

HERNDON WALKWAY RENOVATION

Raytown Quality Schools

11501 E. State Rte 350

Raytown, MO 64138

CONSTRUCTION DOCUMENTS

we design the future™

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Structural Engineers
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INDEX OF DRAWINGS

- GENERAL**
G000 COVER SHEET
- STRUCTURAL**
S100 FRAMING PLAN AND SECTIONS

VICINITY MAP



LOCATION OF WALKWAY



HERNDON CAREER CENTER

- GENERAL NOTES:**
- FIELD VERIFY THAT THE MAIN BUILDING EXTERIOR WALL IS INSULATED AND SEALED AT THE SOFFIT.
 - SOME ITEMS ARE INCLUDED TO COVER UNFORSEEN CONDITIONS AND MAY BE MODIFIED DURING DEMOLITION EXPLORATION.

SCOPE OF WORK: REMOVE EXISTING DAMAGED AND RUSTED STRUCTURAL MEMBERS, RE: STRUCTURAL SHEET FOR SCOPE OF ALL STRUCTURAL WORK TO BE DONE. REMOVE AND REPLACE SOFFIT SUPPORT MEMBERS THAT ARE DAMAGED. UNDAAGED MEMBERS CAN BE REUSED. REMOVE AND REPLACE SOFFIT AND FACIA METAL PANELS. PANELS THAT ARE NOT DAMAGED CAN BE REUSED. NEW PANELS TO MATCH EXISTING PROFILE AND GAUGE. PAINT TO MATCH EXISTING COLOR. REMOVE AND REINSTALL EXISTING RAILING AS REQUIRED FOR STRUCTURAL WORK. REPLACE EXISTING GUTTER TO MATCH EXISTING DRAINAGE REQUIREMENTS. EXISTING CONCRETE WALKWAY SLAB TO REMAIN, EXCEPT WHERE NOTED FOR STRUCTURAL BEAM REPLACEMENT. SCOPE TO INCLUDE CONCRETE SLAB, UP TO 4 SECTIONS REPLACEMENT IF REQUIRED. RE: DETAILS FOR ADDITIONAL INFORMATION AND NOTES.

