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SPECIAL INSPECTIONS			
1.	Special Inspections shall be performed in accordance with Section 1705 of 2021 IBC. An independent testing agency shall be employed to provide Special Inspections during construction on the types of work listed under Section 1705. The following areas of work require Special Inspections in accordance with 2021 IBC.		
2.	Refer to project specification for additional quality control/quality assurance requirements.		
3.	Construction Manager/Contractor shall coordinate any additional Special Inspection requirements with the Owner and applicable building authorities.		
4.	Special Inspections are not the responsibility of the Structural Engineer of Record.		
5.	Special Inspections shall be paid for directly by the Construction Manager.		
6.	Copies of all Special Inspections Reports shall be emailed to the SEOR Andrew Deschenes, P.E., (asd@tswstructural.com) or their designate within seven (7) calendar days of completing the individual inspection(s).		

MASONRY CONSTRUCTION			
(IBC 1705.4)			
PRIOR TO CONSTRUCTION (ARTICLE 1.5, TMS 602-16)			
Verification & Inspection	Continuous	Periodic	Detailed Instructions
Review material certificates, mix designs, test results and construction procedures	-----	X	Verify materials conform to requirements of approved construction documents. Mix design, test results, material certificates, and construction procedures submitted for review. Mortar mix designs conform to ASTM C 270; grout conforms to ASTM C 476. Material certificates provided for: reinforcement; anchors, ties, fasteners, and metal accessories; masonry units; mortar and grout materials. Construction procedures for cold-weather or hot-weather construction reviewed. Qualification of field testing personnel, and special inspector reviewed.

AS CONSTRUCTION BEGINS (TABLE 4, TMS 602-16)			
Verification & Inspection	Continuous	Periodic	Detailed Instructions
Proportions of site-prepared mortar	-----	X	Verify mortar is type and color specified on construction documents, conforms to ASTM C 270, and is mixed in accordance with Article 2.6 A and Article 2.6 C of TMS 602-16.
Grade, type, and size of reinforcement, connectors, anchor bolts, and prestressing tendons and anchorages	-----	X	Verify reinforcement is placed in accordance with Article 3.4 of TMS 602-16. Prestressing tendons placed per Article 3.6 A.
Sample panel construction	-----	X	Verify sample panel complies with Article 1.6 D of TMS 602-16.

DURING MASONRY CONSTRUCTION (TABLE 4, TMS 602-16)			
Verification & Inspection	Continuous	Periodic	Detailed Instructions
Size and location of structural elements	-----	X	Verify locations of structural elements comply with approved plans. Confirm tolerances meet the requirements of Article 3.3 F of TMS 602-16.
Type, size, and location of anchors, including other details of anchorage of masonry to structural members, frames, or other construction.	-----	X	Verify anchorages and connections are provided per approved plans, Section 1.2.1(e), 6.1.4.3, and 6.2.1 of TMS 602-16. Continuous inspection required for Risk Category IV buildings.
Welding of reinforcement	X	-----	Verify welded splice has bars butted and welded to develop at least 125% of yield strength of bar in tension or compression. See Section 6.1.8.1.2 of TMS 602-16.
Preparation, construction, and protection of masonry during cold weather (<40°F) or hot weather (>90°F).	-----	X	Verify cold-weather construction performed in accordance with Article 1.8 C of TMS 602-16 and hot weather construction per Article 1.8 D of TMS 602-16.
Observation of preparation of grout specimens, mortar specimens, and/or prisms	-----	X	Confirm specimen/prism preparation performed as required by Article 1.4 of TMS 602-16. Continuous inspection is required for Risk Category IV buildings.
Placement of masonry unit and construction of mortar joints	-----	X	Verify placement in accordance with Article 3.3 B of TMS 602-16.
Materials and procedures with the approved submittals	-----	X	Verify materials and procedures conform to approved submittals. See Article 1.5 of TMS 602-16.

PRIOR TO GROUTING (TABLE 4, TMS 602-16)			
Verification & Inspection	Continuous	Periodic	Detailed Instructions
Grout space	-----	X	Verify grout space is free of mortar droppings, debris, loose aggregate, and other deleterious materials and cleanouts are provided per Article 3.2 D and 3.2 F of TMS 602-16. Continuous inspection is required for Risk Category IV buildings.
Placement of reinforcement, connectors, and anchor bolts	-----	X	Verify reinforcement, joint reinforcement, wall ties, anchor bolts and veneer anchors are installed in accordance with the approved construction documents, Section 6.1, 6.3.1, 6.3.6, and 6.3.7 of TMS 402-16, and Articles 3.2 E, and 3.4 of TMS 602-16. Continuous inspection is required for Risk Category IV buildings.
Proportions of site-prepared grout	-----	X	Verify grout is proportioned per ASTM C 476 and has a slump between 8-11 inches. Self-consolidated grout shall not be proportioned onsite.

MINIMUM TESTING (TABLE 3, TMS 602-16)			
Verification & Inspection	Continuous	Periodic	Detailed Instructions
Verification of slump flow and Visual Stability Index (VSI) for self-consolidating grout	-----	X	Compressive strength tests should be performed in accordance with ASTM C 1019; slump flow and VSI performed in accordance with ASTM C 1611.
Verification of fm and fAAC	-----	X	Determine compressive strength for each wythe by "unit strength method" or by the "prism test method" as specified in Article 1.4 B of TMS 602-16 prior to construction. For Risk Category IV buildings this should be verified at every 5,000 sq. ft. of construction.
Verification of proportions of materials in grout and premixed or preblended mortar	-----	X	Verify that proportions for mortar meet ASTM C 270 and proportions for grout meet ASTM C 476. This applies to Risk Category IV buildings only.

