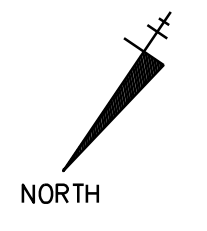
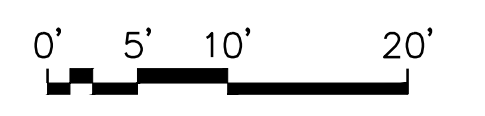
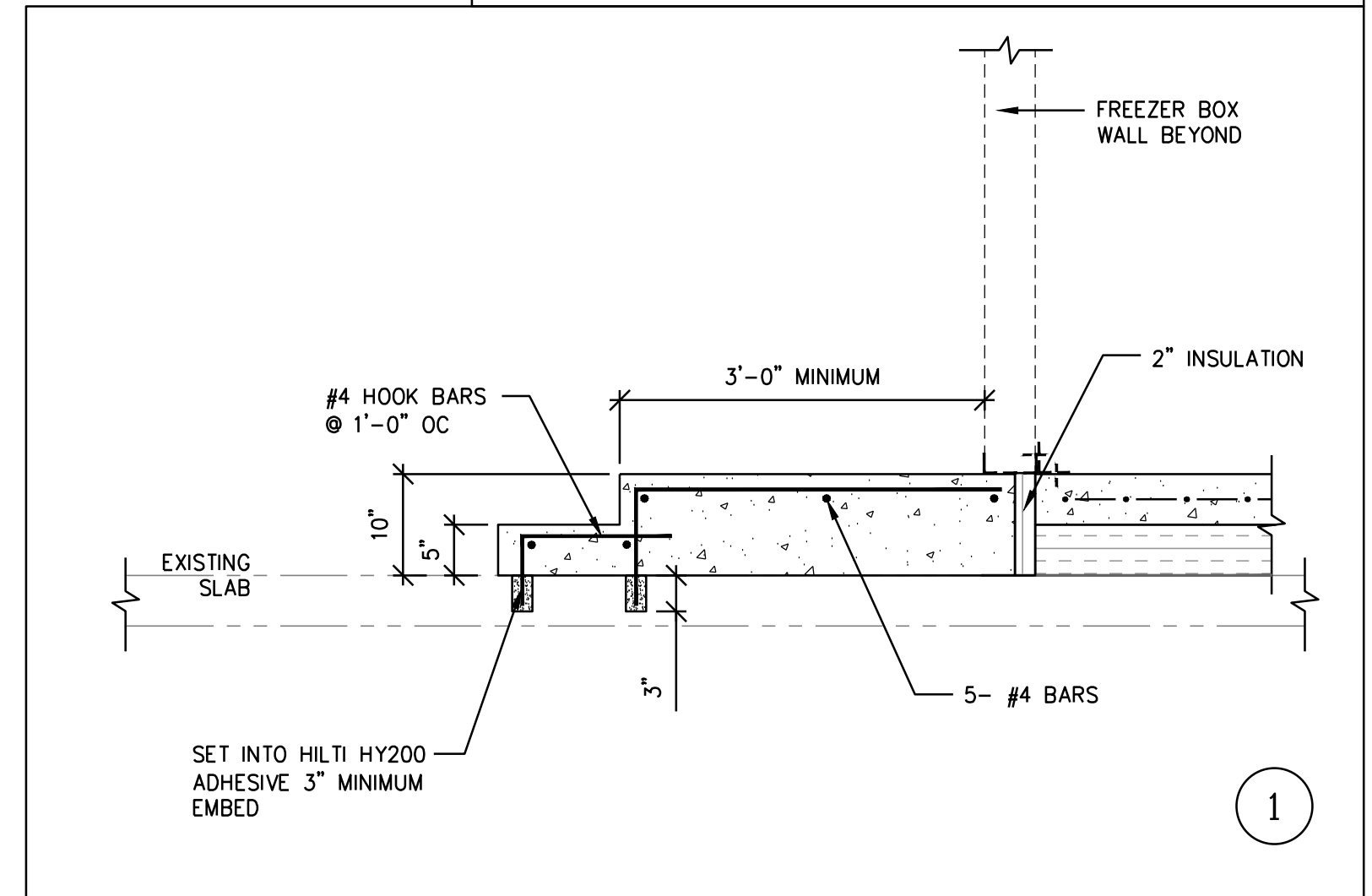
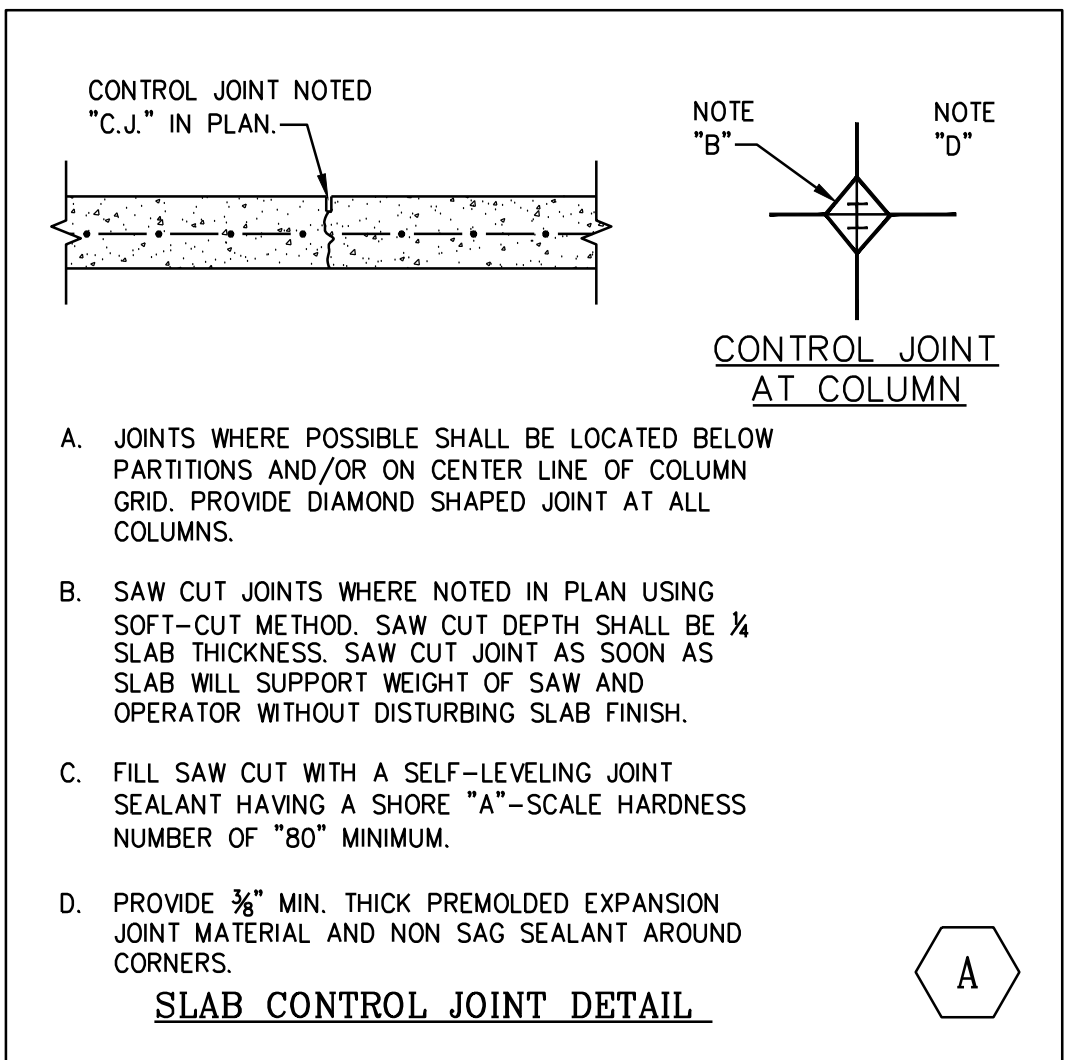
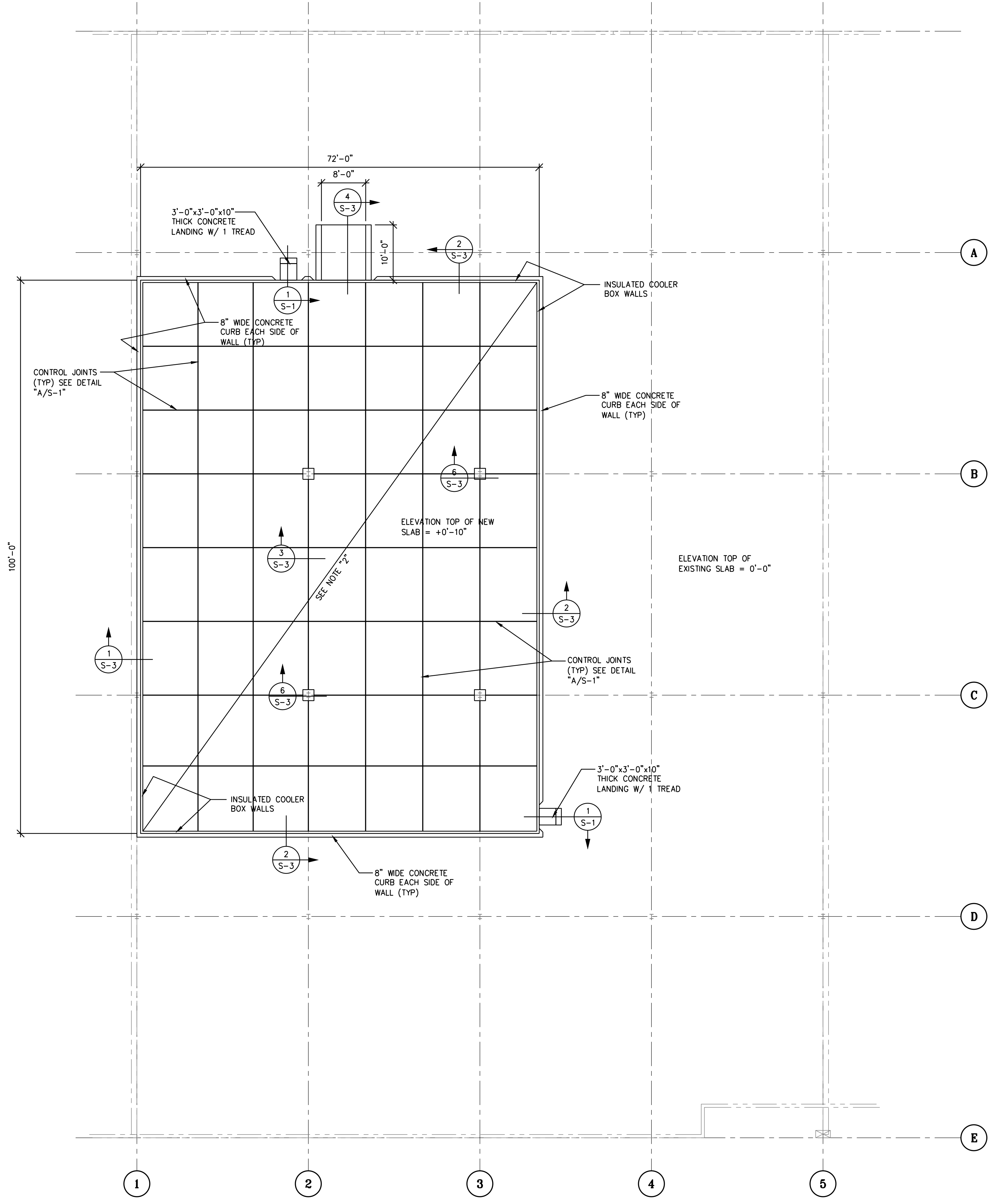