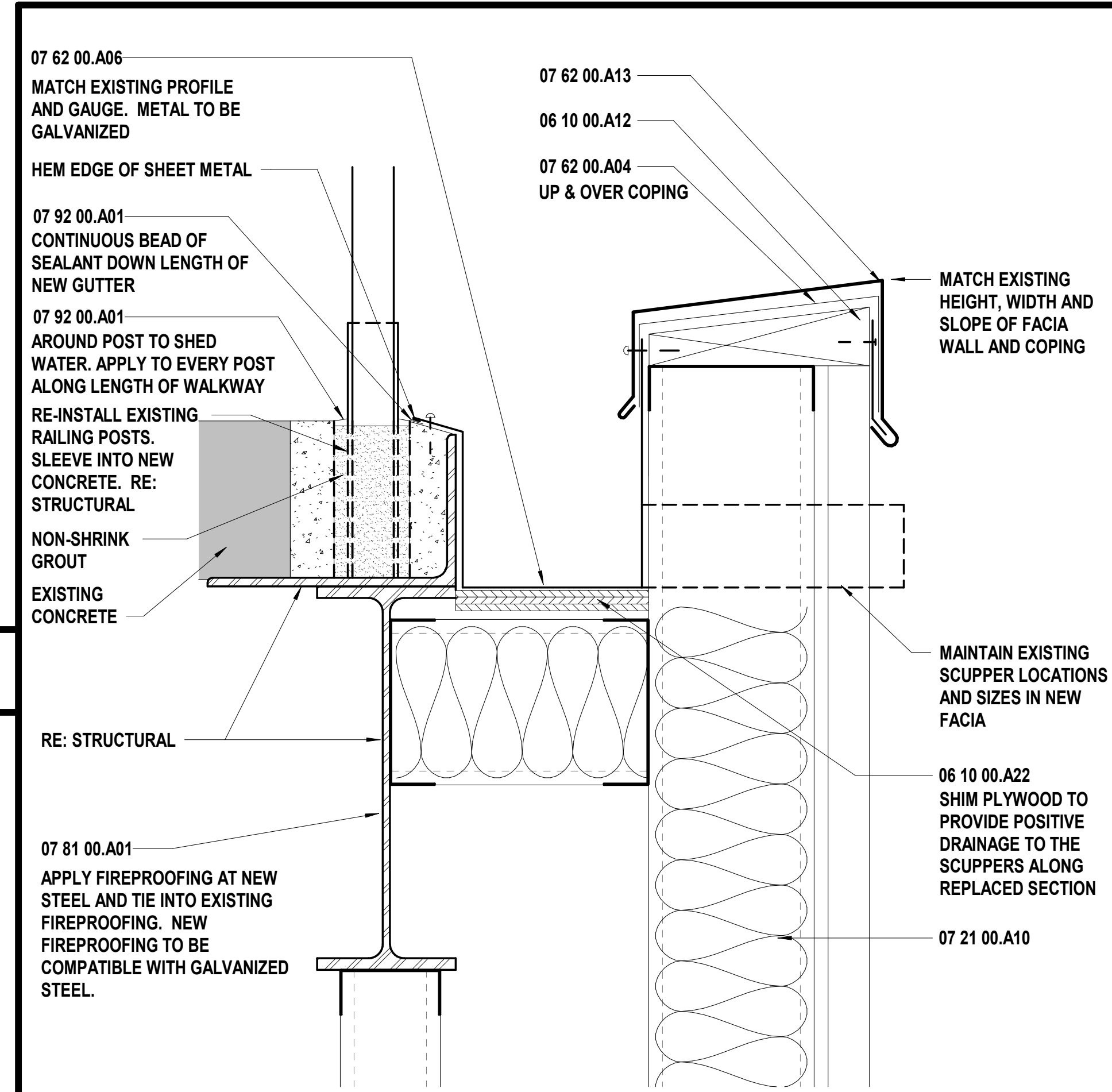


DISCONNECT EXISTING RAILING AS REQUIRED FOR STRUCTURAL REPLACEMENT

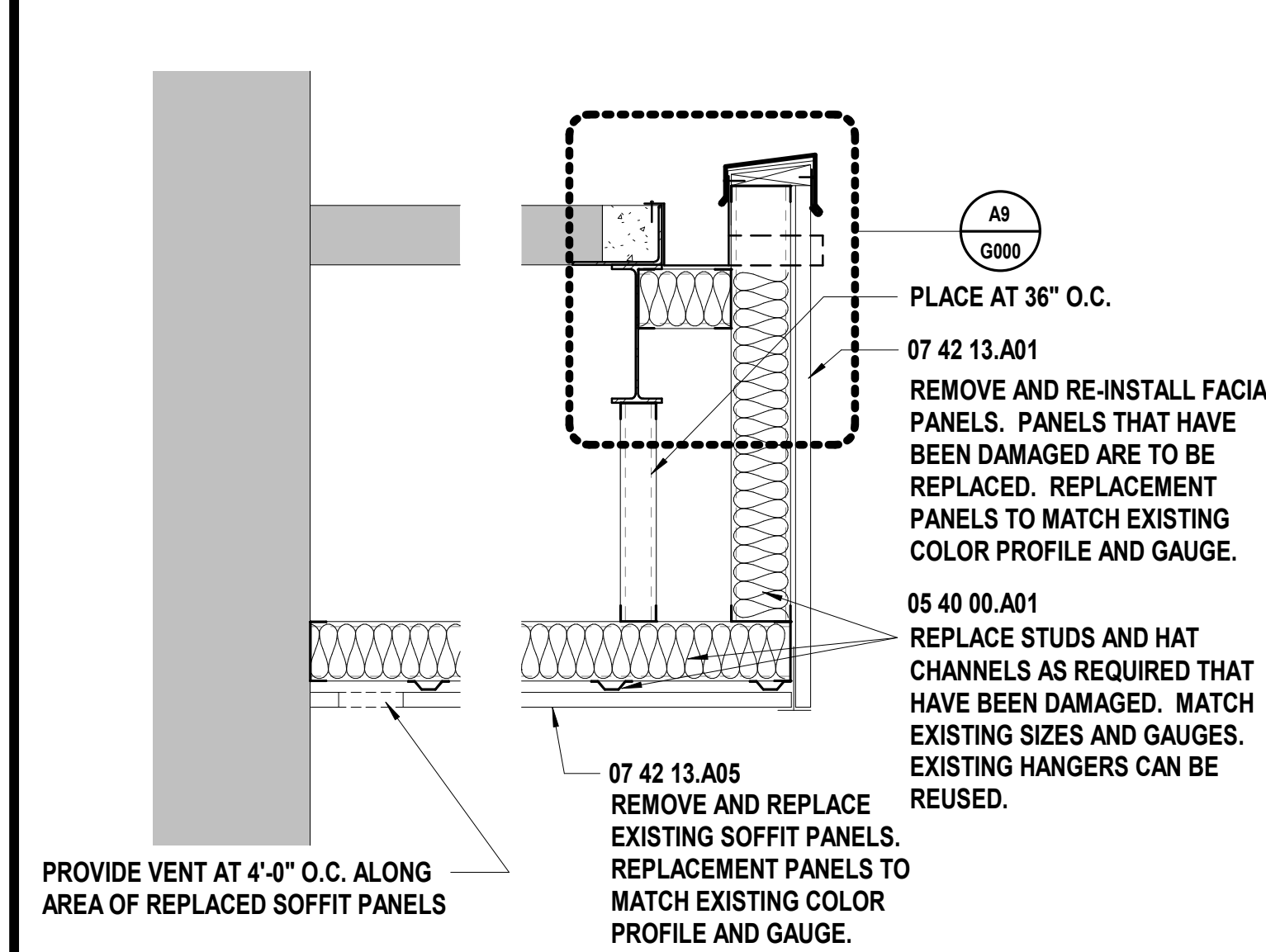


SHEET KEYNOTE LEGEND

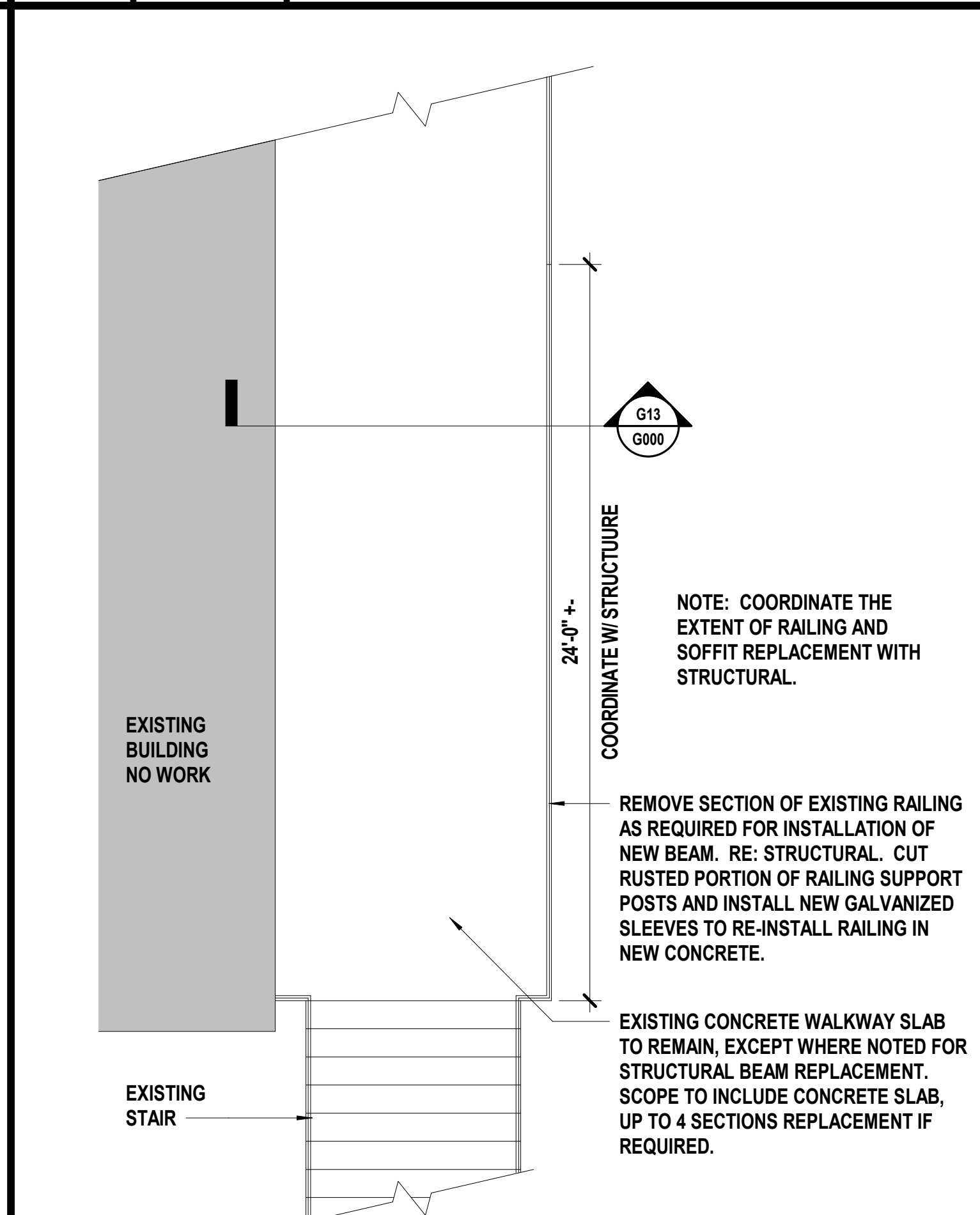
05 40 00.A01	COLD-FORMED METAL FRAMING
06 10 00.A12	PRESERVATIVE TREATED WOOD BLOCKING/NAILERS
06 10 00.A22	PRESERVATIVE TREATED PLYWOOD BLOCKING
07 21 00.A10	FOIL-FACED GLASS FIBER BLANKET INSULATION
07 42 13.A01	EXPOSED FASTENER METAL WALL PANELS
07 42 13.A05	METAL SOFFIT PANELS
07 62 00.A04	FLEXIBLE MEMBRANE CLOSURE
07 62 00.A06	BUILT-IN GUTTERS
07 62 00.A13	COPING
07 81 00.A01	FIREPROOFING
07 92 00.A01	SEALANT



A9 Scale 3/8" = 1'-0" Gutter Detail



G13 Scale 3/4" = 1'-0" Wall Section @ Soffit



A13 Scale 1/4" = 1'-0" Walkway Partial Plan

DESIGN TEAM

ARCHITECT:

