A. GENERAL NOTES

- 1. All construction shall conform to the Design Codes in Section "C. Design Criteria," including all applicable standards and documents
- 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
- 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
- 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,
- 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.
- 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, techniques, and sequence.
- b. The Contractor is responsible for compliance with all applicable job-related safety standards proceeding from governing organizations
- 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
- 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
- f. Where specifically indicated on the drawings, walls may be backfilled according to instructions provided before the final connection to
- 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: Load-bearing wood wall and opening framing.
- 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
- 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
- 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.

	Index of Sheets
Sheet Number	Shoot Nama
	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

C. DESIGN CRITERIA

- 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 = 35 psf Floors (Corridor) = 30 psfExterior Walls (Stone Siding) = 47 psf
 - Exterior Walls (Plank Siding) = 13 psf = 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 = 100 psf Corridors/Public Areas
- Mechanical/Storage = 125 psf (non-reducible) Typical Roof = 20 psf
- c. Roof Snow Load Ground Snow Load (p_a) = 30 psf (per City of Carter Lake, IA) Flat Roof Snow Load (p_f) = 21 psf
 - Snow Exposure Factor (C_e) = 1.0 = 1.0 Snow Load Importance (I_s) = 1.0 Thermal Factor (C_t) = 1.0 Slope Factor (C_s)
 - Snow Drift (Parapets) Surcharge Drift Width = 2.75 ft Snow Drift (Low Roof)

Surcharge

Drift Width

- = 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_{asd} = 81.3 mph Risk Category Wind Exposure = C (per City of Carter Lake, IA) Internal pressure Coefficient (GC_{pi}) = ±0.18
 - Components and Cladding (psf): Zone A=10ft² A=50 ft² A=100 ft² +16/-46 +16/-39 +16/-36 +16/-60 +16/-51 +16/-47 +16/-82 +16/-64 +16/-56

+26/-29 +24/-26 +23/-25

- +26/-35 +24/-30 +23/-27 1. A is the Effective Wind Area as defined in ASCE 7 Ch. 26.
- Linear interpolation between tabulated values is permitted. Elements with Tributary Area (A_t) > 700 ft² shall be permitted to be designed using provisions for MWFRS.
- e. Earthquake Load
 - Risk Category Seismic Importance Factor (I_e) = 1.0 $S_S = 0.071g$ $S_1 = 0.045g$
 - D (Code Default) Soil Site Class: $S_{DS} = 0.076$ $S_{D1} = 0.072$
 - 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 $\Omega_0 = 2.0$ $C_d = 2.0$ Design Base Shear, $V = C_s \times W = 90 \text{ kips}$
 - **Analysis Procedure** = Equivalent Lateral Force Procedure (ASCE 7-16 Chapter 12.8)
- Rain Intensity (i) = 7.07 in/hr

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 finis	sh)	L/240	0.75"
Wall Framing (brittle/brick	•	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.
- 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" 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:
- . 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.
- 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
- Deferred Submittals not meeting the seal requirements of section D.2.b are considered incomplete and will not be reviewed. 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
- 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. 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.

reviews total of the same submittal). Time required for more than two reviews of a submittal is considered an additional service and will

- 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.
- Deferred Submittal items shall not be installed until the Deferred Submittal documents have been approved by the Building Official. Submittal List:
- a. Submittals (product data, test records, shop drawings, and/or calculations) are required for the following:

Submittal Name	Items Required:							
	Product Data	Shop Drawings	Test Records	Engineering Drawings	Engineering Calculations			
Concrete Mix Designs	X		X					
Concrete Break Reports			X					
Concrete Reinforcing Layout		X						
Concrete Anchor Bolts & Embedded Plates	X	X						
Concrete & CMU Anchors (Post-Installed)	Х							
Post-Installed Anchor Substitutions	Х				Х			
7. Post-Installed Connection Geometry Alteration	X			X	Х			
8. Masonry Wall Materials	X		X					
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			X			
14. Wood Framing Materials	Х							
 Wood Floor & Roof Trusses incl. Reactions 				X				
16. Wood Truss Connections to Supporting Structure				X	Х			
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. . Where "Engineering Drawings" and/or "Engineering Calculations" are indicated, the submittal must comply with the requirements of
- item "2. Deferred Submittals" above. 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".

Elevator Shop Drawings with Loads to Structure 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 5000 psi normal weight b. Foundations
- 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.

#5 and smaller

- 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: Concrete cast against and permanently exposed to earth b. Concrete exposed to earth and weather (formed)
- #6 and larger c. Concrete not exposed to weather and not in contact with ground: Slabs and walls
- Beams and columns 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.
- 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 doweled 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

Slab on Grade

- 1. Slab shall be constructed as shown on plans.
- Slab-on-grade shall be founded on 6" 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
- 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

- - 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 D1.4.
- E/U electrodes are not permitted for welding repar. 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 doweled as follows, unless noted otherwise:

	Develo	opment	Class "	B" Splice	Stand	ard 90 deg	. Hook		
Bar	Тор	Other	Тор	Other	Embed	Leg	Bend		
Size	Bar	Bar	Bar	Bar		Length	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		
	Size #3 #4 #5 #6 #7 #8	Bar Top Bar #3 19 #4 25 #5 31 #6 37 #7 54 #8 62	Development Bar Size Top Bar Bar #3 19 15 #4 25 19 #5 31 24 #6 37 29 #7 54 42 #8 62 48	Bar Size Top Other Bar Bar Bar Bar Bar Bar #3 19 15 24 #4 25 19 32 #5 31 24 40 #6 37 29 48 #7 54 42 70 #8 62 48 80	Bar Size Top Bar Bar Bar Bar Bar Bar Bar Bar Bar Bar Bar #3 19 15 24 19 #4 25 19 32 25 #5 31 24 40 31 #6 37 29 48 37 #7 54 42 70 54 #8 62 48 80 62	Bar Size Top Bar Bar Bar Bar Bar Bar Bar Bar Bar Bar Bar Bar Bar Bar Bar Bar Bar Bar Bar Bar Bar Bar Bar Bar Bar Bar Bar Bar Bar Bar Bar Bar Bar Bar Bar Bar Bar Bar Bar Bar Bar Bar Bar	Bar Size Top Bar Bar Bar Other Bar Bar Bar Bar Embed Length #3 19 15 24 19 6 6 #4 25 19 32 25 7 8 #5 31 24 40 31 9 10 #6 37 29 48 37 10 12 #7 54 42 70 54 12 14 #8 62 48 80 62 14 16		

- 1. Straight development and Class "B" splice lengths shown in above tables are based on uncoated bars assuming center-to-center bar spacing ≥ 3*d_n without ties or stirrups or ≥ 2*d_b with ties or stirrups, and bar clear cover ≥ 1.0*d_b 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.

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

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

	Tension Development and Splice Lengths for $f_c = 5,000$ psi										
	Development Class "B" Splice Standard 90 de				lard 90 deg	ı. Hook					
Bar	Тор	Other	Тор	Other	Embed	Leg	Bend				
Size	Bar	Bar	Bar	Bar		Length	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				

- #9 | 63 | 48 | 81 | 63 | 14 1. Straight development and Class "B" splice lengths shown in above tables are based on uncoated bars assuming center-to-center bar spacing ≥ 3*d_b without ties or stirrups or ≥ 2*d_b with ties or stirrups, and bar clear cover ≥ 1.0*d_b 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. All tension splices shall be Class "B" splices unless noted otherwise on plans.

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

- g. All welded wire fabric shall be lapped 12" or 48 wire diameters, whichever is greater.
- 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.
- 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
- 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.
- a. Provide corner bars in the outside face and at wall intersections to match horizontal wall bars. Use (3) #5 vertical construction rods at b. Minimum reinforcing shall be as follows for each wall thickness, unless noted otherwise:
 - 6" wall #4@16 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

the Plans or Specifications. IOWA CERTIFICATE OF AUTHORITY NO. 26887

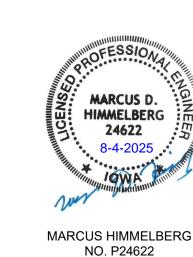
Losses which arise from failure to obtain

and/or follow the engineers' or surveyors

guidance with respect to any alleged

errors, omissions, inconsistencies,

ambiguities, or conflicts contained within



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.

	ROJECT NUMB			SUE DA
20	025001420	1	08/0	01/202
	ENGINEER	DRAWN BY	CHE	CKED B

CEL

MDH

Ш

MO NO

Z

Ш Δ AM SID

> DRAWING NO. S00°

G. STRUCTURAL STEEL

Materials:

a. Materials shall conform to the following, unless noted otherwise.

Rolled WF shapes ASTM A572 Grade 50 Plates and Angles ASTM A36 Channels ASTM A500, Grade C HSS: Rectangular ASTM A500, Grade C HSS: Round **ASTM F3125**

All bolts shall be Grade A325 or F1852, UNO

Bolts designed as "A490" shall be Grade A490 or F2280 ASTM A563 DH or A194 Washers ASTM F436

ASTM F1554 Grade 36, UNO Anchor Bolts Threaded Rod ASTM A36

ASTM A108. Type B Nelson headed shear stud connectors or equal. Studs

Matching weld metal, 70 ksi minimum strength. Electrodes b. Finishes

Prepare all surfaces that will be exposed in accordance with SSPC SP3 "Power Tool Cleaning". Do not prime surfaces to be fireproofed, field welded, in contact with concrete, or high-strength bolted.

All exterior steel components exposed to view or weather shall be galvanized in accordance with ASTM A123 for framing members and ASTM A153 for bolts and threaded fasteners.

iv. All exterior welded connections shall be cold galvanized in accordance with ASTM A780. Fabricator:

ASTM A992

a. Steel Fabricator shall be AISC Certified.

b. Structural members shall be detailed, fabricated, and erected in accordance with the latest edition AISC 303 "Code of Standard Practice for Steel Buildings and Bridges.

Structural steel fabrication drawings must be submitted to the engineer for review prior to fabrication. d. The Fabricator shall engage a professional engineer registered in the state where the project is located for the design and detailing of: Steel connections

Temporary bracing. Connections:

a. The contractor has the option to use bolted or welded connections. Any connections not specifically detailed on the drawings shall be designed by a professional structural engineer licensed in the project state and retained by the fabricator. In general, any connections shown on the drawings are schematic and are intended to show only the relative relationship of the connected members. b. Structural design calculations for all beam and bracing connections shall be submitted to the engineer prior to fabrication and should

include the following (as a minimum): All plate dimensions and grades (minimum plate thickness shall be 3/8").

All weld sizes, lengths, pitches and returns. Number and type of bolts.

c. Connection design forces: Beam shear connections shall be designed for the actual reactions indicated on the drawings or 20 kips minimum. Connection

forces shown on drawings are envelope reactions based on ASD load combinations. Connections indicated on the drawings as moment-resisting shall be designed for the moment shown. If moment is not indicated

on the drawings, connection shall be designed to develop the full capacity of the member. Columns have not been checked for local effects at connections. Fabricator shall verify if stiffener or web doubler plates are

required and provide as necessary. Column size may also be increased with approval of the engineer of record. Connection loads indicated on the drawings include compensation for Code permitted stress increases and load reductions for connection design.

d. Bolted Connections:

Minimum bolt diameter shall be 3/4".

Slip critical connections shall be used for bracing members, moment-resisting connections, cantilevers, and as indicated on the

drawings. Standard oversized and long-slotted holes are permitted for friction-type connections. All non-slip-critical connections shall be typical bearing type. Oversized or slotted holes are not permitted unless indicated on the

iv. The fabricator is responsible for verifying the tensile capacity of axially loaded members with the presence of bolt holes. Increase member size: add plates (etc) as required e. Welded Connections:

All fillet welds shall be sized according to AISC minimums, but never less than 3/16" (UNO).

All welds shall be performed in accordance with the latest edition of the AWS Structural Welding Code. Erection:

a. All structural steel to be fabricated and erected in accordance with latest AISC specifications. It is the responsibility of the contractor to ensure that structure is maintained in a safe, stable configuration at all times.

Any shoring required shall be submitted with engineering calculations for approval.

b. Splicing of steel members not specifically shown on the drawings is prohibited without prior approval from the engineer. c. All beams shall be installed with the mill camber up.

H. WOOD FRAMING AND CONNECTIONS

Sched						onnecti					
						ed per co		n			
						ths, in in					
Connection ^{2, 3}	Nail sha	ank diam				ninal dia			S.		
	3 ½ x	3 x	3 1/4 x		2 ½ x		3 x	2 % x	2 x	2 1/4 x	2 1/4 x
	0.162	0.148	0.131	0.131	0.131	0.120	0.120	0.113	0.113	0.105	0.099
Equiv. Common Nail	16d	10d			8d				6d		
		F	loor Fra	aming							
Joist to band joist	3	5	5	5	N/A	6	6	N/A	N/A	N/A	N/A
Ledger strip	3	4	4	4	6	4	4	N/A	N/A	N/A	N/A
Joist to sill or girder	3	3	3	3	3	4	4	N/A	N/A	N/A	N/A
Blocking between joist or rafter to top plate	3	3	3	4	3	4	4	N/A	N/A	N/A	N/A
Bridging to joist	N/A	N/A	N/A	N/A	2	3	3	3	4	3	4
Rim joist to top plate	8" o.c.	6" o.c.	6" o.c.	6" o.c.	6" o.c.	6" o.c.	4" o.c.	6" o.c.	3" o.c.	3" o.c.	3" o.c.
Built-up Girders & Beams						16" o.c.					
- Spacing along edges,								N/A	N/A	N/A	N/A
- # at ends & splices	3	3	3	3	4	3	3				
•	•	Ceiling	and Ro	of Fran	ning			•	•		•
Ceiling joists to plate	3	4	5	5	5	5	5	6	N/A	N/A	N/A
Ceiling joists, laps over partitions	3	4	4	4	6	4	4	N/A	N/A	N/A	N/A
Ceiling joist to parallel rafter	3	4	4	4	6	4	4	N/A	N/A	N/A	N/A
Collar tie to rafter	3	3	4	4	5	4	4	N/A	N/A	N/A	N/A
Jack rafter to hip, toe-nailed	3	3	4	4	5	4	4	N/A	N/A	N/A	N/A
Jack rafter to hip, face nailed	2	3	3	3	3	4	4	N/A	N/A	N/A	N/A
Roof rafter to plate	3	3	3	3	3	4	4	5	5	5	6
Roof rafter to 2-by ridge beam (driven through beam into end of ridge)	2	3	3	3		4	4	N/A	N/A	N/A	N/A
Roof rafter to 2-by ridge beam (toe-nail rafter to beam)	2	3	3	3	3	4	4	N/A	N/A	N/A	N/A
		1	N all Fra	ming							
Top or sole plate to stud (End nailed)	2	3	3	3	5	4	4	N/A	N/A	N/A	N/A
Stud to top or sole plate (toe-nailed)	2	3	3	3	5	4	4	5	5	5	5
Cap/top plate laps and intersections (each side of lap)		3	3	3	4	3	3	N/A	N/A	N/A	N/A
Diagonal bracing	2	2	2	2	2	3	3	3	4	4	4
Sole plate to joist or blocking @ braced panels (number per 16" joist space)	2	3	3	4		4	4	N/A	N/A	N/A	N/A
Sole plate to joist or blocking	16" ი с	8" o c	8" 0.0	8" o c	6" 0.0	8" o.c.	8" o c	N/A	N/A	N/A	N/A
Double top plate						12" o.c.			N/A	N/A	N/A
Double studs				8" o.c.				N/A	N/A	N/A	N/A
Corner studs						12" o.c.			N/A	N/A	N/A
N/A - Fastener not applicable to connection	24 U.C.	10 U.C.	10 U.C.	10 U.C.	0 U.C.	12 U.C.	12 U.C.	IN/A	IN/A	IN/A	IN/A

N/A - Fastener not applicable to connection

This fastening schedule applies to framing members having an actual thickness of 1 ½"(Nominal "2-by" lumber) ²Fastenings listed above may also be used for other connections that are not listed but that have the same configuration and the same code requirement for fastener

quantity/spacing and fastener size (pennyweight and style, e.g., 8d common, "8-penny common nail"). 3Fastening schedule only applies to buildings of conventional wood frame construction. Connections of shear walls and floor and roof diaphragms shall be as shown on the drawings.

H. WOOD FRAMING AND CONNECTIONS

Install rough carpentry according to the American Institute of Timber Construction Manual.

Material: a. Sawn lumber

> Sawn lumber shall be grade stamped and visually graded with maximum 19% moisture content All members shall meet strength requirements in NDS "National Design Specification for Wood Construction". Joists, rafters, and nailers with nominal depth 8" or less shall be Southern Pine (SP) or Douglas Fir-Larch (DFL), No. 2 or better. Joists, rafters, and nailers with nominal depth greater than 8" shall be Southern Pine (SP) or Douglas Fir-Larch (DFL), No. 1 or

All exterior posts shall be Western Red Cedar No. 2 or better.

Bearing and shear wall studs, and wall plates, shall be Douglas Fir-Larch (DFL), No. 2 or better. b. Structural Composite Lumber

SCL shall meet material specifications in ASTM D5456 SCL shall include laminated veneer lumber (LVL), laminated strand lumber (LSL), oriented strand lumber (OSL) and parallel strand

All LVL shall be stress class 2.0E-2600F. Other SCL materials shall be graded as indicated on the plans.

c. Glued-laminated timber (GluLam) shall be manufactured and identified as required in ANSI/AITC A-190.1 and ASTM D3737. GluLam shall be graded as indicated on the plans.

d. Structural Panels i. All plywood or oriented strand board (OSB) panels shall meet the strength requirements in Department of Commerce (DOC) PS 1 and PS 2 or ANSI/APA PRP 210.

All structural panels (walls, floor and roof) shall meet the Structural 1 grading standard e. Connectors and Fasteners

Metal connectors and associated fasteners used for the applications indicated shall meet the following minimum standards Untreated Lumber

a. Connectors ...ASTM A653 G90 b. Bolts and Anchor RodsASTM F1554 Gr36 c. Nails and StaplesASTM F1667 2. Sodium Borate (SBX) Pressure Treated Lumber

....ASTM A653 G90 Connectors ASTM A307 b. Bolts c. Anchor Rods ..ASTM F1554 Gr 55ASTM F1667 with A153 Hot Dipped Galvanized d. Nails and Staples

3. All Other Pressure Treated Lumber (e.g. ACQ-C, ACQ-D, CA-B, CBA-A, ACZA)AISI SS Type 304 or 316 a. Connectors ..ASTM A193, GrB7 b. Bolts c. Anchor Rods ..ASTM A193, GrB7

Aluminum fasteners and flashing shall not be in contact with pressure treated lumber.

....ASTM F1667 using AISI Type 304 or 316 Stainless Steel d. Nails and Staples Fasteners utilizing dissimilar materials are prohibited Power driven fasteners shall comply with NES NER-272.

Fastener installation whether power driven or otherwise shall be in accordance with the Building Code and the manufacturer's recommendations. In general fastener heads shall be installed nominally flush with the outer ply of the connection. Sheathing and support framing damaged by overdriven fasteners shall be removed and replaced.

General: a. All light framed wood construction shall be fastened as indicated on the plans. Connections not detailed shall be fastened in

accordance with the table below. b. All framing in direct contact with water, soil, concrete, masonry, or permanently exposed to weather shall be preservative treated

lumber in accordance with the AWPA Standard U1 and M4 c. All framing indicated to be fire-retardant treated or fire resistive on the drawings (Architectural or Structural) shall comply with AWPA U1 UCFA, Type A or ICC-ES ESR 2645 and shall have UL FR-S surface burning characteristics.

d. All wood shall be stored on site and protected from the elements to prevent warping, cupping, bowing, crooking and twisting. Use only material that is straight. All stored wood shall be held off the ground with sacrificial dunnage blocks. Wood connectors shall be installed to prevent wood from splitting or otherwise damaging either member.

Use 4x4, 4x6 and 6x6 columns as shown on plans. Built-up sections of 2x studs shall not be substituted for timber posts.

g. All multi-ply beams, joists and headers shall be fastened together. Fasten sawn lumber members per schedule below.

Fasten structural composite lumber per manufacturer's literature.

h. Standard cut washers shall be used under bolt heads and nuts bearing against wood, unless noted otherwise per shear wall anchorage

Wall studs are designed based on being fully braced by sheathing. Design of temporary or permanent blocking or bridging for support of construction loads by unsheathed walls is the responsibility of the contractor. Wood joists shall bear on the full width of supporting members (stud walls, beams, nailers, etc.) unless noted otherwise.

Subject to compliance with the project requirements, wood connectors, joist hangers, post caps and bases, holdowns, and related hardware shall be manufactured by Simpson Strong-Tie Company, Inc. San Leandro, CA.

Contractor shall follow the manufacturer's latest recommendations for installation of connectors. Other manufacturers may be acceptable. Submit substitution request demonstrating that the proposed hardware has the same or greater capacity for each connection. Allow two weeks for review.

All beams and joists not bearing on supporting members shall be framed with Simpson joist hangers. Use LU (or equal) for single joists and type LUS for double joists, unless noted otherwise. The joist hangers shall be installed using nails or screws supplied by the hanger manufacturer as required for the hanger type.

m. Bottom plates of all bearing walls on concrete shall be anchored with 5/8" diameter x 6" screw anchors spaced not more than 4'-0" o.c., unless noted otherwise. Sill plate anchors shall be located a maximum of 1'-0" from corners, ends of walls and sill plate splices. Provide (2) anchors minimum in each sill plate segment Refer to plans and details for shear wall anchorage requirements.

n. Nailers shall be anchored to steel beams and columns with 1/2" diameter A307 bolts with required washers at a maximum spacing of 24" on center (alternate sides), unless noted otherwise.

o. Wall studs, jamb studs, and beam support studs shall have adequate vertical blocking installed to transfer all vertical loads to the

4. Wood Floor and Roof Trusses:

a. Provide wood trusses capable of withstanding the design loads within the limits and under the conditions indicated. Truss design shall be in accordance with the Building Code and TPI-1 Nation Design Standard for Metal Plate Connected Wood Truss Construction.

 b. Wood trusses shall be of sawn lumber with 2x nominal thickness c. In addition to the loads indicated, wood trusses shall be designed for all applicable wind, seismic, and snow (including drift) loads required by Building Code and noted in plan. Truss design and shop drawing preparation shall be supervised by a registered professional engineer licensed in the state where the project is located.

d. Submittals shall be signed and sealed and include comprehensive truss layout plans, design calculations that indicate species and grades of lumber, design stresses, size and type of connector plates used.

Fabricator shall determine truss diagonal locations. Truss configurations shown on drawings are diagrammatic only. Bearing points shall coincide with intersections of diagonals and chords.

Truss member design shall consider unbalanced snow load with full dead load, as well as full dead and snow load.

g. Roof trusses shall be designed for the following:

Dead load = 12 psf Live load = 20 psf, on the top chord horizontal projection Snow load = 21 psf + drift surcharge per "Design Criteria"

Dead load = 10 psf on the bottom chord. Wind uplift = 38 psf End / Parapet Wind Load = ±99 psf

h. Floor trusses shall be designed for the following loads:

Dead Load = 35 psf Live Load = 40 psf: Private Rooms, offices and corridors serving them = 100 psf: Common and public areas, including stairs and landings = 125 psf: Mechanical and communication rooms

i. The maximum allowable deflection shall be: Roof Trusses: Total Load: L/240, Roof Live or Snow Load: L/360

Floor Trusses: Total Load: L/360, Live Load: L/480

where such trimming will not impair the load carrying capacity of the truss.

The manufacturer shall provide all open web trusses and accessories as shown on the structural and architectural drawings and as required for a complete project. k. All truss to truss connections and truss to supporting member connections shall be designed and detailed by the truss supplier and the size and type of connectors included in the shop drawing submittal. Coordinate size, species and grade of supporting chord and web

members with the truss hanger selected All temporary and permanent bracing shall be in accordance with the TPI standards for bracing. The bracing shall be furnished and installed by the Contractor. Do not use ceilings as uplift bracing at truss bottom chord.

m. Girder trusses shown on drawings shall be designed to carry concentrated reactions from supported members. n. Wood trusses shall be handled and erected in accordance with TPI HIB-91. Trusses shall be unloaded and stored in bundles in an

upright position out of contact with the ground until ready for installation. o. Any damage to the trusses shall be brought to the immediate attention of the Structural Engineer and truss supplier. Field repair and modification of trusses shall not be made with prior written approval from the supplier, except for nominal trimming to correct length

I. WOOD SHRINKAGE

- 1. IBC 2304.3.3 requires that architectural, mechanical, electrical, and plumbing systems be designed to accommodate movement due to
- shrinkage. McClure Engineering Co. takes no responsibility for the naturally occurring shrinking that will occur.
- 2. Estimated values are based upon the following moisture content:
- a. At installation (MC) = 19% b. At equilibrium (EMC) = 8%
- 3. The following recommendations are intended to minimize the potential issues associated to wood shrinkage. Implementation and liability are
- ultimately up to the contractor or design professional responsible for the impacted trade. a. Mechanical, Electrical, Plumbing
- i. Allow construction gaps in the wood framing to close by delaying installation of MEP as long as possible to allow for additional
- ii. Provide oversized or long slotted holes at pipe penetrations. Holes must be within conformance of typical penetration details.
- iii. Rigid connections shall be adjusted before completion of construction of closing of wall and ceiling assemblies.
- iv. All vertical sheet metal down spouts shall have intermediate slip joints.
- v. Roof Drains shall utilize adjustable fittings. Fittings must be adjusted at the completion of construction and then as required to
- maintain proper drainage. b. Architectural Considerations
- Stucco, EIFS and brittle finishes shall have horizontal expansion joints, slip joints with appropriate waterproofing. ii. Brick and stone finishes shall have ties that accommodate differential movement.
- iii. Provide adjustable thresholds or transitions at rigid transitions such as CMU or concrete stair and elevator shafts.
- Limit shortening due to nesting by cutting all studs level square and tight against plates.
- ii. Structural wood panels shall have ½" relief gaps at each floor to limit bulging.
- iii. Floor sheathing shall have 1/8" gaps on all sides during installation to accommodate movement.
- iv. Shear wall hold downs shall be checked and retightened immediately prior to sheathing walls. v. Delay gyp topping around concrete and CMU stair or elevator shafts until completion of construction.
- i. Stored materials shall be covered and elevation from the elements. ii. Do not allow water to pond on floor sheathing. Provide drain holes if required to allow water to quickly drain if water does
- temporarily pond.
- i. McClure recommends a review of roof drains every 3 months for the first 24 months of occupancy and then annually. Adjust drains
- as required to maintain watertight integrity ii. McClure recommends review of joints at exterior doors, windows and finish transitions. Waterproof as needed where original joints
- fail per the architect's recommendations. iii. Remedial self-leveling work may be required around concrete or CMU stair and elevator towers to accommodate shrinkage.

