

GENERAL NOTES:

- THE STRUCTURAL DESIGN IS IN ACCORDANCE WITH THE 2018 NORTH CAROLINA STATE BUILDING CODE.
- THE GENERAL CONTRACTOR SHALL INSURE THAT ALL WORK IS COMPLETED IN ACCORDANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL BUILDING CODES AND ORDINANCES.
- REPRODUCTION OF ANY PORTION OF THE STRUCTURAL DRAWINGS IS A VIOLATION OF COPYRIGHT LAWS. ALL PLANS, NOTES, DETAILS, AND SECTIONS MUST BE REDRAWN AND COORDINATED WITH THE ARCHITECTURAL DRAWINGS. REPRODUCED CONTRACT DOCUMENTS THAT ARE SUBMITTED WILL NOT BE REVIEWED.
- THE GENERAL CONTRACTOR SHALL VERIFY ALL INFORMATION SHOWN ON THE PLANS PRIOR TO INITIATING CONSTRUCTION, AND SHALL NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THOSE SHOWN ON THE PLANS FOR POSSIBLE MODIFICATION OF THE DESIGNER DETAILS.
- THE CONTRACTOR SHALL REFER TO ARCHITECTURAL DRAWINGS FOR INFORMATION NOT NOTED ON THE STRUCTURAL DRAWINGS. THE CONTRACTOR SHALL COMPARE THE STRUCTURAL DRAWINGS WITH THE ARCHITECTURAL DRAWINGS AND REPORT ANY DISCREPANCIES TO THE ENGINEER PRIOR TO COMPLETION OF SHOP DRAWINGS.
- ANY DEVIATION FROM, ADDITION TO, SUBSTITUTION FOR, OR MODIFICATIONS TO THE STRUCTURE SHOWN ON THESE DRAWINGS SHALL BE SUBMITTED IN WRITING TO THE ENGINEER FOR REVIEW. SHOP DRAWINGS THAT ARE SUBMITTED FOR REVIEW DO NOT CONSTITUTE "IN WRITING" UNLESS IT IS CLEARLY NOTED THAT SPECIFIC CHANGES ARE BEING SUGGESTED.
- THE STRUCTURAL DRAWINGS AND SPECIFICATIONS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE METHODS OF CONSTRUCTION UNLESS SO STATED OR NOTED. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT WORKERS AND OTHER PERSONS DURING CONSTRUCTION.
- THE STRUCTURAL DRAWINGS ARE NOT TO BE SCALED FOR DETERMINATION OF QUANTITIES, LENGTHS OR FIT OF MATERIALS.
- THE GENERAL CONTRACTOR SHALL BE SOLELY AND EXCLUSIVELY RESPONSIBLE FOR THE ADEQUACY OF ALL SHORING AND BRACING. THE CONTRACTOR SHALL PROVIDE TEMPORARY ERECTION SHORING AND BRACING OF ALL STRUCTURAL WORK AS REQUIRED FOR THE STABILITY OF THE STRUCTURE DURING ALL PHASES OF CONSTRUCTION. THE CONTRACTOR SHALL IMMEDIATELY INFORM THE ENGINEER OF ANY CONDITION WHICH, IN HIS OPINION, MIGHT ENDANGER THE STABILITY OF THE STRUCTURE OR CAUSE DISTRESS IN THE STRUCTURE.
- THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO INITIATING FABRICATION.

11. DESIGN LOADS:  
OCCUPANCY CATEGORY II  
ROOF LOADS:  
DEAD LOAD 20 PSF  
SNOW LOAD (GROUND ) 29 PSF  
C<sub>g</sub> = 1.0  
C<sub>t</sub> = 1.0  
I = 1.0  
  
WIND LOAD:  
3 SECOND GUST SPEED = 115 MPH  
WIND EXPOSURE CATEGORY 'C'  
IMPORTANCE FACTOR 1.0  
COMPONENTS AND CLADDING PER ASCE 7-16  
  
SEISMIC LOADING:  
IMPORTANCE FACTOR 1.0  
S<sub>s</sub> = 0.342 S<sub>i</sub> = 0.081  
SITE CLASS 'C'  
S<sub>10</sub> = 0.348 S<sub>D1</sub> = 0.129  
SEISMIC DESIGN CATEGORY 'C'  
BASIC SEISMIC RESISTING SYSTEM:  
STEEL SYSTEM NOT SPECIFICALLY DETAIL FOR SEISMIC  
DESIGN BASE SHEAR  
LONGITUDINAL 12 KIP  
TRANSVERSE 12 KIP  
R = 3.0  
C<sub>u</sub> = .116  
ANALYSIS PROCEDURE USED: EQUIVALENT LATERAL FORCE

2

- OTHER DEAD LOADS HAVE BEEN CALCULATED TO INCLUDE THE ACTUAL WEIGHT OF ALL WORK SHOWN ON THE STRUCTURAL DRAWINGS. NO EQUIPMENT SHALL BE PLACED ON OR HUNG FROM THE ROOF SYSTEM WITHOUT WRITTEN APPROVAL OF THE ENGINEER.
- COMPLETE SHOP DRAWINGS FOR THE STRUCTURAL WORK SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO COMMENCEMENT OF CONSTRUCTION. REVIEW OF SHOP DRAWINGS BY THE ENGINEER DOES NOT RELIEVE THE CONTRACTOR OF FULL RESPONSIBILITY FOR CORRECT FABRICATION AND CONSTRUCTION OF THE WORK.
- PRINCIPAL OPENINGS ARE SHOWN ON THE STRUCTURAL DRAWINGS. THE CONTRACTOR SHALL REFER TO ARCHITECTURAL DRAWINGS FOR SLEEVES, CURBS, INSERTS, AND SIMILAR DETAILS NOT SHOWN. SIZE AND LOCATION OF ALL OPENINGS SHALL BE VERIFIED BY THE CONTRACTOR. ANY DEVIATION FROM OPENINGS SHOWN ON THE ARCHITECTURAL DRAWINGS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION FOR APPROVAL PRIOR TO CONSTRUCTION.
- CONSTRUCTION MATERIALS SHALL NOT BE STORED ON ROOFS IN EXCESS OF THE DESIGN LIVE LOADS UNLESS SPECIFICALLY APPROVED IN WRITING BY THE STRUCTURAL ENGINEER OF RECORD. IMPACT SHALL BE AVOIDED WHEN PLACING MATERIALS ON ROOFS. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ENFORCE THESE REQUIREMENTS.
- TYPICAL DETAILS MAY NOT NECESSARILY BE CUT ON PLANS, BUT APPLY UNLESS NOTED OTHERWISE.

FOUNDATION AND CONCRETE NOTES:

- FOOTINGS SHALL BEAR ON SUITABLE INDIGENOUS SOIL OR ENGINEERED FILL. PER SOILS REPORT, HAVING AN ALLOWABLE BEARING CAPACITY OF 2,000 POUNDS PER SQUARE FOOT. PRIOR TO FOOTING EXCAVATION, PLACING BACKFILL, FOOTINGS OR SLABS SITE SHALL BE VISUALLY INSPECTED BY GEOTECHNICAL ENGINEER PER REPORT.
- IF BEARING MATERIALS WITH A LOWER BEARING CAPACITY ARE ENCOUNTERED, THE UNDERLYING UNSUITABLE MATERIAL SHALL BE REMOVED AND REPLACED WITH SUITABLE MATERIAL APPROVED BY THE GEOTECHNICAL ENGINEER.
- THE ARCHITECT AND ENGINEER ASSUME NO RESPONSIBILITY FOR THE ADEQUACY OF THE SUBSURFACE CONDITIONS.
- ANY OBSTRUCTIONS ENCOUNTERED DURING EXCAVATION WHICH MAY INTERFERE WITH THE CONSTRUCTION OF ANY OF THE FOUNDATIONS OR WALLS MUST BE REMOVED AND REPLACED IN COMPLIANCE WITH THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.
- GENERAL CONTRACTOR SHALL INSURE COMPLIANCE WITH ALL APPLICABLE STATE, COUNTY, AND LOCAL BUILDING ORDINANCES.
- NO CONCRETE SHALL BE PLACED IN WATER OR ON FROZEN GROUND.
- ALL CONCRETE AND FOUNDATIONS SHALL BE PROTECTED AGAINST FROST UNTIL THE PROJECT IS COMPLETED.
- BACKFILL UNDER ANY PORTION OF THE BUILDING OR FOUNDATION SHALL BE COMPACTED IN 6" LIFTS OF 95% COMPACTED GRAVEL AS APPROVED BY THE GEOTECHNICAL ENGINEER.
- ALL CONCRETE WORK SHALL CONFORM TO "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318-LATEST EDITION) AND "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" (ACI 301, LATEST EDITION).
- CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 P.S.I. AT 28 DAYS.
- CONCRETE FOR FOUNDATIONS SHALL HAVE A SLUMP OF NO MORE THAN 5" AND AIR ENTRAINMENT OF 4-6%. THE USE OF CALCIUM CHLORIDE IS NOT PERMITTED. PROVIDE PROPER CONCRETE PROTECTION IN COLD WEATHER AND MAINTAIN PROPER CURING PROCEDURES IN ACCORDANCE WITH ALL A.C.I. REQUIREMENTS.
- CONCRETE FOR FLOOR SLABS SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI @ 28 DAYS, 3" SLUMP AND 3% MAXIMUM AIR ENTRAPMENT.
- STEEL REINFORCEMENT SHALL CONFORM TO A.S.T.M. A-615, GRADE 60.
- ALL REINFORCING BARS SHALL BE COLD BENT IN ACCORDANCE WITH THE PROPER RADI ESTABLISHED BY THE A.C.I. UNDER NO CIRCUMSTANCES SHALL HEAT BE APPLIED TO THE BARS TO OBTAIN BENDS.
- ALL CONCRETE SLABS PLACED ON GROUND SHALL BE REINFORCED WITH FIBERMESH REINFORCING.
- WHERE CONTINUOUS BARS ARE CALLED FOR, THEY SHALL BE RUN CONTINUOUSLY AROUND CORNERS AND LAPPED AT NECESSARY SPLICES OR HOOKED AT DISCONTINUOUS ENDS. LAPS SHALL BE 40 BAR DIAMETERS, UNLESS OTHERWISE SHOWN.
- PLACEMENT OF CONCRETE POURS FOR FOUNDATION WALLS SHOULD NOT EXCEED 60" IN LENGTH AND SHOULD HAVE A VERTICAL 2" x 4" KEY, AND CONTINUOUS REINFORCING (40 BAR DIAMETER MINIMUM) THROUGH THE CONSTRUCTION JOINT.
- ALL FOUNDATION WALLS SHALL BE BRACED DURING BACKFILLING AND TAMPING OPERATIONS.
- THE USE OF CONTROL JOINTS IN THE SLAB IS RECOMMENDED TO CONTROL CRACKING. SAW CUT TO A DEPTH OF 1/5 OF THE DEPTH OF THE SLAB.
- BACKFILL NO EXTERIOR WALLS UNTIL PERMANENT STRUCTURAL SUPPORTS (FRAMED FLOORS AND SLABS) ARE IN PLACE.
- CONCRETE SHALL REACH 75% OF SPECIFIED STRENGTH BEFORE CONSTRUCTION LOADS ARE APPLIED, UNLESS SPECIFICALLY APPROVED BY THE STRUCTURAL ENGINEER-OF-RECORD. CONCRETE STRENGTH SHALL BE VERIFIED WITH 7-DAY CYLINDER BREAKS.
- CONCRETE PROTECTION FROM REINFORCING BARS:  
FOUNDATION & BASEMENT WALLS: 2" CLEAR  
BOTTOM OF FOOTINGS & GRADE BEAMS: 3" CLEAR  
BEAMS, COLUMNS & STRUCTURAL SLABS: 1 1/2" CLEAR

