-13.....Energy Standard for Buildings Except Low-Rise  
Residential Buildings.
- D. ASTM International (ASTM):
  - C1177/C1177M-17.....Glass Mat Gypsum Substrate for Use as  
Sheathing.
  - C1289-19.....Faced Rigid Cellular Polyisocyanurate Thermal  
Insulation Board.
  - D41/D41M-11 (2016).....Asphalt Primer Used in Roofing, Dampproofing,  
and Waterproofing.
  - D312/D312M-16a.....Asphalt Used in Roofing.
  - D2178/D2178M-15a.....Asphalt Glass Felt Used in Roofing and  
Waterproofing.
  - D4586/D4586M-07(2018)...Asphalt Roof Cement, Asbestos-Free.
  - E84-20.....Surface Burning Characteristics of Building  
Materials.
  - F1667-18a.....Driven Fasteners: Nails, Spikes, and Staples.
- E. National Roofing Contractors Association (NRCA):
  - Manual-15.....The NRCA Roofing Manual: Membrane Roof Systems-  
2019.
- F. UL LLC (UL):
  - Listed Online Certifications Directory.

G. U.S. Department of Agriculture (USDA):

USDA BioPreferred Program Catalog.

H. U.S. Department of Commerce National Institute of Standards and Technology (NIST):

DOC PS 1-19.....Structural Plywood.

DOC PS 2-18.....Performance Standard for Wood-Based  
Structural-Use Panels.

**1.4 SUBMITTALS**

A. Submittal Procedures: Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.

B. Submittal Drawings:

1. Show size, configuration, and installation details.

a. Nailers and terminations.

b. Layout of insulation showing slopes, tapers, penetrations, and edge conditions.

C. Manufacturer's Literature and Data:

1. Description of each product.

D. Samples:

1. Roof insulation, each type.

2. Fasteners, each type.

E. Qualifications: Substantiate qualifications meet specifications.

1. Installer.

**1.5 QUALITY ASSURANCE**

A. Installer Qualifications: Same installer as Division 07 roofing section installer.

**1.6 DELIVERY**

A. Comply with recommendations of NRCA Manual.

B. Deliver products in manufacturer's original sealed packaging.

C. Mark packaging, legibly. Indicate manufacturer's name or brand, type, and manufacture date.

D. Before installation, return or dispose of products within distorted, damaged, or opened packaging.

**1.7 STORAGE AND HANDLING**

A. Comply with recommendations of NRCA Manual.

B. Store products indoors in dry, weathertight facility.

C. Protect products from damage during handling and construction operations.

**1.8 FIELD CONDITIONS**

A. Environment: Install products when existing and forecasted weather permit installation according to manufacturer's instructions.

**1.9 WARRANTY**

A. Construction Warranty: FAR clause 52.246-21, "Warranty of Construction."

B. Manufacturer's Warranty: Warrant vapor retarder, insulation, and cover board against material and manufacturing defects as part of Division 07 roofing system warranty.

**PART 2 - PRODUCTS****2.1 SYSTEM PERFORMANCE**

A. Insulation Thermal Performance:

1. Overall Average R-Value: RSI-57 (R-33), minimum.
2. Any Location R-Value: RSI-17 (R-10), minimum.

B. Wind Uplift Resistance: Provide roof insulation complying with requirements specified in Division 07 roofing section.

C. Insulation on Metal Decking: UL labeled indicating compliance with one of the following:

1. UL Listed.
2. Insulation Surface Burning Characteristics: When tested according to ASTM E84.
  - a. Flame Spread Rating: 75 maximum.
  - b. Smoke Developed Rating: 150 maximum.

**2.2 PRODUCTS - GENERAL**

A. Provide each product from one manufacturer.

**2.3 ADHESIVES**

A. Primer: ASTM D41/D41M.

B. Asphalt: ASTM D312, Type III or IV for vapor retarders and insulation.

C. Bead-Applied Urethane Insulation Adhesive: Insulation manufacturer's recommended bead-applied, low-rise, one- or multicomponent urethane adhesive formulated to adhere roof insulation to another insulation layer.

D. Full-Spread Applied Urethane Insulation Adhesive: Insulation manufacturer's recommended spray-applied, low-rise, two-component urethane adhesive formulated to adhere roof insulation to substrate or to another insulation layer.

E. Roof Cement: Asbestos free, ASTM D2822/D2822M, Type I or Type II; or, ASTM D4586/D4586M, Type I or Type II.

**2.4 ROOF AND DECK INSULATION**

- A. Roof and Deck Insulation, General: Preformed roof insulation boards approved by roofing manufacturer.
- B. Polyisocyanurate Board Insulation: ASTM C1289, Type II, Class 1, Grade 2, faced with glass fiber reinforced cellulosic felt facers on both major surfaces of the core foam.
- C. Tapered Roof Insulation System:
  - 1. Fabricate of polyisocyanurate. Use only one insulation material for tapered sections. Use only factory-tapered insulation.
  - 2. Cut to provide high and low points with crickets and slopes as shown.
  - 3. Minimum thickness of tapered sections; 38 mm (1-1/2 inch).
  - 4. Minimum slope 1/48 (1/4 inch per 12 inches).

**2.5 INSULATION ACCESSORIES**

- A. Vapor Retarder:
  - 1. Polyethylene Film: ASTM D4397, 10 mil (0.25 mm) thick, minimum, with maximum permeance rating of 0.076 perm (0.050 metric perm).
    - a. Tape: Pressure-sensitive tape of type recommended by vapor retarder manufacturer for sealing joints and penetrations in vapor retarder.
- B. Cover Board:
  - 1. Glass-Mat, Water-Resistant Gypsum Roof Board: ASTM C1177/C1177M, 16 mm (5/8 inch) thick, factory primed.

**2.6 ACCESSORIES**

- A. Fasteners: Corrosion-resistant carbon steel fasteners and galvalume-coated steel or plastic round plates for fastening insulation to roof deck.
- B. Nails: ASTM F1667; type to suit application.

**PART 3 - EXECUTION****3.1 EXAMINATION**

- A. Comply with requirements of Division 07 roofing section.

**3.2 PREPARATION**

- A. Examine and verify substrate suitability for product installation.
- B. Protect existing construction and completed work from damage.

**3.3 INSTALLATION - GENERAL**

- A. Install products according to manufacturer's instructions.



1. When manufacturer's instructions deviate from specifications, submit proposed resolution for Contracting Officer's Representative consideration.

B. Comply with requirements of UL for insulated steel roof deck.

C. Attach substrate board and other products to meet requirements of Division 07 roofing section.

### **3.4 VAPOR RETARDER INSTALLATION**

A. Vapor Retarder Installation, General:

1. Install continuous vapor retarder on roof decks where indicated.
2. At vertical surfaces, turn up vapor retarder to top of insulation or base flashing.
3. Seal penetrations through vapor retarder with tape to prevent moisture entry from below.

B. Metal Decks:

1. Loosely lay polyethylene-film vapor retarder in a single layer over area to receive vapor retarder, side and end lapping each sheet a minimum of 2 and 6 inches (50 and 150 mm), respectively. Continuously seal side and end laps with tape.

### **3.5 INSULATION INSTALLATION**

A. Insulation Installation, General:

1. Use same insulation as existing for roof repair and alterations unless specified otherwise.

B. Insulation Thickness:

1. Thickness of roof insulation shown on drawings is nominal. Provide thickness required to comply with specified thermal performance.
2. Insulation on Metal Decks: Provide insulation in minimum thickness recommended by insulation manufacturer to span deck flutes. Support edges of insulation on metal deck ribs.
3. When actual insulation thickness differs from drawings, coordinate alignment and location of roof drains, flashing, gravel stops, fascias and similar items.
4. Where tapered insulation is used, maintain insulation thickness at high points and roof edges shown on drawings.
  - a. Low Point Thickness: Minimum 38 mm (1-1/2 inches).
5. Use minimum two layers of insulation with joints offset a minimum of 6 inches.

C. Lay insulating units with close joints, in regular courses and with end joints staggered.

- 1. Stagger joints between layers minimum 150 mm (6 inches).
- D. Seal cut edges at penetrations and at edges against blocking with bitumen or roof cement.
- E. Cut to fit tightly against blocking or penetrations.
- F. Cover all insulation installed on the same day; comply with temporary protection requirements of Division 07 roofing section.
- G. Installation Method:
  - 1. Mechanically Fastened Insulation:
    - a. Fasten insulation according to requirements in Division 07 roofing section.
    - b. Fasten insulation to resist uplift pressures specified in Division 07 roofing section and ASCE-7.

**3.6 COVER BOARD INSTALLATION**

- A. Install cover boards over insulation with long joints in continuous straight lines with staggered end joints.
- B. Offset cover board joints from insulation joints 150 mm (6 inches), minimum.
- C. Adhered Cover Board: Set cover boards firmly in ribbons of bead-applied adhesive or in uniform application of full-spread insulation adhesive.

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**SECTION 09 54 16  
LUMINOUS CEILINGS**

**PART 1 - GENERAL**

**1.1 SUMMARY:**

- A. Section Includes:
  - a. Luminous ceilings.

**1.2 RELATED WORK:**

- A. Ceiling grid and installation: Section 09 51 00, ACOUSTICAL CEILINGS.
- B. Wall-mounted units similar to luminous sky-image ceilings: Section 12 11 13, EDGE-ILLUMINATED PHOTO MURALS.
- C. Power connections and installation of lamps and power converters for LED lamps: Division 26, ELECTRICAL.

**1.3 DELIVERY, STORAGE AND HANDLING:**

- A. Deliver products in manufacturer's original packaging. Store materials indoors in location that is secure, dry, and has stable temperature. Handle in accordance with manufacturer's instructions to prevent damage.

**1.4 AMBIENT CONDITIONS:**

- A. Do not install until permanent HVAC equipment is working, ambient temperature and humidity has stabilized, and other work above luminous sky-image ceilings is completed.

**1.5 SUBMITTALS:**

- A. In accordance with Section 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES, submit the following:
  - 1. Shop Drawings: Submit drawings showing construction, sizes and shape of luminous sky-image ceilings; identification of artwork; layout and orientation if image tiles; wiring diagram; and coordination with adjacent work.
  - 2. Product Data: Submit for each type of product specified.
  - 3. Artwork Sample: Submit three by three inch samples showing quality of graphic reproduction.
  - 4. Manufacturer's Instructions: Submit manufacturer's installation instructions.
  - 5. Operation and Maintenance Data:
    - a. Submit manufacturer's operation and maintenance instructions.
    - b. Submit copy of manufacturer's program for image tile replacement.
  - 6. Warranty Documentation: Submit sample of manufacturer's limited warranty.



**1.6 WARRANTY:**

- A. Construction Warranty: Comply with FAR clause 52.246-21 "Warranty of Construction".
- B. Provide manufacturer's ten-year, pro-rated, limited warranty against visible fade or color shift in image tiles.

**PART 2 - PRODUCTS**

**2.1 LUMINOUS CEILINGS:**

- A. Basis of Design: Equal to Luminous SkyCeilings sky-image ceilings manufactured by Sky Factory, Inc.; phone: 641-472-1747; fax: 641-472-1014; www.skyfactory.com; info@SkyFactory.com.
- B. Light Boxes:
  - 1. Back-illumination distribution uniformly over visible surface of image tiles without fall-off at edges, hot spots, or shadows.
  - 2. Image tiles installable and removable without use of doors.
  - 3. Image tiles fully visible between ceiling suspension grids.
  - 4. Installable in 5-inch minimum clearance from face of ceiling suspension grids to structure or other obstructions above.
  - 5. Fabricate from painted sheet aluminum.
  - 6. Units shall bear UL & CE label, and operate on power characteristics shown on Drawings.
  - 7. Provide the following type:
    - a. Dimmable LED Light Boxes: Lamps shall be light-emitting diode (LED) arrays with 6500 K color temperature (daylight balanced), 40,000-hour estimated service life. Provide 24 DC Power System, dimmable from 0 to 100 percent, for installation as specified in Division 26, ELECTRICAL.
- C. Image Tiles:
  - 1. Print images on translucent graphic media with high-quality, UV-resistant, pigmented inks.
  - 2. Laminate images between acrylic sheet approved for use in light fixtures and a clear cover film.
  - 3. Artwork: Provide images to be selected from manufacturer's standard and premium selections.

**PART 3 - EXECUTION**

**3.1 EXAMINATION:**

- A. Examine area receiving work of this Section to identify conditions that may adversely affect installation. Do not begin installation until adverse conditions have been remedied.

**3.2 INSTALLATION OF SKY-IMAGE CEILINGS:**

- A. Install in accordance with manufacturer's instructions and approved shop drawings.
- B. Install elevators and light boxes.
- C. Make connections to power and install lamps as specified in Division 26, ELECTRICAL.
- D. Install image tiles. Orient artwork as shown on approved shop drawings.
- E. Repair damage and adjust installation, if required, to provide attractive appearance, provide uniform illumination across face of image tiles, and optimize visual illusion of sky.

**3.3 CLEANING:**

- A. Clean image tiles and reflective surfaces inside light boxes in accordance with manufacturer's instructions.

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**SECTION 26 05 13**  
**MEDIUM-VOLTAGE CABLES**

**PART 1 - GENERAL****1.1 DESCRIPTION**

- A. This section specifies the furnishing, installation, and connection of medium-voltage cables, indicated as cable or cables in this section, and medium-voltage cable splices and terminations.

**1.2 RELATED WORK**

- A. Section 26 05 11, REQUIREMENTS FOR ELECTRICAL INSTALLATIONS: Requirements that apply to all sections of Division 26.
- B. Section 26 05 26, GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS: Requirements for personnel safety and to provide a low impedance path for possible ground fault currents.
- C. Section 26 05 33, RACEWAY AND BOXES FOR ELECTRICAL SYSTEMS: Conduits for medium-voltage cables.
- D. Section 26 05 41, UNDERGROUND ELECTRICAL CONSTRUCTION: Manholes and ducts for medium-voltage cables.

**1.3 QUALITY ASSURANCE**

- A. Quality Assurance shall be in accordance with Paragraph, QUALIFICATIONS (PRODUCTS AND SERVICES) in Section 26 05 11, REQUIREMENTS FOR ELECTRICAL INSTALLATIONS.

**1.4 FACTORY TESTS**

- A. Factory Tests shall be required.
- B. Factory Tests shall be in accordance with Paragraph, MANUFACTURED PRODUCTS in Section 26 05 11, REQUIREMENTS FOR ELECTRICAL INSTALLATIONS, and the following requirement:
1. A representative sample of Medium-voltage cables from each lot shall be factory tested per NEMA WC 74 to ensure that there are no electrical defects in that specific lot of cable.

**1.5 SUBMITTALS**

- A. Submit in accordance with Paragraph, SUBMITTALS in Section 26 05 11, REQUIREMENTS FOR ELECTRICAL INSTALLATIONS, and the following requirements:
1. Shop Drawings:
    - a. Submit sufficient information to demonstrate compliance with drawings and specifications.
    - b. Submit the following data for approval:

- 1) Complete electrical ratings.
  - 2) Installation instructions.
2. Samples:
- a. After approval of submittal and prior to installation, Contractor shall furnish sample in accordance with Section 26 05 11, REQUIREMENTS FOR ELECTRICAL INSTALLATIONS.
3. Certifications:
- a. Factory Test Reports: Submit certified factory production test reports for approval.
  - b. Field Test Reports: Submit field test reports for approval.
  - c. Compatibility: Submit a certificate from the cable manufacturer that the splices and terminations are approved for use with the cable.
  - d. Two weeks prior to final inspection, submit the following.
    - 1) Certification by the manufacturer that the cables, splices, and terminations conform to the requirements of the drawings and specifications.
    - 2) Certification by the Contractor that the cables, splices, and terminations have been properly installed and tested.
    - 3) Certification by the Contractor that each splice and each termination were completely installed in a single continuous work period by a single qualified worker without any overnight interruption.
4. Qualified Worker Approval:
- a. Qualified workers who install cables, splices, and terminations shall have a minimum of five years of experience splicing and terminating cables, including experience with the materials in the approved splices and terminations. Qualified workers who perform cable testing shall have a minimum of five year of experience performing electrical testing of medium-voltage cables, including the ability to understand, interpret test results and develop test report.
  - b. Furnish satisfactory proof of such experience for each qualified worker who splices or terminates the cables.

#### **1.6 APPLICABLE PUBLICATIONS**

- A. Publications listed below (including amendments, addenda, revisions, supplements, and errata) form a part of this specification to the



extent referenced. Publications are referenced in the text by designation only.

- B. American Society for Testing and Materials (ASTM):
  - B3-13(2018).....Standard Specification for Soft or Annealed  
Copper Wire
- C. Institute of Electrical and Electronics Engineers, Inc. (IEEE):
  - 48-20.....Test Procedures and Requirements for  
Alternating-Current Cable Terminations Used on  
Shielded Cables Having Laminated Insulation  
Rated 2.5 kV through 765 kV or Extruded  
Insulation Rated 2.5 kV through 500 kV
  - 386-16.....Separable Insulated Connector Systems for Power  
Distribution Systems above 600 V
  - 400-12.....Guide for Field Testing and Evaluation of the  
Insulation of Shielded Power Cable Systems
  - 400.2-13.....Guide for Field Testing of Shielded Power Cable  
Systems Using Very Low Frequency (VLF)
  - 404-12.....Extruded and Laminated Dielectric Shielded  
Cable Joints Rated 2500 V to 500,000 V
- D. National Electrical Manufacturers Association (NEMA):
  - WC 71-14.....Non-Shielded Cables Rated 2001-5000 Volts for  
Use in the Distribution of Electric Energy
  - WC 74-17.....5-46 KV Shielded Power Cable for Use in the  
Transmission and Distribution of Electric  
Energy
- E. National Fire Protection Association (NFPA):
  - 70-23.....National Electrical Code (NEC)
- F. Underwriters Laboratories (UL):
  - 1072-06 .....Medium-Voltage Power Cables

**1.7 SHIPMENT AND STORAGE**

- A. Cable shall be shipped on reels such that it is protected against physical, mechanical and environmental damage. Each end of each length of cable shall be hermetically sealed with manufacturer's end caps and securely attached to the reel.
- B. Cable stored and/or cut on site shall have the ends turned down, and sealed with cable manufacturer's standard cable end seals, or field-installed heat-shrink cable end seals.

**PART 2 - PRODUCTS****2.1 CABLE**

- A. Cable shall be in accordance with ASTM, IEEE, NEC, NEMA and UL, and as shown on the drawings.
- B. Single conductor stranded copper conforming to ASTM B3.
- C. Voltage Rating:
  - 2. 15,000 V cable shall be used on all distribution systems with voltages ranging from 5,000 V to 15,000 V.
- D. Insulation:
  - 1. Insulation level shall be 133%.
  - 2. Types of insulation:
    - a. Cable type abbreviation, EPR: Ethylene propylene rubber insulation shall be thermosetting, light and heat stabilized.
    - b. Cable type abbreviation, XLP, XLPE, or TR-XLPE: cross-linked polyethylene insulation shall be thermosetting, light and heat stabilized, and chemically cross-linked.
- E. Insulation shield shall be semi-conducting. Conductor shield shall be semi-conducting.
- F. Insulation shall be wrapped with copper shielding tape, helically-applied over semi-conducting insulation shield.
- G. Heavy duty, overall protective polyvinyl chloride jacket shall enclose every cable. The manufacturer's name, cable type and size, and other pertinent information shall be marked or molded clearly on the overall protective jacket.
- H. Cable temperature ratings for continuous operation, emergency overload operation, and short circuit operation shall be not less than the NEC, NEMA WC 71, or NEMA WC 74 standard for the respective cable.

SPEC WRITER NOTE: Select termination type as required by project requirements. Note that loadbreak terminations are not available in larger medium-voltage cable sizes.

**2.2 SPLICES AND TERMINATIONS**

- A. Splicing of Medium Voltage Cables is not permitted. Materials shall be compatible with the cables being spliced and terminated, and shall be suitable for the prevailing environmental conditions.
- B. In locations where moisture might be present, the splices shall be watertight. In manholes and pullboxes, the splices shall be submersible.

**C. Splices:**

1. Shall comply with IEEE 404. Include all components required for complete splice, with detailed instructions.

SPEC WRITER NOTE: Choose type of terminations to meet project requirements.

**D. Terminations:**

1. Shall comply with IEEE 48. Include shield ground strap for shielded cable terminations.
4. Class 3 terminations for outdoor use: Kit with stress cone and compression-type connector.
5. Load-break terminations for indoor and outdoor use: 200 A loadbreak premolded rubber elbow connectors with bushing inserts, suitable for submersible applications. Separable connectors shall comply with the requirements of IEEE 386, and shall be interchangeable between suppliers. Allow sufficient slack in medium-voltage cable, ground, and drain wires to permit elbow connectors to be moved to their respective parking stands.
7. Ground metallic cable shields with a device designed for that purpose, consisting of a solderless connector enclosed in watertight rubber housing covering the entire assembly.
8. Provide insulated cable supports to relieve any strain imposed by cable weight or movement. Ground cable supports to the grounding system.

**2.3 FIREPROOFING TAPE**

- A. Fireproofing tape shall be flexible, non-corrosive, self-extinguishing, arcproof, and fireproof intumescent elastomer. Securing tape shall be glass cloth electrical tape not less than 0.18 mm (7 mils) thick, and 19 mm (0.75 inch) wide.

**PART 3 - EXECUTION****3.1 GENERAL**

- A. Installation shall be in accordance with the NEC, as shown on the drawings, and manufacturer's instructions.
- B. Cable shall be installed in conduit above grade and duct bank below grade.
- C. All cables of a feeder shall be pulled simultaneously.
- D. Conductors of different systems (e.g., 5kV and 15kV) shall not be installed in the same raceway.
- E. Splice the cables only in manholes and pullboxes.

- F. Ground shields in accordance with Section 26 05 26, GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS.
- G. Cable maximum pull length, maximum pulling tension, and minimum bend radius shall conform with the recommendations of the manufacturer.
- H. Use suitable lubricating compounds on the cables to prevent pulling damage. Provide compounds that are not injurious to the cable jacket and do not harden or become adhesive.
- I. Seal the cable ends prior to pulling, to prevent the entry of moisture or lubricant.

### **3.2 PROTECTION DURING SPLICING OPERATIONS**

- A. Blowers shall be provided to force fresh air into manholes where free movement or circulation of air is obstructed. Waterproof protective coverings shall be available on the work site to provide protection against moisture while a splice is being made. Pumps shall be used to keep manholes dry during splicing operations. Under no conditions shall a splice or termination be made that exposes the interior of a cable to moisture. A manhole ring at least 150 mm (6 inches) above ground shall be used around the manhole entrance to keep surface water from entering the manhole. Unused ducts shall be plugged and water seepage through ducts in use shall be stopped before splicing.

### **3.3 PULLING CABLES IN DUCTS AND MANHOLES**

- A. Cables shall be pulled into ducts with equipment designed for this purpose, including power-driven winches, cable-feeding flexible tube guides, cable grips, pulling eyes, and lubricants. A sufficient number of qualified workers and equipment shall be employed to ensure the careful and proper installation of the cable.
- B. Cable reels shall be set up at the side of the manhole opening and above the duct or hatch level, allowing cables to enter through the opening without reverse bending. Flexible tube guides shall be installed through the opening in a manner that will prevent cables from rubbing on the edges of any structural member.
- C. Cable shall be unreeled from the top of the reel. Pay-out shall be carefully controlled. Cables to be pulled shall be attached through a swivel to the main pulling wire by means of a suitable cable grip and pulling eye.
- D. Woven-wire cable grips shall be used to grip the cable end when pulling small cables and short straight lengths of heavier cables.

- E. Pulling eyes shall be attached to the cable conductors to prevent damage to the cable structure.
- F. Cables shall be liberally coated with a suitable lubricant as they enter the tube guide or duct. Rollers, sheaves, or tube guides around which the cable is pulled shall conform to the minimum bending radius of the cable.
- G. Cables shall be pulled into ducts at a reasonable speed. Cable pulling using a vehicle shall not be permitted. Pulling operations shall be stopped immediately at any indication of binding or obstruction, and shall not be resumed until the potential for damage to the cable is corrected. Sufficient slack shall be provided for free movement of cable due to expansion or contraction.
- H. Splices in manholes shall be firmly supported on cable racks. Cable ends shall overlap at the ends of a section to provide sufficient undamaged cable for splicing.
- I. Cables cut in the field shall have the cut ends immediately sealed to prevent entrance of moisture.

#### **3.4 SPLICES AND TERMINATIONS**

- A. Install the materials as recommended by the manufacturer, including precautions pertaining to air temperature and humidity during installation.
- B. Installation shall be executed by qualified person trained to perform medium-voltage equipment installations. Tools shall be as recommended or provided by the manufacturer. Installation shall comply with manufacturer's instructions.
- C. Splices of medium voltage cables is not permitted..
- D. Where the Government determines that unsatisfactory splices and terminations have been installed, the Contractor shall replace the unsatisfactory splices and terminations with approved material at no additional cost to the Government.

#### **3.5 FIREPROOFING**

- A. Cover all cable segments exposed in manholes and pullboxes with fireproofing tape.
- B. Apply the tape in a single layer, wrapped in a half-lap manner, or as recommended by the manufacturer. Extend the tape not less than 25 mm (1 inch) into each duct.
- C. At each end of a taped cable section, secure the fireproof tape in place with glass cloth tape.

### 3.6 CIRCUIT IDENTIFICATION OF FEEDERS

- A. In each manhole and pullbox, install permanent identification tags on each circuit's cables to clearly designate the circuit identification and voltage. The tags shall be the embossed brass type, 40 mm (1.5 inches) in diameter and 40 mils thick. Attach tags with plastic ties. Position the tags so they will be easy and clear to read after the fireproofing tape is installed.

### 3.7 ACCEPTANCE CHECKS AND TESTS

- A. General:
  1. Perform tests in accordance with the latest IEEE 400 and 400.2, manufacturer's recommendations, and as specified in this specification.
  2. Contractor shall make arrangements to have tests witnessed by the COR. Contractor shall proceed with tests only after obtaining approval from the COR.
- B. Visual Inspection: Perform visual inspection prior to electrical tests.
  1. Inspect exposed sections of cables for physical damage.
  2. Inspect shield grounding, cable supports, splices, and terminations.
  3. Verify that visible cable bends meet manufacturer's minimum bending radius requirement.
  4. Verify installation of fireproofing tape and identification tags.
  5. At the time of final acceptance, Contractor shall provide the COR visual field inspection notes, findings, and photographs detailing accessible inspection locations.
- C. Electrical Tests - New Cables: Perform preparation and tests in order shown below:
  1. Preparation Prior to Testing: Splices and terminations applied to new cables shall be completed prior to testing. For renovation installation, ends of new cables intended to be spliced to existing service-aged cables shall be prepared (cut back) to allow testing without flashover or tracking. Cables shall not be connected to other equipment while under test.
  2. Perform Insulation-Resistance Test. Test all cables with respect to ground and adjacent cables. All adjacent cables shall be grounded during testing.
    - a. Apply test voltage for a period sufficient to stabilize output voltage and insulation resistance measurement.

- b. Test data shall include megohm, applied test voltage, and leakage current readings.
- c. Further testing shall not continue unless the insulation resistance test results meet or exceed the values listed below. Test voltages and minimum acceptable resistance values shall be:
- | <u>Voltage Class</u> | <u>Test Voltage</u> | <u>Min. Insulation Resistance</u> |
|----------------------|---------------------|-----------------------------------|
| 5kV                  | 2,500 VDC           | 1,000 megohms                     |
| 15kV                 | 2,500 VDC           | 5,000 megohms                     |
| 25kV                 | 5,000 VDC           | 20,000 megohms                    |
| 35kV                 | 15,000 VDC          | 100,000 megohms                   |
3. Perform Tan Delta test. Review test readings with the COR prior to proceeding with the Very Low Frequency (VLF) Withstand test
4. Perform Very Low Frequency (VLF) Withstand test. Utilize test voltages in accordance with IEEE 400.2.
- E. Electrical Tests - Inter-connected New Cables and Service-Aged Cables: After successful Tan Delta and VLF Withstand testing of new cables and service-aged cables, perform final splicing inter-connecting between new and service-aged cables. Once new and service-aged cables are completely inter-connected, conduct Tan Delta and VLF Withstand tests for the entire inter-connected cable. Utilize maintenance test voltage for VLF Withstand testing.
- F. Field Test Report: Submit a field test report to the COR that includes the following information:
1. Project Name, Location, Test Date.
  2. Name of Technician and Company performing the test.
  3. Ambient temperature and humidity at time of test.
  4. Name, Model Number and Description of Test Equipment used.
  5. Circuit identification, cable length, cable type and size, insulation type, cable manufacturer, service age (if any), voltage rating, description of splices or terminations.
  6. Visual field inspection notes, findings, and photographs.
  7. Insulation Resistance Test results:
    - a. Test voltage.
    - b. Measurement in Megohms.
    - c. Leakage current.
  8. Tan Delta results:
    - a. Test voltage.

- b. Waveform (sinusoidal or cosine-rectangular).
  - c. Mean Tan Delta at  $V_0$ .
  - d. Stability measured by Standard Deviation at  $V_0$ .
  - e. Differential Tan Delta.
  - f. IEEE Condition Assessment Rating.
9. VLF Withstand results:
- a. Test voltage.
  - b. Waveform (sinusoidal or cosine-rectangular).
  - c. Pass/Fail Rating.
10. Conclusions. If any deficiency is discovered based on test results, provide recommendations for corrective action.
- G. Final Acceptance: Final acceptance shall depend upon the satisfactory performance of the cables under test. No cable shall be put into service until all tests are successfully passed, and field test reports have been approved by the COR.

---END---



**SECTION 26 05 19**  
**LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES**

**PART 1 - GENERAL****1.1 DESCRIPTION**

- A. This section specifies the furnishing, installation, connection, and testing of the electrical conductors and cables for use in electrical systems rated 600 V and below, indicated as cable(s), conductor(s), wire, or wiring in this section.

**1.2 RELATED WORK**

- A. Section 07 84 00, FIRESTOPPING: Sealing around penetrations to maintain the integrity of fire-resistant rated construction.
- B. Section 26 05 11, REQUIREMENTS FOR ELECTRICAL INSTALLATIONS: Requirements that apply to all sections of Division 26.
- C. Section 26 05 26, GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS: Requirements for personnel safety and to provide a low impedance path for possible ground fault currents.
- D. Section 26 05 33, RACEWAY AND BOXES FOR ELECTRICAL SYSTEMS: Conduits for conductors and cables.

**1.3 QUALITY ASSURANCE**

- A. Quality Assurance shall be in accordance with Paragraph, QUALIFICATIONS (PRODUCTS AND SERVICES) in Section 26 05 11, REQUIREMENTS FOR ELECTRICAL INSTALLATIONS.

**1.4 SUBMITTALS**

- A. Submit in accordance with Paragraph, SUBMITTALS in Section 26 05 11, REQUIREMENTS FOR ELECTRICAL INSTALLATIONS, and the following requirements:
1. Shop Drawings:
    - a. Submit sufficient information to demonstrate compliance with drawings and specifications.
    - b. Submit the following data for approval:
      - 1) Electrical ratings and insulation type for each conductor and cable.
      - 2) Splicing materials and pulling lubricant.
  2. Certifications: Two weeks prior to final inspection, submit the following.
    - a. Certification by the manufacturer that the conductors and cables conform to the requirements of the drawings and specifications.

- b. Certification by the Contractor that the conductors and cables have been properly installed, adjusted, and tested.

**1.5 APPLICABLE PUBLICATIONS**

- A. Publications listed below (including amendments, addenda, revisions, supplements and errata) form a part of this specification to the extent referenced. Publications are reference in the text by designation only.
- B. American Society of Testing Material (ASTM):
  - D2301-10.....Standard Specification for Vinyl Chloride Plastic Pressure-Sensitive Electrical Insulating Tape
  - D2304-10.....Test Method for Thermal Endurance of Rigid Electrical Insulating Materials
  - D3005-10.....Low-Temperature Resistant Vinyl Chloride Plastic Pressure-Sensitive Electrical Insulating Tape
- C. National Electrical Manufacturers Association (NEMA):
  - WC 70-09.....Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy
- D. National Fire Protection Association (NFPA):
  - 70-17.....National Electrical Code (NEC)
- E. Underwriters Laboratories, Inc. (UL):
  - 44-14.....Thermoset-Insulated Wires and Cables
  - 83-14.....Thermoplastic-Insulated Wires and Cables
  - 467-13.....Grounding and Bonding Equipment
  - 486A-486B-13.....Wire Connectors
  - 486C-13.....Splicing Wire Connectors
  - 486D-15.....Sealed Wire Connector Systems
  - 486E-15.....Equipment Wiring Terminals for Use with Aluminum and/or Copper Conductors
  - 493-07.....Thermoplastic-Insulated Underground Feeder and Branch Circuit Cables
  - 514B-12.....Conduit, Tubing, and Cable Fittings

**PART 2 - PRODUCTS**

**2.1 CONDUCTORS AND CABLES**

- A. Conductors and cables shall be in accordance with ASTM, NEMA, NFPA, UL, as specified herein, and as shown on the drawings.
- B. All conductors shall be copper.
- C. Single Conductor and Cable:

1. No. 12 AWG: Minimum size, except where smaller sizes are specified herein or shown on the drawings.
2. No. 8 AWG and larger: Stranded.
3. No. 10 AWG and smaller: Solid; except shall be stranded for final connection to motors, transformers, and vibrating equipment.
4. Insulation: THHN-THWN and XHHW-2. XHHW-2 shall be used for isolated power systems.

D. Color Code:

1. No. 10 AWG and smaller: Solid color insulation or solid color coating.
2. No. 8 AWG and larger: Color-coded using one of the following methods:
  - a. Solid color insulation or solid color coating.
  - b. Stripes, bands, or hash marks of color specified.
  - c. Color using 19 mm (0.75 inches) wide tape.
4. For modifications and additions to existing wiring systems, color coding shall conform to the existing wiring system.
5. Conductors shall be color-coded as follows:

208/120 V	Phase	480/277 V
Black	A	Brown
Red	B	Orange
Blue	C	Yellow
White	Neutral	Gray *
* or white with colored (other than green) tracer.		

6. Lighting circuit "switch legs", and 3-way and 4-way switch "traveling wires," shall have color coding that is unique and distinct (e.g., pink and purple) from the color coding indicated above. The unique color codes shall be solid and in accordance with the NEC. Coordinate color coding in the field with the COR.

## 2.2 SPLICES

- A. Splices shall be in accordance with NEC and UL.
- B. Splicing of main feeders is not permitted.
- C. Above Ground Splices for No. 10 AWG and Smaller:
  1. Solderless, screw-on, reusable pressure cable type, with integral insulation, approved for copper and aluminum conductors.
  2. The integral insulator shall have a skirt to completely cover the stripped conductors.

3. The number, size, and combination of conductors used with the connector, as listed on the manufacturer's packaging, shall be strictly followed.

### **2.3 CONNECTORS AND TERMINATIONS**

- A. Mechanical type of high conductivity and corrosion-resistant material, listed for use with copper and aluminum conductors.
- B. Long barrel compression type of high conductivity and corrosion-resistant material, with minimum of two compression indents per wire, listed for use with copper and aluminum conductors.
- C. All bolts, nuts, and washers used to connect connections and terminations to bus bars or other termination points shall be zinc-plated steel.

### **2.4 CONTROL WIRING**

- A. Unless otherwise specified elsewhere in these specifications, control wiring shall be as specified herein, except that the minimum size shall be not less than No. 14 AWG.
- B. Control wiring shall be sized such that the voltage drop under in-rush conditions does not adversely affect operation of the controls.

### **2.5 WIRE LUBRICATING COMPOUND**

- A. Lubricating compound shall be suitable for the wire insulation and conduit, and shall not harden or become adhesive.
- B. Shall not be used on conductors for isolated power systems.

## **PART 3 - EXECUTION**

### **3.1 GENERAL**

- A. Installation shall be in accordance with the NEC, as shown on the drawings, and manufacturer's instructions.
- B. Install all conductors in raceway systems.
- C. Splice conductors only in outlet boxes, junction boxes, or pullboxes,.
- D. Conductors of different systems (e.g., 120 V and 277 V) shall not be installed in the same raceway.
- E. Install cable supports for all vertical feeders in accordance with the NEC. Provide split wedge type which firmly clamps each individual cable and tightens due to cable weight.
- F. In panelboards, cabinets, wireways, switches, enclosures, and equipment assemblies, neatly form, train, and tie the conductors with non-metallic ties.

- G. For connections to motors, transformers, and vibrating equipment, stranded conductors shall be used only from the last fixed point of connection to the motors, transformers, or vibrating equipment.
- H. Use expanding foam or non-hardening duct-seal to seal conduits entering a building, after installation of conductors.
- I. Conductor and Cable Pulling:
  - 1. Provide installation equipment that will prevent the cutting or abrasion of insulation during pulling. Use lubricants approved for the cable.
  - 2. Use nonmetallic pull ropes.
  - 3. Attach pull ropes by means of either woven basket grips or pulling eyes attached directly to the conductors.
  - 4. All conductors in a single conduit shall be pulled simultaneously.
  - 5. Do not exceed manufacturer's recommended maximum pulling tensions and sidewall pressure values.
- J. No more than three branch circuits shall be installed in any one conduit.
- K. When stripping stranded conductors, use a tool that does not damage the conductor or remove conductor strands.

### **3.2 SPLICE AND TERMINATION INSTALLATION**

- A. Splices and terminations shall be mechanically and electrically secure, and tightened to manufacturer's published torque values using a torque screwdriver or wrench.
- B. Where the Government determines that unsatisfactory splices or terminations have been installed, replace the splices or terminations at no additional cost to the Government.

### **3.3 CONDUCTOR IDENTIFICATION**

- A. When using colored tape to identify phase, neutral, and ground conductors larger than No. 8 AWG, apply tape in half-overlapping turns for a minimum of 75 mm (3 inches) from terminal points, and in junction boxes, pullboxes, and manholes. Apply the last two laps of tape with no tension to prevent possible unwinding. Where cable markings are covered by tape, apply tags to cable, stating size and insulation type.

### **3.4 FEEDER CONDUCTOR IDENTIFICATION**

- A. In each interior pullbox and each underground manhole and handhole, install brass tags on all feeder conductors to clearly designate their circuit identification and voltage. The tags shall be the embossed

type, 40 mm (1-1/2 inches) in diameter and 40 mils thick. Attach tags with plastic ties.

### **3.5 EXISTING CONDUCTORS**

- A. Unless specifically indicated on the plans, existing conductors shall not be reused.

### **3.6 CONTROL WIRING INSTALLATION**

- A. Unless otherwise specified in other sections, install control wiring and connect to equipment to perform the required functions as specified or as shown on the drawings.
- B. Install a separate power supply circuit for each system, except where otherwise shown on the drawings.

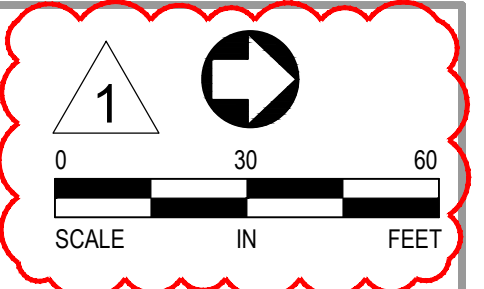
### **3.7 CONTROL WIRING IDENTIFICATION**

- A. Install a permanent wire marker on each wire at each termination.
- B. Identifying numbers and letters on the wire markers shall correspond to those on the wiring diagrams used for installing the systems.
- C. Wire markers shall retain their markings after cleaning.

### **3.9 ACCEPTANCE CHECKS AND TESTS**

- A. Perform in accordance with the manufacturer's recommendations. In addition, include the following:
  - 1. Visual Inspection and Tests: Inspect physical condition.
  - 2. Electrical tests:
    - a. After installation but before connection to utilization devices, such as fixtures, motors, or appliances, test conductors phase-to-phase and phase-to-ground resistance with an insulation resistance tester. Existing conductors to be reused shall also be tested.
    - b. Applied voltage shall be 500 V DC for 300 V rated cable, and 1000 V DC for 600 V rated cable. Apply test for one minute or until reading is constant for 15 seconds, whichever is longer. Minimum insulation resistance values shall not be less than 25 megohms for 300 V rated cable and 100 megohms for 600 V rated cable.
    - c. Perform phase rotation test on all three-phase circuits.

---END---



three inches = one foot  
 one and one half inches = one foot  
 one inch = one foot  
 three quarters inch = one foot  
 one half inch = one foot  
 three eighths inch = one foot  
 one quarter inch = one foot  
 one eighth inch = one foot  
 1/16 inch = one foot

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1	Addendum #1	02/13/2024
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**CONSULTANTS**

SURVEYOR:

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**STAMP**

**Office of Construction and Facilities Management**

**VA** U.S. Department of Veterans Affairs

**Drawing Title**  
 TOPOGRAPHIC SURVEY

Approved:

**Phase**  
 CONSTRUCTION DOCUMENTS

FOR OFFICIAL USE ONLY

**Project Title**  
 NEW FRONT LOBBY AND PRIMARY CARE ADDITION

**Location**  
 SIOUX FALLS, SOUTH DAKOTA

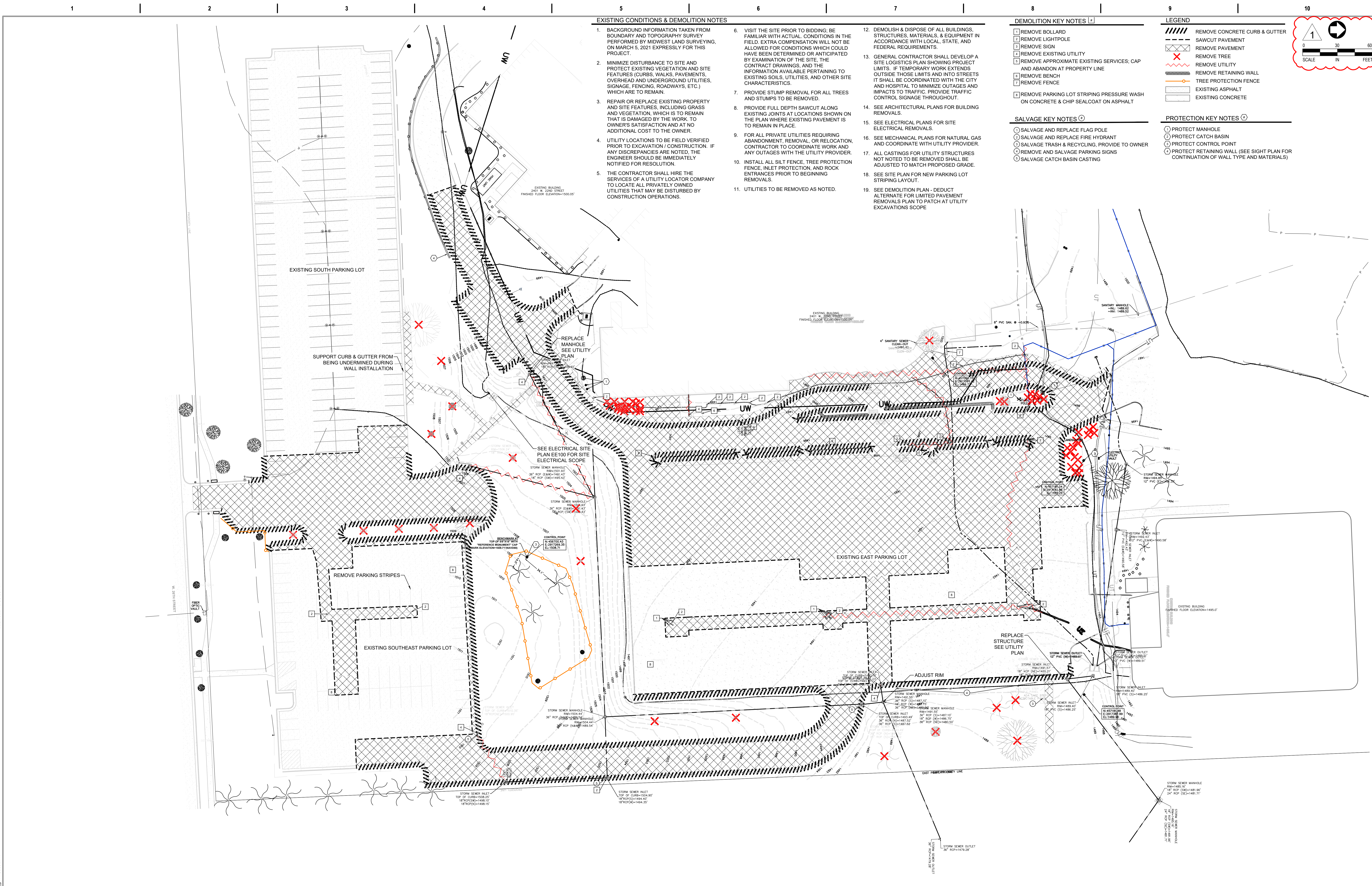
Issue Date: 06/22/2022  
 Checked: BJ / RK  
 Drawn: CL / AF / DG

**Project Number**  
 VA #438-480  
 SGA #201909

**Building Number**  
 5

**Drawing Number**  
 V001

three inches = one foot  
 one and one half inches = one foot  
 one inch = one foot  
 three quarters inch = one foot  
 one half inch = one foot  
 three eighths inch = one foot  
 one quarter inch = one foot  
 one eighth inch = one foot



**EXISTING CONDITIONS & DEMOLITION NOTES**

- BACKGROUND INFORMATION TAKEN FROM BOUNDARY AND TOPOGRAPHY SURVEY PERFORMED BY MIDWEST LAND SURVEYING, ON MARCH 5, 2021 EXPRESSLY FOR THIS PROJECT.
- MINIMIZE DISTURBANCE TO SITE AND PROTECT EXISTING VEGETATION AND SITE FEATURES (CURBS, WALKS, PAVEMENTS, OVERHEAD AND UNDERGROUND UTILITIES, SIGNAGE, FENCING, ROADWAYS, ETC.) WHICH ARE TO REMAIN.
- REPAIR OR REPLACE EXISTING PROPERTY AND SITE FEATURES, INCLUDING GRASS AND VEGETATION, WHICH IS TO REMAIN THAT IS DAMAGED BY THE WORK TO OWNER'S SATISFACTION AND AT NO ADDITIONAL COST TO THE OWNER.
- UTILITY LOCATIONS TO BE FIELD VERIFIED PRIOR TO EXCAVATION / CONSTRUCTION. IF ANY DISCREPANCIES ARE NOTED, THE ENGINEER SHOULD BE IMMEDIATELY NOTIFIED FOR RESOLUTION.
- THE CONTRACTOR SHALL HIRE THE SERVICES OF A UTILITY LOCATOR COMPANY TO LOCATE ALL PRIVATELY OWNED UTILITIES THAT MAY BE DISTURBED BY CONSTRUCTION OPERATIONS.
- VISIT THE SITE PRIOR TO BIDDING, BE FAMILIAR WITH ACTUAL CONDITIONS IN THE FIELD. EXTRA COMPENSATION WILL NOT BE ALLOWED FOR CONDITIONS WHICH COULD HAVE BEEN DETERMINED OR ANTICIPATED BY EXAMINATION OF THE SITE, THE CONTRACT DRAWINGS, AND THE INFORMATION AVAILABLE PERTAINING TO EXISTING SOILS, UTILITIES, AND OTHER SITE CHARACTERISTICS.
- PROVIDE STUMP REMOVAL FOR ALL TREES AND STUMPS TO BE REMOVED.
- PROVIDE FULL DEPTH SAWCUT ALONG EXISTING JOINTS AT LOCATIONS SHOWN ON THE PLAN WHERE EXISTING PAVEMENT IS TO REMAIN IN PLACE.
- FOR ALL PRIVATE UTILITIES REQUIRING ABANDONMENT, REMOVAL, OR RELOCATION, CONTRACTOR TO COORDINATE WORK AND ANY OUTAGES WITH THE UTILITY PROVIDER.
- INSTALL ALL SILT FENCE, TREE PROTECTION FENCE, INLET PROTECTION, AND ROCK ENTRANCES PRIOR TO BEGINNING REMOVALS.
- UTILITIES TO BE REMOVED AS NOTED.
- DEMOLISH & DISPOSE OF ALL BUILDINGS, STRUCTURES, MATERIALS, & EQUIPMENT IN ACCORDANCE WITH LOCAL, STATE, AND FEDERAL REQUIREMENTS.
- GENERAL CONTRACTOR SHALL DEVELOP A SITE LOGISTICS PLAN SHOWING PROJECT LIMITS. IF TEMPORARY WORK EXTENDS OUTSIDE THOSE LIMITS AND INTO STREETS IT SHALL BE COORDINATED WITH THE CITY AND HOSPITAL TO MINIMIZE OUTAGES AND IMPACTS TO TRAFFIC. PROVIDE TRAFFIC CONTROL SIGNAGE THROUGHOUT.
- SEE ARCHITECTURAL PLANS FOR BUILDING REMOVALS.
- SEE ELECTRICAL PLANS FOR SITE ELECTRICAL REMOVALS.
- SEE MECHANICAL PLANS FOR NATURAL GAS AND COORDINATE WITH UTILITY PROVIDER.
- ALL CASTINGS FOR UTILITY STRUCTURES NOT NOTED TO BE REMOVED SHALL BE ADJUSTED TO MATCH PROPOSED GRADE.
- SEE SITE PLAN FOR NEW PARKING LOT STRIPING LAYOUT.
- SEE DEMOLITION PLAN - DEDUCT ALTERNATE FOR LIMITED PAVEMENT REMOVALS PLAN TO PATCH AT UTILITY EXCAVATIONS SCOPE

**DEMOLITION KEY NOTES**

- 1 REMOVE BOLLARD
- 2 REMOVE LIGHTPOLE
- 3 REMOVE SIGN
- 4 REMOVE EXISTING UTILITY
- 5 REMOVE APPROXIMATE EXISTING SERVICES; CAP AND ABANDON AT PROPERTY LINE
- 6 REMOVE BENCH
- 7 REMOVE FENCE
- 8 REMOVE PARKING LOT STRIPING PRESSURE WASH ON CONCRETE & CHIP SEALCOAT ON ASPHALT

**SALVAGE KEY NOTES**

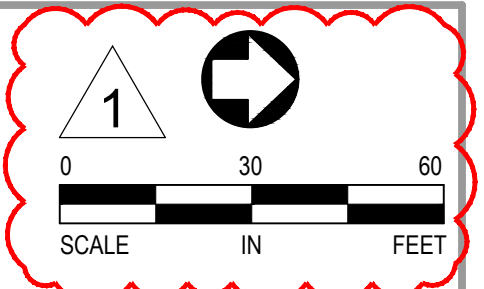
- 1 SALVAGE AND REPLACE FLAG POLE
- 2 SALVAGE AND REPLACE FIRE HYDRANT
- 3 SALVAGE TRASH & RECYCLING, PROVIDE TO OWNER
- 4 REMOVE AND SALVAGE PARKING SIGNS
- 5 SALVAGE CATCH BASIN CASTING

**LEGEND**

- REMOVE CONCRETE CURB & GUTTER
- SAWCUT PAVEMENT
- REMOVE PAVEMENT
- REMOVE TREE
- REMOVE UTILITY
- REMOVE RETAINING WALL
- TREE PROTECTION FENCE
- EXISTING ASPHALT
- EXISTING CONCRETE

**PROTECTION KEY NOTES**

- 1 PROTECT MANHOLE
- 2 PROTECT CATCH BASIN
- 3 PROTECT CONTROL POINT
- 4 PROTECT RETAINING WALL (SEE SIGHT PLAN FOR CONTINUATION OF WALL TYPE AND MATERIALS)



1	2	3	4	5	6	7	8	9	10
1	2	3	4	5	6	7	8	9	10

**CONSULTANTS**

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**ARCHITECT OF RECORD**

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**STAMP**

Office of Construction and Facilities Management  
VA U.S. Department of Veterans Affairs

**Drawing Title**  
DEMOLITION PLAN - DEDUCT ALTERNATE

**Approved:**

**Phase**  
CONSTRUCTION DOCUMENTS

FOR OFFICIAL USE ONLY

**Project Title**  
NEW FRONT LOBBY AND PRIMARY CARE ADDITION

**Location**  
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**Issue Date**  
06/22/2022

**Checked**  
BJ / RK

**Drawn**  
CL / AF / DG

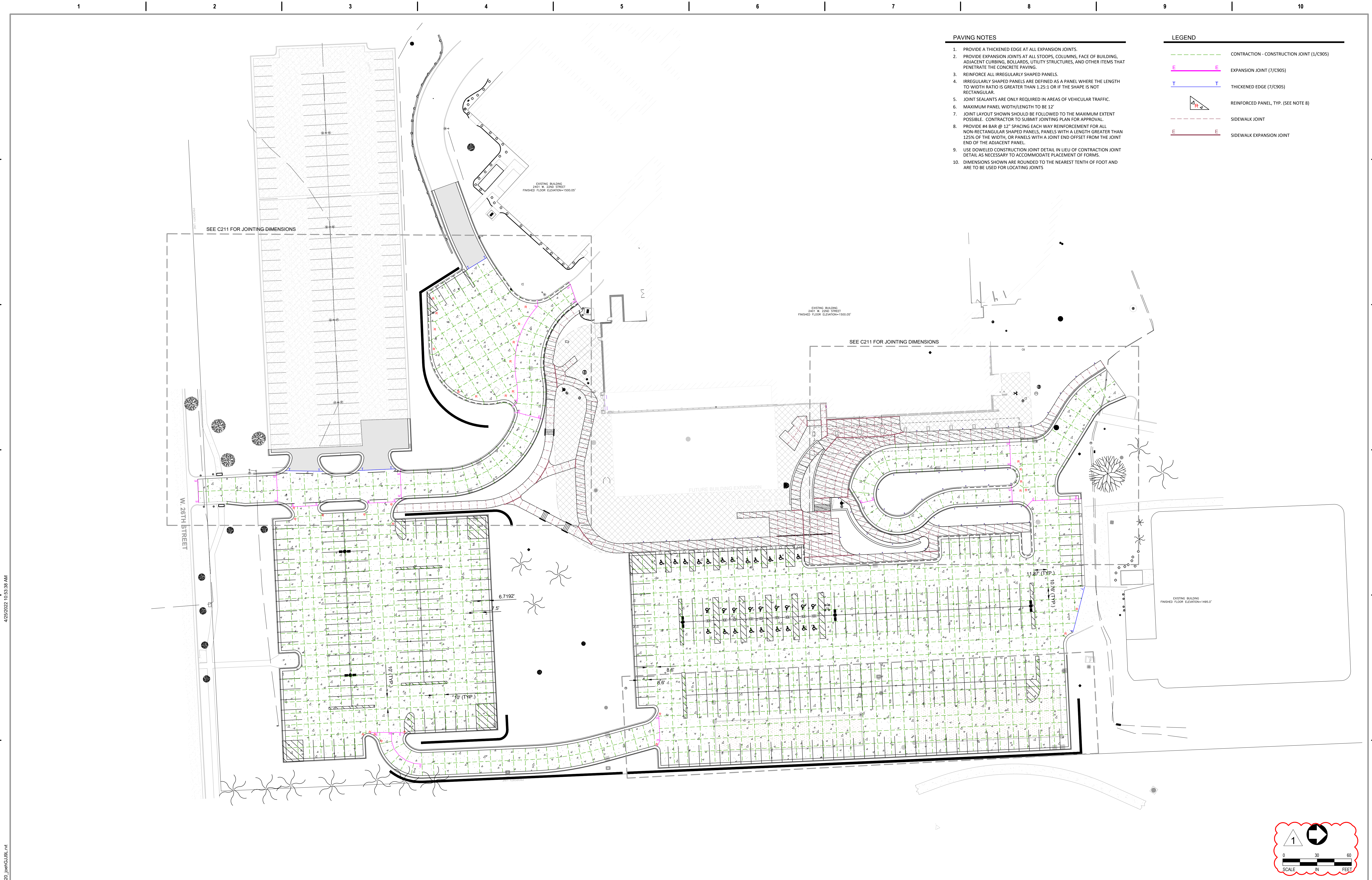
**Project Number**  
VA #438-480  
SGA #201909

**Building Number**  
5

**Drawing Number**  
C101



three inches = one foot  
 one and one half inches = one foot  
 one inch = one foot  
 three quarters inch = one foot  
 one half inch = one foot  
 three eighths inch = one foot  
 one quarter inch = one foot  
 one eighth inch = one foot



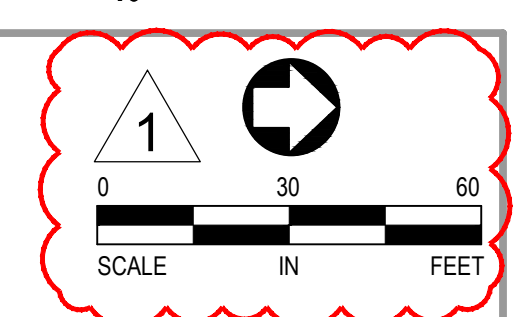
**PAVING NOTES**

1. PROVIDE A THICKENED EDGE AT ALL EXPANSION JOINTS.
2. PROVIDE EXPANSION JOINTS AT ALL STAIRS, COLUMNS, FACE OF BUILDING, ADJACENT CURBING, BOLLARDS, UTILITY STRUCTURES, AND OTHER ITEMS THAT PENETRATE THE CONCRETE PAVING.
3. REINFORCE ALL IRREGULARLY SHAPED PANELS.
4. IRREGULARLY SHAPED PANELS ARE DEFINED AS A PANEL WHERE THE LENGTH TO WIDTH RATIO IS GREATER THAN 1.25:1 OR IF THE SHAPE IS NOT RECTANGULAR.
5. JOINT SEALANTS ARE ONLY REQUIRED IN AREAS OF VEHICULAR TRAFFIC.
6. MAXIMUM PANEL WIDTH/LENGTH TO BE 12'
7. JOINT LAYOUT SHOWN SHOULD BE FOLLOWED TO THE MAXIMUM EXTENT POSSIBLE. CONTRACTOR TO SUBMIT JOINTING PLAN FOR APPROVAL.
8. PROVIDE #4 BAR @ 12" SPACING EACH WAY REINFORCEMENT FOR ALL NON-RECTANGULAR SHAPED PANELS, PANELS WITH A LENGTH GREATER THAN 125% OF THE WIDTH, OR PANELS WITH A JOINT END OFFSET FROM THE JOINT END OF THE ADJACENT PANEL.
9. USE DOWELED CONSTRUCTION JOINT DETAIL IN LIEU OF CONTRACTION JOINT DETAIL AS NECESSARY TO ACCOMMODATE PLACEMENT OF FORMS.
10. DIMENSIONS SHOWN ARE ROUNDED TO THE NEAREST TENTH OF FOOT AND ARE TO BE USED FOR LOCATING JOINTS

**LEGEND**

- CONTRACTION - CONSTRUCTION JOINT (1/C905)
- EXPANSION JOINT (7/C905)
- THICKENED EDGE (7/C905)
- REINFORCED PANEL, TYP. (SEE NOTE 8)
- SIDEWALK JOINT
- SIDEWALK EXPANSION JOINT

<b>CONSULTANTS</b> ARCHITECTURAL: <b>BWBR</b> STRUCTURAL: <b>ERA</b> MEP: <b>DUNHAM</b> CIVIL: <b>EVS</b> LANDSCAPE: <b>CONFLUENCE</b>		<b>ARCHITECT OF RECORD</b> A/E: <b>Stone Group Architects</b> 600 E 7th Street Sioux Falls, SD 57103 605-271-1144		<b>STAMP</b>  Office of Construction and Facilities Management VA U.S. Department of Veterans Affairs	Drawing Title <b>CONCRETE JOINTING PLAN BASE</b> Approved:	Phase <b>CONSTRUCTION DOCUMENTS</b>  FOR OFFICIAL USE ONLY	Project Title <b>NEW FRONT LOBBY AND PRIMARY CARE ADDITION</b>  Location <b>SIoux FALLS, SOUTH DAKOTA</b>	Project Number VA #438-480 SGA #201909 Building Number 5 Drawing Number <b>C210</b>	
Addendum #1 02/13/2024		BWR 380 St. Peter St Suite 600 St. Paul, MN 55102 Phone: 651-222-3701 ERA 2520 University Ave W Suite 423-S St. Paul, MN 55402 Phone: 651-351-1970 Dunham Associates, Inc. 51 South Sixth St Suite 1100 Minneapolis, MN 55402 Phone: 612-465-7550 EVS 10025 Valley View Rd Suite 140 Eden Prairie, MN 55344 Phone: 952-846-0236 CONFLUENCE 524 N Main Ave Suite 201 Sioux Falls, SD 57104 Phone: 605-339-1205		Stone Group Architects		Approved:		Issue Date: 06/22/2022 Checked: BJ / RK Drawn: CL / AF / DG	



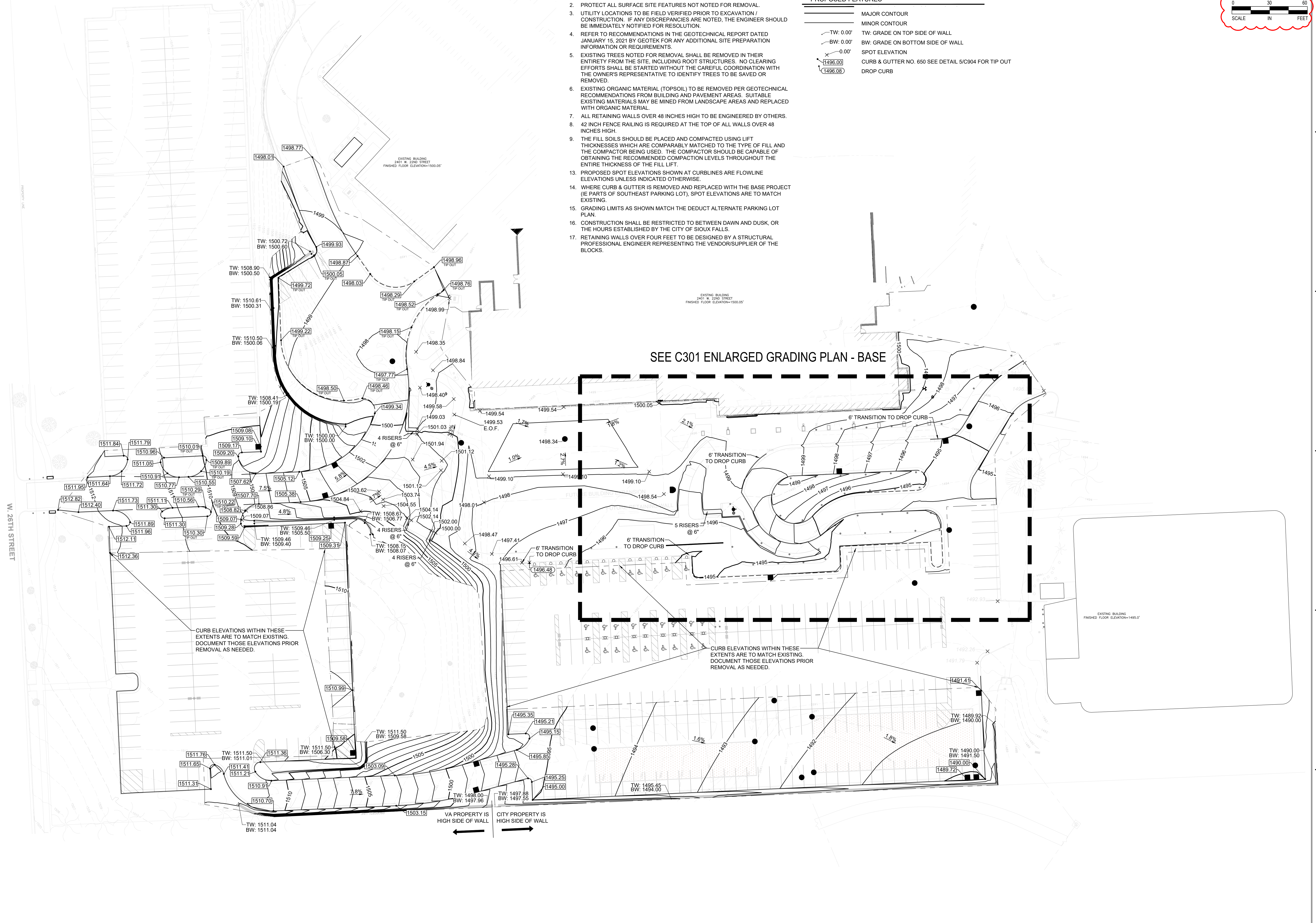
**GRADING NOTES**

- SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS
- PROTECT ALL SURFACE SITE FEATURES NOT NOTED FOR REMOVAL.
- UTILITY LOCATIONS TO BE FIELD VERIFIED PRIOR TO EXCAVATION / CONSTRUCTION. IF ANY DISCREPANCIES ARE NOTED, THE ENGINEER SHOULD BE IMMEDIATELY NOTIFIED FOR RESOLUTION.
- REFER TO RECOMMENDATIONS IN THE GEOTECHNICAL REPORT DATED JANUARY 15, 2021 BY GEOTEK FOR ANY ADDITIONAL SITE PREPARATION INFORMATION OR REQUIREMENTS.
- EXISTING TREES NOTED FOR REMOVAL SHALL BE REMOVED IN THEIR ENTIRETY FROM THE SITE, INCLUDING ROOT STRUCTURES. NO CLEARING EFFORTS SHALL BE STARTED WITHOUT THE CAREFUL COORDINATION WITH THE OWNER'S REPRESENTATIVE TO IDENTIFY TREES TO BE SAVED OR REMOVED.
- EXISTING ORGANIC MATERIAL (TOPSOIL) TO BE REMOVED PER GEOTECHNICAL RECOMMENDATIONS FROM BUILDING AND PAVEMENT AREAS. SUITABLE EXISTING MATERIALS MAY BE MINED FROM LANDSCAPE AREAS AND REPLACED WITH ORGANIC MATERIAL.
- ALL RETAINING WALLS OVER 48 INCHES HIGH TO BE ENGINEERED BY OTHERS.
- 42 INCH FENCE RAILING IS REQUIRED AT THE TOP OF ALL WALLS OVER 48 INCHES HIGH.
- THE FILL SOILS SHOULD BE PLACED AND COMPACTED USING LIFT THICKNESSES WHICH ARE COMPARABLY MATCHED TO THE TYPE OF FILL AND THE COMPACTOR BEING USED. THE COMPACTOR SHOULD BE CAPABLE OF OBTAINING THE RECOMMENDED COMPACTION LEVELS THROUGHOUT THE ENTIRE THICKNESS OF THE FILL LIFT.
- PROPOSED SPOT ELEVATIONS SHOWN AT CURBLINES ARE FLOWLINE ELEVATIONS UNLESS INDICATED OTHERWISE.
- WHERE CURB & GUTTER IS REMOVED AND REPLACED WITH THE BASE PROJECT (IE PARTS OF SOUTHEAST PARKING LOT), SPOT ELEVATIONS ARE TO MATCH EXISTING.
- GRADING LIMITS AS SHOWN MATCH THE DEDUCT ALTERNATE PARKING LOT PLAN.
- CONSTRUCTION SHALL BE RESTRICTED TO BETWEEN DAWN AND DUSK, OR THE HOURS ESTABLISHED BY THE CITY OF SIOUX FALLS.
- RETAINING WALLS OVER FOUR FEET TO BE DESIGNED BY A STRUCTURAL PROFESSIONAL ENGINEER REPRESENTING THE VENDOR/SUPPLIER OF THE BLOCKS.

