

**DOCUMENT 00 90 00  
ADDENDUM**

**ADDENDUM NO. [2]                      Date: January 4, 2021**

**RE:                      INDEPENDENCE SCHOOL DISTRICT  
                            EAST ELEMENTARY SCHOOL REMODEL  
                            1103 1<sup>ST</sup> ST W  
                            WEST ELEMENTARY SCHOOL ADDITION  
                            1301 1<sup>ST</sup> ST W  
                            INDEPENDENCE, IOWA 50644  
                            HSR PROJECT NO. 19045**

**FROM:                  HSR Associates, Inc  
                            100 Milwaukee Street  
                            La Crosse, WI 54603  
                            (608) 784-1830**

**To:                      Prospective Bidders**

This addendum forms a part of the Contract Documents and modifies the original Bidding Documents dated December 2020. Acknowledge receipt of this Addendum in the space provided on the bid form. Failure to do so may subject the Bidder to disqualification.

This Addendum consists of [3] pages and [9] 30 x 42 Drawings.

**CHANGES TO BIDDING REQUIREMENTS AND CONDITIONS OF THE CONTRACT:**

1. Contractors desiring to be listed on our website as plan holders can contact Toni at HSR. [tfurlano@hsrassociates.com](mailto:tfurlano@hsrassociates.com).

**CHANGES TO SPECIFICATIONS:**

2. Section 07 72 00 ROOF ACCESSORIES
  - a. Roof hatch size shall be 36 x 36 inches.
3. Section 08 43 13 ALUMINUM FRAMED STOREFRONT
  - a. 2.04, D: Operable sash shall be equal to or better than storefront framing performance.
4. Section 09 84 30 SOUND ABSORBING WALL AND CEILING UNITS
  - a. 2.01, A. Clarification: Quantities and layout shall be determined by supplier based on specified information in this section. 4 x 4 ceiling panel layout shall be coordinated with ceiling system supplier from Section 09 51 00. Walls in each room are clear with the exception of doors, windows, casework and marker boards as indicated on floor plan.

5. Section 09 91 00 INTERIOR PAINTING

- a. Existing interior metal lockers to be painted: Lockers surfaces inside and out shall be washed/wiped to remove dirt and residue. Surfaces shall be sanded to roughen for paint adhesion. At chip areas taper edges to eliminate site lines. Mask numbers and other items that are currently not painted. Paint shall be applied with a fine tip airless sprayer. All surfaces inside and out shall be painted. Paint Type: Water based alkyd specifically recommended for this type of painted metal surface. Mask and protect surrounding floor, wall and ceiling surfaces from over spray.

6. Section 23 08 00 COMMISSIONING OF HVAC

- a. Commissioning is required at West Elementary only. Responsibility for commissioning is stated in 1.05, C.

7. Section 23 09 93 Sequence of Operations

- a. 3.07 Exhaust Fan Control
  - i. Classroom exhaust (RX-2 thru RX-6) shall have BAS timer to automatically cycle off exhaust after 1-hour (adjustable) of operation.
- b. 3.09 Pressure Independent VAV Control
- c. Classroom VAV boxes shall be commanded to maximum airflow when associated classroom exhaust fan is energized.

**CHANGES TO DRAWINGS:**

8. West Elementary: Sheet A090 REMOVAL PLANS 30 x 42 attached hereto

- a. Revisions clouded on Drawing.
- b. Stoop removal at south entry added.

9. West Elementary: Sheet A100 FIRST FLOOR REMODEL PLAN 30 x 42 attached hereto

- a. Revisions clouded on Drawing.
- b. Extents of existing locker painting identified.

10. West Elementary: Sheet A120 ROOF PLAN No Drawing Reissued

- a. Roof hatch moved south 2 feet to align with bar joist spacing. Field verify final location. Provide cricket as required at north edge of hatch to divert water.

11. West Elementary: Sheet S001 STRUCTURAL NOTES 30 x 42 attached hereto

- a. Revisions clouded on Drawing.

12. West Elementary: Sheet S002 STRUCTURAL SCHEDULES 30 x 42 attached hereto

- a. Revisions clouded on Drawing.

13. West Elementary: Sheet S100 FOUNDATION PLAN 30 x 42 attached hereto

- a. Revisions clouded on Drawing.'

14. West Elementary: Sheet S130 ROOF FRAMING PLAN 30 x 42 attached hereto

- a. Revisions clouded on Drawing.
- b. Control joint locations added to CMU bearing walls.

15. West Elementary: Sheet S500 FOUNDATION DETAILS 30 x 42 attached hereto
  - a. Revisions clouded on Drawing.
16. West Elementary: Sheet S501 FRAMING DETAILS 30 x 42 attached hereto
  - a. Revisions clouded on Drawing.
17. East Elementary: Sheet A600 DOOR SCHEDULE, FRAME ELEVATION AND WALL TYPES No Drawing Reissued
  - a. Detail 2A600: Change glass type to GLT-4.
18. East Elementary: Sheet S100 PLANS AND DETAILS 30 x 42 attached hereto
  - a. Revisions clouded on Drawing.
  - b. Detail 7S100 revised.

### **PRIOR APPROVALS**

1. Section 08 43 13 ALUMINUM FRAMED STOREFRONT
  - a. EFCO 403X and 406X
2. Section 09 84 30 SOUND ABSORBING WALL AND CEILING UNITS
  - a. Kinetics Noise Control
3. Section 10 51 13 METAL LOCKERS
  - a. Olympus; Hercules All-Welded Locker.
4. Section 23 21 16 Hydronic Specialties – 2.01 Balancing Stations
  - a. Griswold
5. Section 23 21 17 Air Control Devices – 2.03 Coalescing Type Air Separator
  - a. Taco
  - b. B&G
6. Section 23 33 00 Air Duct Accessories
  - a. Tamco
  - b. United Enertech
7. Section 23 33 19 Sound Attenuators
  - a. Commercial Acoustics
  - b. Kinetics Noise Control
8. Section 23 36 00 Air Terminal Units
  - a. Krueger
9. Section 23 37 50 Metal Louvers-Stationary
  - a. United Enertech
10. Section 23 73 13 Modular Air Handling Units
  - a. Aaon
  - b. Carrier
11. Section 23 74 13 Packaged Gas Electric Rooftop Units
  - a. LG
  - b. Carrier

**END OF DOCUMENT 00 90 00**

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No.	Description	Date
A02	ADDENDUM #2	1/4/2021

Graphic Scale: VARIES

Last Update: 1/4/2021 8:45:51 AM

**A090**

KEY NOTES REMOVAL	
1	REMOVE WOOD STEPS, SUPPORTS AND RAILINGS
2	REMOVE WOOD FRAMED STAGE AND ASSOCIATED PARTS - SEE SECTION 3A090
3	REMOVE EXISTING DOOR AND FRAME
4	REMOVE PORTION OF MASONRY/CLAY TILE WALL TO 6'-0" HT. FIELD VERIFY WALL TYPE. PROVIDE SHORING AS REQUIRED.
5	REMOVE ALL ELEMENTS ASSOCIATED WITH METAL BUILDING
6	REMOVE EXISTING LOCKERS AND CONCRETE BASE - PATCH CONCRETE FLOOR
7	REMOVE EXISTING CONCRETE RISERS, FILL AND SLAB ON GRADE
8	REMOVE EXISTING CARPET AND WALL BASE
9	REMOVE EXISTING CEILING GRID, TILES, LIGHTS AND MECH. - COORDINATE W/ MECH. AND ELEC.
10	REMOVE EXISTING GYP. BD WALL
11	REMOVE EXISTING CONCRETE FLOOR AND FILL - LOWER NEW FINISHED FLOOR TO ELEV. 100'-0"
12	REMOVE EXISTING EXTERIOR WALLS, FOUNDATIONS AND ROOF STRUCTURE OF VESTIBULE
13	REMOVE EXISTING WINDOW AND PREP OPENING FOR INFILL
14	REMOVE EXISTING WINDOW AND WALL TO GRADE - PREP OPENING FOR NEW DOOR FRAME
15	REMOVE NOTED NUMBER OF METAL LOCKERS AND SALVAGE FOR REINSTALLATION WHERE SHOWN ON FLOOR PLAN AS "R"
16	REMOVE WALL TO ONE COURSE BELOW GRADE. FIELD VERIFY HEIGHT.
17	REMOVE STEEL PIPE RAIL AT MEZZANINE.
18	AREA OF CONCRETE FLOOR REMOVAL/ TRENCHING FOR NEW PIPING. COORDINATE WITH PLUMBING
19	AREA OF CONCRETE FLOOR REMOVAL FOR NEW THICKENED SLAB
20	REMOVE 8" CONCRETE FLOOR AS REQUIRED FOR INSTALLATION OF NEW STAIRS
21	REMOVE ROOF EDGE, BLOCKING AND FRAMING ABOVE AT NEW ADDITION LOCATION
22	PATCH EXISTING BRICK AT REMOVED INTERSECTING WALL.
23	REMOVE ENTIRE MASONRY/CLAY TILE WALL
24	REMOVE SINK AND CABINET
25	REMOVE EXISTING WALL CABINETS AND CASEWORK
26	REMOVE EXISTING EXTERIOR CONCRETE SLAB AND FROST WALLS

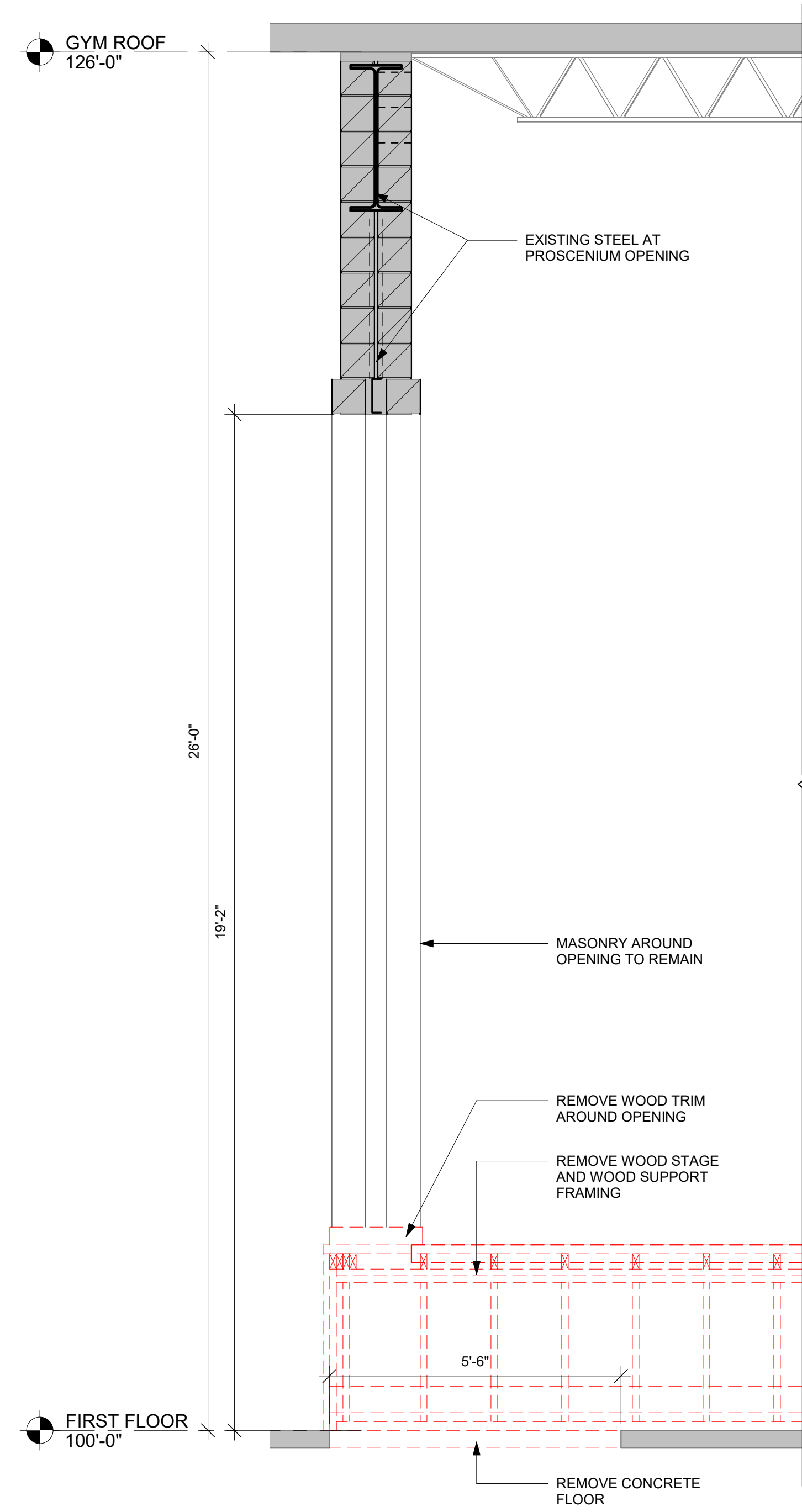
REMOVAL GENERAL NOTES:	
A	ALL ITEMS SHOWN DASHED ON DEMOLITION PLANS SHALL BE REMOVED FROM THE SITE UNLESS OTHERWISE NOTED. REFERENCE MEP DRAWINGS FOR APPLICABLE EQUIPMENT REMOVALS AND MODIFICATIONS. COORDINATE PATCHING AT EQUIPMENT REMOVALS.
B	AT ALL WALL TYPES/ MATERIALS: PREPARATION FOR NEW FINISHES SHALL INCLUDE, BUT NOT BE LIMITED TO REMOVAL OF EXISTING FINISHES, TAPES, GLUES/MASTIC, NAILS AND RELATED ITEMS. PATCHING OF HOLES, INDENTATIONS AND CRACKS OF AN ACCEPTABLE SURFACE FOR NEW FINISHES.
C	OWNER WILL REMOVE LOOSE FURNISHINGS AND EQUIPMENT FROM THE WORK AREA PRIOR TO START OF CONSTRUCTION.
D	MAINTAIN ALL EXIT DOORS AND CORRIDORS IN UNOBSTRUCTED OPERABLE CONDITION WITH SAFE PASSAGE AWAY FROM THE BUILDING.
E	CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SHORING, BRACING, ETC. AS REQUIRED FOR THE WORK.
F	COORDINATE STORAGE LOCATIONS FOR SALVAGED ITEMS WITH THE OWNER.
J	PROVIDE FLOOR PROTECTION AS SPECIFIED AT DEBRIS REMOVAL PATHS THROUGH BUILDING.
H	SEE SHEET A600 FOR EXISTING WALL TYPES.

REMOVAL PLAN LEGEND:	
	SYMBOL INDICATES CONSTRUCTION NOTE THIS SHEET
	REMOVE ITEMS NOTED WITH DASHED LINES
	SYMBOL INDICATES REMOVAL OF DOOR AND FRAME UNLESS NOTED OTHERWISE
	SYMBOL INDICATES EXISTING WALL TYPE - SEE SHEET A600.

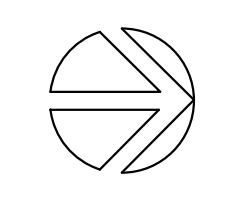


**1 FIRST FLOOR DEMO**  
3/32" = 1'-0"

**2 MEZZANINE DEMO**  
3/32" = 1'-0"



**3 DEMO WALL SECTION**  
1/2" = 1'-0"



**GENERAL NOTES:**

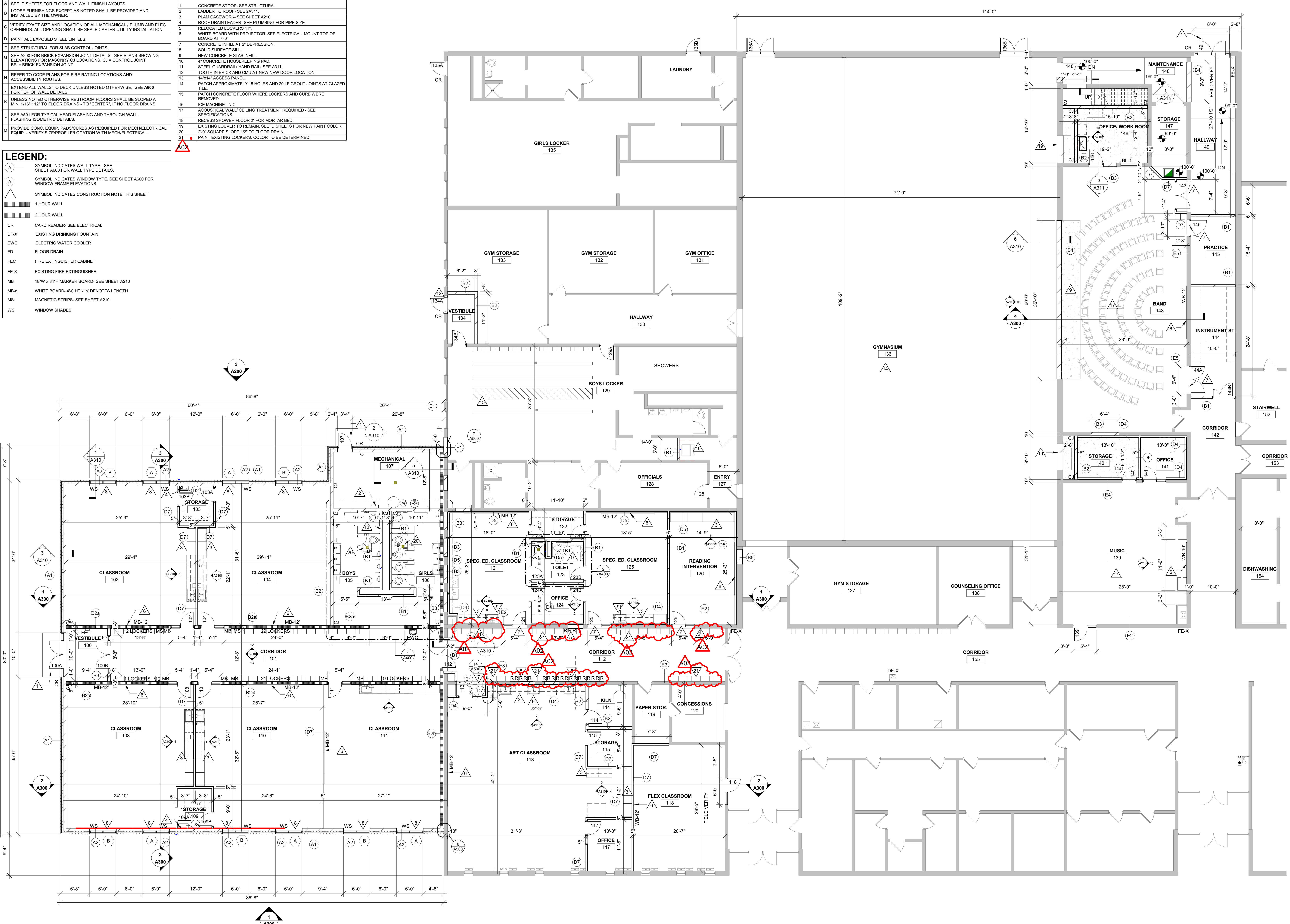
- A SEE ID SHEETS FOR FLOOR AND WALL FINISH LAYOUTS.
- B LOOSE FURNISHINGS EXCEPT AS NOTED SHALL BE PROVIDED AND INSTALLED BY THE OWNER.
- C VERIFY EXACT SIZE AND LOCATION OF ALL MECHANICAL, PLUMB AND ELEC OPENINGS. ALL OPENING SHALL BE SEALED AFTER UTILITY INSTALLATION.
- D PAINT ALL EXPOSED STEEL LINTELS.
- E SEE STRUCTURAL FOR SLAB CONTROL JOINTS.
- F SEE A200 FOR BRICK EXPANSION JOINT DETAILS. SEE PLANS SHOWING ELEVATIONS FOR MASONRY CJ LOCATIONS. CJ = CONTROL JOINT. BE = BRICK EXPANSION JOINT.
- G REFER TO CODE PLANS FOR FIRE RATING LOCATIONS AND ACCESSIBILITY ROUTES.
- H EXTEND ALL WALLS TO DECK UNLESS NOTED OTHERWISE. SEE A600 FOR TOP OF WALL DETAILS.
- J UNLESS NOTED OTHERWISE RESTROOM FLOORS SHALL BE SLOPED A MIN. 1/16" - 12" TO FLOOR DRAINS - TO "CENTER", IF NO FLOOR DRAINS.
- L SEE A501 FOR TYPICAL HEAD FLASHING AND THROUGH-WALL FLASHING ISOMETRIC DETAILS.
- M PROVIDE CONC. EQUIP. PADS/CURBS AS REQUIRED FOR MECHANICAL EQUIP. - VERIFY SIZE/PROFILE/LOCATION WITH MECHANICAL.

**KEY NOTES PLAN**

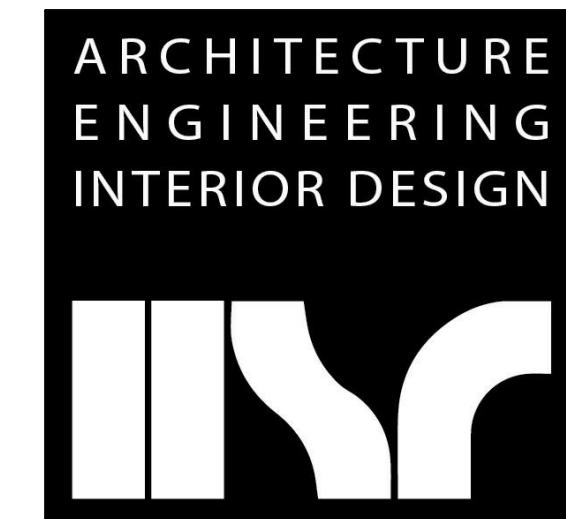
- 1 CONCRETE STOOP- SEE STRUCTURAL.
- 2 LADDER TO ROOF- SEE A311.
- 3 PLAM CASEWORK- SEE SHEET A210.
- 4 ROOF DRAIN LEADER- SEE PLUMBING FOR PIPE SIZE.
- 5 RELOCATED LOCKERS "R"
- 6 WHITE BOARD WITH PROJECTOR. SEE ELECTRICAL. MOUNT TOP OF BOARD AT 7'-0"
- 7 CONCRETE INFILL AT 2" DEPRESSION.
- 8 SOLID SURFACE SILL.
- 9 NEW CONCRETE SLAB INFILL.
- 10 4" CONCRETE HOUSEKEEPING PAD.
- 11 STEEL GUARDRAIL HAND RAIL- SEE A311.
- 12 TOOTH IN BRICK AND CMU AT NEW NEW DOOR LOCATION.
- 13 14"x14" ACCESS PANEL.
- 14 PATCH APPROXIMATELY 15 HOLES AND 20 LF GROUT JOINTS AT GLAZED TILE.
- 15 PATCH CONCRETE FLOOR WHERE LOCKERS AND CURB WERE REMOVED.
- 16 ICE MACHINE - NIC
- 17 ACoustICAL WALL/ CEILING TREATMENT REQUIRED - SEE SPECIFICATIONS
- 18 RECESS SHOWER FLOOR 2" FOR MORTAR BED.
- 19 EXISTING LOUVER TO REMAIN. SEE ID SHEETS FOR NEW PAINT COLOR.
- 20 2" SQUARE SLOPE 12" TO FLOOR DRAIN.
- 21 PAINT EXISTING LOCKERS. COLOR TO BE DETERMINED.

**LEGEND:**

- (A) SYMBOL INDICATES WALL TYPE. SEE SHEET A600 FOR WALL TYPE DETAILS.
- (A) SYMBOL INDICATES WINDOW TYPE. SEE SHEET A600 FOR WINDOW FRAME ELEVATIONS.
- (A) SYMBOL INDICATES CONSTRUCTION NOTE THIS SHEET
- 1 HOUR WALL
- 2 HOUR WALL
- CR CARD READER- SEE ELECTRICAL
- DF-X EXISTING DRINKING FOUNTAIN
- EWC ELECTRIC WATER COOLER
- FD FLOOR DRAIN
- FEC FIRE EXTINGUISHER CABINET
- FE-X EXISTING FIRE EXTINGUISHER
- MB 18"W x 84"H MARKER BOARD- SEE SHEET A210
- MB-4 WHITE BOARD- 4'-0 HT x 1' DENOTES LENGTH
- MS MAGNETIC STRIPS- SEE SHEET A210
- WS WINDOW SHADES



**1 FIRST FLOOR REMODEL PLAN**  
1/8" = 1'-0"



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Consultant:

**INDEPENDENCE COMMUNITY SCHOOL DISTRICT  
WEST ELEMENTARY SCHOOL ADDITION & REMODEL  
FIRST FLOOR REMODEL PLAN**

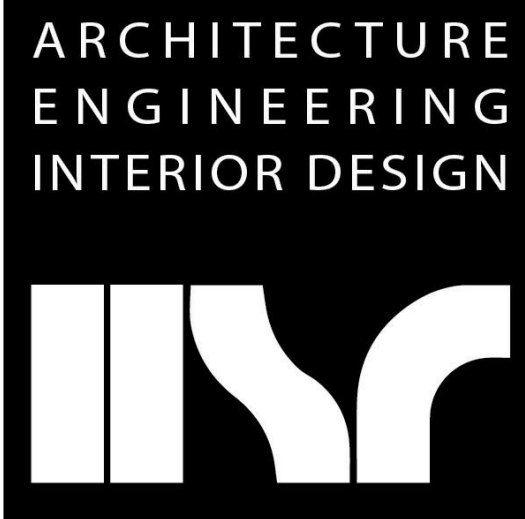
Project Title: INDEPENDENCE COMMUNITY SCHOOL DISTRICT WEST ELEMENTARY SCHOOL ADDITION & REMODEL  
Project Location: 1307 1ST ST. W INDEPENDENCE, IA 50644  
Sheet Title: FIRST FLOOR REMODEL PLAN

HSR Project Number: 19045  
Project Date: DECEMBER 2020  
Drawn By: M.MALAND/ MPL  
Key Plan:

No.	Description	Date
A02	ADDENDUM #2	1/4/2021

Graphic Scale: VARIES  
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**A100**



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project number: 1200552

**INDEPENDENCE COMMUNITY SCHOOL DISTRICT  
WEST ELEMENTARY SCHOOL ADDITION/ REMODEL  
STRUCTURAL NOTES**

Project Title: HSR Project Number: **19045**  
Project Location: **1301 1ST ST. W. INDEPENDENCE, IA 50644**  
Sheet Title: **STRUCTURAL NOTES**

Revisions:  
No. Description Date  
2 ADDENDUM #2 1/4/21

Project Date: **DECEMBER 2020**  
Drawn By: **Author**

Key Plan:

**CONSTRUCTION DRAWINGS**

Graphic Scale: **VARIES**

Last Update: **1/4/2021 11:45:51 PM**

**S001**

► BUILDING CODES

- DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF THE 2018 INTERNATIONAL BUILDING CODE.

RISK CATEGORY III

► DESIGN LOADS AND DATA

**SUPERIMPOSED LOADS**

STAIR

DEAD 5 PSF  
LIVE 100 PSF

MECHANICAL ROOMS

DEAD 15 PSF  
MISCELLANEOUS (HVAC, PIPING, LIGHTS, CEILING)

ROOF LOADS

DEAD 25 PSF  
LIVE (SEE SNOW LOAD ALSO) 20 PSF

► ROOF LOADS

GROUND SNOW (p<sub>s</sub>) 30 PSF  
SNOW DENSITY 17.8 PCF  
ROOF EXPOSURE PARTIALLY EXPOSED  
SNOW IMPORTANCE FACTOR (I<sub>s</sub>) 1.1  
SNOW EXPOSURE FACTOR (E<sub>s</sub>) 1.0  
THERMAL FACTOR - BUILDING (C<sub>t</sub>) 1.1  
THERMAL FACTOR - CANOPY (C<sub>c</sub>) 1.2  
FLAT ROOF SNOW LOAD (p<sub>f</sub>) 25.4 PSF  
DRIFT LOAD AS NOTED ON DRAWINGS  
MECHANICAL EQUIPMENT, PIPING AND ROOF TOP AHUS AS NOTED ON DRAWINGS

► WIND DATA

BASIC WIND SPEED (3 SECOND GUST) 116 MPH  
BUILDING ENCLOSURE ENCLOSED  
EXPOSURE C  
WIND IMPORTANCE FACTOR (I<sub>w</sub>) 1.0  
WIND DIRECTIONAL FACTOR (K<sub>d</sub>) 0.85  
TOPOGRAPHIC FACTOR (K<sub>z</sub>) 1.0  
GUST FACTOR (BUILDING IS FLEXIBLE) (G<sub>f</sub>) 0.85  
INTERNAL PRESSURE COEFFICIENT (GC<sub>p</sub>) 0.8  
ANALYSIS PROCEDURE CHAPTER 28 & CHAPTER 28  
EDGE ZONE WIDTH (Z<sub>e</sub>) 12 FT  
MEAN ROOF HEIGHT (h) 15 FT  
ROOF PLANE SLOPE (θ) 1.2 DEGREES  
MINIMUM NET UPLIFT 1.2 DEGREES

► SEISMIC DATA

SEISMIC IMPORTANCE FACTOR 1.25  
MAPPED SPECTRAL RESPONSE ACCELERATION FOR SHORT PERIODS (S<sub>s</sub>) 0.60  
MAPPED SPECTRAL RESPONSE ACCELERATION FOR 1 SECOND PERIOD (S<sub>1</sub>) 0.49  
SITE CLASS PER ASCE CHAPTER 20.1 D  
DESIGN SPECTRAL RESPONSE ACCELERATION FOR SHORT PERIODS (S<sub>s</sub>) 0.65  
DESIGN SPECTRAL RESPONSE ACCELERATION FOR 1 SECOND PERIOD (S<sub>1</sub>) 0.78  
SEISMIC DESIGN CATEGORY B  
BASIC SEISMIC FORCE RESISTING SYSTEM AND PARAMETERS R = 2.0, C<sub>d</sub> = 2.1  
SEISMIC RESPONSE COEFFICIENT (C<sub>s</sub>) 0.4  
ANALYSIS PROCEDURE MINIMUM EQUIVALENT LATERAL FORCE ANALYSIS

► MATERIAL STRENGTHS AND STANDARDS

THE MATERIAL STRENGTHS AND STANDARDS LISTED HERE REPRESENT A SELECTED SUMMARY OF THE REQUIREMENTS NOTED IN THE SPECIFICATIONS. SEE SPECIFICATIONS FOR ADDITIONAL INFORMATION. IN CASE OF DISCREPANCY BETWEEN THESE NOTES AND THE SPECIFICATIONS, THESE NOTES SHALL GOVERN.

► SOILS

DESIGN SOIL BEARING CAPACITY FOR SPREAD/STRIP FOOTINGS 3000 PSF

► CONCRETE (28 DAY STRENGTH)

FOOTINGS, DRILLED PIERS, STEEL PILE FILL  
FOUNDATION WALLS f<sub>c</sub> = 3,000 PSI  
INTERIOR SLAB-ON-GRADE f<sub>c</sub> = 4,000 PSI  
EXTERIOR SLAB-ON-GRADE f<sub>c</sub> = 4,500 PSI

► REINFORCING STEEL

WELDED WIRE FABRIC, PROVIDED IN FLAT SHEETS ONLY (ASTM A185) f<sub>y</sub> = 65,000 PSI  
DEFORMED BARS (ASTM A615, GRADE 60) f<sub>y</sub> = 60,000 PSI

► MASONRY

SOLID CONCRETE BRICK (ASTM C55) 3,500 PSI  
CONCRETE MASONRY UNIT ASSEMBLY f<sub>m</sub> = 2,500 PSI  
CONCRETE MASONRY UNIT (ASTM C90) 3,250 PSI  
MORTAR (ASTM C270) TYPE S  
GROUT (ASTM C270) f<sub>c</sub> = 3,000 PSI  
ANCHOR RODS (ASTM F1554, GRADE 36) f<sub>y</sub> = 36,000 PSI

► STRUCTURAL STEEL (SHAPE)

WF, WT SECTIONS (ASTM A992) F<sub>y</sub> = 50,000 PSI, F<sub>t</sub> = 65,000 PSI  
M, S, HP SECTIONS, CHANNELS, ANGLES, PLATES (ASTM A36) F<sub>y</sub> = 36,000 PSI, F<sub>t</sub> = 58,000 PSI  
HSS SHAPES - RECT ANGULAR (ASTM A500, GRADE C) F<sub>y</sub> = 50,000 PSI, F<sub>t</sub> = 62,000 PSI  
HSS SHAPES - ROUND (ASTM A500, GRADE C) F<sub>y</sub> = 50,000 PSI, F<sub>t</sub> = 62,000 PSI  
STEEL PIPE (ASTM A53, GRADE B) F<sub>y</sub> = 36,000 PSI, F<sub>t</sub> = 60,000 PSI  
PLATES (ASTM A36) F<sub>y</sub> = 36,000 PSI, F<sub>t</sub> = 58,000 PSI

► STRUCTURAL STEEL CONNECTIONS

ANCHOR RODS (ASTM F1554, GRADE 36) F<sub>y</sub> = 36,000 PSI  
HIGH STRENGTH BOLTS (1 1/2" MAXIMUM DIAMETER) A325 AS NOTED  
WELDING ELECTRODES E70XX  
SHEAR STUD CONNECTORS (ASTM A108, GRADE 1010 THROUGH 1020) F<sub>y</sub> = 50,000 PSI  
DOWEL BAR ANCHORS (ASTM A496) F<sub>y</sub> = 70,000 PSI  
THREADED RODS (ASTM A36) F<sub>y</sub> = 36,000 PSI  
GROUT (ASTM C1107) f<sub>c</sub> = 5,000 PSI

► COLD-FORMED METAL FRAMING

COLD-FORMED MATERIAL - 18 GAUGE AND THINNER (ASTM A653, GRADE 33) f<sub>y</sub> = 33,000 PSI  
COLD-FORMED MATERIAL - 16 GAUGE AND THICKER (ASTM A653, GRADE 30) f<sub>y</sub> = 50,000 PSI  
ANCHOR RODS (ASTM F1554, GRADE 36) f<sub>y</sub> = 36,000 PSI  
CONNECTOR PLATES (ASTM A36) f<sub>y</sub> = 36,000 PSI  
CONNECTOR BOLTS (ASTM A307, GRADE A) f<sub>y</sub> = 36,000 PSI  
WELDING ELECTRODES E60XX  
GALVANIZING THICKNESS 600

► GENERAL NOTES

► EXISTING CONDITIONS

INFORMATION PERTAINING TO EXISTING CONDITIONS GIVEN ON THE STRUCTURAL DRAWINGS REPRESENTS THE ACTUAL EXISTING FIELD CONDITION TO THE BEST OF OUR KNOWLEDGE. R.A. SMITH, INC. MAKES NO WARRANTY AS TO THEIR ACCURACY. CONTRACTOR SHALL FIELD VERIFY EXISTING ELEVATIONS, DIMENSIONS AND BUILDING CONDITIONS AFFECTING THE WORK BY DIRECT SURVEY AND MEASUREMENT PRIOR TO THE FABRICATION, ERECTION OR CONSTRUCTION OF ANY ITEM IMPACTED BY EXISTING CONDITIONS. REPORT DISCREPANCIES BETWEEN THE CONTRACT DOCUMENTS AND FIELD CONDITIONS FOR REVIEW. ANY WORK PERFORMED PRIOR TO THE RESOLUTION OF THE DISCREPANCIES IS SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTORS EXPENSE.