Partial First Floor Plan

3/32" = 1'-0"



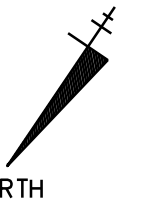
- EXISTING FRAMING TO REMAIN UNLESS NOTED OTHERWISE.
- PROVIDE NEW 5" THICK CONCRETE SLAB REINFORCED W/ 6x6-W2.9xW2.9 WELDED WIRE MESH OVER 5" OF INSULATION (R-28 MINIMUM) + VAPOR BARRIER OVER EXISTING SLAB ON GRADE.



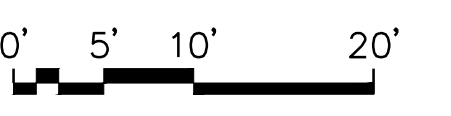
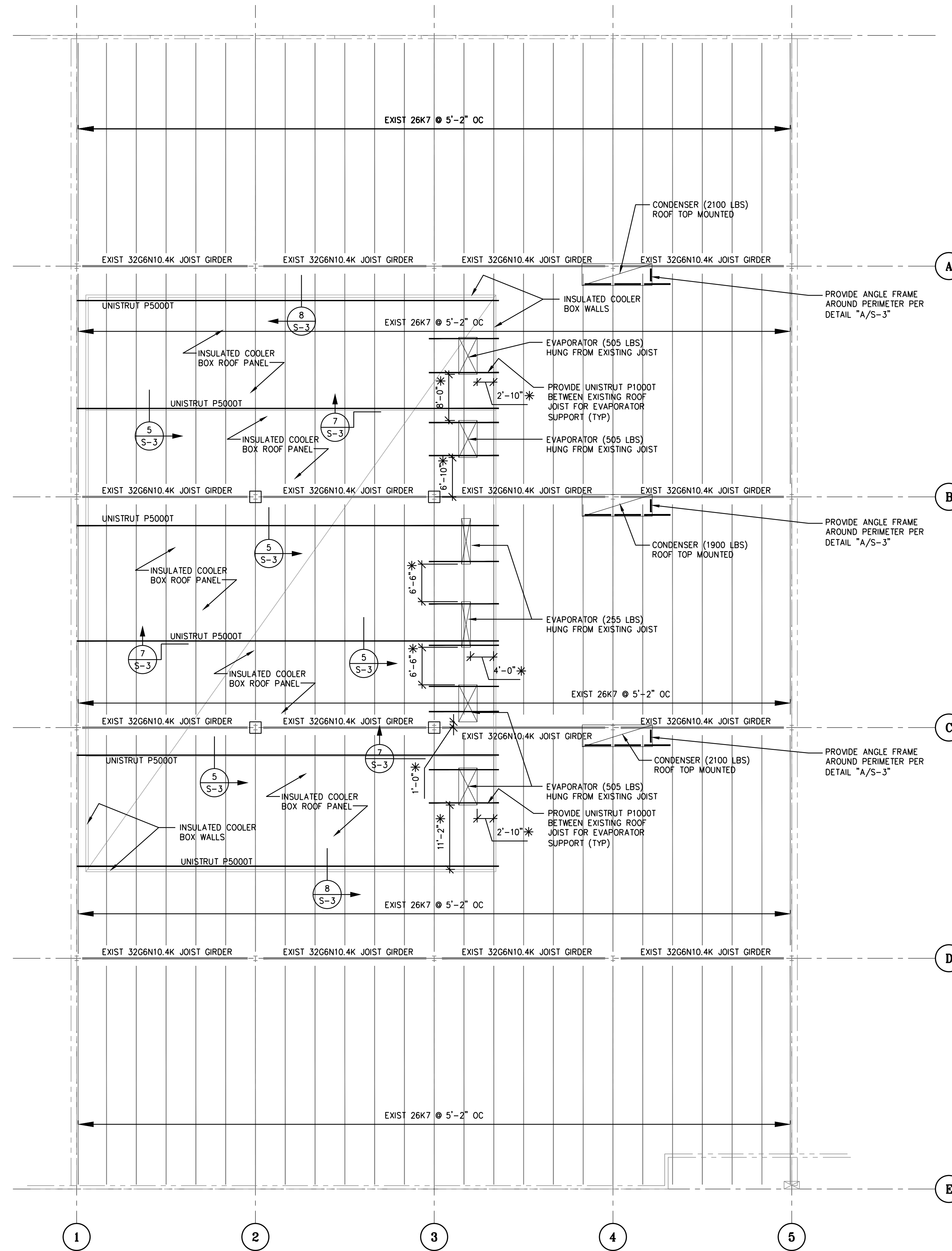
	Skarda and Associates Structural Consultants, Inc. 2439 N. Charles Street Baltimore, Maryland 21218 (410)-366-9384 (410)-366-9389 Fax EMAIL: INFO@SKARDAENGINEERS.COM		3 8 JOB NO.	DRAWN SPW	DWG. NO. S-1
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Partial Roof Framing Plan

