

DESIGN CRITERIA:

LOCATION: HARNETT COUNTY, NORTH CAROLINA
BUILDING CODE: 2018 NORTH CAROLINA STATE BUILDING CODE (2015 IBC WITH NORTH CAROLINA AMENDMENTS)
RISK CATEGORY: II
BASIC LATERAL FORCE RESISTING SYSTEM: CANTILEVERED COLUMN SYSTEM
DESIGN LIVE LOADS: ROOF 20PSF
ROOF SNOW LOAD: P_s=15PSF, C_s=0.9, I_s=1.1, C_w=1.0
WIND LOAD: V = 116 MPH (3 SECOND GUST) EXPOSURE C

WOOD TRUSS NOTES

- TYPICAL TRUSS LOADS ARE AS FOLLOWS U.O.N.
 A. TOP CHORD DEAD LOAD = 10 PSF
 B. BOT. CHORD DEAD LOAD = 10 PSF
 C. TOP CHORD LIVE LOAD = 20 PSF
 D. WIND LOADINGS AS PRESCRIBED IN THE NCSCC
 E. SNOW LOADINGS AS PRESCRIBED IN THE NCSCC (SHALL INCLUDE UNBALANCED CASES)
- THE DESIGN OF EACH ROOF TRUSS SHALL BE PERFORMED BY A NORTH CAROLINA PROFESSIONAL ENGINEER AND SUBMITTED TO THE ARCHITECT FOR REVIEW PRIOR TO FABRICATION.
- THE BRACING INDICATED UPON THE DRAWINGS IS FOR PERMANENT BRACING OF ROOF SYSTEM. ADDITIONAL BRACING AS REQUIRED FOR INDIVIDUAL MEMBER AND/OR COMPONENTS, PERMANENT OR TEMPORARY, SHALL BE PROVIDED BY THE CONTRACTOR. ALL TRUSSES SHALL BE BRACED DURING ERECTION IN ACCORDANCE WITH THE "COMMENTARY AND RECOMMENDATIONS" BWT-76 OF THE TRUSS PLATE INSTITUTE INC.
- ALL BRACING MEMBERS SHALL BE NAILED AT EACH TRUSS MEMBER WITH NO LESS THAN (2) 16d NAILS.
- CONTRACTOR SHALL VERIFY AND COORDINATE ALL DIMENSIONS AND SHALL ADEQUATELY BRACE, BLOCK AND FIRESTOP ALL TRUSS CONSTRUCTION.
- ALL PROVISIONS OF THE N.C. STATE BLDG. CODE, THE NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION, AND STANDARDS AND RECOMMENDATIONS OF THE TRUSS PLATE INSTITUTE SHALL BE ADHERED TO.
- TRUSS MANUFACTURER MAY FABRICATE TRUSS IN SEGMENTS TO FACILITATE TRANSPORTATION.

WOOD FRAMING

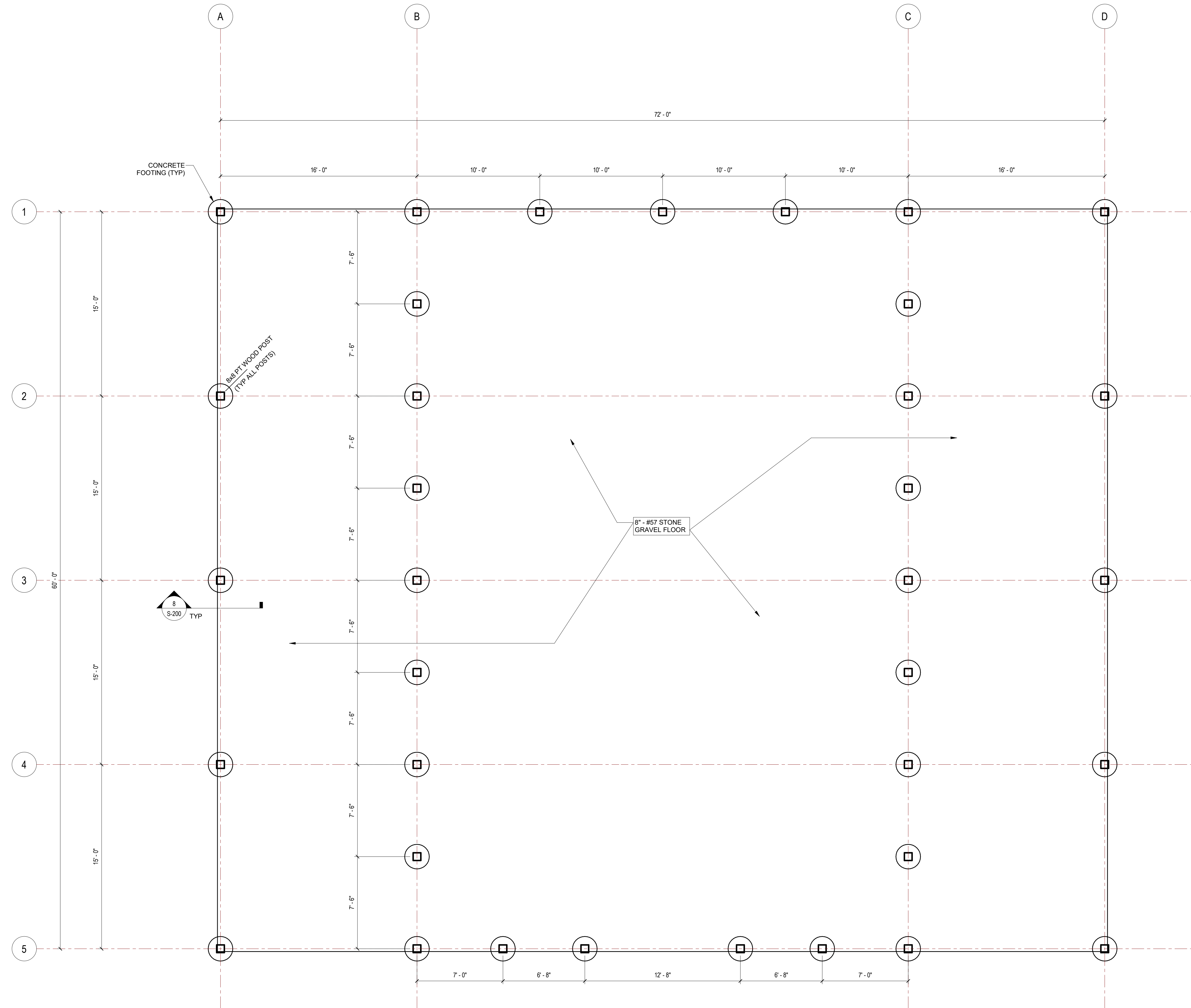
- MATERIALS:**
 A. DIMENSIONAL LUMBER: #2 SYP 19% M.C. PRESSURE-PRESERVATIVE TREATED.
 B. STEEL CONNECTORS: G30 GALVANIZED FOR EXPOSED CONNECTIONS, ZMAX FOR SIMPSON CONNECTORS OR APPROVED EQUAL.
 C. LVL'S SHALL BE VERSA-LAM 3100 2.0 3100 BY BOISE CASCADE.
- SOLID SAWN WOOD FRAMING SHALL CONFORM TO THE SPECIFICATIONS AS LISTED IN THE NATIONAL FOREST PRODUCTS ASSOCIATION "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION" LATEST EDITION (NDS). PROVIDE DRESSED LUMBER, S4S, UNLESS OTHERWISE INDICATED. WITH A MAXIMUM MOISTURE CONTENT FOR DIMENSION LUMBER OF 15 PERCENT FOR 2-INCH NOMINAL THICKNESS OR LESS, 19 PERCENT FOR MORE THAN 2-INCH NOMINAL THICKNESS. TIMBER FRAMING LARGER THAN 5x5 NOMINAL SHALL HAVE A MAXIMUM MOISTURE CONTENT OF 20 PERCENT. THE FRAMING SHALL BE OF THE SPECIES AND GRADE AS LISTED BELOW UNLESS OTHERWISE NOTED NO THE FRAMING PLANS:
 A. JOIST, RAFTERS, AND WOOD GIRDERS AND BEAMS: SYP No. 2
 B. TIMBER FRAMING (LARGER THAN 5x5 NOMINAL): SYP No. 2
- LUMBER IN CONTACT WITH CONCRETE, MASONRY, EARTH OR FRAMING MEMBERS THAT ARE LESS THAN 18 INCHES ABOVE THE GROUND IN CRAWL SPACES OR UNEXCAVATED AREAS, AND ALL OTHER EXPOSED TIMBER SHALL BE PRESSURE TREATED IN ACCORDANCE WITH AWPA STANDARD C-2, CONTAINING NO ARSENIC OR CHROMIUM.
- PLYWOOD SHALL CONFORM TO THE LATEST EDITION OF U.S. PRODUCT STANDARD PS-1. INSTALL IN STAGGERED PATTERN. NAIL TO SUPPORTING RAFTERS @ BOUNDARY AND SUPPORTED EDGES W/8d COMMON NAILS @ 6". NAIL TO SUPPORTING RAFTERS @ INTERMEDIATE FRAMING W/ 8d COMMON NAILS @ 12".
- FRAMING CONNECTIONS SHALL BE SIMPSON COMPANY OR EQUAL. OF THE CATALOG DESIGNATIONS INDICATED. INSTALL MANUFACTURERS STANDARD NAILS IN ALL HOLES PROVIDED UNLESS OTHERWISE NOTED.
- NAILS SHALL BE STRONGHOLD, GALVANIZED COMMON NAILS OF THE SIZES INDICATED.
- ALL BOLTS AND LAG SCREWS SHALL BE AMERICAN STANDARD MANUFACTURE. BOLT HOLES IN WOOD SHALL BE DRILLED 1/16" MAXIMUM OVERSIZE. HOLES FOR SCREWS AND LAG SCREWS SHALL BE FIRST BORED FOR THE SAME DEPTH AND DIAMETER OF THE SHANK, THEN THE REMAINDER OCCUPIED BY THE THREADED PORTION SHALL BE BORED NOT LARGER IN DIAMETER THAN THE ROOT OF THE THREAD. ALL SCREWS SHALL BE SCREWED, NOT DRIVEN INTO PLACE.
- PROVIDE WASHERS UNDER ALL NUTS AND HEADS OF BOLTS AND LAG SCREWS. WASHERS SHALL BE EITHER ROUND MALLEABLE IRON OR SQUARE CUT STEEL WASHERS 1/4" THICK x 3 FASTENER DIAMETERS.
- ALL TIMBER FRAMING SHALL BE ACCURATELY CUT, NOTCHED, OR DAPPED AS INDICATED. NO OVERCUT IS PERMITTED FOR NOTCHES OR DAPS. MEMBERS SHALL FIT TIGHT AND TRUE. EXAMINE MEMBERS FOR DETRIMENTAL DAMAGE BEFORE INSTALLATION, AND AVOID NATURAL DEFLECTS AT CONNECTIONS. WHERE STEEL PLATES OCCUR, THEY SHALL BE USED AS THE TEMPLATE FOR BORING HOLES.
- DESIGN, FABRICATION, AND CONSTRUCTION SHALL CONFORM TO THE "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION" CURRENT EDITION AS RECOMMENDED BY THE NATIONAL LUMBER MANUFACTURER'S ASSOCIATION.
- ROOF SHEATHING SHALL BE NAILED AS INDICATED ON DRAWINGS.