**LEGEND**

**PROPOSED FEATURES**

- MAJOR CONTOUR
- MINOR CONTOUR
- TW: 0.00' BW: 0.00' SPOT ELEVATION
- CURB & GUTTER NO. 650 SEE DETAIL 5/C904 FOR TIP OUT
- DROP CURB



1  
 2  
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A  
 B  
 C  
 D  
 E  
 F

three inches = one foot  
 one and one half inches = one foot  
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 one quarter inch = one foot  
 one eighth inch = one foot

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VA FORM 08 - 6231

**CONSULTANTS**

<b>ARCHITECTURAL:</b> BWB	<b>STRUCTURAL:</b> ERA	<b>MEP:</b> DUNHAM	<b>CIVIL:</b> EVS	<b>LANDSCAPE:</b> CONFLUENCE
BWB 380 St. Peter St Suite 600 St. Paul, MN 55102 Phone: 651-222-3701	Erichsen Road Associates 2520 University Ave W Suite 423-S St. Paul, MN 55402 Phone: 651-351-1707	Dunham Associates, Inc. 51 South Sixth St Suite 1100 Minneapolis, MN 55402 Phone: 612-465-7550	EVS 10025 Valley View Rd Suite 140 Eden Prairie, MN 55344 Phone: 952-946-0239	CONFLUENCE 524 N. Main Ave Suite 201 Sioux Falls, SD 57104 Phone: 605-339-1205

**ARCHITECT OF RECORD**

**A/E:**  
Stone Group Architects  
600 E 7th Street  
Sioux Falls, SD 57103  
605-271-1144

**STAMP**

Office of  
Construction  
and Facilities  
Management

VA U.S. Department  
of Veterans Affairs

Drawing Title  
**GRADING PLAN - BASE**

Approved: \_\_\_\_\_

Phase  
**CONSTRUCTION DOCUMENTS**

FOR OFFICIAL USE ONLY

Project Title  
**NEW FRONT LOBBY AND PRIMARY CARE ADDITION**

Location  
**SIOUX FALLS, SOUTH DAKOTA**

Issue Date  
06/22/2022

Checked  
BJ / RK

Drawn  
CL / AF / DG

Project Number  
VA #438-480  
SGA #201909

Building Number  
5

Drawing Number  
**C300**

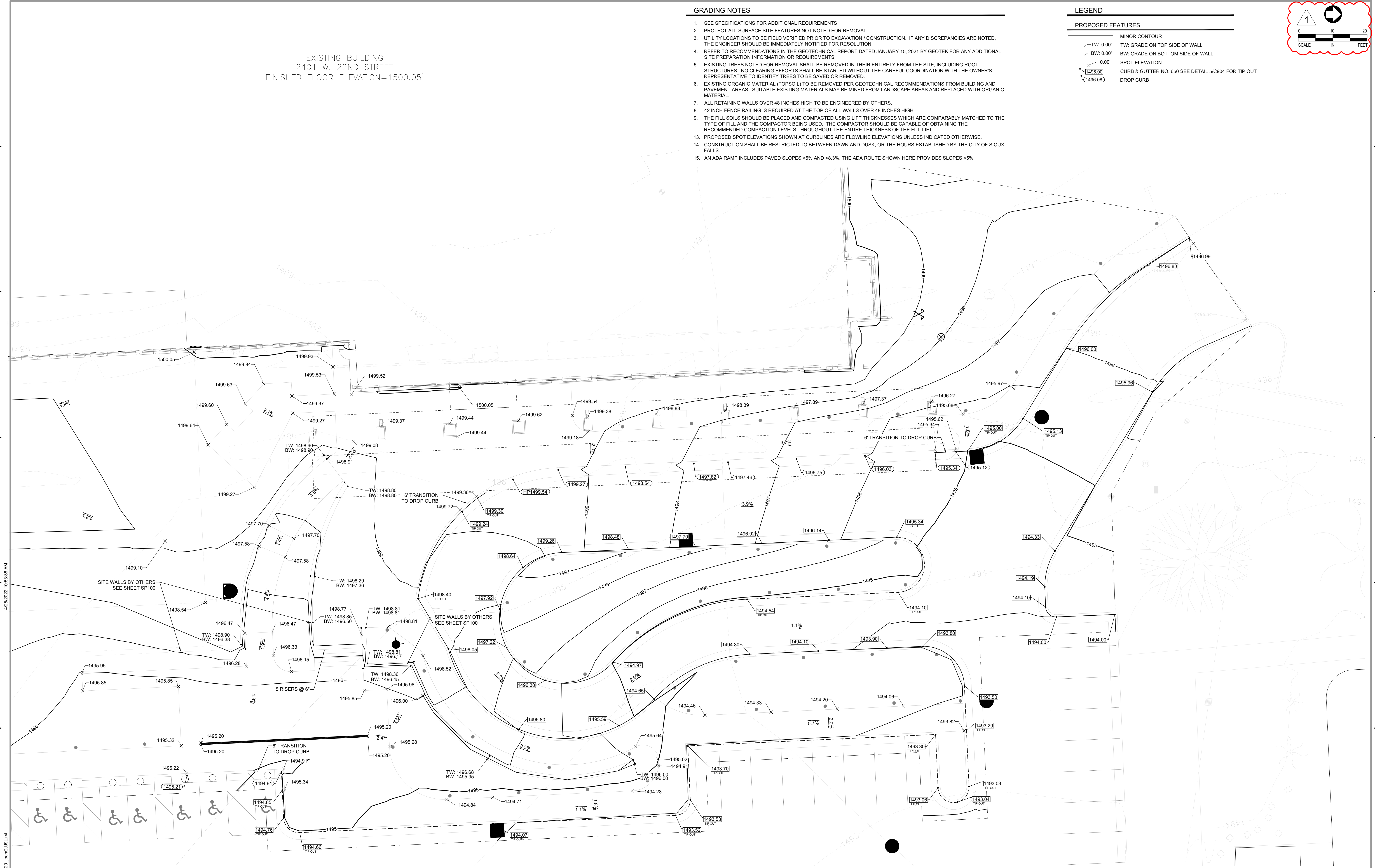
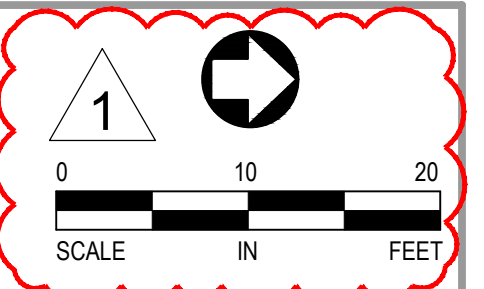
EXISTING BUILDING  
2401 W. 22ND STREET  
FINISHED FLOOR ELEVATION=1500.05'

GRADING NOTES

- SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS
- PROTECT ALL SURFACE SITE FEATURES NOT NOTED FOR REMOVAL.
- UTILITY LOCATIONS TO BE FIELD VERIFIED PRIOR TO EXCAVATION / CONSTRUCTION. IF ANY DISCREPANCIES ARE NOTED, THE ENGINEER SHOULD BE IMMEDIATELY NOTIFIED FOR RESOLUTION.
- REFER TO RECOMMENDATIONS IN THE GEOTECHNICAL REPORT DATED JANUARY 15, 2021 BY GEOTEK FOR ANY ADDITIONAL SITE PREPARATION INFORMATION OR REQUIREMENTS.
- EXISTING TREES NOTED FOR REMOVAL SHALL BE REMOVED IN THEIR ENTIRETY FROM THE SITE, INCLUDING ROOT STRUCTURES. NO CLEARING EFFORTS SHALL BE STARTED WITHOUT THE CAREFUL COORDINATION WITH THE OWNER'S REPRESENTATIVE TO IDENTIFY TREES TO BE SAVED OR REMOVED.
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- PROPOSED SPOT ELEVATIONS SHOWN AT CURBLINES ARE FLOWLINE ELEVATIONS UNLESS INDICATED OTHERWISE.
- CONSTRUCTION SHALL BE RESTRICTED TO BETWEEN DAWN AND DUSK, OR THE HOURS ESTABLISHED BY THE CITY OF SIOUX FALLS.
- AN ADA RAMP INCLUDES PAVED SLOPES >5% AND <8.3%. THE ADA ROUTE SHOWN HERE PROVIDES SLOPES <5%.

LEGEND

- PROPOSED FEATURES
- MINOR CONTOUR
  - TW: 0.00' TW: GRADE ON TOP SIDE OF WALL
  - BW: 0.00' BW: GRADE ON BOTTOM SIDE OF WALL
  - 0.00' SPOT ELEVATION
  - (1496.00) CURB & GUTTER NO. 650 SEE DETAIL 5/C904 FOR TIP OUT
  - (1496.08) DROP CURB



Vertical scale indicators on the left side of the sheet:  
 Three inches = one foot  
 one and one half inches = one foot  
 one inch = one foot  
 three quarters inch = one foot  
 one half inch = one foot  
 three eighths inch = one foot  
 one quarter inch = one foot  
 one eighth inch = one foot

CONSULTANTS

<p>ARCHITECTURAL: <b>BWBR</b></p> <p>380 St. Peter St Suite 600 St. Paul, MN 55102 Phone: 651-222-3701</p>	<p>STRUCTURAL: <b>ERA</b></p> <p>Ericksen Road Associates 2520 University Ave W Suite 423-S St. Paul, MN 55402 Phone: 651-351-1701</p>	<p>MEP: <b>DUNHAM</b></p> <p>Dunham Associates, Inc. 51 South Sixth St Suite 1100 Minneapolis, MN 55402 Phone: 612-465-7550</p>	<p>CIVIL: <b>EVS</b></p> <p>EVS 10025 Valley View Rd Suite 140 Eden Prairie, MN 55344 Phone: 952-946-0236</p>	<p>LANDSCAPE: <b>CONFLUENCE</b></p> <p>CONFLUENCE 524 N. Main Ave Suite 201 Sioux Falls, SD 57104 Phone: 605-339-1205</p>
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ARCHITECT OF RECORD

**A/E**  
Stone Group Architects  
600 E 7th Street  
Sioux Falls, SD 57103  
605-271-1144

STAMP

Office of  
Construction  
and Facilities  
Management

VA U.S. Department  
of Veterans Affairs

Drawing Title  
**ENLARGED GRADING PLAN - BASE**

Approved:

Phase  
**CONSTRUCTION DOCUMENTS**

FOR OFFICIAL USE ONLY

Project Title  
**NEW FRONT LOBBY AND  
PRIMARY CARE ADDITION**

Location  
**SIOUX FALLS, SOUTH DAKOTA**

Issue Date  
06/22/2022

Checked  
BJ / RK

Drawn  
CL / AF / DG

Project Number  
VA #438-480  
SGA #201909

Building Number  
5

Drawing Number  
**C301**

**DEDUCT ALTERNATE - STORMWATER GALLERY MATERIAL**

**BASE**  
 ADVANCED DRAINAGE SYSTEMS (ADS) SC-740 ARCH PIPE GALLERY WITH ISOLATOR ROWS AND MANIFOLDS, BOTH PIPE GALLERY 1 (SOUTH) AND 2 (NORTH).

**DEDUCT ALTERNATE**  
 ROUND PIPE INCLUDING MATERIALS CMP, HDPE, OR CPP, PROVIDING THE FOLLOWING STORAGE VOLUMES:  
 GALLERY 1 - 0.334 AC-FT (SOUTH)  
 GALLERY 2 - 0.215 AC-FT (NORTH)

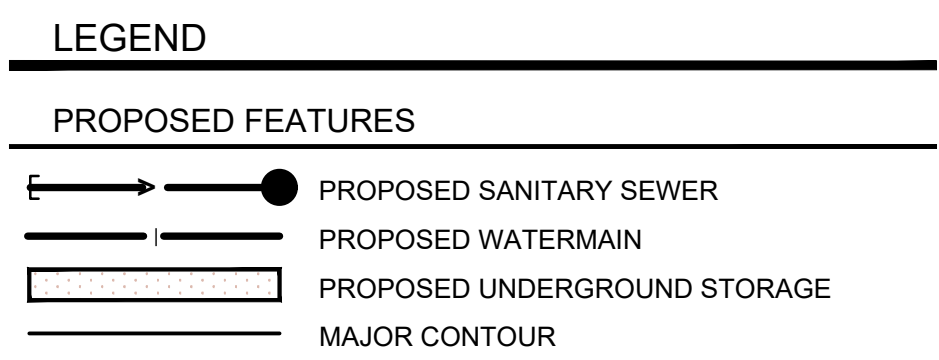
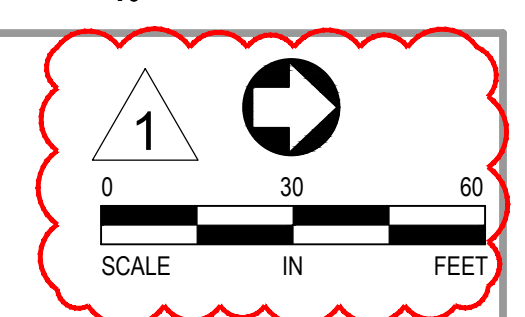
**PARAMETERS:**  
 SOIL TYPE - 'D'  
 INFILTRATION RATE - 0.06 IN/HR  
 48-HR DRAWDOWN DEPTH OF 2.88' - DEAD STORAGE OF 2.178 CF

- WATERMAIN NOTES**
- ALL WATERMAIN PIPE SHALL BE PVC, C-900, WATERMAIN INSTALLED WITH 6" TO 8" FEET OF COVER IS CONSIDERED NORMAL DEPTH INSTALLATION PER CITY OF SIOUX FALLS SPECIFICATION FOR WATERMAIN CONSTRUCTION SECTION 300. ALL WATERMAIN IS EXPECTED TO BE NORMAL DEPTH.
  - WATERMAIN SHALL BE INSTALLED AT LEAST 10 FEET HORIZONTALLY FROM ANY MANHOLE, CATCH BASIN, STORM SEWER, SANITARY SEWER, DRAIN TILE OR OTHER POTENTIAL SOURCE FOR CONTAMINATION. THIS ISOLATION DISTANCE SHALL BE MEASURED FROM THE OUTER EDGE OF THE PIPE TO THE OUTER EDGE OF THE CONTAMINATION SOURCE.
  - ALL HYDRANTS SHALL BE WATEROUS IMPROVED PACER STYLE, MODEL WB-67, WITH SAFETY FLANGE AND STEM COUPLING. HYDRANT SHALL BE ROTATED AS NECESSARY SO MAIN CONNECTION IS DIRECTED TOWARDS ADJACENT ACCESS ROAD.
  - ALL WATER SERVICE OR GATE VALVE BOXES WITHIN CONSTRUCTION AREA MUST BE EXPOSED AND BROUGHT TO GRADE UPON COMPLETION OF CONSTRUCTION.

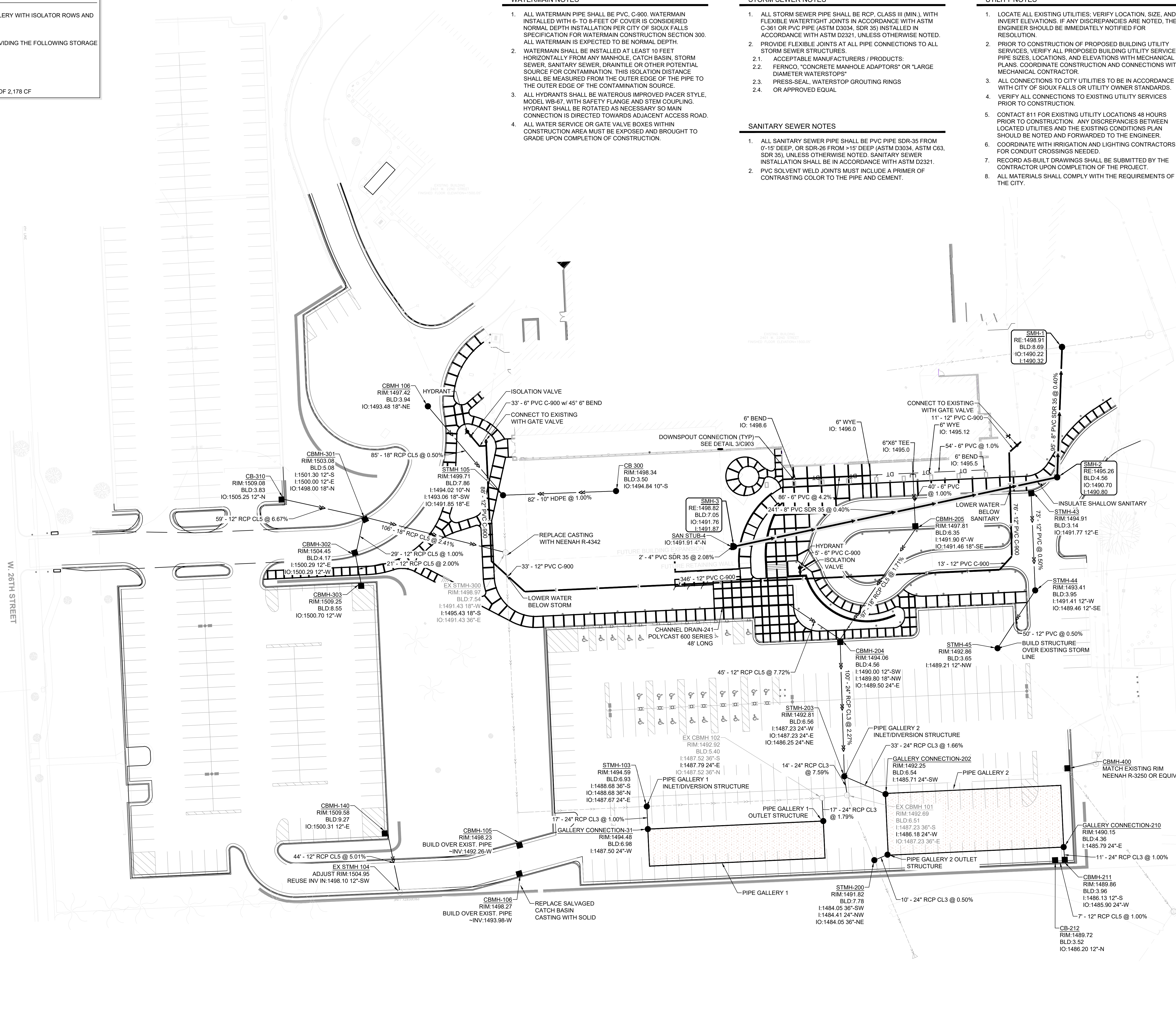
- STORM SEWER NOTES**
- ALL STORM SEWER PIPE SHALL BE RCP, CLASS III (MIN.), WITH FLEXIBLE WATERTIGHT JOINTS IN ACCORDANCE WITH ASTM C-361 OR PVC PIPE (ASTM D3034, SDR 35) INSTALLED IN ACCORDANCE WITH ASTM D2321, UNLESS OTHERWISE NOTED.
  - PROVIDE FLEXIBLE JOINTS AT ALL PIPE CONNECTIONS TO ALL STORM SEWER STRUCTURES.
    - ACCEPTABLE MANUFACTURERS / PRODUCTS:
    - FERNCO, "CONCRETE MANHOLE ADAPTORS" OR "LARGE DIAMETER WATERSTOPS"
    - PRESS-SEAL, WATERSTOP GROUTING RINGS
    - OR APPROVED EQUAL

- SANITARY SEWER NOTES**
- ALL SANITARY SEWER PIPE SHALL BE PVC PIPE SDR-35 FROM 0'-15" DEEP, OR SDR-26 FROM >15" DEEP (ASTM D3034, ASTM C63, SDR 35), UNLESS OTHERWISE NOTED. SANITARY SEWER INSTALLATION SHALL BE IN ACCORDANCE WITH ASTM D2321.
  - PVC SOLVENT WELD JOINTS MUST INCLUDE A PRIMER OF CONTRASTING COLOR TO THE PIPE AND CEMENT.

- UTILITY NOTES**
- LOCATE ALL EXISTING UTILITIES, VERIFY LOCATION, SIZE, AND INVERT ELEVATIONS. IF ANY DISCREPANCIES ARE NOTED, THE ENGINEER SHOULD BE IMMEDIATELY NOTIFIED FOR RESOLUTION.
  - PRIOR TO CONSTRUCTION OF PROPOSED BUILDING UTILITY SERVICES, VERIFY ALL PROPOSED BUILDING UTILITY SERVICE PIPE SIZES, LOCATIONS, AND ELEVATIONS WITH MECHANICAL PLANS, COORDINATE CONSTRUCTION AND CONNECTIONS WITH MECHANICAL CONTRACTOR.
  - ALL CONNECTIONS TO CITY UTILITIES TO BE IN ACCORDANCE WITH CITY OF SIOUX FALLS OR UTILITY OWNER STANDARDS.
  - VERIFY ALL CONNECTIONS TO EXISTING UTILITY SERVICES PRIOR TO CONSTRUCTION.
  - CONTACT 811 FOR EXISTING UTILITY LOCATIONS 48 HOURS PRIOR TO CONSTRUCTION. ANY DISCREPANCIES BETWEEN LOCATED UTILITIES AND THE EXISTING CONDITIONS PLAN SHOULD BE NOTED AND FORWARDED TO THE ENGINEER.
  - COORDINATE WITH IRRIGATION AND LIGHTING CONTRACTORS FOR CONDUIT CROSSINGS NEEDED.
  - RECORD AS-BUILT DRAWINGS SHALL BE SUBMITTED BY THE CONTRACTOR UPON COMPLETION OF THE PROJECT.
  - ALL MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE CITY.



W. 26TH STREET



1	ADDENDUM #1	02/13/2024
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**CONSULTANTS**

<b>ARCHITECTURAL:</b> BWB 380 St. Peter St Suite 600 St. Paul, MN 55102 Phone: 651-222-3701	<b>STRUCTURAL:</b> ERA 250 University Ave W Suite 423-S St. Paul, MN 55402 Phone: 651-251-1701	<b>MEP:</b> DUNHAM Dunham Associates, Inc. 51 South Sixth St Suite 1100 Minneapolis, MN 55402 Phone: 612-465-7550	<b>CIVIL:</b> EVS 10025 Valley View Rd Suite 140 Eden Prairie, MN 55344 Phone: 952-846-0226	<b>LANDSCAPE:</b> CONFLUENCE 524 N. Main Ave Suite 201 Sioux Falls, SD 57104 Phone: 605-339-1205
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**ARCHITECT OF RECORD**

A/E:  
 Stone Group Architects  
 600 E 7th Street  
 Sioux Falls, SD 57103  
 605-271-1144

**STAMP**

Office of Construction and Facilities Management  
 U.S. Department of Veterans Affairs

**Drawing Title**  
 UTILITY PLAN - BASE

Approved: \_\_\_\_\_

**Phase**  
 CONSTRUCTION DOCUMENTS

FOR OFFICIAL USE ONLY

**Project Title**  
 NEW FRONT LOBBY AND PRIMARY CARE ADDITION

**Location**  
 SIOUX FALLS, SOUTH DAKOTA

**Issue Date**  
 06/22/2022

**Checked**  
 BJ / RK

**Drawn**  
 CL / AF / DG

**Project Number**  
 VA #438-480  
 SGA #201909

**Building Number**  
 5

**Drawing Number**  
 C600

**DEDUCT ALTERNATE - STORMWATER GALLERY MATERIAL**

**BASE**  
 ADVANCED DRAINAGE SYSTEMS (ADS) SC-740 ARCH PIPE GALLERY WITH ISOLATOR ROWS AND MANIFOLDS, BOTH PIPE GALLERY 1 (SOUTH) AND 2 (NORTH).

**DEDUCT ALTERNATE**  
 ROUND PIPE INCLUDING MATERIALS CMP, HDPE, OR CPP, PROVIDING THE FOLLOWING STORAGE VOLUMES:  
 GALLERY 1 - 0.334 AC-FT (SOUTH)  
 GALLERY 2 - 0.215 AC-FT (NORTH)

**PARAMETERS:**  
 SOIL TYPE - 'D'  
 INFILTRATION RATE - 0.06 IN/HR  
 48-HR DRAWDOWN DEPTH OF 2.88" - DEAD STORAGE OF 2.178 CF

**WATERMAIN NOTES**

1. ALL WATERMAIN PIPE SHALL BE PVC, C-900, WATERMAIN INSTALLED WITH 6" TO 8" FEET OF COVER IS CONSIDERED NORMAL DEPTH INSTALLATION PER CITY OF SIOUX FALLS SPECIFICATION FOR WATERMAIN CONSTRUCTION SECTION 300. ALL WATERMAIN IS EXPECTED TO BE NORMAL DEPTH.
2. WATERMAIN SHALL BE INSTALLED AT LEAST 10 FEET HORIZONTALLY FROM ANY MANHOLE, CATCH BASIN, STORM SEWER, SANITARY SEWER, DRAIN TILE OR OTHER POTENTIAL SOURCE FOR CONTAMINATION. THIS ISOLATION DISTANCE SHALL BE MEASURED FROM THE OUTER EDGE OF THE PIPE TO THE OUTER EDGE OF THE CONTAMINATION SOURCE.
3. ALL HYDRANTS SHALL BE WATEROUS IMPROVED PACER STYLE, MODEL WB-67, WITH SAFETY FLANGE AND STEM COUPLING. HYDRANT SHALL BE ROTATED AS NECESSARY SO MAIN CONNECTION IS DIRECTED TOWARDS ADJACENT ACCESS ROAD.
4. ALL WATER SERVICE OR GATE VALVE BOXES WITHIN CONSTRUCTION AREA MUST BE EXPOSED AND BROUGHT TO GRADE UPON COMPLETION OF CONSTRUCTION.

**STORM SEWER NOTES**

1. ALL STORM SEWER PIPE SHALL BE RCP, CLASS III (MN), WITH FLEXIBLE WATERTIGHT JOINTS IN ACCORDANCE WITH ASTM C-361 OR PVC PIPE (ASTM D3034, SDR 35) INSTALLED IN ACCORDANCE WITH ASTM D2321, UNLESS OTHERWISE NOTED.
2. FLEXIBLE JOINTS AT STORM SEWER PIPE CONNECTIONS TO STRUCTURES:
  - 2.1. PROVIDE FLEXIBLE JOINTS AT ALL PIPE CONNECTIONS TO ALL STORM SEWER STRUCTURES.
  - 2.2. ACCEPTABLE MANUFACTURERS / PRODUCTS:
    - 2.2.1. FERNCO, "CONCRETE MANHOLE ADAPTORS" OR "LARGE DIAMETER WATERSTOPS"
    - 2.2.2. PRESS-SEAL, WATERSTOP GROUTING RINGS
    - 2.2.3. OR APPROVED EQUAL

**SANITARY SEWER NOTES**

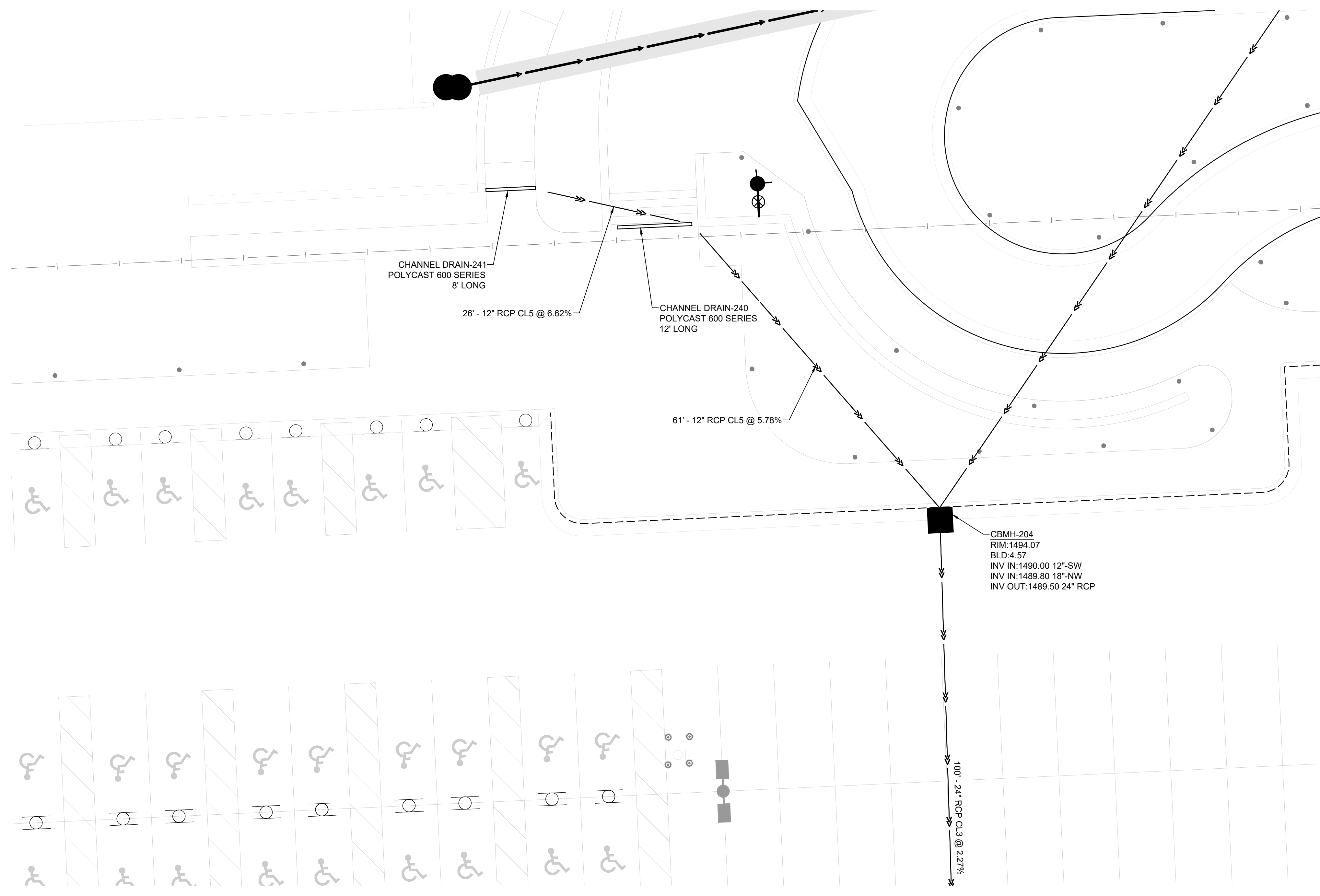
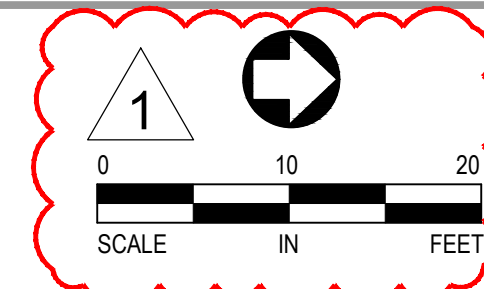
1. ALL SANITARY SEWER PIPE SHALL BE PVC PIPE SDR-35 FROM 0'-15" DEEP, OR SDR-26 FROM >15" DEEP (ASTM D3034, ASTM C63, SDR 35), UNLESS OTHERWISE NOTED. SANITARY SEWER INSTALLATION SHALL BE IN ACCORDANCE WITH ASTM D2321.
2. PVC SOLVENT WELD JOINTS MUST INCLUDE A PRIMER OF CONTRASTING COLOR TO THE PIPE AND CEMENT.

**UTILITY NOTES**

1. LOCATE ALL EXISTING UTILITIES, VERIFY LOCATION, SIZE, AND INVERT ELEVATIONS. IF ANY DISCREPANCIES ARE NOTED, THE ENGINEER SHOULD BE IMMEDIATELY NOTIFIED FOR RESOLUTION.
2. PRIOR TO CONSTRUCTION OF PROPOSED BUILDING UTILITY SERVICES, VERIFY ALL PROPOSED BUILDING UTILITY SERVICE PIPE SIZES, LOCATIONS, AND ELEVATIONS WITH MECHANICAL PLANS. COORDINATE CONSTRUCTION AND CONNECTIONS WITH MECHANICAL CONTRACTOR.
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6. COORDINATE WITH IRRIGATION AND LIGHTING CONTRACTORS FOR CONDUIT CROSSINGS NEEDED.
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8. ALL MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE CITY.

**LEGEND**

- PROPOSED FEATURES**
- PROPOSED SANITARY SEWER
  - PROPOSED WATERMAIN
  - PROPOSED UNDERGROUND STORAGE
  - MAJOR CONTOUR



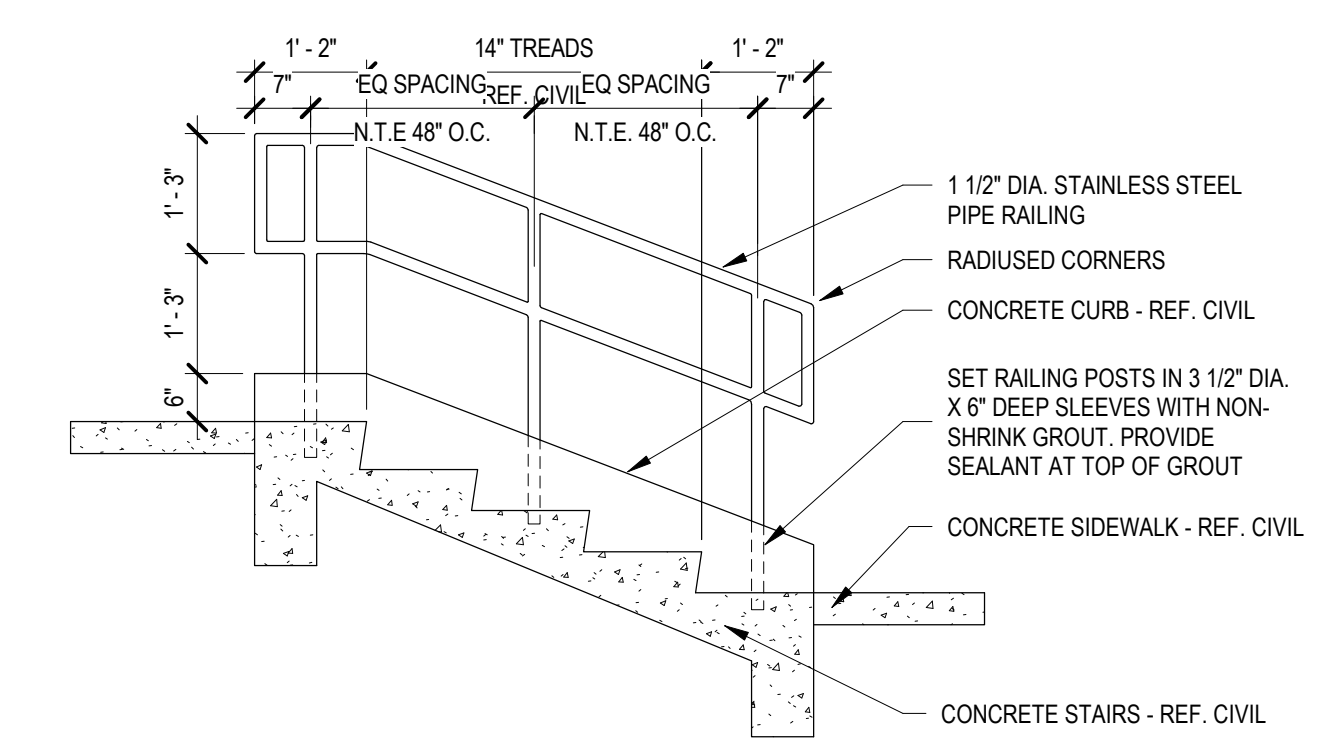
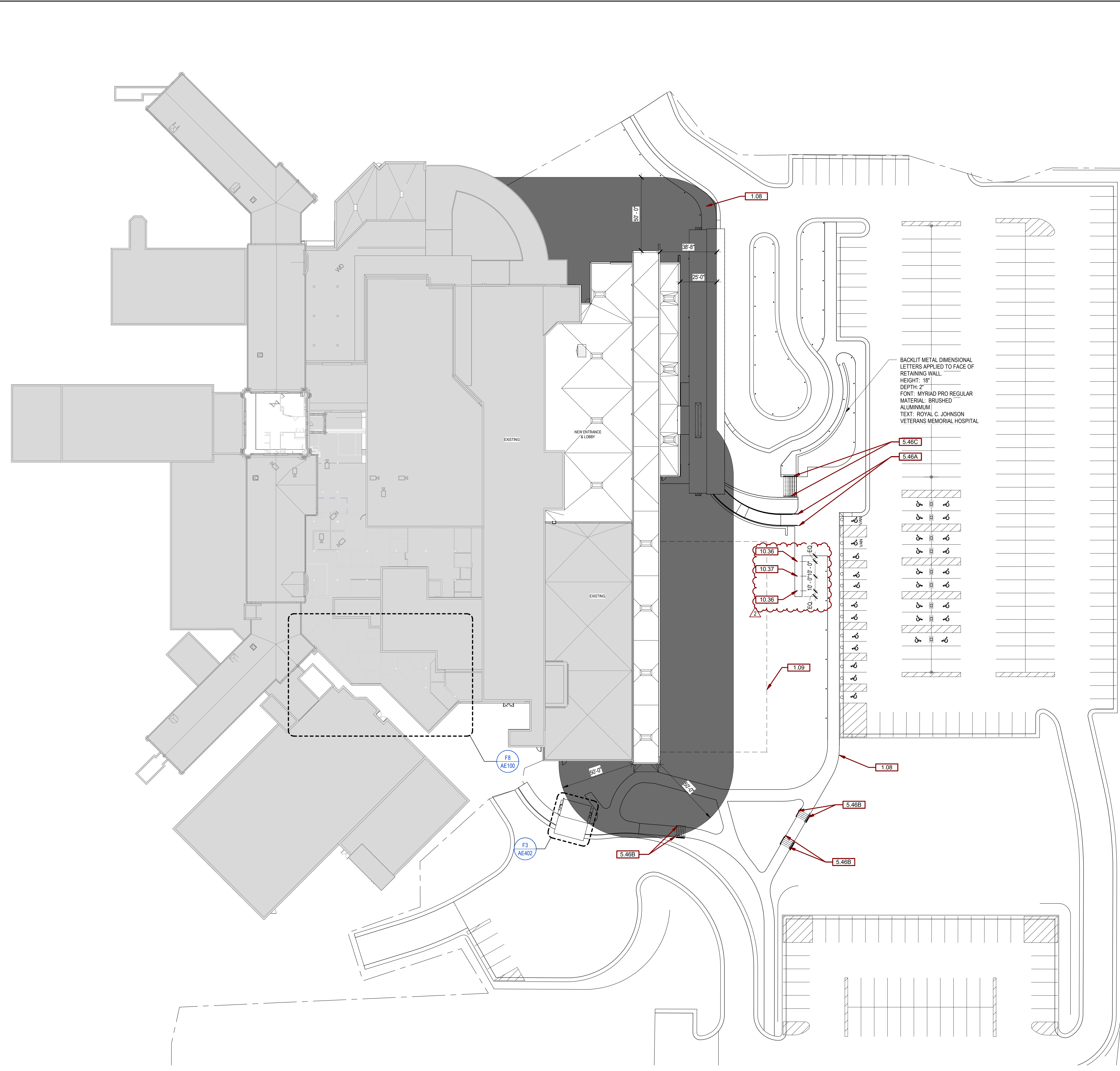
Vertical scale indicators on the left side of the drawing, ranging from 'one eighth inch = one foot' to 'three inches = one foot'.

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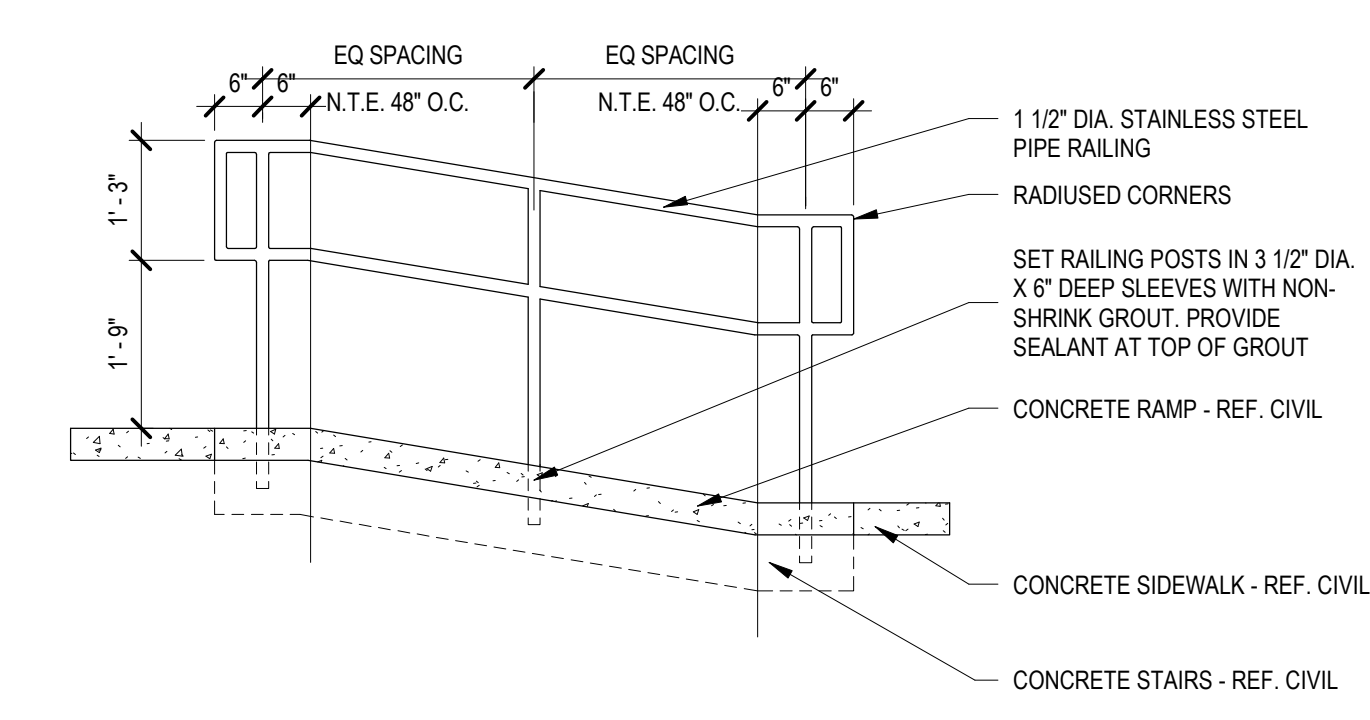
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<b>CONSULTANTS</b>		<b>ARCHITECT OF RECORD</b>		<b>STAMP</b>		<b>Drawing Title</b>		<b>Phase</b>		<b>Project Title</b>		<b>Project Number</b>			
ARCHITECTURAL: <b>BWB</b>	STRUCTURAL: <b>ERA</b>	MEP: <b>DUNHAM</b>	CIVIL: <b>EVS</b>	LANDSCAPE: <b>CONFLUENCE</b>	<b>Stone Group Architects</b> 600 E 7th Street Sioux Falls, SD 57103 605-271-1144		<b>Office of Construction and Facilities Management</b> VA U.S. Department of Veterans Affairs		<b>UTILITY PLAN - DEDUCT ALTERNATE</b>		<b>CONSTRUCTION DOCUMENTS</b>		<b>NEW FRONT LOBBY AND PRIMARY CARE ADDITION</b>		
BWB 380 St. Peter St Suite 600 St. Paul, MN 55102 Phone: 651-222-3701		ERA Erickson Road Associates 2520 University Ave W Suite 423-S St. Paul, MN 55402 Phone: 651-251-1570		DUNHAM Dunham Associates, Inc. 51 South Sixth St Suite 1100 Minneapolis, MN 55402 Phone: 612-465-7550		EVS 10025 Valley View Rd Suite 140 Eden Prairie, MN 55344 Phone: 952-946-0239		CONFLUENCE 524 N Main Ave Suite 201 Sioux Falls, SD 57104 Phone: 605-339-1205		Approved:		FOR OFFICIAL USE ONLY		Location <b>SIOUX FALLS, SOUTH DAKOTA</b>	
Addendum #1		02/13/2024								Issue Date 06/22/2022		Checked BJ / RK		Drawn CL / AF / DG	
														Drawing Number <b>C601</b>	

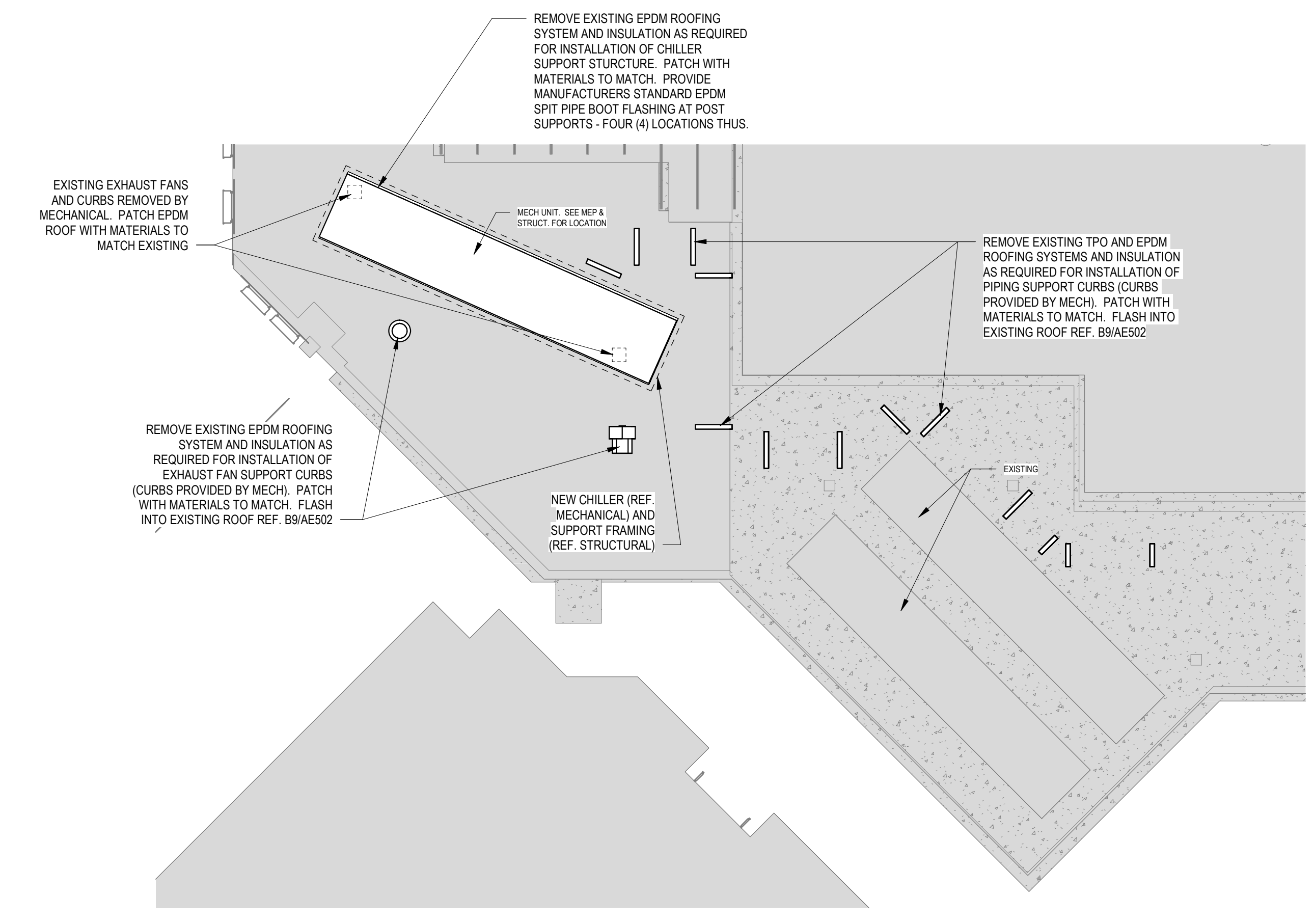
SGA KEYNOTES	
KTKT	KEYNOTE TEXT
1.08	THESE SIDEWALKS (HATCHED AREA) TO BE INSTALLED IN PHASE 2.
1.09	DASHED LINE INDICATE FUTURE PACT BUILDING.
5.46A	RAMP HANDRAIL - SEE DETAIL C7/AE100.
5.46B	STAIR HANDRAIL - SEE DETAIL B7/AE100.
5.46C	STAIR HANDRAIL - SIMILAR TO DETAIL B7/AE100 (ANCHOR POSTS INTO STEPS 2" CLEAR FROM RETAINING WALLS IN LIEU OF ANCHORING INTO CURBS).
10.36	30" Ø FLAGPOLE
10.37	33" Ø FLAGPOLE



**B8** DETAIL - TYP. RAILING AT STAIRS  
1/2" = 1'-0"



**C8** DETAIL - TYP. RAILING AT RAMP  
1/2" = 1'-0"



**F8** MECHANICAL EQUIPMENT LOCATION ON EXISTING ROOF  
3/32" = 1'-0"

**F1** SITE PLAN  
1" = 30'-0"

Revision#	Description	Date
2	ADDENDUM #1	02/12/2024
1	ISSUE SET	06/22/2022

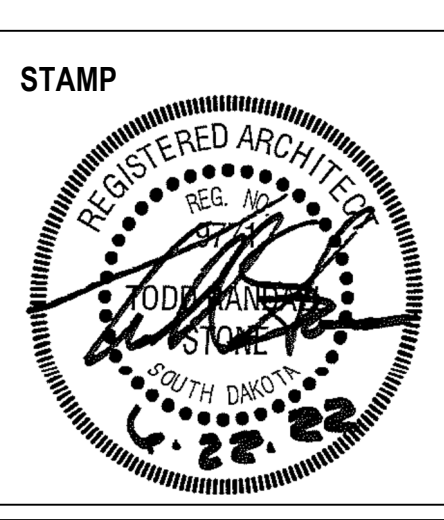
**CONSULTANTS**

<b>ARCHITECTURAL:</b> BWB R 380 St. Peter St Suite 600 St. Paul, MN 55102 Phone: 651-222-3701	<b>STRUCTURAL:</b> ERA 2250 University Ave W Suite 423-S St. Paul, MN 55402 Phone: 651-251-1970	<b>MEP:</b> DUNHAM 50 South Sixth St Suite 1100 Minneapolis, MN 55402 Phone: 612-465-7550	<b>CIVIL:</b> EVS 10025 Valley View Rd Suite 140 Eden Prairie, MN 55344 Phone: 952-846-0236	<b>LANDSCAPE:</b> CONFLUENCE 224 N Main Ave Suite 201 Sioux Falls, SD 57104 Phone: 605-339-1205
--	--	--	--	--

**ARCHITECT OF RECORD**

A/E/C  
Stone Group Architects  
600 E 7th Street  
Sioux Falls, SD 57103  
605-271-1144

**STONE GROUP ARCHITECTS**



Office of Construction and Facilities Management  
VA U.S. Department of Veterans Affairs

Drawing Title  
**ARCHITECTURAL SITE PLAN**

Approved: \_\_\_\_\_

Phase

Project Title  
**NEW FRONT LOBBY AND PRIMARY CARE ADDITION**

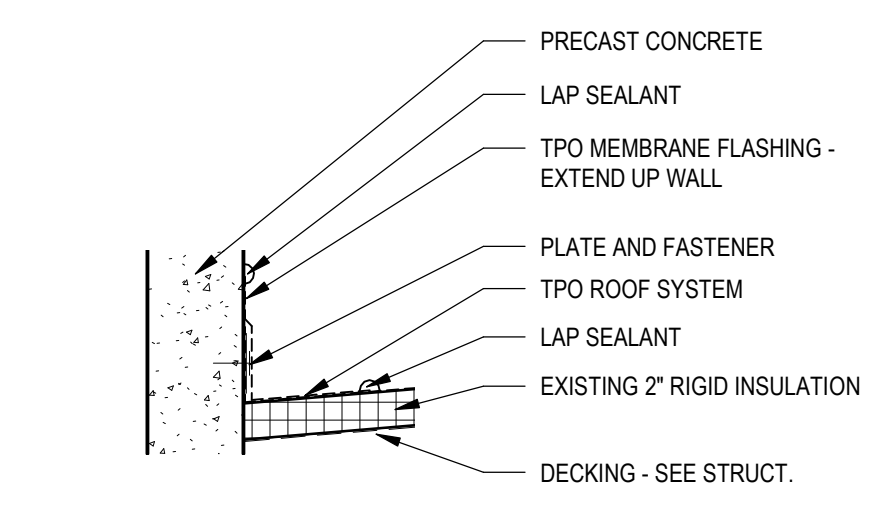
Location  
**SIOUX FALLS, SOUTH DAKOTA**

Issue Date: 06/22/2022  
Checked: BH  
Drawn: JH / DN

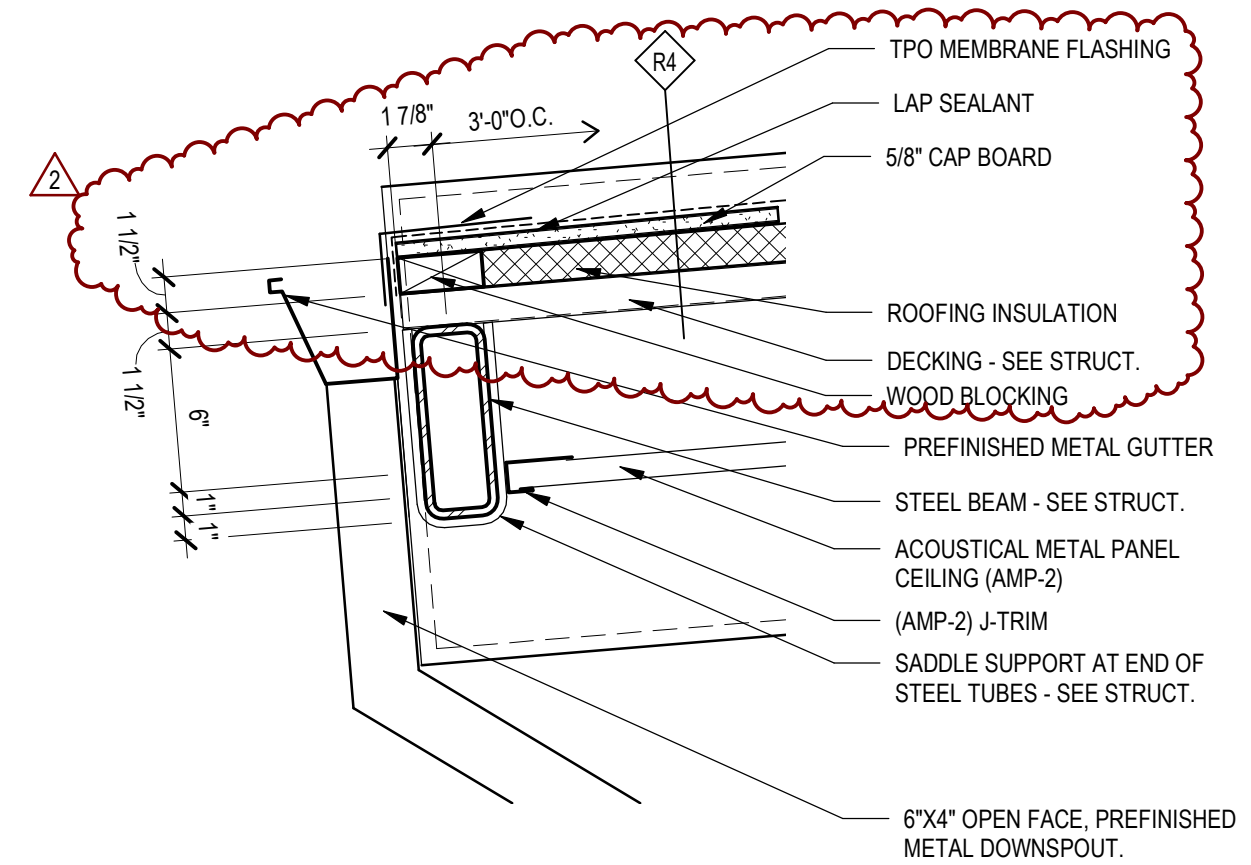
Project Number  
VA #438-480  
SGA #201909

