

GENERAL

- G1. WORK SHALL CONFORM TO THE REQUIREMENTS OF THE MASSACHUSETTS STATE RESIDENTIAL CODE, TENTH EDITION AS WELL AS REFERENCED STANDARDS.
- G2. CONTRACTOR IS TO EXAMINE ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL REQUIREMENTS FOR VERIFICATION OF LOCATION AND DIMENSIONS OF OTHER PROJECT REQUIREMENTS NOT SHOWN ON THE FRAMING PLANS.
- G3. CONTRACTOR SHALL VERIFY & COORDINATE ALL DIMENSIONS ON THE JOB. DO NOT SCALE DRAWINGS.
- G4. ALL DETAILS SHALL BE CONSIDERED TYPICAL AND APPLICABLE TO ALL SIMILAR CONDITIONS UNLESS OTHERWISE NOTED OR INDICATED.
- G5. IN ANY CASE OF CONFLICT BETWEEN THE VARIOUS DRAWINGS OR DETAILS, THE MORE STRINGENT REQUIREMENT SHALL GOVERN.

TEMPORARY SHORING AND BRACING

- B1. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL MEANS AND METHODS OF CONSTRUCTION EMPLOYED ON THIS PROJECT, AND FOR ALL TEMPORARY BRACING, SUPPORT, AND PROTECTION OF THE EXISTING STRUCTURE. PROVIDE AND INSTALL SHORING DESIGNED TO SUPPORT THE TEMPORARY STRUCTURAL LOADS OF THE SUPPORTED ITEMS. SUBMIT SHORING PRODUCTS, CONFIGURATION, AND PROCEDURE TO THE ENGINEER FOR HIS REVIEW PRIOR TO SHORING AND BRACING.
- B2. SHORING SHALL BE OF ANY MATERIAL THAT IS SUITABLE FOR THE APPLICATION. TIMBER SHORING SHALL BE FULLY DRIED AND ALL END GRAIN SHALL BE SEALED TO PREVENT ABSORPTION OF WATER AND ASSOCIATED SWELLING. SHORING SHALL BE MADE STABLE, STIFF, AND SNUG FITTING SO AS NOT TO DEFLECT UNDER LOAD. PRE LOAD SUPPORTED ELEMENTS FOR SNUG FIT ONLY. SHORING SHALL DEFLECT NO MORE THAN THE GIVEN SPAN LENGTH DIVIDED BY 600.
- B3. BEARING SURFACES OF SHORING SHALL BE REVIEWED WITH ARCHITECT IN FIELD AND SHALL PROVIDE FOR PROPER TRANSFER OF LOADS TO SUPPORTING AND SUPPORTED ELEMENTS.

FOUNDATIONS

- F1. FOUNDATIONS ARE TO BE CARRIED DOWN TO UNDISTURBED NATURAL SOILS HAVING A MINIMUM BEARING CAPACITY OF 2.0 TONS PER SQUARE FOOT; PROVIDE LEAN CONCRETE FOR ANY ELEVATION DIFFERENCES BETWEEN SUITABLE BEARING MATERIAL AND THE BOTTOM OF FOOTINGS. THE CONTRACTOR SHALL VERIFY THE EXISTING SOIL CONDITIONS, AND IF CONDITIONS ARE QUESTIONABLE, A QUALIFIED SOILS PROFESSIONAL SHALL BE RETAINED BY THE OWNER TO VERIFY THE SUITABILITY OF THE SOIL UPON COMPLETION OF EXCAVATIONS.
- F2. FOOTING DEPTHS SHOWN ON THE DRAWINGS REPRESENT ESTIMATED DEPTHS AND ARE NOT TO BE CONSTRUED AS LIMITING THE AMOUNT OF EXCAVATION REQUIRED TO REACH GOOD BEARING MATERIAL.
- F3. EXTERIOR CONSTRUCTION IS TO BE CARRIED DOWN BELOW FINISHED EXTERIOR GRADE TO A MINIMUM DEPTH OF 4 FEET UNLESS NOTED OTHERWISE. IF LEDGE IS DISCOVERED IN EXCAVATING FOR NEW FOOTINGS, CONSULT ENGINEER FOR INSTRUCTION ON PINNING NEW FOUNDATION CONSTRUCTION TO LEDGE.
- F4. FOOTING EXCAVATIONS ARE TO BE FINISHED BY HAND.
- F5. MAKE NO EXCAVATIONS TO THE FULL DEPTH INDICATED WHEN FREEZING TEMPERATURE OR HEAVY RAIN MAY BE EXPECTED, UNLESS THE FOUNDATIONS OR SLABS CAN BE PLACED IMMEDIATELY AFTER THE EXCAVATION HAS BEEN COMPLETED. PROTECT THE BOTTOM SO EXCAVATED FROM FROST IF PLACING OF CONCRETE IS DELAYED. SHOULD PROTECTION FAIL, REMOVE FROZEN OR SWOLLEN MATERIALS AND REPLACE WITH CONCRETE OR GRAVEL FILL, AS DIRECTED BY A GEOTECHNICAL ENGINEER, AT NO COST TO OWNER. FOOTINGS SHALL BE PROTECTED AGAINST FROST AND RAIN UNTIL PROJECT IS COMPLETED.
- F6. CONTRACTOR SHALL CONTROL SURFACE AND SUBSURFACE WATER DURING CONSTRUCTION SO THAT FOUNDATION WORK WILL BE DONE IN DRY AND ON UNDISTURBED SOILS.
- F7. BACKFILL UNDER & AROUND/AGAINST NEW STRUCTURES IS TO BE COMPACTED TO 95 PERCENT IN 6" LIFTS.
- F8. BACKFILLING SHALL BE DONE SIMULTANEOUSLY ON BOTH SIDES OF EACH WALL IN ORDER TO MINIMIZE UNBALANCED EARTH PRESSURES.
- F9. UNLESS NOTED OTHERWISE, FOOTINGS ARE TO BE CENTERED UNDER SUPPORTED MEMBERS.
- F10. PROVIDE 6" OF CRUSHED STONE UNDER ALL NEW SLABS ON GRADE.
- F11. PROVIDE 15-MIL MEMBRANE (MINIMUM) VAPOR BARRIER, SUCH AS STEGOWRAP OR SIMILAR.