FOUNDATIONS

- ALL FOOTINGS SHALL BE PLACED ON UNDISTURBED SOIL OR COMPACTED STRUCTURAL FILL. PRESUMPTIVE ALLOWABLE BEARING PRESSURE IS 2000 PSF.
- NO FOUNDATIONS SHALL BE PLACED IN WATER OR ON FROZEN GROUND.
- ALL FOOTINGS EXCAVATIONS ARE TO BE FINISHED BY HAND.
- ALL FINISHED FOUNDATIONS EXCAVATIONS SHALL BE INSPECTED AND APPROVED BY THE ARCHITECT OR HIS DESIGNATE BEFORE ANY CONCRETE IS PLACED.
- UNLESS OTHERWISE NOTED, ALL FOOTINGS SHALL BE CENTERED UNDER SUPPORTED MEMBERS.
- CONTRACTORS SHALL PROVIDE CONTINUOUS CONTROL OF SURFACE AND UNDERGROUND WATER AS REQUIRED DURING CONSTRUCTION SUCH THAT THE WORK IS DONE IN THE DRY.

CAST-IN-PLACE CONCRETE

- MATERIALS**
 A. PORTLAND CEMENT: ASTM C150, TYPE I
 B. FLY ASH: ASTM A618, CLASS C OR F
 C. NORMAL-WEIGHT AGGREGATE: ASTM C33, CLASS 3M
 D. LIGHTWEIGHT AGGREGATE EXPANDED SHALE OR SLATE: ASTM C330
 E. REINFORCING STEEL: ASTM A615 GRADE 60
 F. REINFORCING STEEL, WELDABLE: ASTM A706
 G. WELDED WIRE FABRIC: ASTM A185, FLAT SHEETS.
- CONCRETE MIXES**
 A. FOOTINGS: 3000 PSI NW
 B. SLAB-ON-GRADE: 3000 PSI NW, AIR ENTRAINED
- PERFORM CONCRETE WORK IN ACCORDANCE WITH ACI 318 AND ACI 301.



1 FOUNDATION PLAN
 S-100 SCALE: 1/4" = 1'-0"

bennett & pless
 formerly LHC Structural Engineers

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 Charlotte, North Carolina
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REVISIONS