EXISTING STRUCTURE TO REMAIN IS SHOWN WITH LIGHT GRAY LINES. EXISTING STRUCTURE TO BE REMOVED IS NOT GENERALLY SHOWN ON STRUCTURAL DRAWINGS - SEE ARCHITECTURAL DRAWINGS FOR DEMOLITION DRAWINGS.

ALL EXISTING STRUCTURE TO REMAIN TO BE SUPPORTED BY NEW CONSTRUCTION SHALL BE SHORED UNTIL NEW CONSTRUCTION IS IN PLACE, COMPLETED, AND CAPABLE OF SUPPORTING THE EXISTING STRUCTURE. EXISTING STRUCTURE TO REMAIN THAT IS AFFECTED, BUT NOT SUPPORTED, BY NEW CONSTRUCTION SHALL BE SHORED UNTIL IT IS NO LONGER AFFECTED BY CONSTRUCTION ACTIVITIES.

► CONSTRUCTION

UNLESS SPECIFICALLY NOTED OTHERWISE, BUILDING STRUCTURE HAS BEEN DESIGNED FOR THE FINAL COMPLETED CONDITION ONLY, AND HAS NOT BEEN ANALYZED, INVESTIGATED OR DESIGNED FOR OVERALL STRUCTURE, OR INDIVIDUAL MEMBER, STABILITY DURING CONSTRUCTION. CONTRACTOR SHALL PROVIDE AND MAINTAIN TEMPORARY BRACING AND SUPPORTS FOR ALL STRUCTURAL ELEMENTS, BOTH INDIVIDUALLY AND COLLECTIVELY, AS REQUIRED AT EVERY STAGE OF CONSTRUCTION UNTIL THE FINAL COMPLETION OF THE STRUCTURE. NO PORTION OF THE BUILDING STRUCTURE, WHILE UNDER CONSTRUCTION IS INTENDED TO BE STABLE IN THE ABSENCE OF THE CONTRACTORS TEMPORARY BRACES AND SUPPORTS, WHICH SHALL ADDITIONALLY PROVIDE SUPPORT FOR ALL CONSTRUCTION LOADING. MATERIALS AND EQUIPMENT SHALL BE STORED, TRANSPORTED AND INSTALLED IN A MANNER THAT WILL NOT EXCEED THE DESIGN FLOOR LOADING.

CONTRACTOR IS SOLELY RESPONSIBLE FOR THE MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES OF CONSTRUCTION INCLUDING, BUT NOT LIMITED TO, TEMPORARY BRACING, SUPPORTS, SHORING, FORMING TO SUPPORT IMPOSED CONSTRUCTION LOADS, AND OTHER SIMILAR ITEMS.

STRUCTURAL DOCUMENTS MAY REFER TO OSHA REQUIREMENTS. SUCH REFERENCES ARE INCIDENTAL, AND ARE NOT INTENDED TO IDENTIFY ALL APPLICABLE OSHA REQUIREMENTS.

► COMPLETENESS

INFORMATION CONTAINED IN THE GENERAL NOTES IS ONLY A PARTIAL SUMMARY OF PROJECT REQUIREMENTS. SEE SPECIFICATIONS, PLANS AND DETAILS FOR ADDITIONAL REQUIREMENTS.

USE ONLY DIMENSIONS INDICATED ON THE DRAWINGS. DO NOT MANUALLY SCALE THE DRAWINGS OR USE ANY DIMENSIONS MEASURED FROM ELECTRONIC DRAWING FILES.

UNLESS NOTED OTHERWISE, CENTERLINE OF FLOOR FRAMING ELEMENTS COINCIDES WITH COLUMN CENTERLINES, AND FRAMING ELEMENTS ARE EQUALLY SPACED BETWEEN ADJACENT COLUMN CENTERLINES.

MAJOR OPENING LOCATIONS AND SIZES ARE INDICATED ON THE STRUCTURAL DRAWINGS - SMALLER OPENINGS AND SLEEVES REQUIRED TO ACCOMMODATE VARIOUS BUILDING SERVICES MAY NOT BE NOTED. CONTRACTOR TO VERIFY THE SIZE AND LOCATION OF ALL ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING OPENINGS, INCLUDING CLEARANCE REQUIREMENTS CONTAINED IN THE RESPECTIVE DISCIPLINE DOCUMENTS FOR INSTALLATION AND IN-PLACE OPERATION OF THE RESPECTIVE EQUIPMENT OR ITEMS. UNDER NO CIRCUMSTANCES MAY PENETRATIONS BE MADE IN ANY STRUCTURAL ELEMENT AFTER FINAL PLACEMENT IN THE BUILDING STRUCTURE, WITHOUT WRITTEN APPROVAL OF THE STRUCTURAL ENGINEER.

CONSULT ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS AND MANUFACTURERS SPEC SHEETS FOR LOCATIONS AND DIMENSIONS OF PADS, CURBS, EQUIPMENT SUPPORTS, DEPRESSIONS, INSERTS, DRIPS, REGLETS, REVEALS, FINISHES AND OTHER MISCELLANEOUS PROJECT REQUIREMENTS THAT NECESSITATE INCIDENTAL ACCOMMODATION BY THE BUILDING STRUCTURE BUT ARE NOT SHOWN ON THE STRUCTURAL DRAWINGS.

► GENERAL

THE STRUCTURE HAS BEEN DESIGNED AS UNRESTRAINED FOR THE PURPOSE OF FIRE RATING AND FIREPROOFING ASSEMBLY EVALUATIONS.

STRUCTURAL COMPONENTS HAVE NOT BEEN DESIGNED FOR VIBRATORY EQUIPMENT UNLESS NOTED OTHERWISE. PLACE VIBRATORY EQUIPMENT AND EQUIPMENT SENSITIVE TO VIBRATIONS ON VIBRATION ISOLATORS SPECIFICALLY DESIGNED FOR THE EQUIPMENT.

LATERAL BRACING FOR NON-STRUCTURAL ELEMENTS DESIGNED AND DETAILED BY COMPONENT SUPPLIERS SHALL BE DESIGNED TO APPLY LOADS DIRECTLY TO FLOOR OR ROOF DIAPHRAGMS. BRACES SHALL NOT ATTACH DIRECTLY TO BOTTOM FLANGES OF BEAMS OR BOTTOM CHORDS OF JOISTS UNLESS THE COMPONENT SUPPLIER PROVIDES ADDITIONAL BRACING FROM THOSE ELEMENTS TO THE FLOOR OR ROOF DIAPHRAGM AT EACH ATTACHMENT POINT.

HOLES, NOTCHES, BLOCK-OUTS AND OTHER SIMILAR FIELD MODIFICATIONS TO STRUCTURAL MEMBERS NOT SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS OR APPROVED SHOP DRAWINGS ARE NOT PERMITTED.

EXCEPT AS NOTED BELOW, ALL FUTURE EXPANSION IS ASSUMED TO BE COMPLETELY SELF SUPPORTING FOR BOTH GRAVITY AND LATERAL LOADS.

► SYSTEM NOTES

► FOUNDATIONS AND EARTHWORK

REMOVE EXISTING SURFICIAL TOP SOIL AND VEGETATION FROM WITHIN THE BUILDING AREA AND A MINIMUM OF TEN FEET BEYOND. EXCAVATE MATERIAL TO PROPOSED SLAB-ON-GRADE SUBGRADE. PROOFROLL WITH A HEAVY RUBBER Tired VEHICLE. SOILS WHICH HEAVE, PUMP, OR DO NOT READILY COMPACT SHALL BE EXCAVATED AND REPLACED WITH ENGINEERED FILL.

SUBGRADE PREPARATION FOR FOOTINGS SHALL CONSIST OF EXCAVATION TO REQUIRED ALLOWABLE BEARING CAPACITY SOILS AT OR NEAR DESIGN FOOTING ELEVATIONS. WHERE UNSUITABLE SOIL IS ENCOUNTERED AT NOMINAL BEARING DEPTH, SEE OVER EXCAVATION DETAIL.

ALL COMPACTION REQUIREMENTS REFER TO % OF MAXIMUM DRY DENSITY PER ASTM D-1557 MODIFIED PROCTOR GRANULAR STRUCTURAL FILL BENEATH FOOTINGS SHALL BE PLACED IN LAYERS NO MORE THAN 8" THICK, AND EACH LAYER SHALL BE COMPACTED TO 96%. COHESIVE FILL APPROVED BY THE GEOTECHNICAL CONSULTANT SHALL BE PLACED IN LAYERS NO THICKER THAN 8", AND EACH LAYER SHALL BE COMPACTED TO 96%. MOISTURE CONDITION FILL MATERIALS AS REQUIRED TO OBTAIN PROPER COMPACTION. COHESIVE SOILS OR GRANULAR SOILS WITH A SIGNIFICANT PERCENT OF COHESIVE FINES SHALL BE CONDITIONED TO WITHIN 3% OF OPTIMUM MOISTURE CONTENT AT COMPACTION.

FOR GENERAL INFORMATION AND SPECIFIC RECOMMENDATIONS AND REQUIREMENTS PERTAINING TO THE PROJECT SITE, REFER TO THE PROJECT GEOTECHNICAL REPORT PREPARED BY CHOSEN VALLEY TESTING, INC. JOB NUMBER 17488 20 JAW, DATED NOVEMBER 18, 2020.

ALL ACTIVITIES CONCERNING PREPARATION AND VERIFICATION OF BEARING SOILS FOR SLAB-ON-GRADE AND FOOTINGS SHALL BE SUPERVISED AND APPROVED BY A QUALIFIED GEOTECHNICAL ENGINEER.

FOOTINGS, PIERS, AND SPREAD FOOTINGS ARE CENTERED ON GRIDLINES UNLESS NOTED OTHERWISE. CONTINUOUS COLUMNS ARE CENTERED ON WALLS ABOVE UNLESS NOTED OTHERWISE.

BACKFILL UNIFORMLY ON EACH SIDE OF FOUNDATION WALLS, GRADE BEAMS AND OTHER SIMILAR ELEMENTS. DO NOT BACKFILL AGAINST ANY STRUCTURAL ELEMENT UNTIL THAT ELEMENT HAS ATTAINED FULL DESIGN STRENGTH. DO NOT BACKFILL AGAINST BASEMENT WALLS UNTIL TOP AND BOTTOM OF WALL IS BRACED BY FLOOR FRAMING AND SLAB-ON-GRADE.

TOP OF FOOTING ELEVATION NOTED ON DRAWINGS REPRESENTS CONSIDERED ENGINEERING JUDGMENTS ABOUT PROTECTION FROM FROST AND MINIMUM DEPTH TO SOILS CAPABLE OF PROVIDING DESIGN SOIL BEARING CAPACITY. UNCERTAINTIES INherent IN DETERMINING THE ELEVATION OF SOILS ARE liable TO PROVIDE DESIGN BEARING CAPACITY MAY REQUIRE FOUNDATIONS TO BE LOWERED - IN NO CASE SHALL TOP OF FOOTING BE HIGHER THAN NOTED. A GEOTECHNICAL ENGINEER SHALL VERIFY THAT SOIL AT THE FOOTING BASE IS ADEQUATE TO PROVIDE THE REQUIRED DESIGN SOIL BEARING CAPACITY.

► CAST-IN-PLACE CONCRETE

DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF ACI 318-11 EXCEPT WHERE MORE RESTRICTIVE REQUIREMENTS ARE NOTED.

REINFORCING CLEAR COVER SHALL BE AS NOTED BELOW UNLESS SPECIFICALLY NOTED OTHERWISE ON STRUCTURAL DRAWINGS.

CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH 3"  
CONCRETE EXPOSED TO EARTH OR WEATHER  
#3 - #5 BARS 1 1/2"  
#8 - #10 BARS 2"  
CONCRETE NOT EXPOSED TO EARTH OR WEATHER  
WALLS - #3 THRU #11 BARS 3/4"  
WALLS - #14 THRU #18 BARS 1 1/2"

PROVIDE (2) #5 BARS AROUND ALL OPENINGS AND (2) #5 DIAGONAL BARS AT ALL OPENING AND RE-ENTRANT CORNERS. BARS SHALL EXTEND A MINIMUM OF 24" PAST OPENING.

ALL BAR SPLICES SHALL BE CONTACT LAP SPLICED USING CLASS B TENSION LAP LENGTHS, WITH ADJACENT LAPS STAGGERED A MINIMUM OF 3'-0" UNLESS DETAILED OTHERWISE.

FIELD WEAVING OF ASTM A615 REINFORCING STEEL IS NOT PERMITTED. FIELD BENDING OF REINFORCING STEEL IS NOT PERMITTED EXCEPT WHERE SPECIFICALLY DETAILED ON STRUCTURAL DRAWINGS.

CORING OF COLUMNS, WALLS, BEAMS, JOISTS AND SLABS IS NOT PERMITTED. PROVIDE STEEL SLEEVES FOR ALL PENETRATIONS AT ALL LOCATIONS APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO PLACING CONCRETE.

► CONCRETE MASONRY

DESIGN AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF ACI 530-11 AND ACI 530.1-11 EXCEPT WHERE MORE RESTRICTIVE REQUIREMENTS ARE NOTED.

ALL CMU SHALL BE PLACED IN RUNNING BOND. UNLESS NOTED OTHERWISE PROVIDE CONTINUOUS LADDER TYPE REINFORCEMENT WITH 3/8" GAUGE SIDES AND CROSS RODS AT 4" OC VERTICALLY IN WALLS AND PIERS, AND AT 4" OC VERTICALLY AT PARAPETS. WHERE VERTICAL BARS ARE REQUIRED, CONSTRUCT CMU WALL TO PROVIDE A CONTINUOUS UNOBSTRUCTED CELL FROM BOTTOM TO TOP OF BAR. CELL CONTAINING A SINGLE BAR SHALL NOT BE LESS THAN 3" x 4" IN PLAN AREA.

PORTIONS OF CMU CONSTRUCTION REQUIRING STRUCTURAL FILL SHALL USE GROUT ONLY. USE OF CONCRETE FILL IN CMU CONSTRUCTION IS NOT PERMITTED. WHERE CLEARANCES AND CONGESTION PERMIT, USE COURSE GROUT WITH PEA GRAVEL AGGREGATE; OTHERWISE, USE FINE GROUT.

REFER TO ARCHITECTURAL DRAWINGS FOR LOCATION OF ALL VERTICAL CONTACT JOINTS IN EXTERIOR WYTHES OF PERIMETER WALLS AND FOR EXTERIOR WALLS.

PROVIDE STEEL PIPE SLEEVES AT ALL LOCATIONS WHERE PIPING PASSES THROUGH CMU WALL.

WHERE BOND BEAMS INTERSECT AT WALL CORNERS AT DIFFERENT ELEVATIONS, RUN EACH BOND BEAM AROUND THE CORNER FOR A MINIMUM OF TWO FULL BLOCK LENGTHS BEFORE TERMINATING. WHERE BOND BEAMS ADJOIN ON THE SAME WALL AT DIFFERENT ELEVATIONS, RUN BOND BEAMS PAST ONE ANOTHER A MINIMUM OF FOUR FULL BLOCK LENGTHS BEFORE TERMINATING.

► STRUCTURAL STEEL

DESIGN, DETAILING, AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS AISC 360-10, THE CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS AND BRIDGES AISC 303-10 AND THE STEEL CONSTRUCTION MANUAL, FOURTEENTH EDITION.

TYPICAL DETAILS INDICATE GENERAL CRITERIA FOR DESIGN AND DETAILING OF CONNECTIONS. THEY ARE NOT INTENDED TO CONVEY COMPLETE INFORMATION CONCERNING SIZE AND QUANTITY OF CONNECTORS, PLATES, ANGLES, WELDS AND SIMILAR ITEMS THAT ARE DEVELOPED THROUGH THE DESIGN OF AN INDIVIDUAL CONNECTION FOR A SPECIFIC SET OF LOADS AND CONNECTIONS. DETAILS THAT CONVEY SPECIFIC COMPONENT INFORMATION ESTABLISH MINIMUM REQUIREMENTS AND ARE NOT INTENDED TO CONVEY A COMPLETE DESIGN UNLESS NOTED.

UNLESS OTHERWISE NOTED, ALL STEEL TO STEEL FRAMING HAS BEEN SELECTED ASSUMING ATTACHMENTS FOR SHEAR ONLY, USING DOUBLE ANGLE OR DOUBLE BENT PLATE CONNECTIONS SHOP WELDED TO FRAMING MEMBER AND FIELD BOLTED TO SUPPORTING MEMBER WITH HIGH STRENGTH BOLT IN BEARING. CONNECTIONS SHALL BE SYMMETRICAL ABOUT THE BEAM WEB. FABRICATORS PROPOSING TO USE ALTERNATIVE METHODS OF ATTACHMENT NOT SPECIFICALLY DETAILED ON STRUCTURAL DRAWINGS SHALL SUBMIT ALTERNATIVE FOR CONSIDERATION DURING BIDDING, AND SHALL BEAR ALL COSTS ASSOCIATED WITH REVIEW, ENGINEERING REDESIGN, AND APPROVAL OF ALTERNATIVE CONNECTIONS.

SINGLE PLATE SHEAR TAB CONNECTIONS MAY BE USED IN LIEU OF DOUBLE ANGLE OR DOUBLE BENT PLATE CONNECTIONS WHERE SPECIFICALLY NOTED ON DRAWINGS OR WHERE CONNECTION OF FRAMING MEMBER TO ONE SIDE OF A SUPPORT MEMBER IS MATCHED BY A SIMILAR CONNECTION ON THE OPPOSITE SIDE OF THE SAME SUPPORT MEMBER, AND WHERE BEAM SPANS DO NOT DIFFER BY MORE THAN 50% OF THE LARGER SPAN. SINGLE PLATE SHEAR TABS MAY NOT BE USED FOR CONNECTION OF FRAMING MEMBERS TO COLUMNS OR TO SPAN/REL EGGED SUPPORT MEMBERS UNLESS SPECIFICALLY DETAILED ON DRAWINGS.

CONNECTIONS FOR ALL STRUCTURAL STEEL BEAMS AND GIRDEES NOT SHOWN OR COMPLETELY DETAILED ON THE STRUCTURAL DRAWINGS SHALL BE DESIGNED BY AN ENGINEER REGISTERED IN THE STATE OF WISCONSIN AND RETAINED BY THE FABRICATOR, USING THE REACTIONS SHOWN. IF NO REACTION IS SHOWN, BEAM CONNECTIONS SHALL BE DESIGNED FOR 50 % OF THE TOTAL UNIFORM LOAD CAPACITY FOR THE GIVEN MEMBER SIZE, SPAN AND GRADE OF STEEL.

ALL MOMENT CONNECTIONS SHALL BE DESIGNED AND DETAILED BY AN ENGINEER REGISTERED IN THE STATE OF WISCONSIN AND RETAINED BY THE FABRICATOR, USING THE REACTIONS AND MOMENTS WHERE REACTIONS AND MOMENTS ARE NOT SHOWN, CONNECTION SHALL BE DESIGNED TO DEVELOP THE FULL CAPACITY OF THE BEAM IN MOMENT AND SHEAR.

DESIGN OF STAIRS, HANDRAILS AND GUARDRAILS SHALL BE BY THE STEEL SUPPLIER.

REFER TO ARCHITECTURAL DRAWINGS FOR MISCELLANEOUS STRUCTURAL STEEL NOT NOTED ON STRUCTURAL DRAWINGS.

PROVIDE HOLES IN BEAMS TO ACCOMMODATE WOOD CONNECTIONS TO STEEL.

► BAR JOISTS

ALL STANDARD K, LH AND DLH SERIES JOISTS SHALL BE DESIGNED FOR A SHEAR CAPACITY EQUAL TO THE REACTION, AND VARYING LINEARLY TO 20% OF THE REACTION AT THE MIDSPAN OF THE JOIST IN ORDER TO ACCOUNT FOR POTENTIAL STRESS REVERSALS THE SHEAR CAPACITY OF THE JOIST SHALL BE MAINTAINED AT THE 25% VALUE FOR A DISTANCE BEYOND THE MIDSPAN EQUAL TO MINIMUM OF ONE PANEL WIDTH, ROUNDED UP TO THE NEXT PANEL POINT.

WHERE JOISTS ARE DESIGNATED BY DEPTH, SERIES AND TOTAL LOAD / LIVE LOAD, FINAL DESIGN SHALL BE PER NOTED LOAD PLUS SELF WEIGHT OF JOIST AND IS THE RESPONSIBILITY OF THE JOIST SUPPLIER.

WHERE JOIST DESIGNATION INCLUDES "SP", FINAL DESIGN SHALL BE PER LOADING DIAGRAM PROVIDED PLUS SELF WEIGHT OF JOIST AND IS THE RESPONSIBILITY OF THE JOIST SUPPLIER.

WHERE STANDARD JOIST DESIGNATION FOR DEPTH, SERIES AND SIZE OCCURS PRIOR TO THE DESIGNATION "SP", FINAL DESIGN SHALL BE PER LOADING DIAGRAM PROVIDED PLUS SELF WEIGHT OF JOIST, SHALL AT A MINIMUM USE THE STANDARD CHORDS AND WEB MEMBERS FOR THE DEPTH AND SERIES NOTED, AND IS THE RESPONSIBILITY OF THE JOIST SUPPLIER.

UPLIFT DESIGN OF JOISTS AND BRIDGING SHALL NOT UTILIZE A 1/3 STRESS INCREASE.

WHERE BRIDGING INTERFERES WITH MECHANICAL OR OTHER TRADE INSTALLATION, CONTRACTOR MAY REMOVE BRIDGING AFTER METAL DECK IS COMPLETE IN PLACE. UPON RECEIPT OF WRITTEN APPROVAL FROM THE ENGINEER, BRIDGING REMOVED SHALL BE REPLACED AS DIRECTED BY THE ENGINEER, INCLUDING ADDITIONAL SUPPLEMENTAL BRACING AS MAY BE NECESSARY IN THE SOLE JUDGEMENT OF THE ENGINEER.

NO FIELD DRILLED HOLES OR CUTS ARE PERMITTED IN ANY JOIST CHORD OR WEB MEMBER.

MAXIMUM HANGER LOAD TO BE LOCATED ALONG BAR JOIST TOP CHORD BETWEEN PANEL POINTS IS 100 POUNDS.

ALL CONCENTRATED LOADS EXCEEDING 100 POUNDS SHALL BE APPLIED AT A JOIST PANEL POINT UNLESS LOADS ARE INDICATED ON LOAD DIAGRAMS AND CHORDS HAVE BEEN SPECIFICALLY DESIGNED FOR CONCENTRATED LOADS, OR UNLESS SUPPLEMENTAL CHORD BRACING IS PROVIDED. SUPPLEMENTAL CHORD BRACING SHALL BE PROVIDED AS DETAILED ON THE DRAWINGS BY THE CONTRACTOR RESPONSIBLE FOR THE CONCENTRATED LOADS NOT APPLIED AT PANEL POINTS.

JOISTS AND SEAT CONNECTIONS SHALL BE DESIGNED TO RESIST AXIAL LOADS INDICATED, OR RESIST A HORIZONTAL FORCE ACTING PARALLEL TO THE JOIST NOT LESS THAN 5% OF THE (DEAD + LIVE) LOAD INCLUDING, WHICHEVER IS GREATER.

WHERE FIRE PROTECTION LINE RUNS PARALLEL TO A BAR JOIST, LINES UP TO AND INCLUDING 4" MAY BE SUPPORTED BY A SINGLE JOIST LINE LARGER THAN 4" SHALL BE HUNG BETWEEN BAR JOISTS USING TRAPEZOID HANGER.

UNLESS SPECIFICALLY NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS, MAXIMUM SPACING OF HANGERS ON ANY SIZE FIRE PROTECTION LINE MAY NOT BE MORE THAN 15".

► SYSTEM NOTES (CONTINUED)

► METAL DECKING

PROVIDE ANGLE SUPPORTS FOR METAL DECK AT ALL COLUMN FACES WHERE SUPPORT IS REQUIRED, AND IS NOT PROVIDED BY MEMBERS FRAMING TO COLUMN. ANGLE FRAMING SHALL BE A MINIMUM OF 1x3x1/8.

NO LOADS FROM ARCHITECTURAL, MECHANICAL, ELECTRICAL OR PLUMBING ITEMS, SINGLY OR IN AGGREGATE, IN EXCESS OF 25 POUNDS SHALL BE HUNG FROM METAL ROOF DECK IN ANY 4 SQUARE FOOT AREA. LOADS EXCEEDING THIS LIMIT REQUIRE SUPPLEMENTAL FRAMING ATTACHED DIRECTLY TO STRUCTURAL FRAMING.

SPLICES AT CONTINUOUS DIAPHRAGM CHORD ANGLES SHALL BE FULL PENETRATION WELDS UNLESS NOTED.

► CONDUIT AND SLEEVES IN CONCRETE

THE USE OF ALUMINUM CONDUITS EMBEDDED IN STRUCTURAL CONCRETE ELEMENTS (WALLS) IS PROHIBITED.

WHERE SPECIFICALLY APPROVED IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD PRIOR TO THE PLACEMENT OF SLEEVES, CONDUIT OF ANY TYPE MAY PASS PERPENDICULARLY THROUGH A STRUCTURAL CONCRETE ELEMENT PROVIDED THAT A SCHEDULE 40 STEEL SLEEVE IS PROVIDED WITH AN INSIDE DIAMETER NO LESS THAN 1" LARGER THAN THE CONDUIT OUTSIDE DIAMETER. APPROVAL WILL GENERALLY NOT BE GIVEN FOR CONDUIT GROUPS WITH A COMBINED DIAMETER GREATER THAN 12" AT ONE LOCATION, UNLESS SPECIFICALLY INCORPORATED BY REFERENCE IN THE DRAWINGS.

CONDUITS EMBEDDED IN STRUCTURAL CONCRETE ELEMENTS SHALL SATISFY THE FOLLOWING CRITERIA:

- THEY ARE UNCOATED OR GALVANIZED IRON OR STEEL NOT THINNER THAN STANDARD SCHEDULE 40 STEEL PIPE.
- THEY SHALL NOT BE LARGER IN OUTSIDE DIAMETER THAN 1/3 THE OVERALL THICKNESS OF THE SLAB, WALL OR BEAM IN WHICH THEY ARE EMBEDDED, OR 4" OUTSIDE DIAMETER, WHICHEVER IS SMALLER, FOR SLABS-ON-METAL DECK. THICKNESS SHALL BE THE CONCRETE DEPTH ABOVE FLUTES.
- SPECIFIED CONCRETE COVER FOR PIPES, CONDUITS AND FITTINGS SHALL NOT BE LESS THAN 2" FOR CONCRETE EXPOSED TO EARTH OR WEATHER, NOR LESS THAN 1" FOR CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND.
- MULTIPLE CONDUITS SHALL NOT BE CLOSELY GROUPED. WHERE IT IS DESIRED TO PLACE MULTIPLE CONDUITS CLOSELY TOGETHER, INDIVIDUAL CONDUITS SHALL NOT BE SPACED CLOSER THAN FOUR OUTSIDE DIAMETERS OF THE LARGEST CONDUIT IN THE GROUP OR MORE, NO MORE THAN FOUR (4) CONDUITS MAY BE PLACED IN A GROUP. CONDUIT GROUPS SHALL BE SEPARATED BY A MINIMUM CLEAR DISTANCE OF 30 INCHES.
- CONDUITS MAY BE EMBEDDED IN CONCRETE. THE ELEVATION OF SOILS AGGREGATE TO PROVIDE DESIGN BEARING CAPACITY MAY REQUIRE FOUNDATIONS TO BE LOWERED - IN NO CASE SHALL TOP OF FOOTING BE HIGHER THAN NOTED. A GEOTECHNICAL ENGINEER SHALL VERIFY THAT SOIL AT THE FOOTING BASE IS ADEQUATE TO PROVIDE THE REQUIRED DESIGN SOIL BEARING CAPACITY.
- PIPING AND CONDUIT SHALL BE FABRICATED AND INSTALLED SO THAT CUTTING, BENDING OR DISPLACEMENT OF REINFORCEMENT OR OTHER EMBEDMENTS FROM THEIR PROPER LOCATION WILL NOT BE REQUIRED.
- DO NOT USE CONDUIT TO REINFORCEMENT STEEL. PROVIDE A MINIMUM OF 2" CLEARANCE FOR CONCRETE FLOW BETWEEN CONDUIT AND REINFORCEMENT STEEL.

► POST-INSTALLED ANCHORAGE

ALL POST-INSTALLED ANCHORS MUST BE INSTALLED IN STRICT CONFORMANCE WITH THE MANUFACTURERS PRINTED INSTALLATION INSTRUCTIONS INCLUDING, BUT NOT LIMITED TO, DRILL TYPE, HOLE CLEANING, INSTALLATION TORQUE, AND TEMPERATURE CONSTRAINTS.

ALL PERSONNEL INSTALLING POST-INSTALLED ANCHORS SHALL BE TRAINED BY THE MANUFACTURER ON PROPER INSTALLATION TECHNIQUE. CONTRACTOR SHALL COORDINATE ANY ON-SITE TRAINING WITH THE ANCHOR MANUFACTURER. TRAINING DOCUMENTATION SHALL BE AVAILABLE UPON REQUEST.

WHEN A SPECIFIC PRODUCT AND MANUFACTURER IS REFERENCED IN THE CONTRACT DOCUMENTS, THAT SPECIFIC PRODUCT SHALL BE USED UNLESS NOTED OTHERWISE. BELOW CONTAINS A LIST OF PRE-APPROVED ANCHORS FOR USE AS AN EQUAL (WHERE "OR EQUAL" IS INDICATED) OR WHERE POST-INSTALLED ANCHORAGE IS REFERRED TO IN THE DOCUMENTS GENERALLY (E.G. "ADHESIVE ANCHOR").

PROVIDE SPECIAL INSPECTION FOR ALL POST-INSTALLED ANCHORS PER THE EVALUATION REPORT OR AS INDICATED OTHERWISE. THE ANCHOR MANUFACTURERS REPRESENTATIVE SHALL BE PRESENT DURING THE INITIAL INSTALLATION OF EACH TYPE OF ANCHOR TO REVIEW AND APPROVE THE CONTRACTORS INSTALLATION PROCEDURES.

► CONCRETE ANCHORS

PRIOR TO INSTALLING POST-INSTALLED ANCHORS, CONTRACTOR SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2,500 PSI AND BE 21 DAYS OLD. ADHERE TO MANUFACTURER'S REQUIREMENTS FOR REQUIRED INSTALLATION TEMPERATURES AND HOLE CONDITION (WET, DRY, SATURATED).

EXPANSION ANCHORS FOR USE IN CONCRETE INCLUDE:

HILTI: KWIK-BOLT Z  
SIMPSON STRONG-TIE: STRONG-BOLT 2  
DEWALT: POWERS: POWER-STUD-SD2

SCREW ANCHORS FOR USE IN CONCRETE INCLUDE:

HILTI: HUS-EZ  
SIMPSON STRONG-TIE: TITEN HD  
DEWALT: POWERS: SCREW-BOLT-

ADHESIVE ANCHORS FOR USE IN CONCRETE INCLUDE:

HILTI: HIT-RE 500 VS OR HIT-HI 200  
SIMPSON STRONG-TIE: SET-XP AT XP  
DEWALT: POWERS: PURE110+ OR AC2080+ GOLD

DO NOT USE ADHESIVE ANCHORS IN OVERHEAD APPLICATIONS UNLESS SPECIFICALLY INDICATED ON THE CONTRACT DOCUMENTS. FOR ADHESIVE ANCHORS INSTALLED HORIZONTALLY OR UPWARDLY INCLINED, INSTALLER SHALL HOLD AN ACTIVE AICRISH ISSUED ADHESIVE ANCHOR INSTALLER CERTIFICATION IN ADDITION TO TRAINING BY THE ANCHOR MANUFACTURER. CONTINUOUS SPECIAL INSPECTION FOR ADHESIVE ANCHORS INSTALLED AT THESE ANGLES IS REQUIRED. THE SPECIAL INSPECTOR SHALL PROVIDE A REPORT TO THE STRUCTURAL ENGINEER OF RECORD INDICATING THAT THE MATERIALS USED AND INSTALLATION PROCEDURES CONFORM WITH THE CONSTRUCTION DOCUMENTS AND MANUFACTURERS PRINTED INSTALLATION INSTRUCTIONS.

ALL OTHER POST-INSTALLED ANCHORS SHALL HAVE PERIODIC SPECIAL INSPECTION AT A MINIMUM UNLESS MORE STRINGENT REQUIREMENTS ARE INDICATED IN THE SPECIFIC ANCHORS EVALUATION REPORT.

► MASONRY ANCHORS

INSTALLATION OF POST-INSTALLED ANCHORAGE INTO GROUTED CELLS SHALL BE MADE ONCE GROUT HAS REACHED A COMPRESSIVE STRENGTH OF 2,000 PSI.

PERIODIC SPECIAL INSPECTION IS REQUIRED FOR ALL POST-INSTALLED ANCHORAGE INTO MASONRY, IF MORE STRINGENT REQUIREMENTS ARE INDICATED IN THE SPECIFIC ANCHORS EVALUATION REPORT, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN.