J. CONCRETE MASONRY

- 1. All construction shall comply with applicable provisions of the following latest ACI standards:
- a. ACI 530/ASCE 52/TMS 402 Building Code Requirements for Masonry Structures.
- b. ACI 530.1/ASCE 6/TMS 602– Specifications for Masonry Structures.
- c. IBC Chapter 21 Masonry 2. Concrete block units shall conform to the requirements for Grade N Type 1, load-bearing normal-weight units per ASTM C-90. Use
- Grade S blocks below grade. All below grade block shall be solid grouted.
- 3. Net area compressive strength of masonry, $f'_m = 1,500 \text{ psi}$ 4. Standard units shall have nominal face dimensions of 16 x 8 inches high. The minimum compressive strength of the masonry units shall

be as follows: Net Area Net Area Compressive

TVCL / TCG	NCL / NCG OOI	riprossivo		
Compressive	Strength Of Concrete Masonry			
Strength Of	Units (osi)		
Masonry (f' _m psi)	Type M or S	Type N		
	mortar	mortar		
1,500	2000	2000		

- 5. Mortar for unit masonry shall be proportioned per ASTM C270. The minimum mortar compressive strength is as follows: a. Type S: 1,800 psi
- b. Type M: 2.500 psi 6. Grout for unit masonry shall be proportioned per ASTM C476. The minimum grout compressive strength is the larger of 2,000 psi or f_m.
- 7. Maximum coarse aggregate size is 3/8". 8. Reinforce all CMU walls with vertical rebar full height, centered in cell as shown on the drawings. Grout reinforced cells solid.
- a. When reinforcing is not specified, provide #5 @ 48" o.c., minimum.
- 9. All vertical cells to be filled shall have vertical alignment to maintain an unobstructed cell area not less than 2 in. x 3 in.
- 10. All bond beams shall be grouted solid and reinforced.
- a. Provide bent dowels at all wall intersections one per bond beam at corners, and two at tee intersections.
- 11. Provide bond beams at all walls supporting roof and floor slabs. 12. Grout solid under all beams and lintels for full height of wall.
- 13. All masonry walls shall have ladder type horizontal joint reinforcement with two 9 gage wires spaced at 16" o.c. vertically, unless noted
- a. All wall intersections shall be reinforced with prefabricated tee or corner units. 14. Use low lift method of grouting. Maximum grout lift = 5'-0". Alternative methods of grouting may be acceptable. Submit method for
- approval two weeks in advance 15. Masonry reinforcing lap lengths shall be as follows: Masonry Strength, f'_m (psi)

- 1. Development length is based on 2½" masonry cover for all bars. Use bar spacers to maintain cover.
- 16. Brace all masonry walls until floor and roof framing and metal deck are installed. a. Design and installation of bracing is the responsibility of the masonry contractor.
- b. Submit bracing plan for review. 17. When grouting is stopped for more than one hour, horizontal construction joints shall be formed by stopping the pour of grout 1-1/2"
- below the top of the uppermost course. 18. Provide control joints in wall every 40 ft. Provide vertical reinforcing in first cell each side of control joint. Do not locate control joint
- within 2'-0" of end or opening. 19. Conduit pipes and sleeves in masonry shall not displace more than 2 percent of the net cross-sectional area and shall be placed no closer than 3 diameters or widths on center.

STATEMENT OF SPECIAL INSPECTIONS

Project Name: The Residence at Carter Lake Address: 9th St & Ave. K, Carter Lake, IA 51510

1. This Statement of Special Inspections is submitted as a condition for permit issuance in accordance with the Special Inspection and Structural Testing requirements of the Building Code. It includes a schedule of Special Inspection services applicable to this project as well as the name of the Special Inspector to be retained for conducting these inspections and tests. This Statement of Special Inspections encompasses the following disciplines:

o Architectural x Structural

o Mechanical/Electrical/Plumbing o Other:

2. The Special Inspector shall keep records of all inspections and shall furnish inspection reports to the Building Official and the Registered Design Professional in Responsible Charge. Discovered discrepancies shall be brought to the immediate attention of the Contractor for correction. If such discrepancies are not corrected, the discrepancies shall be brought to the attention of the Building Official and the Registered Design Professional in Responsible Charge. The Special Inspection program does not relieve the Contractor of his or her responsibilities.

3. Interim reports shall be submitted to the Building Official and the Registered Design Professional in Responsible Charge. 4. A Final Report of Special Inspections documenting completion of all required Special Inspections, testing and correction of any discrepancies noted in the inspections shall be submitted prior to issuance of a Certificate of Use and Occupancy.

5. Job site safety and means and methods of construction are solely the responsibility of the Contractor. This Statement of Special Inspections includes the following building systems:

x Fabricators

x Cast-In-Place Foundations Elements o Driven Deep Foundation Elements o Helical Pile Foundations o Cast-In-Place Deep Foundation Elements x Concrete Construction x Masonry Construction - Level 2 o Masonry Construction - Level 3 x Structural Steel Construction

to special inspections in accordance with the Special Inspection Schedule - Seismic Resistance:

o Cold-Formed Steel Construction o Metal Building Systems o Spray Fire-Resistant Materials x Wood Construction

o Exterior Insulation and Finish System (EIFS) o Mastic and Intumescent Fire-Resistant Coatings o Smoke Control o Fire-Resistant Penetrations and Joints x Seismic Resistance x Wind Resistance

to special inspections in accordance with the Special Inspection Schedule - Wind Resistance: Wood framed shear walls with wood sheathing and sheathing of other materials, wood sheathed floor and roof diaphragms 7. The following components are designated seismic systems or part of the seismic-force resisting system that are subject

6. The following components are wind-resisting components or part of the main wind-force resisting system and are subject

Wood framed shear walls with wood sheathing and sheathing of other materials, wood sheathed floor and roof diaphragms

1901 Pennsylvania Drive Columbia, MO 65202

P 573-814-1568

NOTICE: McClure Engineering Co. is not responsible or liable for any issues,

claims, damages, or losses (collectively

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,

NO. 26887

Losses") which arise from failure to follow

ambiguities, or conflicts contained within the Plans or Specifications. IOWA CERTIFICATE OF AUTHORITY



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

I HEREBY CERTIFY THAT THIS

ENGINEERING DOCUMENT WAS

UNDER THE LAWS OF THE STATE OF

IOWA.

PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER

PROJECT NUMBER SET ISSUE DATE 2025001420 CHECKED BY CEL MDH

AM

Z

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

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

Verification And	Applicable To	Freque	ncy
Inspection Task	This Project?	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.	Х	-	Х
	X X	-	X

Verification And	Applicable To	Freque	ncy
Inspection Task	This Project?	Continuous	Periodic
1. Inspect reinforcing steel, including prestressing tendons and placement.	Χ	-	Х
2. Inspection of welding, reinforcing steel:		I	1
a. Verification of weldability of reinforcing steel other than ASTM A706.	-	-	Х
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.	-	Х	-
c. Shear reinforcement.	-	X	-
d. Other reinforcing steel.	-	-	Х
3. Inspect anchors cast in concrete where allowable loads have been increased or where strength design is used.	Х	-	Х
4. Inspect anchors post-installed in hardened concrete members.	X	-	Х
5. Verify use of required design mix.	X	-	Х
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.	Х	Х	-
7. Inspect concrete and shotcrete placement for proper application techniques.	Х	Х	-
8. Inspect for maintenance of specified curing temperature and techniques.	X	-	Х
9. Inspection of Prestressed Concrete:			
a. Observe application of prestressing forces.	-	Х	-
b. Observe grouting of bonded prestressing tendons in the seismic force resisting system.	-	X	-
10. Inspect erection of precast concrete members.	-	-	Х
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.	-	-	Х
12. Inspect formwork for shape, location, and dimensions of the concrete member being formed.	X	-	Х

Verification And	Applicable To	Frequency		
Inspection Task	This Project?	Continuous	Periodi	
Compliance with required inspection provisions of the Construction Documents and the approved submittals shall be verified.	Х	-	Х	
2. Verify f'm and f'aac prior to construction except where specifically exempted by the building code.	Х	-	Х	
3. Verify slump flow and VSI as delivered to the site for self-consolidating grout.	Х	Х	-	
4. As masonry construction begins, the following shall be verified to ensure compliance:			1	
a. Proportions of site-prepared mortar.	Χ	-	Х	
b. Construction of mortar joints.	Χ	-	Х	
c. Location of reinforcement, connectors, prestressing tendons, and anchorages.	Х	-	Х	
d. Prestressing technique.	-	-	Х	
e. Grade and size of prestressing tendons and anchorages.	-	-	Х	
5. During construction, the inspection program shall verify:				
a. Size and location of structural elements.	Χ	-	Х	
b. Type, size, and location of anchors, including other details of anchorage of masonry to structural members, frames, or other construction.	Х	-	Х	
c. Specified size, grade, and type of reinforcement, anchor bolts, prestressing tendons, and anchorages.	Х	-	Х	
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).	Х	-	Х	
f. Application and measurement of prestressing force. 6. Prior to grouting, the following shall be verified to ensure compliance:	-	Х	-	
a. Grout space is clean.	X	_	Х	
b. Placement of reinforcement, connectors, prestressing tendons, and anchorages.	Х	-	Х	
c. Proportions of site-prepared grout and prestressing grout for bonded tendons.	-	-	Х	
d. Construction of mortar joints.	Χ	-	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.	-	-	Х	

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

Special Inspection Schedule: Wood Construction					
Verification And	Applicable To	Freque	ncy		
Inspection Task	This Project?	Continuous	Periodic		
1. Inspection of high-load diaphragms:					
a. Verify wood structural panel sheathing is of the grade and thickness	Х	-	Х		
shown on the Construction Documents. b. Verify nominal size of framing members at adjoining panel edges agrees with the Construction Documents.	Х	-	Х		
c. Verify fastener diameter and length, number of fastener lines, the spacing of the fasteners, and the edge margins agree with the Construction Documents.	Х	-	Х		
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.	-	-	Х		
b. Verify permanent individual truss member restraint/bracing are installed in accordance with approved truss submittal package.	-	-	Х		

Special Inspection Schedule: Wind Re	sistance	,	
Verification And	Applicable To	Freque	ency
Inspection Task	This Project?	Continuous	Periodic
Roof cladding and roof framing connections.	X	-	-
Wall connections to roof and floor diaphragms and framing.	X	-	Х
3. Roof and floor diaphragm systems including collectors, drag struts, and boundary elements.	Х	-	Х
4. Vertical wind force resisting systems including braced frames, moment frames, and shear walls.	Х	-	Х
5. Wind force resisting system connections to the foundation.	Χ	-	X
6. Fabrication and installation of systems or components required to meet impact-resistant requirements.	-	-	Х
7. Inspection of structural wood:			
a. Inspect field gluing operations of elements of the main wind force resisting system.	-	Х	-
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.	Х	-	Х
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	Χ	-	-
b. Wall cladding	X	-	-

Special Inspection Schedule: Seismic R		_	
Verification And	Applicable To	Freque	
Inspection Task	This Project?	Continuous	Periodic
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.	-	-	Х
4. Inspection of cold-formed steel framing:			
a. Inspect welding operations of elements of the seismic force resisting system.	-	-	Х
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.	-	-	Х
5. Inspection of structural wood:			
a. Inspect field gluing operations of elements of the seismic force resisting system.	-	Х	
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.	Х	-	Х
6. Inspection of storage racks:			
a. Inspect anchorage of storage racks 8 feet or greater in height.	-	_	Х
7. Inspection of architectural components:			1
a. Inspect erection and fastening of exterior cladding.	X	_	Х
b. Inspect erection and fastening of interior and exterior nonbearing walls.	X	-	Х
c. Inspect erection and fastening of interior and exterior veneer.	X	_	Х
d. Inspect anchorage of access floors.	-	_	Х
9. Inspection of designated seismic systems:		1	
a. Verify label, anchorage, or mounting conforms to the certificate of compliance.	-	-	Х
10. Inspection of seismic isolation systems:		I	1
a. Inspect the fabrication and installation of isolator units and energy dissipation devices that are part of the seismic isolation system.	-	-	Х



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
PRO IEC	T NUMBER	SET IS	SSUE DATE
00050			10.4.1000E

PROJECT NUMBER SET ISSUE DAT 2025001420 08/01/202

ENGINEER DRAWN BY CHECKED BY IWC CEL MDH

M RENZ ICE AT CARTER LAKE

JONES GILLAM RENZ THE RESIDENCE AT C CARTER LAKE, IOWA

GENERAL NOTES



	TYPICAL WALL HEADER SCHEDULE											
0	May Cuan		Header					Kings	& Jacks			Sills*
Opening Mark	Max. Span (ft-in)	Lovel 1	Lovel 2	Lovel 2	Header Plates*	Lev	el 1	Lev	el 2	Lev	el 3	All Levels
IVIAIN	(11-111)	Level 1	Level 2	Level 3	(All Levels)	Kings	Jacks	Kings	Jacks	Kings	Jacks	(if applicable)
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					
H2	7'-0"	(2) 2x8	(2) 2x8	(2) 2x8	(1) 2x6 T&B	(1) 2x6						
Н3	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					
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				
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					

Min. Sill/Top Plate

2X6

2X6

2X6

2X6

2X6

2X6

2x4

2x4

2x4

2x4

2x4 or 2x6

2X6

2X6

2X6

WOOD SHEAR WALL SCHEDULE

Hold-Down

MST37 w/ (14) 0.162x2-1/2"

MST37 w/ (22) 0.162x2-1/2"

DTT2Z w/ (8) 1/4"Øx1-1/2"

SDS screws & 1/2"Ø Anchor

MST37 w/ (14) 0.162x2-1/2"

MST37 w/ (22) 0.162x2-1/2"

HTT4 w/ (18) 0.148Øx1-1/2"

& 5/8"Ø Anchor Rod

MST37 w/ (14) 0.162x2-1/2"

MST37 w/ (22) 0.162x2-1/2"

ITT4 w/ (18) 0.148Øx1-1/2"

& 5/8"Ø Anchor Rod

MST48 w/ (26) 0.162x2-1/2"

MST48 w/ (34) 0.162x2-1/2"

HTT5KT w/ (26) SD #

10x2-1/2" & 5/8"Ø Anchor

MST37 w/ (14) 0.162x2-1/2"

MST37 w/ (22) 0.162x2-1/2"

DTT1Z w/ (6) SD #9x1-1/2"

& 3/8"Ø Anchor Rod

Post

(2) 2x6

(2) 2x6

(2) 2x6

(2) 2x6

(3) 2x4 or

(2) 2x6

1. See S500 for typical opening framing.

2. All openings should stack according to the plans.

3. Coordinate all dimensions and elevations with architectural drawings.

4. Cripple studs should match the adjacent wall framing.

5. * Header top and bottom plates and sills should match the wall stud depths.

Drag Truss/Blocking Load (ASD)

85 plf

145 plf

205 plf

140 plf

235 plf

335 plf

185 plf

300 plf

425 plf

260 plf

440 plf

625 plf

45 plf

90 plf

105 plf

6. All LVL shall be stress class 2.0E-2500F

Base Connection

(2) 16d nails @ 24" o.c.

(2) 16d nails @ 16" o.c.

(1) HILTI KH-EZ 3/8"Øx 6"

@ 24" o.c.

(2) 16d nails @ 8" o.c.

(2) 16d nails @ 6" o.c.

(1) HILTI KH-EZ 3/8"Øx 6"

@ 12" o.c.

(2) 16d nails @ 16" o.c.

(2) 16d nails @ 8" o.c.

(1) HILTI KH-EZ 3/8"Øx 6"

@ 16" o.c.

(2) 16d nails @ 12" o.c.

(2) 16d nails @ 8" o.c.

(1) HILTI KH-EZ 3/8"Øx 6"

@ 12" o.c.

(2) 16d nails @ 24" o.c.

(2) 16d nails @ 16" o.c.

(1) HILTI KH-EZ 3/8"Øx 6"

@ 24" o.c.

7. ** Indicates headers that do not require top and bottom plates.

FLOOR AND ROOF SCHEDULE					
Туре	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:					
1. Vapor barrier to be placed over compacted fill per general notes.					

2. Plywood sheathing to be fastened per detail 2/S500 3. Floor/Roof diaphragm are unblocked unless noted otherwise on plan.

4. Plywood to be Structural Grade 1 Material

5. See architectural drawings for full floor and roof assemblies including nonstructural elements.

WOOD WALL SCHEDULE					
Wood Wall Location	Wall Stu	ud Size, number of plys, and	Shoothing & Footoning LLN O (See Note 5)		
Wood Wall Location	Level 1	Level 2	Level 3	Sheathing & Fastening U.N.O. (See Note 5)	
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	

1. Wall stud spacing is to be per schedule unless noted otherwise.

2. 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.

3. 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			
В3	19'-3"	(3) LVL 1-3/4 x 14"	Simpson ECC66			
B4	8'-0"	(2) 2x8	Simpson HUC28-2			
N1 - 4						

Notes:

1. All exterior beams are to be pressure treated. 2. All LVL shall be stress class 2.0E-2500F

3. All Glulam shall be stress class 24F-1.8E or better

3. Hangers to be installed with number of fasteners per manufacturer product data

4. * 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			

1. All exterior columns are to be pressure treated

JOIST & HANGER SCHEDULE		
Joist Size	Hanger	
2x6	Simpson LUS26	
2x8	Simpson LUS28	
2x10	Simpson LUS28	
A1 (

1. Hangers to be installed with typical fasteners per manufacturer product data

2. All exterior members are to be pressure treated

	FOUNDA	ATION 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

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



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

IOWA CERTIFICATE OF AUTHORITY NO. 26887

errors, omissions, inconsistencies, ambiguities, or conflicts contained within the Plans or Specifications.



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 SET ISSUE DATE 2025001420 08/01/2025 **ENGINEER** CHECKED BY CEL MDH

핕 RENZ

IOWA GILLAM SSIDENCI

JONE

DRAWING NO. **S004**

SCHEDUL

	Lever	Nail, 7" Edge Fastening, 16" O.C. Unblocked	(2)
Notes:			
1. See S	530 for typ	ical shear wall framing	
2. All thre	aded rods	shall be F1554 GR60; See 3/S530 for anchor op	tions.

H = An opening which requires a header

Mark Level

SW1

Level 3

Level 2

Level 3

Level 1

SW2 Level 2

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

Sheathing/ Fastener Layout

(1) Sided, ZIP Wood Structural Panel -

Sheathing - 7/16" Thick, 8d Nail, 6" Edge

Fastening

(1) Sided, ZIP Wood Structural Panel -

Sheathing - 7/16" Thick, 8d Nail, 6" Edge

Fastening

(1) Sided, ZIP Wood Structural Panel -

Sheathing - 7/16" Thick, 8d Nail, 6" Edge

Fastening

(1) Sided, ZIP Wood Structural Panel -

Sheathing - 7/16" Thick, 8d Nail, 6" Edge

Fastening

(1) Sided, ZIP Wood Structural Panel -

Sheathing - 7/16" Thick, 8d Nail, 6" Edge

Fastening

(1) Sided, ZIP Wood Structural Panel -

Sheathing - 7/16" Thick, 8d Nail, 4" Edge

Fastening

(1) Sided, Wood Structural Panels - Sheathing -

7/16" Thick, 8d Nail, 6" Edge fastening

SW3 Level 2 (1) Sided, Wood Structural Panels - Sheathing -

SW4 Level 2 (1) Sided, Wood Structural Panels - Sheathing -

Unblocked

7/16" Thick, 8d Nail, 6" Edge fastening

1) Sided, Wood Structural Panels - Sheathing -

7/16" Thick, 8d Nail, 4" Edge fastening

(1) Sided, Wood Structural Panels - Sheathing -

7/16" Thick, 8d Nail, 6" Edge fastening

7/16" Thick, 8d Nail, 4" Edge fastening

(1) Sided, Wood Structural Panels* -

Sheathing - 7/16" Thick, 8d Nail, 3" Edge

(1) Sided, Gypsum Wallboard - 1/2" Thick, 5d

Nail, 7" Edge Fastening, 16" O.C. Unblocked

(1) Sided, Gypsum Wallboard - 1/2" Thick, 5d

Nail, 7" Edge Fastening, 16" O.C. Unblocked

(1) Sided, Gypsum Wallboard - 1/2" Thick, 5d

5. Bottom sill plate connections shall have a 3"x3"x1/4" steel plate washer at each anchor bolt on shear walls only. 6. All drag trusses shall be connected to shear walls per detail 4/S530 and 5/S530.

4. All hold downs and strap ties are Simpson Strong-Tie brand, U.N.O.

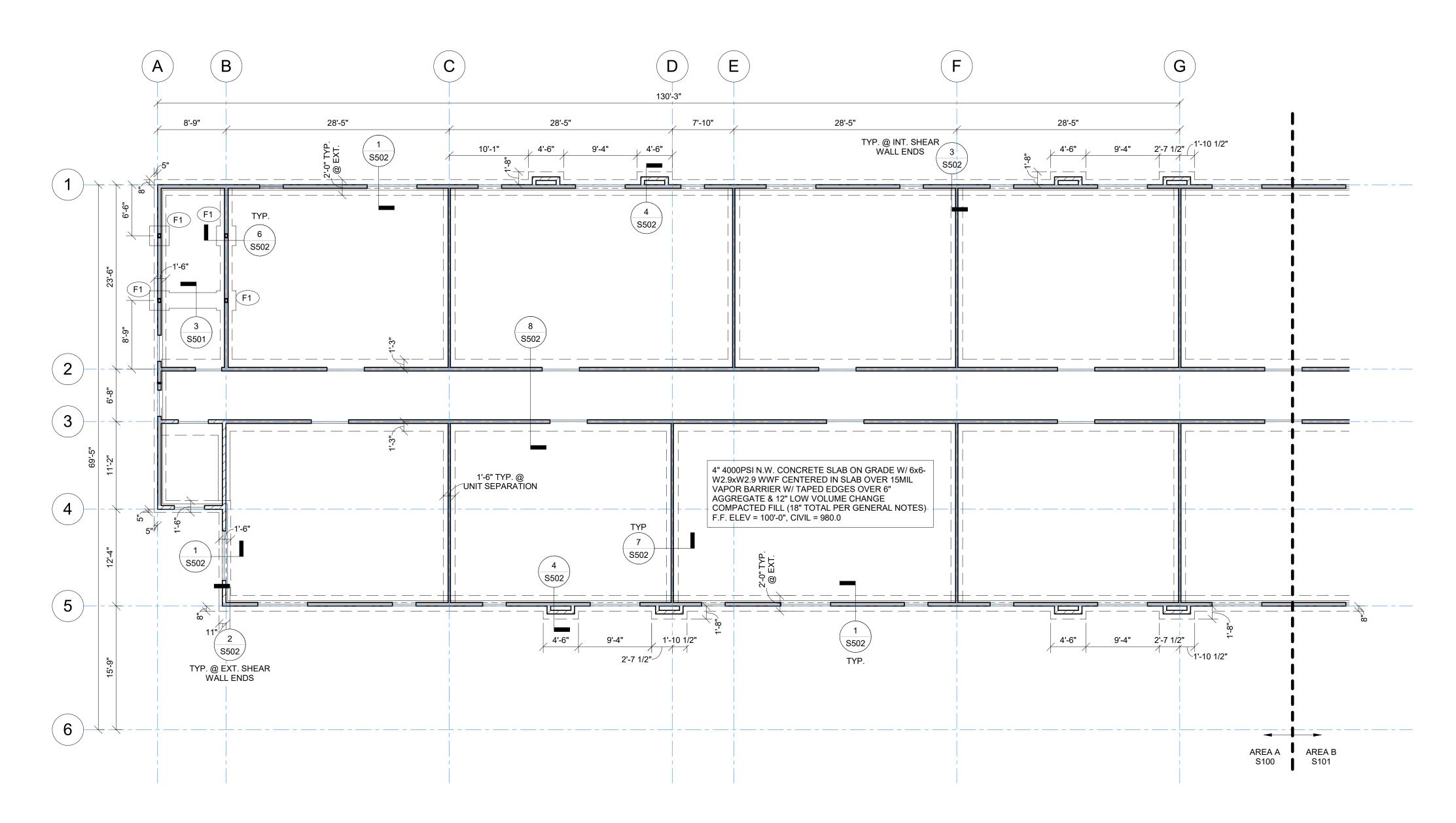
3. Floor to floor strap ties at top of wall shall match that of the floor above.

7. Provide floor to floor strapping on the same side as the OSB sheathing.

8. Field fastening for all sheathing to be 12" O.C. U.N.O

9. All shear walls to be blocked at all panel joints unless noted "Unblocked."

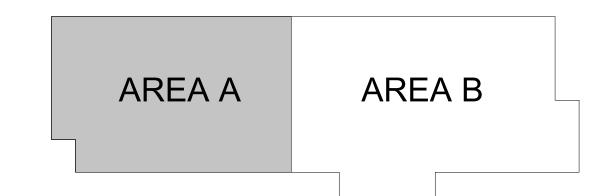
10. * Indicates that at exterior locations ZIP Sheathing may be used in lieu of wood structural panel.





1 FOUNDATION PLAN - AREA A 1/8" = 1'-0"

BUILDING KEY



FRAMING PLAN NOTES:

- 1. SEE ARCHITECURAL DRAWINGS FOR SITE PLAN BENCHMARK ELEVATIONS, SEE BELOW (VERIFY ALL ELEVATIONS AND DIMENSIONS WITH ARCHITECTURAL DRAWINGS) T.O. SLABE-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.
- 4. 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.
- 5. REFER TO MANUFACTURER'S GUIDELINES FOR INSTALLATION OF STRAP TIES, HOLD DOWNS & OTHER

6. 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
- P# INDICATES POST TYPE
- C# INDICATES COLUMN TYPE

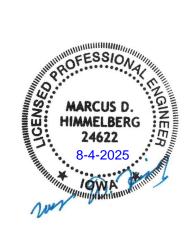
E.O.S. INDICATES EDGE OF CONCRETE SLAB



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,

the Plans or Specifications. IOWA CERTIFICATE OF AUTHORITY NO. 26887

ambiguities, or conflicts contained within



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

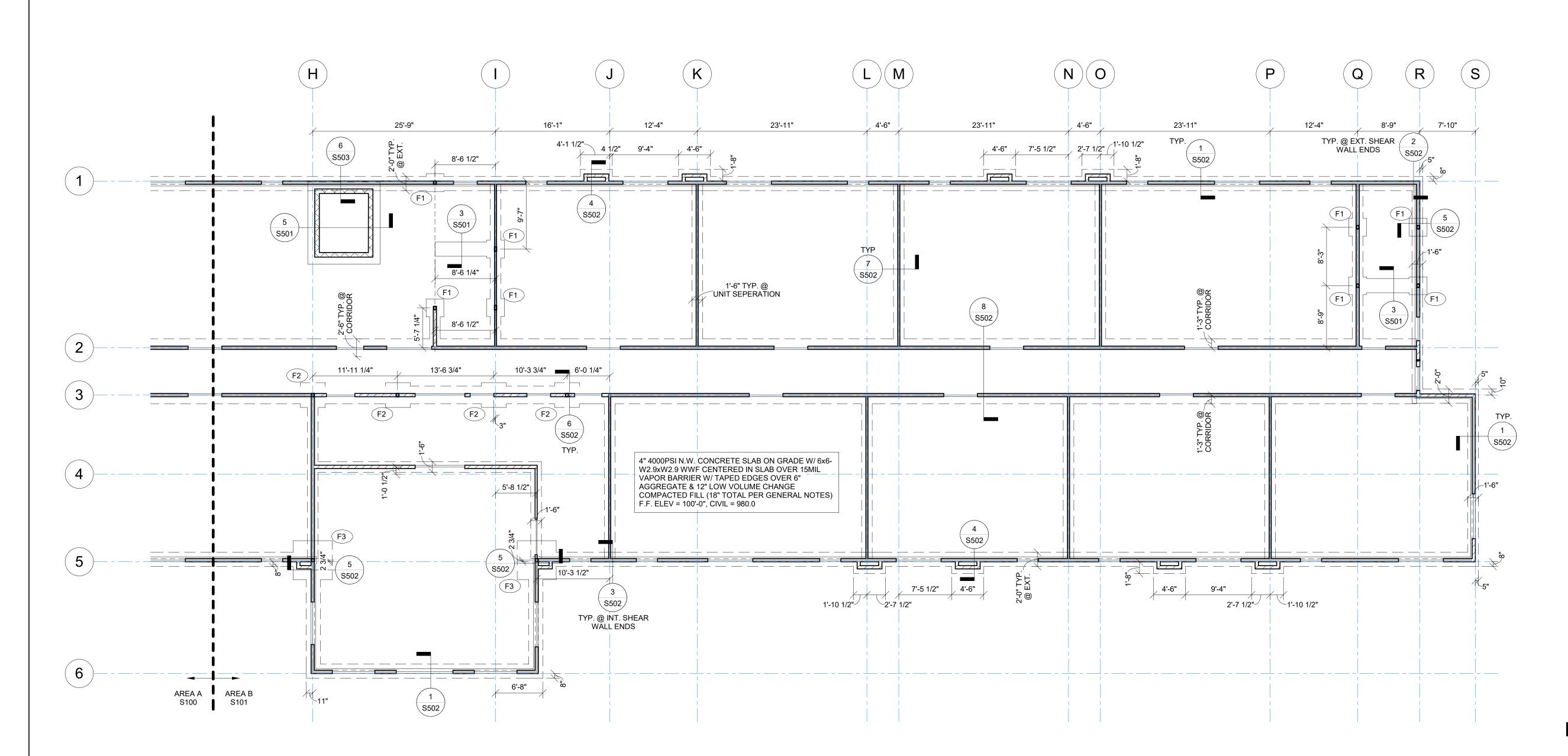
DRAWN BY CHECKED BY CEL

RENZ

JONES

GILLAM ESIDENCI

ATION



BUILDING KEY

AREA A

AREA B

\bigwedge_{N}

1 FOUNDATION PLAN - AREA B

FRAMING PLAN NOTES:

- 1. SEE ARCHITECURAL DRAWINGS FOR SITE PLAN BENCHMARK ELEVATIONS, SEE BELOW (VERIFY ALL ELEVATIONS AND DIMENSIONS WITH ARCHITECTURAL DRAWINGS)
- T.O. SLABE-ON-GRADE: 100'-0"

 PROVIDE CONTROL JOINTS IN SLAB ON GRAL
- 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.
- 4. 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.
- 5. REFER TO MANUFACTURER'S GUIDELINES FOR INSTALLATION OF STRAP TIES, HOLD DOWNS & OTHER CONNECTIONS
- CONNECTIONS.
 6. 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
- P# INDICATES POST TYPE
- C# INDICATES COLUMN TYPE

E.O.S. INDICATES EDGE OF CONCRETE SLAB



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,

the Plans or Specifications.

