

GENERAL NOTES

GENERAL:

- 1. ALL WORK SHALL CONFORM TO THE COMMONWEALTH OF PENNSYLVANIA'S UNIFORM CONSTRUCTION CODE (2009 INTERNATIONAL BUILDING CODE (IBC) AS ADOPTED AND AMENDED BY THE COMMONWEALTH OF PENNSYLVANIA) AND TO ALL OTHER APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS, LAWS, RULES, AND ORDINANCES. NO WORK SHALL COMMENCE UNTIL APPLICABLE APPROVALS AND REQUIRED PERMITS HAVE BEEN OBTAINED.
2. WHERE A DETAIL, TYPICAL DETAIL, SECTION, TYPICAL SECTION, OR PLAN NOTE IS SHOWN FOR ONE CONDITION, IT SHALL APPLY FOR ALL SIMILAR OR LIKE CONDITIONS UNLESS NOTED OTHERWISE.
3. STRUCTURAL DRAWINGS ARE TO BE USED IN CONJUNCTION WITH THE CIVIL/SITE, ARCHITECTURAL, ELECTRICAL, MECHANICAL, PLUMBING SPECIFICATIONS, AND ANY OTHER DOCUMENTS THAT ENCOMPASS THE COMPLETE CONSTRUCTION DOCUMENTATION.
4. ALL WORK RELATED TO THE STAGING, CONSTRUCTION PRACTICES, AND SAFETY OF THE PROJECT'S WORKERS AND PROPERTY SHALL BE CONSIDERED MEANS AND METHODS AND SHALL BE COMPLETED BY THE CONTRACTOR PER STANDARD INDUSTRY PRACTICE AND ALL CODES AND STANDARDS.
5. THE STRUCTURAL DRAWINGS ARE ONLY FOR THE PLACEMENT AND SIZE OF STRUCTURAL COMPONENTS. REQUIREMENTS MADE BY OSHA AND ALL OTHER APPLICABLE SAFETY CODES ARE TO BE DETERMINED AND PROVIDED BY THE CONTRACTOR.
6. THE CONTRACTOR SHALL COORDINATE ANY OPENINGS REQUIRED TO ACCOMMODATE ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING CONSTRUCTION EQUIPMENT, AND DEVICES.
7. THE CONTRACTOR SHALL VERIFY AND ESTABLISH ALL EXISTING CONDITIONS AND DIMENSIONS AT THE SITE. IF THE EXISTING FIELD CONDITIONS DO NOT PERMIT THE INSTALLATION OF THE WORK PER THE DETAILS SHOWN, THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IMMEDIATELY.
8. SPECIAL INSPECTION IS REQUIRED OF ALL CONSTRUCTION DELINEATED ON THE STRUCTURAL DRAWINGS. THE PERMIT APPLICANT SHALL PROVIDE AN APPROVED AGENCY, COMPETENT AND OBJECTIVE, PER CHAPTER 17 OF THE IBC. THE APPROVED AGENCY SHALL FURNISH COPIES OF ALL INSPECTION REPORTS TO THE ENGINEER OF RECORD WITHIN 24 HOURS AFTER INSPECTION. THE APPROVED AGENCY SHALL SUBMIT A SUMMARY FOR EACH DIVISION OF WORK, CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER, TO THE COMPLETION OF ALL REQUIRED SPECIAL INSPECTIONS AND CORRECTION OF ANY DISCREPANCIES NOTED IN THE INSPECTIONS.

SUBMITTALS:

- 1. ALL SHOP DRAWINGS MUST BE REVIEWED AND STAMPED BY THE GENERAL CONTRACTOR BEFORE SUBMISSION. SUBMITTAL WITHOUT CONTRACTOR REVIEW WILL RESULT IN DELAYS. THE CONTRACTOR SHALL CONFIRM THAT THE SHOP DRAWINGS HAVE BEEN COMPLETED AND CHECKED BY THE SUPPLIER BEFORE THE SUBMISSION.
2. THE CONTRACTOR IS TO PROVIDE ELECTRONIC COPIES (PDF) OF CONTRACTOR-REVIEWED AND STAMPED SHOP DRAWINGS FOR A/E REVIEW AND PROCESSING.
3. SHOP DRAWING SUBMITTAL REQUIREMENTS SHALL BE PER THE STRUCTURAL SPECIFICATIONS. CHANGES OR ADDITIONS MADE ON RESUBMITTED SHOP DRAWINGS SHALL BE INDICATED, AND THE PURPOSE OF THE RESUBMITTAL SHALL BE NOTED ON THE TRANSMITTAL. REVIEW OF RESUBMITTED SHOP DRAWINGS SHALL BE LIMITED SPECIFICALLY TO THE ITEMS NOTED FOR CORRECTION ON THE PREVIOUS SUBMITTAL.
4. THE GENERAL CONTRACTOR SHALL SUBMIT FOR STRUCTURAL ENGINEER REVIEW SHOP DRAWINGS FOR THE FOLLOWING ITEMS:
CONCRETE MIX DESIGNS
CONCRETE REINFORCING
CONCRETE MASONRY UNITS
CONCRETE MASONRY GROUT
CONCRETE MASONRY REINFORCING
STRUCTURAL STEEL
LIGHT GAUGE METAL FRAMING
ENGINEERED WOOD PRODUCTS
WOOD TRUSSES
CALCULATIONS (WHERE APPLICABLE) AND SHOP DRAWINGS SHALL BE SIGNED AND SEALED BY A PROFESSIONAL ENGINEER REGISTERED IN THE JURISDICTION OF THE PROJECT.

DESIGN LOADS:

RISK CATEGORY: III

FLOOR LIVE LOAD: FIRST FLOOR 200 PSF

ROOF LIVE LOAD: 20 PSF

ROOF SNOW LOAD:

Fg: 30 PSF
Ce: 0.9
Cl: 1
Ft: 20 PSF

WIND LOAD:

Vult = 122 MPH
Vascd = 95 MPH
EXPOSURE CATEGORY: C
INTERNAL PRESSURE COEFFICIENT, Gcpi = (+/-) 0.18
COMPONENT 4 CLADDING WIND PRESSURE: 28 PSF

SEISMIC DESIGN DATA:

SEISMIC IMPORTANCE FACTOR: Ie = 1.0
Sa = 0.191, S1 = 0.204
SDs = 0.203, SD1 = 0.211
SITE CLASS = D
SEISMIC DESIGN CATEGORY = B
ORDINARY REINFORCED MASONRY SHEAR WALLS: R=2.0, Cs=0.10
EQUIVALENT LATERAL FORCE PROCEDURE

EARTHWORK:

- 1. REMOVE UNSUITABLE SOILS ENCOUNTERED DURING EXCAVATION FOR FOUNDATIONS. BACKFILL THESE EXCAVATIONS AND AREAS REQUIRING STRUCTURAL FILL WITH CLEAN M0 OR BETTER BORROW (PER ASTM D 2487) PLACED IN 8" MAXIMUM LIFTS. COMPACT TO 95% MAXIMUM DRY DENSITY AS DETERMINED BY THE MODIFIED PROCTOR TEST (ASTM D 1557), IF APPROVED BY A QUALIFIED GEOTECHNICAL ENGINEER, SUITABLE ON-SITE SOIL MAY BE USED INSTEAD OF SELECT BORROW.
2. ONLY PREDOMINATELY GRANULAR SOILS FREE OF ORGANIC AND OTHER DELETERIOUS MATERIALS, COMPLETELY PASSING A 2" SIEVE AND WITH LESS THAN 35% PASSING A NO. 200 SIEVE MAY BE USED AS RETAINING WALL OR BASEMENT WALL BACKFILL.
3. EXCAVATION SHALL BE PERFORMED SO NOT TO DISTURB EXISTING ADJACENT BUILDINGS, STREETS AND UTILITY LINES. VERIFY THE LOCATION OF ALL UTILITIES BEFORE THE COMMENCEMENT OF WORK. HAND EXCAVATE AROUND UTILITIES AS REQUIRED.
4. DO NOT BACKFILL AGAINST BASEMENT WALLS UNTIL THE BASEMENT SLAB IS ON GRADE AND ALL FRAMED SLABS ARE IN PLACE AND HAVE ATTAINED THE SPECIFIED DESIGN STRENGTH. BRACE AND PROTECT FOUNDATION WALLS AND PIERS DURING BACKFILLING.
5. BACKFILL SHALL BE BROUGHT UP EQUALLY ON EACH SIDE OF WALLS AND GRADE BEAMS.
6. DO NOT BACKFILL UNTIL BASEMENT/RETAINING WALLS HAVE ATTAINED 75% OF THE SPECIFIED 28-DAY DESIGN STRENGTH.

FOUNDATIONS:

- 1. FOUNDATIONS HAVE BEEN DESIGNED BASED UPON A PRESUMPTIVE MINIMUM ALLOWABLE SOIL-BEARING CAPACITY OF 2,000 PSF. BEFORE FOOTING CONCRETE PLACEMENT, THE FOOTING SUBGRADE SHALL BE APPROVED BY A LICENSED GEOTECHNICAL ENGINEER. IF CONDITIONS PROVE TO BE UNACCEPTABLE AT THE ELEVATIONS INDICATED, FOOTINGS SHALL BE ENLARGED OR LOWERED TO ACCEPTABLE SUBGRADE MATERIAL. FILL OVER-EXCAVATIONS WITH LEAN CONCRETE OR AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
2. THE BOTTOM OF EXTERIOR FOOTINGS SHALL BE A MINIMUM OF 3 FEET BELOW FINISHED GRADE.
3. SLABS ON GROUND SHALL BEAR ON MECHANICALLY COMPACTED SOIL CAPABLE OF SUPPORTING 250 PSF. DRAINAGE FILL UNDER SLABS SHALL BE COMPACTED SAND AND GRAVEL OR CRUSHED STONE.
4. UNLESS OTHERWISE NOTED OR DETAILED, ALL FOUNDATIONS SHALL BE LOCATED SUCH THAT THE CENTERLINE OF FOOTING IS ALSO THE CENTERLINE OF THE WALL, PIER OR COLUMN.
5. ALL BOTTOM OF FOOTING TRANSITIONS SHALL BE MADE USING STEPS AS SHOWN ON THE TYPICAL STEPPED FOOTING DETAIL. WHERE NEW FOOTINGS ABUT EXISTING FOUNDATIONS, CAREFULLY HAND EXCAVATE AND PLACE THE BOTTOM OF NEW FOOTING AT THE SAME ELEVATION AS THE EXISTING.
6. THE DESIGN OF WALLS RETAINING EARTH ASSUMES DRAINAGE SYSTEM IS IN PLACE, AND DOES NOT INCLUDE HYDROSTATIC PRESSURE LOADS. CONTRACTOR SHALL PROVIDE DRAINAGE SYSTEM IN ALL BACKFILL CONDITIONS. (SEE CIVIL/ARCHITECTURAL DRAWINGS FOR DRAINAGE SPECIFICATIONS.)
7. THE DESIGN OF WALLS RETAINING EARTH DOES NOT INCLUDE SURCHARGE LOADS THAT MAY BE INDUCED FROM CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING THE DESIGN, ADEQUACY, SAFETY, AND STABILITY OF TEMPORARY ERECTION BRACING AND SHORING.

CONCRETE:

- 1. CONCRETE SHALL BE REINFORCED, DETAILED AND CONSTRUCTED PER THE LATEST EDITIONS OF THE BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE (ACI 318), SPECIFICATIONS FOR STRUCTURAL CONCRETE (ACI 301), ACI DETAILING MANUAL (9P-66) AND THE MANUAL OF STANDARD PRACTICE.
2. HOT WEATHER CONCRETE SHALL BE PER ACI 305. COLD WEATHER CONCRETING SHALL BE PER ACI 306.
3. CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH (F'c) OF 4,000 PSI, MAXIMUM WATER/CEMENT RATIO OF 0.45 AND SLUMP OF 3" MAXIMUM.
4. ALL CONCRETE SHALL BE PORTLAND CEMENT CONFORMING TO ASTM C150. AGGREGATE SHALL CONFORM TO ASTM C33.
5. CONCRETE ADMIXTURES SHALL BE USED TO FACILITATE CONCRETE PLACEMENT, AND DIFFICULT PLACING CONDITIONS OR ASSIST IN ATTAINING SPECIFIED CONCRETE QUALITIES. ADMIXTURES SHALL HAVE LESS THAN 0.05% CHLORIDE IONS.
AIR ENTRAINMENT PER ASTM C260
WATER REDUCER PER ASTM C494, TYPE A
WATER REDUCER/ACCELERATOR PER ASTM C494, TYPE C OR E
WATER REDUCER/RETARDER PER ASTM C494, TYPE B OR D
SUPERPLASTICIZER PER ASTM C494, TYPE F OR G
6. CONCRETE MIXES SHALL BE PROPORTIONED PER SECTION 4.0 OF ACI-301. CERTIFIED HISTORICAL DATA SHALL SERVE AS A BASIS FOR EACH MIX DESIGN. DEVIATIONS SHALL BE SUBSTITUTED WITH ADDITIONAL CERTIFIED TRIAL MIX TESTING AND RESULTS. SUBMIT MIX DESIGN, HISTORICAL DATA OR TRIAL MIX RESULTS FOR APPROVAL PRIOR TO PROCEEDING WITH THE WORK.
7. TEST CYLINDERS SHALL BE TAKEN AS A REPRESENTATIVE SAMPLE OF CONCRETE PLACED IN THE AMOUNT ACCORDING TO THE LESSER OF THE FOLLOWING: (1) 1% CUBIC YARDS, (2) 24 HOUR PERIOD OR (3) CHANGE IN CONCRETE STRENGTH. TEST RESULTS SHALL BE FURNISHED TO THE ARCHITECT/ENGINEER UNLESS OTHERWISE NOTED. NORMAL WEIGHT CONCRETE (145 PCF) SHALL BE USED WITH 3% MAX (ELEVATED) MAX (SLAB ON GRADE) COARSE AGGREGATE CONFORMING TO ASTM C 33.
8. ALL FIELD AND LAB TESTING OF CONCRETE SHALL CONFORM TO THE LATEST APPROVED (BY LOCAL GOVERNMENT) EDITIONS OF ASTM:
ASTM C318/C318M CYLINDER SPECIMENS
ASTM C143 SLUMP TEST
ASTM C231 AIR CONTENT (WHEN REQUIRED)
ASTM C39 LAB TESTING CYLINDERS
ASTM C117 SAMPLING FRESH CONCRETE
ASTM C47 HARDENED CORES (WHERE REQUIRED)
9. UNLESS OTHERWISE NOTED, CONCRETE COVER FOR REINFORCING STEEL SHALL BE AS FOLLOWS:
CONCRETE CAST AGAINST EARTH: 2"
FORMED CONCRETE EXPOSED TO EARTH OR WEATHER: 2"
INTERIOR SLABS: 1"
WALLS: 1 1/2"
10. THE FOLLOWING CRITERIA REGARDING PIPES AND CONDUITS EMBEDDED IN CONCRETE MUST BE FOLLOWED (SEE MECH/ELEC DRAWINGS FOR LOCATION OF SLEEVES, PIPES, CONDUIT, ACCESSORIES, ETC.) THESE CRITERIA WILL BE STRICTLY ENFORCED.
a. CONDUITS, PIPES AND SLEEVES OF ANY MATERIAL NOT HARMFUL TO CONCRETE SHALL BE PERMITTED TO BE EMBEDDED IN CONCRETE WITH THE APPROVAL OF THE STRUCTURAL ENGINEER.
b. CONDUITS AND PIPES OF ALUMINUM SHALL NOT BE EMBEDDED IN STRUCTURAL CONCRETE.
c. CONDUITS, PIPES, AND SLEEVES PASSING THROUGH A SLAB, WALL, OR BEAM SHALL NOT SIGNIFICANTLY IMPAIR THE STRENGTH OF THE CONSTRUCTION.
d. CONDUITS AND PIPES SHALL NOT BE 1/3 OVER THE DIAMETER THAN 1/3 THE OVERALL THICKNESS OF THE SLAB, WALL, OR BEAM IN WHICH THEY ARE EMBEDDED.
e. CONDUITS AND PIPES SHALL NOT BE SPACED CLOSER THAN 3 DIAMETERS OR WIDTHS ON CENTER. CONCRETE COVER FOR PIPES, CONDUITS AND FITTINGS SHALL NOT BE LESS THAN 1 1/2" FOR CONCRETE EXPOSED TO EARTH OR WEATHER OR IN CONTACT WITH GROUND.
f. REFER TO ACI 318, SECTION 6.3 FOR ADDITIONAL REQUIREMENTS FOR CONDUITS AND PIPES EMBEDDED IN CONCRETE.
11. REINFORCING STEEL: ASTM A 65 GRADE 60.
12. REINFORCING STEEL DIMENSIONS ARE TO THE CENTERLINE OF BAR UNLESS NOTED OTHERWISE.
13. SUBMIT A COMPLETE SET OF SHOP DRAWINGS SHOWING THE SIZE AND LOCATION OF REINFORCING STEEL. ALLOW 10 BUSINESS DAYS FOR REVIEW. DO NOT FABRICATE OR INSTALL BEFORE SHOP DRAWING APPROVAL.
14. PROVIDE DOUELS INTO FOOTINGS TO MATCH SIZE AND SPACING OF VERTICAL WALL REINFORCING. PROVIDE CORNER BARS AT ALL CONTINUOUS REINFORCING BARS AT ALL MEMBERS.
15. ALL TENSION SPLICES, INCLUDING SPLICES FROM BARS LABELED CONTINUOUS, SHALL CONFORM TO ACI 318. SPLICES SHALL BE CLASS B PER ACI 318, UNLESS NOTED OTHERWISE.
16. WELDED WIRE FABRIC (W/WF) ASTM A 185, INSTALL WELDED WIRE FABRIC IN LENGTHS AS LONG AS POSSIBLE. LAP ADJOINING PIECES AT LEAST ONE FULL RIB AND LACE SPLICES WITH WIRE. OFFSET LAPS OF ADJOINING WIDTHS TO PREVENT CONTINUOUS LAPS IN EITHER DIRECTION. ALL WELDED WIRE FABRIC SHALL BE IN SHEETS AND SUPPORTED ON CHAIRS.
17. SLAB-ON-GRADE: LOCATE REINFORCING 1 INCH FROM THE TOP OF THE SLAB UNLESS NOTED OTHERWISE. PLACE SLAB ON 10 MIL POLYETHYLENE VAPOR BARRIER AND 4" ASH/10 5/1 COMPACTED STONE. PROVIDE CONTROL JOINTS AS SHOWN, CUT TO 3/4" BELOW THE TOP OF THE SLAB.
18. PROVIDE FULL DEPTH 1/2" PRE-MOLDED ISOLATION JOINT BETWEEN SLAB AND WALLS, PIERS, AND OTHER VERTICAL FACES.
19. PLACE (2) 14 BY 3 FEET LONG REINFORCING BARS, 1" BELOW SURFACE, 2' APART AT ALL RE-ENTRANT CORNERS.
20. PROVIDE 3/4" CHAMFER ON ALL EXPOSED EDGES AND CORNERS.
21. PLACE AND FINISH SLAB FOR CLASS FT-20 AND FI-25.
22. THE PLACING OF CONCRETE SHALL NOT START UNTIL THE PLACEMENT OF REINFORCING HAS BEEN APPROVED BY THE OWNER'S INSPECTION AGENCY.
23. BONDING AGENT SHALL BE USED WHERE NEW CONCRETE IS PLACED AGAINST EXISTING CONCRETE.