NO. | DATE | REMARKS

FOUNDATION PLAN
**HARNETT COUNTY SCHOOLS
 POLE BARN**

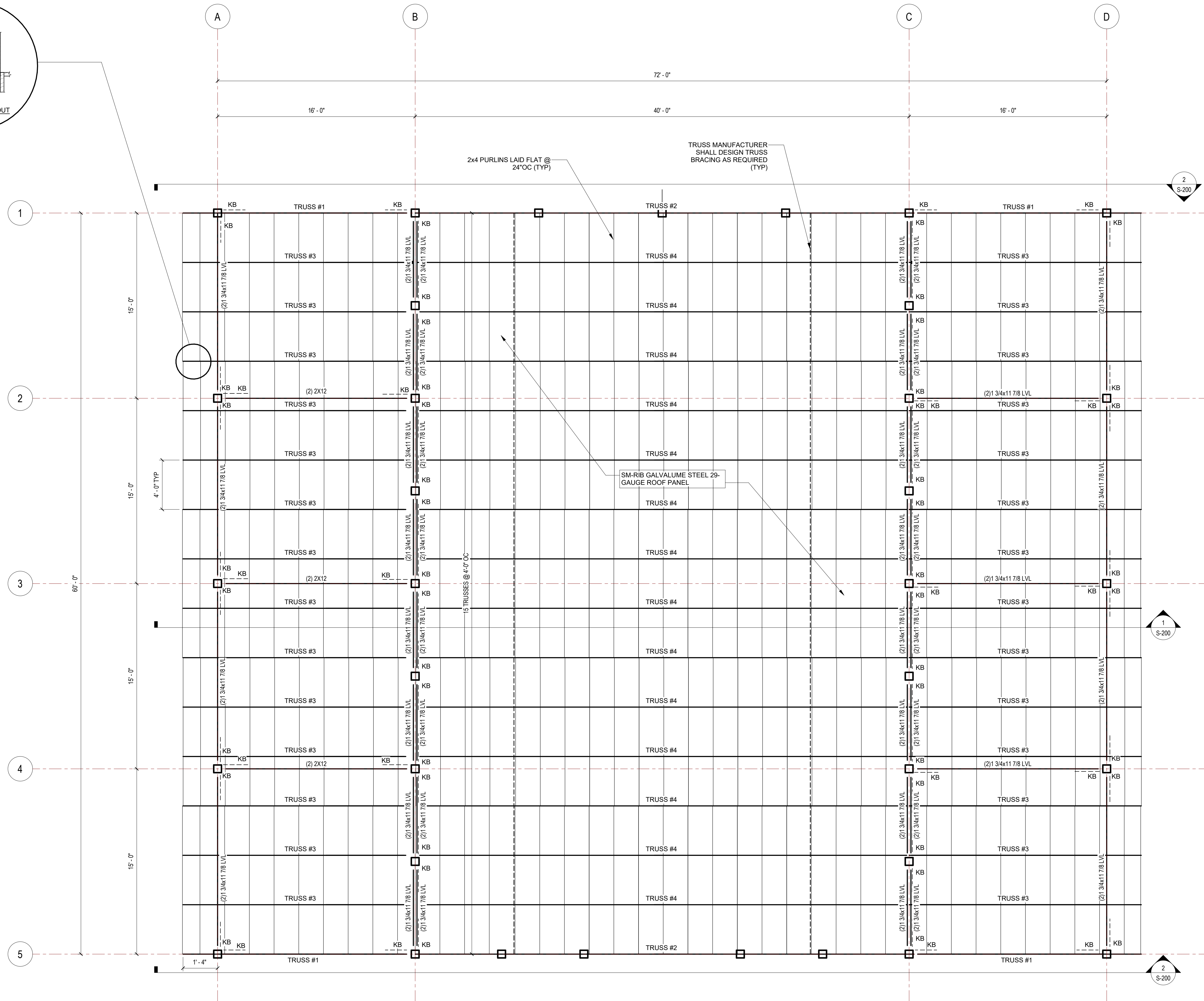
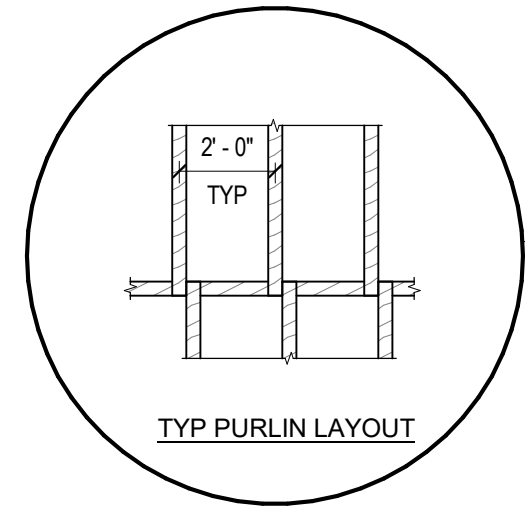
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 REVIEWED BY: JJM
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 DATE: 10/18/23

SHEET NUMBER:
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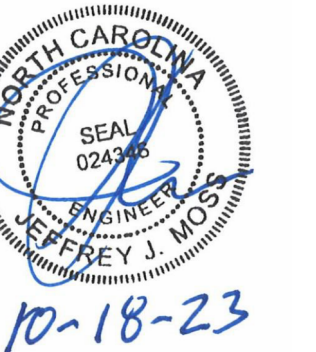
FRAMING PLAN LEGEND

- KB INDICATES KNEE BRACE IS REQUIRED
- Ⓢ INDICATES NOTE REFERRAL. SEE CORRESPONDING PLAN NOTE.

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



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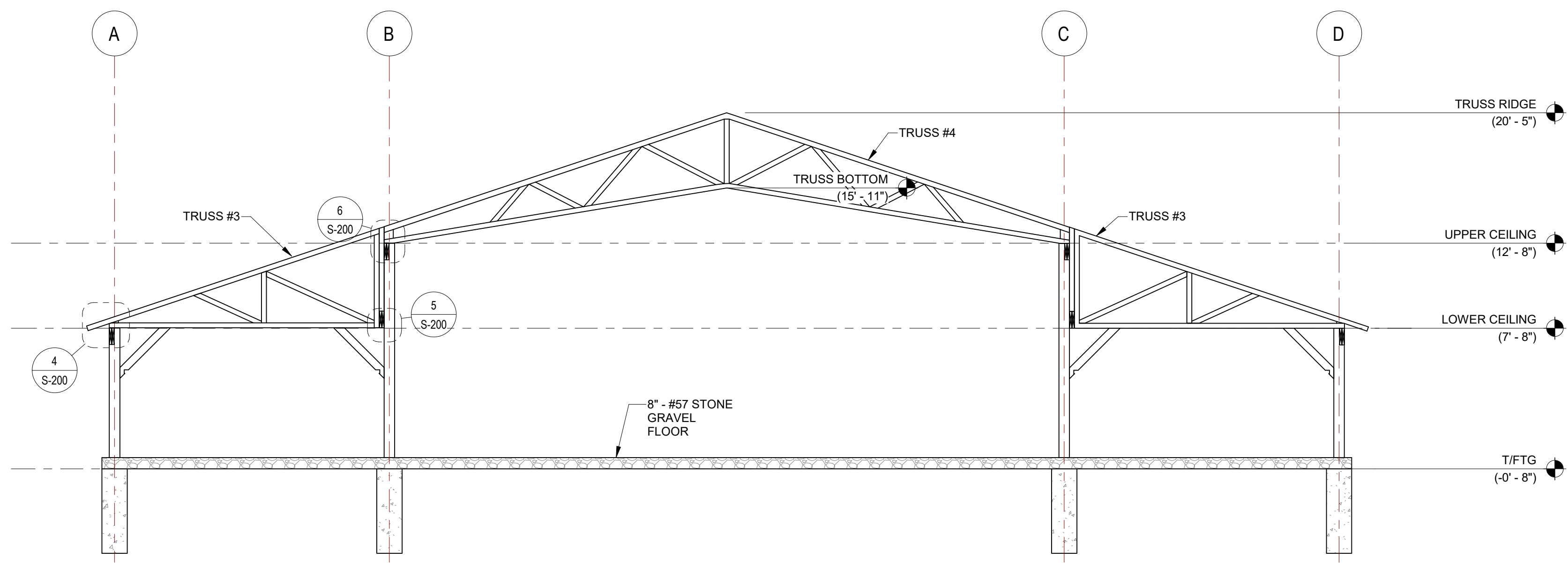
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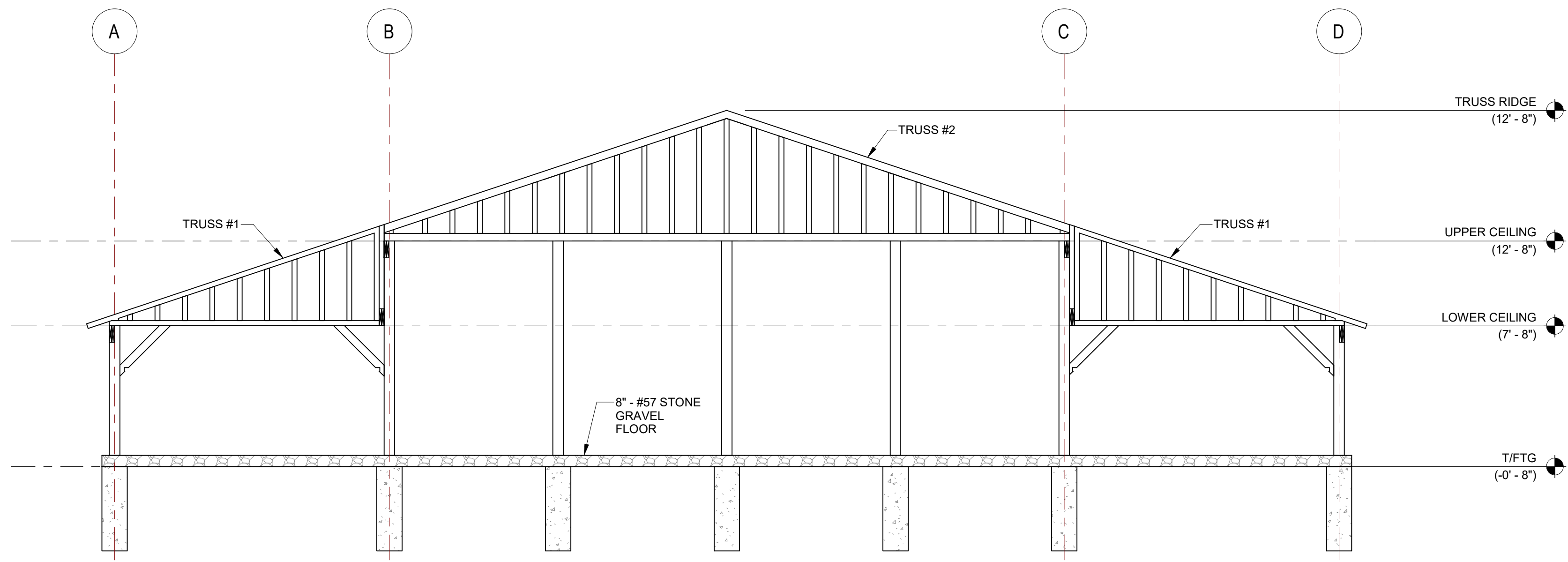
ROOF FRAMING PLAN
HARNETT COUNTY SCHOOLS
POLE BARN