3/32" = 1'-0"



- EXISTING FRAMING TO REMAIN UNLESS NOTED OTHERWISE.
- * - INDICATES DIMENSION THAT CONTRACTOR NEEDS TO BE COORDINATED WITH EQUIPMENT AND MEP DRAWINGS.



Skarda and Associates
 Structural Consultants, Inc.
 2439 N. Charles Street
 Baltimore, Maryland 21218
 (410)-366-9384
 (410)-366-9389 Fax
 EMAIL: INFO@SKARDAENGINEERS.COM

S-2

General Notes

1.0

GENERAL

- THE STANDARD GENERAL CONDITIONS FOR THE CONSTRUCTION CONTRACT N.S.P.E. DOCUMENT 1910-B SHALL GOVERN THIS WORK AS IF ENTIRELY INCLUDED ON THESE DRAWINGS.
- DIMENSIONS AND ELEVATIONS SHOWN ON THE STRUCTURAL DRAWINGS ARE OBTAINED FROM THE ARCHITECTURAL DRAWINGS AVAILABLE PRIOR TO RELEASE OF CONTRACT DOCUMENTS. ARCHITECTURAL DIMENSIONS WILL GOVERN OVER STRUCTURAL DIMENSIONS. LAYOUT OF BUILDING FOUNDATIONS OR OTHER ITEMS SHALL BE BASED ON THE ARCHITECTURAL, CIVIL, AND STRUCTURAL DRAWINGS. ERRORS AND INCONSISTENCIES IN DIMENSIONS SHALL BE FORWARDED TO THE ARCHITECT FOR RESOLUTION.
- THE BASIC STABILITY OF THE STRUCTURE IS DEPENDENT UPON THE DIAPHRAGM ACTION OF FLOORS, WALLS, AND ROOF ACTING TOGETHER. PROVIDE GUYS, BRACES, STRUTS, ETC., TO ACCOMMODATE LIVE, DEAD, AND WIND LOADS UNTIL FINAL CONNECTIONS BETWEEN THESE ELEMENTS ARE MADE.

1.1

DESIGN LOADS

- THE STRUCTURE WAS DESIGNED FOR THE LIVE LOADS SHOWN BELOW AND DEAD LOADS AS REQUIRED BY CONSTRUCTION IN ACCORDANCE WITH IBC 2021.
- MECHANICAL UNITS WITH WEIGHTS SHOWN IN PLAN AND SUPPORTED BY THE STRUCTURE WERE CONSIDERED IN THE DESIGN OF THE STRUCTURE. ADDITIONAL MECHANICAL EQUIPMENT NOT SHOWN ON STRUCTURAL DRAWINGS AND HAVING A WEIGHT IN EXCESS OF 400 POUNDS SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER PRIOR TO INSTALLATION.
- LIVE LOADS SHOWN BELOW ARE IN POUNDS PER SQUARE FOOT (PSF).
 ROOF LIVE LOAD: 30 ROOF DEAD LOAD: 15
 FLOOR LIVE LOAD: 125
- SNOW LOAD CRITERIA. LOADS SHOWN ARE IN POUNDS PER SQUARE FOOT (PSF):
 GROUND SNOW LOAD (Pg): 25 FLAT ROOF SNOW LOAD (P_f): 17.5
 SNOW LOAD IMPORTANCE FACTOR (I_s): 1.0
 SNOW EXPOSURE FACTOR (C_e): 1.0 THERMAL FACTOR (C_t): 1.0
- WIND CRITERIA:
 ULTIMATE DESIGN WIND SPEED: 115 MPH (3 SECOND GUST)
 NOMINAL DESIGN WIND SPEED: 90 MPH (3 SECOND GUST)
 RISK CATEGORY: II
 WIND EXPOSURE CATEGORY: B
 INTERNAL PRESSURE COEFFICIENT: 0.18
 COMPONENTS & CLADDING (NOMINAL PRESSURE ON 100-SQ.FT. AREA):
 ROOF ZONE 1: -29.0 & 16.0 WALL ZONE 4: -20.0 & 21.3
 ROOF ZONES 2&3: -45.9 & 16.0 WALL ZONE 5: -22.2 & 21.3
- SEISMIC CRITERIA:
 RISK CATEGORY: II
 SEISMIC IMPORTANCE FACTOR, I_e: 1.0
 SITE CLASS: D
 SEISMIC DESIGN CATEGORY: B
 S_s = 0.135 S_{ds} = 0.144
 S₁ = 0.043 S_{d1} = 0.069
 BASIC SEISMIC FORCE-RESISTING SYSTEM: ORDINARY REINFORCED CONCRETE SHEAR WALLS
 SEISMIC RESPONSE COEFFICIENT, C_s: 0.036
 RESPONSE MODIFICATION COEFFICIENT, R: 4.0
 ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE

1.3

EXISTING CONDITIONS

- EXPOSE EXISTING FRAMING AND NOTIFY ARCHITECT PRIOR TO INSTALLATION OF NEW FRAMING.
- CONTRACTOR MUST FIELD CHECK AND VERIFY DIMENSIONS AND ELEVATIONS OF EXISTING WORK PRIOR TO FABRICATION OF NEW MATERIALS.
- USE NON-DESTRUCTIVE TESTING METHODS TO DETERMINE LOCATION OF REINFORCING. DO NOT CUT EXISTING REINFORCING. ADJUST LOCATIONS OF NEW HOLES TO MISS REINFORCING.
- RELOCATE EXISTING HVAC, ELECTRIC, AND PLUMBING (MEP) TO ALLOW INSTALLATION OF NEW FRAMING.