IOWA CERTIFICATE OF AUTHORITY
NO. 26887

ambiguities, or conflicts contained within



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.

101	*/ 1.	_
Descriptio	n	Date
T NUMBER	SET ISSUE	DAT
01420	08/01/2	202
	Descriptio T NUMBER	T NUMBER SET ISSUE

PROJECT NUMBER SET ISSUE DATE 08/01/2025

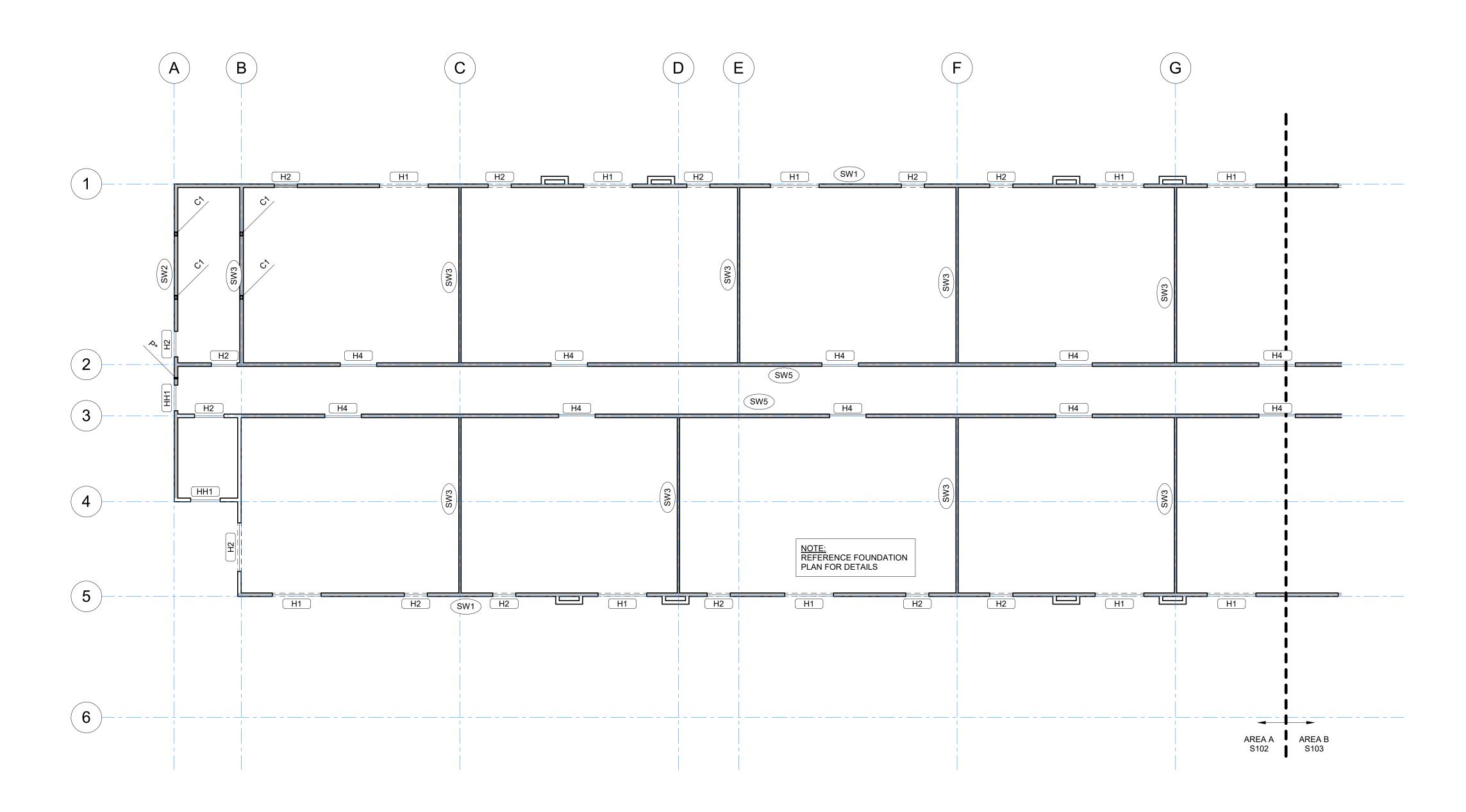
ENGINEER DRAWN BY CHECKED BY IWC CEL MDH

RENZ E AT CARTER LAKE

GILLAM ESIDENCI

JONES

UNDATION PLAN - ARE



LEVEL 1 FRAMING - AREA A

BUILDING KEY

AREA A

FRAMING PLAN NOTES:

- 1. SEE ARCHITECURAL 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"
- 130'-8 7/8" TRUSS BRG: 2. 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.
- 3. 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.
- 4. COORDINATE PLUMBING FIXTURES, SHAFTS, AND FLOOR DRAINS WITH ARCH. & MEP DRAWINGS. 5. 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.
- 6. FLOOR PLAN SHOWS FRAMING FOR THE FLOOR INDICATED & VERTICAL FRAMING (WALLS, HEADERS,
- POSTS, COLUMNS) ABOVE THAT FLOOR. 7. SEE ARCHITECTURAL DRAWINGS FOR ALL RAILING DETAILS. REFER GENERAL NOTES FOR DESIGN
- CRITERIA.
- 8. REFER TO MANUFACTURER'S GUIDELINES FOR INSTALLATION OF STRAP TIES, HOLD DOWNS & OTHER
- CONNECTIONS.
- 9. ALL EXTERIOR LUMBER (POSTS, BEAMS, DECKING, ETC.) TO BE TREATED. 10. 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.
- 11. TRUSS MANFACTURER TO DESIGN & PROVIDE GIRDER TRUSSES AT ALL FLOOR OPENINGS & SPECIFY HANGERS FOR GIRDERS & SUPPORTED FRAMING.
- 12. REFER TO ARCHITECTURAL PLANS FOR STAIR DIMENSIONS AND REQUIREMENTS. REFER TO STRUCTURAL GENERAL NOTES FOR STAIR DESIGN CRITERIA.
- 13. COLUMN FRAMING MAY BE USED IN LIEU OF SHEAR WALL END POST FRAMING END OF SHEAR WALLS.
- 14. SEE S500 FOR TYPICAL FRAMING DETAILS, S510 FOR STAIR FRAMING, & S515 FOR CMU DETAILS. 15. FIRE PROOF AROUND BEAMS AT SHAFT PENETRATIONS.



AREA B

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
- P# INDICATES POST TYPE
- C# INDICATES COLUMN TYPE
- E.O.S. INDICATES EDGE OF CONCRETE SLAB



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'

the Plans or Specifications. IOWA CERTIFICATE OF AUTHORITY NO. 26887

guidance with respect to any alleged errors, omissions, inconsistencies, ambiguities, or conflicts contained within



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

No.	Description	ı	Date
DDO IEC	T NUMBER	SET ISS	IIE DAT
202E0			1/2021

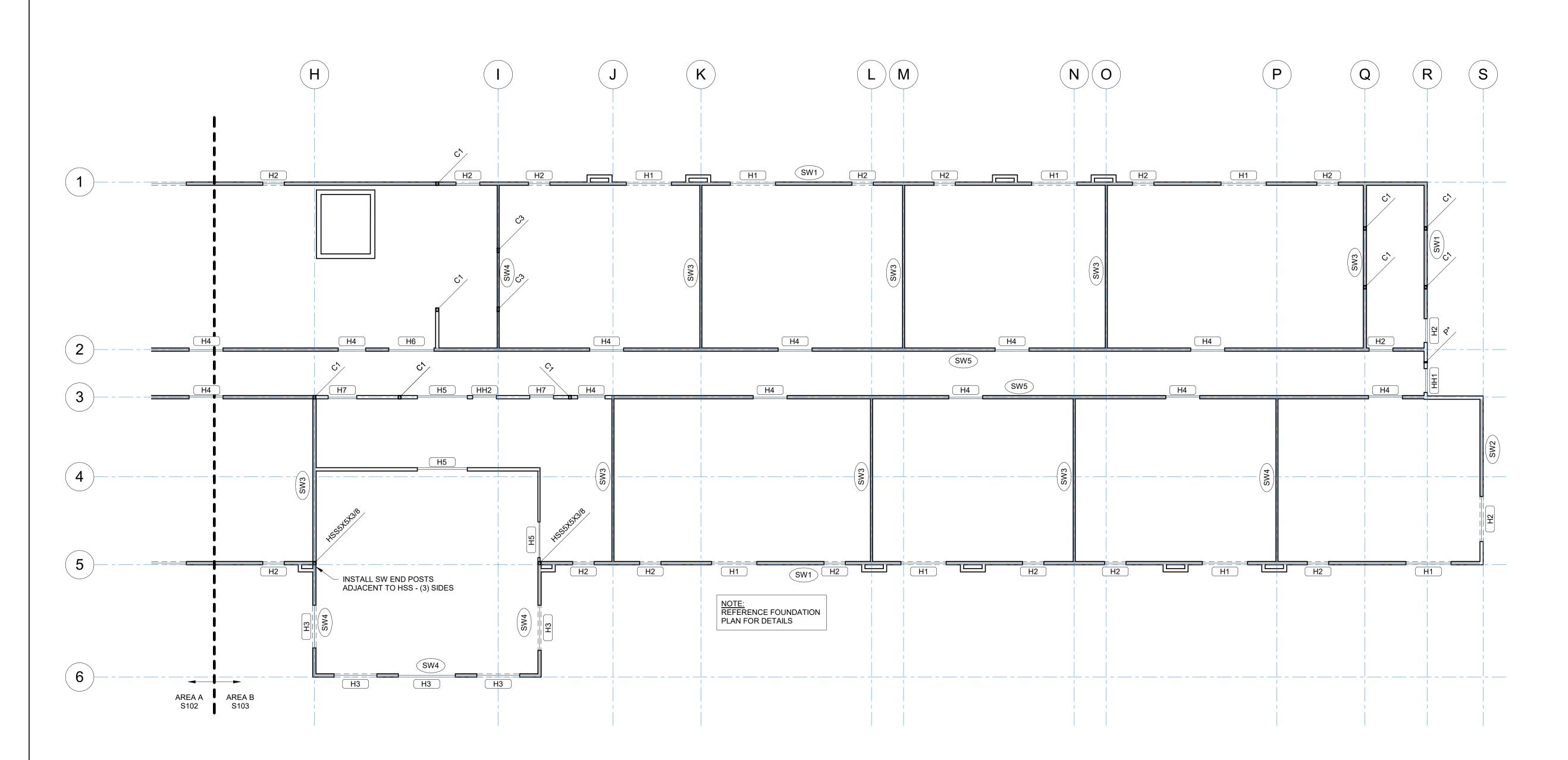
2025001420 08/01/2025 CHECKED BY CEL MDH

AMING

DRAWING NO. S102

ENZ

GILLAM



BUILDING KEY

AREA A

AREA B

LEVEL 1 FRAMING - AREA B

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
- P# INDICATES POST TYPE
- C# INDICATES COLUMN TYPE
- E.O.S. INDICATES EDGE OF CONCRETE SLAB

FRAMING PLAN NOTES:

- 1. SEE ARCHITECURAL 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"
- 130'-8 7/8" TRUSS BRG: 2. 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.
- 3. 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.
- 4. COORDINATE PLUMBING FIXTURES, SHAFTS, AND FLOOR DRAINS WITH ARCH. & MEP DRAWINGS.
- 5. 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.
- 6. FLOOR PLAN SHOWS FRAMING FOR THE FLOOR INDICATED & VERTICAL FRAMING (WALLS, HEADERS,
- POSTS, COLUMNS) ABOVE THAT FLOOR. 7. SEE ARCHITECTURAL DRAWINGS FOR ALL RAILING DETAILS. REFER GENERAL NOTES FOR DESIGN
- CRITERIA. 8. REFER TO MANUFACTURER'S GUIDELINES FOR INSTALLATION OF STRAP TIES, HOLD DOWNS & OTHER
- CONNECTIONS. 9. ALL EXTERIOR LUMBER (POSTS, BEAMS, DECKING, ETC.) TO BE TREATED.
- 10. 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.
- 11. TRUSS MANFACTURER TO DESIGN & PROVIDE GIRDER TRUSSES AT ALL FLOOR OPENINGS & SPECIFY HANGERS FOR GIRDERS & SUPPORTED FRAMING.
- 12. REFER TO ARCHITECTURAL PLANS FOR STAIR DIMENSIONS AND REQUIREMENTS. REFER TO STRUCTURAL GENERAL NOTES FOR STAIR DESIGN CRITERIA. 13. COLUMN FRAMING MAY BE USED IN LIEU OF SHEAR WALL END POST FRAMING END OF SHEAR WALLS.
- 14. SEE S500 FOR TYPICAL FRAMING DETAILS, S510 FOR STAIR FRAMING, & S515 FOR CMU DETAILS. 15. FIRE PROOF AROUND BEAMS AT SHAFT PENETRATIONS.



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

the Plans or Specifications. IOWA CERTIFICATE OF AUTHORITY NO. 26887

errors, omissions, inconsistencies, ambiguities, or conflicts contained within



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

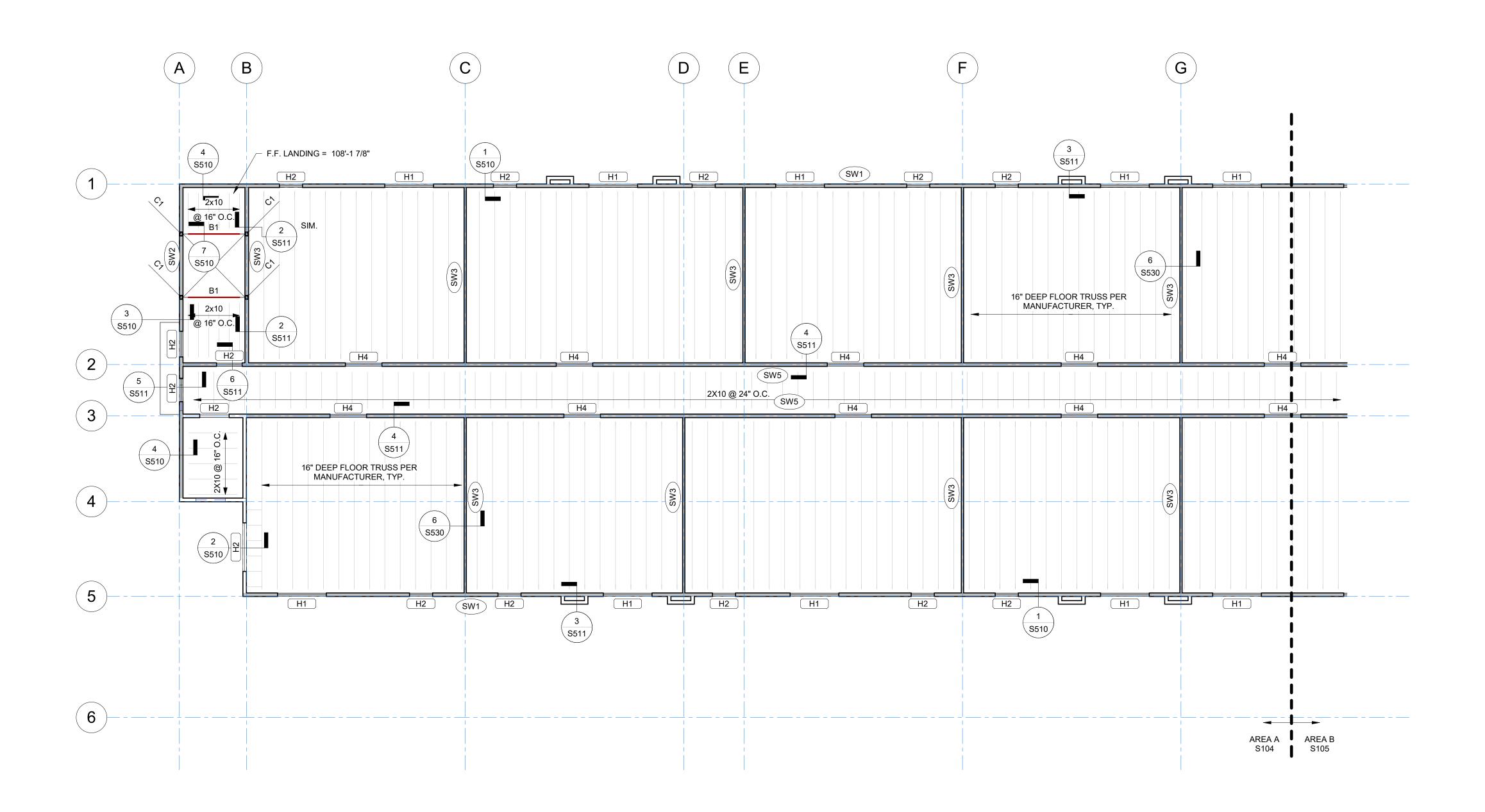
	IOW	'A.	
No.	Description	l	Date
DBO IEC	T NI IMRED	SET IS	SHE DATE

2025001420 08/01/2025 CHECKED BY CEL MDH

AMING

GILLAM

ENZ



FRAMING PLAN NOTES:

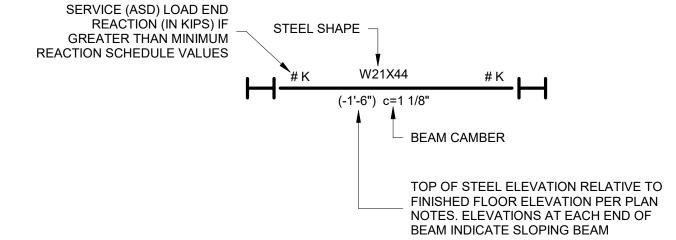
- 1. SEE ARCHITECURAL DRAWINGS FOR SITE PLAN BENCHMARK ELEVATIONS, SEE BELOW (VERIFY ALL ELEVATIONS AND DIMENSIONS WITH ARCHITECTURAL DRAWINGS)
- T.O. SLABE-ON-GRADE: 100'-0"
- LEVEL 2 F.F.: 110'-5 7/8"
- LEVEL 3 F.F. : 121'-7 3/4" 130'-8 7/8" TRUSS BRG: 2. FLOOR SHEATHING: 3/4" STRUCTURAL GRADE PLYWOOD. FASTEN TO FRAMING W/ 10d COMMON NAILS
- SPACED 6" O.C. AT EDGES, 12" O.C. WITHIN FIELD. 3. 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.
- 4. COORDINATE PLUMBING FIXTURES, SHAFTS, AND FLOOR DRAINS WITH ARCH. & MEP DRAWINGS. 5. 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. 6. FLOOR PLAN SHOWS FRAMING FOR THE FLOOR INDICATED & VERTICAL FRAMING (WALLS, HEADERS,
- POSTS, COLUMNS) ABOVE THAT FLOOR. 7. SEE ARCHITECTURAL DRAWINGS FOR ALL RAILING DETAILS. REFER GENERAL NOTES FOR DESIGN
- CRITERIA.
- 8. REFER TO MANUFACTURER'S GUIDELINES FOR INSTALLATION OF STRAP TIES, HOLD DOWNS & OTHER
- CONNECTIONS. 9. ALL EXTERIOR LUMBER (POSTS, BEAMS, DECKING, ETC.) TO BE TREATED.
- 10. 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. 11. TRUSS MANFACTURER TO DESIGN & PROVIDE GIRDER TRUSSES AT ALL FLOOR OPENINGS & SPECIFY
- HANGERS FOR GIRDERS & SUPPORTED FRAMING. 12. REFER TO ARCHITECTURAL PLANS FOR STAIR DIMENSIONS AND REQUIREMENTS. REFER TO STRUCTURAL
- GENERAL NOTES FOR STAIR DESIGN CRITERIA. 13. COLUMN FRAMING MAY BE USED IN LIEU OF SHEAR WALL END POST FRAMING END OF SHEAR WALLS.
- 14. SEE S500 FOR TYPICAL FRAMING DETAILS, S510 FOR STAIR FRAMING, & S515 FOR CMU DETAILS. 15. FIRE PROOF AROUND BEAMS AT SHAFT PENETRATIONS.

BUILDING KEY

AREA A AREA B

STEEL BEAM LEGEND

LEVEL 2 FRAMING - AREA A



FRAMING PLAN LEGEND

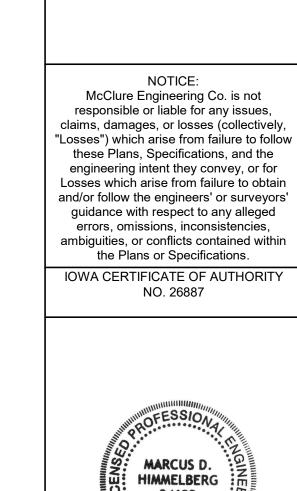
- SW?) SHEAR WALL TYPE INDICATED BY
- (H?#) HEADING/OPENING PER OPENING SCHEDULE
- (F?) INDICATES FOOTING TYPE
- P* JAMB FROM ABOVE PER OPENING SCHEDULE
- P# INDICATES POST TYPE
- C# INDICATES COLUMN TYPE
- E.O.S. INDICATES EDGE OF CONCRETE SLAB

CEL Щ И GILLAM

PROJECT NUMBER

2025001420

DRAWING NO. S104



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

SET ISSUE DATE

08/01/2025

CHECKED BY

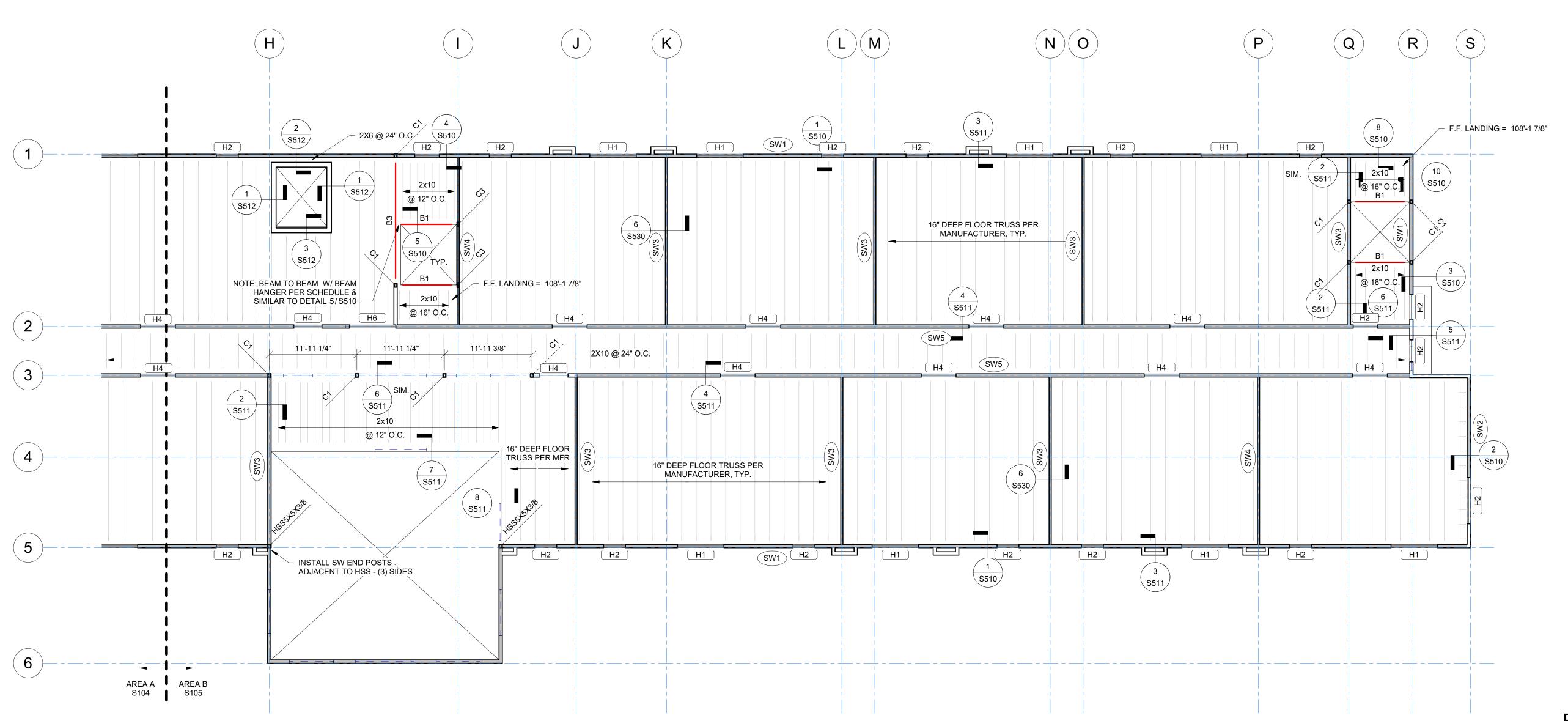
AMING

2

MDH

LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.