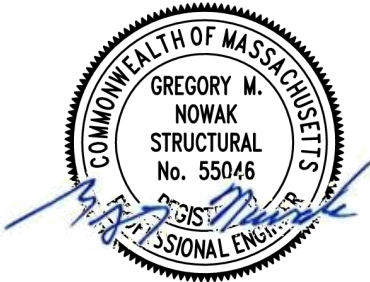
CONCRETE AND REINFORCEMENT

- C1. CONCRETE WORK IS TO CONFORM TO BUILDING CODE REQUIREMENTS FOR REINFORCED AND PLAIN CONCRETE (ACI 318-19) AND SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS (ACI 301-16).
- C2. WHEN CONCRETE IS PLACED AT OR BELOW AMBIENT TEMPERATURES OF 40 DEGREES F, OR WHENEVER LOWER TEMPERATURES ARE LIKELY TO OCCUR WITHIN 48 HOURS AFTER PLACEMENT OF CONCRETE, COLD WEATHER CONCRETING PROCEDURES, IN ACCORDANCE TO ACI 306 SHALL BE FOLLOWED.
- C3. CONFORM TO ACI 305R WHEN CONCRETING DURING HOT WEATHER.
- C4. CONCRETE IS TO HAVE 4,000 PSI (NORMALWEIGHT) COMPRESSIVE STRENGTH AT 28 DAYS.
- C5. CONCRETE IS TO BE PLACED WITHOUT HORIZONTAL CONSTRUCTION JOINTS.
- C6. DETAILING, FABRICATION, AND ERECTION OF REINFORCEMENT, UNLESS OTHERWISE NOTED, SHALL CONFORM TO ACI "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318-19)" AND ACI "DETAILING MANUAL (MNL-66(20))".
- C7. STEEL REINFORCEMENT UNLESS OTHERWISE SHOWN IS TO CONFORM TO ASTM 615 GRADE 60 (YIELD STRESS = 60,000 PSI)
- C8. WELDED WIRE FABRIC REINFORCEMENT SHALL BE ASTM A185 WWF 4x4 W2.9xW2.9 IN ALL NEW 4" SLABS ON GRADE.
- C10. REINFORCEMENT IS TO BE CONTINUOUS UNLESS OTHERWISE INDICATED ON THE DRAWINGS.
- C11. WELDED WIRE FABRIC IS TO LAP 6 INCHES OR ONE SPACE PLUS 2 INCHES, WHICHEVER IS LARGER, AND IS TO BE WIRED TOGETHER.
- C12. PROVIDE MIX DESIGN FOR EACH TYPE OF CONCRETE TO BE USED ON THE PROJECT. EACH MIX DESIGN SHALL BE APPROVED PRIOR TO ORDERING CONCRETE.

STRUCTURAL STEEL

- S1. STRUCTURAL STEEL WORK SHALL CONFORM TO "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS" (ASD OR LRFD, 14th EDITION (AISC 360-16); AND STRUCTURAL WELDING CODE - STEEL (AWS D1.4/D1.4M-2011).
- S2. STRUCTURAL STEEL SHALL BE NEW STEEL CONFORMING TO THE FOLLOWING:
 - PLATES: ASTM A36
 - STRUCTURAL TUBES: ASTM A500, GRADE B
 - ANCHOR BOLTS: ASTM A307
 - WELDING ELECTRODES: AWS E70-XX
- S3. WELDING SHALL BE DONE BY APPROVED CERTIFIED WELDERS, AND SHALL CONFORM TO THE AMERICAN WELDING SOCIETY CODE. SEE SPECIFICATIONS. ALL FILLET WELDS SHALL BE MADE WITH A RETURN LEG ON THE WELD END. THE MINIMUM SIZE OF FILLET WELDS SHALL BE DETERMINED IN ACCORDANCE WITH PARAGRAPH J2.2B. OF THE AISC SPECIFICATIONS FOR STRUCTURAL STEEL BUILDINGS. AVOID FIELD-WELDING WHEREVER POSSIBLE. IF FIELD-WELDING CANNOT BE AVOIDED, G.C. SHALL COORDINATE FIRE WATCH AS REQUIRED BY THE LOCAL AUTHORITY.
- S4. ELECTRODES FOR ALL FIELD AND SHOP WELDING SHALL CONFORM TO A-233 (CLASS 70).
- S5. ANCHOR BOLTS, LEVELING PLATES, OR BEARING PLATES SHALL BE LOCATED AND BUILT INTO CONNECTING WORK, PRESENT BY TEMPLATES OR SIMILAR METHODS. PLATES SHALL BE SET IN FULL BEDS OF NON-SHRINK GROUT OR LEVELING NUTS USED WITH NON-SHRINK GROUT PACKED BETWEEN UNDERSIDE OF PLATE AND TOP OF FOOTING FOLLOWING COLUMN PLACEMENT.
- S6. ALL STRUCTURAL STEEL (REINFORCING STEEL FOR FOOTINGS, EMBEDDED SECTIONS OF ANCHOR BOLTS EXCLUDED) SHALL BE COATED WITH TWO HEAVY APPLICATIONS OF AN EPOXY PAINT (BAR-RUST 235, DURA-PLATE 235 OR APPROVED EQUIVALENT). SUBMIT PRODUCT INFORMATION FOR APPROVAL PRIOR TO PURCHASING MATERIAL. WORK SHALL BE DONE AFTER STEEL HAS BEEN INSTALLED YET BEFORE SLABS ARE PLACED. FOLLOW ALL MANUFACTURER'S SPECIFICATIONS AND INSTRUCTIONS.
- S7. STRUCTURAL STEEL FRAMING SHALL BE TRUE AND PLUMB BEFORE CONNECTIONS ARE FINALLY SCREWED OR BEFORE DRY-PACK IS PLACED BETWEEN THE UNDERSIDE OF BEARING PLATES AND THE TOP OF FOOTINGS.
- S8. TEMPORARY ERECTION BRACING AND SUPPORTS SHALL BE PROVIDED TO HOLD NEW STRUCTURAL STEEL FRAMING SECURELY IN POSITION. SUCH TEMPORARY BRACING AND SUPPORTS SHALL NOT BE REMOVED UNTIL PERMANENT BRACING HAS BEEN INSTALLED.
- S9. MINIMUM CONNECTION PLATE THICKNESS SHALL BE 3/8".

