

A. GENERAL NOTES

1. All construction shall conform to the Design Codes in Section "C. Design Criteria," including all applicable standards and documents referenced within these codes.
2. Plan and detail notes provided on specific sheets within these drawings supplement information in these General Notes. Always coordinate the requirements of these notes with what is shown within the drawings.
3. Unless noted specifically on a plan, all floor plans show framing for the floor indicated and vertical framing (walls, openings, posts, columns) above that floor. The roof plan shows roof framing only.
4. Contract Document Coordination:
- a. The drawings contained herein are intended to be utilized in conjunction with other design consultant's drawings (architectural, civil, mechanical, etc.). It is the responsibility of the Contractor to coordinate the requirements of the drawings into their shop drawings and construction.
- i. Refer to the Project Specifications issued as part of the contract documents for information supplemental to these drawings.
- Should conflicts between these drawings and the Specifications exist, the Contractor shall bring them to the attention of the structural engineer for clarification.
- b. Refer to the architectural, mechanical, electrical, and civil drawings for location and size of block outs, inserts, openings, curbs, bases & pads, and dimensions not shown on these drawings.
- c. Refer to the architectural drawings for size and location of doors and window openings, exterior wall assemblies, and floor, wall, and roof finishes. Refer to the mechanical and electrical drawings for additional information including locations of mechanical units, generators, etc.
- d. Omissions or conflicts between various elements of the drawings, notes and details shall be brought to the attention of the structural engineer and resolved before proceeding with the work.
5. Use of Drawings in Construction:
- a. The Contractor shall verify all dimensions and conditions at the job site before commencing work and shall report any discrepancies to the engineer responsible for the design of that work.
- b. Do not use scaled dimensions; use written dimensions or, where no dimension is provided, consult the structural engineer for clarification before proceeding with the work.
- c. Details and keynotes shown shall be incorporated into the project at all appropriate locations, whether or not they are specifically referenced on the drawings.
- d. McClure may provide the contractor with electronic files for their convenience and use in the preparation of shop drawings. These electronic files are not construction documents; the contractor is not relieved of his/her duty to fully comply with the contract documents, including the need to confirm and coordinate all dimensions and details, take field measurements, verify field conditions, and coordinate the contractor's work with that of other contractors for the project.
6. Changes During Construction:
- a. Openings shall not be cut or otherwise made in any structural member unless that opening is specifically shown on these drawings. The Contractor shall seek approval in writing from the structural engineer for any design incorporating additional openings.
- b. Support details shown for Architectural, Mechanical, Electrical, and Plumbing equipment as well as elevators is based upon available information from the manufacturer (if any). The Contractor shall coordinate requirements of actual equipment supplied with details and shall provide any additional framing required.
- c. The Contractor has the responsibility to notify the structural engineer of any architectural, mechanical, electrical, or plumbing load imposed on the structure that is not documented on the Contract Documents or differs from what is originally shown. Provide documentation of location, load, size, and anchorage of all undocumented loads in excess of 250 lbs.
7. Construction Sequence and Methods
- a. These drawings and the related Specifications represent the finished structure and, except where specifically shown, do not indicate the method or means of construction. Loads on the structure during construction shall not exceed the design loads indicated in Section "A. Design Criteria" as a maximum. The Contractor shall supervise and direct the work and shall be solely responsible for all construction means, methods, procedures, and sequence.
- b. The Contractor is responsible for compliance with all applicable job-related safety standards proceeding from governing organizations (e.g. OSHA).
- c. It is the responsibility of the Contractor to ensure the stability of the structural elements during construction as a result of means and sequence by providing shoring, bracing, etc. as required.
- i. Stability considerations should include all applicable temporary construction and environmental loads per ASCE 37 which may include wind and seismic forces.
- ii. Temporary bracing shall remain in place until positive connection is made between the braced element and the floor/roof diaphragm or foundation above and below, and those diaphragms in turn are structurally complete and connected to the vertical elements of the lateral force resisting system. This is a means and methods item.
- iii. The Contractor may at their discretion employ a Specialty Structural Engineer, licensed in the state where the project is located, for the design of any temporary bracing, lifting, rigging, and shoring. Any sealed drawings, calculations, reports, etc. prepared for construction stability shall be submitted to the structural engineer for review.
- d. The Contractor shall consider the effects of thermal movements due to hot or cold weather construction and the potential for extreme temperature variations before the structure is complete.
- e. Any foundation wall restrained by a floor is not designed to be backfilled prior to the complete construction of the floor and the lateral bracing elements (shear walls, braced frames, etc.) below it. For backfilling before this time, temporary bracing shall be designed and provided by the Contractor.
- f. Where specifically indicated on the drawings, walls may be backfilled according to instructions provided before the final connection to the slab is made.
- g. The Contractor is responsible for the protection and repair of any adjacent existing structures, surfaces, and areas which may be damaged as a result of the work.

B. STRUCTURAL ENGINEERING DESIGN NARRATIVE

1. McClure Engineering Company (McClure, MEC) is the Structural Engineer of Record (EOR) responsible for the documentation of structural design criteria, strength and stability of the primary vertical and lateral load-carrying systems in their completed form, and conformance of the structural design to the applicable building codes. These drawings produced by McClure convey the structural engineering design for the project, which includes the following components and systems:
- a. Foundations consisting of trench footings and isolated column footings.
- b. Slabs on grade.
- c. Residential tower framing above the slab on grade consisting of:
- i. Load-bearing wood wall and opening framing.
- ii. Gypcrete over wood T&G Sheathing over wood joists, floor and roof trusses.
- d. Structural steel framing identified on the drawings.
- e. The lateral force resisting system of the structure consisting of sheathed gypsum and wood shear walls and wood sheathed diaphragms.
2. The following items are Deferred Submittals. Framing intent and additional requirements for these structural components are provided within these drawings":
- a. Structural steel connections – see general notes section "Structural Steel"
- b. Wood Floor & Roof Trusses" – see general notes section "Wood Framing and Fastening" | see S001 for applicable design criteria.
- c. Connections of Wood Floor & Roof Trusses to the supporting structure."
- d. All premanufactured canopy and awning framing including connections to the structure.
- \* Reference section "D. Submittal Requirements." Coordinate requirements of these drawings with those of other design consultant drawings and the Project Specifications.
3. The following items are specifically excluded from McClure's design scope as represented on these drawings:
- a. Requirements for fire rating of assemblies or fire protection of structural members.
- b. Global stability of soil mass.
- c. Any exterior slabs, bollards, curbs, and any enclosures not shown on these drawings.
- d. Interior non-load-bearing wood wall or ceiling framing.
- e. Shoring design, formwork design, temporary bracing, and other means and methods items.

C. DESIGN CRITERIA

1. Design Codes:
- a. International Building Code: IBC 2018
- b. Minimum Design Loads for Buildings and Other Structures: ASCE 7-16
2. Design Loads:
- a. Dead Loads
- Floors = 35 psf
- Floors (Corridor) = 30 psf
- Exterior Walls (Stone Siding) = 47 psf
- Exterior Walls (Plank Siding) = 13 psf
- Roof = 22 psf plus mechanical equipment shown on roof plan
- b. Live Loads (reducible per code UNO)
- Slab on Grade = 125 psf (non-reducible)
- Residential = 40 psf
- Corridors/Public Areas = 100 psf
- Mechanical/Storage = 125 psf (non-reducible)
- Typical Roof = 20 psf
- c. Roof Snow Load
- Ground Snow Load (p<sub>g</sub>) = 30 psf (per City of Carter Lake, IA)
- Flat Roof Snow Load (p<sub>f</sub>) = 21 psf
- Snow Exposure Factor (C<sub>e</sub>) = 1.0
- Snow Load Importance (I<sub>s</sub>) = 1.0
- Thermal Factor (C<sub>t</sub>) = 1.0
- Slope Factor (C<sub>s</sub>) = 1.0
- Snow Drift (Parapets) = 6 psf
- Surcharge = 2.75 ft
- Drift Width = 47 psf
- Snow Drift (Low Roof) = 10.5ft (Leeward Snow Drift from Higher Roof)
- d. Wind Load
- Basic Design Wind Speed, V = 105 mph (3 sec. Gust) (per City of Carter Lake, IA)
- ASD Wind Speed, V<sub>asd</sub> = 81.3 mph
- Risk Category = II
- Wind Exposure = C (per City of Carter Lake, IA)
- Internal pressure Coefficient (GC<sub>p</sub>) = ±0.18
- Components and Cladding (psf):
- | Zone | A=10ft <sup>2</sup> | A=50 ft <sup>2</sup> | A=100 ft <sup>2</sup> |
|------|---------------------|----------------------|-----------------------|
| 1    | +16/-46             | +16/-39              | +16/-36               |
| 2    | +16/-60             | +16/-51              | +16/-47               |
| 3    | +16/-82             | +16/-64              | +16/-56               |
| 4    | +26/-29             | +24/-26              | +23/-25               |
| 5    | +26/-35             | +24/-30              | +23/-27               |
- Notes:
1. A is the Effective Wind Area as defined in ASCE 7 Ch. 26.
2. Linear interpolation between tabulated values is permitted.
3. Elements with Tributary Area (A<sub>t</sub>) > 700 ft<sup>2</sup> shall be permitted to be designed using provisions for MWFRS.
- e. Earthquake Load
- Risk Category = II
- Seismic Importance Factor (I<sub>s</sub>) = 1.0
- S<sub>rs</sub> = 0.071g S<sub>1</sub> = 0.045g
- Soil Site Class: D (Code Default)
- S<sub>DS</sub> = 0.076 S<sub>0.1</sub> = 0.072
- Seismic Design Category B (per City of Carter Lake, IA)
- Basic Seismic Force Resisting System(s)
- Light-Frame Walls with shear panels – all other materials (ASCE 7 Table 12.2-1 Line A.17)
- R = 2.0 Q<sub>s</sub> = 2.0 C<sub>s</sub> = 2.0 C<sub>e</sub> = 0.038
- Design Base Shear, V = C<sub>s</sub> x W
- Analysis Procedure = Equivalent Lateral Force Procedure (ASCE 7-16 Chapter 12.8)
- f. Rain Load
- Rain Intensity (i) = 7.07 in/hr
3. Allowable Deflections:
- |                                     | Total Load | Live/Snow/Wind Load | Absolute Maximum |
|-------------------------------------|------------|---------------------|------------------|
| Floor Joists/Trusses                | L/360      | L/480               | 1"               |
| Roof Joists/Trusses                 | L/240      | L/360               | 1.5"             |
| Wall Framing (flexible finish)      | L/240      | L/240               | 0.75"            |
| Wall Framing (brittle/brick finish) | L/360      | L/360               | 0.5"             |
- Cantilever deflection limits are the more restrictive of 2 x the appropriate L/--- limit (e.g. 2L/360 = L/180) or absolute maximum value listed above, measured at the tip of the cantilever U.N.O.
4. Soil Properties:
- a. Soil properties are based on the project geotechnical report titled Geotechnical Engineering Report, prepared by ISG-TEAM, Inc. on August 1, 2025 (herein known as "Geotechnical Report").
- b. Allowable Soil Bearing Pressure = 2000 psf
- Note that overexcavation may be required to achieve this allowable bearing pressure per Geotech Report section "Shallow Foundation Construction" for all foundations. Verify with Geotechnical Representative.
- c. Minimum Embedment below Finished Grade = 42 inches

D. SUBMITTAL REQUIREMENTS

1. Submittal Procedures:
- a. The Contractor shall provide all submittals in PDF format unless otherwise requested or indicated in the Project Specifications.
- b. All submittals must be reviewed by the Contractor prior to McClure's review. The Contractor is responsible for reviewing each submittal for basic coordination with these drawings and to verify that all the required components of the submittal are incorporated. The submittal must bear the electronic review stamp of the Contractor before McClure will proceed with the review.
- c. Incomplete submittals or submittals not meeting the requirements of this section will not be reviewed. McClure will notify the contractor that the submittal is incomplete or unacceptable and that resubmission is required.
- i. Submittals requiring engineering calculations for all or a portion of the work are considered incomplete without the sealed calculations and will not be reviewed.
- ii. Shop Drawings shall be original drawings. Submissions incorporating any portion or reproduction of the contract documents will not be reviewed.
- iii. Deferred Submittals not meeting the seal requirements of section D.2.b are considered incomplete and will not be reviewed.
- iv. Resubmittals with comments from a previous review left unaddressed or without any response will not be reviewed.
- d. Allow two weeks for review of all submittals unless an agreement for expedited review is made in writing by McClure.
- e. McClure's submittal review scope of work includes a single submittal review and one review of the revised submittal if required (two reviews total of the same submittal). Time required for more than two reviews of a submittal is considered an additional service and will be billed hourly. McClure reserves the right to withhold review of a submittal surpassing this allowance until proper billing to the responsible party can be established.
- f. Submittals must be returned to the Contractor by McCure bearing a stamp marked "Reviewed No Exception Taken" or "Reviewed With Comments/Exceptions" prior to proceeding with the work. Submittals marked "Reject/Resubmit" must be revised according to the comments provided prior to commencing with the respective scope of work.
2. Deferred Submittals:
- a. See Section "B. Structural Engineering Design Narrative" for the list of items considered Deferred Submittals.
- b. Deferred Submittals shall bear the seal of a professional engineer licensed in the state where the project is located. If the project requires a licensed Structural Engineer (S.E.) as the Engineer of Record according to state laws, the same qualification level applies to the engineer sealing the Deferred Submittals.
- c. Deferred Submittal items shall not be installed until the Deferred Submittal documents have been approved by the Building Official.
3. Submittal List:
- a. Submittals (product data, test records, shop drawings, and/or calculations) are required for the following:
- | Submittal Name                                     | Product Data | Shop Drawings | Test Records | Engineering Drawings | Engineering Calculations |
|--|--------------|---------------|--------------|----------------------|--------------------------|
| 1. Concrete Mix Designs                            | X            |               | X            |                      |                          |
| 2. Concrete Break Reports                          |              |               | X            |                      |                          |
| 3. Concrete Reinforcing Layout                     |              | X             |              |                      |                          |
| 4. Concrete Anchor Bolts & Embedded Plates         | X            | X             |              |                      |                          |
| 5. Concrete & CMU Anchors (Post-Installed)         | X            |               |              |                      |                          |
| 6. Post-Installed Anchor Substitutions             | X            |               |              |                      | X                        |
| 7. Post-Installed Connection Geometry Alteration   | X            |               |              | X                    | X                        |
| 8. Masonry Wall Materials                          | X            |               | X            |                      |                          |
| 9. Masonry Reinforcing                             |              | X             |              |                      |                          |
| 10. Brick & Stone Veneer                           | X            |               |              |                      |                          |
| 11. Structural Steel Framing                       | X            | X             |              |                      |                          |
| 12. Structural Steel Framing Connections           |              | X             |              |                      | X                        |
| 13. Metal Canopies & Awnings                       | X            | X             |              |                      |                          |
| 14. Wood Framing Materials                         | X            |               |              |                      |                          |
| 15. Wood Floor & Roof Trusses incl. Reactions      |              |               |              | X                    |                          |
| 16. Wood Truss Connections to Supporting Structure |              |               |              | X                    | X                        |
| 17. Specialty Wood Fasteners                       | X            |               |              |                      |                          |
- b. "Product Data" may indicate mill certifications, material data sheets, Evaluation Service Reports (ESRs), etc. See requirements of each material section of the general notes for further information.
- c. Where "Engineering Drawings" and/or "Engineering Calculations" are indicated, the submittal must comply with the requirements of item "2. Deferred Submittals" above.
4. Submittals For Record:
- a. The following items impact the structural design and therefore must be submitted to the engineer; however, they do not require review. They will be returned stamped as "Received For Record".
- i. Elevator Shop Drawings with Loads to Structure
- ii. Mechanical Equipment Shop Drawings with Weight

E. CONCRETE

1. Reinforced concrete shall have the following minimum 28 day compressive strengths:
- a. Slab on grade, unless noted otherwise 4000 psi normal weight
- b. Foundations 5000 psi normal weight
2. All concrete exposed to weather shall have 6% (+/- 1%) air entrainment.
3. Submit mix designs for all concrete mixes prior to placement. All submittals shall include the following:
- a. Batch quantities including admixture dosage rates.
- b. Strength test results for trial mixes.
- c. Aggregate source(s) and gradation(s).
- d. Product data for cement, fly ash and other cementitious materials.
- e. Product data for all admixtures.
4. Provide protection for reinforcing bars as follows:
- a. Concrete cast against and permanently exposed to earth 3"
- b. Concrete exposed to earth and weather (formed)
- i. #5 and smaller 1-1/2"
- ii. #6 and larger 2"
- c. Concrete not exposed to weather and not in contact with ground:
- i. Slabs and walls 3/4"
- ii. Beams and columns 1-1/2"
5. Interface of all slab and beam construction joints shall be roughened with 1/4" amplitude. Surface of construction joints shall be clean and free of laitance. Immediately before new concrete is placed, construction joints shall be wetted and standing water removed.
6. Construction joints in walls shall be keyed and placed at locations approved by the Architect and Structural Engineer.
7. Provide control joints in all retaining walls at 15 ft to 20 ft intervals.
8. Provide PVC waterstops in all below grade construction joints and at other locations as shown.
9. Provide compressible filler and sealant in all slab-on-grade and wall and column interfaces that are not dowelled together.
10. All column pockets shall be filled with concrete after column is erected.
11. Sleeves and openings in slabs not shown on structural drawings or outside the parameters of typical sleeve details are not permitted, unless approved by the Structural Engineer.
12. Conduit and pipes embedded in slabs, walls, or grade beams shall be no larger in outside dimension than 1/3 the overall member thickness and shall be placed no closer than 3 diameters or widths on center.
13. Provide concrete housekeeping pads under all mechanical, plumbing, fire protection, and electrical equipment per plans. Pads shall extend beyond equipment a nominal 6" on all sides. Apply a bonding agent to existing concrete slab prior to pouring of housekeeping pad. Provide reinforcing per details.
14. At floor drains, locally slope floor towards drain. See architectural and plumbing drawings for drain locations.
15. Foundation walls shall be temporarily braced until positive attachment is made to floor framing per details. This is a means and methods item.

Slab on Grade

1. Slab shall be constructed as shown on plans.
2. Slab-on-grade shall be founded on 8" deep 3/4" clean aggregate base.
3. The upper 18" of subgrade shall consist of low volume change material such as rollstone or wastelime. Granular fill shall be compacted to a minimum of 95% of the ASTM D698 maximum dry Standard Proctor density. The 6" aggregate base shall be included in the 18" depth required for the low volume change layer.
4. Provide joints at 30 x slab thickness (+/-) in both directions and located to conform to bay spacing wherever possible (at column centerlines, half bays, third bays, etc.). Submit control joint layout to Architect for any exposed concrete surface.
5. Saw cut control joints shall be done late enough to prevent raveling of the cut edges and early enough to prevent cracking of the slab ahead of the saw blade.
6. Concrete slab to be cured according to ACI Standards. Concrete slab cure to be compatible with any sealer, grout, or adhesive that may be used on the floor later.
7. At floor drains, locally slope floor towards drain. See architectural and plumbing drawings for drain locations.

Subsurface Requirements

1. Foundation design is based on geotechnical report by ISG-TEAM, Inc. dated 08/01/2025.
2. A geotechnical representative shall be retained on site for all construction activity to verify that all proper requirements have been met to meet the design requirements outlined in the geotechnical report. Representative shall be ISG-TEAM, Inc. or someone familiar with all documents of the geotechnical investigation provided for the project.
3. The Contractor shall provide dewatering of excavations from surface water and ground water. Do not place concrete if water is present at base of excavation.
4. Geotechnical Testing Agency Requirements
- a. If the geotechnical representative on site takes exception to anything in the Geotechnical Report and requires additional field investigation to clarify those expectations, the cost of such investigation shall be included in the additional fee for field quality control and testing and identified as such. All other exceptions, the cost of such investigation shall be included in the additional fee for field quality control and testing and identified as such. All other exceptions shall be documented and approved by the geotechnical engineer.
- b. The geotechnical representative must have read all documents pertaining to the geotechnical report for the project and understood and accepted the criteria contained in the report.
5. The geotechnical representative must understand and be able to make decisions affecting the work for field observations and conditions described in the report during construction. The representative must be capable of advising the owner or contractor for procedures regarding, but not limited to: sub-grade preparation, dewatering activities, and other construction considerations.

F. REINFORCING FOR CONCRETE

1. General
- a. All reinforcing steel to be ASTM A615, Grade 60, deformed bars, unless noted otherwise.
- i. Any reinforcing to be welded shall be ASTM A706 and welded with E80 electrodes.
- ii. Alternatively, ASTM A615 reinforcing may be welded with E90 electrodes and proper preheat according to AWS D14.1.
- iii. E70 electrodes are not permitted for welding rebar.
- b. Welded wire fabric shall be plain wire conforming to ASTM A1064. Welded wire fabric shall be in flat sheets.
- c. All reinforcing bars to be detailed and placed in accordance with the ACI "Manual of Standard Practice for Detailing Reinforced Concrete Structures" specifications.
- d. All reinforcing, including dowels, shall be securely tied and cast with the lower member. Placing reinforcing after concrete has been placed will not be permitted.
- e. Field bending of reinforcing partially embedded in concrete will not be allowed unless specifically noted on the drawings or approved by the Structural Engineer.
- f. All reinforcing bars shall be contact lap spliced or dowelled as follows, unless noted otherwise:
- | Tension Development and Splice Lengths for f <sub>y</sub> = 4,000psi |             |           |           |                  |           |                       |            |           |  |
|--|-------------|-----------|-----------|------------------|-----------|-----------------------|------------|-----------|--|
| Bar Size   | Development |           |           | Class "B" Splice |           | Standard 90 deg. Hook |            |           |  |
|  | Top Bar     | Other Bar | Bend Dia. | Top Bar          | Other Bar | Embed Length          | Leg Length | Bend Dia. |  |
| #3   | 19          | 15        | 24        | 19               | 6         | 6                     | 2-1/4      |           |  |
| #4   | 25          | 19        | 32        | 25               | 7         | 8                     | 3          |           |  |
| #5   | 31          | 24        | 40        | 31               | 9         | 10                    | 3-3/4      |           |  |
| #6   | 37          | 29        | 48        | 37               | 10        | 12                    | 4-1/2      |           |  |
| #7   | 54          | 42        | 70        | 54               | 12        | 14                    | 5-1/4      |           |  |
| #8   | 62          | 48        | 80        | 62               | 14        | 16                    | 6          |           |  |
| #9   | 70          | 54        | 91        | 70               | 15        | 19                    | 9-1/2      |           |  |
1. Straight development and Class "B" splice lengths shown in above tables are based on uncoated bars assuming center-to-center bar spacing ≥ 3d, without ties or stirrups or ≥ 2d, with ties or stirrups, and bar clear cover ≥ 1.0d, Normal weight concrete as well as no transverse reinforcing are both assumed.
2. Standard 90 deg. hook embedment lengths are based on bar side cover ≥ 2.5" and bar end cover ≥ 2" without ties around hook.
3. For special seismic considerations, refer to ACI 318 Code Chapter 21.
4. All tension splices shall be Class "B" splices unless noted otherwise on plans.

Tension Development and Splice Lengths for f <sub>y</sub> = 5,000psi									
Bar Size	Development			Class "B" Splice		Standard 90 deg. Hook			
	Top Bar	Other Bar	Bend Dia.	Top Bar	Other Bar	Embed Length	Leg Length	Bend Dia.	
#3	17	13	22	17	6	6	2-1/4		
#4	22	17	29	22	6	8	3		
#5	28	22	36	28	8	10	3-3/4		
#6	33	26	43	33	9	12	4-1/2		
#7	49	37	63	49	11	14	5-1/4		
#8	55	43	72	55	12	16	6		
#9	63	48	81	63	14	19	9-1/2		

1. Straight development and Class "B" splice lengths shown in above tables are based on uncoated bars assuming center-to-center bar spacing ≥ 3d, without ties or stirrups or ≥ 2d, with ties or stirrups, and bar clear cover ≥ 1.0d, Normal weight concrete as well as no transverse reinforcing are both assumed.

2. Standard 90 deg. hook embedment lengths are based on bar side cover ≥ 2.5" and bar end cover ≥ 2" without ties around hook.

3. For special seismic considerations, refer to ACI 318 Code Chapter 21.

4. All tension splices shall be Class "B" splices unless noted otherwise on plans.

- g. All welded wire fabric shall be lapped 12" or 48 wire diameters, whichever is greater.
- h. Provide (2) #5 x 6'-0" diagonals at all corners of openings and re-entrant corners, unless noted otherwise.
- i. Dowels between foundation and walls shall be installed and shall be the same grade, size, and spacing as the vertical wall reinforcing, unless noted otherwise.
- j. Provide corner bars to match longitudinal reinforcing in all footings. Provide (2) corner bars at tee intersections.
- k. Provide 250 pounds of miscellaneous straight bar reinforcing (#4 & #5) to be used in field for special conditions. Labor for placing same to be included.
2. Slabs and Slabs-on-Grade
- a. All slabs on grade to be reinforced with 6x6 – W2.9xW2.9 welded wire fabric, unless noted otherwise.
3. Walls
- a. Provide corner bars in the outside face and at wall intersections to match horizontal wall bars. Use (3) #5 vertical construction rods at corners.
- b. Minimum reinforcing shall be as follows for each wall thickness, unless noted otherwise:
- 6" wall – #4@18 one layer
- 8" wall – #4@12 one layer
- 10" wall – #4@18 Ea. Face
- 12" wall – #5@18 Ea. Face
- c. Provide #5 at 12" o.c. each way unless noted otherwise.



NOTICE:  
McClure Engineering Co. is not responsible or liable for any issues, claims, damages, or losses (collectively, "Losses") which arise from failure to follow these Plans, Specifications, and the engineering intent they convey, or for Losses which arise from failure to obtain and/or follow the engineers' or surveyors' guidance with respect to any alleged errors, omissions, inconsistencies, ambiguities, or conflicts contained within the Plans or Specifications.

IOWA CERTIFICATE OF AUTHORITY  
NO. 26887



MARCUS HIMMELBERG  
NO. P24622  
EXP. 12/31/2025

I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.

No.	Description	Date

PROJECT NUMBER: 2025001420  
SET/ISSUE DATE: 08/01/2025

ENGINEER: IWC  
DRAWN BY: CEL  
CHECKED BY: MDH

JONES GILLAM RENZ  
THE RESIDENCE AT CARTER LAKE  
CARTER LAKE, IOWA  
GENERAL NOTES

DRAWING NO.  
S001

Sheet Number	Sheet Name
S001	GENERAL NOTES
S002	GENERAL NOTES
S003	GENERAL NOTES
S004	SCHEDULES
S100	FOUNDATION PLAN - AREA A
S101	FOUNDATION PLAN - AREA B
S102	LEVEL 1 FRAMING PLAN - AREA A
S103	LEVEL 1 FRAMING PLAN - AREA B
S104	LEVEL 2 FRAMING PLAN - AREA A
S105	LEVEL 2 FRAMING PLAN - AREA B
S106	LEVEL 3 FRAMING PLAN - AREA A
S107	LEVEL 3 FRAMING PLAN - AREA B
S108	ROOF FRAMING - AREA A
S109	ROOF FRAMING - AREA B
S500	TYPICAL WOOD DETAILS
S501	FOUNDATION DETAILS
S502	FOUNDATION DETAILS
S503	ALTERNATE FOUNDATION DETAILS
S504	TYPICAL STEEL DETAILS
S510	FRAMING DETAILS
S511	FRAMING DETAILS
S512	FRAMING DETAILS
S515	MASONRY DETAILS
S520	ROOF DETAILS
S521	ROOF DETAILS
S530	SHEAR WALL DETAILS







Special Inspection Schedule: Fabricators			
Verification And Inspection Task	Applicable To This Project?	Frequency	
		Continuous	Periodic
1. Verify fabrication and implementation procedures:			
a. Steel Construction	X	-	X
b. Concrete Construction (including rebar fabrication)	X	-	X
c. Masonry Construction	X	-	X
d. Wood Construction	X	-	X
e. Cold Formed Metal Construction	-	-	X
f. Other Construction	-	-	X

Special Inspection Schedule: Soils			
Verification And Inspection Task	Applicable To This Project?	Frequency	
		Continuous	Periodic
1. Verify materials below shallow foundations are adequate to achieve the design bearing capacity.	X	-	X
2. Verify excavations are extended to proper depth and have reached proper material.	X	-	X
3. Perform classification and testing of compacted fill materials.	X	-	X
4. Verify use of proper materials, densities and lift thickness during placement and compaction of compacted fill.	X	X	-
5. Prior to placement of compacted fill, observe subgrade and verify that site has been prepared properly.	X	-	X

Special Inspection Schedule: Cast-In-Place Foundation Elements			
Verification And Inspection Task	Applicable To This Project?	Frequency	
		Continuous	Periodic
1. Special Inspections and verifications for concrete foundation construction in accordance with the Special Inspection Schedule: Cast-In-Place Concrete for the following foundation elements:			
a. Isolated spread concrete footings.	X	-	X
b. Continuous concrete footings supporting walls.	X	-	X
c. Concrete foundation walls.	X	X	-

Special Inspection Schedule: Concrete Construction			
Verification And Inspection Task	Applicable To This Project?	Frequency	
		Continuous	Periodic
1. Inspect reinforcing steel, including prestressing tendons and placement.	X	-	X
2. Inspection of welding, reinforcing steel:			
a. Verification of weldability of reinforcing steel other than ASTM A706.	-	-	X
b. Reinforcing steel resisting flexural and axial forces in intermediate and special moment frames and boundary elements of special structural walls of concrete and shear reinforcement.	-	X	-
c. Shear reinforcement.	-	X	-
d. Other reinforcing steel.	-	-	X
3. Inspect anchors cast in concrete where allowable loads have been increased or where strength design is used.	X	-	X
4. Inspect anchors post-installed in hardened concrete members.	X	-	X
5. Verify use of required design mix.	X	-	X
6. At the time fresh concrete is sampled to fabricate specimens for strength tests, perform slump and air content tests and record the temperature of the concrete.	X	X	-
7. Inspect concrete and shotcrete placement for proper application techniques.	X	X	-
8. Inspect for maintenance of specified curing temperature and techniques.	X	-	X
9. Inspection of Prestressed Concrete:			
a. Observe application of prestressing forces.	-	X	-
b. Observe grouting of bonded prestressing tendons in the seismic force resisting system.	-	X	-
10. Inspect erection of precast concrete members.	-	-	X
11. Verify in-situ concrete strength prior to stressing of tendons in post-tensioned concrete and prior to removal of shores and forms from beams and structural slabs.	-	-	X
12. Inspect formwork for shape, location, and dimensions of the concrete member being formed.	X	-	X

Special Inspection Schedule: Masonry Construction - Level 2				
Verification And Inspection Task	Applicable To This Project?	Frequency		
		Continuous	Periodic	
1. Compliance with required inspection provisions of the Construction Documents and the approved submittals shall be verified.	X	-	X	
2. Verify fm and faac prior to construction except where specifically exempted by the building code.	X	-	X	
3. Verify slump flow and VSI as delivered to the site for self-consolidating grout.	X	X	-	
4. As masonry construction begins, the following shall be verified to ensure compliance:				
a. Proportions of site-prepared mortar.	X	-	X	
b. Construction of mortar joints.	X	-	X	
c. Location of reinforcement, connectors, prestressing tendons, and anchorages.	X	-	X	
d. Prestressing technique.	-	-	X	
e. Grade and size of prestressing tendons and anchorages.	-	-	X	
5. During construction, the inspection program shall verify:				
a. Size and location of structural elements.	X	-	X	
b. Type, size, and location of anchors, including other details of anchorage of masonry to structural members, frames, or other construction.	X	-	X	
c. Specified size, grade, and type of reinforcement, anchor bolts, prestressing tendons, and anchorages.	X	-	X	
d. Welding of reinforcing bars.	-	X	-	
e. Preparation, construction, and protection of masonry during cold weather (temperature < 40°F) or hot weather (temperature > 90°F).	X	-	X	
f. Application and measurement of prestressing force.	-	X	-	
6. Prior to grouting, the following shall be verified to ensure compliance:				
a. Grout space is clean.	X	-	X	
b. Placement of reinforcement, connectors, prestressing tendons, and anchorages.	X	-	X	
c. Proportions of site-prepared grout and prestressing grout for bonded tendons.	-	-	X	
d. Construction of mortar joints.	X	-	X	
7. Grout placement shall be verified to ensure compliance with Building Code and Construction Document provisions.				
a. Grouting of prestressing bonded tendons.	-	X	-	
8. Preparation of any required grout specimens, mortar specimens, and/or prisms shall be observed.	-	-	X	

Special Inspection Schedule: Structural Steel Construction				
Verification And Inspection Task	Applicable To This Project?	Frequency		
		Continuous	Periodic	
1. Material verification of high-strength bolts, nuts and washers:				
a. Identification markings to conform to ASTM standards specified in the approved construction documents.	X	-	X	
b. Manufacturer's certificate of compliance required.	X	-	X	
2. Inspection of high-strength bolting:				
a. Snug-tight joints.	X	-	X	
b. Pretensioned and slip-critical joints using turn-of-nut with match marking, twist-off bolt, or direct tension indicator methods of installation.	-	-	X	
c. Pretensioned and slip-critical joints using turn-of-nut without match marking or calibrated wrench methods of installation.	-	X	-	
3. Material verification of structural steel:				
a. Identification markings to conform to ASTM standards specified in the approved Construction Documents and AISC 360.	X	-	X	
b. Manufacturer's certified test reports.	X	-	X	
4. Material verification of weld filler materials:				
a. Identification markings to conform to AWS specification in the approved Construction Documents.	X	-	X	
b. Manufacturer's certificate of compliance required.	X	-	X	
5. Inspection of welding, structural steel:				
a. Complete and partial penetration groove welds.	X	X	-	
b. Multi-pass fillet welds.	X	X	-	
c. Single-pass fillet welds > 5/16".	X	X	-	
d. Single-pass fillet welds < 5/16".	X	-	X	
6. Inspection of steel frame joint details for compliance with approved Construction Documents:				
a. Details such as bracing and stiffening.	X	-	X	
b. Member locations.	X	-	X	
c. Application of joint details at each connection.	X	-	X	

Special Inspection Schedule: Wood Construction			
Verification And Inspection Task	Applicable To This Project?	Frequency	
		Continuous	Periodic
1. Inspection of high-load diaphragms:			
a. Verify wood structural panel sheathing is of the grade and thickness shown on plans.	X	-	X
b. Verify construction of framing members at adjoining panel edges agrees with the Construction Documents.	X	-	X
c. Verify fastener diameter and length, number of fastener lines, the spacing of the fasteners, and the edge margins agree with the Construction Documents.	X	-	X
2. Inspection of metal-plate-connected wood trusses spanning 60 feet or greater:			
a. Verify temporary installation restraint/bracing are installed in accordance with approved truss submittal package.	-	-	X
b. Verify permanent individual truss member restraint/bracing are installed in accordance with approved truss submittal package.	-	-	X

Special Inspection Schedule: Wind Resistance			
Verification And Inspection Task	Applicable To This Project?	Frequency	
		Continuous	Periodic
1. Roof cladding and roof framing connections.	X	-	-
2. Wall connections to roof and floor diaphragms and framing.	X	-	X
3. Roof and floor diaphragm systems including collectors, drag struts, and boundary elements.	X	-	X
4. Vertical wind force resisting systems including braced frames, moment frames, and shear walls.	X	-	X
5. Wind force resisting system connections to the foundation.	X	-	X
6. Fabrication and installation of systems or components required to meet impact-resistant requirements.	-	-	X
7. Inspection of structural wood:			
a. Inspect field gluing operations of elements of the main wind force resisting system.	-	X	-
b. Inspect nailing, bolting, anchoring, and other fastening of components within the main wind force resisting system including wood shear walls, wood diaphragms, drag struts, braces, and hold downs.	X	-	X
8. Inspection of cold-formed steel light frame construction:			
a. Inspection of welding operations of elements of the main wind force resisting system.	-	-	-
b. Inspection of screw attachment, bolting, anchoring, and other fastening of other components within the main wind force resisting system including shear walls, braces, diaphragms, collectors (drag struts), and hold downs.	-	-	-
9. Wind resistant systems and components:			
a. Roof cladding	X	-	-
b. Wall cladding	X	-	-

Special Inspection Schedule: Seismic Resistance			
Verification And Inspection Task	Applicable To This Project?	Frequency	
		Continuous	Periodic
1. Inspection of pier foundations:			
a. Inspect placement of reinforcement.	-	-	X
b. Inspect placement of concrete.	-	-	X
2. Inspection of concrete reinforcement:			
a. Verify certified mill test reports comply with ACI 318 Chapter 21 requirements.	-	-	X
b. Where reinforcing complying with ASTM A615 is to be welded, chemical tests shall be performed to determine weldability.	-	-	X
3. Inspection of structural steel.			
a. Inspections shall be in accordance with the quality assurance plan requirements of AISC 341.	-	-	X
4. Inspection of cold-formed steel framing:			
a. Inspect welding operations of elements of the seismic force resisting system.	-	-	X
b. Inspect screw attachment, bolting, anchoring, and other fastening of components within the seismic force resisting system including shear walls, braces, diaphragms, collectors (drag struts), and hold downs.	-	-	X
5. Inspection of structural wood:			
a. Inspect field gluing operations of elements of the seismic force resisting system.	-	X	
b. Inspect nailing, bolting, anchoring, and other fastening of components within the seismic force resisting system including wood shear walls, wood diaphragms, drag struts, braces, shear panels, and hold downs.	X	-	X
6. Inspection of storage racks:			
a. Inspect anchorage of storage racks 8 feet or greater in height.	-	-	X
7. Inspection of architectural components:			
a. Inspect erection and fastening of exterior cladding.	X	-	X
b. Inspect erection and fastening of interior and exterior nonbearing walls.	X	-	X
c. Inspect erection and fastening of interior and exterior veneer.	X	-	X
d. Inspect anchorage of access floors.	-	-	X
9. Inspection of designated seismic systems:			
a. Verify label, anchorage, or mounting conforms to the certificate of compliance.	-	-	X
10. Inspection of seismic isolation systems:			
a. Inspect the fabrication and installation of isolator units and energy dissipation devices that are part of the seismic isolation system.	-	-	X



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IOWA CERTIFICATE OF AUTHORITY  
NO. 26887



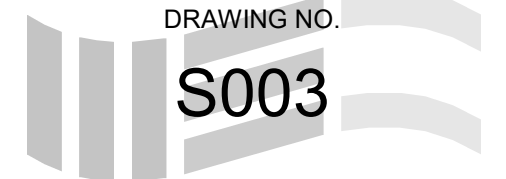
MARCUS HIMMELBERG  
NO. P24622  
EXP. 12/31/2025

I HEREBY CERTIFY THAT THIS  
ENGINEERING DOCUMENT WAS  
PREPARED BY ME OR UNDER MY  
DIRECT PERSONAL SUPERVISION AND  
THAT I AM A DULY  
LICENSED PROFESSIONAL ENGINEER  
UNDER THE LAWS OF THE STATE OF  
IOWA.

No.	Description	Date

PROJECT NUMBER 2025001420	SET / ISSUE DATE 08/01/2025
ENGINEER IWC	DRAWN BY CEL
CHECKED BY MDH	

JONES GILLAM RENZ  
THE RESIDENCE AT CARTER LAKE  
CARTER LAKE, IOWA  
GENERAL NOTES



Autodesk Docs://2025001420 - JGR - Carter Lake/2025001420 - JGR - Carter Lake R24.rvt



TYPICAL WALL HEADER SCHEDULE											
Opening Mark	Max. Span (ft-in)	Header				Kings & Jacks					
		Level 1	Level 2	Level 3	Header Plates* (All Levels)	Level 1		Level 2		Level 3	
						Kings	Jacks	Kings	Jacks	Kings	Jacks
H1	7'-0"	(2) LVL 1-3/4 x 11-7/8	(2) LVL 1-3/4 x 11-7/8	(3) 2x10	(1) 2x6 T&B	(2) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6
H2	7'-0"	(2) 2x8	(2) 2x8	(2) 2x8	(1) 2x6 T&B	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6
H3	8'-0"	(3) LVL 1-3/4 x 11-7/8	---	---	(1) 2x6 T&B	(3) 2x6	(1) 2x6	---	---	---	(1) 2x6
H4	4'-9"	(3) 2x10	(3) 2x10	(3) 2x8	(1) 2x6 T&B**	(2) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6
H5	7'-0"	(2) LVL 1-3/4 x 11-7/8	---	---	(1) 2x6 T&B**	(1) 2x6	(1) 2x6	---	---	---	(1) 2x6
H6	6'-0"	(3) LVL 1-3/4 x 11-7/8	(3) LVL 1-3/4 x 11-7/8	(3) 2x8	(1) 2x6 T&B**	(2) 2x6	(2) 2x6	(1) 2x6	(1) 2x6	(1) 2x6	(1) 2x6
H7	4'-0"	(3) 2x8	---	---	(1) 2x6 T&B**	(1) 2x6	(1) 2x6	---	---	---	(1) 2x6
HH1	3'-0"	(3) 2x8	---	---	(1) 2x6 T&B	(1) 2x6	(1) 2x6	---	---	---	(1) 2x6
HH2	3'-0"	(3) LVL 1-3/4 x 11-7/8	---	---	(1) 2x6 T&B**	(2) 2X6	(2) 2X6	---	---	---	---

H = An opening which requires a header

HH = An opening which requires a header & which does not stack with openings above

Notes:

- See S500 for typical opening framing.
- All openings should stack according to the plans.
- Coordinate all dimensions and elevations with architectural drawings.
- Cripple studs should match the adjacent wall framing.
- \* Header top and bottom plates and sills should match the wall stud depths.
- All LVL shall be stress class 2.0E-2500F
- \*\* Indicates headers that do not require top and bottom plates.

WOOD SHEAR WALL SCHEDULE							
Mark	Level	Sheathing/ Fastener Layout	Post	Hold-Down	Min. Sill/Top Plate	Base Connection	Drag Truss/Blocking Load (ASD)
SW1	Level 3	(1) Sided, ZIP Wood Structural Panel - Sheathing - 7/16" Thick, 8d Nail, 6" Edge Fastening	(2) 2x6	MST37 w/ (14) 0.162x2-1/2" nails	2X6	(2) 16d nails @ 24" o.c.	85 plf
	Level 2	(1) Sided, ZIP Wood Structural Panel - Sheathing - 7/16" Thick, 8d Nail, 6" Edge Fastening	(2) 2x6	MST37 w/ (22) 0.162x2-1/2" nails	2X6	(2) 16d nails @ 16" o.c.	145 plf
	Level 1	(1) Sided, ZIP Wood Structural Panel - Sheathing - 7/16" Thick, 8d Nail, 6" Edge Fastening	(2) 2x6	DTT2Z w/ (8) 1/4"Øx1-1/2" SDS screws & 1/2"Ø Anchor Rod	2X6	(1) HILTI KH-EZ 3/8"Øx 6" @ 24" o.c.	205 plf
SW2	Level 3	(1) Sided, ZIP Wood Structural Panel - Sheathing - 7/16" Thick, 8d Nail, 6" Edge Fastening	(2) 2x6	MST37 w/ (14) 0.162x2-1/2" nails	2X6	(2) 16d nails @ 8" o.c.	140 plf
	Level 2	(1) Sided, ZIP Wood Structural Panel - Sheathing - 7/16" Thick, 8d Nail, 6" Edge Fastening	(2) 2x6	MST37 w/ (22) 0.162x2-1/2" nails	2X6	(2) 16d nails @ 6" o.c.	235 plf
	Level 1	(1) Sided, ZIP Wood Structural Panel - Sheathing - 7/16" Thick, 8d Nail, 4" Edge Fastening	(2) 2x6	HTT4 w/ (18) 0.148Øx1-1/2" & 5/8"Ø Anchor Rod	2X6	(1) HILTI KH-EZ 3/8"Øx 6" @ 12" o.c.	335 plf
SW3	Level 3	(1) Sided, Wood Structural Panels - Sheathing - 7/16" Thick, 8d Nail, 6" Edge fastening Unblocked	(3) 2x4	MST37 w/ (14) 0.162x2-1/2" nails	2x4	(2) 16d nails @ 16" o.c.	185 plf
	Level 2	(1) Sided, Wood Structural Panels - Sheathing - 7/16" Thick, 8d Nail, 6" Edge fastening	(3) 2x4	MST37 w/ (22) 0.162x2-1/2" nails	2x4	(2) 16d nails @ 8" o.c.	300 plf
	Level 1	(1) Sided, Wood Structural Panels - Sheathing - 7/16" Thick, 8d Nail, 4" Edge fastening	(3) 2x4	HTT4 w/ (18) 0.148Øx1-1/2" & 5/8"Ø Anchor Rod	2x4	(1) HILTI KH-EZ 3/8"Øx 6" @ 16" o.c.	425 plf
SW4	Level 3	(1) Sided, Wood Structural Panels - Sheathing - 7/16" Thick, 8d Nail, 6" Edge fastening	(3) 2x4	MST48 w/ (26) 0.162x2-1/2" nails	2x4	(2) 16d nails @ 12" o.c.	260 plf
	Level 2	(1) Sided, Wood Structural Panels - Sheathing - 7/16" Thick, 8d Nail, 4" Edge fastening	(3) 2x4	MST48 w/ (34) 0.162x2-1/2" nails	2x4	(2) 16d nails @ 8" o.c.	440 plf
	Level 1	(1) Sided, Wood Structural Panels* - Sheathing - 7/16" Thick, 8d Nail, 3" Edge fastening	(3) 2x4 or (2) 2x6	HTT5KT w/ (26) SD # 10x2-1/2" & 5/8"Ø Anchor Rod	2x4 or 2x6	(1) HILTI KH-EZ 3/8"Øx 6" @ 12" o.c.	625 plf
SW5	Level 3	(1) Sided, Gypsum Wallboard - 1/2" Thick, 5d Nail, 7" Edge Fastening, 16" O.C. Unblocked	(2) 2x6	MST37 w/ (14) 0.162x2-1/2" nails	2X6	(2) 16d nails @ 24" o.c.	45 plf
	Level 2	(1) Sided, Gypsum Wallboard - 1/2" Thick, 5d Nail, 7" Edge Fastening, 16" O.C. Unblocked	(2) 2x6	MST37 w/ (22) 0.162x2-1/2" nails	2X6	(2) 16d nails @ 16" o.c.	90 plf
	Level 1	(1) Sided, Gypsum Wallboard - 1/2" Thick, 5d Nail, 7" Edge Fastening, 16" O.C. Unblocked	(2) 2x6	DTT1Z w/ (6) SD #9x1-1/2" & 3/8"Ø Anchor Rod	2X6	(1) HILTI KH-EZ 3/8"Øx 6" @ 24" o.c.	105 plf

Notes:

- See S530 for typical shear wall framing
- All threaded rods shall be F1554 GR60; See 3/S530 for anchor options.
- Floor to floor strap ties at top of wall shall match that of the floor above.
- All hold downs and strap ties are Simpson Strong-Tie brand, U.N.O.
- Bottom sill plate connections shall have a 3"x3"x1/4" steel plate washer at each anchor bolt on shear walls only.
- All drag trusses shall be connected to shear walls per detail 4/S530 and 5/S530.
- Provide floor to floor strapping on the same side as the OSB sheathing.
- Field fastening for all sheathing to be 12" O.C. U.N.O
- All shear walls to be blocked at all panel joints unless noted "Unblocked."
- \* Indicates that at exterior locations ZIP Sheathing may be used in lieu of wood structural panel.