1.5

SUBMITTALS

- BEFORE SUBMISSION OF SHOP DRAWINGS, CONTRACTOR SHALL HAVE DETERMINED AND VERIFIED QUANTITIES, DIMENSIONS, SPECIFIED PERFORMANCE CRITERIA, INSTALLATION REQUIREMENTS, MATERIALS, CATALOG NUMBERS, AND SIMILAR DATA WITH RESPECT THERETO AND REVIEWED OR COORDINATED EACH SHOP DRAWING WITH OTHER SHOP DRAWINGS AND SAMPLES WITH THE REQUIREMENTS OF THE WORK AND THE CONTRACT DOCUMENTS.
- AFTER CHECKING AND VERIFYING COMPLIANCE WITH CONTRACT DOCUMENTS AND ACTUAL FIELD CONDITIONS, CONTRACTOR SHALL SUBMIT, FOR REVIEW, SHOP DRAWINGS REFERENCED IN THE INDIVIDUAL MATERIALS INDICATION. CONTRACTOR SHALL STAMP OR PROVIDE A SIMILAR WRITTEN INDICATION THAT CONTRACTOR HAS REVIEWED THE SUBMISSION AND IS SATISFIED THAT MATERIALS SHOWN ARE IN COMPLIANCE WITH THE CONTRACT DOCUMENTS.

- REVIEW PERIOD OF 5 WORKING DAYS WILL BE REQUIRED FOR SHOP DRAWING REVIEW OF EACH UNIT TYPE. SHOP DRAWING SUBMISSION OF MULTIPLE COMPONENT TYPES WILL REQUIRE ADDITIONAL REVIEW TIME. SHOP DRAWINGS WILL BE FORWARDED TO THE ARCHITECT OR CLIENT FOR THEIR REVIEW BEFORE RETURNING TO THE CONTRACTOR.

2.3

FOUNDATIONS

- A SOIL BEARING CAPACITY OF 2000 PSF WAS USED FOR FOOTING DESIGN. ENGAGE THE SERVICES OF A GEOTECHNICAL ENGINEER TO VERIFY EXCAVATIONS AND SOIL BEARING CAPACITY. IF SOIL OF THIS CAPACITY IS NOT ENCOUNTERED AT ELEVATIONS INDICATED, CONTACT THE STRUCTURAL ENGINEER OF RECORD (SOR).