EXPANSION ANCHORS TO SOLID OR GROUTED CMU INCLUDE:

HILTI: KWIK-BOLT 3  
SIMPSON STRONG-TIE: STRONG-BOLT 2  
DEWALT: POWERS: POWER-STUD-SD1

SCREW ANCHORS TO SOLID OR GROUTED CMU INCLUDE:

HILTI: KWIK-HUS-EZ  
SIMPSON STRONG-TIE: TITEN HD  
DEWALT: POWERS: SCREW-BOLT-

ADHESIVE ANCHORS TO SOLID, GROUTED, OR HOLLOW CMU AND UNREINFORCED BRICK INCLUDE:

HILTI: HIT-HY 70  
SIMPSON STRONG-TIE: SET-XP (CMU ONLY)  
SIMPSON STRONG-TIE AT (BRICK ONLY)  
DEWALT: POWERS: AC100+ GOLD

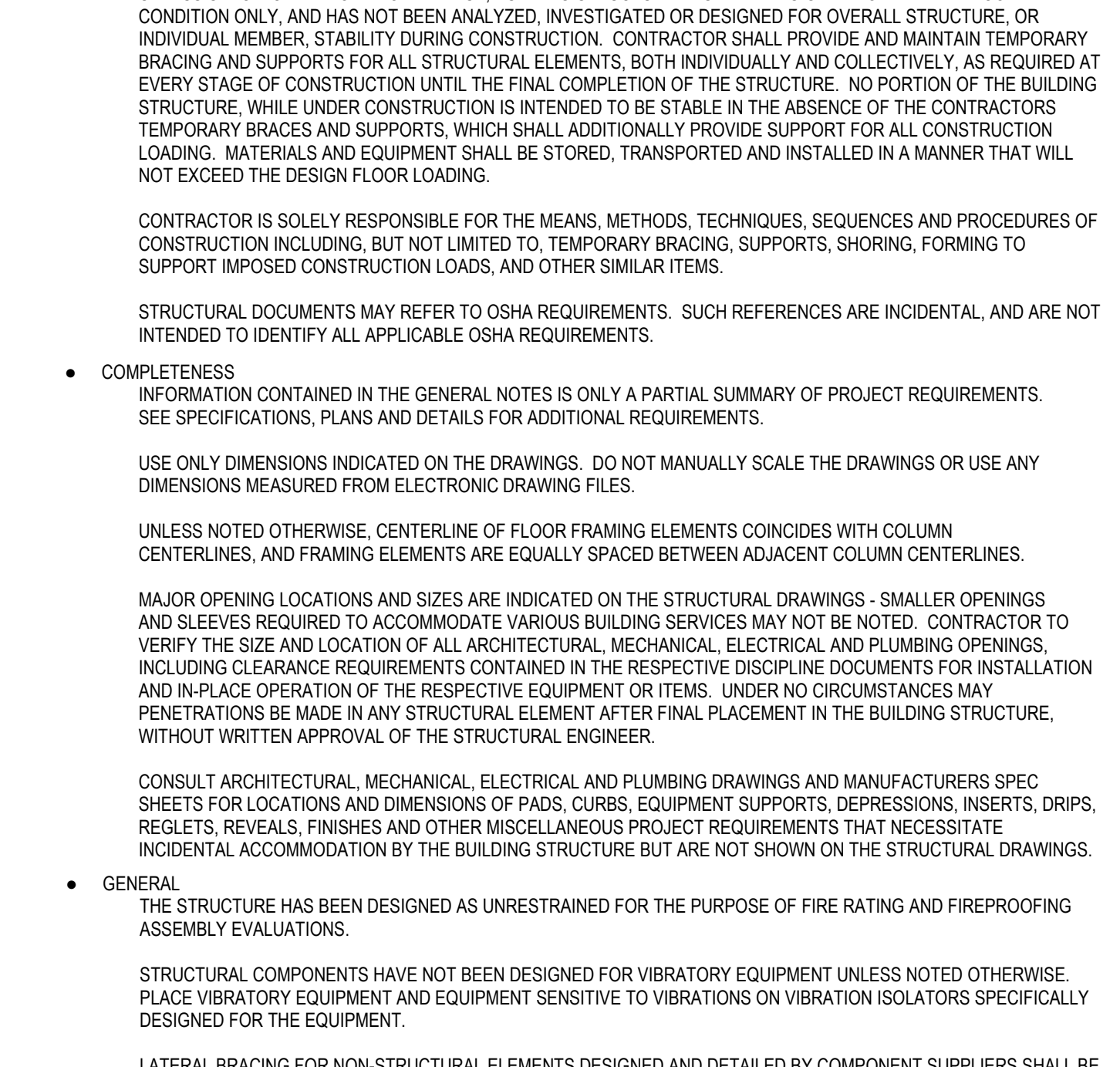
► STANDARD ABBREVIATIONS

AB ANCHOR BOLT (ROD)  
AHU AIR HANDLING UNIT  
ALT ALTERNATE  
APPROX APPROXIMATELY  
ARCH ARCHITECTURAL  
BF BOTTOM OF FOOTING  
BS BOTTOM OF STEEL  
BC BOTTOM CHORD  
BLDG BUILDING  
BRG BEARING  
BTWN BETWEEN  
CB CATCH BASIN  
CP CAST-IN-PLACE  
CL CONTROL JOINT  
CJ CENTER LINE  
CLR CLEAR (DISTANCE)  
CMU CONCRETE MASONRY UNIT  
COL COLUMN  
CONC CONCRETE  
CONT CONTINUOUS  
CS COLUMN STRIP  
CSA FORMER BAR ANCHOR  
OR DECK BEARING ANGLE  
DBE DECK BEARING ELEVATION  
DEMO DEMOLITION / DEMOLISH  
DIA DIAMETER  
DL DEAD LOAD  
EOD DRAWING  
EOD EDGE OF DECK  
EoS EDGE OF SLAB  
EF EACH FACE  
EJ EXPANSION JOINT  
EL ELEVATION  
ELEC ELECTRICAL  
ENG ENGINEER  
EQ EQUAL  
ES EDGE STRIP  
EW EACH WAY  
EWEF EACH WAY EACH FACE  
EXP EXPANSION  
EXT EXTERIOR  
EXTG or (e) EXISTING  
FD FLOOR DRAIN  
FLG FLANGE  
FLR FLOOR  
FND FOUNDATION  
FTG FOOTING  
FRMG FRAMING  
FUT FUTURE  
FV FIELD VERIFY  
GA GAUGE  
GALV GALVANIZED  
GC GENERAL CONTRACTOR  
GLLUM GULF-LAMINATED BEAM(S)  
GT GIRDER TRUSS  
HK HOOK  
HORIZ HORIZONTAL  
HP HIGH POINT  
HVAC HEATING, VENTILATING, AND AIR CONDITIONING  
TC TOP CHORD  
THK THICK (NESS) (ENED)  
TL TOTAL LOAD  
INT INTERIOR  
JRE JOIST BEARING ELEVATION  
K KIP  
KIP VERT  
KO KNOCKOUT PANEL  
KPS KIPS PER SQUARE INCH  
L ANGLE  
LB POUNDS  
LL LIVE LOAD

LBB LONG LEG BACK TO BACK  
LLH LONG LEG HORIZONTAL  
LLV LONG LEG VERTICAL  
LP LOW POINT  
LSP CLASS 'B' BAR LAP  
LST LAMINATED STRAND LUMBER  
LWT LIGHTWEIGHT  
LV LAMINATED VENER LUMBER  
LW LONG WAY  
MAX MAXIMUM  
MECH MECHANICAL  
MFR MANUFACTURER  
MIN MINIMUM  
MISC MISCELLANEOUS  
MSP MASSONRY OPENING  
MS MIDDLE STRIP  
NA NOT APPLICABLE  
NIC NOT IN CONTRACT  
NOM NOMINAL  
NTS NOT TO SCALE  
OC ON CENTER  
OD OUTSIDE DIAMETER  
OF OUTSIDE FACE  
OPNG OPENING  
OPF DEMOLITION / DEMOLISH  
OSL OUTSTANDING LEG  
PCJ PRECAST / PRESTRESSED  
PCF POUNDS PER CUBIC INCH  
PDL POUNDS PER CUBIC FOOT  
PL PLATE  
PLB PLUMBING  
PLF POUNDS PER LINEAR FOOT  
PROJ PROJECTION  
PSF POUNDS PER CUBIC FOOT  
PSI POUNDS PER SQUARE INCH  
PRE (POST) TENSIONED  
RND RADIUS  
REF REFERENCE  
REINF REINFORCE(D)  
REM REMAINDER  
RTU ROOF TOP UNIT  
SLP CRITICAL  
SCHED SCHEDULE  
SHEE SHEET  
SIM SIMILAR  
SNL SNOW LOAD  
SUB SHORT LESS BACK TO BACK  
SOG SLAB-ON-GRADE  
SPA SPACE(S) (EDGING)  
SPEC SPECIFICATION  
SQ SQUARE  
SS STAINLESS STEEL  
STAND STANDARD CONTRACTOR  
SW SHORT WAY  
TF TOP OF FOOTING  
TL TOP OF EDGE  
TP TOP OF PIER  
TS TOP OF STEEL  
TW TOP OF WALL  
TENSION CONTROL  
TC TOP CHORD  
THK THICK (NESS) (ENED)  
TL TOTAL LOAD  
INT INTERIOR  
JRE JOIST BEARING ELEVATION  
K KIP  
KIP VERT  
KO KNOCKOUT PANEL  
KPS KIPS PER SQUARE INCH  
L ANGLE  
LB POUNDS  
LL LIVE LOAD



ISOMETRIC



STRUCTURAL SHEET INDEX

S001	STRUCTURAL NOTES
S002	STRUCTURAL SCHEDULES
S100	FOUNDATION PLAN
S130	ROOF FRAMING PLAN
S300	FOUNDATION DETAILS
S801	FRAMING DETAILS

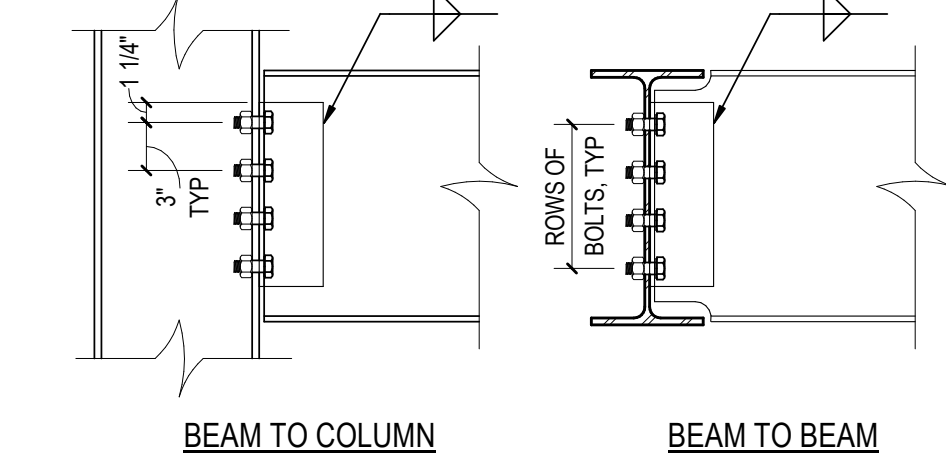
MISCELLANEOUS LINTEL SCHEDULE (SEE NOTE 1)		
WALL THICKNESS	CLEAR MASONRY OPENING WIDTH	SECTION
ALL	AT FIRE EXTINGUISHER CABINETS AND DRINKING FOUNDATIONS	1/4" PL
4"	UP TO 4'-0"	L3 1/2x3 1/2x3/8
4"	UP TO 8'-0"	L5x3 1/2x3/8
6"	UP TO 5'-0"	(2) L3 1/2x2 1/2x1/4
6"	UP TO 7'-0"	WT 4 x 10.5
6"	UP TO 9'-0"	WT 7 x 11
8"	UP TO 5'-0"	(2) L3 1/2x3 1/2x1/4
8"	UP TO 7'-0"	(2) L4x3 1/2x5/16 LLV
8"	UP TO 9'-0"	WT 7 x 15
8"	UP TO 4'-0"	8" HIGH x 8" WIDE BOND BEAM w/ (2) #5 x CONT
8"	UP TO 8'-0"	16" HIGH x 8" WIDE BOND BEAM w/ (2) #5 x CONT
12"	UP TO 4'-0"	8" HIGH x 12" WIDE BOND BEAM w/ (2) #5 x CONT
12"	UP TO 8'-0"	16" HIGH x 12" WIDE BOND BEAM w/ (2) #5 x CONT

LINTEL SCHEDULE				
LINTEL MARK	DESCRIPTION	SECTION	END BEARING PLATES	REMARKS
L1	8" HIGH x 8" WIDE BOND BEAM w/ (2) #5 x CONT		N/A	1,3,4,5
L2	16" HIGH x 8" WIDE BOND BEAM w/ (2) #5 x CONT		N/A	2,7,8
L3	24" HIGH x 8" WIDE BOND BEAM w/ (2) #5 x CONT		N/A	
L4	WB&21 W/ BOTTOM PL 3/8"x9"		PL 3/8"x5'-0" 8" W/ (2) 1/2" DIA x 6" LONG HWS	12
L5	WB&24 W/ BOTTOM PL 3/8"x11"		PL 3/8"x7'-0" 8" W/ (2) 1/2" DIA x 6" LONG HWS	
L6	WB&24 W/ BOTTOM PL 3/8"x15"		PL 3/8"x7'-0" 8" W/ (2) 1/2" DIA x 6" LONG HWS	

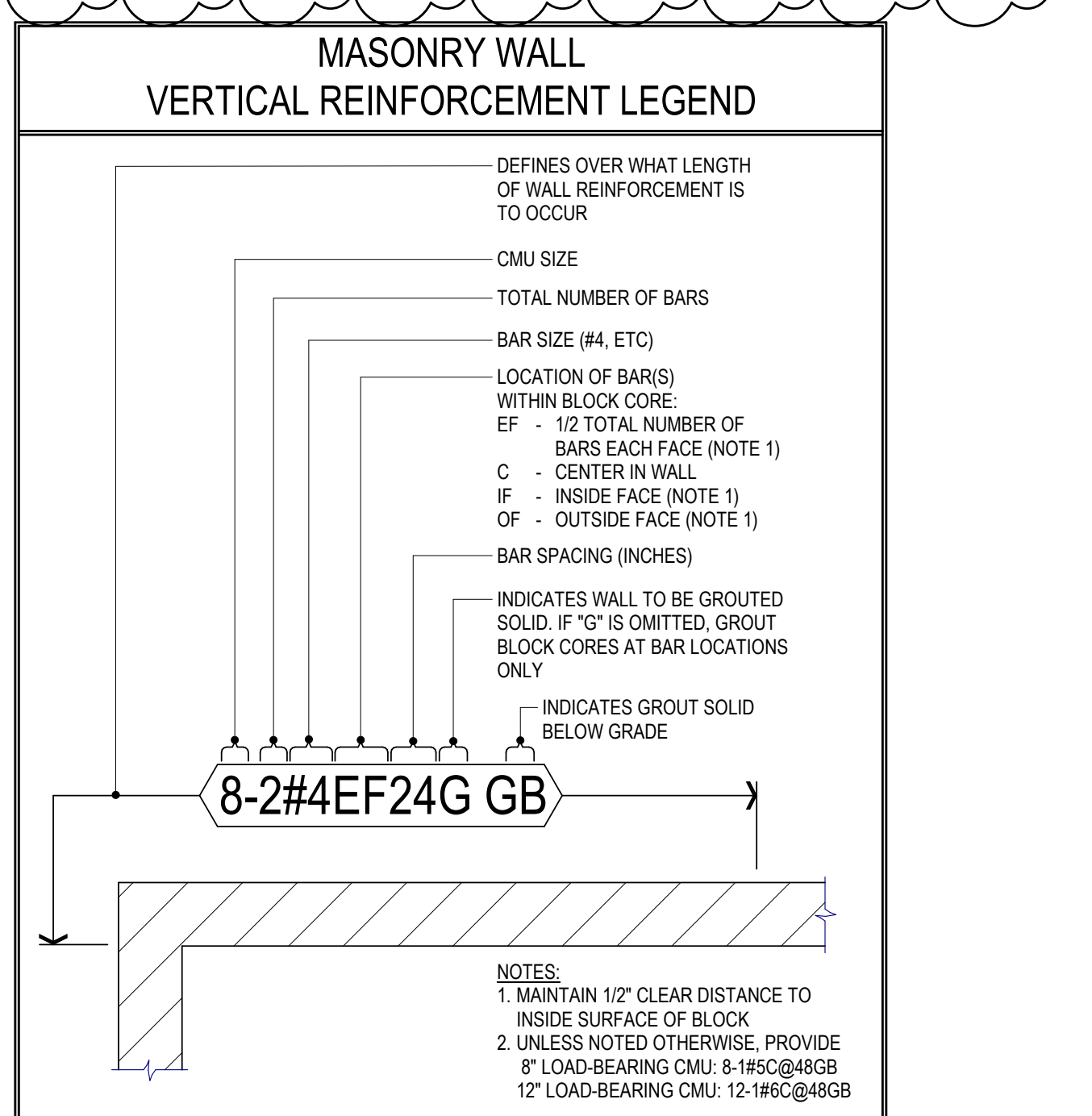
- LINTEL NOTES:**
- LINTELS CALLED OUT IN THIS SCHEDULE ARE FOR NON-LOAD BEARING MASONRY WALLS AND FOR LOAD BEARING WALLS WHERE LOAD IS INTRODUCED ABOVE THE LINTEL AT A DISTANCE GREATER THAN THE LINTEL SPAN.
  - PROVIDE MINIMUM 8" BEARING AT EACH END OF LINTEL.
  - CENTER LINTELS IN WALL UNLESS NOTED OTHERWISE.
  - BOTTOM PLATES UNDER WIDE FLANGE SHAPES SHALL BE EXTENDED TO THE FULL LENGTH OF LINTEL.
  - WELD LINTEL COMPONENTS INTO SINGLE UNIT.
  - NO LINTELS REQUIRED FOR 4" AND 6" NON-LOAD BEARING MASONRY WALLS WHERE GROUTED HOLLOW METAL FRAMES HAVE A HEADSPAN OF 4'-0" OR LESS.
  - PROVIDE THESE LINTELS WHERE OTHER LINTELS ARE NOT SPECIFICALLY DETAILED.
  - GROUT BLOCK CORES SOLID MINIMUM (3) COURSES BELOW LINTEL BEARING.

- NOTES:**
- PROVIDE (1) #5 VERTICAL BAR IN GROUTED CELL, EACH END OF LINTEL TYP.
  - REFERENCE ADJACENT DETAILS TYPICAL LINTEL BEARING REQUIREMENTS.
  - TYPICAL NOTES THAT APPLY UNLESS NOTED OTHERWISE:
    - PROVIDE MINIMUM 8" BEARING AT EACH END OF LINTEL.
    - CENTER LINTELS IN WALL UNLESS NOTED OTHERWISE.
    - BOTTOM PLATES WHERE CALLED FOR SHALL EXTEND FULL LENGTH OF LINTEL.
    - REFERENCE ADJACENT DETAILS FOR TYPICAL CMU WALL OPENING REINFORCEMENT REQUIREMENTS.
    - REFERENCE ADJACENT DETAILS FOR TYPICAL CMU CONTROL JOINT REQUIREMENTS.
  - NOTCH FACE SHELL AS REQUIRED TO PLACE CMU.
  - PROVIDE 1/2" DIA x 6" LONG HEADED WELDED STUDS (HWS) AT 24" OC ON TOP OF LINTEL. GROUT CMU CORE SOLID 8" MIN ABOVE TOP OF LINTEL AT HWS LOCATIONS.
  - PROVIDE ADJUSTABLE MASONRY ANCHORS AT 16" OC EACH SIDE OF WEB.
  - ALL EXTERIOR LINTELS (INCLUDING BOTTOM PLATES) TO BE HOT-DIPPED GALVANIZED.
  - WIDTH OF BOND BEAM TO MATCH WIDTH OF WALL.
  - PROVIDE 1" BOTTOM CLEAR COVER.
  - SEE MISCELLANEOUS LINTEL SCHEDULE FOR BRICK SUPPORT IN FRONT OF CMU LINTELS.
  - FIELD CUT 4" WYTHE WALL AS REQUIRED TO MATCH LINTEL BEARING ELEVATION.

DOUBLE ANGLE CONNECTION SCHEDULE		
BEAM SIZE	ROWS OF BOLTS	REMARKS
WB, W10	2	
W12, W14	3	
W16	4	
W18	5	
W21, W24	6	
W27	7	
W30, W33	8	



- DOUBLE ANGLE CONNECTION NOTES:**
- ALL BOLTS TO BE 3/4" DIA A325.
  - ANGLE LEGS TO BE A MIN OF 5/16" THICK.
  - SEE PLAN FOR COLLAR ORIENTATION.
  - CONNECTIONS SHOWN ARE MINIMUM CONNECTIONS UNLESS NOTED OTHERWISE.
  - CONNECTION ANGLES SHALL BE 30 KI MINIMUM.
  - ALL STEEL EXPOSED TO EXTERIOR CONDITIONS SHALL BE GALVANIZED.
  - ALL STANDARD DOUBLE ANGLE CONNECTIONS SHALL BE IN ACCORDANCE WITH AISC STEEL CONSTRUCTION MANUAL, 13th EDITION & SHALL BE TYPE 2 FRAMING, LIND.



- NOTES:**
- MAINTAIN 1/2" CLEAR DISTANCE TO INSIDE SURFACE OF BLOCK.
  - UNLESS NOTED OTHERWISE, PROVIDE 8" LOAD-BEARING CMU: 8-1#5C@48GB 12" LOAD-BEARING CMU: 12-1#6C@48GB

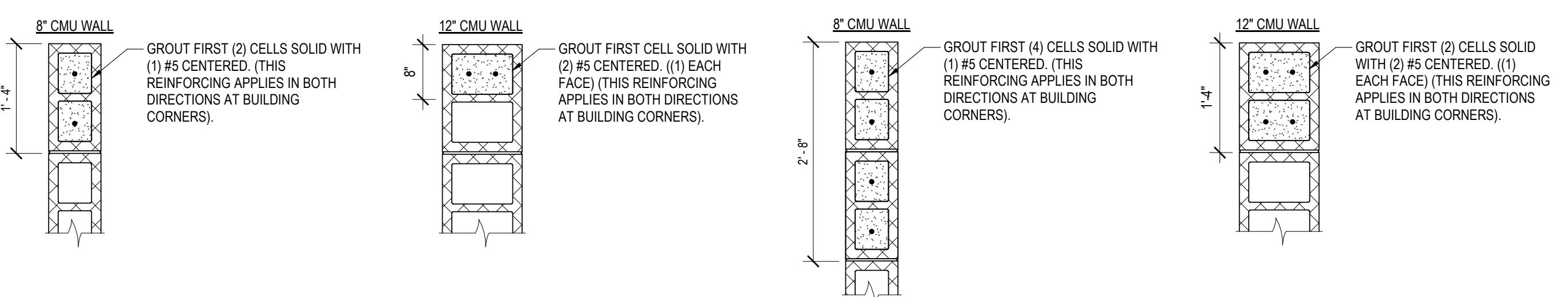
UNCOATED TENSION DEVELOPMENT & CLASS "B" LAP SPLICE SCHEDULE (f <sub>c</sub> = 3,000 psi)												
BAR SIZE	TENSION DEVELOPMENT LENGTH				CLASS "B" TENSION LAP LENGTH				CLASS "B" TENSION LAP LENGTH			
	CLR COV = 75"	CLR COV = 11"	CLR COV = 15"	CLR COV = 75"	CLR COV = 11"	CLR COV = 15"	CLR COV = 75"	CLR COV = 11"	CLR COV = 15"	CLR COV = 75"	CLR COV = 11"	CLR COV = 15"
	BOT	TOP	BOT	TOP	BOT	TOP	BOT	TOP	BOT	TOP	BOT	TOP
#3	12	13	12	13	12	13	12	13	12	13	12	13
#4	17	22	13	17	13	17	22	28	17	23	17	23
#5	24	32	20	26	17	22	32	41	26	33	22	28
#6	33	43	27	35	20	26	43	56	35	46	26	34
#7	53	69	44	57	33	43	69	90	57	74	43	55
#8	66	86	55	72	41	54	86	111	72	93	54	70
#9	80	104	67	87	51	66	104	135	87	113	66	86
#10	96	125	81	106	62	81	125	162	106	137	81	105
#11	113	146	96	125	74	97	146	190	125	162	97	125

UNCOATED TENSION DEVELOPMENT & CLASS "B" LAP SPLICE SCHEDULE (f <sub>c</sub> = 4,000 psi)												
BAR SIZE	TENSION DEVELOPMENT LENGTH				CLASS "B" TENSION LAP LENGTH				CLASS "B" TENSION LAP LENGTH			
	CLR COV = 75"	CLR COV = 11"	CLR COV = 15"	CLR COV = 75"	CLR COV = 11"	CLR COV = 15"	CLR COV = 75"	CLR COV = 11"	CLR COV = 15"	CLR COV = 75"	CLR COV = 11"	CLR COV = 15"
	BOT	TOP	BOT	TOP	BOT	TOP	BOT	TOP	BOT	TOP	BOT	TOP
#3	12	12	12	12	12	12	12	15	12	15	12	15
#4	15	19	12	15	12	15	19	24	15	20	15	20
#5	21	28	17	22	15	19	28	36	22	29	19	24
#6	29	37	24	31	17	22	37	48	31	40	22	29
#7	46	60	38	50	28	37	60	78	50	64	37	48
#8	57	74	48	62	36	47	74	96	62	80	47	60
#9	69	90	58	76	44	57	90	117	76	98	57	74
#10	83	108	70	92	54	70	108	140	92	119	70	91
#11	98	127	83	108	64	84	127	165	108	141	84	109

CONTINUOUS FOOTING SCHEDULE				
MARK	CONTINUOUS FOOTING DIMENSIONS		FOOTING REINFORCEMENT	REMARKS
	WIDTH	THICKNESS		
W20	2'-0"	12"	(2) #5, B, CONT	

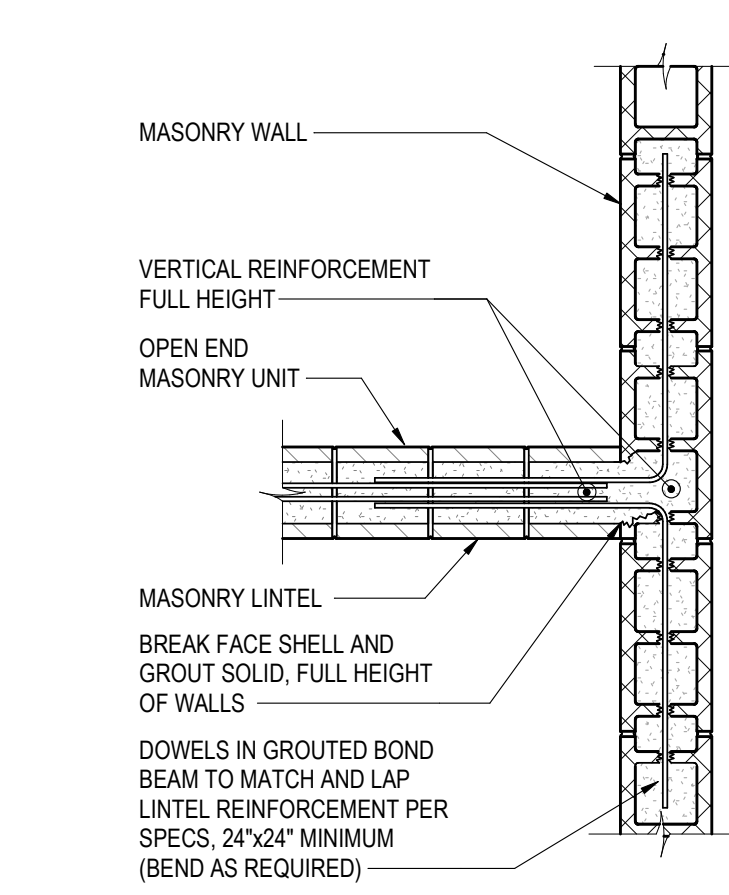
**NOTES:**

- B = BOTTOM, T = TOP, LW = LONG WAY, SW = SHORT WAY, EW = EACH WAY.
- ALL REINFORCEMENT BARS TO BE BOTTOM BARS UNLESS NOTED OTHERWISE.

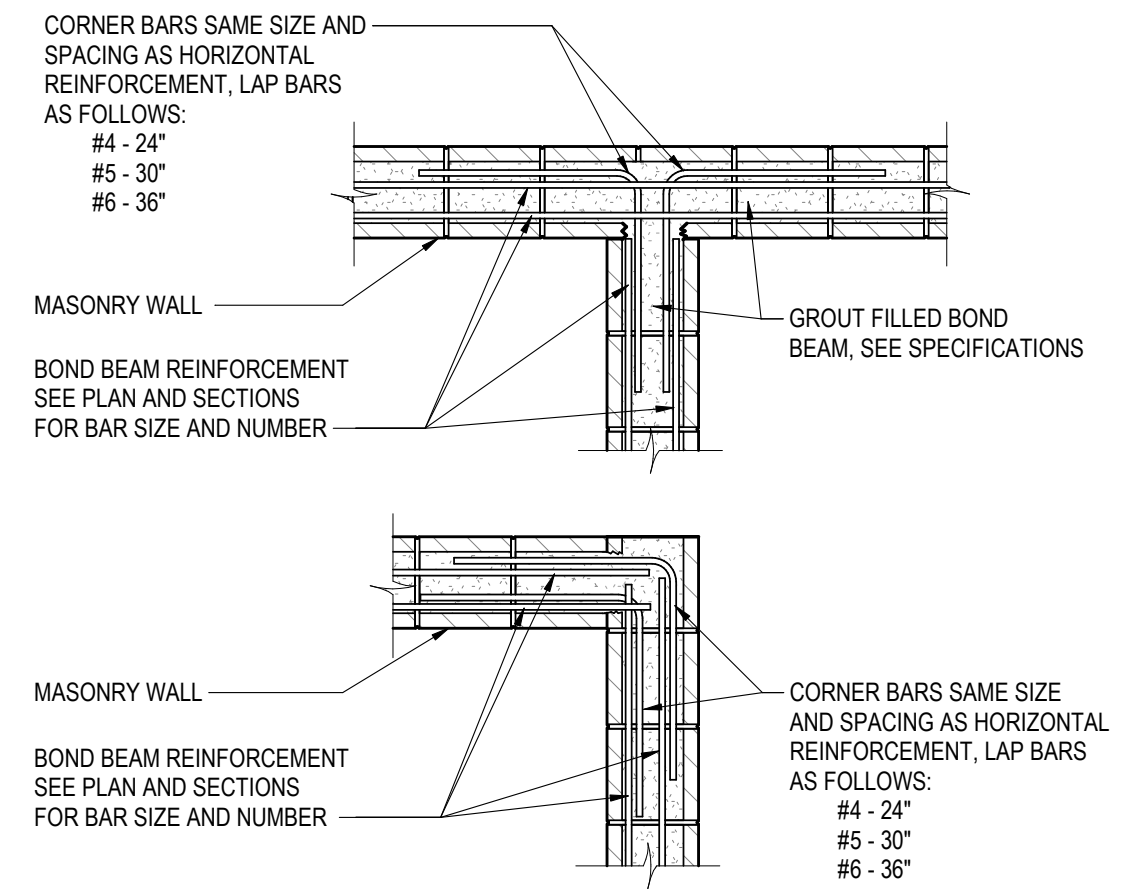


CMU WALL REINFORCEMENT

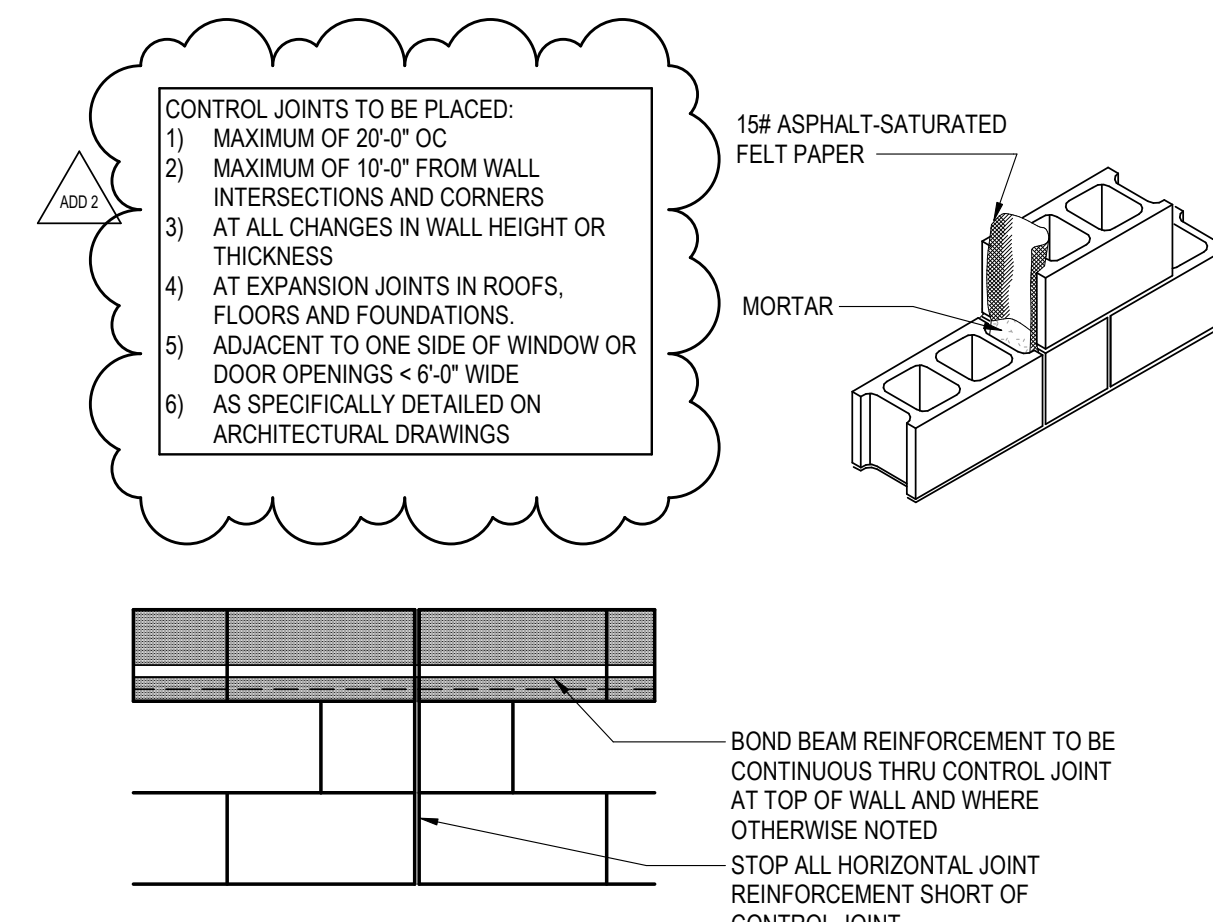
CMU WALL REINFORCEMENT



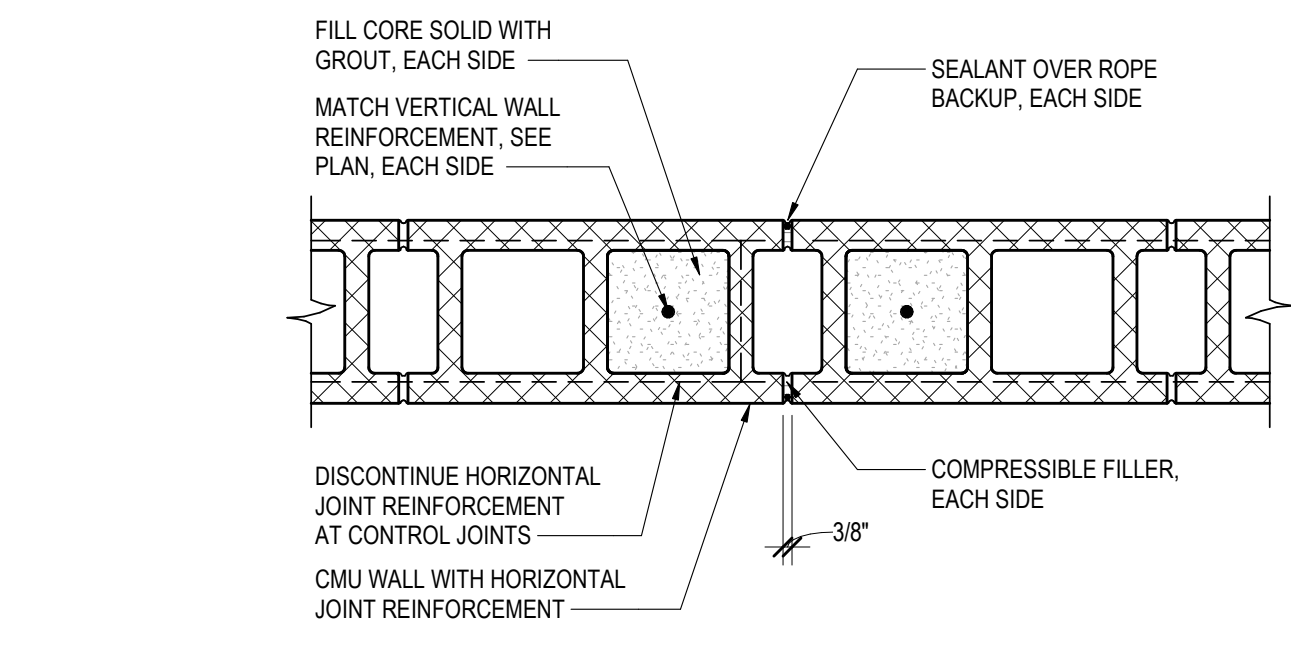
MASONRY WALL INTERSECTION AT MASONRY LINTEL