FLOOR AND ROOF SCHEDULE				
Type	Membrane/Sheathing	Fastening	Concrete/Topping	Reinforcing
Slab on Grade	15mil Vapor Retarder	Taped Edges	4" NW Concrete U.N.O.	See General Notes
Interior Floors	3/4" Plywood	10d @ 6/12	3/4" Gypcrete Topping	---
Roof	15/32" Plywood	10d @ 6/12 UNO	---	---

Notes:

- Vapor barrier to be placed over compacted fill per general notes.
- Plywood sheathing to be fastened per detail 2/S500
- Floor/Roof diaphragm are unblocked unless noted otherwise on plan.
- Plywood to be Structural Grade 1 Material
- See architectural drawings for full floor and roof assemblies including nonstructural elements.

WOOD WALL SCHEDULE				
Wood Wall Location	Wall Stud Size, number of plys, and spacing			Sheathing & Fastening U.N.O. (See Note 5)
	Level 1	Level 2	Level 3	
Exterior Walls	(1) 2x6 @ 16" o.c.	(1) 2x6 @ 24" o.c.	(1) 2x6 @ 24" o.c.	7/16" ZIP sheathing fastened w/ 8d nails. 6" o.c. edge fastening, 12" o.c. field fastening
Corridor Walls & Interior Typ. Walls	(1) 2x6 @ 16" o.c.	(1) 2x6 @ 24" o.c.	(1) 2x6 @ 24" o.c.	5/8" Gypsum wallboard fastened w/ 1 5/8" Type W screws. 7" o.c. edge fastening, 12" o.c. field fastening - Both Sides
Unit Separation Wall @ Mech. Room	(1) 2x4 @ 12" o.c.	(1) 2x4 @ 16" o.c.	(1) 2x4 @ 16" o.c.	5/8" Gypsum wallboard fastened w/ 1 5/8" Type W screws. 7" o.c. edge fastening, 12" o.c. field fastening - Both Sides
Unit Separation Walls	(1) 2x4 @ 16" o.c.	(1) 2x4 @ 16" o.c.	(1) 2x4 @ 16" o.c.	5/8" Gypsum wallboard fastened w/ 1 5/8" Type W screws. 7" o.c. edge fastening, 12" o.c. field fastening - Both Sides

Notes:

- Wall stud spacing is to be per schedule unless noted otherwise.
- Bottom sill plates at foundation to be fastened w/ 3/8"Ø x 6" Hilti Kwik HUS-EZ Bolts @ 48" o.c. U.N.O.
- Sill and top plates at all other levels to be fastened w/ (2) 16d nails @ 24" o.c. U.N.O.
5. Shear walls shall be sheathed & fastened per shear wall schedule
6. Non-load bearing walls not shown, refer to architectural drawings.
7. All top plates are to be continuous. Splice per 3/S500
8. U.N.O. bottom sill plates shall be (1) 2x member matching wall thickness, and top plates shall be (2) 2x members.

WOOD BEAM SCHEDULE			
Mark	Max. Span (ft-in)	Beam Size	Hanger
B1	8'-2"	(3) LVL 1-3/4 x 9-1/2	*Simpson HUCQ610-SDS
B2	12'-0"	5-1/2 x 14 Glulam	Simpson CC66/ECC66
B3	19'-3"	(3) LVL 1-3/4 x 14"	Simpson ECC66
B4	8'-0"	(2) 2x8	Simpson HUC28-2

Notes:

- All exterior beams are to be pressure treated.
- All LVL shall be stress class 2.0E-2500F
- All Glulam shall be stress class 24F-1.8E or better
- Hangers to be installed with number of fasteners per manufacturer product data
- \* Indicates fasteners differ from those provided with hanger per detail 6/S510

WOOD COLUMN SCHEDULE			
Mark	Level 1	Level 2	Level 3
C1	(3) 2X6	(3) 2X6	(3) 2X6
C2	4x4	---	---
C3	(5) 2X4	(3) 2X4	---

Notes:

- All exterior columns are to be pressure treated

JOIST & HANGER SCHEDULE	
Joist Size	Hanger
2x6	Simpson LUS26
2x8	Simpson LUS28
2x10	Simpson LUS28

Notes:

- Hangers to be installed with typical fasteners per manufacturer product data
- All exterior members are to be pressure treated

FOUNDATION SCHEDULE		
Mark	Size	Reinforcing
F1	2'-6"x2'-6"x1'-0"	(3) #5 Bars, Bottom Each Way
F2	3'-6"x3'-6"x1'-0"	(3) #5 Bars, Bottom Each Way
F3	5'-6"x5'-6"x1'-0"	(5) #5 Bars, Bottom Each Way

Notes:

- All footings must be centered on walls and columns U.N.O.



**McCLURE**™

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Columbia, MO 65202  
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IOWA CERTIFICATE OF AUTHORITY  
NO. 26887



MARCUS HIMMELBERG  
NO. P24622  
EXP. 12/31/2025

I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.

No.	Description	Date

PROJECT NUMBER 2025001420	SET/ISSUE DATE 08/01/2025
ENGINEER IWC	DRAWN BY CEL
	CHECKED BY MDH

JONES GILLAM RENZ  
THE RESIDENCE AT CARTER LAKE  
CARTER LAKE, IOWA  
SCHEDULES

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DRAWING NO.  
**S004**



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IOWA CERTIFICATE OF AUTHORITY  
NO. 26887



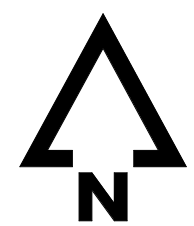
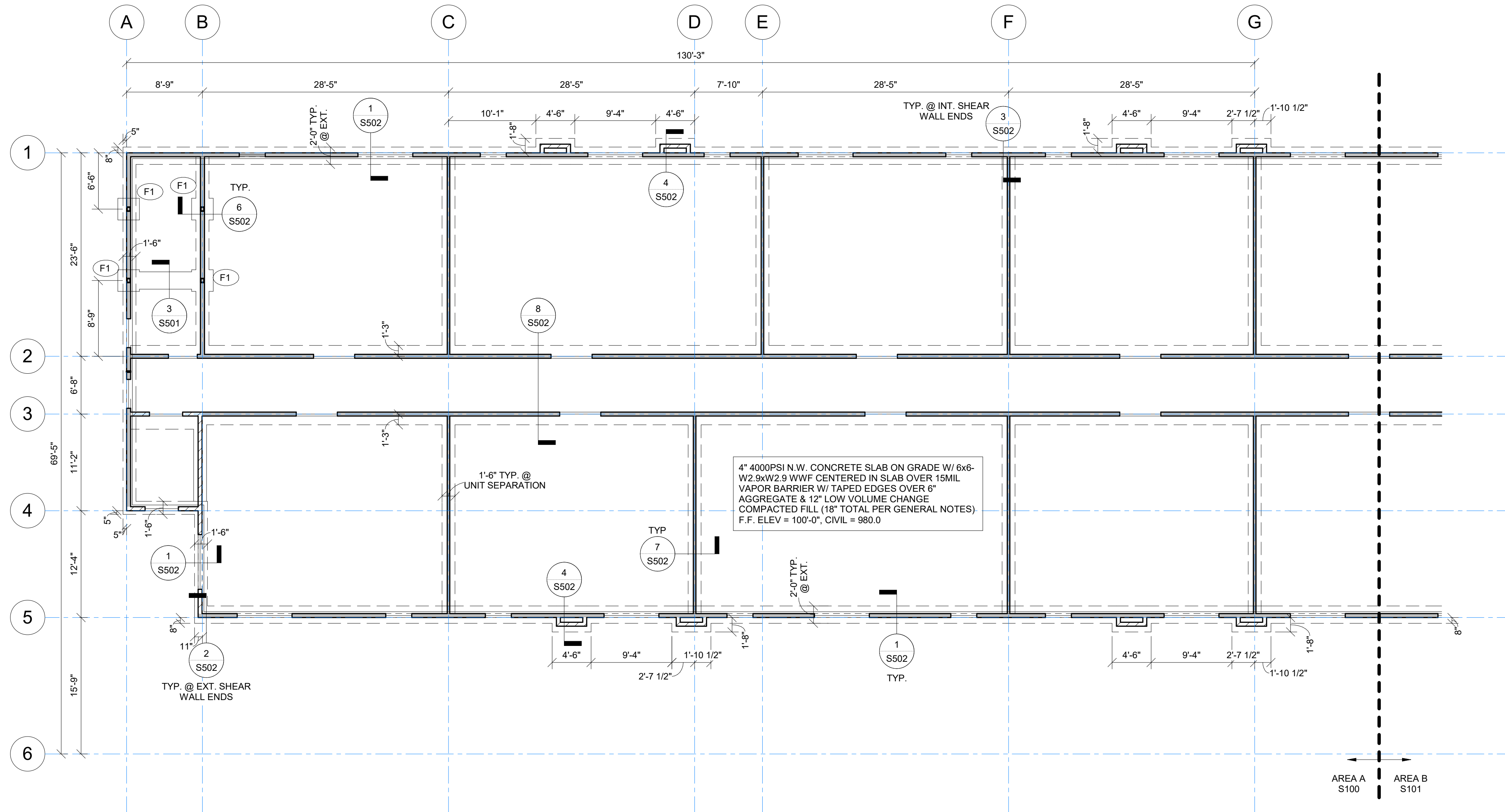
MARCUS HIMMELBERG  
NO. P24622  
EXP. 12/31/2025

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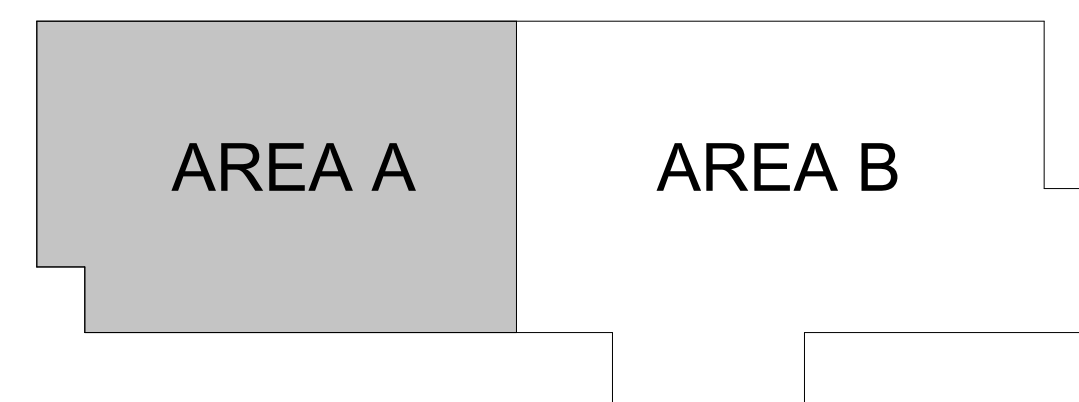
PROJECT NUMBER 2025001420	SET/ISSUE DATE 08/01/2025
ENGINEER IWC	DRAWN BY CEL
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JONES GILLAM RENZ  
THE RESIDENCE AT CARTER LAKE  
CARTER LAKE, IOWA  
FOUNDATION PLAN - AREA A  
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1 FOUNDATION PLAN - AREA A  
1/8" = 1'-0"

## BUILDING KEY



### FRAMING PLAN NOTES:

- SEE ARCHITECTURAL DRAWINGS FOR SITE PLAN BENCHMARK ELEVATIONS, SEE BELOW (VERIFY ALL ELEVATIONS AND DIMENSIONS WITH ARCHITECTURAL DRAWINGS)
  - T.O. SLAB-ON-GRADE: 100'-0"
- PROVIDE CONTROL JOINTS IN SLAB ON GRADE PER 1/S501 AND PER GENERAL NOTES.
- COORDINATE PLUMBING FIXTURES, SHAFTS, AND FLOOR DRAINS WITH ARCH. & MEP DRAWINGS.
- ALL EXTERIOR & INTERIOR LOAD BEARING WALLS ARE PER WALL SCHEDULE ON SHEET S004. SEE ARCHITECTURAL FLOOR PLAN FOR NON-BEARING WALL, DOOR, AND WINDOW LOCATIONS.
- REFER TO MANUFACTURER'S GUIDELINES FOR INSTALLATION OF STRAP TIES, HOLD DOWNS & OTHER CONNECTIONS.
- SEE SHEET S501 & S502 FOR DETAILS

### FRAMING PLAN LEGEND

- (SW?) SHEAR WALL TYPE INDICATED BY
- (H?)# HEADING/OPENING PER OPENING SCHEDULE
- (F?) INDICATES FOOTING TYPE
- P# JAMB FROM ABOVE PER OPENING SCHEDULE
- PH# INDICATES POST TYPE
- C# INDICATES COLUMN TYPE
- E.O.S. INDICATES EDGE OF CONCRETE SLAB



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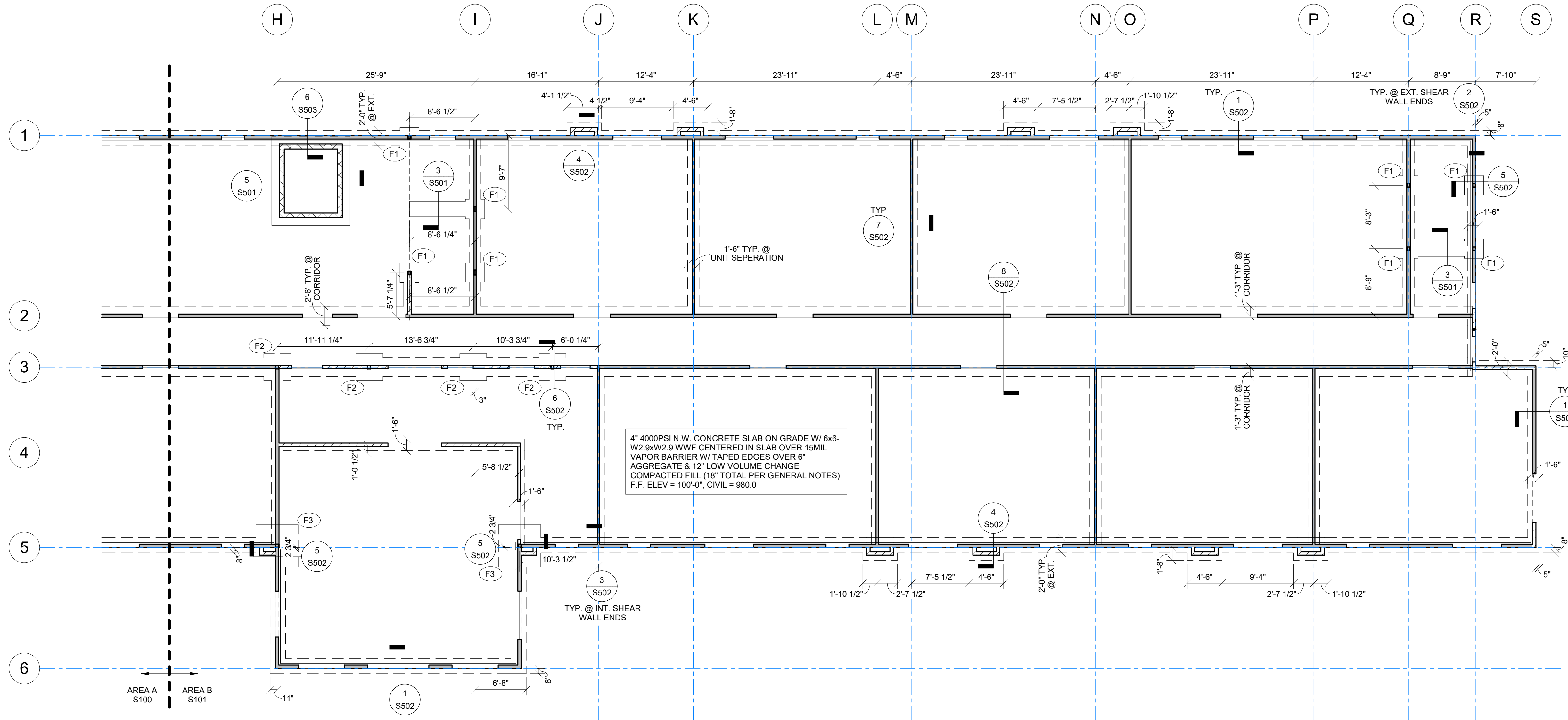
CARTER LAKE, IOWA

FOUNDATION PLAN - AREA B

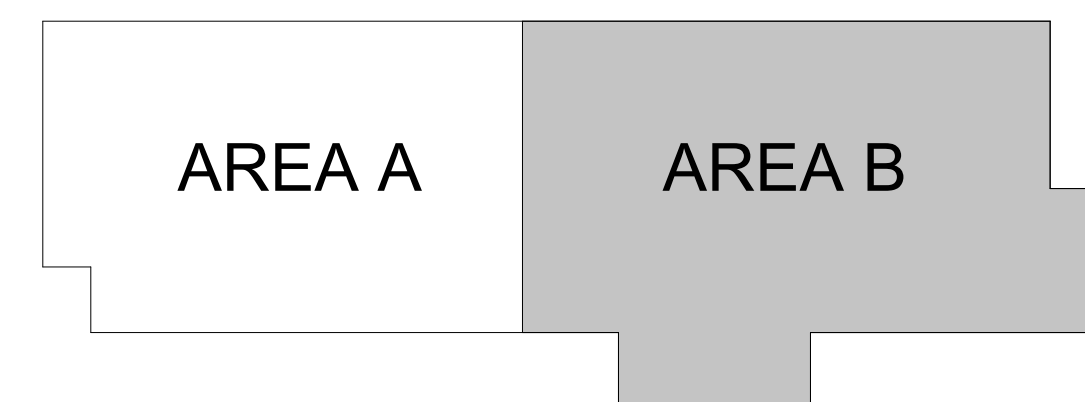
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DRAWING NO.

S101



## BUILDING KEY



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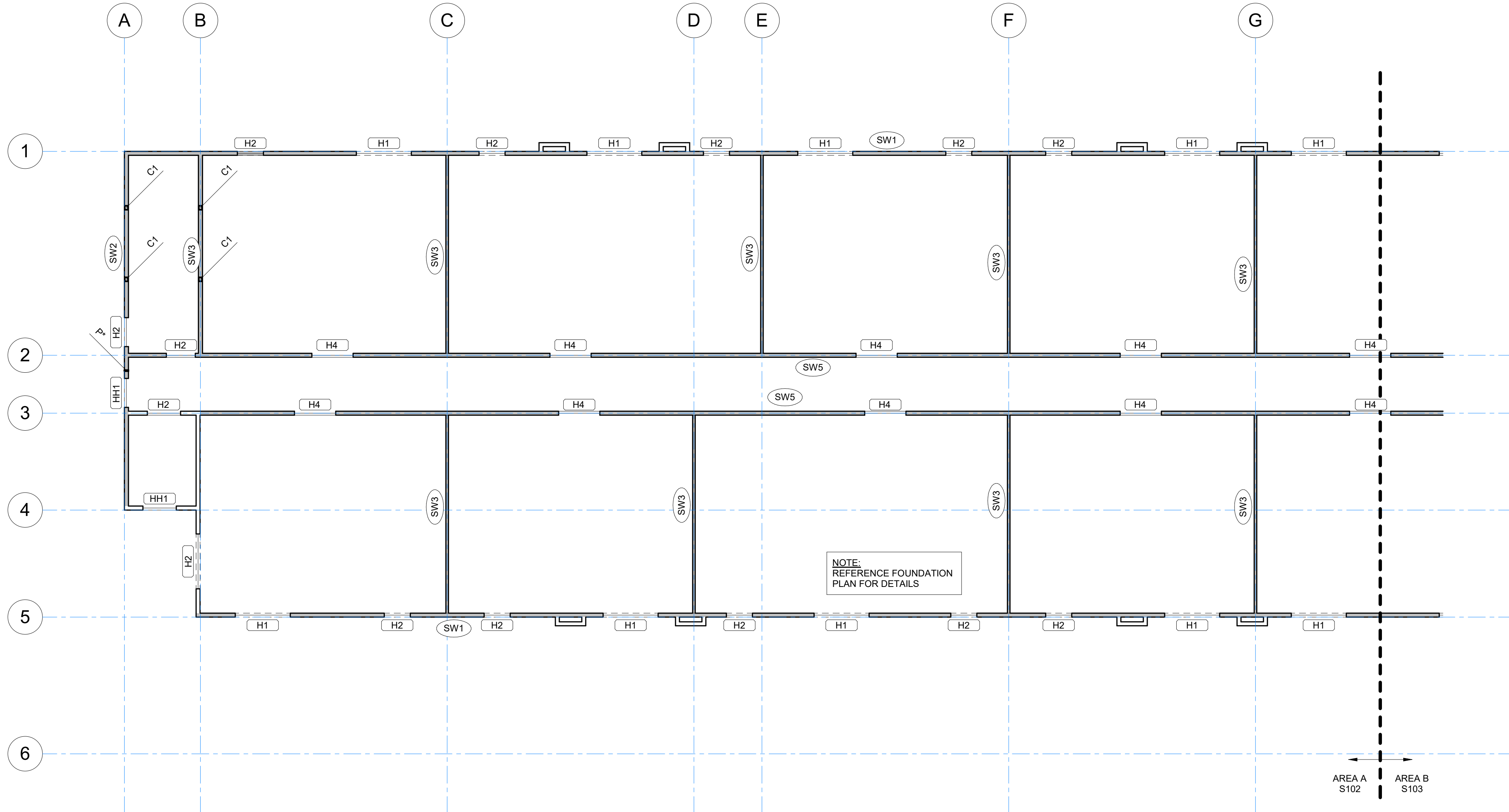
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LEVEL 1 FRAMING PLAN - AREA A  
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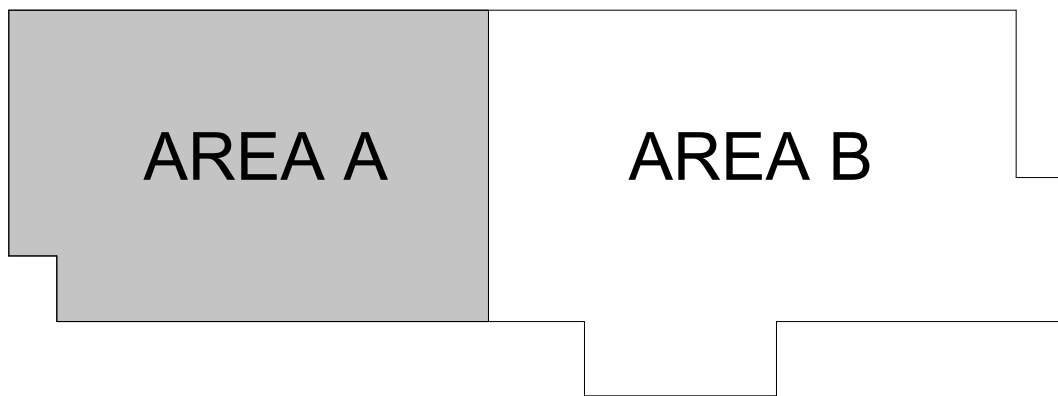
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**BUILDING KEY**





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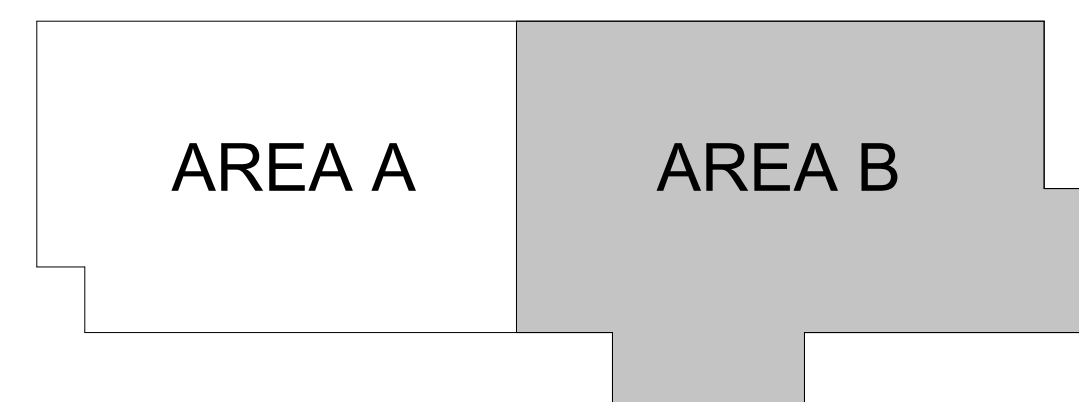
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08/01/2025

ENGINEER  
IWC

DRAWN BY  
CEL

CHECKED BY  
MDH

## BUILDING KEY



### FRAMING PLAN LEGEND

- (SW?) SHEAR WALL TYPE INDICATED BY [Symbol]
- (H7#) HEADING/OPENING PER OPENING SCHEDULE
- (F?) INDICATES FOOTING TYPE
- P\* JAMB FROM ABOVE PER OPENING SCHEDULE
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- CH INDICATES COLUMN TYPE
- E.O.S. INDICATES EDGE OF CONCRETE SLAB

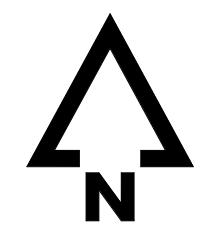
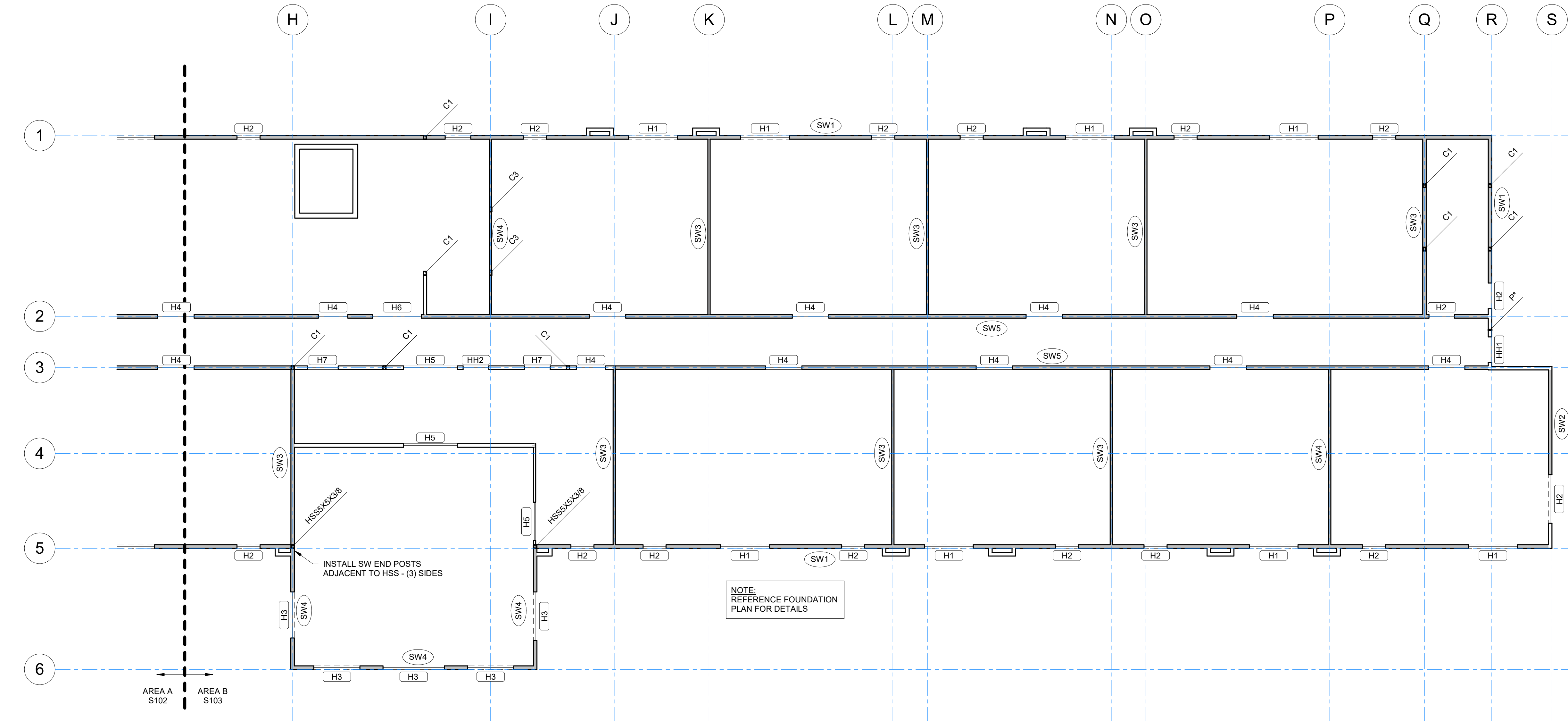
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- SEE S500 FOR TYPICAL FRAMING DETAILS, S510 FOR STAIR FRAMING, & S515 FOR CMU DETAILS.
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JONES GILLAM RENZ  
THE RESIDENCE AT CARTER LAKE  
CARTER LAKE, IOWA  
LEVEL 1 FRAMING PLAN - AREA B  
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DRAWING NO.

S103



1 LEVEL 1 FRAMING - AREA B  
S103 1/8" = 1'-0"



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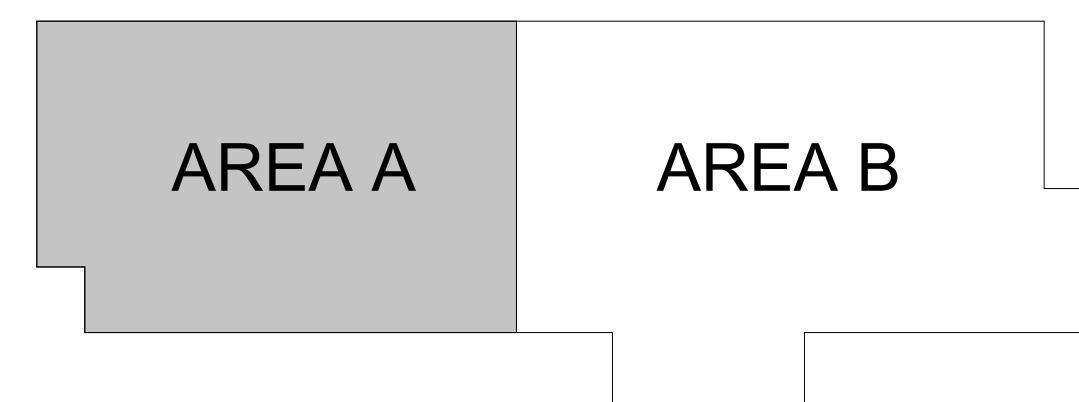
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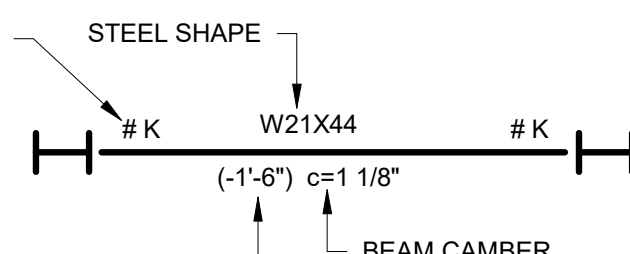


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### STEEL BEAM LEGEND

SERVICE (ASD) LOAD END  
REACTION (IN KIPS) IF  
GREATER THAN MINIMUM  
REACTION SCHEDULE VALUES



TOP OF STEEL ELEVATION RELATIVE TO  
FINISHED FLOOR ELEVATION PER PLAN  
NOTES. ELEVATIONS AT EACH END OF  
BEAM INDICATE SLOPING BEAM

### FRAMING PLAN LEGEND

- (SW?) SHEAR WALL TYPE INDICATED BY [Symbol]
- (H?) HEADING/OPENING PER OPENING SCHEDULE
- (F?) INDICATES FOOTING TYPE
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JONES GILLAM RENZ  
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LEVEL 2 FRAMING PLAN - AREA A  
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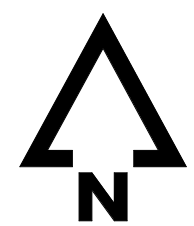
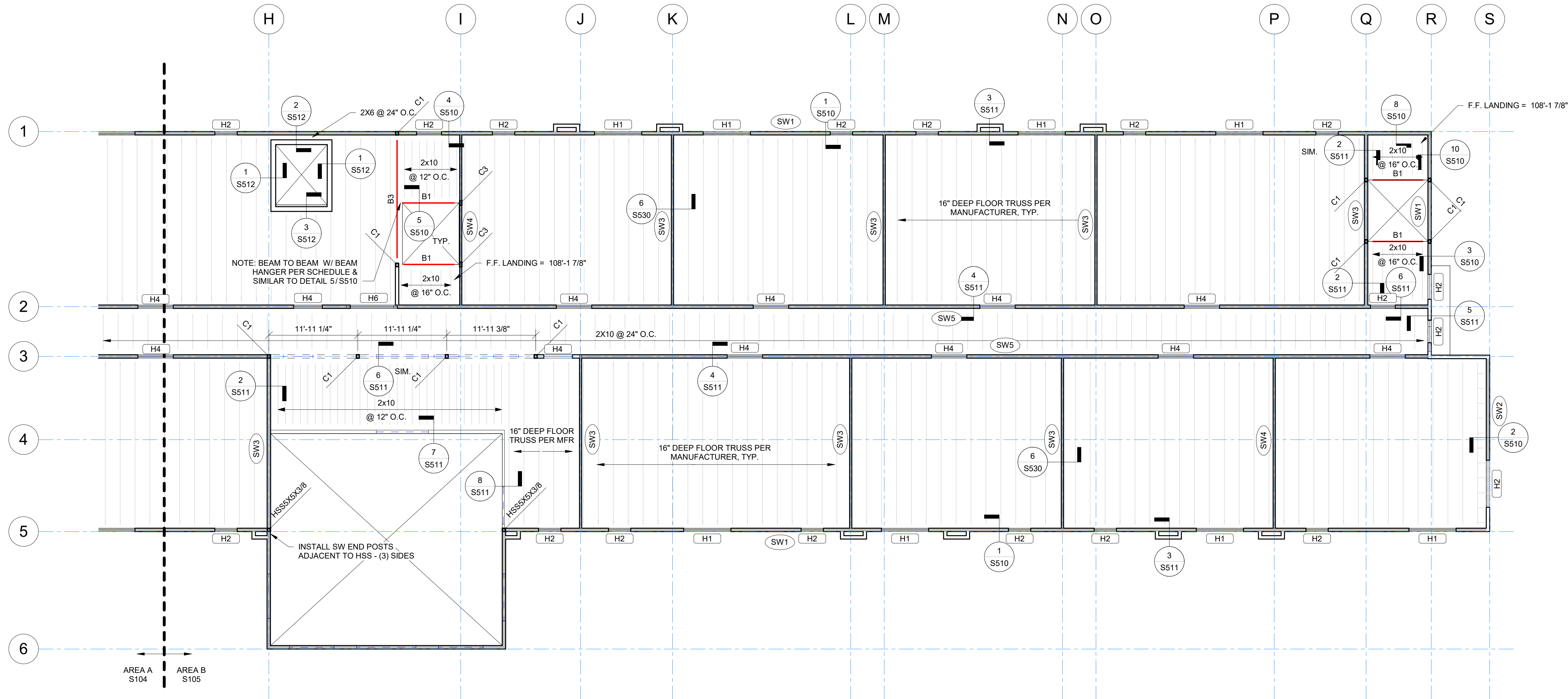
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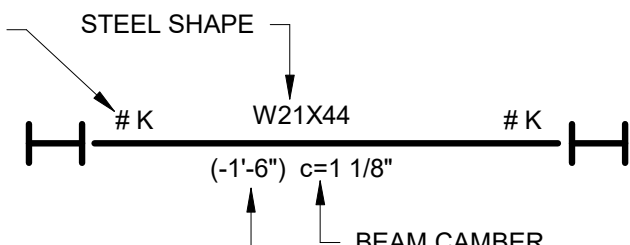
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1  
S105  
LEVEL 2 FRAMING - AREA B  
1/8" = 1'-0"

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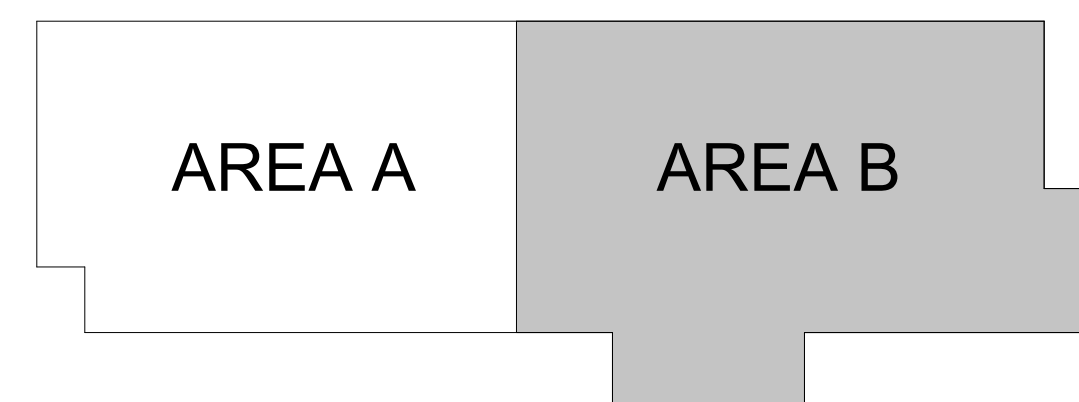


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IOWA CERTIFICATE OF AUTHORITY  
NO. 26887



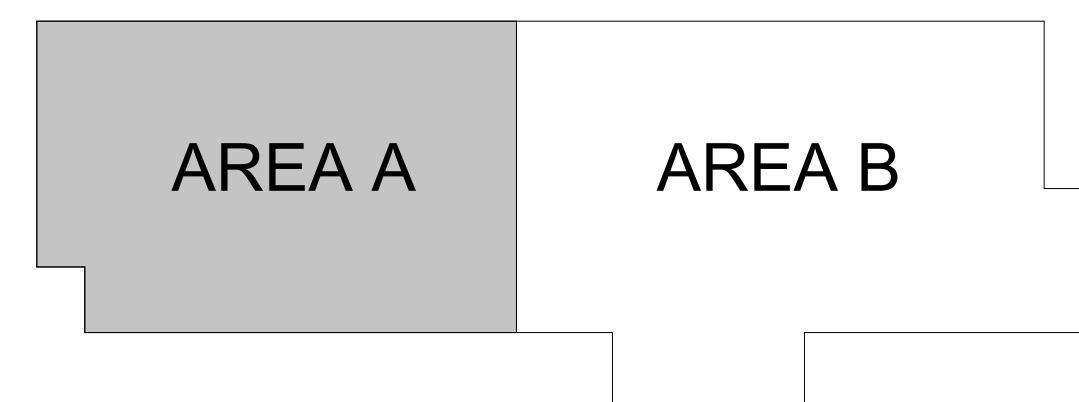
MARCUS HIMMELBERG  
NO. P24622  
EXP. 12/31/2025

I HEREBY CERTIFY THAT THIS  
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PREPARED BY ME OR UNDER MY  
DIRECT PERSONAL SUPERVISION AND  
THAT I AM A DULY  
LICENSED PROFESSIONAL ENGINEER  
UNDER THE LAWS OF THE STATE OF  
IOWA.