METAL ROOF DECK NOTES:

- ALL DECKING SHALL BE PUDDLE WELDED TO THE STEEL ROOF JOISTS AND BEAMS PER THE MANUFACTURER'S RECOMMENDATIONS, AND THE STEEL JOIST INSTITUTE'S (S.J.I.) REQUIREMENTS. WELDING PATTERN TO BE  $\frac{3}{8}$ " UNLESS NOTED OTHERWISE. SIDELAPS SHALL BE MADE W/ (9) #10 TEK SCREWS U.N.O.
- METAL ROOF DECKING SHALL BE TYPE B, 1-1/2" DEPTH, 22 GAGE MINIMUM, AND SHALL BE CAPABLE OF SUPPORTING THE DESIGN LOADS SHOWN ON THE PLANS.
- METAL DECKING SHALL BE FABRICATED FROM STEEL IN CONFORMANCE WITH ASTM A611, GRADE C, D, OR E.
- PROVIDE A SHOP COAT OF PRIMER PAINT ON FRESHLY CLEANED AND PHOSPHATIZED STEEL.
- SUBMIT DESIGN CAPACITIES, DETAILS, INSTALLATION REQUIREMENTS, REQUIRED LAPS, PLANS, ETC. TO THE ARCHITECT FOR REVIEW AND APPROVAL PRIOR TO FABRICATION.
- METAL ROOF DECK SHALL BE CONTINUOUS OVER A MINIMUM OF THREE SPANS.

STRUCTURAL STEEL NOTES:

- ALL STEEL SHALL BE NEW STEEL, CONFORMING TO A.I.S.C. "SPECIFICATIONS FOR DESIGN, FABRICATION & ERECTION OF STRUCTURAL STEEL FOR BUILDINGS", LATEST EDITION.
- STEEL GRADES SHALL BE AS FOLLOWS:  
2.1. WIDE FLANGE STEEL SHALL CONFORM TO A.S.T.M. A992 WITH A MINIMUM YIELD STRESS OF 50 K.S.I.  
2.2. ALL PLATES, BARS, ANGLES, AND CHANNELS SHALL CONFORM TO A.S.T.M. A36 WITH A MINIMUM YIELD STRESS OF 36 K.S.I.  
2.3. ROUND STEEL PIPE STEEL SHALL CONFORM TO A.S.T.M. A53, GRADE B, WITH A MINIMUM YIELD STRESS OF 35 K.S.I.  
2.4. STRUCTURAL STEEL TUBING SHALL CONFORM TO A.S.T.M. A 500, GRADE B, WITH A MINIMUM YIELD STRESS OF 46 K.S.I.
- ALL CONNECTIONS SHOWN ARE "TYPE 2"/SIMPLE CONNECTIONS ANCHOR BOLTS F1554 GRADE 55 WELDABLE AS DEFINED IN THE A.I.S.C. MANUAL OF STEEL CONSTRUCTION, UNLESS NOTED OTHERWISE. NO PERMANENT CONNECTIONS SHOULD BE MADE UP UNTIL THE STRUCTURE HAS BEEN PROPERLY ALIGNED. PROVIDE TEMPORARY BRACING AS REQUIRED.
- ALL CONNECTIONS SHALL BE DESIGNED AS "TYPE 2"/SIMPLE CONNECTIONS (UNLESS NOTED OTHERWISE) AND SHALL BE CAPABLE OF SUPPORTING ONE-HALF OF THE MAXIMUM ALLOWABLE UNIFORM LOAD AS INDICATED UNDER PART 2 OF THE MANUAL OF STEEL CONSTRUCTION, LATEST EDITION.
- ALL SHOP AND FIELD WELDS SHOWN SHALL BE MADE BY APPROVED CERTIFIED WELDERS AND SHALL CONFORM TO THE A.W.S. CODE FOR BUILDINGS. ALL WELDS SHALL DEVELOP THE FULL STRENGTH OF THE MATERIAL BEING WELDED. USE E-70XX ELECTRODES. IT SHALL BE AT THE DISCRETION OF THE STEEL FABRICATOR AND ERECTOR TO PROVIDE SHOP AND FIELD WELDS UNLESS SPECIFICALLY NOTED.
- ALL STEEL SHALL HAVE ONE COAT OF RUST INHIBITIVE PRIMER PAINT. TOUCH UP ALL WELDS, SCRATCHES, OR SCRAPES AFTER ERECTION.
- WELD ALL STEEL CONTACT SURFACES (OTHER THAN BOLTED CONNECTIONS) WITH A CONTINUOUS 3/16" (MINIMUM) FILLET WELD UNLESS NOTED OTHERWISE.
- THE FABRICATOR SHALL DESIGN ALL CONNECTIONS. CONNECTION DESIGNS SHALL COMPLY WITH ALL APPLICABLE PROVISIONS OF THE A.I.S.C. "MANUAL OF STEEL CONSTRUCTION, ALLOWABLE STRESS DESIGN", LATEST EDITION, WHERE DESIGN REACTIONS ARE SHOWN ON DRAWINGS, THESE VALUES SUPERSEDE THE MINIMUM CRITERIA IN THE A.I.S.C. MANUAL.
- REPRODUCTION OF THE CONTRACT DRAWINGS FOR USE IN SHOP DRAWING SUBMITTAL IS PROHIBITED. ALL PLANS, SECTIONS, NOTES, AND DETAILS SHALL BE COORDINATED WITH THE ARCHITECTURAL PLANS AND REDRAWN. REPRODUCED CONTRACT DRAWINGS SUBMITTED WILL NOT BE REVIEWED.
- ALL STRUCTURAL STEEL CONNECTIONS & DETAILS SHALL CONFORM TO THE A.I.S.C. "CODE OF STANDARD PRACTICE FOR STEEL BUILDINGS & BRIDGES."
- UNFINISHED THREADED FASTENERS SHALL CONFORM TO A.S.T.M. A 307 GRADE A BOLTS & NUTS WITH HEXAGONAL HEADS. UNFINISHED THREADED FASTENERS SHALL BE USED ONLY FOR ANCHORAGE TO CONCRETE CONSTRUCTION.
- BOLTED CONNECTIONS OF PRIMARY MEMBERS SHALL CONFORM TO THE REQUIREMENTS OF THE A.I.S.C. "SPECIFICATIONS FOR STRUCTURAL JOINTS USING A.S.T.M. A 325 BOLTS." ALL PRIMARY CONNECTIONS SHALL USE A.S.T.M. A 325 BOLTS AND HEAVY HEX NUTS. ALL BOLTS AND NUTS SHALL BE NEW.
- ALL STEEL BEAMS SHALL BE ERECTED WITH NATURAL CAMBER UP.
- BOLTED CONNECTIONS SHALL BE BEARING TYPE WITH THREADS EXCLUDED FROM SHEAR PLANE UNLESS NOTED OTHERWISE.
- THE USE OF OVERSIZED, SHORT-SLOTTED, OR LONG SLOTTED HOLES IN LIEU OF STANDARD HOLES REQUIRES THE APPROVAL OF THE ENGINEER-OF-RECORD.
- THE USE OF THERMAL CUTTING IN THE PRODUCTION OR ALTERATION OF BOLT HOLES REQUIRES THE APPROVAL OF THE ENGINEER-OF-RECORD.
- MOMENT CONNECTIONS ARE TO BE WELDED UNLESS NOTED OTHERWISE.

STEEL JOIST NOTES:

- REPRODUCTION OF THE STRUCTURAL DRAWINGS FOR USE IN SHOP DRAWING SUBMITTALS IS PROHIBITED. ALL PLANS, SECTIONS, NOTES, AND DETAILS MUST BE COORDINATED WITH THE ARCHITECTURAL PLANS AND REDRAWN. REPRODUCED CONTRACT DRAWINGS THAT ARE SUBMITTED WILL NOT BE REVIEWED.
- ALL JOISTS AND JOIST GIRDERS SHALL BE FABRICATED AND INSTALLED IN ACCORDANCE WITH THE STEEL JOIST INSTITUTE'S (S.J.I.) REQUIREMENTS.
- PAINTE ALL STEEL WITH RED OXIDE PRIMER AND TOUCH UP ALL WELDS.
- FINAL WELDING OF CONNECTIONS OF STEEL JOISTS ARE TO BE COMPLETED AS NOTED ON THE DRAWINGS AFTER ALL DEAD LOADS HAVE BEEN APPLIED.
- PROVIDE HORIZONTAL OR DIAGONAL BRIDGING AS REQUIRED BY THE S.J.I. AND THE PLANS.
- NO CONSTRUCTION LOADS ARE TO BE PLACED UPON THE JOISTS BEFORE THE JOISTS ARE PROPERLY ANCHORED AND BRIDGING IS IN PLACE. ALL BRIDGING SHALL BE FULLY CONNECTED TO THE STRUCTURE.
- BRACE JOISTS IN THE END BAYS TO PREVENT LATERAL DISPLACEMENT DURING THE INSTALLATION OF THE BRIDGING.
- SUBMIT THREE COPIES OF THE SHOP DRAWINGS SHOWING ERECTION PLANS, JOIST DIMENSIONS AND DETAILS, YIELD STRENGTH, LOAD CARRYING CAPACITY, DECKING WELDS, CONNECTIONS AND BRIDGING DETAILS.
- TRUSSES MUST BE CAPABLE OF SUPPORTING ALL MECHANICAL EQUIPMENT LOADS. SEE ARCHITECTURAL & H.V.A.C. DRAWINGS FOR LOCATION, SIZE AND WEIGHT OF EQUIPMENT.