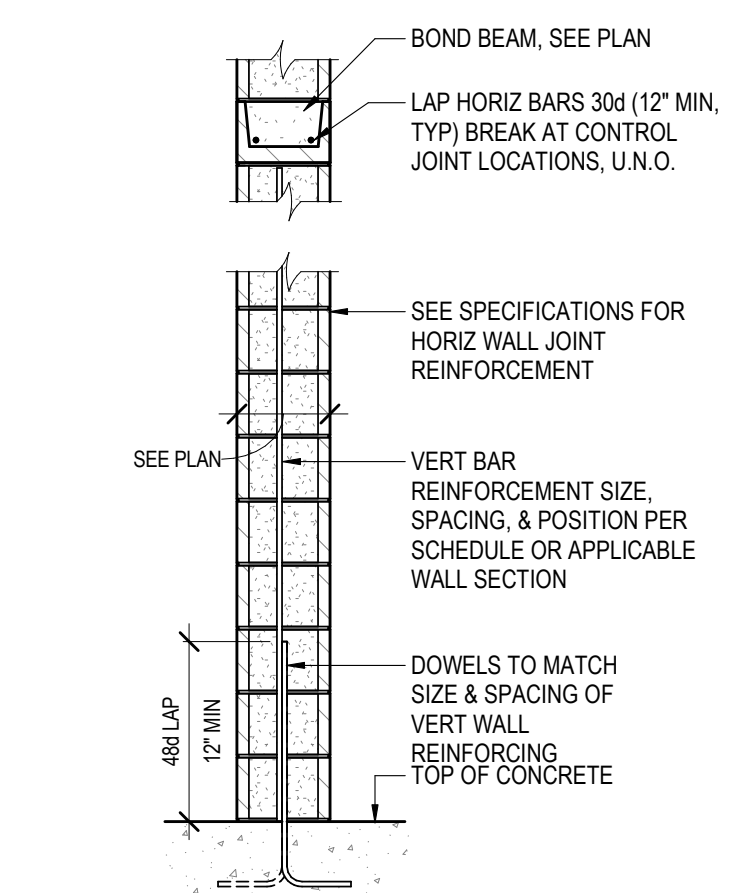
MASONRY BOND BEAM CORNER REINFORCEMENT PLAN DETAIL



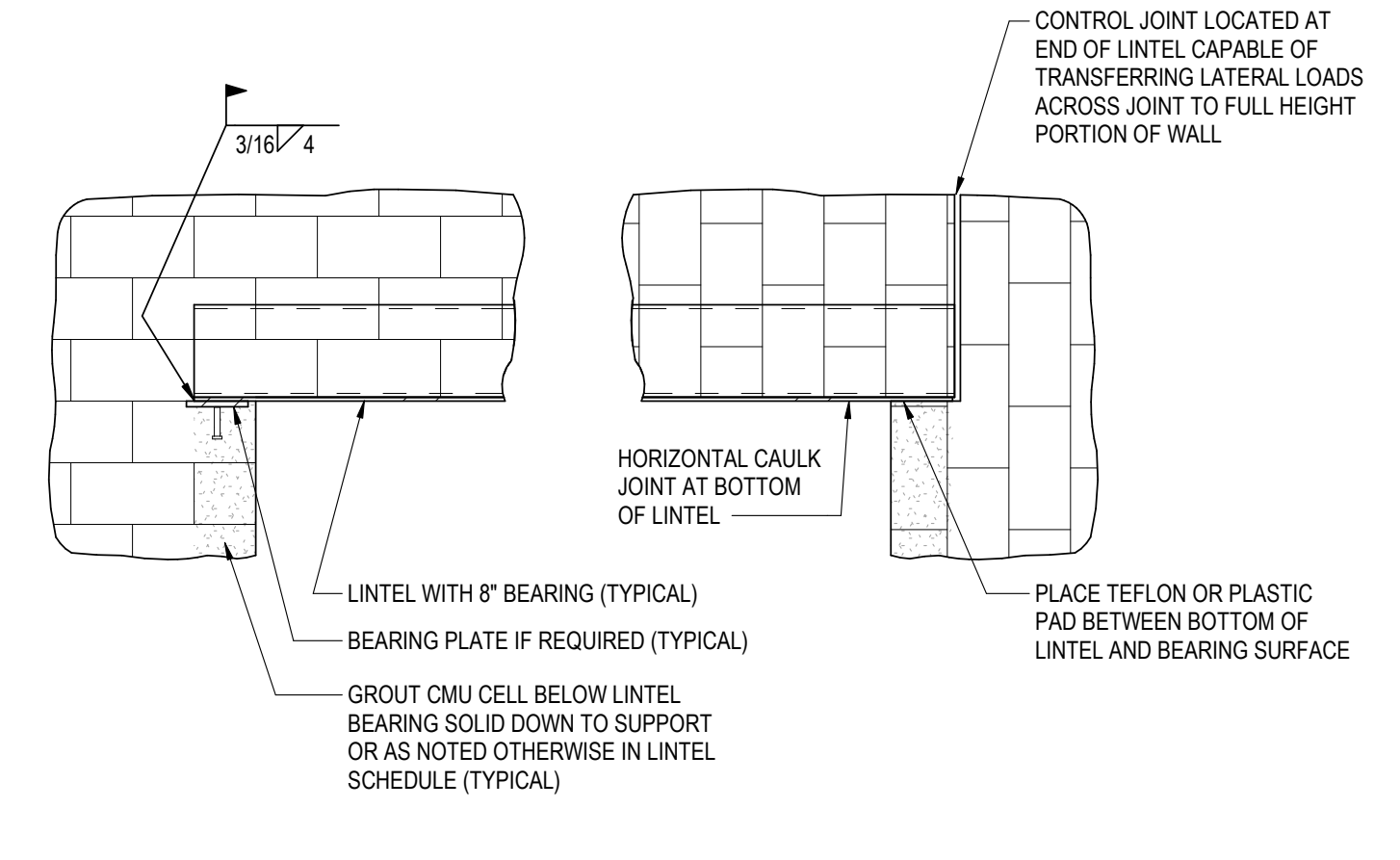
CMU CONTROL JOINT



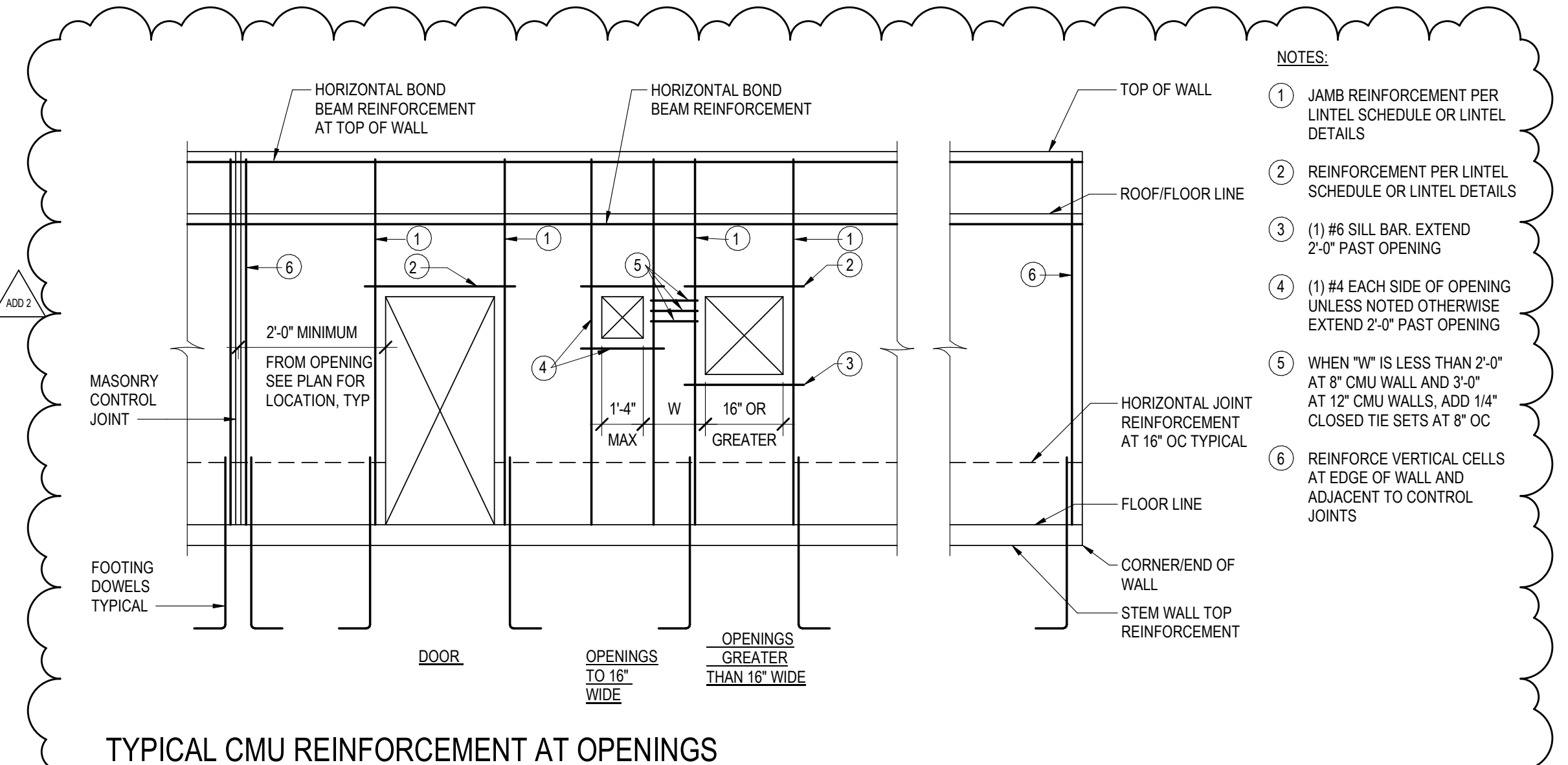
CMU WALL-CONTROL JOINT



TYP REINFORCED CMU WALL CONSTRUCTION



MASONRY BEARING DETAIL

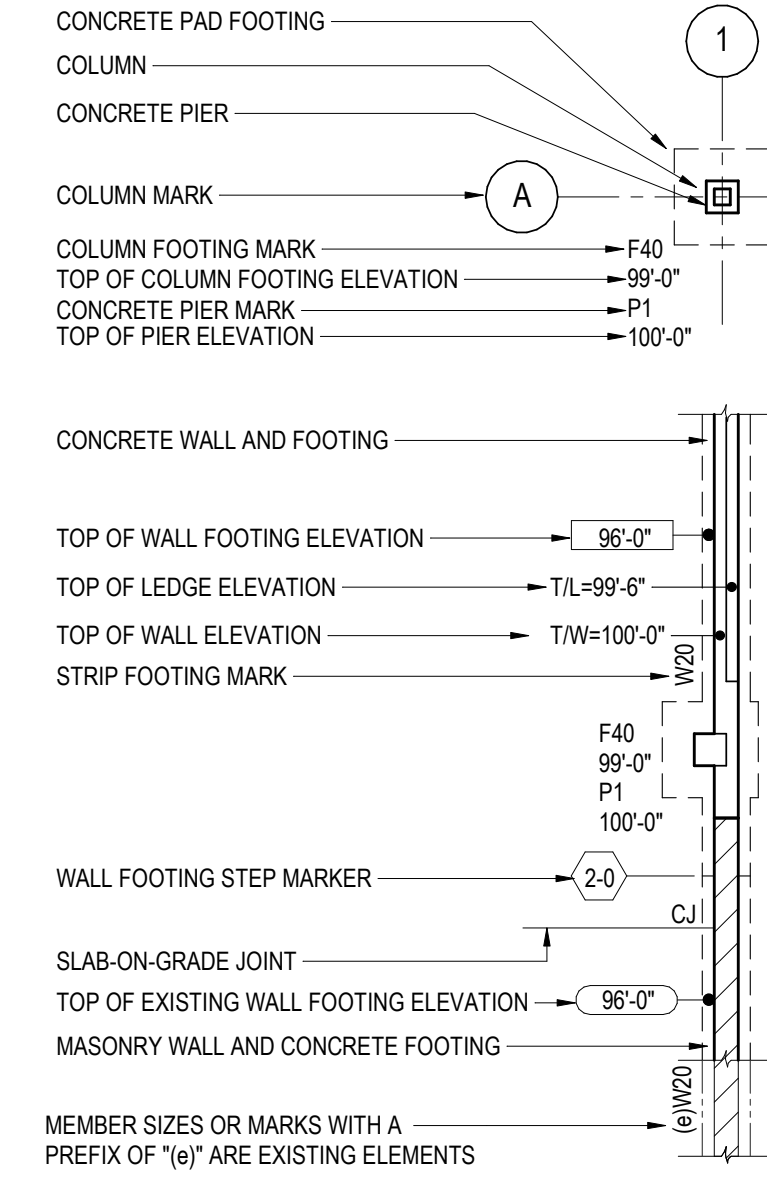


TYPICAL CMU REINFORCEMENT AT OPENINGS

No.	Description	Date
2	ADDENDUM #2	1/4/21



**FOUNDATION LEGEND**

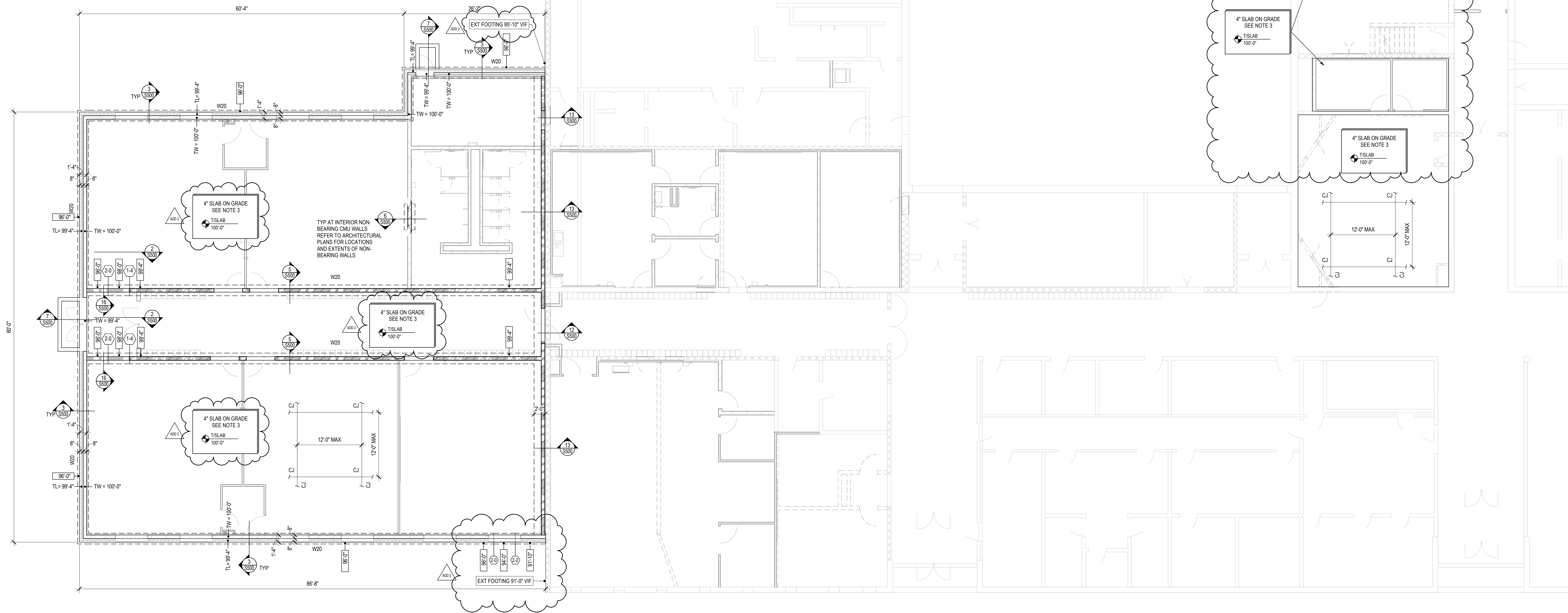


**FRAMING KEY NOTES**

- 1 FIELD CUT EXISTING SLAB FOR NEW LOAD BEARING CMU. FIELD VERIFY SLAB REMOVAL. W/ARCH. 2" (1" EACH SIDE OF NEW WALL).
- 2 INFILL EXISTING WALL OPENING WITH AN 8" CONCRETE WALL #4 BARS AT 18" O/C SW. DOWEL BARS INTO EXISTING CONCRETE FOUNDATION WALL 6" MIN. SEE ARCH FOR WATER PROOFING.
- 3 REMOVE EXISTING WALLS AND SLABS. SEE DEMO PLAN.
- 4 DOWEL STOOP HORIZONTAL REINFORCING INTO EXISTING FOUNDATION WALL (6" EMBED). WATER PROOF AS REQUIRED. SEE ARCH.

**FOUNDATION PLAN NOTES**

- 1. FINISH SLAB ELEVATION = 100'-0" LOCAL DATUM UNLESS NOTED OTHERWISE. TOP OF FOOTING ELEVATION = 96'-0" UNLESS NOTED OTHERWISE.
- 2. SEE ARCH FOR STOOP DIMENSIONS AND LOCATIONS.
- 3. SLAB-ON-GRADE TO BE 4" THICK WITH SYNTHETIC FIBERS (REFER TO SPECIFICATION) VAPOR RETARDER OVER 8" COARSE STONE BASE UNLESS NOTED OTHERWISE.
- 4. TYPICAL WHERE SLAB-ON-GRADE ABUTS WALL OR COLUMN, PROVIDE 1/4" x (SOG THICKNESS) ISOLATION FILLER STRIP. SET STRIP 1/4" BELOW FINISH SLAB ELEVATION.
- 5. OVER-EXCAVATION PER DETAIL 1/SS00 MAY BE REQUIRED TO REMOVE EXISTING UNDOCUMENTED FILL AND UNSUITABLE BEARING SOIL.
- 6. TYPICAL DETAILS THAT APPLY TO PLAN INCLUDE:
  - 2/SS00 FOOTING STEP DETAIL
  - 4/SS00 WALL FOOTING OVER LATERAL
  - 6/SS00 THICKENED SLAB FOR NON-BEARING WALLS
  - 7/SS00 STOOP DETAIL
  - 8/SS00 CONCRETE WALL JOINT DETAIL
  - 9/SS00 CORNER REINFORCEMENT DETAIL
  - 10/SS00 NEW TO EXISTING SLAB ON GRADE DETAIL
  - 11/SS00 SLAB-ON-GRADE JOINT DETAIL
- 7. DIMENSIONS PROVIDED ARE FOR FOUNDATION AND ARE NOT INDICATIVE OF OVERALL CMU WALL AND BRICK LOCATIONS. VERIFY WALL LOCATION ON FOUNDATION WALL WITH ARCH.



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www.raSmith.com  
project number: 120052

**INDEPENDENCE COMMUNITY SCHOOL DISTRICT  
WEST ELEMENTARY SCHOOL ADDITION/ REMODEL  
FOUNDATION PLAN**

Project Title:  
Project Location: 1301 1ST ST. W  
INDEPENDENCE, IA 50644

HSR Project Number:  
**19045**

Project Date:  
**DECEMBER 2020**

Drawn By:  
**Author**

Key Plan:

**CONSTRUCTION  
DRAWINGS**

No.	Description	Date
2	ADDENDUM #2	1/4/21

Graphic Scale:  
**VARIES**

Last Update:  
**1/4/2021 1:14:53 PM**

**S100**



Consultant:

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www.ra-smith.com  
project number: 1200582

Project Title: **INDEPENDENCE COMMUNITY SCHOOL DISTRICT  
WEST ELEMENTARY SCHOOL ADDITION/ REMODEL**  
Project Location: 1301 1ST ST. W  
INDEPENDENCE, IA 50644  
Sheet Title: **ROOF FRAMING PLAN**

HSR Project Number: **19045**  
Project Date: **DECEMBER 2020**  
Drawn By: **Author**

Key Plan:

**CONSTRUCTION  
DRAWINGS**

No.	Description	Date
2	ADDENDUM #2	1/4/21

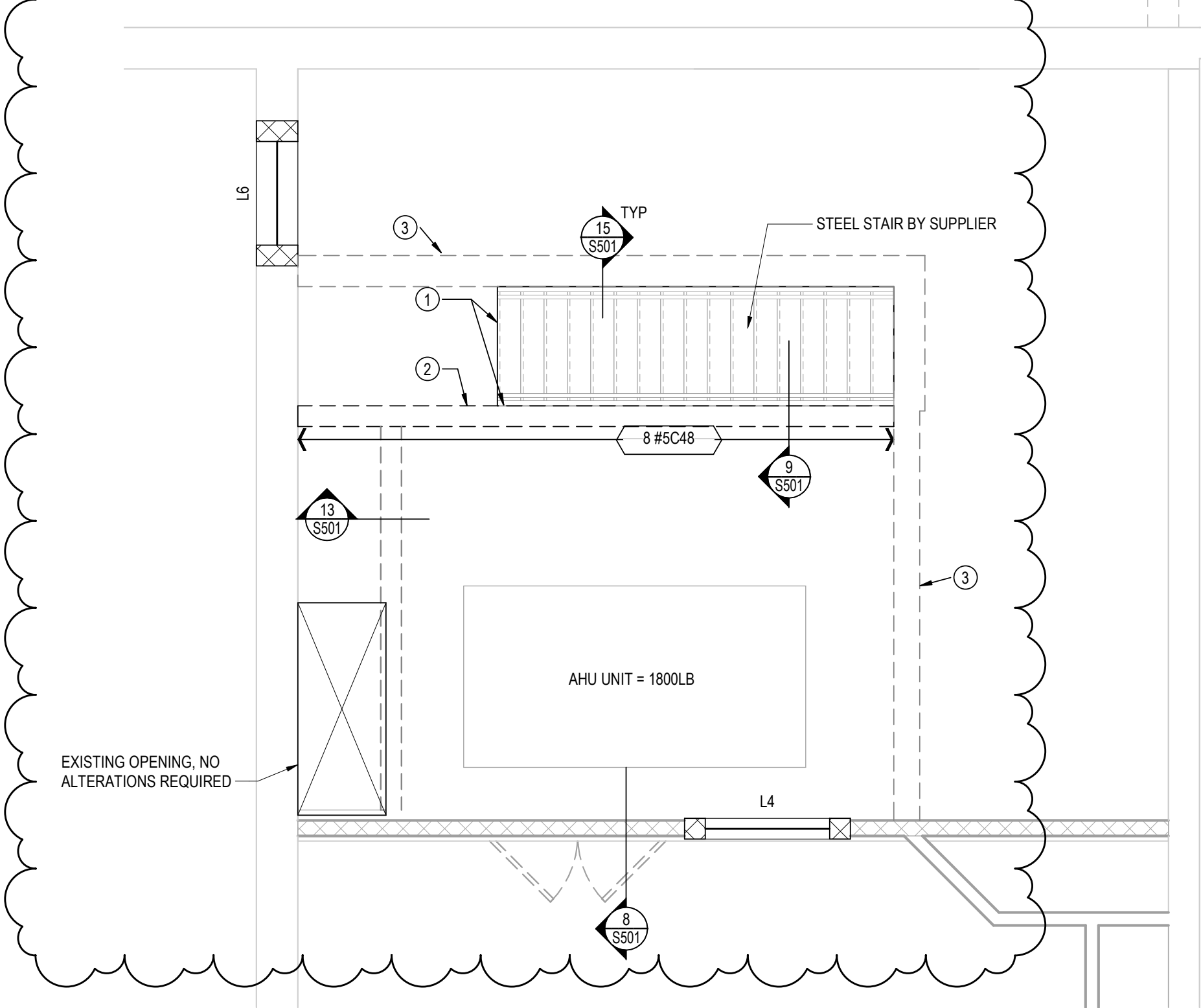
Graphic Scale: **VARIES**

Last Update: **1/4/2021 1:14:53 PM**

**S130**

**MEZZANINE FRAMING KEY NOTES**

- FIELD CUT NEW OPENING IN EXISTING CONCRETE SLAB. SHORE AS REQUIRED UNTIL CONSTRUCTION OF NEW WALL IS COMPLETED.
- NEW LOAD BEARING WALL BELOW
- EXISTING MASONRY WALL BELOW



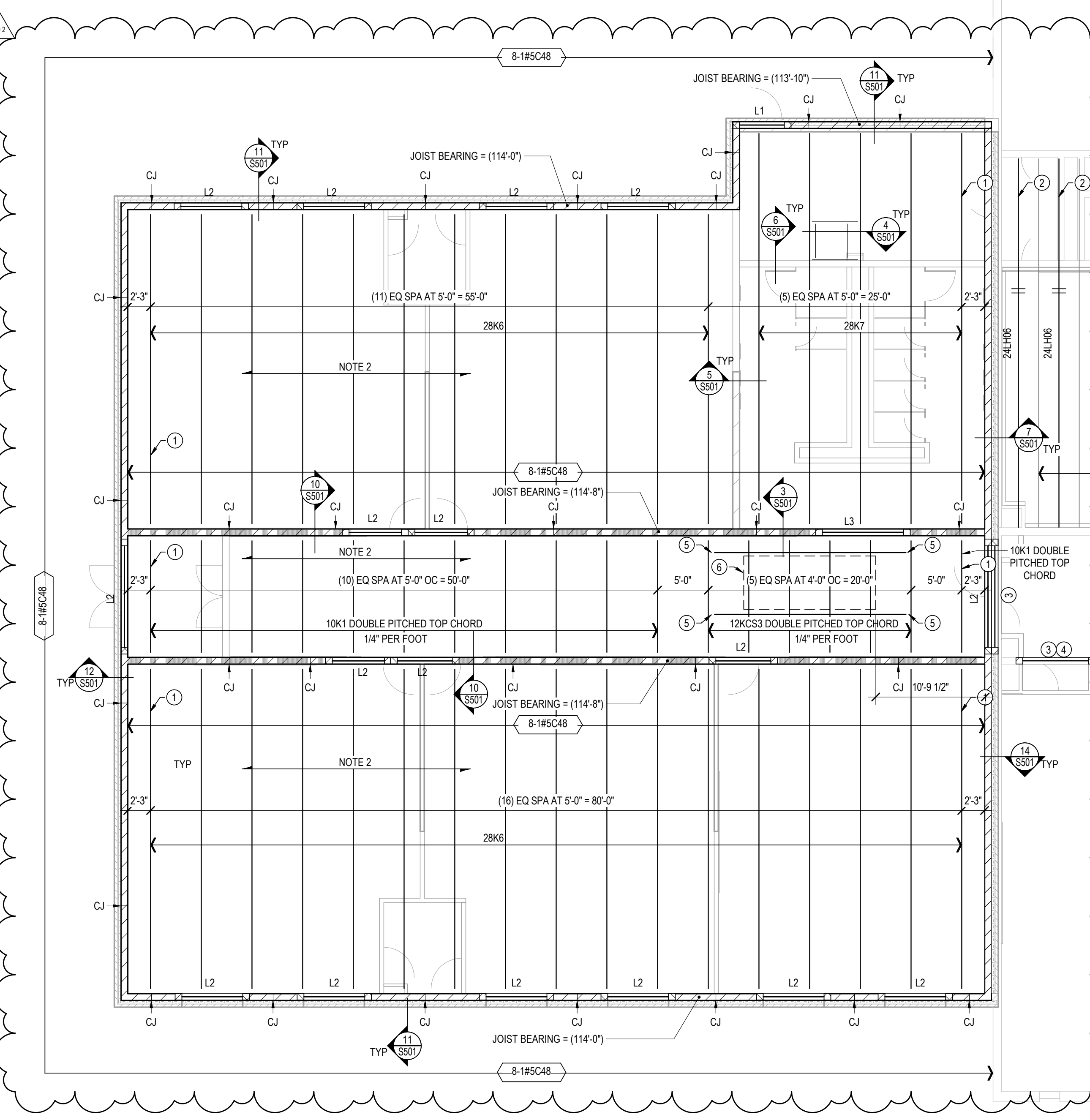
**3 MEZZANINE LEVEL FRAMING**  
SCALE: 1/4" = 1'-0"

**ROOF FRAMING PLAN NOTES**

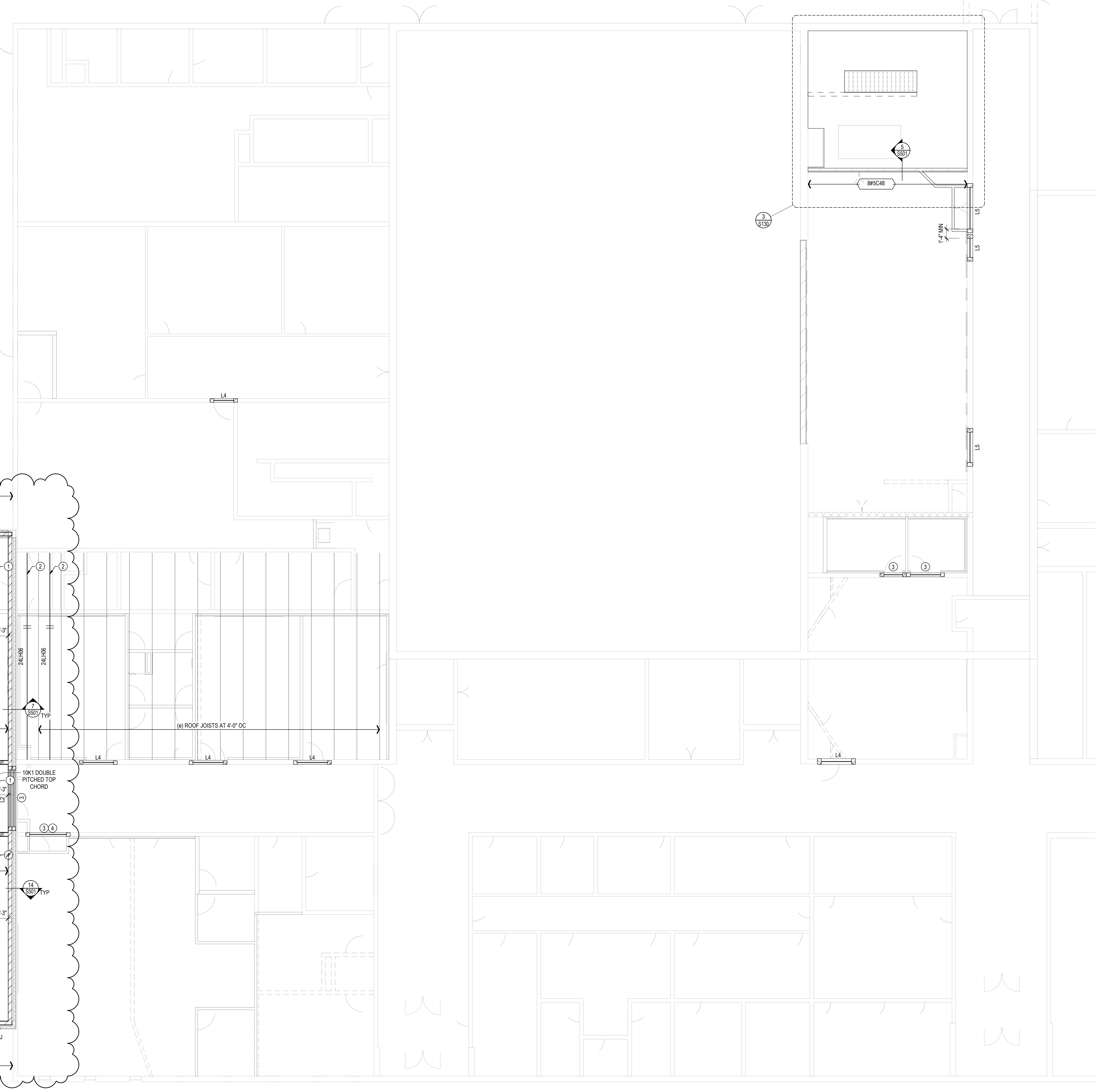
- ELEVATIONS REFERENCE FINISHED GROUND LEVEL SLAB WHICH HAS BEEN SET EQUAL TO 100'-0".
- ROOF DECKING SHALL BE 1 1/2" x 22GA WIDE RIB PRIME PAINTED METAL ROOF DECK FASTENED TO SUPPORTING STRUCTURE USING 3/8" PATTERN OF ANY OF THE ATTACHMENT METHODS SHOWN IN DETAIL D3/S501 WITH #10 TEK SIDELAP FASTENERS AT 18" OC. PROVIDE DECK WITH THE FOLLOWING PROPERTIES:  
 $T_{1000} = 0.0295 \text{ in}$   $I_{1000} = 0.155 \text{ in}^4$   $S_{1000} = 0.186 \text{ in}^3$   
 $F_y = 33 \text{ KSI MIN}$   $F_u = 0.193 \text{ KSI}$   $S_x = 0.182 \text{ in}^3$   
INSTALL DECK UNDER 3 OR MORE SPAN CONDITIONS.
- PROVIDE MIN 8" HIGH BOND BEAM WITH (2) #5 CONTINUOUS AT END ADJACENT TO JOIST BEARING ELEVATIONS UNLESS NOTED OTHERWISE. WHERE JOIST BEARING IS NOT AT COURSE, PROVIDE PARTIAL HEIGHT BLOCK GROUDED SOLD TO TOP OF BOND BEAM. WIDTH OF BOND BEAM TO MATCH WALL THICKNESS AND IS TO RUN CONTINUOUS THROUGH CONTROL JOINTS. PROVIDE CORNER BARS WHERE THEY OCCUR AND LAP ALL BOND BEAM STEPS A MINIMUM OF 24".
- JOIST SUPPLIER TO PROVIDE CONTINUOUS TOP AND BOTTOM CHORD HORIZONTAL ANGLE BRIDGING AS REQUIRED. PROVIDE DIAGONAL X-BRIDGING WHERE INDICATED.
- PROVIDE ANGLE FRAME SUPPORT AT ALL ROOF OPENINGS IN ACCORDANCE WITH DETAIL 2 & 4/S501. REFERENCE DETAIL D3/S501 FOR ADDITIONAL CONCENTRATED LOADS ON ROOF DECK.
- ALL BAR JOISTS TO BE DESIGNED FOR A NET UPLIFT LOAD LISTED ON SHEET S301 ADDITION TO GRAVITY VERTICAL LOADS REQUIRED BY THE BAR JOIST DESIGNATION.
- AT FIRST BOTTOM CHORD PANEL POINT AT EACH END OF BAR JOIST WHERE THIS NOTE IS REFERENCED, PROVIDE CONTINUOUS HORIZONTAL BRIDGING. PROVIDE ADDITIONAL LINES OF HORIZONTAL BRIDGING ALONG LENGTH OF JOIST AS REQUIRED TO RESIST UPLIFT LOADINGS.
- BRACE TOP OF NON-LOAD BEARING CMU WALLS IN ACCORDANCE WITH DETAILS S/S501 AND S/S501

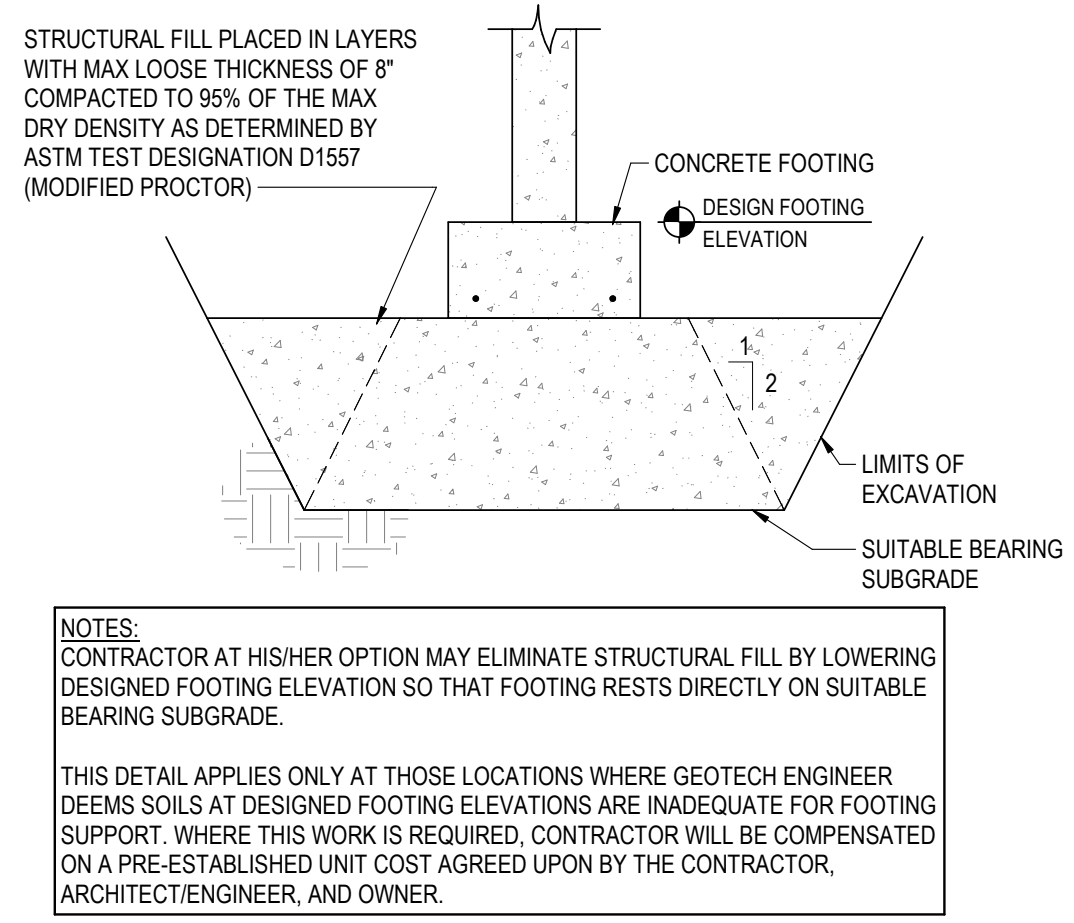
**ROOF FRAMING KEY NOTES**

- REDUCE CAMBER BY 1/2 AT END JOISTS
- INSERT JOISTS BETWEEN EXISTING JOISTS. FIELD SPLICE PER JOIST SUPPLIER'S INSTALLATION REQUIREMENTS. DO NOT CAMBER JOISTS. ORDER JOISTS W/ SEAT 1/2" LESS THAN EXISTING AND SHIM UP TO BOTTOM OF DECK. ADD OR REPLACE "X" BRACING AT NEW JOISTS PER MANUFACTURER'S REQUIREMENTS.
- NON-LOAD BEARING MASONRY WALL. SEE MISC LINTEL SCHEDULE
- TWO WYTHE WALL OF TILE AND CMU. AT HEAD ELEVATION. CUT CMU AND/OR TILE AS NEEDED. USE BACK-TO-BACK 4" WYTHE LINTELS FROM THE LOOSE LINTEL SCHEDULE.
- EXTEND CURB SUPPORT CHANNEL BEYOND RTU UNIT TO NEXT SUPPORTING JOISTS.
- RTU (5800 LBS) SEE MECHANICAL FOR MORE INFORMATION. SEE DETAIL 4/S501 FOR ROOF PENETRATION/OPENING FRAMING REQUIREMENTS.