Building Number  
5

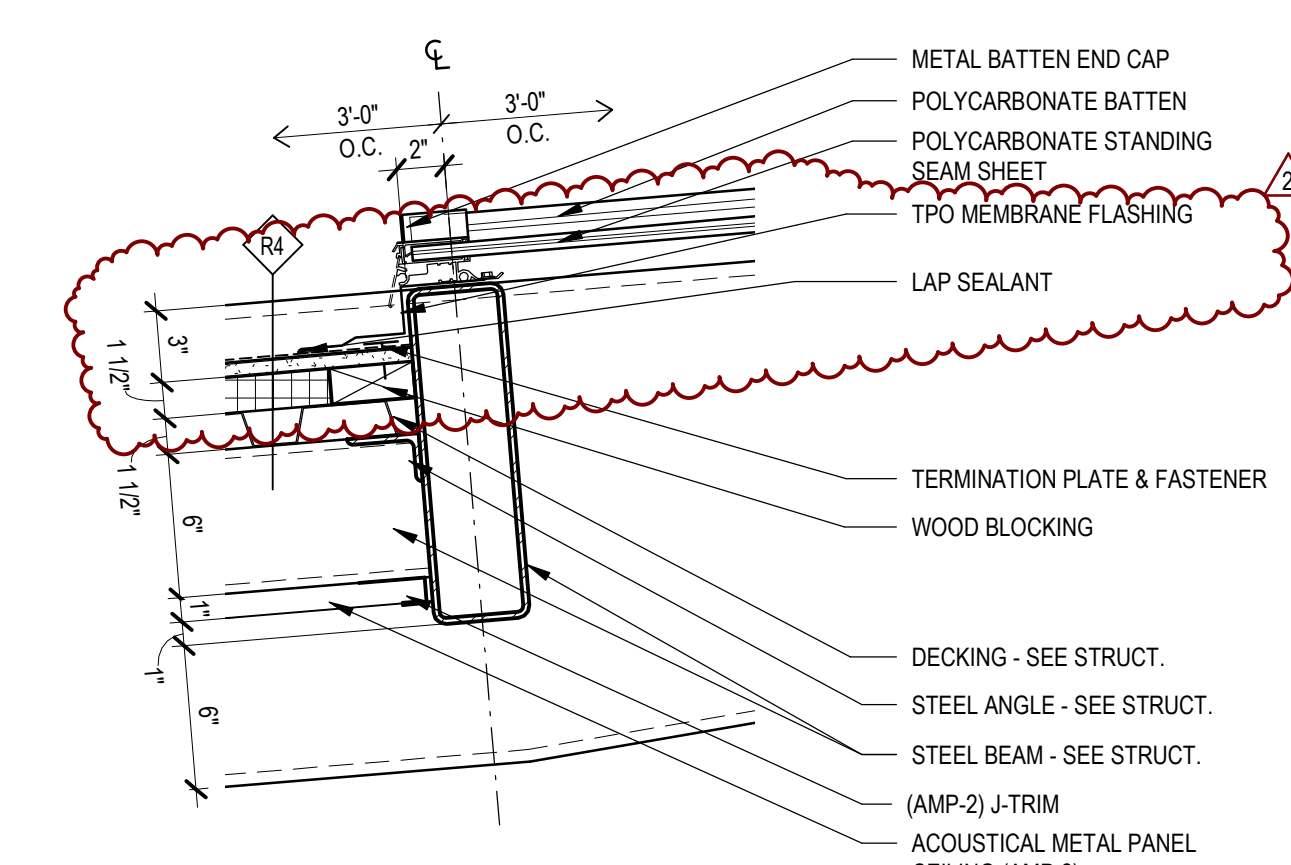
Drawing Number  
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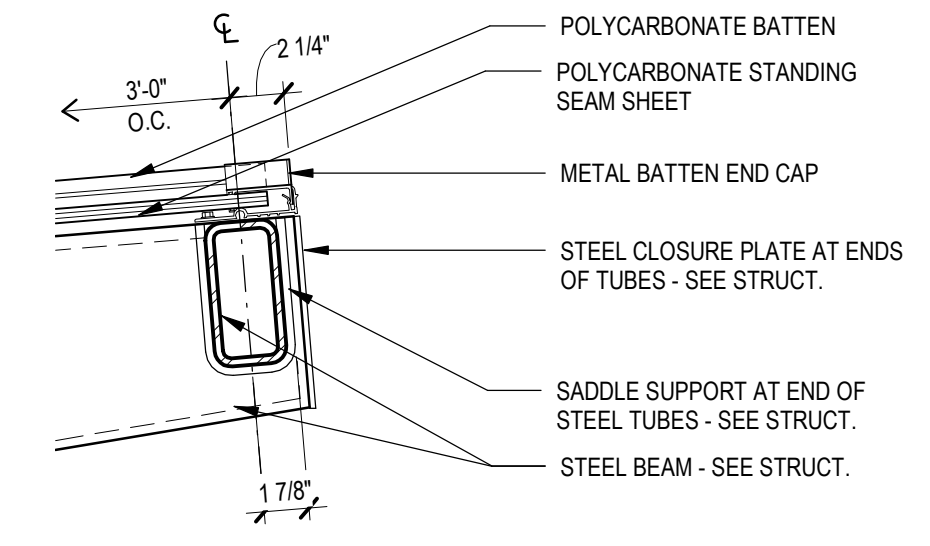
**B1 SECTION DETAIL - FLASHING AT CANOPY**  
1 1/2" = 1'-0"



**B4 CANOPY - REAR EDGE**  
1 1/2" = 1'-0"



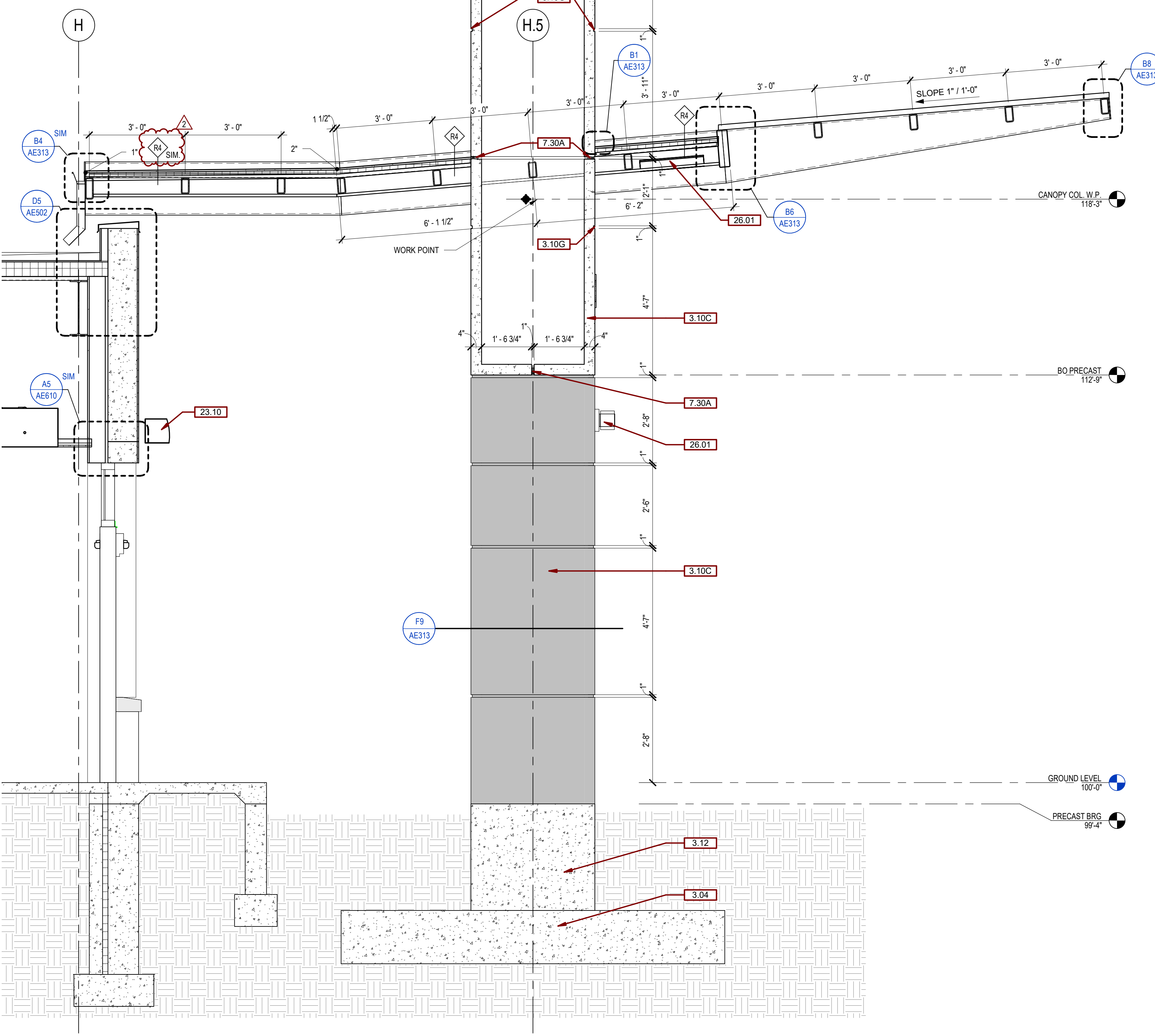
**B6 CANOPY - MID SPAN DETAIL**  
1 1/2" = 1'-0"



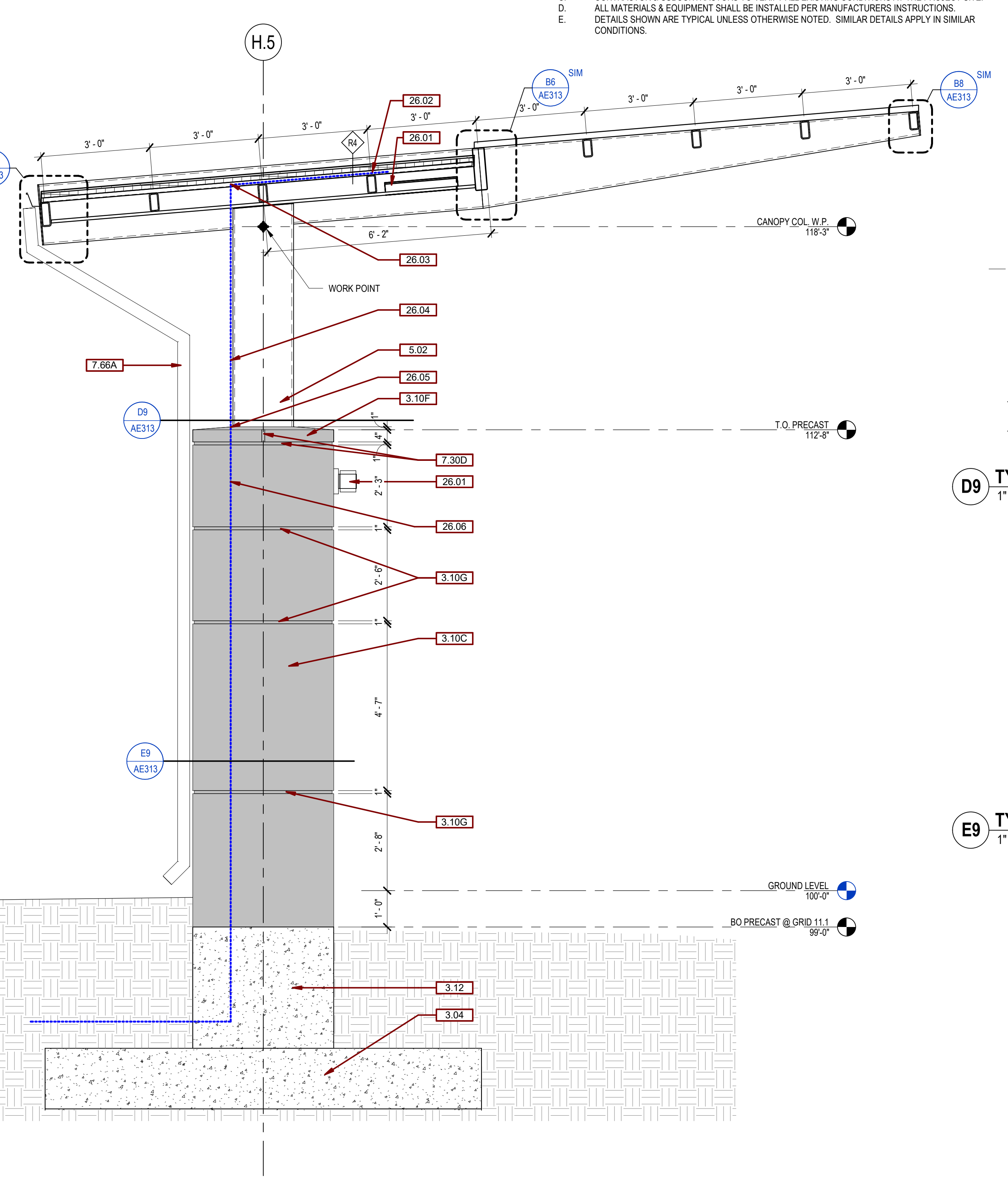
**B8 CANOPY - FRONT EDGE DETAIL**  
1 1/2" = 1'-0"

**GENERAL SECTION NOTES:**  
 A. ANY DISCREPANCIES OR CONFLICTS FOUND IN THE VARIOUS PARTS OF THE CONSTRUCTION DOCUMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND THE OWNER BEFORE PROCEEDING WITH THE WORK.  
 B. WRITTEN DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. DO NOT SCALE THE DRAWINGS.  
 C. CONTRACTOR & SUBCONTRACTORS TO VERIFY ALL EXISTING CONDITIONS AT THE PROJECT SITE. ALL MATERIALS & EQUIPMENT SHALL BE INSTALLED PER MANUFACTURERS INSTRUCTIONS. DETAILS SHOWN ARE TYPICAL UNLESS OTHERWISE NOTED. SIMILAR DETAILS APPLY IN SIMILAR CONDITIONS.  
 D.  
 E.

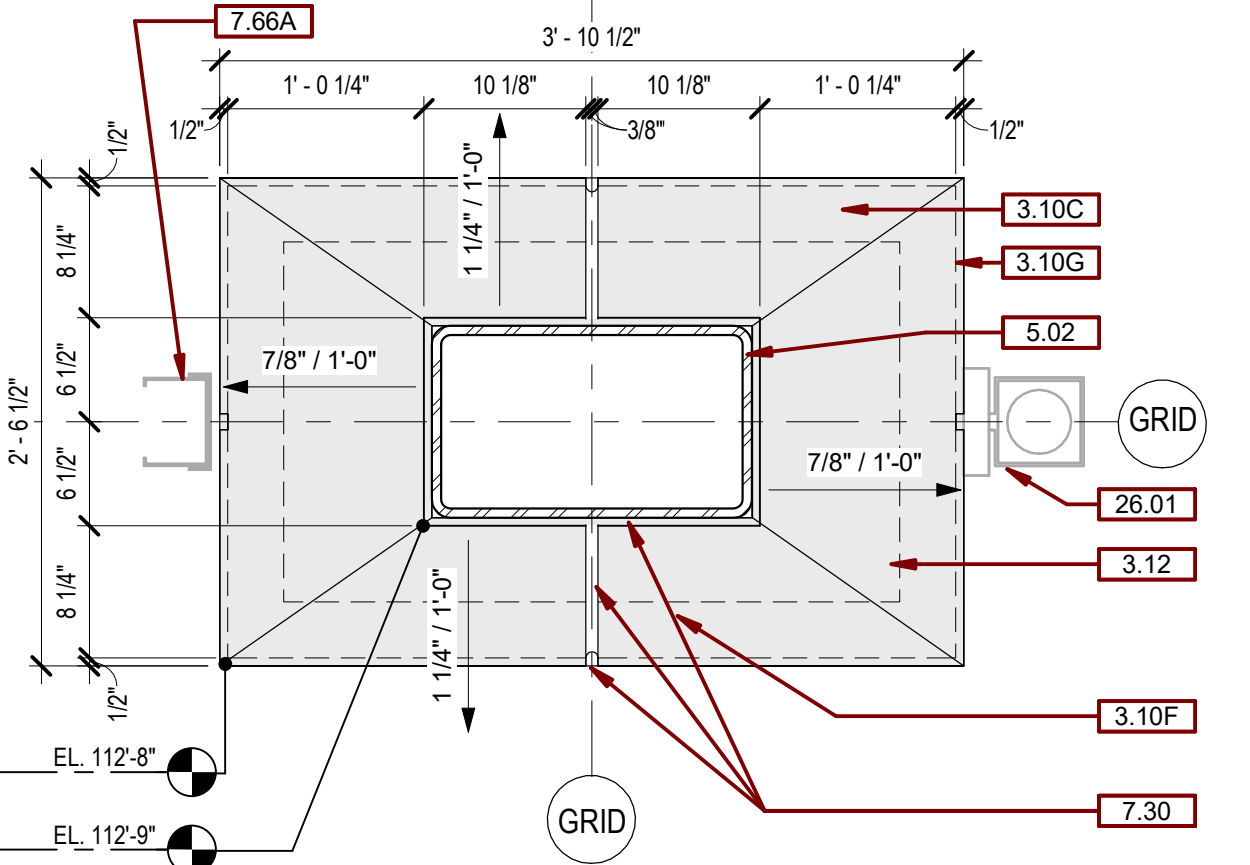
SGA KEYNOTES	
KTKT	KEYNOTE TEXT
2.31	EXISTING 2" RIGID INSULATION
3.04	FOOTING - SEE STRUCT.
3.10	PRECAST CONCRETE
3.10C	PRECAST CONCRETE W/ SANDBLAST "LIMESTONE" FINISH
3.10F	1" SLOPED TOP OF PRECAST
3.10G	1" W. X 1/2" D. PRECAST REVEAL
3.10K	PROVIDE 2" SLOPE ON PRECAST CONCRETE CAP.
3.12	CONCRETE PIER - SEE STRUCT.
5.02	COLUMN - SEE STRUCT.
6.03A	STEEL BEAM - SEE STRUCT.
5.04	DECKING - SEE STRUCT.
5.07	STEEL ANGLE - SEE STRUCT.
5.08B	STEEL CLOSURE PLATE AT ENDS OF TUBES - SEE STRUCT.
5.59	(AMP-2) J-TRIM
5.61	METAL BATTEN END CAP
5.61	TERMINATION PLATE & FASTENER
5.62	SADDLE SUPPORT AT END OF STEEL TUBES - SEE STRUCT.
6.24A	POLYCARBONATE BATTEN
6.24B	POLYCARBONATE STANDING SEAM SHEET
6.89	WOOD BLOCKING
7.30	SEALANT
7.30A	BACKER ROD AND SEALANT
7.30D	BACKER ROD AND SEALANT RECESSED 1/2"
7.30E	LAP SEALANT
7.47	TPO MEMBRANE FLASHING - EXTEND UP WALL
7.47C	TPO MEMBRANE FLASHING - EXTEND UP WALL
7.49	PLATE AND FASTENER
7.50B	TPO ROOF SYSTEM
7.53	ROOFING INSULATION
7.65	PREFINISHED METAL GUTTER
7.66A	6"X4" OPEN FACE, PREFINISHED METAL DOWNSPOUT.
8.20H	5/8" CAP BOARD
9.27	ACOUSTICAL METAL PANEL CEILING (AMP-2)
23.10	CABINET UNIT HEATER - SEE MECH
26.01	LIGHT FIXTURE - SEE ELEC.
26.02	INSTALL CONDUIT IN DECK FLUTES (COORDINATE WITH ROOFING FASTENERS)
26.03	DRILL THROUGH 2x8 TUBE STEEL BEAMS FOR CONDUIT
26.04	CONDUIT INSTALLED TIGHT TO BACK SIDE OF 2x12 TUBE STEEL COLUMN
26.05	DRILL THROUGH BASE PLATE FOR CONDUIT
26.06	CONDUIT STUBBED UP THROUGH CONCRETE PIER



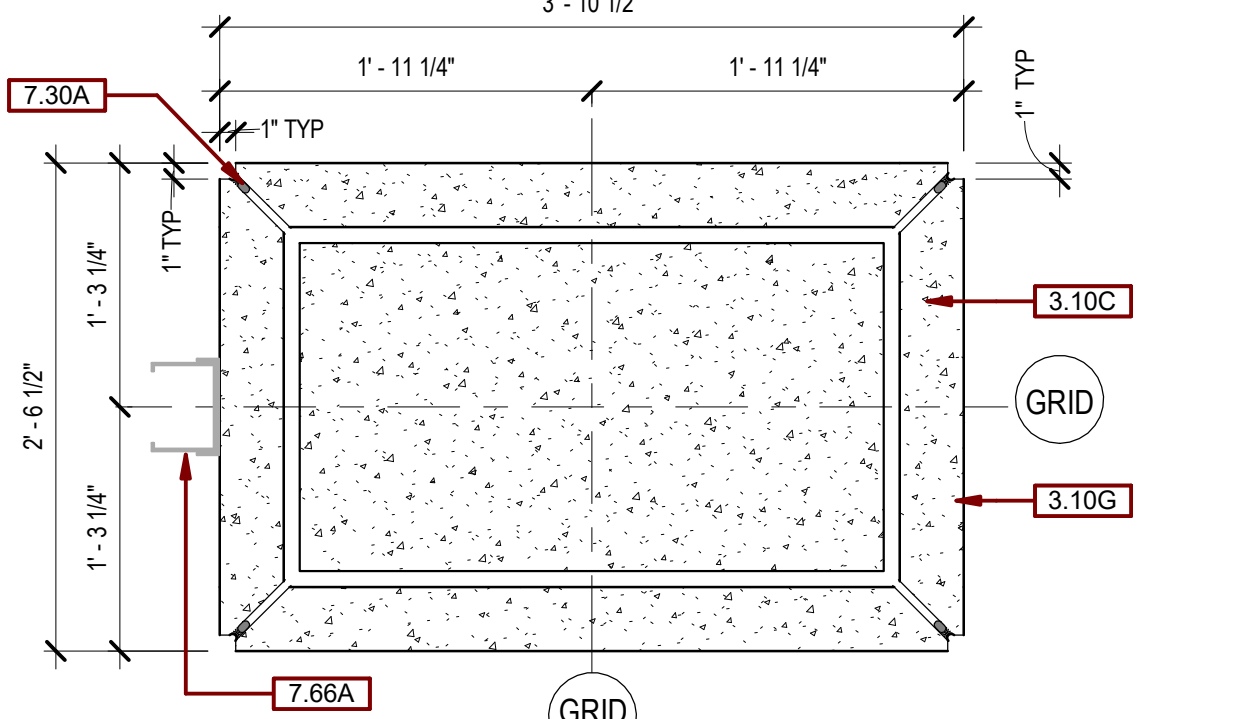
**F1 CANOPY SECTION - AT ENTRANCE**  
1/2" = 1'-0"



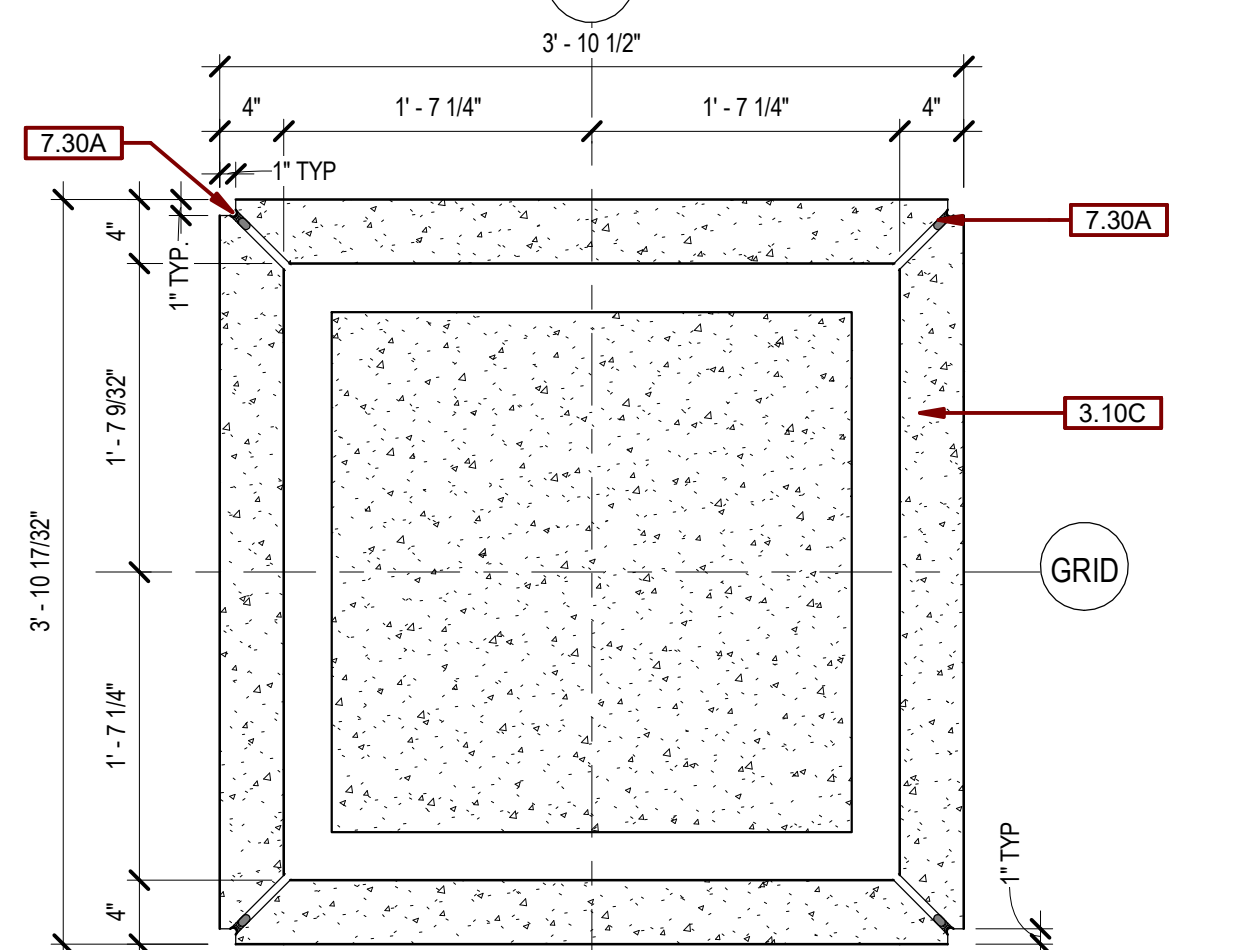
**F6 CANOPY SECTION - TYPICAL**  
1/2" = 1'-0"



**D9 TYP. CANOPY COLUMN CAP DETAIL**  
1" = 1'-0"



**E9 TYP. CANOPY COLUMN BASE DETAIL**  
1" = 1'-0"



**F9 CANOPY ENTRY PIER DETAIL**  
1" = 1'-0"

Revision#	Description	Date
2	ADDENDUM #1	02/12/2024
1	ISSUE SET	06/22/2022

**CONSULTANTS**

<b>ARCHITECTURAL:</b> BWB R	<b>STRUCTURAL:</b> ERA	<b>MEP:</b> DUNHAM	<b>CIVIL:</b> EVS	<b>LANDSCAPE:</b> CONFLUENCE
BWB R 380 St. Peter St Suite 600 St. Paul, MN 55102 Phone: 651-223-3701	Ericsson Road Associates 2250 University Ave W Suite 423-S St. Paul, MN 55402 Phone: 651-251-7970	Dunham Associates, Inc. 50 South Sixth St Suite 1100 Minneapolis, MN 55402 Phone: 612-465-7550	EVS 10025 Valley View Rd Suite 140 Eden Prairie, MN 55344 Phone: 952-646-0269	CONFLUENCE 524 N Main Ave Suite 201 Sioux Falls, SD 57104 Phone: 605-339-1205

**ARCHITECT OF RECORD**

A/E/C  
Stone Group Architects  
600 E 7th Street  
Sioux Falls, SD 57103  
605-271-1144

**STAMP**

Office of  
Construction  
and Facilities  
Management

VA U.S. Department  
of Veterans Affairs

Drawing Title  
**WALL SECTIONS**

Approved:

Phase

Project Title  
**NEW FRONT LOBBY AND  
PRIMARY CARE ADDITION**

Location  
**SIOUX FALLS, SOUTH DAKOTA**

Issue Date  
06/22/2022

Checked  
BH

Drawn  
JH / DN

Project Number  
VA #438-480  
SGA #201909

Building Number  
5

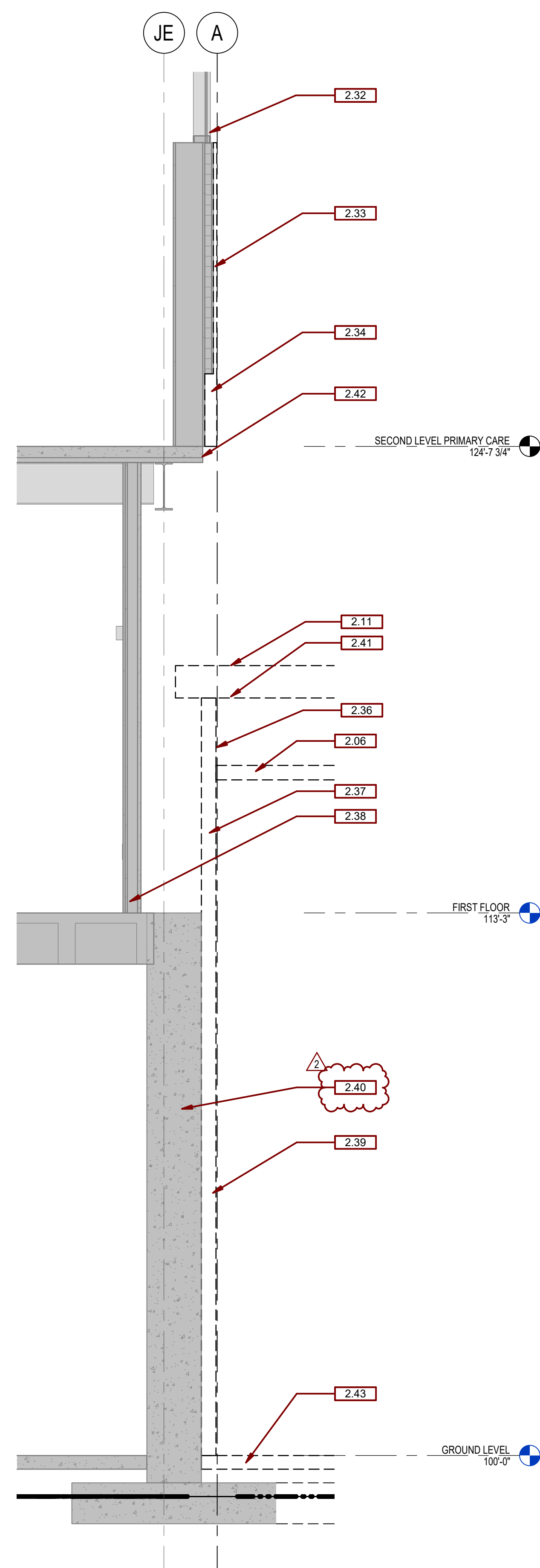
Drawing Number  
AE313

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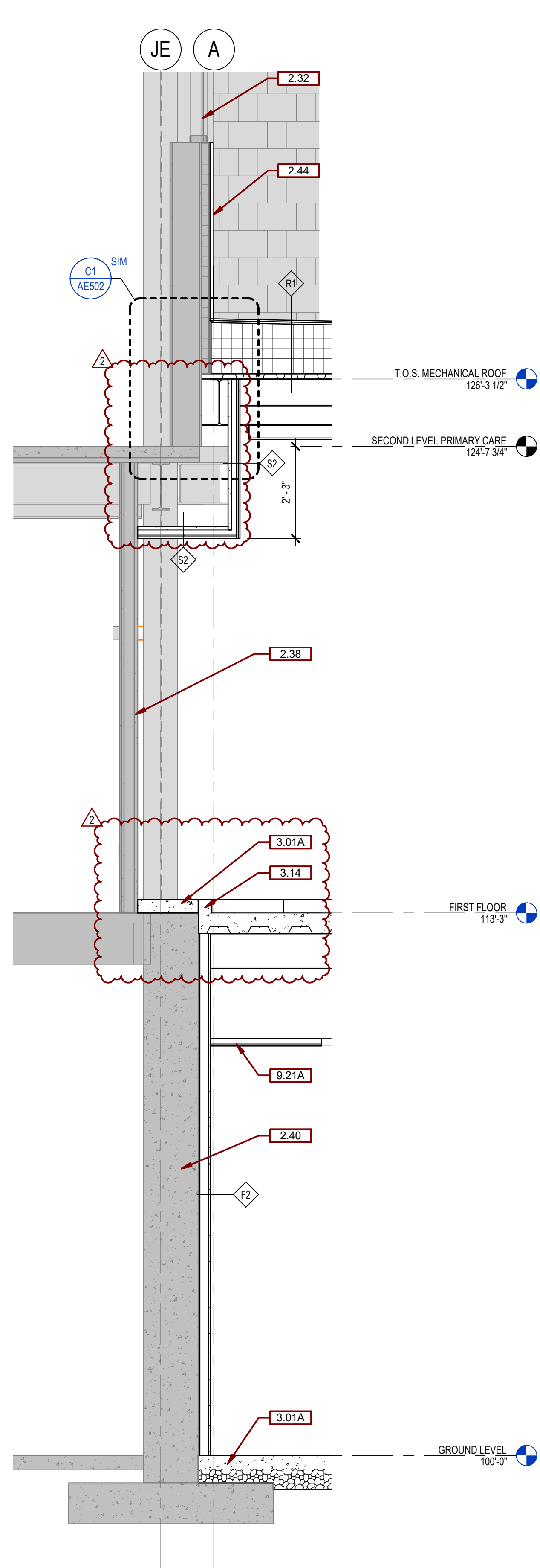
**GENERAL SECTION NOTES:**

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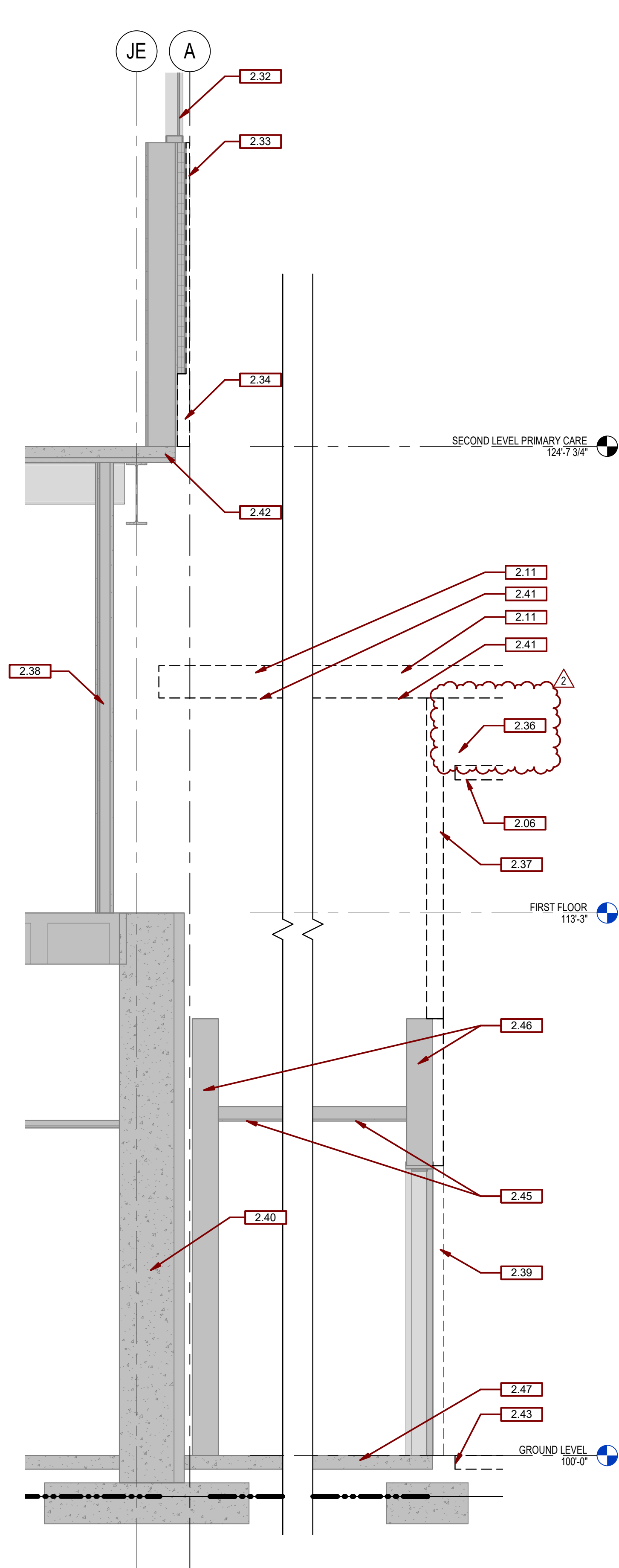
SGA KEYNOTES	
KTKT	KEYNOTE TEXT
2.06	REMOVE EXISTING CEILING
2.11	REMOVE EXISTING ROOF MEMBRANE & INSULATION
2.32	EXISTING ALUMINUM STOREFRONT AND GLASS TO REMAIN
2.33	REMOVE METAL PANELS BETWEEN BOTTOM OF EXISTING WINDOWS AND TOP OF NEW ROOF DECK. (SALVAGE METAL PANELS FOR REINSTALLATION). EXISTING 8" METALS STUDS, BATT INSUL., GYP SHEATHING, 2" RIGID INSUL., AND 1/2" PLYWOOD TO REMAIN.
2.34	REMOVE 2" RIGID INSUL., 1/2" PLYWOOD AND METAL PANELS BETWEEN TOP OF NEW ROOF DECK AND SECOND LEVEL. (SALVAGE METAL PANELS FOR REINSTALLATION). EXISTING 8" METAL STUDS, BATT INSUL., GYP SHEATHING TO REMAIN
2.36	REMOVE EXISTING BEAMS
2.37	REMOVE EXISTING METAL STUD WALL AND GYPSUM BOARD
2.38	EXISTING METAL STUD/GYPSUM BOARD SHAFT WALL TO REMAIN
2.39	REMOVE METAL STUD AND GYPSUM BOARD FURRING
2.40	EXISTING CONCRETE WALL TO REMAIN
2.41	REMOVE EXISTING LONG SPAN METAL DECK
2.42	EXISTING FLOOR STRUCTURE TO REMAIN
2.43	REMOVE EXISTING CONCRETE SLAB
2.44	REINSTALL EXISTING METAL PANELS
2.45	EXISTING CEILING TO REMAIN
2.46	EXISTING MASONRY WALL TO REMAIN
2.47	EXISTING CONCRETE SLAB TO REMAIN
3.01A	4" CONCRETE SLAB
3.14	4"x4" CONCRETE CURB, UNLESS DIMENSIONED OTHERWISE, POURED INTEGRAL WITH FLOOR SLAB AND FLUSH WITH EDGE OF FLOOR SLAB.
9.20F	1 1/2" C.R. CHANNELS @ 48" O.C., 7/8" HAT CHANNEL @ 16" O.C., AND 5/8" GYP. BD.
9.21A	ACOUSTICAL CEILING TILE, AT-1



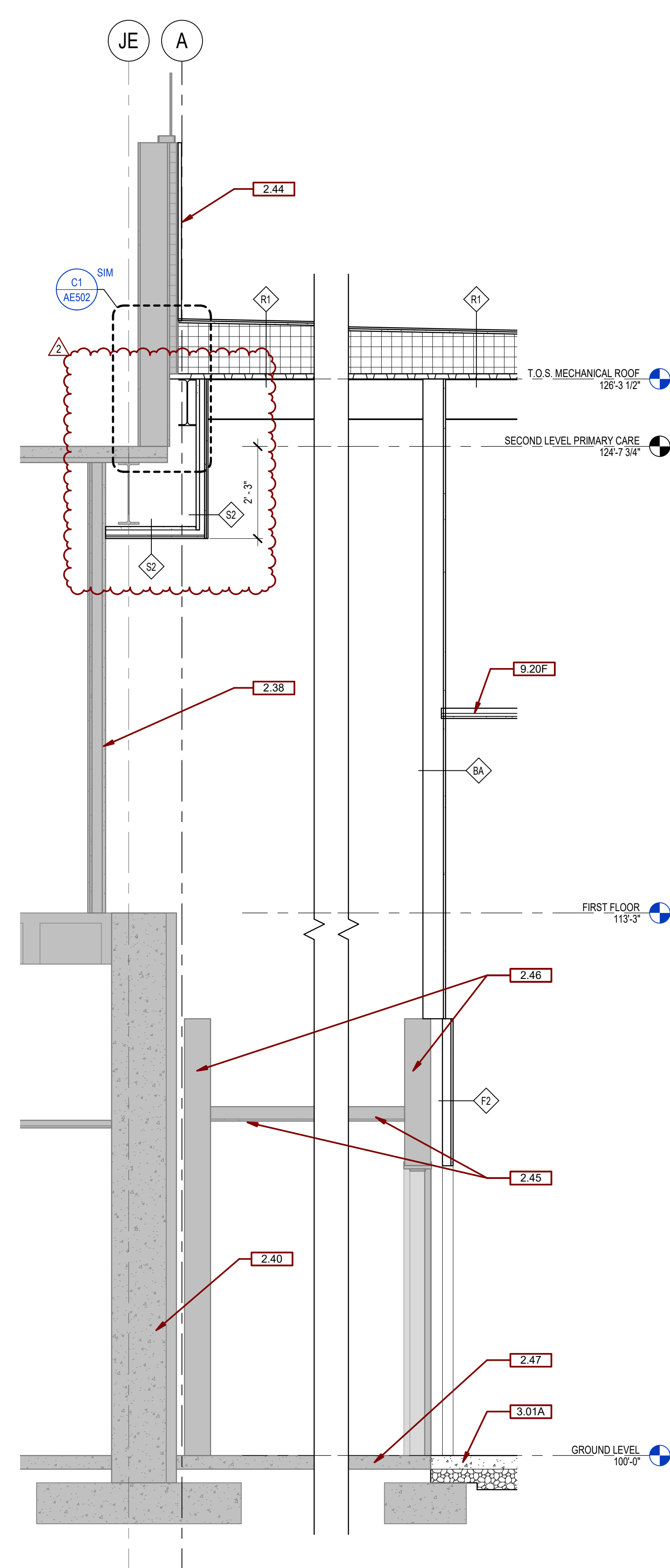
**E1A WALL SECTION AT CONNECTION TO EXISTING - DEMOLITION**  
1/2" = 1'-0"



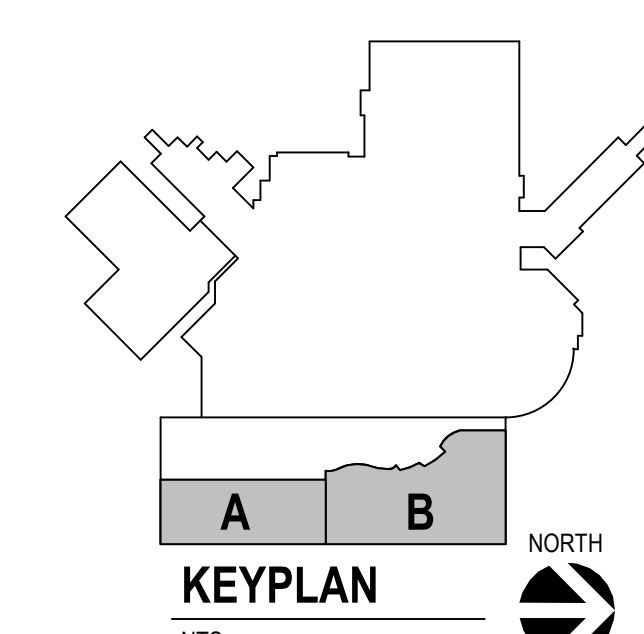
**E1B WALL SECTION AT CONNECTION TO EXISTING**  
1/2" = 1'-0"



**E2A WALL SECTION AT CONNECTION TO EXISTING - DEMOLITION**  
1/2" = 1'-0"



**E2B WALL SECTION AT CONNECTION TO EXISTING**  
1/2" = 1'-0"



Revision#	Description	Date:
2	ADDENDUM #1	02/12/2024
1	ISSUE SET	06/22/2022

**CONSULTANTS**

<b>ARCHITECTURAL:</b> BWB 380 St. Peter St Suite 600 St. Paul, MN 55102 Phone: 651-223-3701	<b>STRUCTURAL:</b> ERA 2250 University Ave W Suite 423-S St. Paul, MN 55402 Phone: 651-251-1970	<b>MEP:</b> DUNHAM 50 South Sixth St Suite 1100 Minneapolis, MN 55402 Phone: 612-465-7550	<b>CIVIL:</b> EVS 10025 Valley View Rd Suite 140 Eden Prairie, MN 55344 Phone: 952-646-0239	<b>LANDSCAPE:</b> CONFLUENCE 524 N Main Ave Suite 201 Sioux Falls, SD 57104 Phone: 605-339-1205
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**ARCHITECT OF RECORD**

A/E:  
Stone Group Architects  
600 E 7th Street  
Sioux Falls, SD 57103  
605-271-1144

**STAMP**

Office of  
Construction  
and Facilities  
Management

VA U.S. Department  
of Veterans Affairs

Drawing Title  
**WALL SECTIONS**

Approved:

Phase

Project Title  
**NEW FRONT LOBBY AND  
PRIMARY CARE ADDITION**

Location  
**SIOUX FALLS, SOUTH DAKOTA**

Issue Date  
06/22/2022

Checked  
BH

Drawn  
JH / DN

Project Number  
VA #438-480  
SGA #201909

Building Number  
5

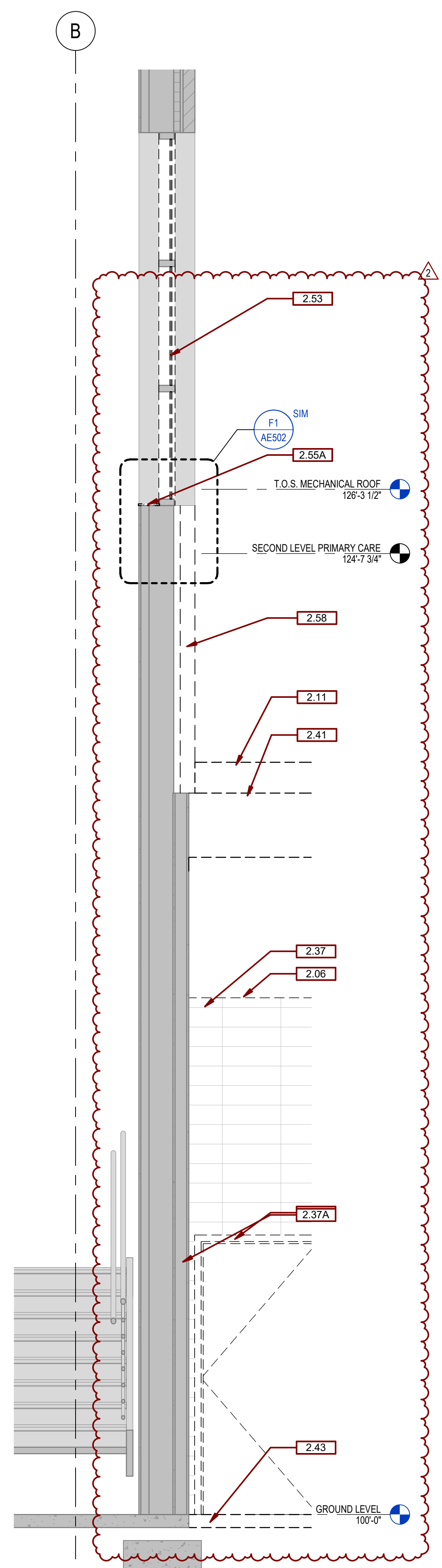
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**AE314**



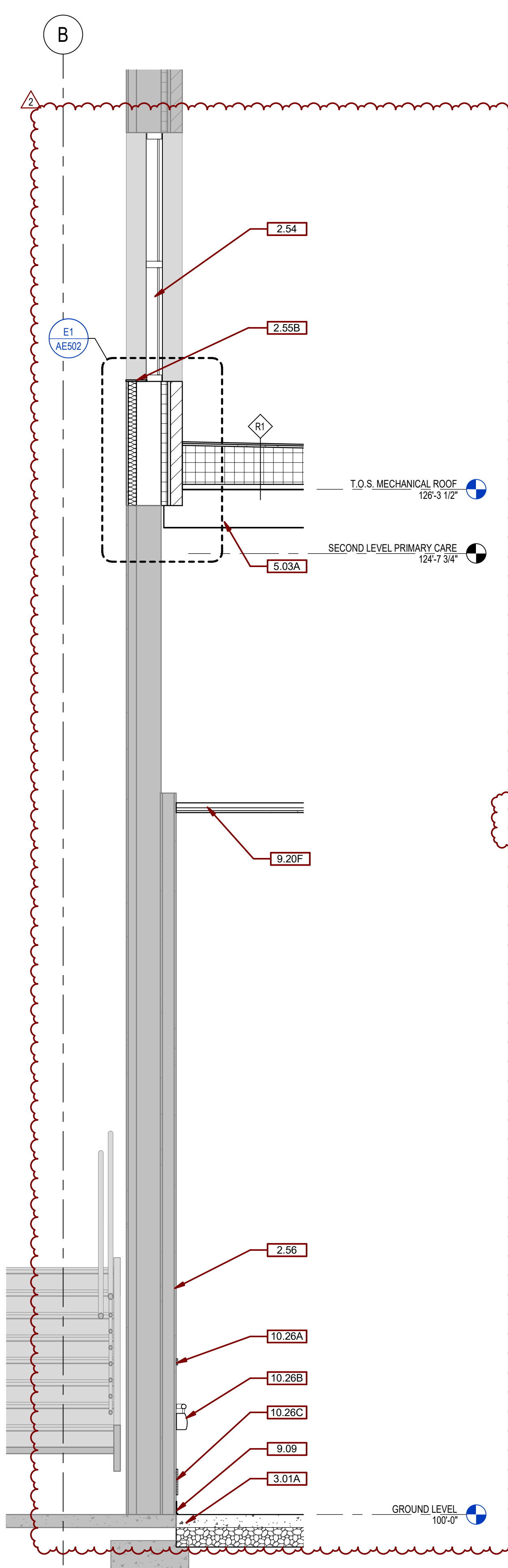
**GENERAL SECTION NOTES:**

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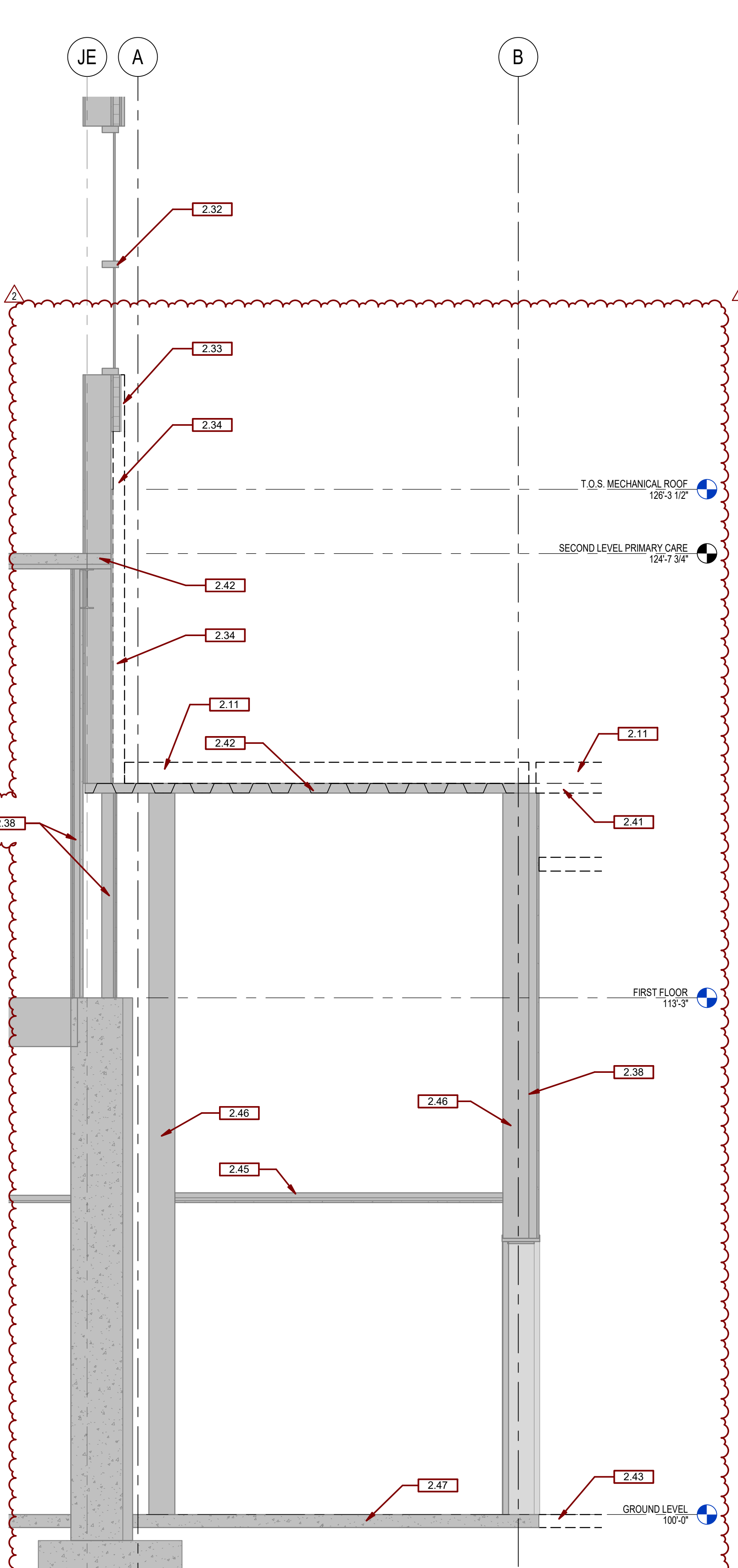
KEYNOTE	KEYNOTE TEXT
2.03A	REMOVE DOOR & FRAME, INFILL TO MATCH EXISTING WALL
2.06	REMOVE EXISTING CEILING
2.31	REMOVE EXISTING ROOF MEMBRANE & INSULATION
2.32	EXISTING ALUMINUM STOREFRONT AND GLASS TO REMAIN
2.33	REMOVE METAL PANELS BETWEEN BOTTOM OF EXISTING WINDOWS AND TOP OF NEW ROOF DECK. (SALVAGE METAL PANELS FOR REINSTALLATION). EXISTING 8" METALS STUDS, BATT INSUL., GYP SHEATHING, 2" RIGID INSUL., AND 12" PLYWOOD TO REMAIN.
2.34	REMOVE 2" RIGID INSUL., 12" PLYWOOD AND METAL PANELS BETWEEN TOP OF NEW ROOF DECK AND SECOND LEVEL. (SALVAGE METAL PANELS FOR REINSTALLATION). EXISTING 8" METAL STUDS, BATT INSUL., GYP SHEATHING TO REMAIN.
2.37	REMOVE EXISTING METAL STUD WALL AND GYPSUM BOARD
2.37A	EXISTING METAL STUD WALL AND GYPSUM FURRED WALL TO REMAIN
2.38	EXISTING METAL STUD/GYPSUM BOARD SHIRT WALL TO REMAIN
2.41	REMOVE EXISTING LONG SPAN METAL DECK
2.42	REMOVE EXISTING FLOOR STRUCTURE TO REMAIN
2.43	REMOVE EXISTING CONCRETE SLAB
2.44	REINSTALL EXISTING METAL PANELS
2.45	EXISTING CEILING TO REMAIN
2.46	EXISTING MASONRY WALL TO REMAIN
2.47	EXISTING CONCRETE SLAB TO REMAIN
2.53	REMOVE & SALVAGE STOREFRONT FOR REINSTALLATION - REF. FRAME TYPE W5 ON SHEET AE602
2.54	REINSTALL SALVAGED STOREFRONT - REF. FRAME TYPE W5 ON SHEET AE602
2.55A	REMOVE & SALVAGE EXISTING SILL
2.55B	REINSTALL EXISTING SALVAGED SILL
2.56	PATCH EXISTING MET STUD / GYP FURRED WALL AS REQUIRED & PROVIDE NEW LEVEL 5 FINISH OVER ENTIRE WALL
2.58	REMOVE FACE BRICK & 2" RIGID INSUL BELOW WINDOW (AND UP TO A±126'-8" @ OTHER STAIR/ELEVATOR WALLS)
3.01A	4" CONCRETE SLAB
5.03A	STEEL BEAM - SEE STRUCT.
9.09	WALL BASE - SEE SCHED.
9.26F	1 1/2" C.R. CHANNELS @ 48" O.C., 7/8" HAT CHANNEL @ 16" O.C., AND 5/8" GYP. BD.
10.26A	RIGID WALL PROTECTION WITH TOP CAP RWP-1
10.26B	HANDRAIL HR-1
10.26C	WALL GUARD WG-1



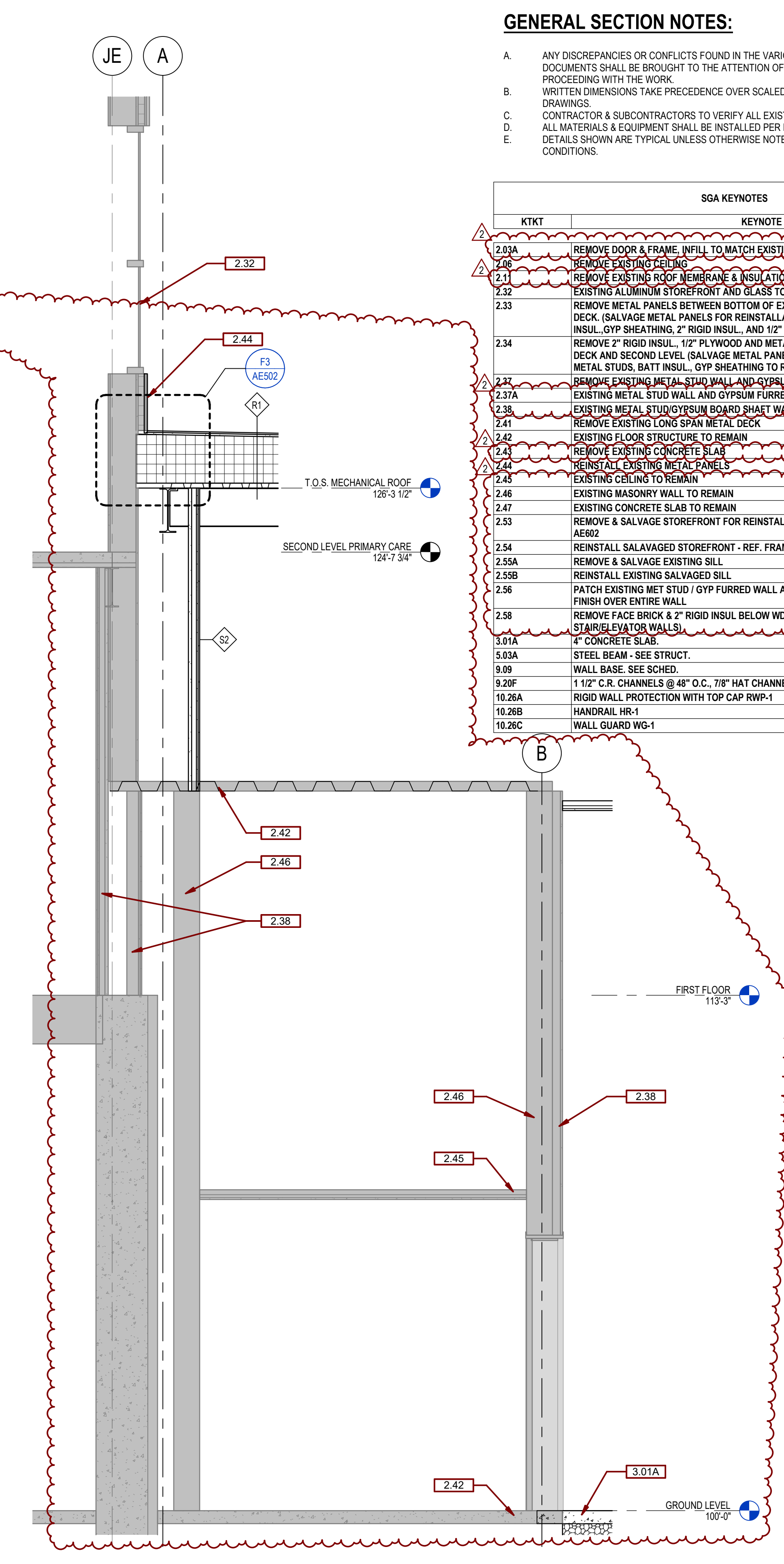
**E1A WALL SECTION AT CONNECTION TO EXISTING - DEMOLITION A**  
1/2" = 1'-0"



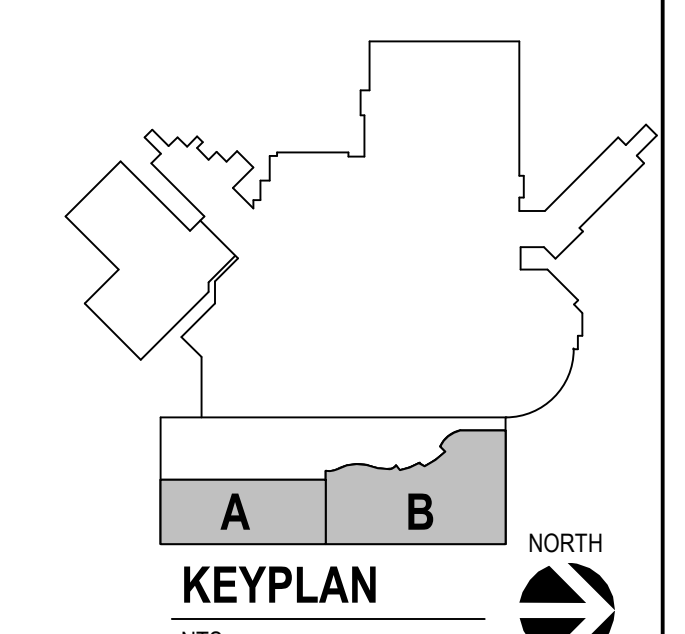
**E1B WALL SECTION AT CONNECTION TO EXISTING A**  
1/2" = 1'-0"



**E2A WALL SECTION AT CONNECTION TO EXISTING DEMOLITION B**  
1/2" = 1'-0"



**E2B WALL SECTION AT CONNECTION TO EXISTING B**  
1/2" = 1'-0"



Revision#	Description	Date
2	ADDENDUM #1	02/12/2024
1	ISSUE SET	06/22/2022

**CONSULTANTS**

<b>ARCHITECTURAL:</b> BWB R	<b>STRUCTURAL:</b> ERA	<b>MEP:</b> DUNHAM	<b>CIVIL:</b> EVS	<b>LANDSCAPE:</b> CONFLUENCE
BWBR 380 St. Peter St Suite 600 St. Paul, MN 55102 Phone: 651-221-3701	Ericsson Road Associates 2250 University Ave W Suite 423-S St. Paul, MN 55402 Phone: 651-251-7570	Dunham Associates, Inc. 50 South Sixth St Suite 1100 Minneapolis, MN 55402 Phone: 612-465-7550	EVS 10025 Valley View Rd Suite 140 Eden Prairie, MN 55344 Phone: 952-646-0239	CONFLUENCE 524 N Main Ave Suite 201 Sioux Falls, SD 57104 Phone: 605-339-1205

**ARCHITECT OF RECORD**

A/E:  
Stone Group Architects  
600 E 7th Street  
Sioux Falls, SD 57103  
605-271-1144

**STAMP**

Office of  
Construction  
and Facilities  
Management

VA U.S. Department of Veterans Affairs

Drawing Title  
**WALL SECTIONS**

Approved:

Phase

Project Title  
**NEW FRONT LOBBY AND PRIMARY CARE ADDITION**

Location  
**SIOUX FALLS, SOUTH DAKOTA**

Issue Date  
06/22/2022

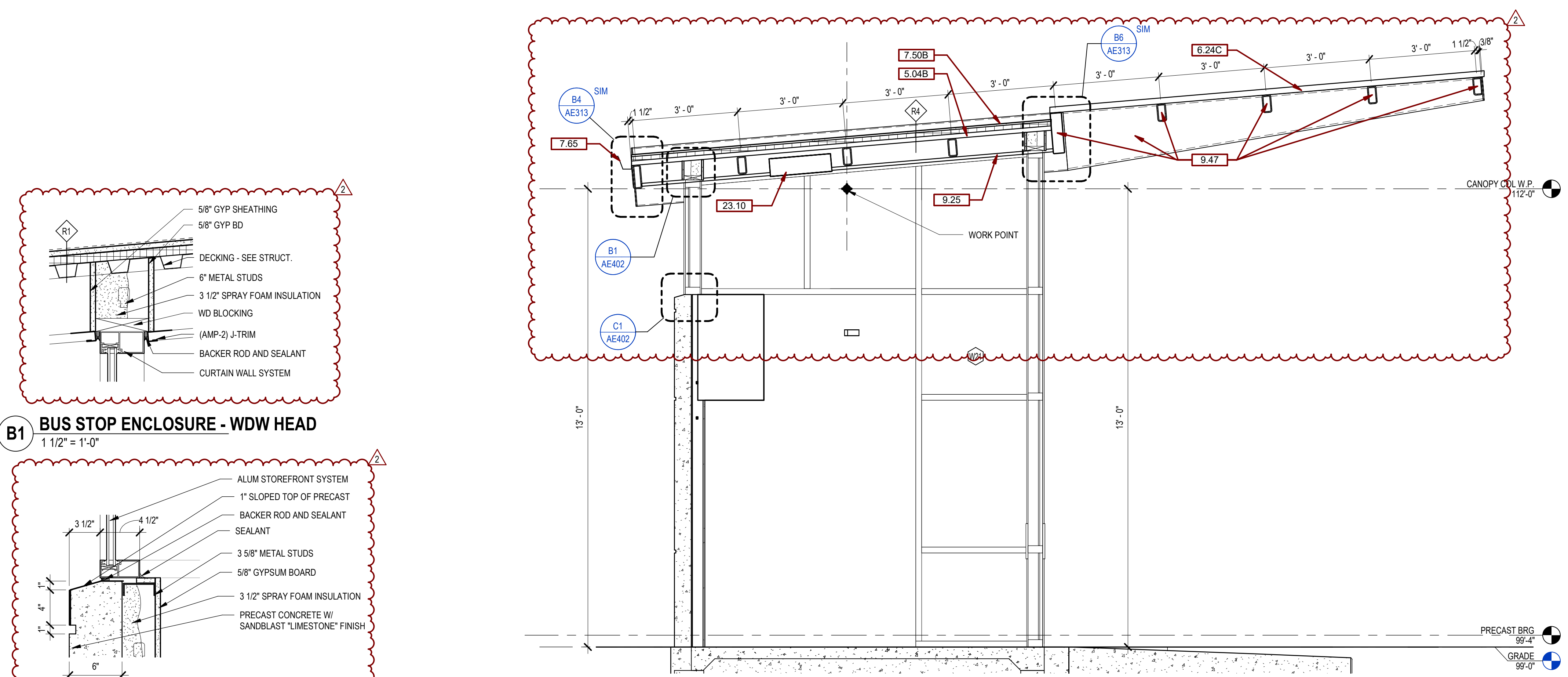
Checked  
BH

Drawn  
JH / DN

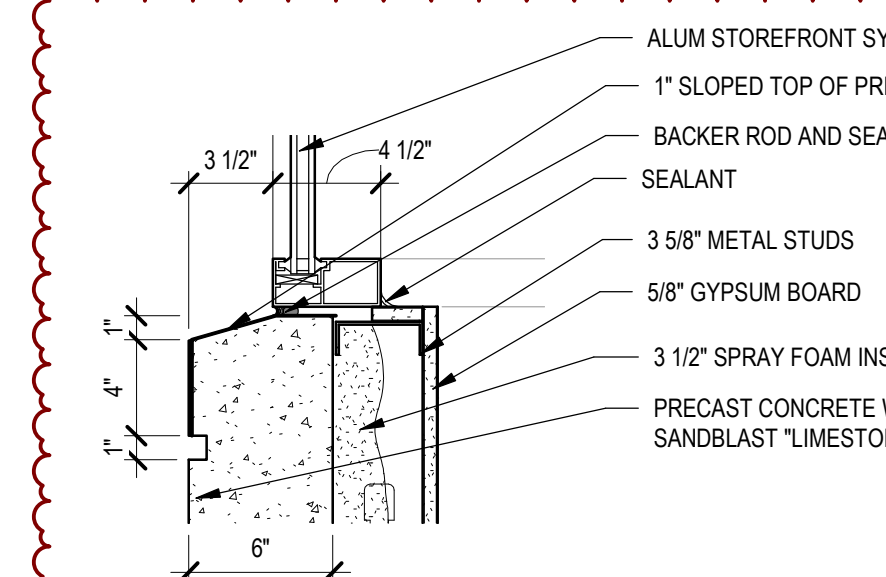
Project Number  
VA #438-480  
SGA #201909

Building Number  
5

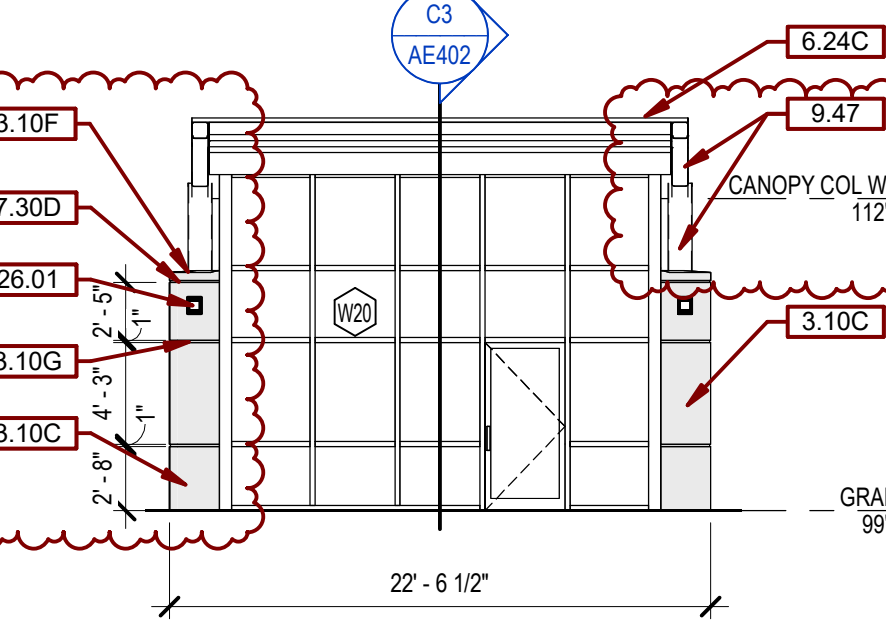
Drawing Number  
**AE315**



**B1 BUS STOP ENCLOSURE - WDW HEAD**  
1 1/2" = 1'-0"

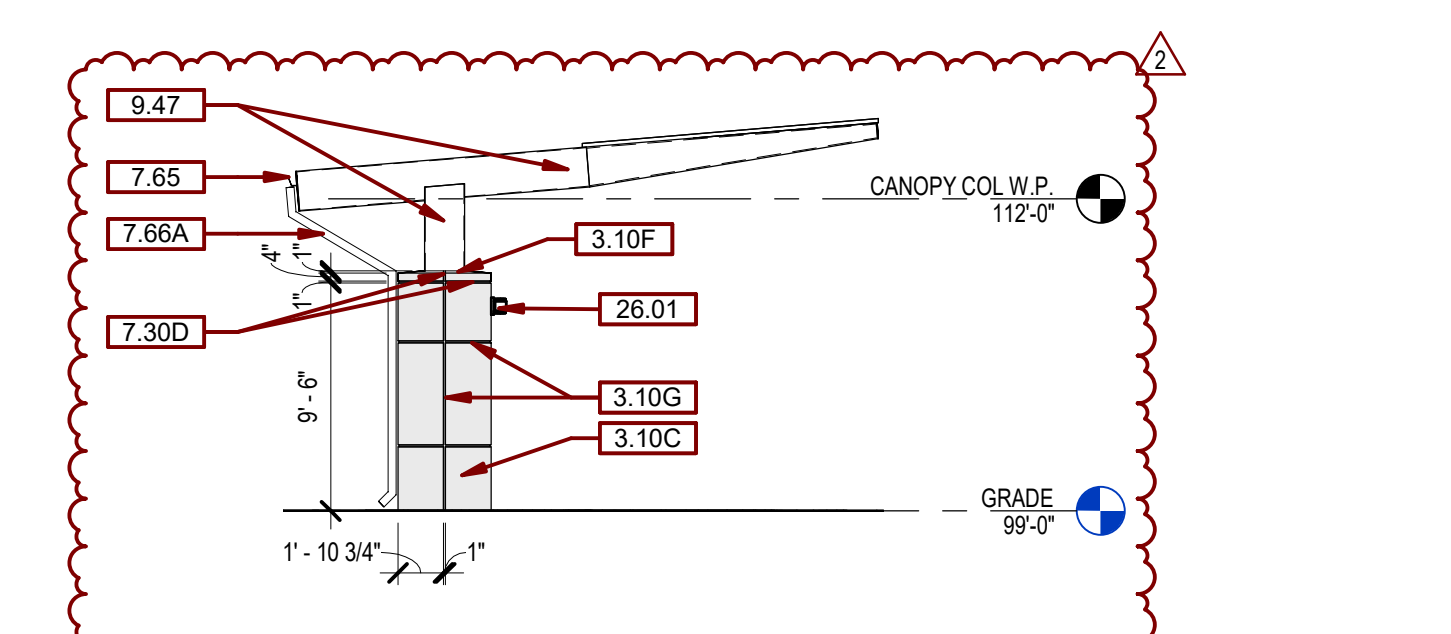


**C1 BUS STOP ENCLOSURE - WDW SILL**  
1 1/2" = 1'-0"

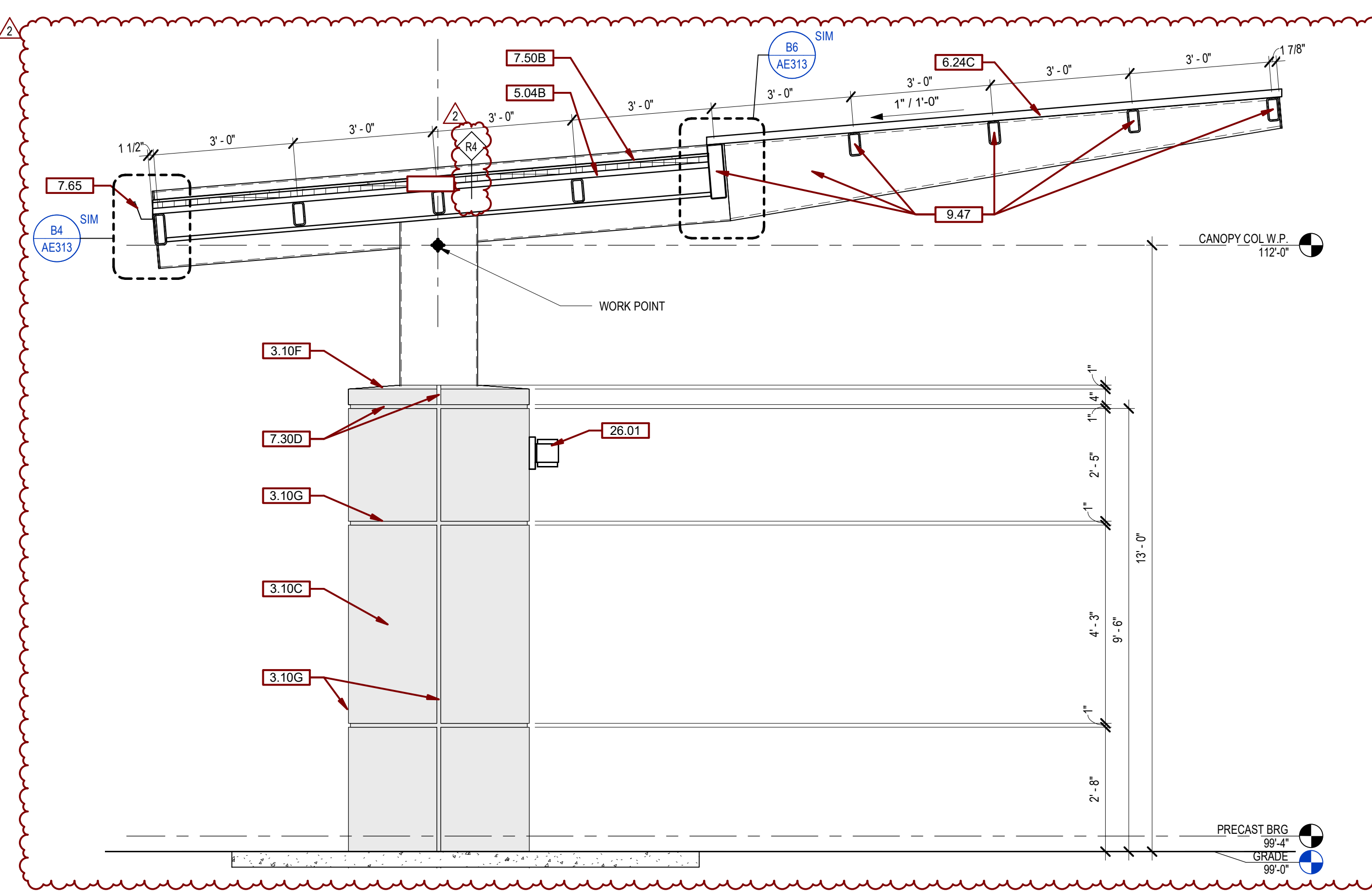


**C3 BUS STOP ENCLOSURE - SECTION**  
1/2" = 1'-0"

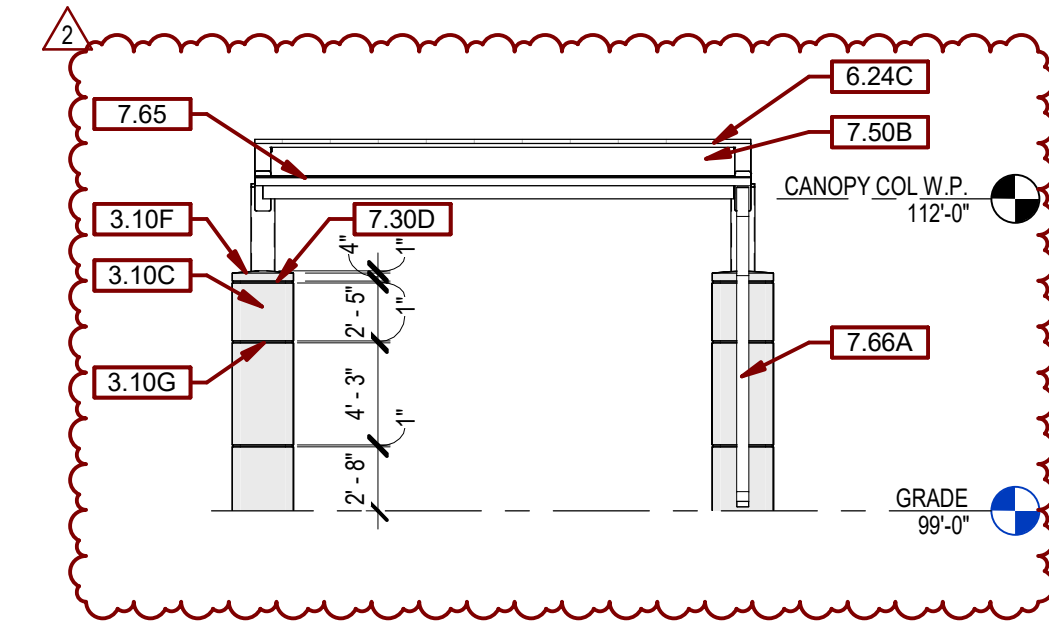
KT/KT	KEYNOTE TEXT
3.10C	PRECAST CONCRETE W/ SANDBLAST "LIMESTONE" FINISH
3.10F	1" SLOPED TOP OF PRECAST
3.10G	1"W. X 1/2" D. PRECAST REVEAL
5.04	DECKING - SEE STRUCT.
5.04B	ROOF DECKING - SEE STRUCT.
5.11A	3/8" METAL STUDS
5.11B	6" METAL STUDS
5.59	(AMP-2) J-TRIM
6.24C	POLYCARBONATE STANDING SEAM ROOF SYSTEM
7.44F	5/8" GYP BOARD
7.50	SEALANT
7.50A	BACKER ROD AND SEALANT
7.50B	BACKER ROD AND SEALANT RECESSED 1/2"
7.50B	TPO ROOF SYSTEM
7.65	PREFINISHED METAL GUTTER
7.66A	6"x4" OPEN FACE, PREFINISHED METAL DOWNSPOUT.
8.20	CURTAIN WALL SYSTEM
8.21A	ALUM STOREFRONT SYSTEM
9.20A	5/8" GYPSUM BOARD
9.25	ACOUSTICAL METAL PANEL CEILING (AMP-1)
9.47	PAINT EXPOSED COLUMNS & BEAMS P-13
23.10	CABINET UNIT HEATER - SEE MECH
26.01	LIGHT FIXTURE - SEE ELEC.



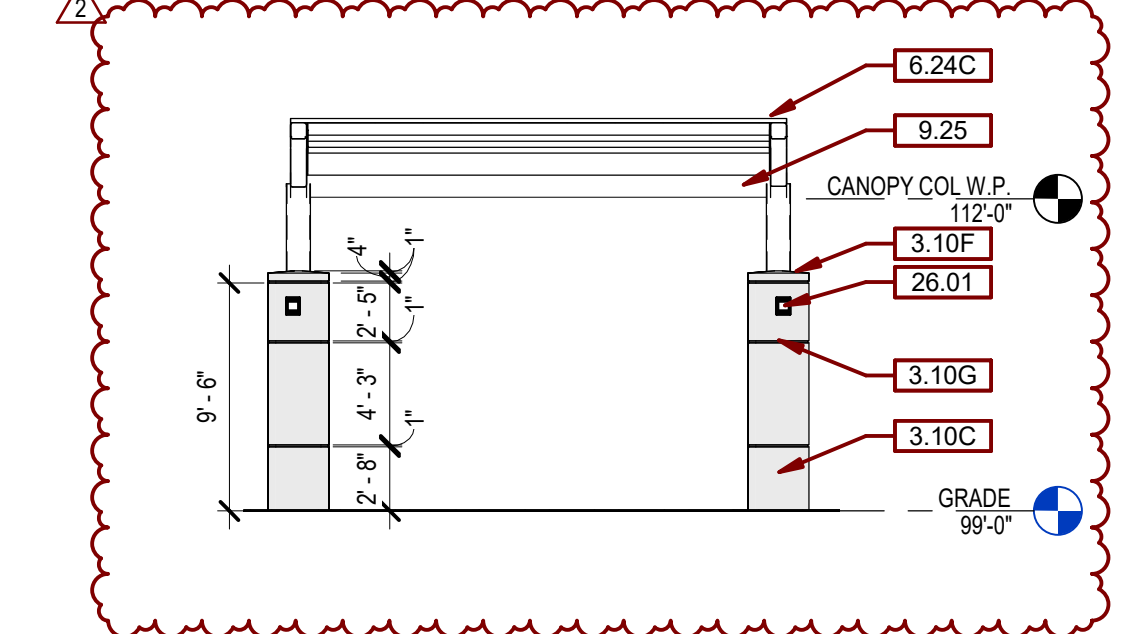
**D5 BUS STOP - (ALT DEDUCT) SIDE ELEVATION - TYP**  
1/8" = 1'-0"



**C7 BUS STOP - (ALT DEDUCT) SECTION**  
1/2" = 1'-0"

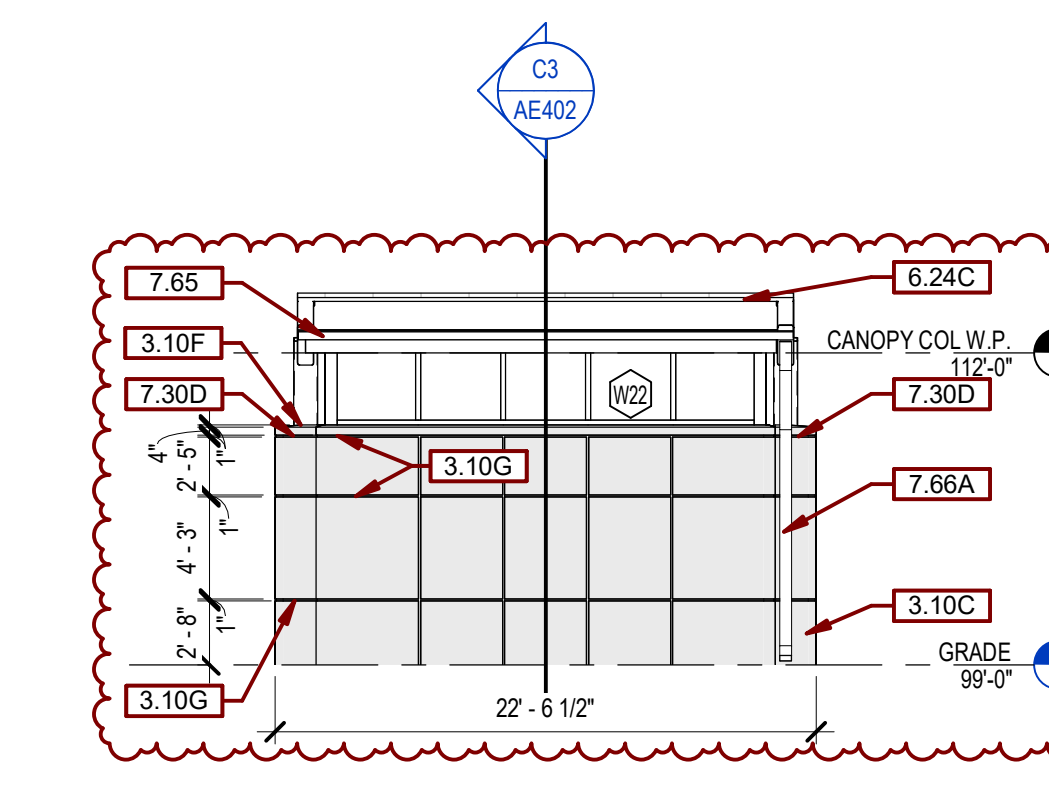


**D7 BUS STOP - (ALT DEDUCT) REAR ELEVATION**  
1/8" = 1'-0"

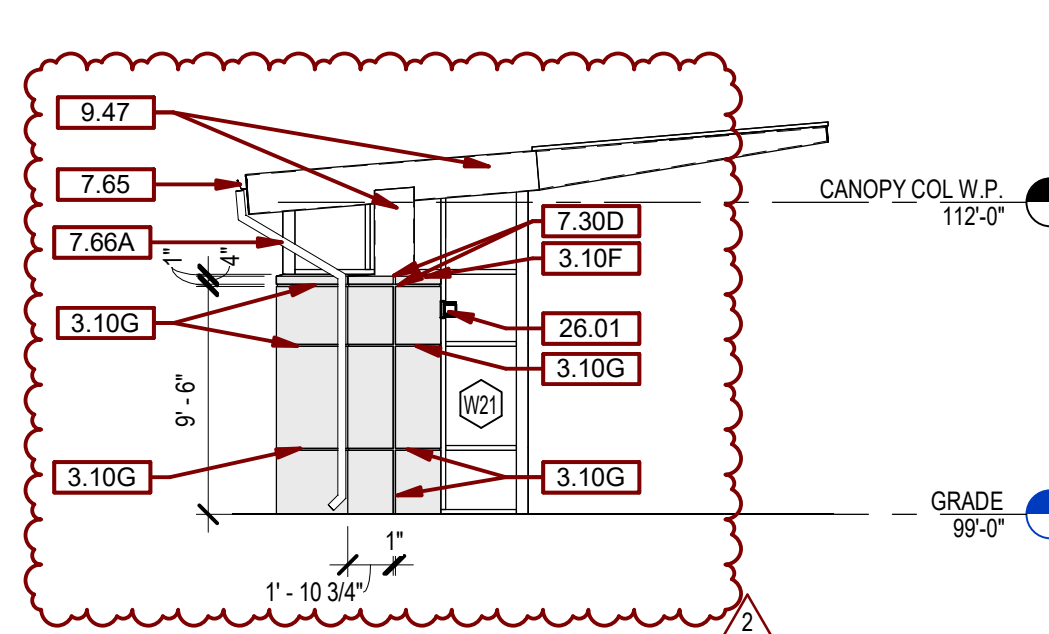


**D9 BUS STOP - (ALT DEDUCT) FRONT ELEVATION**  
1/8" = 1'-0"

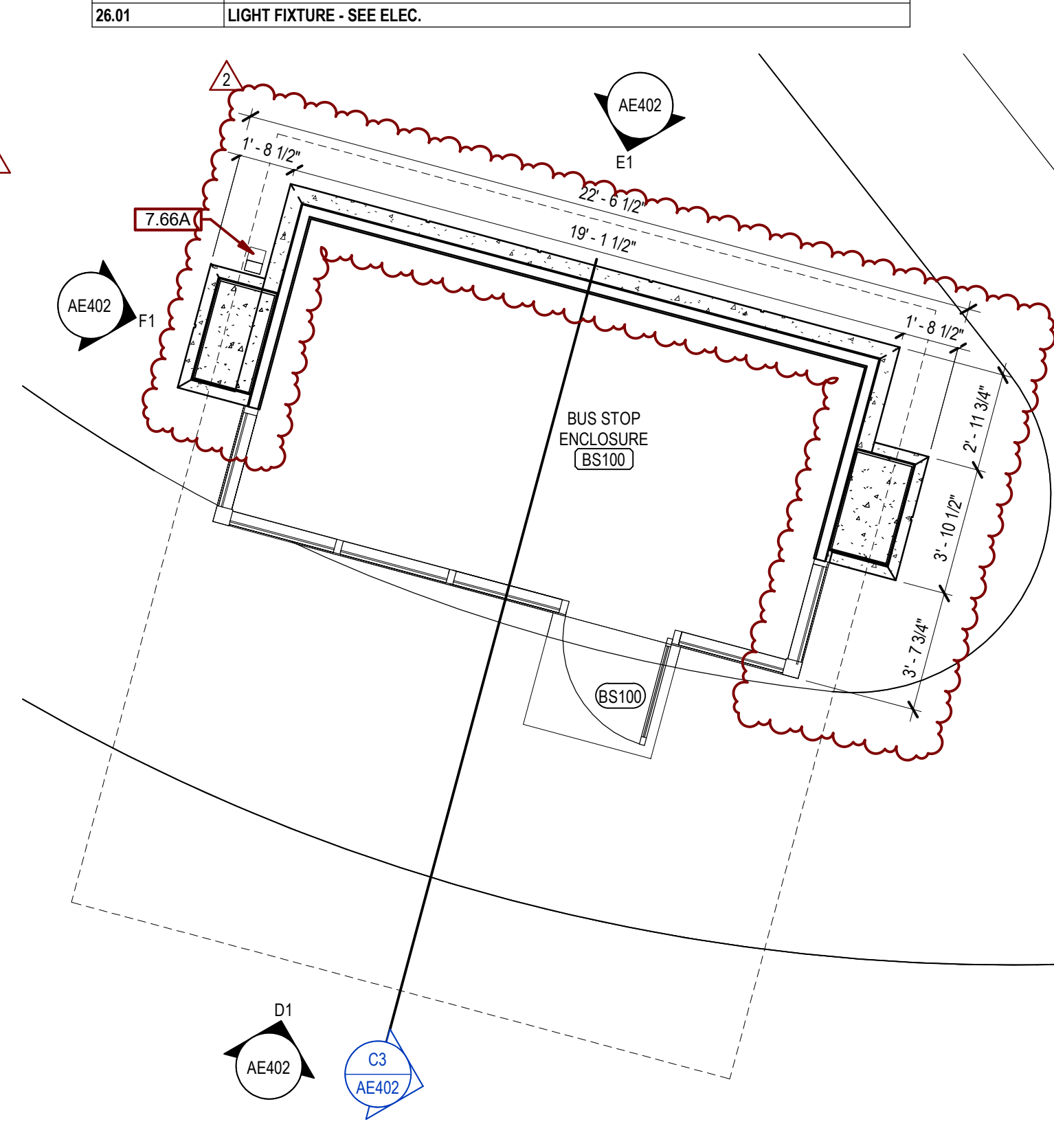
**D1 BUS STOP ENCLOSURE - FRONT ELEVATION**  
1/8" = 1'-0"



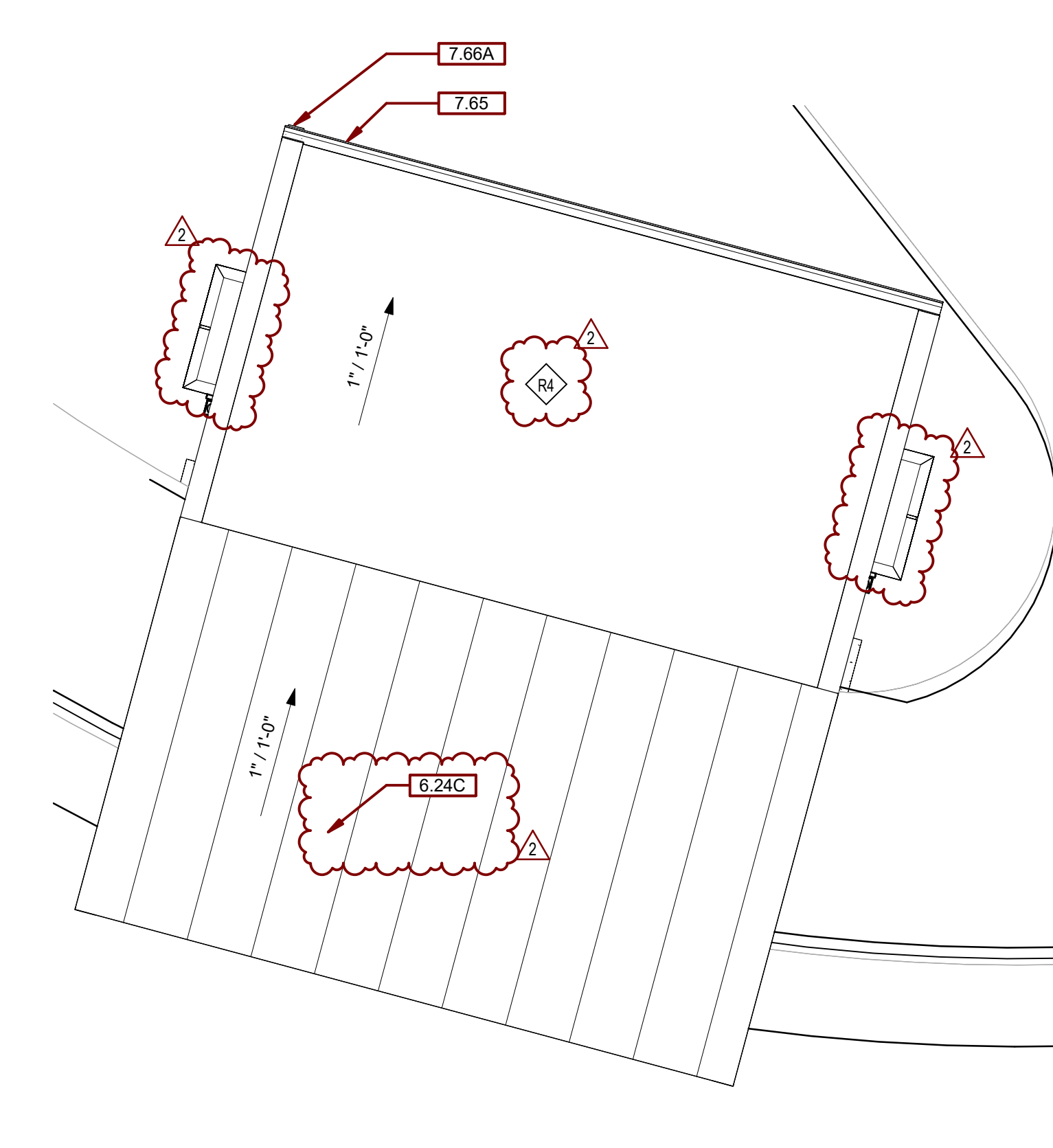
**E1 BUS STOP ENCLOSURE - REAR ELEVATION**  
1/8" = 1'-0"



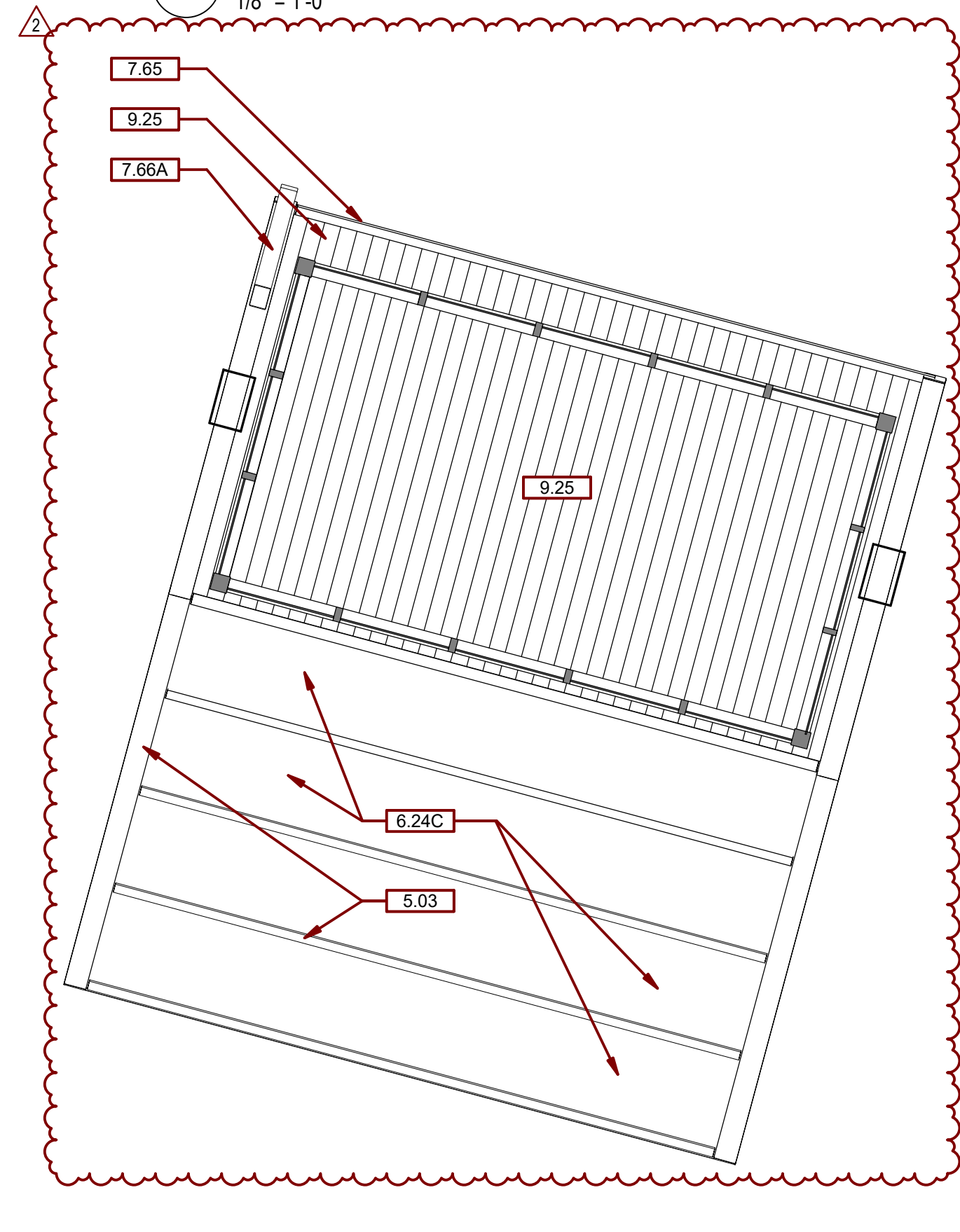
**F1 BUS STOP ENCLOSURE - SIDE ELEVATION - TYP**  
1/8" = 1'-0"



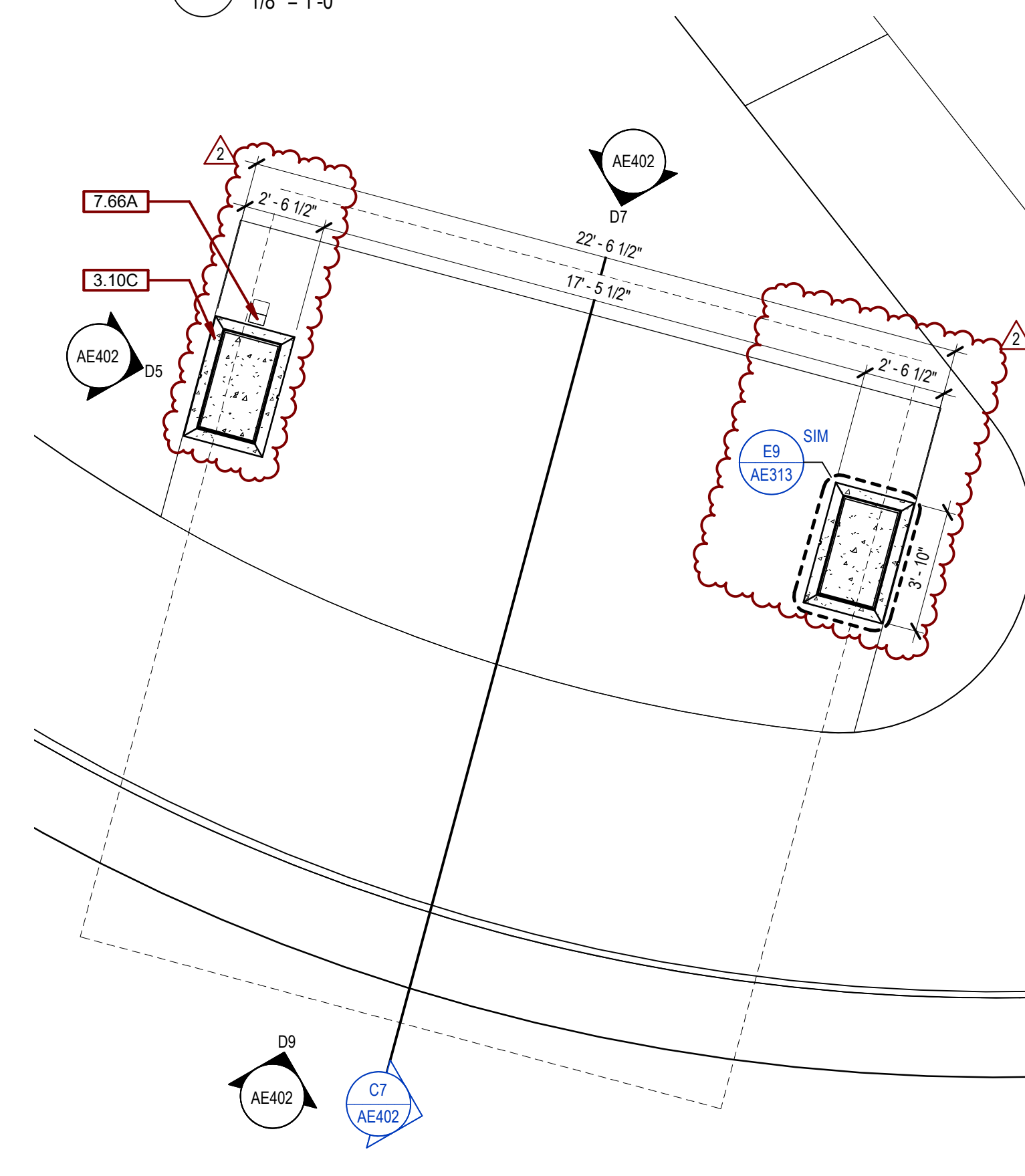
**F3 BUS STOP ENCLOSURE - PLAN**  
1/4" = 1'-0"



**F5 BUS STOP - ROOF PLAN**  
1/4" = 1'-0"



**F7 BUS STOP RCP**  
1/4" = 1'-0"



**F9 BUS STOP - PLAN (ALT DEDUCT)**  
1/4" = 1'-0"

Revision#	Description	Date
2	ADDENDUM #1	02/12/2024
1	ISSUE SET	06/22/2022

**CONSULTANTS**

<b>ARCHITECTURAL:</b> BWB/R	<b>STRUCTURAL:</b> ERA	<b>MEP:</b> DUNHAM	<b>CIVIL:</b> EVS	<b>LANDSCAPE:</b> CONFLUENCE
BWB/R 380 St. Peter St Suite 600 St. Paul, MN 55102 Phone: 651-223-3701	Ericson Road Associates 2250 University Ave W Suite 423-S St. Paul, MN 55402 Phone: 651-251-1970	Dunham Associates, Inc. 50 South Sixth St Suite 1100 Minneapolis, MN 55402 Phone: 612-465-7550	EVS 10025 Valley View Rd Suite 140 Eden Prairie, MN 55344 Phone: 952-846-0239	CONFLUENCE 524 N Main Ave Suite 201 Sioux Falls, SD 57104 Phone: 605-339-1205

**ARCHITECT OF RECORD**

A/E:  
Stone Group Architects  
600 E 7th Street  
Sioux Falls, SD 57103  
605-271-1144

**STAMP**

REGISTERED ARCHITECT  
JODI HANSEN  
SOUTH DAKOTA  
C-22-22

**STONE GROUP ARCHITECTS**

Office of Construction and Facilities Management

VA U.S. Department of Veterans Affairs

Drawing Title  
**BUS STOP DETAILS**

Phase

Approved:

Project Title  
**NEW FRONT LOBBY AND PRIMARY CARE ADDITION**

Location  
**SIoux FALLS, SOUTH DAKOTA**

Issue Date  
06/22/2022

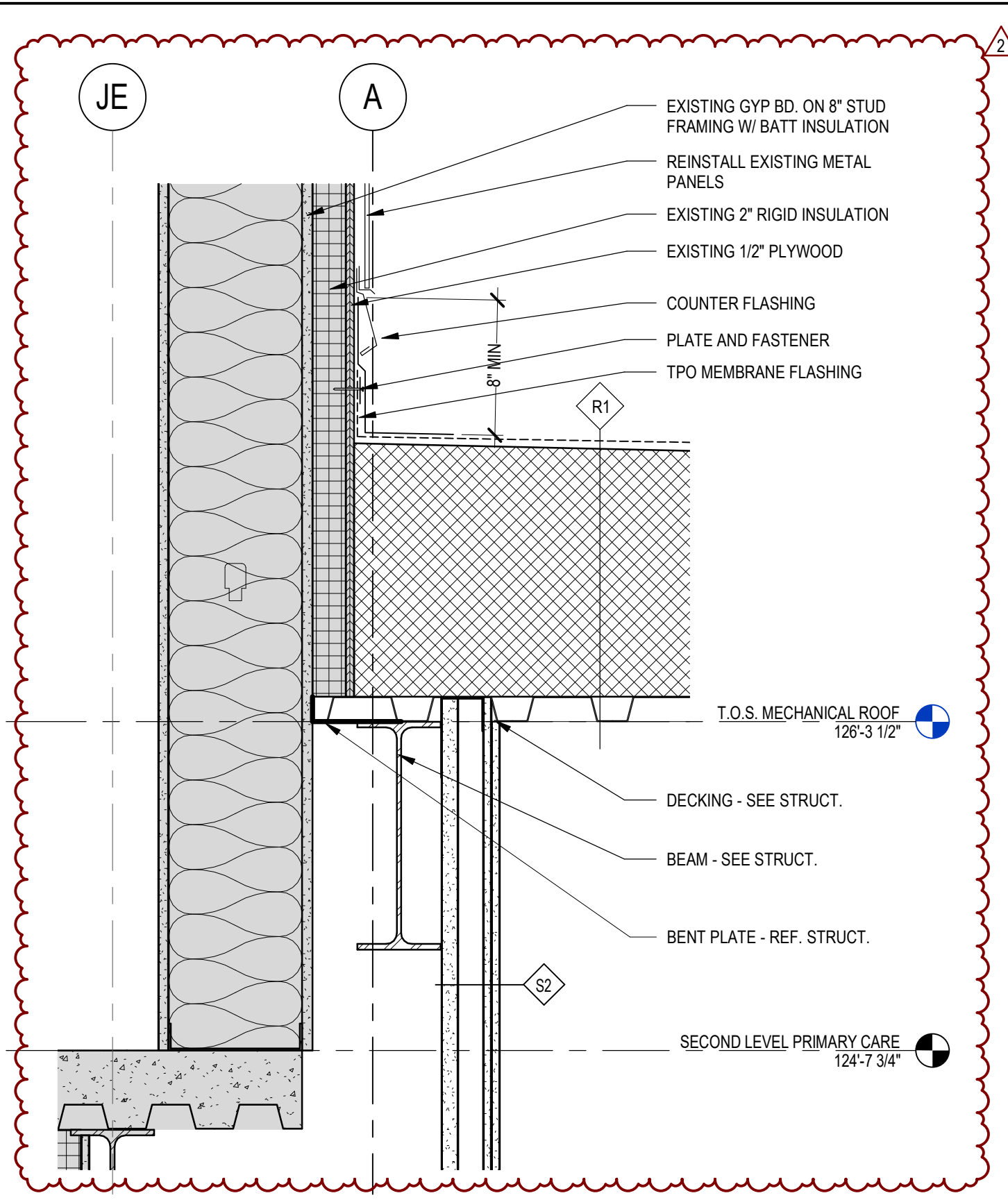
Checked  
BH

Drawn  
JH / DN

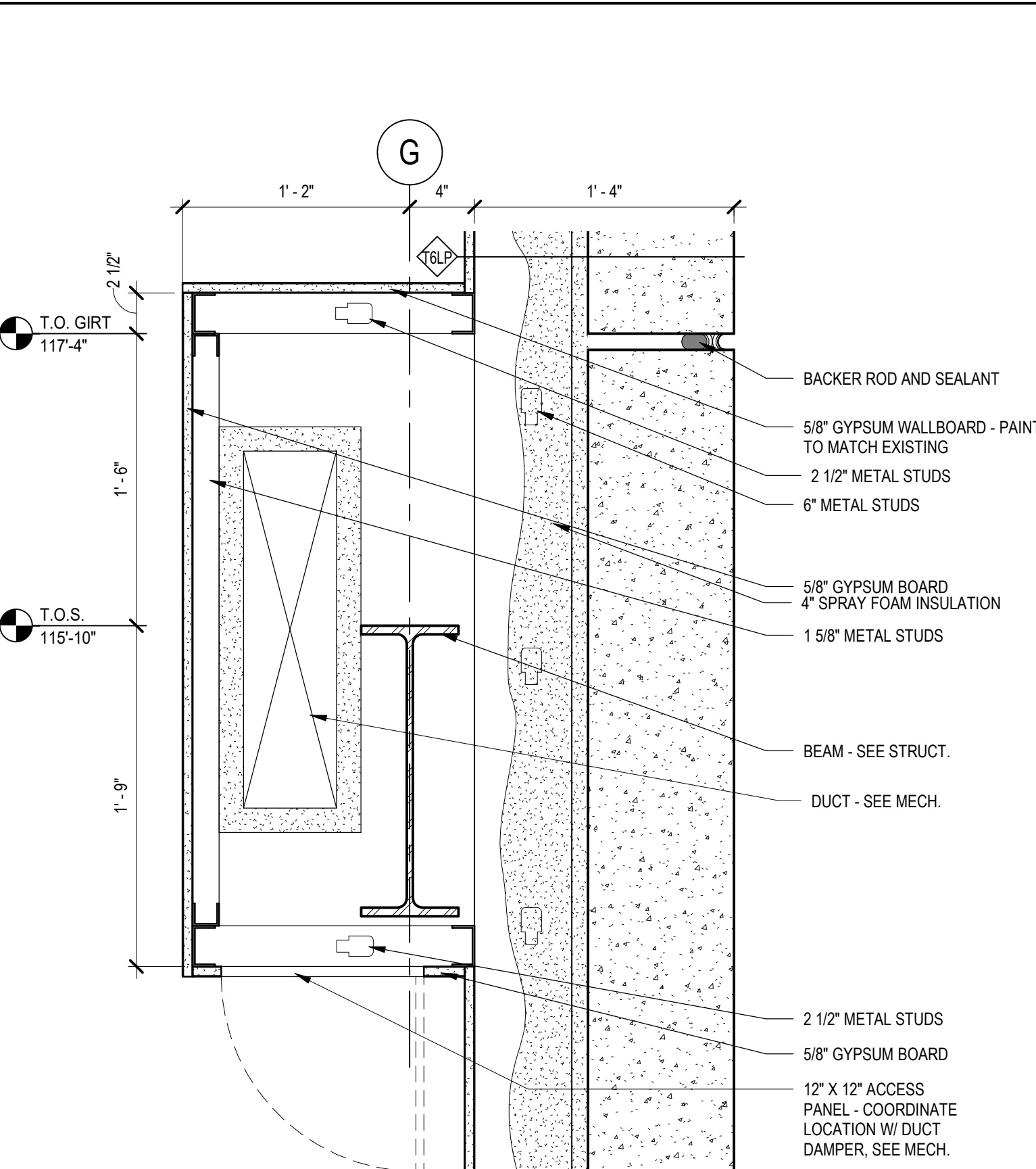
Project Number  
VA #438-480  
SGA #201909

Building Number  
5

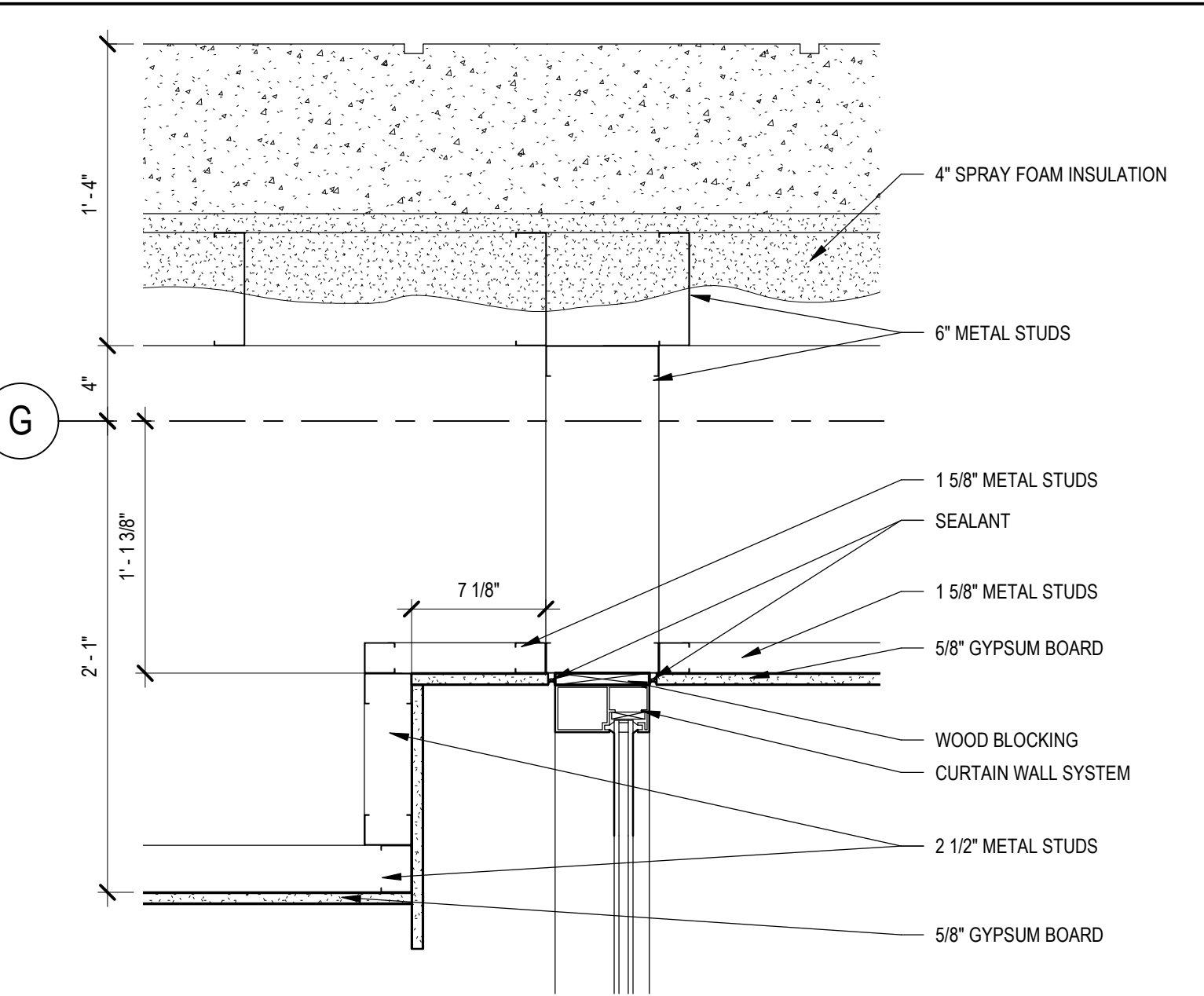
Drawing Number  
AE402



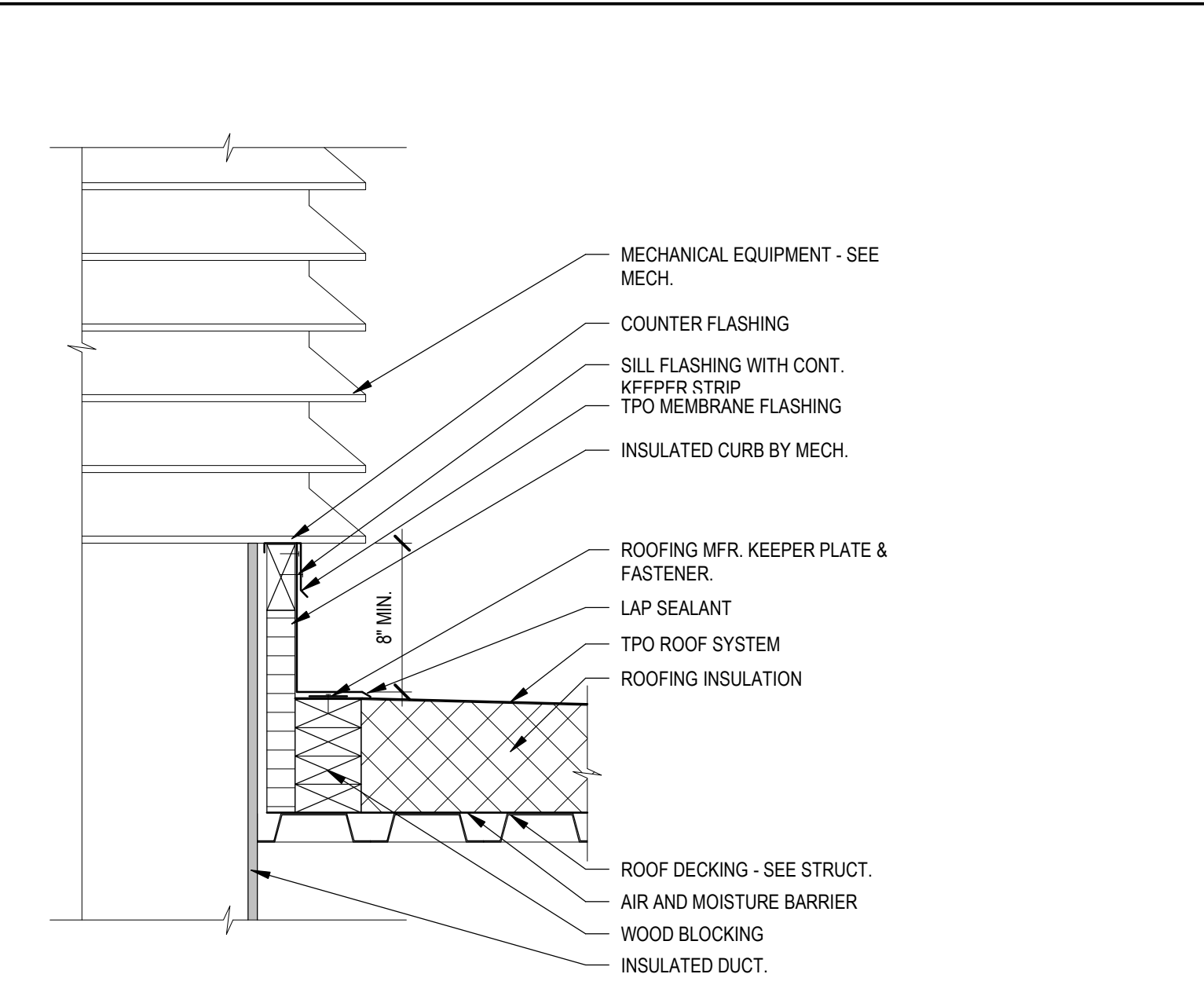
**C1 SECTION DETAIL - ROOF FLASHING AT EXISTING & LOBBY CORRIDOR**  
1 1/2" = 1'-0"



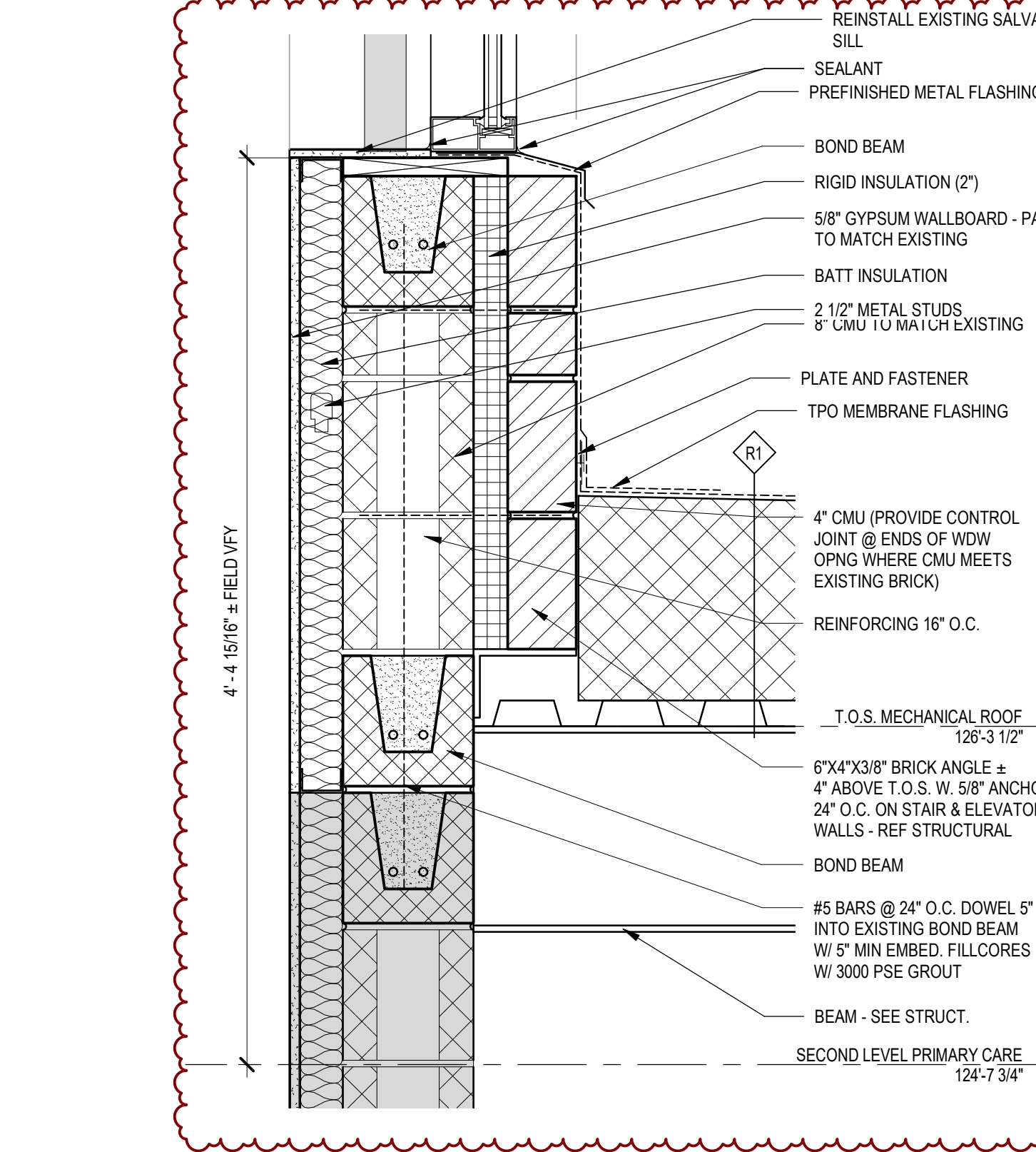
**C3 SECTION DETAIL - VEST C55A - EAST SOFFIT**  
1 1/2" = 1'-0"