1901 Pennsylvania Drive Columbia, MO 65202 P 573-814-1568



SERVICE (ASD) LOAD END

GREATER THAN MINIMUM

REACTION SCHEDULE VALUES

REACTION (IN KIPS) IF

STEEL SHAPE

BUILDING KEY

LEVEL 2 FRAMING - AREA B

AREA A

AREA B

FRAMING PLAN NOTES:

- 1. SEE ARCHITECURAL 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'-8 7/8" 2. 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.
- 3. 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. 4. COORDINATE PLUMBING FIXTURES, SHAFTS, AND FLOOR DRAINS WITH ARCH. & MEP DRAWINGS.
- 5. 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. 6. FLOOR PLAN SHOWS FRAMING FOR THE FLOOR INDICATED & VERTICAL FRAMING (WALLS, HEADERS,
- POSTS, COLUMNS) ABOVE THAT FLOOR. 7. SEE ARCHITECTURAL DRAWINGS FOR ALL RAILING DETAILS. REFER GENERAL NOTES FOR DESIGN
- CRITERIA. 8. REFER TO MANUFACTURER'S GUIDELINES FOR INSTALLATION OF STRAP TIES, HOLD DOWNS & OTHER
- CONNECTIONS. 9. ALL EXTERIOR LUMBER (POSTS, BEAMS, DECKING, ETC.) TO BE TREATED.
- 10. 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.
- 11. TRUSS MANFACTURER TO DESIGN & PROVIDE GIRDER TRUSSES AT ALL FLOOR OPENINGS & SPECIFY
- HANGERS FOR GIRDERS & SUPPORTED FRAMING. 12. REFER TO ARCHITECTURAL PLANS FOR STAIR DIMENSIONS AND REQUIREMENTS. REFER TO STRUCTURAL
- GENERAL NOTES FOR STAIR DESIGN CRITERIA.
- 13. COLUMN FRAMING MAY BE USED IN LIEU OF SHEAR WALL END POST FRAMING END OF SHEAR WALLS. 14. SEE S500 FOR TYPICAL FRAMING DETAILS, S510 FOR STAIR FRAMING, & S515 FOR CMU DETAILS. 15. FIRE PROOF AROUND BEAMS AT SHAFT PENETRATIONS.



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

the Plans or Specifications. IOWA CERTIFICATE OF AUTHORITY NO. 26887

errors, omissions, inconsistencies,

ambiguities, or conflicts contained within



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.

Date

2025001420 08/01/2025 DRAWN BY CHECKED BY CEL MDH

AMING 2

Щ И

GILLAM

DRAWING NO. S105



TOP OF STEEL ELEVATION RELATIVE TO

FINISHED FLOOR ELEVATION PER PLAN

NOTES. ELEVATIONS AT EACH END OF BEAM INDICATE SLOPING BEAM

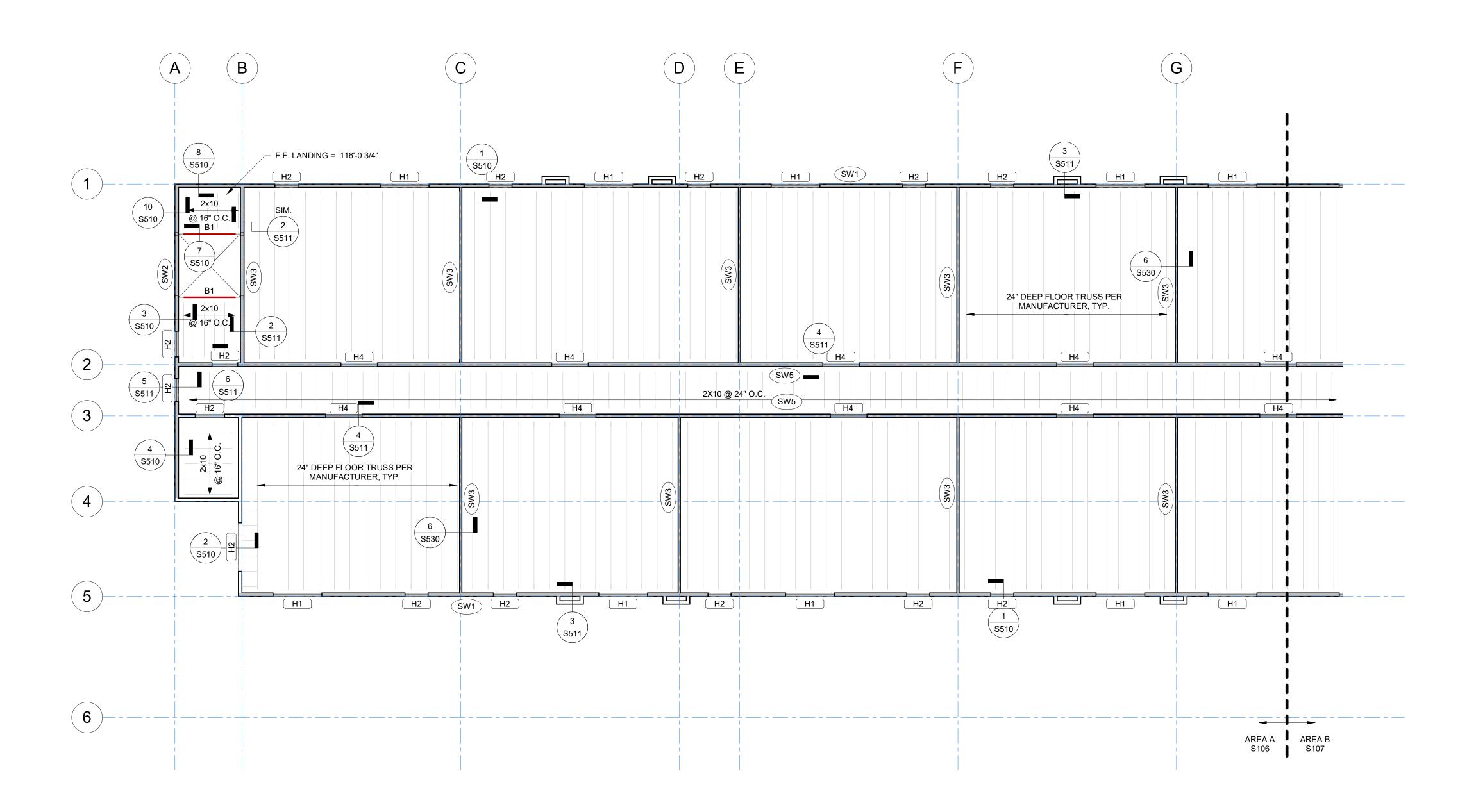
- BEAM CAMBER

- SW?) SHEAR WALL TYPE INDICATED BY H?# HEADING/OPENING PER OPENING SCHEDULE

- C# INDICATES COLUMN TYPE
- E.O.S. INDICATES EDGE OF CONCRETE SLAB

FRAMING PLAN LEGEND

- (F?) INDICATES FOOTING TYPE
- P* JAMB FROM ABOVE PER OPENING SCHEDULE
- P# INDICATES POST TYPE



LEVEL 3 FRAMING - AREA A

AREA A

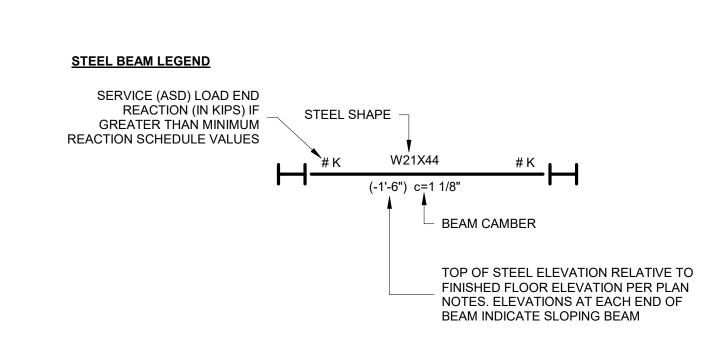
AREA B

FRAMING PLAN NOTES:

- T.O. SLABE-ON-GRADE: 100'-0"
- LEVEL 2 F.F. :
- 130'-8 7/8" 2. 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. 3. 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.
- ARCHITECTURAL FLOOR PLAN FOR NON-BEARING WALL, DOOR, AND WINDOW LOCATIONS.
- POSTS, COLUMNS) ABOVE THAT FLOOR. 7. SEE ARCHITECTURAL DRAWINGS FOR ALL RAILING DETAILS. REFER GENERAL NOTES FOR DESIGN
- CRITERIA.
- 8. REFER TO MANUFACTURER'S GUIDELINES FOR INSTALLATION OF STRAP TIES, HOLD DOWNS & OTHER
- CONNECTIONS.
- 10. WOOD FLOOR TRUSSES TO BE DESIGNED BY MANUFACTURER AND ARE SHOWN FOR THE INTENT OF
- 11. TRUSS MANFACTURER TO DESIGN & PROVIDE GIRDER TRUSSES AT ALL FLOOR OPENINGS & SPECIFY
- HANGERS FOR GIRDERS & SUPPORTED FRAMING.
- GENERAL NOTES FOR STAIR DESIGN CRITERIA.
- 13. COLUMN FRAMING MAY BE USED IN LIEU OF SHEAR WALL END POST FRAMING END OF SHEAR WALLS. 14. SEE S500 FOR TYPICAL FRAMING DETAILS, S510 FOR STAIR FRAMING, & S515 FOR CMU DETAILS.

BUILDING KEY

- 1. SEE ARCHITECURAL DRAWINGS FOR SITE PLAN BENCHMARK ELEVATIONS, SEE BELOW (VERIFY ALL ELEVATIONS AND DIMENSIONS WITH ARCHITECTURAL DRAWINGS)
 - 110'-5 7/8"
- LEVEL 3 F.F. : 121'-7 3/4"
- TRUSS BRG:
- 4. COORDINATE PLUMBING FIXTURES, SHAFTS, AND FLOOR DRAINS WITH ARCH. & MEP DRAWINGS.
- 5. ALL EXTERIOR & INTERIOR LOAD BEARING WALLS ARE PER WALL SCHEDULE ON SHEET S004. SEE
- 6. FLOOR PLAN SHOWS FRAMING FOR THE FLOOR INDICATED & VERTICAL FRAMING (WALLS, HEADERS,
- 9. ALL EXTERIOR LUMBER (POSTS, BEAMS, DECKING, ETC.) TO BE TREATED.
- SPAN DIRECTION AND LOAD PATH ONLY. REFER TO GENERAL NOTES FOR DESIGN CRITERIA.
- 12. REFER TO ARCHITECTURAL PLANS FOR STAIR DIMENSIONS AND REQUIREMENTS. REFER TO STRUCTURAL
- 15. FIRE PROOF AROUND BEAMS AT SHAFT PENETRATIONS.



FRAMING PLAN LEGEND

SW?) SHEAR WALL TYPE INDICATED BY

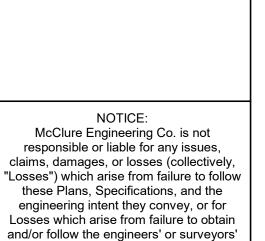
(H?#) HEADING/OPENING PER OPENING SCHEDULE

(F?) INDICATES FOOTING TYPE

P* JAMB FROM ABOVE PER OPENING SCHEDULE

P# INDICATES POST TYPE C# INDICATES COLUMN TYPE

E.O.S. INDICATES EDGE OF CONCRETE SLAB



1901 Pennsylvania Drive Columbia, MO 65202 P 573-814-1568

the Plans or Specifications. IOWA CERTIFICATE OF AUTHORITY NO. 26887

guidance with respect to any alleged errors, omissions, inconsistencies, ambiguities, or conflicts contained within



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
PF	ROJECT NUMBI	ER	SET IS	SUE DATE
20	025001420		08/	01/2025
	ENGINEER	DRAWN BY	CHE	CKED BY

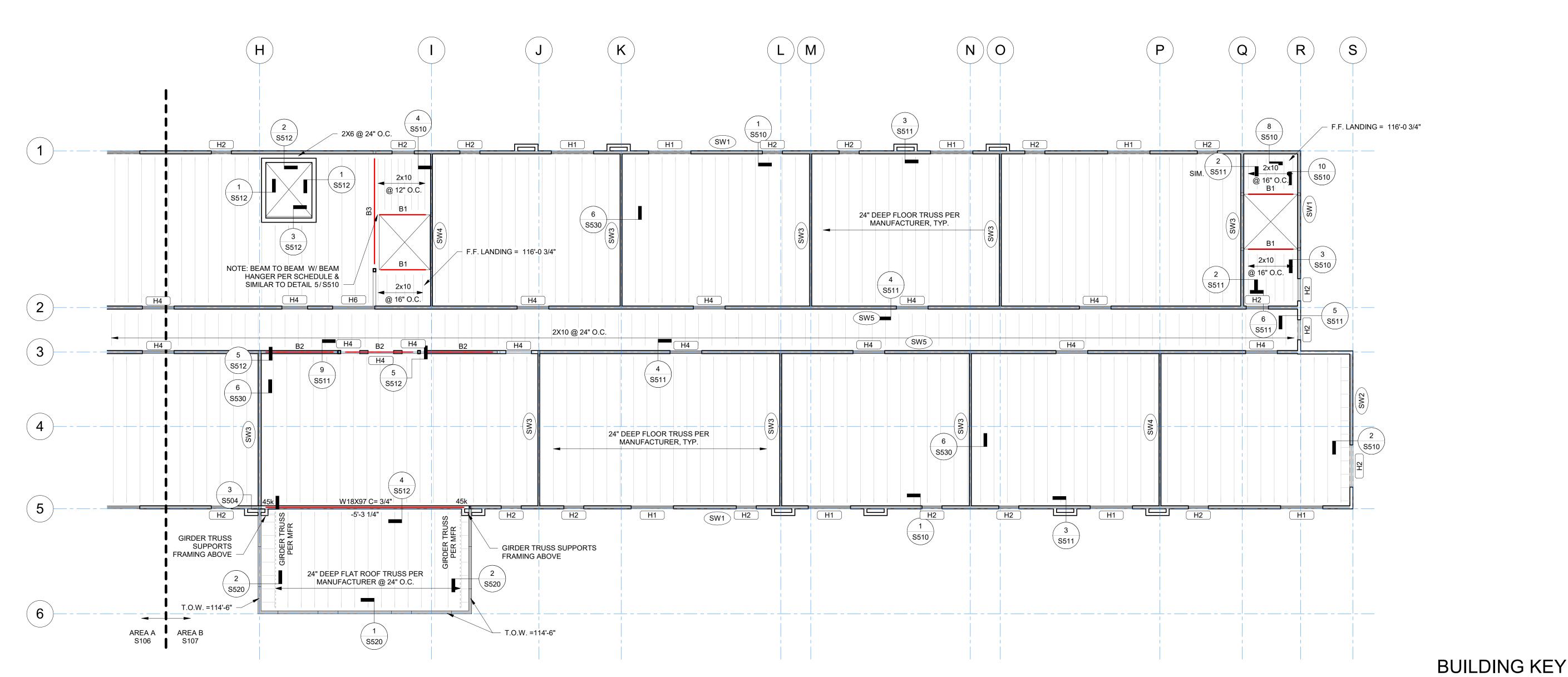
CEL

AMING 3

DRAWING NO. S106

ENZ

GILLAM

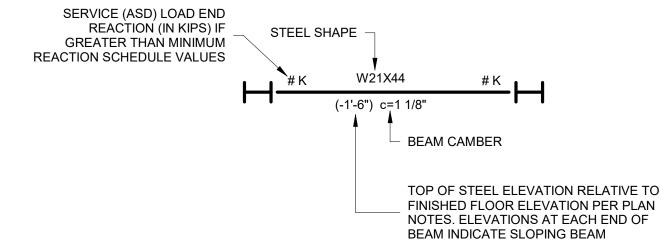


AREA A

AREA B

LEVEL 3 FRAMING - AREA B

STEEL BEAM LEGEND



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

P# INDICATES POST TYPE

C# INDICATES COLUMN TYPE

E.O.S. INDICATES EDGE OF CONCRETE SLAB

FRAMING PLAN NOTES:

- 1. SEE ARCHITECURAL 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"
- 130'-8 7/8" TRUSS BRG: 2. 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.
- 3. 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.
- 4. COORDINATE PLUMBING FIXTURES, SHAFTS, AND FLOOR DRAINS WITH ARCH. & MEP DRAWINGS.
- 5. 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. 6. FLOOR PLAN SHOWS FRAMING FOR THE FLOOR INDICATED & VERTICAL FRAMING (WALLS, HEADERS,
- POSTS, COLUMNS) ABOVE THAT FLOOR. 7. SEE ARCHITECTURAL DRAWINGS FOR ALL RAILING DETAILS. REFER GENERAL NOTES FOR DESIGN CRITERIA.
- 8. REFER TO MANUFACTURER'S GUIDELINES FOR INSTALLATION OF STRAP TIES, HOLD DOWNS & OTHER
- CONNECTIONS. 9. ALL EXTERIOR LUMBER (POSTS, BEAMS, DECKING, ETC.) TO BE TREATED.
- 10. 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.
- 11. TRUSS MANFACTURER TO DESIGN & PROVIDE GIRDER TRUSSES AT ALL FLOOR OPENINGS & SPECIFY
- HANGERS FOR GIRDERS & SUPPORTED FRAMING. 12. REFER TO ARCHITECTURAL PLANS FOR STAIR DIMENSIONS AND REQUIREMENTS. REFER TO STRUCTURAL
- GENERAL NOTES FOR STAIR DESIGN CRITERIA. 13. COLUMN FRAMING MAY BE USED IN LIEU OF SHEAR WALL END POST FRAMING END OF SHEAR WALLS.
- 14. SEE S500 FOR TYPICAL FRAMING DETAILS, S510 FOR STAIR FRAMING, & S515 FOR CMU DETAILS. 15. FIRE PROOF AROUND BEAMS AT SHAFT PENETRATIONS.



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

the Plans or Specifications. IOWA CERTIFICATE OF AUTHORITY NO. 26887

errors, omissions, inconsistencies, ambiguities, or conflicts contained within



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

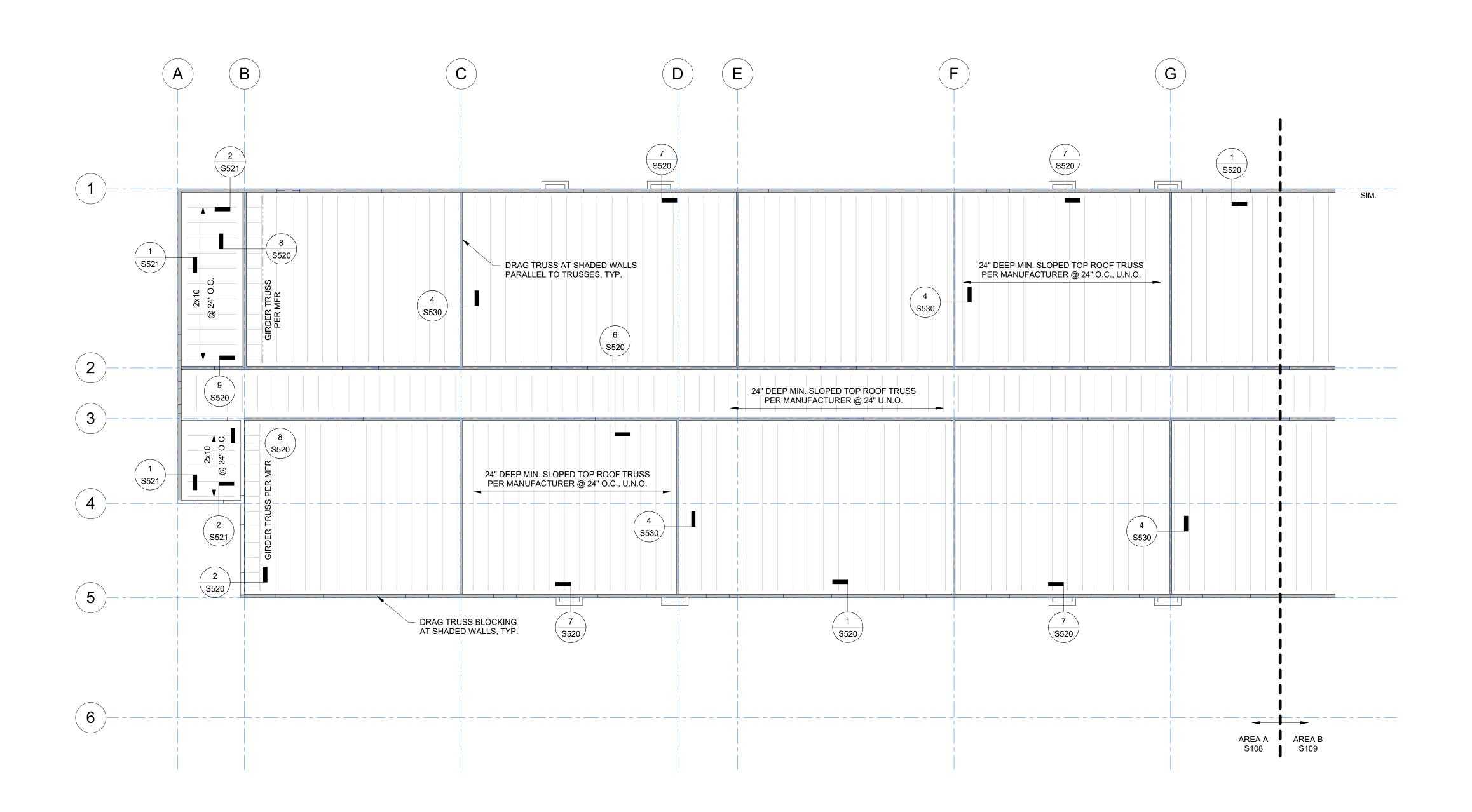
	IOWA	۸.	
No.	Description		Date
PRO IEC	T NUMBER	SET IS	SUF DAT

2025001420 08/01/2025 CHECKED BY CEL MDH

AR GILLAM

ENZ

AMING \mathbf{C} 3

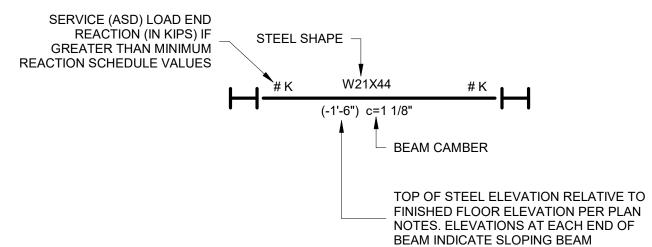


BUILDING KEY

AREA A

AREA B

STEEL BEAM LEGEND



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

P# INDICATES POST TYPE

C# INDICATES COLUMN TYPE

E.O.S. INDICATES EDGE OF CONCRETE SLAB



FRAMING PLAN NOTES:

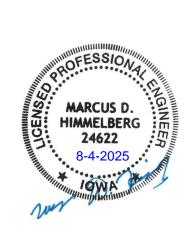
- 1. SEE ARCHITECTURAL DRAWINGS FOR SITE PLAN BENCHMARK ELEVATIONS. FOR REFERENCE ELEVATION, SEE BELOW (VERIFY ALL ELEVATIONS AND DIMENSIONS WITH ARCHITECTURAL DRAWINGS):
 - * T.O. SLAB ON GRADE 100'-0" 110'-5 7/8" * LEVEL 2 F.F.
 - * LEVEL 3 F.F. 121'-7 3/4" * ROOF TRUSS BEARING 132'-8 7/8"
- 2. ROOF SHEATHING: 15/32" STRUCTURAL GRADE PLYWOOD FASTENED TO ROOF TRUSSES W/ 10d COMMON NAILS SPACED 6" O.C. AT EDGES, 12" O.C. WITHIN THE FIELD.
- 3. RTU PENETRATIONS TO BE COORDINATED W/ ARCH. & MEP DRAWINGS.
- 4. REFER TO MANUFACTURER'S GUIDELINES FOR INSTALLATION OF STRAP TIES, HOLD DOWNS AND OTHER CONNECTIONS.
- 5. ALL EXTERIOR LUMBER (POSTS, BEAMS, DECKING, ETC.) TO BE TREATED.
- 6. WOOD ROOF TRUSSES (DESIGN PER MANUFACTURER) ARE SHOWN FOR THE INTENT OF SPAN DIRECTION
- AND LOAD PATH ONLY. REFER TO GENERAL NOTES FOR DESIGN CRITERIA.
- 7. TRUSS MANUFACTURER TO DESIGN & PROVIDE GIRDER TRUSSES AT ALL OPENINGS AND LOCATIONS SHOWN ON PLAN & SPECIFY HANGERS FOR GIRDERS & SUPPORTED FRAMING WHERE REQUIRED.
- 8. TRUSS MANUFACTURER TO DESIGN & PROVIDE DRAG BLOCKING AND TRUSSES AS INDICATED ON PLAN FOR LOADS PER SCHEDULE
- 9. 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.