No.	Description	Date

PROJECT NUMBER 2025001420	SET/ISSUE DATE 08/01/2025
ENGINEER IWC	DRAWN BY CEL
	CHECKED BY MDH

## BUILDING KEY

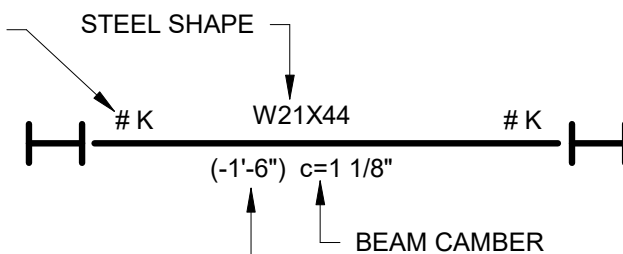


### FRAMING PLAN NOTES:

- SEE ARCHITECTURAL DRAWINGS FOR SITE PLAN BENCHMARK ELEVATIONS, SEE BELOW (VERIFY ALL ELEVATIONS AND DIMENSIONS WITH ARCHITECTURAL DRAWINGS)
  - T.O. SLABE-ON-GRADE: 100'-0"
  - LEVEL 2 F.F.: 110'-5 7/8"
  - LEVEL 3 F.F.: 121'-7 3/4"
  - TRUSS BRG.: 130'-5 7/8"
- FLOOR SHEATHING: 3/4" STRUCTURAL GRADE PLYWOOD. FASTEN TO FRAMING W/ 10d COMMON NAILS SPACED 6" O.C. AT EDGES, 12" O.C. WITHIN FIELD.
- ROOF SHEATHING: 15/32" STRUCTURAL GRADE PLYWOOD. FASTEN TO FRAMING W/ 10d COMMON NAILS SPACED 6" O.C. AT EDGES, 12" O.C. WITHIN FIELD.
- COORDINATE PLUMBING FIXTURES, SHAFTS, AND FLOOR DRAINS WITH ARCH. & MEP DRAWINGS.
- ALL EXTERIOR & INTERIOR LOAD BEARING WALLS ARE PER WALL SCHEDULE ON SHEET 5004. SEE ARCHITECTURAL FLOOR PLAN FOR NON-BEARING WALL, DOOR, AND WINDOW LOCATIONS.
- FLOOR PLAN SHOWS FRAMING FOR THE FLOOR INDICATED & VERTICAL FRAMING (WALLS, HEADERS, POSTS, COLUMNS) ABOVE THAT FLOOR.
- SEE ARCHITECTURAL DRAWINGS FOR ALL RAILING DETAILS. REFER GENERAL NOTES FOR DESIGN CRITERIA.
- REFER TO MANUFACTURER'S GUIDELINES FOR INSTALLATION OF STRAP TIES, HOLD DOWNS & OTHER CONNECTIONS.
- ALL EXTERIOR LUMBER (POSTS, BEAMS, DECKING, ETC.) TO BE TREATED.
- WOOD FLOOR TRUSSES TO BE DESIGNED BY MANUFACTURER AND ARE SHOWN FOR THE INTENT OF SPAN DIRECTION AND LOAD PATH ONLY. REFER TO GENERAL NOTES FOR DESIGN CRITERIA.
- TRUSS MANUFACTURER TO DESIGN & PROVIDE GIRDER TRUSSES AT ALL FLOOR OPENINGS & SPECIFY HANGERS FOR GIRDERS & SUPPORTED FRAMING.
- REFER TO ARCHITECTURAL PLANS FOR STAIR DIMENSIONS AND REQUIREMENTS. REFER TO STRUCTURAL GENERAL NOTES FOR STAIR DESIGN CRITERIA.
- COLUMN FRAMING MAY BE USED IN LIEU OF SHEAR WALL END POST FRAMING END OF SHEAR WALLS.
- SEE S500 FOR TYPICAL FRAMING DETAILS, S510 FOR STAIR FRAMING, & S515 FOR CMU DETAILS.
- FIRE PROOF AROUND BEAMS AT SHAFT PENETRATIONS.**

### STEEL BEAM LEGEND

SERVICE (ASD) LOAD END  
REACTION (IN KIPS) IF  
GREATER THAN MINIMUM  
REACTION SCHEDULE VALUES



TOP OF STEEL ELEVATION RELATIVE TO  
FINISHED FLOOR ELEVATION PER PLAN  
NOTES. ELEVATIONS AT EACH END OF  
BEAM INDICATE SLOPING BEAM

### FRAMING PLAN LEGEND

- (SW?) SHEAR WALL TYPE INDICATED BY [Symbol]
- (H?)# HEADING/OPENING PER OPENING SCHEDULE
- (F?) INDICATES FOOTING TYPE
- P\* JAMB FROM ABOVE PER OPENING SCHEDULE
- P# INDICATES POST TYPE
- C# INDICATES COLUMN TYPE
- E.O.S. INDICATES EDGE OF CONCRETE SLAB

JONES GILLAM RENZ  
THE RESIDENCE AT CARTER LAKE  
CARTER LAKE, IOWA  
LEVEL 3 FRAMING PLAN - AREA A  
Autodesk Docs/2025001420 - JGR - Carter Lake/2025001420 - JGR - Carter Lake R24.rvt



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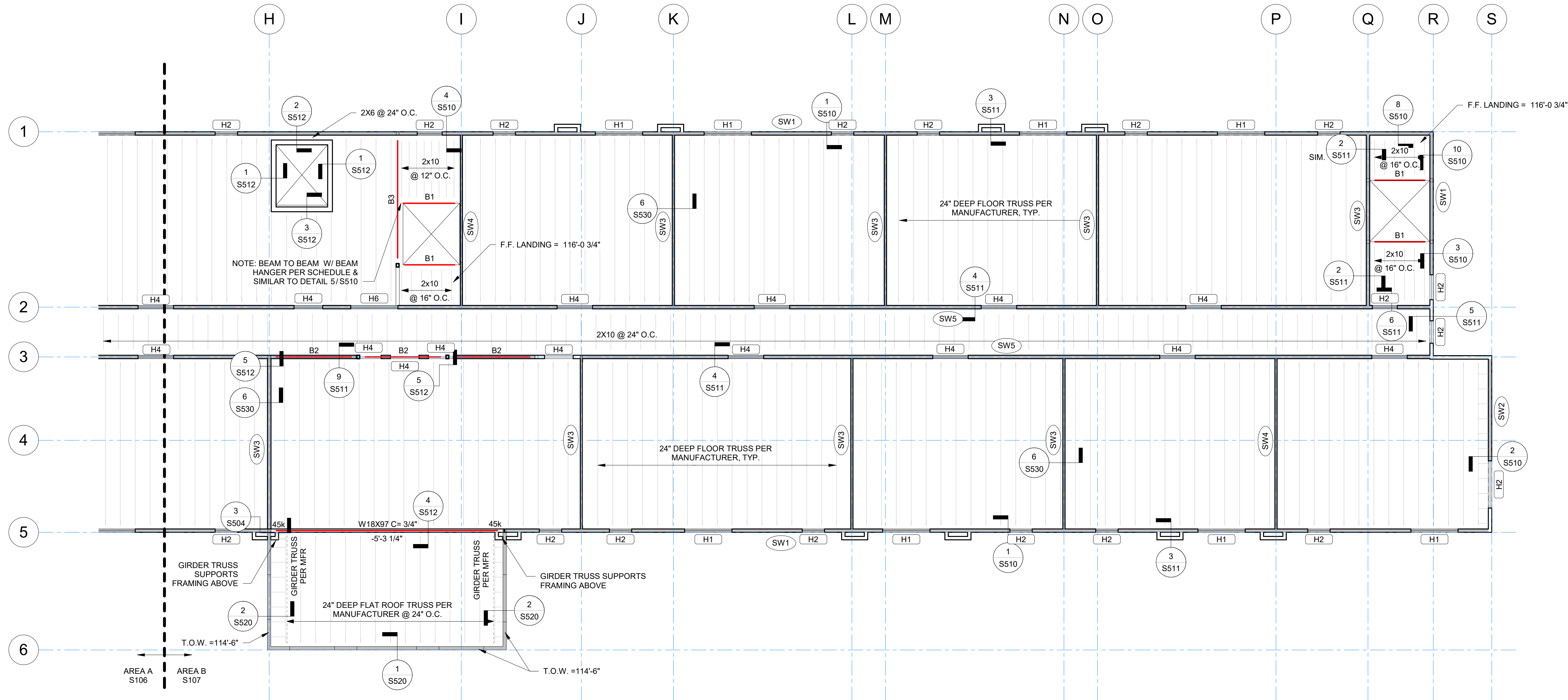
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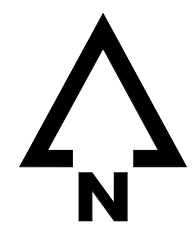
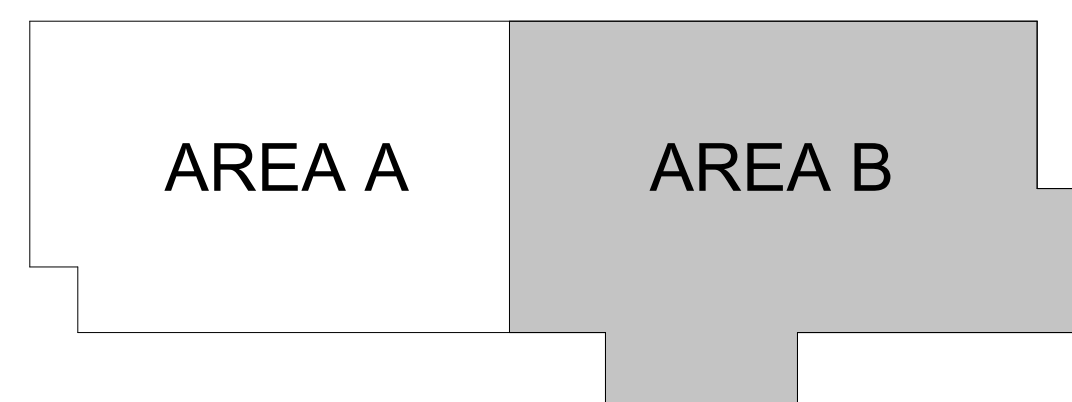
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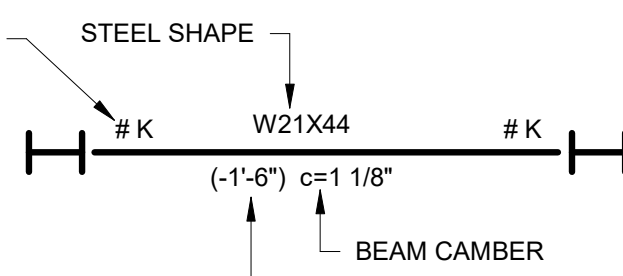
## BUILDING KEY



1 LEVEL 3 FRAMING - AREA B  
1/8" = 1'-0"

### STEEL BEAM LEGEND

SERVICE (ASD) LOAD END  
REACTION (IN KIPS) IF  
GREATER THAN MINIMUM  
REACTION SCHEDULE VALUES



TOP OF STEEL ELEVATION RELATIVE TO  
FINISHED FLOOR ELEVATION PER PLAN  
NOTES. ELEVATIONS AT EACH END OF  
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### FRAMING PLAN LEGEND

- SW? SHEAR WALL TYPE INDICATED BY
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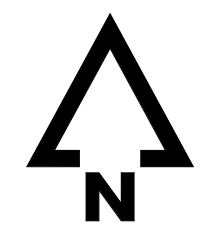
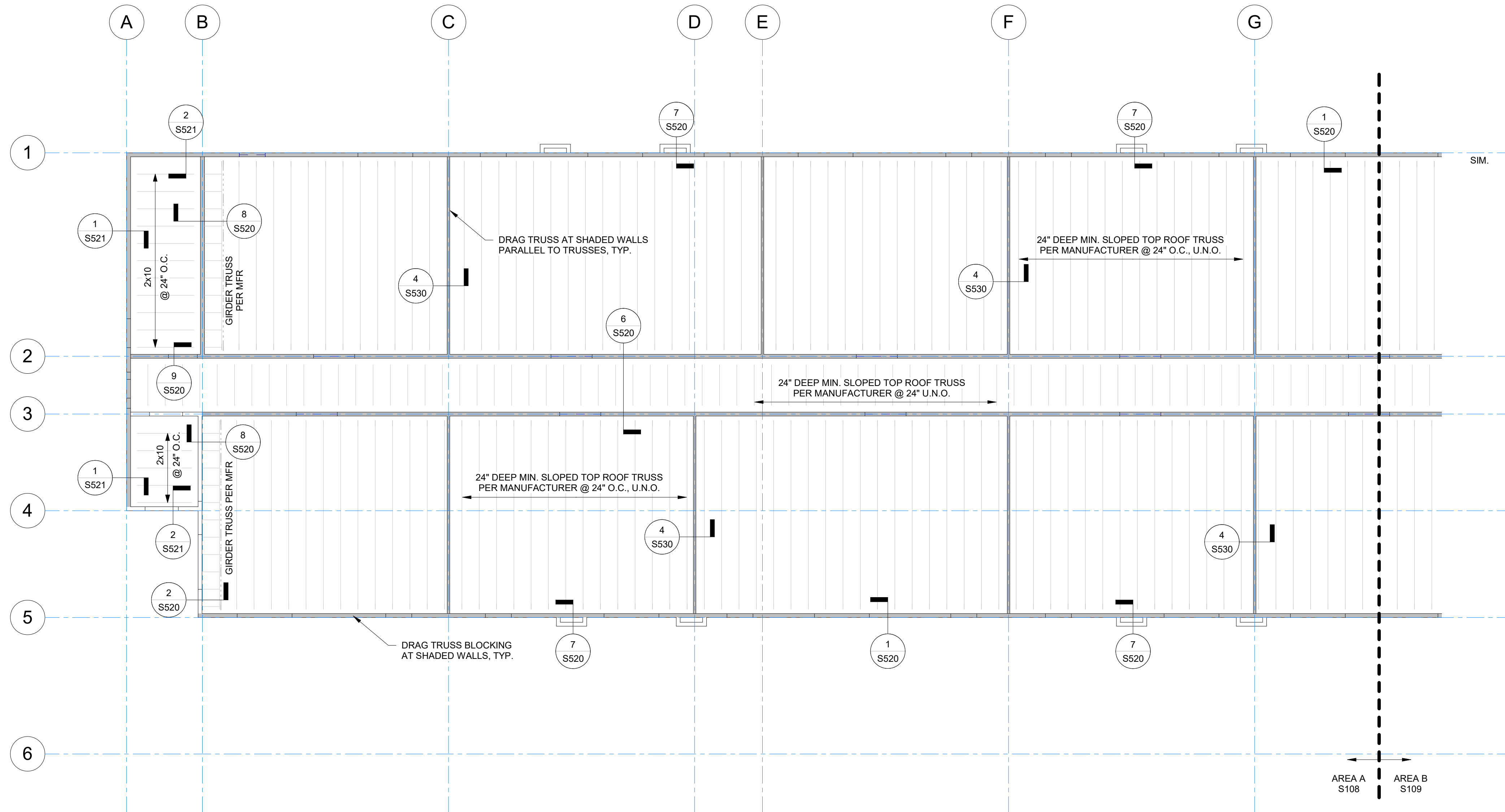
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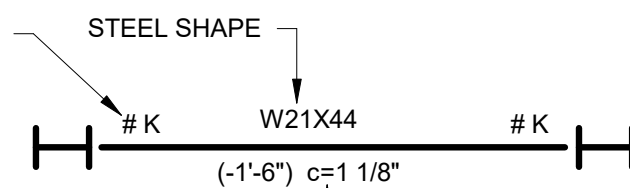
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Autodesk Docs://2025001420 - JGR - Carter Lake/2025001420 - JGR - Carter Lake R24.rvt



1 ROOF FRAMING - AREA A  
S108 1/8" = 1'-0"

#### STEEL BEAM LEGEND

SERVICE (ASD) LOAD END  
REACTION (IN KIPS) IF  
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REACTION SCHEDULE VALUES

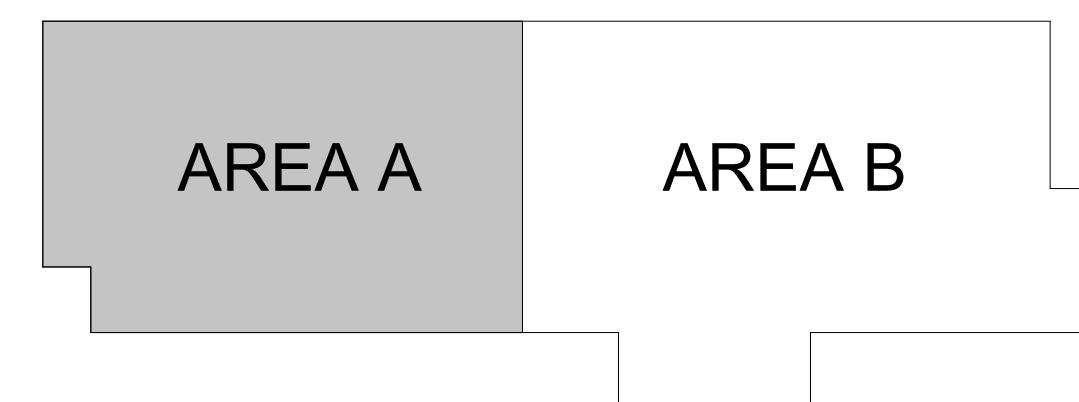


TOP OF STEEL ELEVATION RELATIVE TO  
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#### FRAMING PLAN LEGEND

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#### BUILDING KEY



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- ELEVATOR HOIST BEAM IS APPROVED FOR ELEVATORS WITH A MAXIMUM HOIST LOAD REQUIREMENT OF 6.75KIP. FOR ELEVATORS REQUIRING A HOIST BEAM TO SUPPORT LOADS GREATER THAN 6.75KIP CONTACT MCCLURE FOR HOIST BEAM SIZE.



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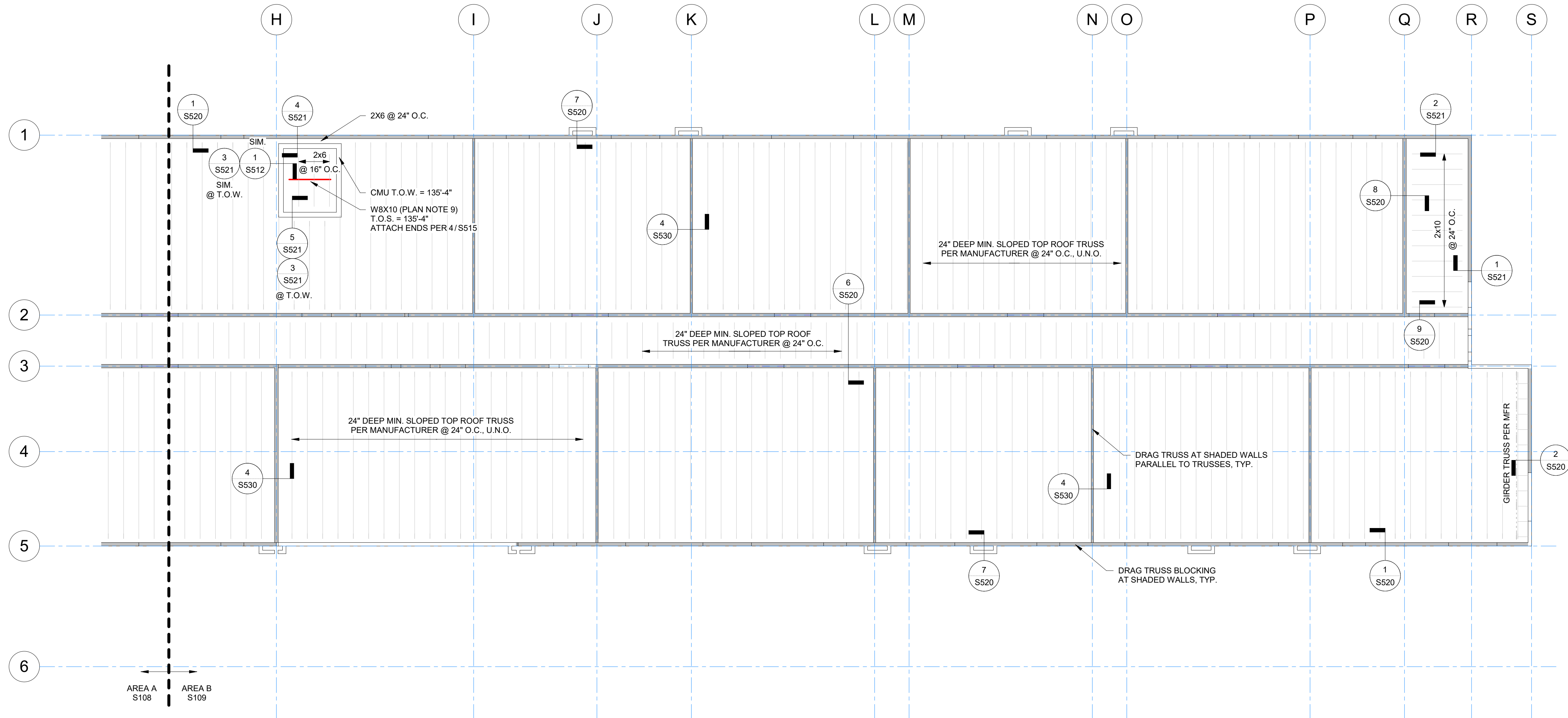
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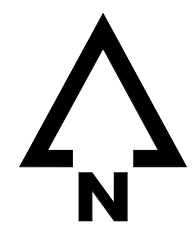
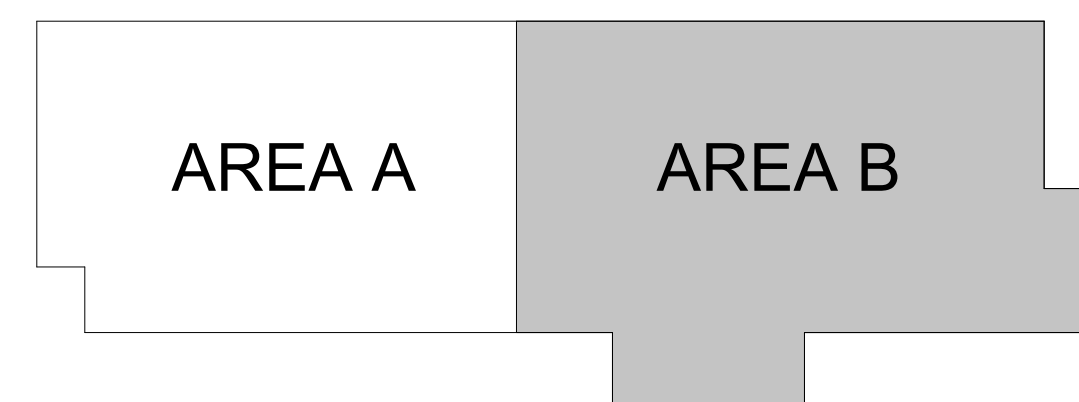
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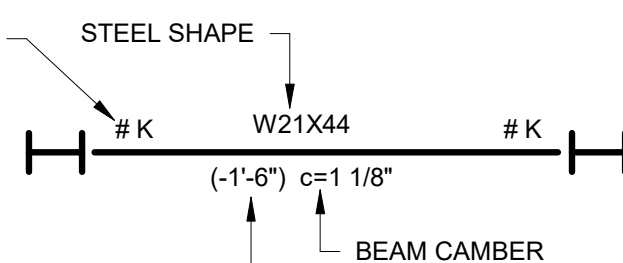
**BUILDING KEY**



1 ROOF FRAMING - AREA B  
1/8" = 1'-0"

**STEEL BEAM LEGEND**

SERVICE (ASD) LOAD END  
REACTION (IN KIPS) IF  
GREATER THAN MINIMUM  
REACTION SCHEDULE VALUES



TOP OF STEEL ELEVATION RELATIVE TO  
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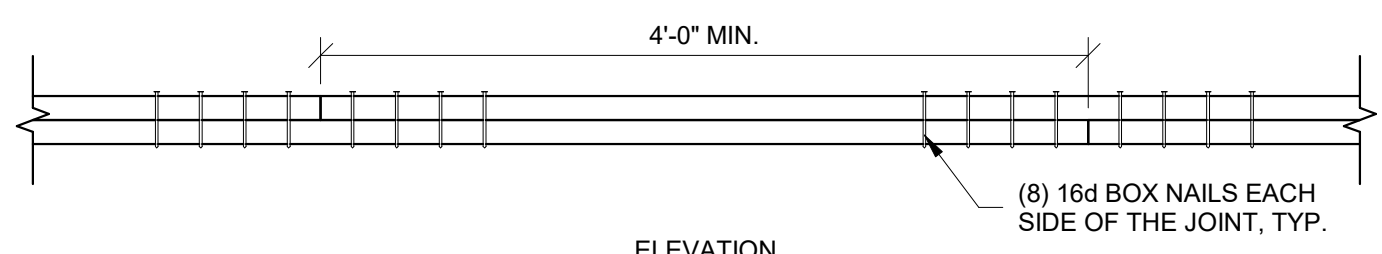
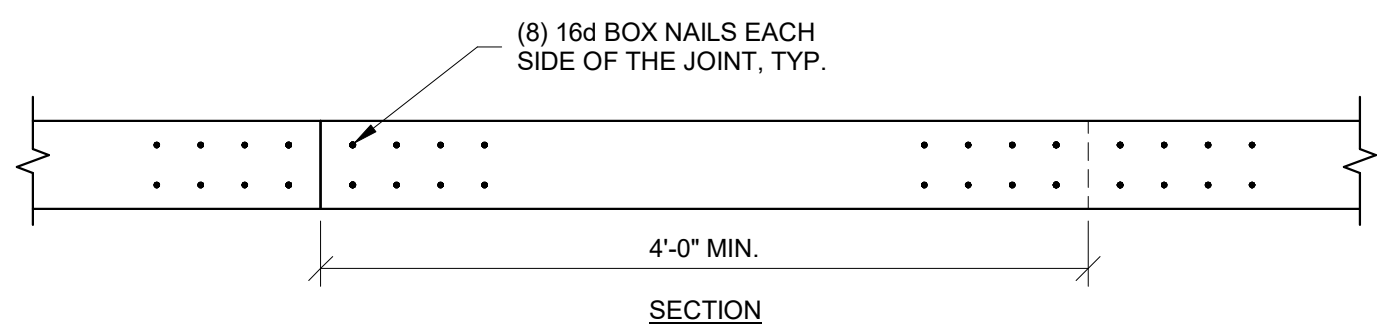
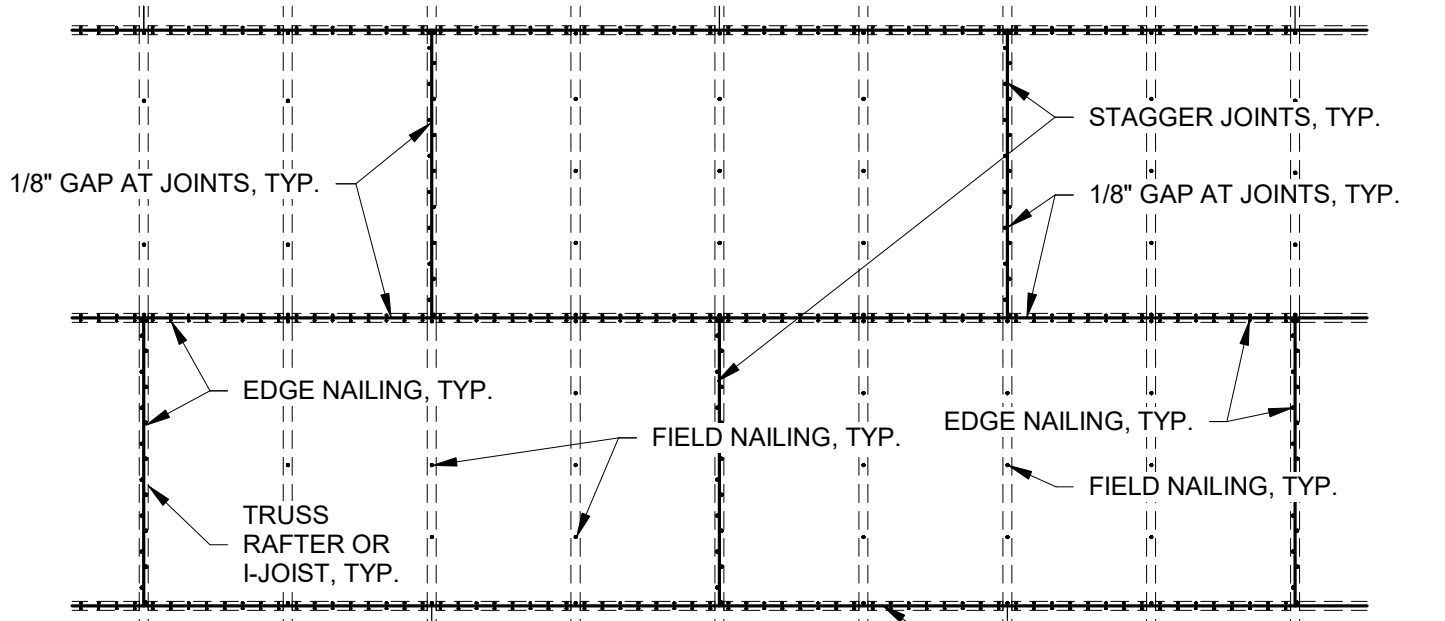
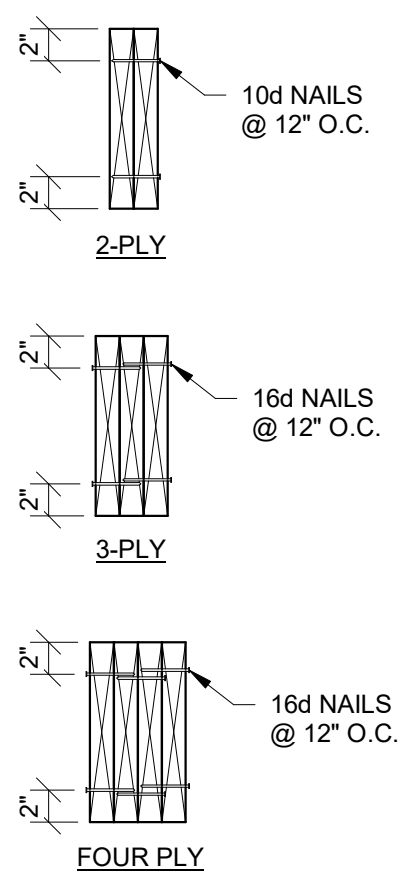
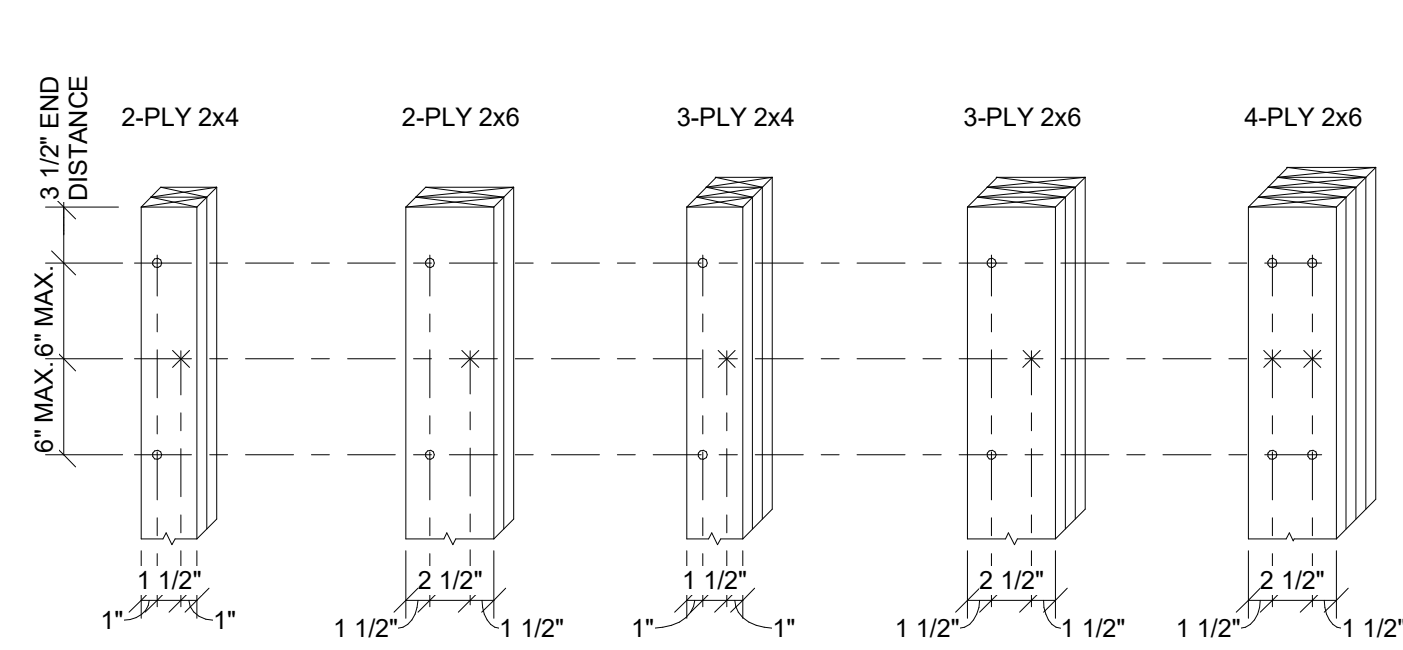
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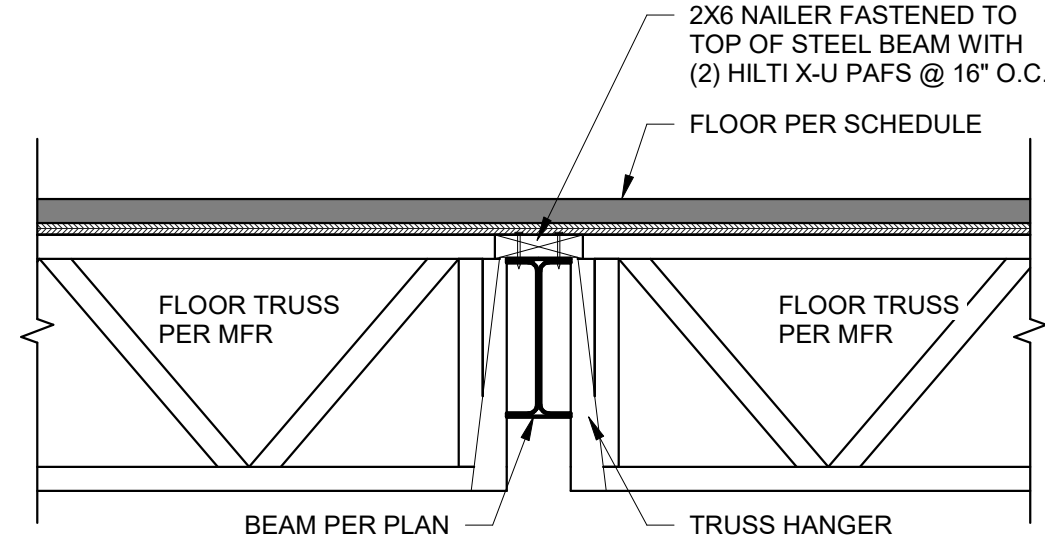
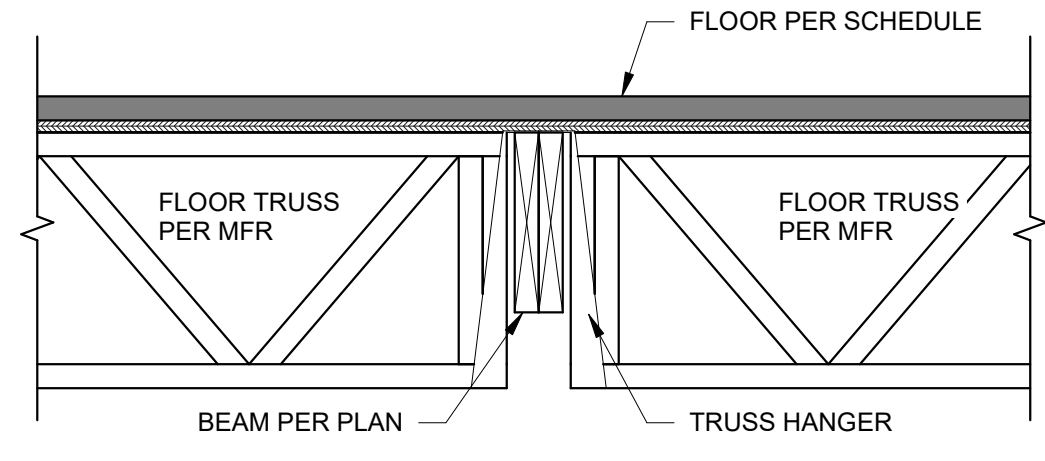
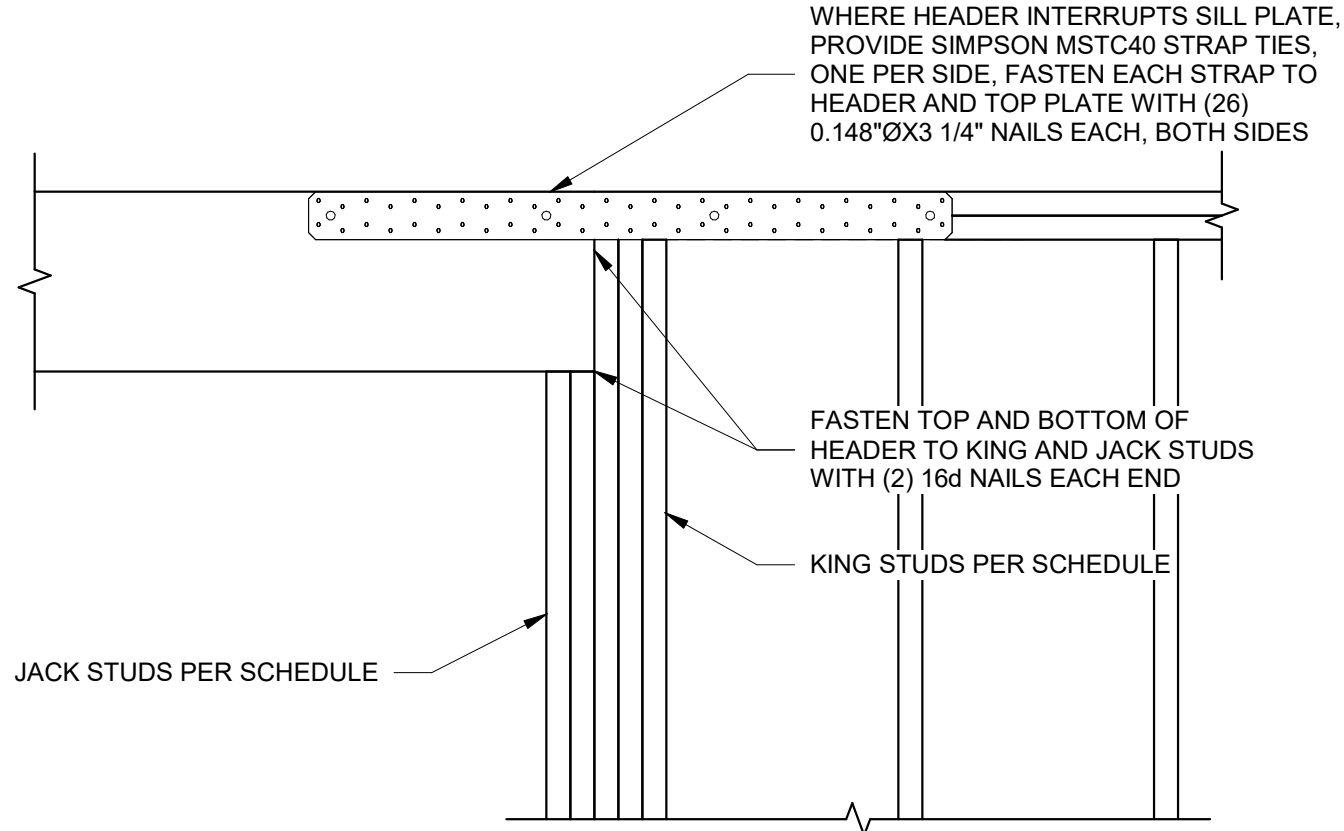
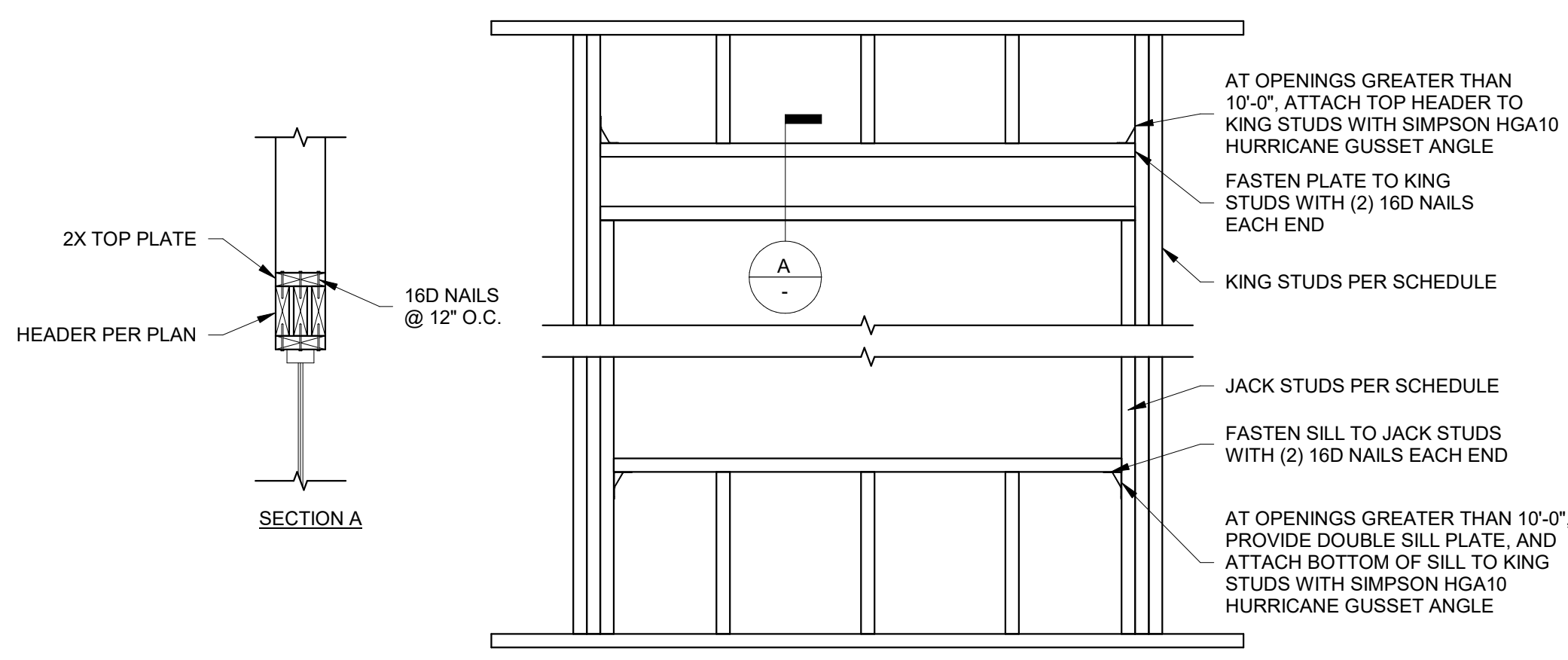