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Herndon Walkway Renovation

Raytown Quality Schools
11501 E. State Rte 350
Raytown, MO. 64138

REVISIONS:

#	Description	Date



JOB NO: 23173
DRAWN BY: PT
CHECKED BY: JB
DATE: 12.19.2023

G000

COVER SHEET

GENERAL NOTES - STRUCTURAL

1. General Information

- A. The contractor shall verify dimensions and conditions before construction and notify the engineer of any discrepancies, inconsistencies, or difficulties affecting the work before proceeding.
- B. The contractor shall coordinate all disciplines, verifying size and location of all openings, whether shown on structural drawings or not, as called for on architectural, mechanical, or electrical drawings. In the case of work in an existing building the contractor shall scan existing structure to locate all rebar in the area of the new core opening using ground penetrating radar and notify the engineer of records for review prior to construction. Conflicts, inconsistencies, or other difficulties affecting structural work shall be called to the architect or engineer's attention for direction before proceeding.
- C. All design and construction work for this project shall conform to the requirements of the following governing design codes:
 - 1.) International Building Code (IBC 2018) as amended by the city of Raytown, MO.
 - 2.) Minimum Design Loads for Buildings and Other Structures (ASCE7-10)
 - 3.) Specification for Structural Steel Buildings (AISC 360-10) Member Design Basis is Allowable Stress Design (ASD) Connection Design Basis is Allowable Stress Design (ASD)
 - 4.) Structural Welding Code (AWS D1.3-98)
 - 5.) Building Code Requirements for Structural Concrete (ACI 318-11)
 - 6.) North American Specification for the Design of Cold-Formed Steel Structural Members (AISI S100-07/1-1)
- D. These drawings are for this specific project and no other use is authorized.

2. Structural Load Design Criteria

- A. Floor Live = 100 pcf
- B. This project is designed to resist the most critical effects resulting from the load combinations of section 1603.3 of the International Building Code.

3. Concrete

- A. All concrete for exterior flatwork shall have a minimum design compressive strength of 4500 psi in 28 days, with not less than 560 pounds of cement per cubic yard of concrete, not over 5 gallons of water per 100 pounds of cement, with 6% +/- 1% air entrainment, and a maximum of 4 inches of slump.
- B. The preceding minimum mix requirements may have water-reducing admixtures conforming to ASTM C494 added to the mix at manufacturer's dosage rates for improved workability.
- C. The preceding minimum mix requirements may have up to 15% maximum of the cement content replaced with an approved ASTM C618 Class C fly ash, provided the total minimum cementitious content is not reduced.
- D. Combined aggregate (coarse plus fine) for all concrete shall be well graded from coarsest to finest with no more than 16 percent and not less than 8 percent retained on an individual sieve, except that less than 8 percent may be retained on coarsest sieve and on No. 50 and finer sieves. Submit this gradation report with the concrete mix design shop drawings.
- E. All concrete is reinforced concrete unless specifically called out as unreinforced. Reinforce all concrete not otherwise shown with same steel as in similar sections or areas. Any details not shown shall be detailed per ACI 315 and meet requirements of ACI 318, current editions.
- F. Contractor shall verify that all concrete inserts, reinforcing and embedded items are correctly located and rigidly secured prior to concrete placement.
- G. No aluminum items shall be embedded in any concrete.

4. Reinforcing Steel

- A. All reinforcing steel shall conform to the requirements of ASTM A615 or A706 grade 60 steel. Welded plain wire fabric shall be supplied in sheets and conform to the requirements of ASTM A185.
- B. Clear coverage of concrete over reinforcing steel shall be as follows:
 - 1.) Concrete placed against earth: 3"
 - 2.) Formed concrete against earth: 2"
 - 3.) Slabs: 1"
 - 4.) Beams or Columns: 1-1/2"
 - 5.) Other: 2"
 All coverage shall be nominal bar diameter minimum.
- C. All dowels shall be the same size and spacing as adjoining main bars (splice lap 48 bar diameters or 24" minimum unless noted otherwise).
- D. Bars marked continuous and all vertical steel shall be lapped 48 bar diameters (2'-0" minimum) at splices and embedments, unless shown otherwise. Splice top bars near midspan and splice bottom bars over supports, unless noted otherwise.
- E. Accessories shall be as specified in latest edition of the ACI Detailing Handbook and the concrete Reinforcing Steel Institute Design Handbook. Maximum accessory spacing shall be 4'-0" on center, and all accessories on exposed surfaces are to have plastic coated feet.