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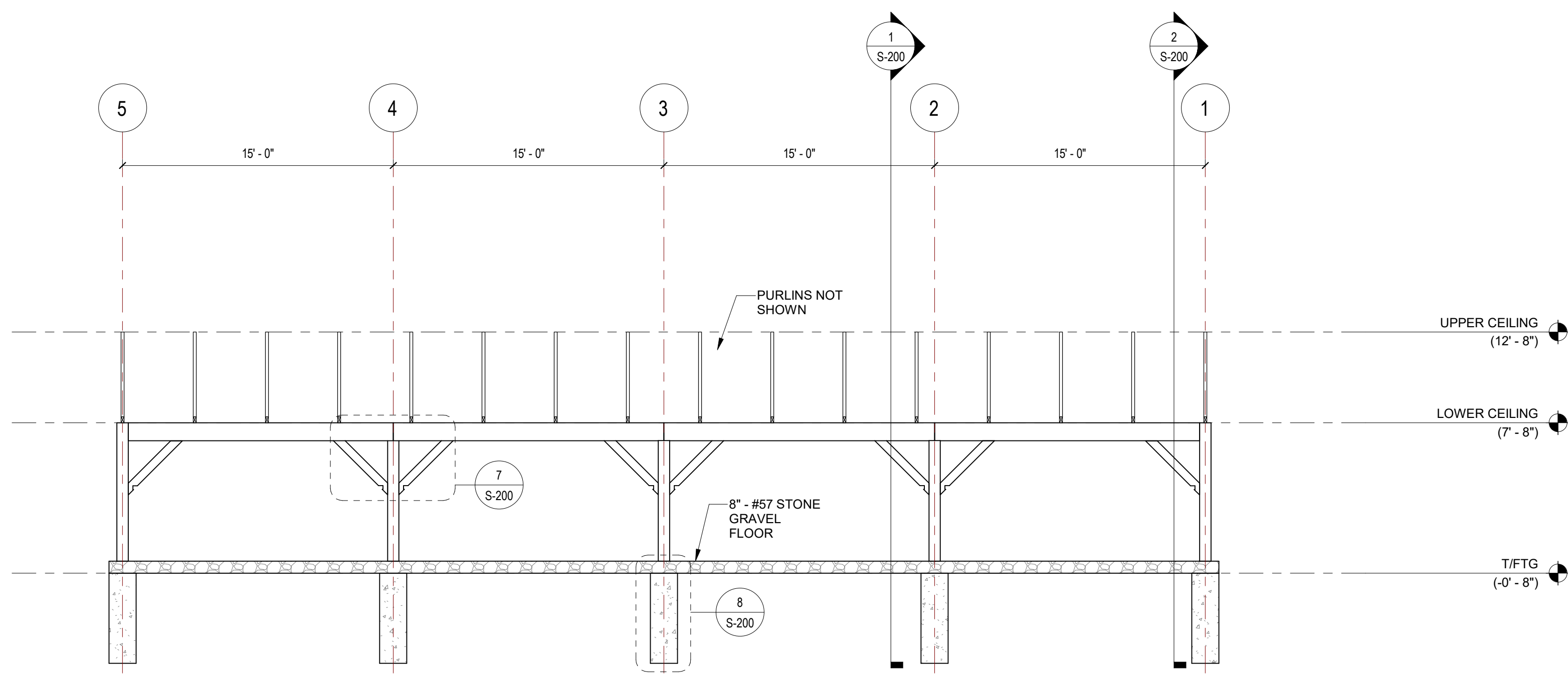
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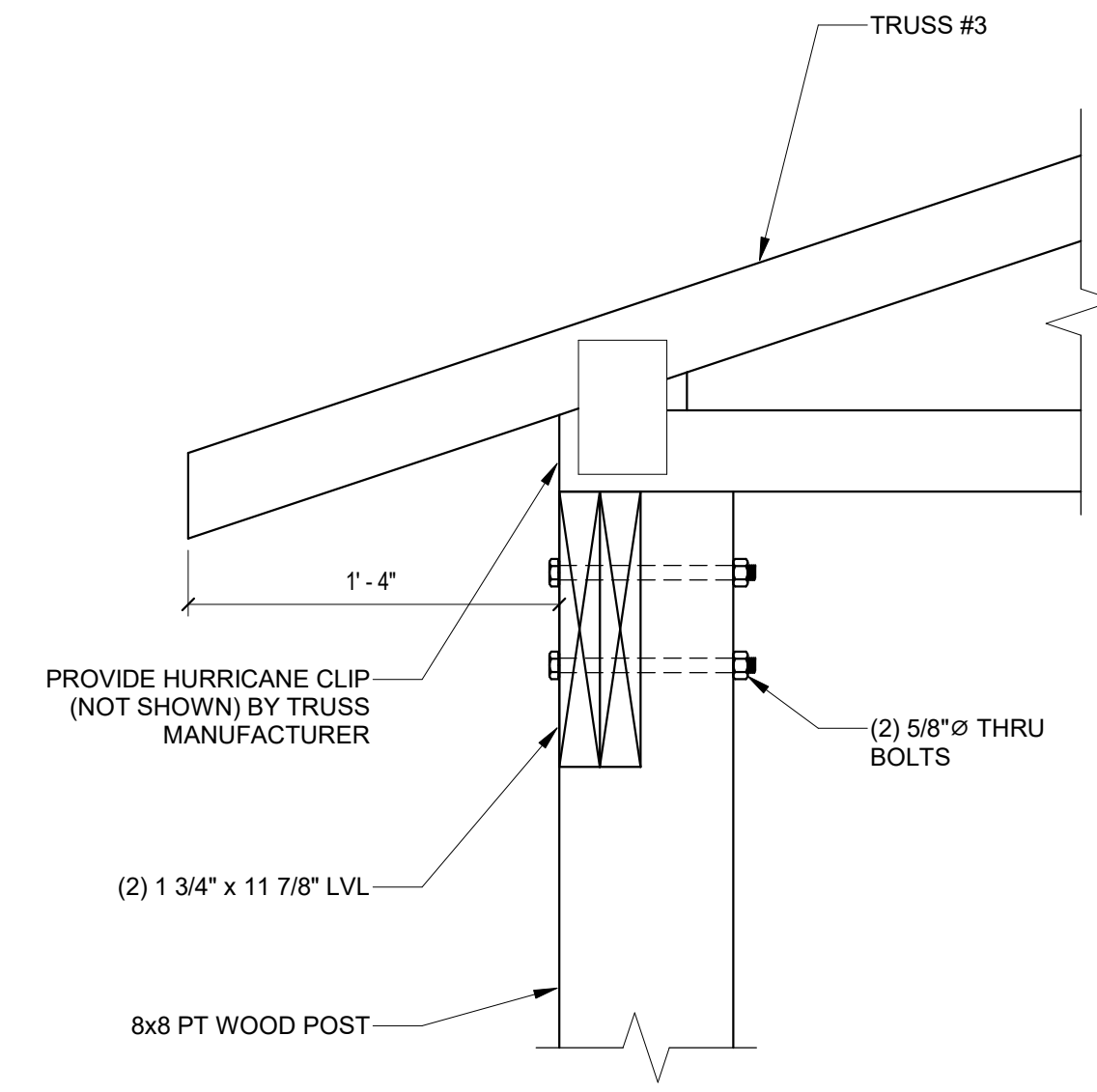
1 BUILDING SECTION
SCALE: 3/16" = 1'-0"