LIGHT GAGE METAL FRAMING NOTES:

- SEE ARCHITECTURAL PLANS FOR LOCATION AND DIMENSIONS OF ALL LIGHT GAGE METAL FRAMING.
- THE LAYOUT SHOWN IS THE RECOMMENDED SCHEME. FINAL SIZES, LOCATIONS, AND DETAILS ARE TO BE PROVIDED BY THE LIGHT GAGE METAL FABRICATOR.
- ALL METAL STUDS SHALL BE 600S162-43 OR 800S162-43 MINIMUM (REFER TO FLOOR PLAN) AND AS REQUIRED BY COMPREHENSIVE ANALYSIS BY THE METAL STUD ENGINEER OF RECORD (65W18 AS MANUFACTURED BY MARINOWARE OR APPROVED EQUAL) UNLESS NOTED OTHERWISE ON THE STRUCTURAL DRAWINGS. ALL STUDS SHALL HAVE A 1-5/8" FLANGE, TYP.
- CALCULATIONS AND DETAILED SHOP DRAWINGS MUST BE SUBMITTED TO THE ARCHITECT FOR REVIEW. IF A DIFFERENT STUD SYSTEM IS TO BE USED, THE RESPONSIBILITY FOR THE DESIGN OF ALL MEMBERS UNDER THE APPLIED LOADS SHALL BE THE SOLE RESPONSIBILITY OF THE LIGHT METAL FABRICATOR. DRAWINGS SHALL INCLUDE ALL DESIGN COMPUTATIONS FOR THE FRAMING MEMBERS AND CONNECTIONS AND MUST BE STAMPED BY A REGISTERED PROFESSIONAL ENGINEER.
- ALL 54MIL (16 GAGE) AND LARGER LIGHTWEIGHT STEEL FRAMING MEMBERS SHALL SATISFY THE REQUIREMENTS OF ASTM A448 GRADE D, WITH A MINIMUM YIELD STRENGTH OF 50,000 P.S.I. ALL 43 MIL (18 GAGE) AND SMALLER LIGHTWEIGHT STEEL FRAMING MEMBERS SHALL BE MANUFACTURED FROM STEEL FABRICATED IN ACCORDANCE WITH ASTM A446, GRADE B, WITH A MINIMUM YIELD STRENGTH OF 33,000 P.S.I.
- ALL MATERIALS SHALL BE HOT-DIPPED GALVANIZED STEEL FOR GREATER CORROSION RESISTANCE, CONFORMING TO FEDERAL SPECIFICATION QQS-775, TYPE 1, CLASS D AND ASTM A525.
- ALL FIELD ABRASIONS TO MEMBERS FROM WELDING SHALL BE TOUCHED UP WITH A ZINC RICH PAINT.
- CONNECTIONS OF LIGHT STEEL FRAMING MEMBERS SHALL BE BY SELF DRILLING SCREWS OR BY WELDING IN STRICT ACCORDANCE WITH THE MANUFACTURERS' REQUIREMENTS. WIRE TIEING OF FRAMING MEMBERS WILL NOT BE PERMITTED.
- TOP AND BOTTOM TRACKS SHALL BE SECURELY ANCHORED TO CEILING OR ROOF STRUCTURE OVERHEAD AND TO FLOOR STRUCTURE BELOW. SILL OR BASE TRACK SHALL BE ANCHORED WITH ANCHOR BOLTS, CONCRETE NAILS, POWDER ACTUATED FASTENERS, SCREWS, EXPANSION BOLTS OR BY WELDING. MAXIMUM SPACING FOR ANCHORS SHALL BE 24" ON CENTER AND NO NEARER THAN 4" FROM EITHER END OF TRACK. CONNECTION OF STUDS TO TRACKS AT THE UNDERSIDE OF THE STEEL BEAMS OR OTHER ROOF FRAMING MEMBERS SHALL HAVE A SLIP OR SLOTTED CONNECTION AS REQUIRED TO ALLOW FOR VERTICAL DEFLECTION OF THE ROOF FRAMING MEMBER.
- STUD BRIDGING REQUIREMENTS:  
UP TO 10'-0" IN HEIGHT: TWO ROWS OF BRIDGING, EQUALLY SPACED  
OVER 10'-0" IN HEIGHT: BRIDGING ROWS SPACED 3'-4" ON CENTER MAXIMUM.
- FLOOR JOIST BRIDGING REQUIREMENTS:  
UP TO 16'-0": ONE ROW AT MID-SPAN  
FOR SPANS 16'-0" TO 24'-0": TWO ROWS AND ONE THIRD POINTS  
FOR SPANS 24'-0" TO 32'-0": THREE ROWS AND ONE QUARTER POINTS  
11.1. SOLID BLOCKING REQUIRED AT ALL OPENINGS AND FOR 2 BAYS AT END OF JOIST SYSTEM

CONCRETE OR BRICK MASONRY (C.M.U.) NOTES:

- CONCRETE MASONRY UNITS SHALL BE MANUFACTURED IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE SPECIFICATIONS 530.1-05 OR LATEST EDITION AND SHALL HAVE A MINIMUM f'm = 2,000 P.S.I.
- MORTAR FOR USE WITH CONCRETE MASONRY UNITS SHALL BE IN CONFORMANCE WITH A.S.T.M. C270 AND SHALL BE TYPE S WITH AN AVERAGE COMPRESSIVE STRENGTH OF 1,800 P.S.I. AT 28 DAYS.
- CONCRETE MASONRY UNITS SHALL NOT BE WETTED PRIOR TO PLACEMENT.
- ALL C.M.U. WALLS SHALL BE REINFORCED IN ACCORDANCE WITH THE MINIMUM REINFORCING PROVISIONS OF THE AMERICAN CONCRETE ASSOCIATION (A.C.I.) PUBLICATION 530 OR LATEST EDITION. THE MINIMUM VERTICAL REINFORCEMENT SHALL BE:  
8" BLOCK  
#5 BARS, MAX. SPACING = 32" O.C.  
NOTE: FOR BAR SIZE USED IN FOLLOWING NOTES, SEE ABOVE TABLE.
- THE MINIMUM HORIZONTAL SHALL BE (2) BARS IN 8" DEEP BOND AT ROOF LINE AND (1) BARS IN 8" DEEP BEAMS AT FLOOR SLAB LINE. CMU WITH KNOCKOUTS MAY BE USED FOR BOND BEAMS
- PROVIDE HORIZONTAL REINFORCING EVERY SECOND (2ND) COURSE. HORIZONTAL REINFORCEMENT SHALL BE 9ga (W1.7) WIRE STANDARD DUR-O-WAL, CONTINUOUS TRUSS TYPE REINFORCING WITH DEFORMED SIDE WIRES.
- CELLS TO RECEIVE VERTICAL REINFORCEMENT SHALL HAVE GROUT PLACED TO THE FULL HEIGHT. CONCRETE STRENGTH TO BE 2,000 P.S.I. AT 28 DAYS.
- DOWELS SHALL BE PROVIDED IN THE FOUNDATION WALLS AND SHALL BE INSTALLED TO MATCH THE VERTICAL MASONRY WALL REINFORCEMENT SIZE AND LOCATION, EXCEPT AS OTHERWISE NOTED.
- SEE STRUCTURAL AND ARCHITECTURAL DRAWINGS FOR C.M.U. WALL LOCATIONS AND DIMENSIONS.
- ALL OPENINGS IN C.M.U. WALLS SHALL HAVE 1 ADDITIONAL BAR ON EACH SIDE OF THE OPENING EXTENDING 24" BEYOND CORNERS OF THE OPENING. VERTICAL BARS SHALL BE FULL HEIGHT BARS. THESE CELLS SHALL BE GROUTED SOLID ON EACH SIDE OF THE OPENING.
- PROVIDE A MINIMUM OF 1 VERTICAL REINFORCING BAR FULLY GROUTED AT END CELL OF ALL DISCONTINUOUS WALLS AND UNDER ALL LINTEL ANGLES AND COLUMN BEARING LOCATIONS UNLESS NOTED OR SHOWN OTHERWISE.
- SEE ARCHITECTURAL DRAWINGS FOR LOCATION OF CONTROL JOINTS. CONTROL JOINTS SHALL BE SPACED NO MORE THAN 24'-0" O.C.
- UNLESS OTHERWISE NOTED OR SHOWN ON PLANS AND SECTIONS, PROVIDE LINTEL ANGLES, ONE FOR EACH FOUR INCHES OF MASONRY WIDTH AS FOLLOWS:  
FOR OPENINGS UP TO 5'-0" L4x3-1/2x5/16  
FOR OPENINGS FROM 5'-0" TO 7'-0" L5x3-1/2x5/16  
FOR OPENINGS FROM 7'-0" TO 9'-0" L6x3-1/2x5/16
- LINTEL ANGLES IN PAIRS SHALL BE PLUG WELDED AT 18" ON CENTER EXCEPT AS OTHERWISE NOTED.
- STEEL LINTEL ANGLES, WHERE EXPOSED TO WEATHER, SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153.
- ALL LINTELS SHALL BE A MINIMUM OF 6" LONGER THAN MASONRY OPENING DIMENSIONS AT EACH END IN ORDER TO PROVIDE PROPER BEARING.
- ALL JOINT REINFORCEMENT (TIES, ANCHORS, AND JOINT REINFORCING) SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A153 WITH A MINIMUM COATING OF 1.50 OUNCES PER SQUARE FOOT.