TYPICAL STRUCTURAL ABBREVIATIONS					
A.R.	ANCHOR ROD	FDN	FOUNDATION	PED	PEDESTAL
ACI	AMERICAN CONCRETE INSTITUTE	FIN	FINISH	PL	PLATE
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION	FLR	FLOOR	PLF	POUNDS PER FOOT
ARCH	ARCHITECT	FTG	FOOTING	PROJ	PROJECTION
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS	GA	GAUGE	PSF	POUNDS PER SQUARE FOOT
BLDG	BUILDING	GALV	GALVANIZED	PSI	POUNDS PER SQUARE INCH
BM	BEAM	H.S.A.	HEADED STUD ANCHOR	R	RADIUS
BOTT	BOTTOM	HK	HOOK	REINF	REINFORCEMENT
BRG	BEARING	HORIZ	HORIZONTAL	REQ'D	REQUIRED
BTWN	BETWEEN	J.B.E.	JOIST BEARING ELEVATION	RTU	ROOF TOP UNIT
CFS	COLD-FORMED STEEL	JST	JOIST	S.O.G.	SLAB ON GRADE
CL	CENTER LINE	JT	JOINT	SCHED	SCHEDULE
CLR	CLEAR	L	ANGLE	SECT	SECTION
COL	COLUMN	LDH	LONG DIMENSION HORIZONTAL	SEOR	STRUCTURAL ENGINEER OF RECORD
CONC	CONCRETE	LDV	LONG DIMENSION VERTICAL	SIM	SIMILAR
CONN	CONNECTION	LG	LONG	SJI	STEEL JOIST INSTITUTE
CONT	CONTINUOUS	LLH	LONG LENGTH HORIZONTAL	SPA	SPACING
DEFL	DEFLECTION	LLV	LONG LENGTH VERTICAL	SPECS	SPECIFICATIONS
DIA. or Ø	DIAMETER	LONG	LONGITUDINAL	STD	STANDARD
DIM	DIMENSION	MAX	MAXIMUM	STIFF	STIFFENER
DN	DOWN	MBM	METAL BUILDING MANUFACTURER	STL	STEEL
do	DITTO	MECH	MECHANICAL	TOC	TOP OF CONCRETE
DTL	DETAIL	MFR	MANUFACTURER	TOT	TOP OF FOOTING
DWG	DRAWING	MIN	MINIMUM	TOS	TOP OF STEEL
E.F.	EACH FACE	MISC	MANUFACTURER MISCELLANEOUS	TOTB	TOP OF TIE BEAM
E.W.	EACH WAY	MTL	MINIMUM METAL	TOW	TOP OF WALL
EA	EACH	N.S.	MISCELLANEOUS NEAR SIDE	TRANS	TRANSVERSE
ELEV	ELEVATION	O.C.	METAL ON CENTER	TYP	TYPICAL
EQ	EQUAL	O.F.	NEAR SIDE OUTSIDE FACE	U.N.O.	UNLESS NOTED OTHERWISE
EXIST	EXISTING	OPNG	ON CENTER OPENING	VERT	VERTICAL
EXP	EXPANSION	P.A.F.	OUTSIDE FACE OPENING	WI	WITH
F.S.	FAR SIDE		POWDERED ACTUATED FASTENER	WP	WORK POINT
F.V.	FIELD VERIFY			WWF	WELDED WIRE FABRIC

STRUCTURAL STEEL			
(IBC 1705.2.1, 1705.13.1 & 1705.14.1)			
PRIOR TO WELDING (TABLE N5.4-1, AISC 360-16; TABLE J6-1, AISC 341-16)			
Verification & Inspection	Continuous	Periodic	Detailed Instructions
Verify welding procedures (WPS) and manufacturer certifications for welding consumable available	X	-----	-----
Verify type and grade of material.	-----	X	For components of seismic force resisting system, perform on a random, daily basis per AISC 341-16 Section J5.1.
Welder identification	-----	X	A system shall be maintained by which a welder who has welded a joint or member can be identified. For components of seismic force resisting system, perform on a random, daily basis per AISC 341-16 Section J5.1.
Fit-up groove welds	-----	X	Verify joint preparation, dimensions, cleanliness, tacking, and backing. For components of seismic force resisting system, perform on a random, daily basis per AISC 341-16 Section J5.1.
Access holes	-----	X	Verify configuration and finish. For components of seismic force resisting system, perform on a random, daily basis per AISC 341-16 Section J5.1.
Fit-up of fillet welds	-----	X	Verify dimensions, cleanliness, and tacking. For components of seismic force resisting system, perform on a random, daily basis per AISC 341-16 Section J5.1.
Check welding equipment	-----	X	-----
Welder qualification records and continuity records	-----	X	-----
Fit-up CJP groove welds for HSS T-, Y-, and K-joints without backing (including joint geometry)	-----	X	Verify joint preparation, dimension (alignment, root opening, roof face, bevel), cleanliness, and tacking (tack weld quality and location).

DURING WELDING (TABLE N5.4-2, AISC 360-16; TABLE J6-2, AISC 341-16)			
Verification & Inspection	Continuous	Periodic	Detailed Instructions
Control and handling of welding consumables	-----	X	Verify packaging and exposure control. For components of seismic force resisting system, perform on a random, daily basis per AISC 341-16 Section J5.1.
Cracked tack welds	-----	X	Verify welding does not occur over cracked tack welds. For components of seismic force resisting system, perform on a random, daily basis per AISC 341-16 Section J5.1.
Environmental conditions	-----	X	Verify wind speed within limits, precipitation and temperature. For components of seismic force resisting system, perform on a random, daily basis per AISC 341-16 Section J5.1.
WPS followed	-----	X	Verify settings on welding equipment, travel speed, welding materials, shielding gas type/flow rate, preheat applied, interpass temperature maintained, and proper position. For components of seismic force resisting system, perform on a random, daily basis per AISC 341-16 Section J5.1.
Welding techniques	-----	X	Verify interpass and final cleaning, each pass within profile limitations, and quality of each pass. For components of seismic force resisting system, perform on a random, daily basis per AISC 341-16 Section J5.1.
Steel headed stud anchors	-----	X	Verify placement and installation.
AFTER WELDING (TABLE N5.4-3, AISC 360-16; TABLE J6-3, AISC 341-16)			
Verification & Inspection	Continuous	Periodic	Detailed Instructions
Welds cleaned	-----	X	Verify welds properly cleaned. For components of seismic force resisting system, perform on a random, daily basis per AISC 341-16 Section J5.1.
Size, length, and location of welds	X	-----	-----
Welds meet visual acceptance criteria	X	-----	Verify crack prohibition, weld/base metal fusion, crater cross section, weld profiles, weld size, undercut, and porosity meet visual acceptance criteria.
Arc strikes	X	-----	-----
k-area	X	-----	-----
Backing & weld tabs removed and finished, and fillet welds added (if required)	X	-----	-----
Repair activities	X	-----	-----
Document acceptance or rejection of welded joint/member	X	-----	-----
Placement of reinforcing or contouring fillet welds	X	-----	Only required in components of seismic force resisting system.
Weld access holes	-----	X	After rolled heavy shapes are welded, visually inspect the weld access hole for cracks.
Prohibited welds	X	-----	Verify no prohibited welds have been added without approval of the EOR.