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	Structural General Notes, Sheet 1 of 2	S-0.1



STRUCTURAL WOOD

- W1. WOOD CONSTRUCTION IS TO CONFORM THE "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION" (NDS-2018).
- W2. NEW TIMBER FOR STRUCTURAL USE IS TO BE SURFACE DRIED AND HAVE A MOISTURE CONTENT OF NOT MORE THAN 15 PERCENT.
- W3. STRUCTURAL TIMBER IS TO BE IDENTIFIED BY THE GRADE MARK OF, OR CERTIFICATE OF INSPECTION ISSUED BY, A GRADING OR INSPECTION BUREAU OR AGENCY RECOGNIZED AS BEING COMPETENT.
- W4. STRUCTURAL TIMBER IS TO BE VISUALLY STRESS-GRADED LUMBER IN ACCORDANCE WITH THE PROVISIONS OF ASTM DESIGNATION D245-06(2019), "METHODS FOR ESTABLISHING STRUCTURAL GRADES AND RELATED ALLOWABLE PROPERTIES FOR VISUALLY GRADED LUMBER."
- W5. TIMBER IS TO BE HANDLED AND COVERED TO PREVENT DAMAGE AND MOISTURE ABSORPTION FROM SNOW OR RAIN.
- W6. ALL STRUCTURAL WOOD IS TO HAVE THE FOLLOWING MINIMUM DESIGN STRENGTHS AND IS TO HAVE MATERIAL CERTIFICATES AND GRADE STAMPS ATTESTING THEREOF (UNITS IN PSI UNLESS OTHERWISE NOTED):

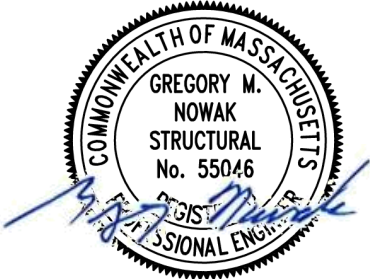
LOCATION OF USE	Fb	FT	Fv	Fc (perp.)	Fc (parallel)	E (KSI)	Emin (KSI)
JOISTS/RAFTERS/ STUDS	875	450	135	425	1400	1400	510
LAMINATED VENEER LUMBER (LVL)	2600	1550	285	750	2510	2000	1016
PARALLEL STRAND LUMBER (PSL)	2400	1755	190	425	2500	1800	915

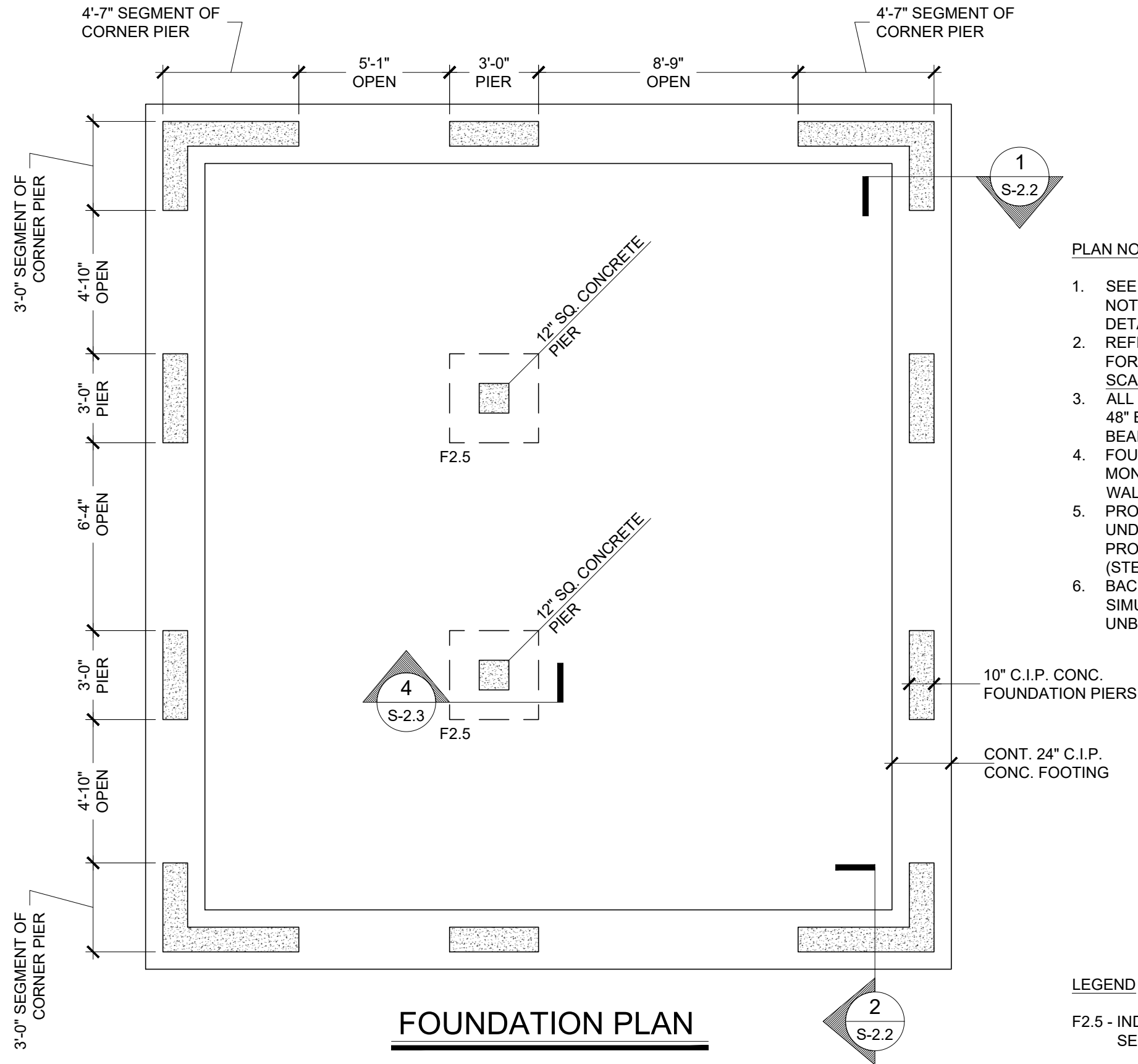
- W7. FABRICATED WOOD JOISTS
1. FABRICATED WOOD JOISTS ARE TO BE TRUSJOIST WEYERHAUSER TJI OR BOISE CASCADE (BCI)
 2. INSTALLATION OF FABRICATED JOIST SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S TYPICAL DETAILS FOR THE CONDITIONS SHOWN.
 3. FABRICATED WOOD JOISTS SHALL BE GLUE AND NAIL CONSTRUCTION
 4. BLOCKING BETWEEN JOIST ENDS SHALL BE WITH FULL DEPTH TJI OR BCI BLOCKING PANELS
 5. PROVIDE 2x4 VERTICAL WEB STIFFENERS ON BOTH SIDES OF THE JOIST WEB AT BEARING POINTS WHERE INDICATED IN MFG. LITERATURE.
- W8. BEAMS AND GIRDERS:
1. GIRDERS WILL NOT REST LESS THAN 4" ON SUPPORTS.
 2. WHERE BEAMS AND GIRDERS OF NOMINAL 2" MEMBERS ARE SHOWN, NAIL WITH TWO ROWS OF 16d NAILS SPACED NOT MORE THAN 24" O.C., LOCATE END JOISTS IN MEMBERS OVER SUPPORTS.
 3. ALL BEAMS MUST BE SPLICED ONLY OVER SUPPORTS AND BE CENTERED ABOUT SUPPORTS.
- W9. PLYWOOD FLOOR
1. PLYWOOD FLOOR IS TO BE ¾" MIN. GLUED AND NAILED INSTALLED WITH OUTER PLIES AT RIGHT ANGLE TO JOISTS AND STAGGERED IN ADJACENT PANELS. PROVIDE ⅙" JOINT SPACING AT ALL PANEL EDGES
- W10. CONNECTIONS:
1. ALL FLUSH FRAMED JOIST CONNECTIONS USE APPROVED SIMPSON TYPE HANGERS.
 2. COMPLY WITH MANUFACTURER INSTALLATION SPECIFICATIONS FOR ALL OF THE ABOVE.