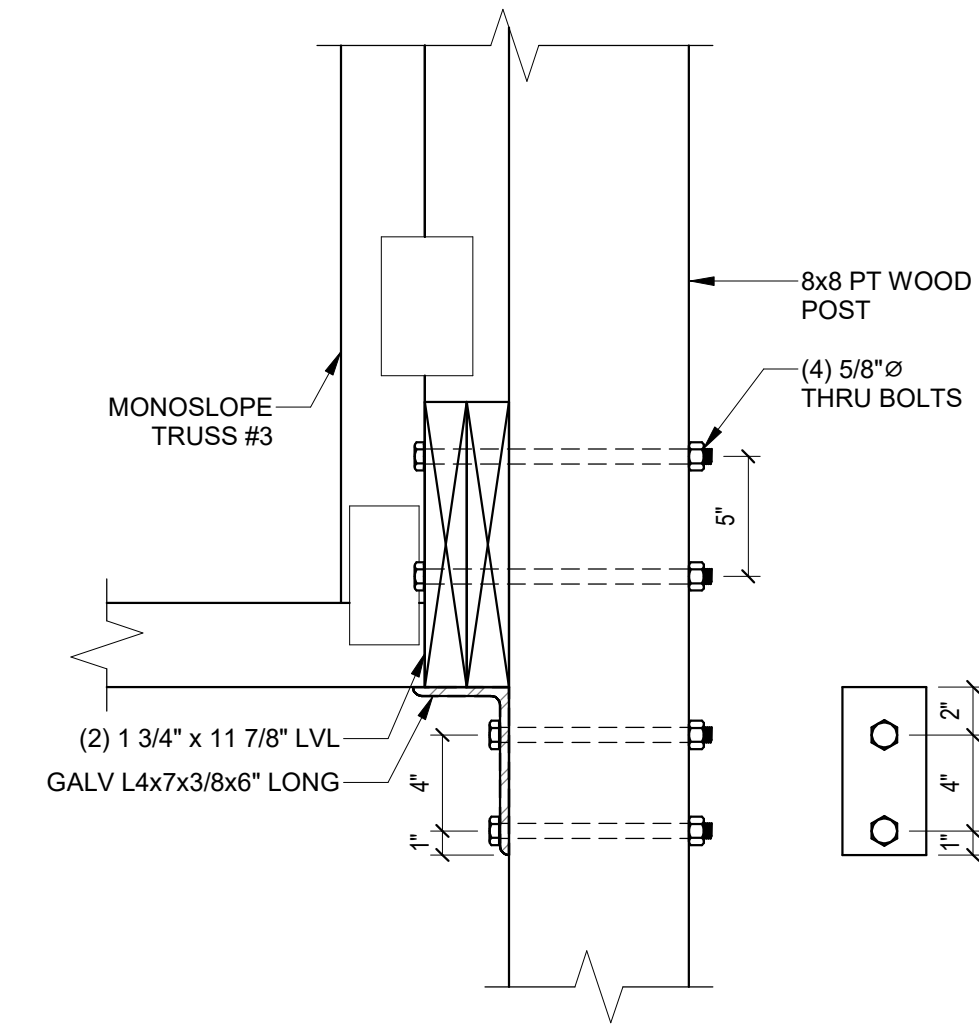
2 END ELEVATION
SCALE: 3/16" = 1'-0"



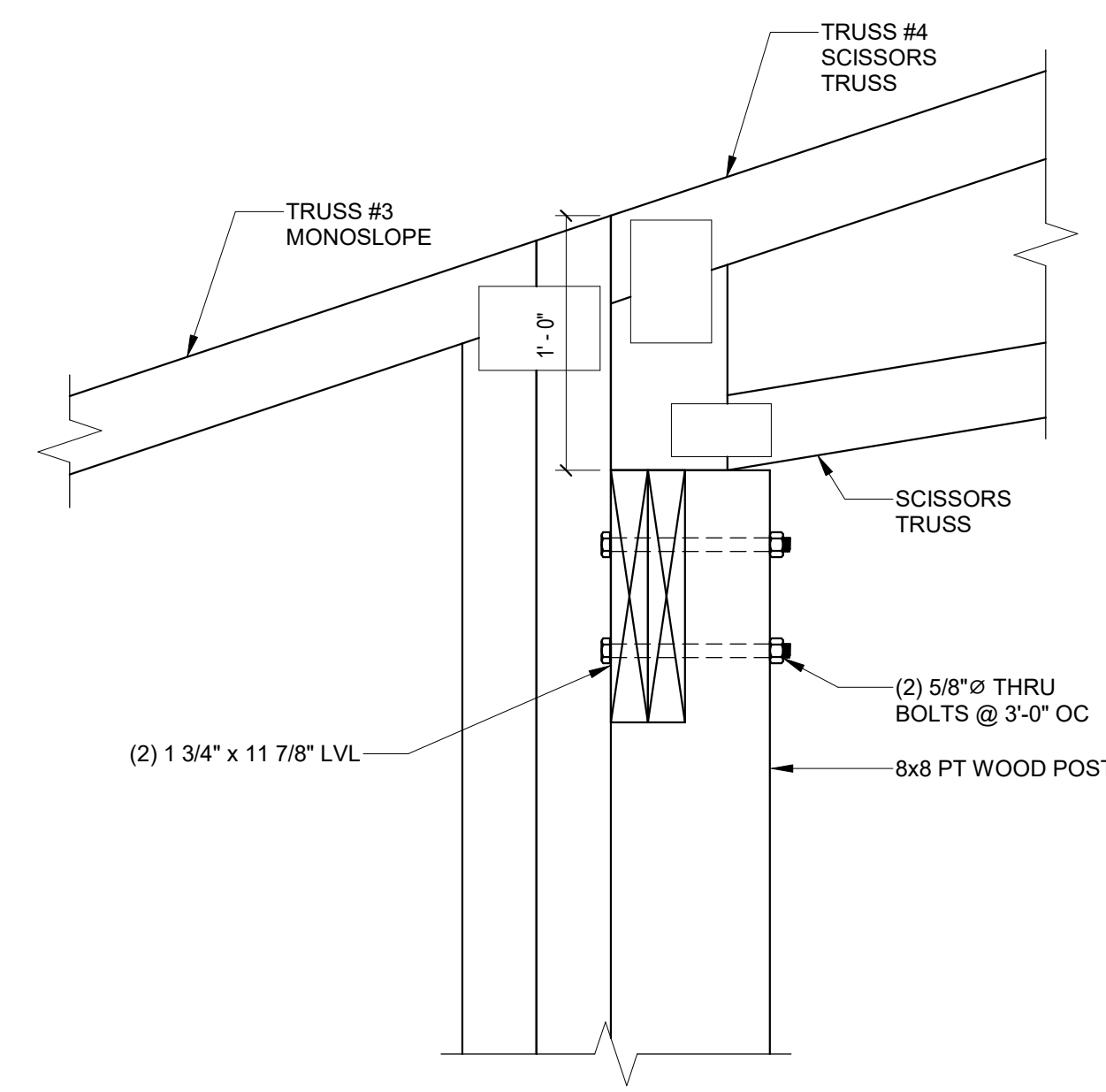
3 SIDE ELEVATION
SCALE: 3/16" = 1'-0"