3.1

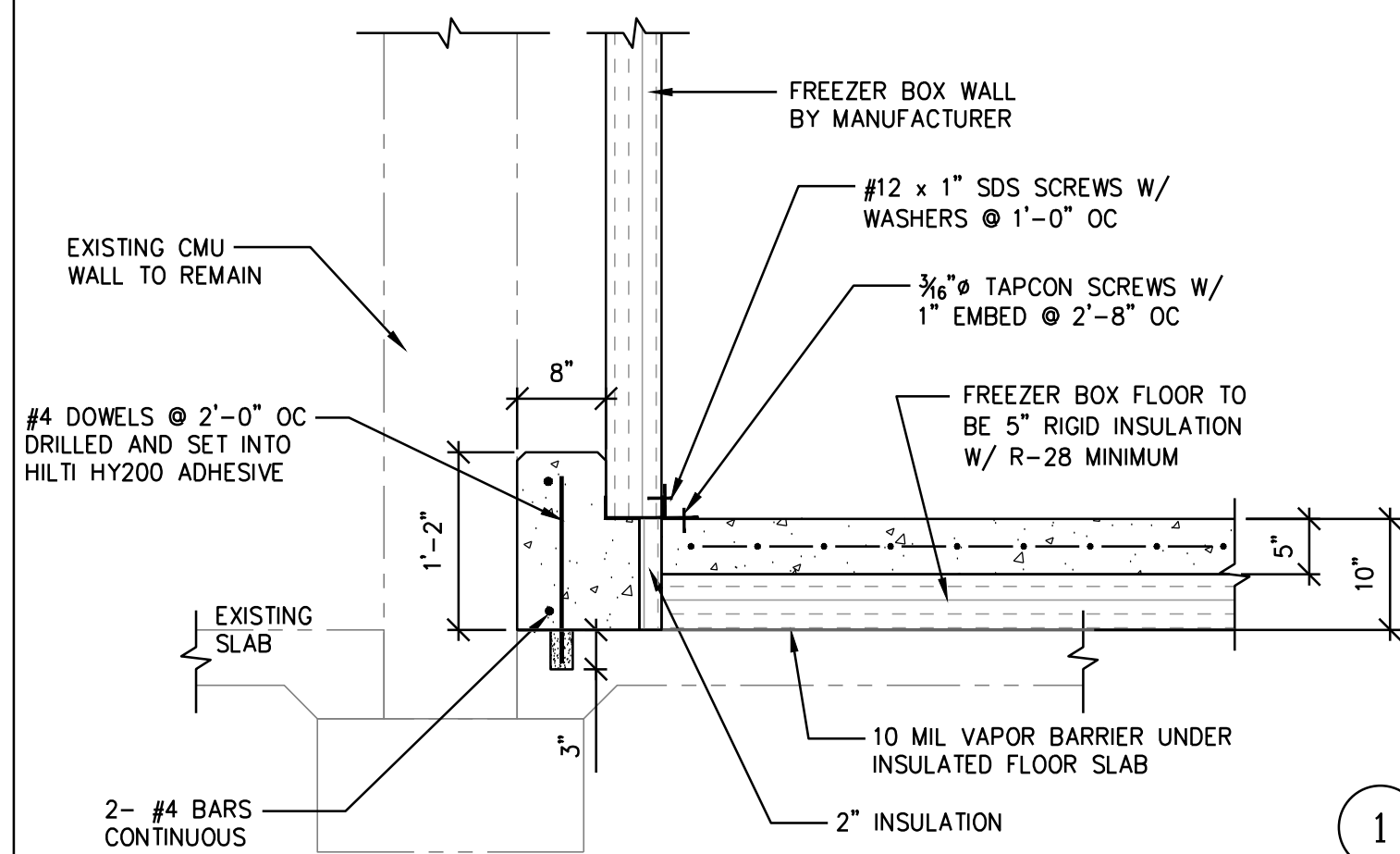
CONCRETE

- UNLESS GOVERNED BY BUILDING CODE OR LOCAL AMENDMENTS, CONCRETE WORK INCLUDING FORMING, MIXING, PLACING, AND CURING SHALL BE IN ACCORDANCE WITH ACI 301. PLACEMENT OF REINFORCING SHALL BE IN ACCORDANCE WITH ACI 315 AND 318. WHEN THERE IS A CONFLICT, THE MOST STRINGENT IS TO APPLY.
- SUBMIT COMPLETE SHOP AND ERECTION DRAWINGS FOR REVIEW PRIOR TO FABRICATION OR ERECTION. REPRINTS OF CONTRACT DRAWINGS ARE NOT ACCEPTABLE. SUBMIT DESIGN MIXES FOR EACH CLASS OF CONCRETE PRIOR TO USE.
- CONCRETE REINFORCING: ASTM A-615, GRADE 60.
- WELDED WIRE REINFORCEMENT: ASTM A-1064.
- PORTLAND CEMENT: ASTM C-150, TYPE I.
- BLENDED HYDRAULIC CEMENT: ASTM C-595.
- FLY ASH: ASTM C-618, CLASS F (25% MAX.)
- AGGREGATE: ASTM C-33. 1" MAXIMUM FOR FOOTINGS, WALLS, AND SLABS ON GRADE.
- CONCRETE SHALL HAVE A 28 DAY COMPRESSIVE STRENGTH OF: 4,000 PSI.
- WATER CEMENT RATIO NOT TO EXCEED 0.45 FOR 4,000 PSI CONCRETE.
- INSTALL WELDED WIRE REINFORCEMENT 2" BELOW UPPER SURFACE OF CONCRETE SLAB.
- REINFORCING SHALL HAVE 3/4" CONCRETE COVER FOR SLABS AND WALLS AND 1 1/2" COVER FOR BEAMS, GIRDERS, AND COLUMNS.
- USE A WATER REDUCING ADMIXTURE IN ALL CONCRETE.
- USE A MINIMUM OF 5 1/2 BAGS OF CEMENT AND A MAXIMUM OF 6 1/2 GALLONS OF WATER PER BAG FOR EACH CUBIC YARD OF CONCRETE.
- SLUMP - ACI (211.1), EXCEPT THAT SLABS-ON-GRADE AND THIN-FRAMED SLABS SHALL HAVE A MAXIMUM SLUMP OF 4". SHOULD EXTRA WATER BE REQUIRED BEFORE DEPOSITING CONCRETE, AND WATER/CEMENT RATIO OF ACCEPTED MIX DESIGN HAS NOT BEEN EXCEEDED, GENERAL CONTRACTOR'S SUPERINTENDENT SHALL HAVE SOLE AUTHORITY TO AUTHORIZE ADDITION OF WATER. ANY ADDITIONAL WATER ADDED TO MIX AFTER LEAVING BATCH PLANT SHALL BE INDICATED ON THE TRUCK TICKET AND SIGNED BY PERSON RESPONSIBLE. SUBMIT COPY OF TRUCK TICKET FOR REVIEW.
- NO CALCIUM CHLORIDE WILL BE PERMITTED IN CONCRETE.
- ENGAGE THE SERVICES OF A TESTING AGENCY APPROVED BY THE ARCHITECT TO PERFORM TESTS OF CONCRETE. TAKE A MINIMUM OF 5 CYLINDERS FOR EACH CLASS OF CONCRETE POURED IN ANY ONE DAY. PERFORM 1 SLUMP TEST PER TRUCK LOAD OF CONCRETE.
- PROVIDE TWO COMPRESSION TESTS AT 7 DAYS, TWO AT 28 DAYS, AND RETAIN ONE TEST FOR ADDITIONAL TESTING AS NEEDED. COMPRESSIVE STRENGTH OF CONCRETE AT 7 DAYS TO ACHIEVE AT LEAST 65% OF MINIMUM DESIGN STRENGTH.

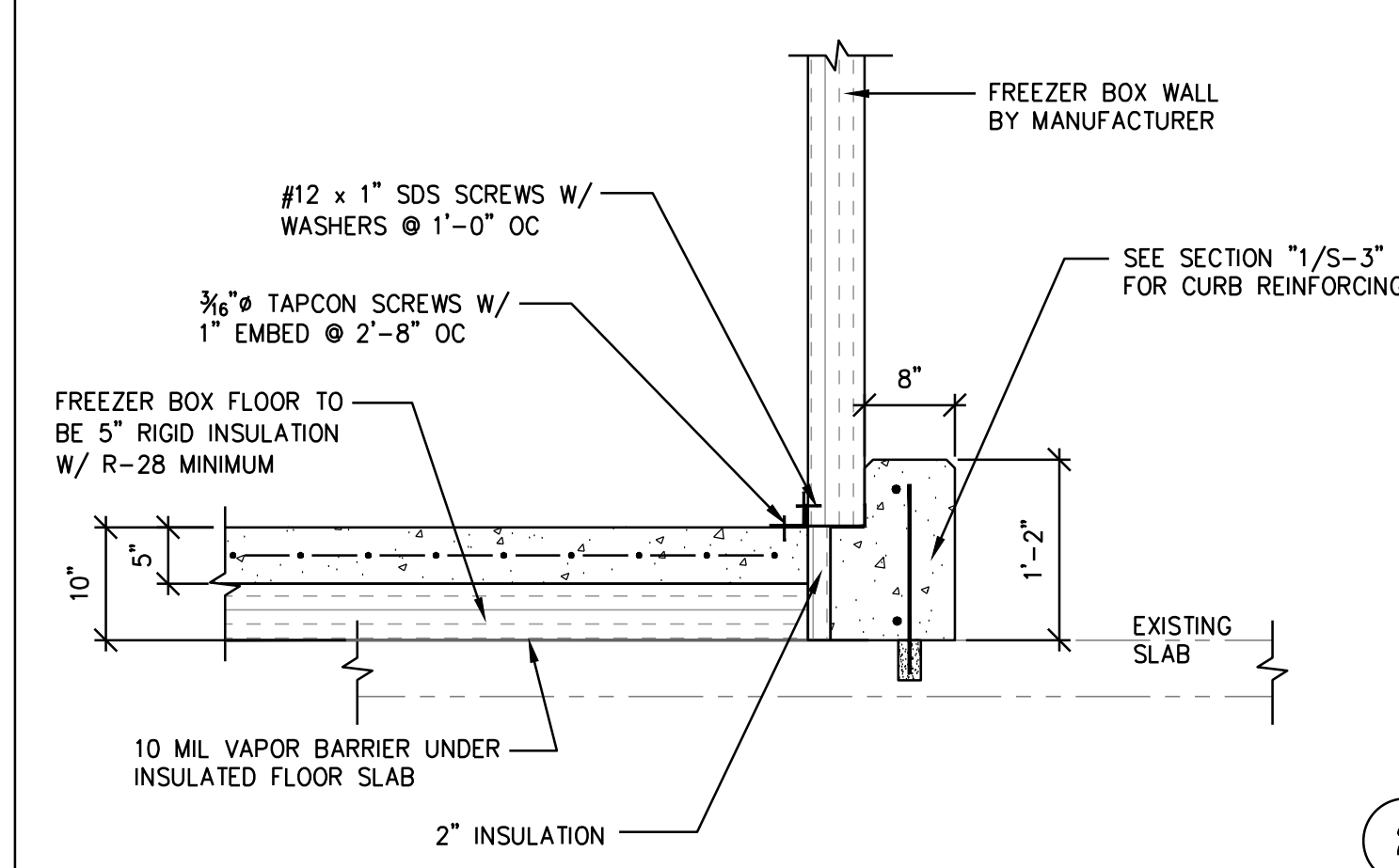
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STRUCTURAL STEEL