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,

the Plans or Specifications. IOWA CERTIFICATE OF AUTHORITY NO. 26887

ambiguities, or conflicts contained within



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

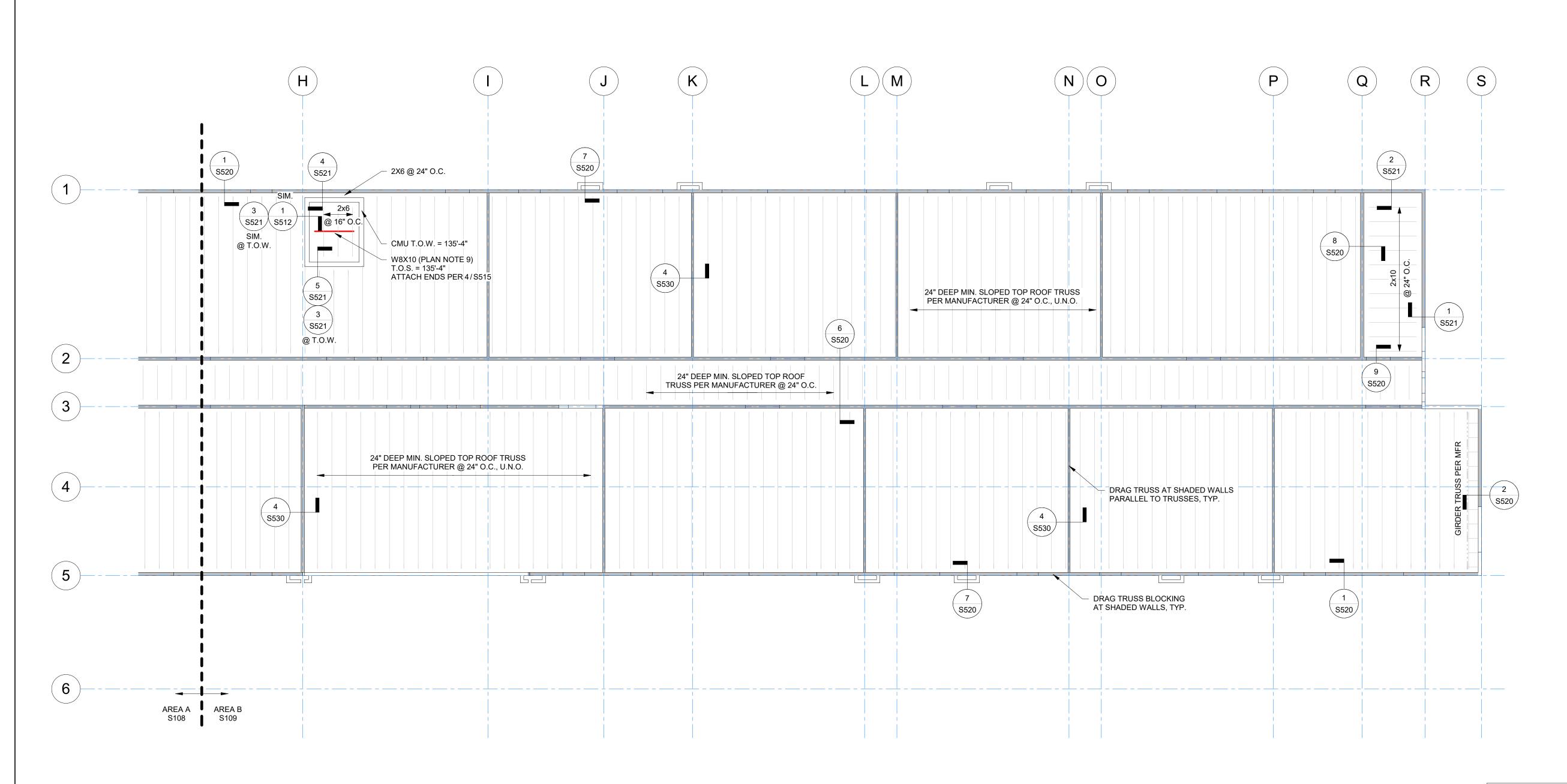
I HEREBY CERTIFY THAT THIS **ENGINEERING DOCUMENT WAS** PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND

THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER

No.	Description	Dat

2025001420 08/01/2025 CHECKED BY CEL

GILLAM



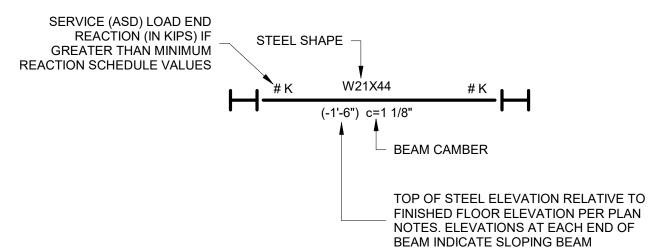
BUILDING KEY

AREA A

AREA B

ROOF FRAMING - AREA B

STEEL BEAM LEGEND



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

E.O.S. INDICATES EDGE OF CONCRETE SLAB

P# INDICATES POST TYPE

C# INDICATES COLUMN TYPE

FRAMING PLAN NOTES:

- 1. SEE ARCHITECTURAL DRAWINGS FOR SITE PLAN BENCHMARK ELEVATIONS. FOR REFERENCE ELEVATION, SEE BELOW (VERIFY ALL ELEVATIONS AND DIMENSIONS WITH ARCHITECTURAL DRAWINGS):
 - * T.O. SLAB ON GRADE 100'-0"
 - 110'-5 7/8" * LEVEL 2 F.F. * LEVEL 3 F.F. 121'-7 3/4"
- * ROOF TRUSS BEARING 132'-8 7/8" 2. ROOF SHEATHING: 15/32" STRUCTURAL GRADE PLYWOOD FASTENED TO ROOF TRUSSES W/ 10d COMMON NAILS SPACED 6" O.C. AT EDGES, 12" O.C. WITHIN THE FIELD.
- 3. RTU PENETRATIONS TO BE COORDINATED W/ ARCH. & MEP DRAWINGS.
- 4. REFER TO MANUFACTURER'S GUIDELINES FOR INSTALLATION OF STRAP TIES, HOLD DOWNS AND OTHER
- CONNECTIONS.
- 5. ALL EXTERIOR LUMBER (POSTS, BEAMS, DECKING, ETC.) TO BE TREATED.
- 6. WOOD ROOF TRUSSES (DESIGN PER MANUFACTURER) ARE SHOWN FOR THE INTENT OF SPAN DIRECTION AND LOAD PATH ONLY. REFER TO GENERAL NOTES FOR DESIGN CRITERIA.
- 7. TRUSS MANUFACTURER TO DESIGN & PROVIDE GIRDER TRUSSES AT ALL OPENINGS AND LOCATIONS SHOWN ON PLAN & SPECIFY HANGERS FOR GIRDERS & SUPPORTED FRAMING WHERE REQUIRED.
- 8. TRUSS MANUFACTURER TO DESIGN & PROVIDE DRAG BLOCKING AND TRUSSES AS INDICATED ON PLAN FOR LOADS PER SCHEDULE
- 9. 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.



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,

the Plans or Specifications. IOWA CERTIFICATE OF AUTHORITY

ambiguities, or conflicts contained within

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

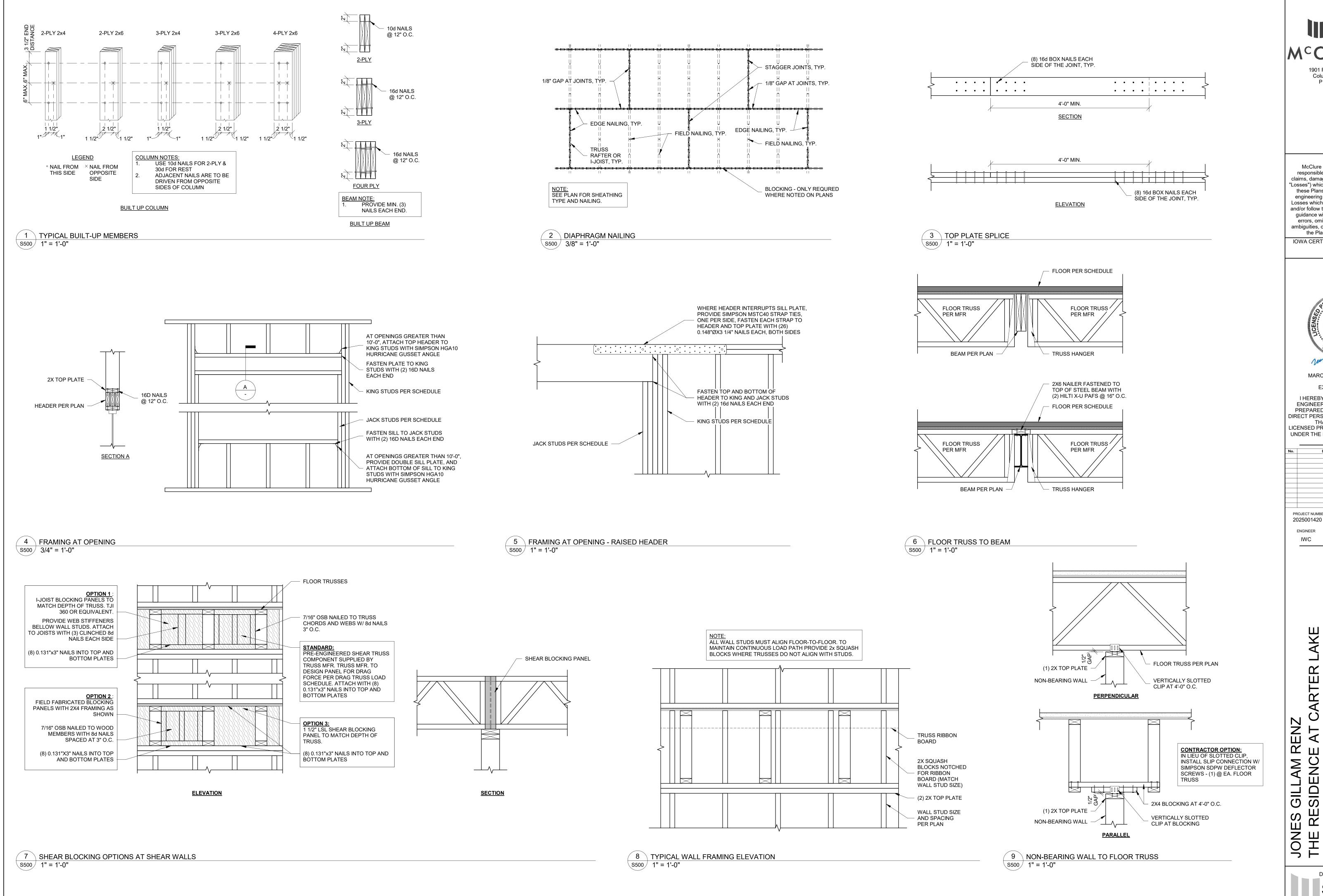
LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF

No.	Description	Dat

2025001420 CHECKED BY CEL

RENZ

GILLAM





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

HIMMELBERG 24622

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

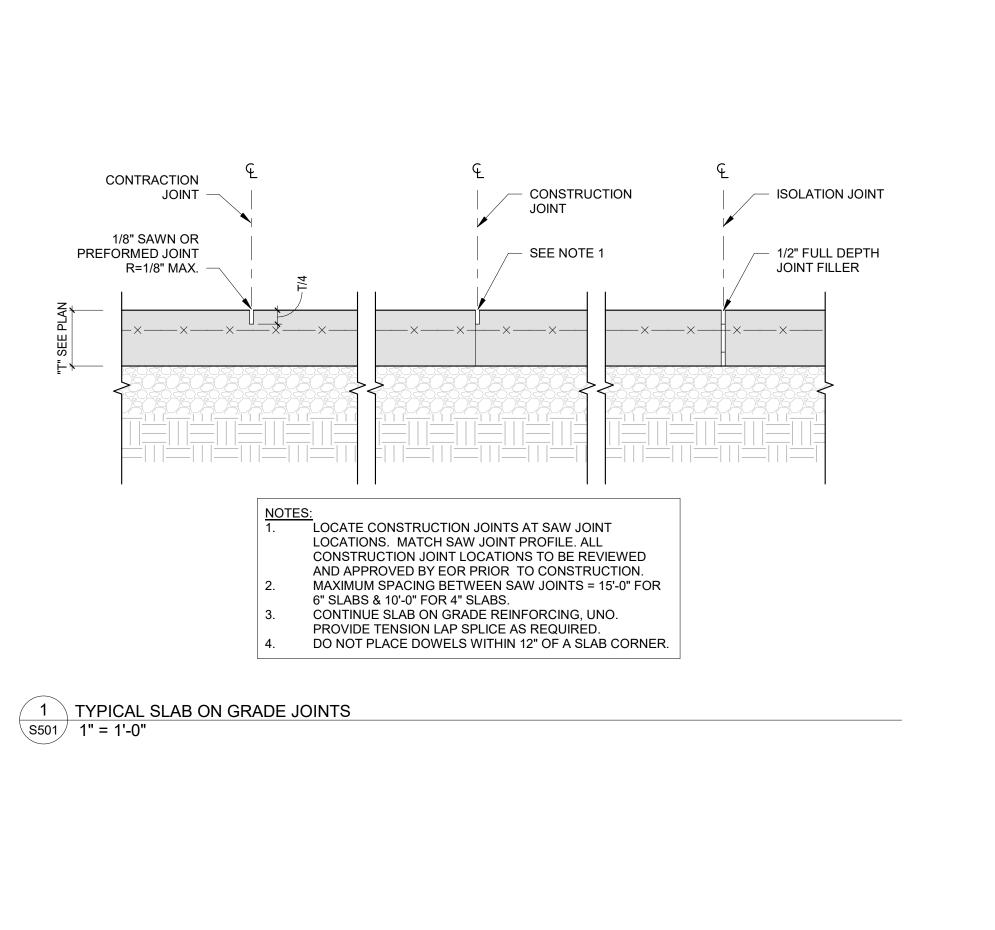
IOWA. SET ISSUE DATE PROJECT NUMBER

2025001420 08/01/2025 CHECKED BY CEL MDH

TER

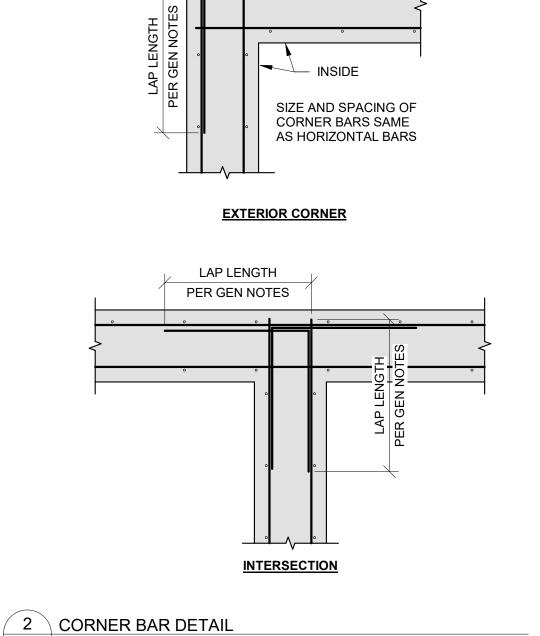
ENC

AIL DET, NO N



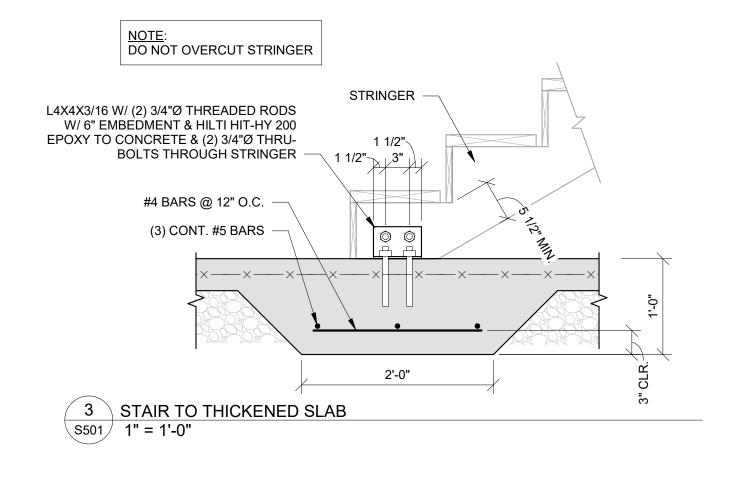
5 ELEVATOR PIT DETAIL

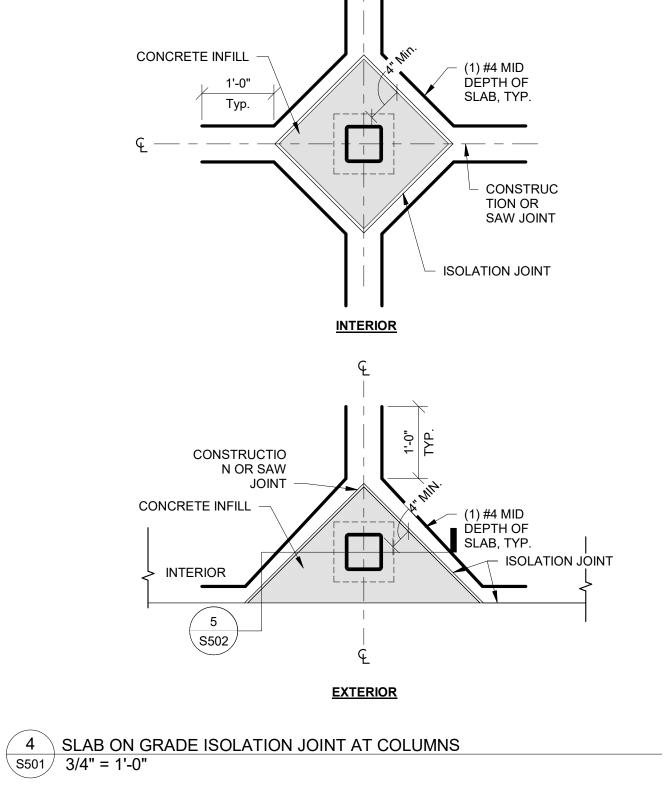
S501 3/4" = 1'-0"

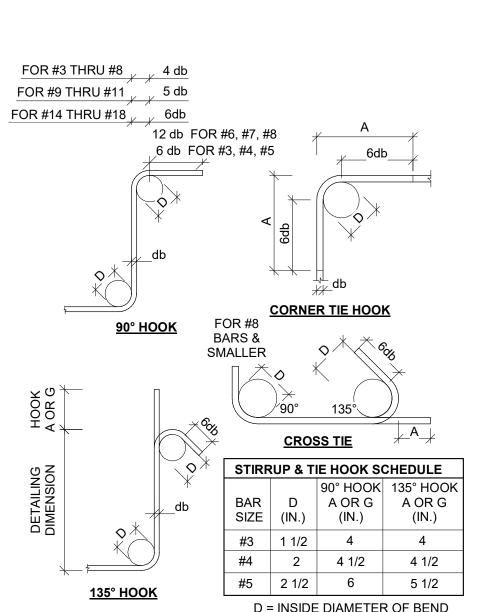


S501 3/4" = 1'-0"

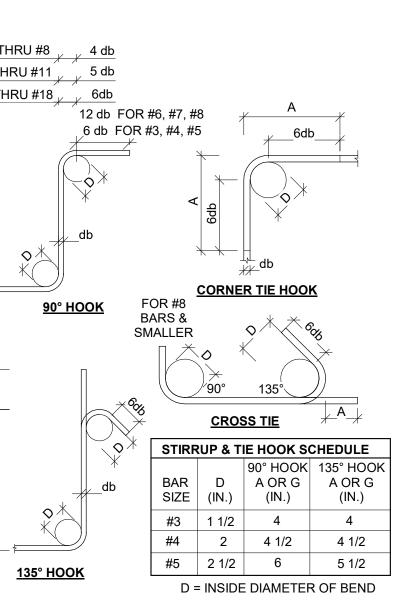
LAP LENGTH PER GEN NOTES

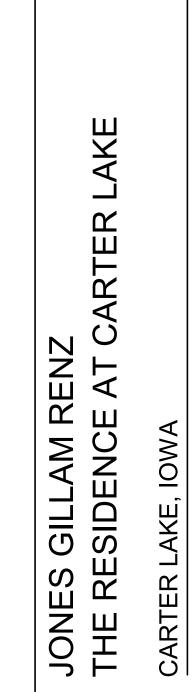






7 BAR BENDING DETAIL 8501 3/4" = 1'-0"





PROJECT NUMBER

2025001420

DETAIL ATION OUND, DRAWING NO. S501

1901 Pennsylvania Drive Columbia, MO 65202 P 573-814-1568

NOTICE:

McClure Engineering Co. is not

responsible or liable for any issues,

claims, damages, or losses (collectively

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

IOWA CERTIFICATE OF AUTHORITY

NO. 26887

HIMMELBERG

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.

SET ISSUE DATE

08/01/2025

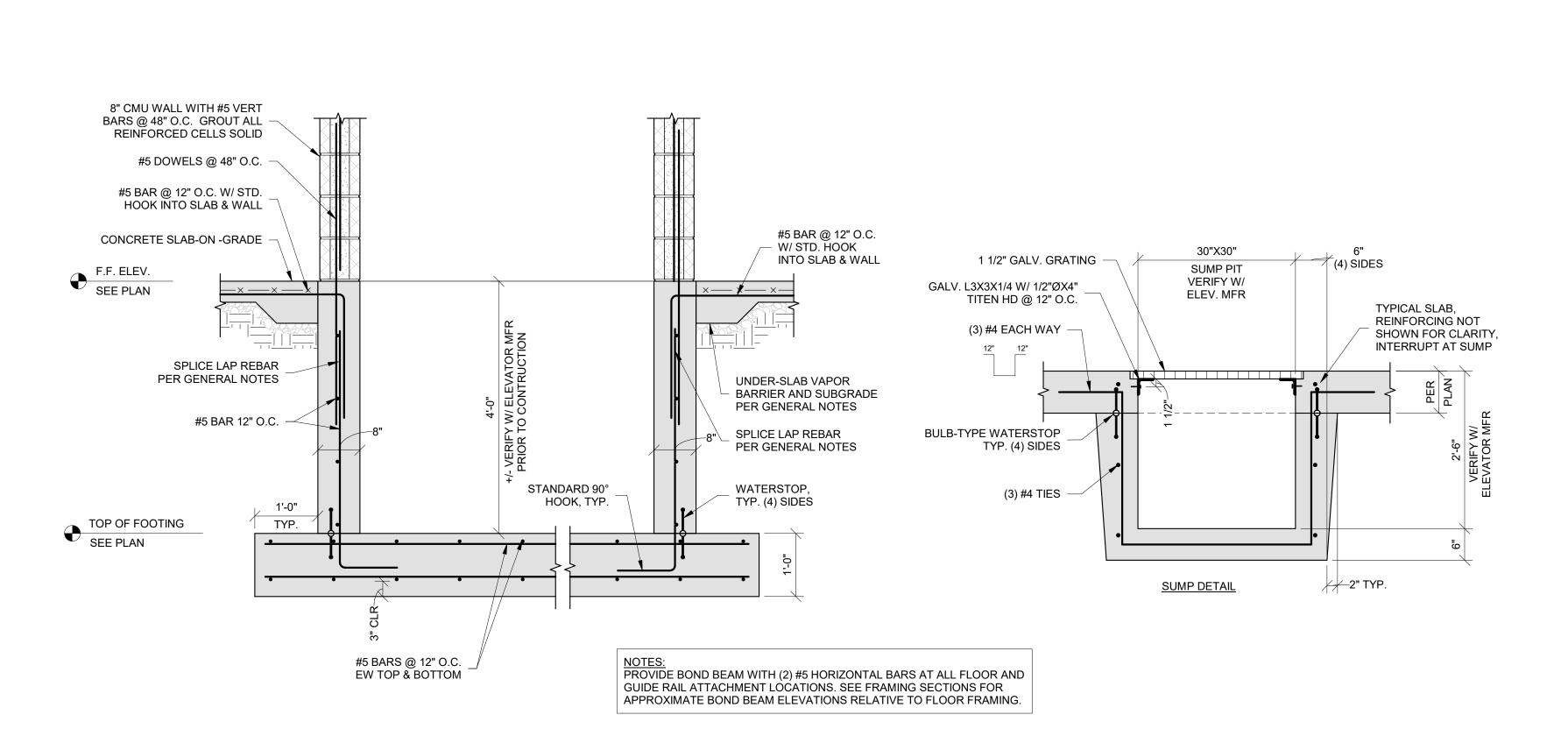
MDH

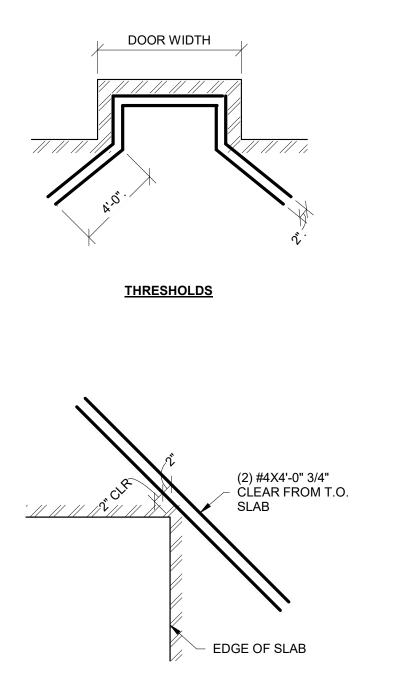
DRAWN BY CHECKED BY

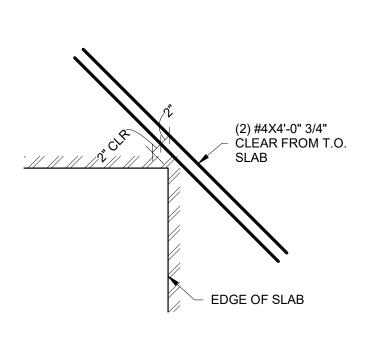
CEL

the Plans or Specifications.

'Losses") which arise from failure to follow

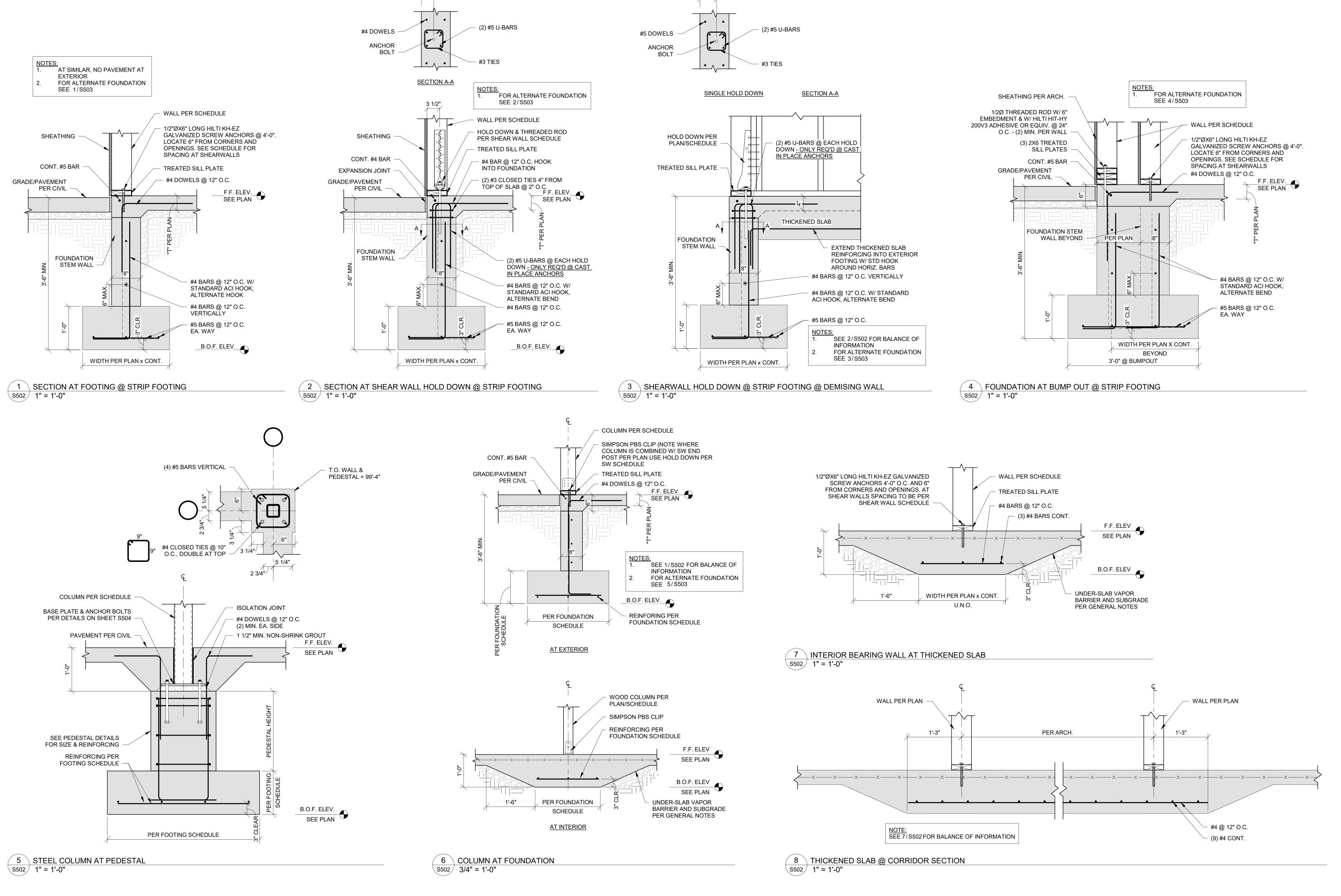








RE-ENTRANT CORNERS





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.