CONCRETE CONSTRUCTION			
(IBC 1705.3; TABLES J9-2 & J9-3, AISC 341-16)			
Verification & Inspection	Continuous	Periodic	Detailed Instructions
Reinforcing steel, including prestressing tendons	-----	X	Verify, prior to placing concrete, reinforcing is of specified type, grade and size; free of oil, dirt and rust; located and spaced properly; hooks, bends, ties, stirrups and supplemental reinforcement placed correctly; lap lengths, stagger and offsets provided; and all mechanical connections installed per the manufacturer's instructions and/or evaluation report.
Cast-in anchors	-----	X	Verify anchor installation complies with ACI 318: 17.8.2.
Post-installed anchors	-----	X	All post-installed anchors shall be specially inspected as required by the approved ICC-ES report. Anchors installed horizontally or in upwardly inclined orientations to resist tension loads require continuous inspection per ACI 318:17.8.2.4. Verify all other mechanical and adhesive anchors comply with ACI 318: 17.8.2.
Use of required mix design	-----	X	Verify mixes comply with the approved construction documents; ACI 318: Ch. 19, 26.4.3, 26.4.4 and IBC 1904.1, 1904.2.
Concrete sampling for strength tests, slump, air content, and temperature	X	-----	Verify sampling in accordance with ASTM C172 and ASTM C31. See ACI 318: 26.12 for evaluation and acceptance of concrete. See ACI 318: 26.5 for mixing requirements of concrete.
Concrete & shotcrete placement	X	-----	Verify proper application techniques. See ACI 318: 26.5.
Curing temperature and techniques	-----	X	Verify concrete surface temperature (other than high-early-strength) is kept >50°F in moist condition for at least 7 days after placement unless accelerated curing is used. High-early-strength concrete shall be kept >50°F in moist condition for at least 3 days unless accelerated curing is used. Verify compliance with cold weather requirements in ACI 318: 26.5.4 or hot weather requirements in ACI 318: 26.5.5, whichever is applicable.
Strength verification	-----	X	Verify adequate strength has been achieved prior to the removal of shores and forms or the stressing of post-tensioned tendons. See ACI 318: 26.11.2.
Formwork	-----	X	Verify forms are placed plumb and conform to the shapes, lines, and dimensions of the members as required by the approved construction documents. See ACI 318: 26.11.1,2.
Limits on water added at the truck or pump	-----	X	Verify during concrete placement. Applicable to composite construction in seismic force resisting system components. Perform on a random daily basis per AISC 341-16 Section J5.1. See Table J9-2, AISC 341-16.
Proper placement techniques to limit segregation	-----	X	Verify during concrete placement. Applicable to composite construction in seismic force resisting system components. Perform on a random daily basis per AISC 341-16 Section J5.1. See Table J9-2, AISC 341-16.

Concrete General Notes 3100:

- All detailing, fabrication and placing of reinforcing steel shall conform to the ACI Standard "Details and Detailing of Concrete Reinforcement" (ACI 315).
- All concrete shall typically develop a 28-day minimum compressive strength of 3,000 psi.
- All concrete shall have a 5" maximum slump.
- All reinforcing steel shall be deformed bars conforming to ASTM A615, Grade 60.
- All reinforcing bar splices shall be 44 bar diameters for #6 and smaller diameter bars. Reinforcing bar splices shall be 48 bar diameters for #7 and larger bar diameters.
- All reinforcing bar hooks shall be ACI standard 90 degree hook, unless noted otherwise.
- Provide corner bars in slabs same size and spacing as longitudinal reinforcing.
- Bar supports shall be factory made wire bar supports, type "SBU" linear supports.
- Epoxy for doweling reinforcement shall be HY-200 by Hilti, AT 3G by Simpson Strong-Tie or AC208+ by Dewart, unless noted otherwise.

Concrete Masonry General Notes 4100:

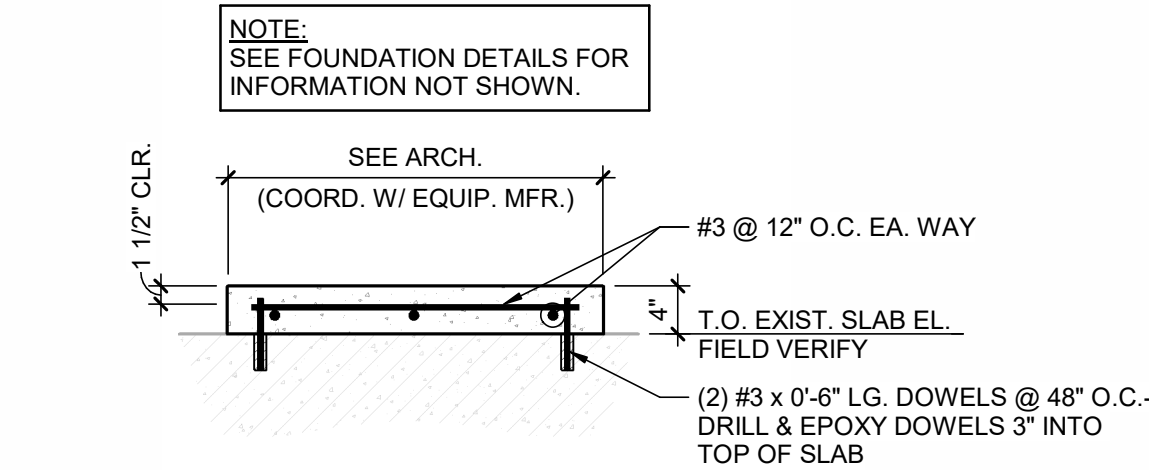
- All concrete masonry units shall be lightweight. All hollow concrete masonry units shall conform to ASTM C90, Grade N, Type 1 with a minimum ultimate compressive prism strength (Fm) of 2,000 psi for the masonry assemblage. All concrete masonry shall be laid in Running (Common) Bond.
- Mortar shall be Type N mortar and have a minimum compressive strength of 750 psi. All mortar shall conform to ASTM C270. **Masonry cement shall not be used for mortar.**
- All grout shall be ready-mix concrete, with 3/8" diameter max. aggregate, have a minimum 28-day compressive strength of 2,000 psi and a design slump between 8" to 10" or preblended product (Core Fill Grout, Coarse CF-02, by Spec Mix) with a minimum 28-day compressive strength of 2,000 psi and a design slump between 8" to 10".
- All 6" CMU bond beam units shall be reinforced with one bar. Provide corner bars and lap bond beam reinforcing 48 bar diameters.
- All reinforcing steel shall be deformed bars conforming to ASTM A615, Grade 60.
- All bolts, anchors, reinforcement and embedded items shall be grouted in place.
- All reinforcing bar splices shall be 48 bar diameters, U.N.O.
- Provide horizontal joint reinforcement at 16" o.c. Reinforcement shall be ladder design, min. 9 gage welded steel wire, hot dipped galvanized to 1.5 oz. width shall be 1 1/2" less than wall thickness.

Structural Steel General Notes 5100:

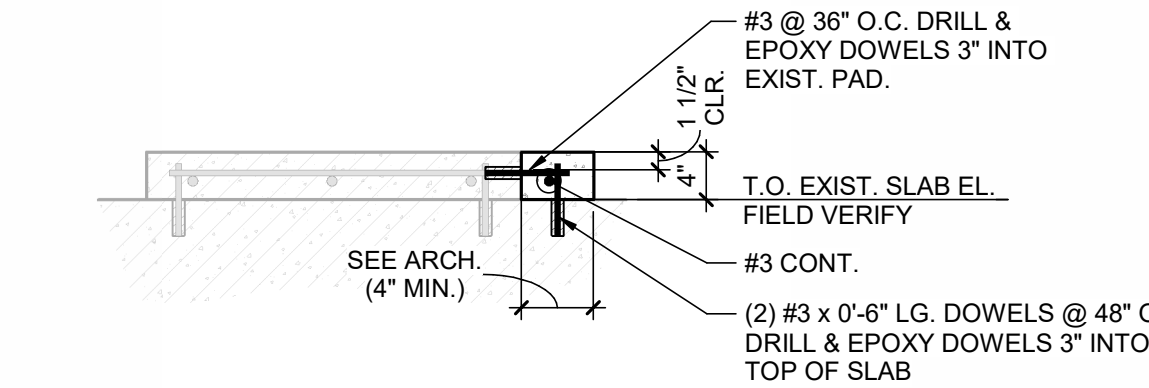
- All detailing, fabrication and erection of structural steel shall conform to the requirements of the AISC Specification for the Design, Fabrication and Erection of Structural Steel for Buildings.
- All structural steel shall conform to the requirements of ASTM A36.
- All welding shall conform to the Specifications of the American Welding Society. Welding electrodes shall be E-70 low hydrogen series. Welding shall be done by a certified welder.
- Bearing ends of all jambs shall be square cut.
- No openings shall be cut in structural members unless shown on the drawings.
- All exposed edges of plates, beams, etc., shall be shop ground smooth and uniform.