- W11. ENGINEERED WOOD TIMBER
1. CONNECTION SHALL BE DESIGNED FOR MAXIMUM CAPACITY OF THE CONNECTED MEMBERS FOR THE SPANS INDICATED.
 2. END BEARING OF LVL BEAMS SHALL BE 2¾ INCHES MINIMUM AND ACROSS THE FULL WIDTH OF THE BEAM.
 3. MINIMUM BEARING LENGTHS ARE GOVERNED BY Fc PERPENDICULAR OF THE WALL PLATE = 425-PSI, OR BY 750-PSI BEARING STRENGTH OF THE VENEER LUMBER WHEN PLACED ON STEEL SUPPORTING CONNECTOR.
 4. ALL LVL BEAMS REQUIRE LATERAL SUPPORT OR BLOCKING AT BEARING POINTS.
 5. BUILT UP LVL BEAMS SHALL BE NAILED OR BOLTED TOGETHER IN ACCORDANCE WITH THE SCHEDULE ON THE MANUFACTURER'S LITERATURE, BUT NOT LESS THAN 3 ROWS OF 16d NAILS AT 12 INCHES O.C. THROUGH ALL PLIES.
 6. ADHESIVES SHALL BE PROVIDED AT ALL PLYWOOD FLOOR TO WOOD JOIST AND BEAM FASTENINGS. ADHESIVES SHALL CONFORM TO TRUSS JOIST MANUFACTURER'S STANDARDS AND MEET THE REQUIREMENTS OF ASTM D2559.
- W12. REFER SHEETS S-3.1 & S-3.2 FOR PREFABRICATED ROOF TRUSSES REQUIREMENTS.
- W13. PLYWOOD SHALL BE HIGH PERFORMANCE APA SPAN RATED PANELS WITH 500 DAY NO-SAND GUARANTEE.
- W14. ALL EXTERIOR CONNECTION HARDWARE INCLUDING NAILS, BOLTS, AND FABRICATED CONNECTORS IS TO BE STAINLESS STEEL OR HOT-DIPPED GALVANIZED OR ZMAX GALVANIZED (OR EQUIVALENT G185 MINIMUM). DO NOT MIX STAINLESS AND GALVANIZED STOCK.

- DESIGN LIVE LOADS
- 1ST FLOOR: 40 PSF 1ST FLOOR LIVE LOAD
- ROOF: SNOW: 35 PSF SNOW LOAD (50 PSF GROUND SNOW WITH 0.70 TOTAL CORRECTION FACTOR PER ASCE-7 16)
- WIND: ASCE-7 16, 116 MPH, RISK CATEGORY II, EXPOSURE D

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	Structural General Notes, Sheet 2 of 2	S-0.2





PLAN NOTES

- SEE S-0.1 & S-0.2 FOR STRUCTURAL GENERAL NOTES, S-2.x & S-3.x SERIES FOR STRUCTURAL DETAILS
- REFER TO FLOOR PLANS PROVIDED BY OWNER FOR DIMENSIONS NOT SHOWN HERE. DO NOT SCALE DRAWINGS.
- ALL NEW FOUNDATION WALL FOOTINGS SHALL BE 48" BELOW EXTERIOR GRADE AND BEAR ON 2 TSF BEARING CAPACITY SOILS.
- FOUNDATION WALLS MUST BE POURED MONOLITHICALLY. COLD JOINTS IN FOUNDATION WALLS ARE NOT ACCEPTABLE.
- PROVIDE 6" FREE DRAINING COMPACTED GRAVEL UNDER ALL NEW INTERIOR FOOTINGS AND PROVIDE 15-MIL MEMBRANE VAPOR BARRIER (STEGOWRAP OR SIM.)
- BACKFILL BOTH SIDES OF THE FOUNDATION WALL SIMULTANEOUSLY IN 6" LIFTS TO AVOID UNBALANCED FILL CONDITIONS.

LEGEND

F2.5 - INDICATES 2'-6" x2'-6" x15" TH. FOOTING, SEE 4/S-2.4



FOUNDATION PLAN

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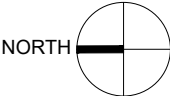
SCALE: NTS