CLS# 211

BK# 3857

2	REVISED	4/20/23
1	REVISED	4/3/23
-	ISSUED FOR BID	3/22/23
No.	Description	Date

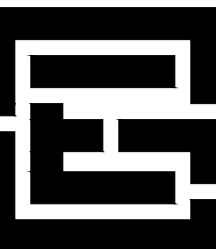
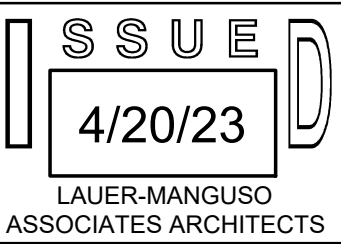


- REVISIONS

BURGER KING  
SIZZLE PROTOTYPE  
MARION, NORTH CAROLINA

CARROLS, LLC  
SYRACUSE, NEW YORK

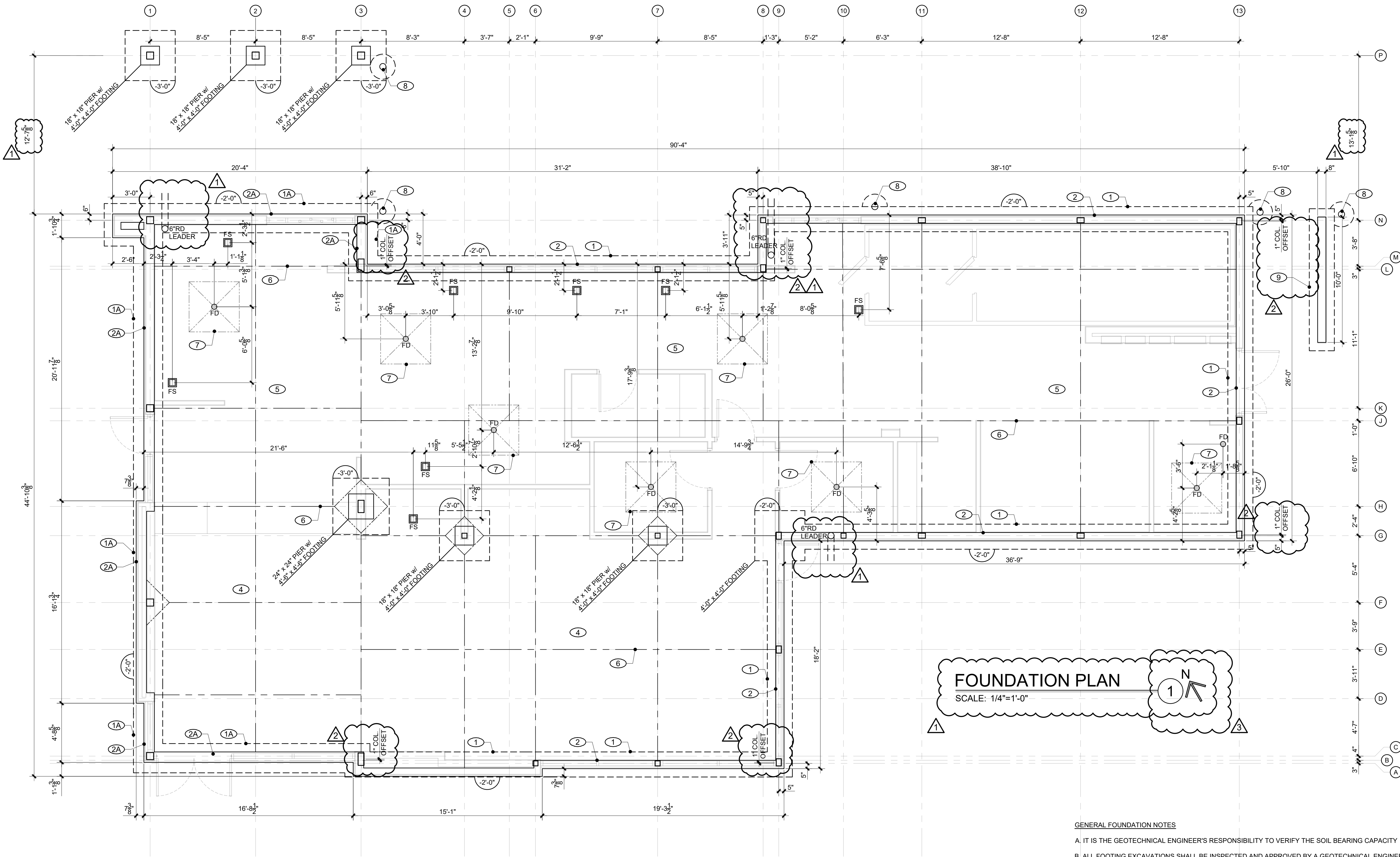
STRUCTURAL  
NOTES



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Drawn By:  
Checked By:  
Job Number: 22083A

Drawing No.  
S-0.0



- KEYED PLAN NOTES** (XX)
- 2'-0" WIDE x 1'-4" DEEP CONTINUOUS CONCRETE FOOTING AT 6" STUD WALLS; REFER TO DETAILS ON SHEET S-3.0
  - 2'-4" WIDE x 1'-4" DEEP CONTINUOUS CONCRETE FOOTING AT 8" STUDS WALLS; REFER TO DETAILS ON SHEET S-3.0
  - 8" CONCRETE CURB AT 6" STUD WALLS; REFER TO DETAILS ON SHEET S-3.0
  - 10" CONCRETE CURB AT 8" STUD WALLS; REFER TO DETAILS ON SHEET S-3.0
  - NOT USED
  - DINING ROOM - 6" CONCRETE SLAB WITH 6x6-W1.4xW1.4 W.W.F. AT MID DEPTH OVER 6 MIL VAPOR BARRIER OVER 4" GRANULAR FILL
  - KITCHEN - 4" CONCRETE SLAB WITH 6x6-W1.4xW1.4 W.W.F. AT MID DEPTH OVER 6 MIL VAPOR BARRIER OVER 4" GRANULAR FILL
  - CONTROL/CONSTRUCTION JOINTS; REFER TO FOUNDATION DETAILS
  - 4'x4' AREA SLOPED TO DRAIN @ 2%, TYP.
  - 6" Ø x 8'-0" STEEL BOLLARD, FILL WITH CONCRETE; TOP OF BOLLARD AT 5'-0" ABOVE SURFACE OF PAVING WITH 24" Ø x 3'-0" DEEP CONCRETE FOOTING
  - REFER TO SECTION DRAWINGS FOR FOOTING, FOUNDATION AND REINFORCING INFORMATION AT SCREEN WALL

**GENERAL FOUNDATION NOTES**

- A. IT IS THE GEOTECHNICAL ENGINEER'S RESPONSIBILITY TO VERIFY THE SOIL BEARING CAPACITY
- B. ALL FOOTING EXCAVATIONS SHALL BE INSPECTED AND APPROVED BY A GEOTECHNICAL ENGINEER REPRESENTING THE OWNER PRIOR TO PLACING CONCRETE; EXCAVATIONS SHALL BE FREE OF WATER AT ALL TIMES
- C. NO ENGINEERED FILL SHALL BE PLACED UNTIL EXCAVATION BOTTOMS HAVE BEEN INSPECTED AND APPROVED BY A SOILS ENGINEER
- D. BACKFILLING:  
2. BOTH SIDES OF FOUNDATION WALLS SHALL BE BACKFILLED SIMULTANEOUSLY SO AS TO PREVENT OVERTURNING OR LATERAL MOVEMENT OF WALLS  
1. NO FILL OR BACKFILL SHALL BE SETTLED BY THE USE OF WATER
- E. SEE SHEET S-0.0 FOR GENERAL STRUCTURAL NOTES
- F. SEE ELECTRICAL SHEETS FOR LOCATIONS OF UNDERGROUND CONDUIT
- G. SEE PLUMBING PLAN FOR LOCATIONS OF UNDERGROUND PIPING
- H. ALL CONTINUOUS FOOTINGS SHALL BE CENTERED UNDER FOUNDATION WALLS UNLESS NOTED OTHERWISE
- I. SOILS CONTRACTOR SHALL REFER AND CONFORM TO ALL RECOMMENDATIONS AND FINDINGS AS SET FORTH IN THE SOILS GEOLOGICAL REPORT; THE OWNER AND/OR ARCHITECT ACCEPTS NO RESPONSIBILITY FOR THE ACCURACY OF THE FINDINGS OR FOR THE FINAL RECOMMENDATIONS, GRADINGS, TRENCHING, ETC. - CONTACT OWNER FOR INSTRUCTIONS PRIOR TO THE CONTINUATION OF WORK SHOULD ANY UNUSUAL CONDITIONS BECOME APPARENT DURING GRADING OR FOUNDATION CONSTRUCTION; EXISTING ELEVATIONS AND LOCATIONS TO BE JOINED SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION; IF THEY DIFFER FROM THOSE SHOWN ON THE DRAWINGS, THE CONTRACTOR SHALL NOTIFY THE OWNER SO THAT MODIFICATIONS CAN BE MADE BEFORE PROCEEDING WITH THE WORK

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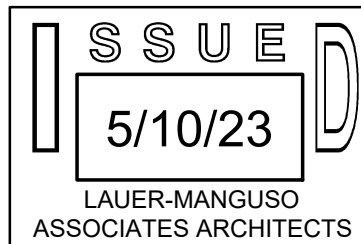
3	REVISED	5/10/23
-	ISSUED FOR HEALTH DEPT. REVIEW	4/25/23
2	REVISED	4/20/23
1	REVISED	4/3/23
-	ISSUED FOR BID	3/22/23