1 TYPICAL BUILT-UP MEMBERS  
1" = 1'-0"

2 DIAPHRAGM NAILING  
3/8" = 1'-0"

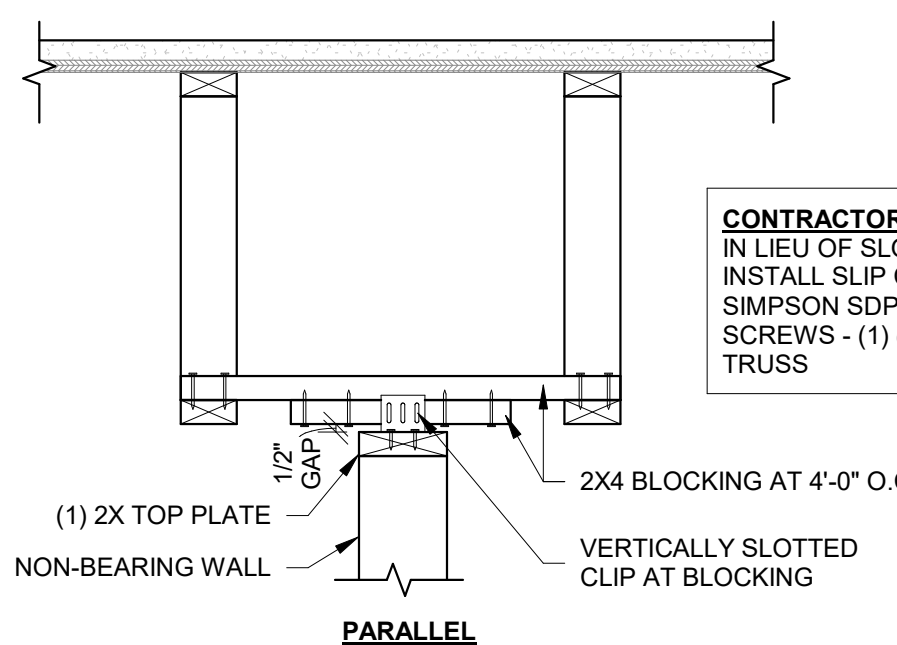
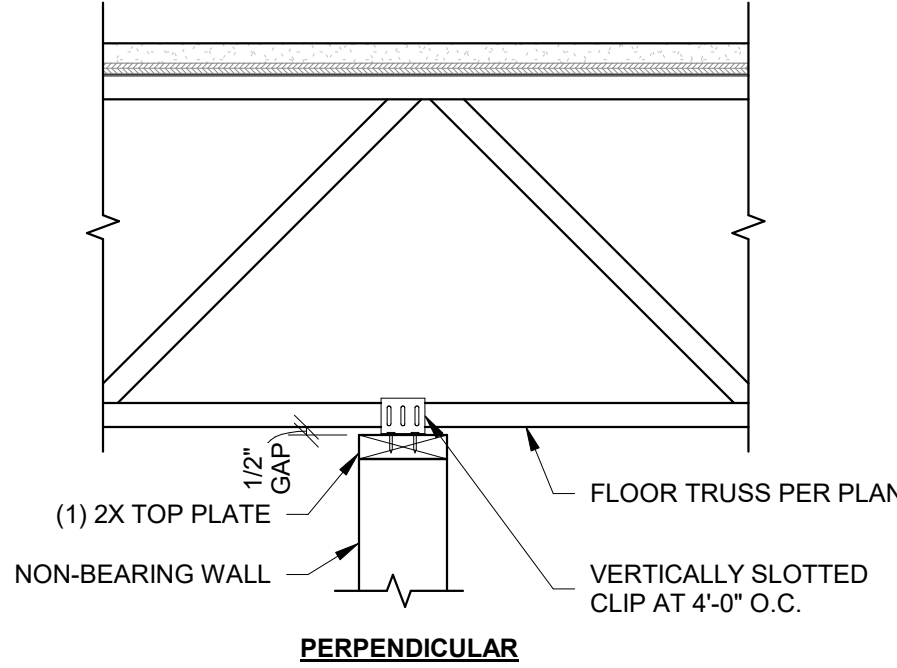
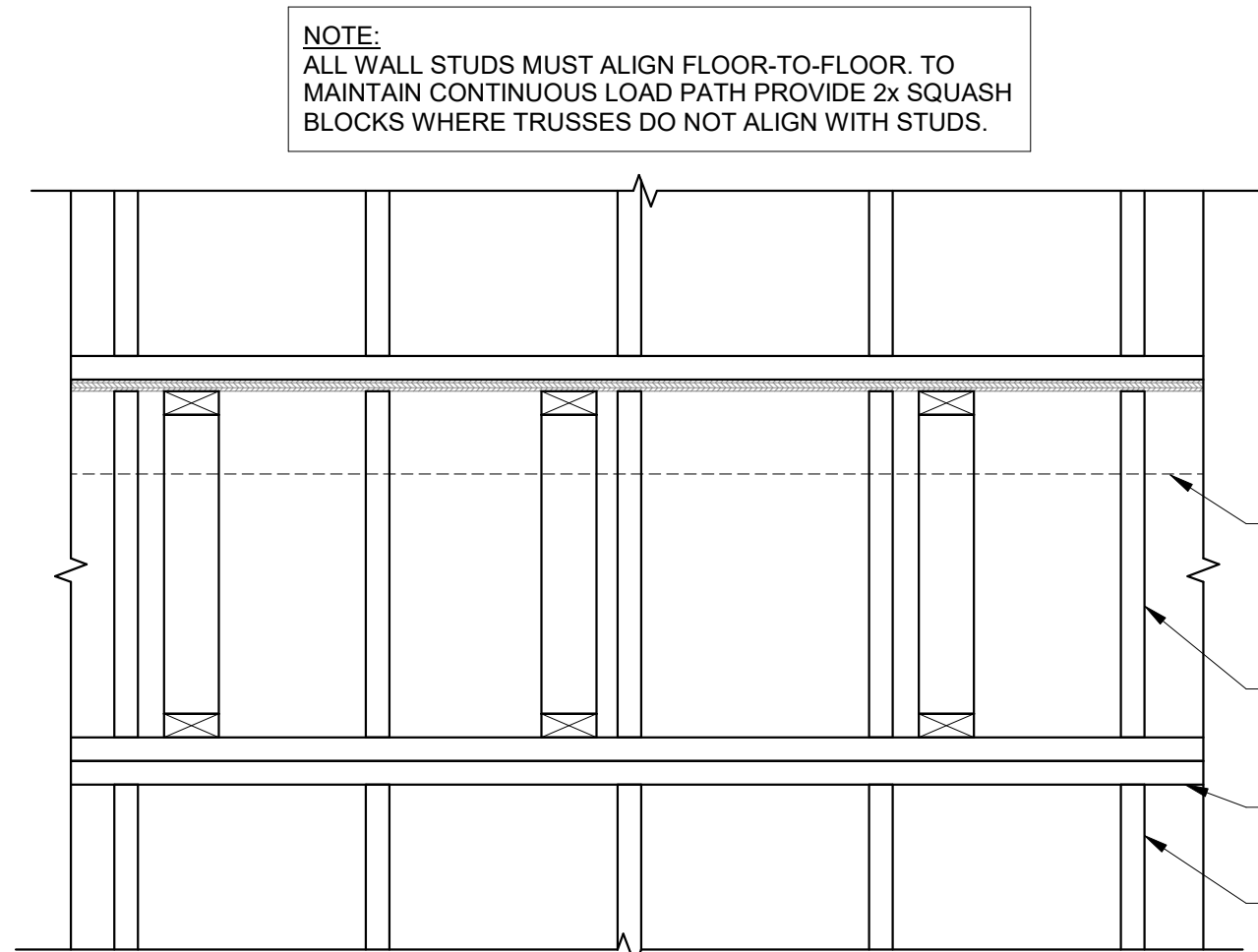
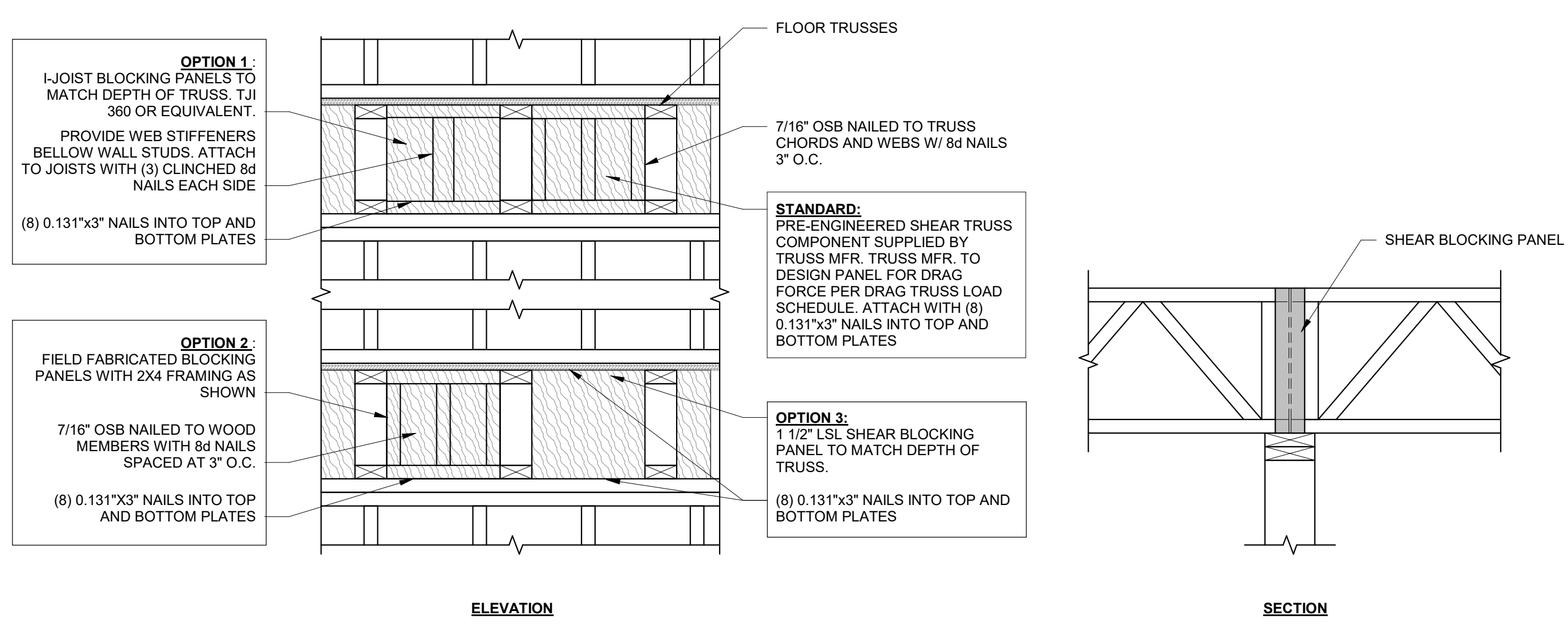
3 TOP PLATE SPLICE  
1" = 1'-0"



4 FRAMING AT OPENING  
3/4" = 1'-0"

5 FRAMING AT OPENING - RAISED HEADER  
1" = 1'-0"

6 FLOOR TRUSS TO BEAM  
1" = 1'-0"



7 SHEAR BLOCKING OPTIONS AT SHEAR WALLS  
1" = 1'-0"

8 TYPICAL WALL FRAMING ELEVATION  
1" = 1'-0"

9 NON-BEARING WALL TO FLOOR TRUSS  
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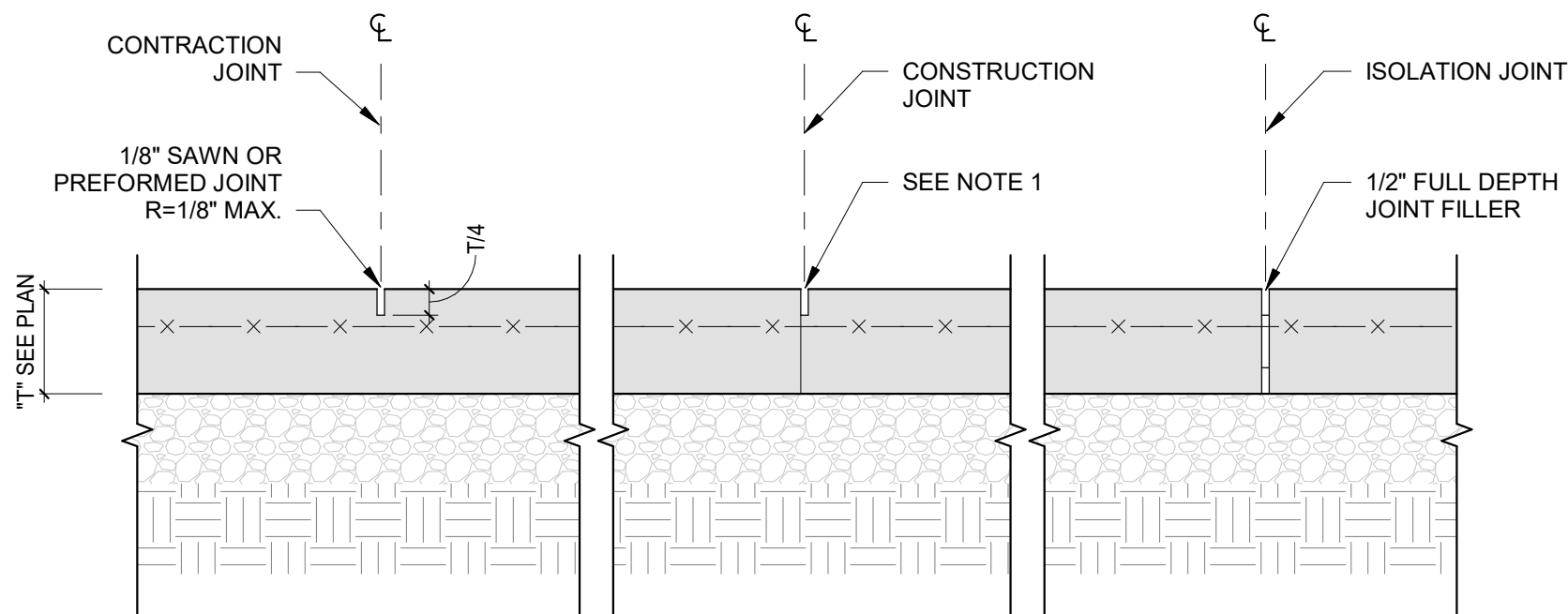
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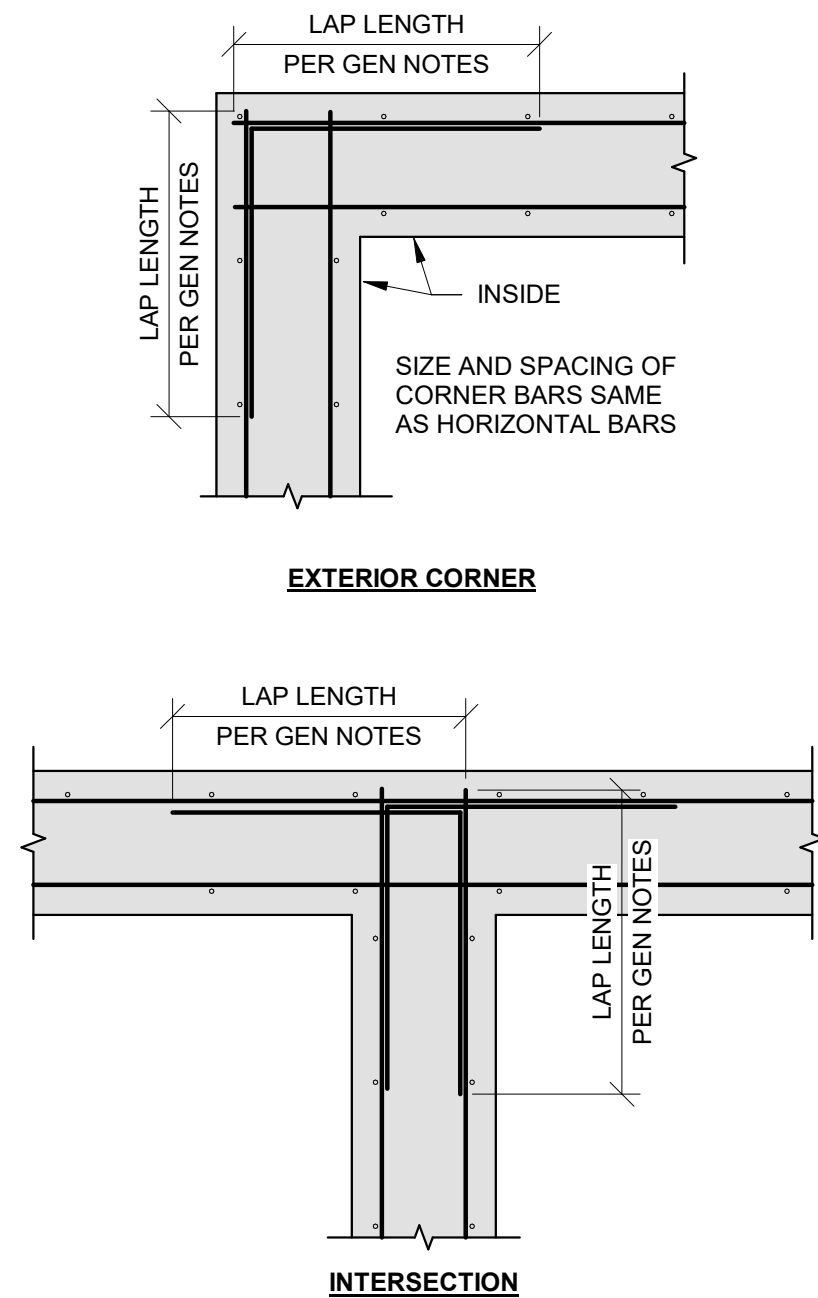
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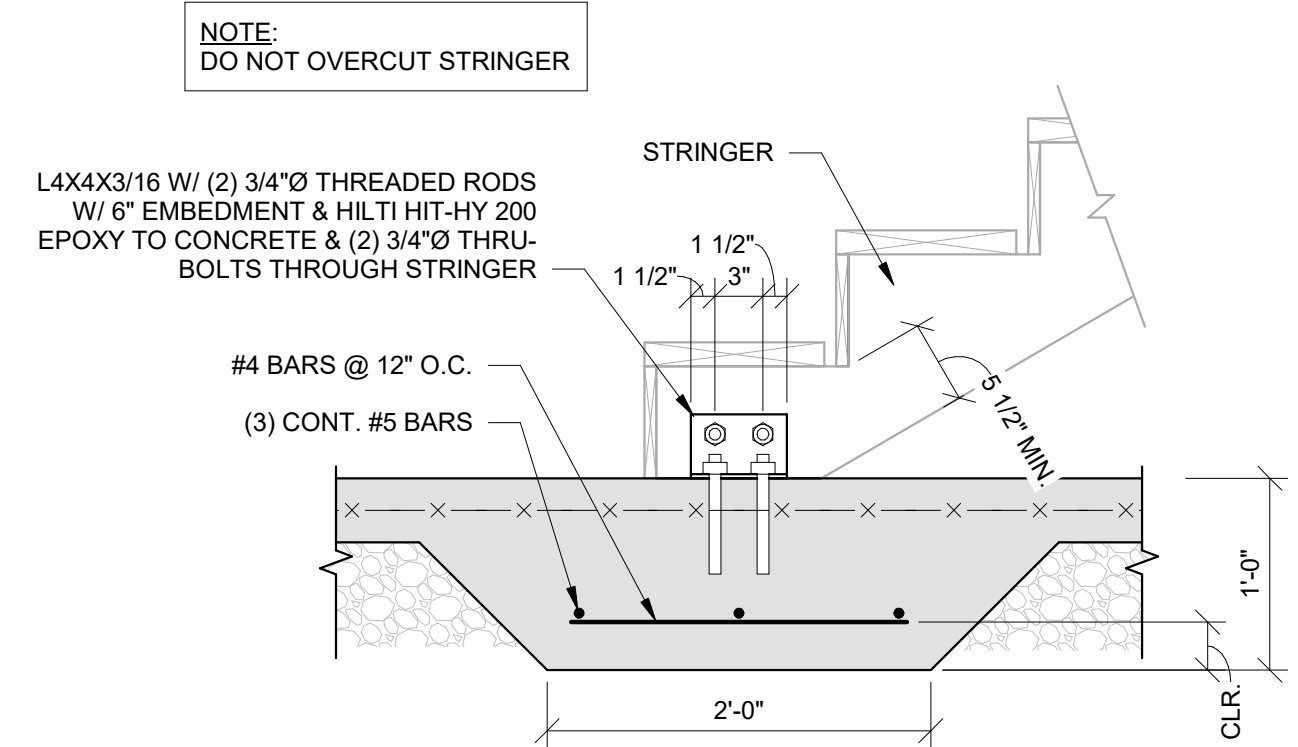


- NOTES:**
1. LOCATE CONSTRUCTION JOINTS AT SAW JOINT LOCATIONS. MATCH SAW JOINT PROFILE. ALL CONSTRUCTION JOINT LOCATIONS TO BE REVIEWED AND APPROVED BY EOR PRIOR TO CONSTRUCTION. MAXIMUM SPACING BETWEEN SAW JOINTS = 15'-0" FOR 6" SLABS & 10'-0" FOR 4" SLABS.
  2. CONTINUE SLAB ON GRADE REINFORCING. UNO. PROVIDE TENSION LAP SPLICE AS REQUIRED. DO NOT PLACE DOWELS WITHIN 12" OF A SLAB CORNER.

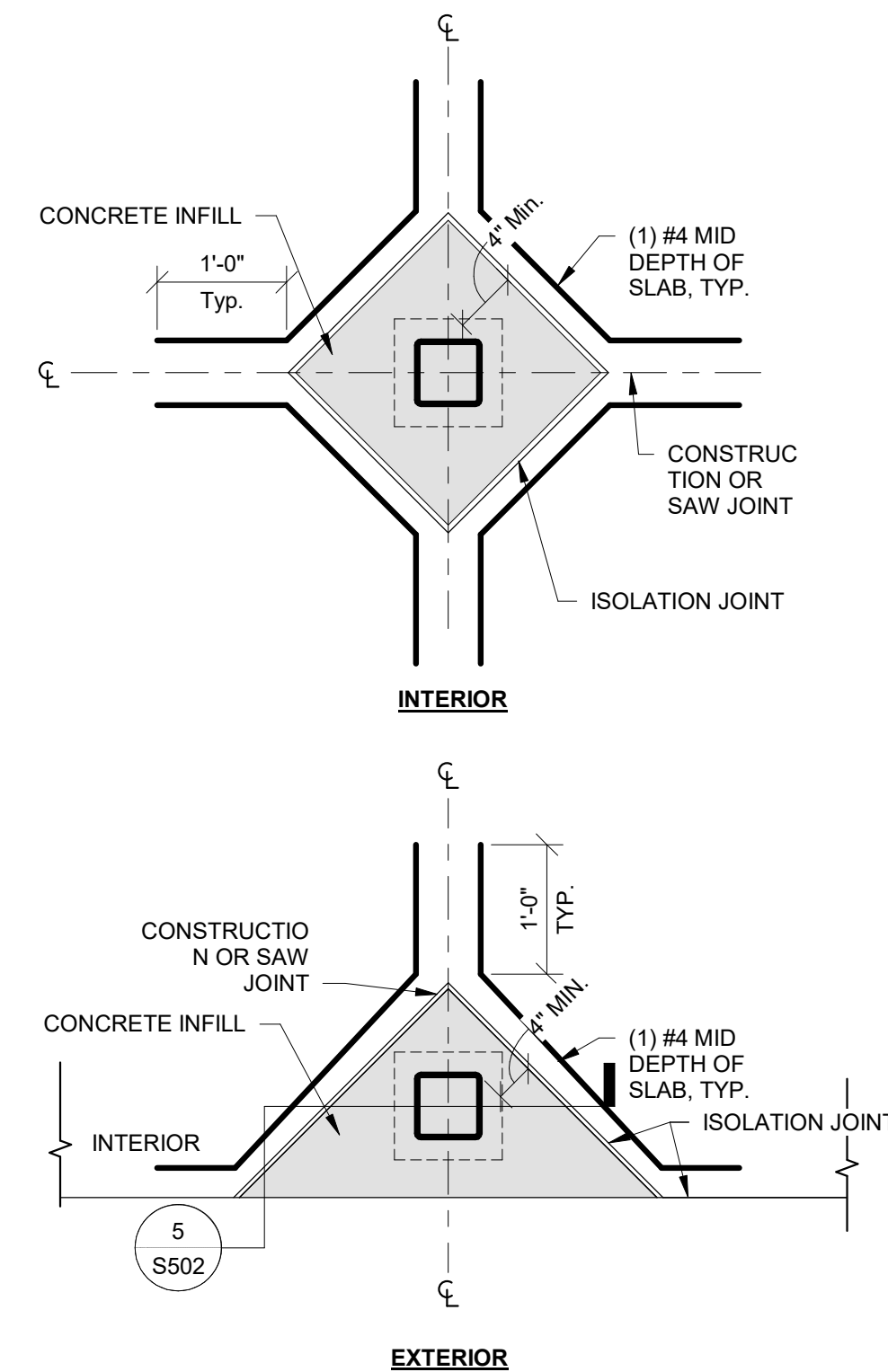
**1**  
S501 TYPICAL SLAB ON GRADE JOINTS  
1" = 1'-0"



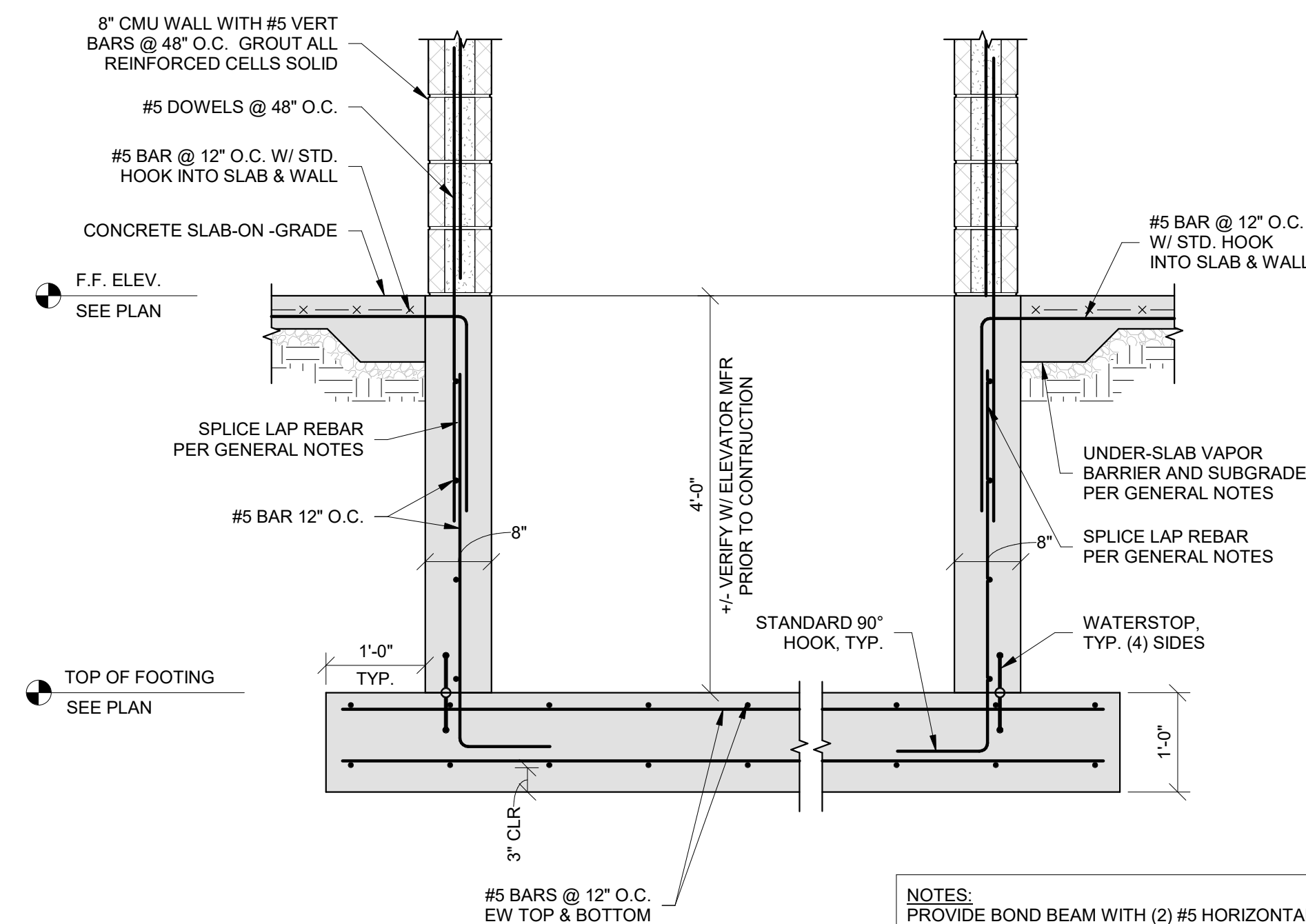
**2**  
S501 CORNER BAR DETAIL  
3/4" = 1'-0"



**3**  
S501 STAIR TO THICKENED SLAB  
1" = 1'-0"

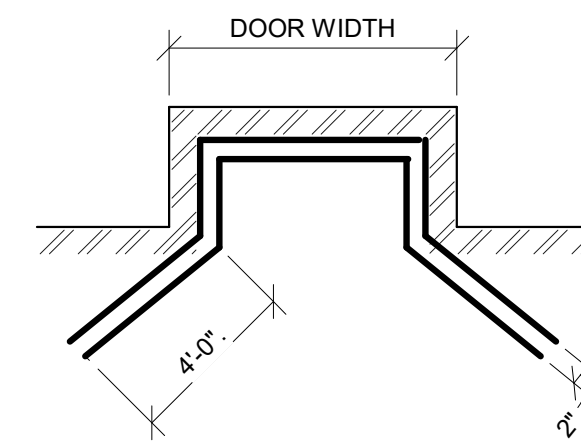
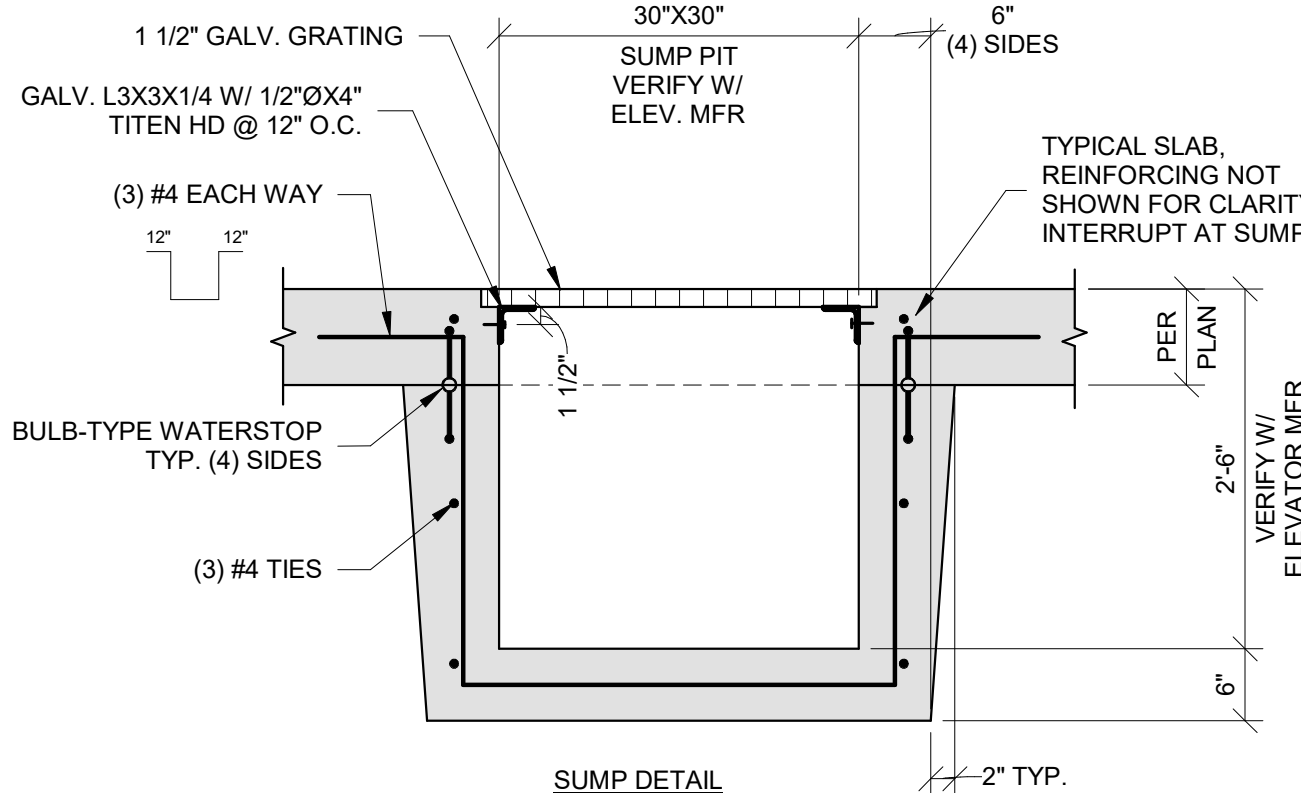


**4**  
S501 SLAB ON GRADE ISOLATION JOINT AT COLUMNS  
3/4" = 1'-0"

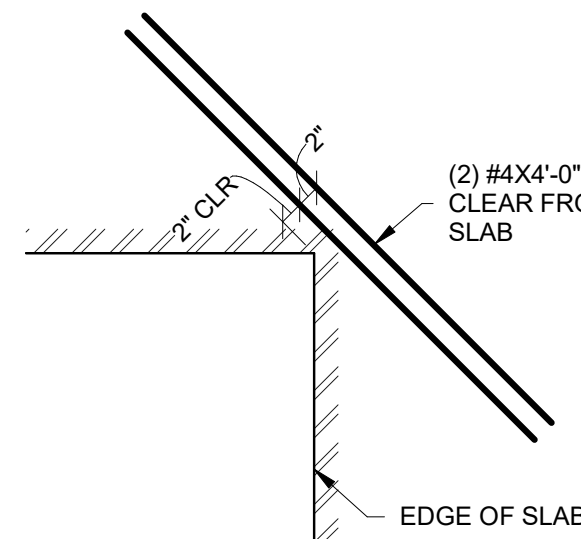


- NOTES:**
1. PROVIDE BOND BEAM WITH (2) #5 HORIZONTAL BARS AT ALL FLOOR AND GUIDE RAIL ATTACHMENT LOCATIONS. SEE FRAMING SECTIONS FOR APPROXIMATE BOND BEAM ELEVATIONS RELATIVE TO FLOOR FRAMING.

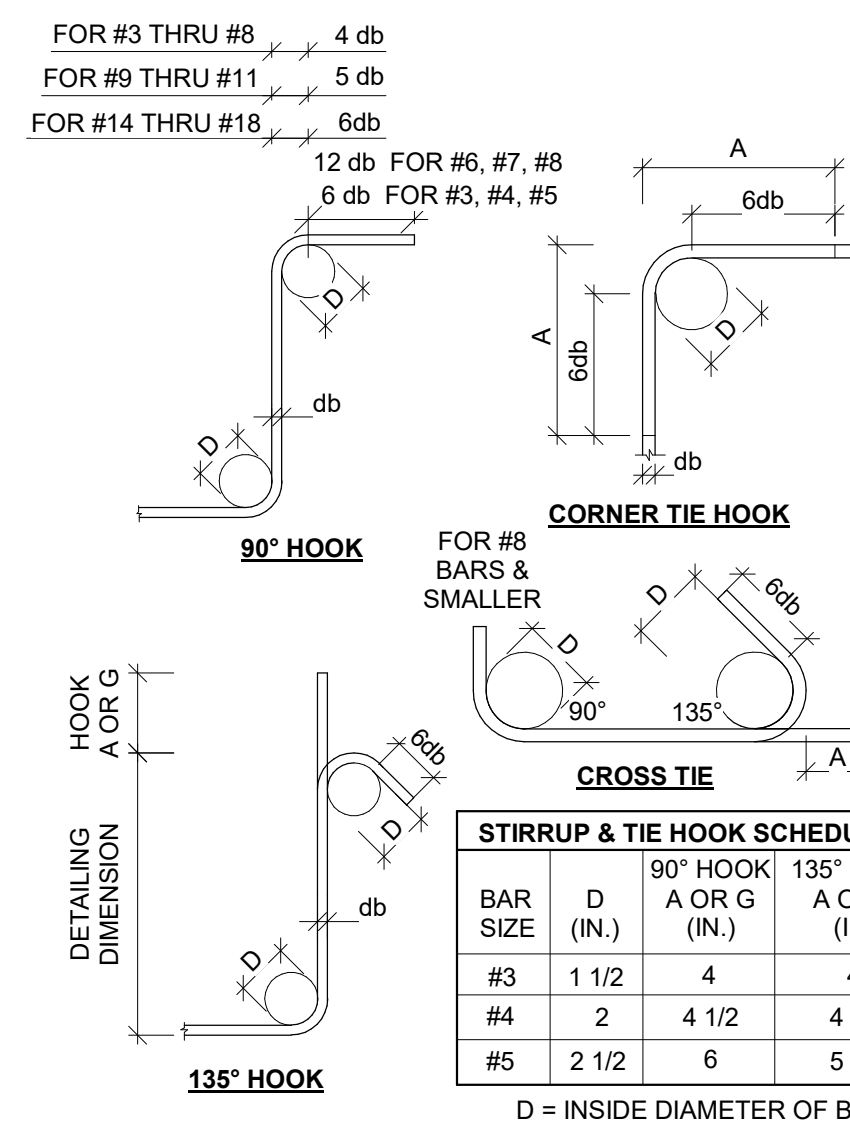
**5**  
S501 ELEVATOR PIT DETAIL  
3/4" = 1'-0"



**THRESHOLDS**



**RE-ENTRANT CORNERS**

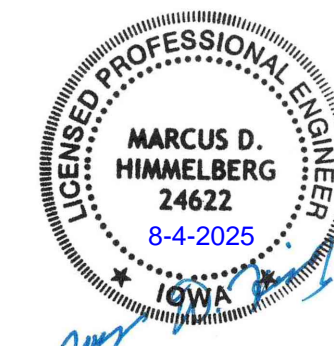


**7**  
S501 BAR BENDING DETAIL  
3/4" = 1'-0"

**6**  
S501 ADDITIONAL REINFORCING IN SLABS  
3/4" = 1'-0"

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MARCUS HIMMELBERG  
NO. P24622  
EXP. 12/31/2025

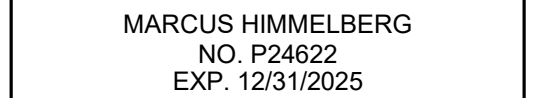
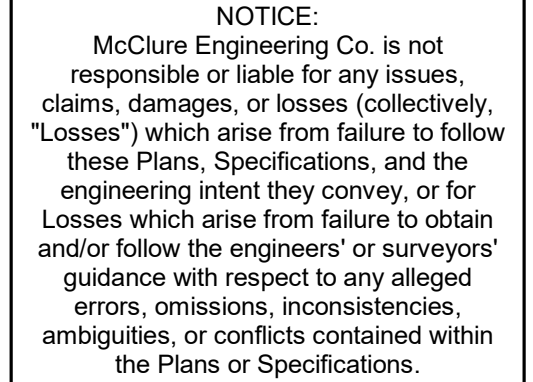
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No.	Description	Date

PROJECT NUMBER 2025001420	SET ISSUE DATE 08/01/2025
ENGINEER IWC	DRAWN BY CEL
CHECKED BY MDH	

JONES GILLAM RENZ  
THE RESIDENCE AT CARTER LAKE  
CARTER LAKE, IOWA  
FOUNDATION DETAILS



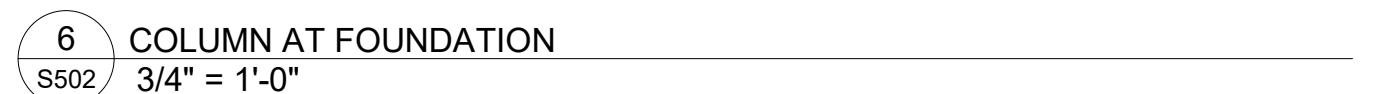


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IOWA.