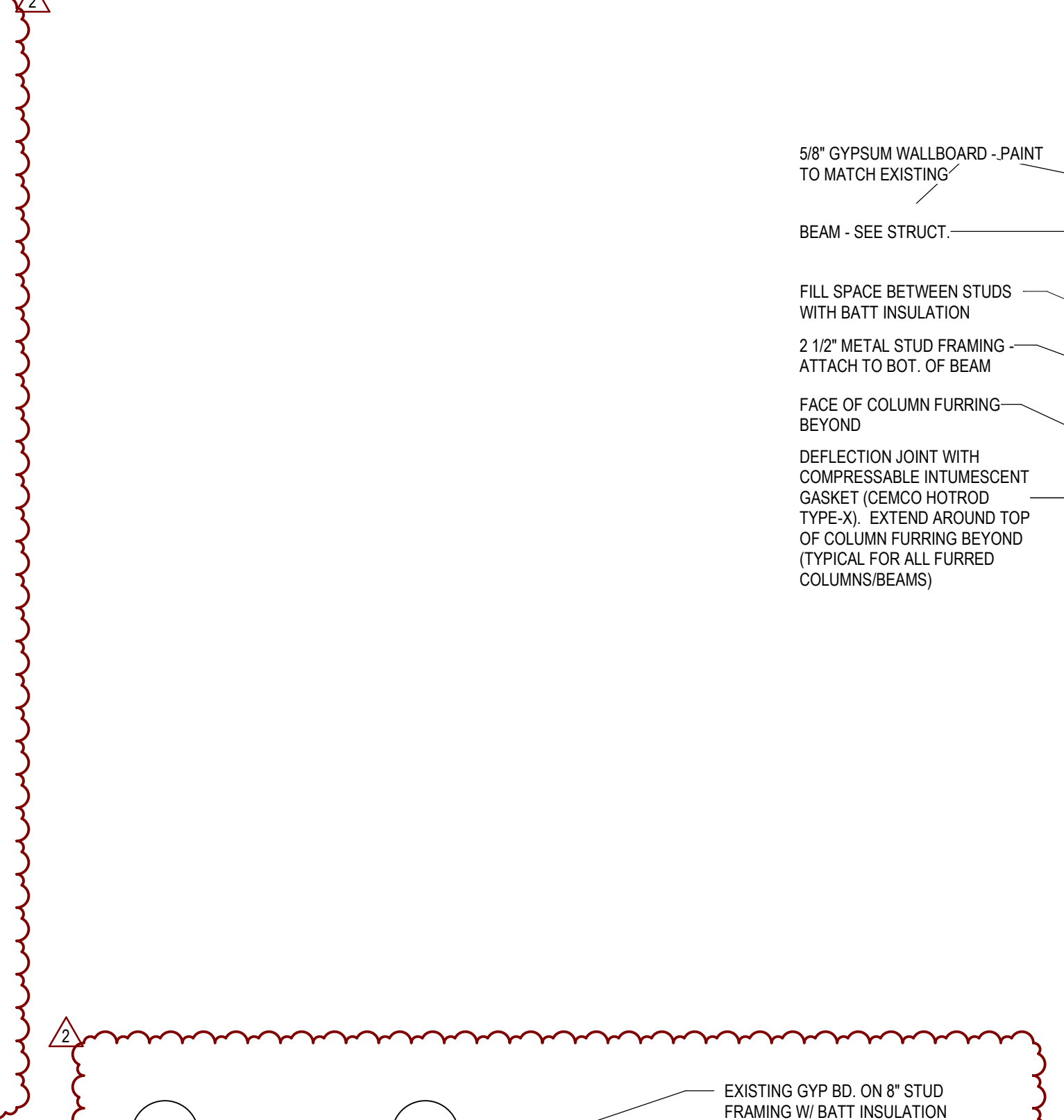
**B5 PLAN DETAIL - SOFFIT RETURN AT SOUTH VESTIBULE**  
1 1/2" = 1'-0"



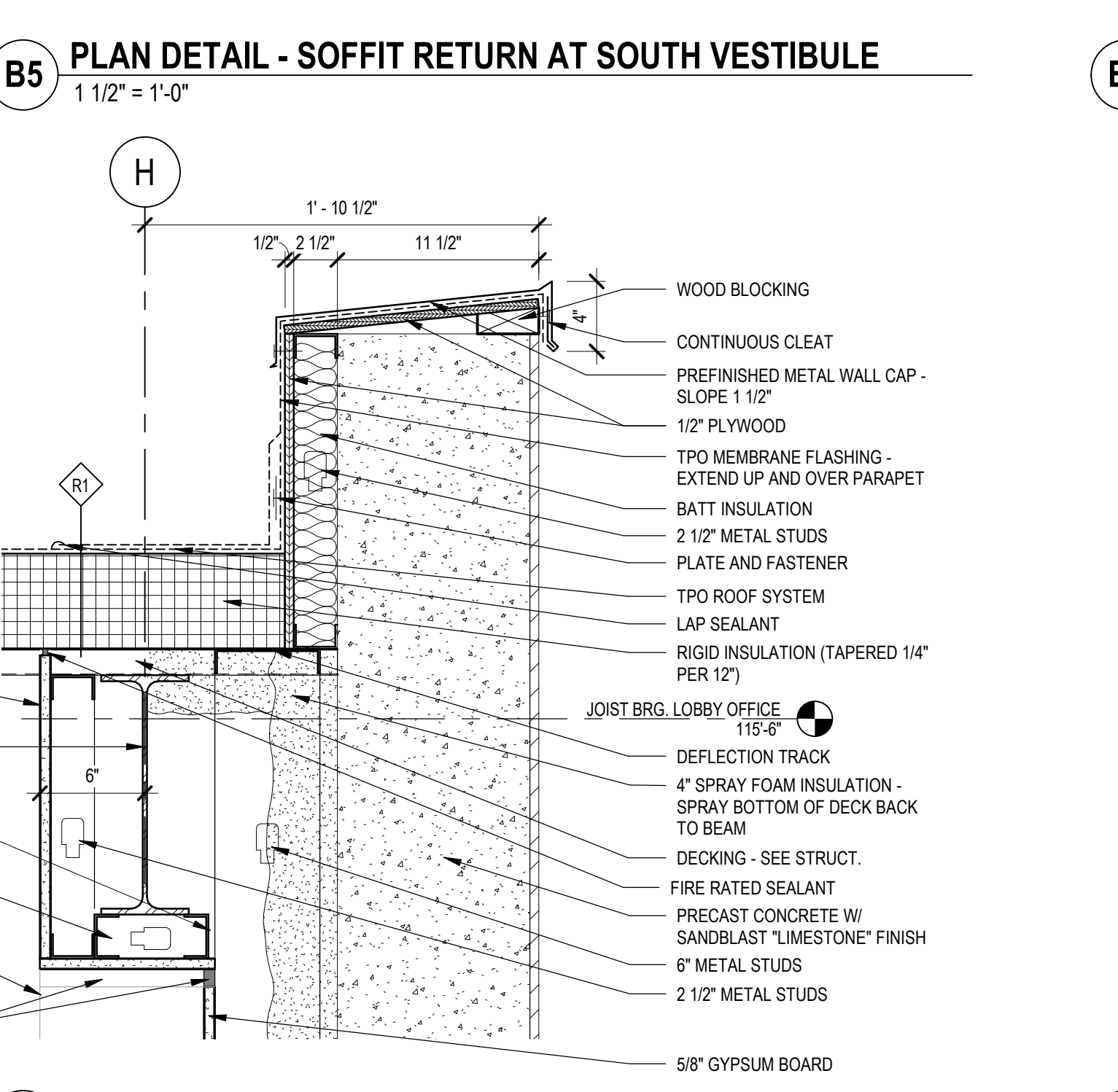
**B7 SECTION DETAIL - MECHANICAL CURB OPENING FLASHING**  
1 1/2" = 1'-0"



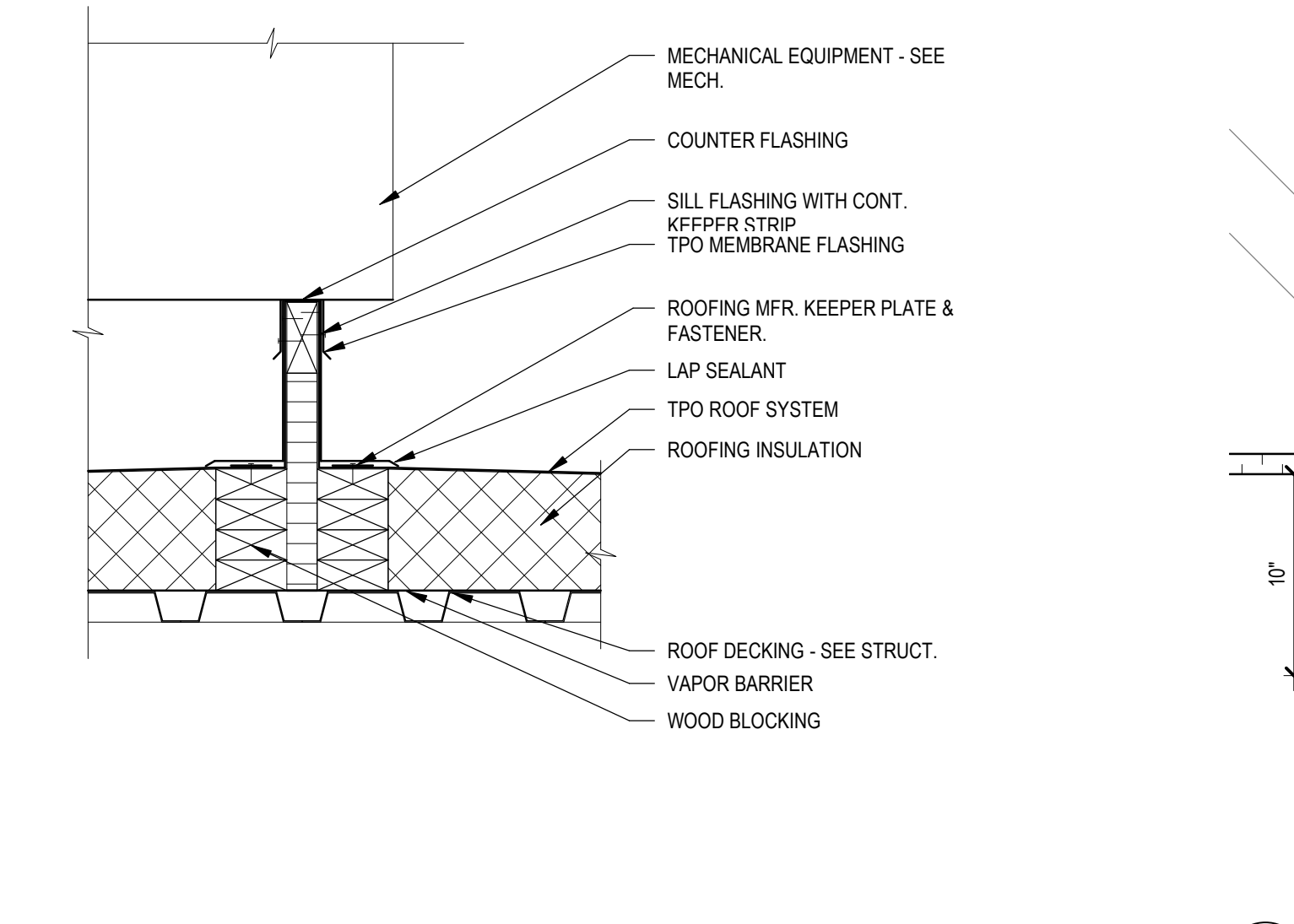
**C1 SECTION DETAIL- 2HR SEPARATION WINDOW SILL- NEW**  
1 1/2" = 1'-0"



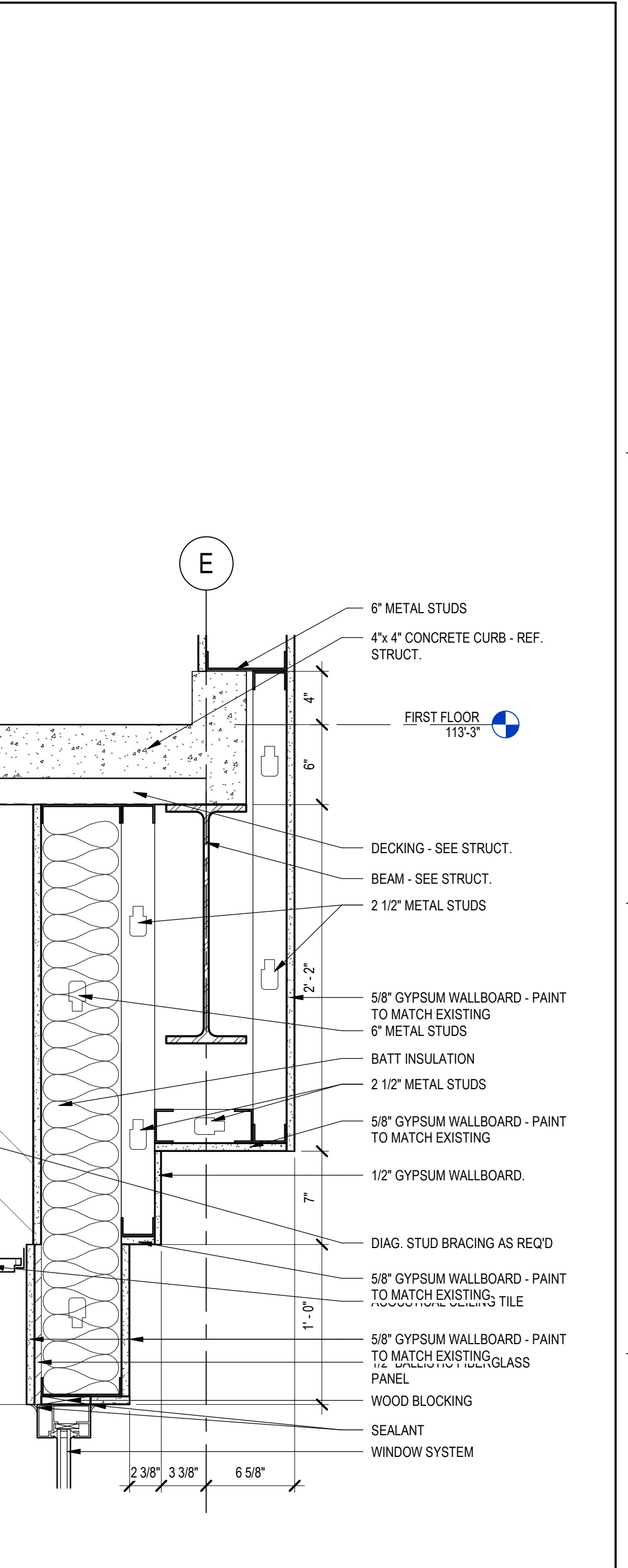
**C3 SECTION DETAIL-2HR SEPARATION WALL-ELEVATOR CORNER**  
1 1/2" = 1'-0"



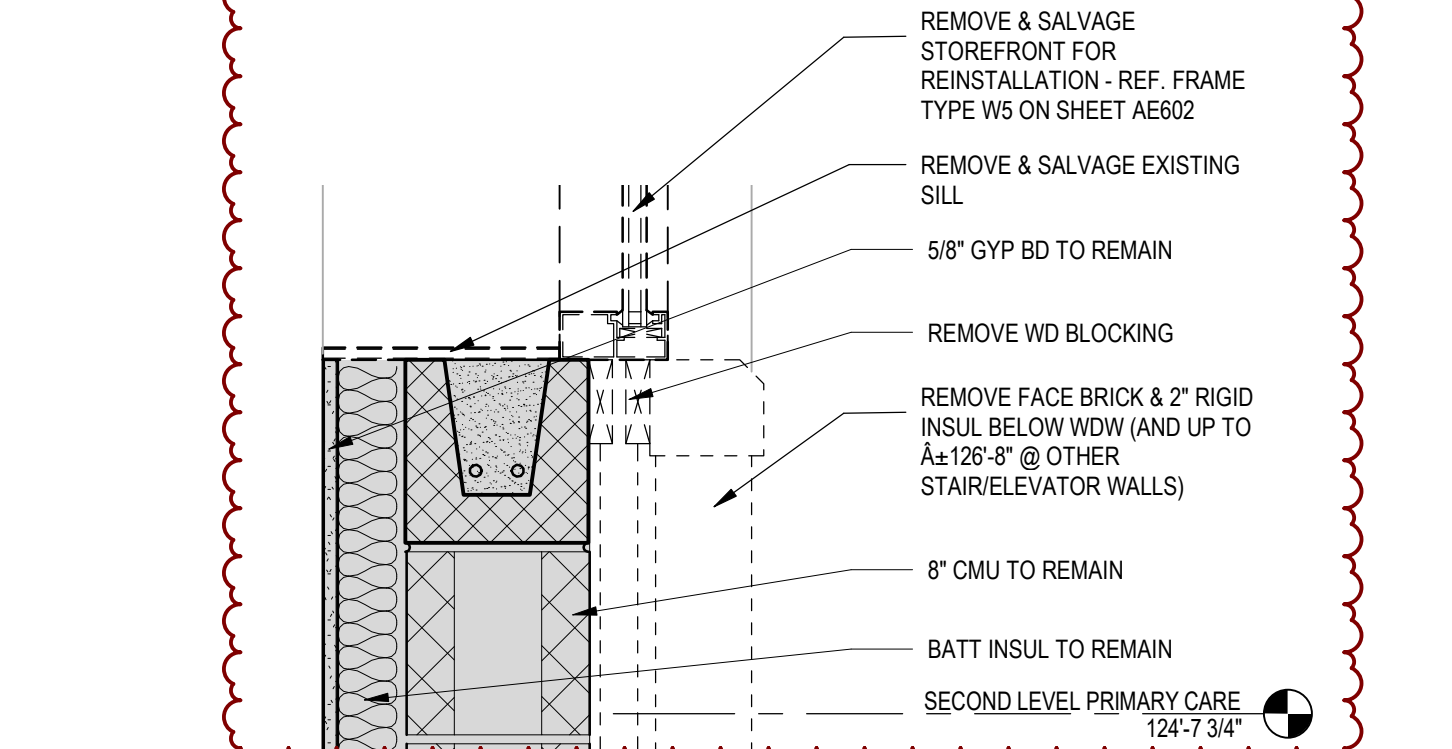
**D5 BEAM/PARAPET DETAIL**  
1 1/2" = 1'-0"



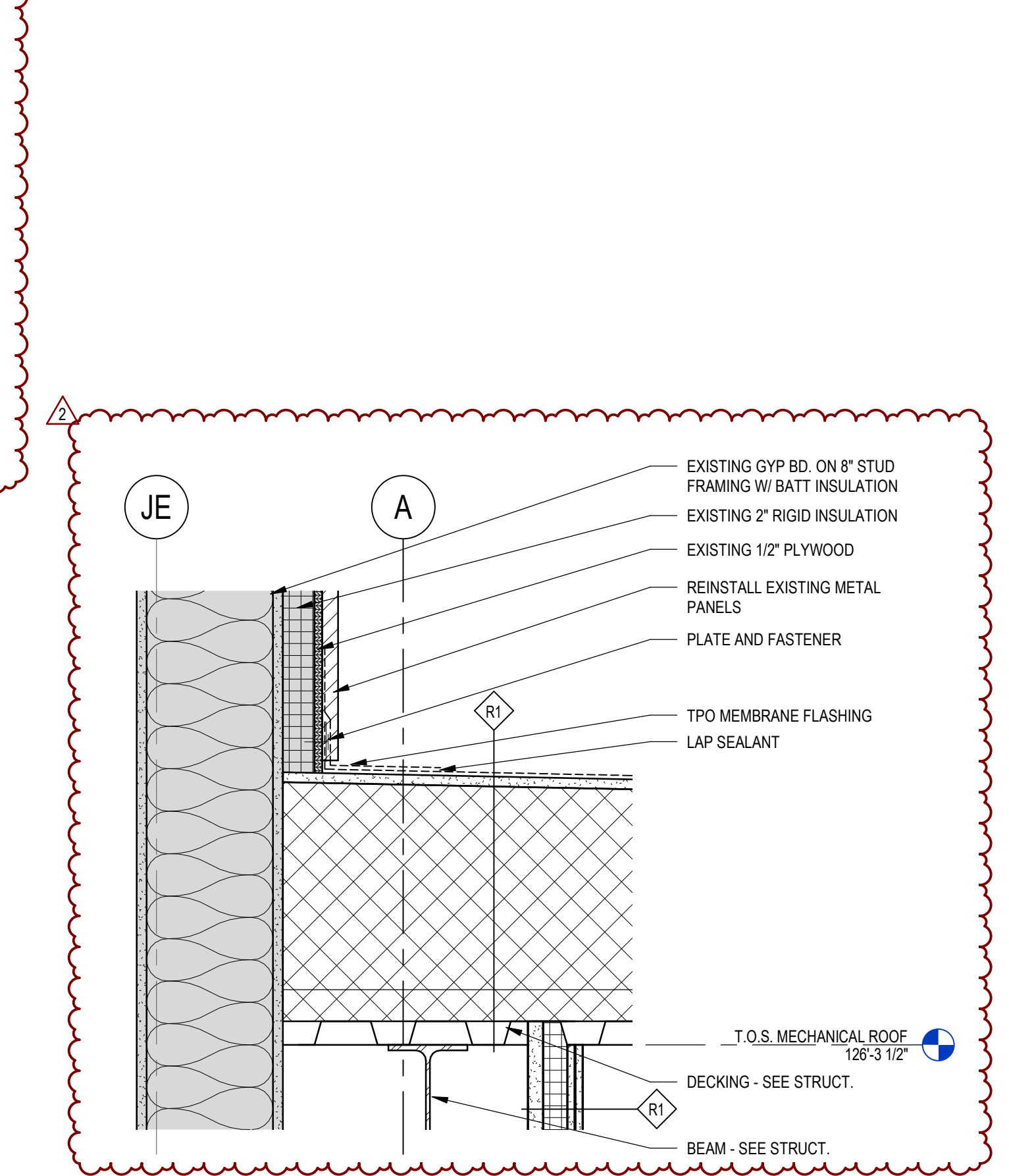
**D7 SECTION DETAIL - MECHANICAL CURB FLASHING**  
1 1/2" = 1'-0"



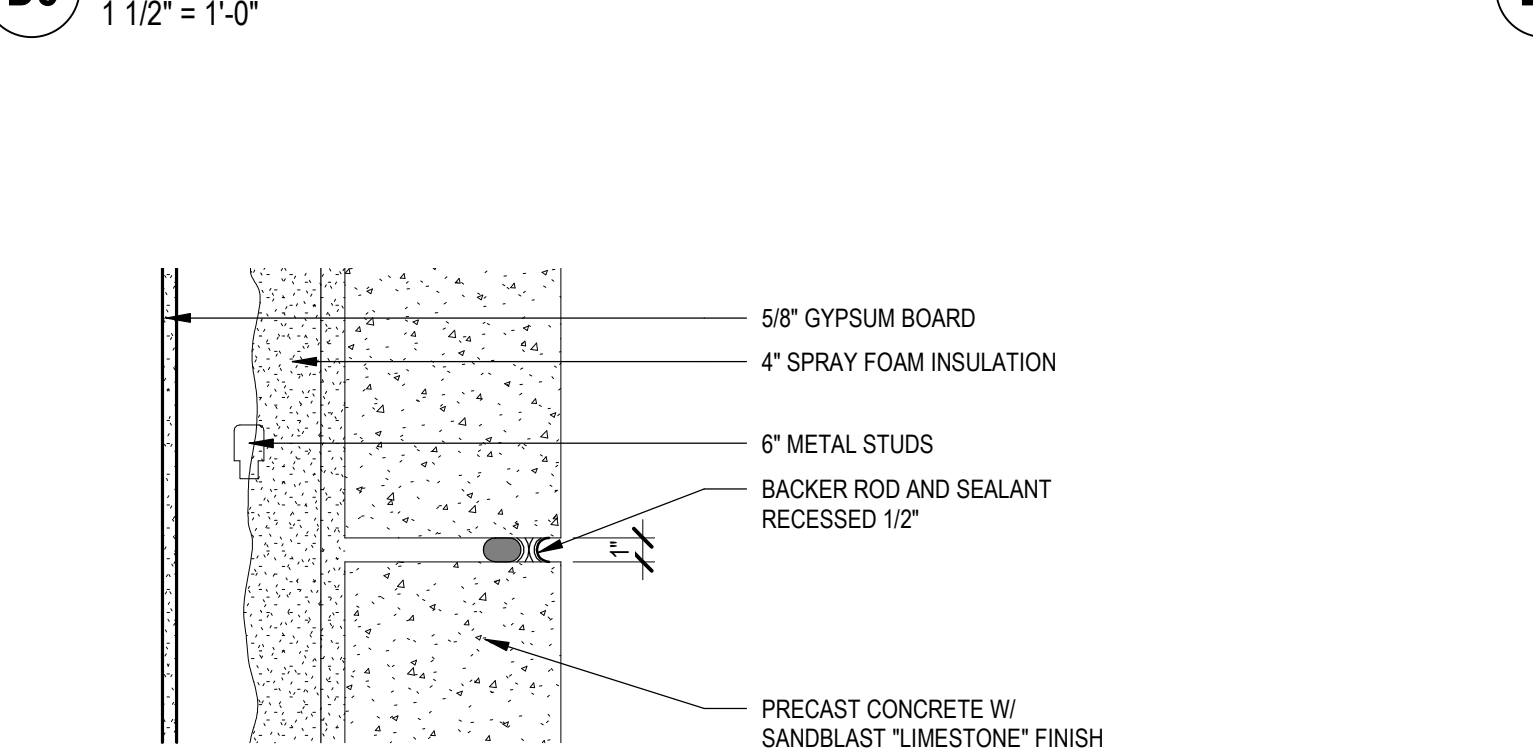
**D9 SECURITY OFFICE SOFFIT DETAIL**  
1 1/2" = 1'-0"



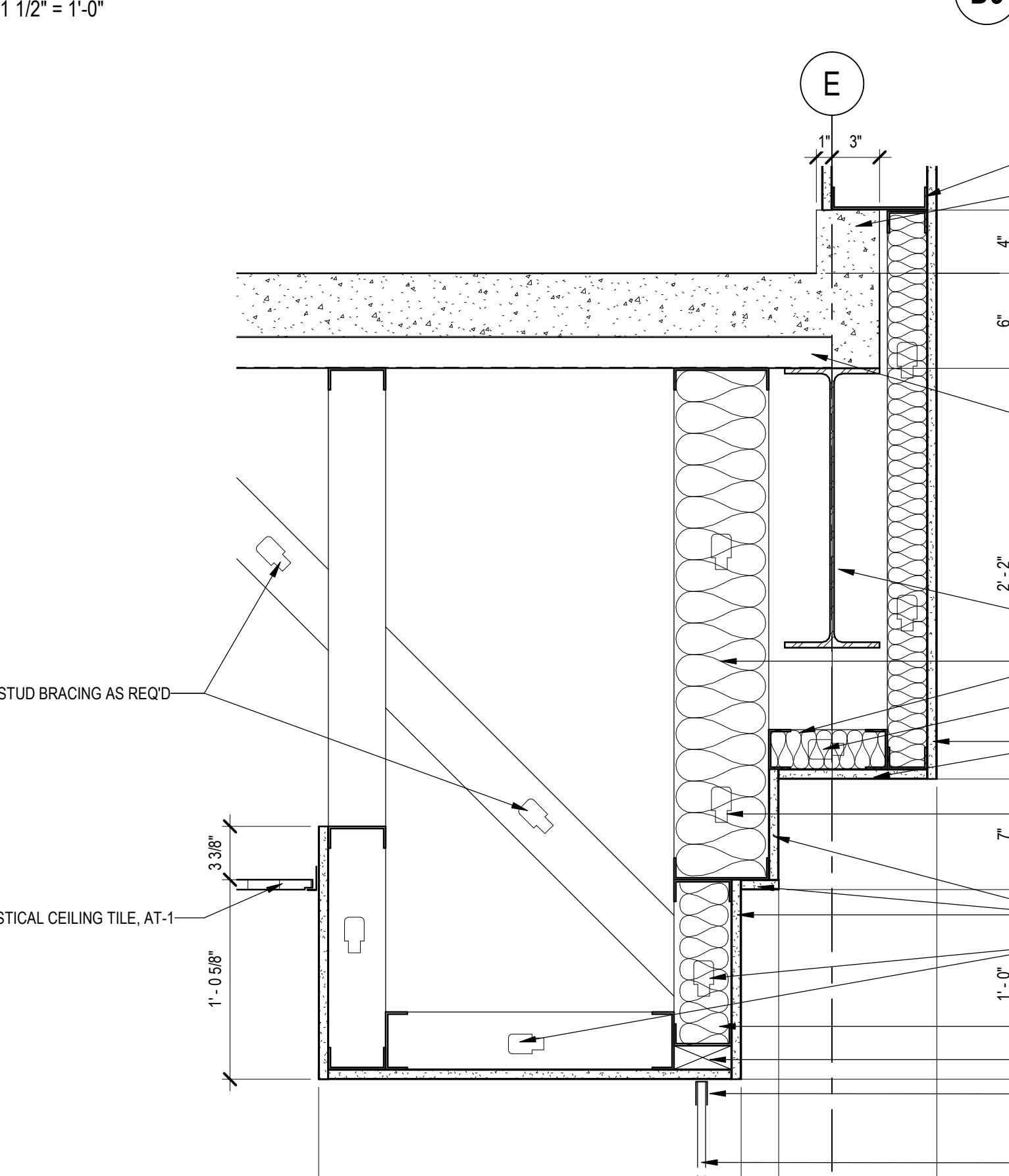
**F1 SECTION DETAIL- 2HR SEPARATION WALL WDW SILL - EXISTING**  
1 1/2" = 1'-0"



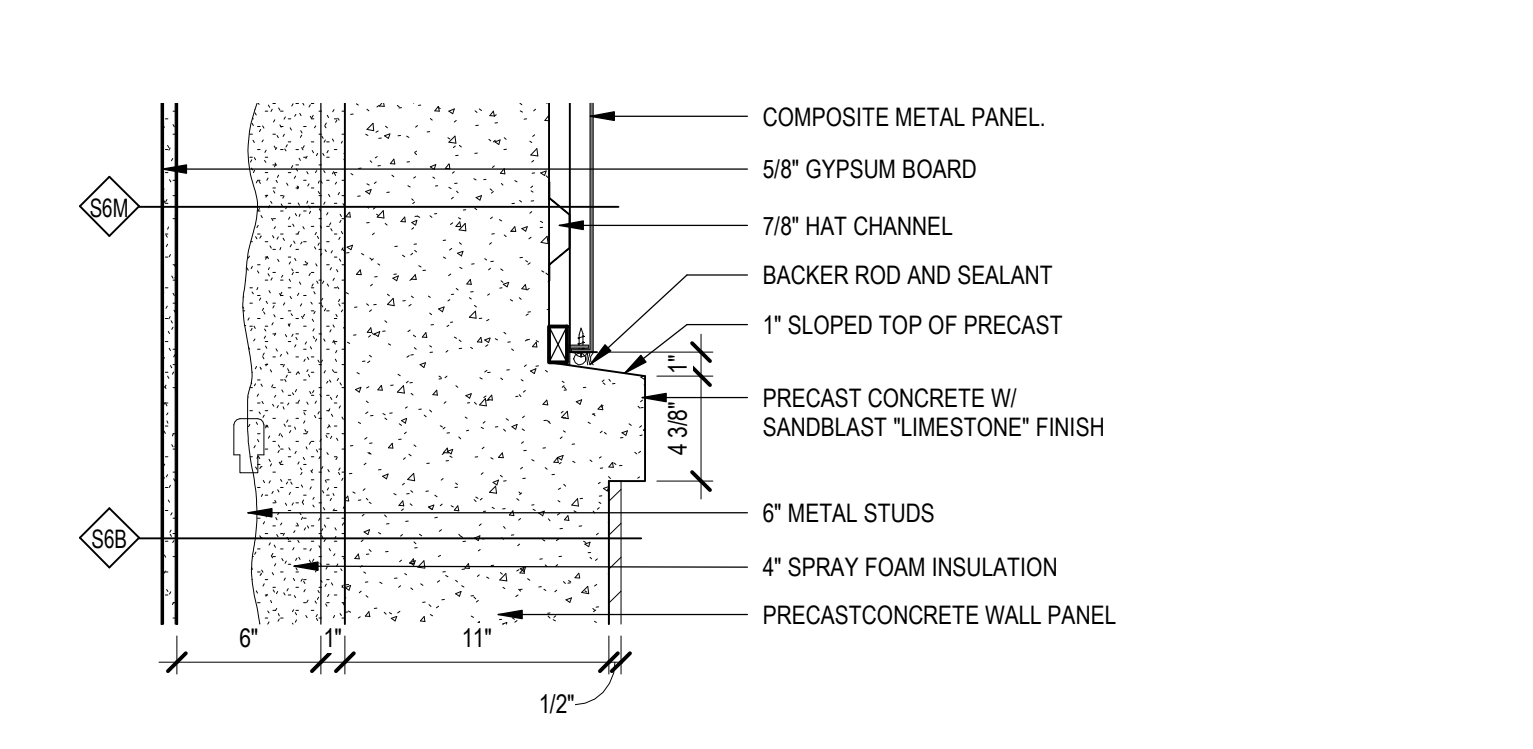
**F3 SECTION DETAIL-2HR SEPARATION WALL-ELEVATOR CORNER**  
1 1/2" = 1'-0"



**E5 TYPICAL PRECAST JOINT @ QUARTZ & LIMESTONE FINISH**  
1 1/2" = 1'-0"



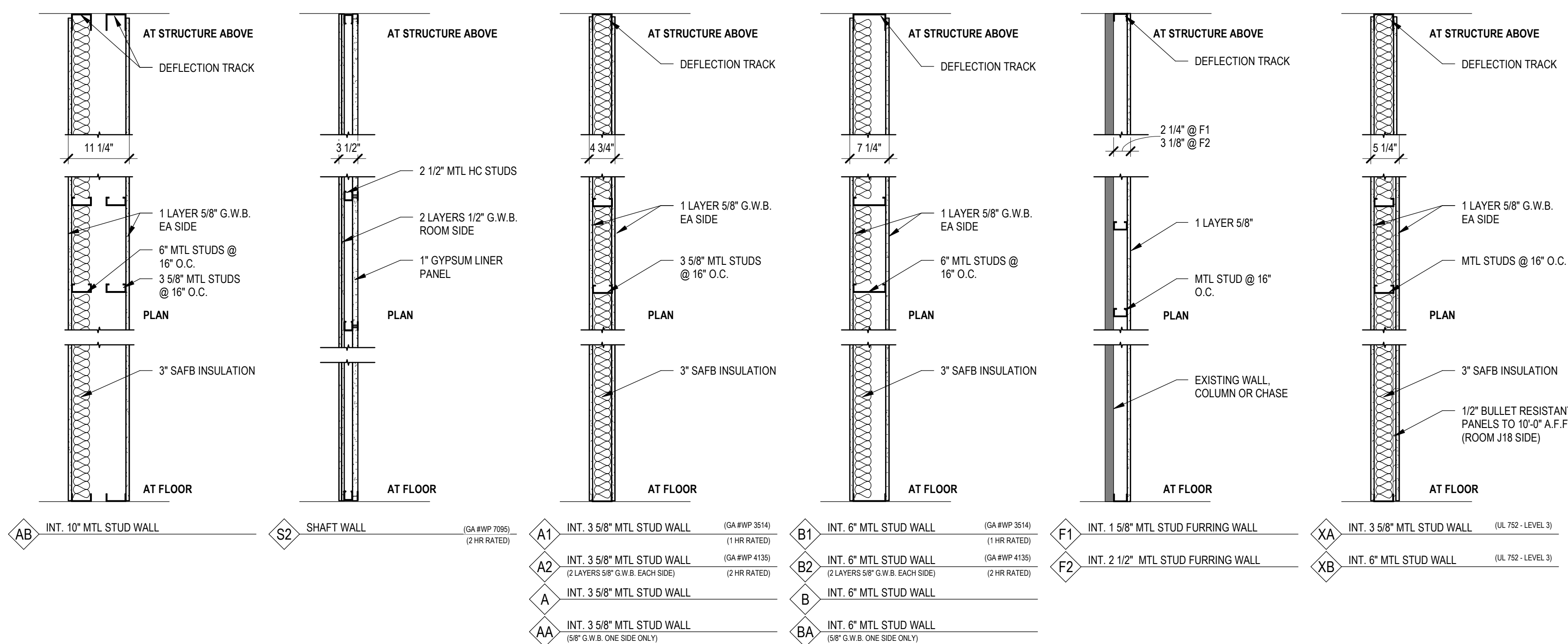
**F7 OFFICE SOFFIT DETAIL**  
1 1/2" = 1'-0"



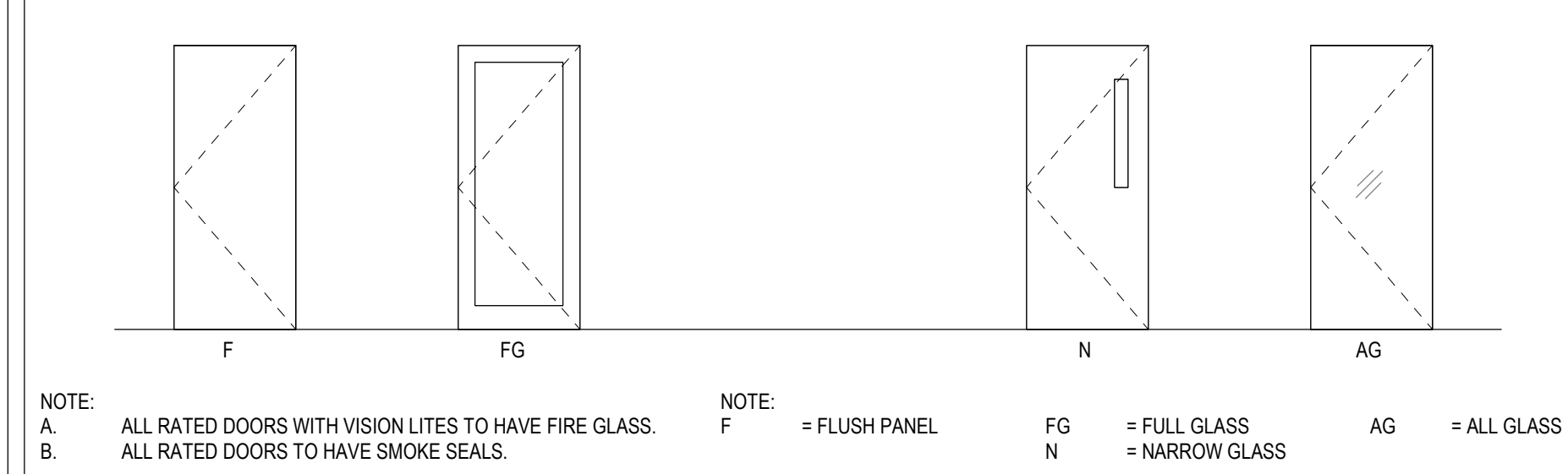
**F5 SECTION DETAIL - COMPOSITE METAL PANEL / SILL**  
1 1/2" = 1'-0"

<b>CONSULTANTS</b> ARCHITECTURAL: <b>BWB</b> STRUCTURAL: <b>ERA</b> MEP: <b>DUNHAM</b> CIVIL: <b>EVS</b> LANDSCAPE: <b>CONFLUENCE</b>		<b>ARCHITECT OF RECORD</b> <b>A/E</b> <b>Stone Group Architects</b> 600 E 7th Street Sioux Falls, SD 57103 605-271-1144		<b>STAMP</b> 		<b>Office of Construction and Facilities Management</b> U.S. Department of Veterans Affairs		Drawing Title <b>DETAILS</b> Approved: _____		Phase _____		Project Title <b>NEW FRONT LOBBY AND PRIMARY CARE ADDITION</b>		Project Number <b>VA #438-480 SGA #201909</b>			
2 <b>ADDENDUM #1</b> 02/12/2024 1 <b>ISSUE SET</b> 06/22/2022		<b>BWB</b> 380 St. Peter St. Suite 600 St. Paul, MN 55102 Phone: 651-223-3701		<b>ERA</b> Erickson Road Associates 2250 University Ave W Suite 423-S St. Paul, MN 55402 Phone: 651-251-1970		<b>DUNHAM</b> Dunham Associates, Inc. 50 South Sixth St Suite 1100 Minneapolis, MN 55402 Phone: 612-645-7550		<b>EVS</b> 10023 Valley View Rd Suite 140 Eden Prairie, MN 55344 Phone: 952-645-0259		<b>CONFLUENCE</b> 524 N Main Ave Suite 201 Sioux Falls, SD 57104 Phone: 605-339-1205		<b>STONE GROUP ARCHITECTS</b>		<b>Office of Construction and Facilities Management</b> U.S. Department of Veterans Affairs		Building Number <b>5</b>	
Revision/Description		Date:		Location <b>SIoux FALLS, SOUTH DAKOTA</b>		Issue Date <b>06/22/2022</b>		Checked <b>BH</b>		Drawn <b>JH / DN</b>		Drawing Number <b>AE502</b>					

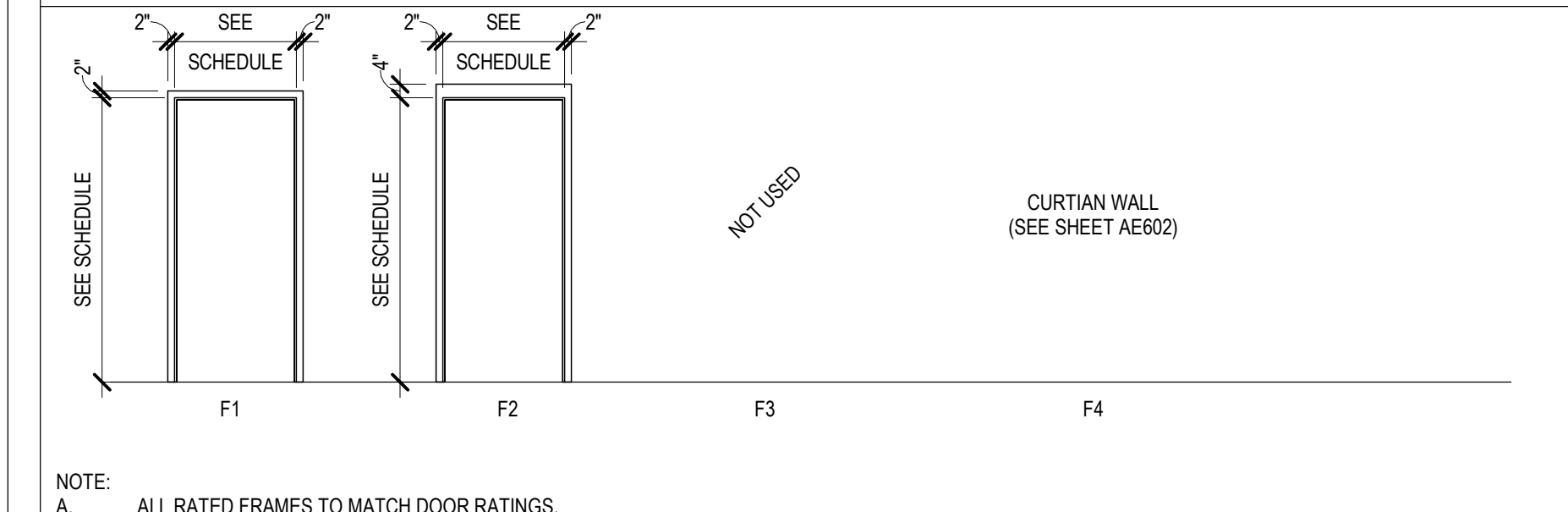
**WALL TYPES**



**DOOR TYPES**



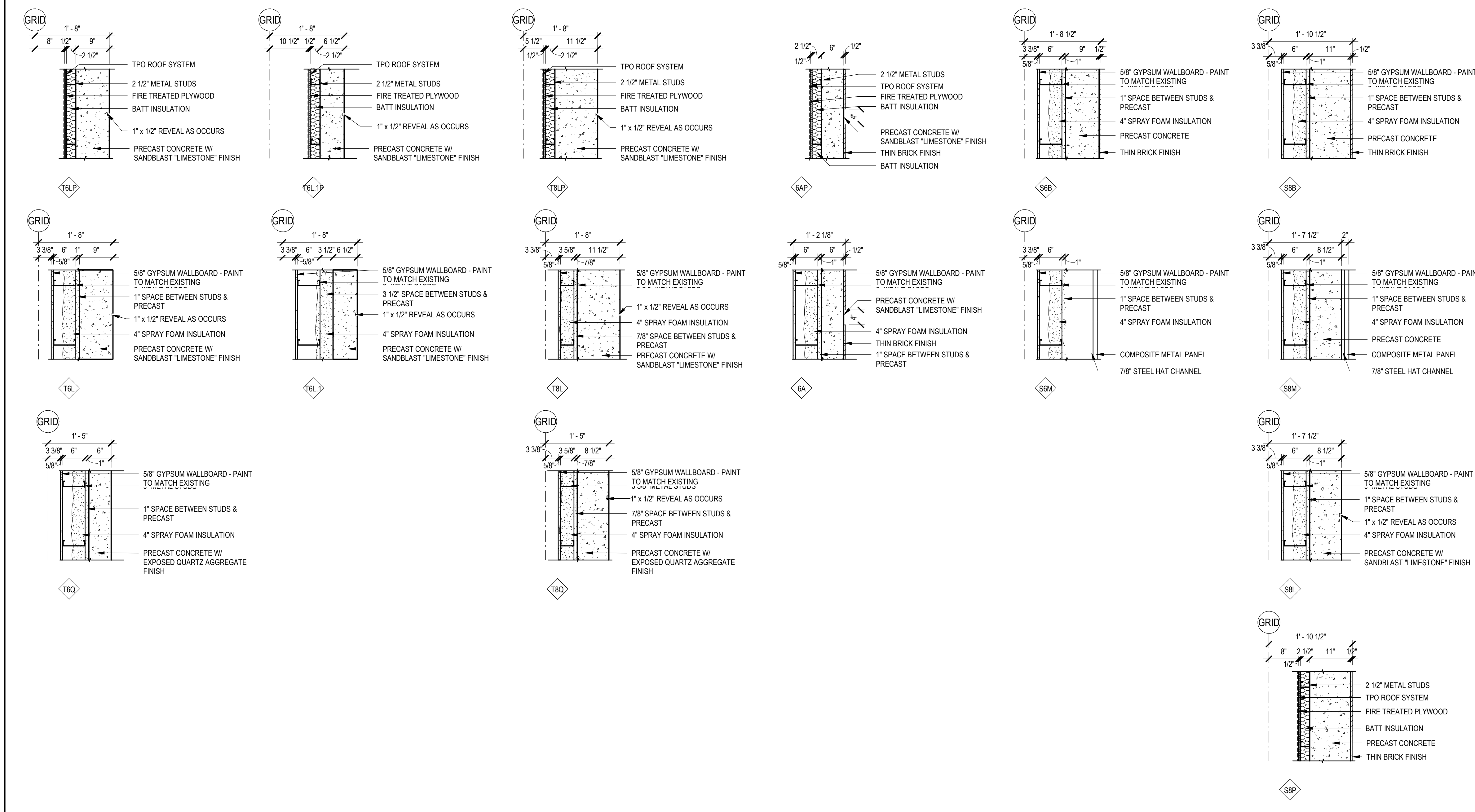
**FRAME TYPES**



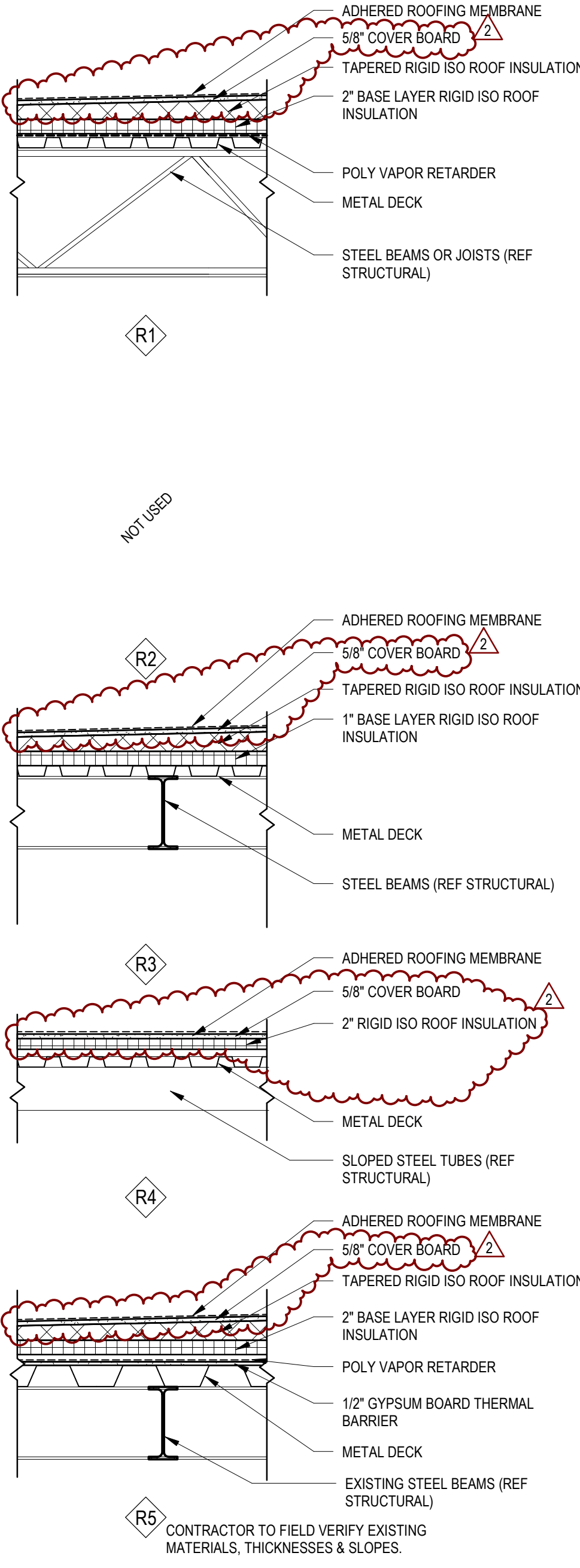
**DOOR SCHEDULE**

DOOR #	DOOR				FRAME				REMARKS		
	WIDTH	HEIGHT	TYPE	MATERIAL	TYPE	MATERIAL	DEPTH	RATING			
189	6'-0"	7'-0"	F	HM	F1	HM	7 1/8"	90 MIN	25		
A01	3'-0"	7'-0"	N	WD	F1	HM	5 3/4"	-	10	MEDIUM STYLE DOOR IN CURTAINWALL FRAME	
B5100	3'-4"	7'-0"	FG	ALUM	F4	ALUM	6"	-	20A	MEDIUM STYLE DOOR IN CURTAINWALL FRAME	
C55A	3'-0"	7'-4"	FG	ALUM	F4	ALUM	6"	-	20	MEDIUM STYLE DOOR IN CURTAINWALL FRAME	
C55B	3'-0"	7'-4"	FG	ALUM	F4	ALUM	6"	-	20	MEDIUM STYLE DOOR IN STOREFRONT FRAME	
C55C	3'-0"	7'-4"	FG	ALUM	F4	ALUM	6"	-	14	MEDIUM STYLE DOOR IN CURTAINWALL FRAME	
C55D	3'-0"	7'-4"	FG	ALUM	F4	ALUM	6"	-	14	MEDIUM STYLE DOOR IN CURTAINWALL FRAME	
F02C	3'-6"	7'-4"	FG	ALUM	F4	ALUM	6"	-	23	MEDIUM STYLE DOOR IN CURTAINWALL FRAME	
F02D	3'-6"	7'-0"	N	WD	F1	HM	7 1/8"	90 MIN	22		
J01B	6'-0"	8'-0"							26	OPENING ONLY	
J01C	3'-6"	7'-4"	FG	ALUM	F4	ALUM	0"	-	22	MEDIUM STYLE DOOR IN CURTAINWALL FRAME	
J01D	3'-0"	7'-0"	N	WD	F1	HM	5 3/4"	-	10		
J01E	3'-0"	7'-0"	N	HM	F2	HM	5 3/4"	-	24		
J01F	9'-0"	8'-0"							None	26	BLAST RESISTANT AUTOMATIC SLIDING DOOR ASSEMBLY - SINGLE SLIDE
J01M	14'-0"	8'-0"							None	26	BLAST RESISTANT AUTOMATIC SLIDING DOOR ASSEMBLY - BI-PARTING
J02	3'-0"	7'-0"	AG	GLASS (SPG)	F4	ALUM CHANNEL	9 1/8"	-	27	ALL GLASS WALL/ENTRANCE SYSTEM	
J03	3'-0"	7'-0"	AG	GLASS (SPG)	F4	ALUM CHANNEL	9 1/8"	-	27	ALL GLASS WALL/ENTRANCE SYSTEM	
J04	3'-0"	7'-0"	AG	GLASS (SPG)	F4	ALUM CHANNEL	9 1/8"	-	27	ALL GLASS WALL/ENTRANCE SYSTEM	
J05	3'-0"	7'-0"	AG	GLASS (SPG)	F4	ALUM CHANNEL	9 1/8"	-	27	ALL GLASS WALL/ENTRANCE SYSTEM	
J06	3'-0"	7'-0"	AG	GLASS (SPG)	F4	ALUM CHANNEL	9 1/8"	-	27	ALL GLASS WALL/ENTRANCE SYSTEM	
J07	3'-0"	7'-0"	AG	GLASS (SPG)	F4	ALUM CHANNEL	9 1/8"	-	27	ALL GLASS WALL/ENTRANCE SYSTEM	
J08	3'-0"	7'-0"	AG	GLASS (SPG)	F4	ALUM CHANNEL	9 1/8"	-	27	ALL GLASS WALL/ENTRANCE SYSTEM	
J09	3'-0"	7'-0"	AG	GLASS (SPG)	F4	ALUM CHANNEL	9 1/8"	-	27	ALL GLASS WALL/ENTRANCE SYSTEM	
J10	3'-0"	7'-0"	AG	GLASS (SPG)	F4	ALUM CHANNEL	9 1/8"	-	27	ALL GLASS WALL/ENTRANCE SYSTEM	
J11	3'-0"	7'-0"	AG	GLASS (SPG)	F4	ALUM CHANNEL	9 1/8"	-	27	ALL GLASS WALL/ENTRANCE SYSTEM	
J12	3'-0"	7'-0"	AG	GLASS (SPG)	F4	ALUM CHANNEL	9 1/8"	-	27	ALL GLASS WALL/ENTRANCE SYSTEM	
J13	3'-0"	7'-0"	AG	GLASS (SPG)	F4	ALUM CHANNEL	9 1/8"	-	27	ALL GLASS WALL/ENTRANCE SYSTEM	
J14	3'-0"	7'-0"	AG	GLASS (SPG)	F4	ALUM CHANNEL	9 1/8"	-	27	ALL GLASS WALL/ENTRANCE SYSTEM	
J15	3'-0"	7'-0"	AG	GLASS (SPG)	F4	ALUM CHANNEL	9 1/8"	-	27	ALL GLASS WALL/ENTRANCE SYSTEM	
J16	3'-0"	7'-0"	AG	GLASS (SPG)	F4	ALUM CHANNEL	9 1/8"	-	27	ALL GLASS WALL/ENTRANCE SYSTEM	
J17	3'-0"	7'-0"	AG	GLASS (SPG)	F4	ALUM CHANNEL	9 1/8"	-	27	ALL GLASS WALL/ENTRANCE SYSTEM	
J18	3'-0"	7'-0"	F	WD	F1	HM	8 1/4"	-	10		
J19A	3'-0"	7'-0"	F	WD	F1	HM	8 1/4"	-	10		
J19B	3'-0"	7'-0"	F	WD	F1	HM	8 1/4"	-	10		
J20	3'-0"	7'-0"	F	WD	F1	HM	5 3/4"	-	21		
J21	3'-0"	7'-0"	F	WD	F1	HM	5 3/4"	-	21		

**EXTERIOR WALL TYPES**



**ROOF TYPES**



**GENERAL DOOR AND WINDOW NOTES:**

- A. PROVIDE GLAZING AS REQUIRED BY NFPA 101.
  - B. VERIFY ALL DOOR AND WINDOW OPENINGS WITH MANUFACTURER.
  - C. PROVIDE ADA APPROVED LEVER TYPE HARDWARE FOR ALL DOORS UNLESS OTHERWISE NOTED (I.O.N.).
  - D. WHERE THRESHOLDS ARE REQUIRED, PROVIDE LOW PROFILE ADA COMPLIANT THRESHOLD.
  - E. COORDINATE DOOR PROTECTION WITH DOOR SUPPLIER.
- HARDWARE SETS:**
1. NON-LOCKING. MAY BE PUSH/PULL, HOSPITAL LATCH, OR LATCHSET.
  2. PRIVACY. MAY BE STANDARD PRIVACY, HOSPITAL PRIVACY (DOUBLE THUMBTURN), KEYED INDICATOR PRIVACY, OR STAFF KEY-ONLY ENTRY INDICATOR PRIVACY.
  3. OFFICE. MAY INCLUDE STANDARD OFFICE WITH THUMBTURN OR ENTRY LOCK WITH THUMBTURN AND DEADLOCK.
  4. CLASSROOM. MAY INCLUDE STANDARD CLASSROOM. DOUBLE-CYLINDER UTILITY FUNCTION (FREE EGRESS ALWAYS AVAILABLE). CLASSROOM HOSPITAL LATCH. UTILITY LATCH BOLT OPERATED BY LEVER FROM EITHER SIDE, EXCEPT WHEN OUTSIDE IS LOCKED BY KEY FROM INSIDE. WHEN OUTSIDE LEVER IS LOCKER LATCH BOLT RETRACTED BY KEY FROM OUTSIDE OR BY OPERATING INSIDE LEVER.
  5. STOREROOM. MAY INCLUDE STANDARD STOREROOM. STOREROOM WITH DEADBOLT, INSTITUTIONAL LOCK (LOCKABLE BOTH SIDES).
  6. STOREROOM. MAY INCLUDE STANDARD STOREROOM. STOREROOM WITH DEADBOLT, INSTITUTIONAL LOCK (LOCKABLE BOTH SIDES). (IPAR)
  7. SPECIAL. COULD INCLUDE ROLL-UP DOORS, WON DOORS, OPERABLE PARTITIONS, SLIDING DOORS, ICU/CCU DOORS, FOLDING DOORS, ETC.
  8. CLASSROOM. MAY INCLUDE STANDARD CLASSROOM. DOUBLE-CYLINDER UTILITY FUNCTION (FREE EGRESS ALWAYS AVAILABLE). CLASSROOM HOSPITAL LATCH. UTILITY LATCH BOLT OPERATED BY LEVER FROM EITHER SIDE, EXCEPT WHEN OUTSIDE IS LOCKED BY KEY FROM INSIDE. WHEN OUTSIDE LEVER IS LOCKER LATCH BOLT RETRACTED BY KEY FROM OUTSIDE OR BY OPERATING INSIDE LEVER. (IPAR)
  9. STOREROOM. MAY INCLUDE STANDARD STOREROOM. STOREROOM WITH DEADBOLT, INSTITUTIONAL LOCK (LOCKABLE BOTH SIDES). (IPAR)
  10. STOREROOM. MAY INCLUDE STANDARD STOREROOM OR STOREROOM WITH DEADLOCK.
  11. PANIC. MAY INCLUDE EXIT ONLY. PULL OR LEVER.
  - E2. SPECIAL. MAY INCLUDE ROLL-UP DOORS, SLIDING DOORS.
  - E10. SPECIAL. MAY INCLUDE SLIDING DOORS. (IPAR)

Revision#	Description	Date
2	ADDENDUM #1	02/12/2024
1	ISSUE SET	06/22/2022

**CONSULTANTS**

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STRUCTURAL: **ERA** Erickson Road Associates, 2250 University Ave W, Suite 423-S, St. Paul, MN 55402, Phone: 651-465-7570

MEP: **DUNHAM** Dunham Associates, Inc., 50 South Sixth St, Suite 1100, Minneapolis, MN 55402, Phone: 612-465-7550

CIVIL: **EVS** 10023 Valley View Rd, Suite 140, Eden Prairie, MN 55344, Phone: 952-846-0239

LANDSCAPE: **CONFLUENCE** Suite 201, Sioux Falls, SD 57104, Phone: 605-339-1265

**ARCHITECT OF RECORD**

**A/E** Stone Group Architects, 600 E 7th Street, Sioux Falls, SD 57103, 605-271-1144

**STAMP** REGISTERED ARCHITECT, SOUTH DAKOTA, 02-22-2022

**Office of Construction and Facilities Management**

U.S. Department of Veterans Affairs

Drawing Title: **SCHEDULES**

Phase: \_\_\_\_\_

Approved: \_\_\_\_\_

Project Title: **NEW FRONT LOBBY AND PRIMARY CARE ADDITION**

Location: **SIoux FALLS, SOUTH DAKOTA**

Issue Date: 06/22/2022

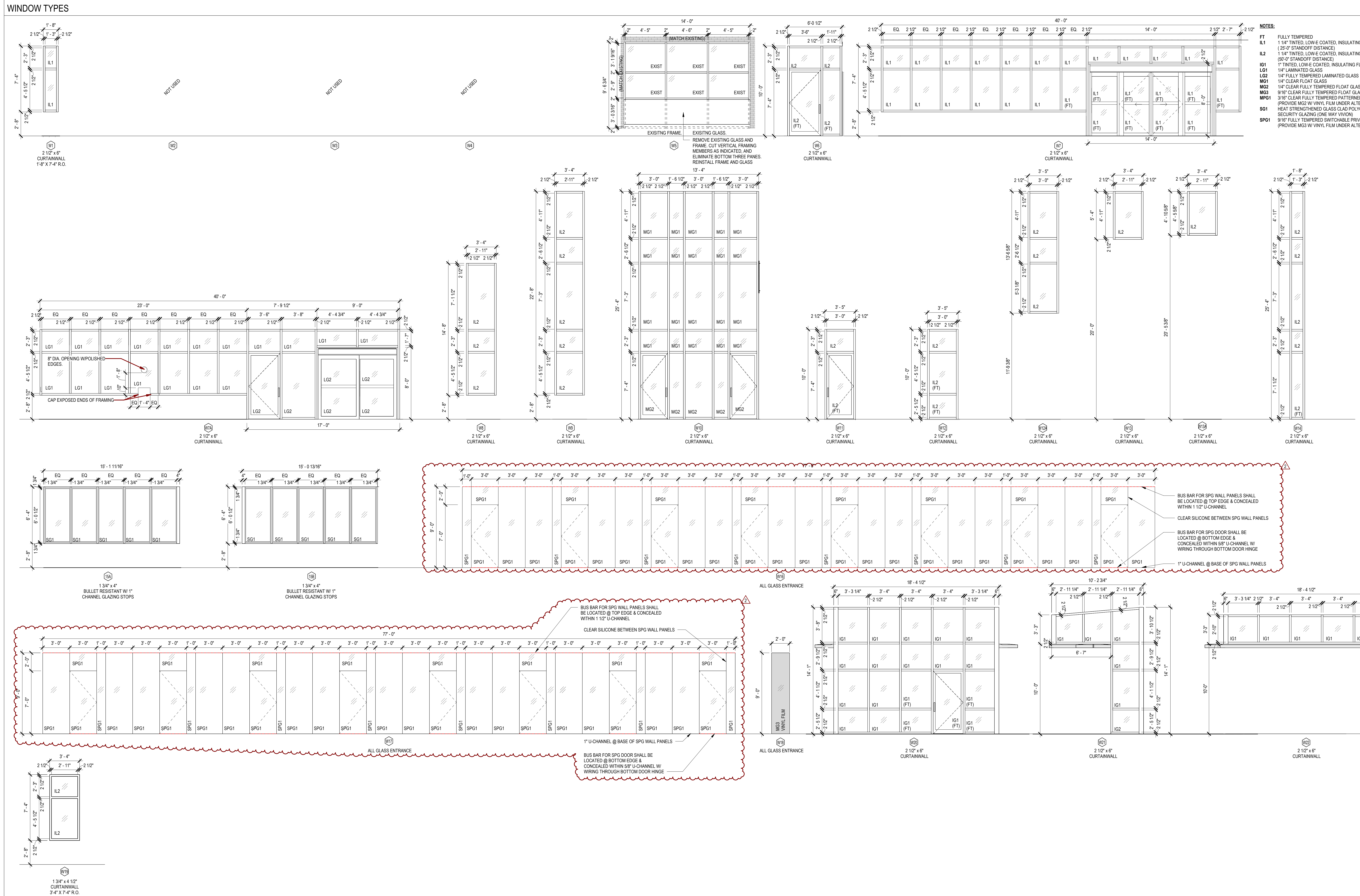
Checked: BH

Drawn: JH / DN

Project Number: VA #438-480, SGA #201909

Building Number: 5

Drawing Number: AE01



- NOTES:**
- FT FULLY TEMPERED
  - IL1 1 1/4" TINTED, LOW-E COATED, INSULATING LAMINATED GLASS (20'-0" STANDOFF DISTANCE)
  - IL2 1 1/4" TINTED, LOW-E COATED, INSULATING LAMINATED GLASS (50'-0" STANDOFF DISTANCE)
  - IG1 1" TINTED, LOW-E COATED, INSULATING GLASS
  - LG1 1/4" LAMINATED GLASS
  - LG2 1/4" FULLY TEMPERED LAMINATED GLASS
  - MG1 1/4" CLEAR FLOAT GLASS
  - MG2 1/4" CLEAR FULLY TEMPERED FLOAT GLASS
  - MG3 9/16" CLEAR FULLY TEMPERED FLOAT GLASS
  - MPG1 3/16" CLEAR FULLY TEMPERED PATTERNED FLOAT GLASS (PROVIDE MG2 W/ VINYL FILM UNDER ALTERNATIVE NO. 8)
  - SG1 HEAT STRENGTHENED GLASS CLAD POLYCARBONATE SECURITY GLAZING (ONE WAY VISION)
  - SPG1 9/16" FULLY TEMPERED SWITCHABLE PRIVACY GLASS (PROVIDE MG3 W/ VINYL FILM UNDER ALTERNATIVE NO. 13)

three inches = one foot  
 one and one half inches = one foot  
 one inch = one foot  
 three quarters inch = one foot  
 one half inch = one foot  
 three eighths inch = one foot  
 one eighth inch = one foot  
 one eighth inch = one foot