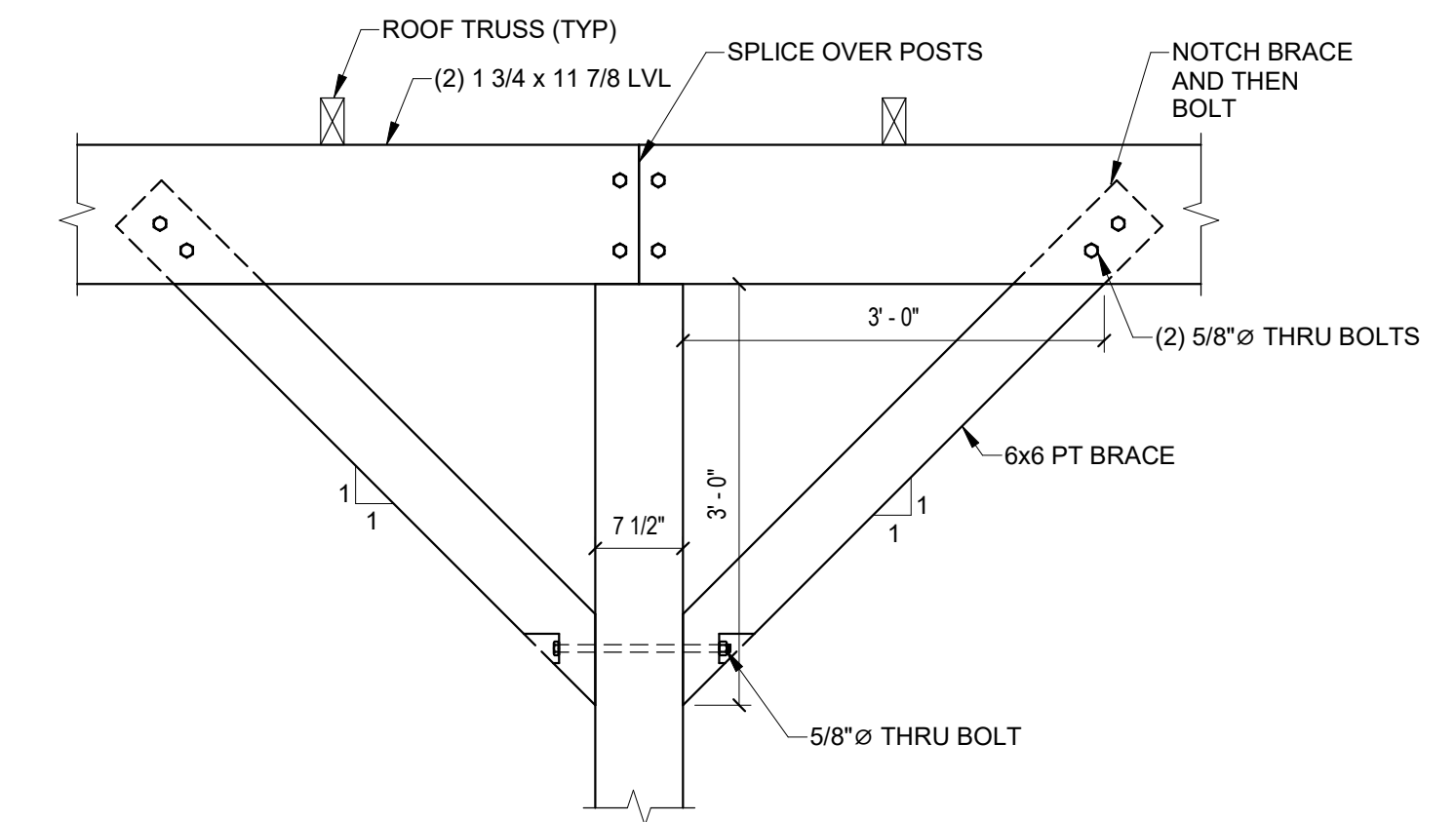
4 TRUSS TO COLUMN CONNECTION
SCALE: 1 1/2" = 1'-0"



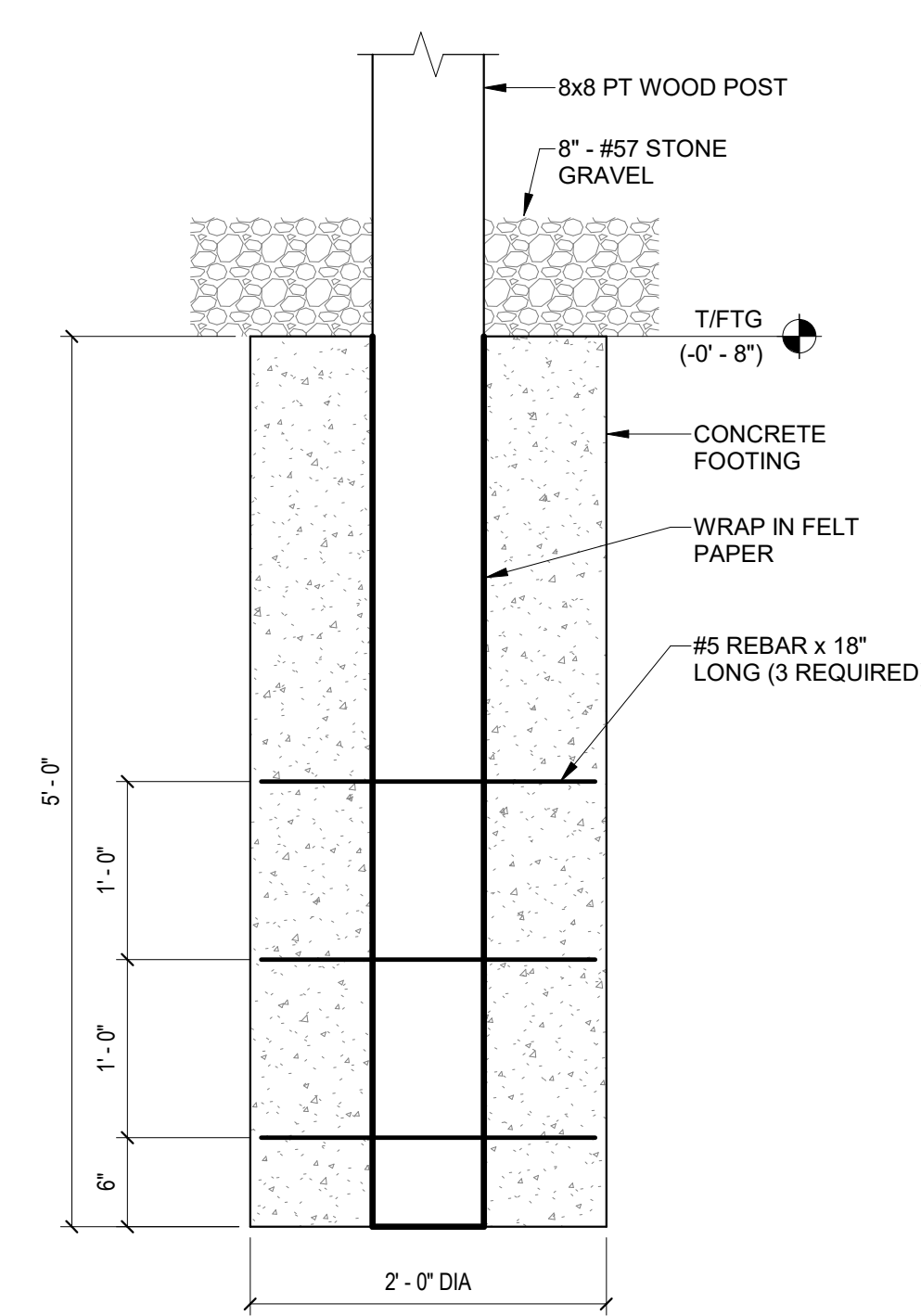
5 TRUSS TO COLUMN CONNECTION
SCALE: 1 1/2" = 1'-0"