PROJECT NUMBER	SET ISSUE DATE	
2025001420	08/01/2025	
ENGINEER	DRAWN BY	CHECKED BY
IWC	CEL	MDH

JONES GILLAM RENZ  
THE RESIDENCE AT CARTER LAKE  
CARTER LAKE, IOWA  
FOUNDATION DETAILS

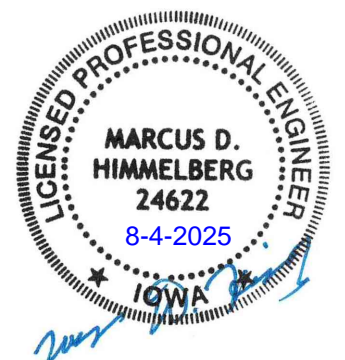
DRAWING NO.  
**S502**





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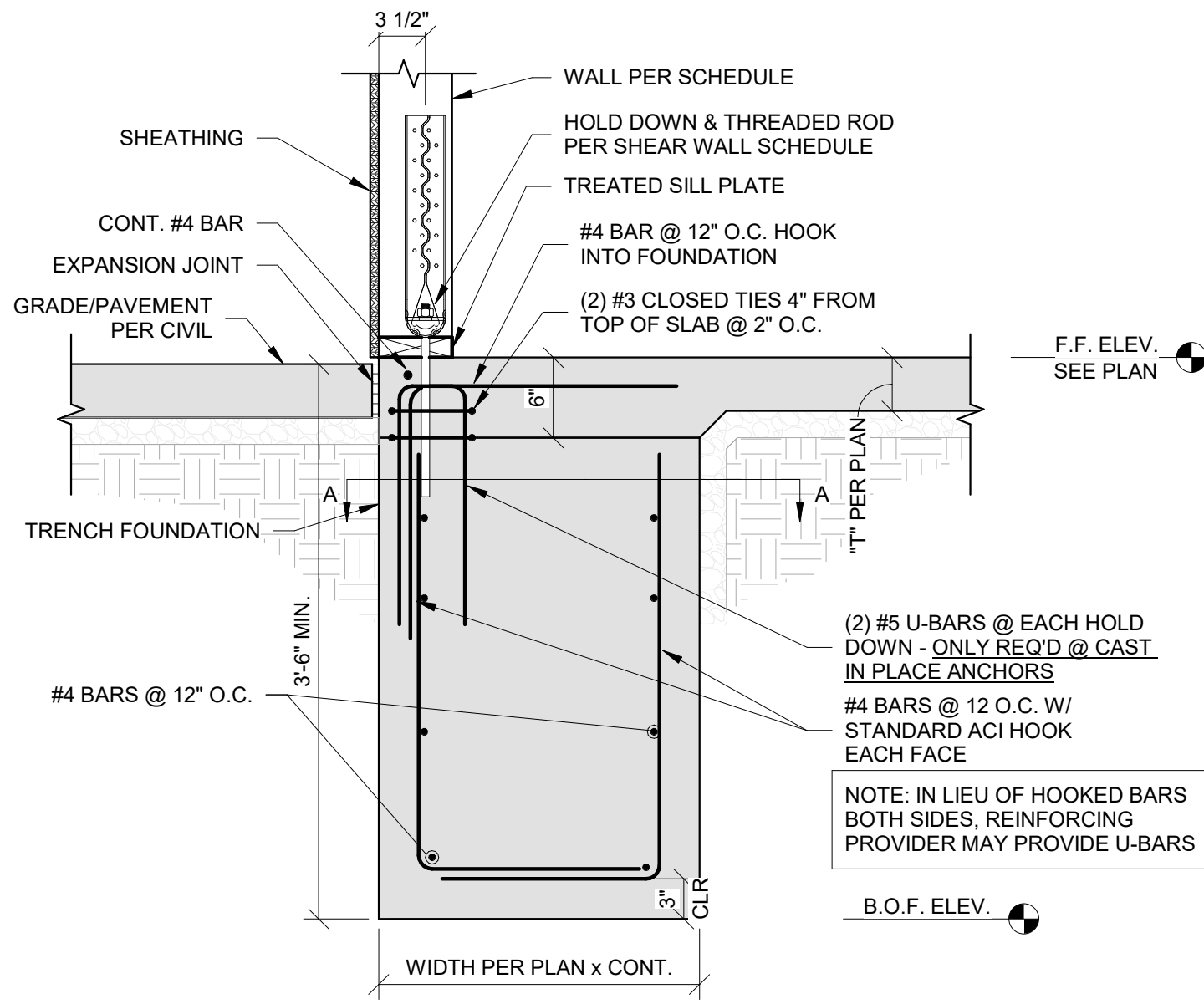
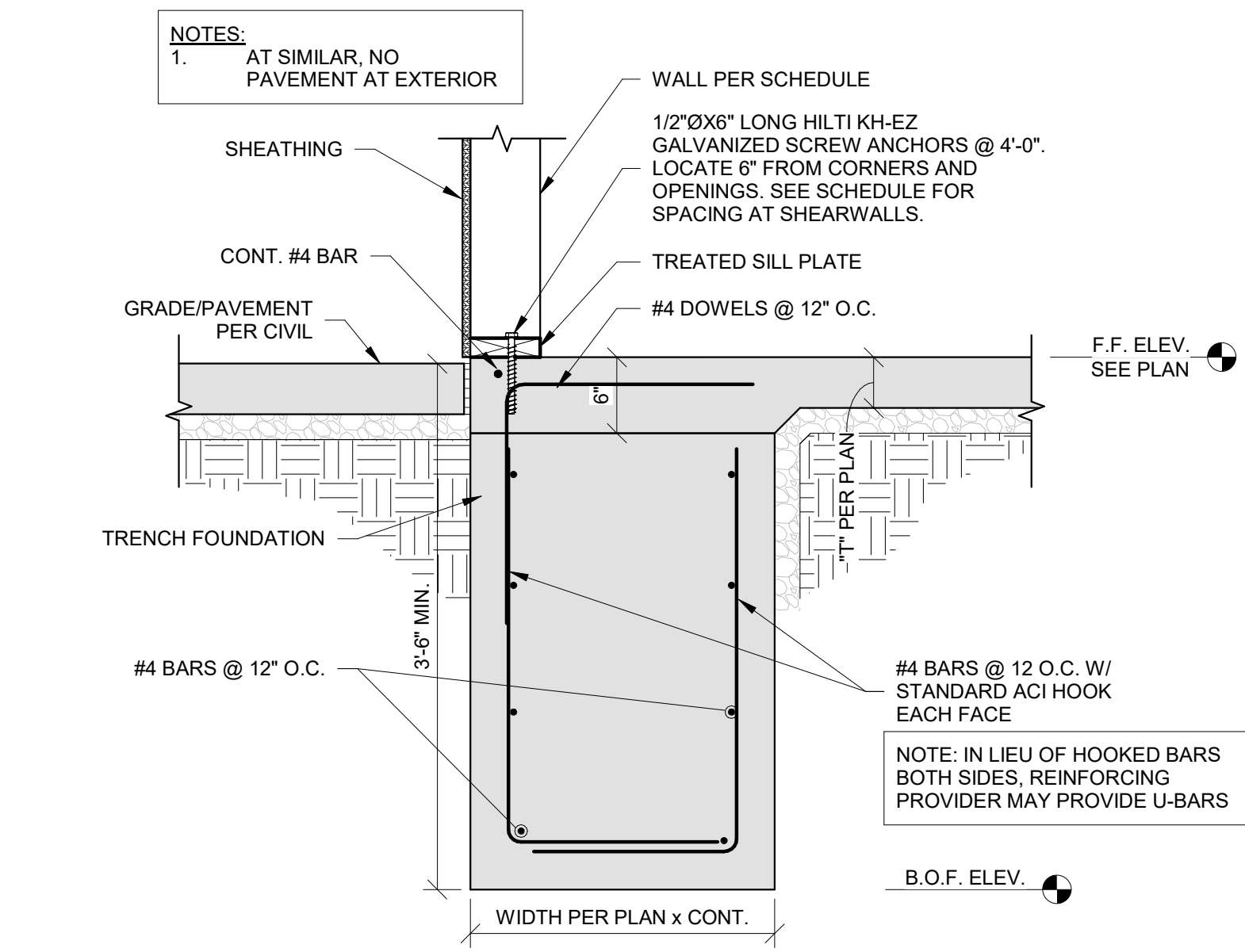
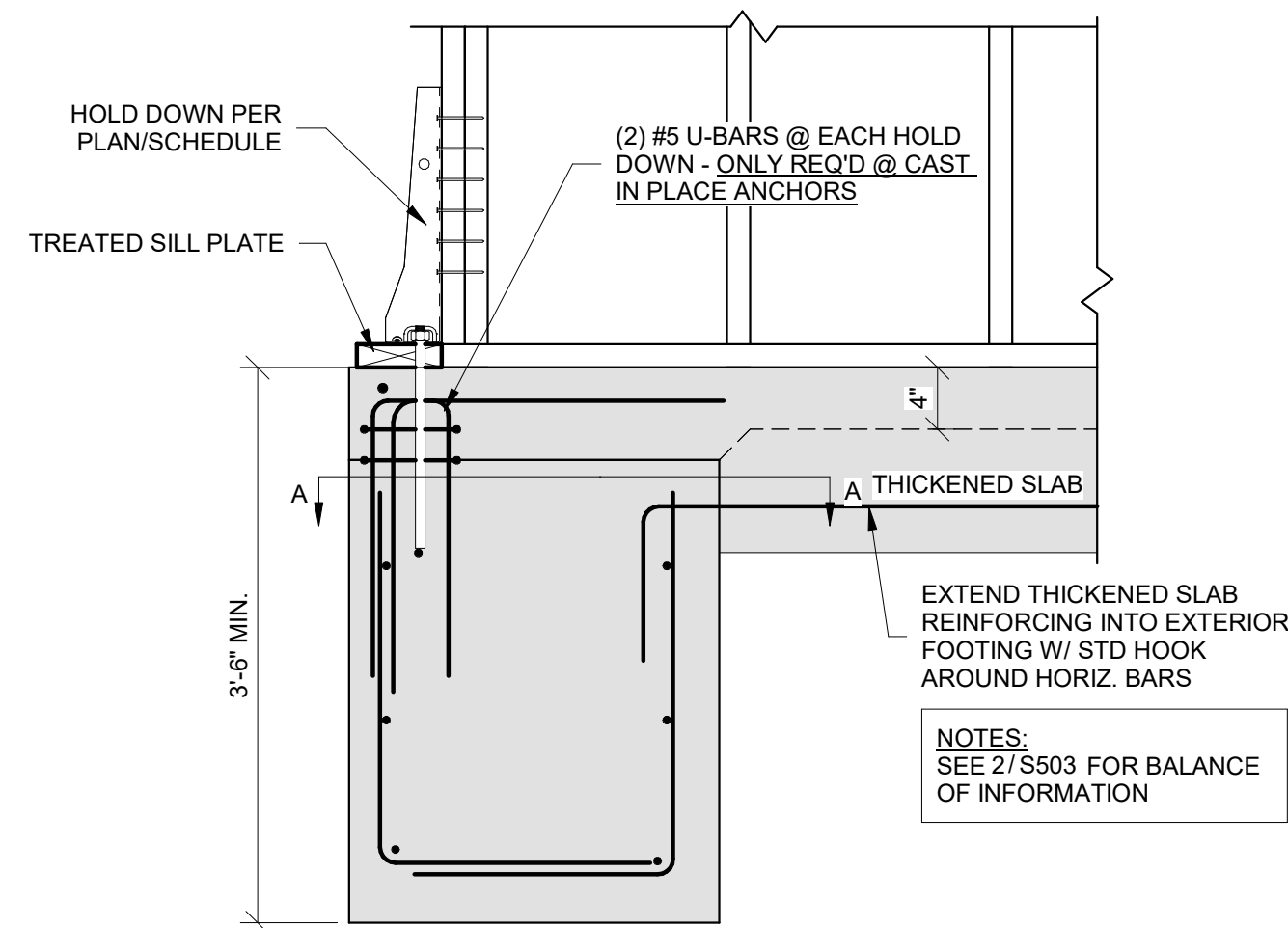
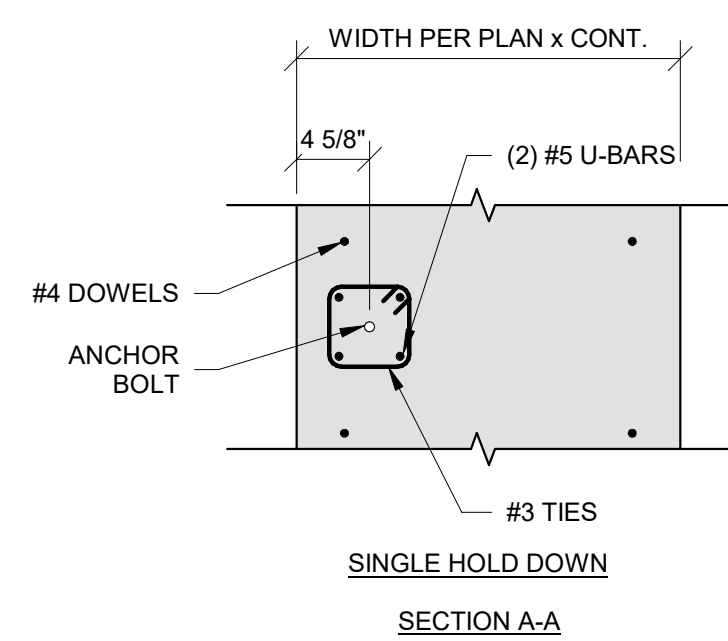
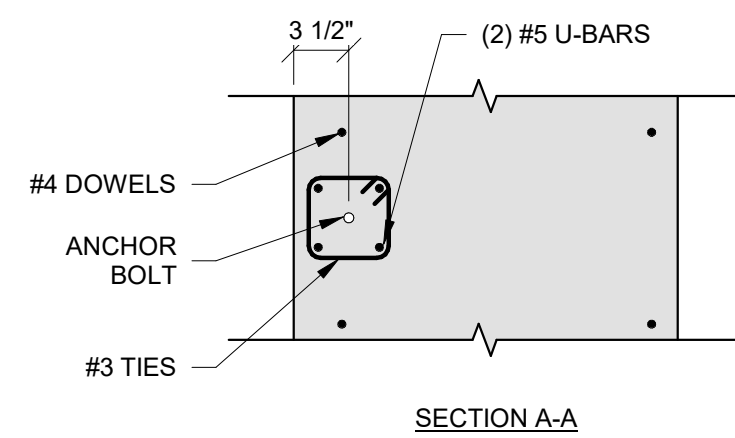
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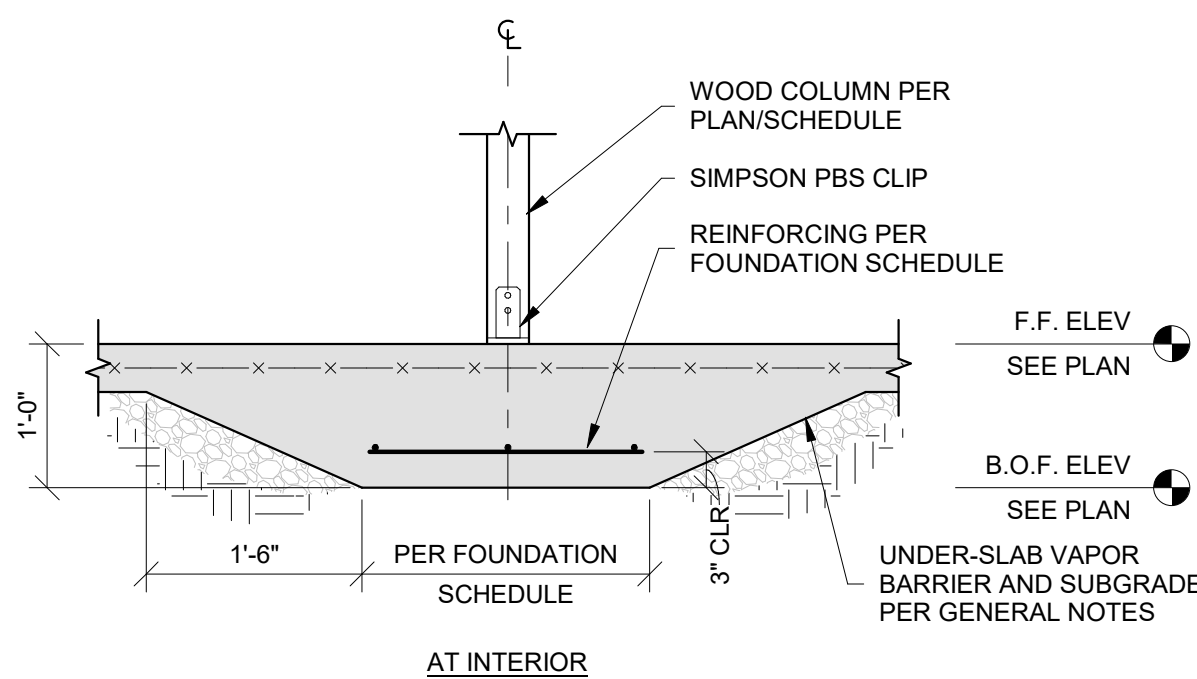
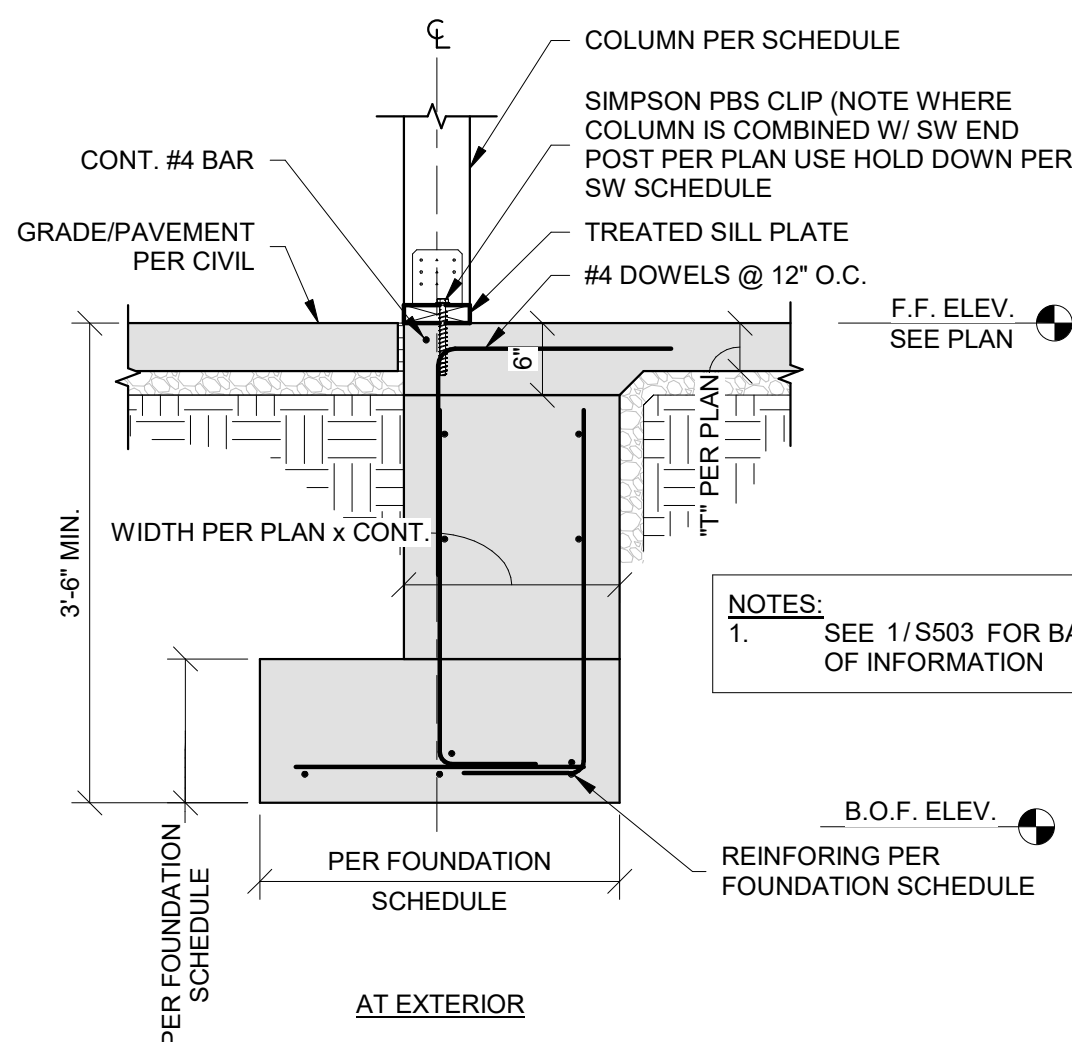
JONES GILLAM RENZ  
THE RESIDENCE AT CARTER LAKE  
CARTER LAKE, IOWA  
ALTERNATE FOUNDATION DETAILS  
Autodesk Docs://2025001420 - JGR - Carter Lake/2025001420 - JGR - Carter Lake R24.rvt



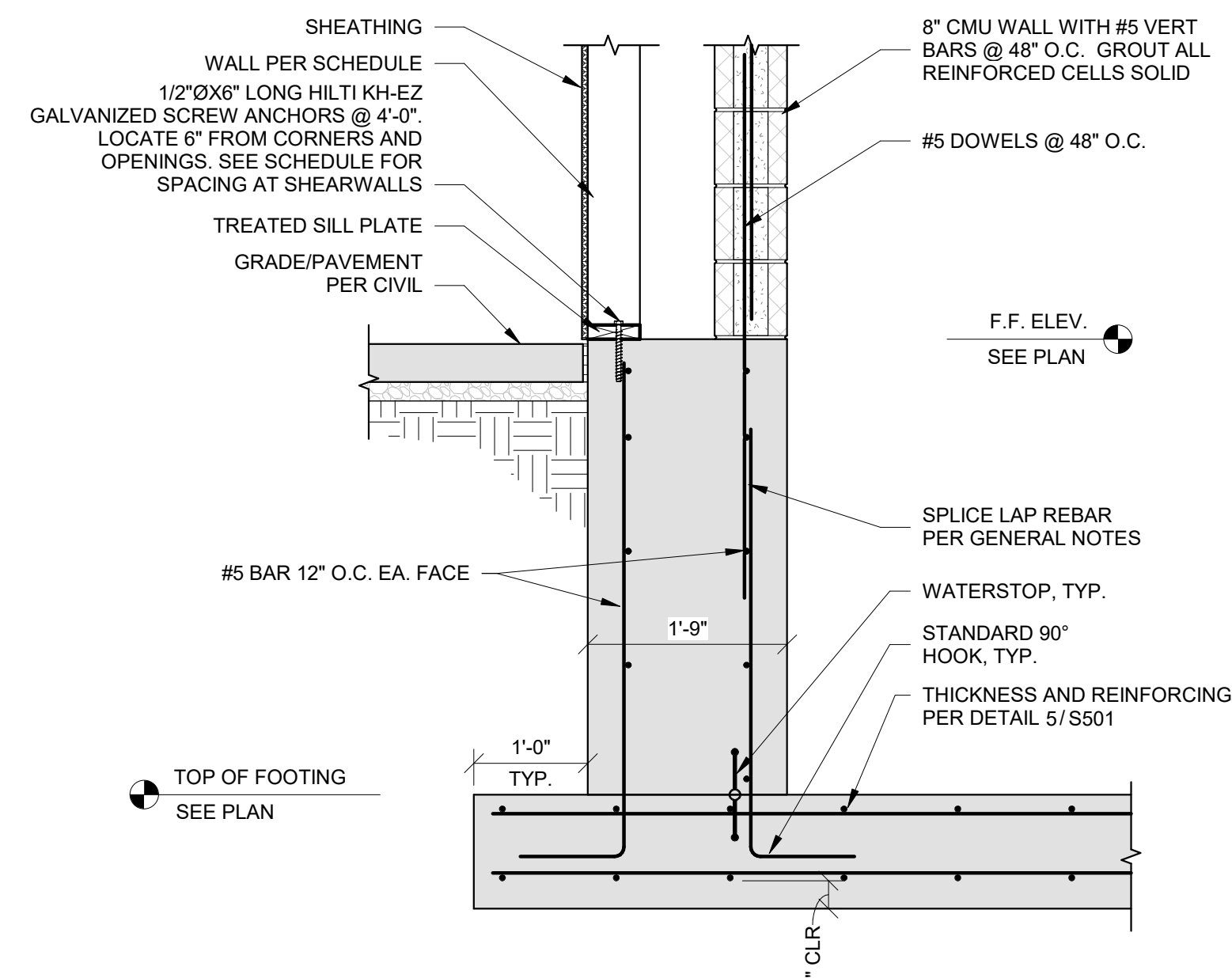
3 SHEARWALL HOLD DOWN @ DEMISING WALL - ALTERNATE  
S503 1" = 1'-0"

2 SECTION AT SHEAR WALL HOLD DOWN - ALTERNATE  
S503 1" = 1'-0"

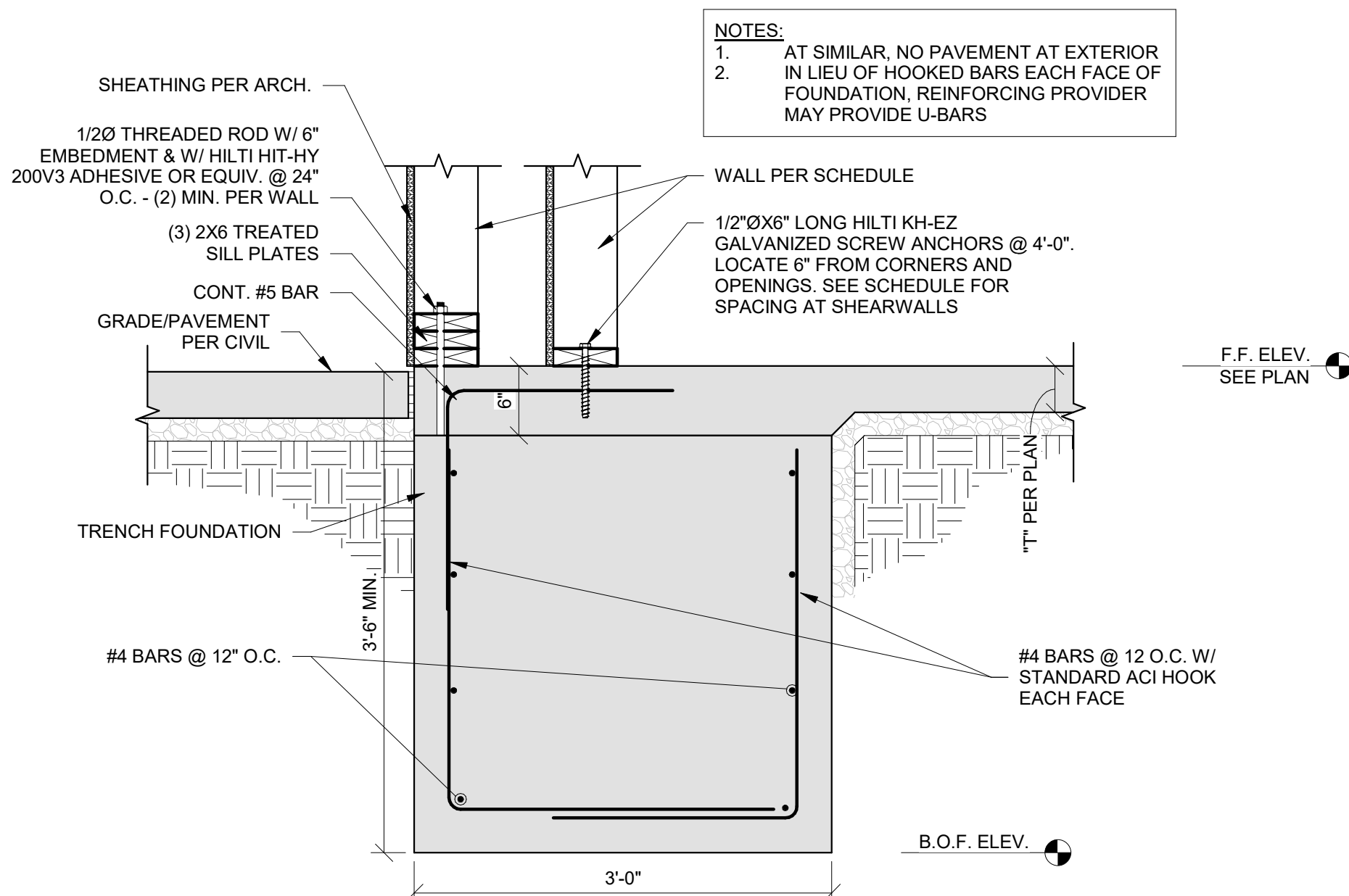
1 SECTION AT FOOTING - ALTERNATE  
S503 1" = 1'-0"



5 COLUMN AT FOUNDATION - ALTERNATE  
S503 3/4" = 1'-0"

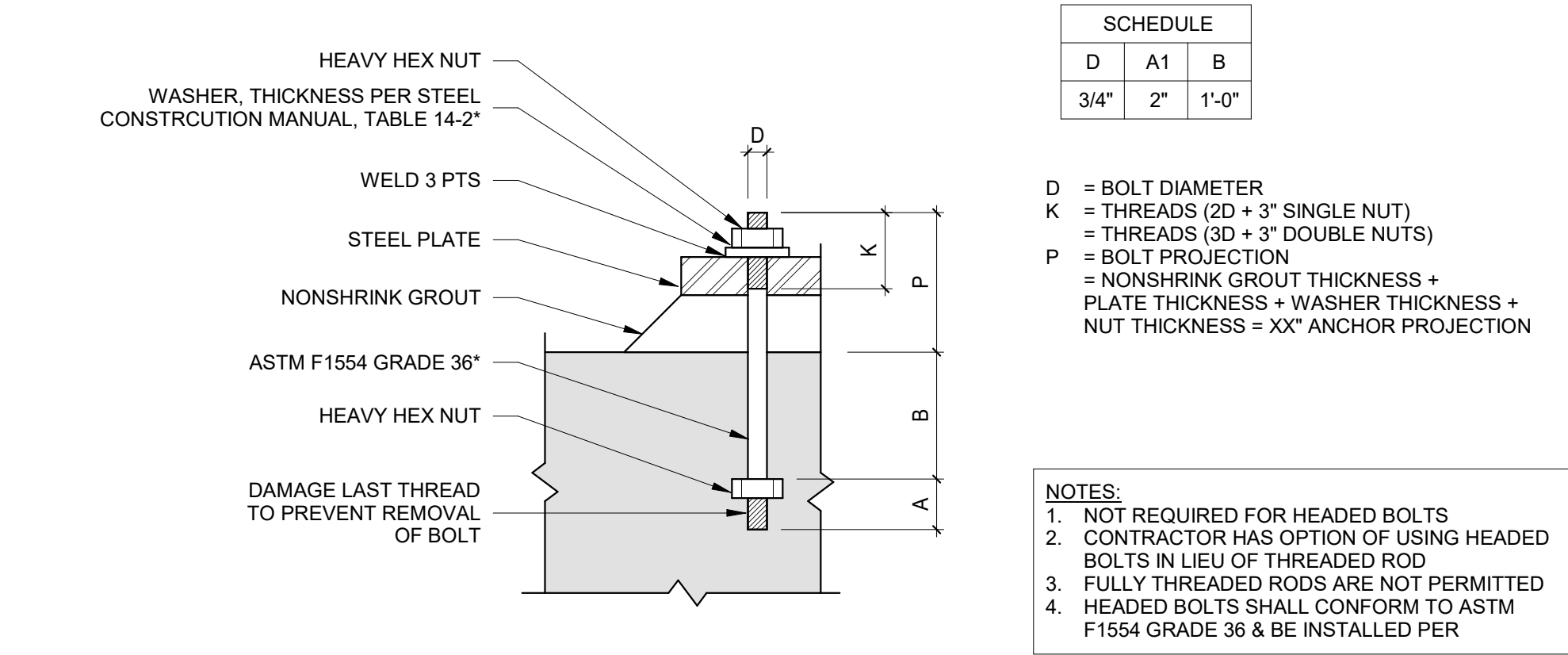


6 ELEVATOR PIT DETAIL @ EXT.  
S503 3/4" = 1'-0"

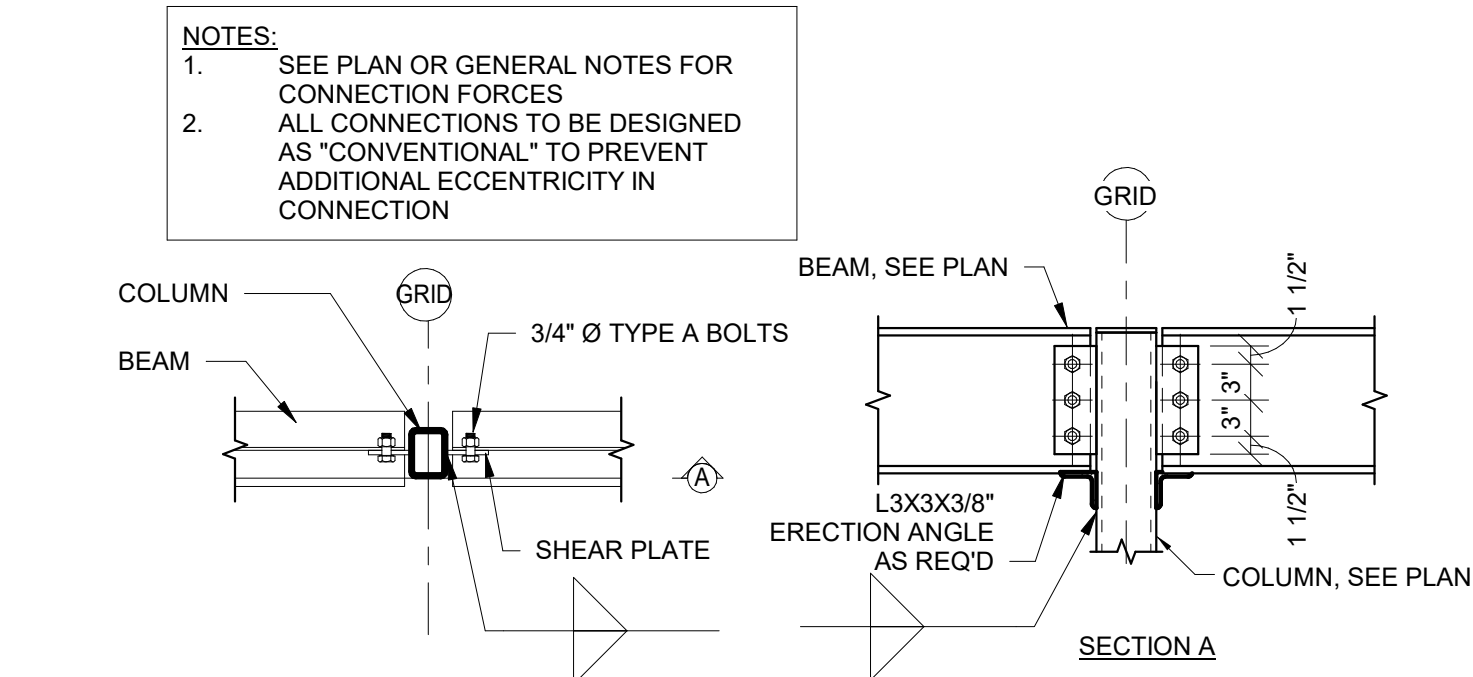


4 FOUNDATION AT BUMP OUT - ALTERNATE  
S503 1" = 1'-0"

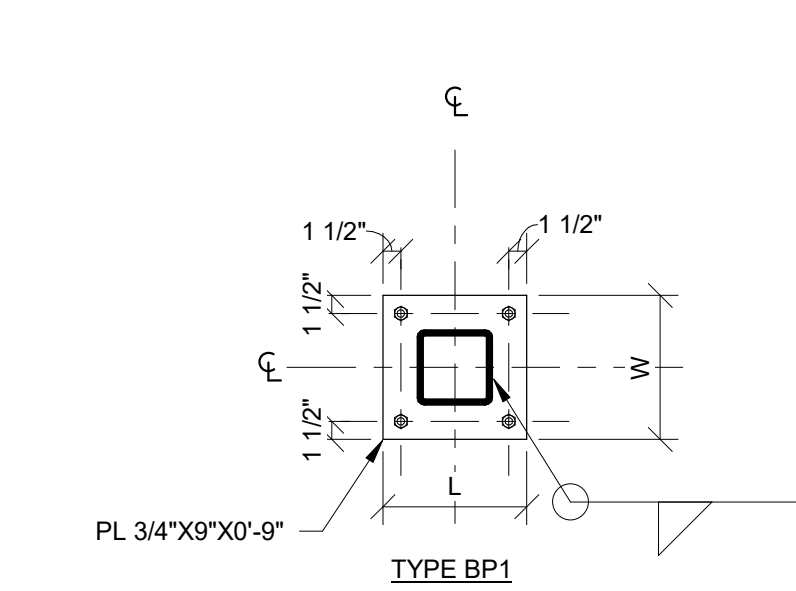




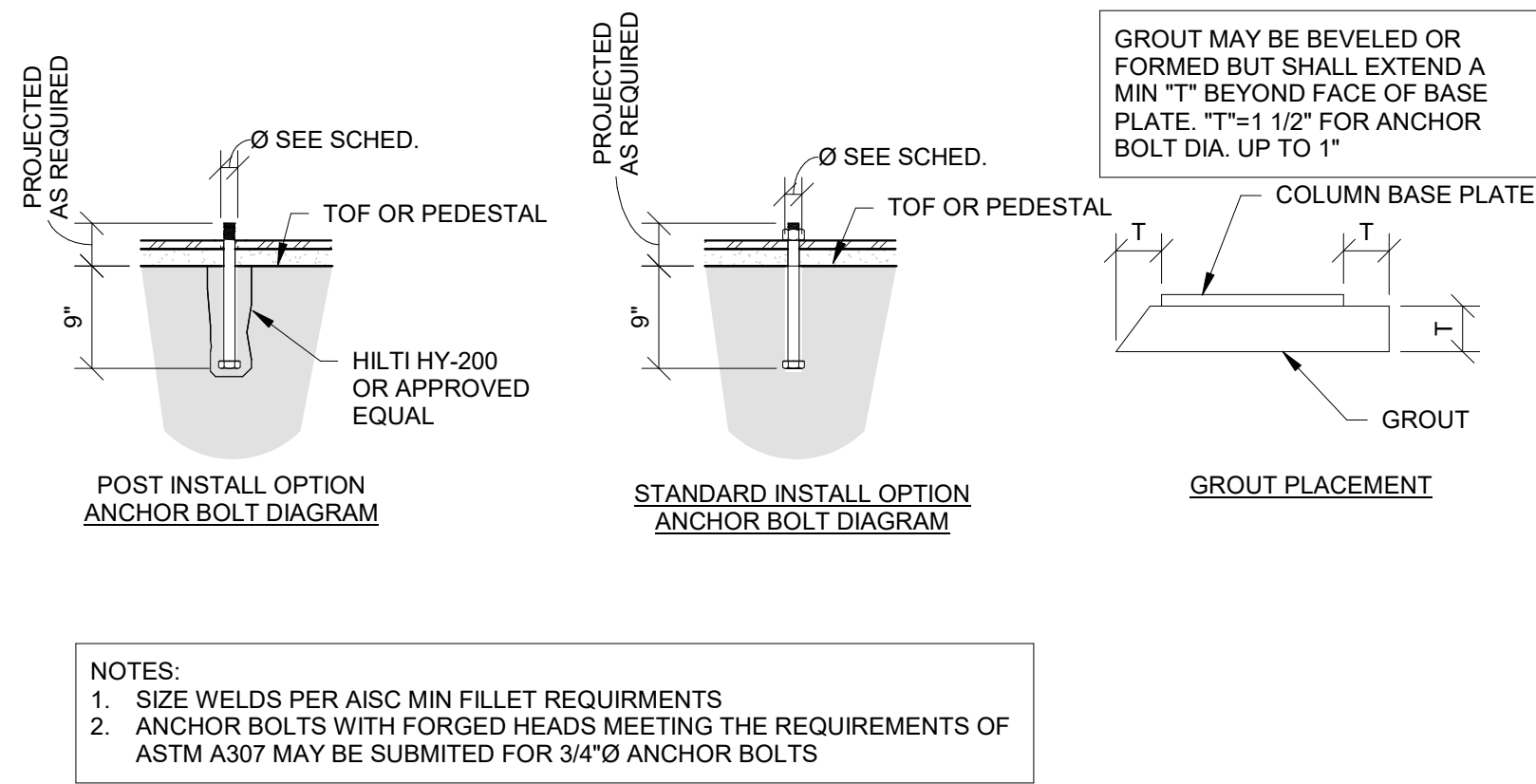
1 ANCHOR BOLT THREADED ROD OR MACHINE BOLT  
1" = 1'-0"



3 TYP. BEAM TO COLUMN SHEAR CONNECTION  
3/4" = 1'-0"



2 COLUMN BASE PLATE  
3/4" = 1'-0"



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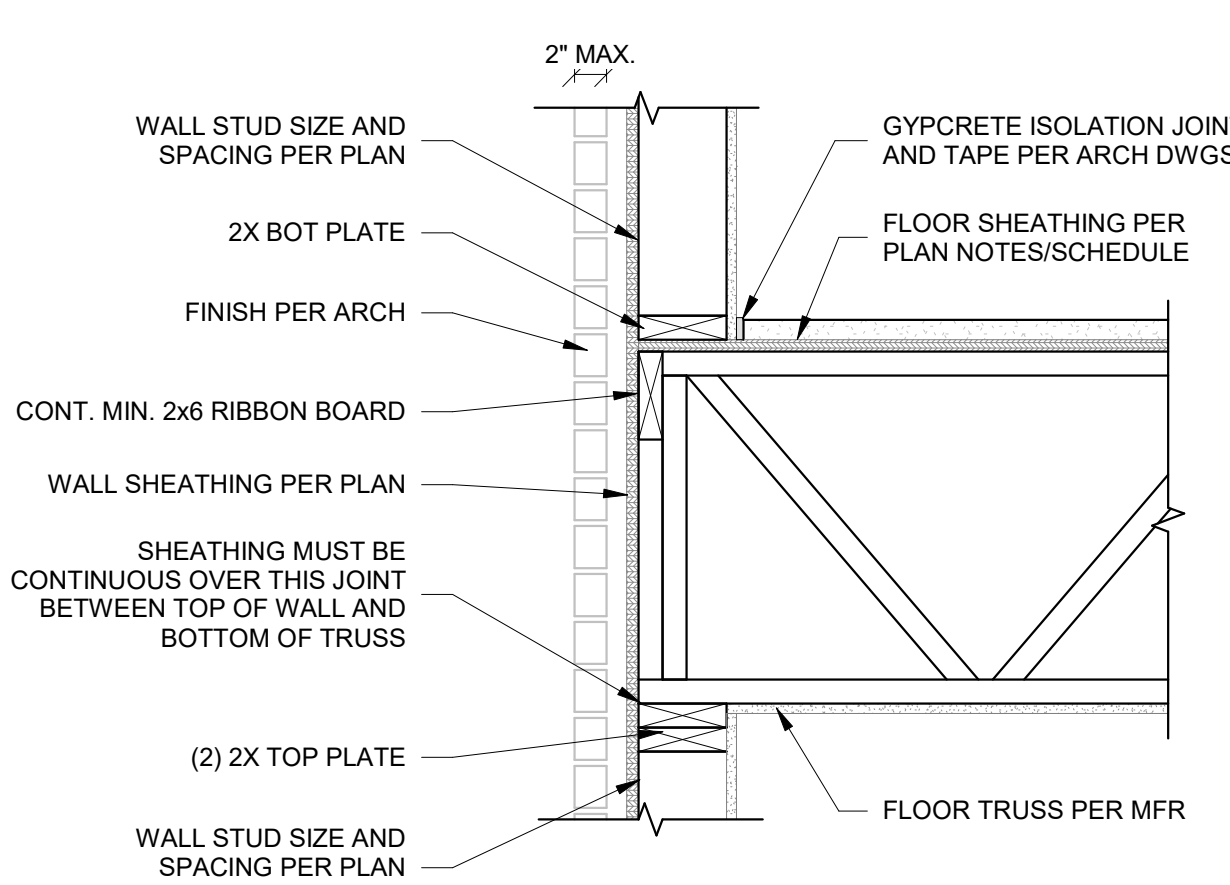
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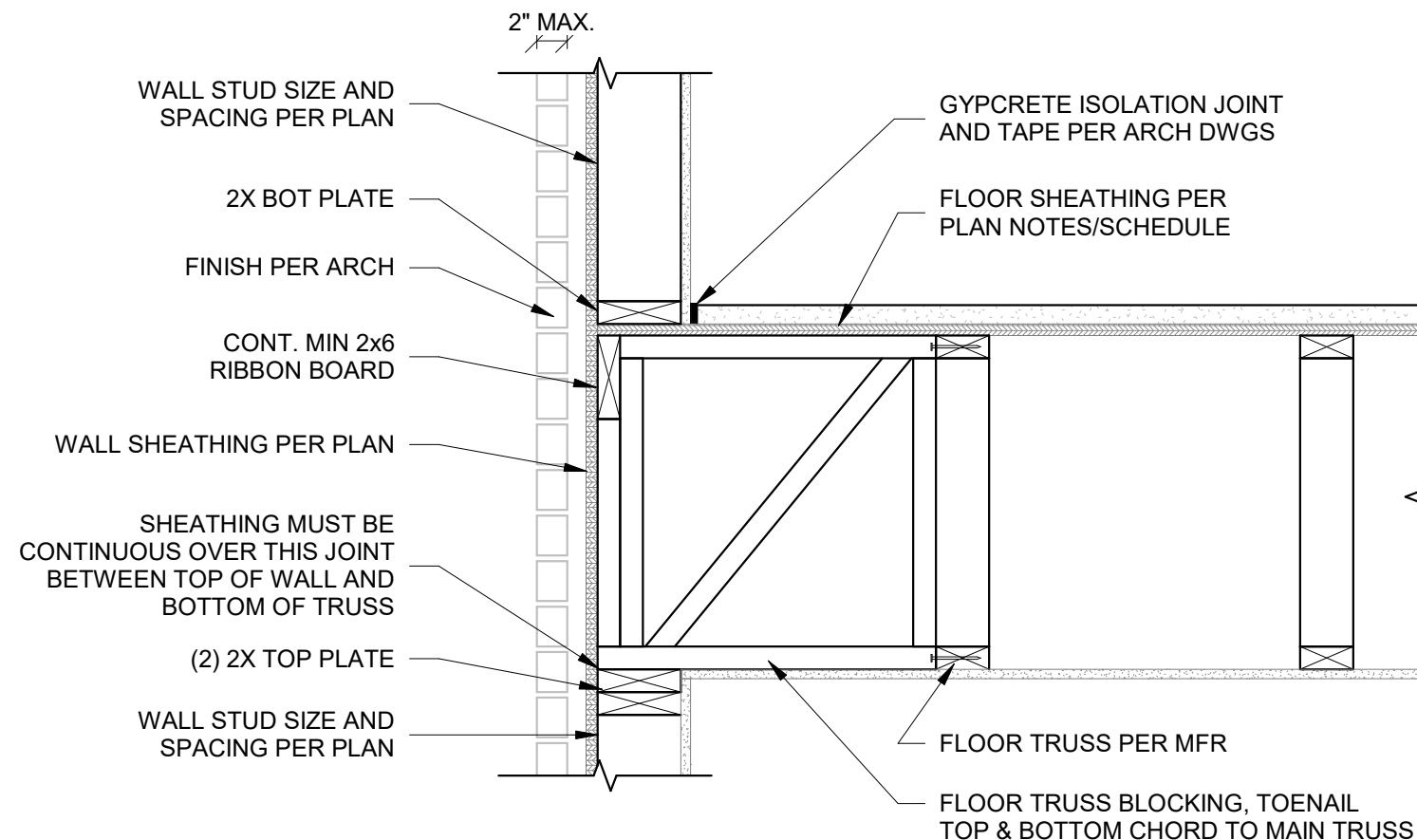
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ENGINEER IWC	DRAWN BY CEL
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JONES GILLAM RENZ  
THE RESIDENCE AT CARTER LAKE  
CARTER LAKE, IOWA  
TYPICAL STEEL DETAILS

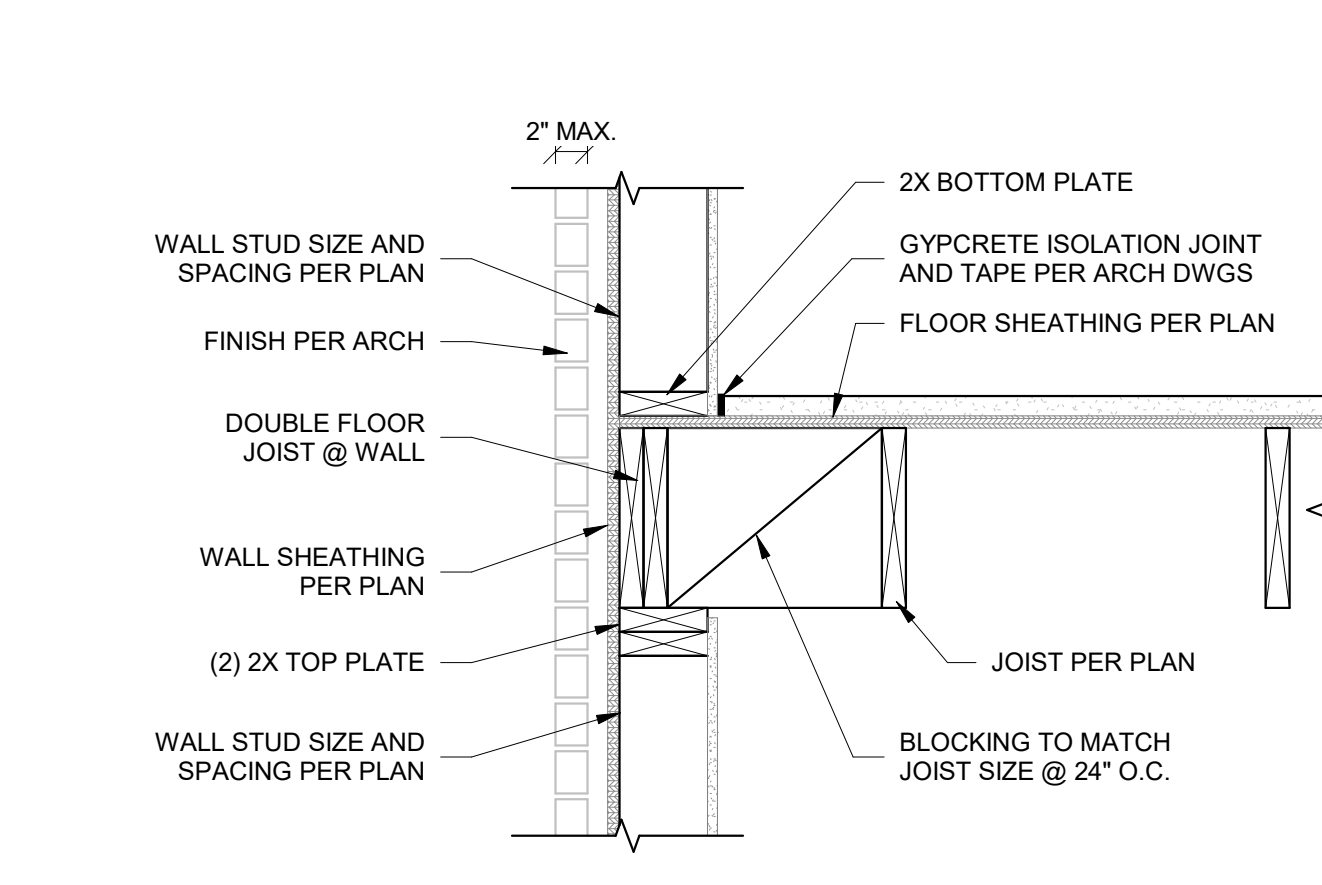




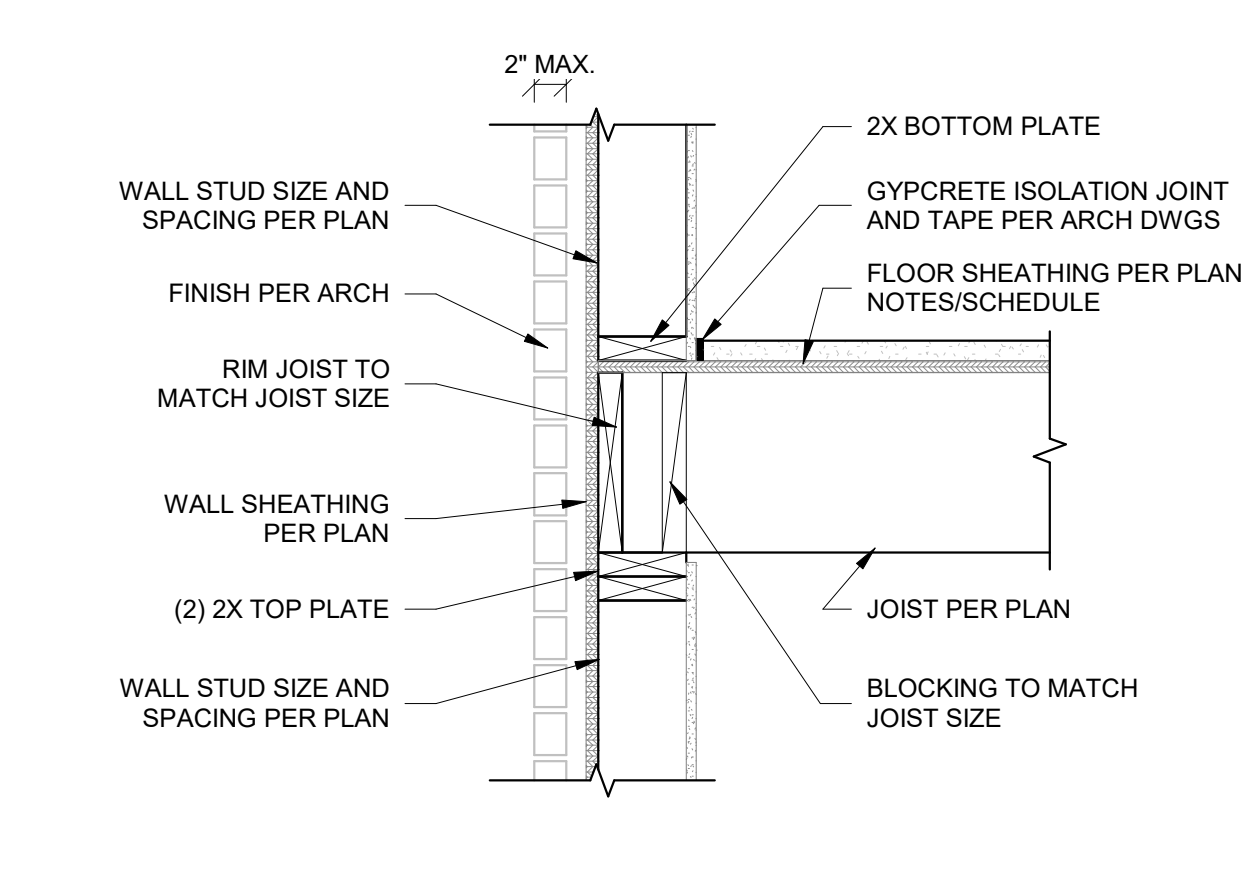
1  
S510  
FRAMING AT EXTERIOR WALL - TRUSS BEARING  
1" = 1'-0"