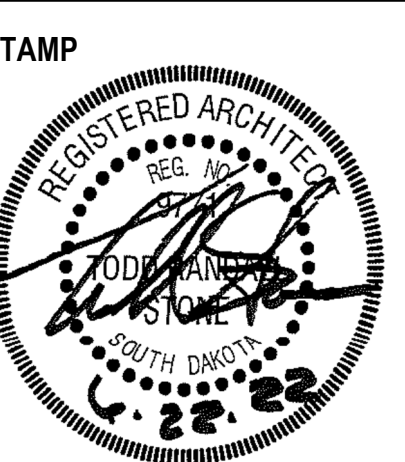
Revision	Description	Date
2	ADDENDUM #1	02/11/2024
1	ISSUE SET	06/22/2022

**CONSULTANTS**

<b>ARCHITECTURAL:</b> BWB R	<b>STRUCTURAL:</b> ERA	<b>MEP:</b> DUNHAM	<b>CIVIL:</b> EVS	<b>LANDSCAPE:</b> CONFLUENCE
380 St. Peter St Suite 600 St. Paul, MN 55102 Phone: 651-223-3701	Ericksen Road Associates 2250 University Ave W Suite 423-S St. Paul, MN 55402 Phone: 651-251-1970	Dunham Associates, Inc. 50 South Sixth St Suite 1100 Minneapolis, MN 55402 Phone: 612-465-7550	EVS 10023 Valley View Rd Suite 140 Eden Prairie, MN 55344 Phone: 952-646-0239	CONFLUENCE 224 N Main Ave Suite 201 Sioux Falls, SD 57104 Phone: 605-339-1205

**ARCHITECT OF RECORD**

A/E/C  
Stone Group Architects  
600 E 7th Street  
Sioux Falls, SD 57103  
605-271-1144



Office of  
Construction  
and Facilities  
Management

VA U.S. Department  
of Veterans Affairs

Drawing Title  
**WINDOW TYPES**

Approved:

Phase

Project Title  
**NEW FRONT LOBBY AND  
PRIMARY CARE ADDITION**

Location  
**SIOUX FALLS, SOUTH DAKOTA**

Issue Date  
06/22/2022

Checked  
BH

Drawn  
JH/DN

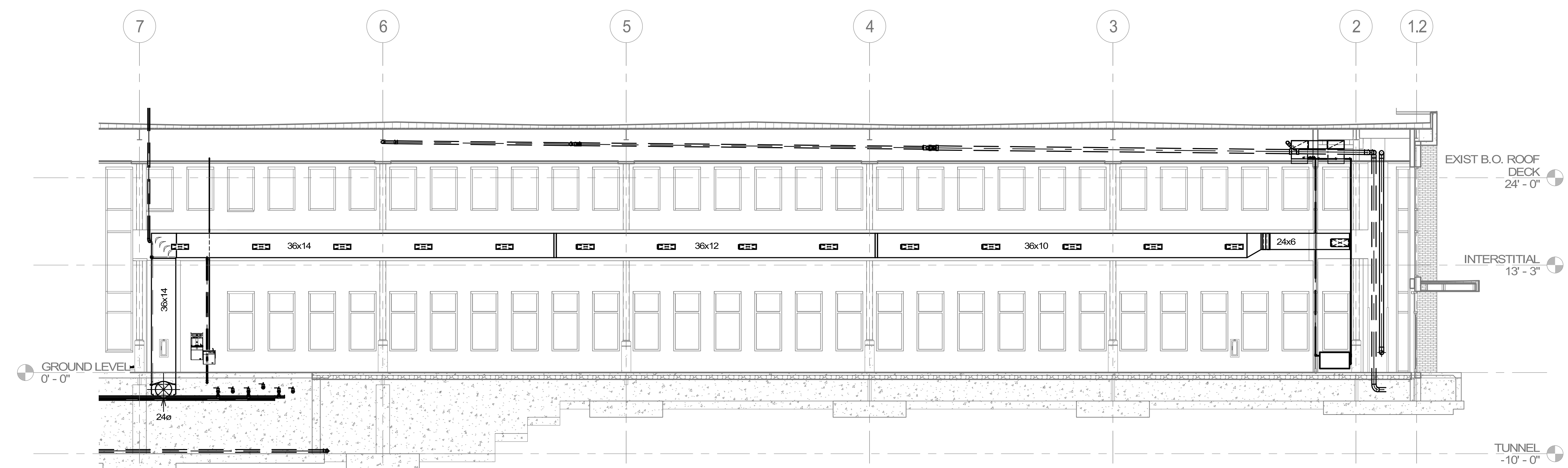
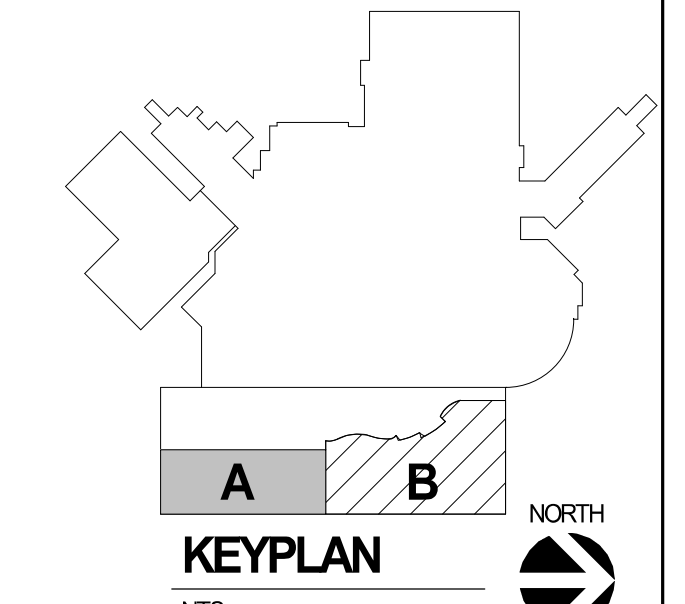
Project Number  
VA #438-480  
SGA #201909

Building Number  
5

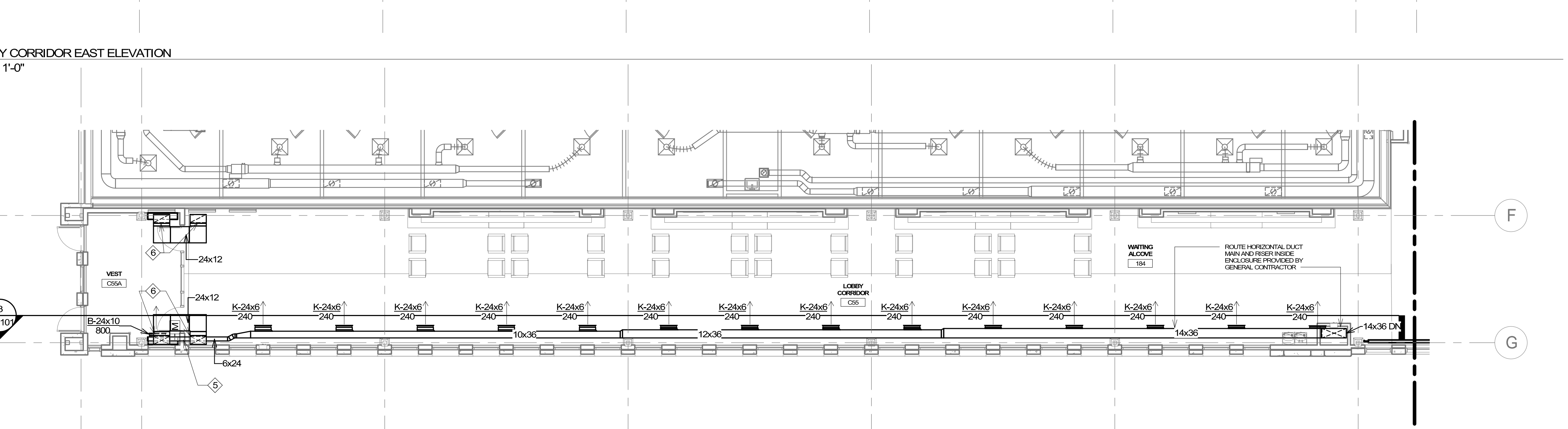
Drawing Number  
AE02

- GENERAL NOTES:**
- MECHANICAL CONTRACTOR SHALL REFER TO THE VA MASTER SPECIFICATION MANUAL EDITED FOR THIS PROJECT ALONG WITH ANY APPLICABLE STANDARDS WITHIN THE VA DESIGN GUIDE. ALL REQUIREMENTS OF THOSE MANUALS SHALL BE MAINTAINED IN ADDITION TO ALL NOTES AND DESCRIPTIONS INDICATED WITHIN THESE DRAWINGS. ANY CONFLICTS BETWEEN THOSE DOCUMENTS SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEER FOR INTERPRETATION.
  - MECHANICAL CONTRACTOR WILL BE RESPONSIBLE TO REVIEW ACCESSIBILITY TO AREAS OUTSIDE THE CONSTRUCTION LIMITS TO DETERMINE APPROXIMATE AMOUNT OF OVERTIME REQUIRED TO PERFORM ALL MECHANICAL WORK INDICATED. COORDINATION OF SCHEDULES WITH ADJACENT DEPARTMENTS AND CLEANING OF ALL DEBRIS AFTER EACH WORK SHIFT SHOULD BE ASSUMED IN THE BASE BID.
  - ANY MAJOR VENTILATION OUTAGES INDICATED ON THESE DRAWINGS SHALL BE SCHEDULED TO BE PERFORMED AFTER NORMAL BUSINESS HOURS OR DURING WEEKEND PERIODS TO MINIMIZE DISRUPTION. VA HOSPITAL FACILITIES WILL REQUIRE A MINIMUM OF TWO(2) WEEKS NOTICE PRIOR TO ANY SUCH OUTAGE AFFECTING MORE THAN ONE ADJACENT AREA.
  - WHERE MECHANICAL SYSTEMS TO REMAIN ARE DAMAGED OR DISTURBED, DURING THE COURSE OF CONSTRUCTION THE CONTRACTOR WILL BE RESPONSIBLE TO REMOVE DAMAGED PORTIONS AND INSTALL NEW PRODUCTS OF EQUAL QUALITY AND FUNCTIONALITY.
  - ALL NEW FIRE, SMOKE AND COMBINATION FIRE/SMOKE DAMPERS INSTALLED SHALL BE INSTALLED TO ALLOW FOR SERVICE OF THE FUSIBLE LINK ACTUATOR PER FACILITY STANDARDS. ANY CONFLICTS WHICH WILL PREVENT ACCESS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND ENGINEER OF RECORD.
  - COORDINATE ALL ROUTING OF DUCT/PIPING WITH ALL OTHER TRADES TO ENSURE ADEQUATE CLEARANCES FOR ELECTRICAL CONDUIT, HVAC DUCTWORK & PIPING, STRUCTURAL SUPPORTS, ETC. ANY UNAVOIDABLE CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER OF RECORD. PROVIDE ALL OFFSETS & TRANSITIONS AS REQUIRED FOR A CLEAN INSTALLATION.
  - THE EXACT LOCATION OF EQUIPMENT ROUGHINS SHALL BE VERIFIED WITH THE STAMPED APPROVED SHOP DRAWINGS PRIOR TO ANY FIELD INSTALLATION.
  - ALL CORE DRILLING OR ANY ACTIVITIES CAUSING EXTREME VIBRATION OR NOISE SHALL BE COORDINATED TO BE PERFORMED AFTER BUSINESS HOURS TO NOT AFFECT CRITICAL HOSPITAL FUNCTIONS IN ADJACENT AREAS, COORDINATE WITH VA REPRESENTATIVE AS REQUIRED.
  - SUPPORT ALL PIPING DIRECTLY TO STRUCTURE. DO NOT SUPPORT ANY PIPING FROM DUCTWORK, CONDUIT OR OTHER PIPING ENCOUNTERED.
  - ALL EXISTING RETURN/EXHAUST DUCTWORK NOT TEMPORARILY CAPPED SHALL BE PROTECTED WITH REMOVABLE FILTER MEDIA TO PROTECT EXISTING DUCT SYSTEMS FROM CONSTRUCTION DEBRIS. ALL NEW DUCTWORK SHALL BE PROTECTED AS REQUIRED AND CLEANED PRIOR TO START-UP. IF CONSTRUCTION DEBRIS IS FOUND INSIDE UNPROTECTED DUCTWORK THAN DUCT CLEANING OF THE ENTIRE SYSTEM SHALL BE PERFORMED AT THE CONTRACTOR'S EXPENSE.
  - THE MECHANICAL CONTRACTOR WILL BE RESPONSIBLE TO MAINTAIN EACH PROJECT SPACE IN A NEGATIVE PRESSURIZATION AND PROVIDE HEPA FILTRATION UNITS AS REQUIRED BY INFECTION CONTROL. IF NECESSARY CONSULT WITH VA OR ENGINEER OF RECORD FOR SUGGESTED METHODS THAT MAY BE UTILIZED TO ELIMINATE CONTAMINATED AIR TO OUTSIDE. VISUAL PRESSURIZATION INDICATORS SHALL BE PROVIDED AT EACH ENTRANCE TO THE CONSTRUCTION ZONE AND MONITORED DAILY TO INSURE A CONSTANT NEGATIVE PRESSURE IS MAINTAINED THROUGHOUT EACH PHASE. COORDINATE PRESSURIZATION PLANNING WITH VA FACILITIES AND INFECTION CONTROL REPRESENTATIVE PRIOR TO EACH CONSTRUCTION PHASE.
  - MECHANICAL CONTRACTOR SHALL REVIEW ARCHITECTURAL CEILING PLANS FOR LOCATIONS OF GYPSUM BOARD. DO NOT INSTALL VALVES, VAV BOXES, SENSOR, OR DAMPERS ABOVE GYPSUM BOARD CEILINGS.
  - ALL WORK OUTSIDE THE PROTECTED PROJECT BOUNDARIES ABOVE EXISTING CEILING SHALL BE COMPLETED WITH CEILINGS REPLACED IN THE SAME DAY UNLESS FULLY COORDINATED THROUGH INFECTION CONTROL CLEAN AREA TO ORIGINAL CONDITION ON COMPLETION.
  - FLUTTER STRIPS OR AIR PRESSURE GAUGES SHALL BE PROVIDED AT THE ENTRANCES TO EACH CONSTRUCTION AREA. ALL CONTRACTED WORKERS SHALL BE TRAINED TO VISUALLY MONITOR THESE DEVICES FOR ADEQUATE NEGATIVE PRESSURIZATION AS THEY ENTER/EXIT THE CONSTRUCTION AREA. DAILY LOGS SHALL BE KEPT BY THE MECHANICAL CONTRACTOR TO INSURE CONSTANT PRESSURIZATION HAS BEEN MAINTAINED.
  - CONTRACTOR SHALL MAINTAIN ACCURATE RECORD DRAWINGS SHOWING ANY DISCREPANCIES WITH EXISTING PIPING INDICATED OR REVISIONS TO THE BID DOCUMENT LAYOUTS. ALL CHANGES WILL BE UPDATED WITHIN THE FINAL RECORD DRAWING SET.

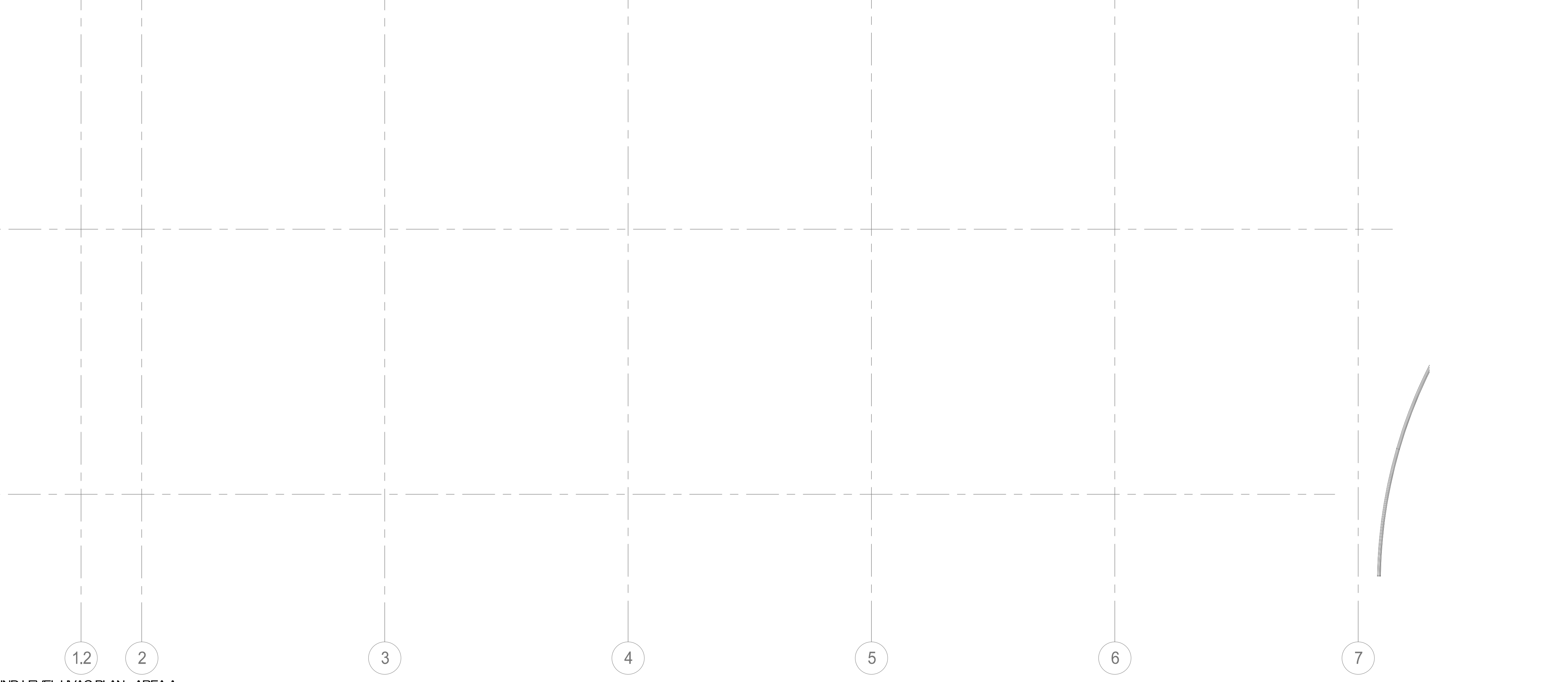
- KEY NOTES:**
- INSTALL SPLIT SYSTEM CONDENSING UNIT ON EITHER A SMALL CONCRETE PAD, OR PROVIDE A STEEL SUPPORT RAIL CANTILEVERED FROM THE BUS SHELTER FOUNDATION TO ELEVATE CONDENSING UNIT OFF ABOVE GROUND. INSTALL REFRIGERANT LINE SETS AS REQUIRED AND CORE DRILL HOLE PENETRATIONS FOR ROUTING. SEALING AS REQUIRED ON COMPLETION TO BE WEATHER TIGHT.
  - MOUNT SPLIT SYSTEM EVAPORATOR COOLING COIL FAN ON WALL INDICATED USING MANUFACTURER SUPPLIED HARDWARE AND BRACKETS. CONFIRM ELEVATION WITH ARCHITECT FOR MOUNTING HEIGHT AND INCLUDE ALL POWER CONNECTIONS AND CONDENSATE DRAIN DISCHARGE OUT THROUGH EXTERIOR WALL TO SPILL OUT JUST ABOVE GRADE. NOTE THAT THIS UNIT SHALL BE PROVIDED WITH INTERNAL RETURN AIR TEMPERATURE SENSOR AND STAND ALONE CONTROL PACKAGE. VA FACILITIES WILL PROGRAM A 7-DAY SCHEDULE WITHIN PACKAGED CONTROLLER BUT IT SHALL NOT REQUIRE INTEGRATION INTO BUILDING AUTOMATION SYSTEM.
  - MOUNT INFRARED HEATER AS HIGH AS POSSIBLE WITHIN BUS SHELTER. ADJUST REFLECTOR TO PROVIDE FULL COVERAGE OF ENTIRE INTERIOR SPACE. INCLUDE CONTROLLER COMPLETE WITH OUTDOOR AIR TEMPERATURE SENSOR FOR CUT-OUT OF OPERATION. NOTE THIS WILL BE A STAND-ALONE CONTROL NOT TIED INTO BUILDING AUTOMATION. REFER TO ELECTRICAL PLANS FOR POWER CONNECTION TO THIS UNIT.
  - ALTERNATE SKYFACTORY LIGHTING SYSTEM IN THIS AREA. COORDINATE CEILING ACCESS TO MECHANICAL EQUIPMENT IF ALTERNATE IS ACCEPTED.
  - PROVIDE A MOTORIZED DAMPER INTEGRATED INTO THE BUILDING AUTOMATION SYSTEM WITH THE FOLLOWING CONTROL SEQUENCE. UPON CALL FOR COOLING (INITIAL SETPOINT AT 78 DEGREES), FROM TEMPERATURE SENSOR MOUNTED AT MID-POINT IN VESTIBULE, MODULATE THE DAMPER OPEN TO A SET POSITION TO ACHIEVE 800 CFM TO DOWNSTREAM SUPPLY REGISTER (BALANCING CONTRACTOR TO ASSIST WITH DAMPER POSITION). ONCE COOLING SETPOINT IS SATISFIED, MINUS A 4 DEGREE DEADBAND (74 DEGREES), THEN MOTORIZED DAMPER SHALL FULLY CLOSE. NOTE THAT BALANCING TO AIR FLOWS INDICATED FROM UPSTREAM LINEAR DIFFUSERS SHALL BE DONE WITH THIS MOTORIZED DAMPER IN A CLOSED POSITION. ACCESS PANEL FOR MOTORIZED DAMPER PROVIDED BY GENERAL CONTRACTOR.
  - PROVIDE PAIR OF 24"x12" TYPE 'C' GRILLES FOR TRANSFERRING AIR BETWEEN VESTIBULE AND ADJACENT CORRIDOR. GRILLES SHALL BE FACTORY PRIMED TO BE FIELD PAINTED TO MATCH EXISTING SOFFIT COLOR. SURFACE MOUNT THESE GRILLES WITHIN SOFFIT AND CONNECT WITH FULL SIZE 24"x12" DUCT. TYPICAL OF 2 LOCATIONS.



2 GROUND LEVEL HVAC PLAN - BUS STOP  
1/8" = 1'-0"

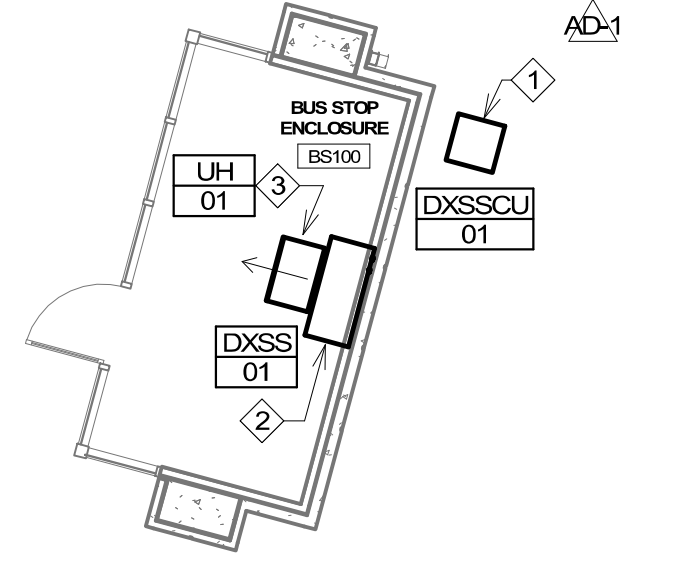


3 LOBBY CORRIDOR EAST ELEVATION  
1/8" = 1'-0"



1 GROUND LEVEL HVAC PLAN - AREA A  
1/8" = 1'-0"

UNDER ACCEPTANCE OF DEDUCT ALT. #7, DELETE ALL EQUIPMENT SHOWN ON THIS DETAIL INCLUDING UH-01, DXSS-01 AND DXSSCU-01. ALL WORK ASSOCIATED WITH KEY NOTES #1, #2, AND #3 WILL ALSO BE REMOVED FROM SCOPE OF PROJECT UNDER DEDUCT.



**CONSULTANTS**

<b>ARCHITECTURAL:</b> BWB BWR	<b>STRUCTURAL:</b> ERR ERICKSON ROAD ASSOCIATES	<b>MEP:</b> DUNHAM DUNHAM ASSOCIATES, INC.	<b>CIVIL:</b> EVS EVANS & SONS	<b>LANDSCAPE:</b> CONFLUENCE CONFLUENCE
BWR 380 St. Peter St Suite 600 St. Paul, MN 55102 Phone: 651-222-3701	ERICKSON ROAD ASSOCIATES 2320 University Ave W Suite 423-S St. Paul, MN 55402 Phone: 651-251-7970	DUNHAM ASSOCIATES, INC. 50 South Sixth St Suite 1100 Minneapolis, MN 55402 Phone: 612-646-7590 0421959-002-00	EVS 10225 Valley View Rd Suite 140 Eden Prairie, MN 55434 Phone: 952-946-6269	CONFLUENCE 634 N Main Ave Suite 201 Sioux Falls, SD 57104 Phone: 605-339-1215

**ARCHITECT OF RECORD**

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600 E 7th Street  
Sioux Falls, SD 57103  
605-271-1144

**STAMP**

14844  
JASON R. GOTTWALT  
REGISTERED PROFESSIONAL ENGINEER  
SOUTH DAKOTA

**Office of Construction and Facilities Management**

VA U.S. Department of Veterans Affairs

**Drawing Title**

GROUND LEVEL HVAC PLAN - AREA A  
Approved:

**Phase**

CONSTRUCTION DOCUMENTS

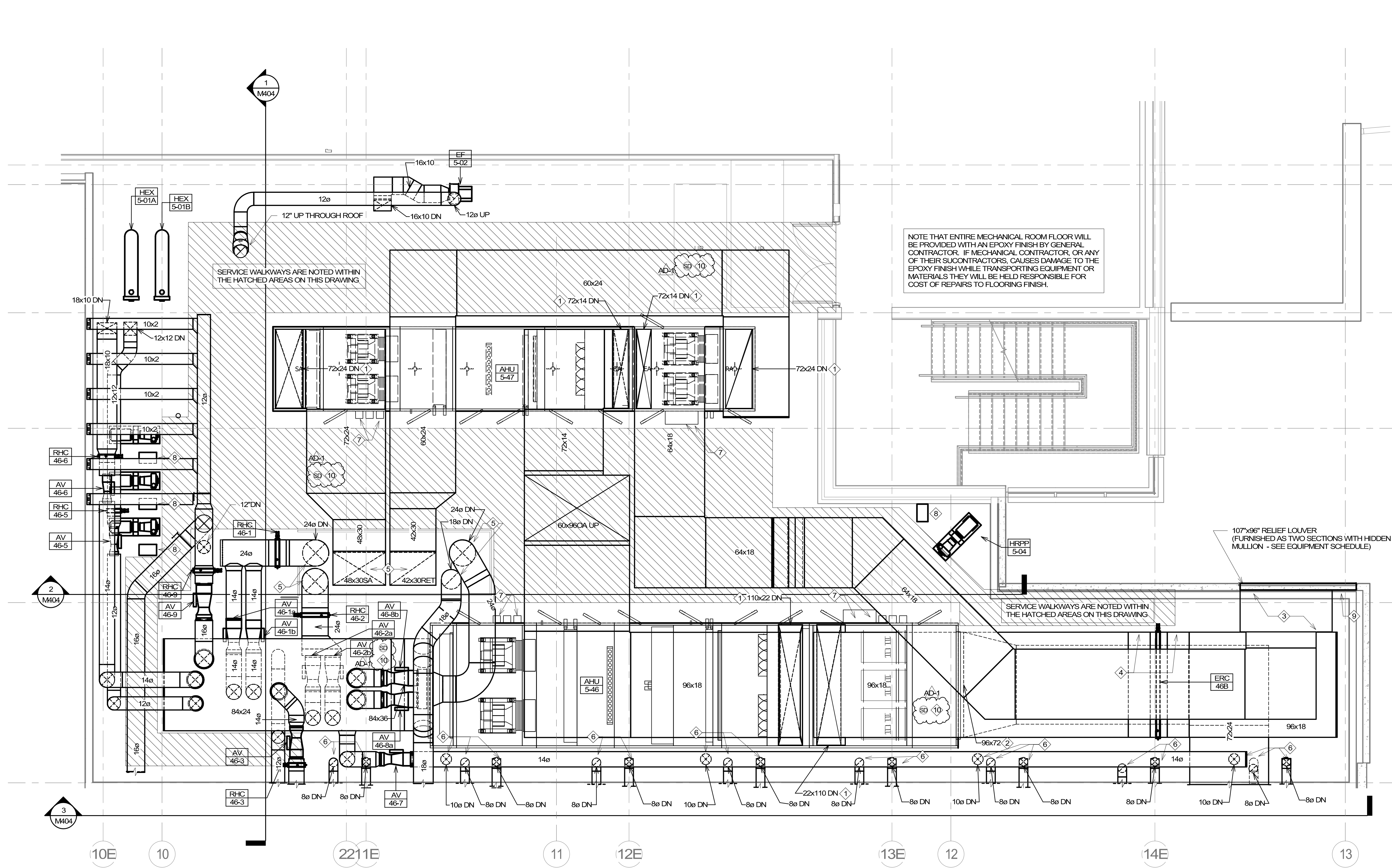
**Project Title**

NEW FRONT LOBBY AND PRIMARY CARE ADDITION  
Location: SIOUX FALLS, SOUTH DAKOTA  
Issue Date: 06/22/2022  
Checked: JRG  
Drawn: TNH

**Project Number**

VA #438-480  
SGA #201909  
Building Number: 5  
Drawing Number: MH101

three inches = one foot  
one and one half inches = one foot  
one inch = one foot  
three quarters inch = one foot  
one half inch = one foot  
three eighths inch = one foot  
one eighth inch = one foot

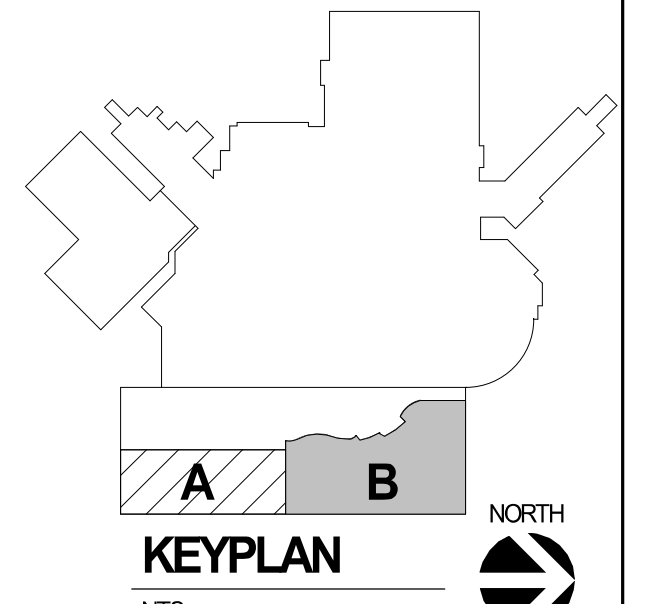


- GENERAL NOTES:**
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  - FLUTTER STRIPS OR AIR PRESSURE GAUGES SHALL BE PROVIDED AT THE ENTRANCES TO EACH CONSTRUCTION AREA. ALL CONTRACTED WORKERS SHALL BE TRAINED TO VISUALLY MONITOR THESE DEVICES FOR ADEQUATE NEGATIVE PRESSURIZATION AS THEY ENTER THE CONSTRUCTION AREA. DAILY LOGS SHALL BE KEPT BY THE MECHANICAL CONTRACTOR TO INSURE CONSTANT PRESSURIZATION HAS BEEN MAINTAINED.
  - CONTRACTOR SHALL MAINTAIN ACCURATE RECORD DRAWINGS SHOWING ANY DISCREPANCIES WITH EXISTING PIPING INDICATED OR REVISIONS TO THE BID DOCUMENT LAYOUTS. ALL CHANGES WILL BE UPDATED WITHIN THE FINAL RECORD DRAWING SET.

- KEY NOTES:**
- CONNECT INTO TOP OF AHU AT DAMPER FURNISHED WITH AHU (ACTUATOR BY CONTROLS CONTRACTOR). FIELD VERIFY EXACT CONNECTION SIZE AND TRANSITION WITH FLARED CONNECTION NOT EXCEEDING 45 DEGREES IN ANY DIRECTION.
  - CONNECT INTO FRONT/REAR PANEL AHU AT DAMPER FURNISHED WITH AHU (ACTUATOR BY CONTROLS CONTRACTOR). FIELD VERIFY EXACT CONNECTION SIZE AND TRANSITION WITH FLARED CONNECTION NOT EXCEEDING 45 DEGREES IN ANY DIRECTION.
  - PROVIDE A SHEETMETAL FLENUM BEHIND LOUVER INDICATED. FLENUM SHALL BE MINIMUM OF 36" DEEP WITH PITCHED BOTTOM TO 1" COPPER DRAIN PIPE ROUTED TO NEAREST FLOOR DRAIN. PROVIDE MINIMUM OF 24"X24" ACCESS DOOR TO ALLOW FOR ENTRY INTO FLENUM FOR SERVICE/CLEANING. INCLUDE UNISTRUT STAND AND FLOOR BRACING ON BOTTOM OF FLENUM CAPABLE OF SUPPORTING AT LEAST 500 LBS.
  - PROVIDE MINIMUM 24"X48" HINGED ACCESS DOORS ON BOTH SIDES OF HEAT RECOVERY COIL FOR CLEANING PURPOSES. PROVIDE PITCHED BOTTOM TO 1" COPPER FLOOR DRAIN WITH TRAP ROUTED TO NEAREST FLOOR DRAIN.
  - SEAL AROUND ALL FLOOR PENETRATIONS INTO SHAFT WITH 4" HIGH CONCRETE CURB TO AVOID WATER INFILTRATIONS INTO FLOORS BELOW. REFER TO LIFE SAFETY PLAN FOR FIRE SEALING AS REQUIRED.
  - PENETRATE MECHANICAL ROOM FLOOR FOR HVAC SERVICE TO OFFICES BELOW WITH TIGHT CEILING FLENUM SPACE. REFER TO SECTION 314404. FIRE SEAL EACH FLOOR PENETRATION AS REQUIRED AND PROVIDE EITHER CONCRETE CURB AROUND PERIMETER, OR SLEEVE THAT EXTENDS AT LEAST 2" ABOVE FLOOR LEVEL, TO PREVENT WATER MIGRATION TO FLOOR BELOW.
  - COORDINATE A MINIMUM OF 36" CLEARANCE IN FRONT OF VFD CONTROLLER MOUNTED TO AHU. COORDINATE ON-SITE WIRING AND INSTALLATION REQUIREMENTS WITH MANUFACTURER AND ELECTRICAL SUBCONTRACTOR AS REQUIRED. PERFORM START-UP AND PROGRAMMING WITH CONTROLS CONTRACTOR ASSISTANCE.
  - SAME AS KEY NOTE 7 ABOVE EXCEPT THESE PUMP VFD'S SHALL BE PROVIDED WITH A UNISTRUT STAND SECURED TO FLOOR.
  - BLANK-OFF PORTION OF LOUVER BEHIND COLUMN WITH INSULATED PANEL. FIELD VERIFY EXACT DIMENSION.
  - INSTALL DUCT SMOKE DETECTOR AT APPROXIMATE LOCATION INDICATED (FOR BOTH SUPPLY AND RETURN MAINS). ASSIST FIRE ALARM CONTRACTOR TO INSTALL DETECTOR, FURNISHED BY THEM, FOR WIRING AND PROGRAMMING TO SHUT-DOWN EITHER AHU UPON DETECTION OF SMOKE.

1 ENLARGED INTERSTITIAL MECHANICAL ROOM - HVAC PLAN  
1/4" = 1'-0"

2/13/2024 1:01:35 PM  
C:\Revit\Projects\M - Lobby Central\_R201\_jason@phillips27.rvt



Revision#	Description	Date:
1	ADDENDUM #1	02/13/2024

**CONSULTANTS**

<b>ARCHITECTURAL:</b> BWB 330 S. Peter St Suite 600 St. Paul, MN 55102 Phone: 651-222-3701	<b>STRUCTURAL:</b> ERR 2250 University Ave W Suite 423-S St. Paul, MN 55402 Phone: 651-251-1970	<b>MEP:</b> DUNHAM 1100 S. Main Suite 1100 Minneapolis, MN 55402 Phone: 652-646-7550 0421959-002-00	<b>CIVIL:</b> EVS 5025 Valley View Rd Suite 140 Eden Prairie, MN 55344 Phone: 952-945-6299	<b>LANDSCAPE:</b> CONFLUENCE 534 Valley Ave Suite 201 Sioux Falls, SD 57104 Phone: 605-339-1265
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**ARCHITECT OF RECORD**

A/E:  
Stone Group Architects  
600 E 7th Street  
Sioux Falls, SD 57103  
605-271-1144

**STONE GROUP ARCHITECTS**

**STAMP**

REGISTERED PROFESSIONAL ENGINEER  
14844  
JASON R. GOTTWALT  
SOUTH DAKOTA

Office of Construction and Facilities Management  
VA U.S. Department of Veterans Affairs

Drawing Title  
**FIRST FLOOR MECHANICAL ROOM HVAC PLAN**

Approved:

Phase  
**CONSTRUCTION DOCUMENTS**

Project Title  
**NEW FRONT LOBBY AND PRIMARY CARE ADDITION**

Location  
**SIOUX FALLS, SOUTH DAKOTA**

Issue Date  
06/22/2022

Checked  
JRG

Drawn  
TNH

Project Number  
VA #438-480  
SGA #201909

Building Number  
5

Drawing Number  
MH113

### FAN SCHEDULE

**MECHANICAL (233413, 233416, 233423)**

EQUIPMENT TAG	APPLICATION	TYPE	CFM	ESP (IN W.C.)	BHP	FAN RPM	DRIVE TYPE	SONES	VFD (YES/NO)	MANUFACTURER	MODEL NUMBER	MECHANICAL NOTES
EF 5-02	LOBBY TOILET EXHAUST	UTILITY SET	750	1.0	0.35	1770	DIRECT			GREENHECK	USF-07	1,2,4

**GENERAL MECHANICAL NOTES:**  
 A. REFER TO ELECTRICAL SECTION BELOW FOR CALCULATED SHORT-CIRCUIT CURRENT AT EQUIPMENT.

**MECHANICAL NOTES:**  
 1. PROVIDE WITH FACTORY MOUNTED DISCONNECT SWITCH AND SPEED CONTROLLER FOR ECM MOTOR (FOR BALANCING PURPOSES ONLY).  
 2. REFER TO INSTALLATION DETAILS AND CONTROL SEQUENCES FOR INSTALLATION OF ISOLATION MOTORIZED DAMPER. INCLUDE END SWITCH FOR PROOF OF OPEN THAT IS INTEGRATED TO FAN START-UP.  
 3. INCLUDE ROOF CURB PROVIDED BY MANUFACTURER AND INSTALLED BY CONTRACTOR. USE CURRENT ROOFING CONTRACTOR IF REQUIRED TO MAINTAIN EXISTING ROOF WARRANTIES.  
 4. FLOOR MOUNTED FANS SHALL BE PROVIDED WITH 4" HIGH CONCRETE EQUIPMENT PAD. MOUNT SPRING ISOLATORS INTO CONCRETE PADS FOR VIBRATION ISOLATION.

**ELECTRICAL:**

EQUIPMENT TAG	HP/LOAD	VOLTAGE	PHASE	CALCULATED AFC	TYPE	FURNISHED BY/ INSTALLED BY	LOCATION	CTRL WIRE BY	AMPS/TYP	FUSE SIZE (AMPS)	NEMA TYPE	FURNISHED BY/ INSTALLED BY	LOCATION	PANEL	CIRCUIT NUMBER	CONDUIT/FEEDER SIZE	ELECTRICAL NOTES
EF 5-02	1/2 HP	120 V	1	2100	MRS	DIV 26 / DIV 26	AT UNIT	DIV 26	20A MRS	N/A	NEMA 1	DIV 26/DIV 26	AT UNIT	CREZ-1	11	3/4" C, 3#12 & 1#12 GND	

**GENERAL ELECTRICAL NOTES:**  
 A. WHEN THE CONTROLLER TYPE IS A VFD OR MAGNETIC STARTER, REFER TO THE VARIABLE FREQUENCY DRIVE CONTROLLER SCHEDULE OR THE MAGNETIC STARTER SCHEDULE FOR MORE INFORMATION.  
 B. MECHANICAL EQUIPMENT AND CORRESPONDING ELECTRICAL DISCONNECTS/CONTROLLERS SHALL HAVE A STANDARD SHORT-CIRCUIT CURRENT RATING HIGHER THAN THE CALCULATED VALUE SHOWN IN THIS SCHEDULE, DETAILED BY THE "CALCULATED AFC" COLUMN.

**ELECTRICAL NOTES:**

**CONTROLLER TYPES:**  
 VFD - VARIABLE FREQUENCY MOTOR CONTROLLER  
 MMS - MANUAL MOTOR STARTER (WITH OVERLOADS)  
 CP - CONTROL PANEL  
 MAGS - MAGNETIC STARTER  
 MRSMS - MOTOR RATED SWITCH (WITHOUT OVERLOADS)

### AIR CURTAIN SCHEDULE - HEATING WATER

**MECHANICAL (233433)**

EQUIPMENT TAG	APPLICATION	TYPE	NOZZLE WIDTH (IN)	FAN MOTOR HP (EACH)	TOTAL CFM	EAT (F)	LAT (F)	EWT (F)	LWT (F)	GPM	GLYCOL TYPE	GLYCOL %	MAXIMUM WPD (FT)	CAPACITY (MBH)	MANUFACTURER	MODEL NUMBER	MECHANICAL NOTES
AC 5-01A	LOBBY VESTIBULE	RECESSED	84"	2	2,518	60	88	180	165	11	PROPYLENE	40%	4.2	76 MBH	BERNER	ARD12-2084WA	1,2,3,4,6
AC 5-01B	LOBBY VESTIBULE	RECESSED	84"	2	2,518	60	88	180	165	11	PROPYLENE	40%	4.2	76 MBH	BERNER	ARD12-2084WA	1,2,3,4,6
AC 5-02A	LOBBY VESTIBULE	WALL MOUNT	84"	2	3,064	72	72	-	-	-	-	-	-	-	AE10-E-2084A	AE10-E-2084A	1,2,3,4,5,7
AC 5-02B	LOBBY VESTIBULE	WALL MOUNT	84"	2	3,064	72	72	-	-	-	-	-	-	-	BERNER	AE10-E-2084A	1,2,3,4,5,7

**GENERAL MECHANICAL NOTES:**  
 A. REFER TO ELECTRICAL SECTION BELOW FOR CALCULATED SHORT-CIRCUIT CURRENT AT EQUIPMENT.

**MECHANICAL NOTES:**  
 1. PROVIDE WITH INTELLISWITCH STANDALONE CONTROLLER, CONTROLS CONTRACTOR, OR START-UP SERVICE TECHNICIAN SHALL PROVIDE ALL PROGRAMMING TO PERFORM PER SEQUENCE OF OPERATION.  
 2. CONTROL CONTRACTOR TO PROVIDE TEMPERATURE SENSOR WITHIN VESTIBULE, ALONG WITH ADJUSTABLE RETURN WATER TEMPERATURE TO PROVIDE REMOTE ALARM INDICATION. SEE SEQUENCE OF OPERATION.  
 3. CABINET SHALL HAVE A STANDARD WHITE ENAMEL FINISH. COORDINATE MOUNTING SYSTEM WITH CEILING OR SOFFIT WITHIN THIS AREA TO CENTER ABOVE DOORWAY WITH AT LEAST 6" EXTENSION ON EITHER SIDE BEYOND DOOR OPENING SIZE. COORDINATE ACCESS PANELS SERVICE.  
 4. PROVIDE DOOR POSITION INDICATOR SWITCH AND WIRE INTO PACKED CONTROLLER TO AUTOMATIC START/STOP SEQUENCE OF AIR CURTAIN PER SEQUENCE OF OPERATIONAL DOOR CONTACT SWITCH SHALL BE CONCEALED WITHIN DOOR FRAME.  
 5. INTERIOR AIR CURTAIN WILL CIRCULATE ROOM AIR WITHOUT HEATING ELEMENT. REFER TO MODEL FOR AIR IONIZATION STERILIZATION SYSTEM FURNISHED WITHIN THIS INTERIOR LAYER OF AIR CURTAIN (BERNER PUREAIR PACKAGE OR EQUAL).  
 6. EXTERIOR DOOR AIR CURTAINS SHALL HAVE HOT WATER HEATING COILS PER SCHEDULED CAPACITY. REFER TO PIPING DIAGRAM FOR ALL ASSOCIATED PIPING COMPONENTS AND CONTROL SENSORS.  
 7. PROVIDE INTERIOR AIR CURTAINS WITH WALL MOUNTING BRACKETS AND IN A FACTORY CUSTOM PAINT COLOR AS SELECTED BY ARCHITECT. SUBMIT 6"x6" METAL SAMPLES FOR COLOR SELECTION.

**ELECTRICAL:**

EQUIPMENT TAG	HP/LOAD	VOLTAGE	PHASE	CALCULATED AFC	TYPE	FURNISHED BY/ INSTALLED BY	LOCATION	CTRL WIRE BY	AMPS/TYP	FUSE SIZE (AMPS)	NEMA TYPE	FURNISHED BY/ INSTALLED BY	LOCATION	PANEL	CIRCUIT NUMBER	CONDUIT/FEEDER SIZE	ELECTRICAL NOTES
AC 5-01A	17A	120 V	1	3400	INTEGRAL	DIV 23	INTEGRAL	DIV 23	30A	N/A	NEMA 1	DIV 26/DIV 26	AT UNIT	LNSM2.1A	10	3/4" C, 2#8 & 1#10 GND	
AC 5-01B	17A	120 V	1	3400	INTEGRAL	DIV 23	INTEGRAL	DIV 23	30A	N/A	NEMA 1	DIV 26/DIV 26	AT UNIT	LNSM2.1A	12	3/4" C, 2#8 & 1#10 GND	
AC 5-02A	17A	120 V	1	3400	INTEGRAL	DIV 23	INTEGRAL	DIV 23	30A	N/A	NEMA 1	DIV 26/DIV 26	AT UNIT	LNSM2.1A	14	3/4" C, 2#8 & 1#10 GND	
AC 5-02B	17A	120 V	1	3400	INTEGRAL	DIV 23	INTEGRAL	DIV 23	30A	N/A	NEMA 1	DIV 26/DIV 26	AT UNIT	LNSM2.1A	16	3/4" C, 2#8 & 1#10 GND	

**GENERAL ELECTRICAL NOTES:**  
 A. WHEN THE CONTROLLER TYPE IS A VFD OR MAGNETIC STARTER, REFER TO THE VARIABLE FREQUENCY DRIVE CONTROLLER SCHEDULE OR THE MAGNETIC STARTER SCHEDULE FOR MORE INFORMATION.  
 B. MECHANICAL EQUIPMENT AND CORRESPONDING ELECTRICAL DISCONNECTS/CONTROLLERS SHALL HAVE A STANDARD SHORT-CIRCUIT CURRENT RATING HIGHER THAN THE CALCULATED VALUE SHOWN IN THIS SCHEDULE, DETAILED BY THE "CALCULATED AFC" COLUMN.

**ELECTRICAL NOTES:**

**CONTROLLER TYPES:**  
 MMS - MANUAL MOTOR STARTER (WITH OVERLOADS)  
 CP - CONTROL PANEL  
 MAGS - MAGNETIC STARTER  
 MRSMS - MOTOR RATED SWITCH (WITHOUT OVERLOADS)

### CHILLER SCHEDULE - AIR COOLED

**MECHANICAL (236423 & 236426)**

EQUIPMENT TAG	APPLICATION	TYPE	RATING POINT			EVAPORATOR (WATER SIDE)					CONDENSER (AIR SIDE)					COMPRESSOR				REFRIGERANT TYPE	VFD (YES/NO)	MANUFACTURER	MODEL NUMBER	MECHANICAL NOTES	
			CAPACITY (TONS)	POWER (KW)	GPM	GLYCOL TYPE	GLYCOL %	MIN FLOW	FOLING FACTOR	EWT (F)	LWT (F)	AMBIENT TEMPERATURE (F)	NUMBER OF FANS	FAN POWER (total)	FAN RPM (EACH)	NUMBER OF COMPRESSORS	POWER (total)	25%	50%						100%
ACC 01	EXISTING	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	TRANE	RTAC 3004 U1CA UAGP W1WY 1CDB NNSU N11A R0EX N	EXISTING
ACC 02	EXISTING	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	TRANE	RTAC 3004 U1CA UAGP W1WY 1CDB NNSU N11A R0EX N	EXISTING
ACC 03	CHILLED WATER	AIR-COOLED SCREW	310 ton / 242 act.	315 kW	453 GPM	PROPYLENE	40%	323 GPM	-	56	42	95	20 (w/VFD)	25.6 kW	VARIABLE	3	288.2 kW	93 dBA	98dBA	104 dBA	R-513A	YES	TRANE	RTAF 310E UAHX XA1 NR4X 1N4X CCV1 HBPB X*XA A1X *X*	1,2,3,4,5,6

**GENERAL MECHANICAL NOTES:**  
 A. REFER TO ELECTRICAL SECTION BELOW FOR CALCULATED SHORT-CIRCUIT CURRENT AT EQUIPMENT.

**MECHANICAL NOTES:**  
 1. REFER TO STRUCTURAL PLANS FOR SUPPORT BEAMS ABOVE ROOF TO SET CHILLER ONTO. PROVIDE APPROPRIATE MOUNTING HARDWARE TO SECURE CHILLER RAILINGS TO SUPPORT BEAMS AS REQUIRED.  
 2. ALL LOSE COMPONENTS PROVIDED BY MANUFACTURER (FLOW SWITCHES, TEMP SENSORS, SAFETIES, ETC) SHALL BE INSTALLED BY MECHANICAL CONTRACTOR ON SITE. COORDINATE WITH MANUFACTURER INSTALLATION REQUIREMENTS.  
 3. PROVIDE ENCLOSED BREAKER FOR SINGLE POINT POWER CONNECTION. PROVIDE DEDICATED ISOLATION VALVES TO TAKE-OUT OF SERVICE FOR MAINTENANCE OR REPAIRS.  
 4. INCLUDE BAC INTEGRATION NETWORK CARD WITHIN FACTORY MOUNTED CONTROLLER. CONTROLS CONTRACTOR SHALL INTEGRATE CONTROLS INTO CENTRAL BUILDING AUTOMATION SYSTEM.  
 5. CONDENSER FANS SHALL ALL HAVE VFD CONTROL WITH MICROCHANNEL COIL OPTION AND OIL COOLER FROM FACTORY.  
 6. APPROVED EQUIVALENT MANUFACTURERS SHALL BE REQUIRED TO MEET OR EXCEED ALL EFFICIENCY RATINGS, WHILE HOLDING SIMILAR PRESSURE DROP REQUIREMENTS COMPARED TO EXISTING CHILLER. ABOVE UNIT RATED AT OVERALL COOLING EFFICIENCY OF 9.2 EER, IRLV AT 16.5 EER AND NPLV AT 15 EER.

**ELECTRICAL:**

EQUIPMENT TAG	HP/LOAD	VOLTAGE	PHASE	TYPE	FURNISHED BY/ INSTALLED BY	LOCATION	CTRL WIRE BY	AMPS/TYP	FUSE SIZE (AMPS)	NEMA TYPE	FURNISHED BY/ INSTALLED BY	LOCATION	CONDUIT/FEEDER SIZE	ELECTRICAL NOTES
ACC 03	600A	480 V	3	VFD	DIV 23/DIV 26	AT UNIT	DIV 23	N/A	N/A	NEMA 3R	DIV 23/DIV 26	INTEGRAL	(3)3" C, 3#40KCMIL & 1#2" GND	1

**GENERAL ELECTRICAL NOTES:**  
 A. WHEN THE CONTROLLER TYPE IS A VFD OR MAGNETIC STARTER, REFER TO THE VARIABLE FREQUENCY DRIVE CONTROLLER SCHEDULE OR THE MAGNETIC STARTER SCHEDULE FOR MORE INFORMATION.  
 B. MECHANICAL EQUIPMENT AND CORRESPONDING ELECTRICAL DISCONNECTS/CONTROLLERS SHALL HAVE A STANDARD SHORT-CIRCUIT CURRENT RATING HIGHER THAN THE CALCULATED VALUE SHOWN IN THIS SCHEDULE, DETAILED BY THE "CALCULATED AFC" COLUMN.

**ELECTRICAL NOTES:**  
 1. REFER TO RISER ON SHEET EE300 FOR ADDITIONAL INFORMATION.

**CONTROLLER TYPES:**  
 VFD - VARIABLE FREQUENCY MOTOR CONTROLLER  
 MMS - MANUAL MOTOR STARTER (WITH OVERLOADS)  
 CP - CONTROL PANEL  
 MAGS - MAGNETIC STARTER  
 MRSMS - MOTOR RATED SWITCH (WITHOUT OVERLOADS)

### UNIT HEATER SCHEDULE - HEATING WATER

**MECHANICAL (238239)**

EQUIPMENT TAG	APPLICATION	TYPE	FAN				COIL				WPD (FT)	CAPACITY (MEH)	MANUFACTURER	MODEL NUMBER	MECHANICAL NOTES	
			CFM	MOTOR HP	EAT (F)	COIL ROWS	GLYCOL TYPE	GLYCOL %	WPD (FT)	GLYCOL %						
CUH 01	VESTIBULE C55A	SEMI-RECESSED	140 - 300	1/4	60	3	180	152	2.1	PROPYLENE	40%	1.1'	30.1	RITTLING	RW-320 (SIZE 03)	1,2,3,4,5,6
CUH 02	VESTIBULE C55A	SEMI-RECESSED	140 - 300	1/4	60	3	180	152	2.1	PROPYLENE	40%	1.1'	30.1	RITTLING	RW-320 (SIZE 03)	1,2,3,4,5,6
CUH 03	VESTIBULE F02C	FREESTANDING	350 - 620	1/4	60	2	180	161	7.3	PROPYLENE	40%	9.3'	69.5	RITTLING	RF-220 (SIZE 06)	1,2,3,4,5,6
CUH 04	STAIRWELL	FREESTANDING	350 - 620	1/4	60	2	180	161	7.3	PROPYLENE	40%	9.3'	69.5	RITTLING	RF-220 (SIZE 06)	1,2,3,4,5,6

**GENERAL MECHANICAL NOTES:**  
 A. REFER TO ELECTRICAL SECTION BELOW FOR CALCULATED SHORT-CIRCUIT CURRENT AT EQUIPMENT.

**MECHANICAL NOTES:**  
 1. PROVIDE UNIT WITH HIGHER CAPACITY MULTITHROW COILS INDICATED ON SCHEDULE. BALANCING CONTRACTOR TO MAXIMIZE FLOW TO EACH UNIT WITH MANUAL CIRCUIT SETTER.  
 2. ALL CABINET UNIT HEATERS SHALL BE FURNISHED WITH HEAVY DUTY 14-GAUGE CONSTRUCTION ADD OPTION INCLUDED. SUBMIT COLOR SAMPLES TO ARCHITECT FOR SELECTION OF FINAL FINISH.  
 3. INCLUDE FAN MOTOR WITH ECM OPTION AND 2-10 VDC INPUT FROM BUILDING AUTOMATION TO VARY AIRFLOW PER SEQUENCE OF OPERATION.  
 4. PROVIDE ALL CABINET UNIT HEATERS WITH PLATED MERV 5 FILTERS. INCLUDE ONE (1) EXTRA SET OF FILTERS TO TURN OVER TO OWNER UPON OCCUPANCY.  
 5. REFER TO DRAWING FOR LOCATION OF REMOTE MOUNTED THERMOSTAT BY CONTROLS CONTRACTOR. COORDINATE CONTROL OPTIONS TO ALLOW BAS FULL CONTROL OF UNIT AND ACCESSORIES.  
 6. INCLUDE ALARM WITH FINAL INSTALLATION OF UNIT. REFER TO SEQUENCE OF OPERATION FOR REMOTE BUILDING ALARM NOTIFICATIONS.

**ELECTRICAL:**

EQUIPMENT TAG	HP/LOAD	VOLTAGE	PHASE	CALCULATED AFC	TYPE	FURNISHED BY/ INSTALLED BY	LOCATION	CTRL WIRE BY	AMPS/TYP	FUSE SIZE (AMPS)	NEMA TYPE	FURNISHED BY/ INSTALLED BY	LOCATION	PANEL	CIRCUIT NUMBER	CONDUIT/FEEDER SIZE	ELECTRICAL NOTES
CUH 01	1/4 HP	120 V	1	3400	INTEGRAL	DIV 23	INTEGRAL	DIV 23	SWITCH	N/A	NEMA 1	DIV 26/DIV 26	AT UNIT	LNSM2.1A	18	3/4" C, 3#12 & 1#12 GND	
CUH 02	1/4 HP	120 V	1	3400	INTEGRAL	DIV 23	INTEGRAL	DIV 23	SWITCH	N/A	NEMA 1	DIV 26/DIV 26	AT UNIT	LNSM2.1A	18	3/4" C, 3#12 & 1#12 GND	
CUH 03	1/4 HP	120 V	1	3400	INTEGRAL	DIV 23	INTEGRAL	DIV 23	SWITCH	N/A	NEMA 1	DIV 26/DIV 26	AT UNIT	LNSM2.1A	20	3/4" C, 3#12 & 1#12 GND	
CUH 04	1/4 HP	120 V	1	3400	INTEGRAL	DIV 23	INTEGRAL	DIV 23	SWITCH	N/A	NEMA 1	DIV 26/DIV 26	AT UNIT	LNSM2.1A	20	3/4" C, 3#12 & 1#12 GND	

**GENERAL ELECTRICAL NOTES:**  
 A. WHEN THE CONTROLLER TYPE IS A VFD OR MAGNETIC STARTER, REFER TO THE VARIABLE FREQUENCY DRIVE CONTROLLER SCHEDULE OR THE MAGNETIC STARTER SCHEDULE FOR MORE INFORMATION.  
 B. MECHANICAL EQUIPMENT AND CORRESPONDING ELECTRICAL DISCONNECTS/CONTROLLERS SHALL HAVE A STANDARD SHORT-CIRCUIT CURRENT RATING HIGHER THAN THE CALCULATED VALUE SHOWN IN THIS SCHEDULE, DETAILED BY THE "CALCULATED AFC" COLUMN.

**ELECTRICAL NOTES:**

**CONTROLLER TYPES:**  
 MMS - MANUAL MOTOR STARTER (WITH OVERLOADS)  
 CP - CONTROL PANEL  
 MAGS - MAGNETIC STARTER  
 MRSMS - MOTOR RATED SWITCH (WITHOUT OVERLOADS)

### UNIT HEATER SCHEDULE - ELECTRIC

**MECHANICAL (238239)**

EQUIPMENT TAG	APPLICATION	TYPE	FAN CFM	MOTOR HP	EAT (F)	KW	NUMBER OF CONTROL STEPS	MANUFACTURER	MODEL NUMBER	MECHANICAL NOTES
UH 01	BUS STOP HEATING	INFRARED	NA	NA	-20	5.0	1	REDD-I	342-460-TISS-48V	1,2

**GENERAL MECHANICAL NOTES:**  
 A. REFER TO ELECTRICAL SECTION BELOW FOR CALCULATED SHORT-CIRCUIT CURRENT AT EQUIPMENT.

**MECHANICAL NOTES:**  
 1. OVERHEAD ELECTRIC INFRARED 24 AMP HEATER, 80 DEG ASYMMETRIC REFLECTOR (DIRECTED AWAY FROM A/C FAN DIRECTLY BELOW) WITH ADJ MOUNTING BRACKETS, THERMOSTAT, AND SCR CONTROLLERS. INCLUDE WITH STAINLESS STEEL MOUNTING FRAME TO FULLY RECESS INTO CEILING SPACE. INSTALL ALL HARDWARE PER MANUFACTURER GUIDELINES FOR FLUSH INSTALLATION.