PROJECT NUMBER SET ISSUE DATE 2025001420 CHECKED BY CEL IWC MDH

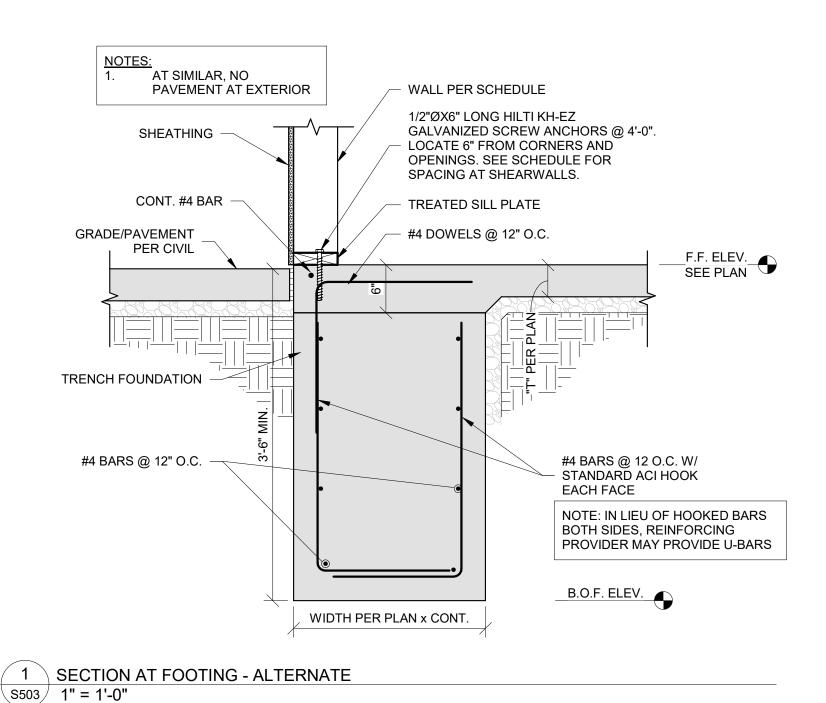
08/01/2025

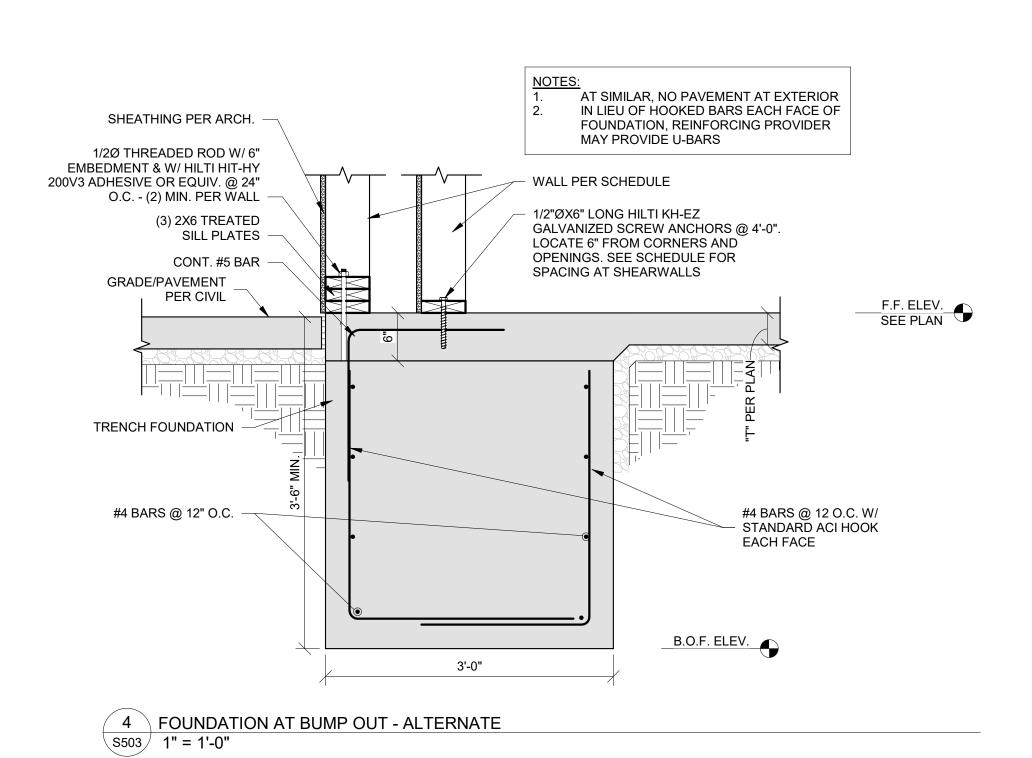
ARTER

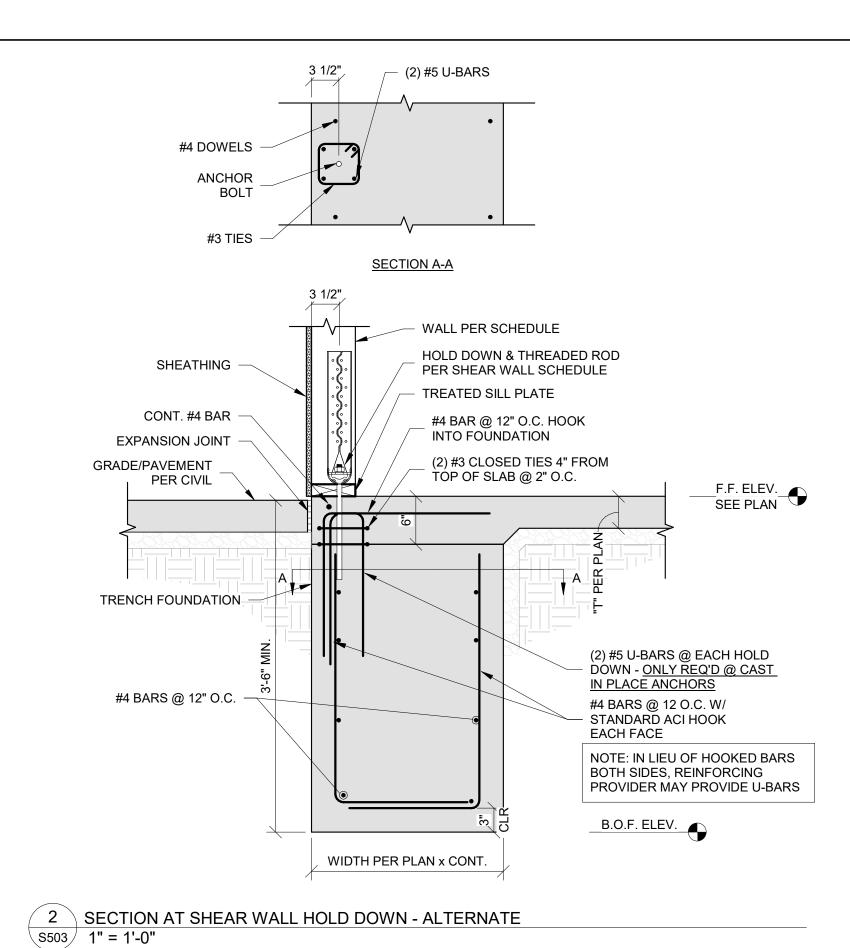
JONE

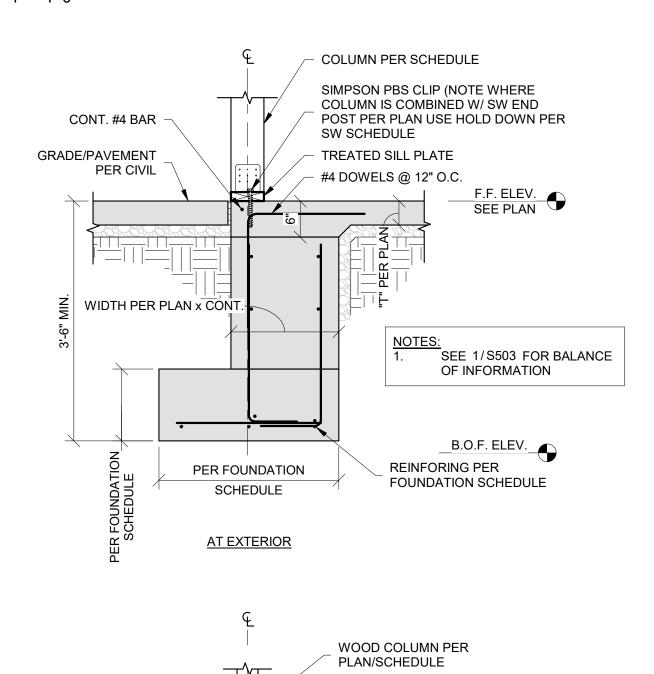
GILLAM ESIDENCI

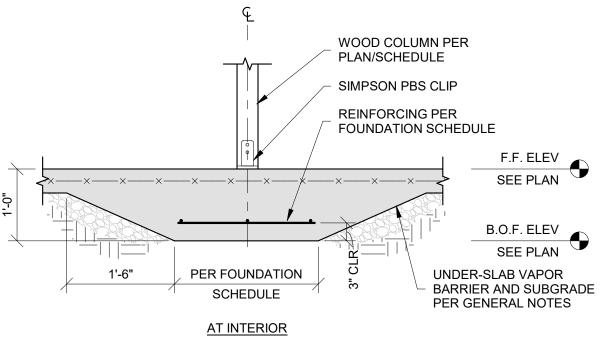
TAIL DE ATION OUND,



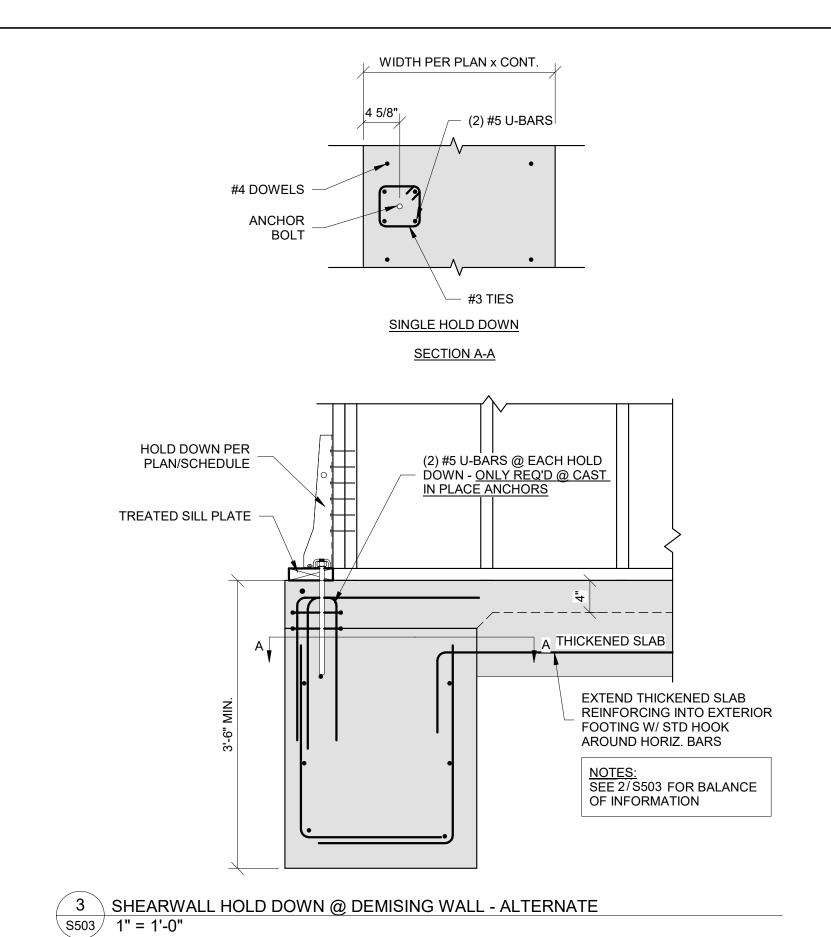


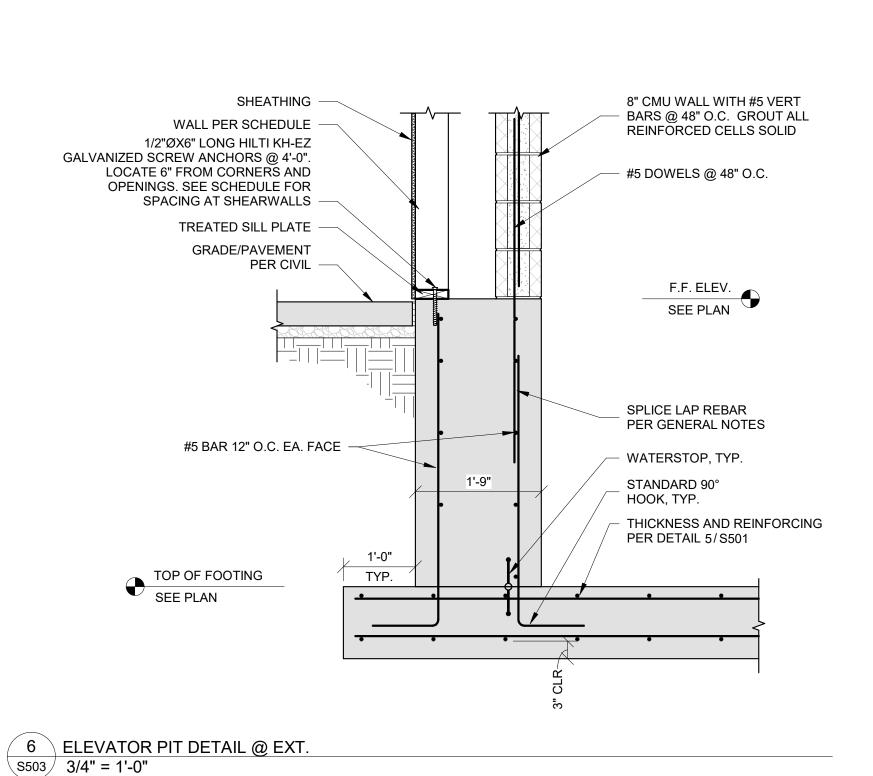


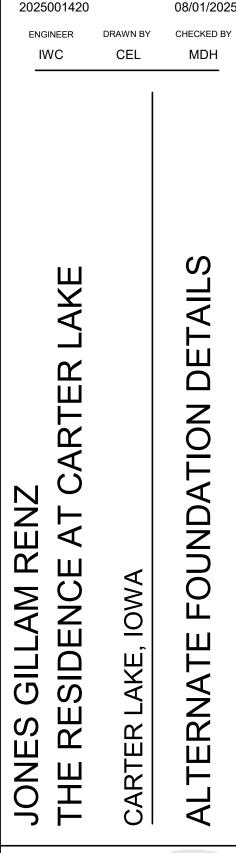












1901 Pennsylvania Drive Columbia, MO 65202 P 573-814-1568

NOTICE:

McClure Engineering Co. is not

responsible or liable for any issues,

claims, damages, or losses (collectively

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

> HIMMELBERG 24622

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.

SET ISSUE DATE

08/01/2025

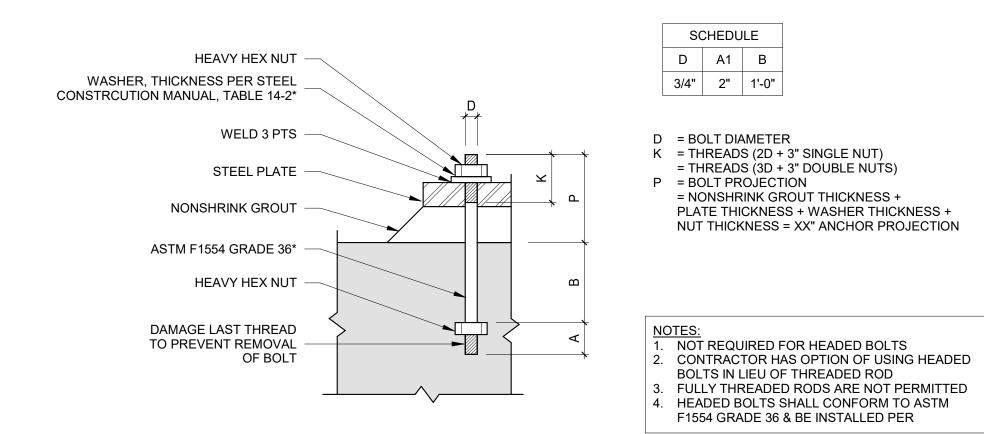
MDH

OUND,

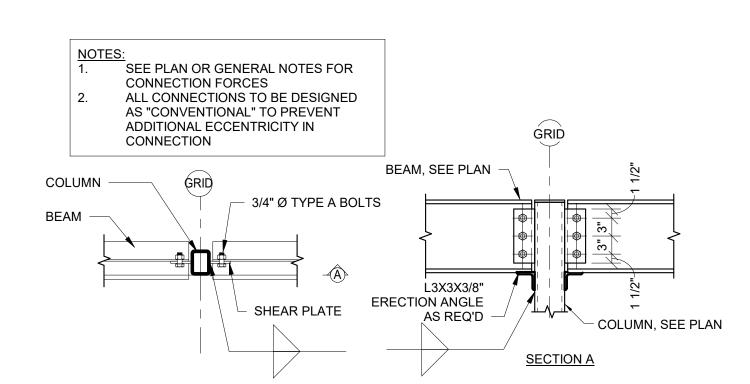
ERNATE

PROJECT NUMBER

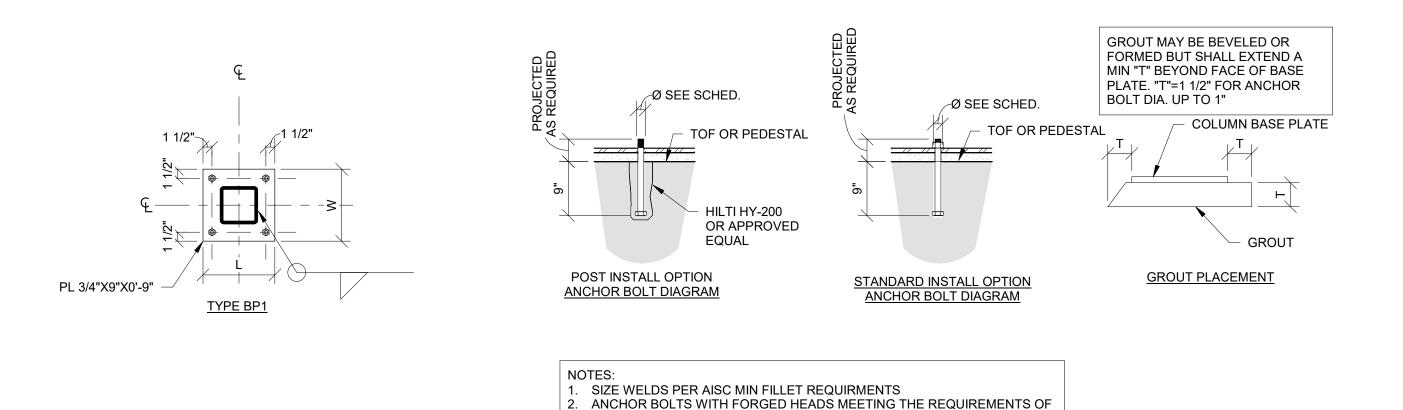
'Losses") which arise from failure to follow



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



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



ASTM A307 MAY BE SUBMITED FOR 3/4"Ø ANCHOR BOLTS

2 COLUMN BASE PLATE \$504 3/4" = 1'-0"



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,

IOWA CERTIFICATE OF AUTHORITY NO. 26887

ambiguities, or conflicts contained within

the Plans or Specifications.



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

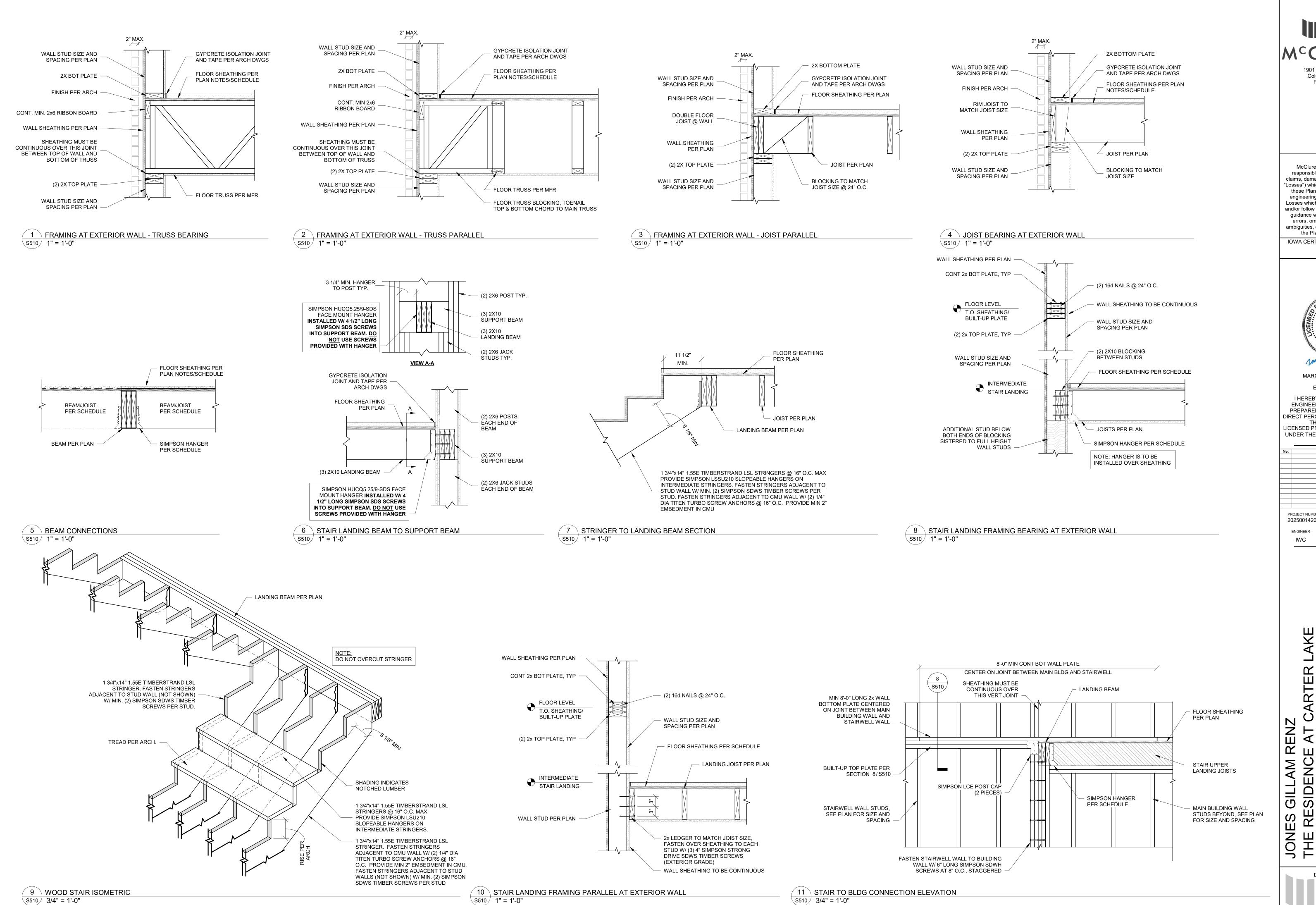
THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.

No.	Description			Date	
	ROJECT NUMBE 025001420	R		SUE DATE 01/2025	
	FNONEED	DD AVAIL DV	01.15	01/55 51/	

CEL

DETAILS

TYPICAL



1901 Pennsylvania Drive Columbia, MO 65202 P 573-814-1568

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.

NO. 26887

IOWA CERTIFICATE OF AUTHORITY

HIMMELBERG

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

I HEREBY CERTIFY THAT THIS **ENGINEERING DOCUMENT WAS**

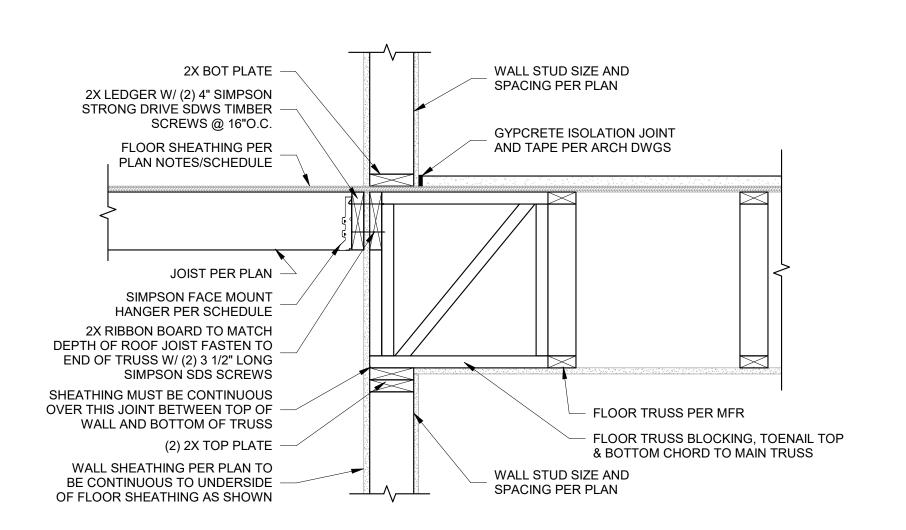
PREPARED BY ME OR UNDER MY THAT I AM A DULY

DIRECT PERSONAL SUPERVISION AND LICENSED PROFESSIONAL ENGINEER

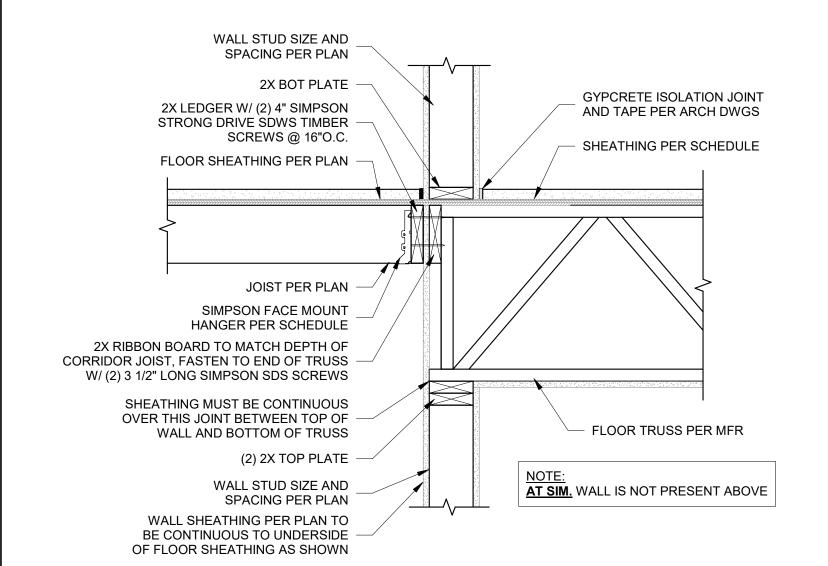
	UNDER THE LAWS OF THE STATE OF IOWA.					
N	lo.	Description			Date	
	PROJECT NUMBER 2025001420			SET ISSUE DATE 08/01/2025		
	ENGINEER		DRAWN BY	CHE	CKED BY	
		IWC	CEL	N	ИDH	

DRAWING NO.