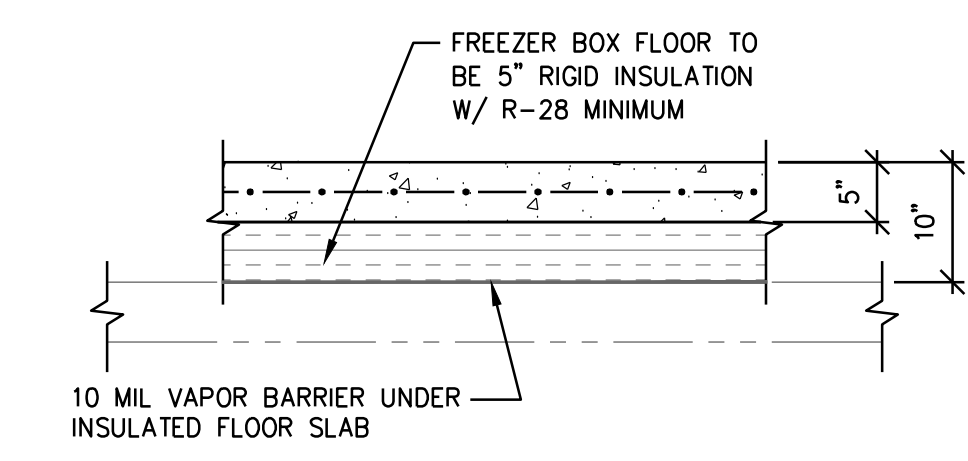
- UNLESS GOVERNED BY BUILDING CODE OR LOCAL AMENDMENTS, FABRICATE AND ERECT STRUCTURAL STEEL IN ACCORDANCE WITH AISC MANUAL OF STEEL CONSTRUCTION, FOURTEENTH EDITION, AND OSHA STEEL ERECTION STANDARDS UNLESS NOTED ON DRAWINGS OR SPECIFICATIONS. WHEN THERE IS A CONFLICT, THE MOST STRINGENT IS TO APPLY.
- STEEL - ASTM A-36 FOR ANGLES, CHANNELS, AND MISCELLANEOUS SHAPES.
- WELDERS SHALL BE CERTIFIED IN ACCORDANCE WITH THE AMERICAN WELDING SOCIETY (AWS).
- COORDINATE WELDING ELECTRODES, MACHINES, ETC., WITH TYPE OF STEEL BEING WELDED.
- COAT STEEL EXPOSED AFTER BUILDING IS COMPLETED WITH ONE SHOP COAT OF AN APPROVED RUST INHIBITIVE PRIMER.