MASONRY:

- 1. COMPLY WITH THE BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES (ACI 530/ASCE 5/TMS 402 LATEST EDITIONS).
2. CONCRETE MASONRY UNITS SHALL BE LAID IN RUNNING BOND UNLESS NOTED OTHERWISE ON THE ARCHITECTURAL DRAWINGS.
3. MASONRY WORK SHALL BE INSPECTED PER TMS 402 AND TMS 602.
4. CONSTRUCT PER SPECIFICATIONS FOR MASONRY STRUCTURES (ACI 530/ASCE 6, TMS 602, LATEST EDITIONS), EXCEPT WHERE OTHERWISE MODIFIED BY THESE GENERAL NOTES AND SPECIFICATIONS. CONCRETE BLOCK MASONRY UNITS, ASTM C90 AND C145, GRADE N NORMAL WEIGHT AGGREGATE, MINIMUM COMPRESSIVE STRENGTH, Fm OF THE MASONRY ASSEMBLY SHALL BE 2,000 PSI AT 28 DAYS. VERIFICATION SHALL BE LEVEL B QUALITY ASSURANCE PER TMS 402, TABLE 3.12, USING MASONRY FRISH TESTING PER ASTM 1314.
5. MORTAR: TYPE S CONFORMING TO ASTM C210 AND ARTICLES 21 AND 2.6.A OF TMS 602/ACI 530/ASCE 6.
6. GROUT: SHALL COMPLY WITH ARTICLE 22 OF TMS 602/ACI 530/ASCE 6+ ASTM C416 WITH PEA GRAVEL AGGREGATE AND A MINIMUM STRENGTH OF 2,000 PSI, BUT NOT LESS THAN FM. GROUT PLACEMENT SHALL NOT START UNTIL REINFORCING PLACEMENT IS APPROVED BY THE OWNER'S INSPECTION AGENCY, MAXIMUM LIFT 4".
7. REINFORCING STEEL: ASTM A65, 60 KSI DEFORMED BARS. VERTICAL REINFORCING BARS SHALL BE HELD IN PLACE BY POSITIONERS SPACED NOT FURTHER THAN RECOMMENDED BY CODE. EXTEND VERTICAL REINFORCING FROM FOOTING TO BOND BEAM. GROUT MASONRY SOLID FULL HEIGHT OF VERTICAL REINFORCING.
8. REINFORCING STEEL SPLICE LAP LENGTHS SHALL BE PER TMS 402, LATEST EDITION.
9. HORIZONTAL JOINT REINFORCEMENT: ASTM A82, GALVANIZED, 3/8" DIA. DIAMETER SIDE RODS, 3 GA. CROSS RODS, TRUSS TYPE. PROVIDE IN EVERY OTHER COURSE (16 CENTERS) VERTICALLY, EXCEPT PROVIDE IN EVERY COURSE BELOW GRADE.
10. ANCHOR MASONRY TO ABUTTING CONCRETE WITH DOVETAIL SLOTS AND ANCHORS (HOFMANN & BARNARD, INC. #303-BV AND #305).
11. PROVIDE CONTINUOUS BOND BEAM WITH (2) 14 REINFORCING BARS IN SOLID GROUT AT THE TOP OF ALL EXTERIOR MASONRY WALLS AND BEARING WALLS. STEP BOND BEAM ELEVATIONS AS REQUIRED, LAP MINIMUM 32".
12. GROUT MASONRY WALLS IF EITHER FACE IS AT OR BELOW GRADE OR SLAB-ON-GRADE.
13. PROVIDE AND INSTALL TEMPORARY BRACING REQUIRED TO ENSURE STABILITY OF ALL WALLS DURING CONSTRUCTION AND UNTIL THE ERECTION OF ATTACHED STRUCTURAL FRAMING IS COMPLETE.
14. ALLOW GROUT IN REINFORCED CHU WALLS TO CURE A MINIMUM OF 48 HOURS BEFORE IMPOSING CONCENTRATED OR OTHER LOADS FROM ABOVE.
15. ALL BEAMS SUPPORTING MASONRY, INCLUDING STEEL, PRECAST, AND MASONRY LINTELS ARE TO BEAR 6" MINIMUM ON 3 COURSES SOLID MASONRY.
16. SUBMIT A COMPLETE SET OF SHOP DRAWINGS SHOWING THE SIZE AND LOCATION OF ALL MASONRY REINFORCING BARS. ALLOW 10 BUSINESS DAYS FOR REVIEW. DO NOT FABRICATE OR INSTALL BEFORE SHOP DRAWING APPROVAL.

STRUCTURAL STEEL:

- 1. FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM TO THE ANSI / AISC 360-16 (FIFTEENTH EDITION AISC STEEL CONSTRUCTION MANUAL).
2. STRUCTURAL STEEL: W SHAPES ASTM A-992, STEEL SHAPES AND PLATES: ASTM A-36
3. STEEL PIPE: ASTM A-53, TYPE E OR S, GRADE B
4. STEEL TUBING (SQUARE OR RECT): ASTM A500, GRADE B (ROUND); ASTM A501
5. WELDING ELECTRODES FOR FIELD WELDING: E70-XX SERIES. ONLY PRE-QUALIFIED WELDERS SHALL PERFORM WELDING. ALL WELDING SHALL BE PER AISC D11.
6. WELDING OF REINFORCING BARS TO STRUCTURAL STEEL: E80-XX SERIES.
7. STEEL ANGLES AND PLATES, ALONG WITH BOLTS AND WASHERS, IN DIRECT CONTACT WITH EXTERIOR FINISH MASONRY AND ALL EXPOSED STRUCTURAL STEEL, SHALL BE HOT-DIPPED GALVANIZED PER ASTM A153.
8. FIELD WELDED SURFACES WITHIN 4 INCHES OF WELDS SHALL BE CLEANED AND GROUND SMOOTH. AFTER WELDING COAT THE SURFACE WITH THE APPROPRIATE PRIMER/PAINTS AS SPECIFIED.
9. THE DESIGN CONFIGURATION, ERECTION SAFETY, AND SEQUENCING OF ALL STRUCTURAL STEEL CONNECTIONS SHALL BE THE RESPONSIBILITY OF THE STRUCTURAL STEEL FABRICATOR. REVIEW AND ACCEPTANCE OF THE SHOP DRAWINGS BY THE ENGINEER SHALL CONSTITUTE APPROVAL OF THE LOAD-CARRYING ADEQUACY ONLY.
10. CLEAN STEEL PER S990 SPS.
11. PRIME STEEL WITH 95PC PAINT 13. DO NOT PRIME STEEL IN AREAS OF FIREPROOFING AND, AT MOMENT, CONNECTIONS.
12. SUBMIT COMPLETE SET OF SHOP DRAWINGS PREPARED UNDER THE IMMEDIATE DIRECTION OF A REGISTERED PROFESSIONAL ENGINEER. SHOP DRAWINGS SHALL INDICATE SIZE, LOCATION, ASSEMBLY, INSTALLATION DETAILS, AND METHOD OF FASTENING OF ALL STRUCTURAL STEEL. ALLOW 10 BUSINESS DAYS FOR REVIEW. DO NOT FABRICATE BEFORE SHOP DRAWING APPROVAL.

COLD-FORMED METAL FRAMING:

- 1. COMPLY WITH AMERICAN IRON AND STEEL INSTITUTE SPECIFICATION FOR THE DESIGN OF COLD FORMED STEEL STRUCTURAL MEMBERS (AISI 900), LATEST EDITION, AND WITH IBC SECTION 2210 AND PER ASTM A-653, C-954, C-985, AND C-1307.
2. ALL MATERIAL AND ACCESSORIES SHALL BE FORMED FROM STEEL HAVING A MINIMUM G-60 GALVANIZED COATING MEETING ASTM A-653.
3. MEMBER SIZES SHOWN ON THE DRAWING REFER TO PRODUCTS MANUFACTURED BY MARINO INDUSTRIES. EQUIVALENT PRODUCTS BY A SINGLE SIMILAR MANUFACTURER MAY BE SUBSTITUTED.
4. PROVIDE TRACKS AT EACH END OF STUDS OR JOISTS, GAUGE TO MATCH GAUGE OF STUDS OR JOISTS. AT TRAIL END JOINTS TRACKS MUST BE ANCHORED TO A COMMON STRUCTURAL MEMBER.
5. ALL STUDS, JOISTS, TRACKS, BRIDGING AND CLOSURES, AND ACCESSORIES SHALL BE FORMED FROM STEEL THAT CORRESPONDS TO THE REQUIREMENTS OF AISI SPECIFICATION FOR THE DESIGN OF COLD-FORMED STEEL STRUCTURAL MEMBERS UNLESS NOTED OTHERWISE.
6. MINIMUM YIELD STRENGTH (Fy) FOR MATERIAL IS 33,000 PSI FOR 33 MILS AND 43 MILS MATERIAL, AND 50,000 PSI FOR 54 MILS, 60 MILS AND 91 MILS MATERIALS.
7. INSTALL, FASTEN AND BRACE ALL MEMBERS AND ACCESSORIES PER THE MANUFACTURER'S RECOMMENDATIONS FOR PARTICULAR APPLICATIONS AS NEEDED TO ACHIEVE A COMPLETE METAL FRAMING SYSTEM.
8. STUDS SHALL BE FLUMBED, ALIGNED, AND SECURELY ATTACHED TO THE FLANGES OR WEBS OF BOTH UPPER AND LOWER TRACKS.
9. WALL STUD BRIDGING SHALL BE ATTACHED IN A MANNER TO PREVENT STUD ROTATION. BRIDGING ROUS SHALL BE SPACED ACCORDING TO THE FOLLOWING SCHEDULE: WALLS UP TO 10' HEIGHT: ONE ROW AT MID-HEIGHT, WALLS EXCEEDING 10' HEIGHT: BRIDGING ROUS SPACED NOT TO EXCEED 4' ON CENTER. ALL BRIDGING MUST BE CONTINUOUS FOR FULL LENGTH OF WALL.
10. UNLESS NOTED OTHERWISE, TRACKS SHALL BE SAME DEPTH AS STUDS OR JOISTS AND EQUAL OR THICKER IN GAUGE THAN STUDS OR JOISTS. TRACKS SHALL BE CONNECTED TO SUPPORTS WITH TWO SCREWS OR PINS AT 16" ON CENTER, MAX. STUDS OR JOISTS SHALL BE CONNECTED TO TRACKS ON EACH SIDE.
11. ALL COLD FORM TO COLD FORM CONNECTIONS SHALL BE MADE WITH NO. 10 TENS SCREWS OF APPROPRIATE LENGTH UNLESS OTHERWISE NOTED ON THE PLANS. PENETRATION OF JOINED MATERIAL SHALL NOT BE LESS THAN 3 EXPOSED THREADS.
12. THE NUMBER OF STUDS OR JOISTS DISPLACED OR CUT FOR THE OPENING SHALL BE PLACED HALF ON EACH SIDE OF THE OPENING UNLESS NOTED OTHERWISE. (2) STUDS MINIMUM EACH SIDE OF OPENING.
13. FRAMED WALL OPENINGS SHALL INCLUDE HEADERS AND SUPPORTING STUDS AS SHOWN ON THE PLANS. MINIMUM 2 STUDS FULL HEIGHT EACH SIDE OF OPENING.
14. TEMPORARY BRACING SHALL BE PROVIDED UNTIL ERECTION IS COMPLETE AND ALL ATTACHED ADJACENT FRAMING IS COMPLETE.
15. WALL SHEATHING: SEE PLAN SECTIONS.
16. SUBMIT COMPLETE SHOP DRAWINGS PREPARED UNDER THE IMMEDIATE DIRECTION OF A REGISTERED PROFESSIONAL ENGINEER. SHOP DRAWINGS SHALL INDICATE SIZE, LOCATION ASSEMBLY, INSTALLATION DETAIL, METHOD OF FASTENING OF ALL LIGHT GAUGE METAL. DESIGN OF STUDS SHALL CONFORM TO LOAD CRITERIA NOTED ON DRAWINGS WITH MAXIMUM STUD DEFLECTION OF L/240 OF STUD LENGTH (1/360 FOR SIMULATED STONE WALLS OR STUCCO FINISHES, 1/600 FOR BRICK OR STONE VENEER WALLS). ALLOW 10 BUSINESS DAYS FOR REVIEW. DO NOT FABRICATE BEFORE SHOP DRAWING APPROVAL.