Design Loads

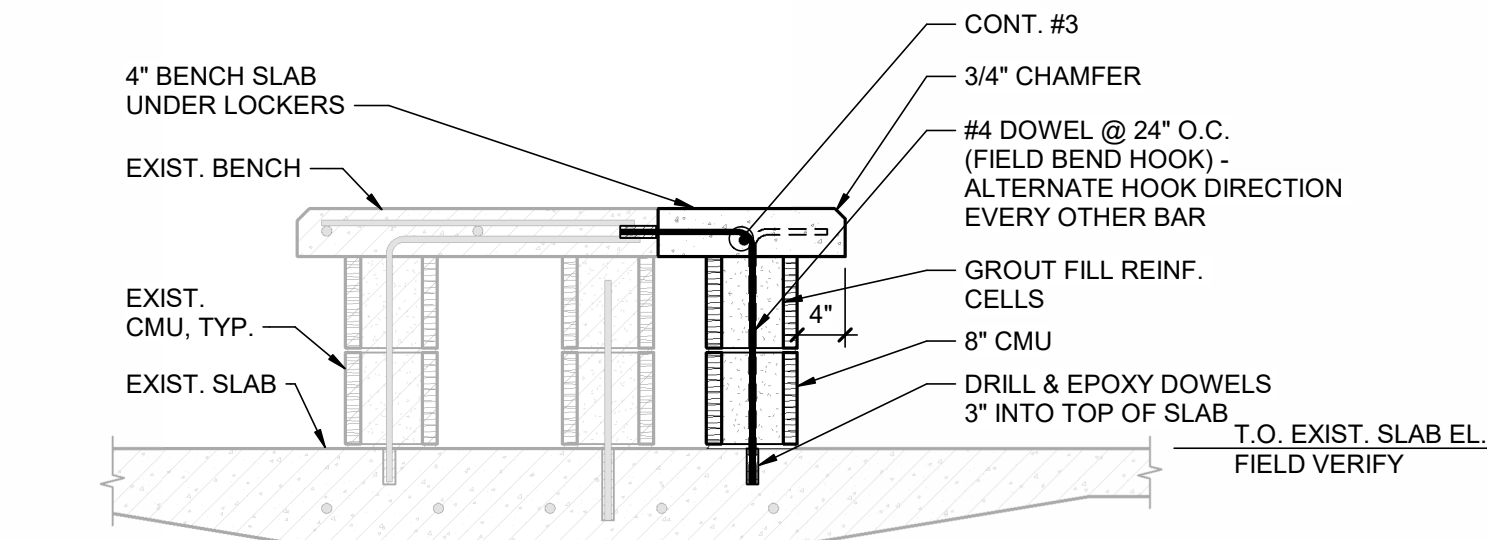
- Typical Existing Roof Dead Load: 20 psf
- Existing Roof Live Load: 20 psf
- Rain Intensity, (15 min. j): 6.46 in/hr
- Ground Snow Load: 15 psf
- Wind Load:
 - Ultimate Design Wind Speed (V_{ult}): 115 mph
 - Nominal Design Wind Speed (V_{nom}): 89.1 mph
 - Risk Category III
 - Wind Exposure C
 - Internal Pressure Coefficient, GC_{pi} = ±0.18
- Components & Cladding Wind Load (Unfactored):
 - Width of Edge Zone, a = 15.1 ft
 - Wall Pressures (10 ft²)
 - End Zone Wall = 40.7 psf
 - Interior Zone = 33.0 psf
 - Wall Pressures (100 ft²)
 - End Zone Wall = 31.7 psf
 - Interior Zone = 28.5 psf
 - Roof Pressures (10 ft²)
 - Corner Zone = 78.5 psf
 - Eave & Rake Zone = 50.3 psf
 - Interior Zone = 36.1 psf
 - Roof Pressures (100 ft²)
 - Corner Zone = 50.3 psf
 - Eave & Rake Zone = 47.4 psf
 - Interior Zone = 36.1 psf
- Seismic:
 - Risk Category II
 - Seismic Importance Factor (I_s) = 1.0
 - S_s = 0.148
 - S₁ = 0.087
 - S_{0s} = 0.158
 - S_{0i} = 0.140
 - Site Class D (per Geotechnical Report)
 - Seismic Design Category C
- Building Code:
 - 2021 Arkansas Fire Prevention Code, Volume II - Adopted 2021 International Building Code
 - ASCE 7-16



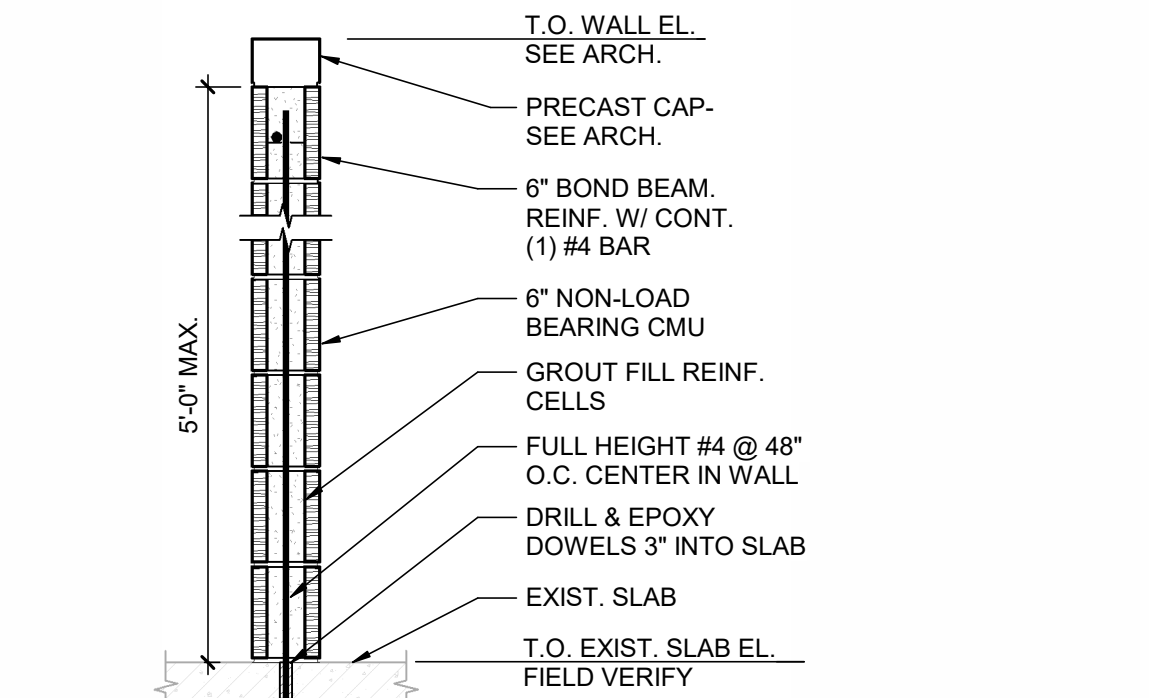
1 TYP. LOCKER PAD FOUNDATION
NOT TO SCALE



2 TYP. EXIST. LOCKER PAD FOUNDATION EXPANSION
NOT TO SCALE



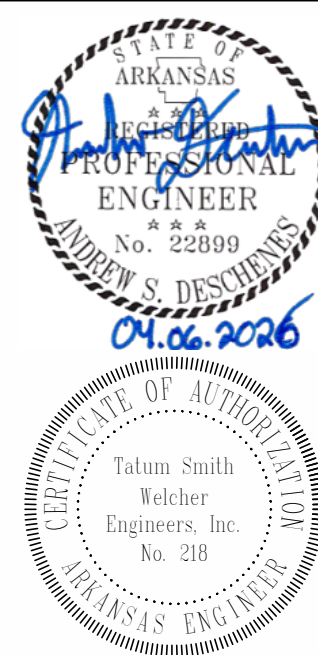
3 TYP. EXIST. LOCKER ROOM BENCH FOUNDATION EXPANSION
NOT TO SCALE



4 TYP. INTR. 6" CMU WALL
NOT TO SCALE



STRUCTURAL ENGINEERS
(479) 621-6128 ROGERS, ARKANSAS
TSW #: 26004 PM: ASD DE: BWA



Hight Jackson Associates
5201 W Village Parkway, Suite 300 | Rogers, Arkansas 72768 | (479) 464-4965 | www.hjarch.com