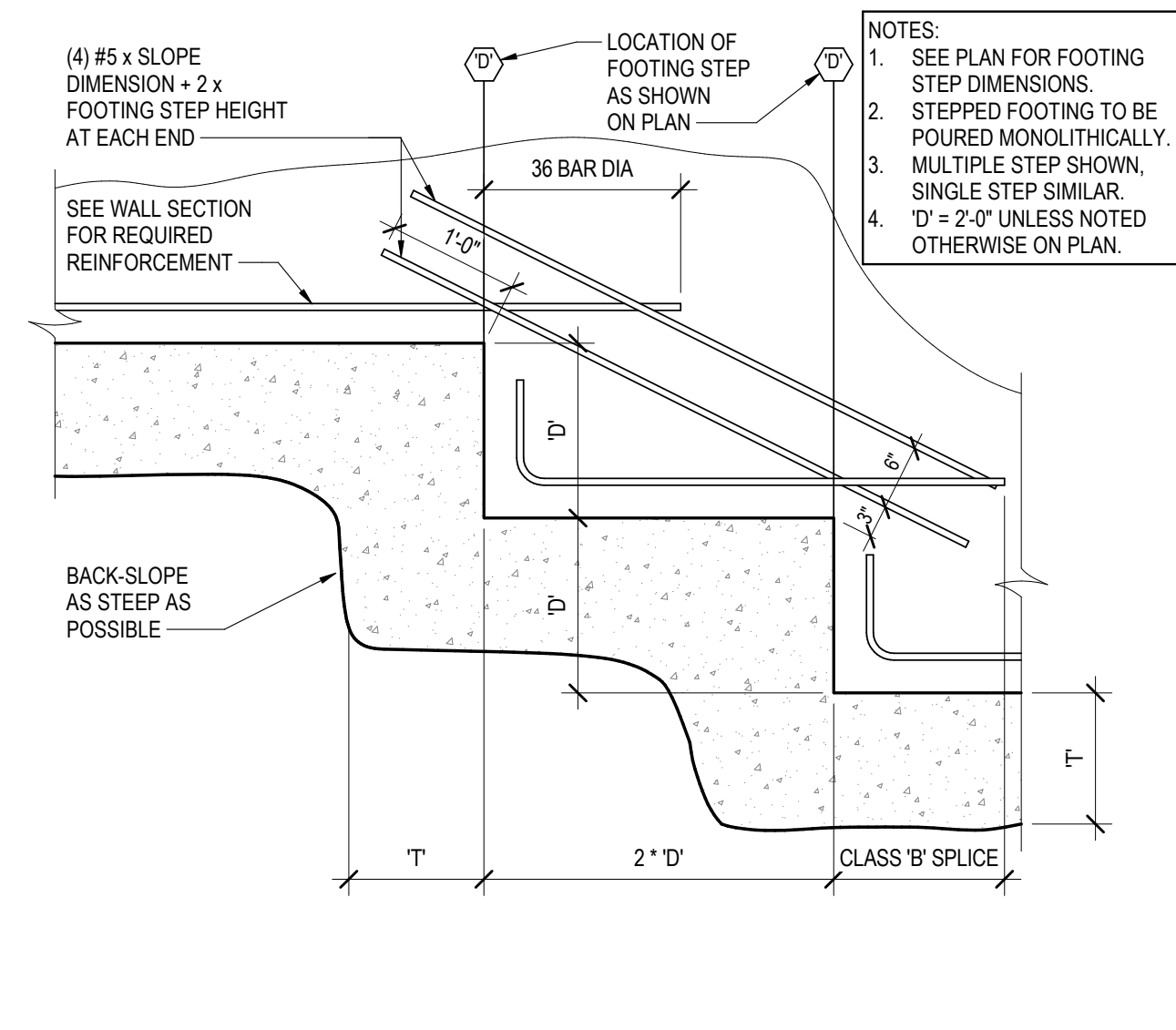


**1 LOWER ROOF FRAMING LEVEL**  
SCALE: 1/8" = 1'-0"

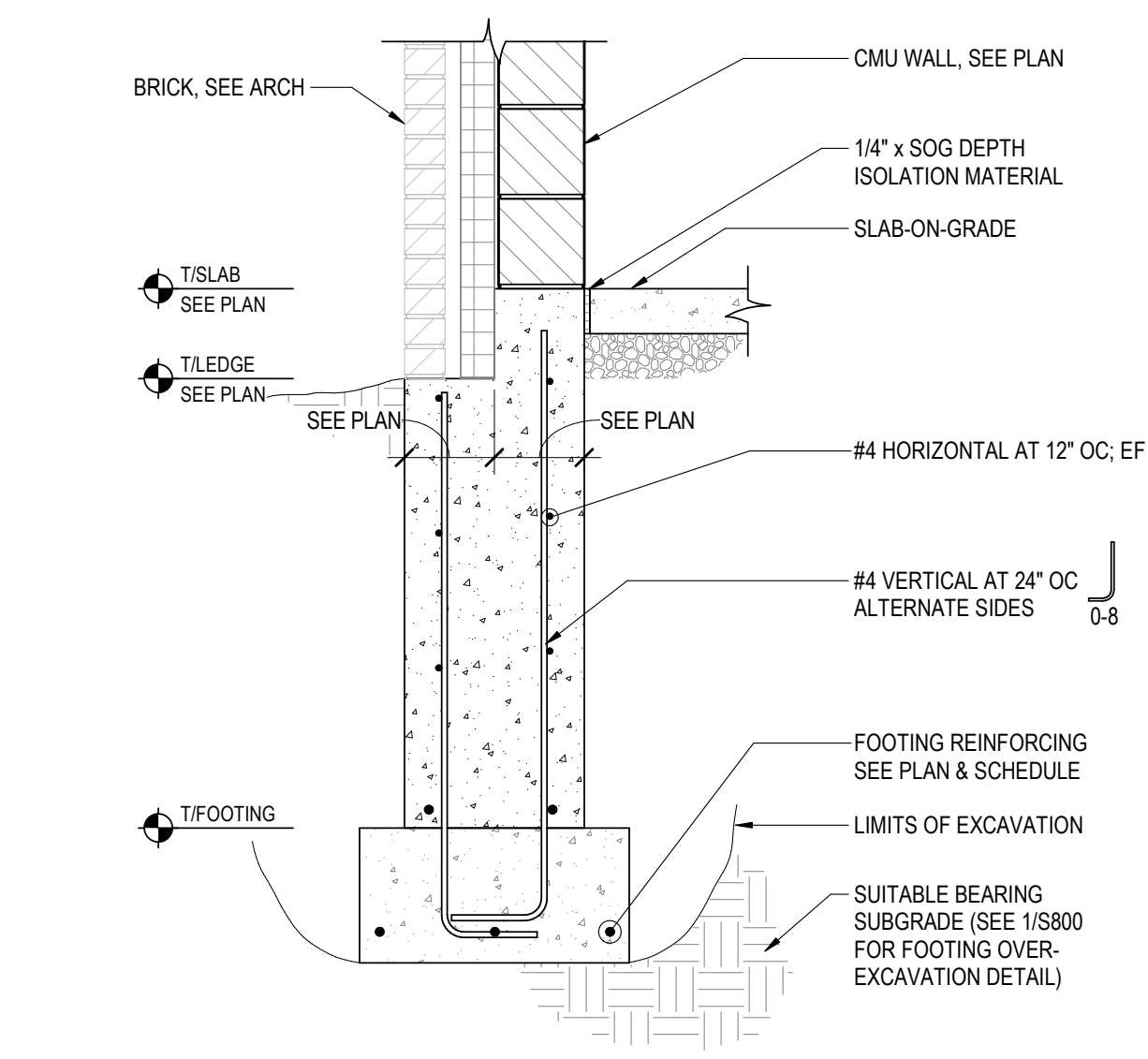




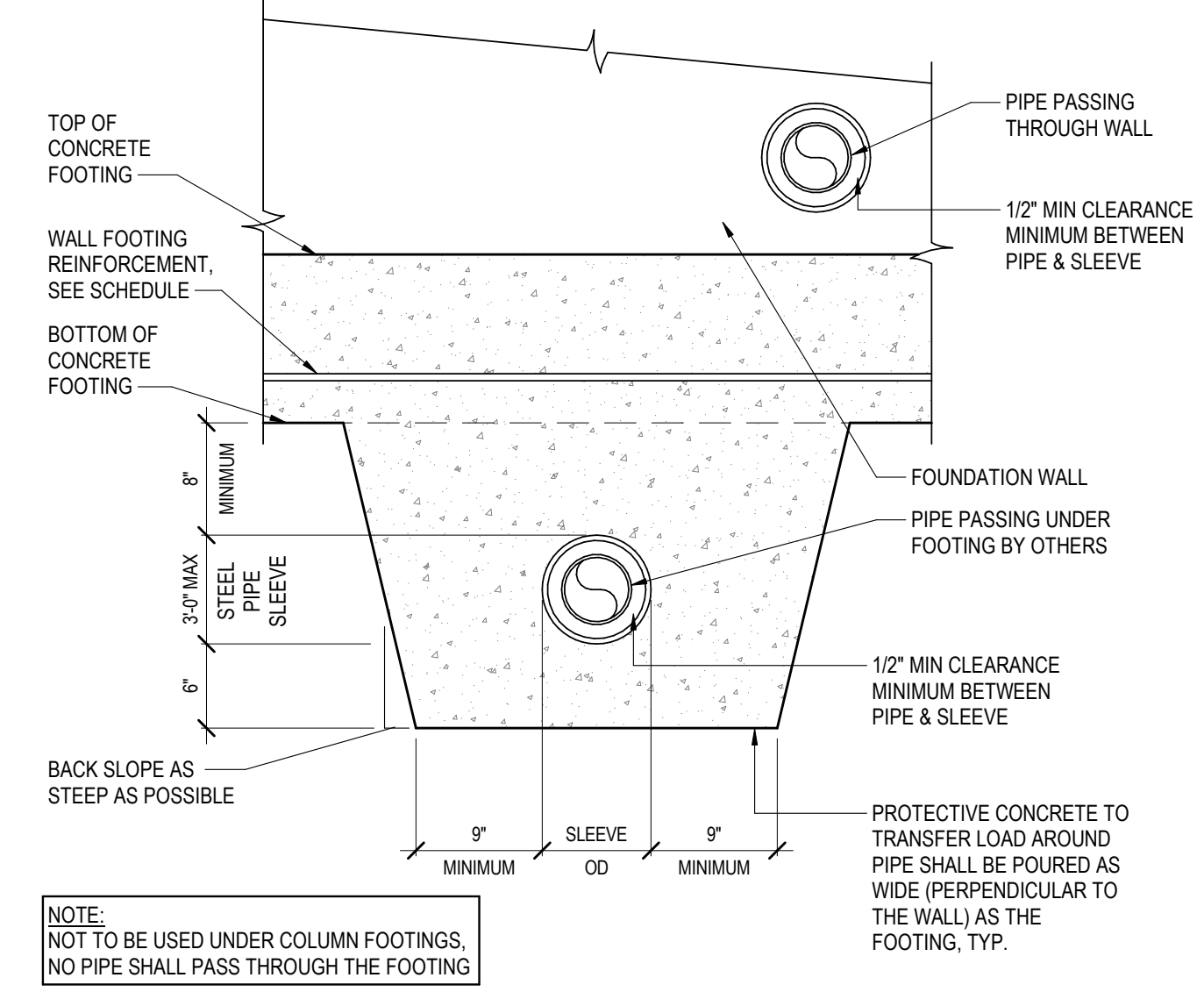
1 OVER EXCAVATION DETAIL  
SCALE: 1/2" = 1'-0"



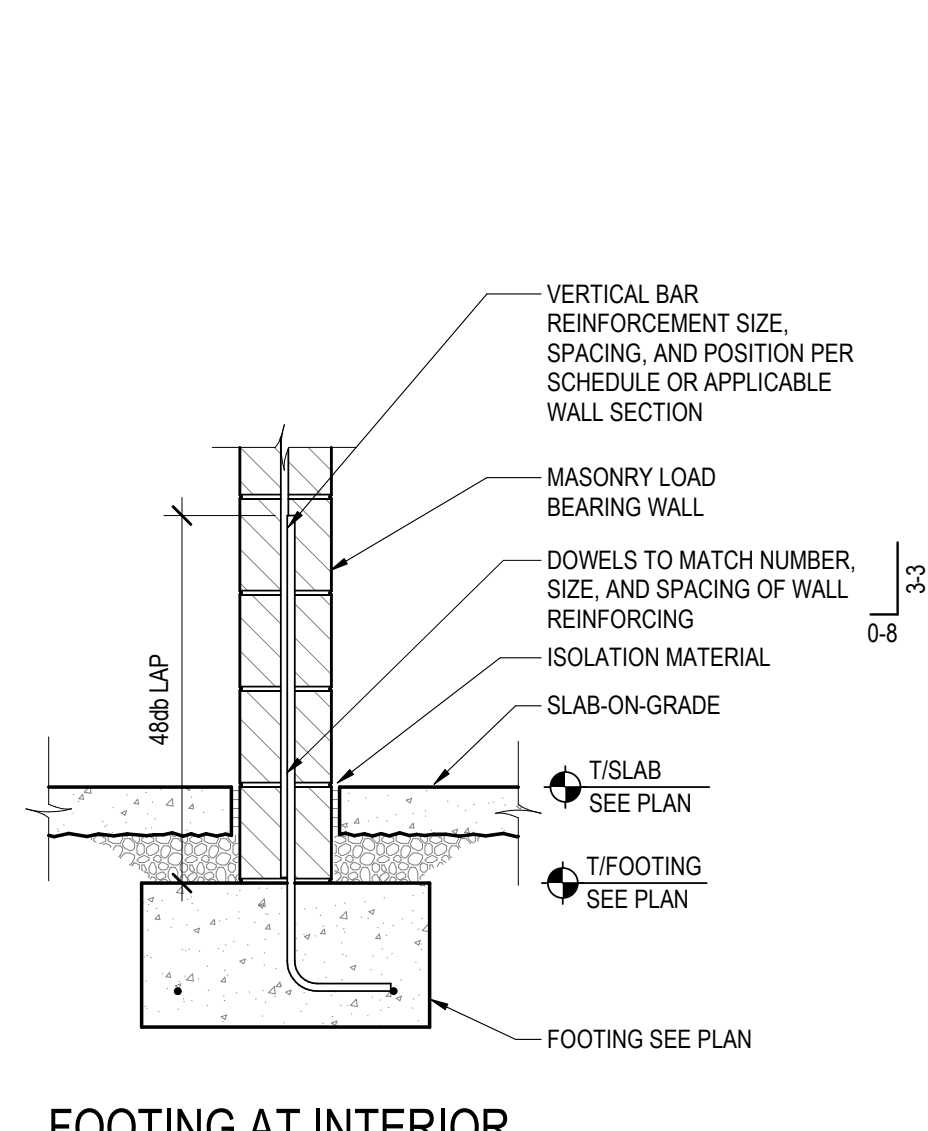
2 FOOTING STEP DETAIL-CAST-IN-PLACE TO CMU WALL  
SCALE: 3/4" = 1'-0"



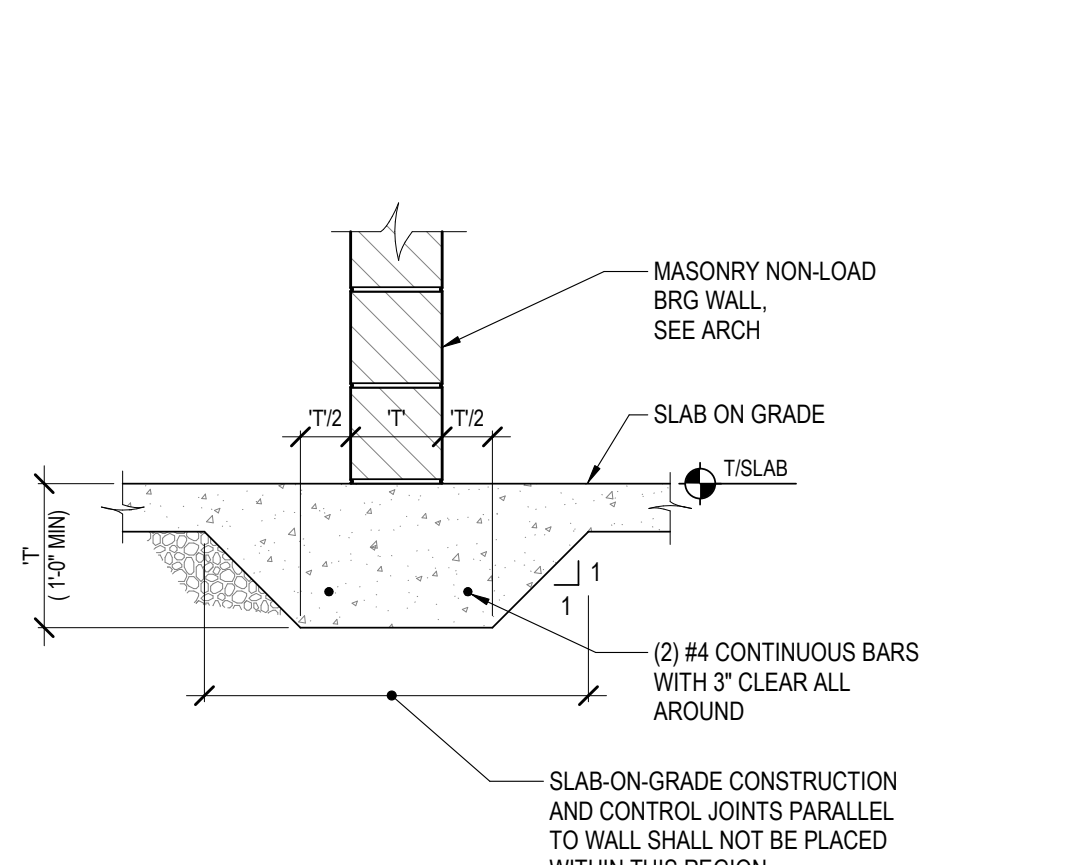
3 TYPICAL CONCRETE FROST WALL  
SCALE: 3/4" = 1'-0"



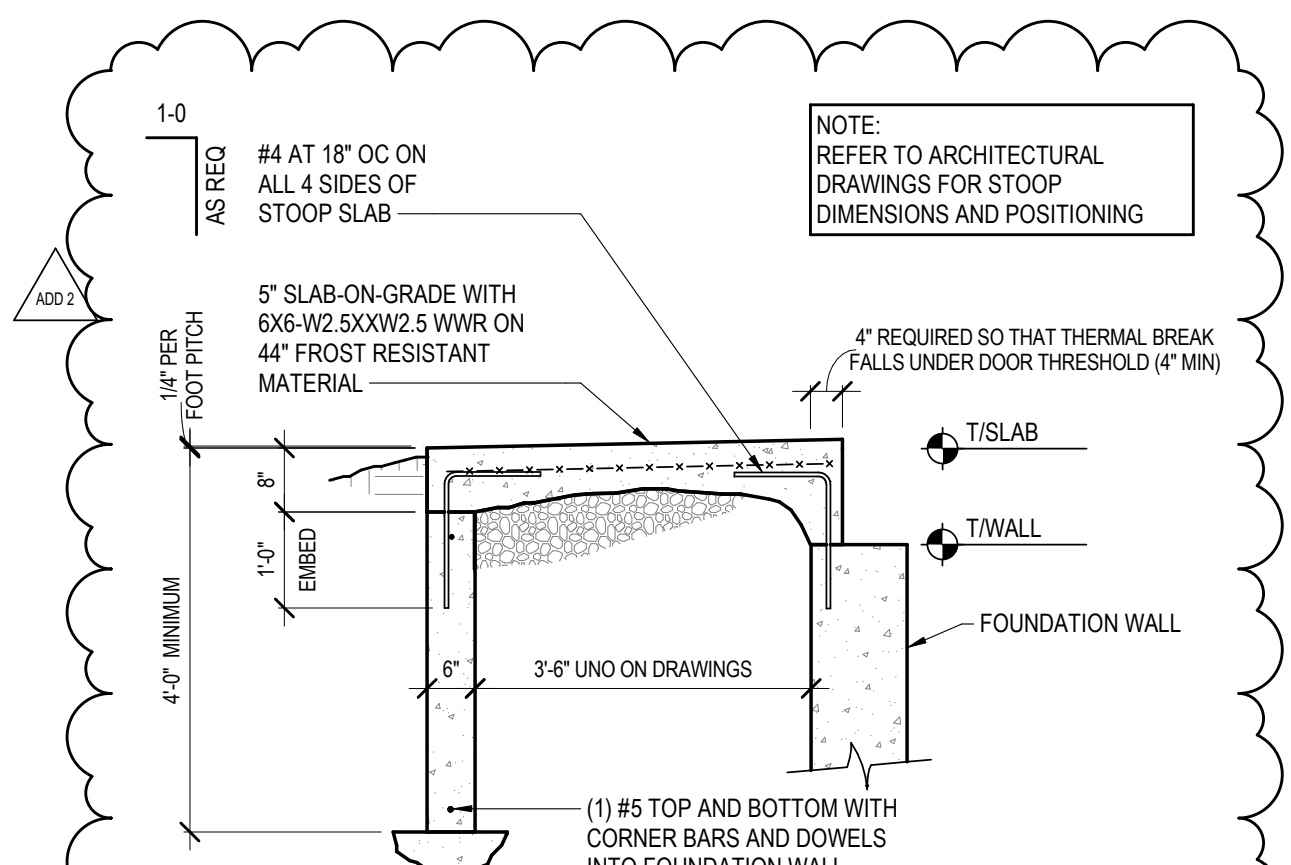
4 PIPE PASSING UNDER WALL FOOTING  
SCALE: 1" = 1'-0"



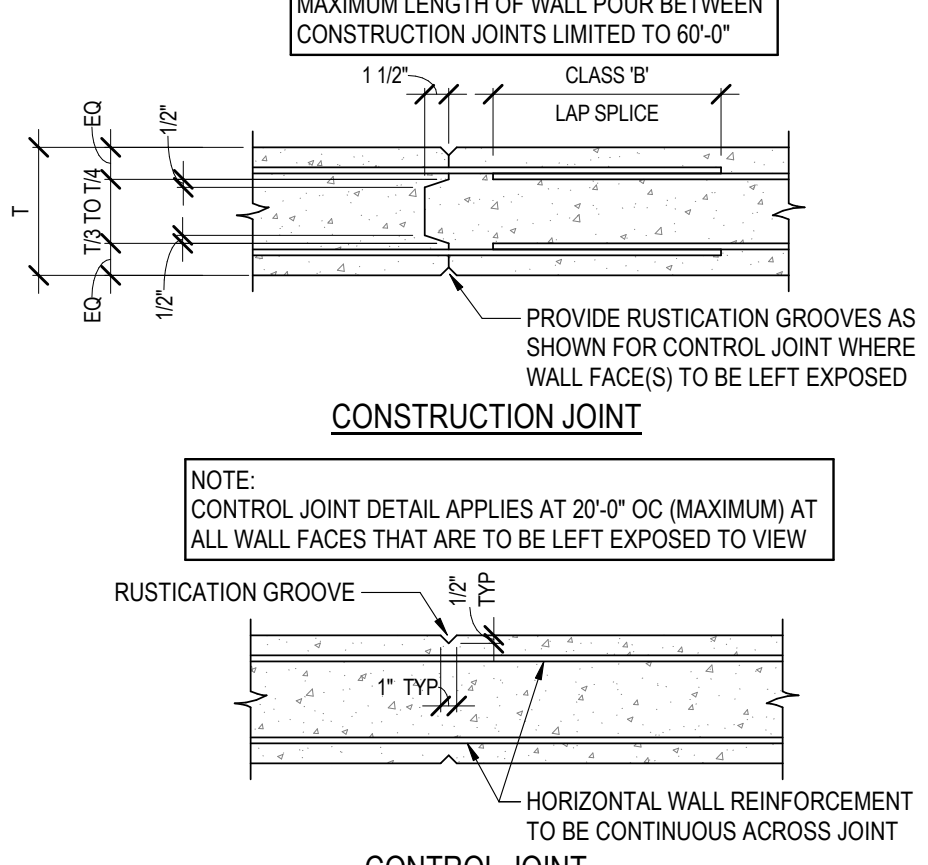
5 FOOTING AT INTERIOR MASONRY BEARING WALLS  
SCALE: 3/4" = 1'-0"



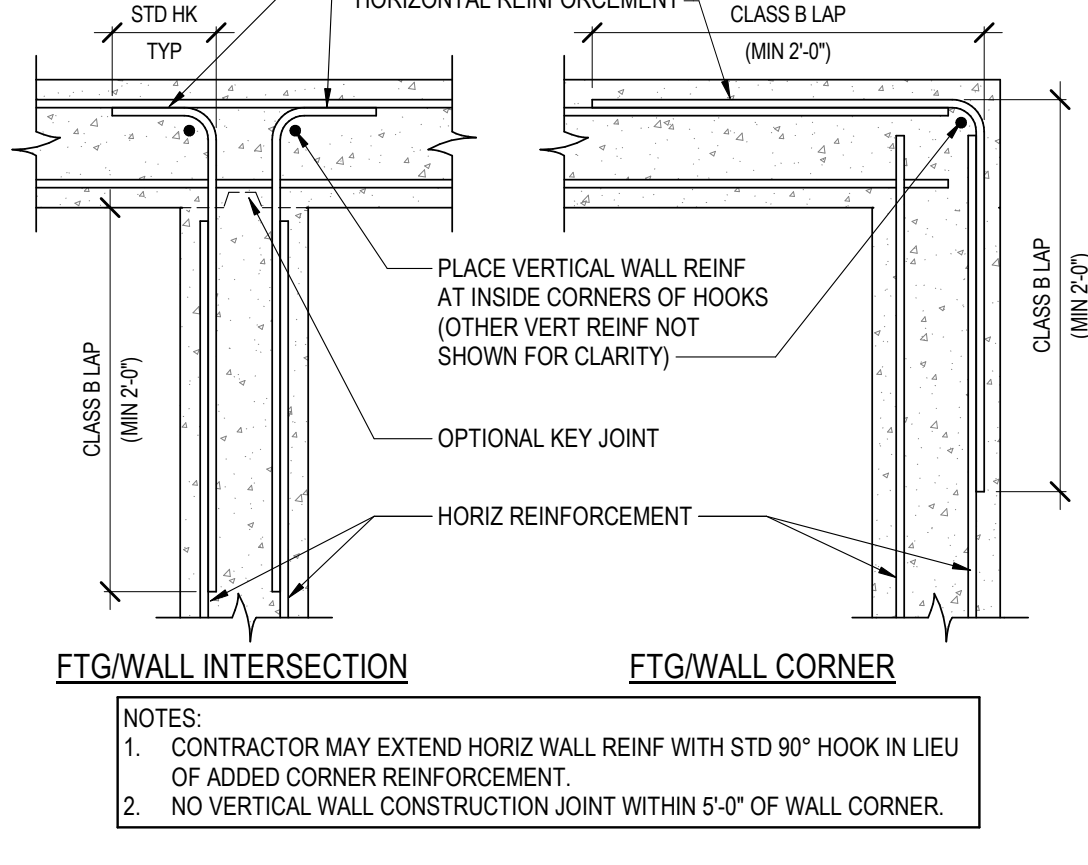
6 TYPICAL THICKENED SLAB FOR NON-LOAD BEARING WALLS  
SCALE: 3/4" = 1'-0"



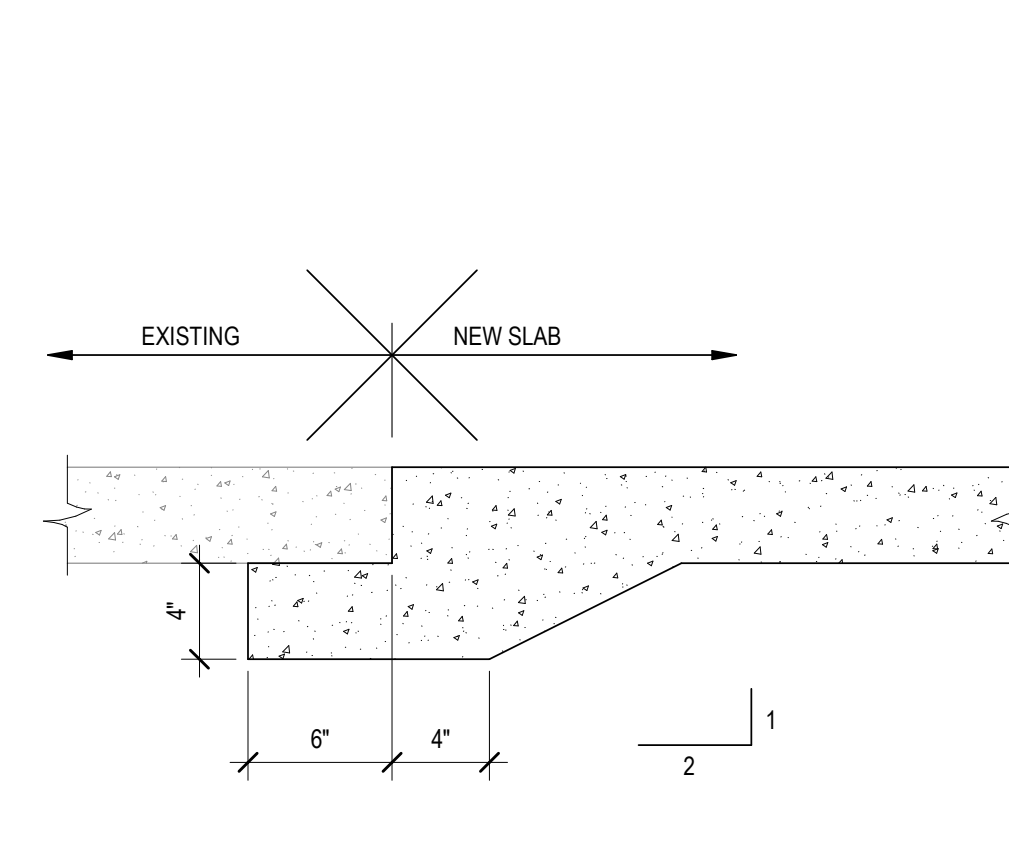
7 TYPICAL STOOP DETAIL  
SCALE: 1/2" = 1'-0"