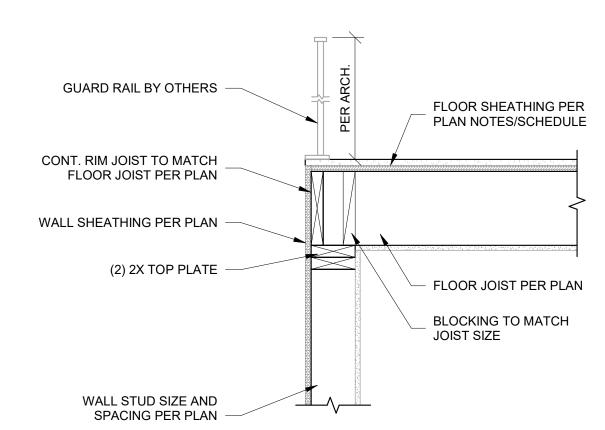
S510



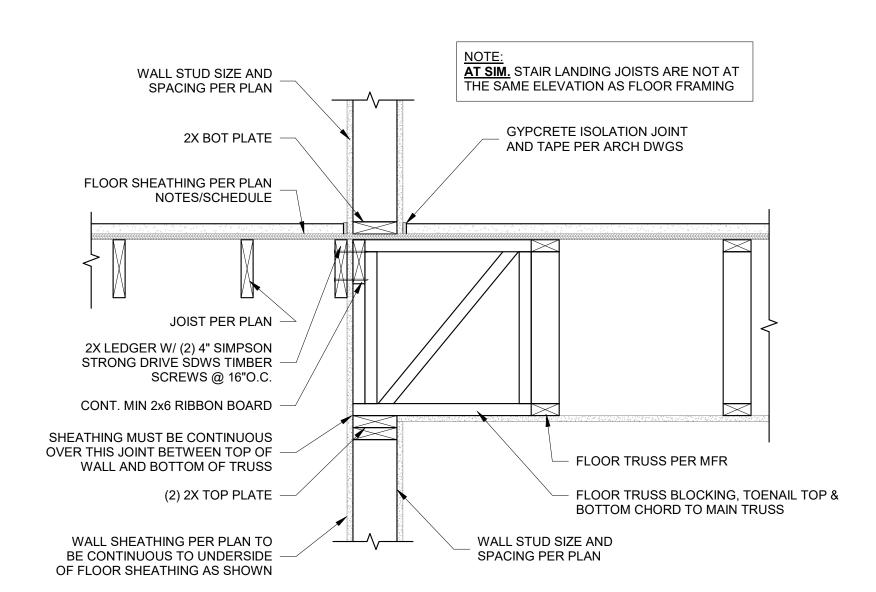
1 FRAMING AT LOW ROOF



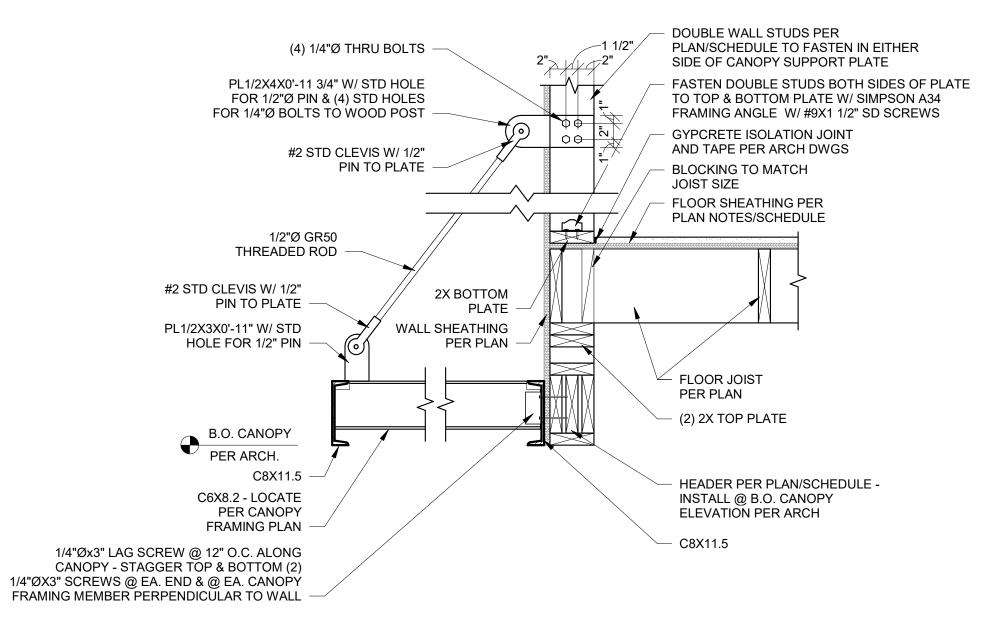
4 TRUSS TO JOIST TRANSITION - BEARING S511 1" = 1'-0"



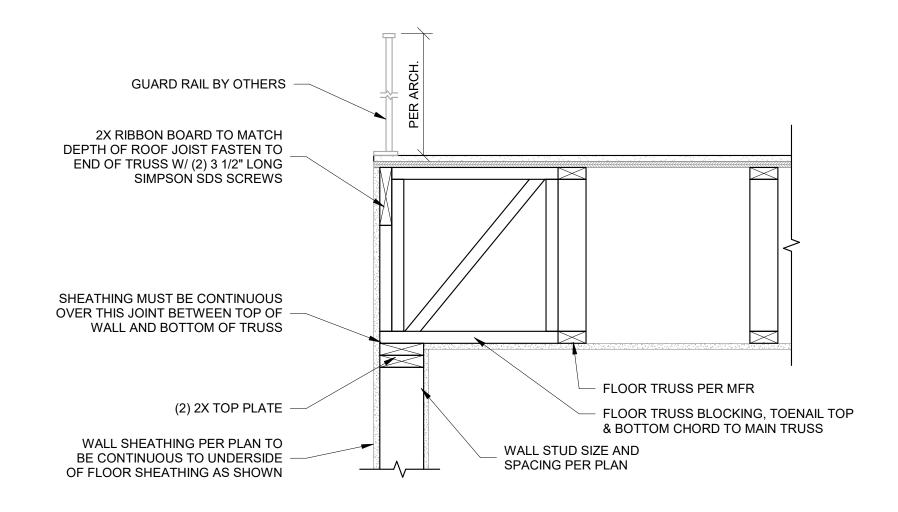
7 JOISTS BEARING AT GUARD RAIL S511 | 1" = 1'-0"



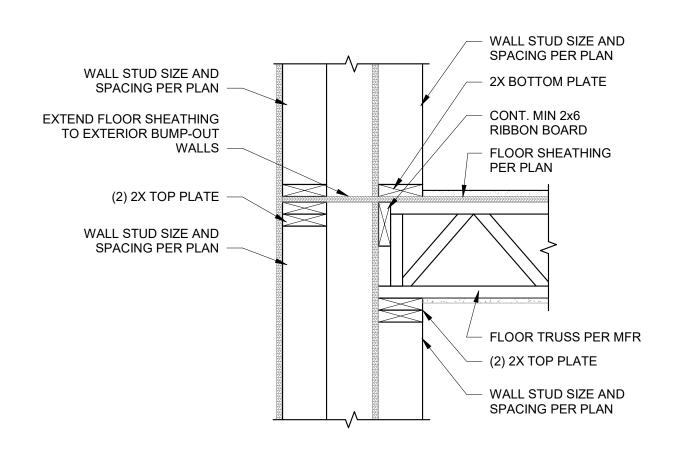
2 FRAMING AT INTERIOR WALL \S511 \ 1" = 1'-0"



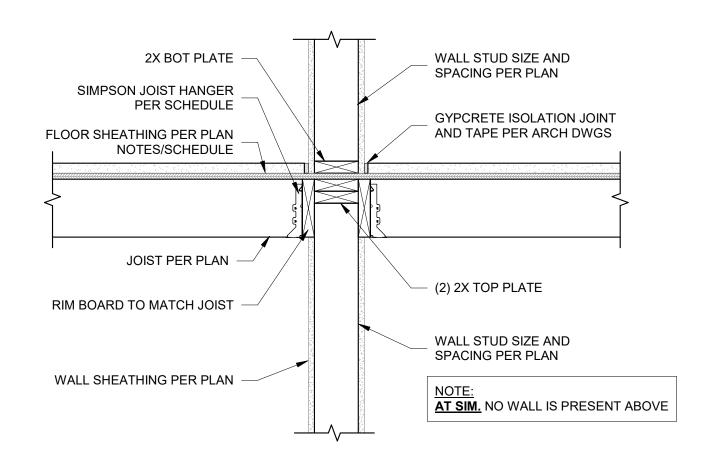
5 CANOPY AT INSET S511 1" = 1'-0"



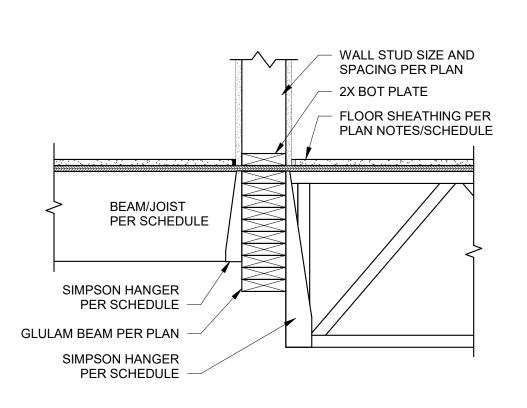
8 FLOOR JOIST PARALLEL TO GUARD RAIL S511 1" = 1'-0"



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



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



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



1901 Pennsylvania Drive Columbia, MO 65202 P 573-814-1568 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



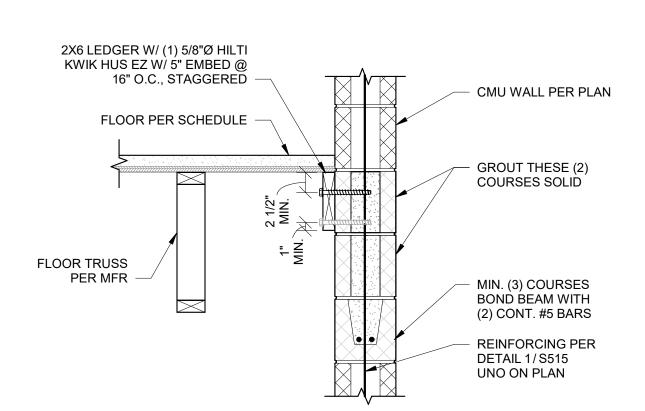
NO. P24622 EXP. 12/31/2025

I HEREBY CERTIFY THAT THIS **ENGINEERING DOCUMENT WAS** PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY

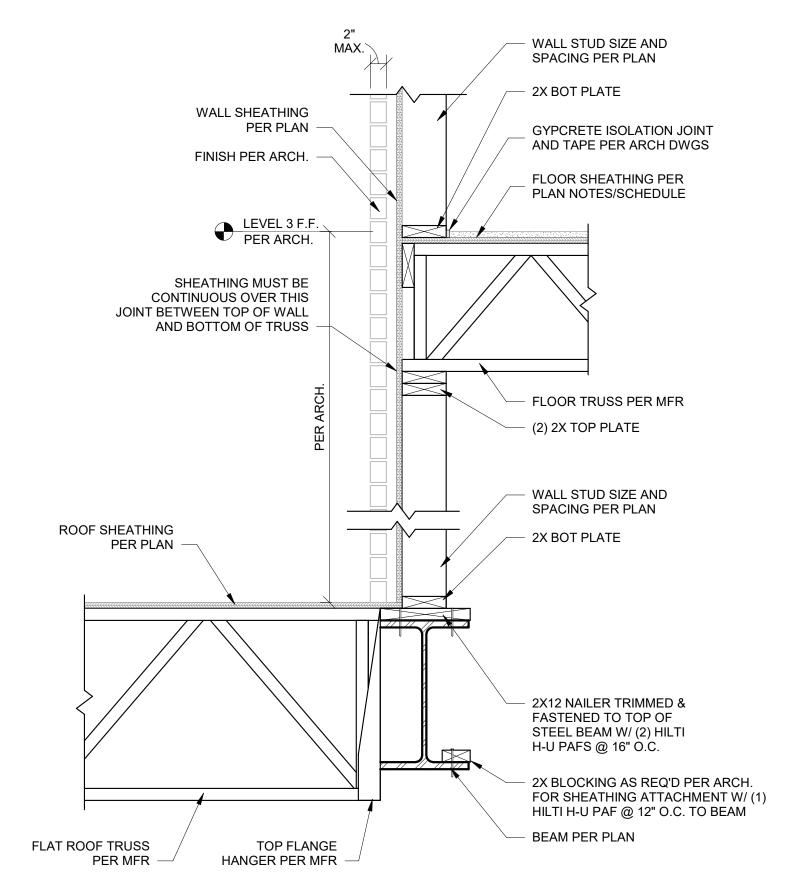
LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.

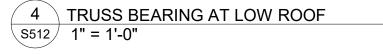
PROJECT NUMBER SE				SET ISSUE DATE			
	2025001420		08/01/2025				
2023001420			06/0	1/2025			
ENGINEER		DRAWN BY	CHECKED BY				
	IWC	CEL	MDH				
	1						

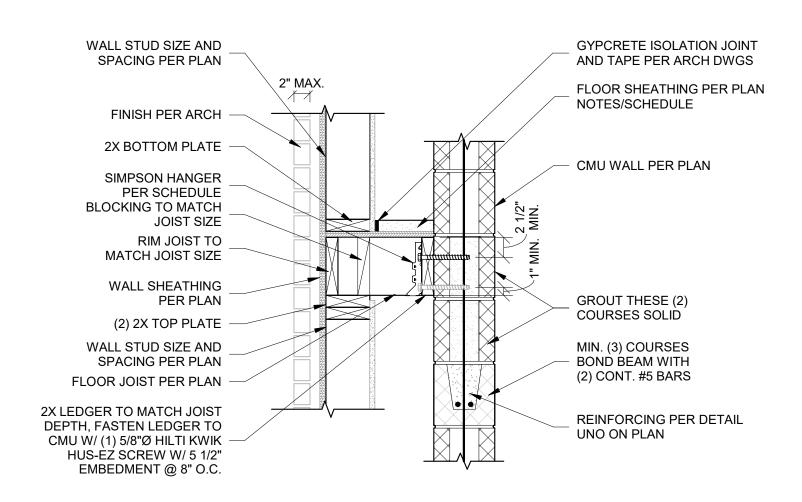
S



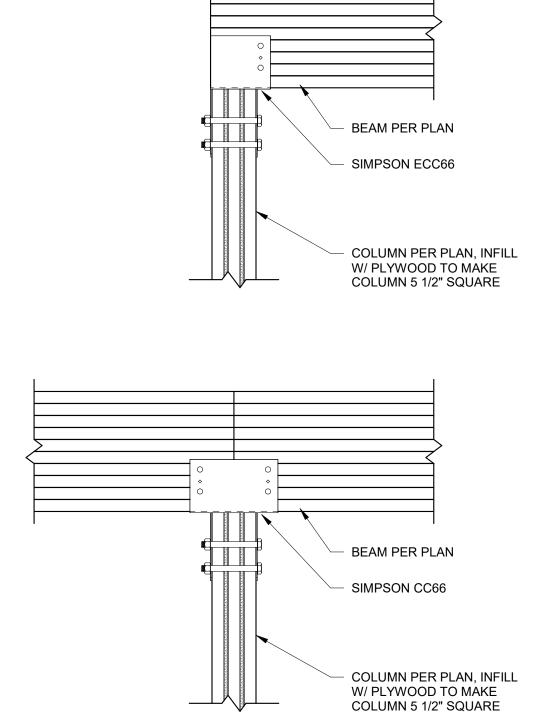
1 FLOOR TRUSS PARALLEL TO CMU S512 1" = 1'-0"



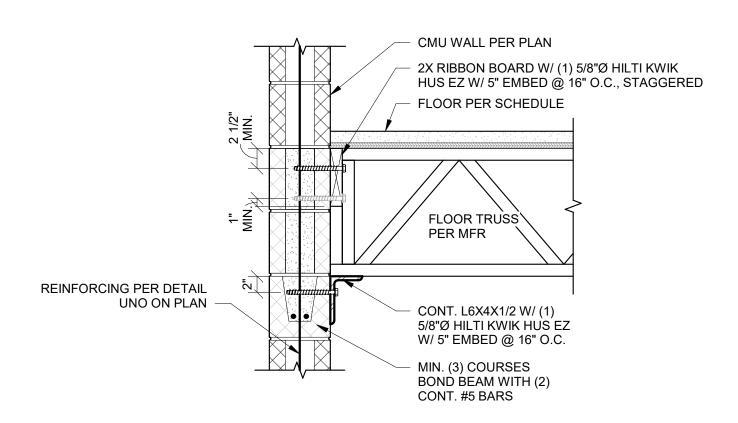




2 FLOOR JOIST BEARING AT CMU S512 1" = 1'-0"



5 WOOD BEAM TO COLUMN S512 1" = 1'-0"



3 FLOOR FRAMING BEARING AT CMU S512 1" = 1'-0"



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

IOWA CERTIFICATE OF AUTHORITY NO. 26887

the Plans or Specifications.



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.

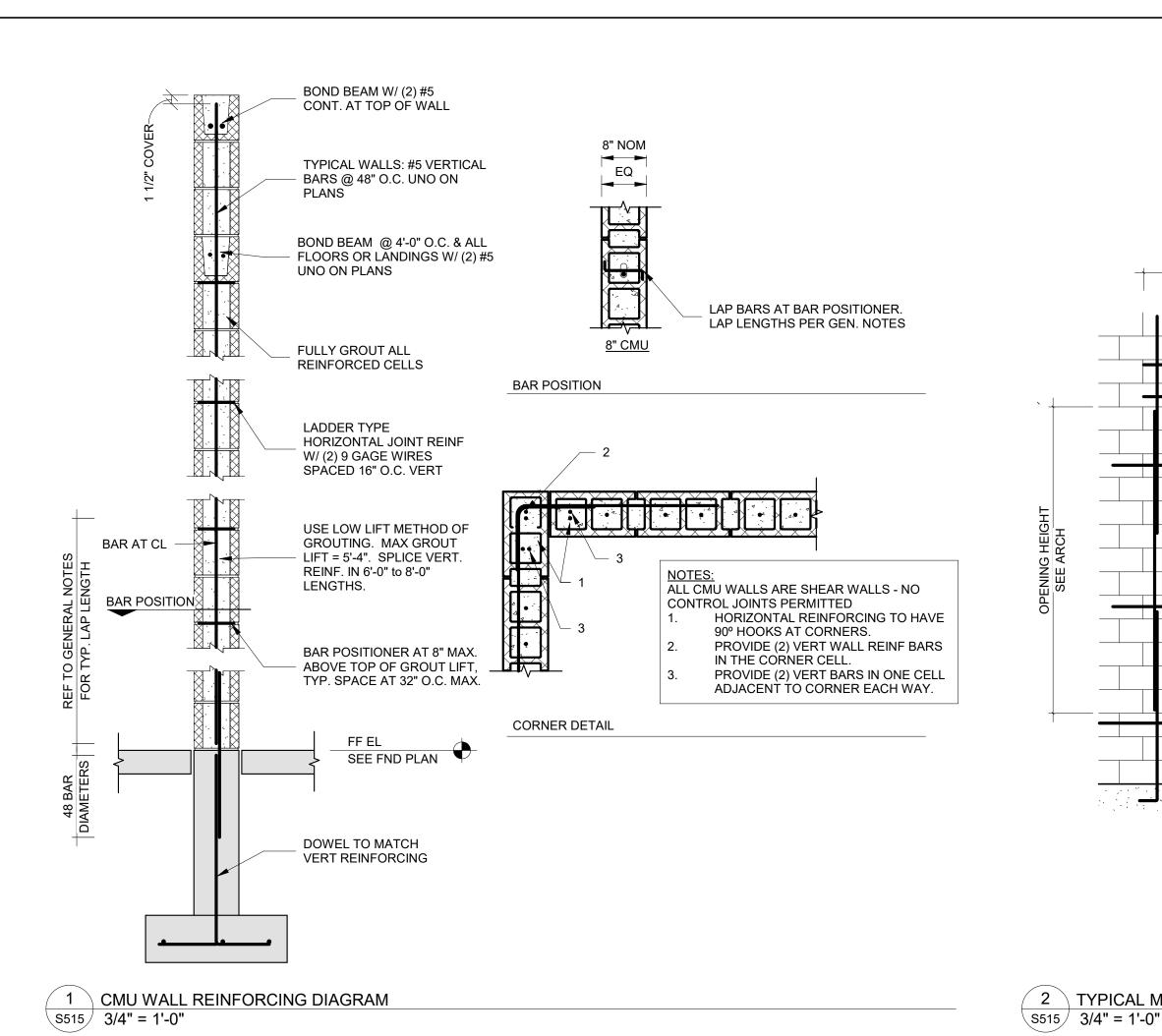
PROJECT NUMBER SET ISSUE DATE 2025001420 08/01/2025 DRAWN BY CHECKED BY ENGINEER CEL IWC MDH

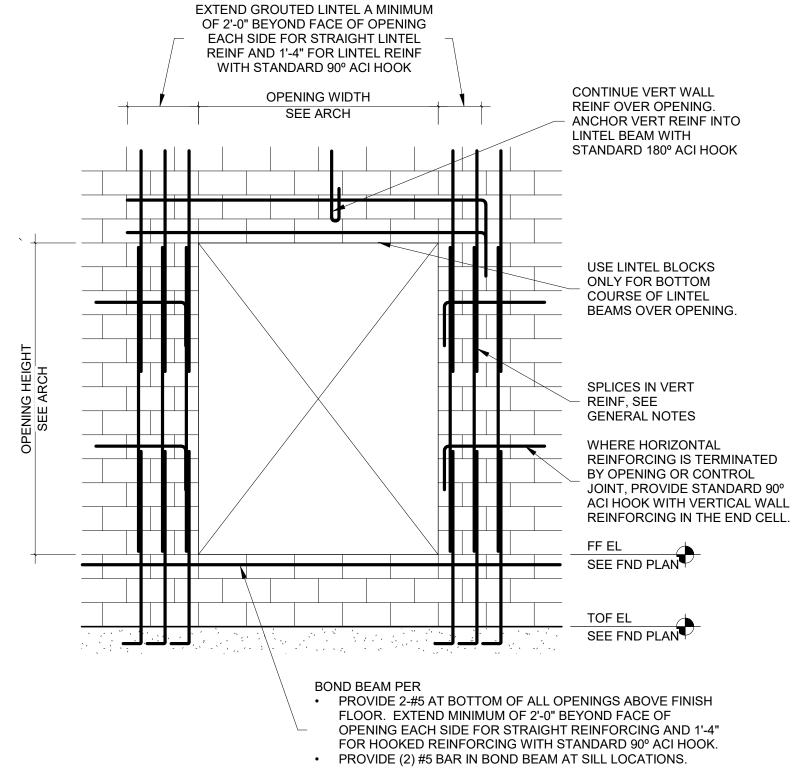
GILLAM ESIDENCI

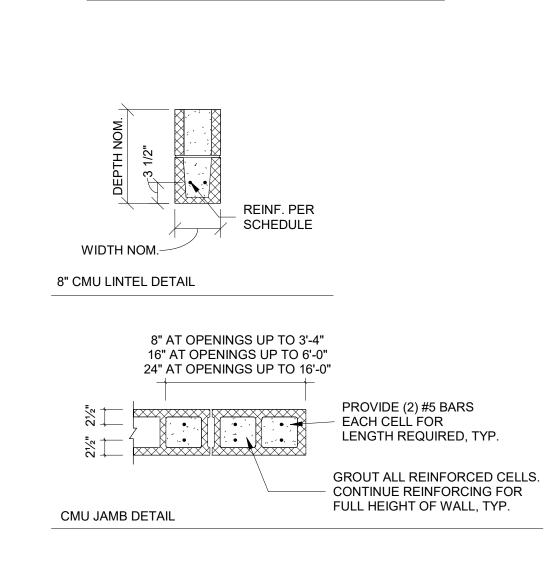
RENZ

S TAIL **FRAMING**

JONES DRAWING NO. S512



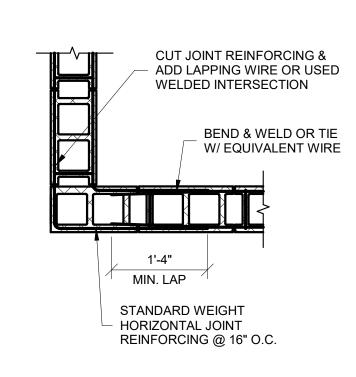




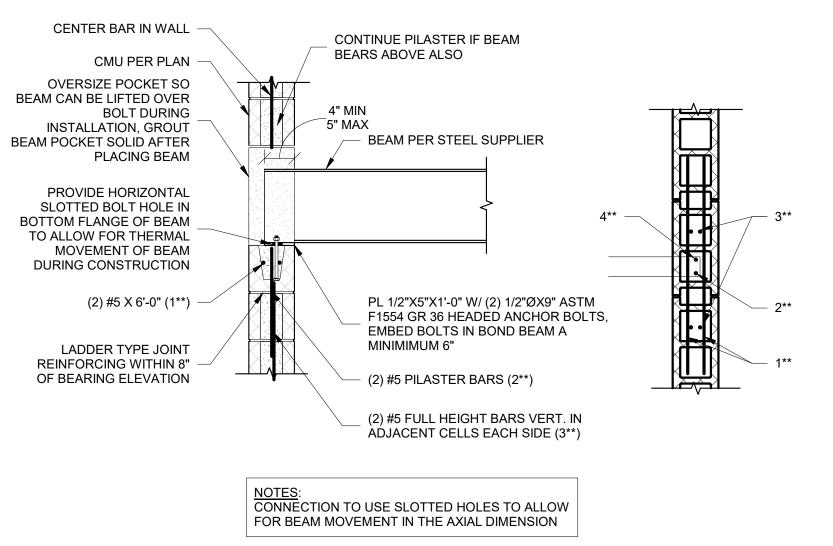
CMU LINTEL SCHEDULE

MARK WIDTH DEPTH REINFORCING STIRRUPS

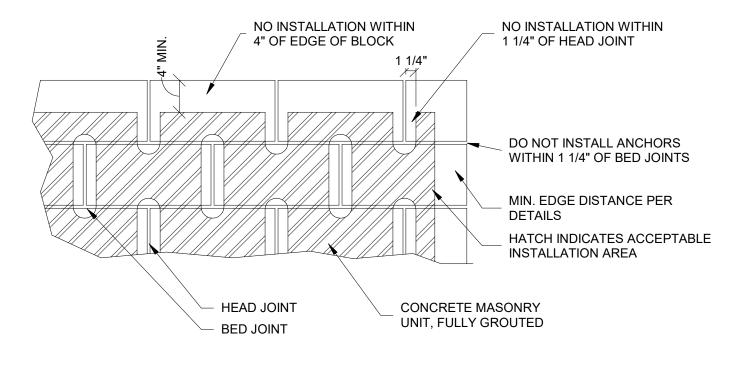
ALL 8" 16" (2) #5



3 JOINT REINFORCING AT INTERSECTING CMU WALLS
S515 3/4" = 1'-0"







2 TYPICAL MASONRY OPENING DIAGRAM & SCHEDULE

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



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

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

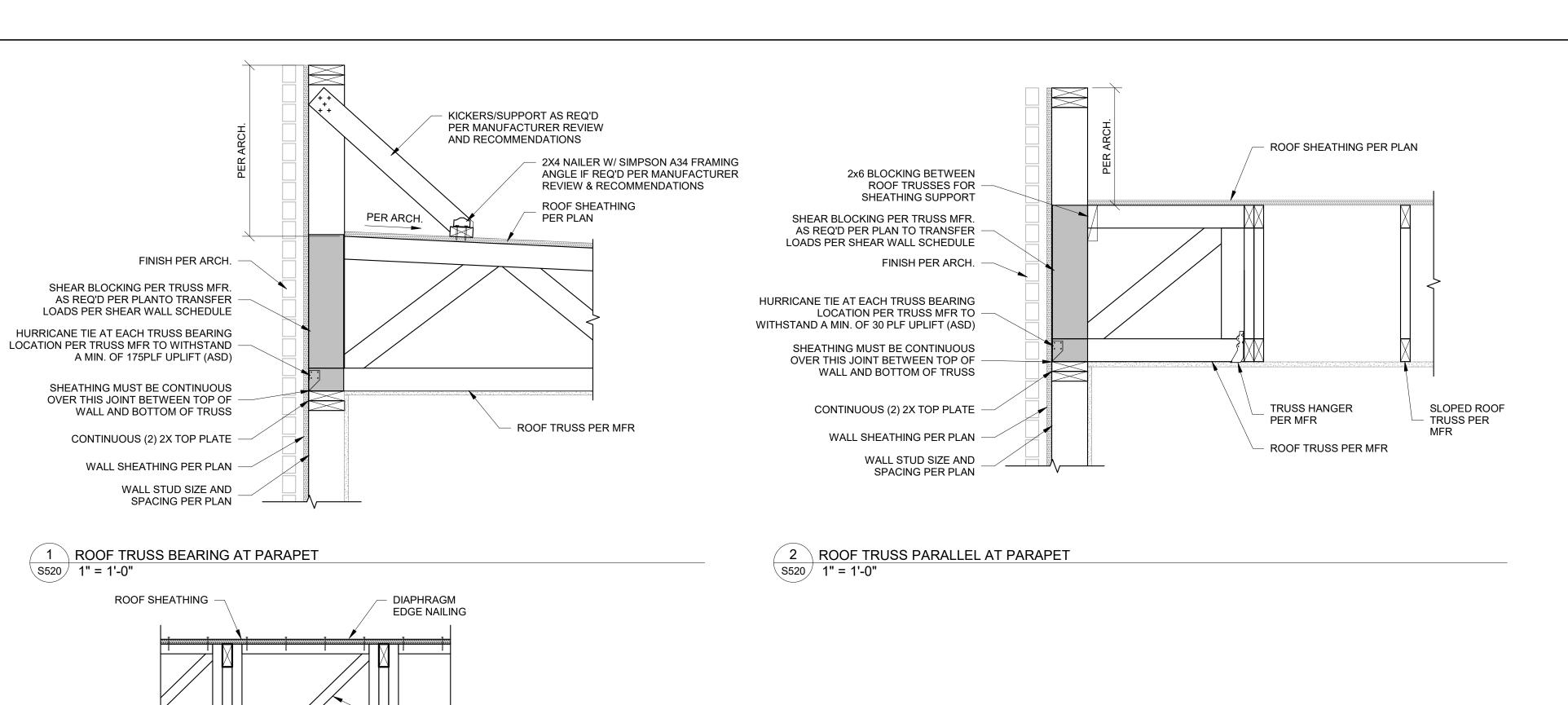
I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL AS DERVISION AND

THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF

No. Description Date

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

MASONRY DETA



TRUSS BLOCKING BY

TRANSFER LOAD PER

SEE 1/S520 FOR BALANCE OF INFORMATION

ROOF SHEATHING PER PLAN

ROOF TRUSS PER MFR

HURRICANE TIE AT EACH TRUSS BEARING LOCATION PER TRUSS MFR TO WITHSTAND A MIN. OF

175PLF UPLIFT (ASD)

TRUSS MFR, MUST

ROOF PLAN

CLIPS BY TRUSS MFR

NOTE: TRUSS MFR MUST DESIGN

PER ARCH.