BENTONVILLE SCHOOL DISTRICT #6
BWHS - DEN Remodel
1355 GAMBLE ROAD, CENTERTON, ARKANSAS

DRAWN BY:
ASD
CHECK BY:
ASD
ISSUE DATE:
04/06/2026

PROJECT NO:
2421

REVISION DATES

REQUIRED IBC SPECIAL INSPECTIONS

S H E E T

S1.0

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1 MASONRY & LOCKER PLAN AREAS

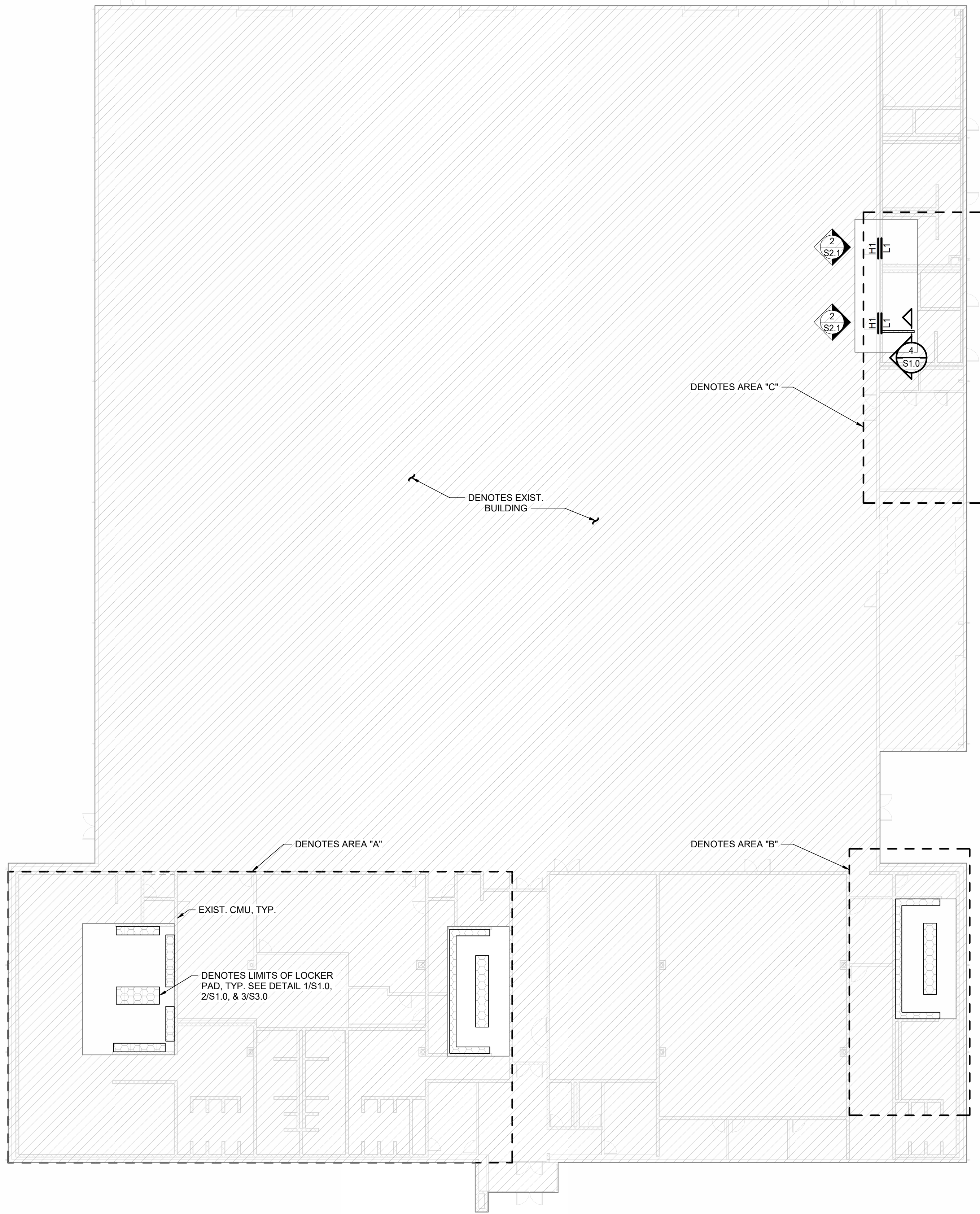
1/16" = 1'-0"

PLAN NOTES:

- SEE ARCH. DWGS. FOR DIMENSIONS NOT SHOWN.
- COORDINATE DOOR LOCATIONS WITH ARCH. DWGS.
- SEE ARCH. DWGS. FOR LOCATIONS OF NON-LOAD-BEARING CMU.
- SEE DWGS. S1.0 FOR GENERAL NOTES & TYP. DETAILS.

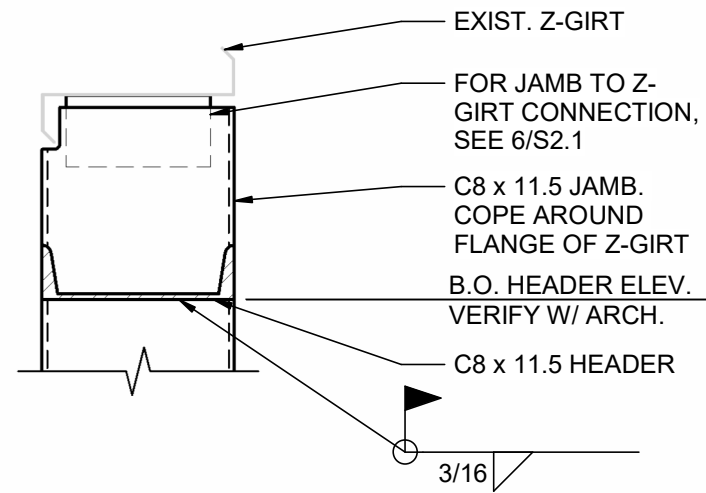
LEGEND:

- L1** DENOTES BACK-TO-BACK (2) L3 x 2 1/2 x 3/8 (LLV) ANGLE. SEE DETAIL 7/S2.1 & 8/S2.1
- H1** DENOTES C8 x 11.5 HEADER. SEE ELEVATION 2/S2.1
- DENOTES NEW CMU WALL
- DENOTES EXIST. CMU WALL
- DENOTES LIMITS OF LOCKER PAD. SEE DETAIL 1/S1.0, 2/S1.0, & 3/S3.0
- DENOTES PARTIAL ELEVATION ON CORRESPONDING DWG. (SOLID HATCH DENOTES DIRECTIONAL VIEW)



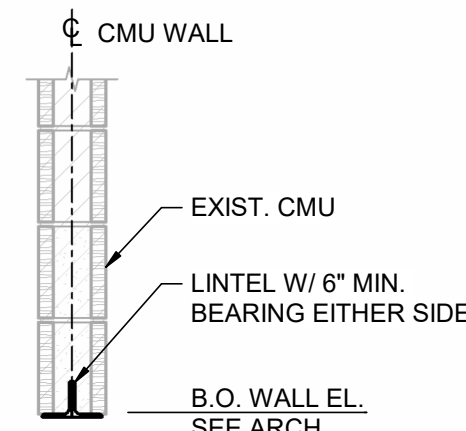
2 PARTIAL ELEVATION

3/4" = 1'-0"



5 SECTION

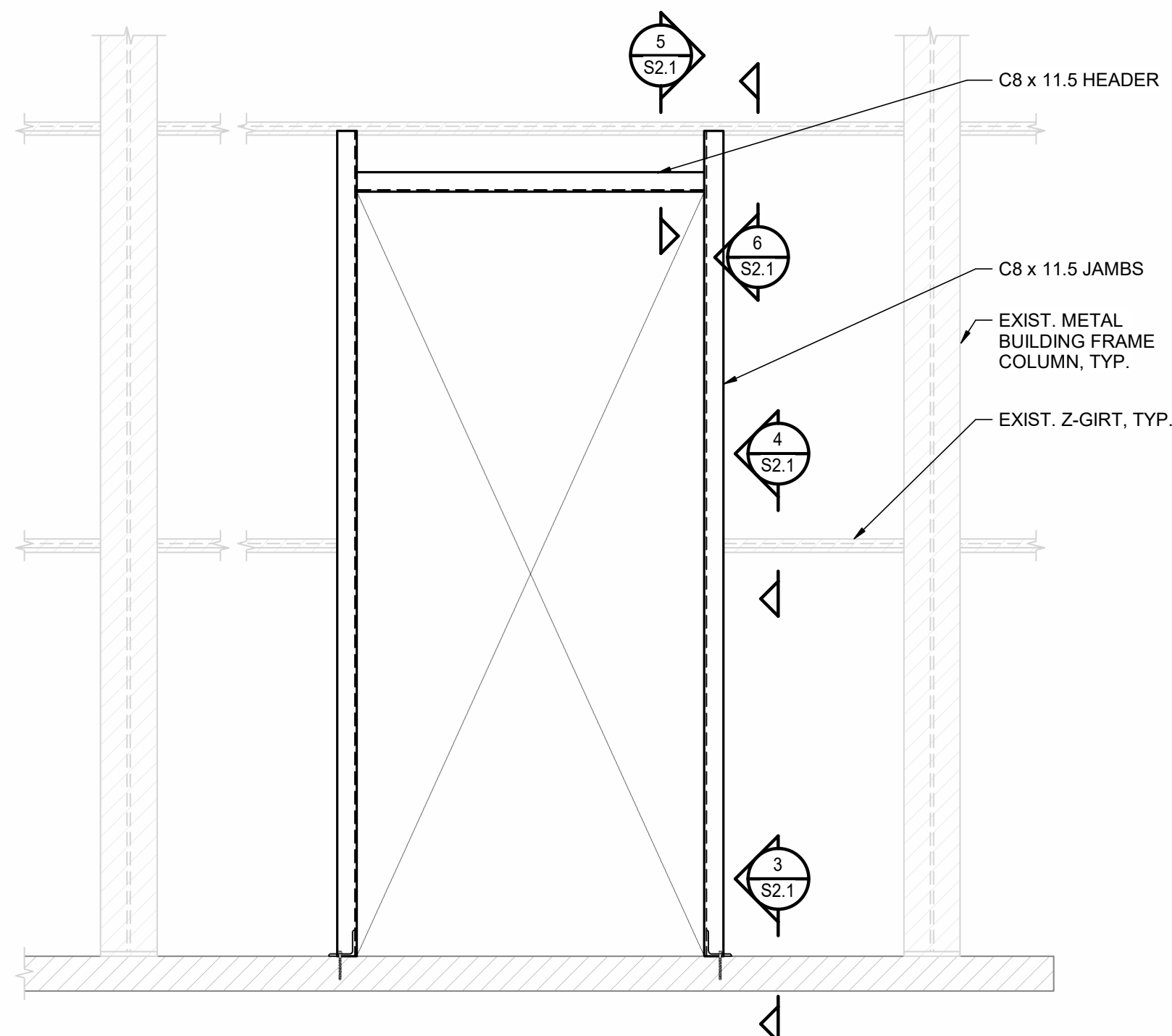
1 1/2" = 1'-0"