5. Structural Steel

- A. All structural steel beams and columns shall be ASTM A992, grade 50 steel and all miscellaneous steel shall be ASTM A36 grade steel (except at moment connections where plates shall be ASTM A572, grade 50). Hollow Structural Sections (HSS) shall be ASTM A500, grade B. Fabrication and erection shall be in accordance with AISC 303-05 "Code of Standard Practice for Steel Buildings and Bridges" in the 13th Edition of the AISC Steel Construction Manual.
- B. All exterior steel and connection components shall be hot dipped galvanized.
- C. All welding shall conform to the recommendations of the AWS.
- D. All exterior steel and connections, and brick relief angles shall be hot-dip galvanized. All bolts not otherwise specified shall be 3/4" diameter high strength (ASTM A325-N). All bolts shall be fully pretensioned. All connections must be two bolt minimum.

6. Light Gage Metal Structural Framing

- A. All load bearing, light gage structural studs, track, and bridging shall be of the type, size, gage, and spacing as shown on the plans, minimum.
- B. All materials shall be 33,000 psi minimum yield, except studs of 16 gage or heavier shall have a minimum yield of 50,000 psi.
- C. All properties, fabrication, and erection shall be in accordance with latest editions of the AISI "Specifications for the Design of Cold-Formed Structural Members."
- D. All framing components shall be cut squarely or at an angle to fit squarely against abutting members. Splicing of axially loaded members is not permitted. Members shall be held firmly in place until properly fastened. Attachments of similar components shall be by welding, screw attachment, or bolting. Wire tying of components is not permitted.
- E. Tracks shall be securely anchored to floor and overhead members. Special anchorage requirements required for wind bracing shall be as shown on the plans.
- F. Prior to fabrication and/or erection, the contractor shall submit shop drawings complete with detail of erection, fabrication, attachments, anchorages, lintels, ect. for review by the architect/engineer.