+ +

BLOCKING TO TRANSFER

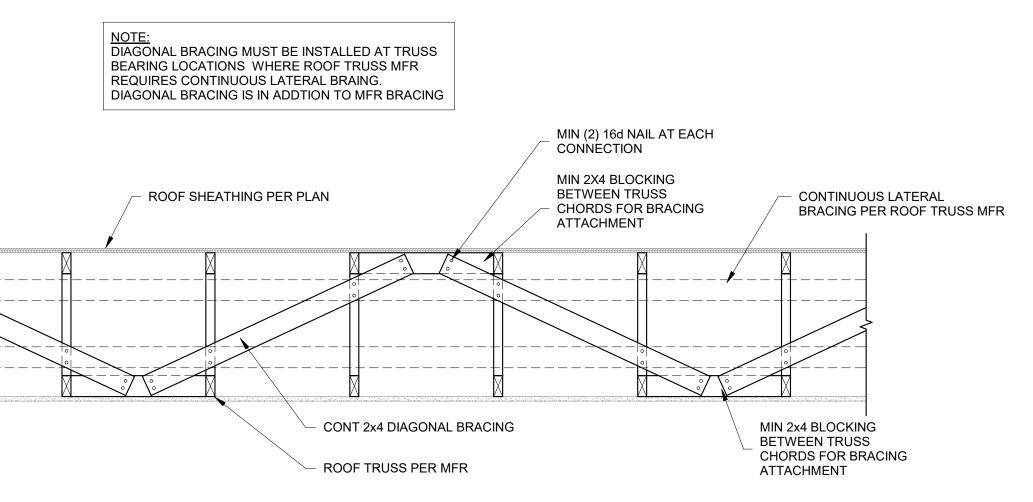
LOAD PER ROOF PLAN

CLIP BY TRUSS MFR

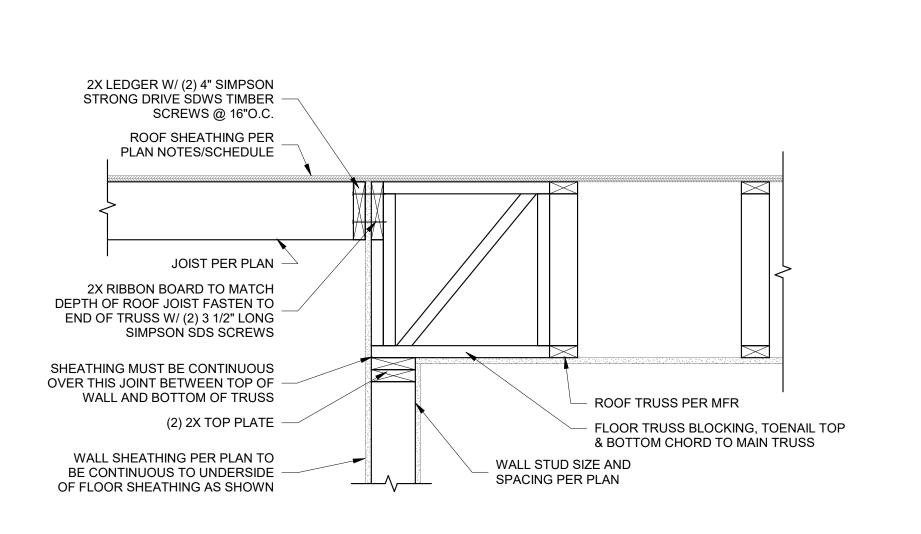
TRUSS BEARING

GABLE TRUSS

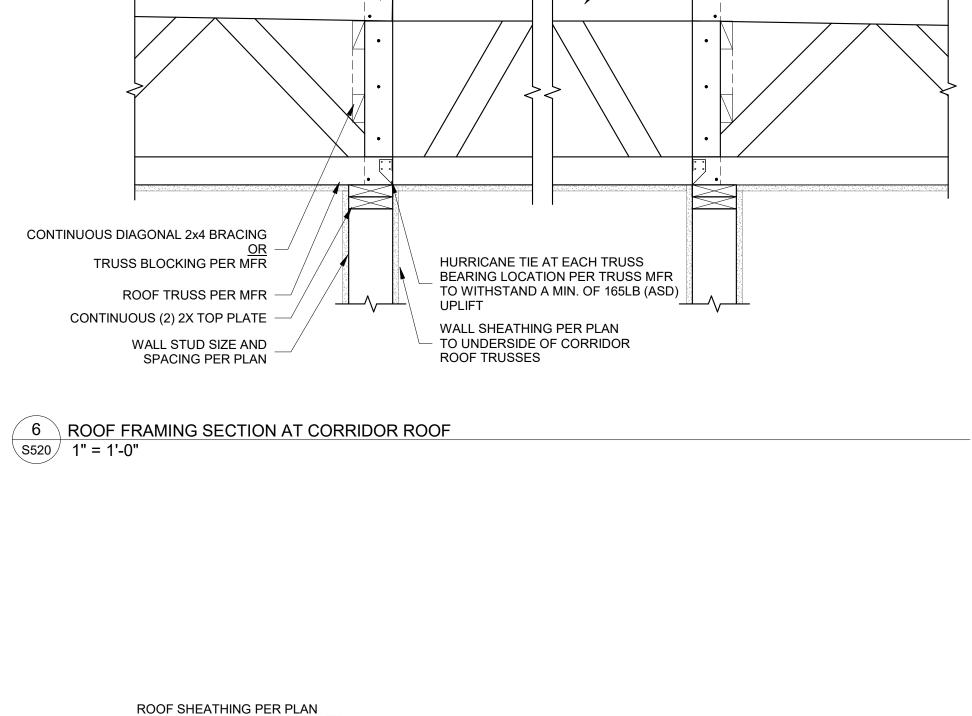
4 TRUSS BLOCKING WHERE TRUSSES ARE PERPENDICULAR TO SHEAR WALLS











 LAP CORRIDOR ROOF TRUSSES TO MAIN **ROOF TRUSSES**

2X6 BLOCKING BETWEEN

TRUSS BOTTOM CHORDS

ROOF TRUSS

BOTTOM CHORD

@ 48" O.C.

WALL PARALLEL TO TRUSSES

ROOF TRUSS PER MFR

- ROOF TRUSS PER MFR

WALL STUD SIZE AND

SPACING PER PLAN

ROOF SHEATHING PER PLAN

SIMPSON DTC @

ROOF TRUSS

TOP PLATE

PARTITION WALL

EACH TRUSS

WALL PERPENDICULAR TO TRUSSES

NON-BEARING PARTITION WALL AT ROOF TRUSS



SIMPSON DTC

PARTITION WALL

TOP PLATE

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

IOWA CERTIFICATE OF AUTHORITY NO. 26887

the Plans or Specifications.

HIMMELBERG

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. PROJECT NUMBER SET ISSUE DATE 2025001420 08/01/2025 CHECKED BY

CEL MDH

囯

RENZ

GILLAM

JONE

ENC

SID

DRAWING NO. S520

ROOF JOIST PARALLEL/ROOF TRUSS BEARING AT WALL

NOTES/SCHEDULE

ROOF JOIST PER PLAN

SCREWS @ 16"O.C.

(2) 2X TOP PLATE

2X LEDGER W/ (2) 4" SIMPSON

STRONG DRIVE SÓWS TIMBER

CONT. MIN 2x6 RIBBON BOARD

WALL AND BOTTOM OF TRUSS

WALL SHEATHING PER PLAN TO

BE CONTINUOUS TO UNDERSIDE

OF FLOOR SHEATHING AS SHOWN

SHEATHING MUST BE CONTINUOUS

OVER THIS JOINT BETWEEN TOP OF

7 ROOF FRAMING AT BUMP OUT S520 1" = 1'-0"

DOUBLE TOP PLATE

TRUSS BOTTOM

S520 1" = 1'-0"

2X4 BRACE @ EA. WALL

STUD W/ (3) 10d NAILS TO

EACH WALL STUD & EACH

ROOF TRUSS

LAP STUDS TO

ROOF TRUSSES

(2) 2X TOP PLATE

2X4 BRACE @ EA. WALL STUD W/ (3) 10d NAILS

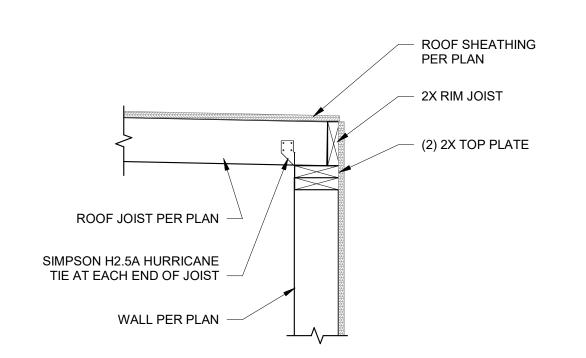
TO EACH WALL STUD

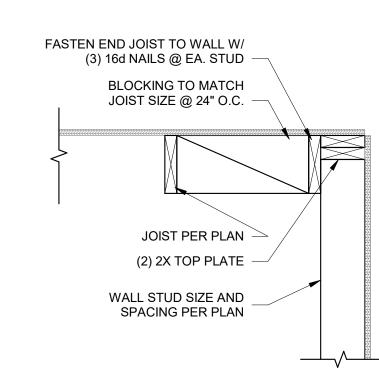
WALL STUD SIZE AND

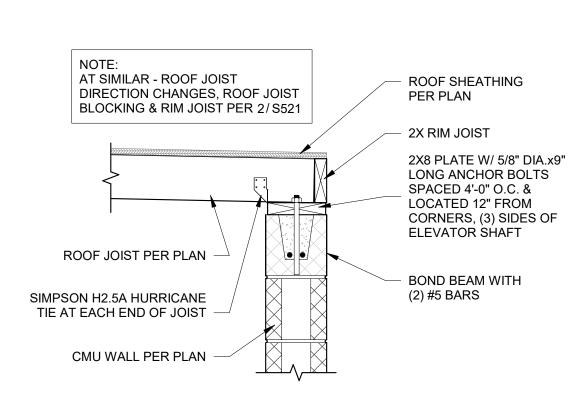
SPACING PER PLAN

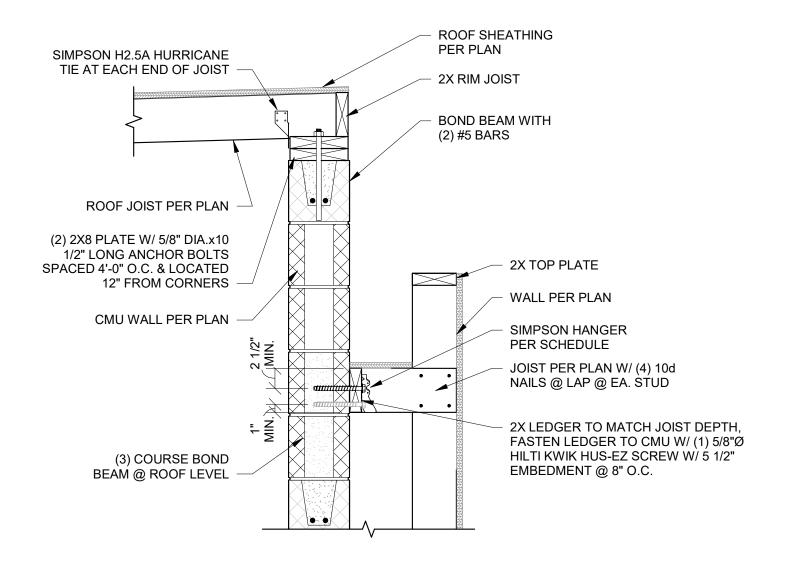
CHORD

DOUBLE TOP PLATE









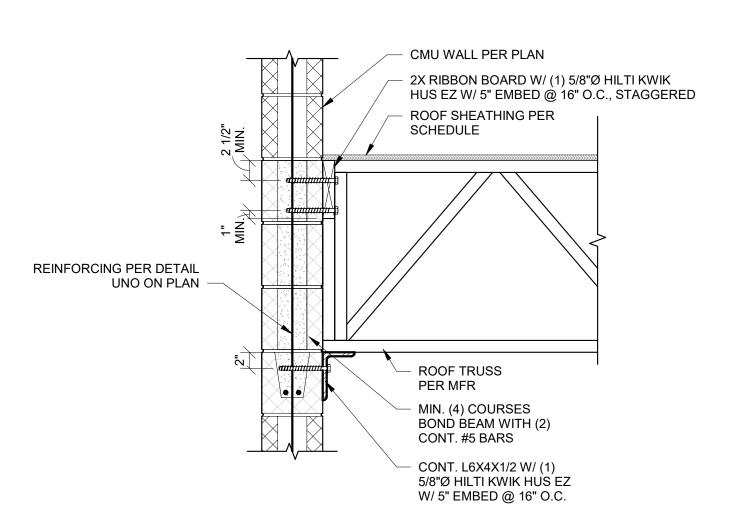


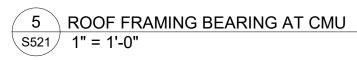
2 ROOF JOIST PARALLEL TO EXTERIOR WALL

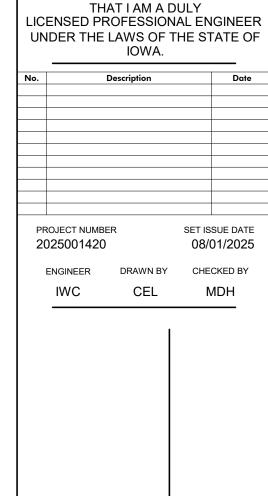
S521 1" = 1'-0"











1901 Pennsylvania Drive Columbia, MO 65202 P 573-814-1568

NOTICE:

McClure Engineering Co. is not responsible or liable for any issues,

claims, damages, or losses (collectively,

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

HIMMELBERG

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

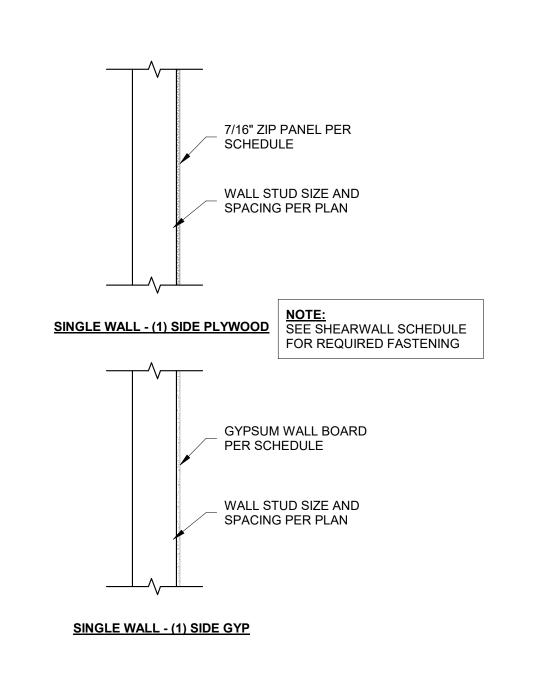
"Losses") which arise from failure to follow

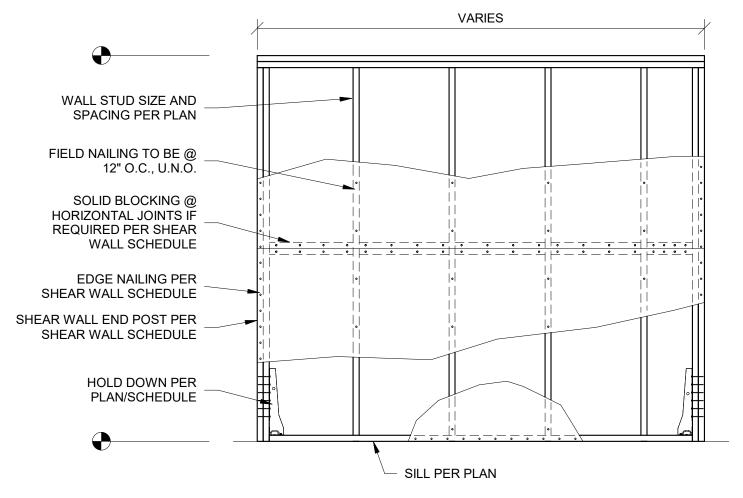


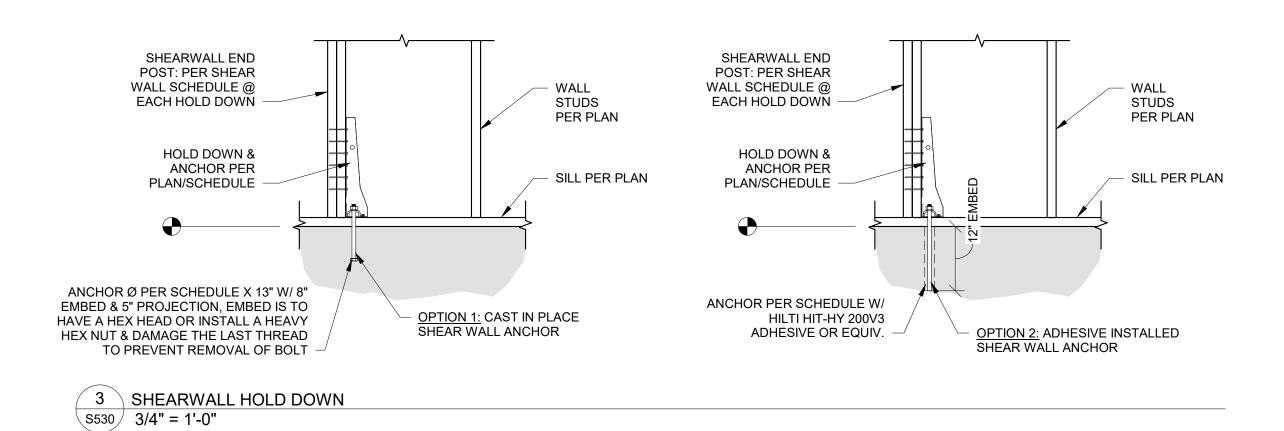
DRAWING NO.

DETAILS

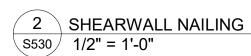
OF

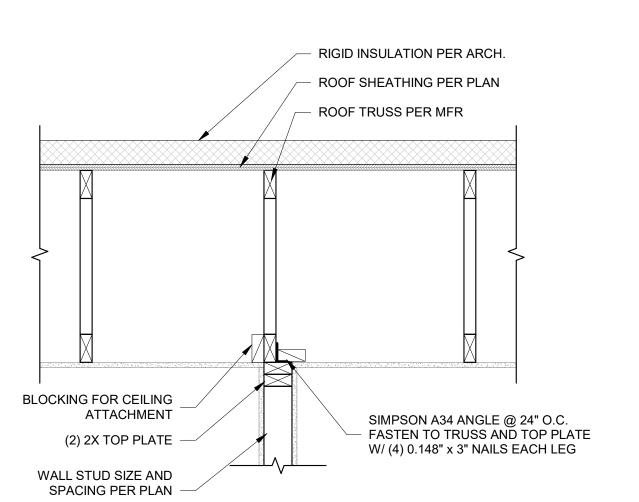


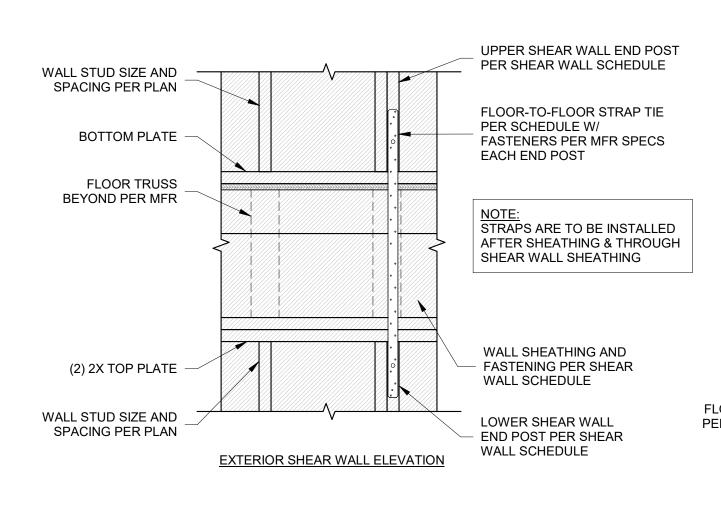


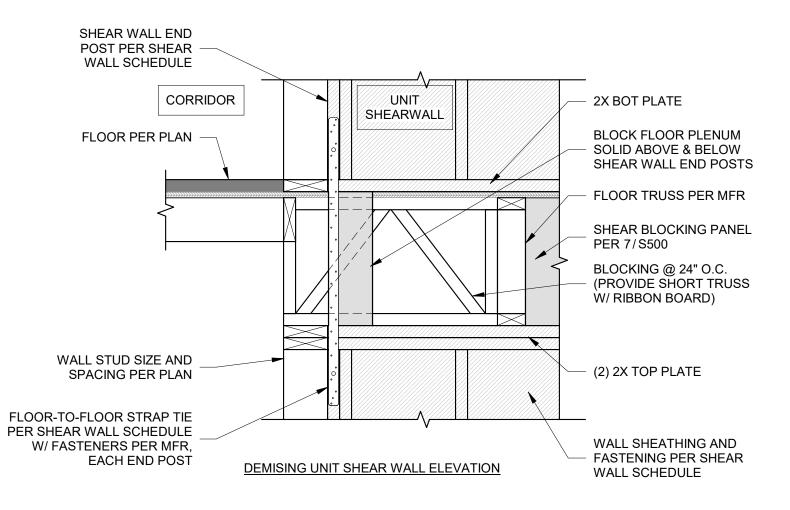


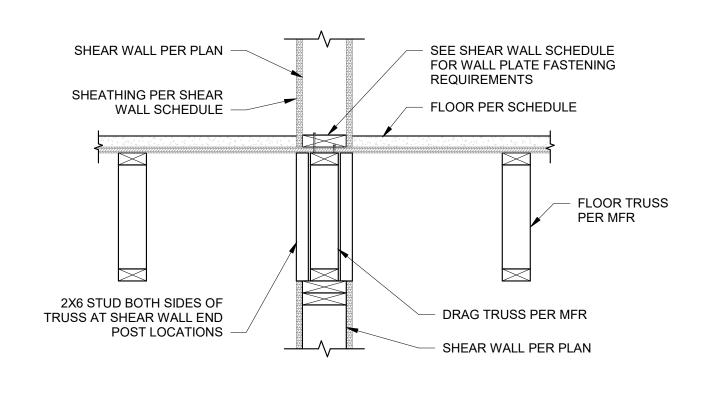




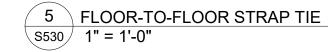








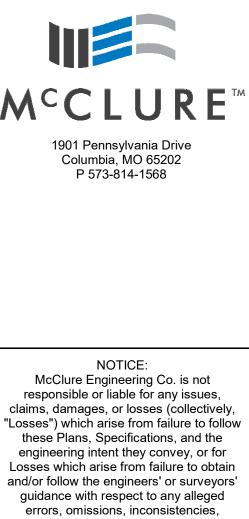
4 ROOF DRAG TRUSS SECTION AT SHEAR WALL S530 1" = 1'-0"





ARTER RENZ GILLAM ESIDENCI JONE

DRAWING NO. S530



ambiguities, or conflicts contained within the Plans or Specifications. IOWA CERTIFICATE OF AUTHORITY

NO. 26887



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. SET ISSUE DATE PROJECT NUMBER 2025001420 08/01/2025 DRAWN BY CHECKED BY

CEL MDH

TAIL