**ELECTRICAL:**

EQUIPMENT TAG	HP/LOAD	VOLTAGE	PHASE	CALCULATED AFC	TYPE	FURNISHED BY/ INSTALLED BY	LOCATION	CTRL WIRE BY	AMPS/TYP	FUSE SIZE (AMPS)	NEMA TYPE	FURNISHED BY/ INSTALLED BY	LOCATION	PANEL	CIRCUIT NUMBER	CONDUIT/FEEDER SIZE	ELECTRICAL NOTES
UH 01	7.5 KW	480 V	3		INTEGRAL	DIV 23/DIV 23	AT UNIT	DIV 23	30A	15A	NEMA 3R	DIV 26/DIV 26	AT UNIT	<unnamed>		3/4" C, 3#12 & 1#12 GND	

**GENERAL ELECTRICAL NOTES:**  
 A. WHEN THE CONTROLLER TYPE IS A VFD OR MAGNETIC STARTER, REFER TO THE VARIABLE FREQUENCY DRIVE CONTROLLER SCHEDULE OR THE MAGNETIC STARTER SCHEDULE FOR MORE INFORMATION.  
 B. MECHANICAL EQUIPMENT AND CORRESPONDING ELECTRICAL DISCONNECTS/CONTROLLERS SHALL HAVE A STANDARD SHORT-CIRCUIT CURRENT RATING HIGHER THAN THE CALCULATED VALUE SHOWN IN THIS SCHEDULE, DETAILED BY THE "CALCULATED AFC" COLUMN.

**ELECTRICAL NOTES:**

**CONTROLLER TYPES:**  
 MMS - MANUAL MOTOR STARTER (WITH OVERLOADS)  
 CP - CONTROL PANEL  
 MAGS - MAGNETIC STARTER  
 MRSMS - MOTOR RATED SWITCH (WITHOUT OVERLOADS)

Revision#	Description	Date:
1	ADDENDUM #1	02/13/2024

### CONSULTANTS

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### ARCHITECT OF RECORD

**A/E:**  
 Stone Group Architects  
 600 E 7th Street  
 Sioux Falls, SD 57103  
 605-271-1144

**STAMP:**  
 (Professional Engineer Seal: JASON R. GOTTMALT, SOUTH DAKOTA, REG. NO. 14944)

Office of Construction and Facilities Management  
 VA U.S. Department of Veterans Affairs

Drawing Title  
**MECHANICAL/ ELECTRICAL SCHEDULES**

Approved: \_\_\_\_\_

Phase  
**CONSTRUCTION DOCUMENTS**

Project Title NEW FRONT LOBBY AND PRIMARY CARE ADDITION	Project Number VA #438-480 SGA #201909
Location SIOUX FALLS, SOUTH DAKOTA	Building Number 5
Issue Date 06/22/2022	Checked JRG
	Drawn TNH
	Drawing Number M502

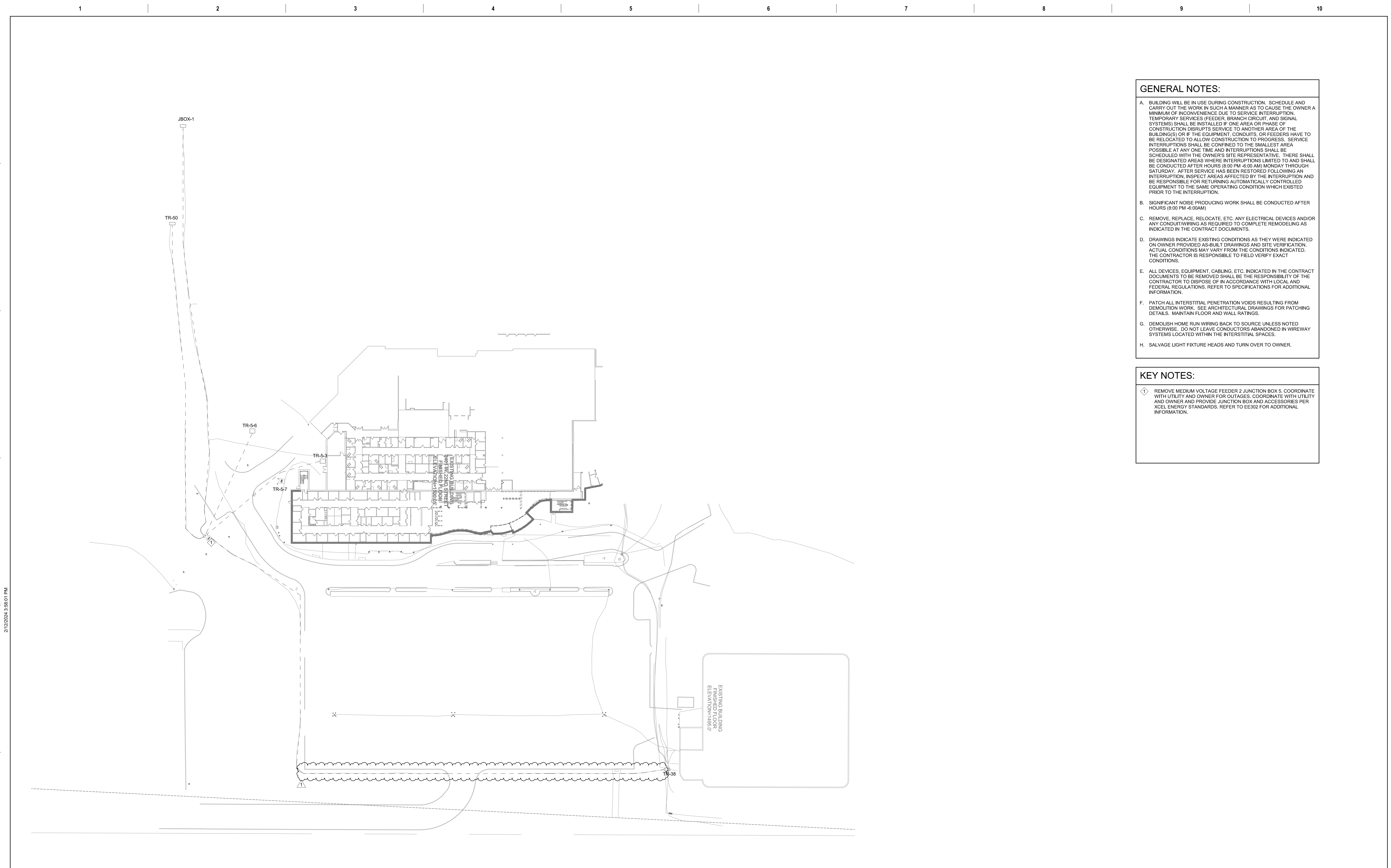


**GENERAL NOTES:**

- A. BUILDING WILL BE IN USE DURING CONSTRUCTION. SCHEDULE AND CARRY OUT THE WORK IN SUCH A MANNER AS TO CAUSE THE OWNER A MINIMUM OF INCONVENIENCE DUE TO SERVICE INTERRUPTION. TEMPORARY SERVICES (FEEDER, BRANCH CIRCUIT, AND SIGNAL SYSTEMS) SHALL BE INSTALLED IF ONE AREA OR PHASE OF CONSTRUCTION DISRUPTS SERVICE TO ANOTHER AREA OF THE BUILDING(S) OR IF THE EQUIPMENT, CONDUITS, OR FEEDERS HAVE TO BE RELOCATED TO ALLOW CONSTRUCTION TO PROGRESS. SERVICE INTERRUPTIONS SHALL BE CONFINED TO THE SMALLEST AREA POSSIBLE AT ANY ONE TIME AND INTERRUPTIONS SHALL BE SCHEDULED WITH THE OWNER'S SITE REPRESENTATIVE. THERE SHALL BE DESIGNATED AREAS WHERE INTERRUPTIONS LIMITED TO AND SHALL BE CONDUCTED AFTER HOURS (8:00 PM -6:00 AM) MONDAY THROUGH SATURDAY. AFTER SERVICE HAS BEEN RESTORED FOLLOWING AN INTERRUPTION, INSPECT AREAS AFFECTED BY THE INTERRUPTION AND BE RESPONSIBLE FOR RETURNING AUTOMATICALLY CONTROLLED EQUIPMENT TO THE SAME OPERATING CONDITION WHICH EXISTED PRIOR TO THE INTERRUPTION.
- B. SIGNIFICANT NOISE PRODUCING WORK SHALL BE CONDUCTED AFTER HOURS (8:00 PM -6:00AM)
- C. REMOVE, REPLACE, RELOCATE, ETC. ANY ELECTRICAL DEVICES AND/OR ANY CONDUIT/WIRING AS REQUIRED TO COMPLETE REMODELING AS INDICATED IN THE CONTRACT DOCUMENTS.
- D. DRAWINGS INDICATE EXISTING CONDITIONS AS THEY WERE INDICATED ON OWNER PROVIDED AS-BUILT DRAWINGS AND SITE VERIFICATION. ACTUAL CONDITIONS MAY VARY FROM THE CONDITIONS INDICATED. THE CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY EXACT CONDITIONS.
- E. ALL DEVICES, EQUIPMENT, CABLING, ETC. INDICATED IN THE CONTRACT DOCUMENTS TO BE REMOVED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DISPOSE OF IN ACCORDANCE WITH LOCAL AND FEDERAL REGULATIONS. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- F. PATCH ALL INTERSTITIAL PENETRATION VOIDS RESULTING FROM DEMOLITION WORK. SEE ARCHITECTURAL DRAWINGS FOR PATCHING DETAILS. MAINTAIN FLOOR AND WALL RATINGS.
- G. DEMOLISH HOME RUN WIRING BACK TO SOURCE UNLESS NOTED OTHERWISE. DO NOT LEAVE CONDUCTORS ABANDONED IN WIREWAY SYSTEMS LOCATED WITHIN THE INTERSTITIAL SPACES.
- H. SALVAGE LIGHT FIXTURE HEADS AND TURN OVER TO OWNER.

**KEY NOTES:**

- ◇ REMOVE MEDIUM VOLTAGE FEEDER 2 JUNCTION BOX 5. COORDINATE WITH UTILITY AND OWNER FOR OUTAGES. COORDINATE WITH UTILITY AND OWNER AND PROVIDE JUNCTION BOX AND ACCESSORIES PER XCEL ENERGY STANDARDS. REFER TO EE302 FOR ADDITIONAL INFORMATION.



1 MEDIUM VOLTAGE DEMOLITION PLAN  
1" = 40'-0"

Revision#	Description	Date:
1	ADDENDUM 1	02/13/2024

**CONSULTANTS**

<b>ARCHITECTURAL:</b> BWB/R	<b>STRUCTURAL:</b> ERR Ericksen Road Associates 2550 University Ave W Suite 423-S St. Paul, MN 55402 Phone: 651-222-3701	<b>MEP:</b> DUNHAM Dunham Associates, Inc. 93 South Sixth St Suite 1100 Minneapolis, MN 55402 Phone: 612-465-7550 0421950-002-00	<b>CIVIL:</b> EVS 10025 Valley View Rd Suite 140 Eden Prairie, MN 55344 Phone: 952-446-0236	<b>LANDSCAPE:</b> CONFLUENCE CONFLUENCE 524 N Main Ave Suite 201 Sioux Falls, SD 57104 Phone: 605-338-1205
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**ARCHITECT OF RECORD**

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Stone Group Architects  
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Sioux Falls, SD 57103  
605-271-1144

**STAMP**

Office of Construction and Facilities Management  
**VA** U.S. Department of Veterans Affairs

Drawing Title  
**ELECTRICAL SITE MEDIUM VOLTAGE DEMOLITION PLAN**

Approved:

Phase  
**CONSTRUCTION DOCUMENTS**

Project Title  
**NEW FRONT LOBBY AND PRIMARY CARE ADDITION**

Location  
**SIoux FALLS, SOUTH DAKOTA**

Issue Date  
02/13/2024

Checked  
CB

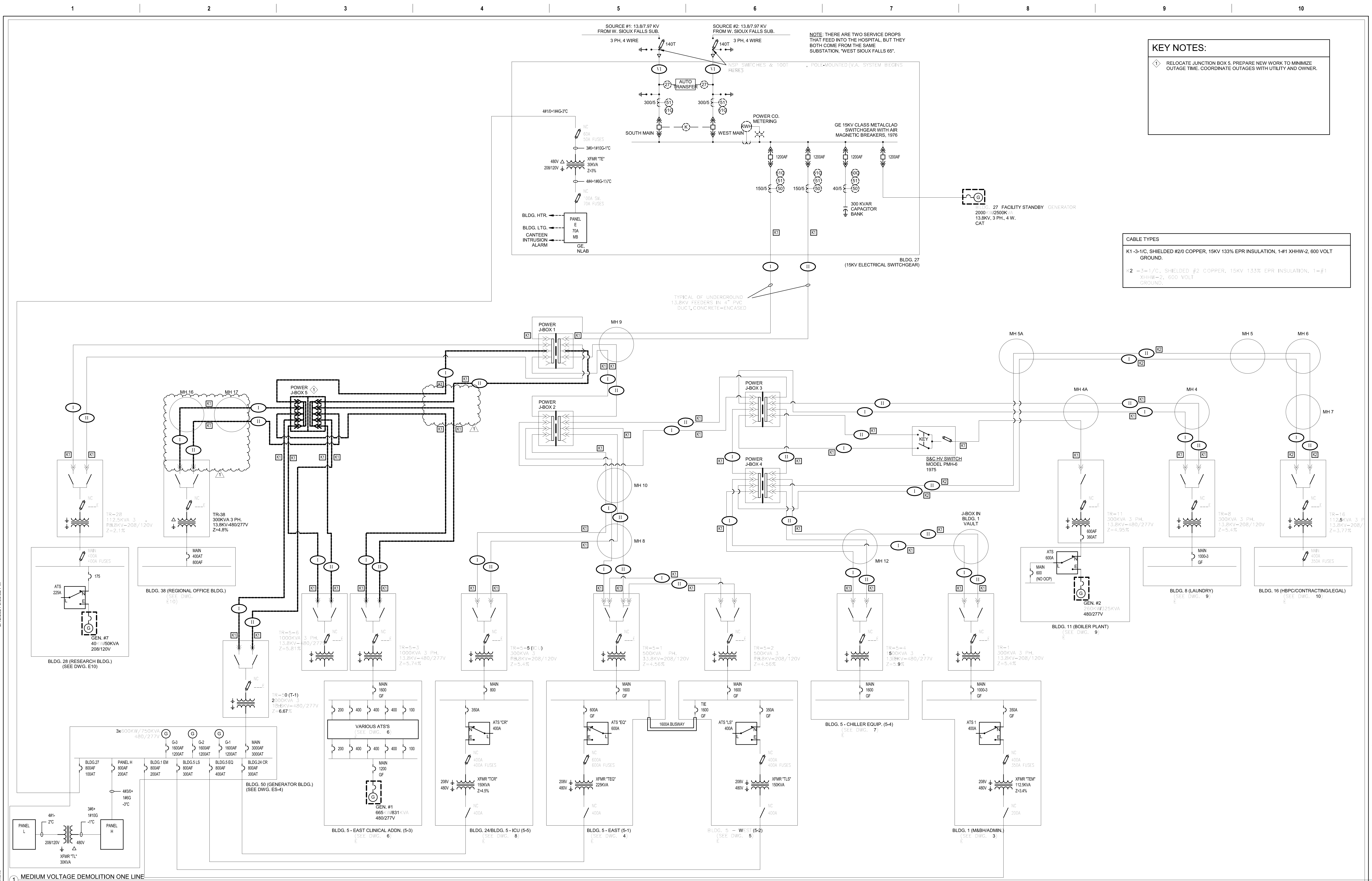
Drawn  
BZ

Project Number  
VA #438-480  
SGA #201909

Building Number  
5

Drawing Number  
ED101

Vertical scale on the left side of the drawing, showing increments from 0 to 10 feet. Labels include: "one eighth inch = one foot", "one quarter inch = one foot", "one half inch = one foot", "one inch = one foot", "two inches = one foot", "three quarters inch = one foot", "three eighths inch = one foot", "one half inch = one foot", "one quarter inch = one foot", "one eighth inch = one foot".



**KEY NOTES:**

1 RELOCATE JUNCTION BOX 5. PREPARE NEW WORK TO MINIMIZE OUTAGE TIME. COORDINATE OUTAGES WITH UTILITY AND OWNER.

**CABLE TYPES**

K1-3-1/C, SHIELDED #2/0 COPPER, 15KV 133% EPR INSULATION, 1-#1 XHHW-2, 600 VOLT GROUND.

#2 -3-1/C, SHIELDED #2 COPPER, 15KV 133% EPR INSULATION, 1-#1 XHHW-2, 600 VOLT GROUND.

1 MEDIUM VOLTAGE DEMOLITION ONE LINE  
NO SCALE

Revision#	Description	Date:
1	ADDENDUM 1	02/13/2024

**CONSULTANTS**

<b>ARCHITECTURAL:</b> <b>BWB</b> BWB 380 St. Peter St Suite 600 St. Paul, MN 55102 Phone: 651-222-3701	<b>STRUCTURAL:</b> <b>ERR</b> ERICKSEN ROAD ASSOCIATES 2550 University Ave W Suite 423-S St. Paul, MN 55402 Phone: 651-251-1570	<b>MEP:</b> <b>DUNHAM</b> DUNHAM ASSOCIATES, INC. 50 South Sixth St Suite 1100 Minneapolis, MN 55402 Phone: 612-465-7550 0421950-002-00	<b>CIVIL:</b> <b>EVS</b> EVS 10023 Valley View Rd Suite 140 Eden Prairie, MN 55344 Phone: 952-446-9236	<b>LANDSCAPE:</b> <b>CONFLUENCE</b> CONFLUENCE 524 N Main Ave Suite 201 Sioux Falls, SD 57104 Phone: 605-338-1205
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**ARCHITECT OF RECORD**

**A/E:**  
Stone Group Architects  
600 E 7th Street  
Sioux Falls, SD 57103  
605-271-1144

**STAMP**

Office of Construction and Facilities Management  
VA U.S. Department of Veterans Affairs

**Drawing Title**  
ELECTRICAL RISER DEMOLITION

**Phase**  
CONSTRUCTION DOCUMENTS

**Project Title**  
NEW FRONT LOBBY AND PRIMARY CARE ADDITION

**Location**  
SIOUX FALLS, SOUTH DAKOTA

**Issue Date**  
02/13/2024

**Checked**  
CB

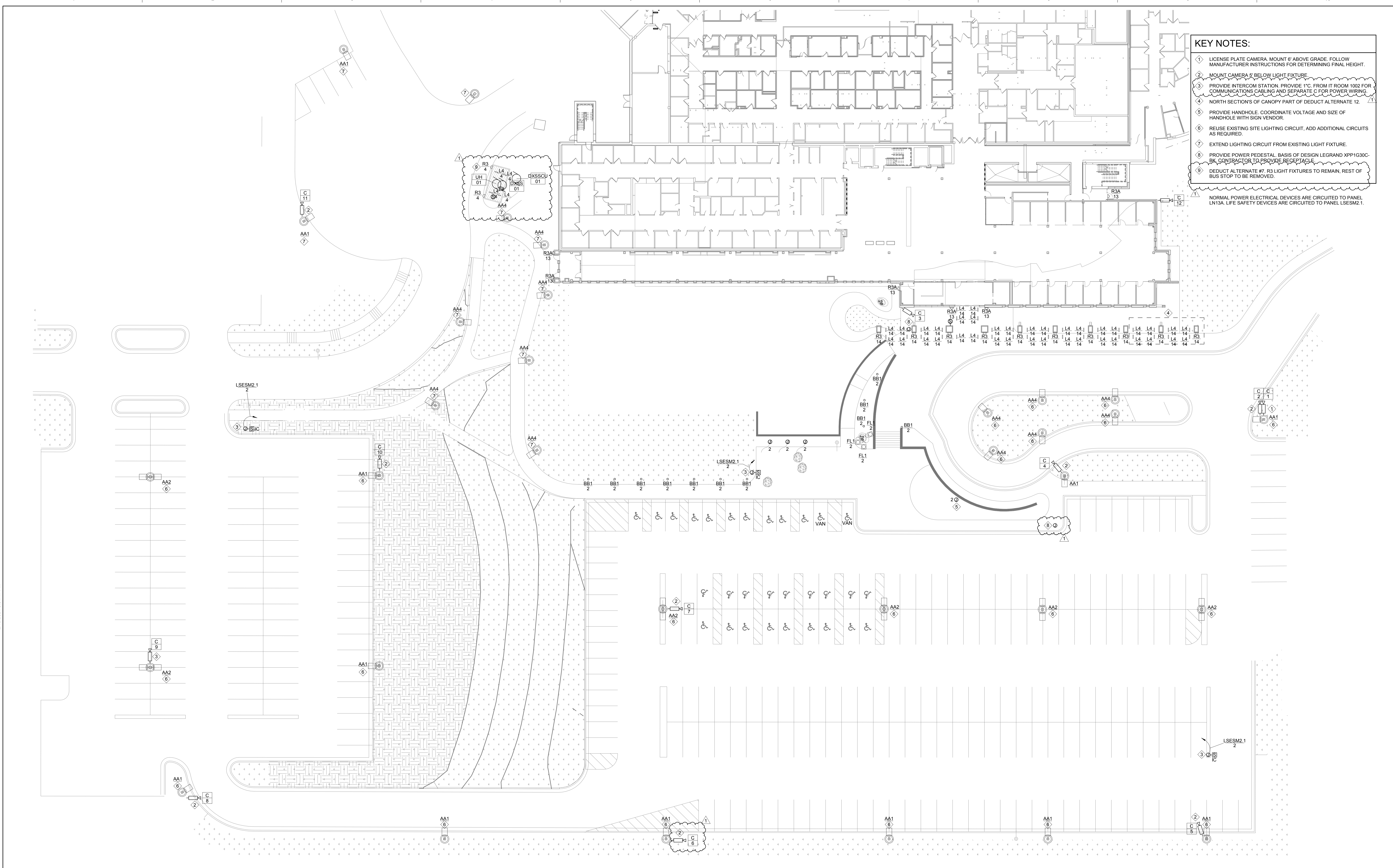
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BZ

**Project Number**  
VA #438-480  
SGA #201909

**Building Number**  
5

**Drawing Number**  
ED300

- KEY NOTES:**
- LICENSE PLATE CAMERA, MOUNT 6' ABOVE GRADE. FOLLOW MANUFACTURER INSTRUCTIONS FOR DETERMINING FINAL HEIGHT.
  - MOUNT CAMERA 5' BELOW LIGHT FIXTURE.
  - PROVIDE INTERCOM STATION. PROVIDE 1" C. FROM IT ROOM 1002 FOR COMMUNICATIONS CABLING AND SEPARATE C FOR POWER WIRING.
  - NORTH SECTIONS OF CANOPY PART OF DEDUCT ALTERNATE 12.
  - PROVIDE HANDHOLE. COORDINATE VOLTAGE AND SIZE OF HANDHOLE WITH SIGN VENDOR.
  - REUSE EXISTING SITE LIGHTING CIRCUIT. ADD ADDITIONAL CIRCUITS AS REQUIRED.
  - EXTEND LIGHTING CIRCUIT FROM EXISTING LIGHT FIXTURE.
  - PROVIDE POWER PEDESTAL. BASIS OF DESIGN LEGRAND XPP1G30C-BK CONTRACTOR TO PROVIDE RECEPTACLE.
  - DEDUCT ALTERNATE #7. R3 LIGHT FIXTURES TO REMAIN, REST OF BUS STOP TO BE REMOVED.
- NORMAL POWER ELECTRICAL DEVICES ARE CIRCUITED TO PANEL LN13A. LIFE SAFETY DEVICES ARE CIRCUITED TO PANEL LSESM2.1.



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

Revision#	Description	Date:
1	ADDENDUM 1	02/13/2024

**CONSULTANTS**

<b>ARCHITECTURAL:</b> BWB 390 St. Peter St St. Paul, MN 55102 Phone: 651-223-3701	<b>STRUCTURAL:</b> ERR 2250 University Ave W Suite 423-S St. Paul, MN 55402 Phone: 651-251-1970	<b>MEP:</b> DUNHAM 50 South Sixth St Suite 1100 Minneapolis, MN 55344 Phone: 612-685-7550 0421950-002-00	<b>CIVIL:</b> EVS 10025 Valley View Rd Suite 140 Eden Prairie, MN 55344 Phone: 952-646-0239	<b>LANDSCAPE:</b> CONFLUENCE 224 W Main Ave Suite 201 Sioux Falls, SD 57104 Phone: 605-339-1205
---	--	--	--	--

**ARCHITECT OF RECORD**

A/E:  
Stone Group Architects  
600 E 7th Street  
Sioux Falls, SD 57103  
605-271-1144

**STAMP**

Office of  
Construction  
and Facilities  
Management

Drawing Title  
**ELECTRICAL SITE PLAN**

Approved:

Phase  
**CONSTRUCTION DOCUMENTS**

Project Title  
**NEW FRONT LOBBY AND PRIMARY CARE ADDITION**

Location  
**SIoux FALLS, SOUTH DAKOTA**

Issue Date  
02/13/2024

Checked  
CB

Drawn  
BZ

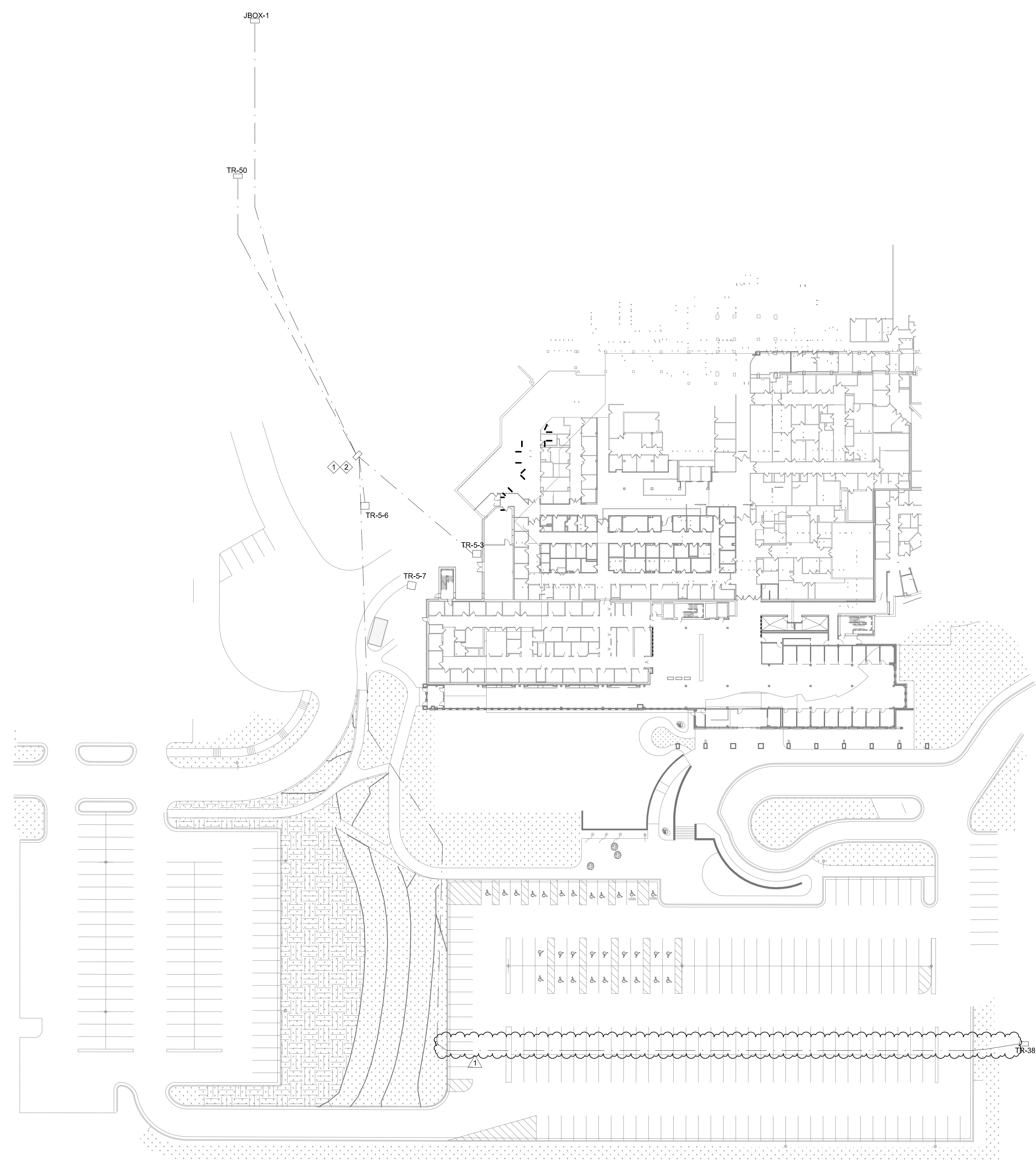
Project Number  
VA #438-480  
SGA #201909  
Building Number  
5

Drawing Number  
EE100

Three inches = one foot  
 one and one half inches = one foot  
 one inch = one foot  
 three quarters inch = one foot  
 one half inch = one foot  
 three eighths inch = one foot  
 one quarter inch = one foot  
 one eighth inch = one foot

**KEY NOTES:**

- ① REPLACE MEDIUM VOLTAGE FEEDER 2 JUNCTION BOX 5. COORDINATE WITH UTILITY AND OWNER.
- ② REFER TO SHEET EE302 FOR ADDITIONAL INFORMATION.



① MEDIUM VOLTAGE SITE PLAN  
 1" = 40'-0"

C:\Revit\Projects\E-Lobby Central\_R201\_Bem.Zum.Mt 2/12/2024 3:56:04 PM

Revision#	Description	Date:
1	ADDENDUM 1	02/13/2024

**CONSULTANTS**

<b>ARCHITECTURAL:</b> <b>BWBR</b> 380 St. Peter St Suite 600 St. Paul, MN 55102 Phone: 651-222-3701	<b>STRUCTURAL:</b> <b>ERR</b> Erickson Road Associates 2550 University Ave W Suite 423-S St. Paul, MN 55402 Phone: 651-251-7570	<b>MEP:</b> <b>DUNHAM</b> Dunham Associates, Inc. 50 South Sixth St Suite 1100 Minneapolis, MN 55402 Phone: 612-465-7550 0421950-002-00	<b>CIVIL:</b> <b>EVS</b> EVS 10025 Valley View Rd Suite 140 Eden Prairie, MN 55344 Phone: 952-446-0236	<b>LANDSCAPE:</b> <b>CONFLUENCE</b> CONFLUENCE 524 N Main Ave Suite 201 Sioux Falls, SD 57104 Phone: 605-338-1205
--	---	--	--	---

**ARCHITECT OF RECORD**

**A/E:**  
Stone Group Architects  
600 E 7th Street  
Sioux Falls, SD 57103  
605-271-1144

**STAMP**

Office of Construction and Facilities Management  
 U.S. Department of Veterans Affairs

Drawing Title  
**ELECTRICAL SITE MEDIUM VOLTAGE PLAN**

Approved: \_\_\_\_\_

Phase  
**CONSTRUCTION DOCUMENTS**

Project Title  
**NEW FRONT LOBBY AND PRIMARY CARE ADDITION**

Location  
**SIoux FALLS, SOUTH DAKOTA**

Issue Date  
 02/13/2024

Checked  
 CB

Drawn  
 BZ

Project Number  
 VA #438-480  
 SGA #201909

Building Number  
 5

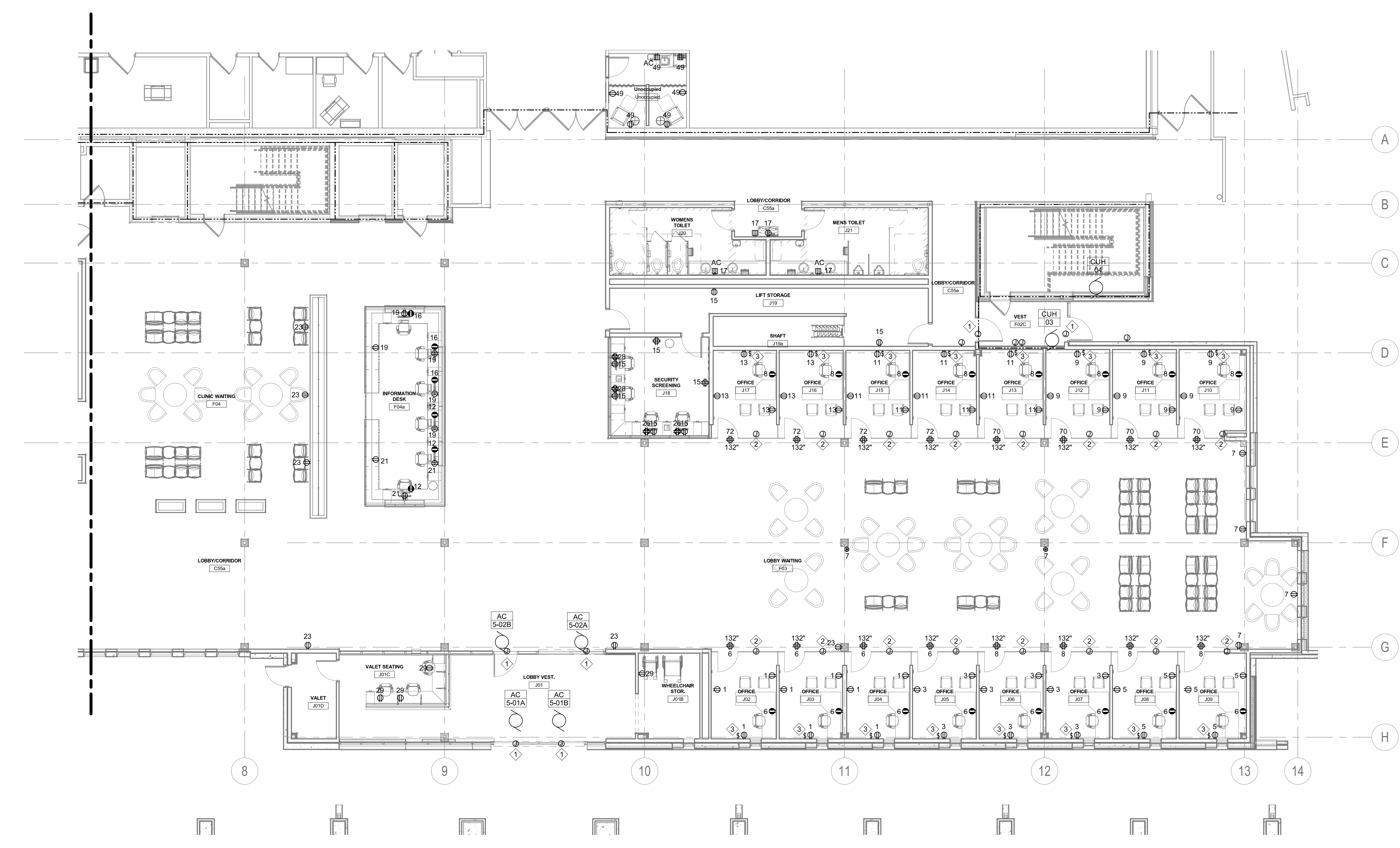
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**GENERAL NOTES:**

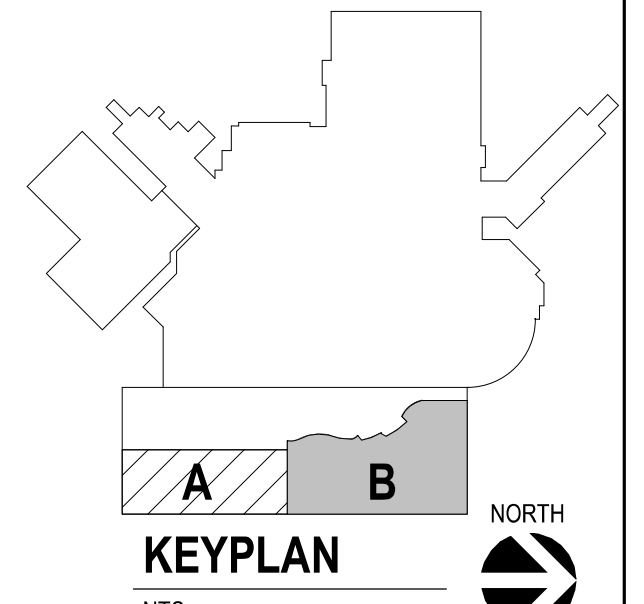
- A. BUILDING WILL BE IN USE DURING CONSTRUCTION. SCHEDULE AND CARRY OUT THE WORK IN SUCH A MANNER AS TO CAUSE THE OWNER A MINIMUM OF INCONVENIENCE DUE TO SERVICE INTERRUPTION. TEMPORARY SERVICES (FEEDER, BRANCH CIRCUIT, AND SIGNAL SYSTEMS) SHALL BE INSTALLED IN ONE AREA OR PHASE OF CONSTRUCTION DISRUPTS SERVICE TO ANOTHER AREA OF THE BUILDING(S) OR IF THE EQUIPMENT, CONDUITS, OR FEEDERS HAVE TO BE RELOCATED TO ALLOW CONSTRUCTION TO PROGRESS. SERVICE INTERRUPTIONS SHALL BE CONFINED TO THE SMALLEST AREA POSSIBLE AT ANY ONE TIME AND INTERRUPTIONS SHALL BE SCHEDULED WITH THE OWNER'S SITE REPRESENTATIVE. THERE SHALL BE DESIGNATED AREAS WHERE INTERRUPTIONS LIMITED TO AND SHALL BE CONDUCTED AFTER HOURS (8:00 PM - 6:00 AM) MONDAY THROUGH SATURDAY. AFTER SERVICE HAS BEEN RESTORED FOLLOWING AN INTERRUPTION, INSPECT AREAS AFFECTED BY THE INTERRUPTION AND BE RESPONSIBLE FOR RETURNING AUTOMATICALLY CONTROLLED EQUIPMENT TO THE SAME OPERATING CONDITION WHICH EXISTED PRIOR TO THE INTERRUPTION.
- B. SIGNIFICANT NOISE PRODUCING WORK SHALL BE CONDUCTED AFTER HOURS (8:00 PM - 6:00AM)
- C. REMOVE, REPLACE, RELOCATE, ETC. ANY ELECTRICAL DEVICES AND/OR ANY CONDUIT/WIRING AS REQUIRED TO COMPLETE REMODELING AS INDICATED IN THE CONTRACT DOCUMENTS.
- D. DRAWINGS INDICATE EXISTING CONDITIONS AS THEY WERE INDICATED ON OWNER PROVIDED AS-BUILT DRAWINGS AND SITE VERIFICATION. ACTUAL CONDITIONS MAY VARY FROM THE CONDITIONS INDICATED. THE CONTRACTOR IS RESPONSIBLE TO FIELD VERIFY EXACT CONDITIONS.
- E. ALL DEVICES, EQUIPMENT, CABLING, ETC. INDICATED IN THE CONTRACT DOCUMENTS TO BE REMOVED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DISPOSE OF IN ACCORDANCE WITH LOCAL AND FEDERAL REGULATIONS. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.
- F. PATCH ALL INTERSTITIAL PENETRATION VOIDS RESULTING FROM DEMOLITION WORK. SEE ARCHITECTURAL DRAWINGS FOR PATCHING DETAILS. MAINTAIN FLOOR AND WALL RATINGS.
- G. DEMOLISH HOME RUN WIRING BACK TO SOURCE UNLESS NOTED OTHERWISE. DO NOT LEAVE CONDUIT ORS ABANDONED IN WIREWAY SYSTEMS LOCATED WITHIN THE INTERSTITIAL SPACES.
- H. NORMAL POWER ELECTRICAL DEVICES ARE CIRCUITED TO PANEL LNSM2.1A. CRITICAL POWER DEVICES ARE CIRCUITED TO PANEL CRE2.1. LIFE SAFETY DEVICES ARE CIRCUITED TO PANEL LSES2M2.1.

**KEY NOTES:**

- 1. INSTALL 1/2" C. FROM THE POWERED DOOR PUSH BUTTONS TO THE POWERED DOOR CONTROL BOX FOR ROUTING OF CONTROL WIRES. FOLLOW MANUFACTURER GUIDELINES FOR PLACEMENT OF POWERED DOOR POWER SUPPLY. INSTALL DISCONNECT TOGGLE SWITCH WITHIN 36" OF THE CONNECTION POINT.
- 2. BASE BID TO INCLUDE SELECTABLE PRIVACY GLASS. DEDUCT ALTERNATE 13 DOES NOT INCLUDE POWERED PRIVACY GLASS. BUSBAR ROUGH IN AT TOP AND BOTTOM OF EACH DOOR.
- 3. SWITCH TO POWER ON SELECTABLE PRIVACY GLASS. DEDUCT ALTERNATE 13 DOES NOT INCLUDE POWERED PRIVACY GLASS.



1. GROUND LEVEL POWER PLAN - ZONE B  
1/8" = 1'-0"



Revision#	Description	Date:
1	ADDENDUM 1	02/13/2024

**CONSULTANTS**

<b>ARCHITECTURAL:</b> <b>BWBR</b> 380 St. Peter St Suite 600 St. Paul, MN 55102 Phone: 651-223-3701	<b>STRUCTURAL:</b> <b>ERR</b> Erickson Road Associates 2550 University Ave W Suite 423-S St. Paul, MN 55142 Phone: 651-251-1570	<b>MEP:</b> <b>DUNHAM</b> Dunham Associates, Inc. 50 South Sixth St Suite 1100 Minneapolis, MN 55402 Phone: 612-465-7550 0421950-002-00	<b>CIVIL:</b> <b>EVS</b> EVS 10025 Valley View Rd Suite 140 Eden Prairie, MN 55344 Phone: 952-445-0236	<b>LANDSCAPE:</b> <b>CONFLUENCE</b> CONFLUENCE 524 N Main Ave Suite 201 Sioux Falls, SD 57104 Phone: 605-338-1205
--	---	--	--	---

**ARCHITECT OF RECORD**

**A/E:**  
Stone Group Architects  
600 E 7th Street  
Sioux Falls, SD 57103  
605-271-1144

**STONE GROUP ARCHITECTS**

**STAMP**

**PROFESSIONAL ENGINEER**  
REG. NO. 7073  
JAY PROFFER  
ELECTRICAL

**Office of Construction and Facilities Management**

**VA** U.S. Department of Veterans Affairs

**Drawing Title**  
GROUND LEVEL POWER PLAN - AREA B

**Approved:**

**Phase**  
CONSTRUCTION DOCUMENTS

**Project Title**  
NEW FRONT LOBBY AND PRIMARY CARE ADDITION

**Location**  
SIOUX FALLS, SOUTH DAKOTA

**Issue Date**  
02/13/2024

**Checked**  
CB

**Drawn**  
BZ

**Project Number**  
VA #438-480  
SGA #201909

**Building Number**  
5

**Drawing Number**  
EP102

three inches = one foot  
 one and one half inches = one foot  
 one inch = one foot  
 three quarters inch = one foot  
 one half inch = one foot  
 three eighths inch = one foot  
 one quarter inch = one foot  
 one eighth inch = one foot



- ### GENERAL SHEET NOTES
- ALL CABLING SHALL BE INDEPENDENTLY SUPPORTED FROM STRUCTURE.
  - DIVISION 28 TO PROVIDE PULL STRING IN ALL CONDUIT RUNS.
  - REFER TO PLANS FOR CAMERA LOCATIONS REQUIRING CABLING PROVIDED BY DIVISION 27.
  - REFER TO DIVISION 08 SPECIFICATIONS FOR DOOR SECURITY/HARDWARE PREPARATION REQUIREMENTS.
  - FINAL QUANTITIES OF ALL PROVIDED DEVICES, SUPPORTS, HARDWARE, CABLING, ETC. TO BE VERIFIED AND PROVIDED BY THE DIVISION 27 CONTRACTOR.
  - SEE ENLARGED TELECOMMUNICATIONS ROOM LAYOUT PLANS FOR EXACT LOCATIONS OF EQUIPMENT.
  - TELECOMMUNICATION COMMON BONDING NETWORK SHALL COMPLY WITH J-STD-607A, TIA 942, IEEE STD 1100, AND NATIONAL ELECTRIC CODE.
  - ACTIVE EQUIPMENT (ROUTERS, SWITCHES, HUBS, ETC.) TO BE PROVIDED BY OWNER/OWNERS REPRESENTATIVE. COORDINATE FINAL EQUIPMENT LOCATION WITH OWNER'S IT STAFF.
  - DIVISION 27 TO PROVIDE ALL EQUIPMENT/CABLING INDICATED ON THIS SHEET UNLESS NOTED OTHERWISE.
  - TELECOMMUNICATION ROOM EQUIPMENT RACKS EXISTING TO REMAIN.

- ### EQUIPMENT
- TC 1 DEVICE TYPE CALLOUT
  - TC 2 INDIVIDUAL DEVICE CALLOUT
  - TC 1 EXISTING TELECOMM EQUIPMENT RACK (2-POST)
  - TC 2 EXISTING NURSE CALL SYSTEM (WALL MOUNTED CABINET)
  - TC 3 EXISTING BUILDING AUTOMATION SYSTEM (BAS) (WALL MOUNTED CABINET)
  - TC 4 EXISTING SURVEILLANCE CAMERA SYSTEM (WALL MOUNTED CABINET)
  - TC 5 EXISTING FIRE DETECTION/ALARM SYSTEM (WALL MOUNTED CABINET)

- ### CABLE TYPE
- CX#(24)/# QTY OF CABLE TYPE
  - CY OF CABLE PAIRS
  - CABLE TYPE CALLOUT (C = COPPER) (F = FIBER)
  - CE1(6)/# 6 PAIR REDUNDANT 50/125 MICRON OM3 MULTIMODE FIBER OPTIC CABLE(S) ROUTED TO FIBER LRU(S), (LAN/WAN BACKBONE)
  - CI(25)/# 25PR CATEGORY 6A PLENUM CABLE(S) ROUTED TO PATCH PANEL(S), (VOICE BACKBONE)
  - CO(25)/# RG-11 COAXIAL CABLE ROUTED TO RACK MOUNTED UTP VIDEO DISTRIBUTION PANEL

2 TELECOMMUNICATIONS CABLING RISER DIAGRAM  
 NO SCALE

### SYSTEMS - VIDEO SURVEILLANCE SCHEDULE

CAMERA	CAMERA TYPE (ROOM)	HOUSING TYPE	MOUNTING	NOTES
GROUND LEVEL				
C 1	LICENSE PLATE / EXTERIOR	DOME	POLE	
C 2	EXTERIOR	MULTI VIEW	POLE	
C 3	EXTERIOR	MULTI VIEW	WALL	
C 4	EXTERIOR	MULTI VIEW	POLE	
C 5	EXTERIOR	MULTI VIEW	POLE	
C 6	EXTERIOR	MULTI VIEW	POLE	
C 7	EXTERIOR	MULTI VIEW	POLE	
C 8	EXTERIOR	MULTI VIEW	POLE	
C 9	EXTERIOR	MULTI VIEW	POLE	
C 10	EXTERIOR	MULTI VIEW	POLE	
C 11	EXTERIOR	MULTI VIEW	POLE	
C 12	EXTERIOR	MULTI VIEW	WALL	
C 13	INTERIOR (C55)	DOME	WALL	
C 14	INTERIOR (C55A)	DOME	WALL	
C 15	INTERIOR (C55A)	DOME	WALL	
C 16	INTERIOR (C55A)	DOME	WALL	
C 17	INTERIOR (F04)	DOME	CEILING	
C 18	INTERIOR (F04)	DOME	CEILING	
C 19	INTERIOR (F01)	DOME	CEILING	
C 20	INTERIOR (F03)	DOME	WALL	
C 21	INTERIOR (F03)	DOME	WALL	

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Revision#	Description	Date:
1	ADDENDUM 1	02/13/2024

### CONSULTANTS

**ARCHITECTURAL:** B|W|B|R  
 330 St. Peter St, Suite 600, St. Paul, MN 55102, Phone: 651-222-3701

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 2350 University Ave W, Suite 423-S, St. Paul, MN 55112, Phone: 651-261-1750

**MEP:** DUNHAM  
 50 South Sixth St, Suite 1100, Minneapolis, MN 55402, Phone: 612-465-7570

**CIVIL:** EVS  
 10225 Valley View Rd, Suite 140, Eden Prairie, MN 55344, Phone: 952-646-0236

**LANDSCAPE:** CONFLUENCE  
 524 N Main Ave, Suite 201, Sioux Falls, SD 57104, Phone: 605-338-1203

### ARCHITECT OF RECORD

**A/E:** Stone Group Architects  
 600 E 7th Street, Sioux Falls, SD 57103, 605-271-1144

**STAMP:** PROFESSIONAL ENGINEER, REG. NO. 7073, JAY BROSCH, CIVIL, STATE OF SOUTH DAKOTA

**Office of Construction and Facilities Management**  
 U.S. Department of Veterans Affairs

**Drawing Title:** ELECTRICAL RISERS

**Phase:** CONSTRUCTION DOCUMENTS

**Project Title:** NEW FRONT LOBBY AND PRIMARY CARE ADDITION

**Location:** SIOUX FALLS, SOUTH DAKOTA

**Issue Date:** 02/13/2024

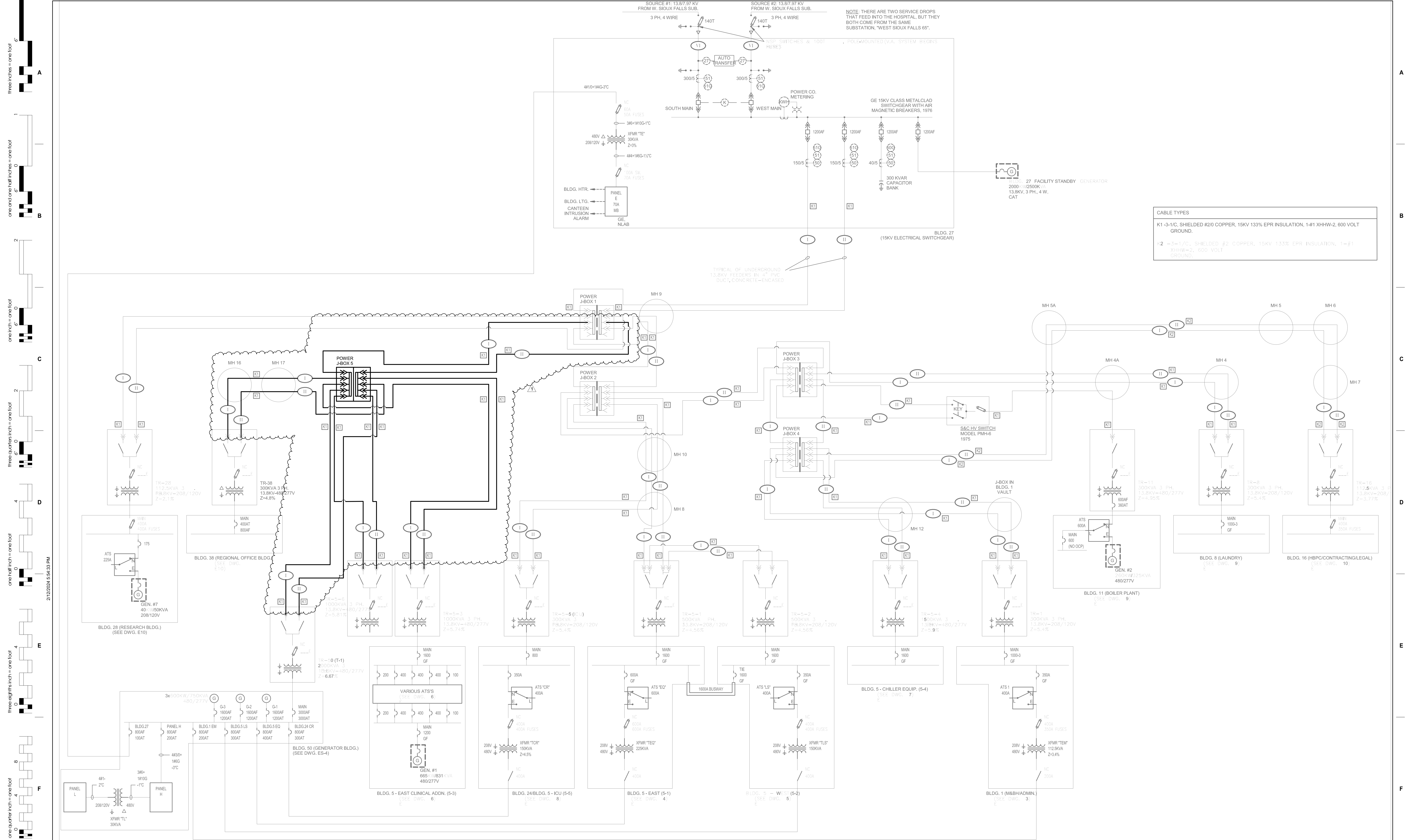
**Checked:** CB

**Drawn:** BZ

**Project Number:** VA #438-480 SGA #201909

**Building Number:** 5

**Drawing Number:** EE301



CABLE TYPES	
K1-3-1/C	SHIELDED #20 COPPER, 15KV 133% EPR INSULATION, 1-#1 XHHW-2, 600 VOLT GROUND.
#2-3-1/C	SHIELDED #2 COPPER, 15KV 133% EPR INSULATION, 1-#1 XHHW-2, 600 VOLT GROUND.

three inches = one foot  
 one and one half inches = one foot  
 one inch = one foot  
 three quarters inch = one foot  
 one half inch = one foot  
 three eighths inch = one foot  
 one quarter inch = one foot  
 one eighth inch = one foot

1 MEDIUM VOLTAGE ONE LINE NO SCALE

Revision#	Description	Date:
1	ADDENDUM 1	02/13/2024

**CONSULTANTS**

ARCHITECTURAL: **BWB**  
 STRUCTURAL: **ERR**  
 MEP: **DUNHAM**  
 CIVIL: **EVS**  
 LANDSCAPE: **CONFLUENCE**

**BWB**  
380 St. Peter St  
Suite 600  
St. Paul, MN 55102  
Phone: 651-222-3701

**ERR**  
Erickson Road Associates  
2350 University Ave W  
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St. Paul, MN 55102  
Phone: 651-261-1750

**DUNHAM**  
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0421950-024-00

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10025 Valley View Rd  
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Eden Prairie, MN 55344  
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**CONFLUENCE**  
524 N Main Ave  
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Sioux Falls, SD 57104  
Phone: 605-334-1205

**ARCHITECT OF RECORD**

**A/E:**  
Stone Group Architects  
600 E 7th Street  
Sioux Falls, SD 57103  
605-271-1144

**STAMP**

**Office of Construction and Facilities Management**  
 U.S. Department of Veterans Affairs

**Drawing Title**  
ELECTRICAL RISERS

**Phase**  
CONSTRUCTION DOCUMENTS

**Approved:**

**Project Title**  
NEW FRONT LOBBY AND PRIMARY CARE ADDITION

**Project Number**  
VA #438-480  
SGA #201909

**Building Number**  
5

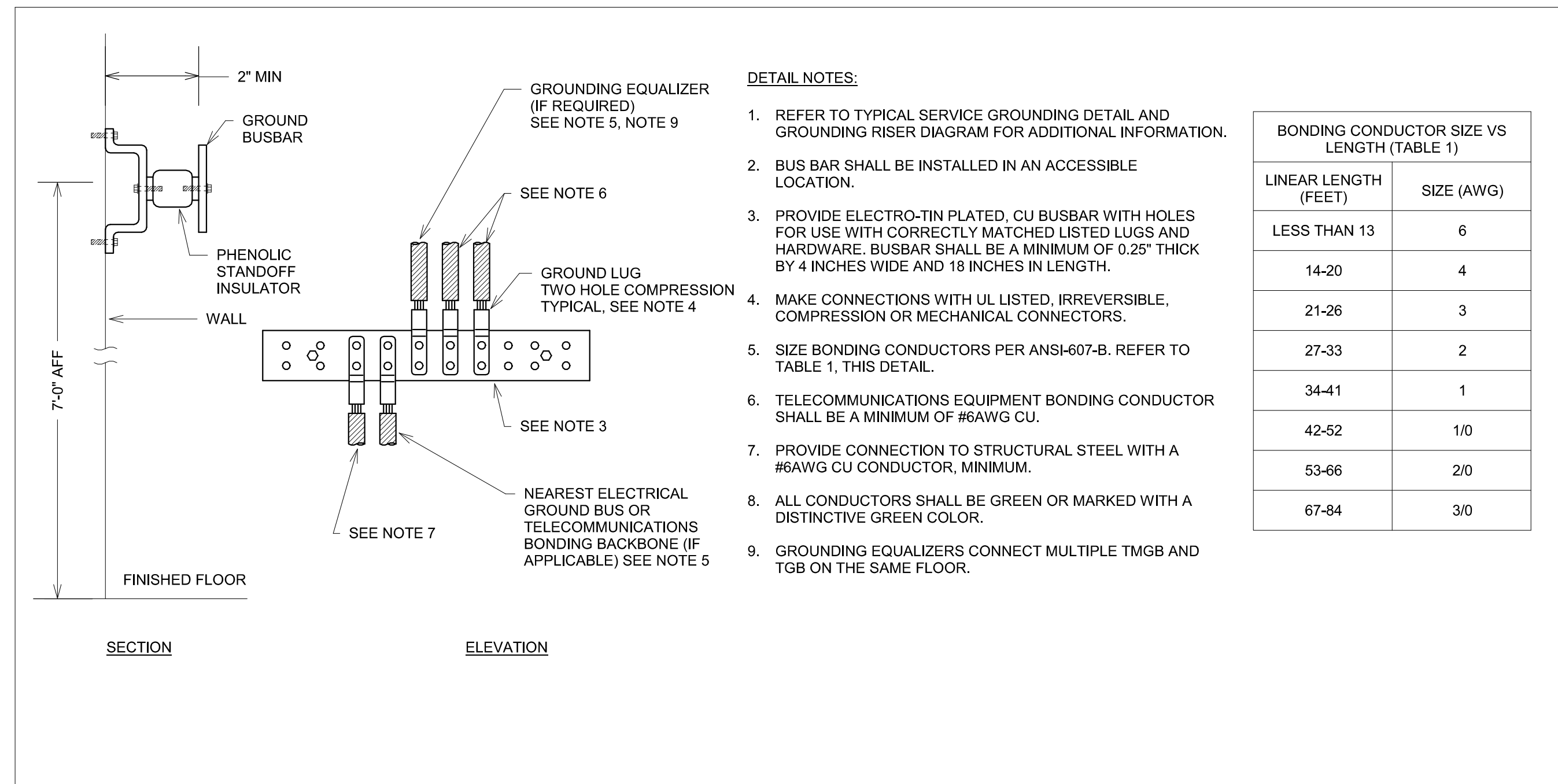
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SIOUX FALLS, SOUTH DAKOTA