Foundation Plan

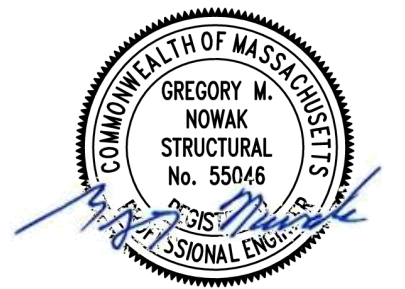
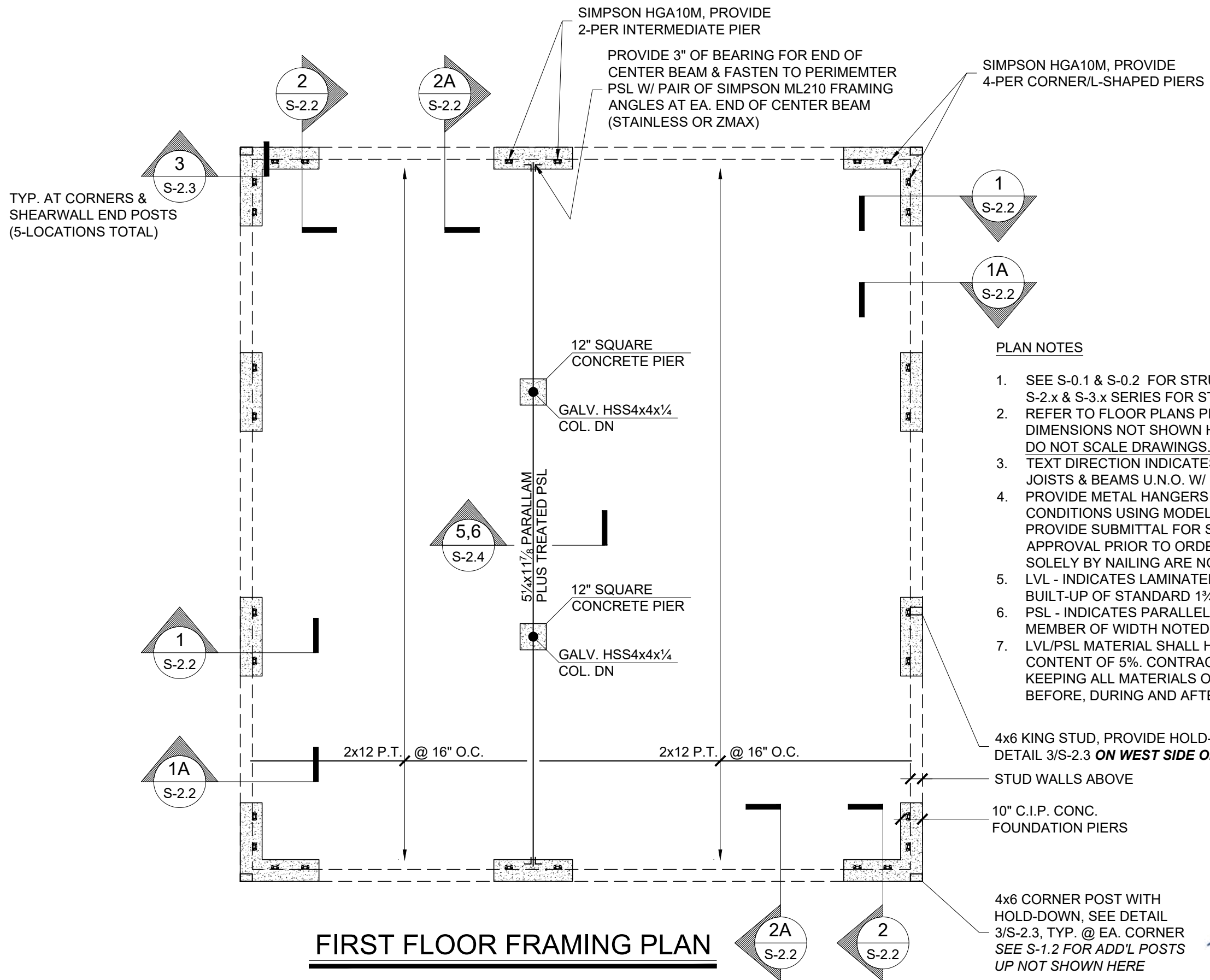
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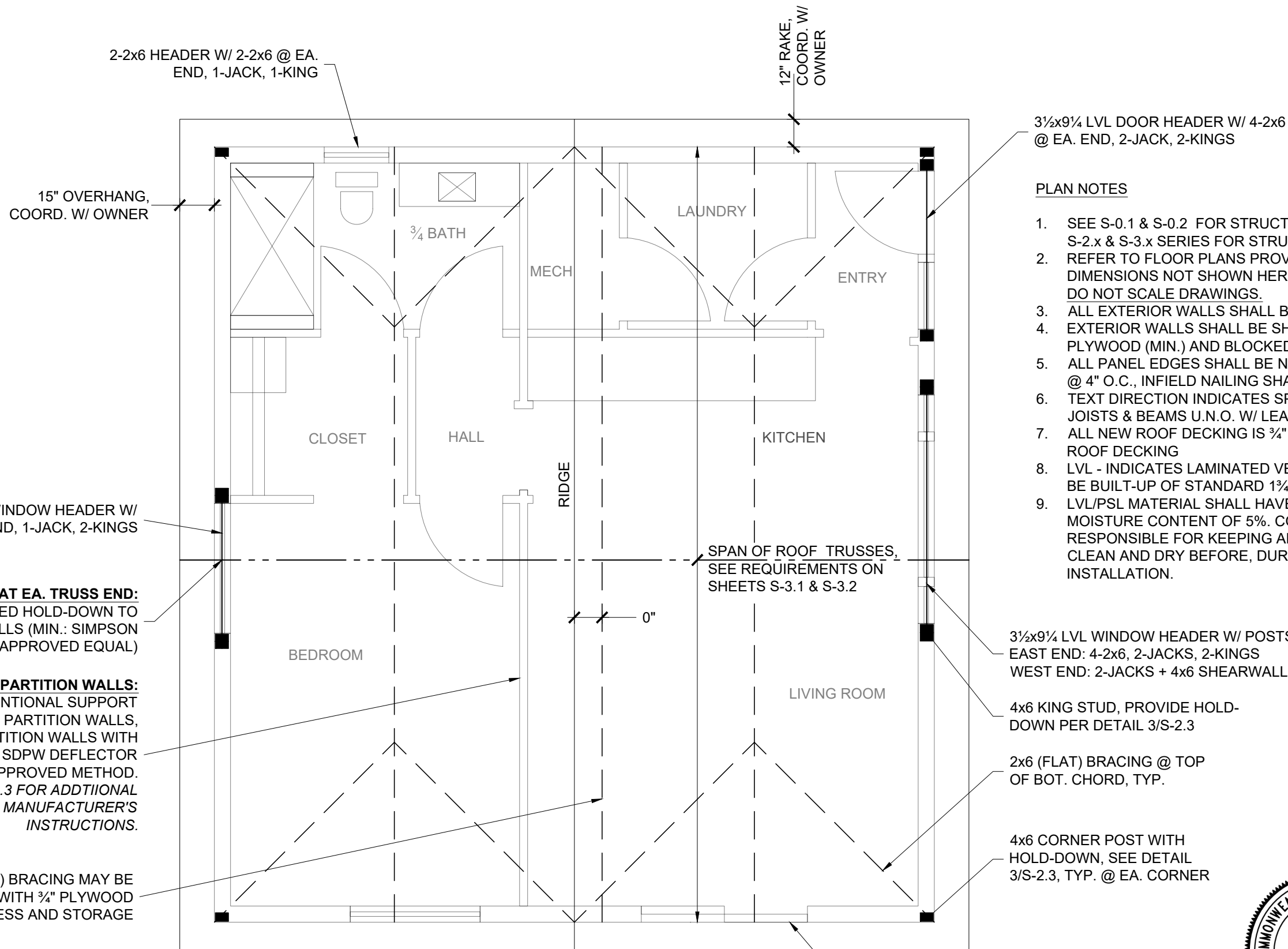
S-1.0