STRUCTURAL WOOD:

- 1. COMPLY WITH THE AMERICAN WOOD COUNCIL NATIONAL DESIGN SPECIFICATIONS (NDS) FOR WOOD CONSTRUCTION, LATEST EDITION.
2. MINIMUM DESIGN VALUES FOR FLOOR/ROOF JOIST FRAMING, HEM-FIR OR SPRUCE-PINE-FIR NO. 2 OR BETTER AS PUBLISHED IN THE NDS SUPPLEMENT, WITH THE APPLICABLE ADJUSTMENT FACTORS, SUBMIT CERTIFICATION OF MATERIAL GRADE AND SPECIES BEFORE INSTALLATION OR ASSEMBLY. ALL WOOD FRAMING MATERIAL SHALL BE SURFACED DRY WITH 19% MAXIMUM MOISTURE CONTENT.
3. WOOD SUBJECT TO EXTERIOR EXPOSURE OR IN CONTACT WITH MASONRY OR CONCRETE OR AT ABOVE-GROUND LOCATIONS SPECIFIED IN IBC SECTION 2304.11 SHALL BE NO. 2 OR BETTER, TREATED PER AMERICAN WOOD PRESERVERS ASSOCIATION (AWPA) STANDARD U1.
4. FRAMING HANGERS, CLIPS, AND ANCHORS ASTM A306, 1/8" GAUGE MINIMUM THICKNESS, UNLESS NOTED OTHERWISE. INSTALL PER MANUFACTURER'S RECOMMENDATIONS. AT A MINIMUM, PROVIDE BETWEEN EACH BEAM, JOIST, RAFTER OR PURLIN AND SUPPORTING MEMBER. ALL CONNECTORS TO HAVE 2-MAX COATING.
5. FASTENERS AND CONNECTORS IN CONTACT WITH PRESERVATIVE-TREATED OR FIRE-RETARDANT-TREATED WOOD SHALL BE PER IBC SECTION 2304.10.5.3 AND 2305.10.5.4.
6. WALL SHEATHING: GROUP 1 APA RATED SHEATHING, 1/2" MINIMUM SPAN RATING 24/16. EXPOSURE 1. FASTEN WITH #8 SCREWS AT 16" O.C. ALONG PANEL EDGES, 12" O.C. LONG INTERMEDIATE SUPPORTS. PROVIDE BLOCKING BETWEEN STUDS BEHIND EDGES.
7. ROOF SHEATHING: GROUP 1 APA RATED SHEATHING, NOMINAL THICKNESS 3/4", MINIMUM SPAN RATING 32/16, EXPOSURE 1.
8. PROVIDE BLOCKING, BRACING, AND BRIDGING PER IBC CODE.
9. NAIL PER THE IBC FASTENING SCHEDULE.

METAL PLATE CONNECTED WOOD ROOF TRUSSES:

- 1. DESIGN DETAIL, AND INSTALL PREFABRICATED TRUSSES INCLUDING ERECTION BRACING AND SPECIAL REINFORCEMENT PER IBC SECTION 2303.4 AND THE FOLLOWING:
TP1 NATIONAL DESIGN STANDARD FOR METAL-PLATE-CONNECTED WOOD TRUSS CONSTRUCTION. NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION (NDS) AMERICAN FOREST AND PAPER ASSOCIATION (AFPA).
BUILDING COMPONENT SAFETY INFORMATION BC01 2008. GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING, RESTRAINING & BRACING OF METAL PLATE CONNECTED WOOD TRUSSES.
TP1 D08 RECOMMENDED DESIGN SPECIFICATION FOR TEMPORARY BRACING OF METAL PLATE CONNECTED WOOD TRUSSES.
2. MINIMUM DESIGN LOADS FOR PREFABRICATED ROOF TRUSSES:
TOP CHORD: LIVE LOAD = 10 PSF DEAD LOAD = 10 PSF
BOTTOM CHORD: LIVE LOAD = 10 PSF DEAD LOAD = 10 PSF
3. DEFLECTION CRITERIA:
ROOF TRUSSES, SPAN / 360 SNOW LOAD, SPAN/240 TOTAL LOAD
PROVIDE PERMANENT BRACING PER TP1 (D08) RECOMMENDATIONS, AS SHOWN ON THE CONSTRUCTION DOCUMENTS AND AS REQUIRED BY THE TRUSS DESIGNER. PROVIDE PERMANENT ROUS OF DIAGONAL CROSS BRACING AT MAXIMUM 16' CENTERS ALONG THE END WALLS, AND REPEATED AT A MAXIMUM 20' INTERVALS ALONG THE LENGTH OF THE ROOF. CROSS BRACING TO BE ANCHOR TO THE GABLE END TRUSS OR END WALL. MINIMUM SIZE OF BRACING: 2X4. ATTACH BRACING TO TRUSSES AND END WALLS WITH MINIMUM (2) 1/2" NAILS.
4. ERECTION BRACING IS ALWAYS REQUIRED. PROFESSIONAL ADVICE SHOULD ALWAYS BE SOUGHT TO PREVENT TOPPLING OR COLLAPSING (CASCADING COLLAPSE) OF TRUSSES DURING INSTALLATION. THE CONTRACTOR SHALL PROVIDE BRACING AS REQUIRED FOR SAFE ERECTION AND PERFORMANCE OF TRUSSES. THE GUIDELINES SET FORTH BY BC01 2008 SHALL BE A MINIMUM REQUIREMENT.
5. SUBMIT A COMPLETE SET OF SHOP DRAWINGS, INCLUDING DESIGN CALCULATIONS WITH LOADINGS, STRESS DIAGRAMS, AND ALLOWABLE STRESSES, PLATE AND MEMBER SIZES, SPLICE LOCATIONS, MEMBER BRACING REQUIREMENTS, ETC., SEALED BY A REGISTERED PROFESSIONAL ENGINEER. ALLOW A MINIMUM OF 10 BUSINESS DAYS FOR REVIEW. DO NOT FABRICATE TRUSSES BEFORE SHOP DRAWING APPROVAL.
6. MANUFACTURER SHALL FURNISH DESIGN DRAWINGS BEARING SEAL AND REGISTRATION NUMBER OF A CIVIL OR STRUCTURAL ENGINEER LICENSED IN STATE WHERE TRUSSES ARE TO BE INSTALLED. DRAWINGS SHALL BE APPROVED BY ARCHITECT PRIOR TO FABRICATION.
7. FOR TRUSSES SPANNING 60'-0" OR GREATER, THE OWNER SHALL CONTRACT WITH A QUALIFIED REGISTERED DESIGN PROFESSIONAL FOR THE DESIGN OF TEMPORARY INSTALLATION RESTRAINT/BRACING.

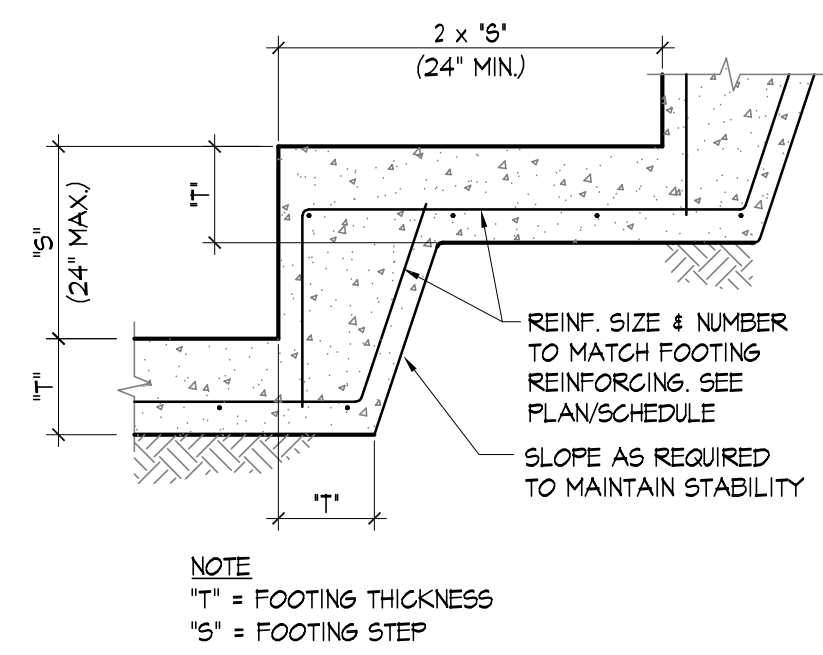
TRUSS DESIGN DRAWINGS SHALL INCLUDE AS MINIMUM INFORMATION:

- a. SPAN, DEPTH OR SLOPE AND SPACING OF TRUSSES;
b. LOCATION OF ALL JOINTS AND SUPPORT LOCATIONS;
c. NUMBER OF FLIES IF GREATER THAN ONE;
d. REQUIRED BEARING WIDTH
e. DESIGN LOADS, AS APPLICABLE:
TOP CHORD LIVE LOAD
TOP CHORD DEAD LOAD
BOTTOM CHORD LIVE LOAD
BOTTOM CHORD DEAD LOAD
ADDITIONAL LOADS AND LOCATIONS
ENVIRONMENTAL DESIGN CRITERIA AND LOADS (WIND, RAIN, SNOW, SEISMIC, ETC.)
f. OTHER LATERAL LOADS, INCLUDING DRAG STRUT LOADS;
g. ADJUSTMENT TO LUMBER AND PLATE DESIGN LOADS FOR CONDITION OF USE;
h. MAXIMUM REACTION FORCE AND DIRECTION, INCLUDING MAXIMUM UPLIFT REACTION FORCES WHERE APPLICABLE;
i. METAL CONNECTOR PLATE TYPE, SIZE AND THICKNESS OR GAGE, AND THE DIMENSIONAL LOCATION OF EACH METAL CONNECTOR PLATE EXCEPT WHERE SYMMETRICALLY LOCATED RELATIVE TO THE JOINT INTERFACE;
j. SIZE, SPECIES AND GRADE FOR EACH WOOD MEMBER;
k. TRUSS-TO-TRUSS CONNECTIONS AND TRUSS FIELD ASSEMBLY REQUIREMENTS;
l. CALCULATED SPAN-TO-DEFLECTION RATIO AND MAXIMUM VERTICAL AND HORIZONTAL DEFLECTION FOR LIVE AND TOTAL LOAD AS APPLICABLE;
m. MAXIMUM AXIAL TENSION AND COMPRESSIVE FORCES IN TRUSS MEMBERS
n. REQUIRED PERMANENT INDIVIDUAL TRUSS MEMBER RESTRAINT LOCATION AND THE METHOD AND DETAILS OF RESTRAINT/BRACING TO BE USED PER IBC SECTION 2303.4.12
10. LUMBER USED FOR TRUSS MEMBERS SHALL BE IN ACCORDANCE WITH PUBLISHED VALUES OF LUMBER RULES WRITING AGENCIES APPROVED BY BOARD OF REVIEW OF AMERICAN LUMBER STANDARDS COMMITTEE. LUMBER SHALL BE IDENTIFIED BY GRADE MARK OF A LUMBER INSPECTION BUREAU OR AGENCY APPROVED BY THAT BOARD, AND SHALL BE AS SHOWN ON DESIGN DRAWINGS.
a. MOISTURE CONTENT OF LUMBER SHALL BE NO LESS THAN 1 PERCENT NOR GREATER THAN 18 PERCENT AT TIME OF FABRICATION.
b. ADJUSTMENT OF VALUES FOR DURATION OF LOAD OR CONDITIONS OF USE SHALL BE IN ACCORDANCE WITH NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION (NDS).
11. METAL CONNECTOR PLATES:
a. METAL CONNECTOR PLATES SHALL BE NOT LESS THAN 2/16" INCHES IN THICKNESS (20 GAUGE) AND SHALL MEET OR EXCEED ASTM GRADE 4 OR HIGHER, AND SHALL BE HOT DIPPED GALVANIZED ACCORDING TO ASTM A653 (COATING G-60).
12. TRUSS FABRICATION
a. TRUSSES SHALL BE FABRICATED IN A PROPERLY EQUIPPED MANUFACTURING FACILITY OF A PERMANENT NATURE. TRUSSES SHALL BE MANUFACTURED BY EXPERIENCED WORKERS USING INSTALLATION CUTTING AND PRESSING EQUIPMENT, MEETING THE REQUIREMENTS OF ANSI/TP1 I. TRUSS MEMBERS SHALL BE ACCURATELY CUT TO LENGTH AND TRUE TO LINE TO ASSURE PROPER FITTING JOINTS WITHIN TOLERANCES OUTLINED IN ANSI/TP1 I AND PROPER FIT WITH OTHER WORK.
13. NO FIELD ALTERATION OF PREFABRICATED TRUSSES IS PERMITTED UNLESS DONE PER TRUSS MANUFACTURER'S APPROVED MODIFICATION DETAILS.
14. INSTALL ROOF SHEATHING ON ALL ROOF TRUSSES PRIOR TO INSTALLATION OF OVER FRAMING.
15. MINIMUM NOMINAL TOP AND BOTTOM CHORD SIZES, 2x4 UP TO 40' SPAN, 2x6 TRUSSES LONGER THAN 40'.
16. ROOF TRUSSES SHALL HAVE BUILT-IN DEAD LOAD CAMBER OF 1/8" OF DEAD LOAD.
17. PROVIDE CLIP OR HANGER AT BOTH ENDS AND ALL BEARINGS OF EACH TRUSS; ASTM A653, GALVANIZED, 18 GAUGE MINIMUM.

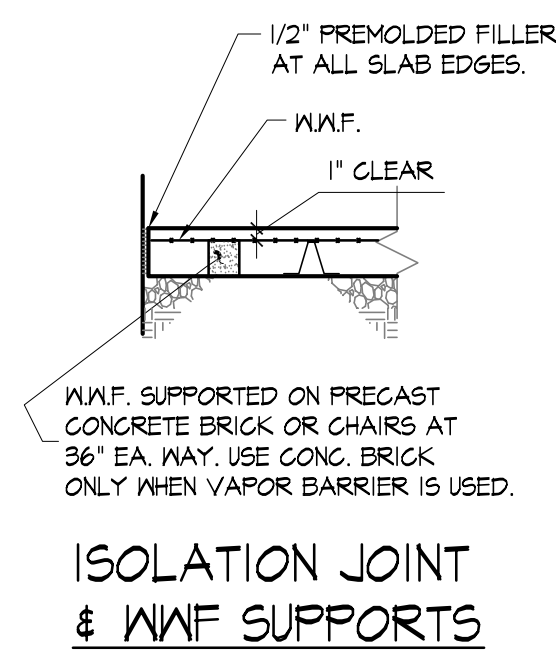
ABBREVIATIONS:

OTHER ABBREVIATIONS PER CSI UNIFORM DRAWING SYSTEM:

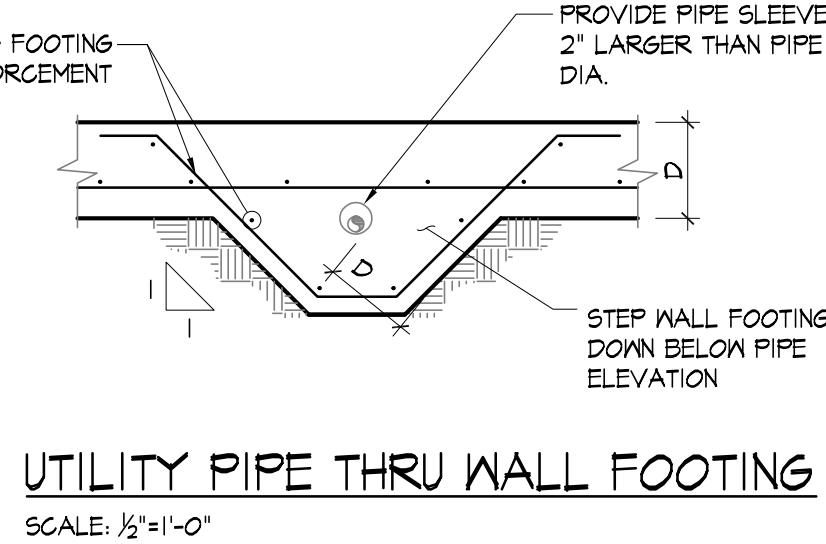
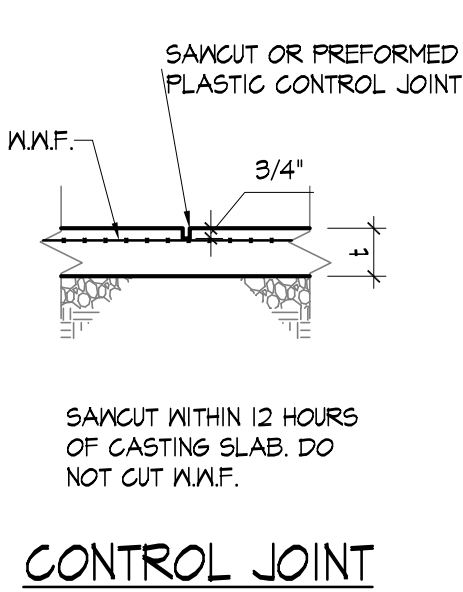
Table with columns: OTHER ABBREVIATIONS PER CSI UNIFORM DRAWING SYSTEM, FDN, FOUNDATION, SCHED, SCHEDULE. Includes entries for AB (ANCHOR BOLT), ADJ (ADJACENT), AFF (ABOVE FINISH FLOOR), ALT (ALTERNATE), APPROX (APPROXIMATE), ARCH (ARCHITECT, ARCHITECTURAL), GA (GAGE), GALV (GALVANIZED), GR (GRADE), GR BM (GRADE BEAM), BC (BOTTOM CHORD), BCB (BOTTOM CHORD EXTENSION), BEF (BOTTOM OF EXISTING FOOTING), BEGB (BOTTOM OF EXISTING GRADE), BEAM, BLDG (BUILDING), BLKG (BLOCKING), BOF (BOTTOM OF FOOTING), BOT (BOTTOM), BRG (BEARING), BS (BOTH SIDES), BW (BOTH WAY), CIP (CAST IN PLACE), CJ (CONTROL JOINT), CLG (CELLAR), CLR (CLEAR), CMU (CONCRETE MASONRY), COL (COLUMN), CONC (CONCRETE), CONN (CONNECTION), CONST (CONSTRUCTION), CONT (CONTINUOUS), DBL (DOUBLE), DET (DETAIL), DIA (DIAMETER), DIM (DIMENSION), DWG (DRAWING), EA (EACH), EL (ELEVATION), EQ (EQUAL), EQUIP (EQUIPMENT), EW (EACH WAY), EXIST (EXISTING), EXP (EXPANSION), EXT (EXTERIOR), FDN (FOUNDATION), FIN (FINISH), FL (FLANGE), FLR (FLOOR), FS (FAR SIDE), FTG (FOOTING), GA (GAGE), GALV (GALVANIZED), GR (GRADE), GR BM (GRADE BEAM), BC (BOTTOM 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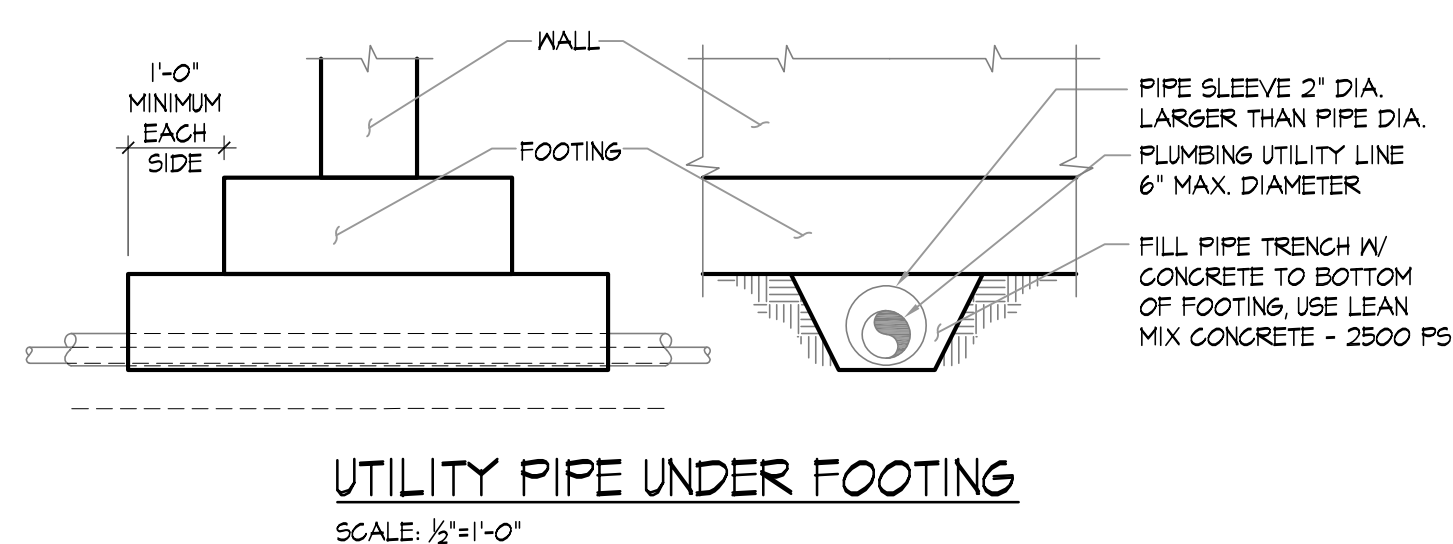
TYPICAL STEPPED FOOTING DETAIL
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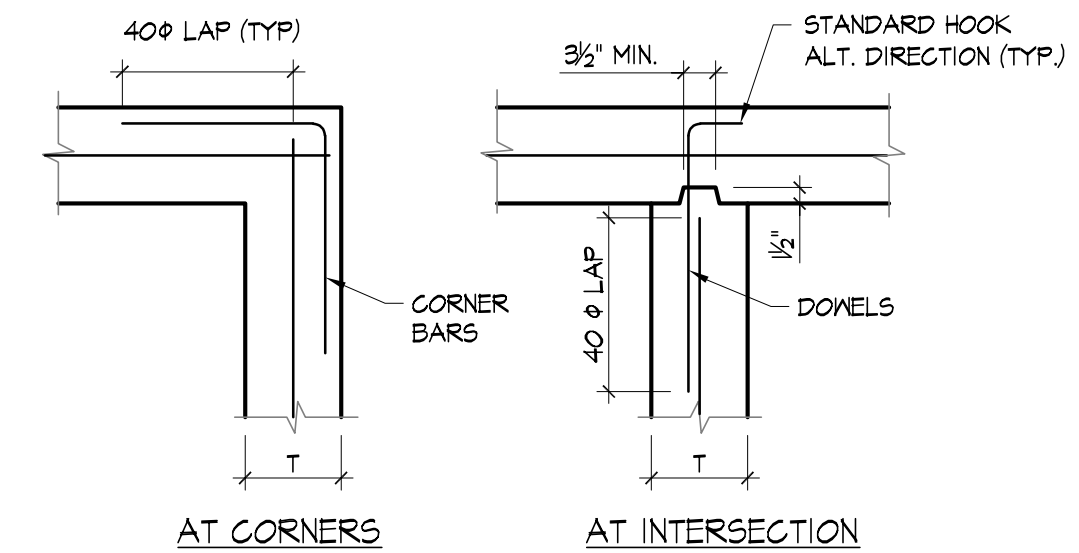
TYPICAL SLAB-ON-GRADE JOINT DETAILS
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UTILITY PIPE THRU WALL FOOTING
SCALE: 1/2" = 1'-0"

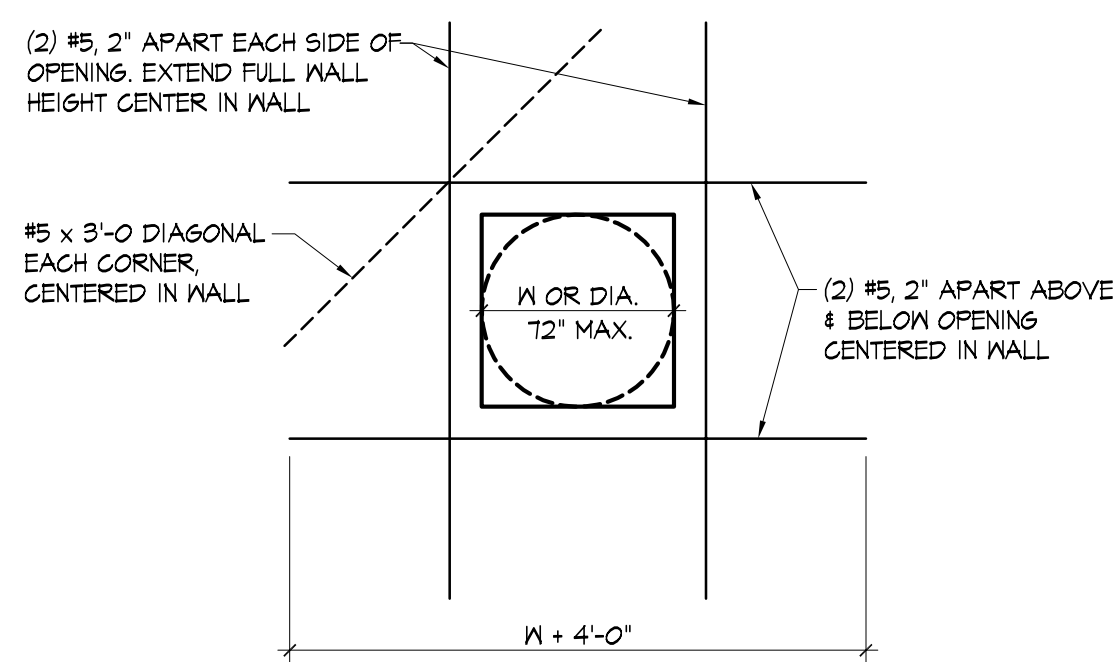


UTILITY PIPE UNDER FOOTING
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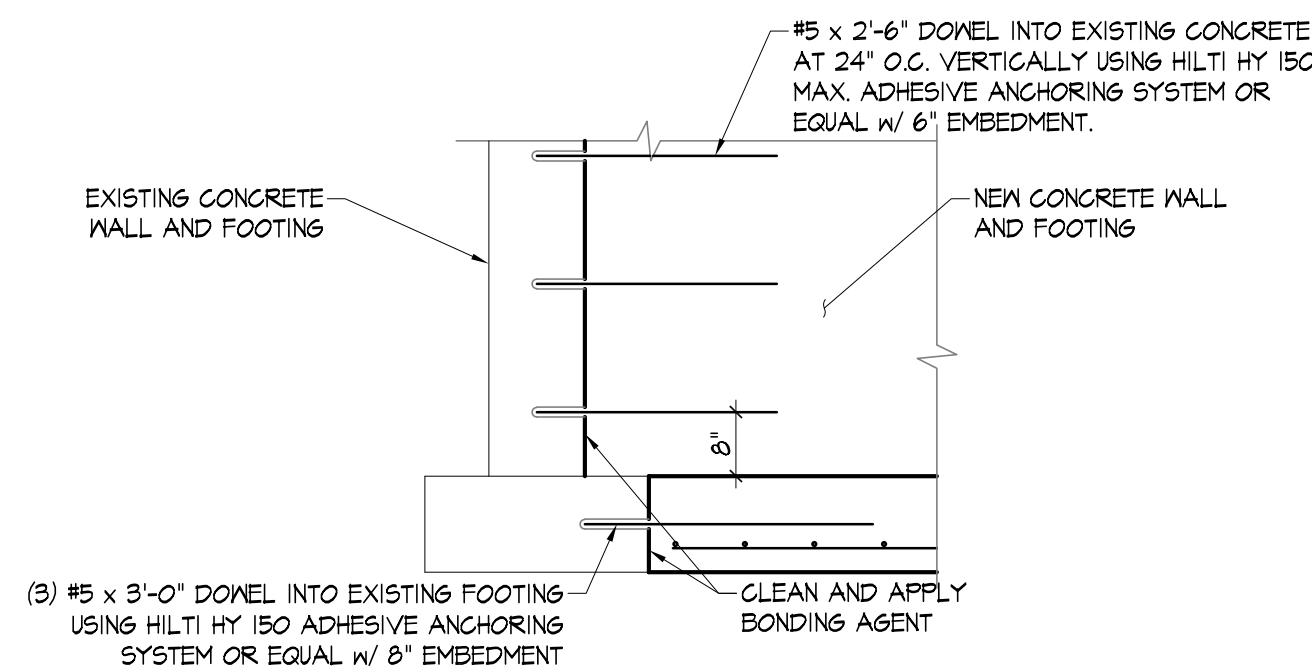


CONCRETE WALL CORNER DETAILS
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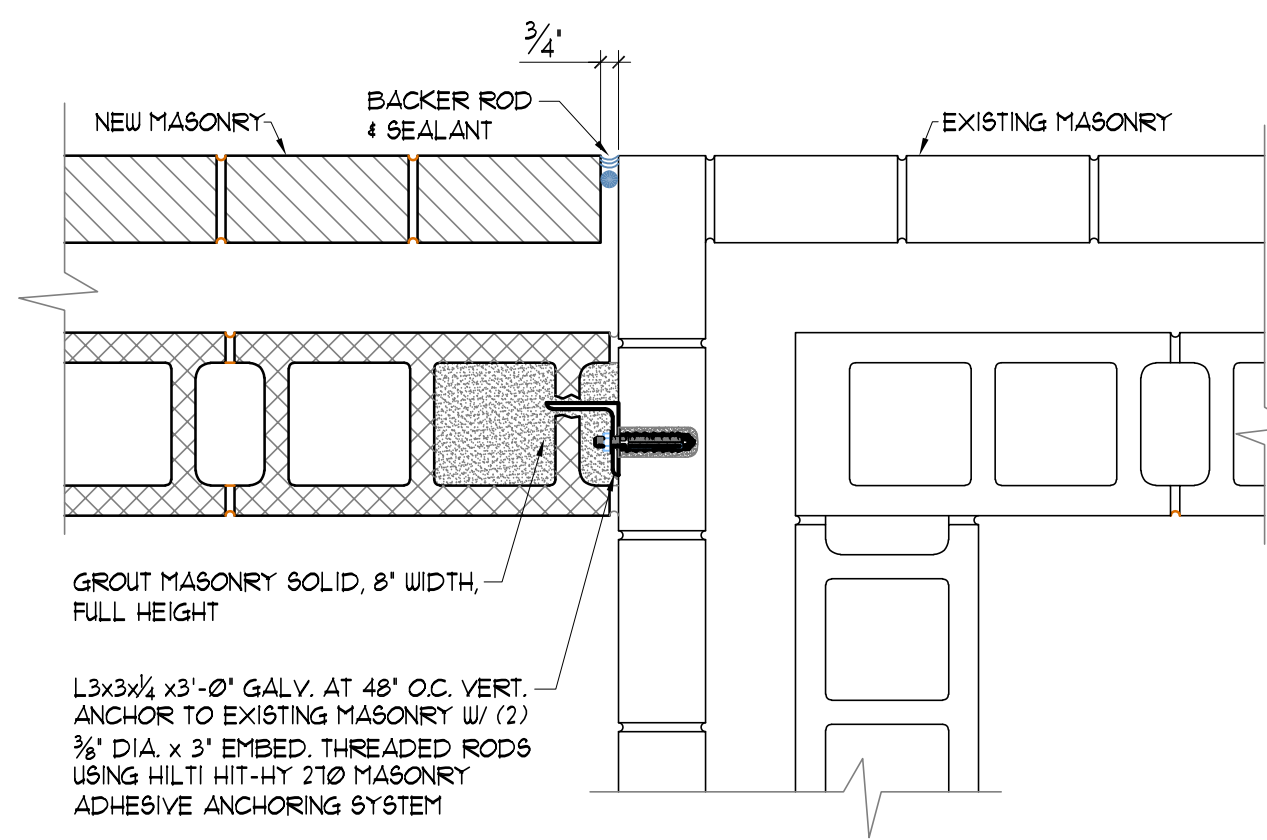
- NOTE:
1. CORNER AND DONEL BAR SIZES TO MATCH WALL HORIZONTAL REINFORCING SIZES.
2. VERTICAL REINFORCING OMITTED FOR CLARITY.