**Issue Date**  
02/13/2024

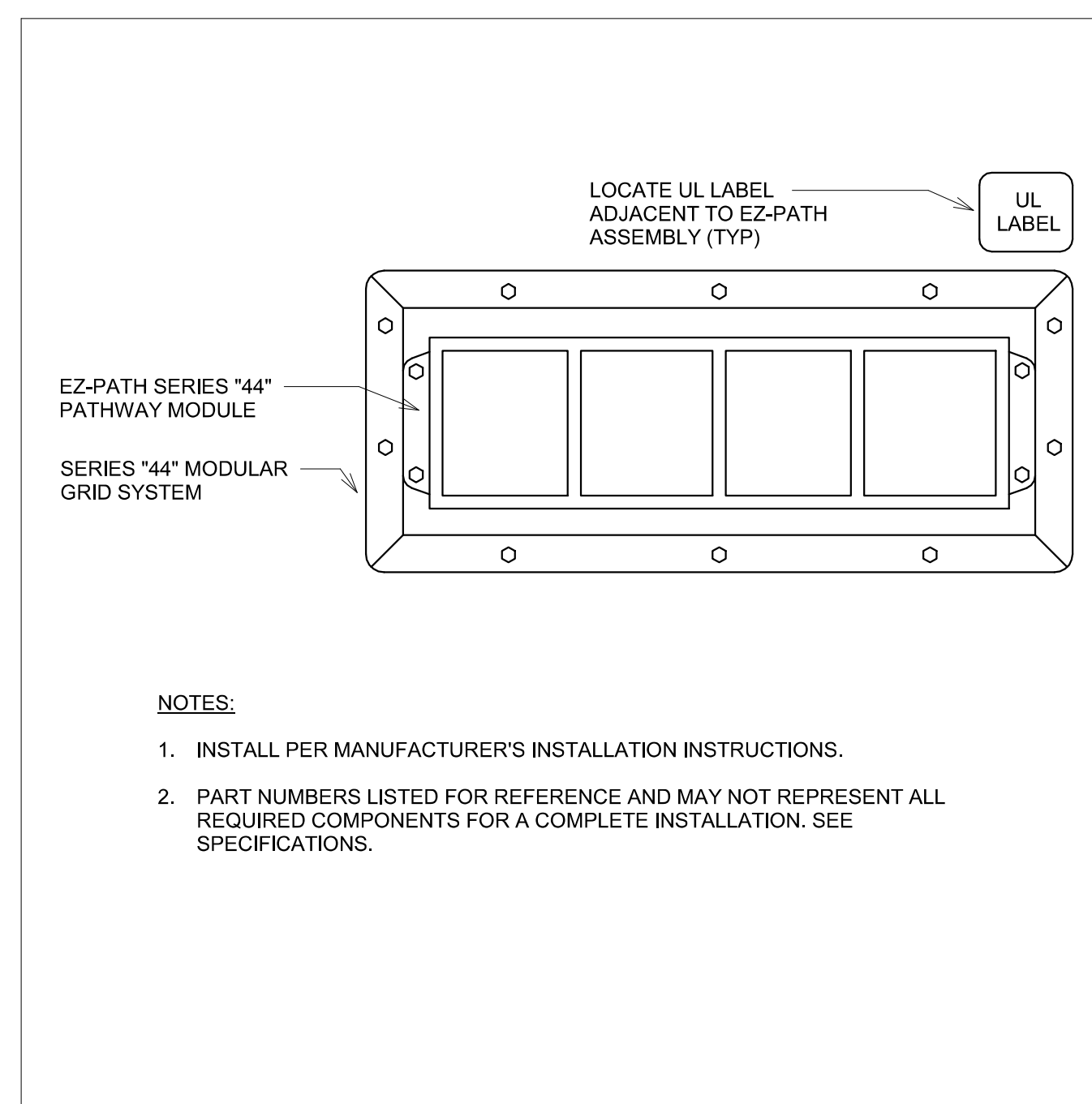
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**Drawn**  
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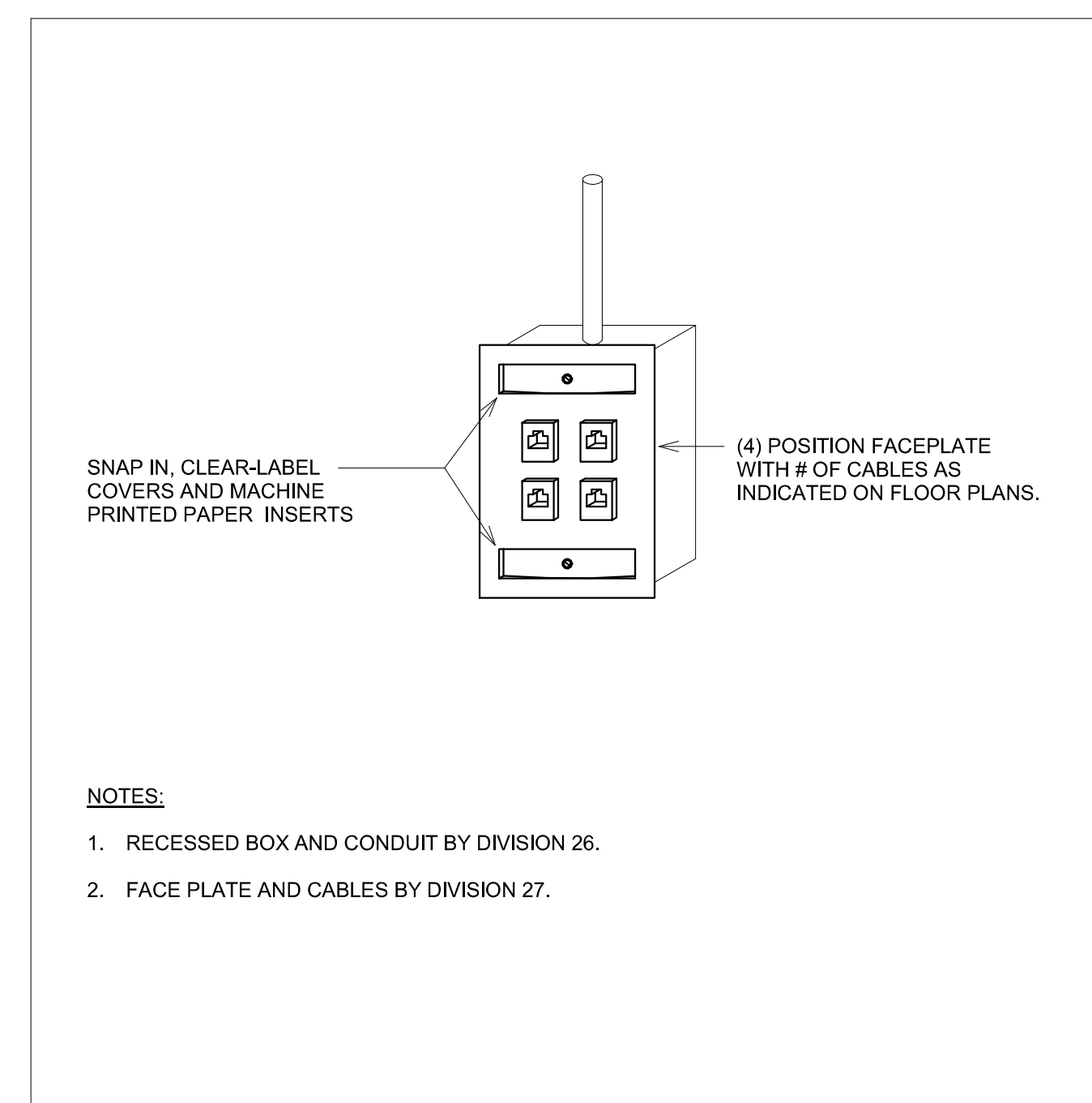
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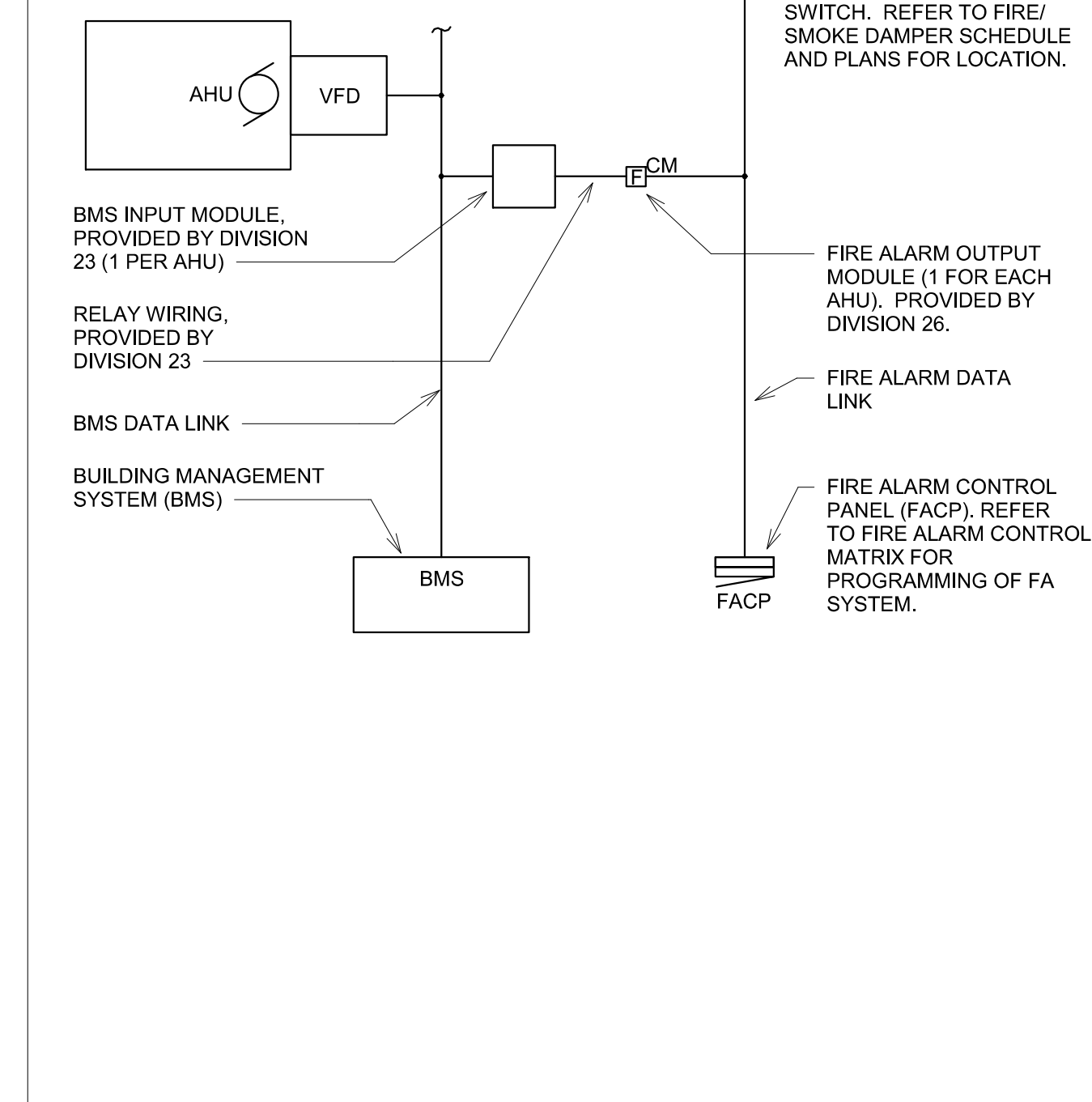
1 TELECOMMUNICATIONS GROUND BAR DETAIL (TGB) NO SCALE



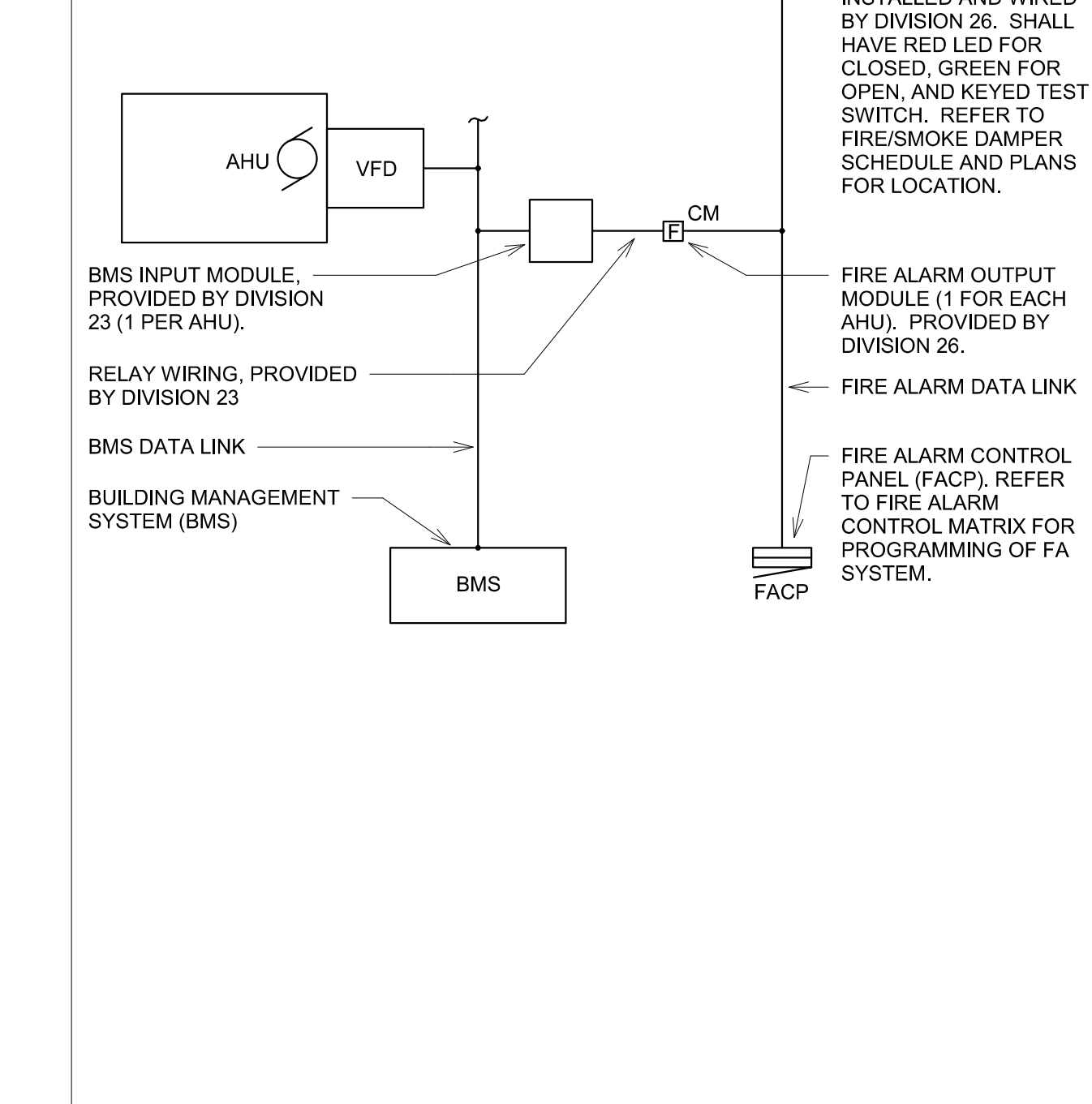
5 FIRE STOP DETAIL - CORRIDOR PENETRATION NO SCALE



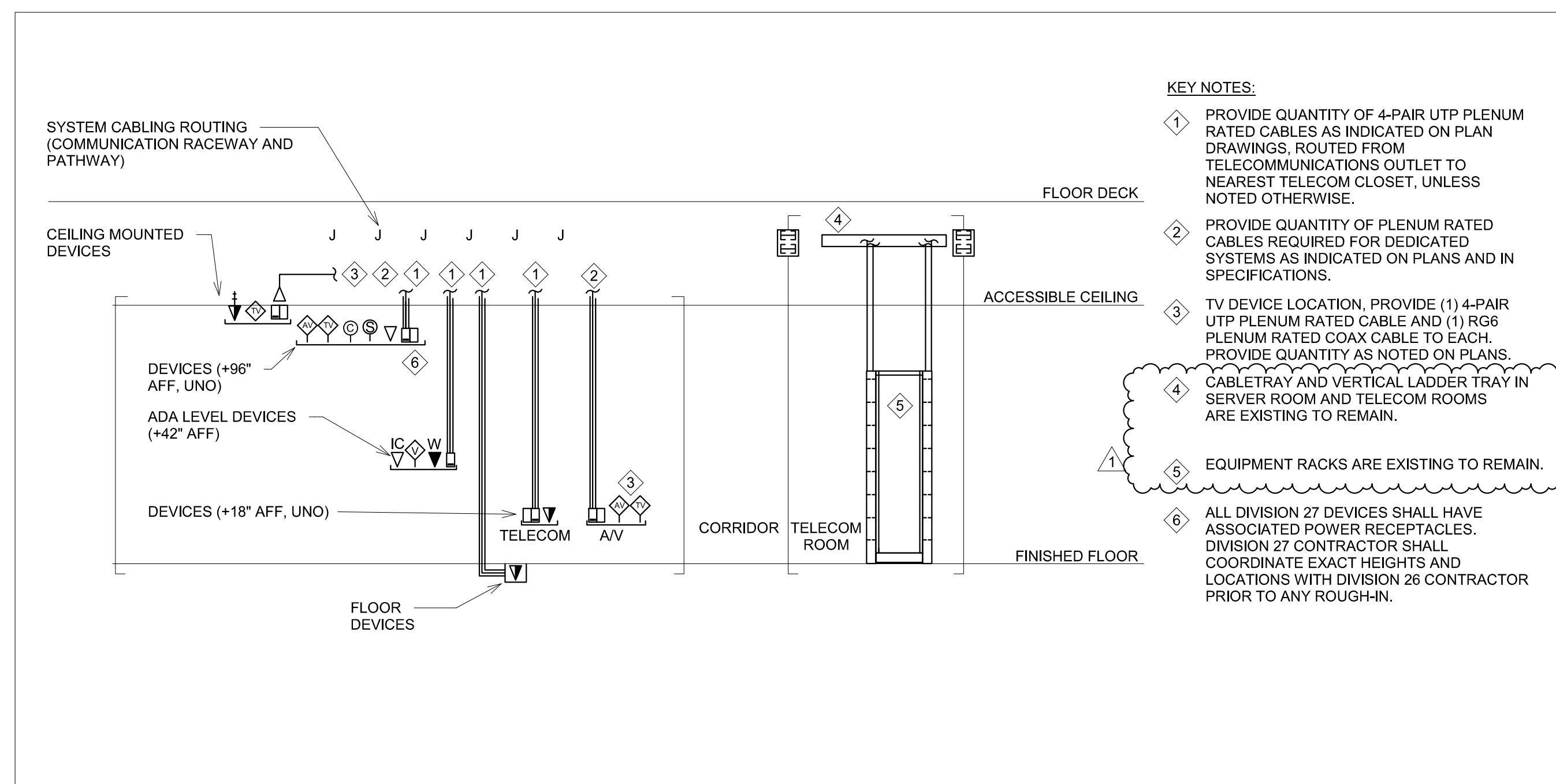
6 VOICE/DATA OUTLET LOCATION DETAIL NO SCALE



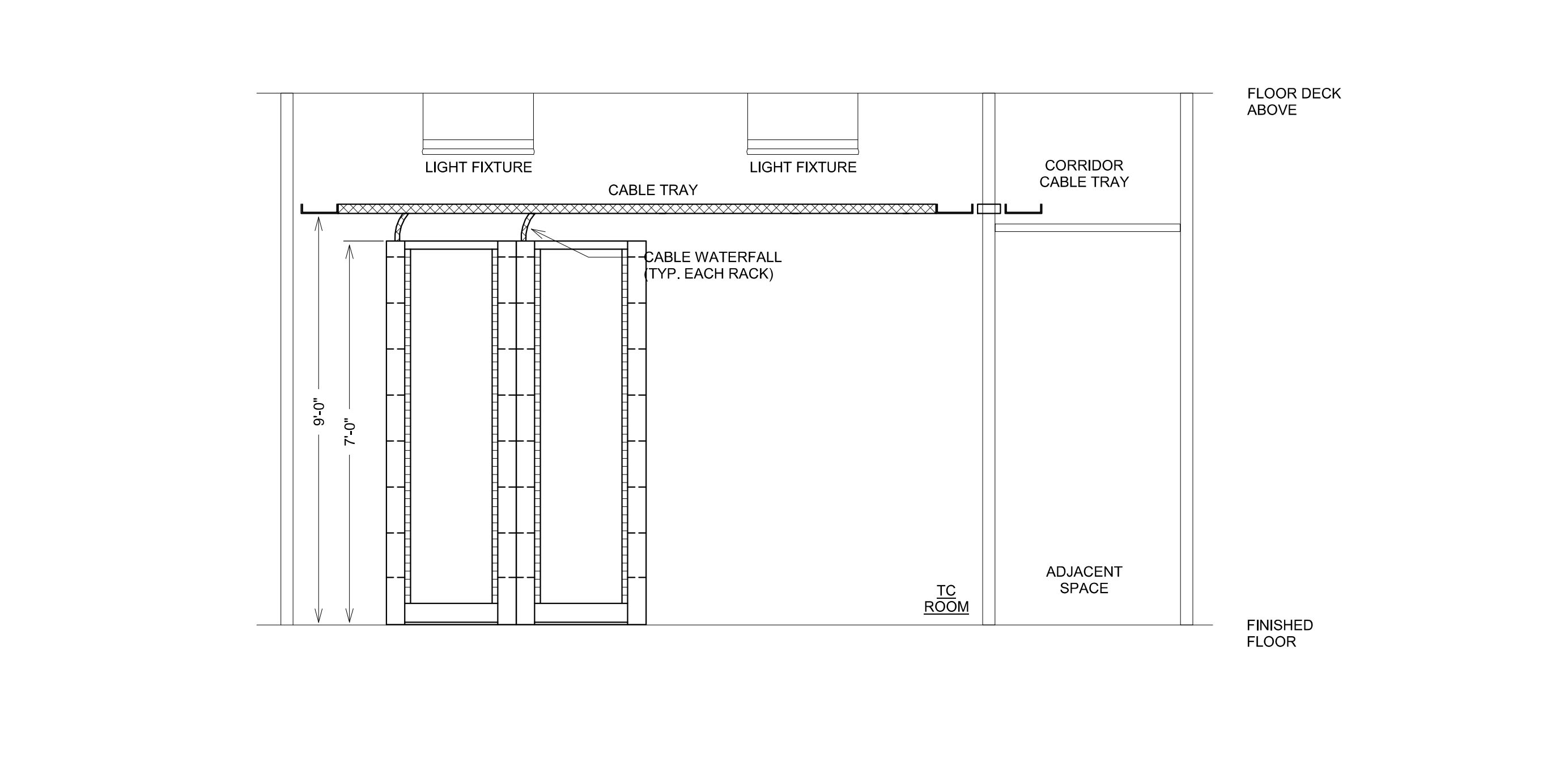
2 DUCT DETECTOR DETAIL NO SCALE



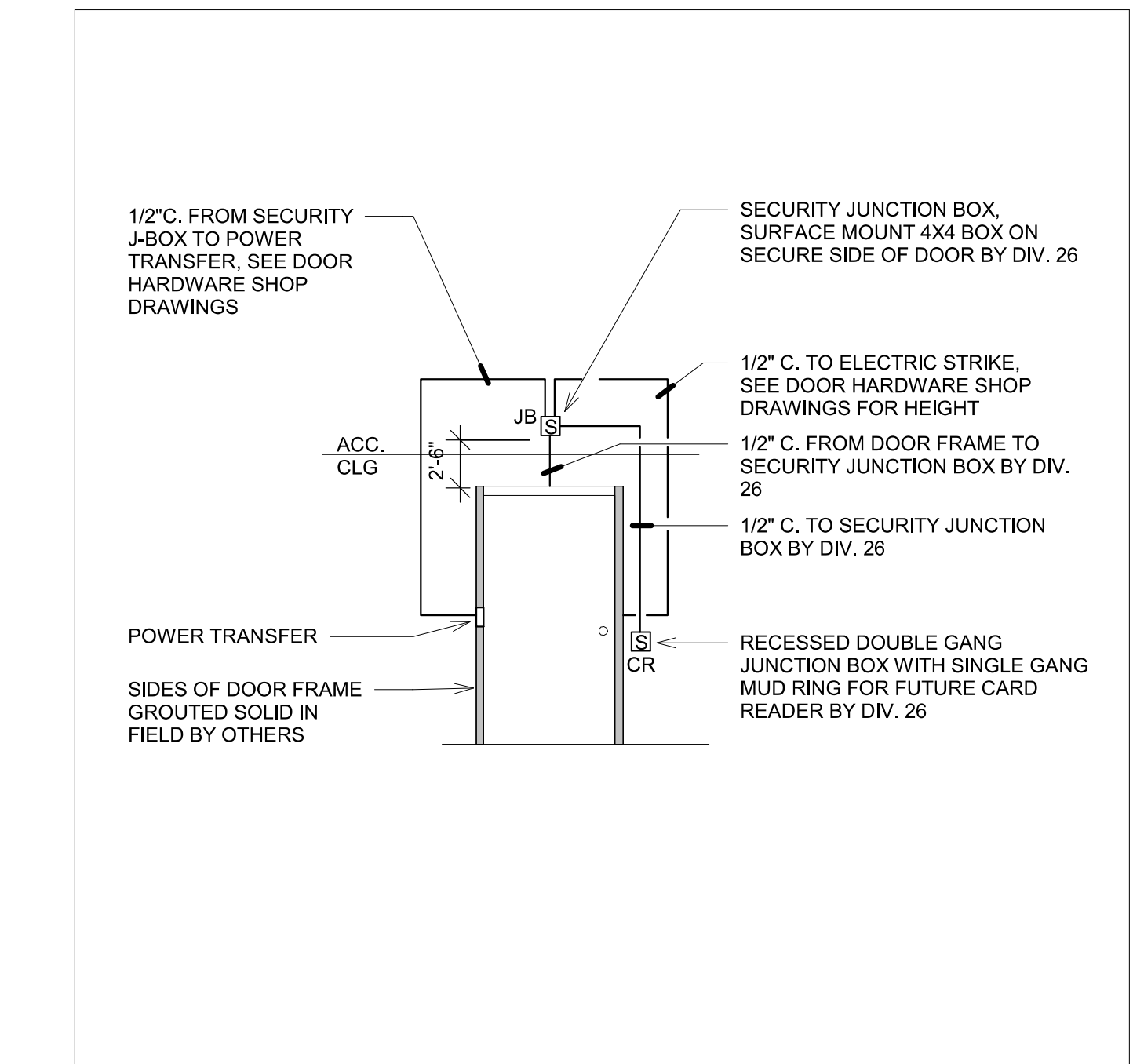
3 FIRE/SMOKE DAMPER - AREA DETECTOR DIAGRAM NO SCALE



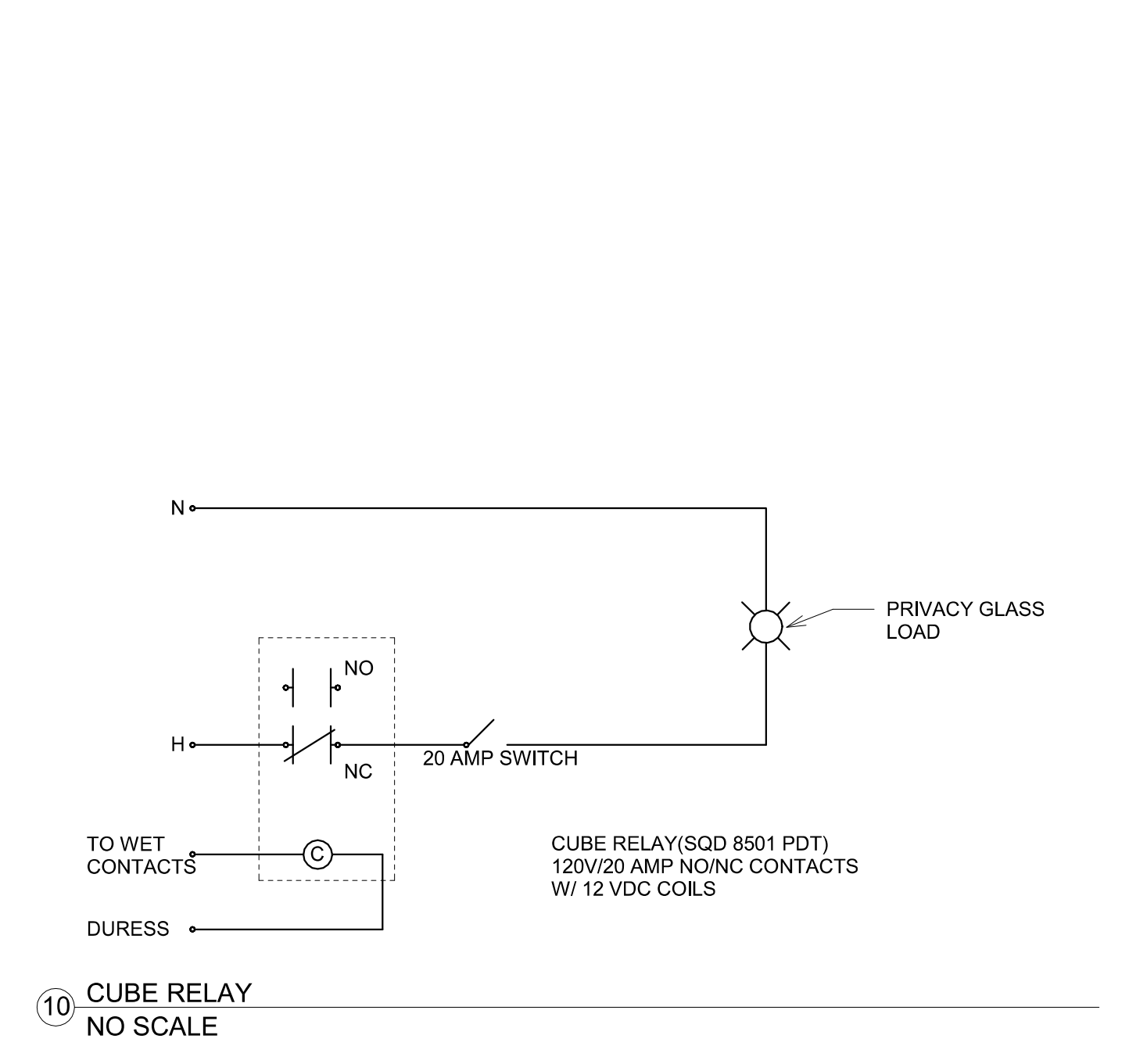
7 HORIZONTAL CABLING DETAIL NO SCALE



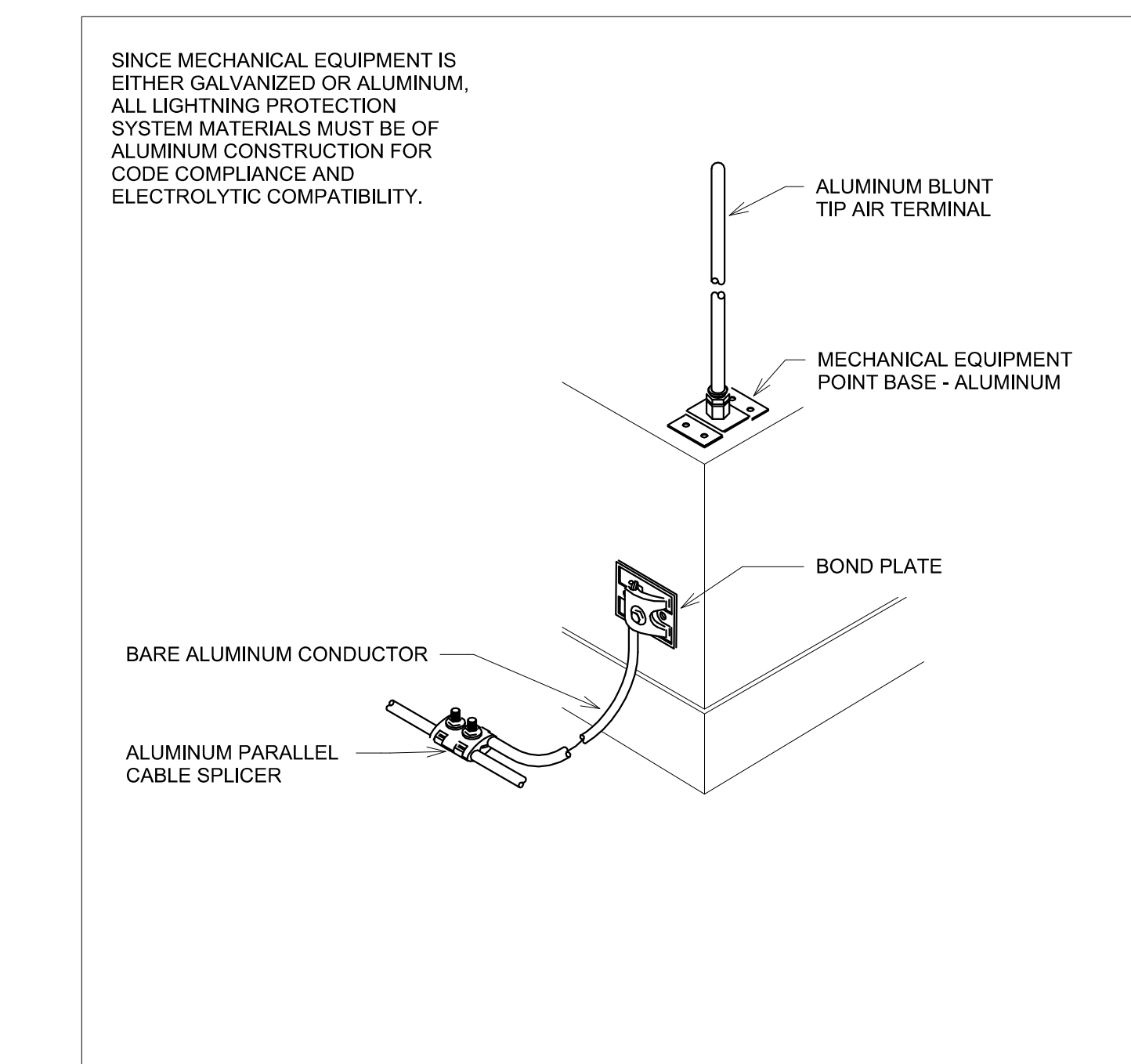
8 TELECOMMUNICATIONS ROOM EQUIPMENT ELEVATION NO SCALE



4 CARD READER ROUGH-IN DETAIL - HEALTH CARE NO SCALE



10 CUBE RELAY NO SCALE



9 AIR TERMINAL - MECHANICAL EQUIPMENT - PARALLEL CABLE DETAIL NO SCALE

Revision#	Description	Date:
1	ADDENDUM 1	02/13/2024

**CONSULTANTS**

ARCHITECTURAL: **BWB** 380 St. Peter St, Suite 600, St. Paul, MN 55102, Phone: 651-223-3701

STRUCTURAL: **ERR** Erickson Road Associates, 2550 University Ave W, Suite 423-S, St. Paul, MN 55402, Phone: 651-251-1570

MEP: **DUNHAM** Dunham Associates, Inc., 50 South Sixth St, Suite 1100, Minneapolis, MN 55402, Phone: 612-465-7550, 0421950-002-00

CIVIL: **EVS** 10023 Valley View Rd, Suite 140, Eden Prairie, MN 55344, Phone: 952-445-0236

LANDSCAPE: **CONFLUENCE** 524 N Main Ave, Suite 201, Sioux Falls, SD 57104, Phone: 605-338-1055

**ARCHITECT OF RECORD**

**A/E:** Stone Group Architects, 600 E 7th Street, Sioux Falls, SD 57103, 605-271-1144

**STAMP**

Office of Construction and Facilities Management, U.S. Department of Veterans Affairs

**Drawing Title**

**ELECTRICAL DETAILS**

**Phase**

**CONSTRUCTION DOCUMENTS**

**Drawing Title**

**NEW FRONT LOBBY AND PRIMARY CARE ADDITION**

**Location**

**SIoux FALLS, SOUTH DAKOTA**

**Issue Date**

**02/13/2024**

**Checked**

**CB**

**Drawn**

**BZ**

**Project Number**

**VA #438-480 SGA #201909**

**Building Number**

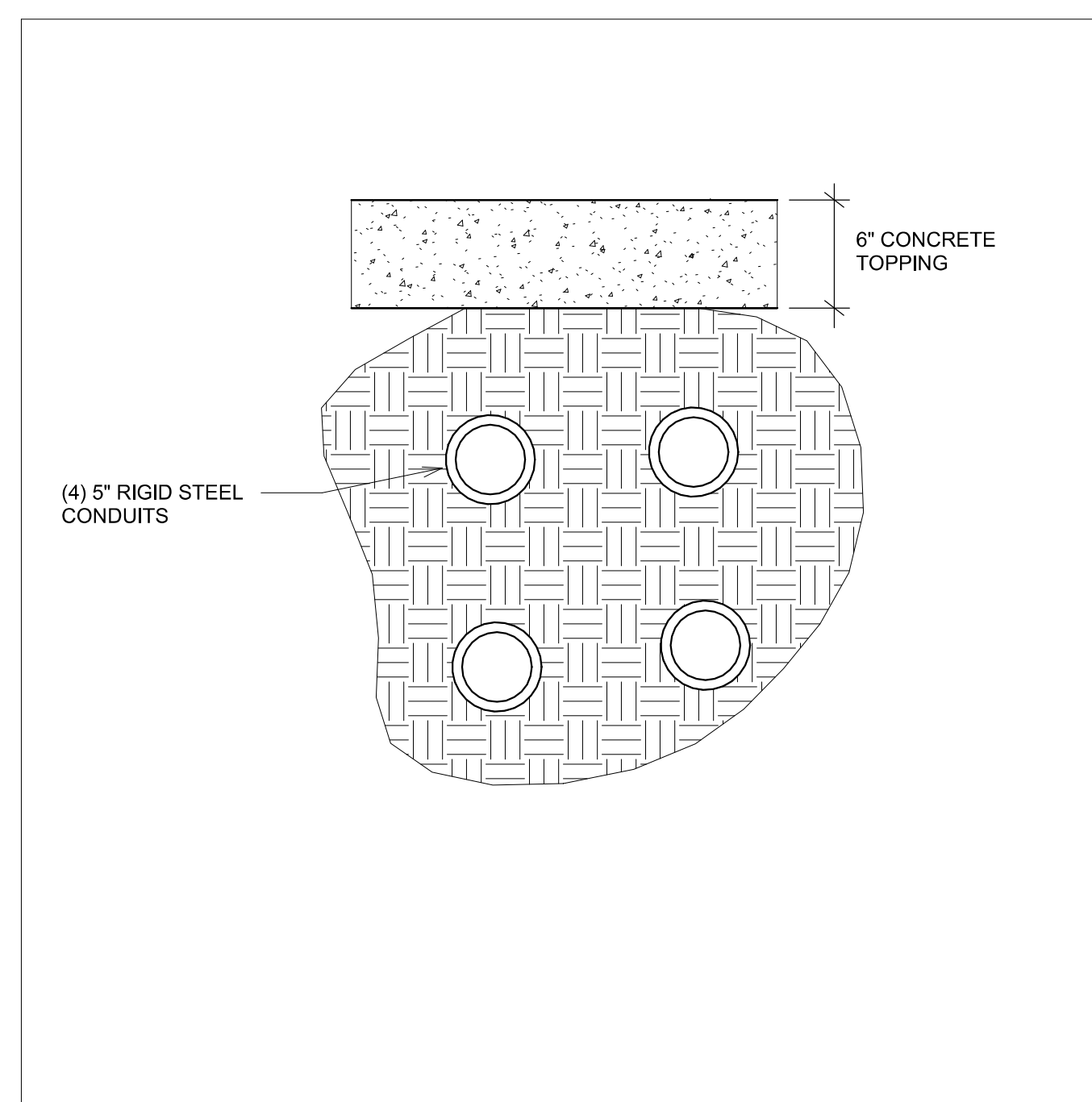
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**Drawing Number**

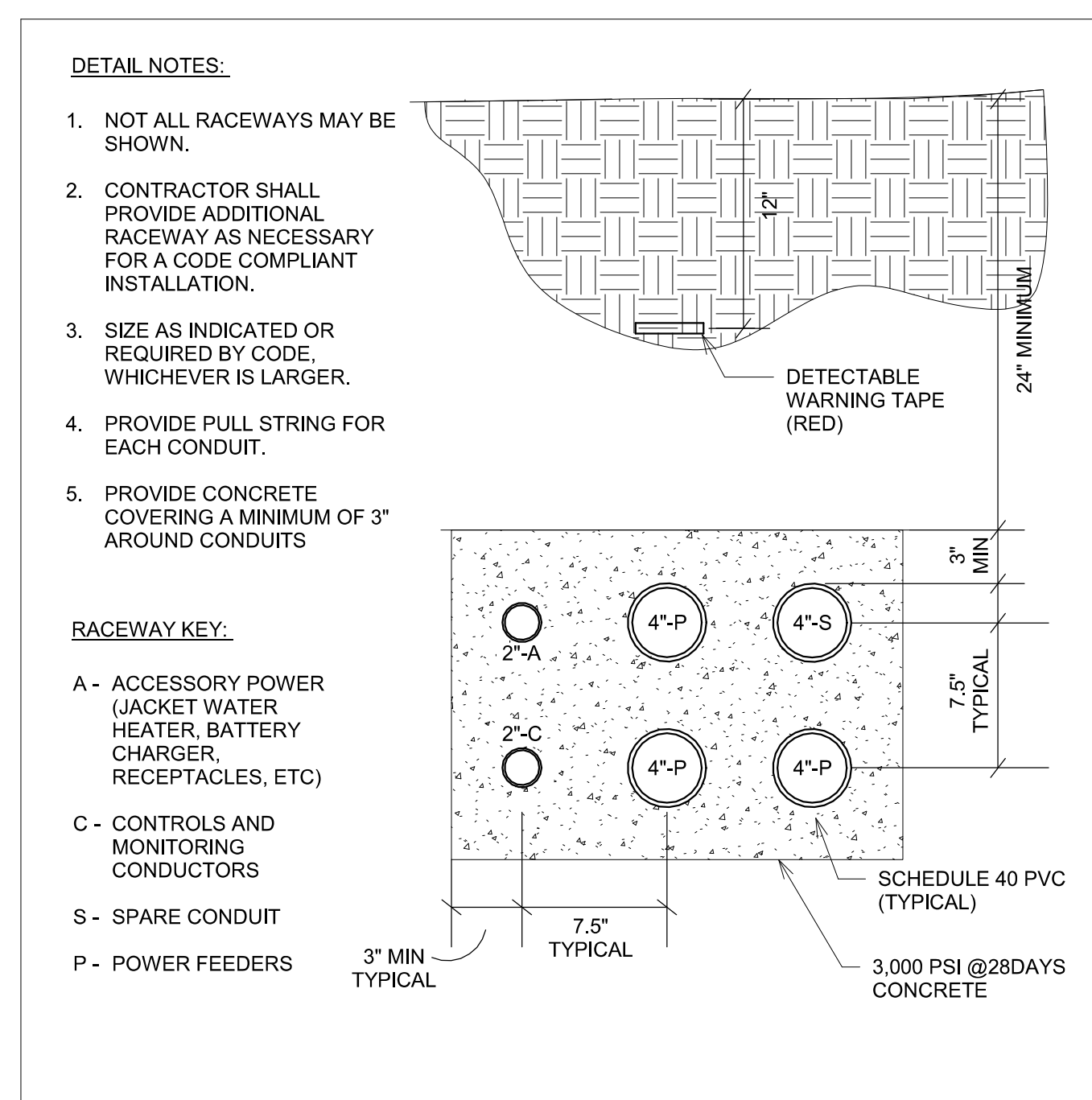
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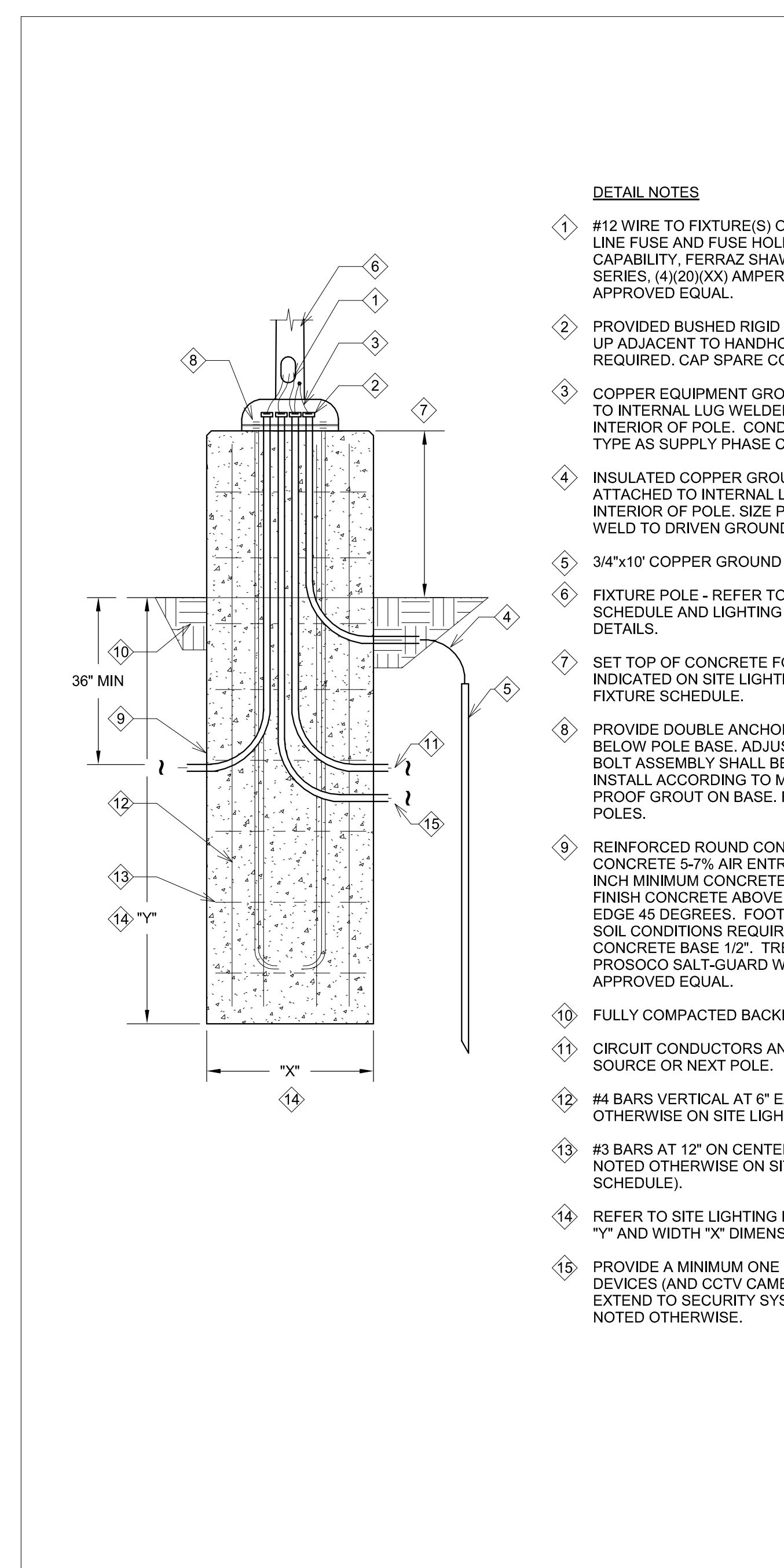
one eighth inch = one foot  
 one quarter inch = one foot  
 one half inch = one foot  
 three quarters inch = one foot  
 one inch = one foot  
 one and one half inches = one foot  
 two inches = one foot  
 three inches = one foot



1 DUCTBANK - TEMP 4 SLEEVE DETAIL  
NO SCALE

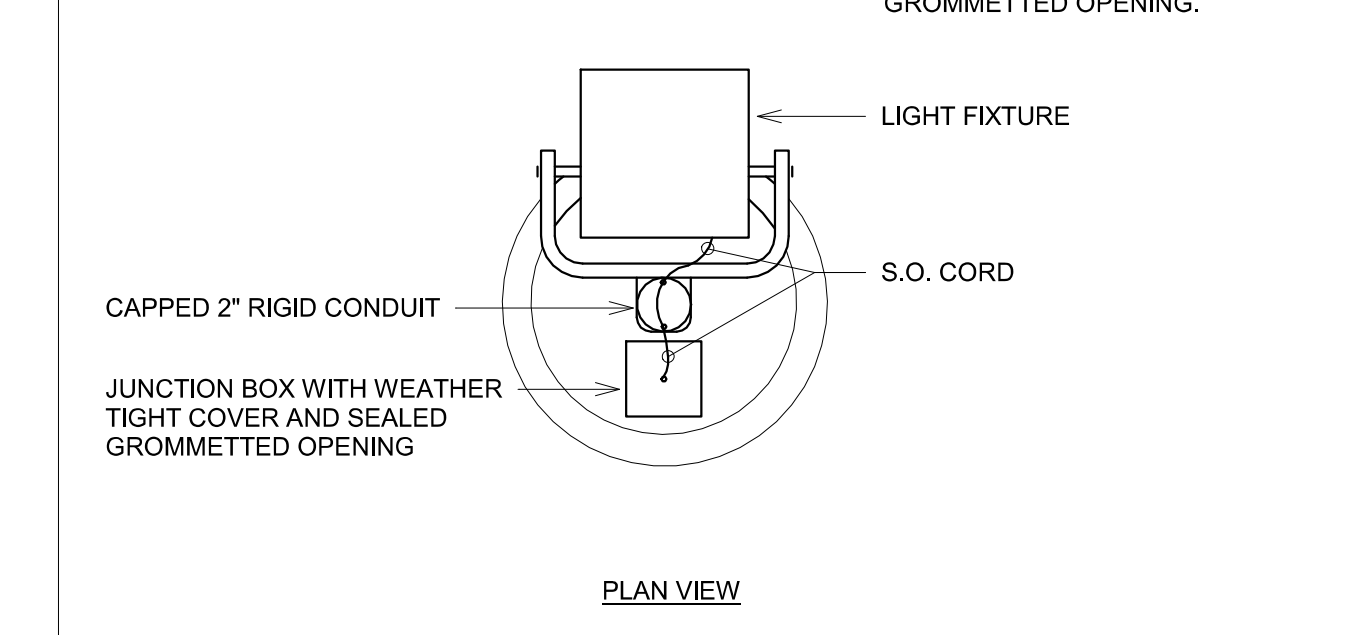
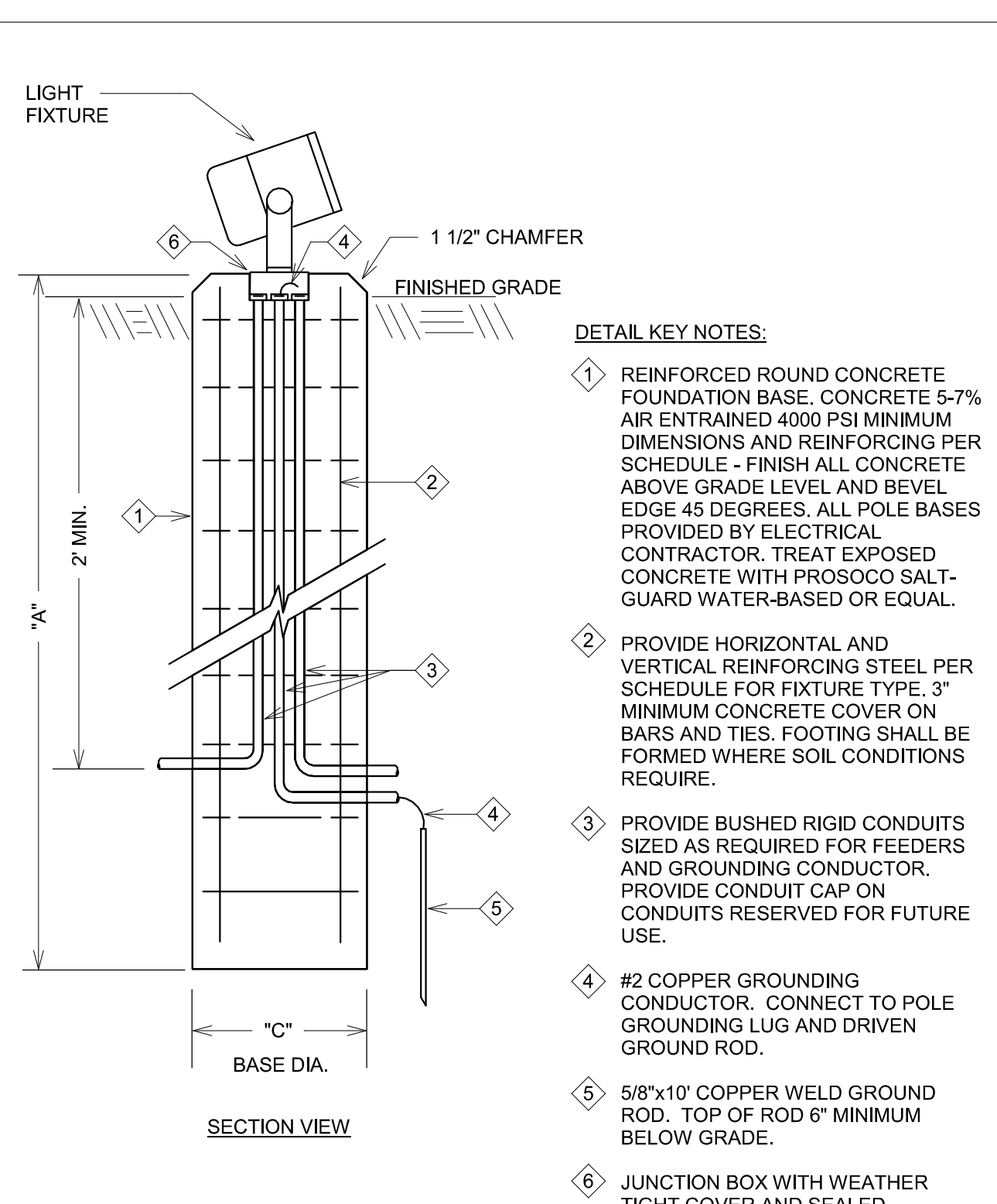


2 DUCTBANK - CONCRETE ENCASED DUCTBANK  
NO SCALE



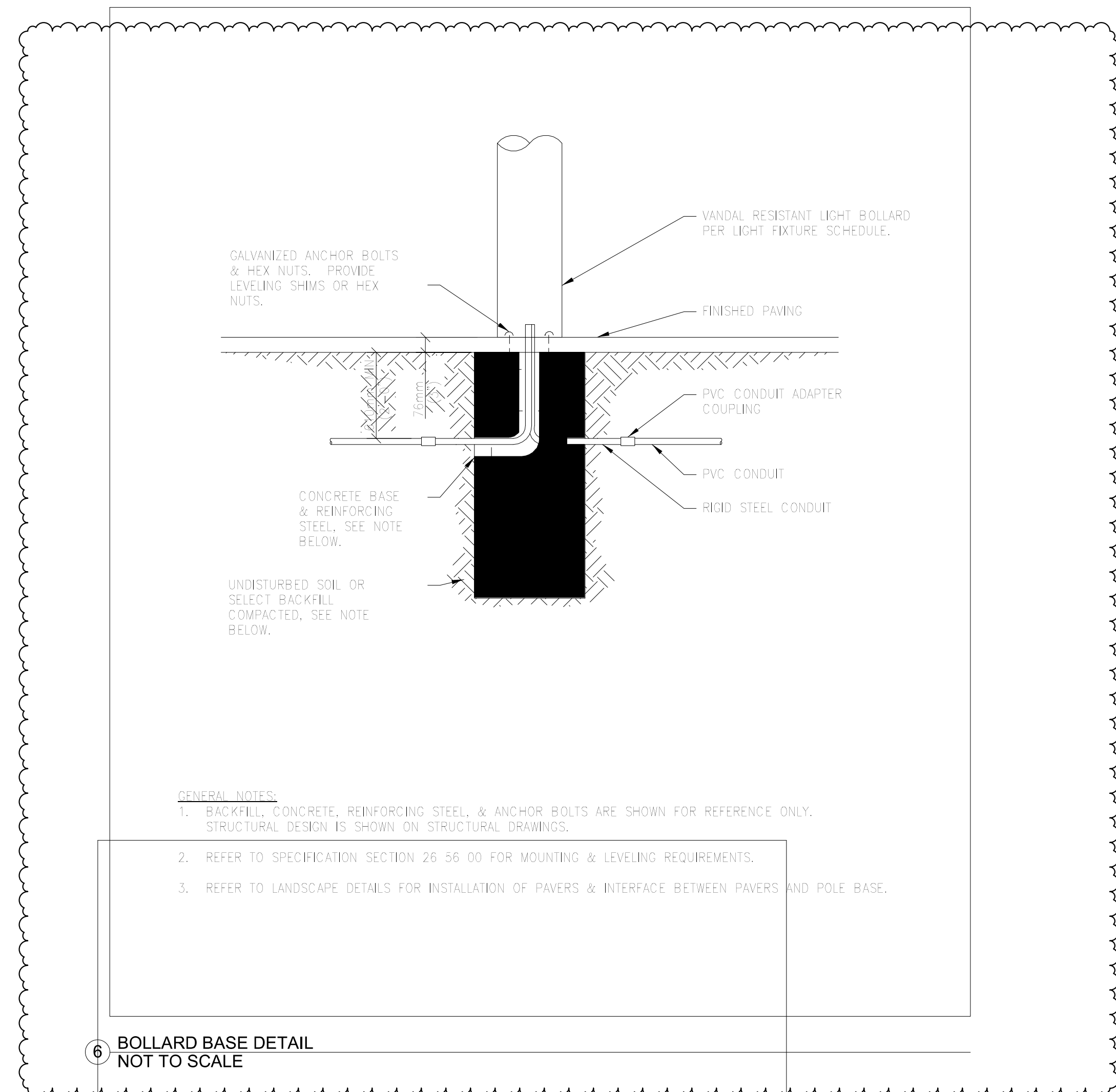
3 EXTERIOR POLE BASE DETAIL WITH GROUNDING  
NO SCALE

- DETAIL NOTES**
- #12 WIRE TO FIXTURE(S) OR AS INDICATED. PROVIDE IN-LINE FUSE AND FUSE HOLDER WITH BREAKAWAY CAPABILITY, FERRAZ SHAWMUT FEY COOPER HEB SERIES, (4)(20)(XX) AMPERE BUSSMAN TYPE KTK OR PRE-APPROVED EQUAL.
  - PROVIDED BUSHED RIGID CONDUITS. CONDUIT STUBBED UP ADJACENT TO HANDHOLE. NUMBER AND SIZE AS REQUIRED. CAP SPARE CONDUITS.
  - COPPER EQUIPMENT GROUNDING CONDUCTOR - ATTACH TO INTERNAL LUG WELDED TO INTERIOR OF POLE. CONDUCTOR TO BE SAME SIZE AND TYPE AS SUPPLY PHASE CONDUCTOR.
  - INSULATED COPPER GROUNDING CONDUCTOR ATTACHED TO INTERNAL LUG WELDED TO INTERIOR OF POLE. SIZE PER NFPA 70. EXOTHERMIC WELD TO DRIVEN GROUND ROD.
  - 3/4"x10" COPPER GROUND ROD (MIN 6" BELOW GRADE).
  - FIXTURE POLE - REFER TO SITE LIGHTING FIXTURE SCHEDULE AND LIGHTING STANDARD DETAILS.
  - SET TOP OF CONCRETE FOUNDATION ABOVE GRADE AS INDICATED ON SITE LIGHTING FIXTURE SCHEDULE.
  - PROVIDE DOUBLE ANCHOR BOLT NUTS ABOVE AND BELOW POLE BASE. ADJUST TO PLUMB POLE. ANCHOR BOLT ASSEMBLY SHALL BE PROVIDED BY POLE MFG. INSTALL ACCORDING TO MFG TEMPLATE. USE SHRINK PROOF GROUT ON BASE. FURNISH BASE COVER FOR POLES.
  - REINFORCED ROUND CONCRETE FOUNDATION BASE. CONCRETE 5-7% AIR ENTRAINED 4000 PSI MINIMUM. 3 INCH MINIMUM CONCRETE COVER ON BARS AND TIES. FINISH CONCRETE ABOVE GRADE LEVEL AND BEVEL EDGE 45 DEGREES. FOOTING SHALL BE FORMED WHERE SOIL CONDITIONS REQUIRE. CHAMFER ALL EDGES OF CONCRETE BASE 1/2". TREAT EXPOSED CONCRETE WITH PROSOCCO SALT-GUARD WATER-BASED OR PRE-APPROVED EQUAL.
  - FULLY COMPACTED BACKFILL.
  - CIRCUIT CONDUCTORS AND CONDUIT TO POWER SOURCE OR NEXT POLE.
  - #4 BARS VERTICAL AT 6" EACH FACE (UNLESS NOTED OTHERWISE ON SITE LIGHTING FIXTURE SCHEDULE).
  - #3 BARS AT 12" ON CENTER HORIZONTALLY (UNLESS NOTED OTHERWISE ON SITE LIGHTING FIXTURE SCHEDULE).
  - REFER TO SITE LIGHTING FIXTURE SCHEDULE FOR DEPTH "Y" AND WIDTH "X" DIMENSIONS.
  - PROVIDE A MINIMUM ONE INCH RACEWAY FOR SECURITY DEVICES (AND CCTV CAMERAS). RACEWAY SHALL EXTEND TO SECURITY SYSTEM HEAD END UNLESS NOTED OTHERWISE.



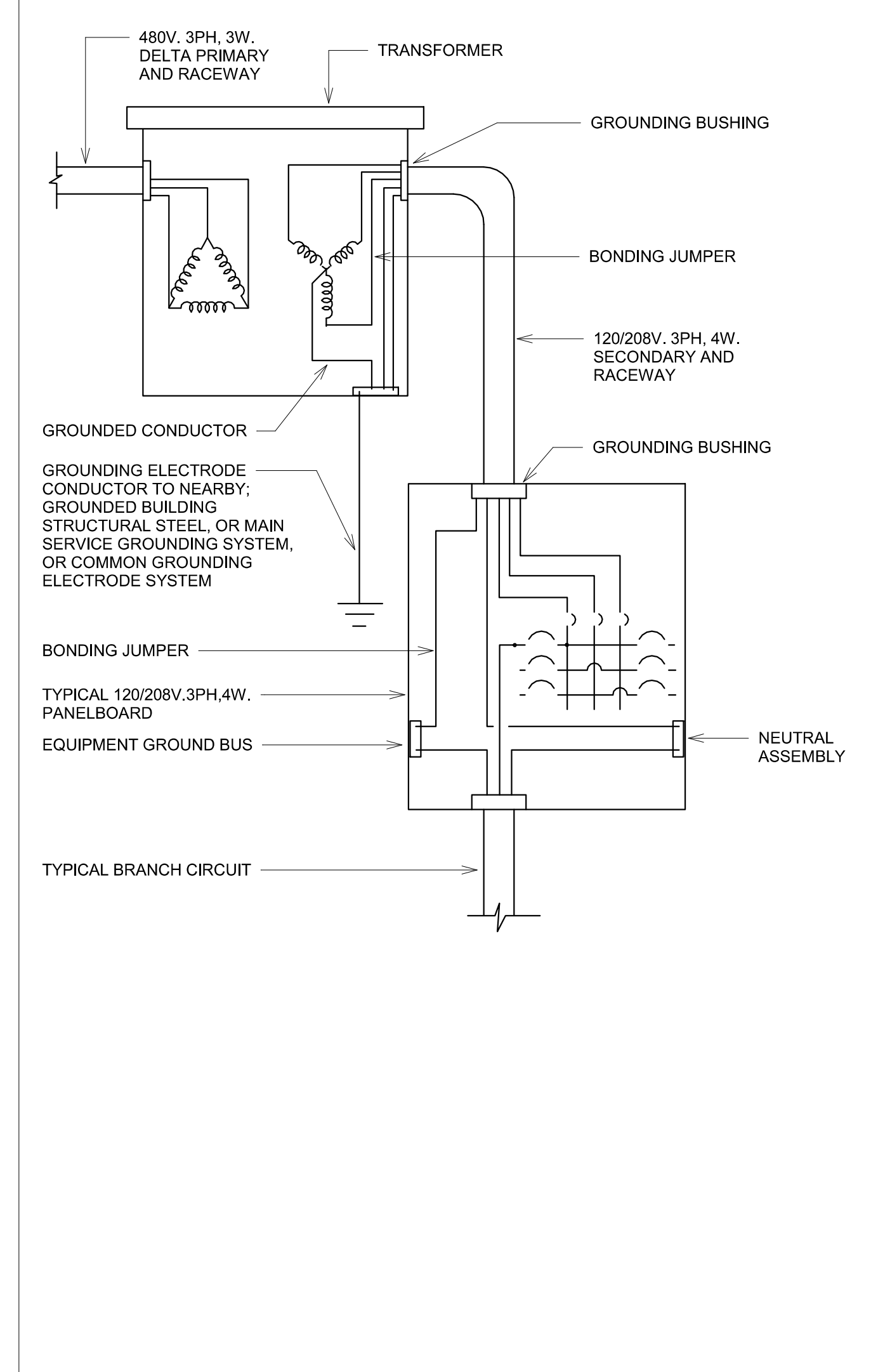
FIXT. TYPE	"A"	"B"	"C"	VERT. BARS	TIES
W2	36"	-	12"	4	3

4 LIGHTING ASSEMBLY BASE DETAIL  
NO SCALE



- GENERAL NOTES**
- BACKFILL, CONCRETE, REINFORCING STEEL, & ANCHOR BOLTS ARE SHOWN FOR REFERENCE ONLY. STRUCTURAL DESIGN IS SHOWN ON STRUCTURAL DRAWINGS.
  - REFER TO SPECIFICATION SECTION 26 56 00 FOR MOUNTING & LEVELING REQUIREMENTS.
  - REFER TO LANDSCAPE DETAILS FOR INSTALLATION OF PAVERS & INTERFACE BETWEEN PAVERS AND POLE BASE.

6 BOLLARD BASE DETAIL  
NOT TO SCALE



5 TRANSFORMER WIRING - PANELBOARD TYPE DETAIL  
NO SCALE

Revision#	Description	Date:
1	ADDENDUM 1	02/13/2024

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ELECTRICAL

**STONE GROUP ARCHITECTS**

Office of Construction and Facilities Management  
VA U.S. Department of Veterans Affairs

Drawing Title: **ELECTRICAL DETAILS**

Phase: **CONSTRUCTION DOCUMENTS**

Approved: \_\_\_\_\_

Project Title: **NEW FRONT LOBBY AND PRIMARY CARE ADDITION**

Location: **SIoux FALLS, SOUTH DAKOTA**

Issue Date: 02/13/2024

Checked: CB

Drawn: BZ

Project Number: **VA #438-480 SGA #201909**

Building Number: **5**

Drawing Number: **EE503**