MADISON STREET



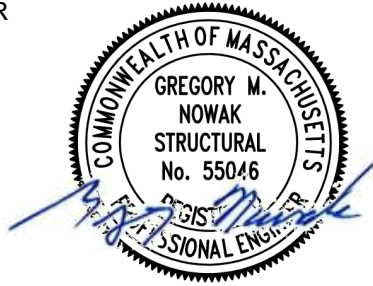
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	First Floor Framing Plan		S-1.1



IMPORTANT NOTE REGARDING PARTITION WALLS:
 IN ORDER TO PREVENT UNINTENTIONAL SUPPORT
 OF ROOF TRUSSES BY PARTITION WALLS,
 LATERALLY BRACE ALL PARTITION WALLS WITH
 BLOCKING AND/OR SIMPSON SDPW DEFLECTOR
 SCREWS OR OTHER APPROVED METHOD.
 SEE DETAILS ON SHEET S-3.3 FOR ADDITIONAL
 INFORMATION, INSTALL PER MANUFACTURER'S
 INSTRUCTIONS.

CENTER 2x6 (FLAT) BRACING MAY BE
 SUBSTITUTED WITH ¾" PLYWOOD
 FOR ACCESS AND STORAGE

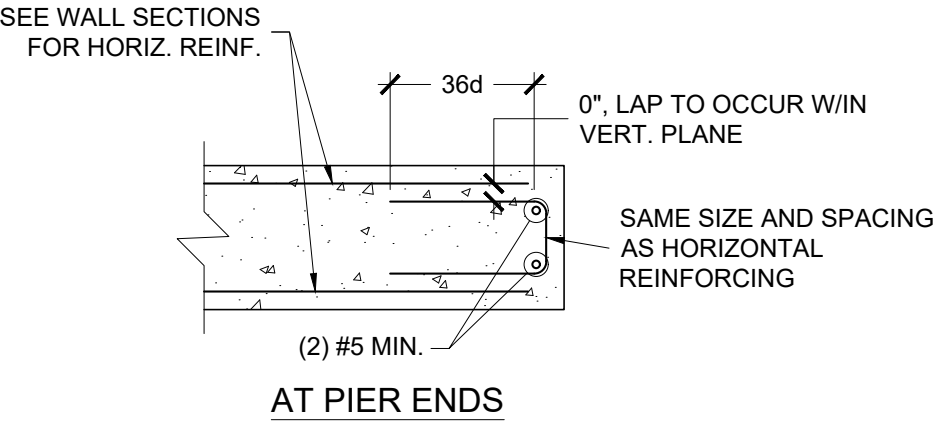
- PLAN NOTES**
1. SEE S-0.1 & S-0.2 FOR STRUCTURAL GENERAL NOTES, S-2.x & S-3.x SERIES FOR STRUCTURAL DETAILS
 2. REFER TO FLOOR PLANS PROVIDED BY OWNER FOR DIMENSIONS NOT SHOWN HERE. DO NOT SCALE DRAWINGS.
 3. ALL EXTERIOR WALLS SHALL BE 2x6 STUDS @ 16" O.C.
 4. EXTERIOR WALLS SHALL BE SHEATED W/ ½" PLYWOOD (MIN.) AND BLOCKED AT ALL PANEL EDGES.
 5. ALL PANEL EDGES SHALL BE NAILED WITH 10d NAILS @ 4" O.C., INFIELD NAILING SHALL BE 12" O.C.
 6. TEXT DIRECTION INDICATES SPAN DIRECTION OF JOISTS & BEAMS U.N.O. W/ LEADER LINE
 7. ALL NEW ROOF DECKING IS ¾" APA SPAN RATED CDX ROOF DECKING
 8. LVL - INDICATES LAMINATED VENEER LUMBER (MAY BE BUILT-UP OF STANDARD 1¾" PLIES)
 9. LVL/PSL MATERIAL SHALL HAVE A MAXIMUM MOISTURE CONTENT OF 5%. CONTRACTOR IS RESPONSIBLE FOR KEEPING ALL MATERIALS ON SITE CLEAN AND DRY BEFORE, DURING AND AFTER INSTALLATION.



ROOF TRUSS LAYOUT PLAN

PROJECT NAME: 3 Madison Street, Haverhill, MA		DRAWN BY: GMN	
SCALE: NTS	Roof Truss Layout Plan		DATE: 6/12/2026
			S-1.2

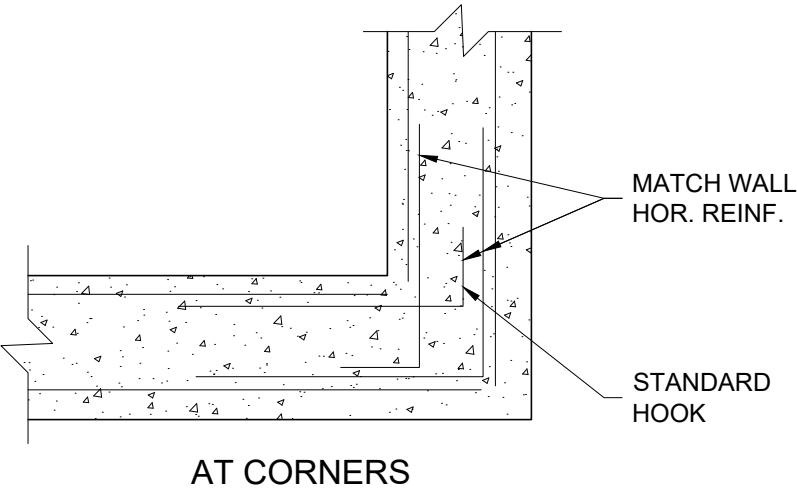




MINIMUM SPLICE & DEVELOPMENT LENGTH										
(UNLESS OTHERWISE SHOWN ON DRAWINGS)										
(fy = 60 ksi, fc = 4,000 psi)										
		#3	#4	#5	#6	#7	#8	#9	#10	#11
SPLICE LENGTH	TOP BARS OTHER BARS	18" 14"	24" 18"	30" 24"	36" 28"	42" 32"	51" 39"	64" 49"	82" 63"	100" 77"
DEVELOPMENT LENGTH	TOP BARS OTHER BARS	14" 12"	18" 14"	24" 18"	28" 21"	32" 25"	39" 30"	49" 38"	63" 48"	77" 59"

AVOID SPLICES IN REGIONS OF MAX. MOMENT. IF THIS IS NOT POSSIBLE STAGGER SPLICES SO THAT NOT MORE THAN 50% ARE WITHIN A REQUIRED LAP LENGTH; OTHERWISE INCREASE SPLICE LENGTHS BY 30%.