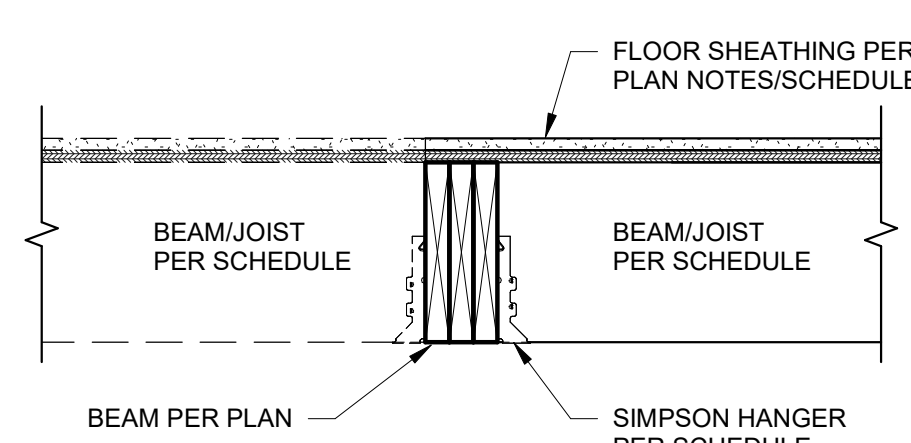
2  
S510  
FRAMING AT EXTERIOR WALL - TRUSS PARALLEL  
1" = 1'-0"



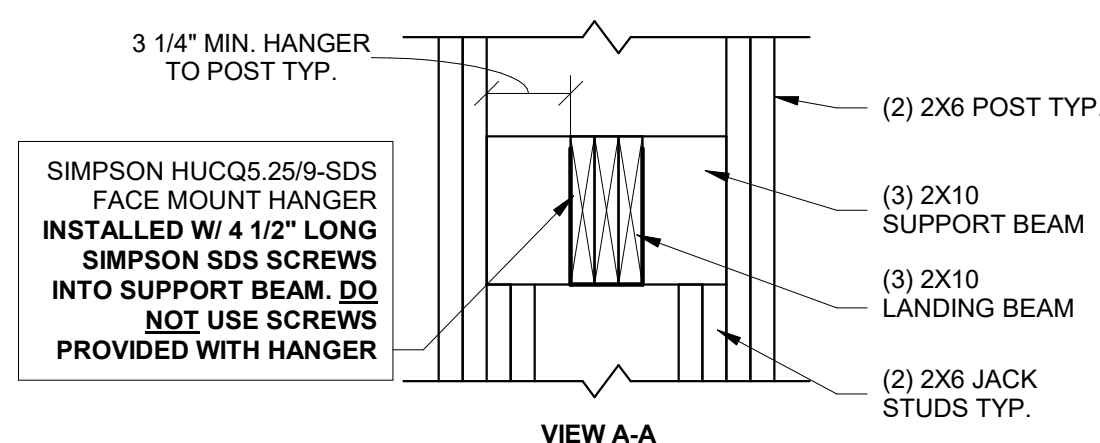
3  
S510  
FRAMING AT EXTERIOR WALL - JOIST PARALLEL  
1" = 1'-0"



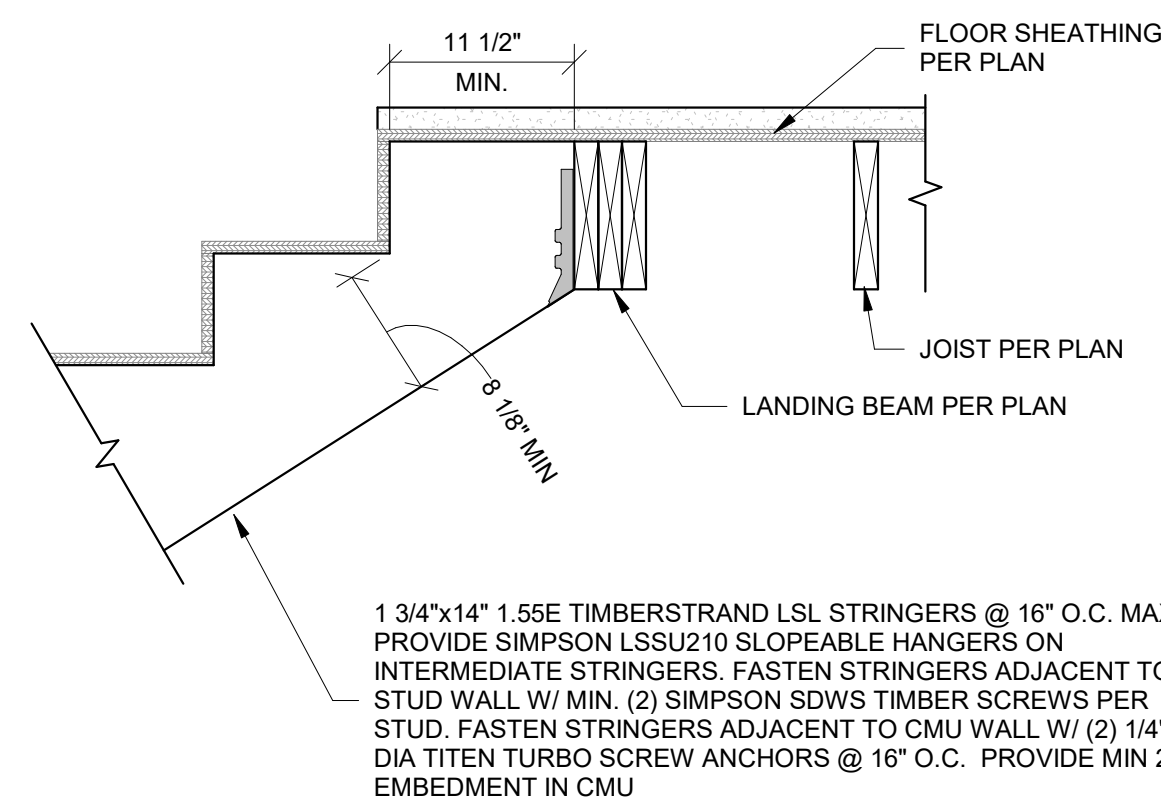
4  
S510  
JOIST BEARING AT EXTERIOR WALL  
1" = 1'-0"



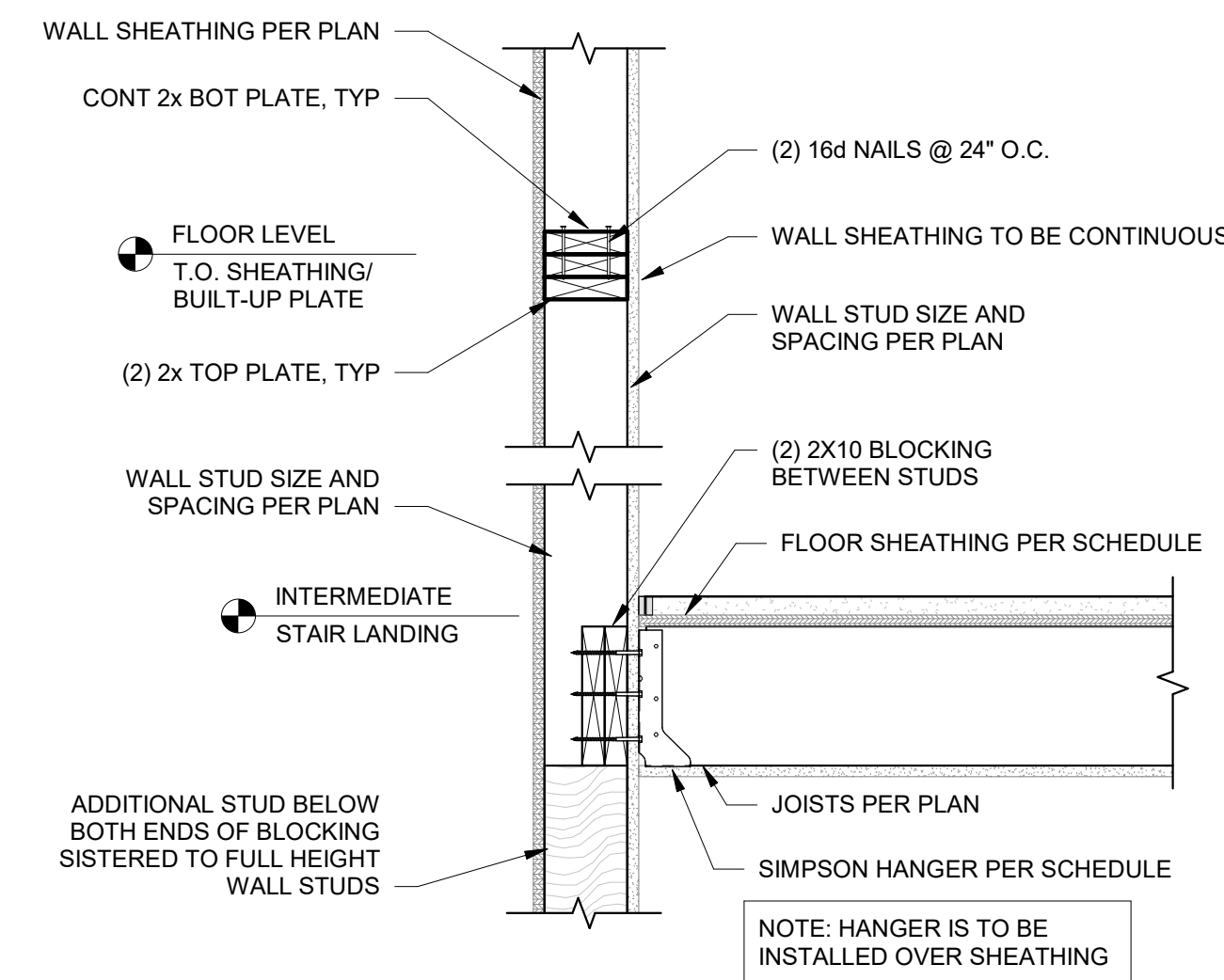
5  
S510  
BEAM CONNECTIONS  
1" = 1'-0"



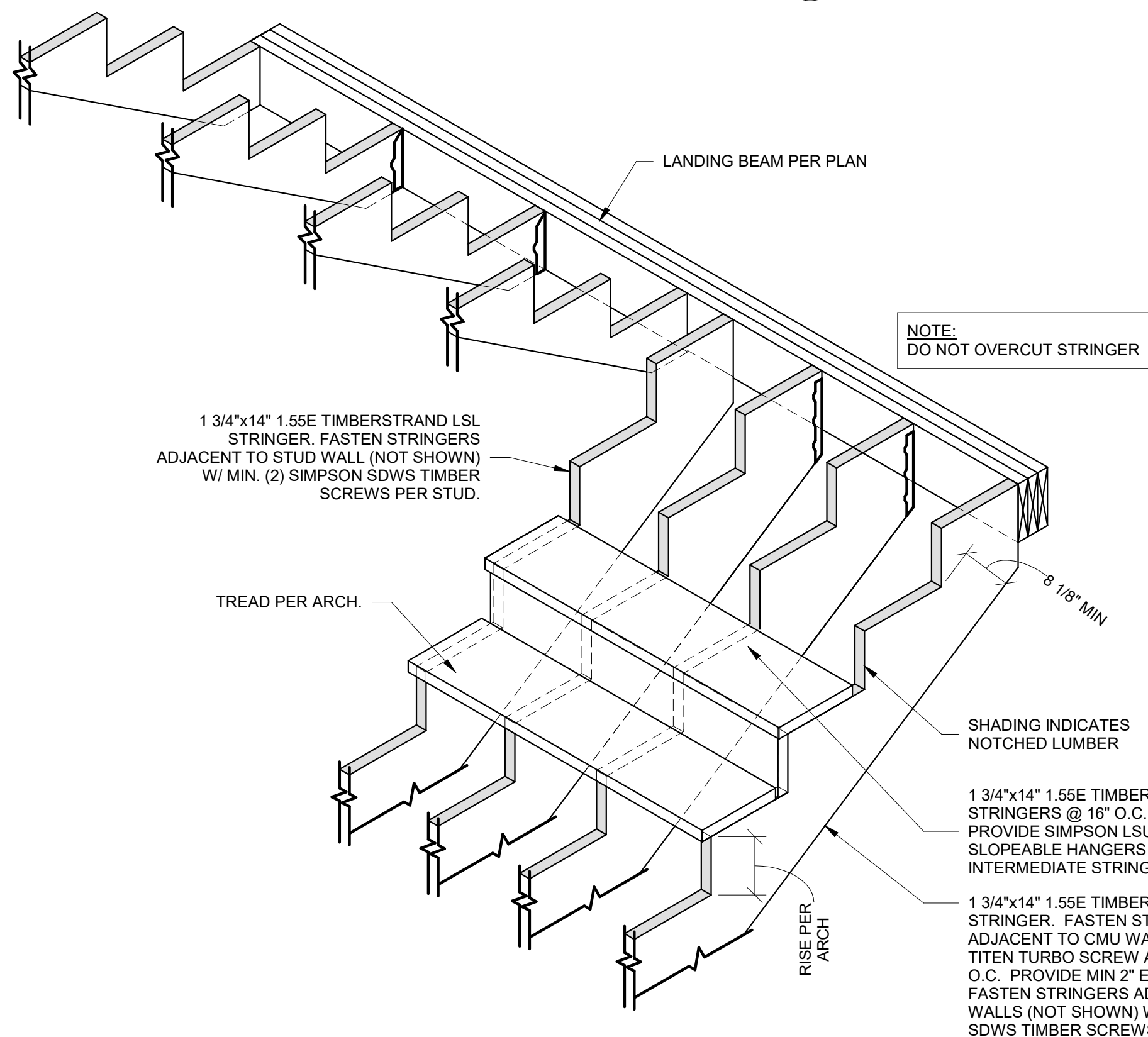
6  
S510  
STAIR LANDING BEAM TO SUPPORT BEAM  
1" = 1'-0"



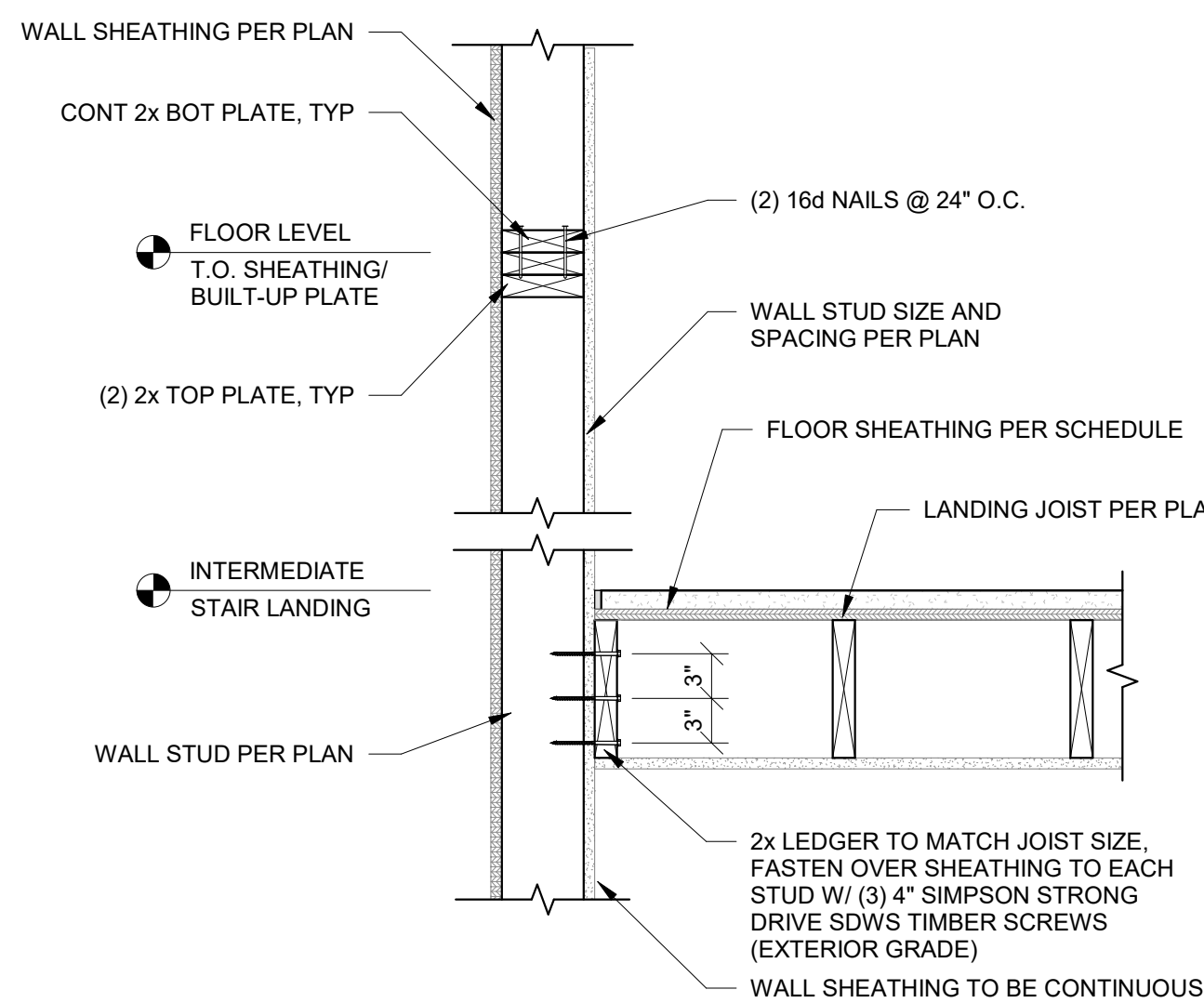
7  
S510  
STRINGER TO LANDING BEAM SECTION  
1" = 1'-0"



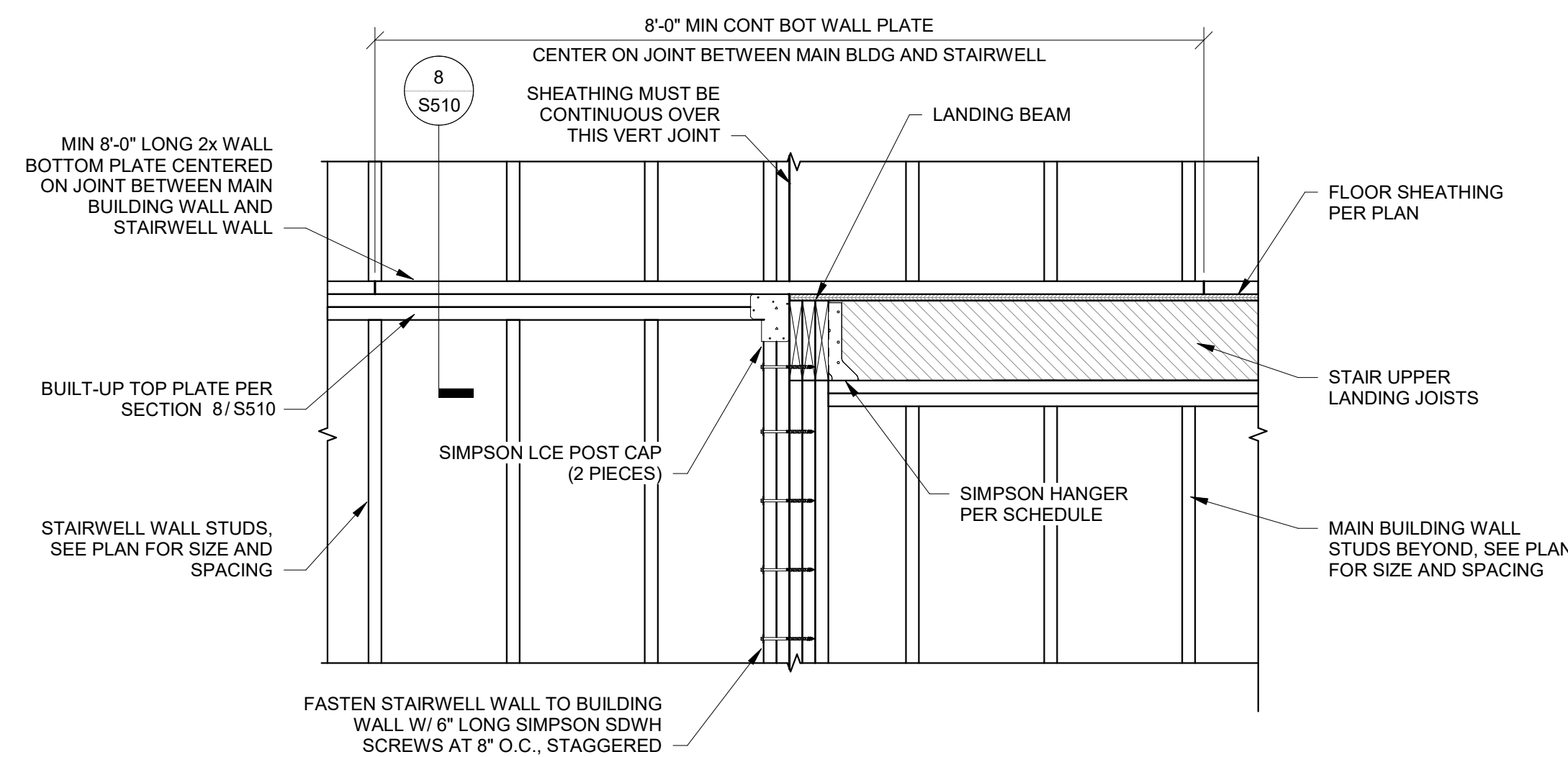
8  
S510  
STAIR LANDING FRAMING BEARING AT EXTERIOR WALL  
1" = 1'-0"



9  
S510  
WOOD STAIR ISOMETRIC  
3/4" = 1'-0"



10  
S510  
STAIR LANDING FRAMING PARALLEL AT EXTERIOR WALL  
1" = 1'-0"



11  
S510  
STAIR TO BLDG CONNECTION ELEVATION  
3/4" = 1'-0"

No.	Description	Date

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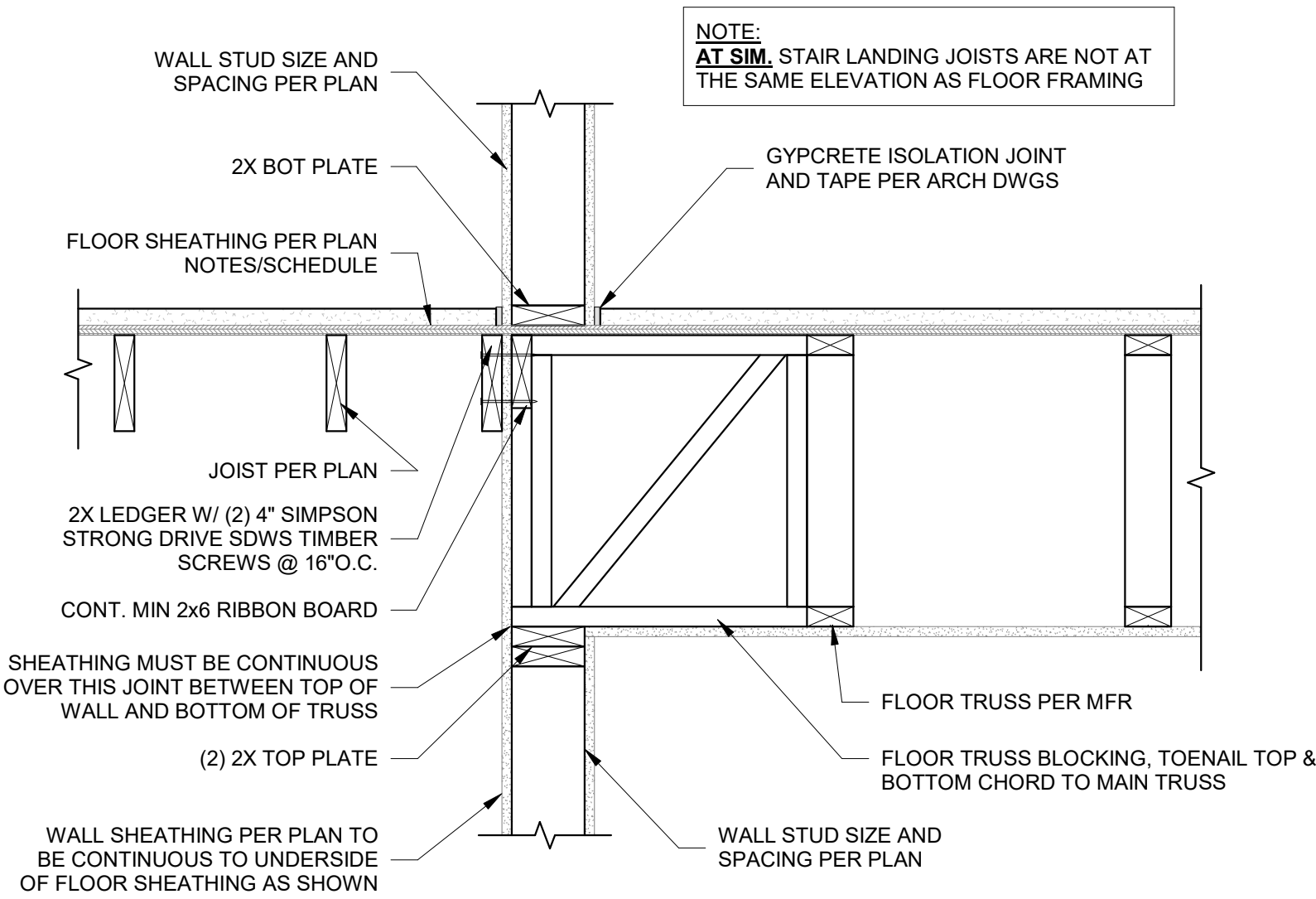
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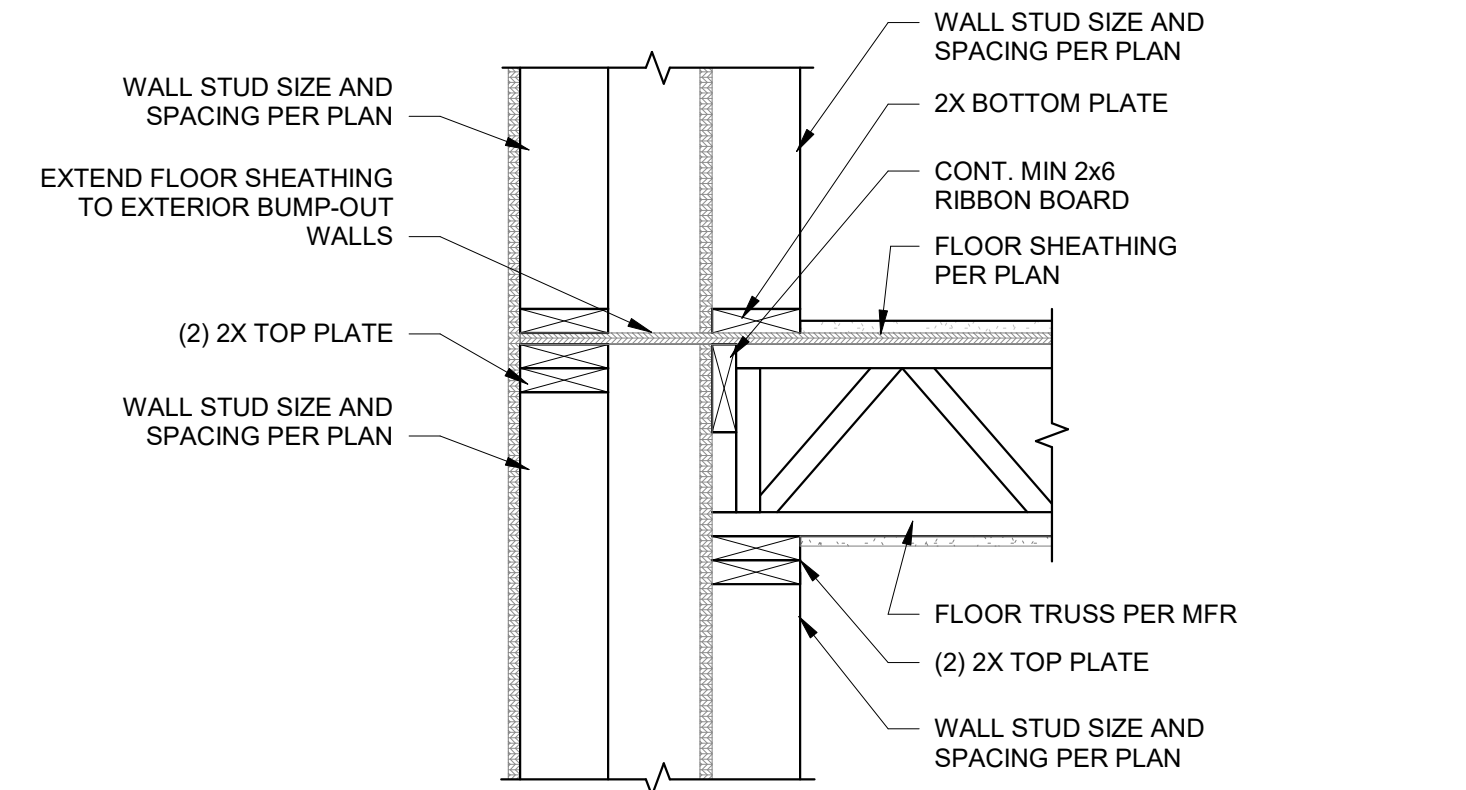
No.	Description	Date

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ENGINEER IWC	DRAWN BY CEL
	CHECKED BY MDH

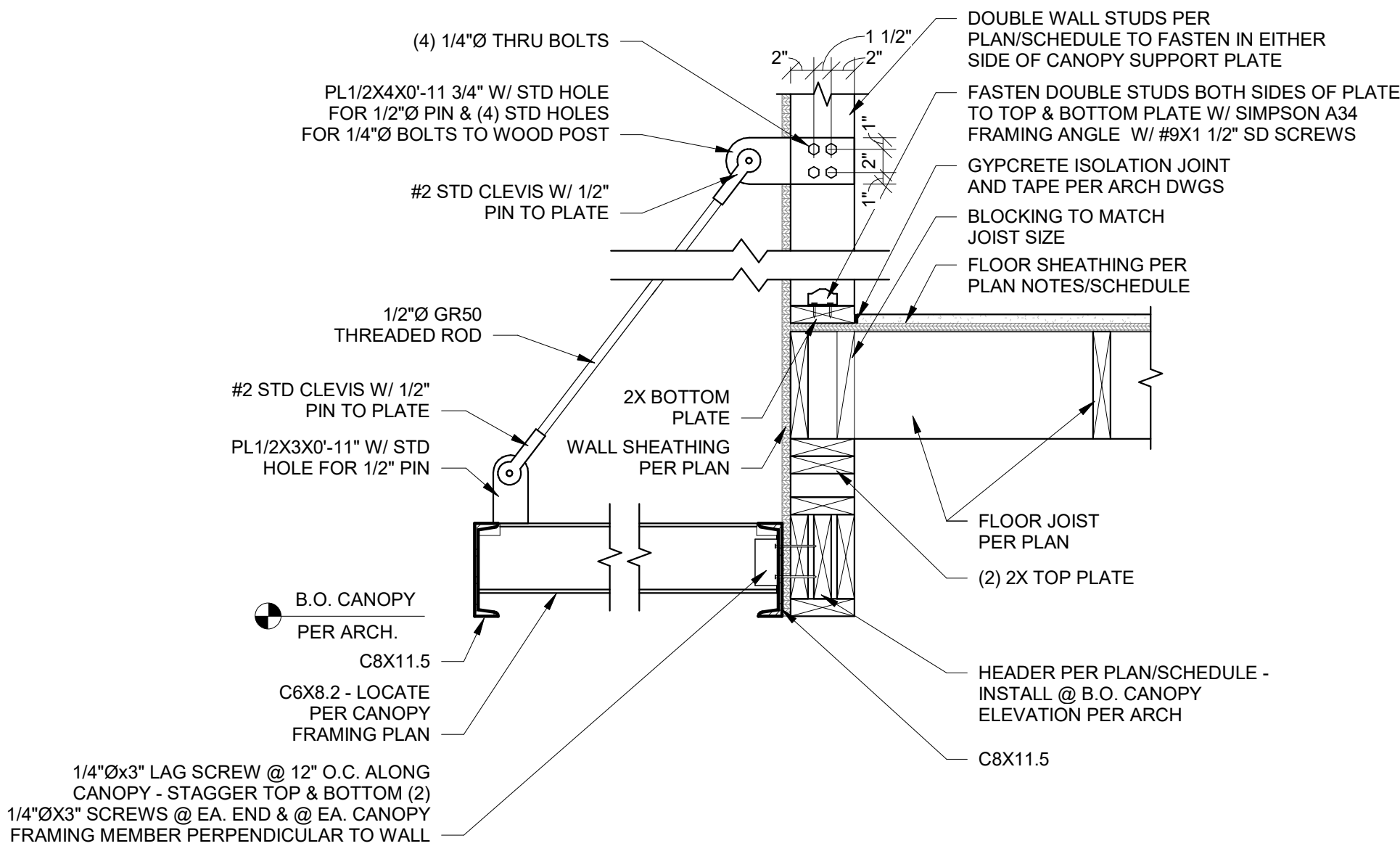
JONES GILLAM RENZ  
THE RESIDENCE AT CARTER LAKE  
CARTER LAKE, IOWA  
FRAMING DETAILS



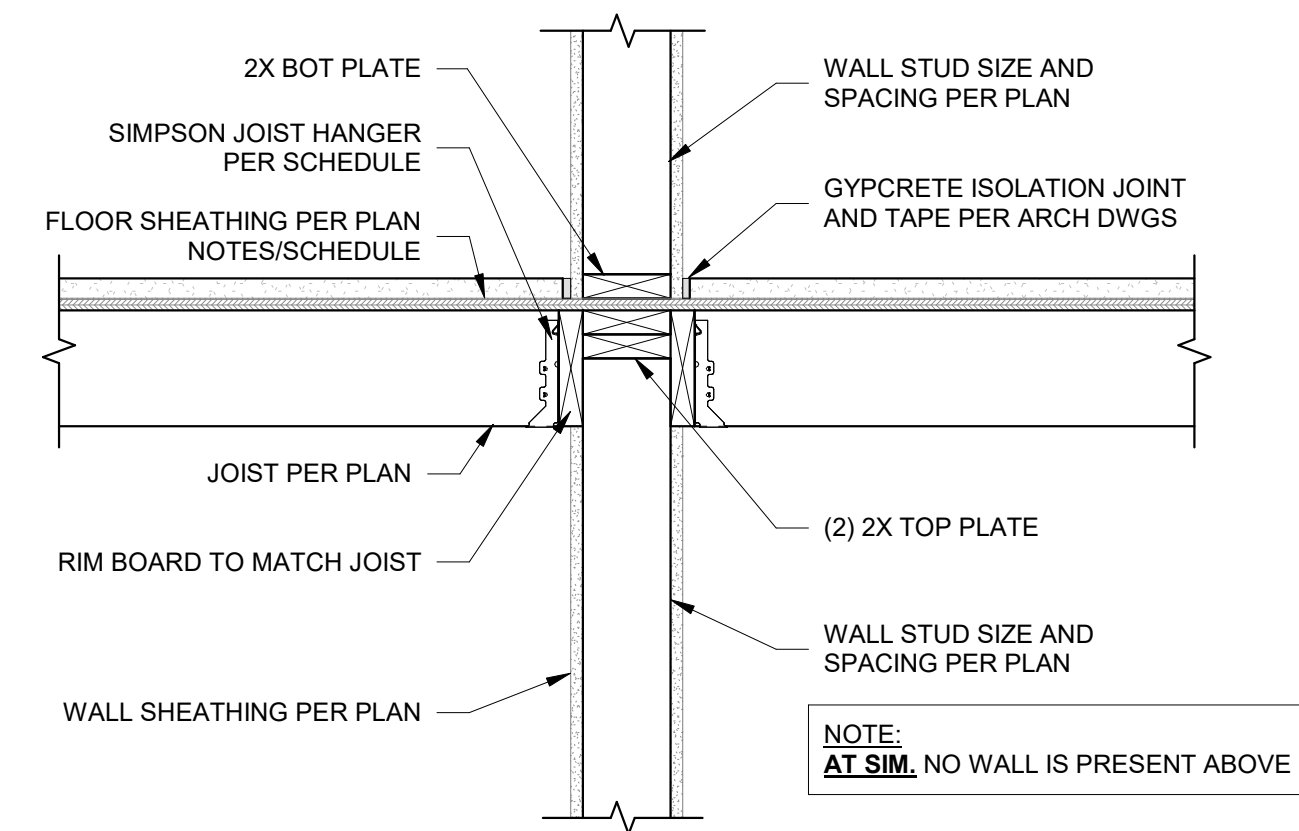
2 FRAMING AT INTERIOR WALL  
S511 1" = 1'-0"



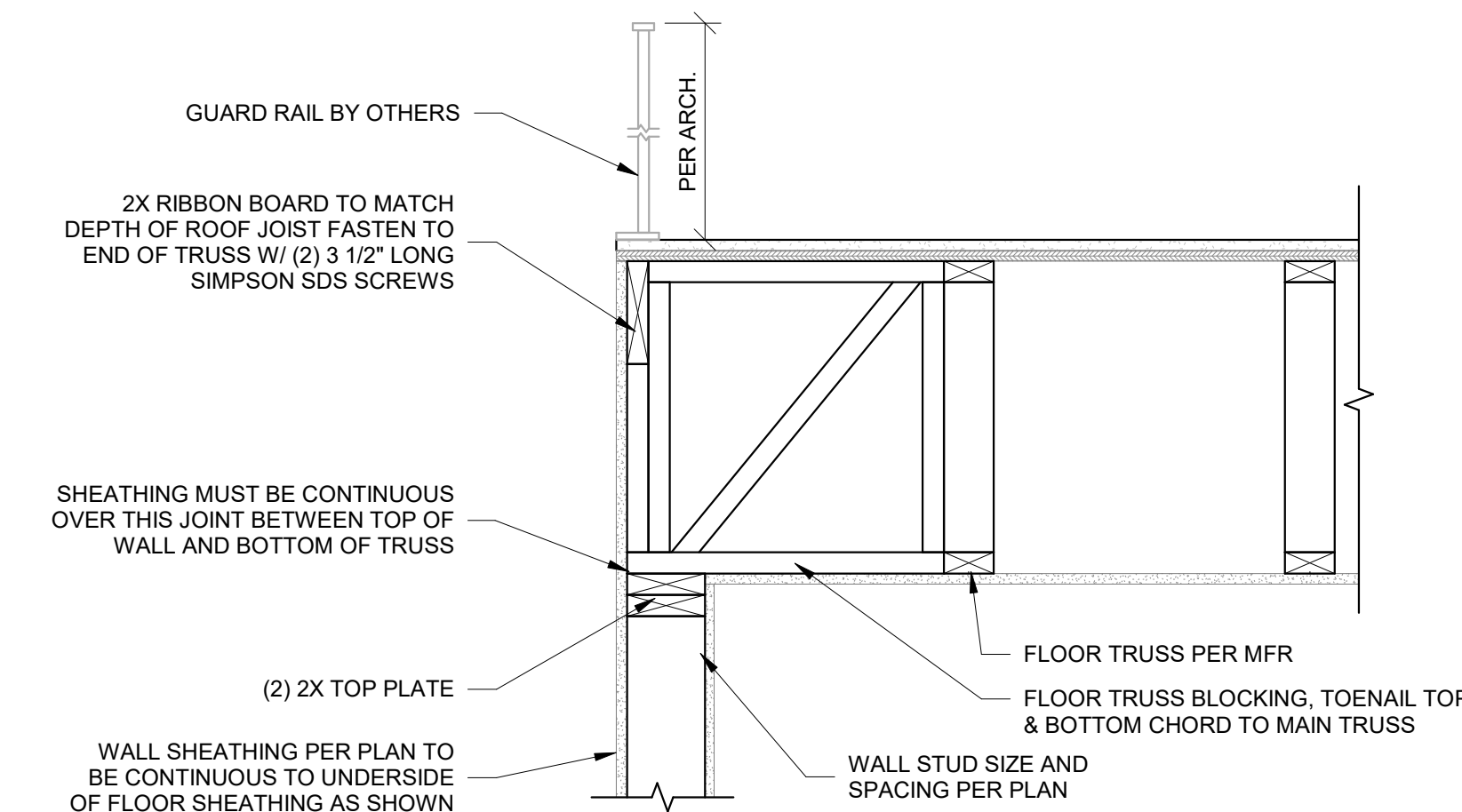
3 FLOOR FRAMING AT BUMP OUT  
S511 1" = 1'-0"



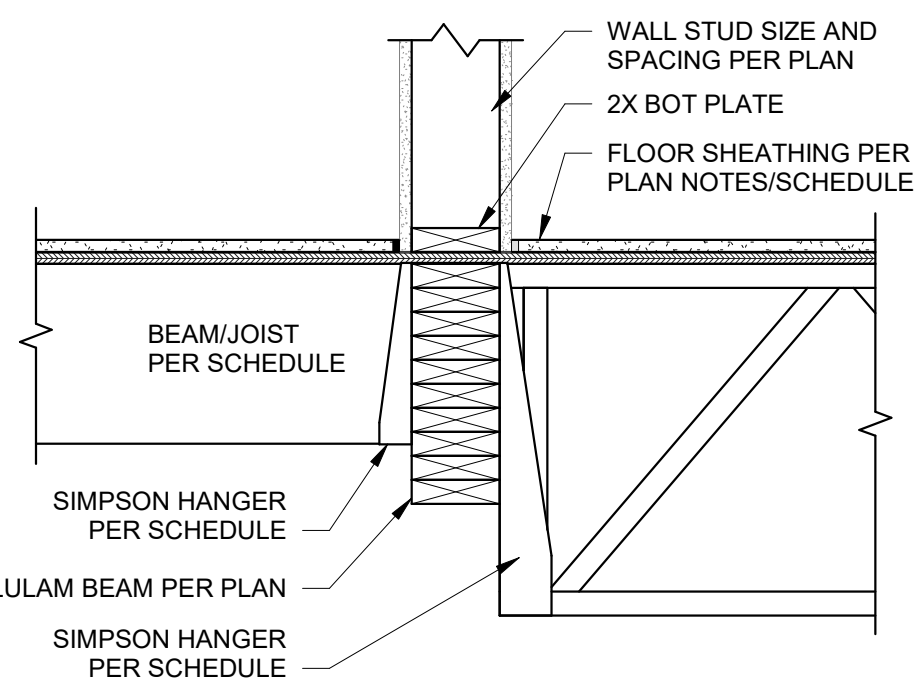
5 CANOPY AT INSET  
S511 1" = 1'-0"