7. Shop Drawing Review

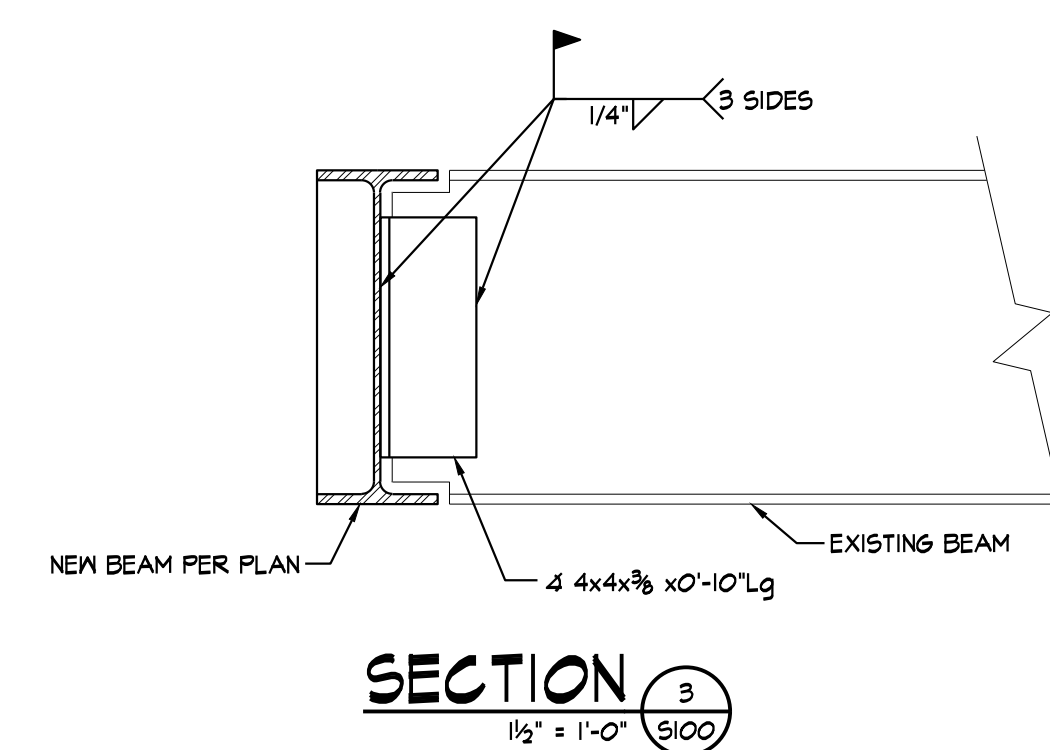
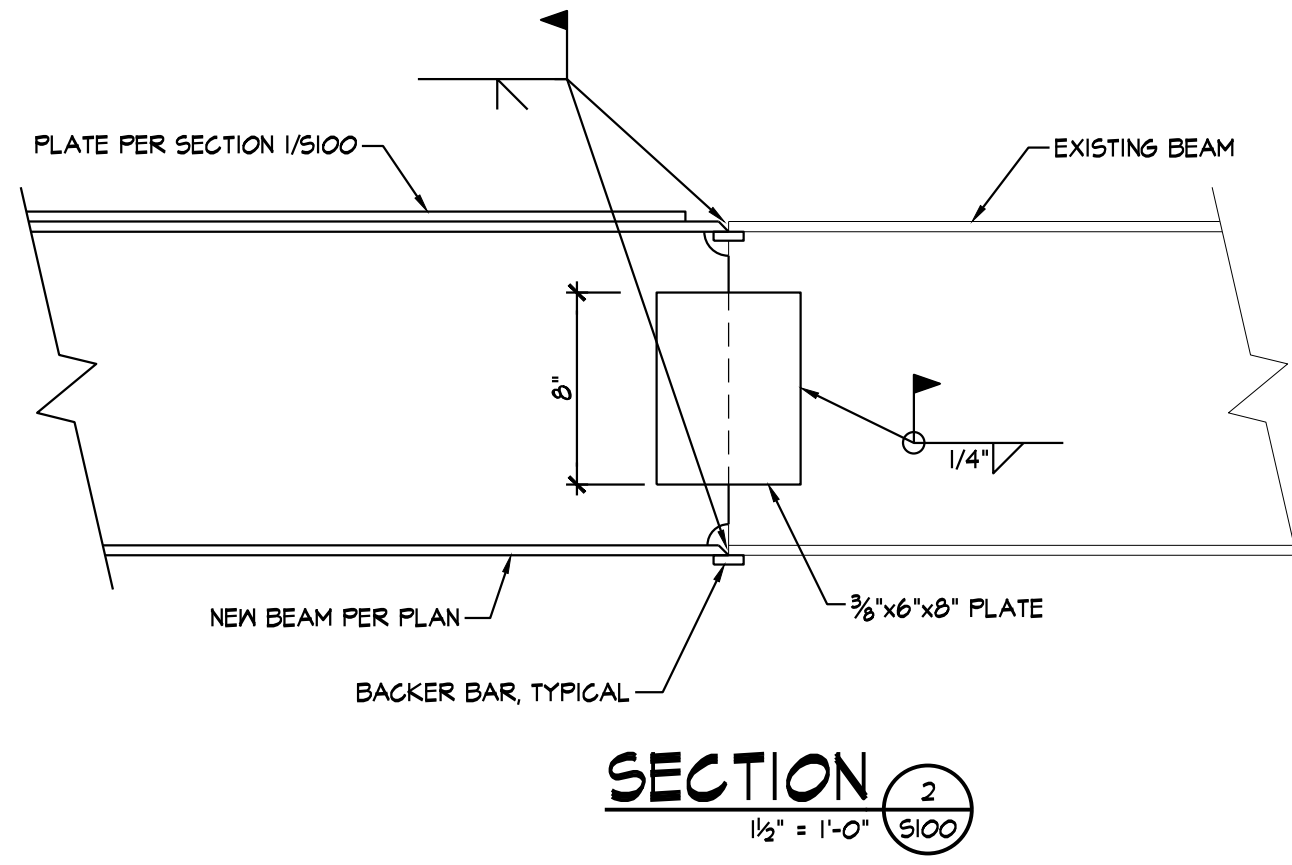
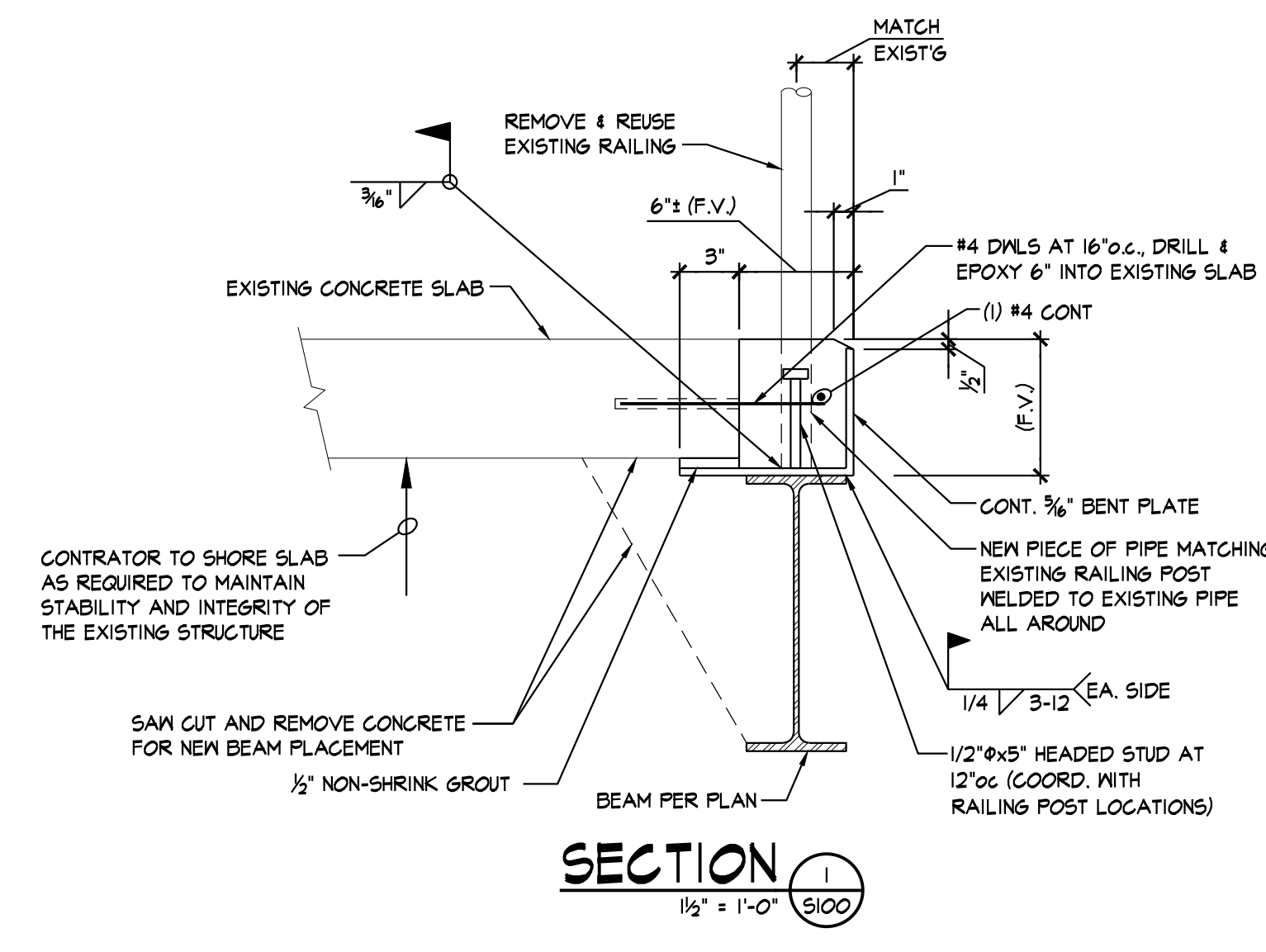
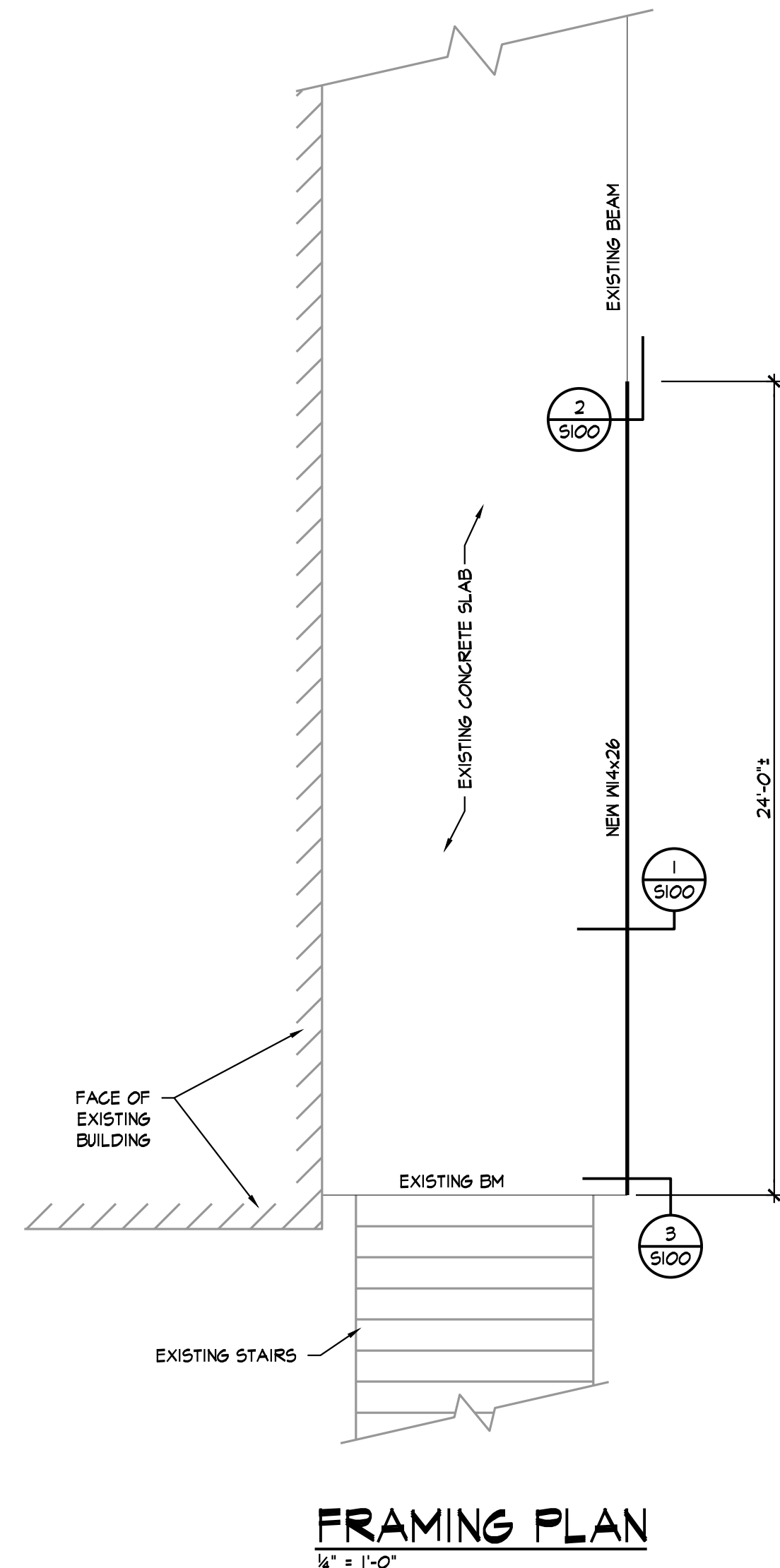
- A. Bob D. Campbell and Company, Inc. will review the General Contractor's (GC) shop drawings and related submittals (as indicated below) with respect to the ability of the detailed work, when complete, to be a properly functioning integral element of the overall structural system designed by Bob D. Campbell and Company, Inc.
 - 1.) Review each submission for conformance with the means, methods, techniques, sequences and operations of construction and safety precautions and programs incidental thereto, all of which are the sole responsibility of the GC.
 - 2.) Review and approve each submission.
 - 3.) Stamp each submission as approved.
- B. Bob D. Campbell and Company, Inc. shall assume that no submission comprises a variation unless the GC advises Bob D. Campbell and Company, Inc. with written documentation.
- C. Bob D. Campbell and Company, Inc. shall review shop drawings and related materials with comments provided that each submission has met the above requirements. Bob D. Campbell and Company, Inc. shall return without comment unrequired material or submissions without GC approval stamp.
- D. Shop drawings and related material (if any) required are indicated below. Should Bob D. Campbell and Company, Inc. require more than ten (10) working days to perform the review, Bob D. Campbell and Company, Inc. shall so notify the GC.
 - 1.) Concrete mix designs and material certificates including admixtures and compounds applied to the concrete after placement.
 - 2.) Reinforcing steel shop drawings including erection drawings and bending details. Bar list will not be reviewed for correct quantities.
 - 3.) Structural steel shop drawings including erection drawings and piece details. Include miscellaneous framing specified on the structural drawings, but do not submit framing specified on non-structural drawings for Bob D. Campbell and Company, Inc. review.
 - 4.) Light gage framing design calculations and detailed erection and fabrication drawings.