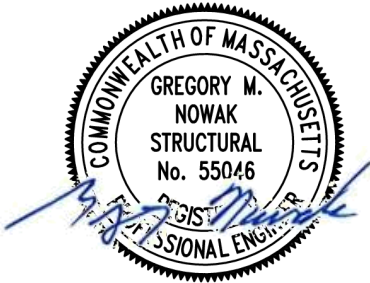
TYPICAL MINIMUM REINFORCEMENT DEVELOPMENT
AND SPLICE LENGTH (CONCRETE $f_c = 4,000$ PSI)



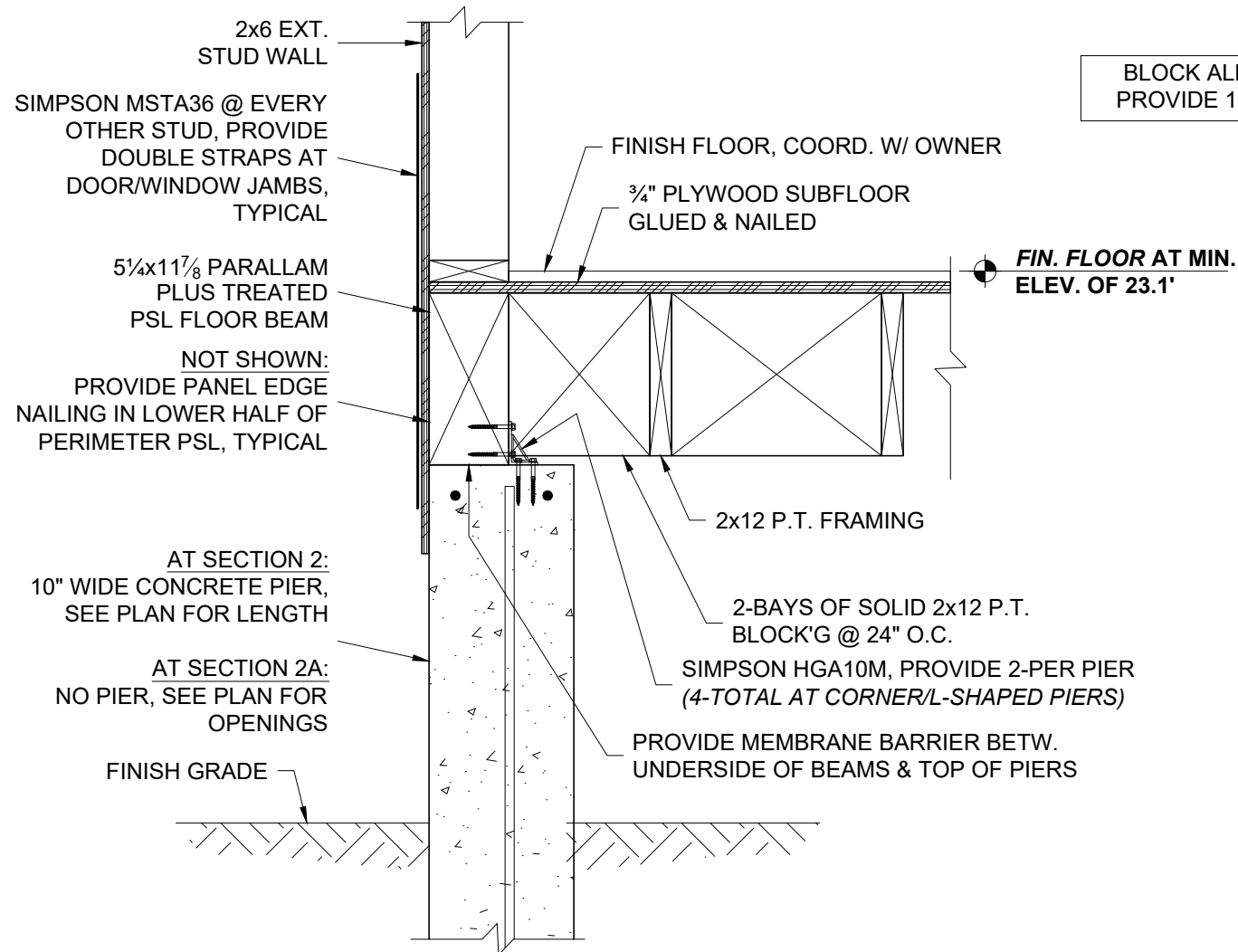
PLAN DETAILS OF TYPICAL
PIER REINFORCING

NTS VERT. REINF. NOT SHOWN

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	Structural Details	S-2.1



BLOCK ALL PANEL EDGES &
PROVIDE 10d NAILS @ 4" O.C.