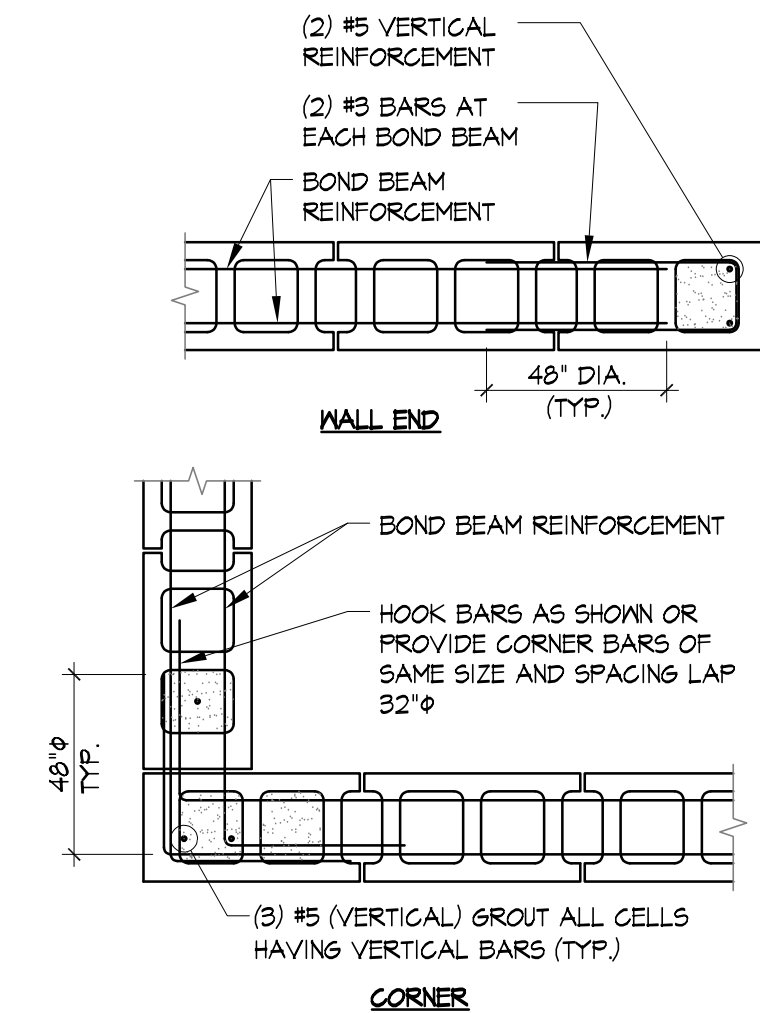
TYPICAL WALL PENETRATION DETAIL



TYPICAL DETAIL WHERE NEW CONCRETE FOUNDATION WALL AND FOOTING MEETS EXISTING
SCALE: 1/2" = 1'-0"

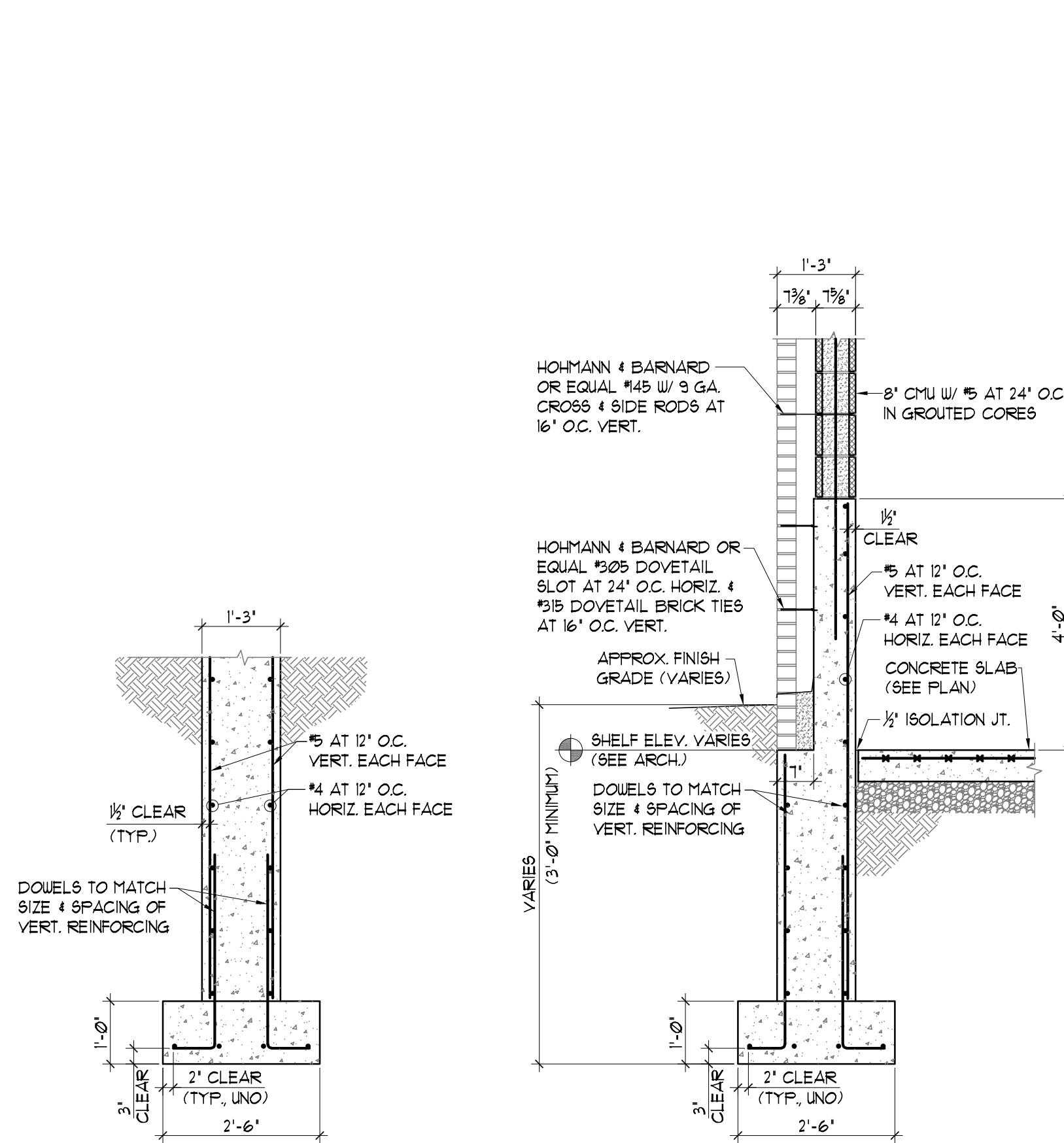


TYP. DETAIL WHERE NEW MASONRY MEETS EXISTING
SCALE: 1/2" = 1'-0"

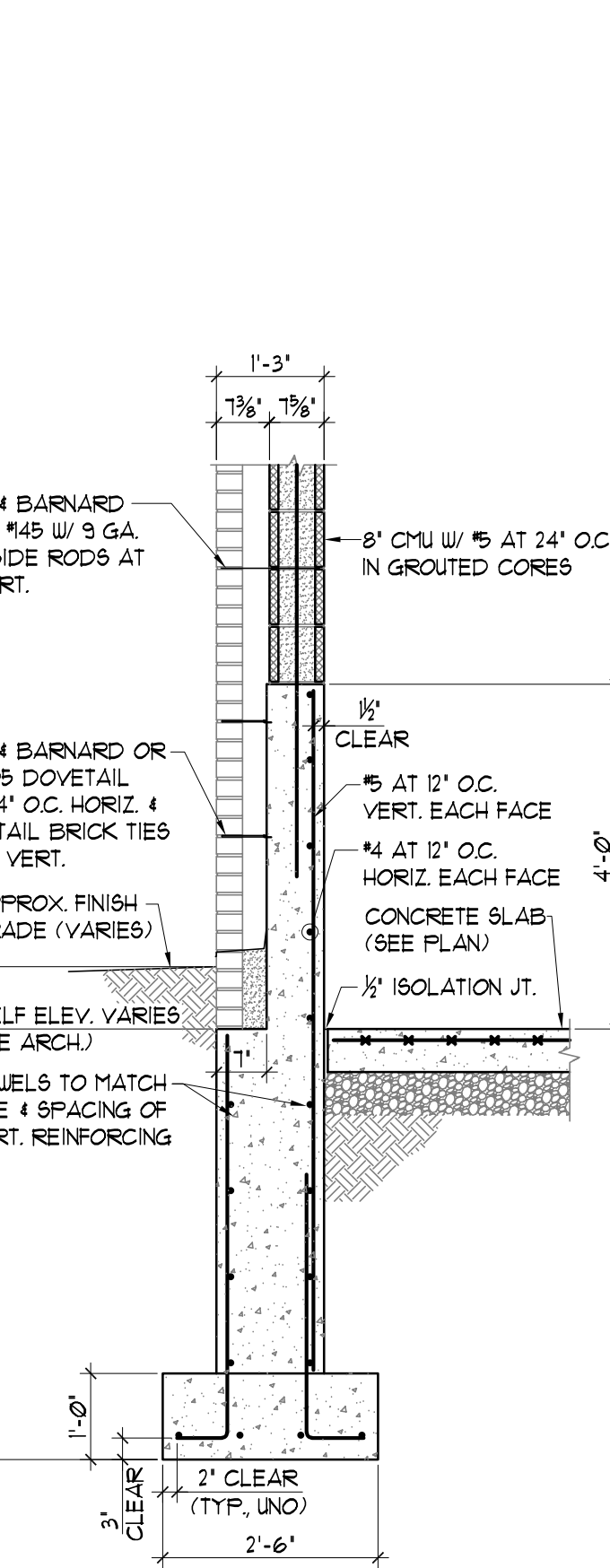


TYP. MASONRY WALL DETAIL
SCALE: 3/4" = 1'-0"

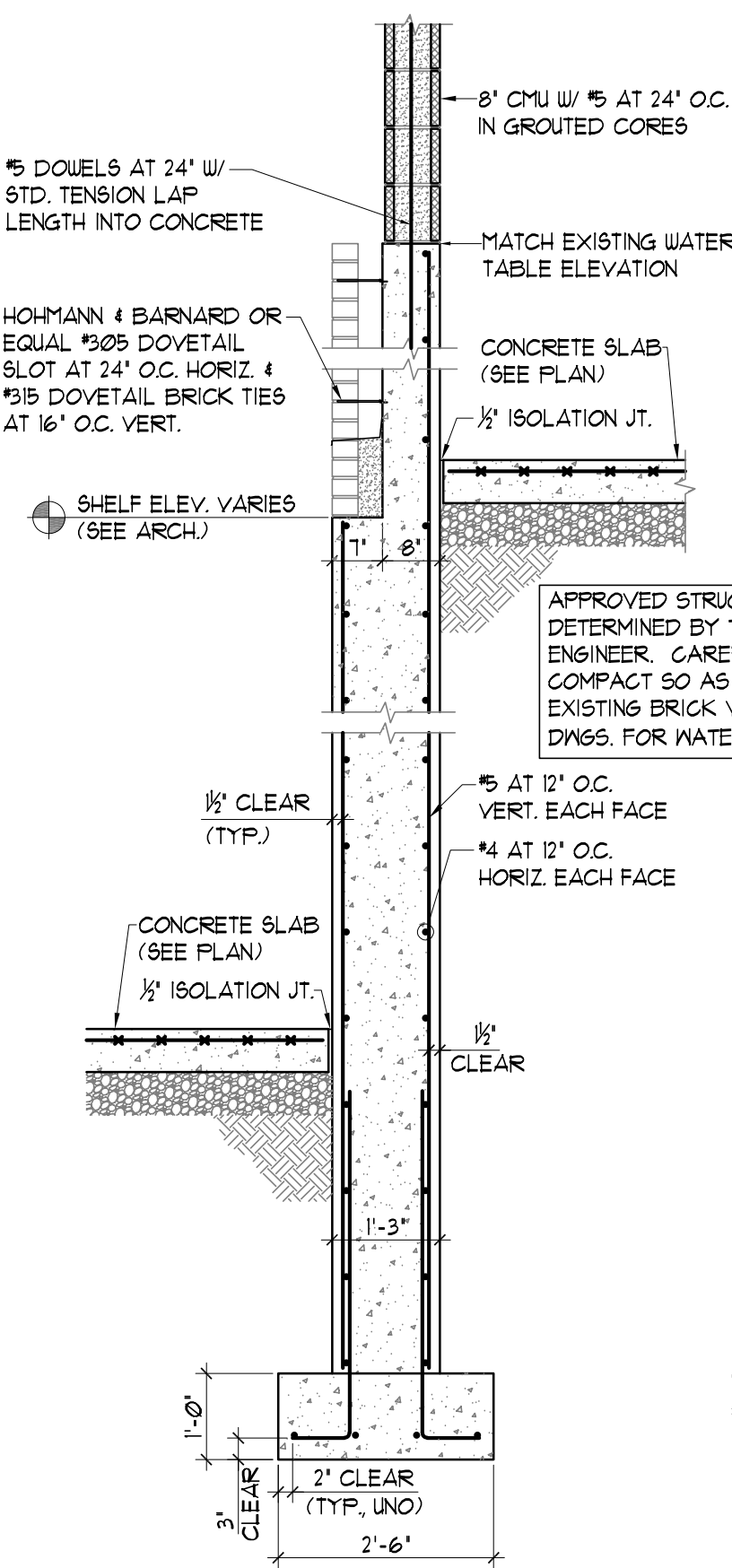
- NOTE:
1. CORNERS AND INTERSECTIONS UNLESS OTHERWISE NOTED OR SPECIFIED AT POINTS WHERE CONCRETE MASONRY WALLS MEET OR INTERSECT, LAY 50% OF UNITS IN MASONRY BOND WITH ALTERNATE 4 INCHES ON THE UNIT BELOW.
2. DONNELS UNLESS OTHERWISE NOTED OR SPECIFIED, PROVIDE DONNELS FROM CONCRETE FOOTING OR WALL BELOW WITH SAME SIZE AND SPACING AS VERTICAL BARS AT LEVEL BELOW. LAP 32 BAR DIAMETERS MINIMUM UNDO.
3. SEE GENERAL NOTES FOR HORIZONTAL REINFORCING.