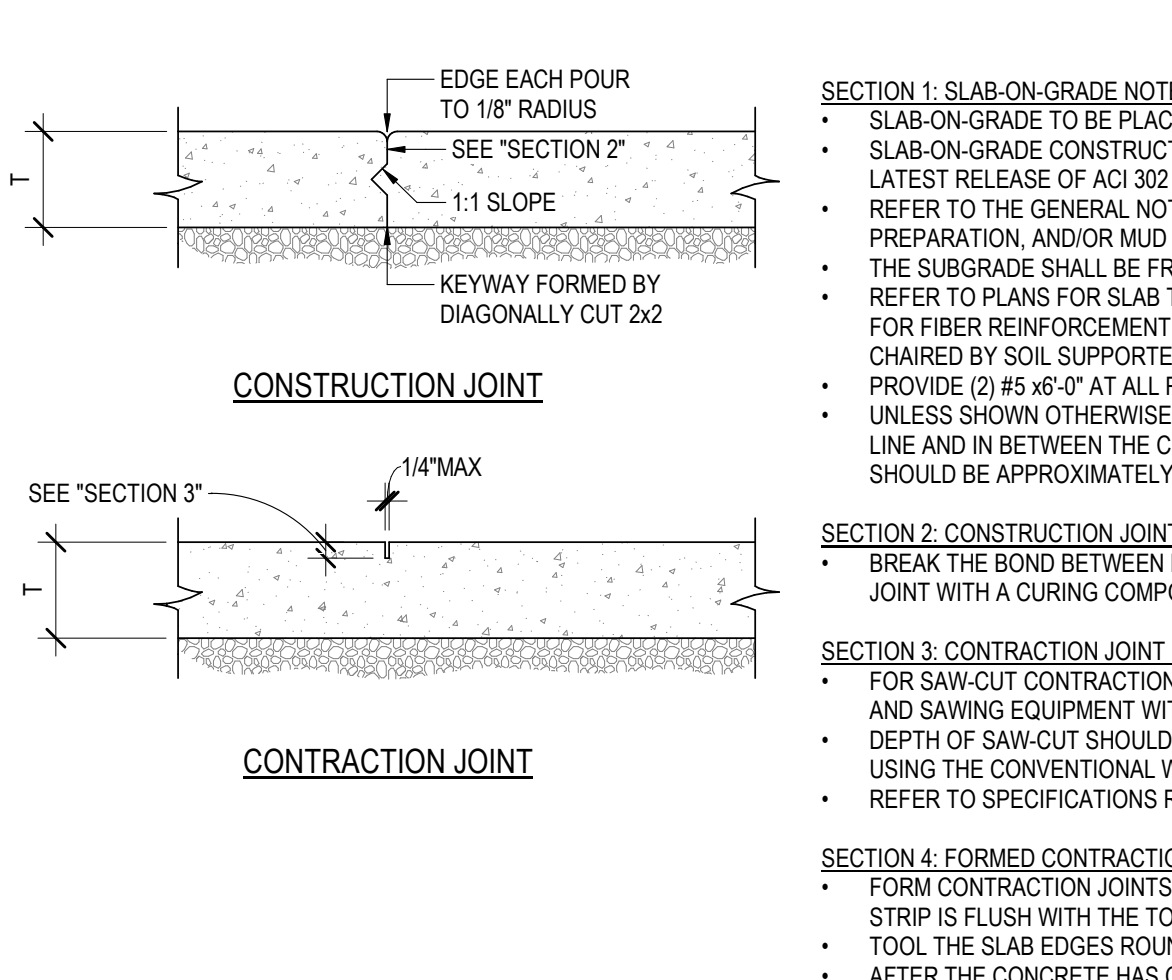
8 TYPICAL CONCRETE WALL JOINTS  
SCALE: 1" = 1'-0"



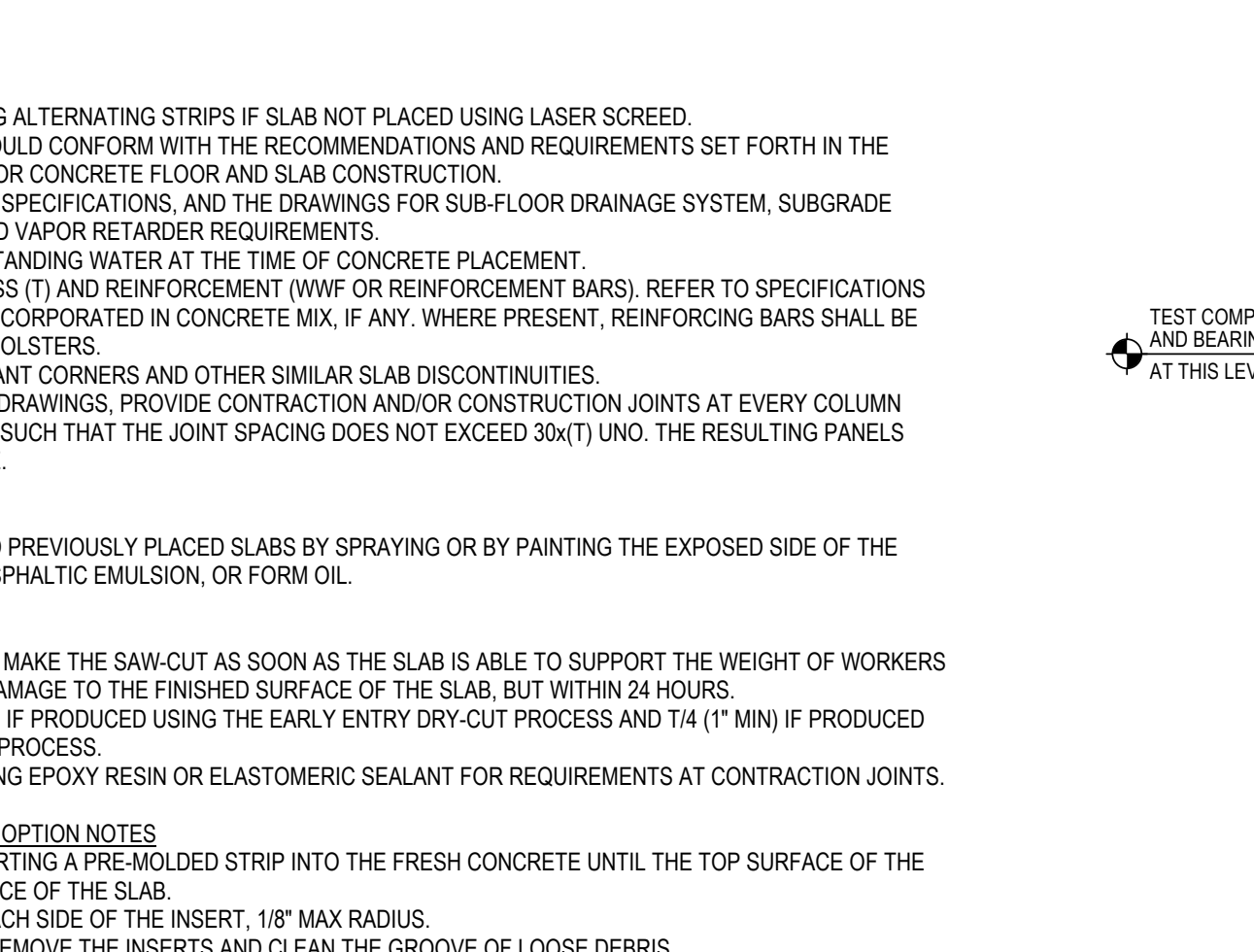
9 TYPICAL CONCRETE WALL AND FOOTING CORNER REINFORCEMENT  
SCALE: 1" = 1'-0"



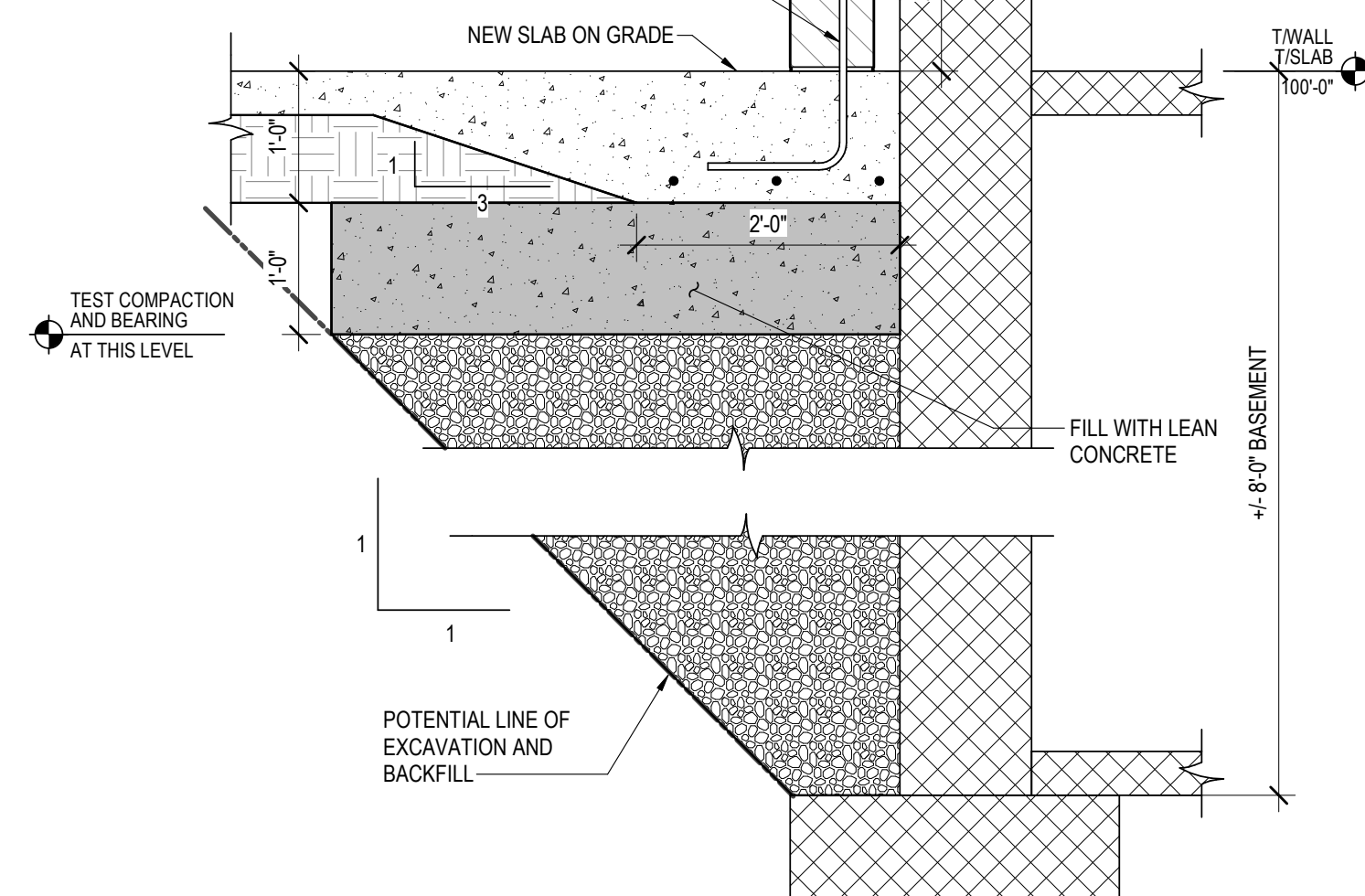
10 NEW TO EXISTING SLAB ON GRADE  
SCALE: 1 1/2" = 1'-0"



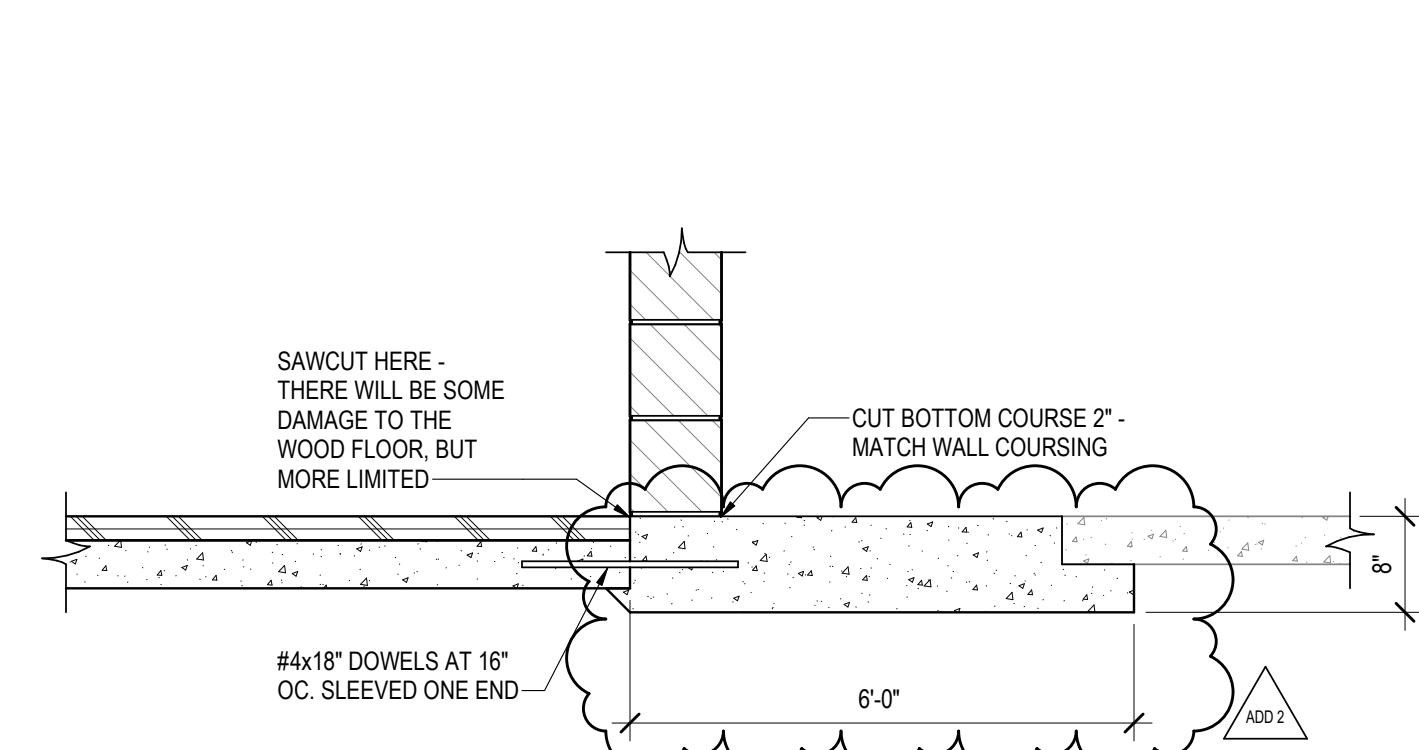
11 TYPICAL CONSTRUCTION AND CONTRACTION JOINTS IN SLAB-ON-GRADE - KEYWAY JOINT  
SCALE: 1" = 1'-0"



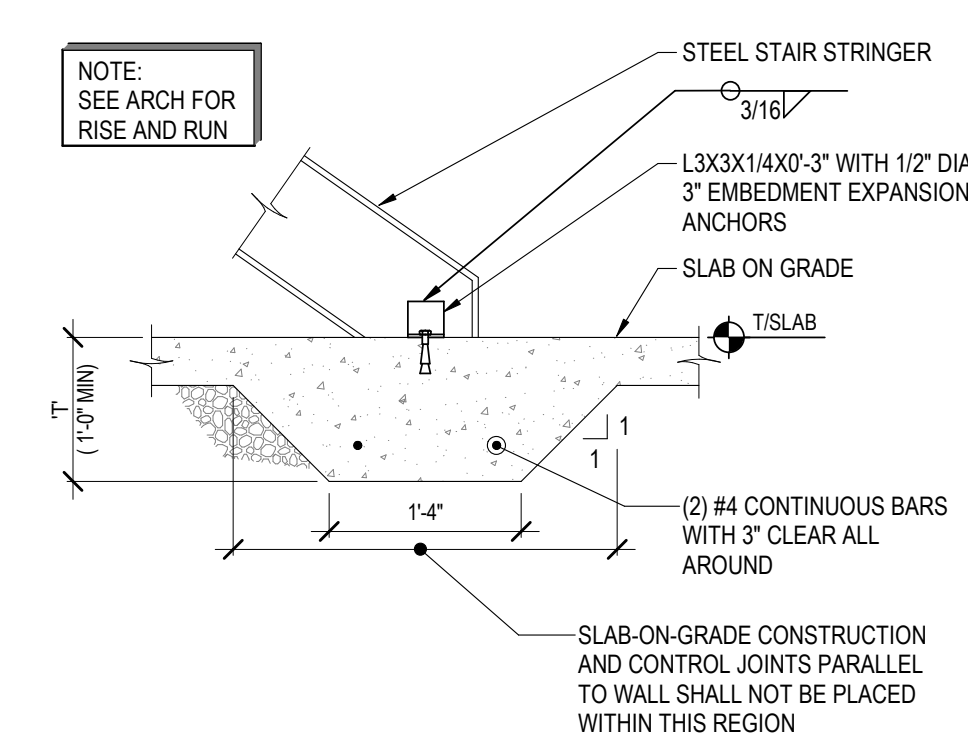
12 NEW SLAB TO EXISTING AT DOOR OPENING  
SCALE: 3/4" = 1'-0"



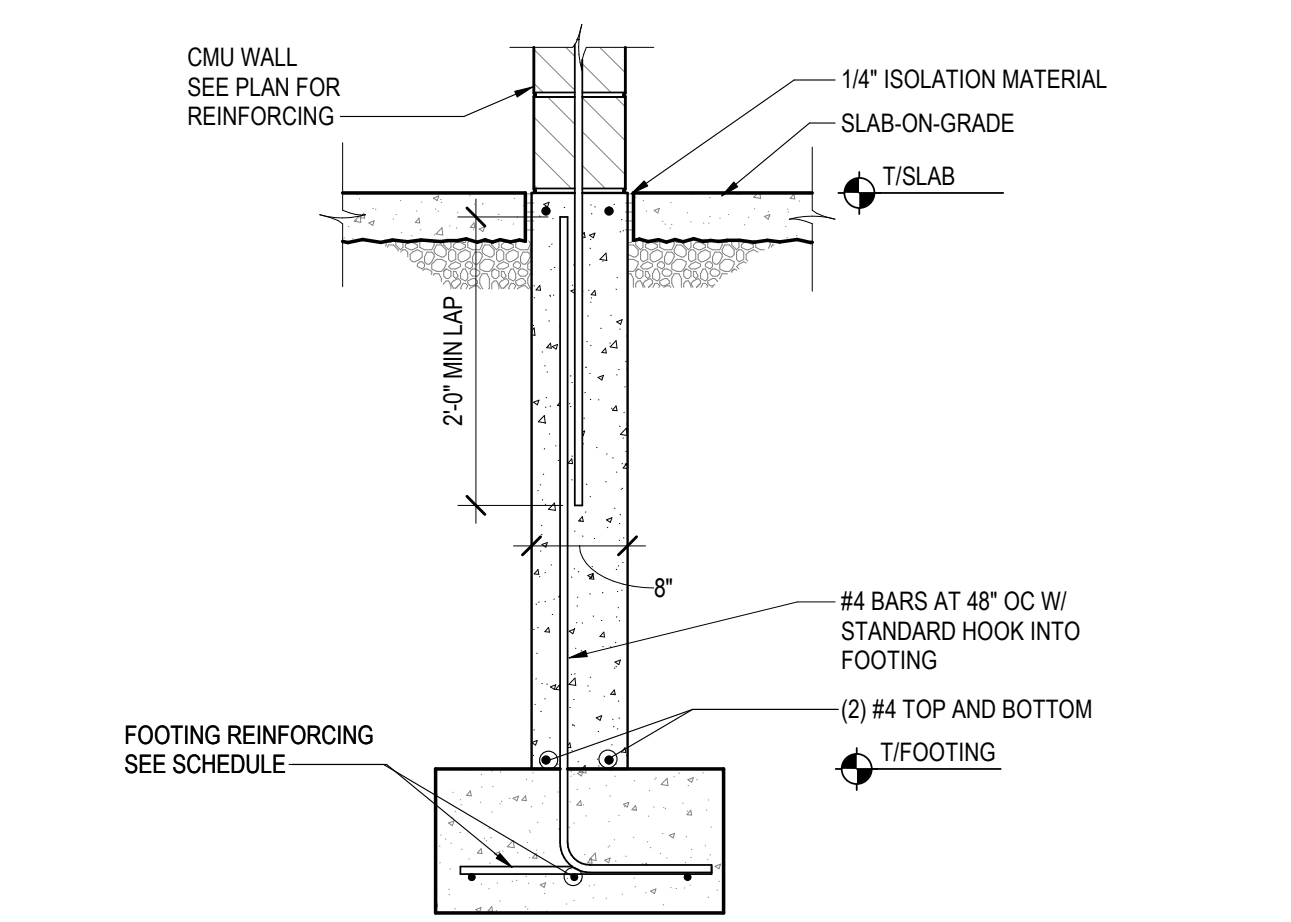
13 NEW SLAB AGAINST EXISTING  
SCALE: 3/4" = 1'-0"



14 THICKENED SLAB AT GYM PROSCENIUM  
SCALE: 3/4" = 1'-0"



15 TYPICAL THICKENED SLAB AT STRINGERS  
SCALE: 3/4" = 1'-0"



16 FOUNDATION WALL AT LOAD BEARING MASONRY WALLS  
SCALE: NONE



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INDEPENDENCE COMMUNITY SCHOOL DISTRICT  
WEST ELEMENTARY SCHOOL ADDITION/ REMODEL

Project Location: 1301 1ST ST. W  
INDEPENDENCE, IA 50644

FRAMING DETAILS

Project Title:

HSR Project Number:  
**19045**

Project Date:  
**DECEMBER 2020**

Drawn By:  
**Author**

Key Plan:

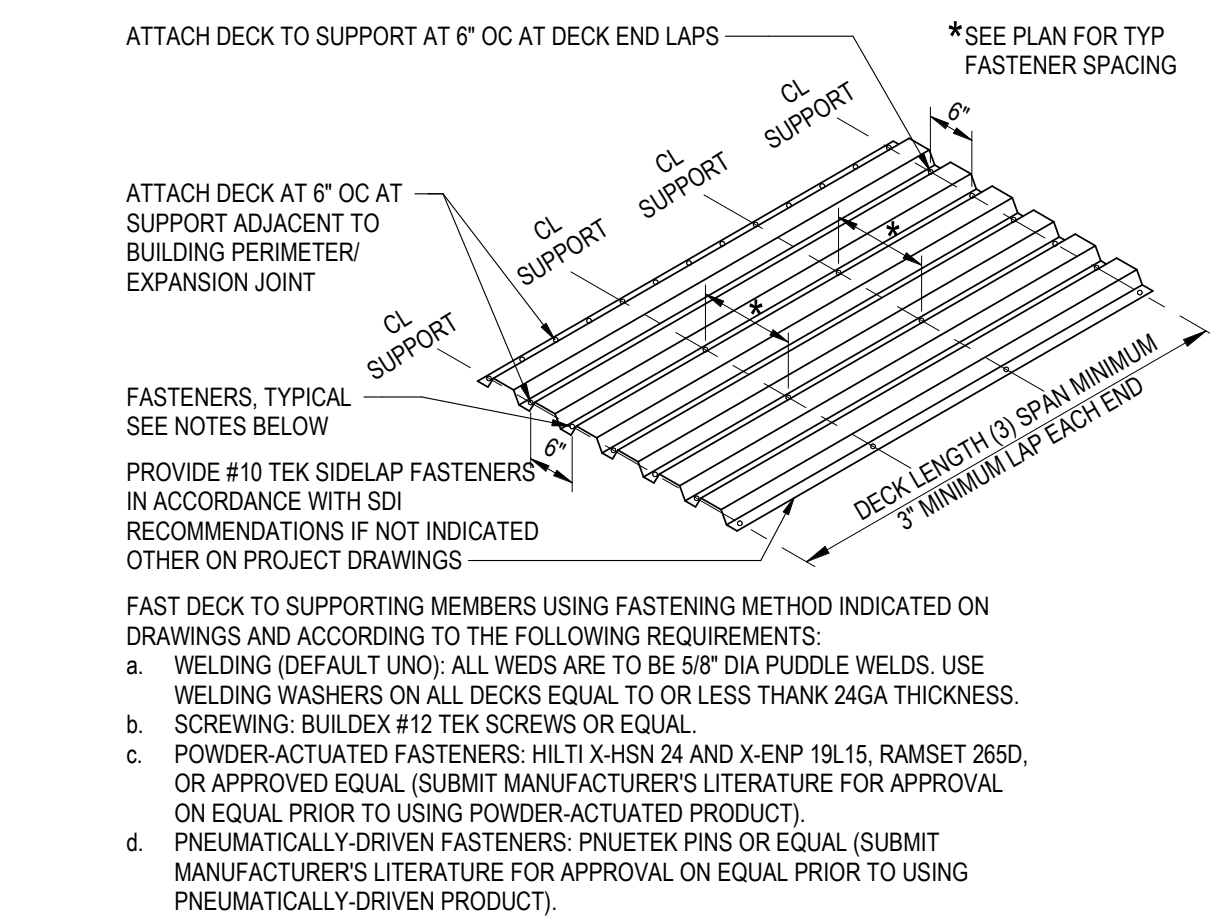
CONSTRUCTION  
DRAWINGS

No.	Description	Date
2	ADDENDUM #2	1/4/21

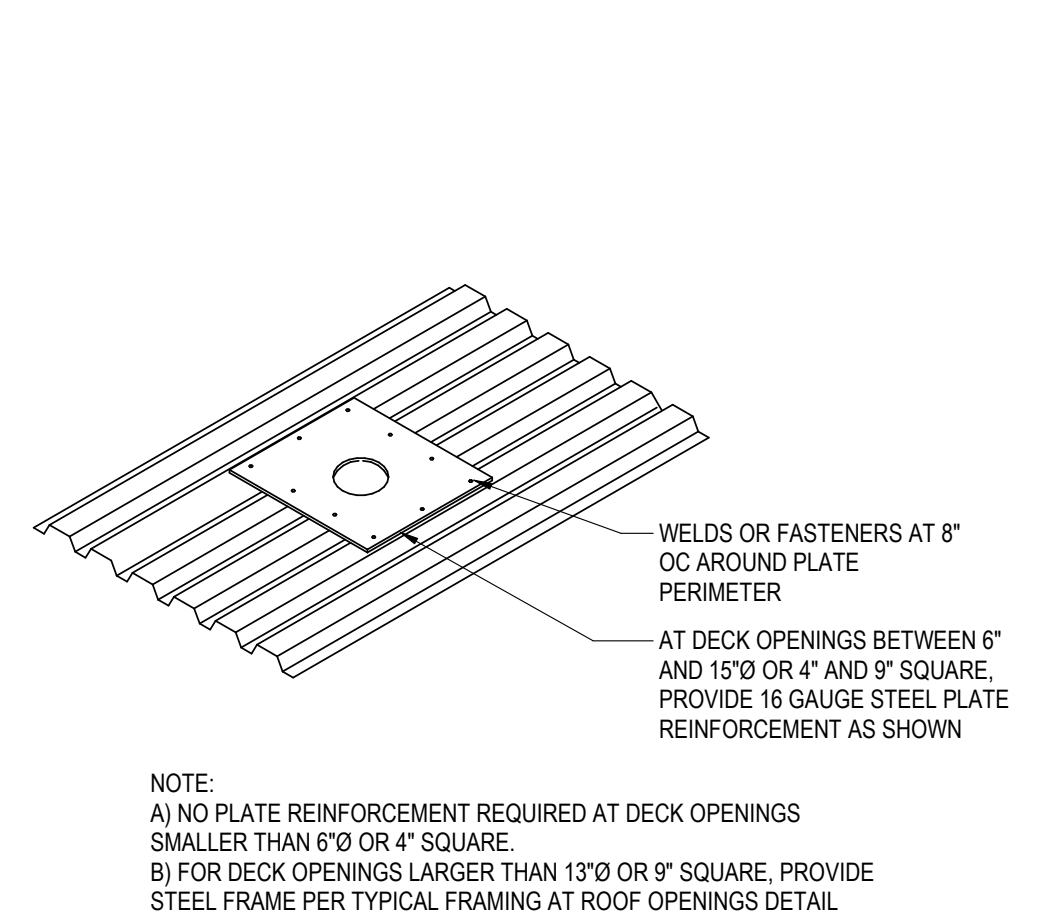
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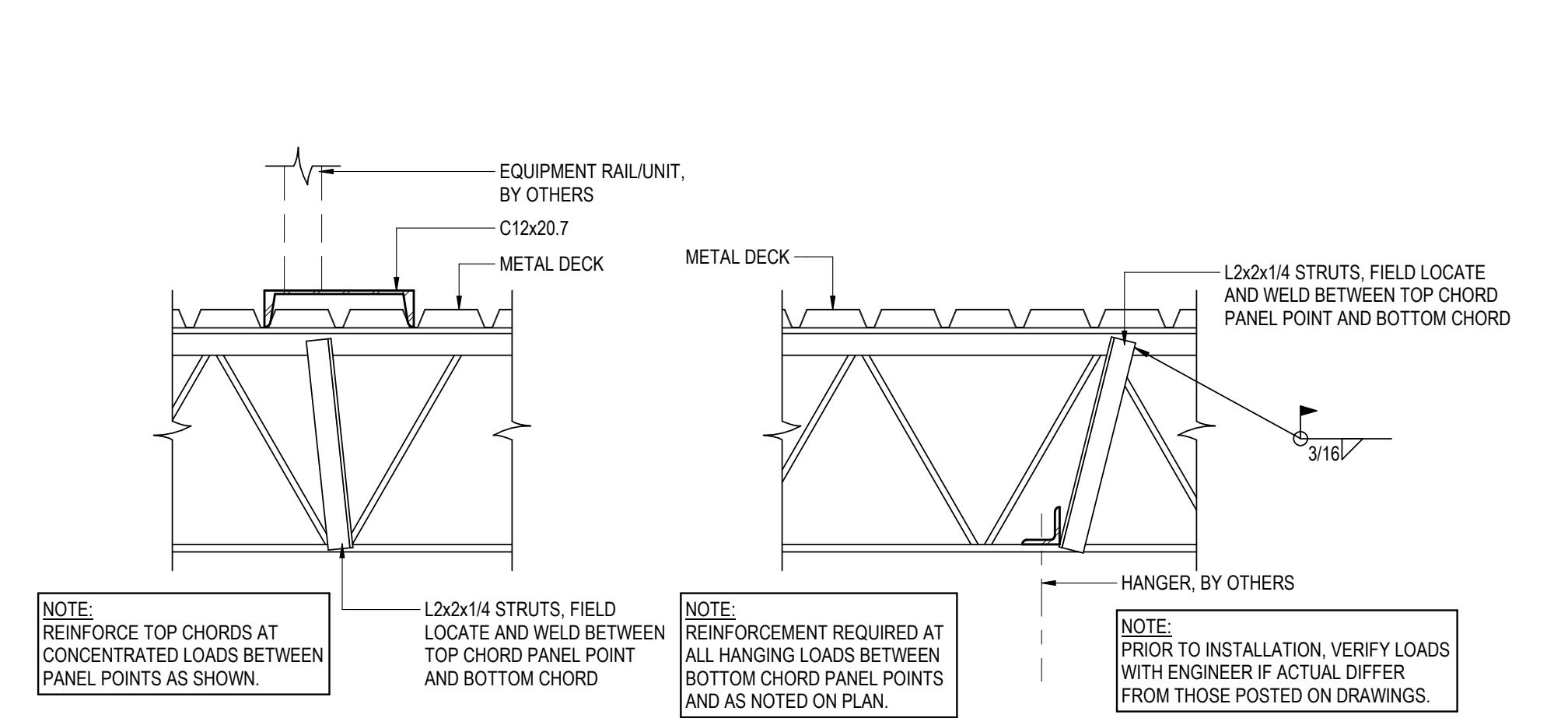
**S501**