8. Statement of Structural Special Inspections

- A. The structural design for this project is based on completion of special inspections during construction in accordance with section 1704 of the International Building Code. The owner shall employ one or more qualified special inspectors to provide the required special inspections.
- B. The special inspector shall furnish inspection reports to the building official, owner, architect and structural engineer, and any other designated person.
- C. All discrepancies shall be brought to the immediate attention of the contractor for correction, then, if uncorrected, to the proper design authority, building official and structural engineer.
- D. The special inspector shall submit a final signed report stating that the work requiring special inspection was, to the best of the inspector's knowledge, in conformance with the approved plans and specifications and the applicable workmanship provisions of the building code.
- E. The following inspections and tests are required with the frequency (continuous or periodic) as defined within the referenced section or standard listed below. The General Contractor shall provide notification to the inspector when items requiring inspection are ready to be inspected and provide access for those inspections.
 - 1.) Shop Fabrication - structural steel per Section 1704.2.5 unless AISC certified shop
 - 2.) Concrete Construction per Section 1705.3 and Table 1705.3
 - a. Reinforcing Steel Placement
 - b. Design Mix Verification
 - c. Concrete Sampling and Testing
 - d. Concrete Placement
 - e. Concrete Curing

9. Copyright and Disclaimer

- A. All drawings in the structural set (S-series drawings) are the copyrighted work of Bob D. Campbell and company, Inc. These drawings may not be photographed, traced, or copies in any manner without the written permission of Bob D. Campbell and Company, Inc. Exception: Original drawings may be printed for distribution to the owner, architect, and general contractor for coordination, bidding, and construction. Subcontractors may not reproduce these drawings for any purpose or in any manner.
- B. I, Wayne E. Davis, P.E., registered engineer and a representative of Bob D. Campbell and Company, Inc., do hereby accept professional responsibility as required by the professional registration laws of this state for the structural design drawings consisting of S-series drawings. I hereby disclaim responsibility for all other drawings in the construction document package, they being the responsibility of other design professionals whose seals and signed statements may appear elsewhere in the construction document package.



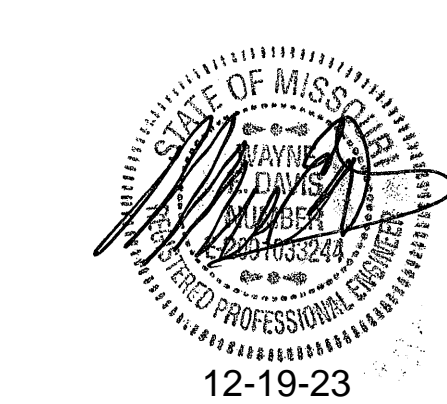
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