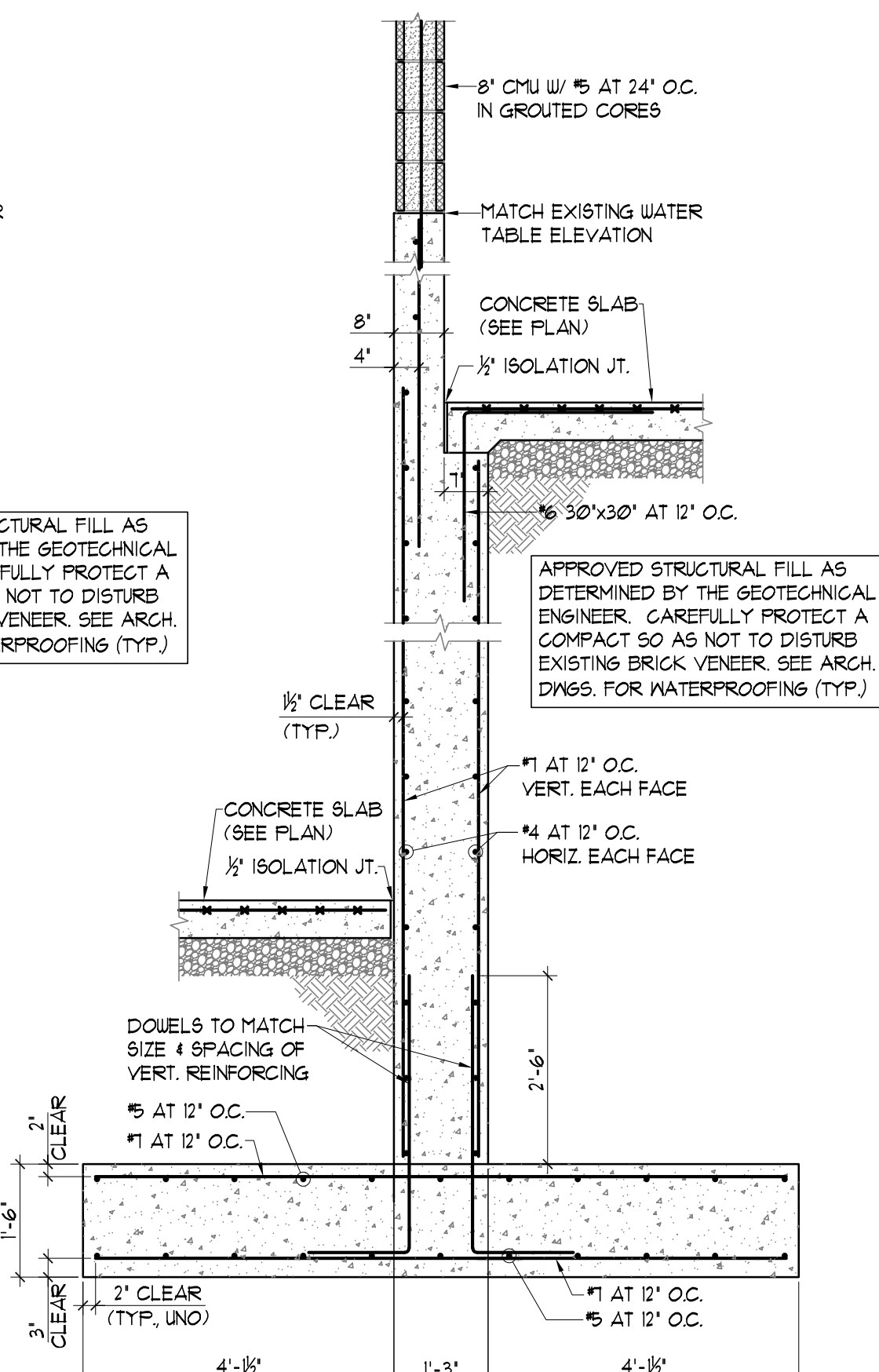
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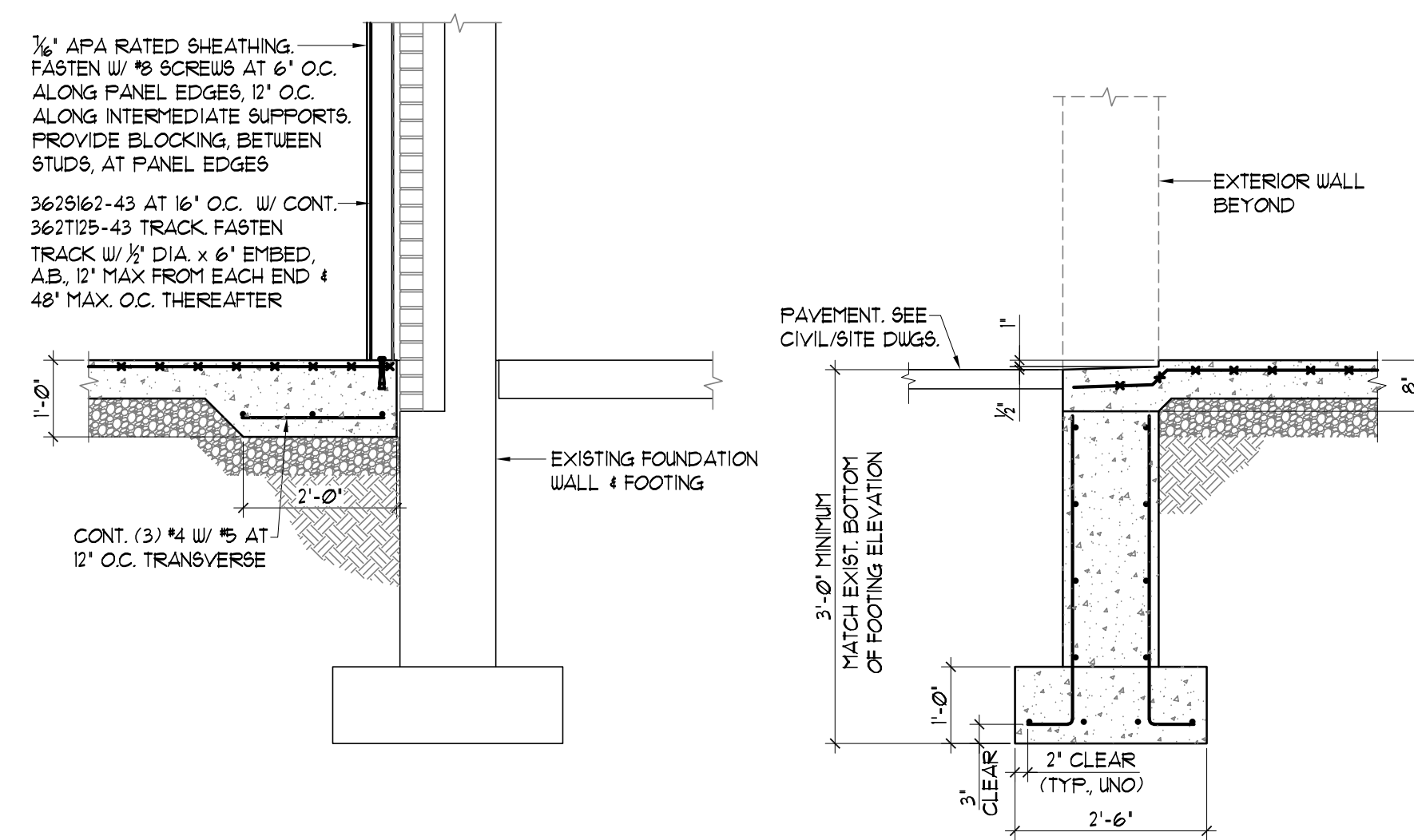
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3 SECTION
SCALE: 1/2" = 1'-0"



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



5 SECTION
SCALE: 1/2" = 1'-0"

6 SECTION
SCALE: 1/2" = 1'-0"



ARCHITECTURE • PLANNING
INTERIOR DESIGN • GRAPHIC ARTS

1309 VEALE ROAD
SUITE 22
WILMINGTON, DE 19810
302.478.3777

256 EAGLEVIEW BLVD.
SUITE 194
EXTON, PA 19341

ISSUED FOR
CONSTRUCTION

LARSEN & LANDIS
STRUCTURAL ENGINEERS
11 W THOMPSON ST PHILADELPHIA, PA 19125
3906 CONCORD FREE, SUITE F, WILMINGTON, DE 19803
PROJECT NO.: 00671

PROJECT NAME

TROOP J

997 Lieds Rd
Coatesville, PA
Chestler County, PA

DRAWING:

SECTIONS & DETAILS

REVISIONS

MARK	DATE	DESCRIPTION
	3.3.2026	ISSUED FOR CONSTRUCTION

PROJECT NO: 2022-123

DRAWN BY: L2

CHK'D BY: JOG

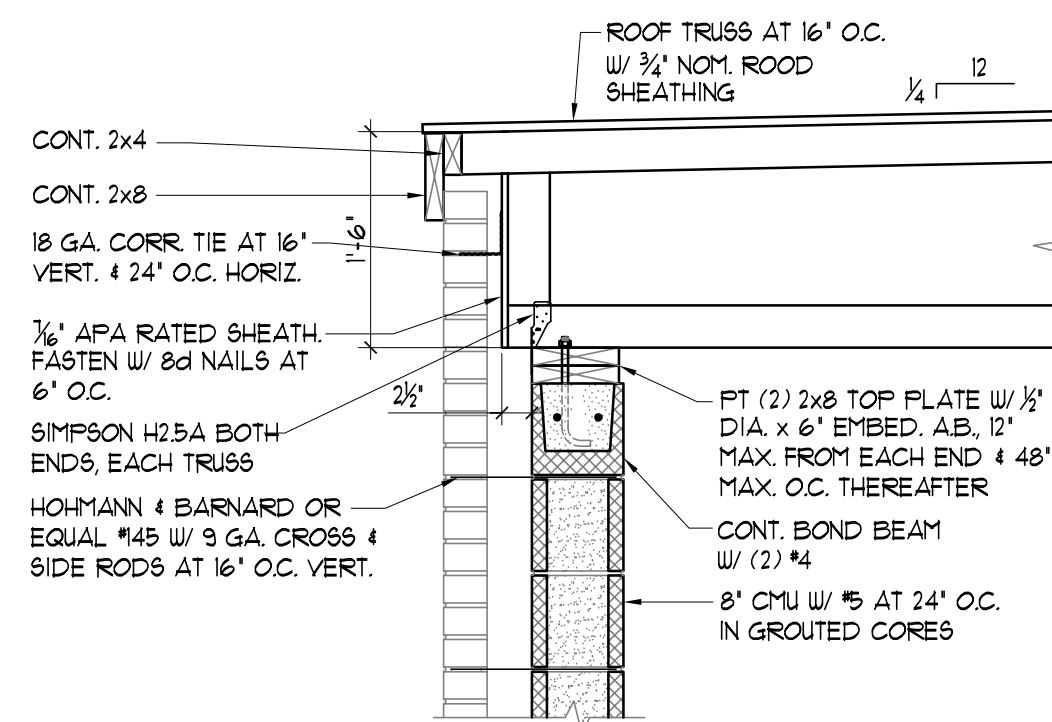
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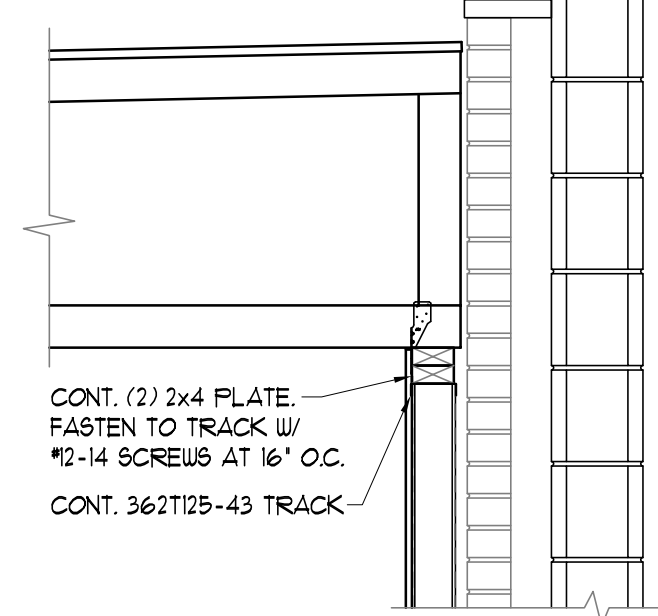
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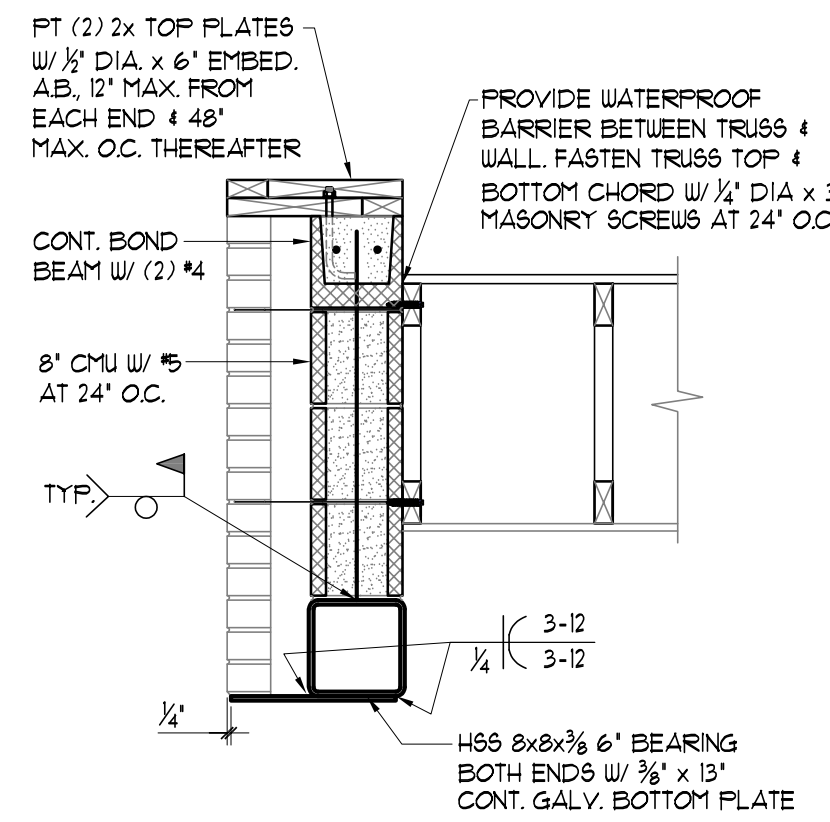
SHEET 3 OF 5