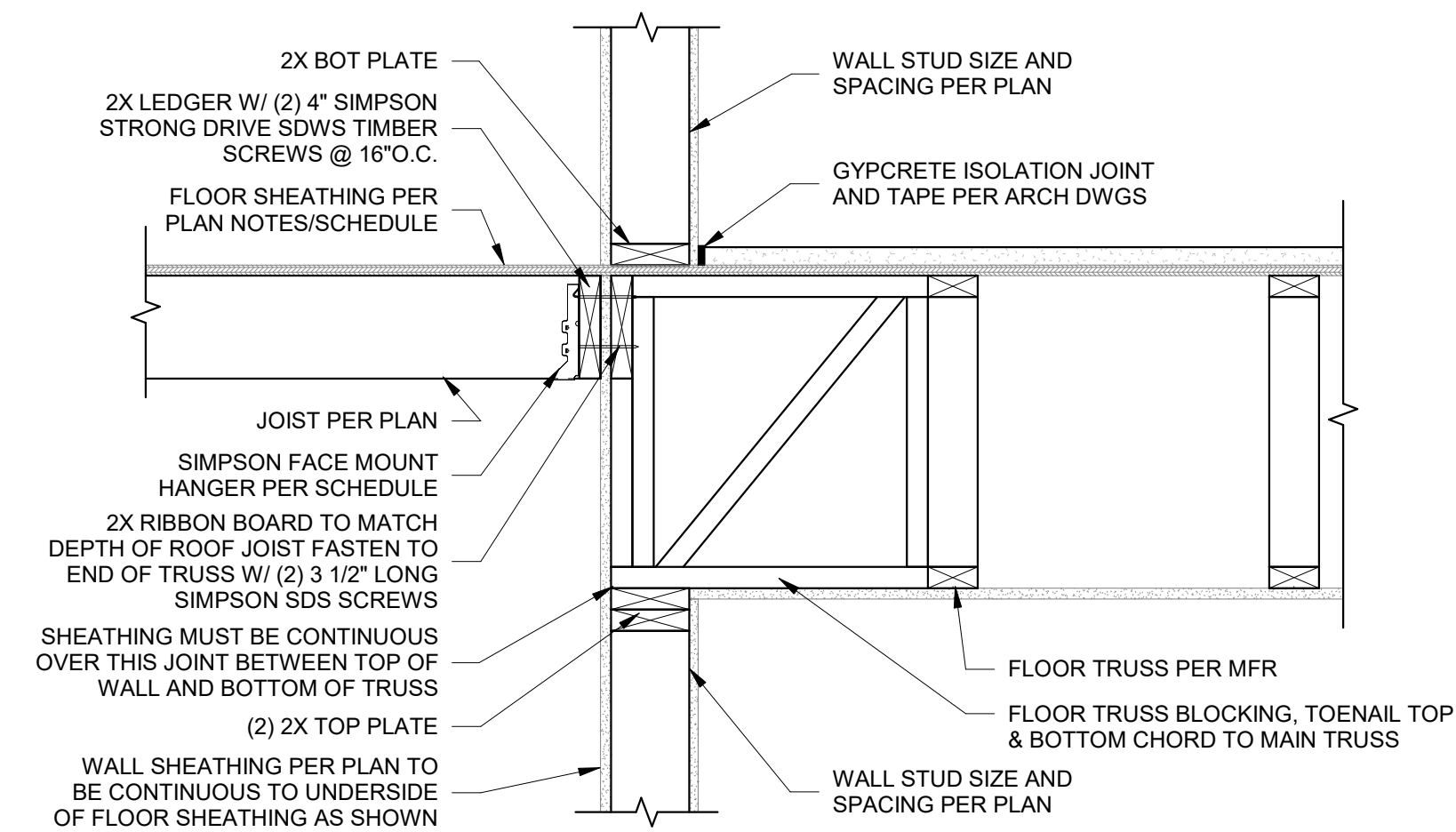
6 2X JOISTS BEARING AT INTERIOR  
S511 1" = 1'-0"



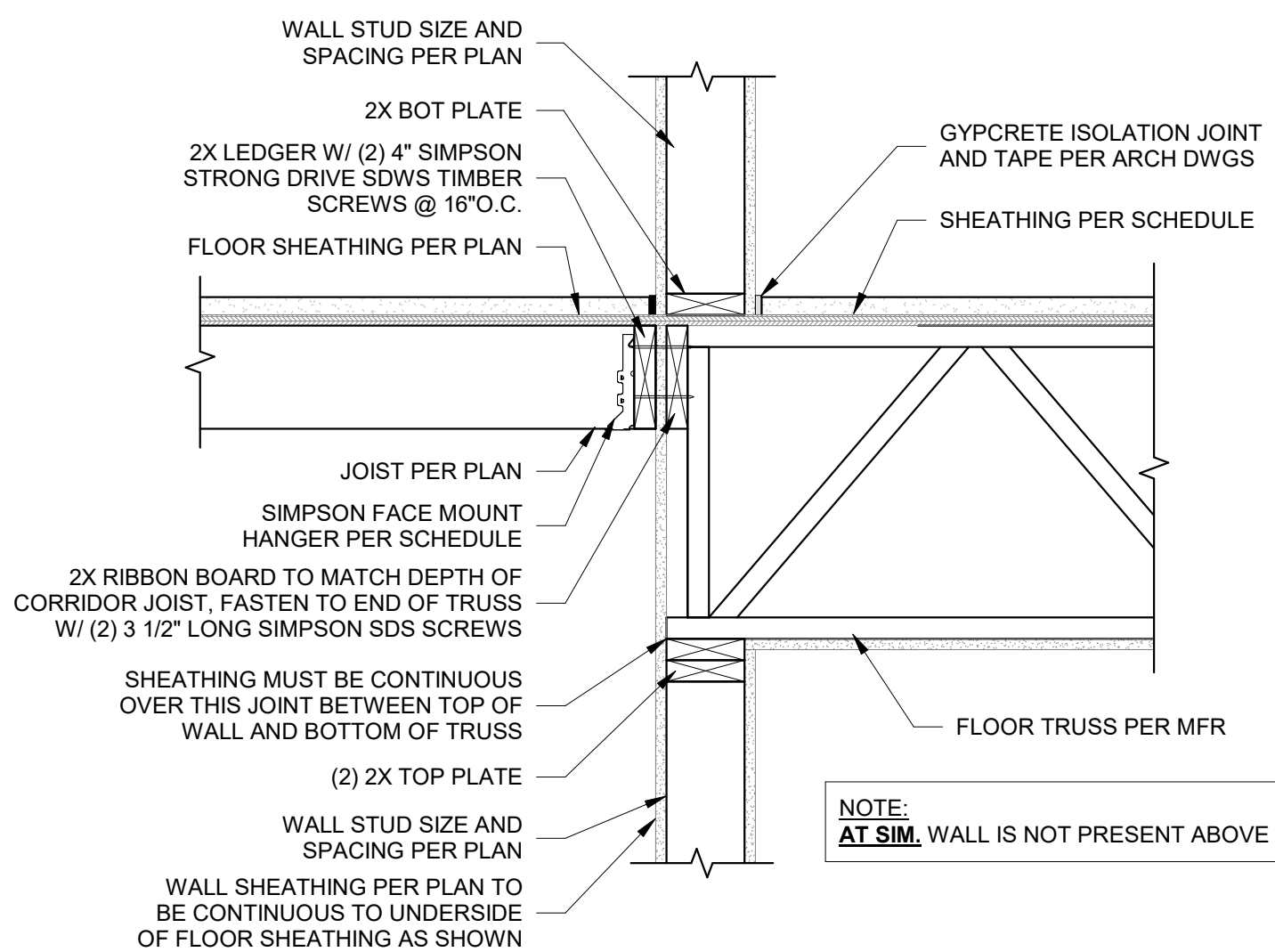
8 FLOOR JOIST PARALLEL TO GUARD RAIL  
S511 1" = 1'-0"



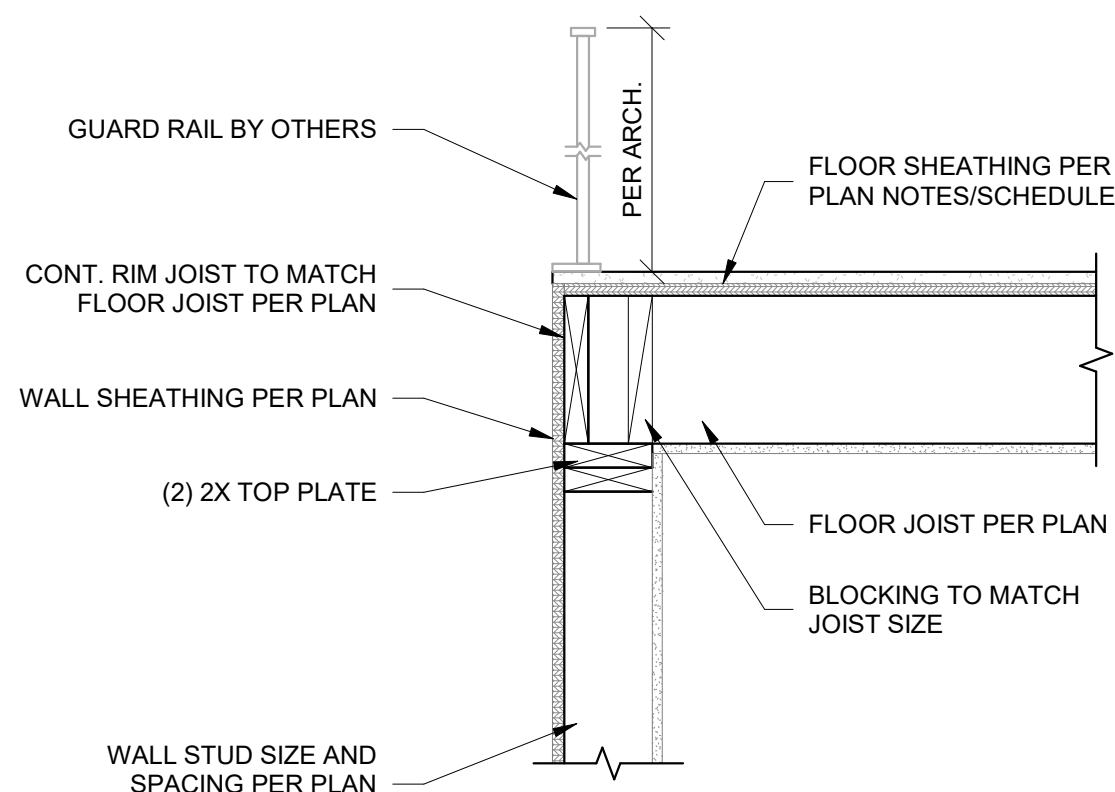
9 FLOOR TRUSS/JOIST BEARING AT STEEL BEAM  
S511 1" = 1'-0"



1 FRAMING AT LOW ROOF  
S511 1" = 1'-0"

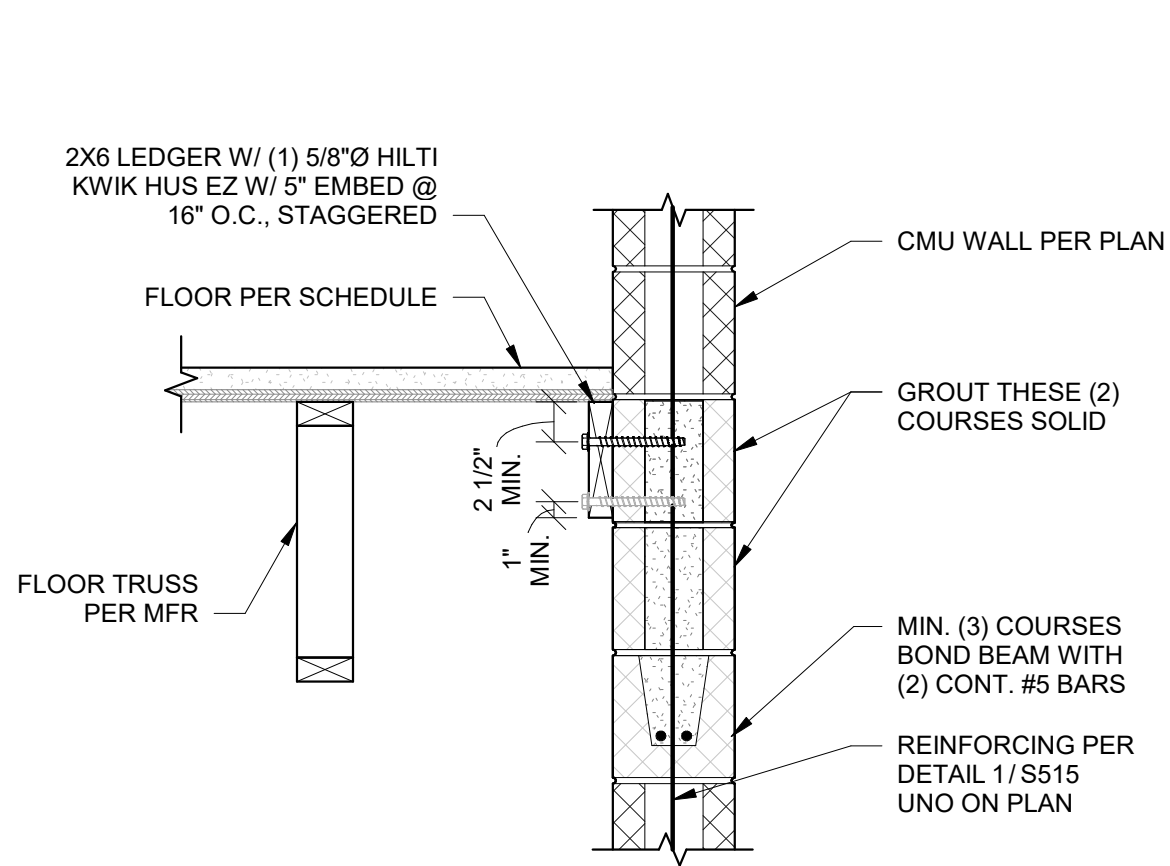


4 TRUSS TO JOIST TRANSITION - BEARING  
S511 1" = 1'-0"

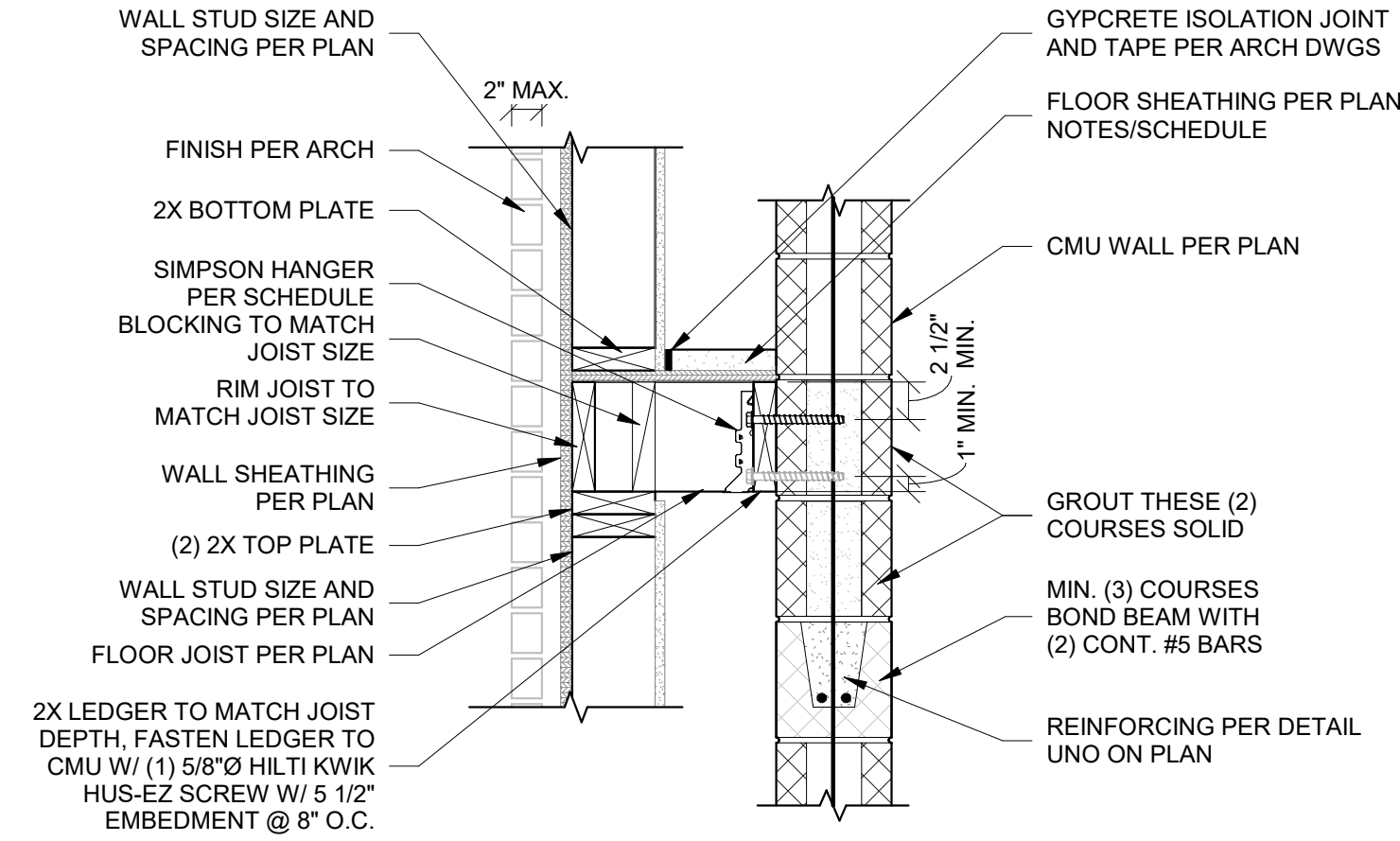


7 JOISTS BEARING AT GUARD RAIL  
S511 1" = 1'-0"

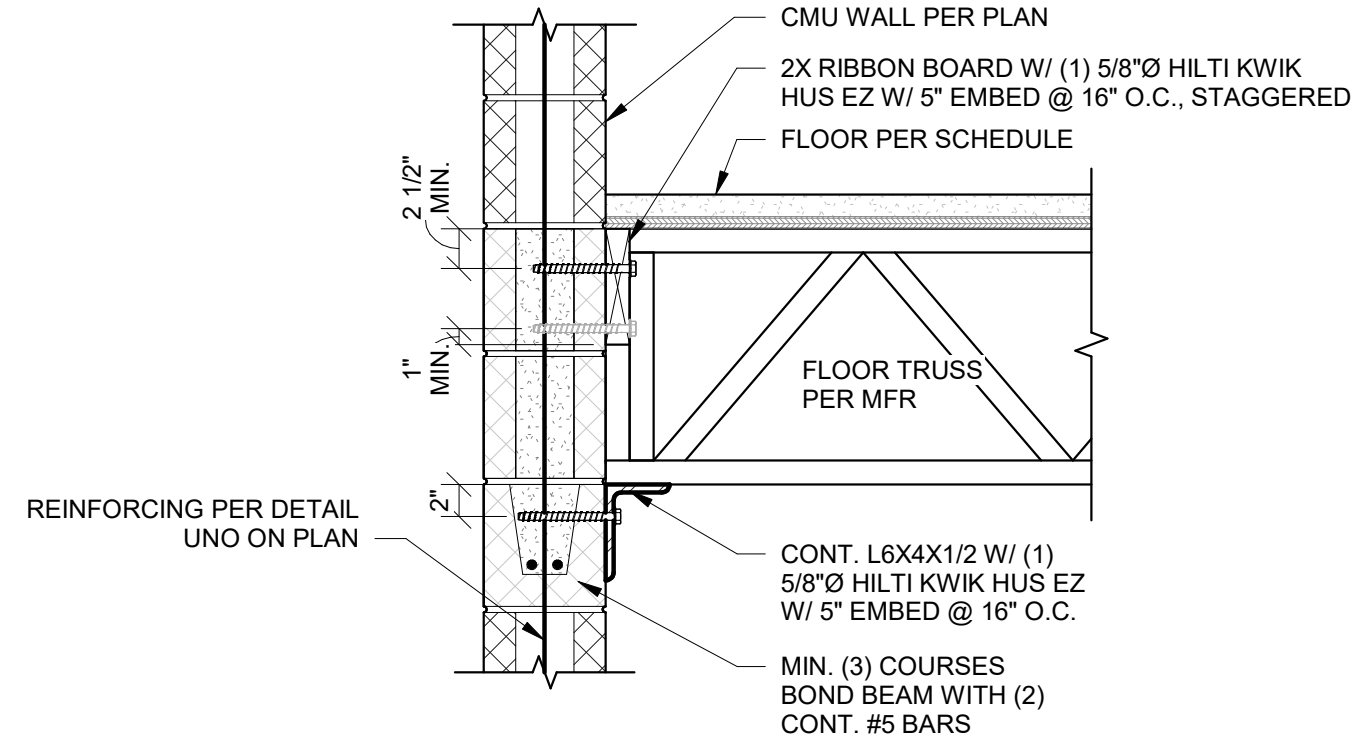




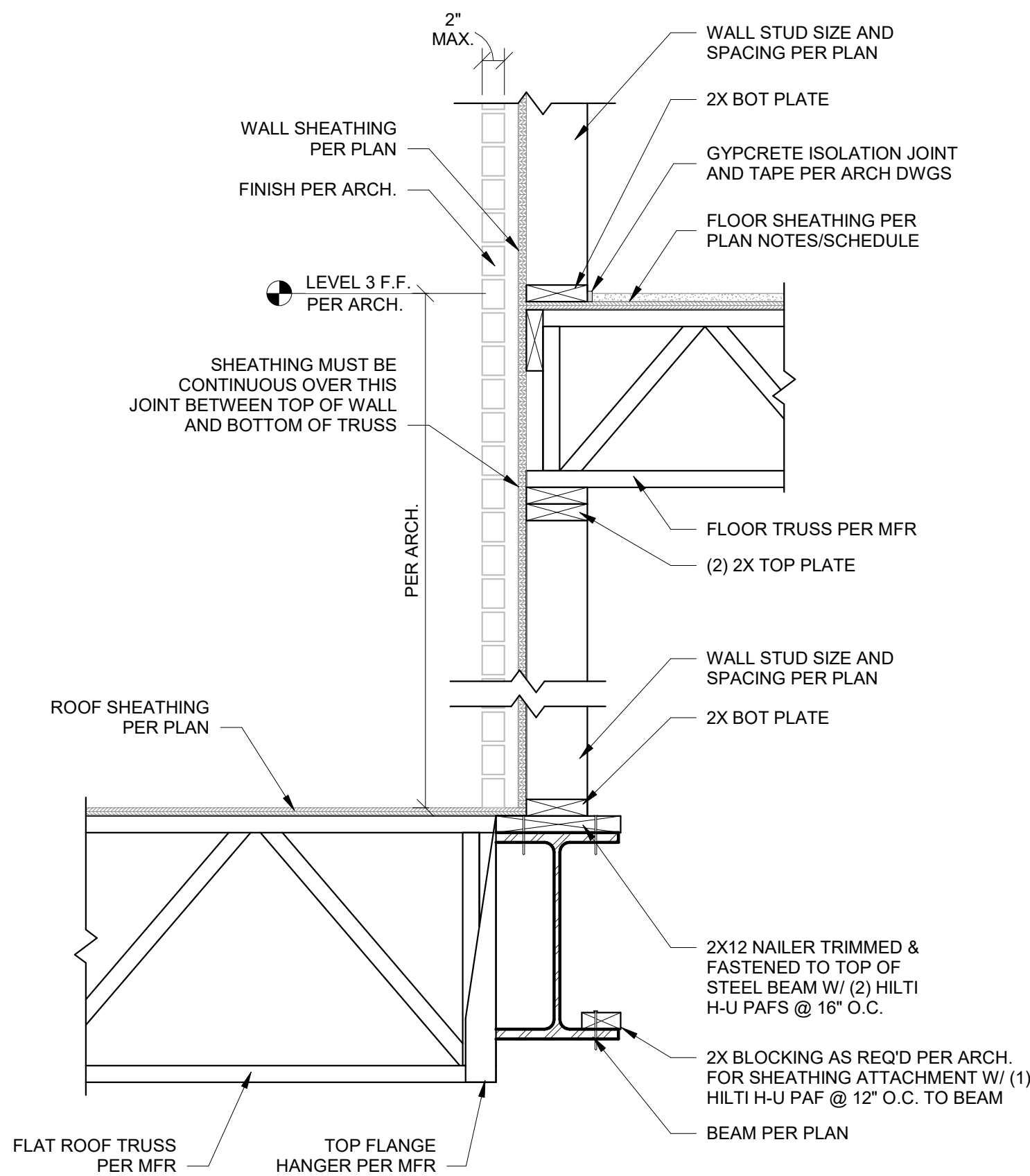
1 FLOOR TRUSS PARALLEL TO CMU  
1" = 1'-0"



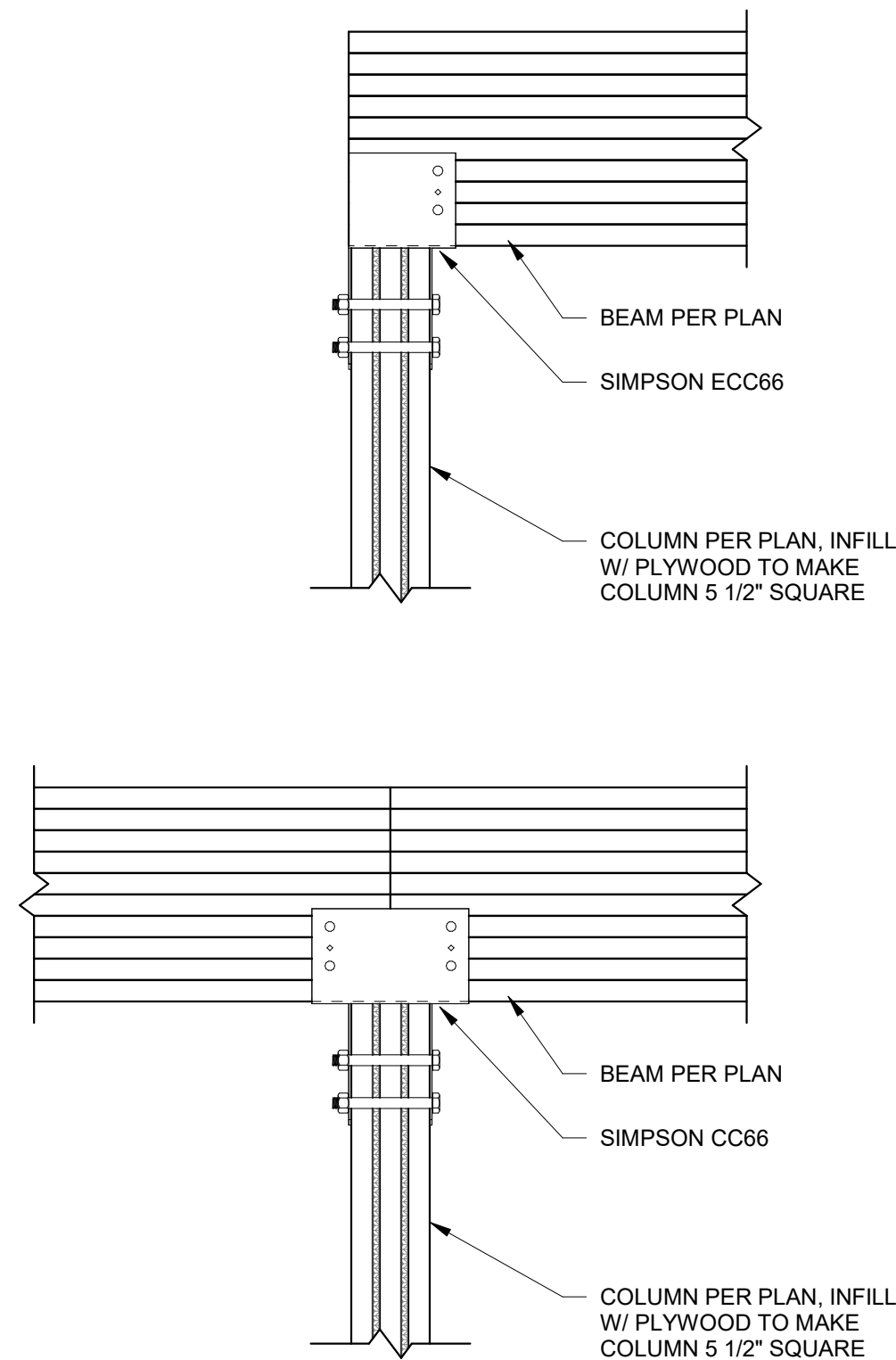
2 FLOOR JOIST BEARING AT CMU  
1" = 1'-0"



3 FLOOR FRAMING BEARING AT CMU  
1" = 1'-0"



4 TRUSS BEARING AT LOW ROOF  
1" = 1'-0"



5 WOOD BEAM TO COLUMN  
1" = 1'-0"

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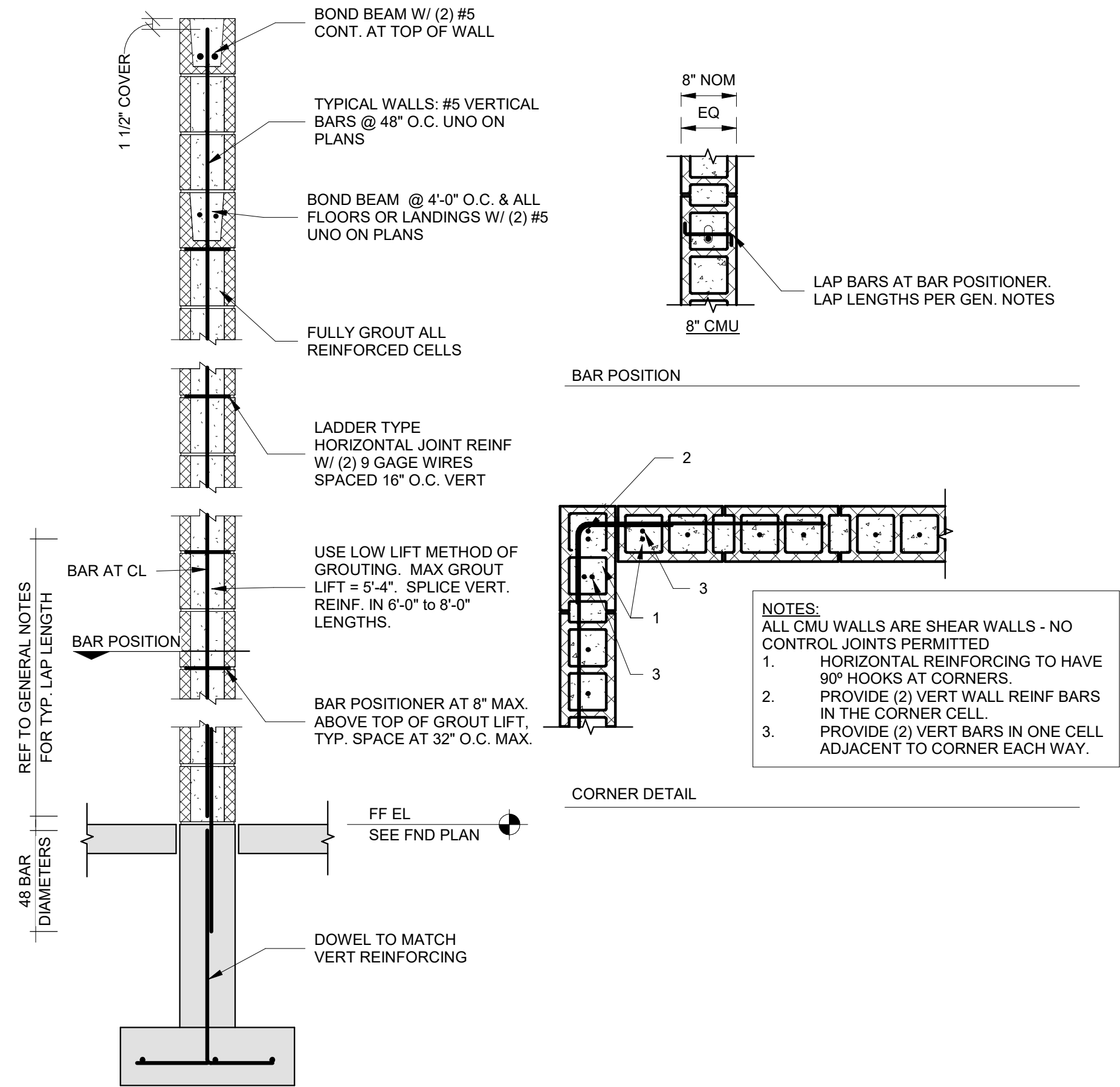
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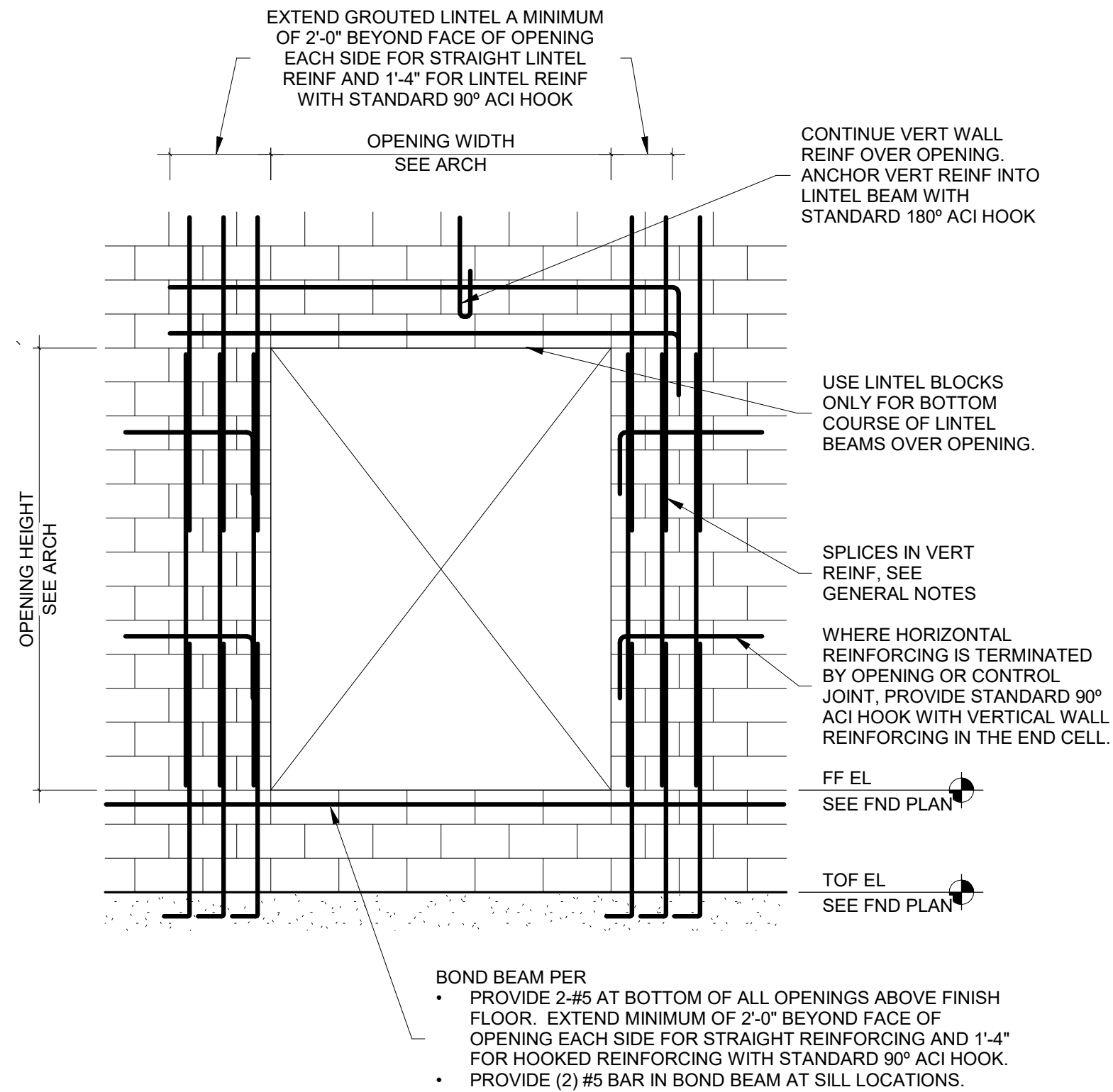
PROJECT NUMBER 2025001420	SET/ISSUE DATE 08/01/2025
ENGINEER IWC	DRAWN BY CEL
	CHECKED BY MDH

JONES GILLAM RENZ  
THE RESIDENCE AT CARTER LAKE  
CARTER LAKE, IOWA  
FRAMING DETAILS



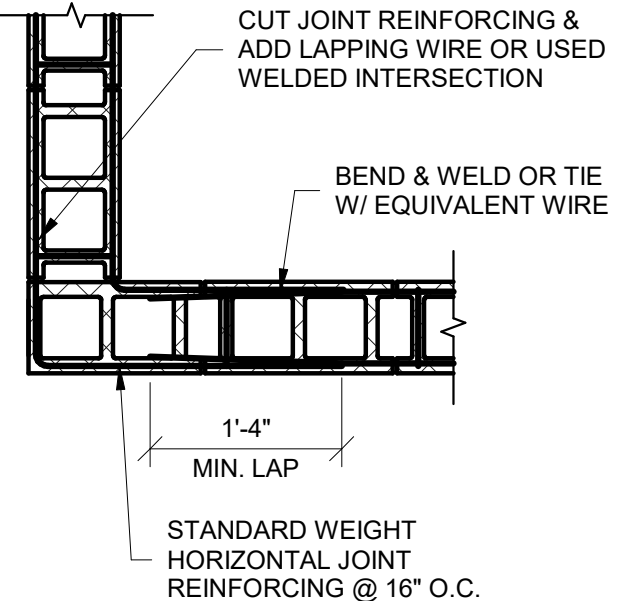
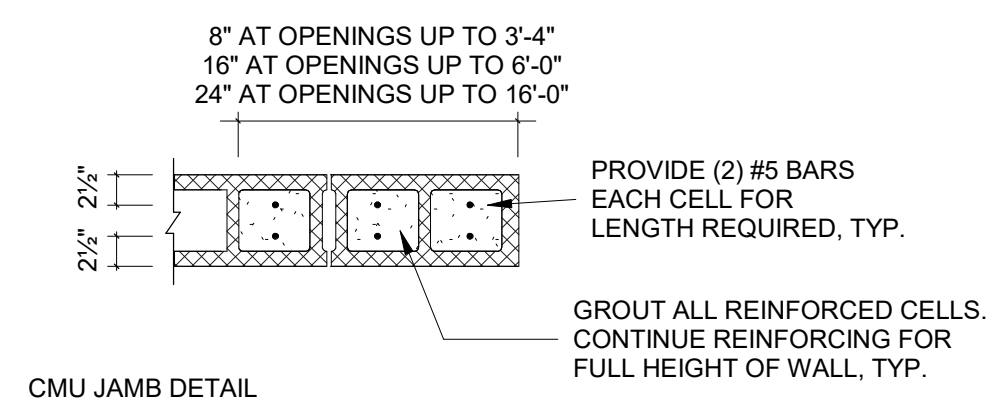
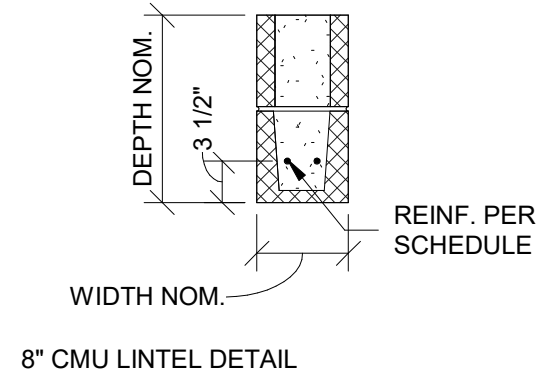


1 CMU WALL REINFORCING DIAGRAM  
3/4" = 1'-0"

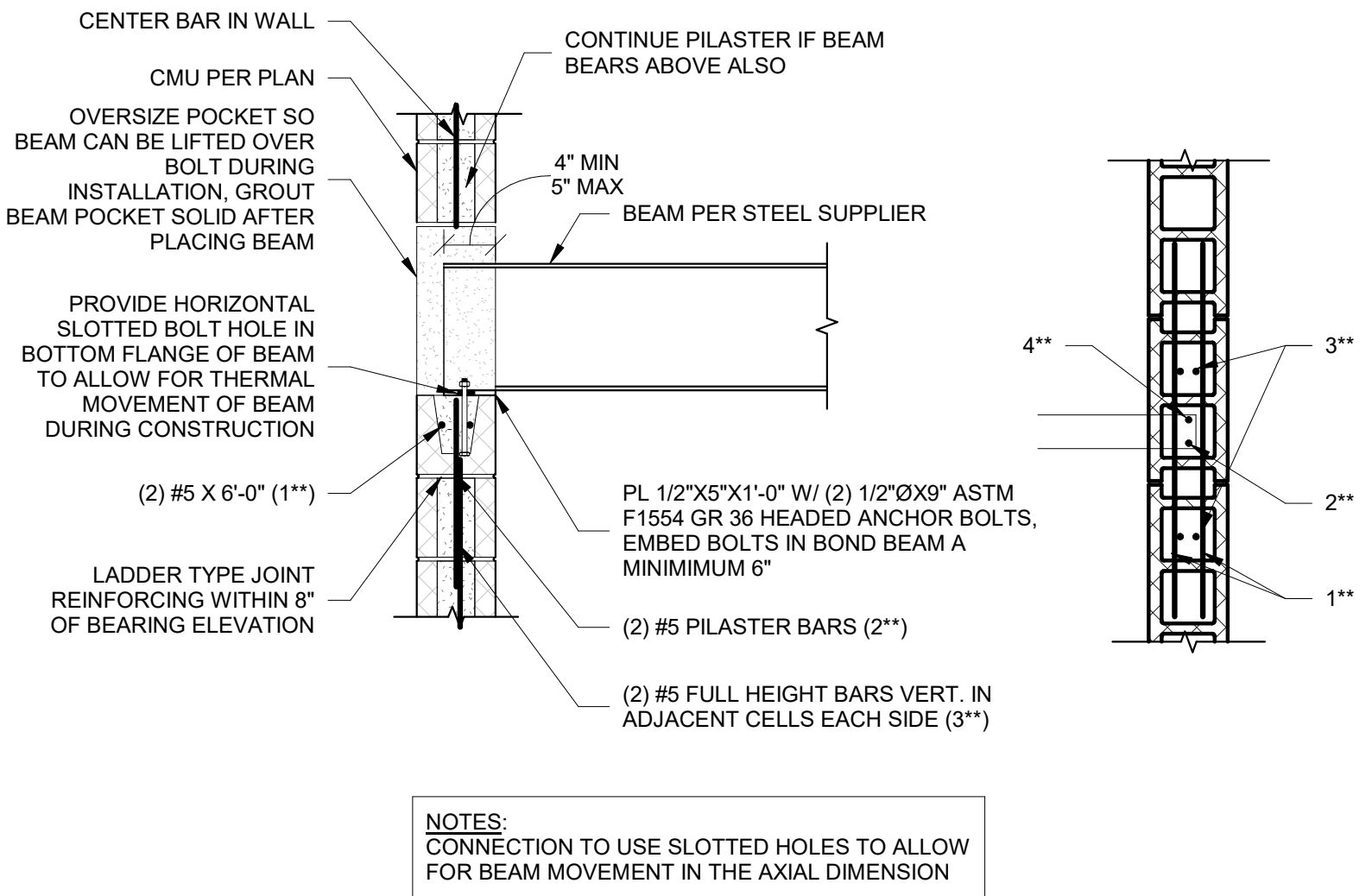


2 TYPICAL MASONRY OPENING DIAGRAM & SCHEDULE  
3/4" = 1'-0"

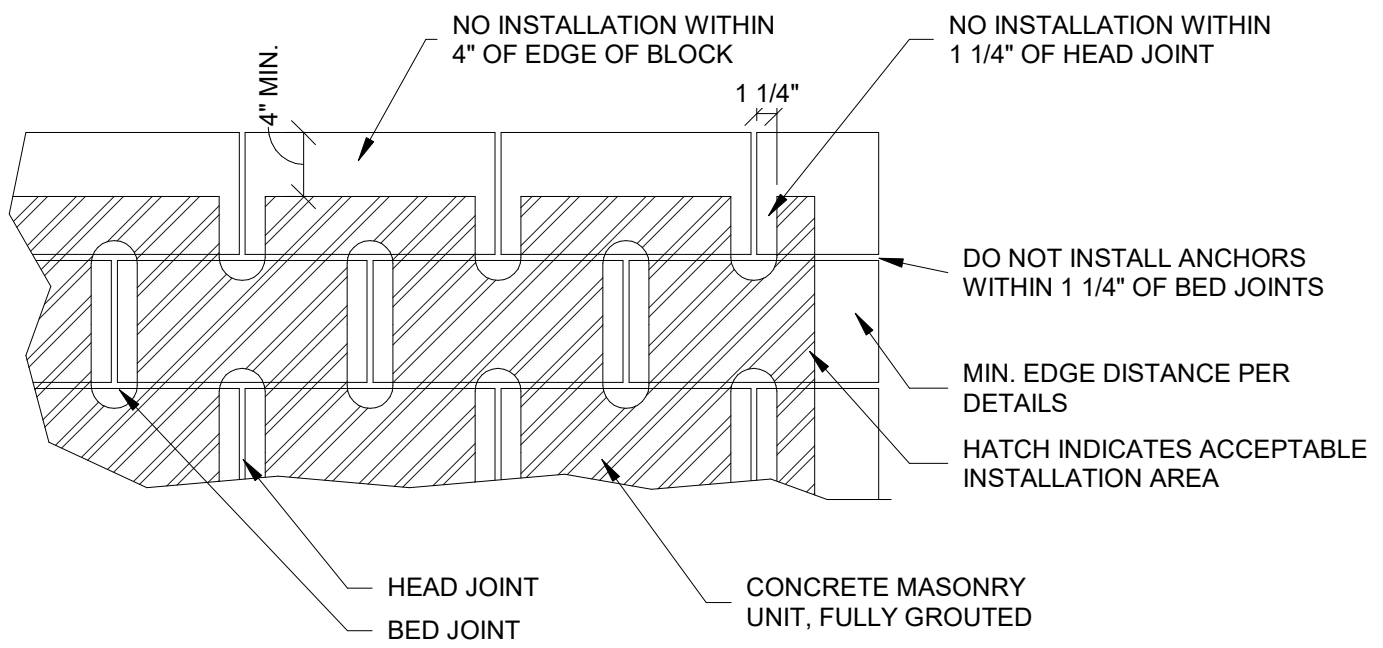
CMU LINTEL SCHEDULE				
MARK	WIDTH	DEPTH	REINFORCING	STIRRUPS
ALL	8"	16"	(2) #5	-



3 JOINT REINFORCING AT INTERSECTING CMU WALLS  
3/4" = 1'-0"



4 BEAM CONNECTION TO MASONRY - MID WALL  
3/4" = 1'-0"



5 ACCEPTABLE INSTALLATION LOCATIONS FOR ANCHORS IN CMU  
1" = 1'-0"

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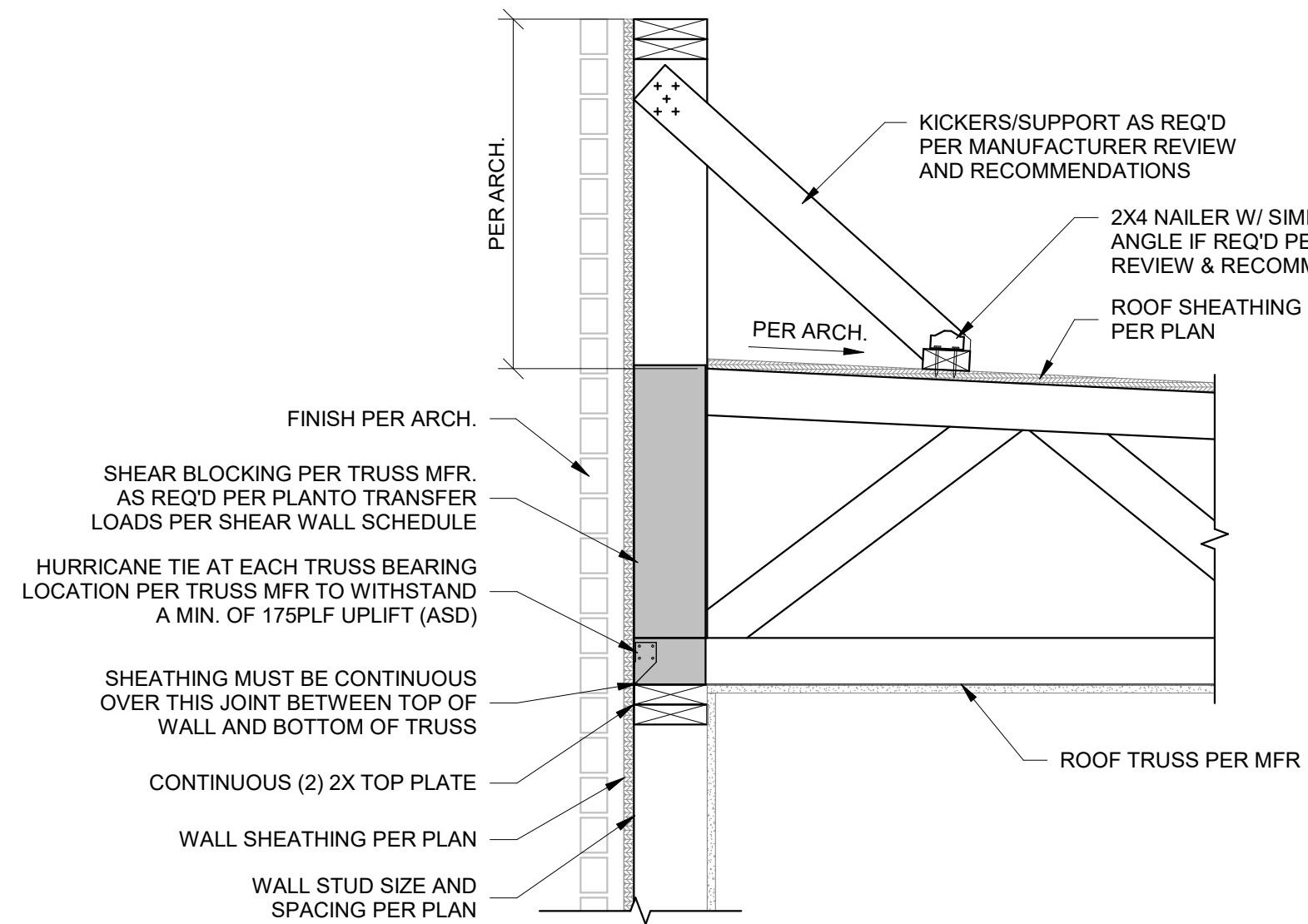
I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.