No.	Description	Date
	- REVISIONS	

**BURGER KING  
SIZZLE PROTOTYPE  
MARION, NORTH CAROLINA**

CARROLS, LLC  
SYRACUSE, NEW YORK

**FOUNDATION  
PLAN**

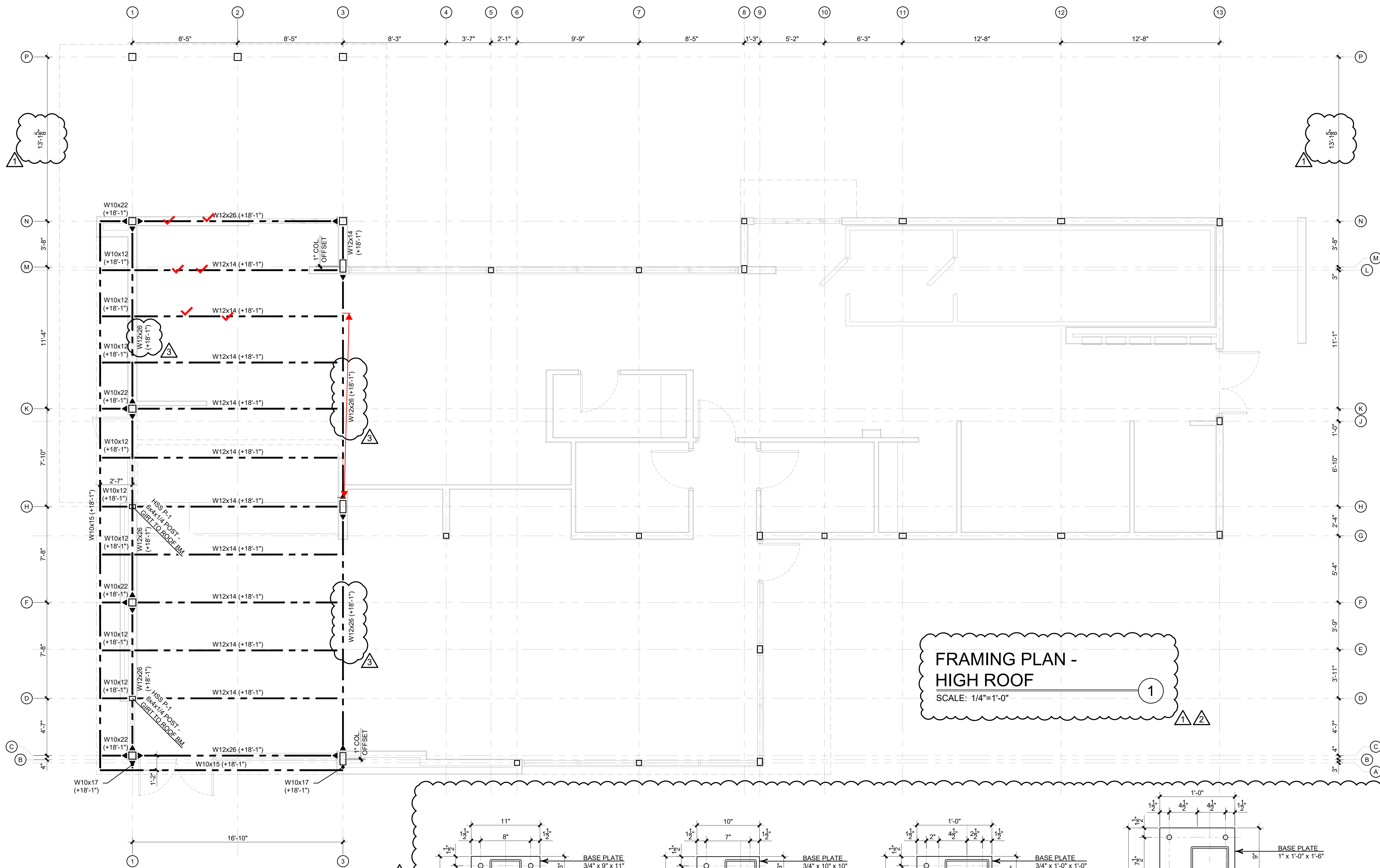


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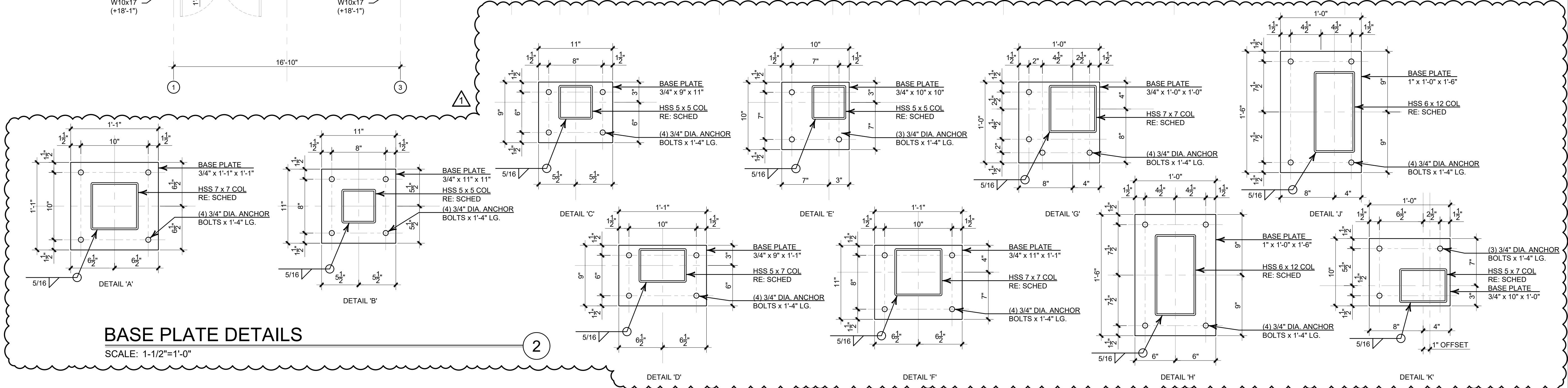
Date:  
DrawnBy:  
CheckedBy:  
Job Number: 22083A

Drawing No.  
**S-1.0**





FRAMING PLAN -  
HIGH ROOF  
SCALE: 1/4"=1'-0"



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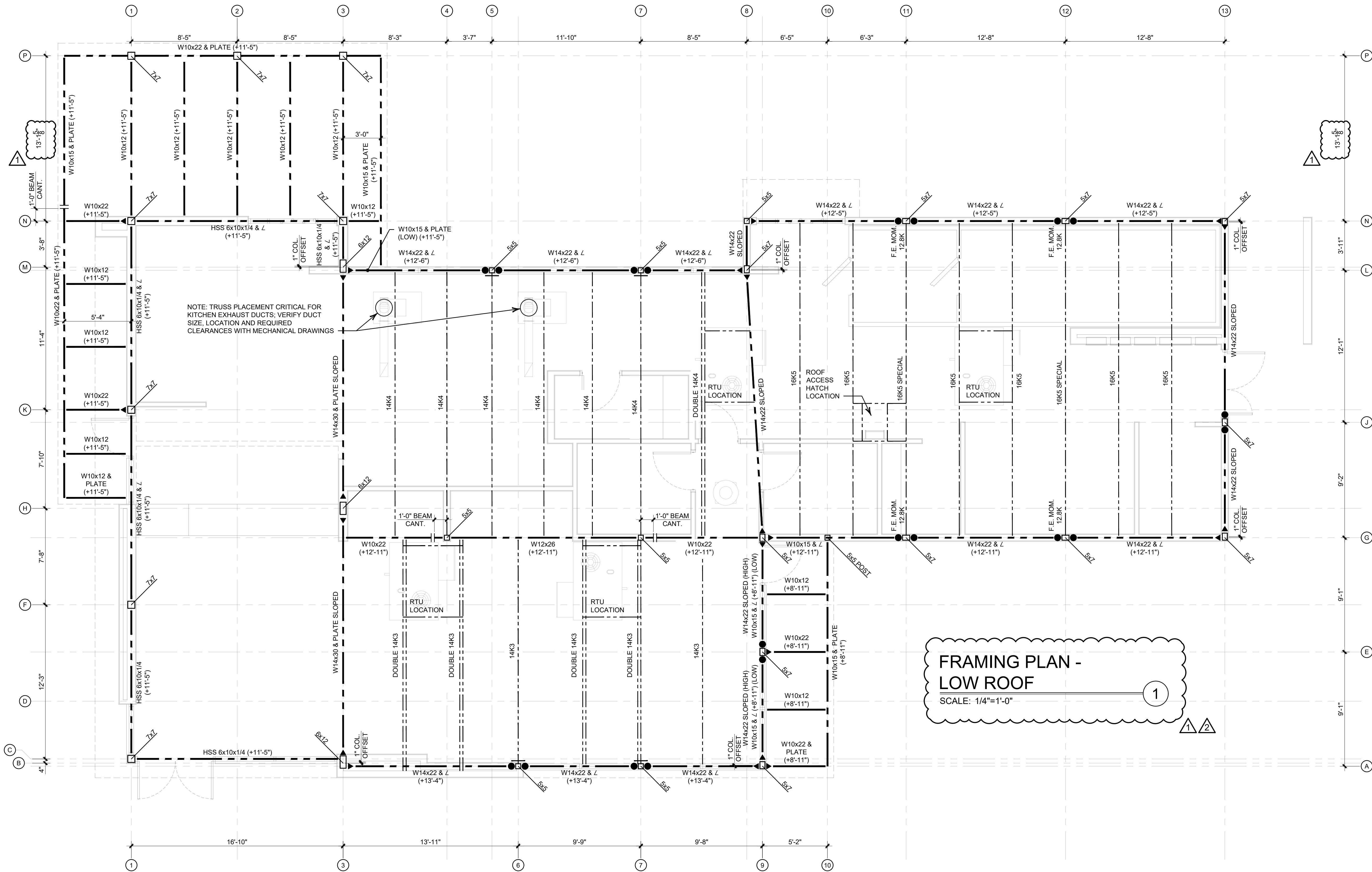
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**FRAMING PLAN  
HIGH ROOF**

**ISSUED**  
5/10/23  
LAUER-MANGUSO  
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COLUMN SCHEDULE

HIGH ROOF																					
LOW ROOF																					
COLUMN SIZE	HSS 5 x 5 x 1/4	HSS 5 x 5 x 1/4	HSS 5 x 7 x 3/8 (OFFSET)	HSS 6 x 12 x 1/4 (OFFSET)	HSS 7 x 7 x 5/16	HSS 6 x 4 x 1/4	HSS 5 x 7 x 1/4	HSS 7 x 7 x 5/16	HSS 5 x 5 x 1/4	HSS 5 x 5 x 1/4	HSS 5 x 7 x 1/4	HSS 5 x 7 x 1/4	HSS 5 x 7 x 3/8 (OFFSET)	HSS 6 x 4 x 1/4	HSS 5 x 7 x 3/8	HSS 5 x 5 x 1/4	HSS 5 x 5 x 1/4	HSS 5 x 7 x 3/8 (OFFSET)	HSS 6 x 12 x 5/16	HSS 7 x 7 x 5/16	HSS 7 x 7 x 5/16
0'-0" T.O. SLAB																					
BASE DETAIL	C	C	K	J	G	I	D	F	B	B	D	C	C	C	K	I	H	D	F	C	C
COLUMN MARK	A-6	A-7	A-9	B-3	C-1	D-1	E-9	F-1	G-4	G-7	G-9	G-10	G-11	G-12	G-13	H-1	H-3	J-13	K-1	L-5	L-7