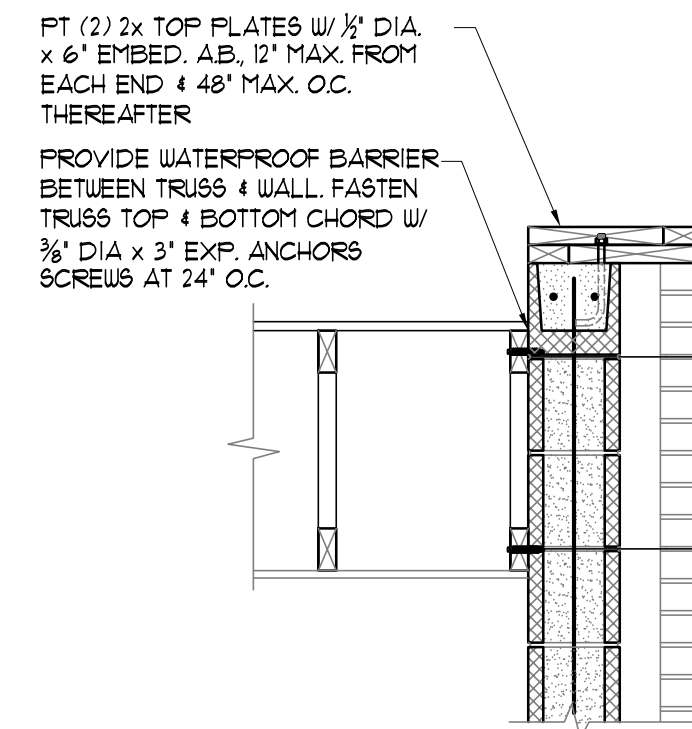
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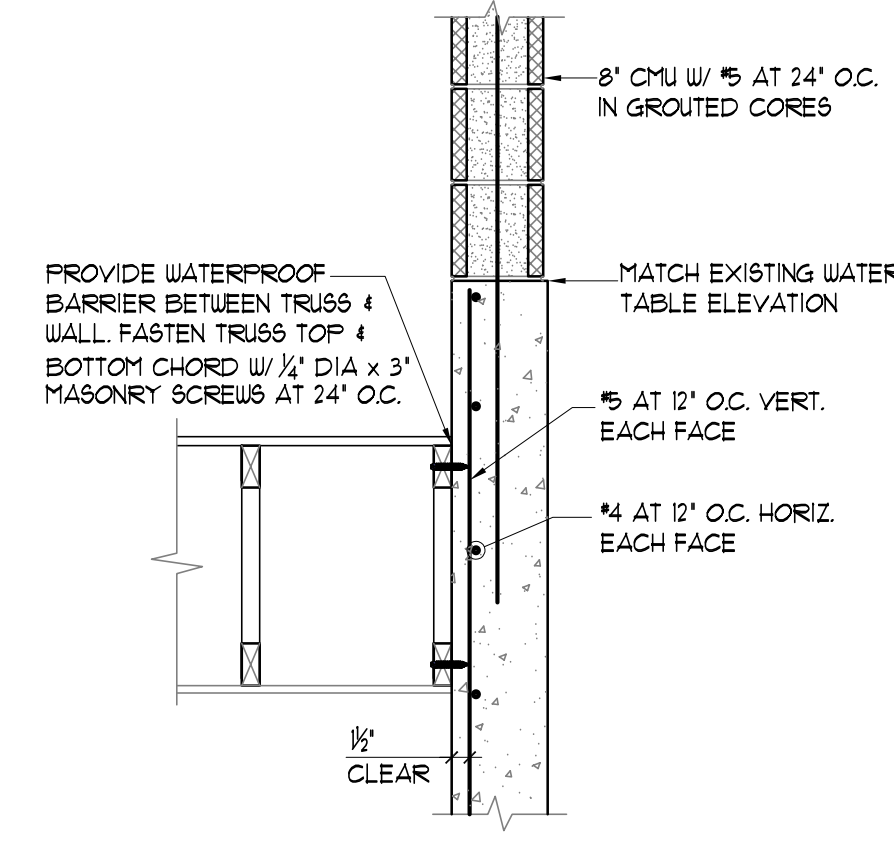
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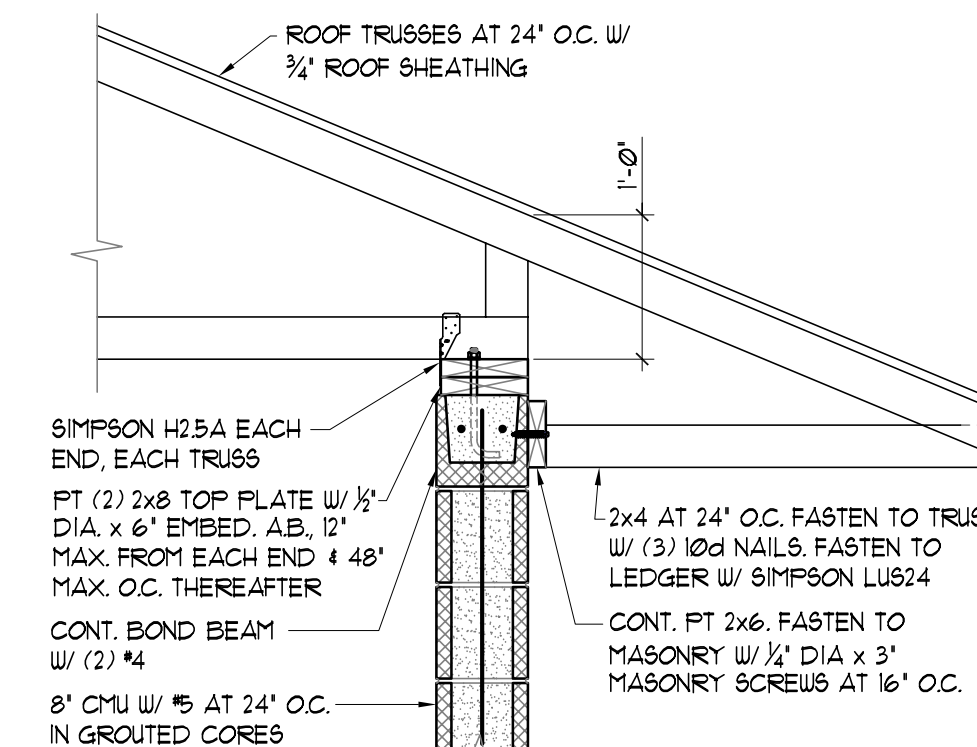
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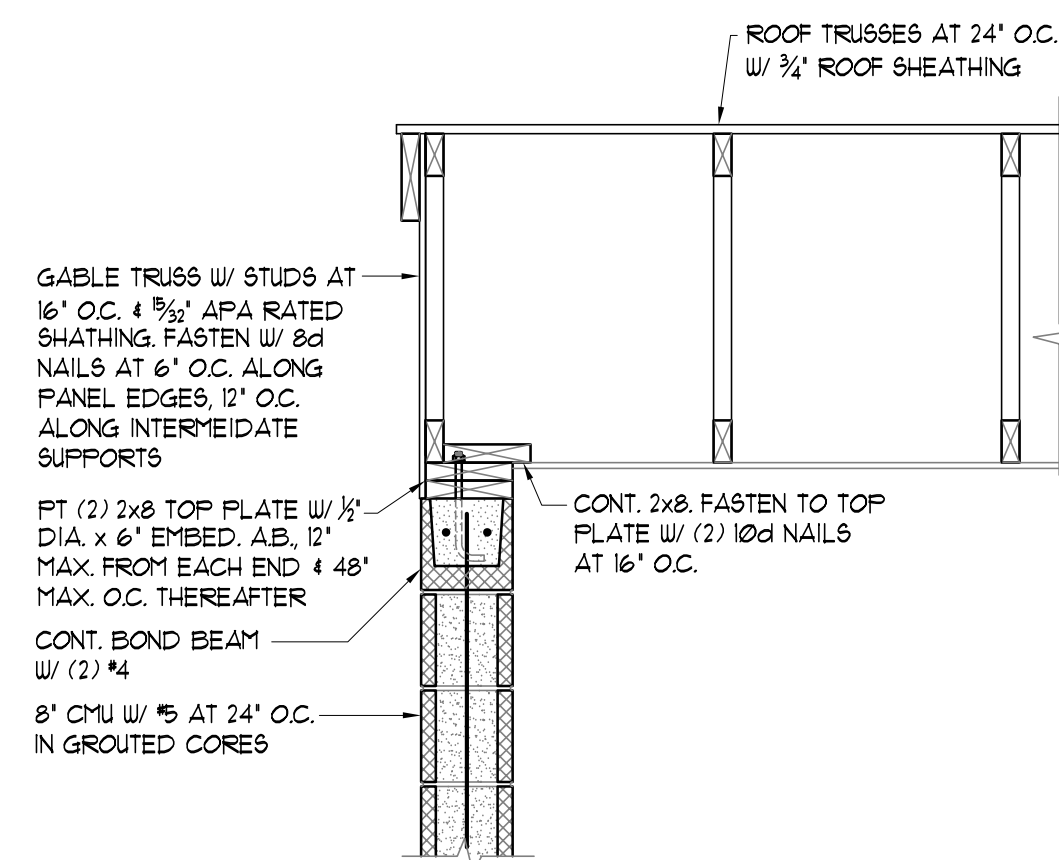
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S3.1 SCALE: 3/4" = 1'-0"



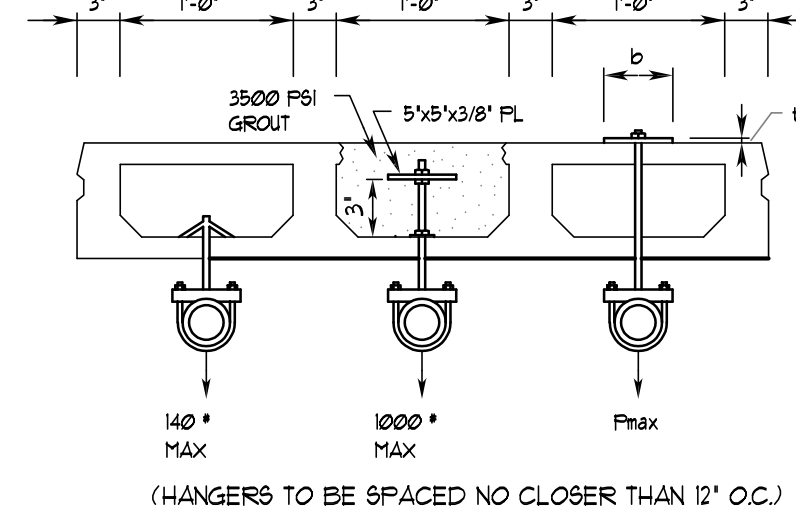
5 SECTION
S3.1 SCALE: 3/4" = 1'-0"



6 SECTION
S3.1 SCALE: 3/4" = 1'-0"

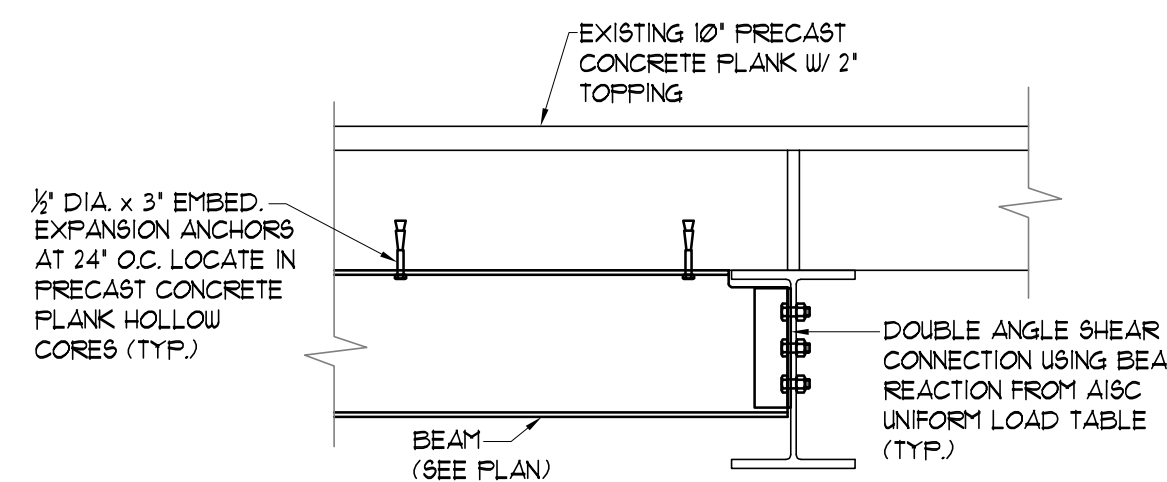


7 SECTION
S3.1 SCALE: 3/4" = 1'-0"

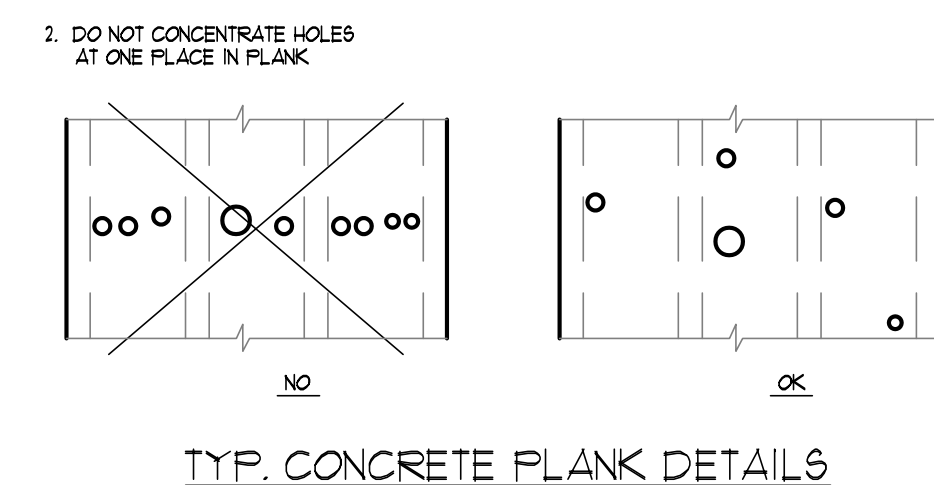
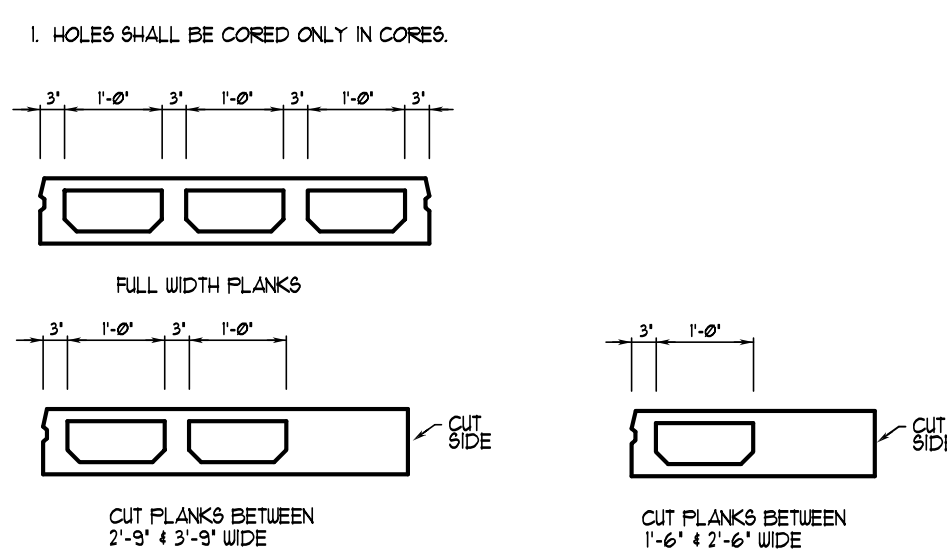


NOTE: FOR LIGHTER LOADS USE FOLDER ACTIVATED FASTENERS WITH A MAXIMUM DEPTH OF 1"

b (in.)	t (in.)	P _{max}
2"	3/8"	245#
3"	3/8"	306#
4"	3/8"	359#
5"	3/8"	449#

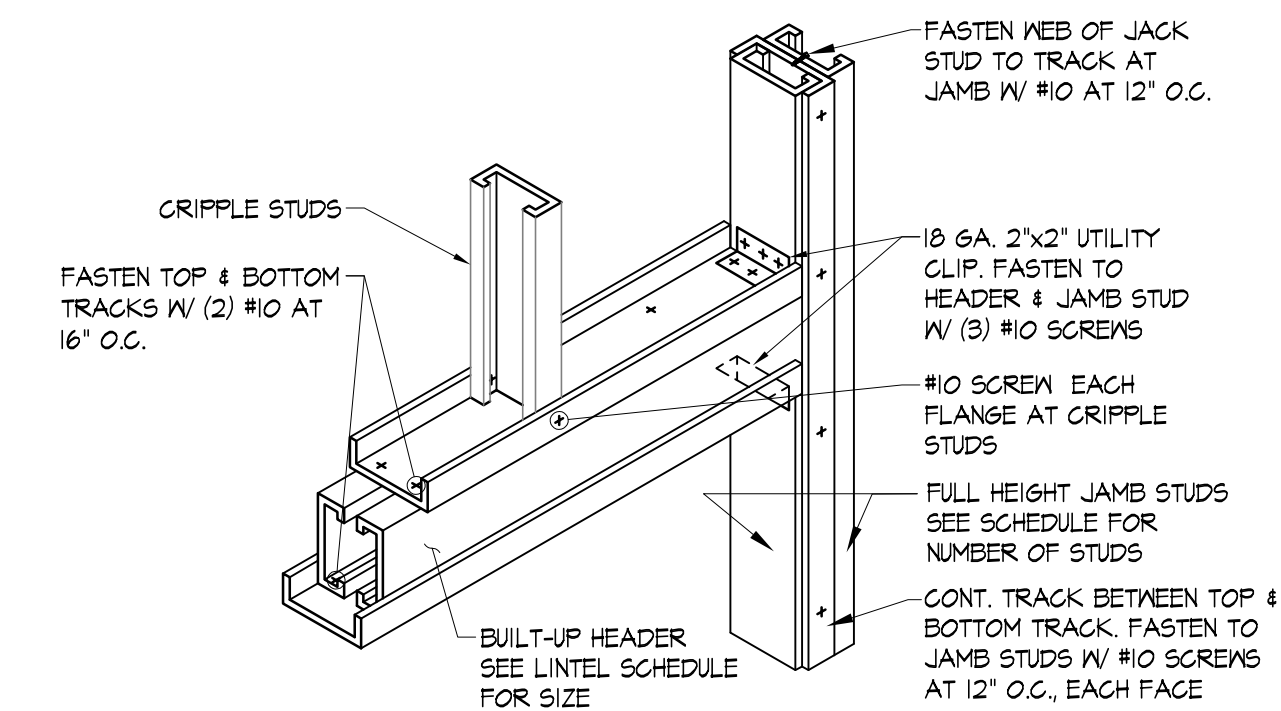


8 SECTION
S3.1 SCALE: 3/4" = 1'-0"



LINTEL SCHEDULE				
MARK	MAXIMUM OPENING WIDTH	BRICK	PRECAST CONCRETE (CONCRETE MASONRY)	3/8" LIGHT-GAUGE METAL
L1	TO 4'-0"	L4x3 3/8"	4" x 8" WITH (1) #3 BOTTOM BAR	(2) 6800S200-43 W/ 800125-43 TOP & BOTTOM TRACKS
L2	4'-0" TO 6'-0"	L5x3 3/8"	4" x 8" WITH (1) #3 TOP AND (1) #4 BOTTOM BAR	
L3	6'-0" TO 8'-0"	L6x3 3/8"	4" x 8" WITH (1) #3 TOP AND (1) #4 BOTTOM BAR	

NOTES:
 1. FOR BRICK AND CONCRETE MASONRY LINTELS, PROVIDE (1) LINTEL FOR EACH 4' WIDTH OF SUPPORTED MASONRY, MINIMUM 6" BEARING BOTH ENDS.
 2. ALL STEEL LINTELS SHALL BE HOT-DIPPED GALVANIZED.
 3. SEE "TYPICAL BOX HEADER DETAIL" FOR LIGHT-GAUGE METAL HEADER ASSEMBLY.