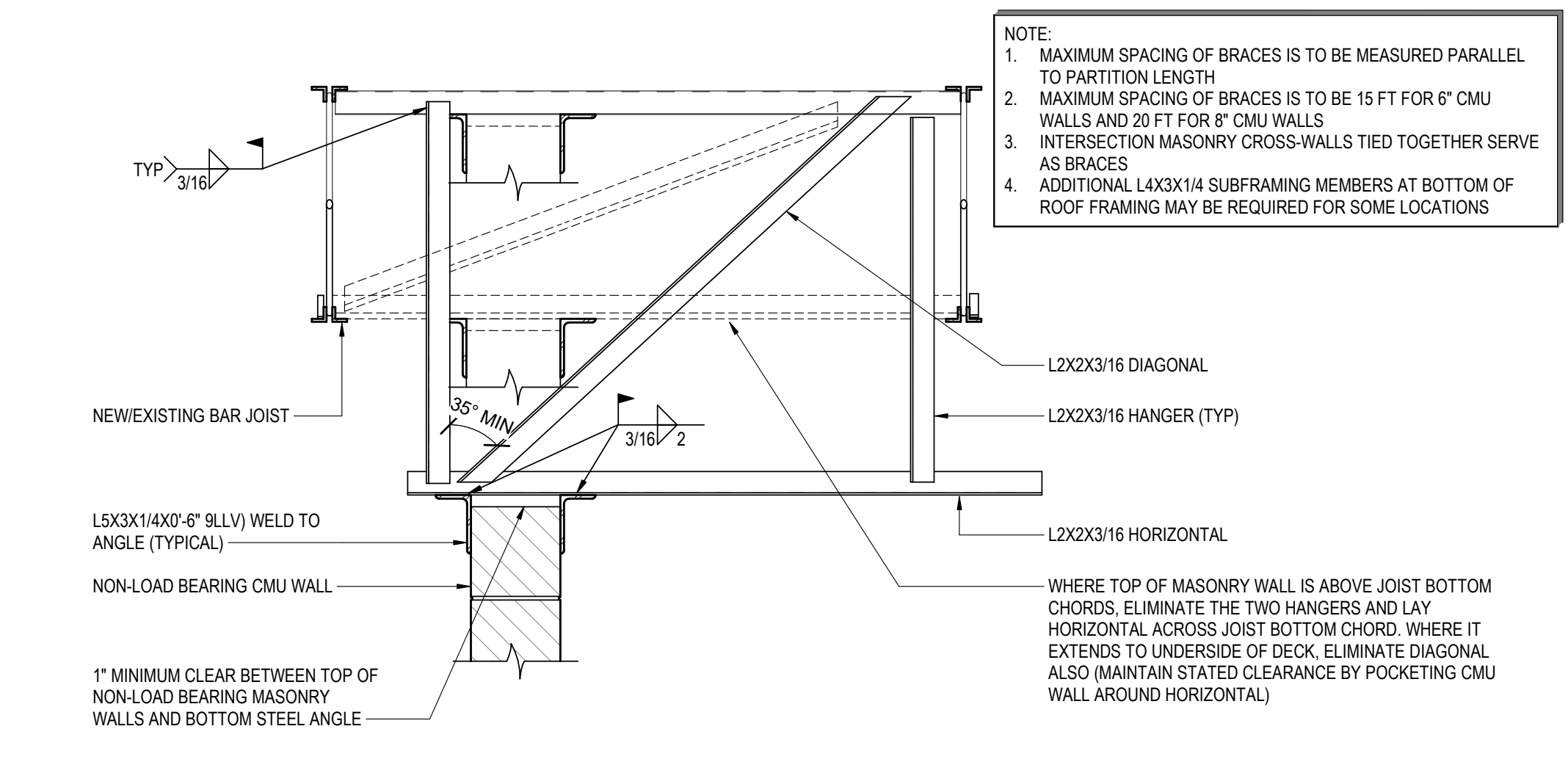
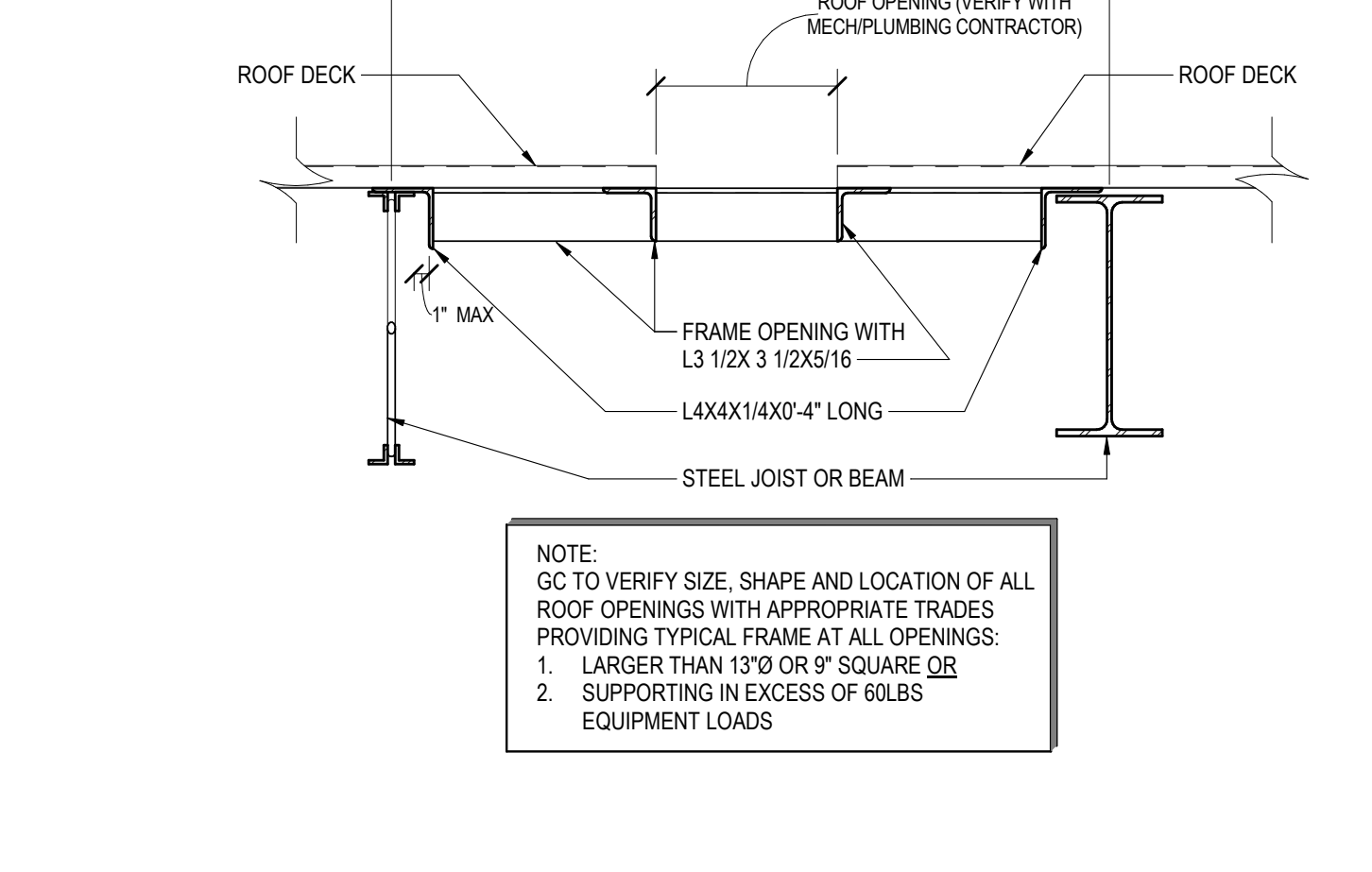
1 METAL DECK FASTENING DETAIL  
SCALE: NONE



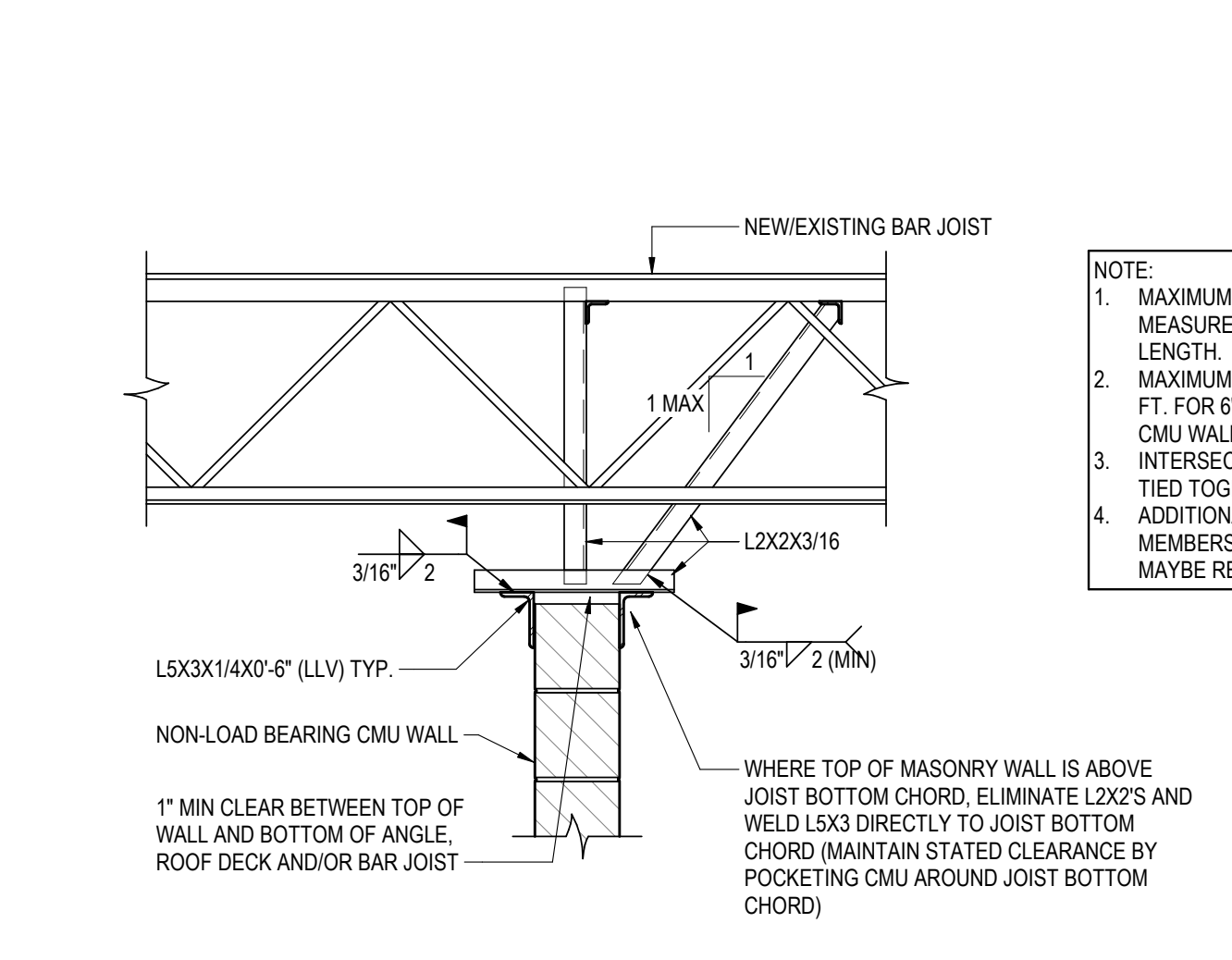
2 TYPICAL ROOF DECK OPENING  
SCALE: 1" = 1'-0"



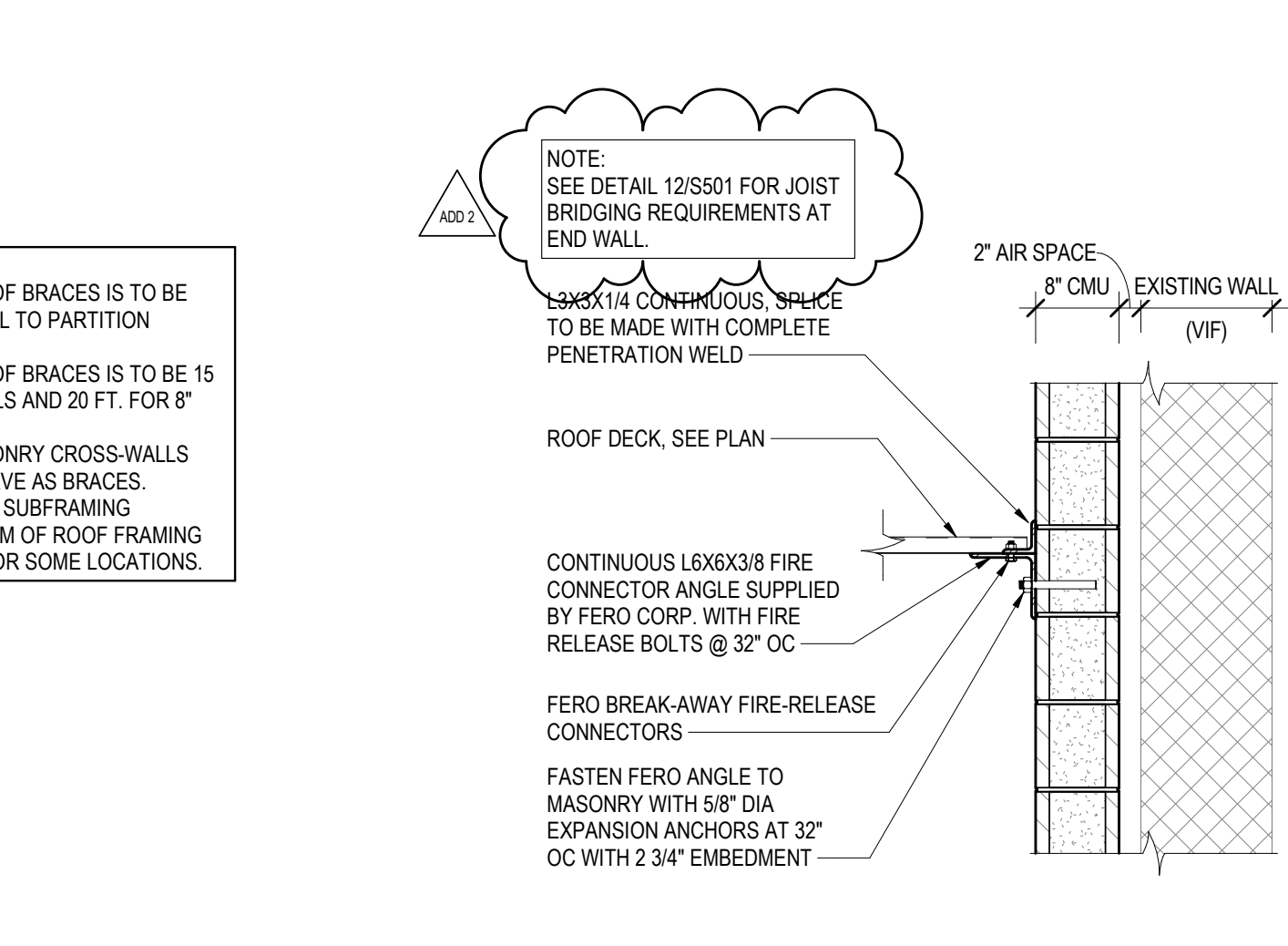
3 CONCENTRATED LOAD AT JOIST  
SCALE: 1" = 1'-0"



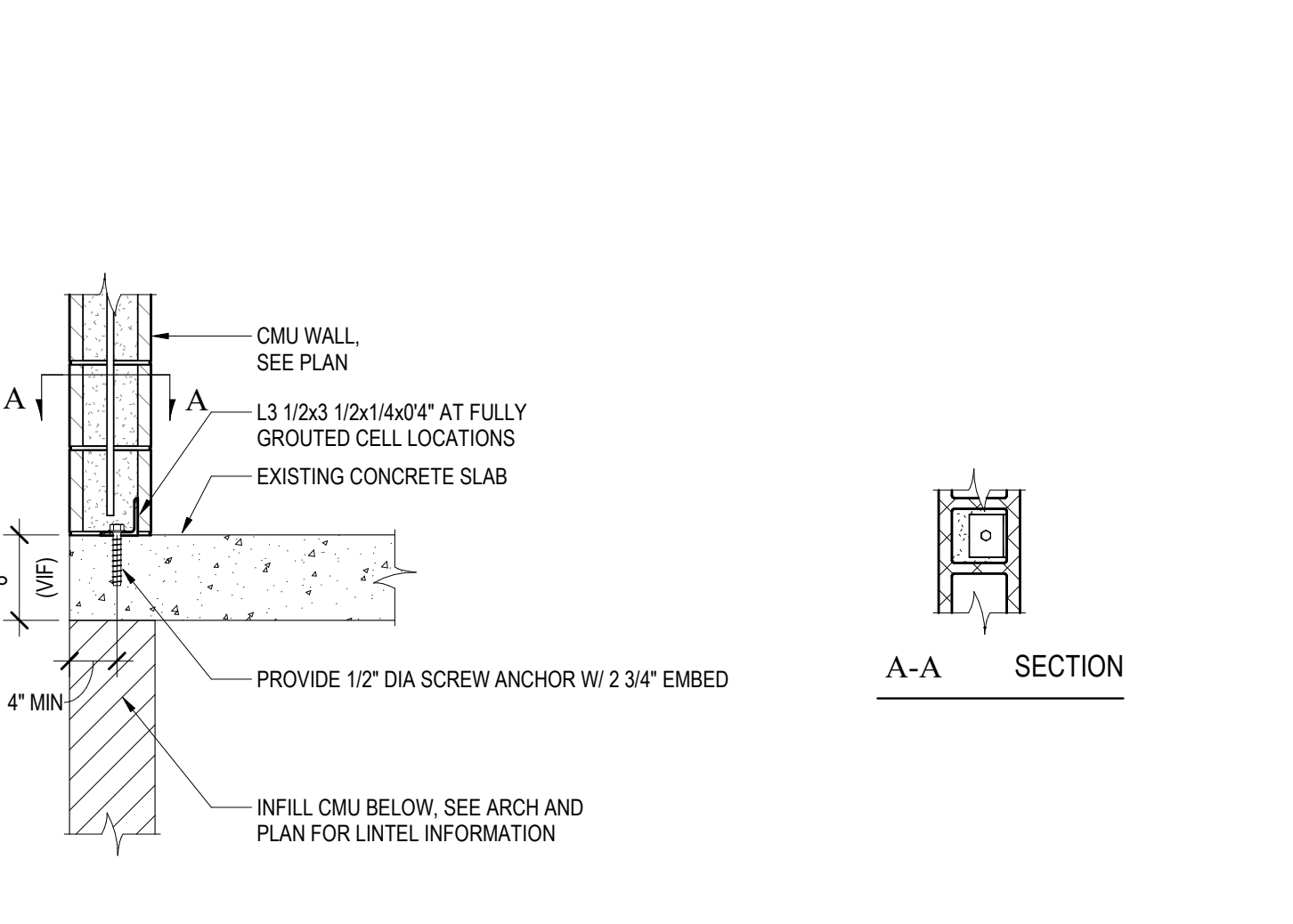
5 NON-LOAD BEARING CMU PARALLEL TO JOISTS  
SCALE: 1" = 1'-0"



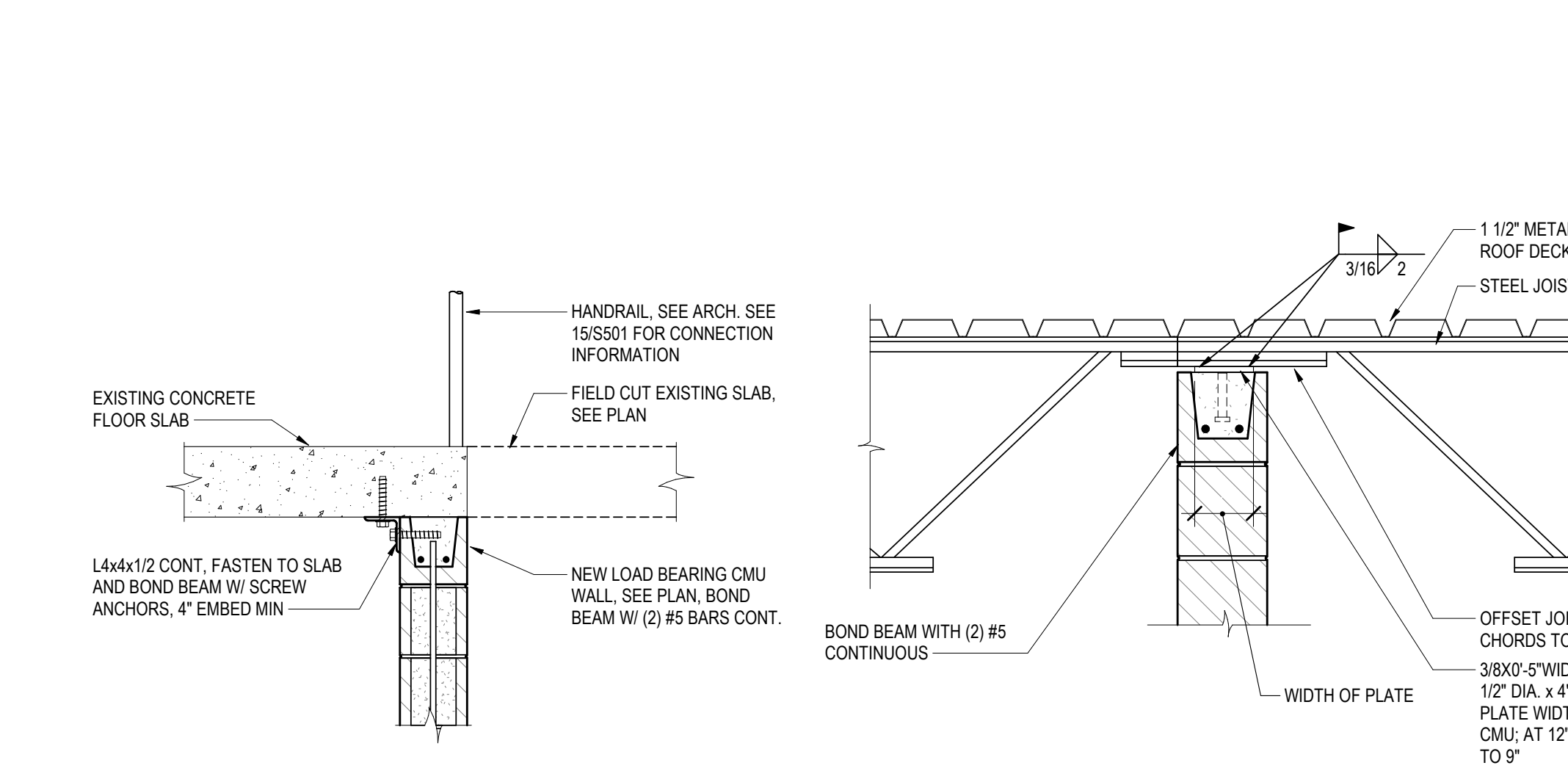
6 NON-LOAD BEARING CMU PERPENDICULAR TO JOISTS  
SCALE: 3/4" = 1'-0"



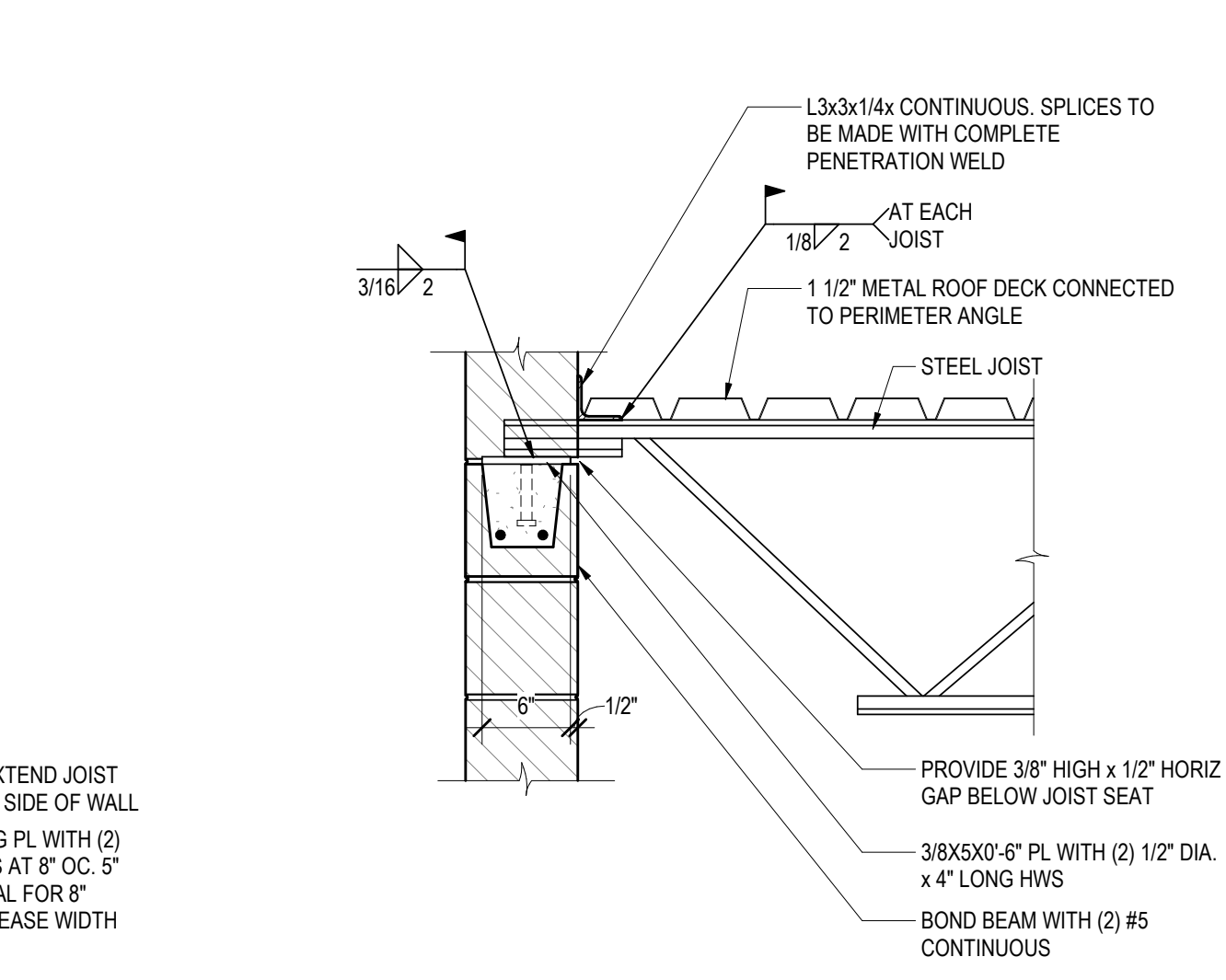
7 FIREWALL AT EXISTING  
SCALE: 3/4" = 1'-0"



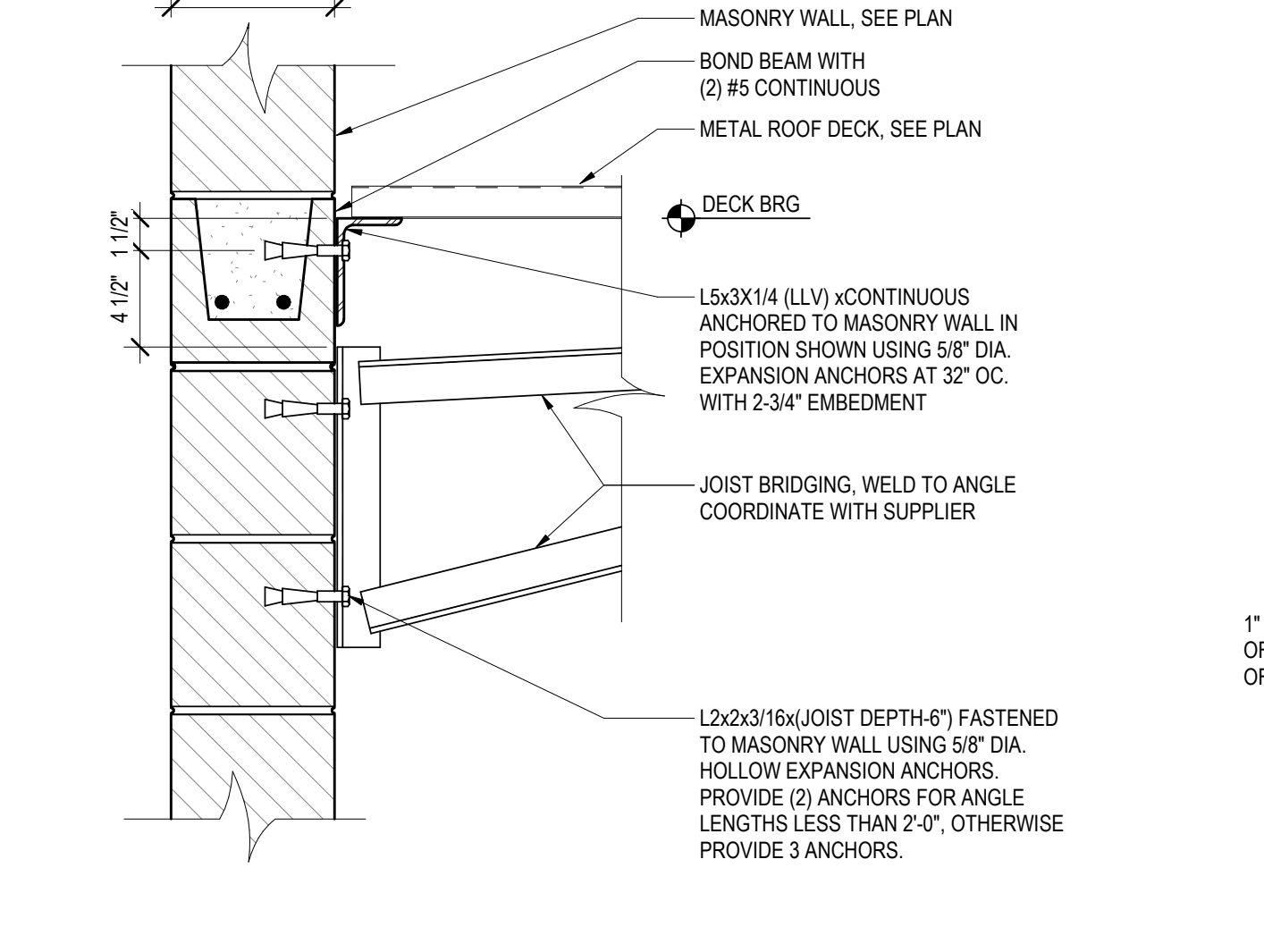
8 MASONRY WALL AT MEZZANINE  
SCALE: 3/4" = 1'-0"



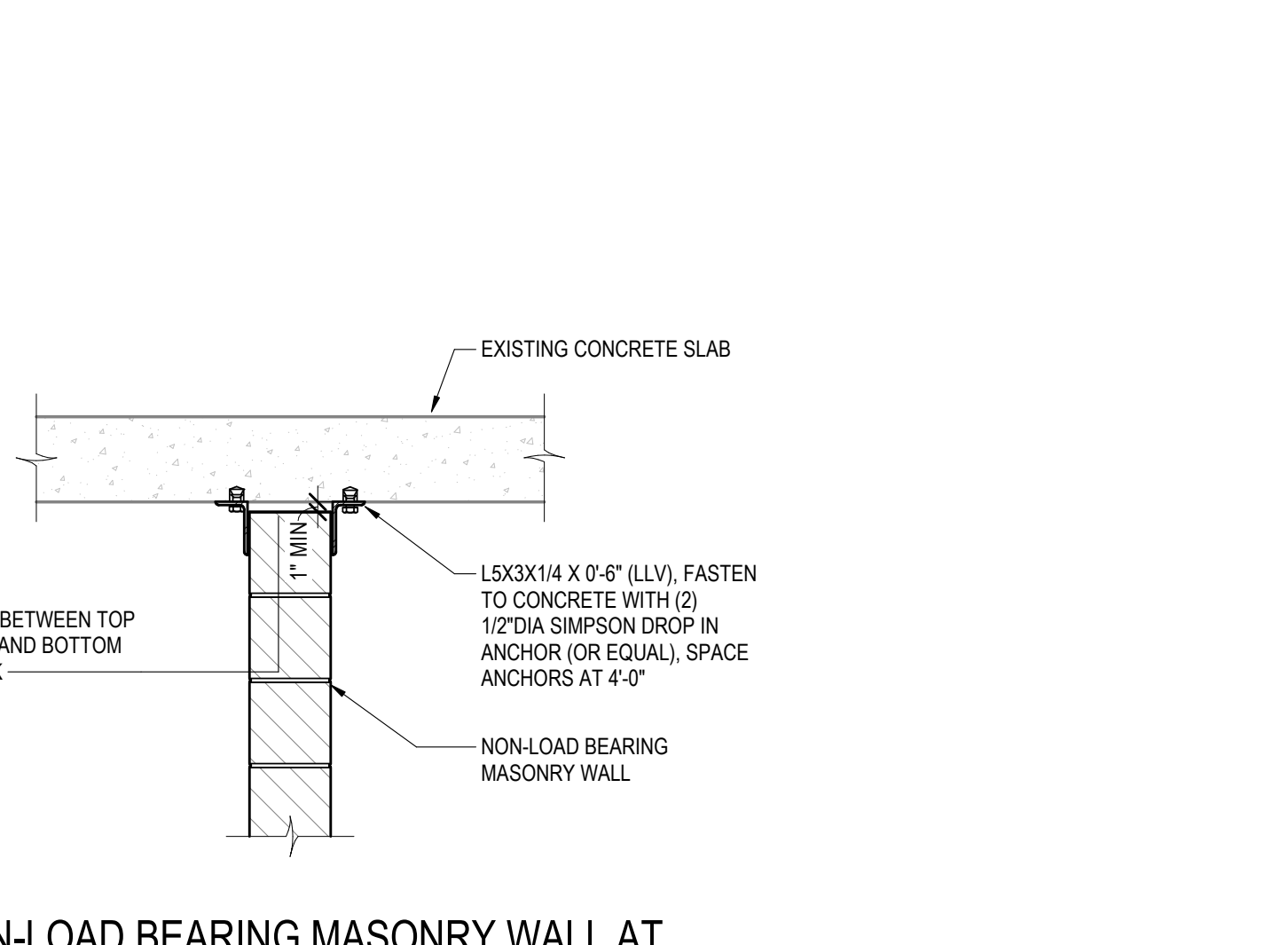
9 NEW LOAD BEARING WALL CONNECTION  
SCALE: 3/4" = 1'-0"



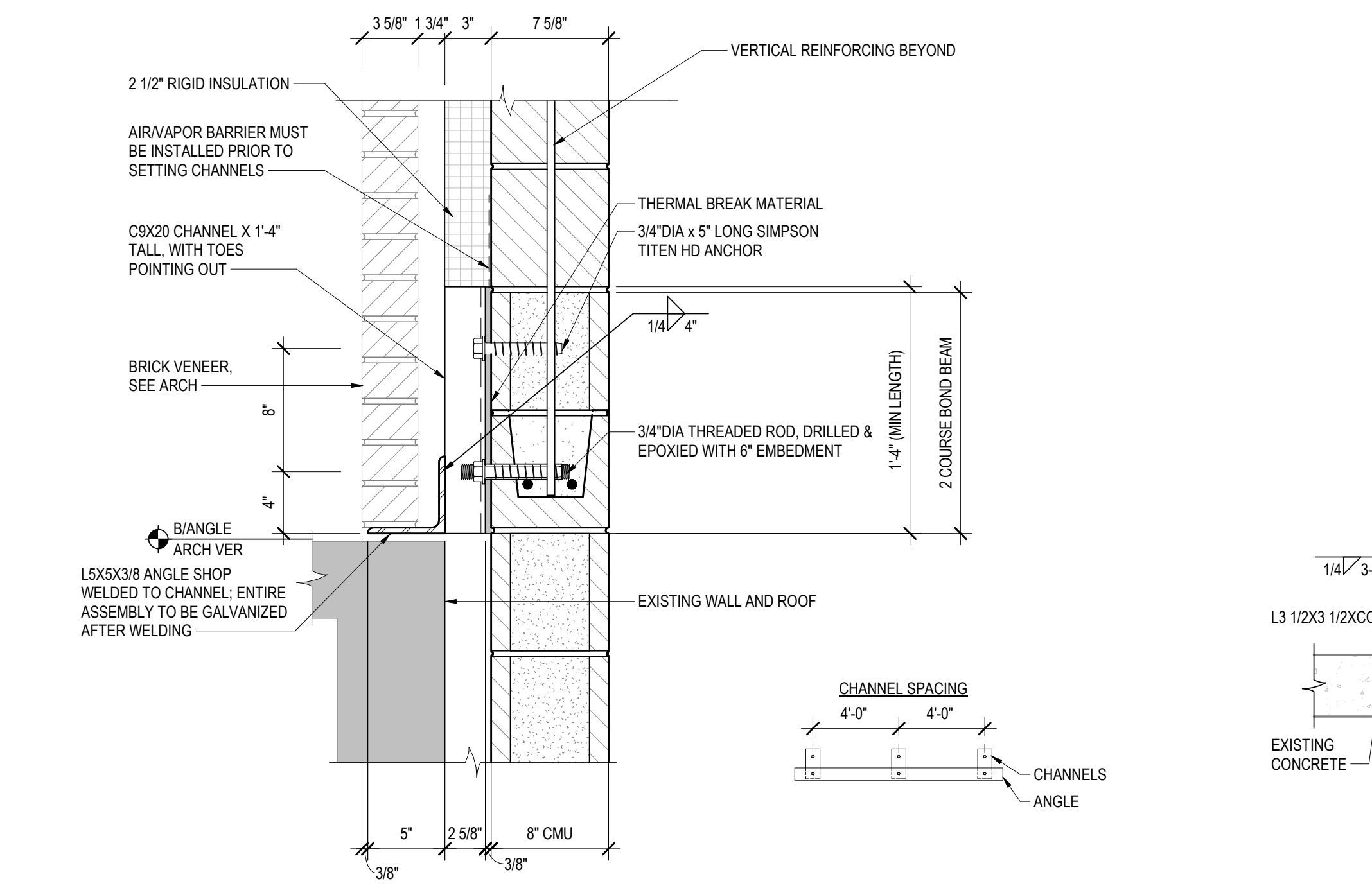
11 TYPICAL JOIST BEARING  
SCALE: 1 1/2" = 1'-0"