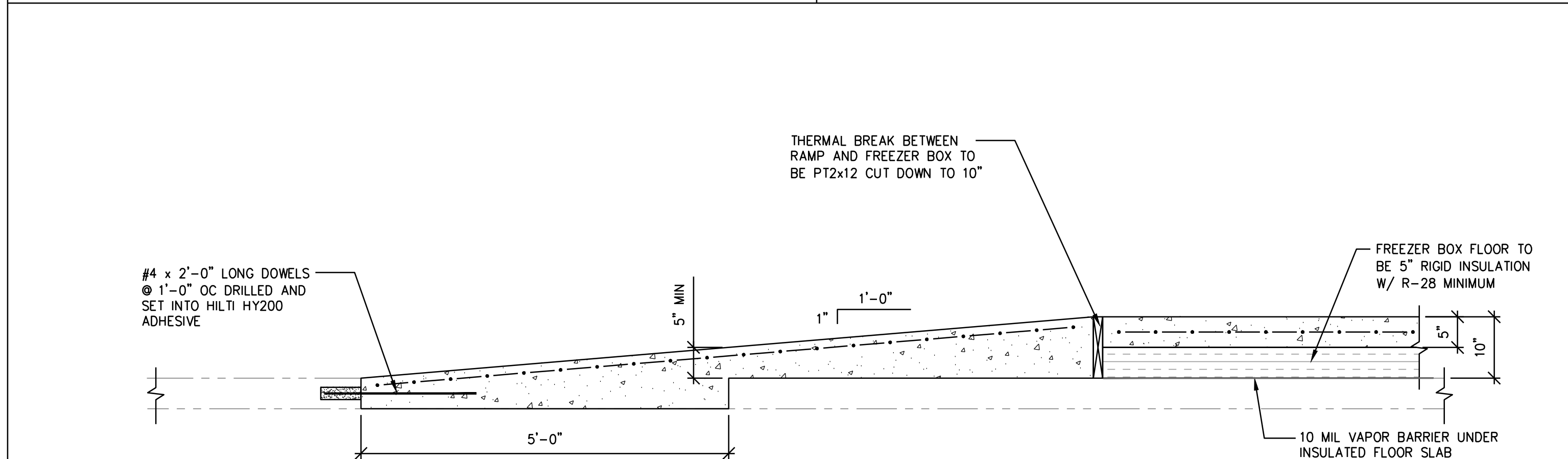
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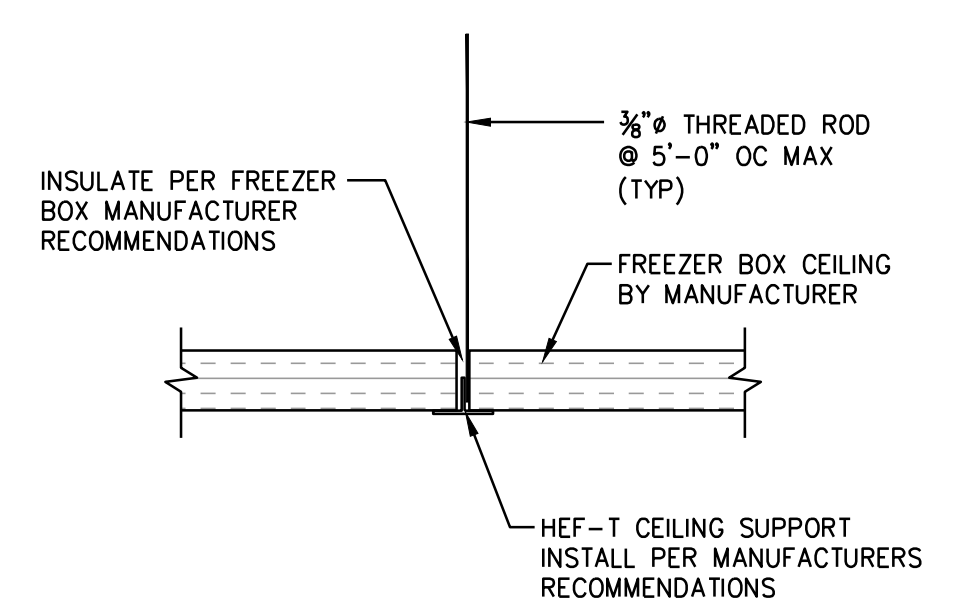
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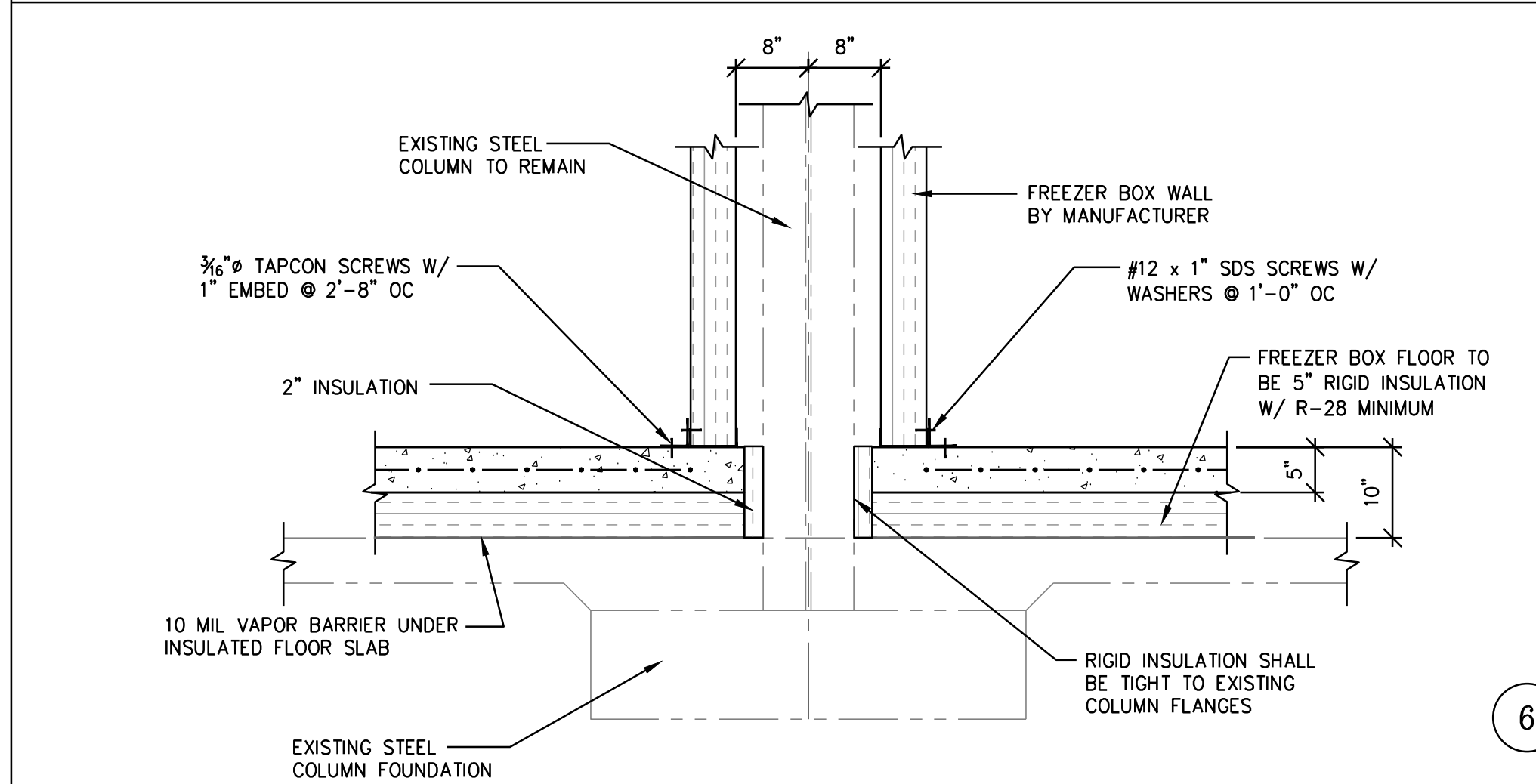
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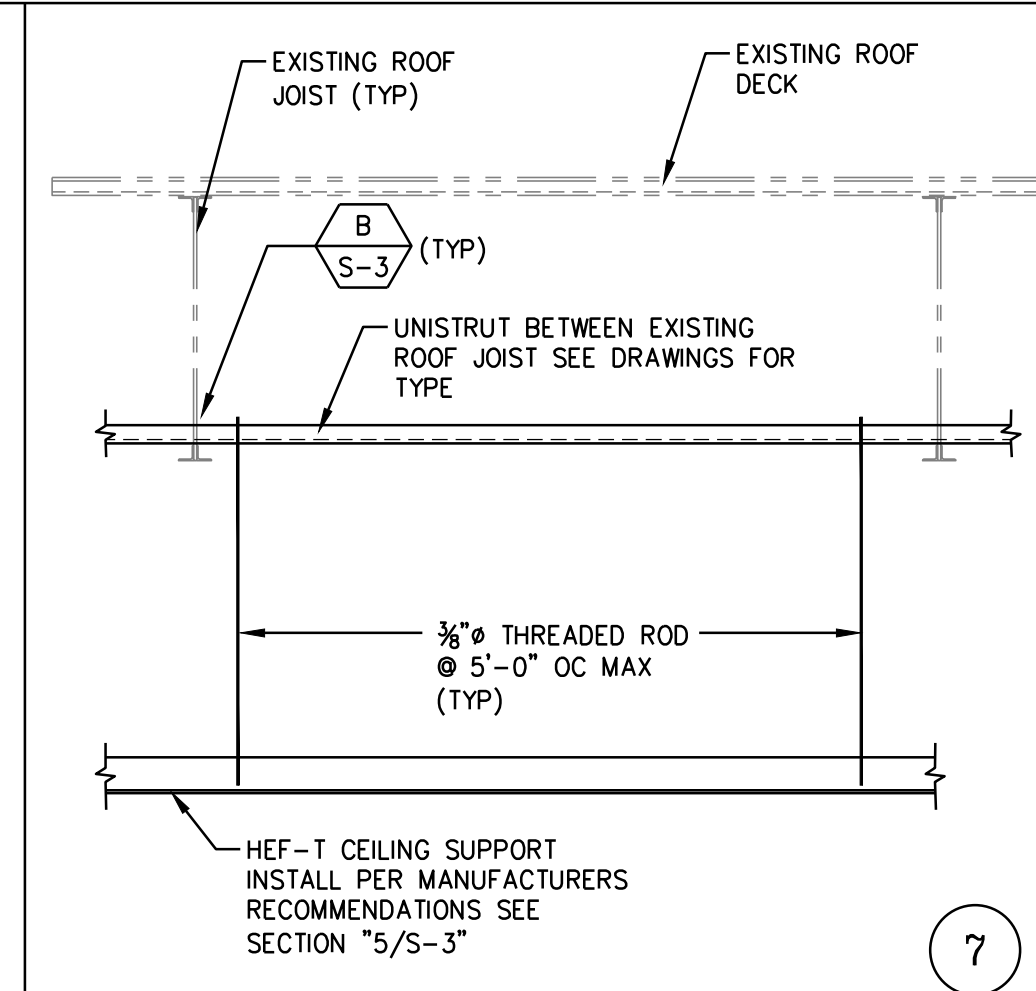
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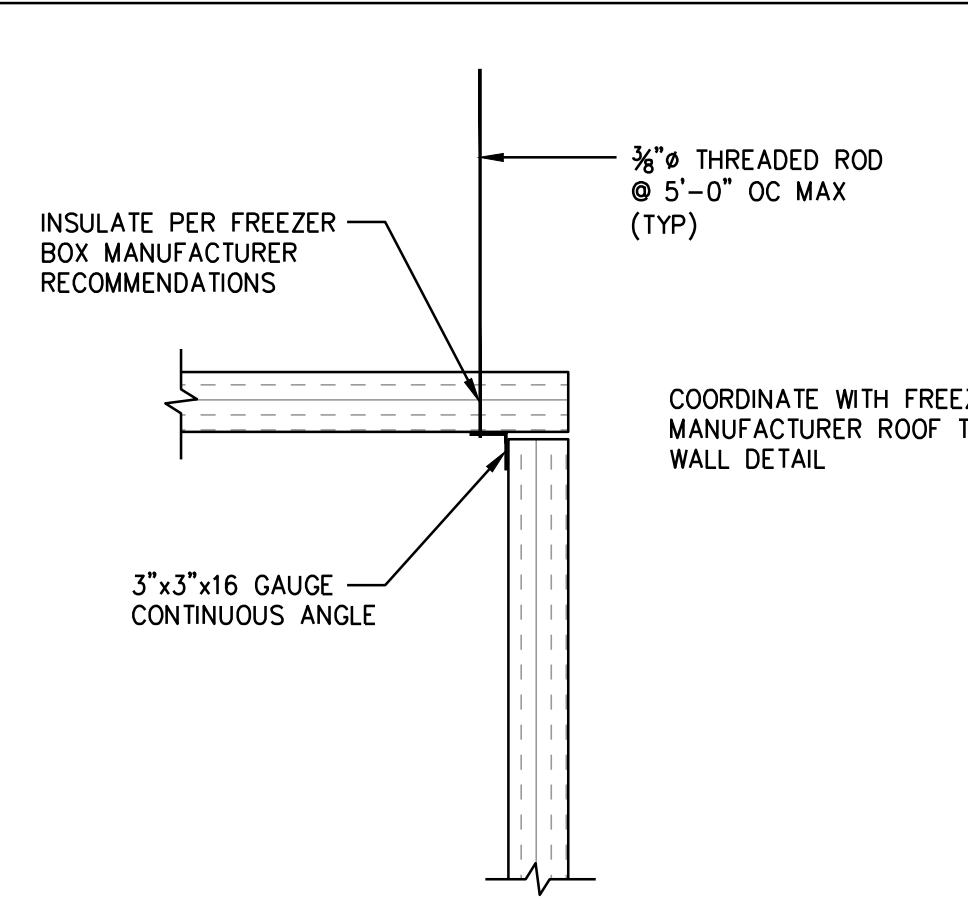