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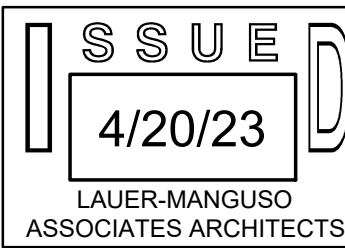
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**FRAMING PLAN  
LOW ROOF**



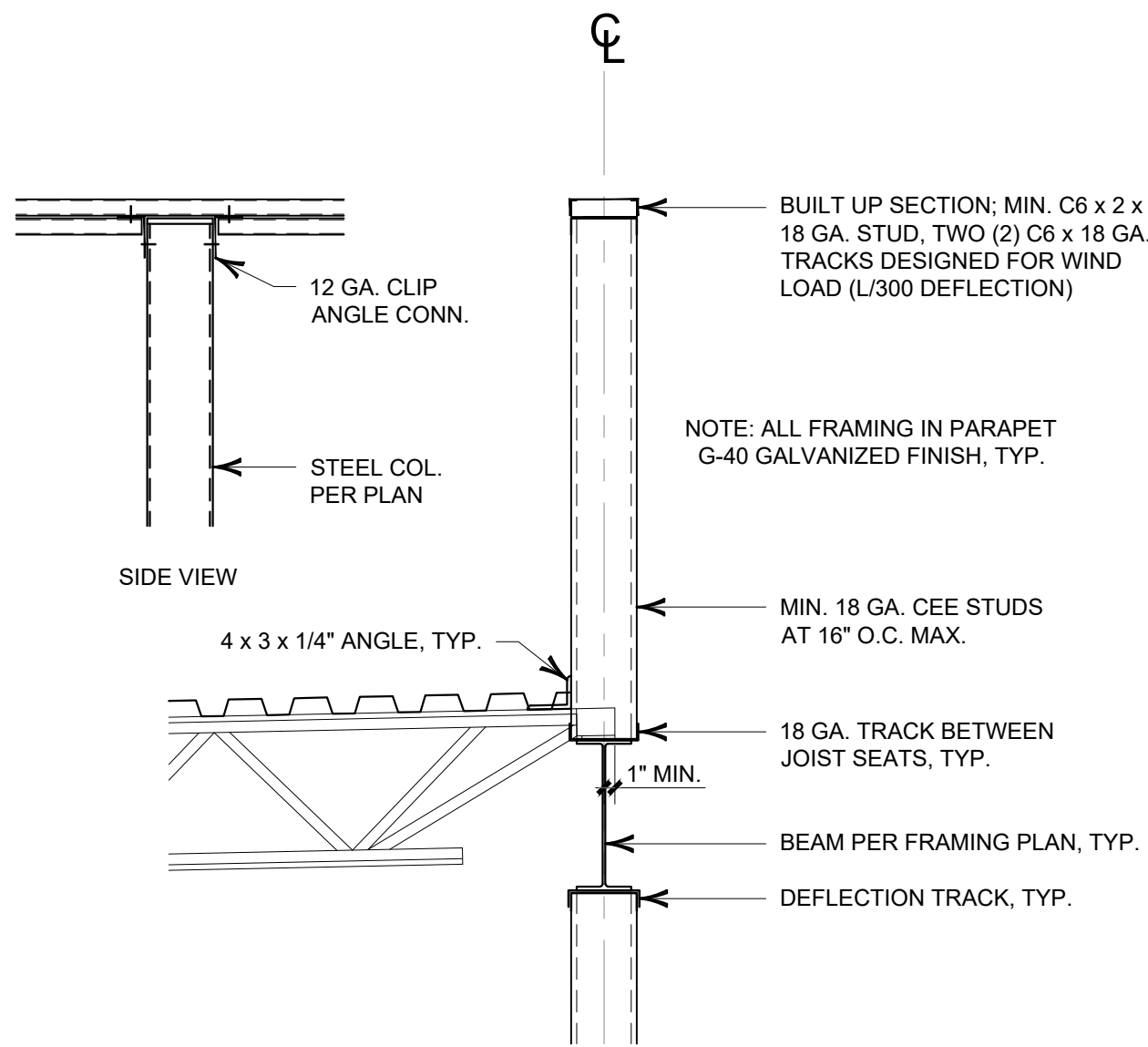
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**S-2.1**