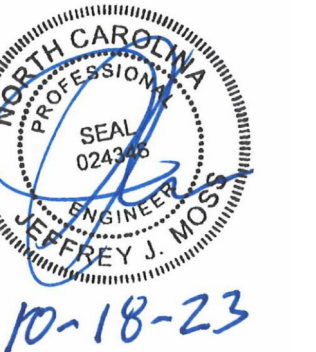
6 TRUSS TO COLUMN CONNECTION
SCALE: 1 1/2" = 1'-0"



7 KNEE BRACE ELEVATION
SCALE: 3/4" = 1'-0"



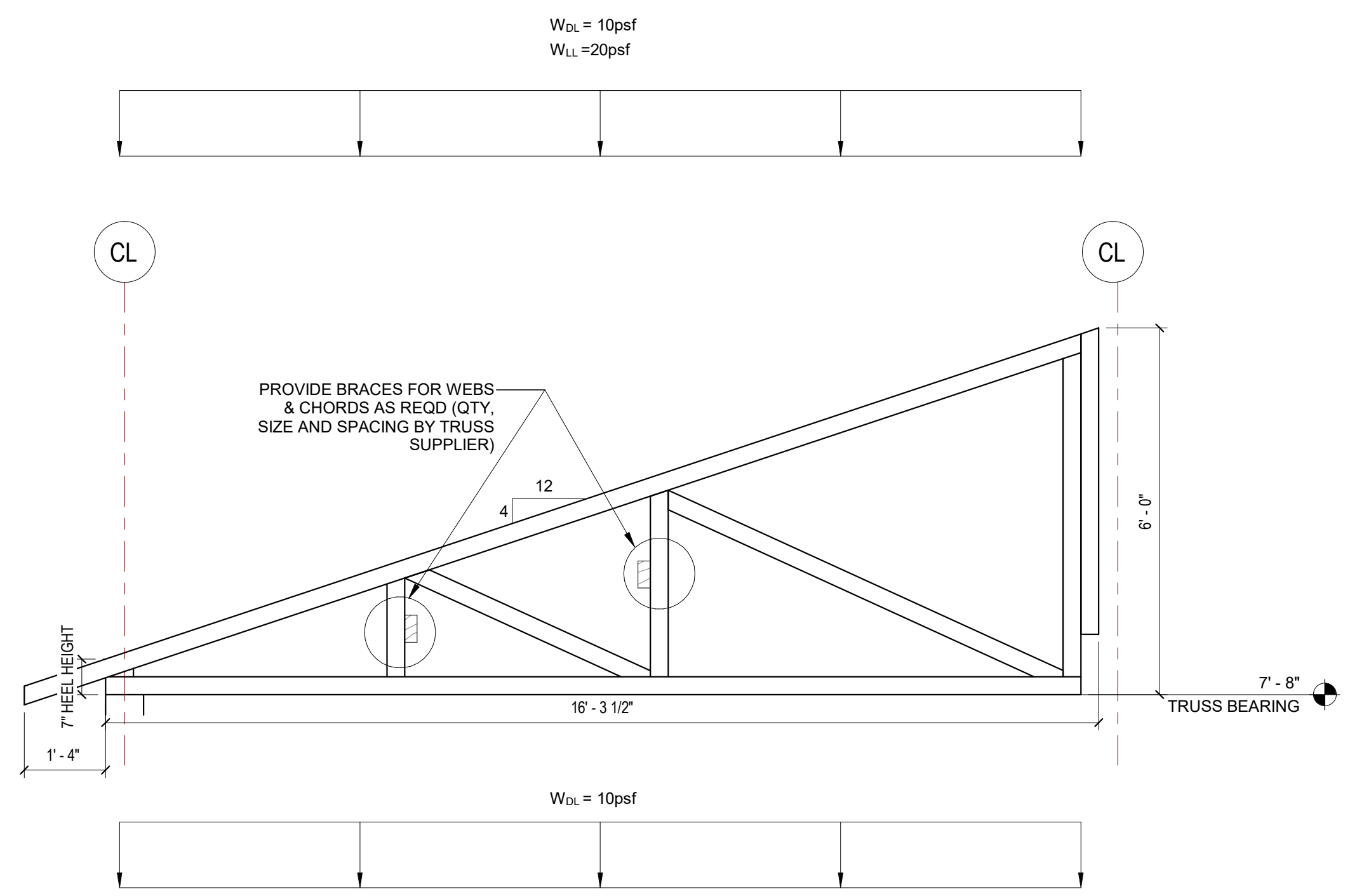
8 TYPICAL CONCRETE FOOTING
SCALE: 1" = 1'-0"