TYPICAL BOX HEADER DETAIL
SCALE: NOT TO SCALE



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1309 VEALE ROAD
SUITE 22
WILMINGTON, DE 19810
302.478.3777

256 EAGLEVIEW BLVD.
SUITE 194
EXTON, PA 19341

ISSUED FOR CONSTRUCTION

LARSEN & LANDIS
STRUCTURAL ENGINEERS
11 W THOMPSON ST PHILADELPHIA, PA 19125
3906 CONCORD PIKE, SUITE F, WILMINGTON, DE 19803
PROJECT NO.: 00671

PROJECT NAME

TROOP J

997 Lieds Rd
Coatesville, PA
Chester County, PA

DRAWING:

SECTIONS & DETAILS

REVISIONS

MARK	DATE	DESCRIPTION
	3.3.2026	ISSUED FOR CONSTRUCTION

PROJECT NO: 2022-123

DRAWN BY: L2

CHK'D BY: JOG

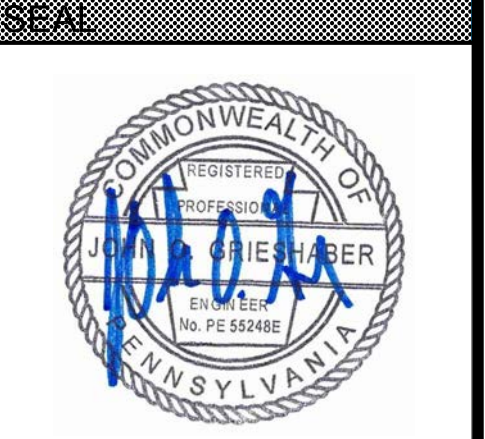
DATE: 03.03.2026

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DRAWING NUMBER

S3.1

SHEET 4 OF 5



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PROJECT NO.: 2022-123

PROJECT NAME

TROOP J

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Chester County, PA

DRAWING:

ROOF TRUSS BRACING

REVISIONS

MARK	DATE	DESCRIPTION
	3.3.2026	ISSUED FOR CONSTRUCTION

PROJECT NO: 2022-123

DRAWN BY: L2

CHK'D BY: JOG

DATE: 03.03.2026

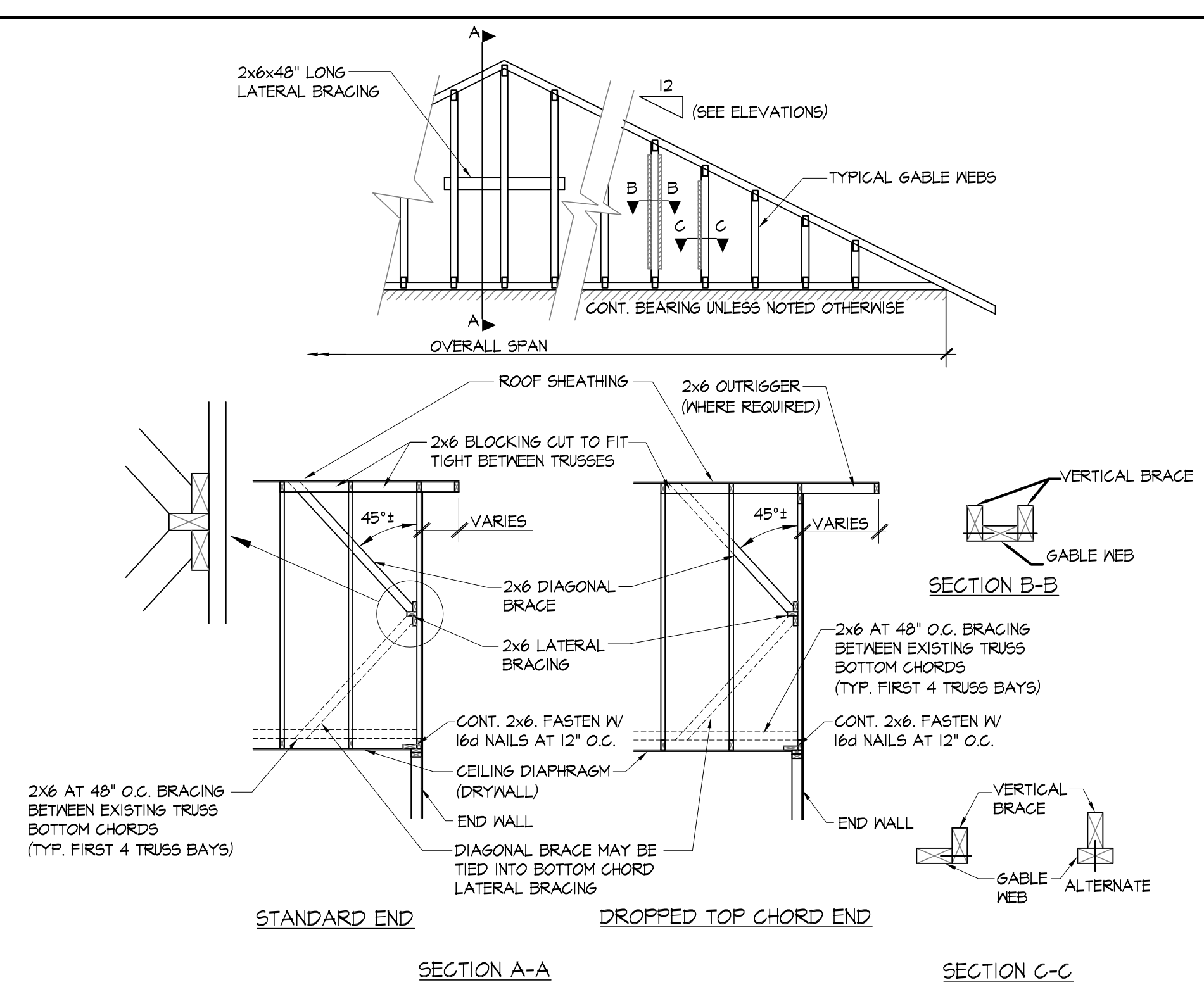
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S3.2

SHEET 5 OF 5

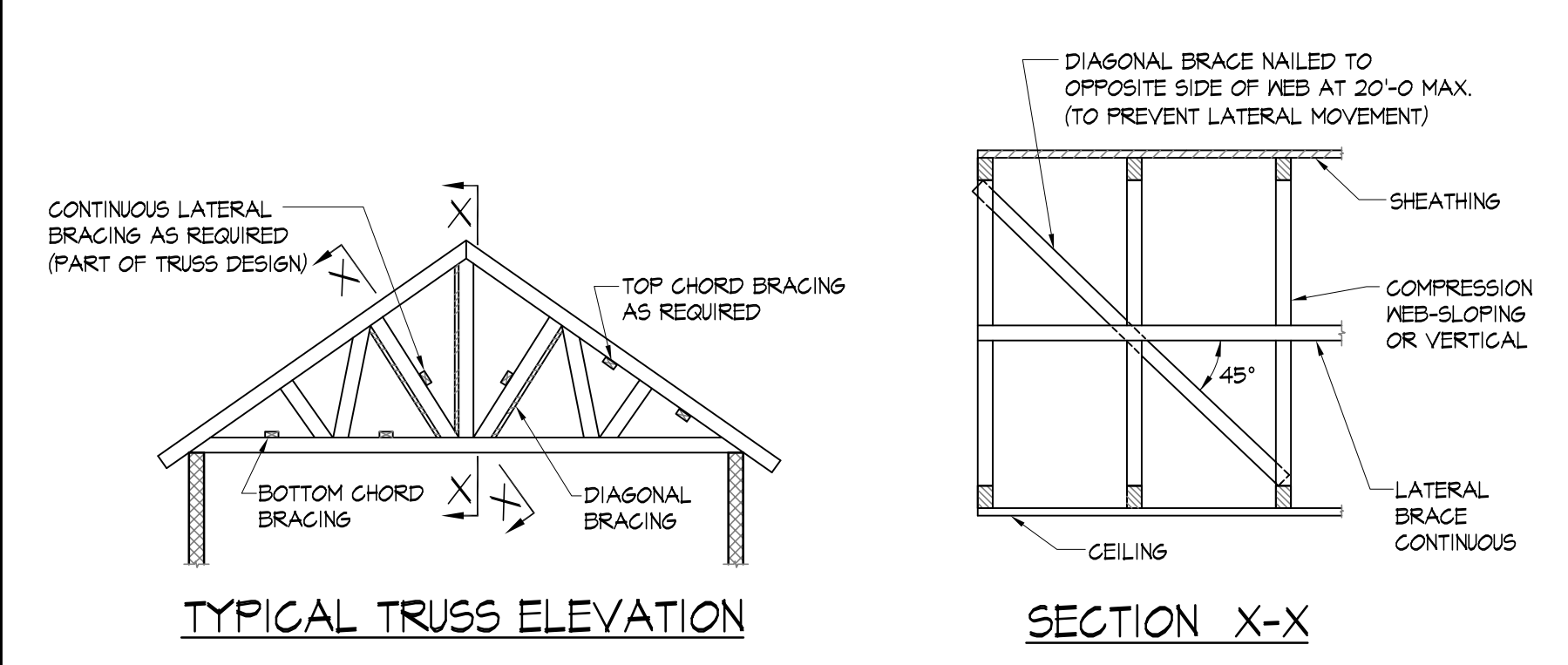
GABLE END WALL BRACING



NOTES:

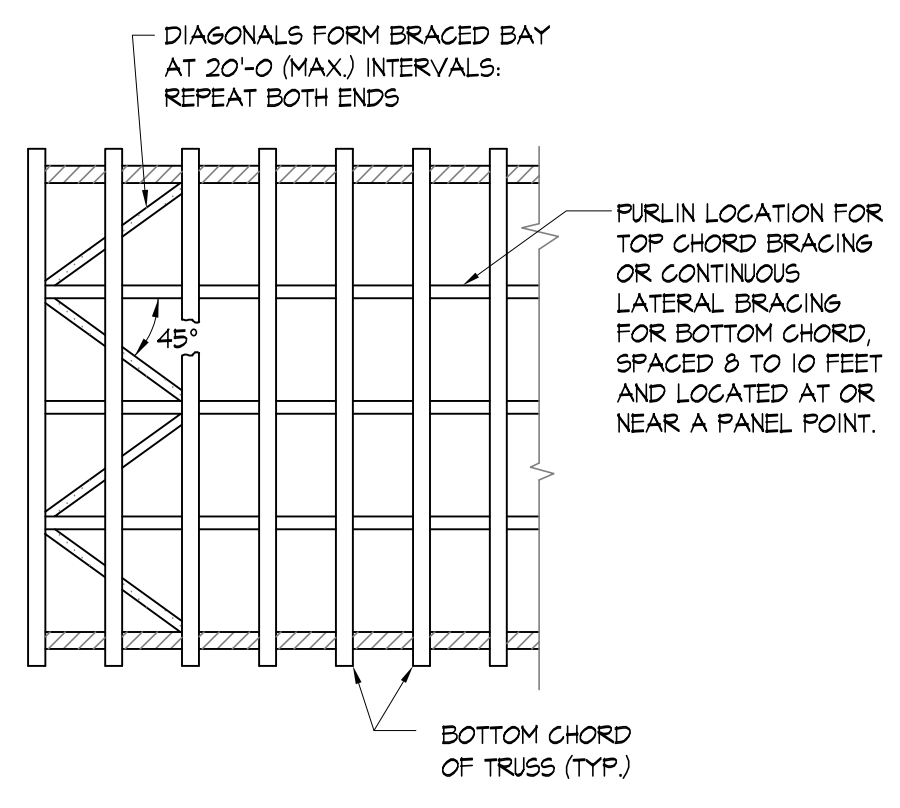
- 1) ACTUAL BRACING REQUIREMENTS WILL VARY DUE TO WIND LOAD, CODE CRITERIA, BUILDING HEIGHT, TRUSS SPAN, WEB LUMBER GRADE/SPECIES/ON CENTER SPACING AND OTHER VARIABLES. BRACING (AND ATTACHMENT) REQUIREMENTS SHOULD BE DESIGNED FOR EACH SPECIFIC JOB.
- 2) CONNECTION BETWEEN BOTTOM CHORD OF GABLE END TRUSS AND WALL, AS WELL AS THE DESIGN AND SPECIFICATION OF TEMPORARY AND PERMANENT BRACING OF THE ROOF SYSTEM IS THE RESPONSIBILITY OF THE BUILDING DESIGNER.

PERMANENT TRUSS BRACING



TRUSS NOTES

1. WOOD TRUSSES SHALL BE BRACED AND ERRECTED IN ACCORDANCE WITH THE "TRUSS PLATE INSTITUTE" BRACING WOOD TRUSSES: COMMENTARY AND RECOMMENDATIONS, TP-1.
2. BRACING IN THE PLANE OF WEB MEMBERS:
 - a. THE TRUSS FABRICATOR SHALL PROVIDE AND LOCATE CONTINUOUS LATERAL BRACING FOR EACH TRUSS WEB MEMBER AS REQUIRED.
 - b. LATERAL BRACING SHALL BE RESTRAINED BY DIAGONAL BRACING (MIN. 2" THICK NOMINAL LUMBER). THIS BRACING IS TO BE CONTINUOUS.
 - c. A MINIMUM OF TWO ROWS OF DIAGONAL BRACING IS REQUIRED, ONE AT EACH VERTICAL WEB MEMBER CLOSE TO BEARING LOCATIONS.
3. THE BOTTOM CHORDS SHALL BE BRACED BY CONTINUOUS LATERAL BRACING SPACED AT 8 TO 10 FEET NAILED TO TOP OF THE BOTTOM CHORD. DIAGONALS PLACED AT 45° TO THE LATERAL BRACES SHALL BE LOCATED AT EACH END, IF BUILDING EXCEEDS 60 FEET IN LENGTH, DIAGONAL BRACING SHOULD BE REPEATED AT 20 FOOT INTERVALS.
4. TOP CHORD BRACING
 - a. IF PLYWOOD DECKING IS APPLIED DIRECTLY TO TOP CHORD, PROPERLY LAPPED AND NAILED TO DEVELOP DIAPHRAGM ACTION, BRACING IS NOT REQUIRED.
 - b. IF PURLINS ARE USED, DIAGONAL TOP CHORD BRACING IS REQUIRED AT EACH END, IF BUILDING EXCEEDS 60 FEET IN LENGTH, DIAGONAL BRACING SHOULD BE REPEATED AT 20 FOOT INTERVALS.
5. WOOD ROOF TRUSSES ARE TO BE DESIGNED FOR THE WOOD FABRICATOR BY A PROFESSIONAL ENGINEER AND SEALED. CALCULATIONS AND DRAWINGS ARE TO BE SUBMITTED FOR REVIEW.



TOP/BOTTOM CHORD BRACING