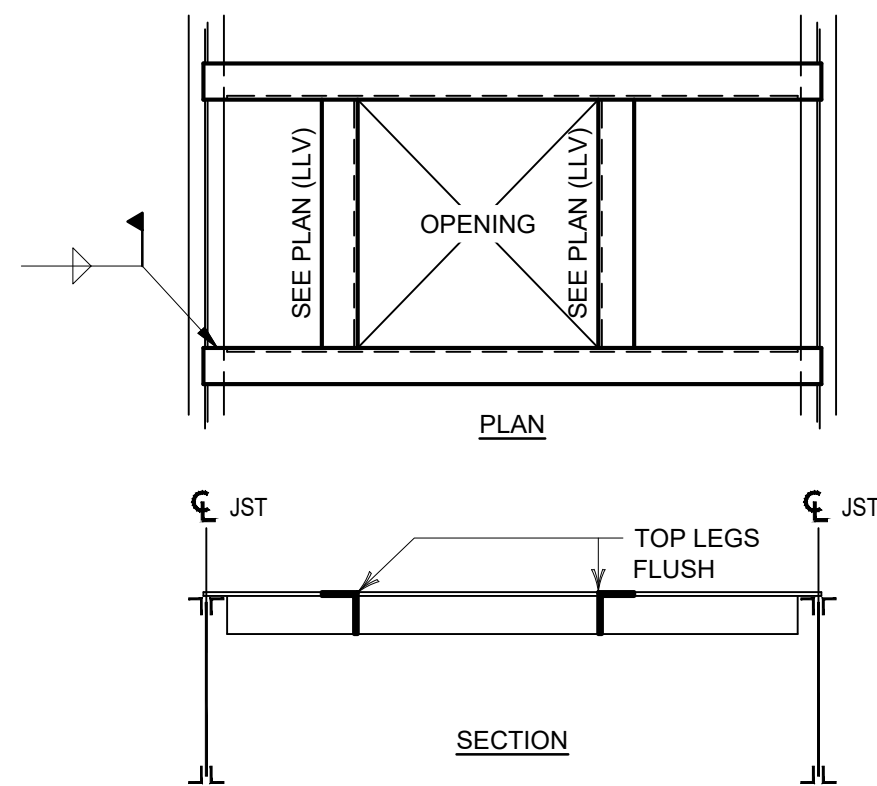






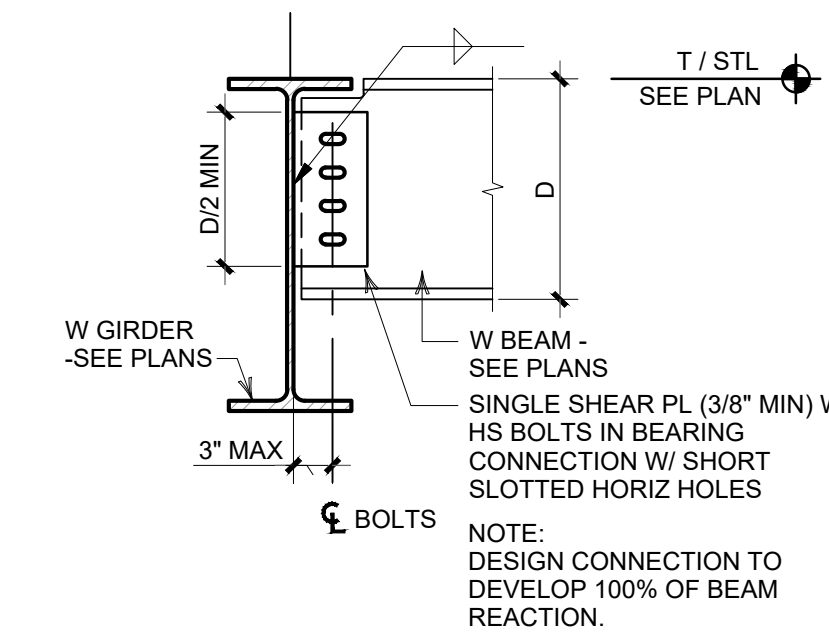
**TYP PARAPET FRAMING**

SCALE: NONE



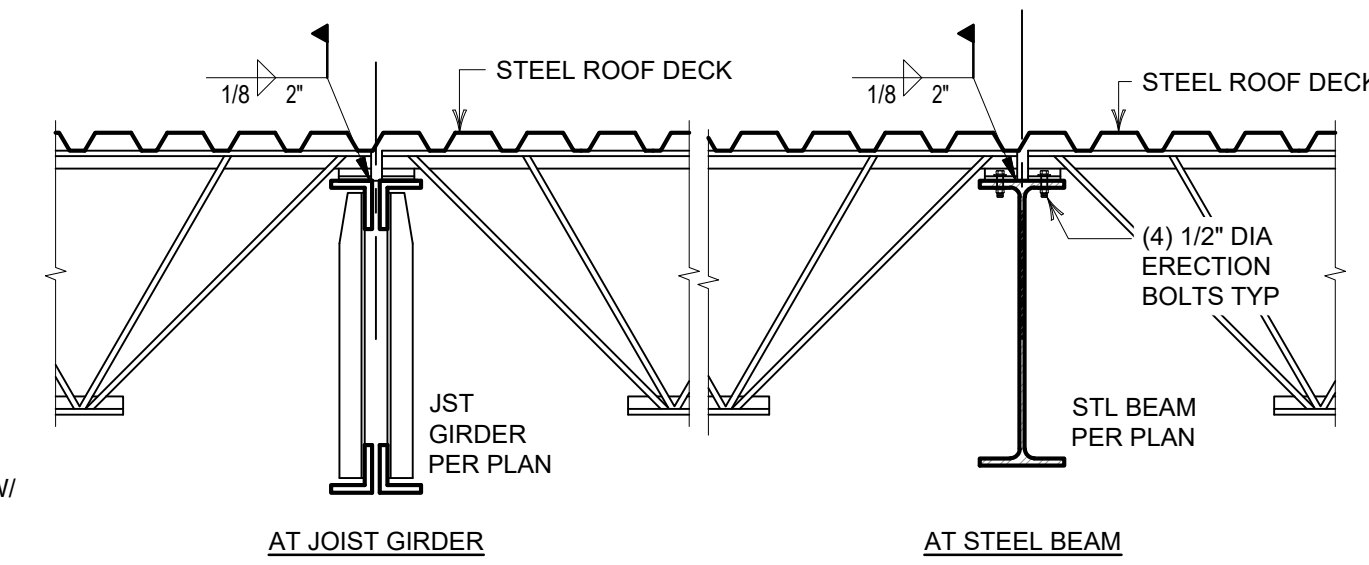
**TYP ROOF OPENING FRAMING**

SCALE: NONE



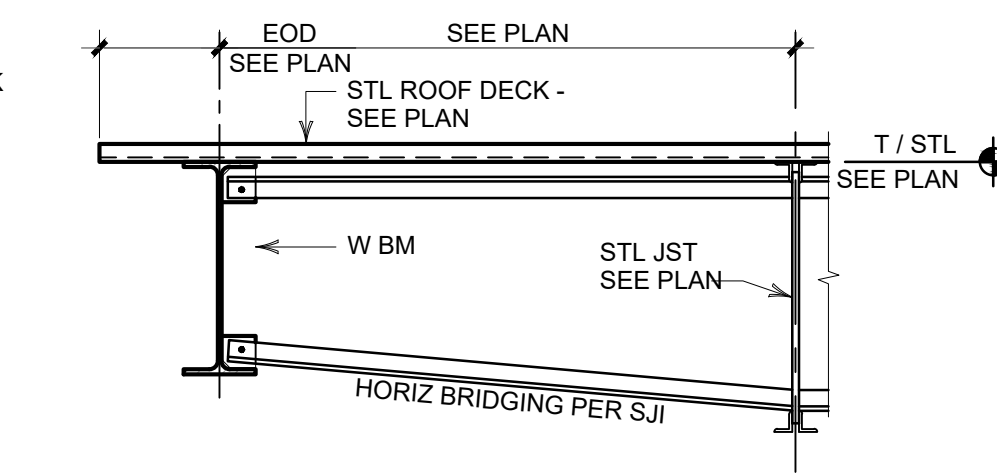
**TYP FRAMED BEAM CONNECTION**

SCALE: NONE



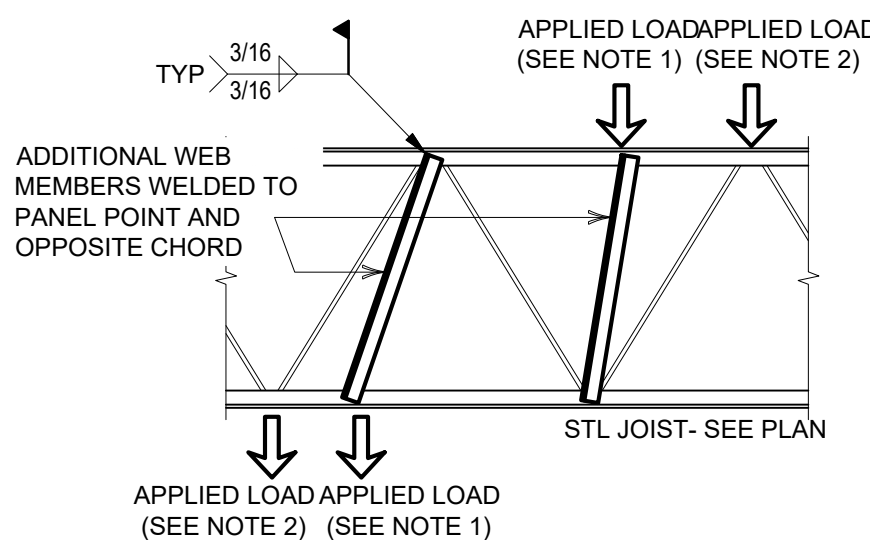
**TYPICAL JOIST BEARING**

SCALE: NONE



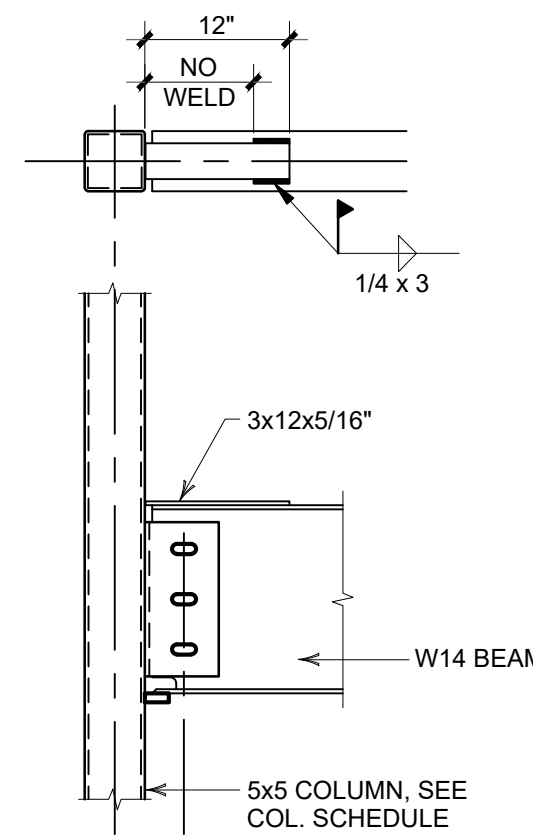
**TYPICAL JOIST BRIDGING DETAILS**

SCALE: NONE



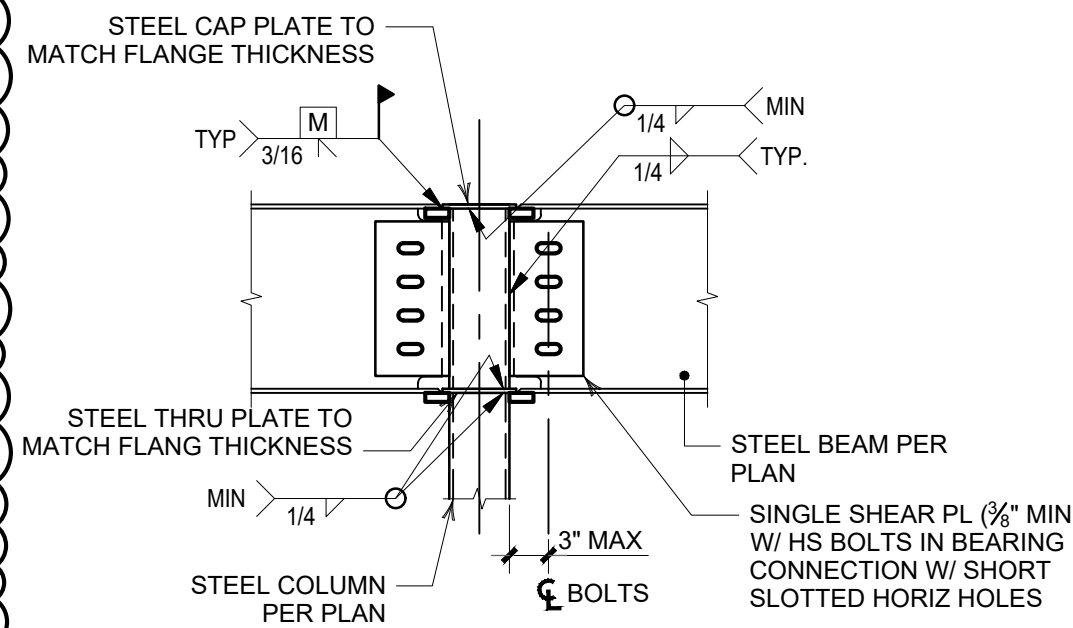
**TYP JOIST REINFORCEMENT AT CONCENTRATED LOADS**

SCALE: NONE



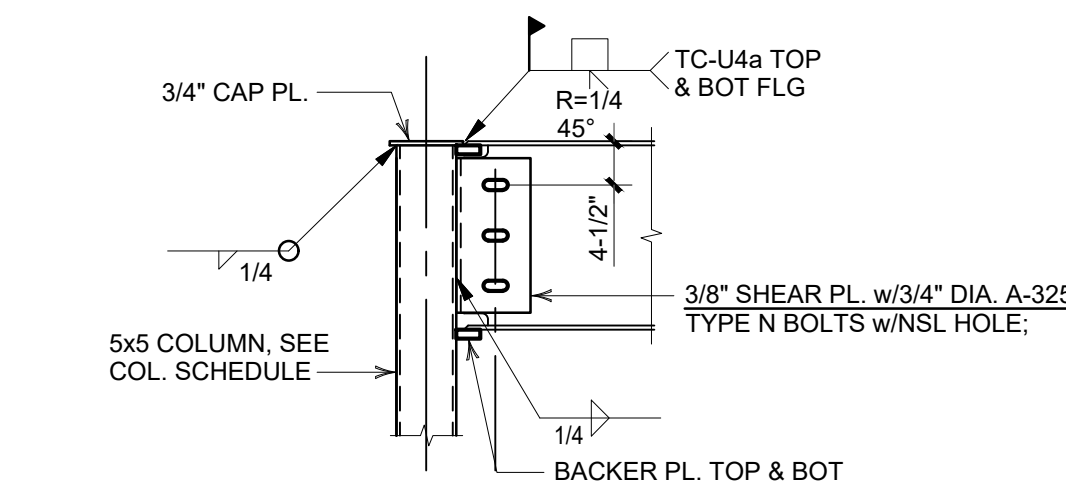
**STRUCTURAL DETAIL**

SCALE: 3/4\"/>



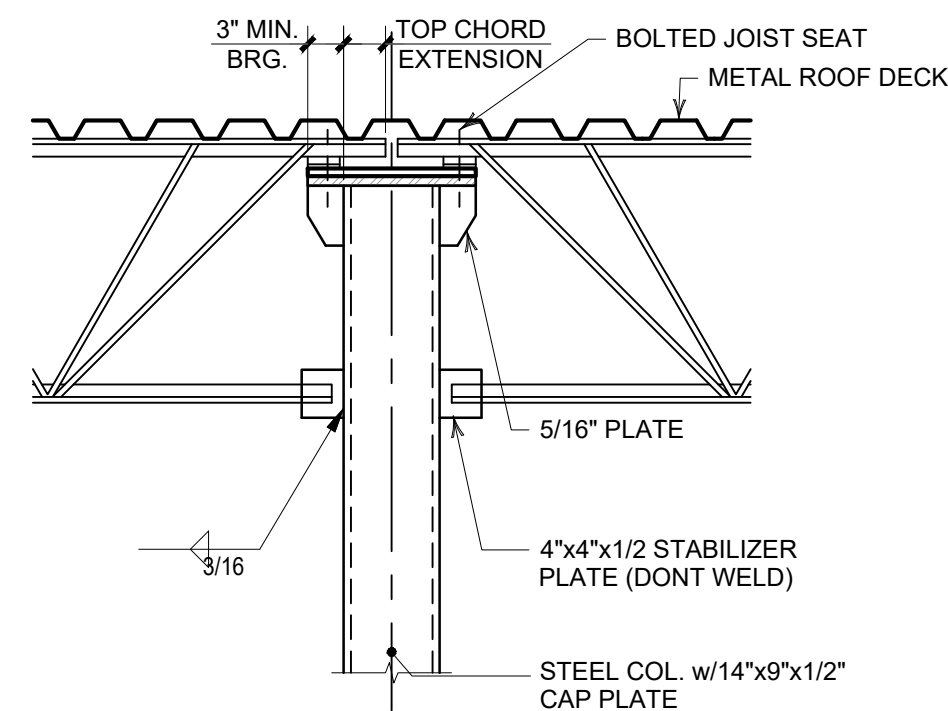
**TYPICAL STEEL BEAM TO STEEL COLUMN MOMENT CONNECTION**