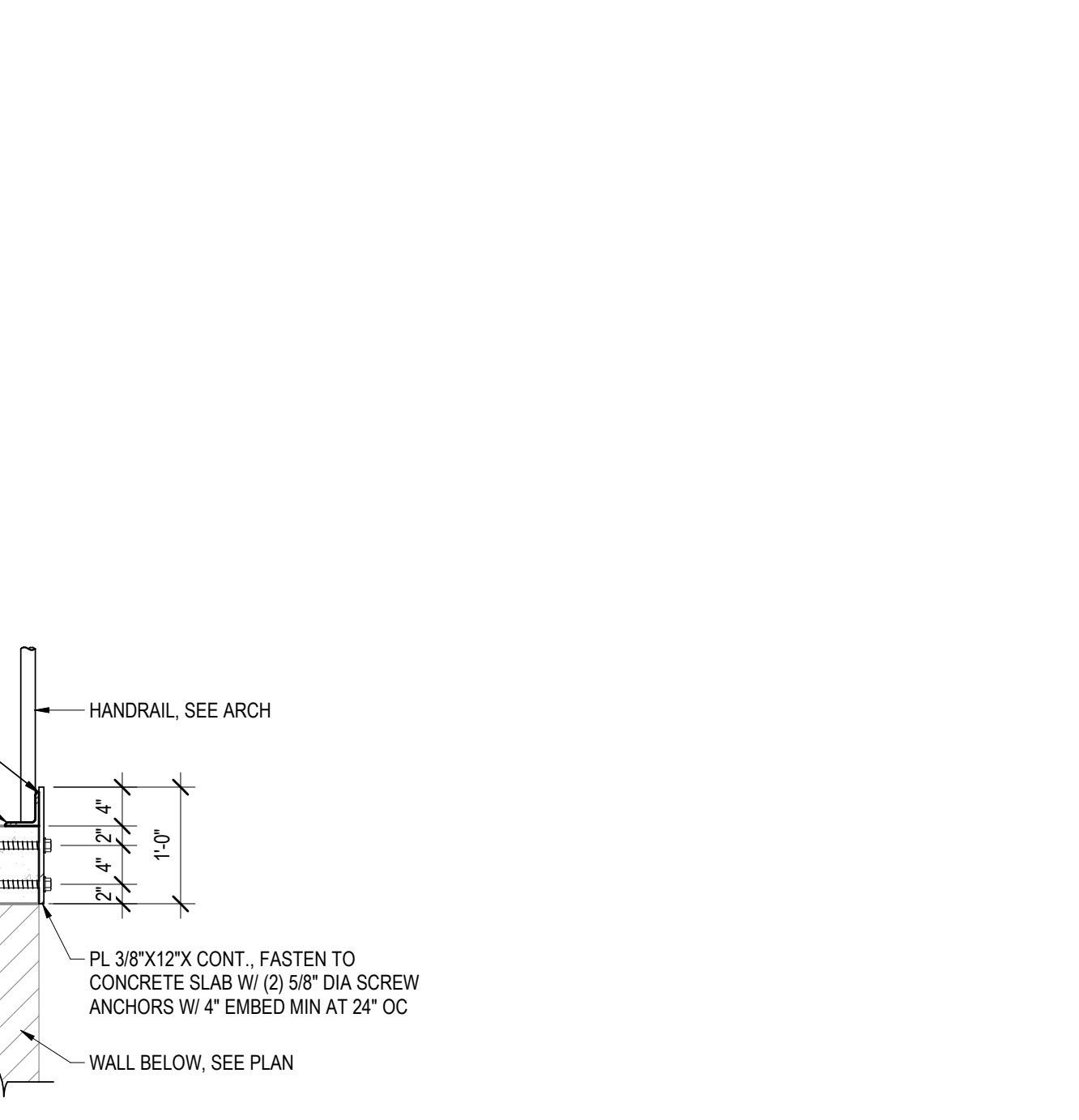
12 TYPICAL END WALL DETAIL  
SCALE: 1 1/2" = 1'-0"



13 NON-LOAD BEARING MASONRY WALL AT EXISTING CONCRETE  
SCALE: 3/4" = 1'-0"



14 BRICK LEDGE AT EXISTING  
SCALE: 1 1/2" = 1'-0"



15 TYPICAL HANDRAIL DETAIL  
SCALE: 3/4" = 1'-0"



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project number: 120052

**INDEPENDENCE COMMUNITY SCHOOL DISTRICT  
EAST ELEMENTARY SCHOOL REMODEL  
PLANS & DETAILS**

Project Title:  
Project Location: 1103 1ST ST. WEST  
INDEPENDENCE, IOWA 50644  
Sheet Title:

HSR Project Number:  
**19045**

Project Date:  
**DECEMBER 2020**

Drawn By:  
**Author**

Key Plan:

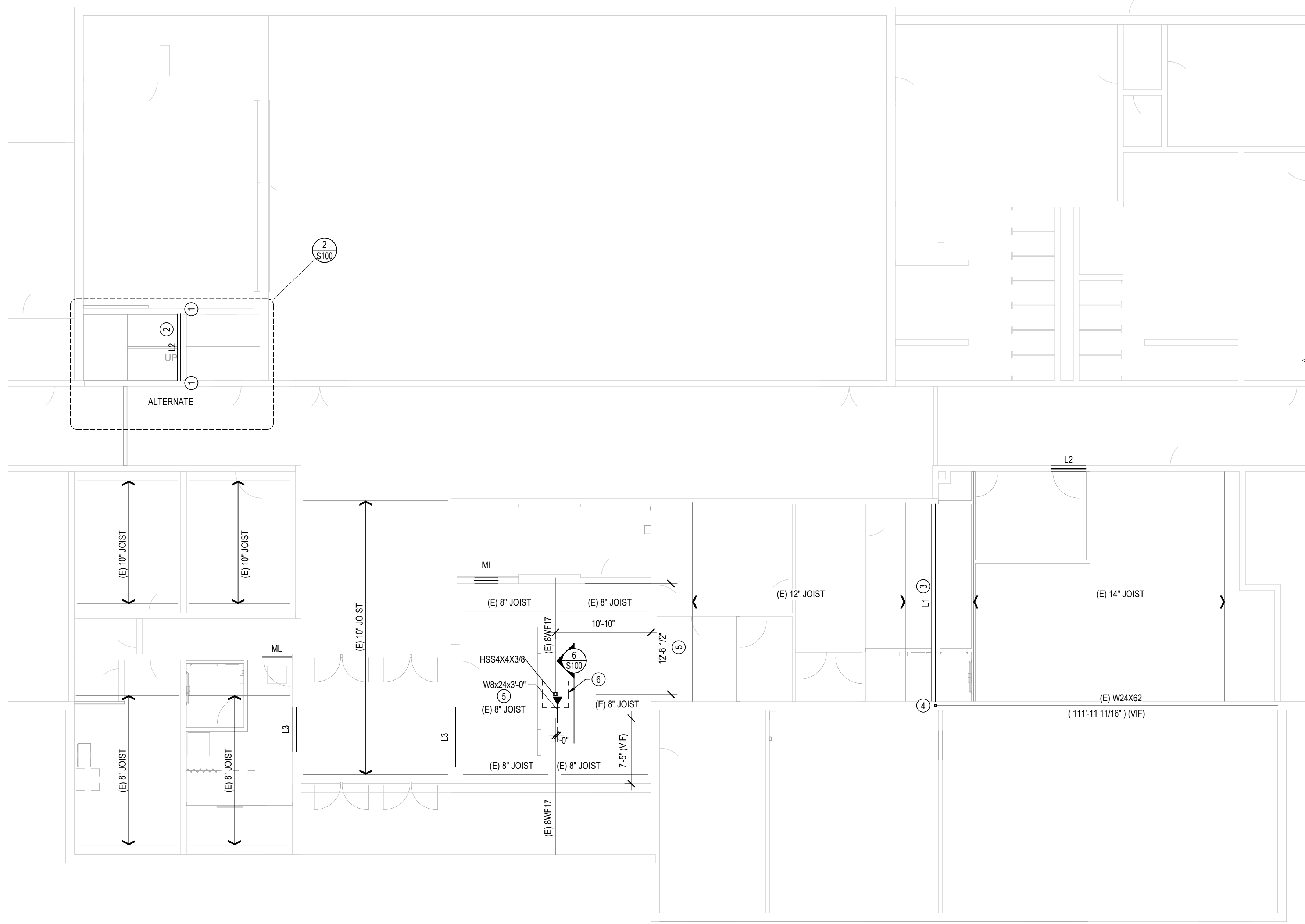
**CONSTRUCTION  
DRAWINGS**

No.	Description	Date
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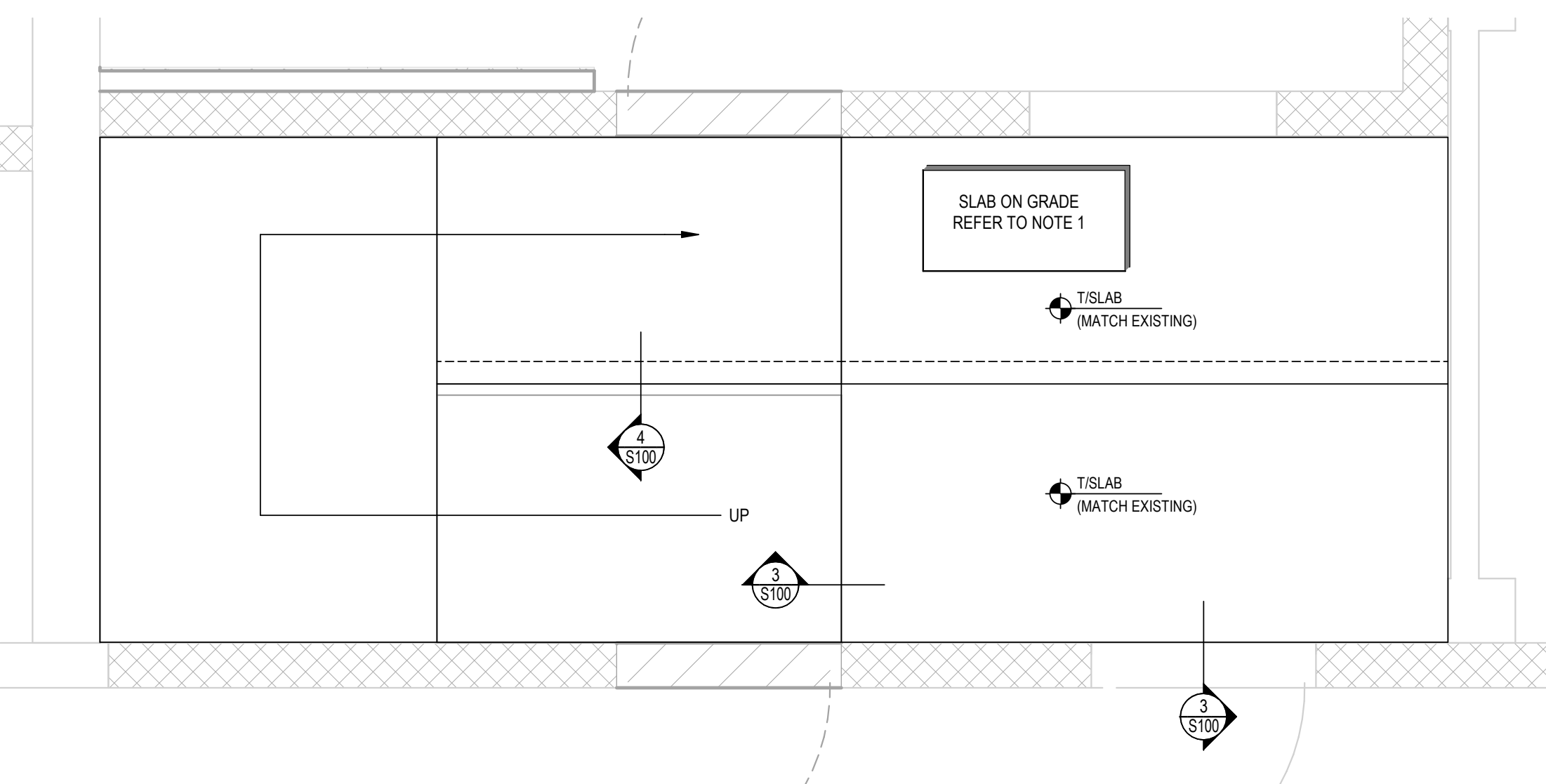
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Last Update:  
**12/31/2020 2:00:46 AM**

**S100**



**1**  
S100  
FRAMING PLAN  
SCALE: 1/8" = 1'-0"



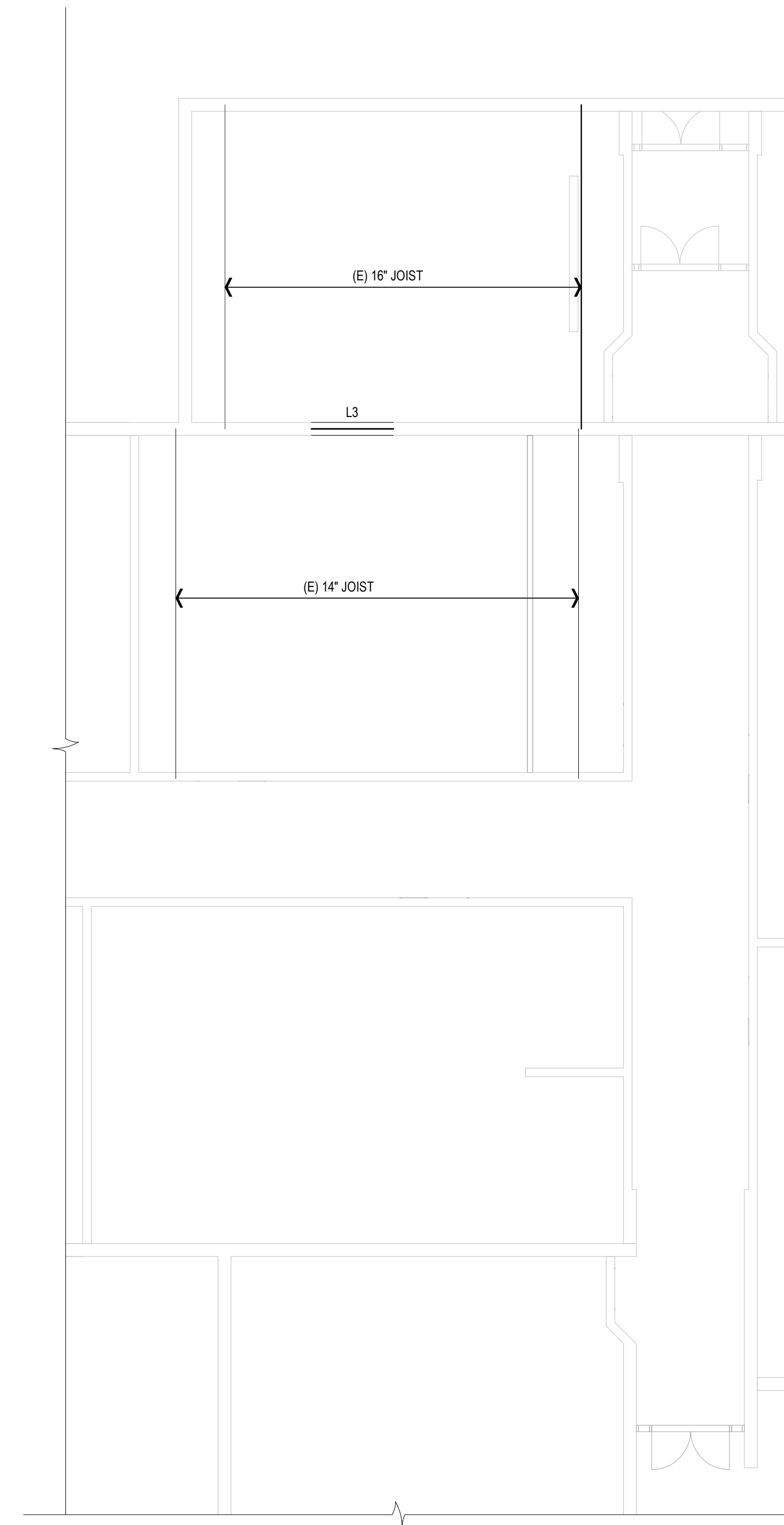
**2**  
S100  
RAMP PLAN (ALTERNATE)  
SCALE: 1/2" = 1'-0"

**FOUNDATION PLAN NOTES**

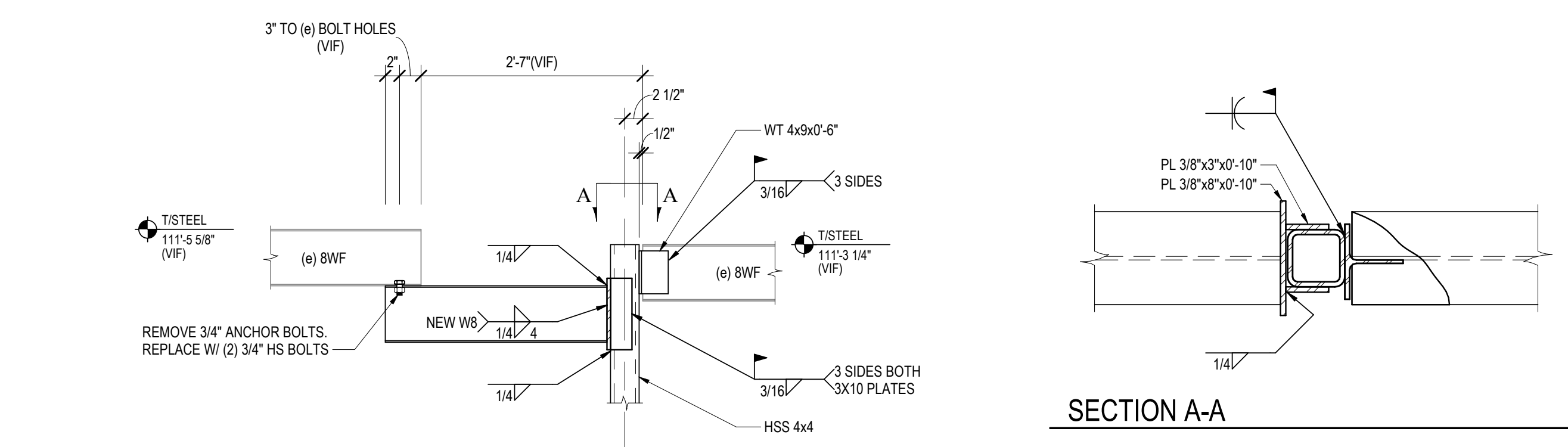
- SLAB-ON-GRADE TO BE 4" THICK MINIMUM WITH 56(CU YD) MACRO POLYPROPYLENE SYNTHETIC FIBERS (REFER TO SPECIFICATION) ON 10 ML MINIMUM VAPOR BARRIER ON 6" OF COMPACTED GRANULAR FILL UNLESS NOTED OTHERWISE. DEMO EXISTING SLAB AS NECESSARY TO PROVIDE FOR NEW-TO-EXISTING AS DETAIL. AND 4" MINIMUM NEW FOUR OVER EXISTING SLAB OR EXISTING SUB-GRADE.

LINTEL SCHEDULE				
LINTEL MARK	DESCRIPTION	SECTION	END BEARING PLATES	REMARKS
ML	REFER TO MISCELLANEOUS LINTEL SCHEDULE			
L1	W10x26 W/ BOTTOM PL 3/8"x7"		N/A	NORTH END - L4x4x3/8@8" WELD TO COLUMN SOUTH END - DETAIL 1/5100 WITH TEFLON BEARING 1.2.3.10
L2	W8x18 W/ BOTTOM PL 3/8"x7"		PL 3/8"x7@8" W/ (2) 1/2" DIA x 4" LONG HWS	1.2.3.10
L3	W8x18 W/ BOTTOM PL 3/8"x11"		PL 3/8"x7@8" W/ (2) 1/2" DIA x 6" LONG HWS	1.2.3.10

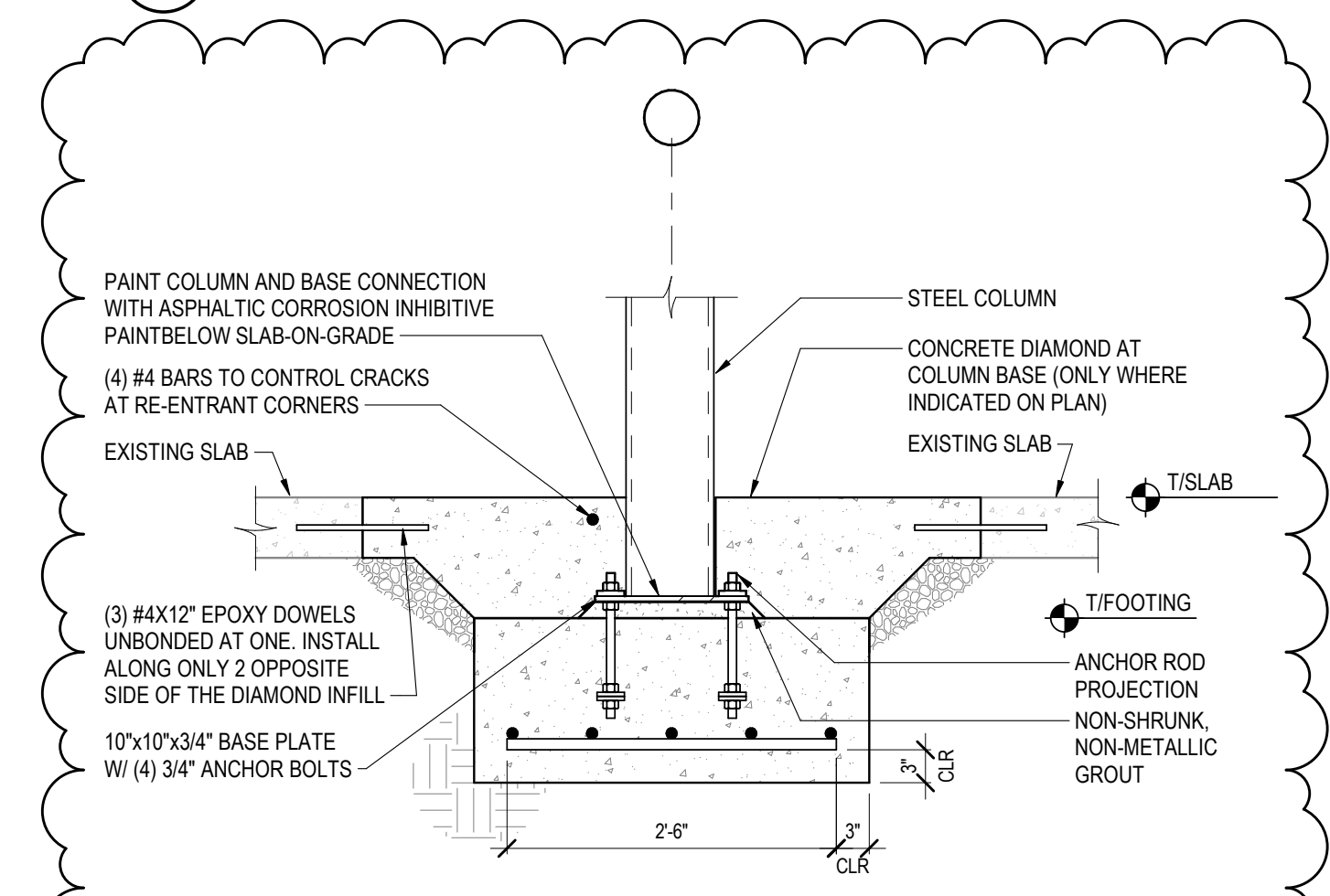
- NOTES:
- REFERENCE DETAIL S/5100 FOR TYPICAL LINTEL BEARING REQUIREMENTS.
  - TYPICAL NOTES THAT APPLY UNLESS NOTED OTHERWISE:
    - PROVIDE MINIMUM 8" BEARING AT EACH END OF LINTEL
    - CENTER LINTELS IN WALL UNLESS NOTED OTHERWISE
    - BOTTOM PLATES WHERE CALLED FOR SHALL EXTEND FULL LENGTH OF LINTEL
  - NOTCH FACE SHELLS AS REQUIRED TO PLACE CMU.
  - PROVIDE 1/2" DIA x 6" LONG HEADED WELDED STUDS (HWS) AT 24" OC ON TOP OF LINTEL. GROUT CMU CORE SOLID 8" (MIN) ABOVE TOP OF LINTEL AT HWS LOCATIONS.
  - PROVIDE ADJUSTABLE MASONRY ANCHORS AT 16" OC EACH SIDE OF WEB.
  - ALL EXTERIOR LINTELS (INCLUDING BOTTOM PLATES) TO BE HOT-DIPPED GALVANIZED.
  - WIDTH OF BOND BEAM TO MATCH WIDTH OF WALL.
  - PROVIDE 1" BOTTOM CLEAR COVER.
  - SEE MISCELLANEOUS LINTEL SCHEDULE FOR BRICK SUPPORT IN FRONT OF CMU LINTELS.
  - GROUT SOLID COURSE BELOW BEARING FOR 16"



**5**  
S100  
LINTEL BEARING DETAIL  
SCALE: 1/2" = 1'-0"

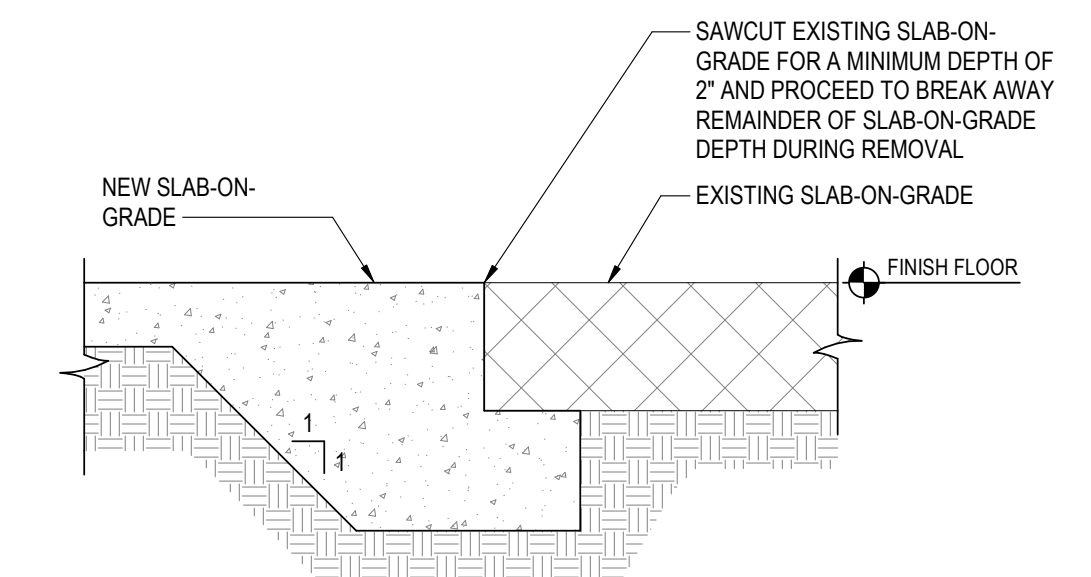


**6**  
S100  
SECTION  
SCALE: 3/4" = 1'-0"

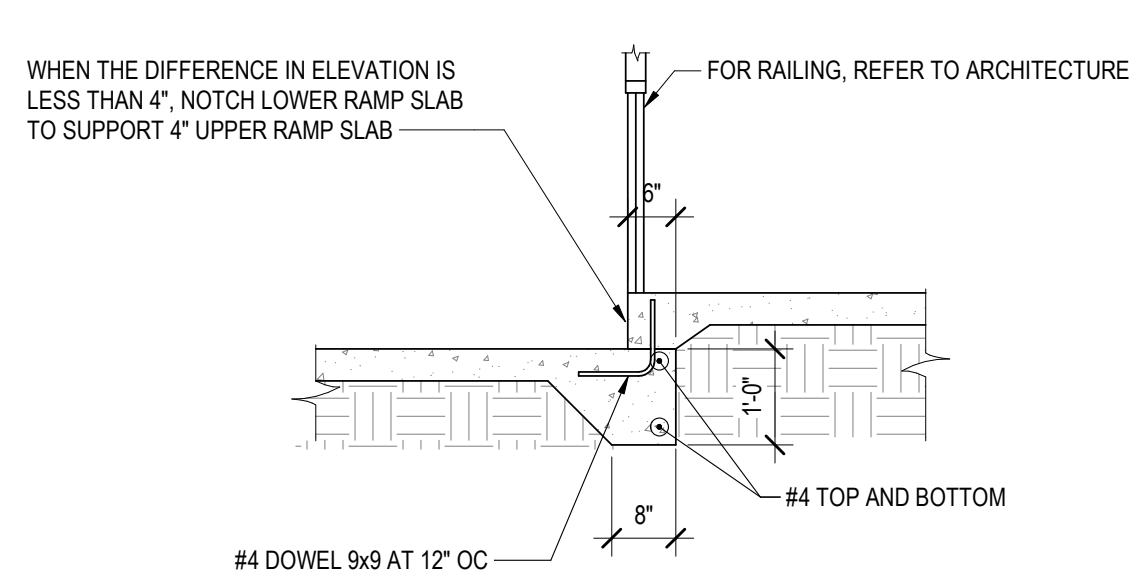


**7**  
S100  
TYP INTERIOR COLUMN FOOTING  
SCALE: 3/4" = 1'-0"

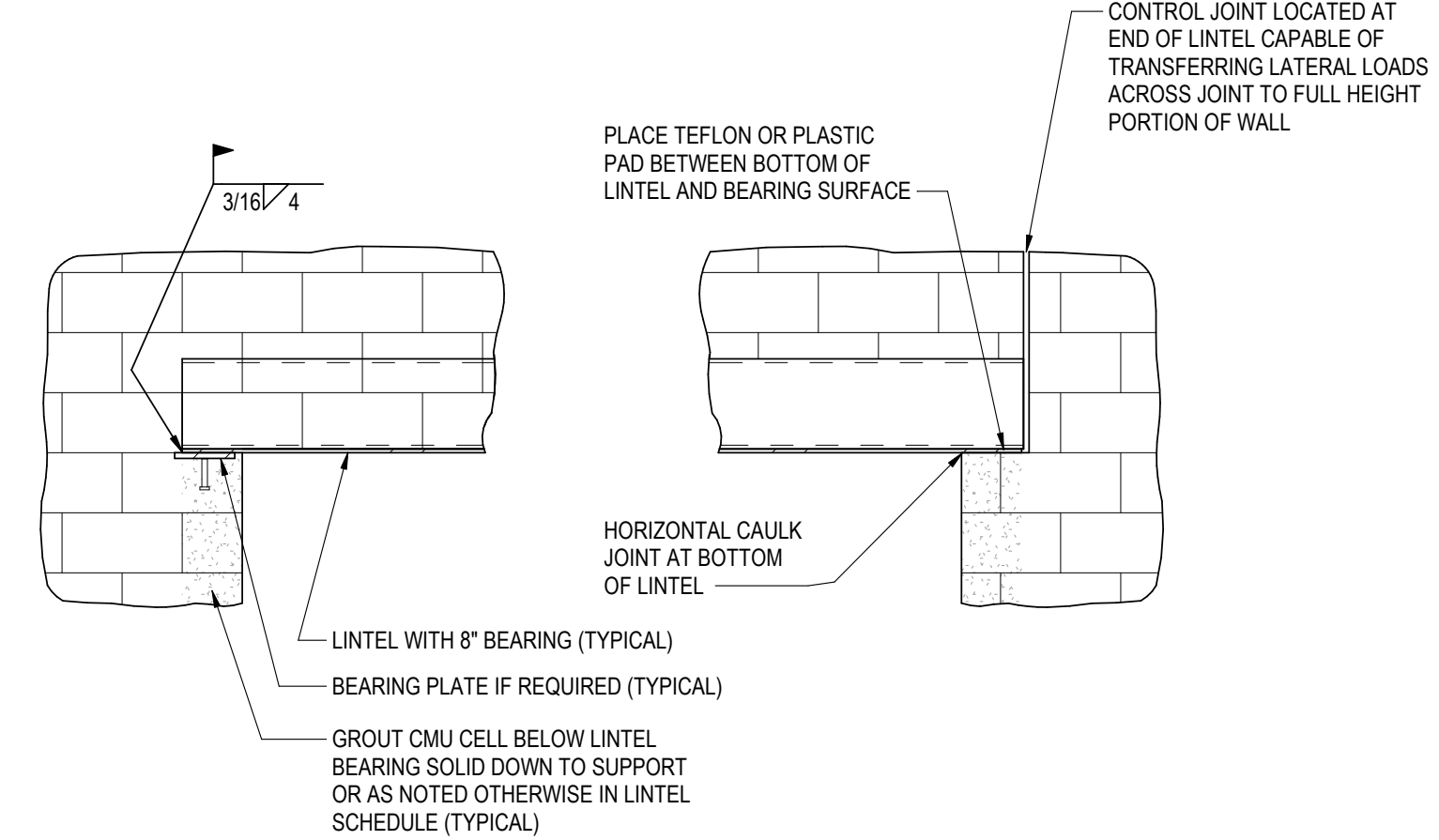
- KEY NOTES**
- BEARING L3x3x14"x2'-0" WITH (3) 1/2" SIMPSON HD45S5 AT 10" OC
  - REMOVE WALL LEAVING NO MORE THAN 24" OF CMU ALTERNATE BEAM SIZE IS (2) L4x3 1/2"x5/16"
  - REMOVE WALL TO ROOF DECK - ATTACH ROOF DECK TO BEAM WITH 3/16"x2"x6" PLATE TABS WELDED TO FLANGE AT 24" OC WITH TEK SCREWS UP INTO DECK.
  - ANGLE SEAT L4x4x3/8@8" WELDED TO COLUMN
  - VERIFY IN FIELD BEFORE FABRICATION - BASED ON 2 1/2" OFF END OF SOUTH 8WF17 AND 2'-7" BETWEEN THE TWO 8WF17
  - 3x3x12" FOOTING WITH (3) #4 EACH WAY 2" OFF BOTTOM. TOP OF FOOTING ELEVATION = 99'-4". SEE 7/S100



**3**  
S100  
NEW TO EXISTING SLAB-ON-GRADE  
SCALE: 1" = 1'-0"



**4**  
S100  
RAMP SECTION  
SCALE: 1/2" = 1'-0"



**5**  
S100  
LINTEL BEARING DETAIL  
SCALE: 1/2" = 1'-0"