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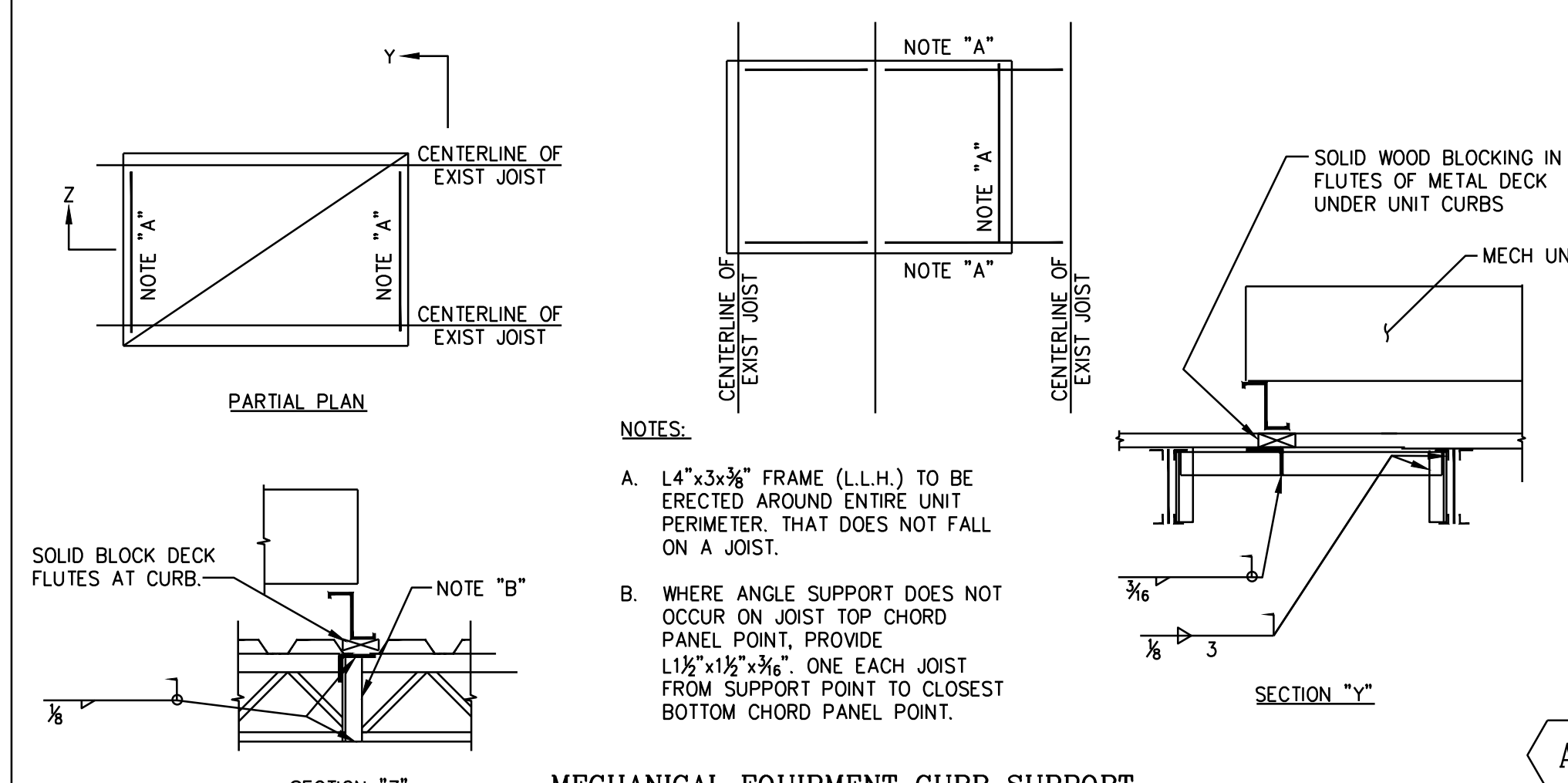
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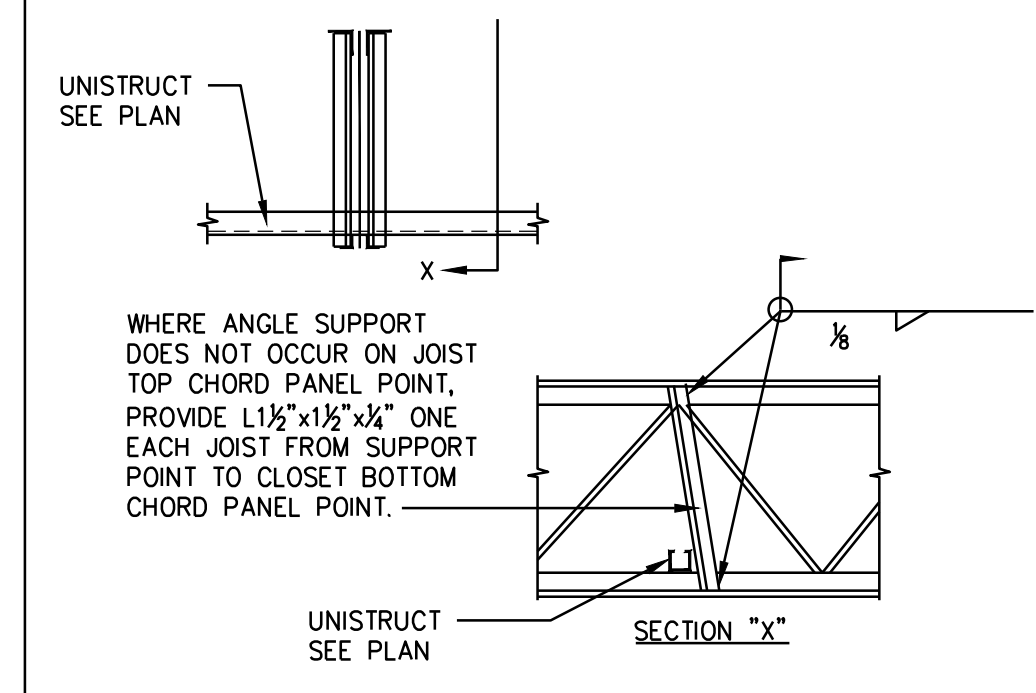
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8



A



B

TYPICAL ROOF REINFORCING DETAIL

Skarda and Associates
 Structural Consultants, Inc.
 2439 N. Charles Street
 Baltimore, Maryland 21218
 (410)-366-9384
 (410)-366-9389 Fax
 EMAIL: INFO@SKARDAENGINEERS.COM