SCALE: 3/4\"/>



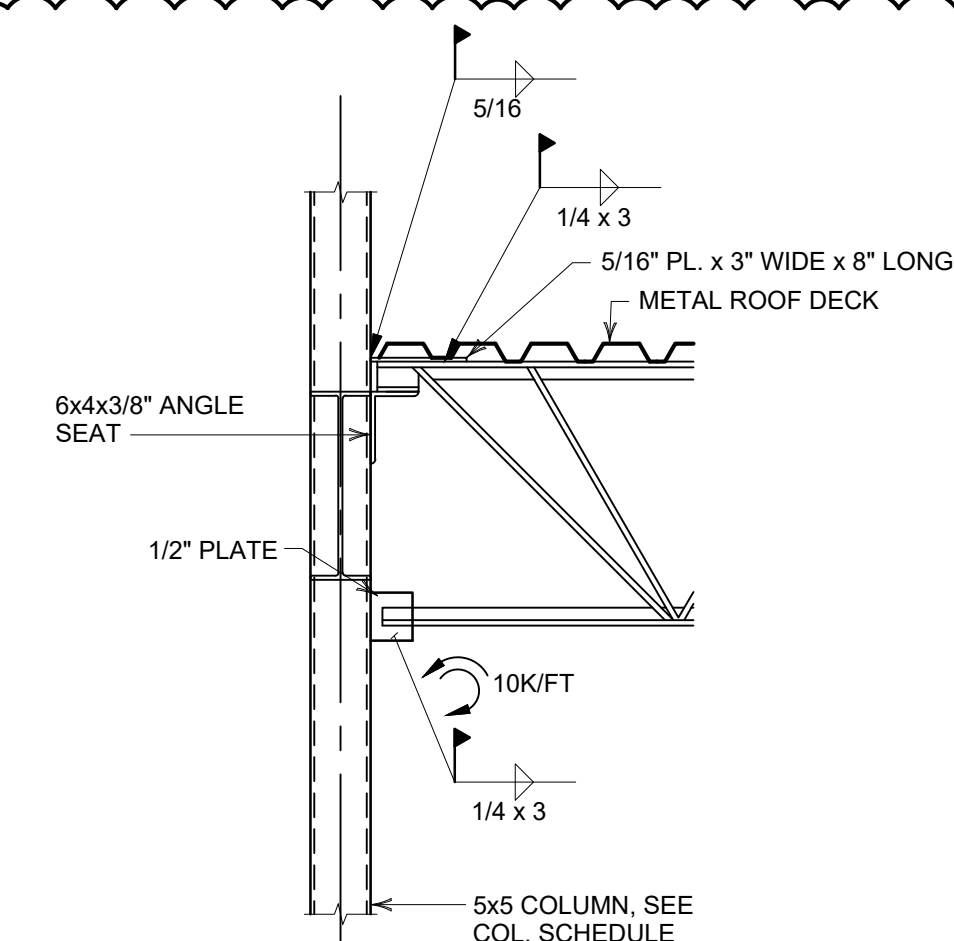
**TYPICAL MOMENT CONNECTION DETAIL AT ROOF (WF BEAM TO HSS COL.)**

SCALE: 3/4\"/>



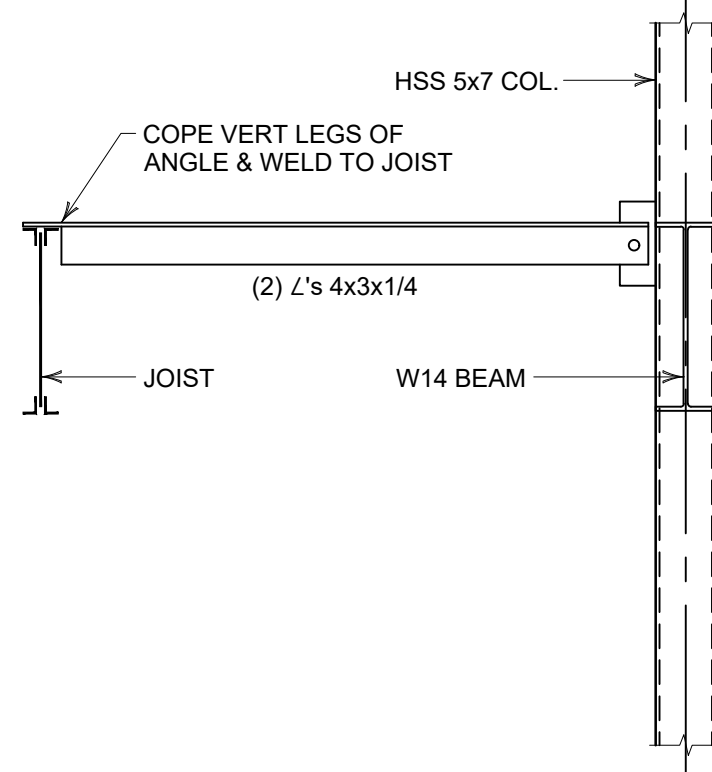
**JOIST FRAME TO COLUMN**

SCALE: NONE



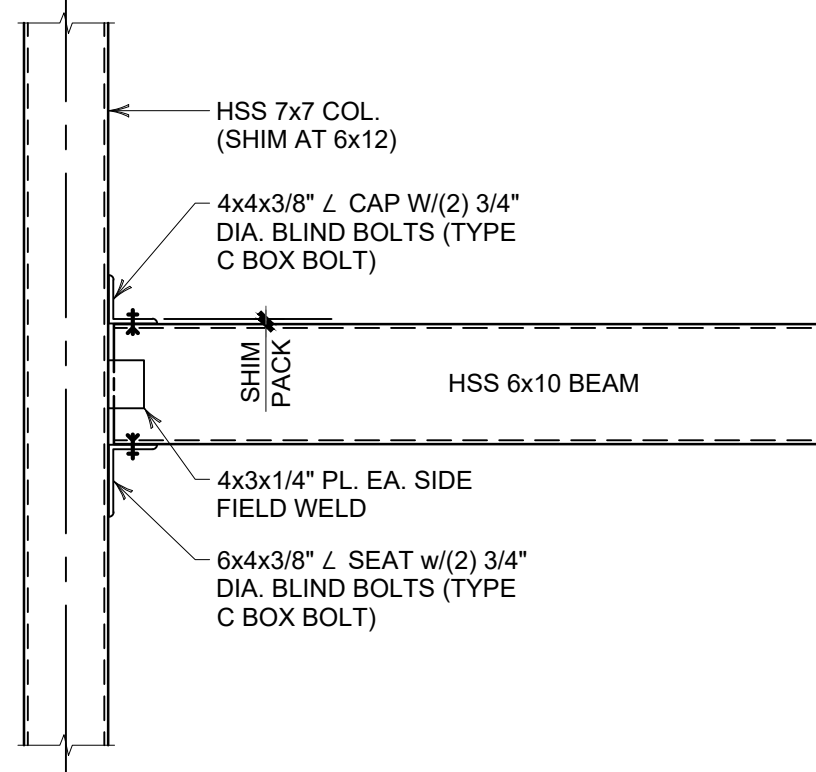
**STRUCTURAL DETAIL**

SCALE: 3/4\"/>



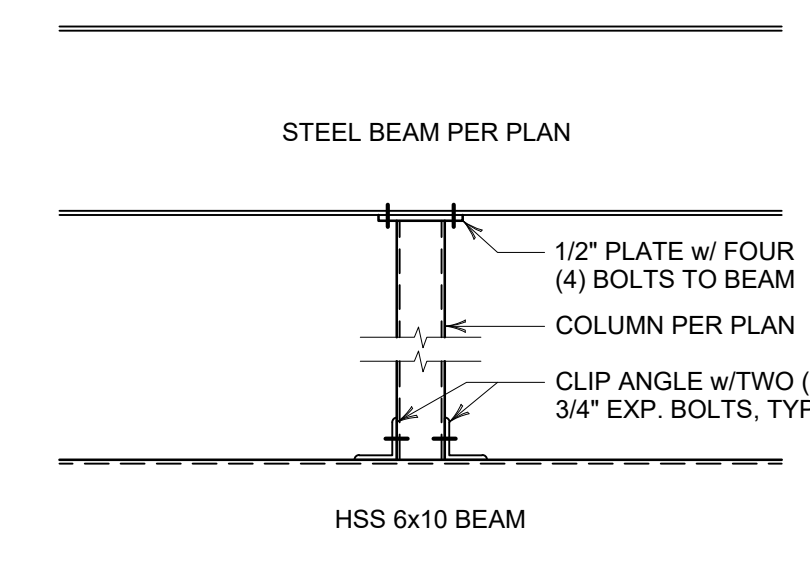
**STRUCTURAL DETAIL**

SCALE: 3/4\"/>



**TYPICAL HSS 6x10 BEAM TO COLUMN CONNECTION**

SCALE: 3/4\"/>



**TYPICAL CONNECTIONS AT COLUMNS D-1 AND H-1**

SCALE: 3/4\"/>

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**FRAMING  
DETAILS**



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