6" CMU

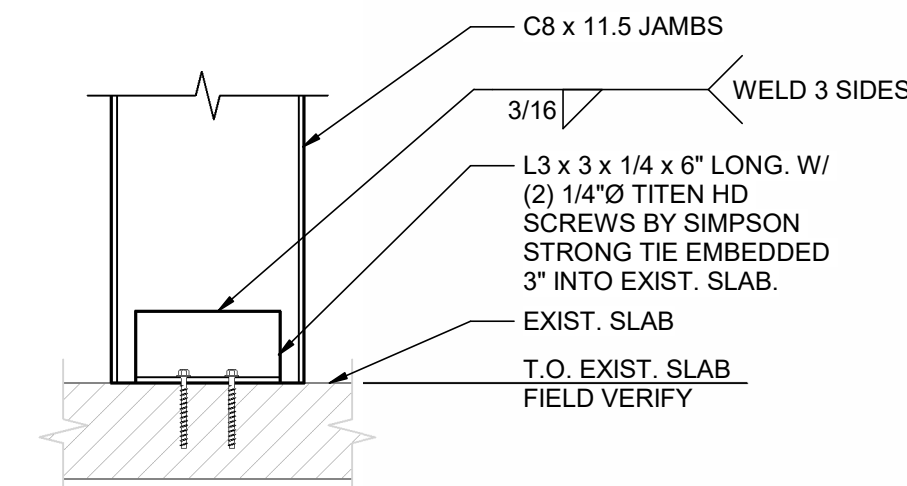
7 TYP. LINTEL IN EXIST. 6" CMU

NOT TO SCALE



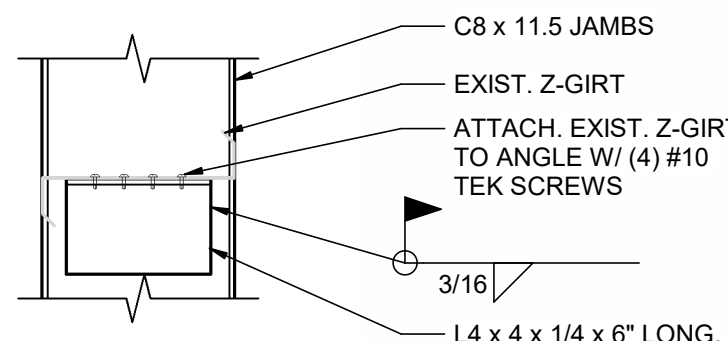
3 SECTION

1 1/2" = 1'-0"



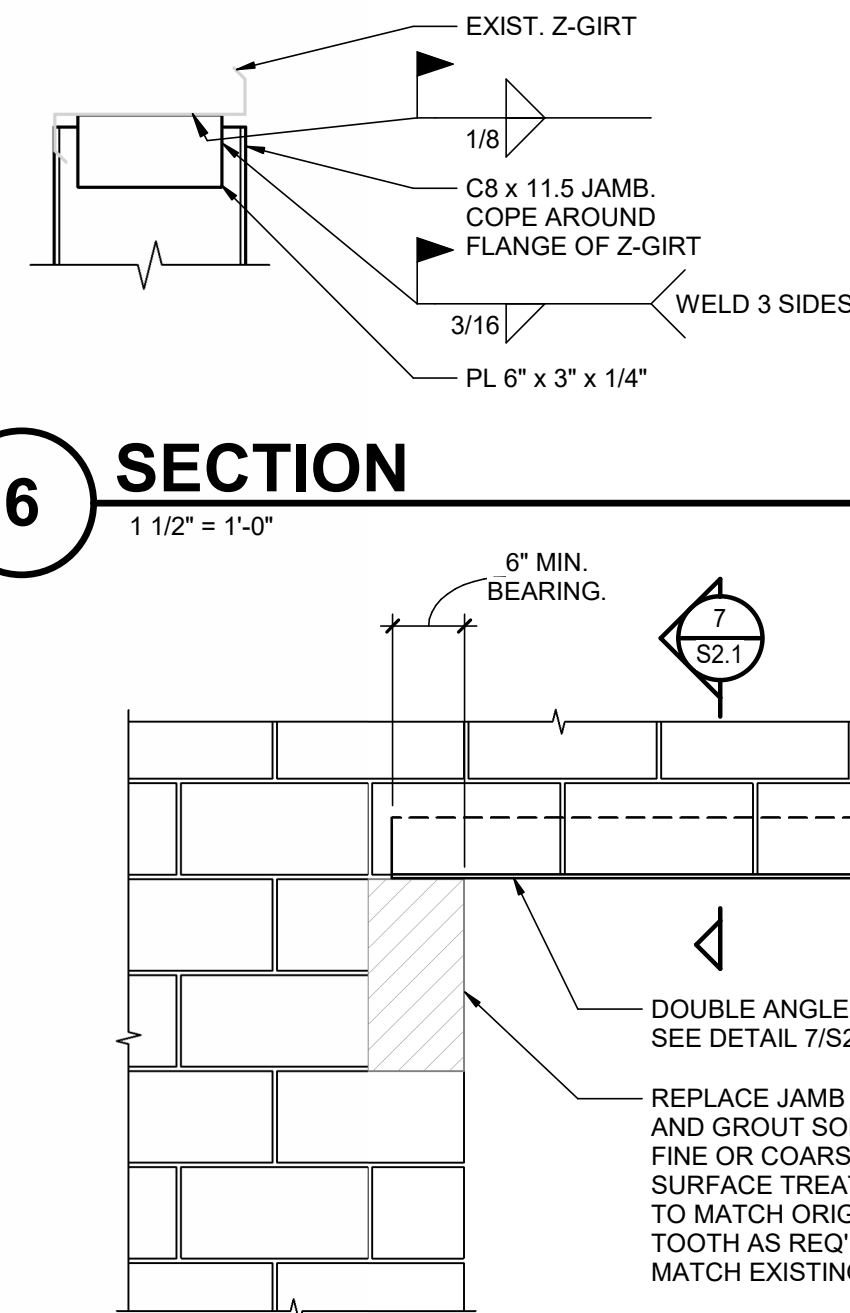
4 SECTION

1 1/2" = 1'-0"



6 SECTION

1 1/2" = 1'-0"



8 TYP. LINTEL IN EXIST. 6" CMU ELEVATION

NOT TO SCALE

TATUM SMITH WELCHER
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TSW #: 26004 PM: ASD DE: BWA



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DRAWN BY:
ASD

CHECK BY:
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04/06/2026

PROJECT NO:
2421

REVISION DATES

MASONRY & LOCKER PLAN AREAS

SHEET

S2.1

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