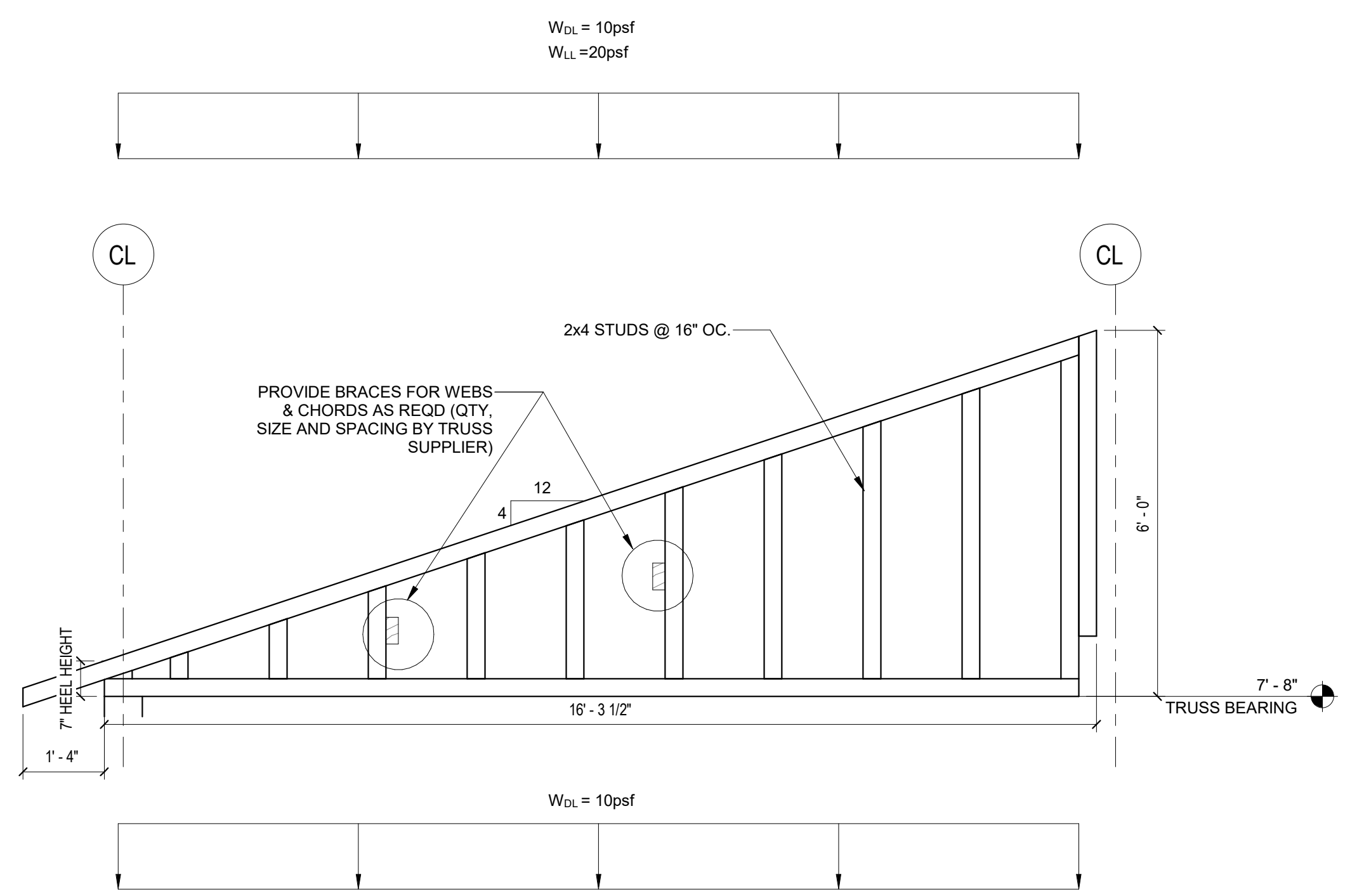
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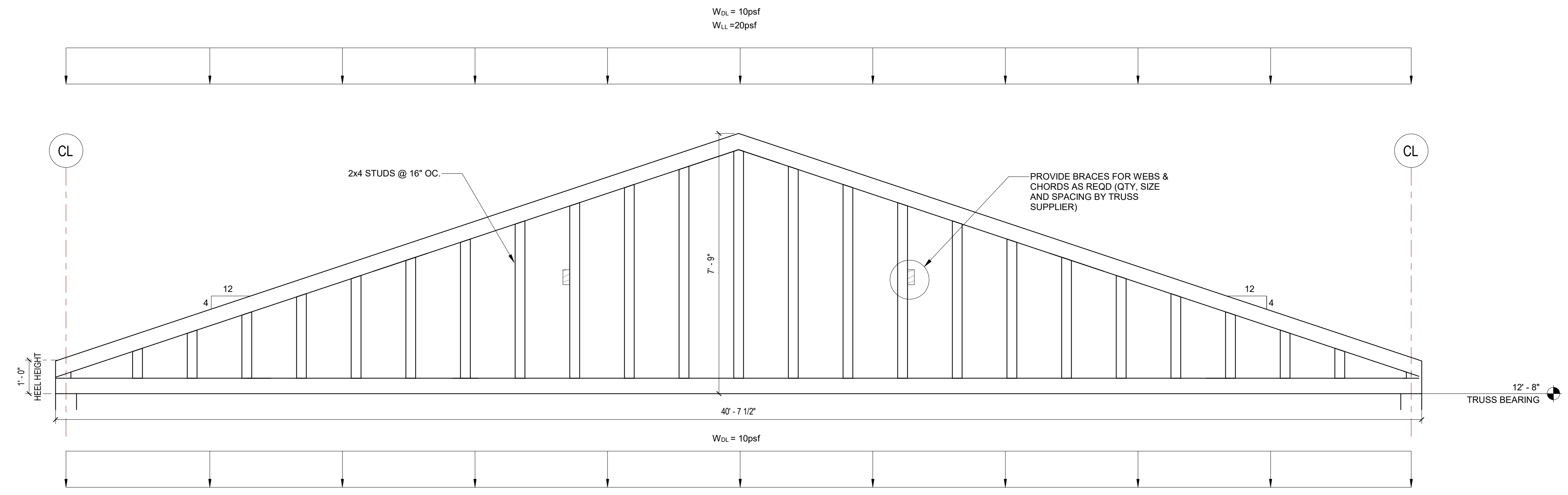
- TRUSS NOTES:**
1. COMPLETE DESIGN CALCULATIONS, SEALED BY A NORTH CAROLINA PROFESSIONAL ENGINEER, ERECTION PLAN AND BRACING PLAN SHALL BE PROVIDED TO THE CONTRACTOR BY THE TRUSS SUPPLIER. SUBMIT TO THE ARCHITECT FOR REVIEW.
 2. ALL TRUSSES SHALL BE DESIGNED FOR THE WIND LOADINGS AS PRESCRIBED IN THE NORTH CAROLINA STATE BUILDING CODE IN ADDITION TO THE FOLLOWING LOADS:
 TOP CHORD DL= 10 PSF
 LL= 20 PSF
 BOTTOM CHORD DL= 10 PSF
 LL= 20 PSF
 3. DEAD LOADS ARE SUPERIMPOSED LOADS. DESIGN SHALL INCLUDE SELF-WEIGHT OF TRUSSES AND OVERBUILD FRAMING. BRACE TRUSSES DURING CONSTRUCTION FOR ALL LIVE AND WIND LOADS, INCLUDING WEIGHT OF MATERIAL STAGED ON TRUSSES DURING CONSTRUCTION.
 4. INSTALL PERMANENT BRIDGING, BRACING, AND ANCHORAGES TO THE PRIMARY STRUCTURE AS INDICATED ON APPROVED SHOP DRAWINGS. INSTALL BENT PLATES AS INDICATED AT RIDGES, HIP, VALLEYS, EAVES, AND OTHER TRANSITIONS TO PROVIDE ADEQUATE SUPPORT FOR DECKING AND SHEATHING.
 5. TRUSS PROFILES SHOWN ARE REPRESENTATIVE AND DO NOT INCLUDE ALL DIFFERENT INDIVIDUAL CONDITIONS. COORDINATE PROFILES WITH ROOF PLAN AND ARCHITECTURAL DRAWINGS.



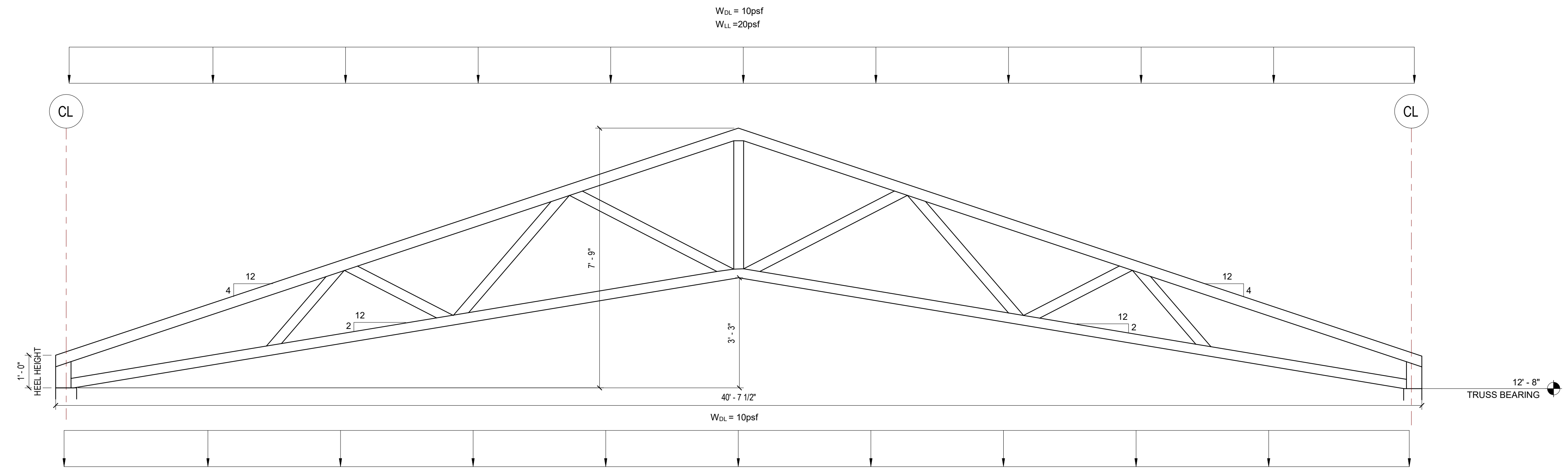
1 TRUSS #3
 SCALE: 1/2" = 1'-0"



4 TRUSS #1
 SCALE: 1/2" = 1'-0"



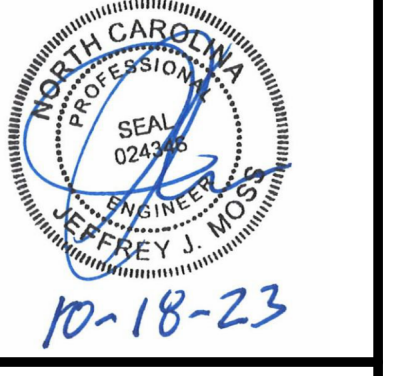
2 TRUSS #2
 SCALE: 1/2" = 1'-0"



3 TRUSS #4
 SCALE: 1/2" = 1'-0"

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TRUSS SECTIONS
**HARNETT COUNTY SCHOOLS
 POLE BARN**

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SHEET NUMBER:
S-201