No.	Description	Date

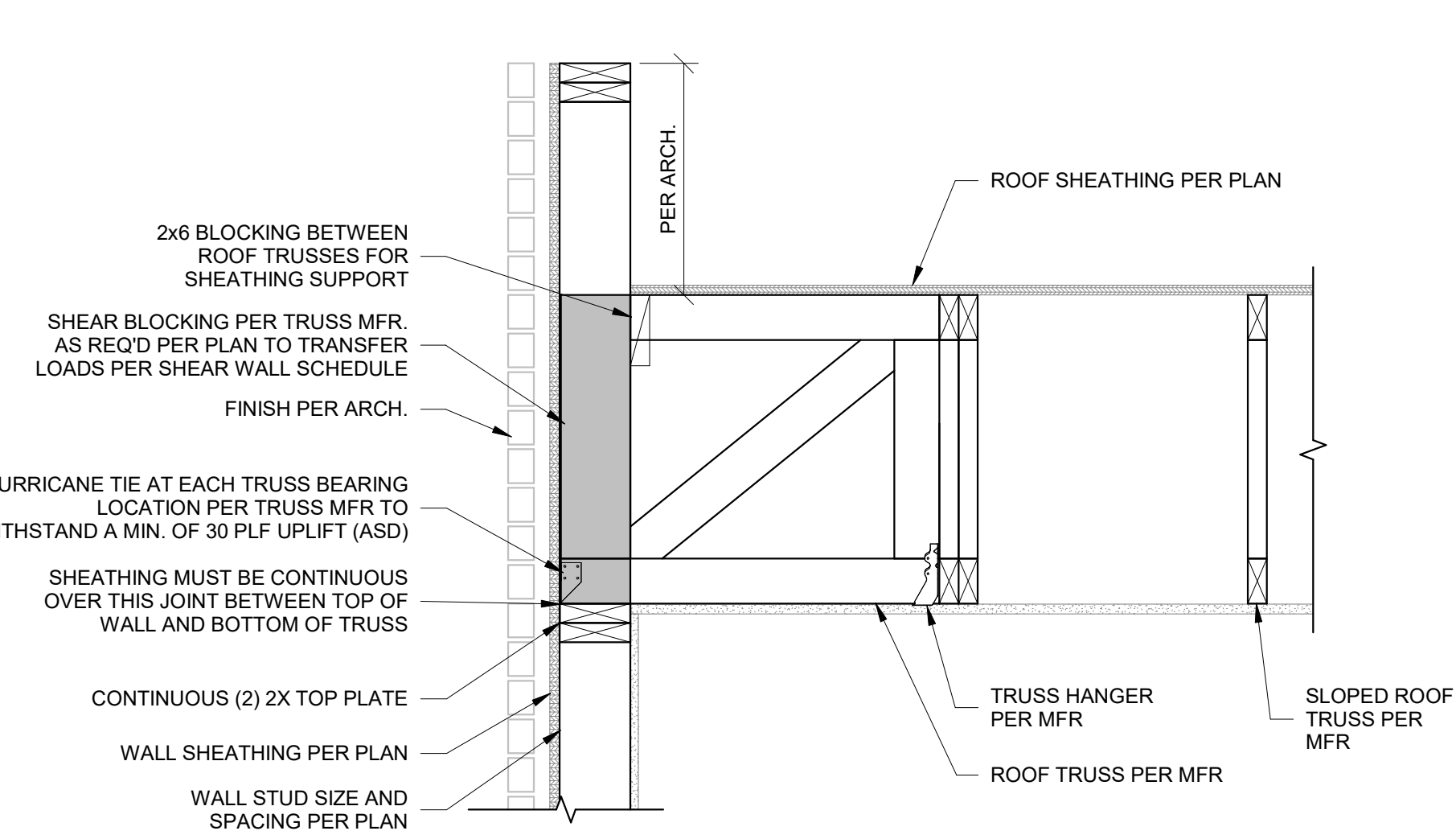
PROJECT NUMBER 2025001420	SET/ISSUE DATE 08/01/2025
ENGINEER IWC	DRAWN BY CEL
CHECKED BY MDH	

JONES GILLAM RENZ  
THE RESIDENCE AT CARTER LAKE  
CARTER LAKE, IOWA  
MASONRY DETAILS  
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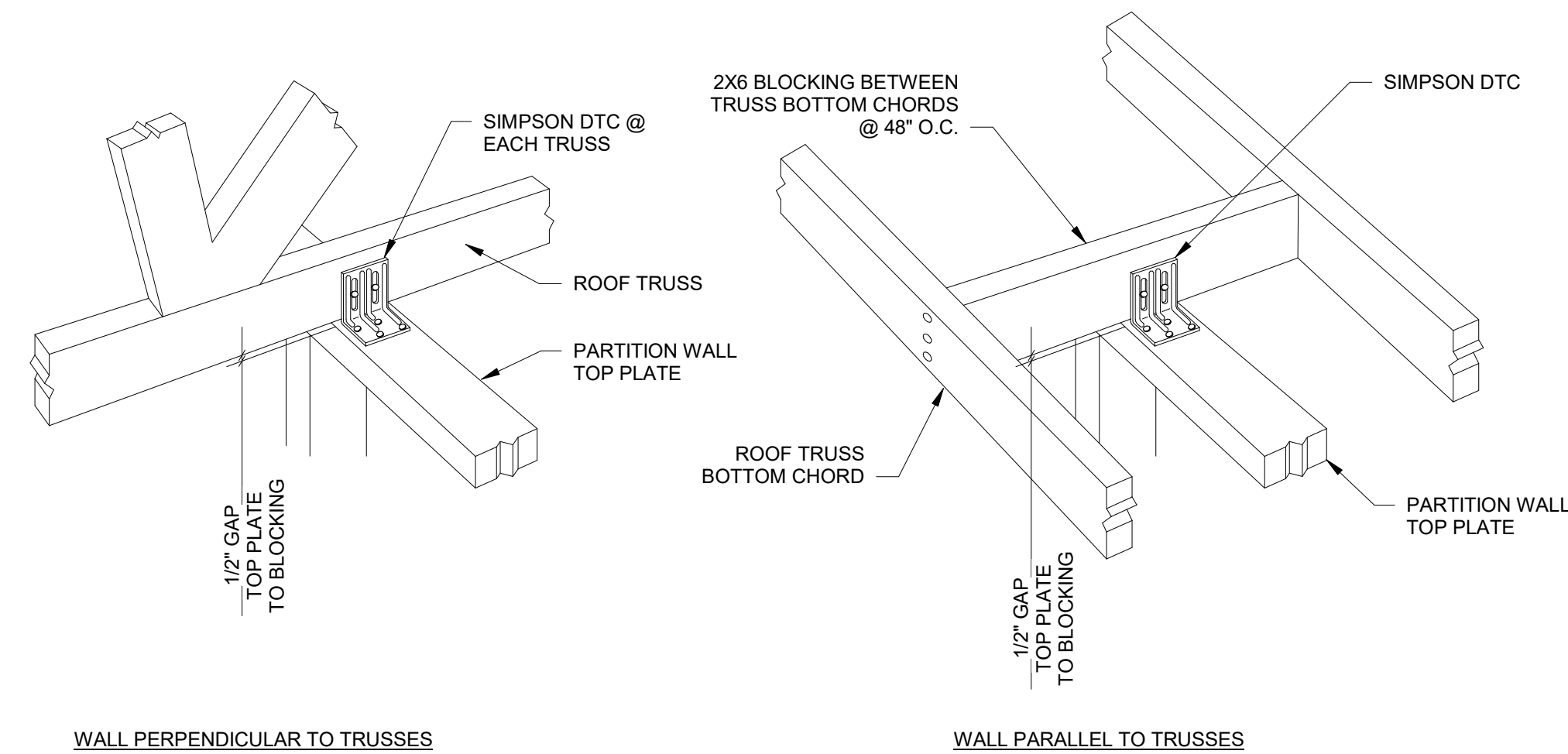




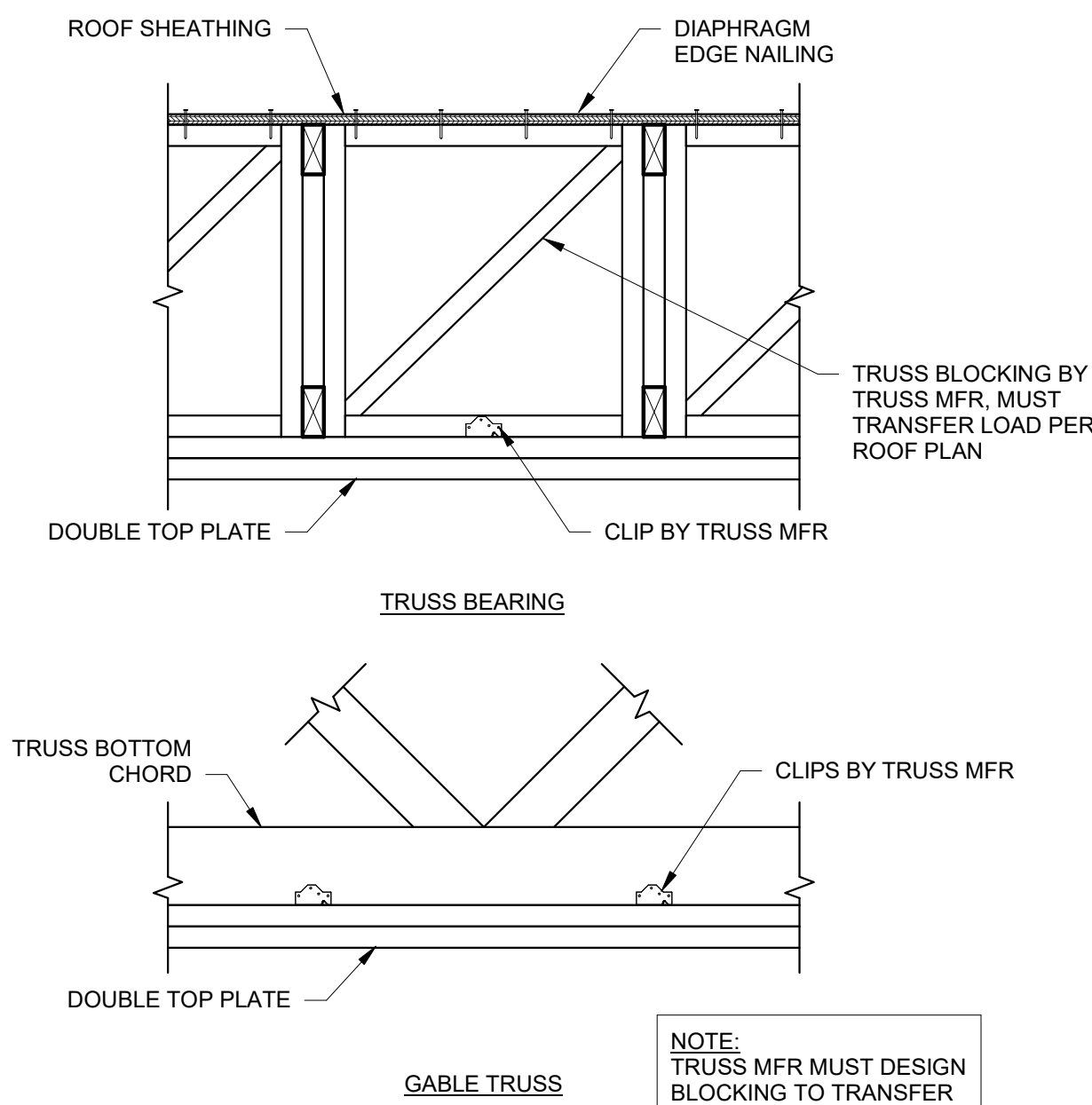
1 ROOF TRUSS BEARING AT PARAPET  
1" = 1'-0"



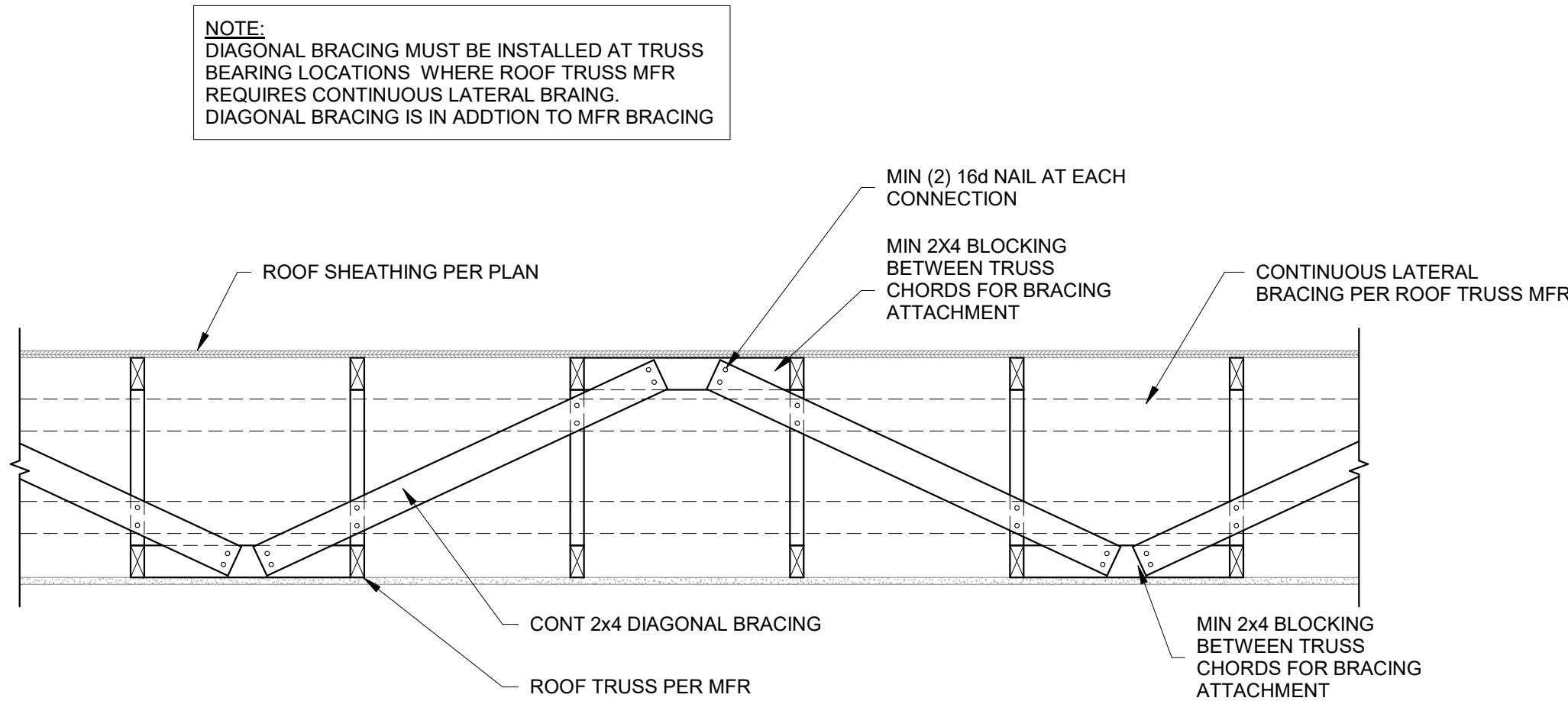
2 ROOF TRUSS PARALLEL AT PARAPET  
1" = 1'-0"



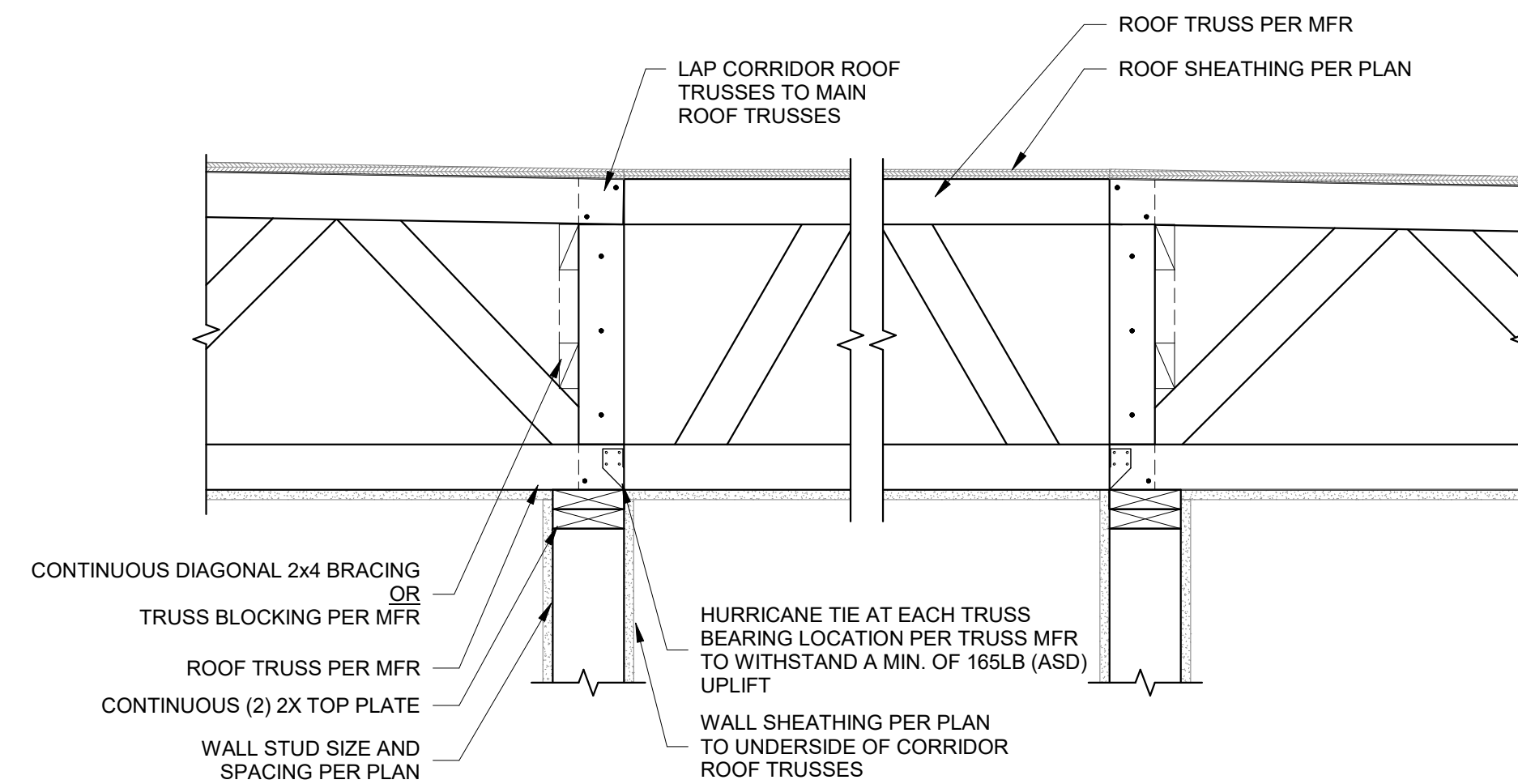
3 NON-BEARING PARTITION WALL AT ROOF TRUSS  
1" = 1'-0"



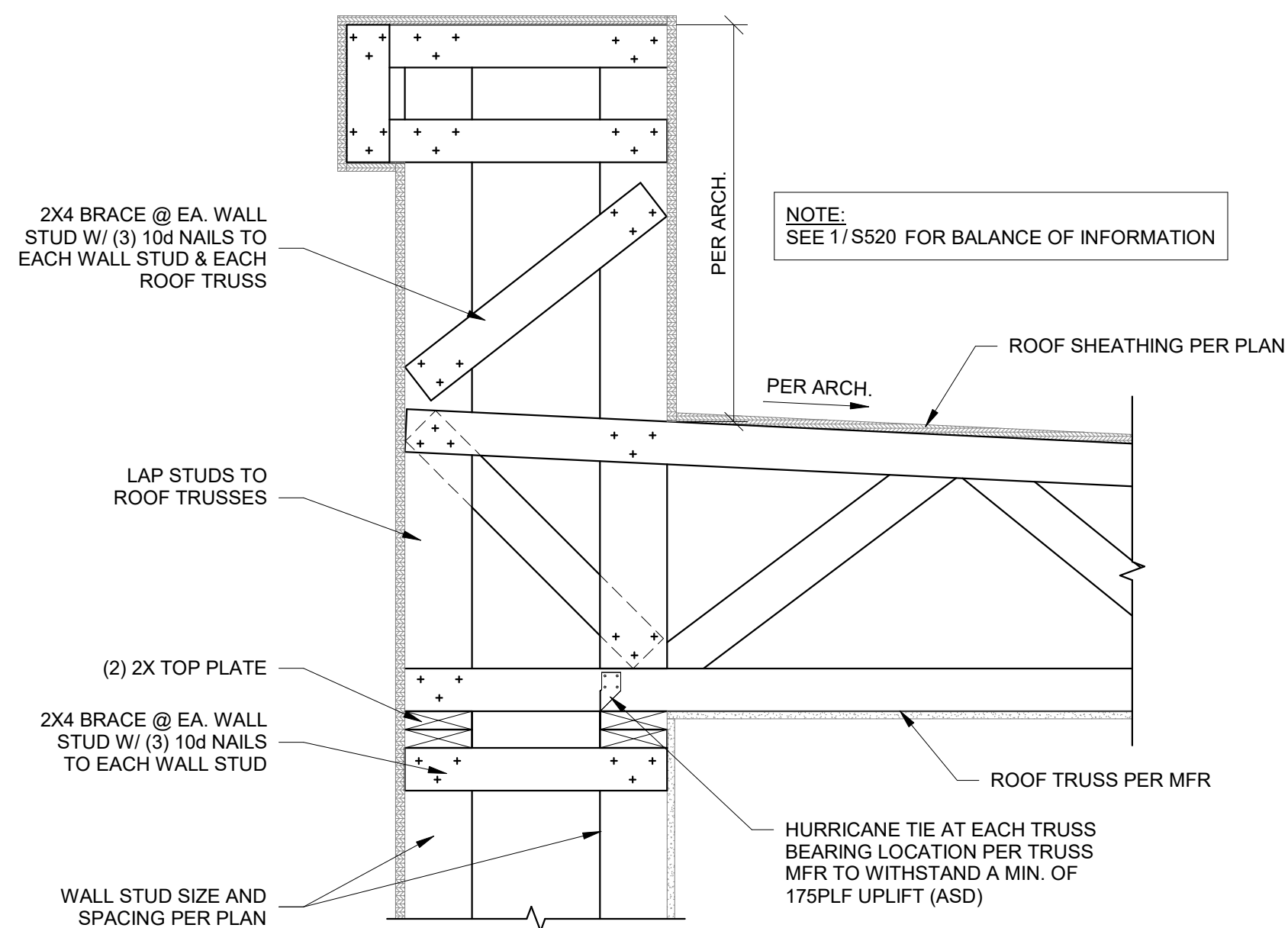
4 TRUSS BLOCKING WHERE TRUSSES ARE PERPENDICULAR TO SHEAR WALLS  
1" = 1'-0"



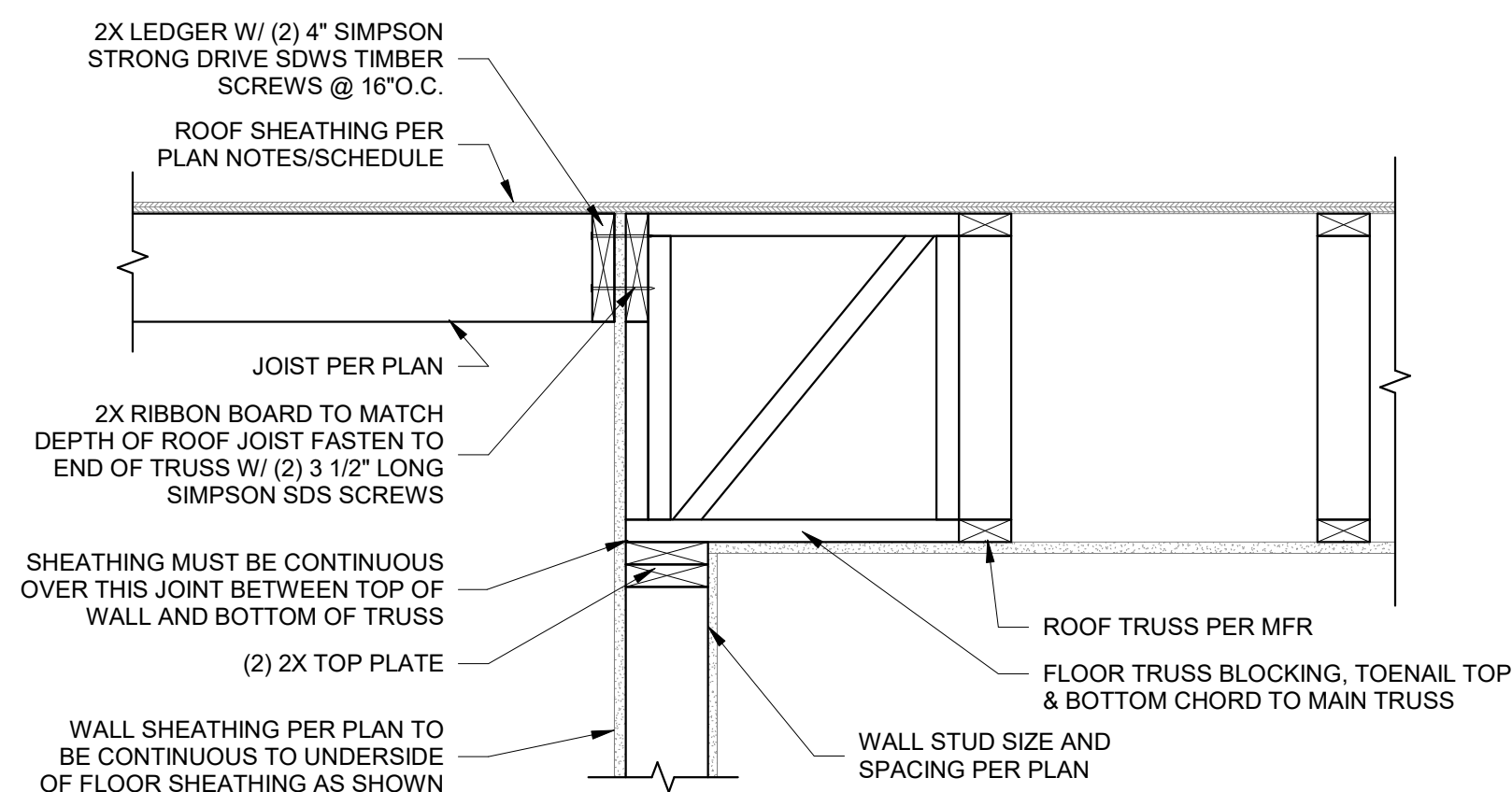
5 ROOF TRUSS BRACING  
3/4" = 1'-0"



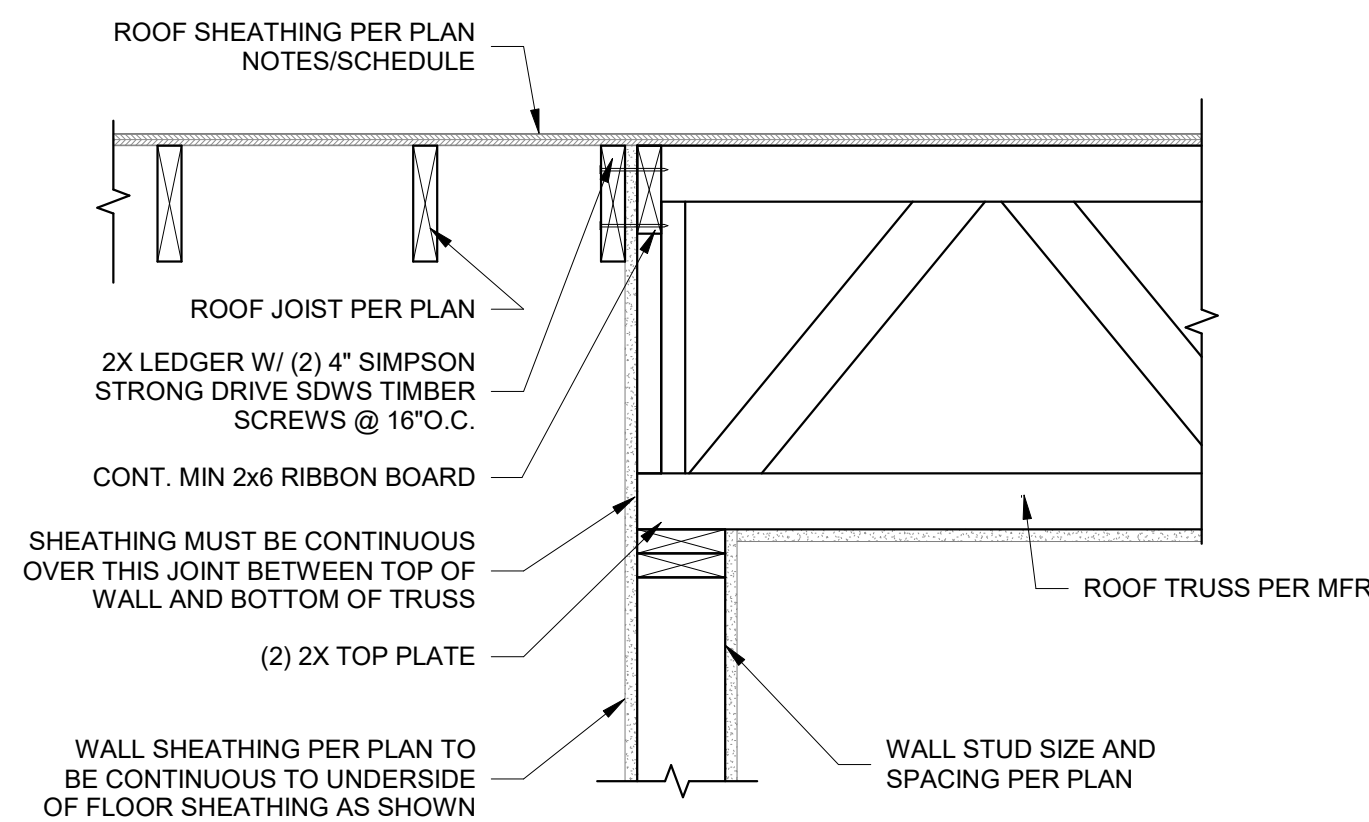
6 ROOF FRAMING SECTION AT CORRIDOR ROOF  
1" = 1'-0"



7 ROOF FRAMING AT BUMP OUT  
1" = 1'-0"



8 ROOF TRUSS/JOIST PARALLEL TO INTERIOR WALL  
1" = 1'-0"

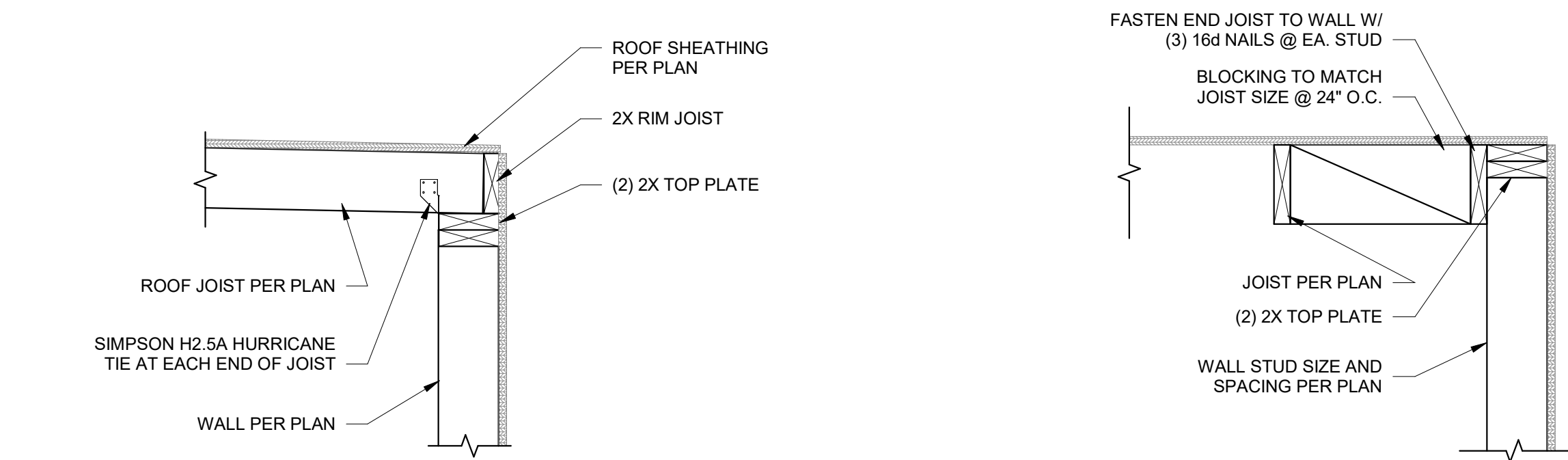


9 ROOF JOIST PARALLEL/ROOF TRUSS BEARING AT WALL  
1" = 1'-0"

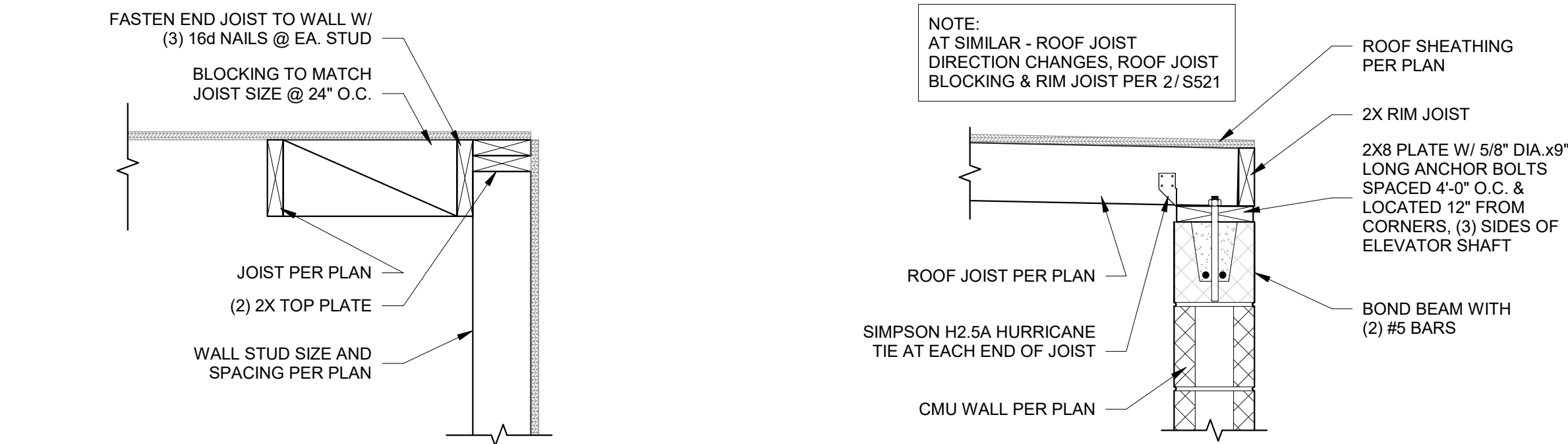
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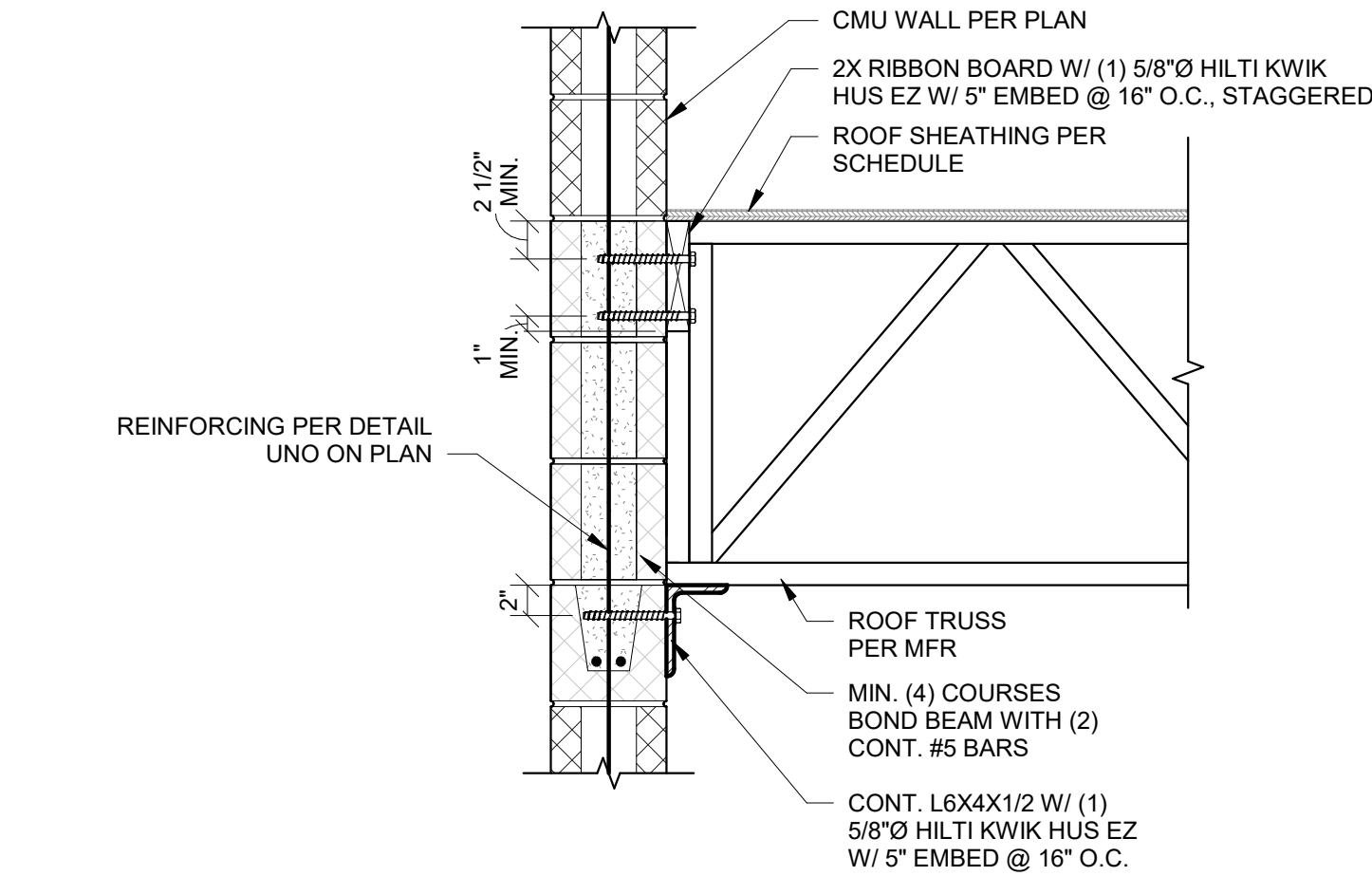
1 ROOF JOIST BEARING AT EXTERIOR WALL  
1" = 1'-0"



2 ROOF JOIST PARALLEL TO EXTERIOR WALL  
1" = 1'-0"

3 ROOF JOIST BEARING ON CMU  
1" = 1'-0"

4 ROOF JOIST BEARING ON CMU AT DOUBLE WALL  
1" = 1'-0"



5 ROOF FRAMING BEARING AT CMU  
1" = 1'-0"

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IOWA CERTIFICATE OF AUTHORITY  
NO. 26887



MARCUS HIMMELBERG  
NO. P24622  
EXP. 12/31/2025

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THE RESIDENCE AT CARTER LAKE  
CARTER LAKE, IOWA  
ROOF DETAILS



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