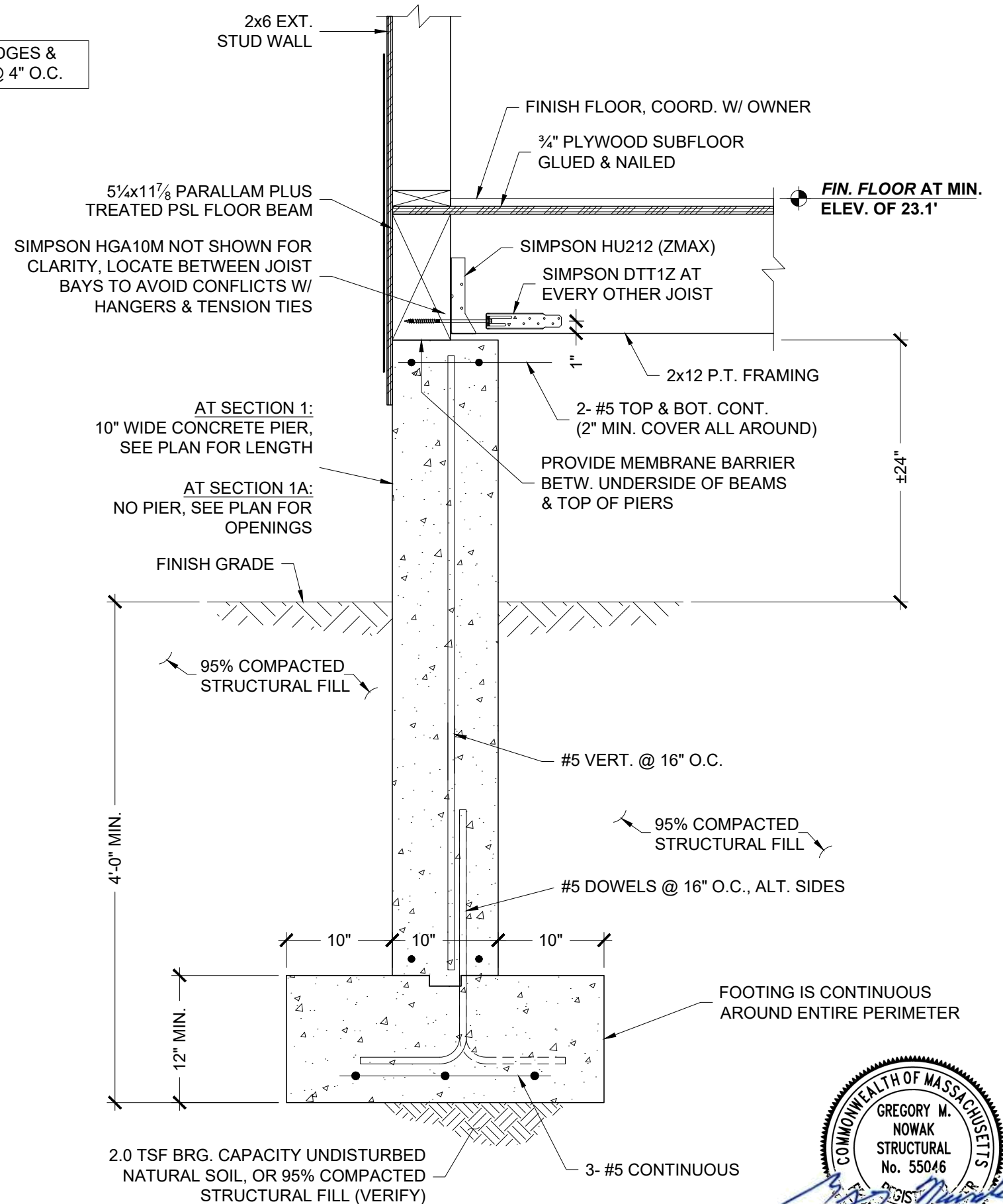


SEE DETAIL 1/S-2.2 FOR INFO
NOT REPEATED HERE

REF. S-1.1 **2/2A TYP. FOUNDATION WALL SECTION**
S-2.2 NTS

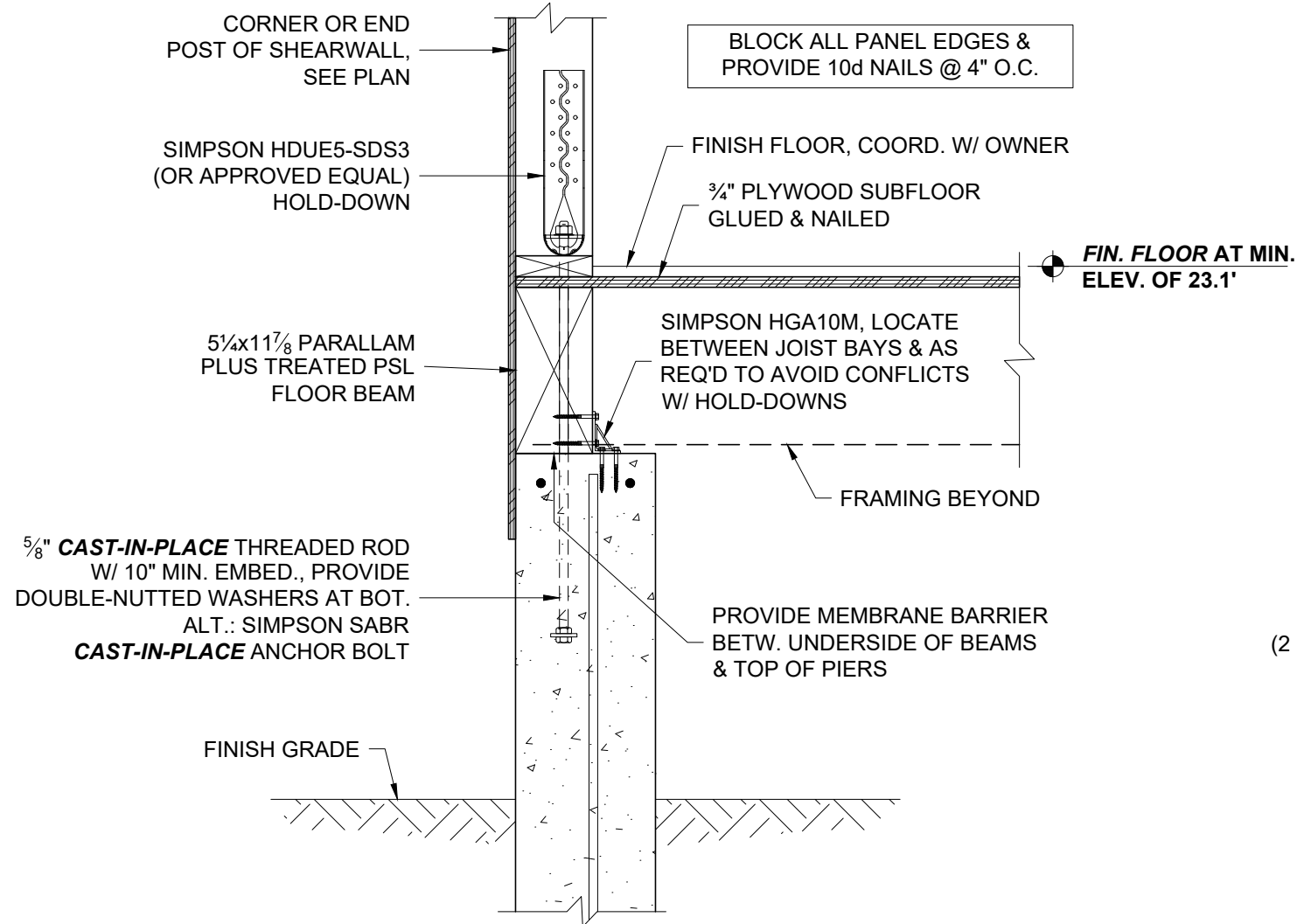
FRAMING PARALLEL TO
FOUNDATION WALL

NOT SHOWN:
PROVIDE CLOSED-CELL FOAM INSULATION TO FILL
ENTIRE JOIST BAY VOID



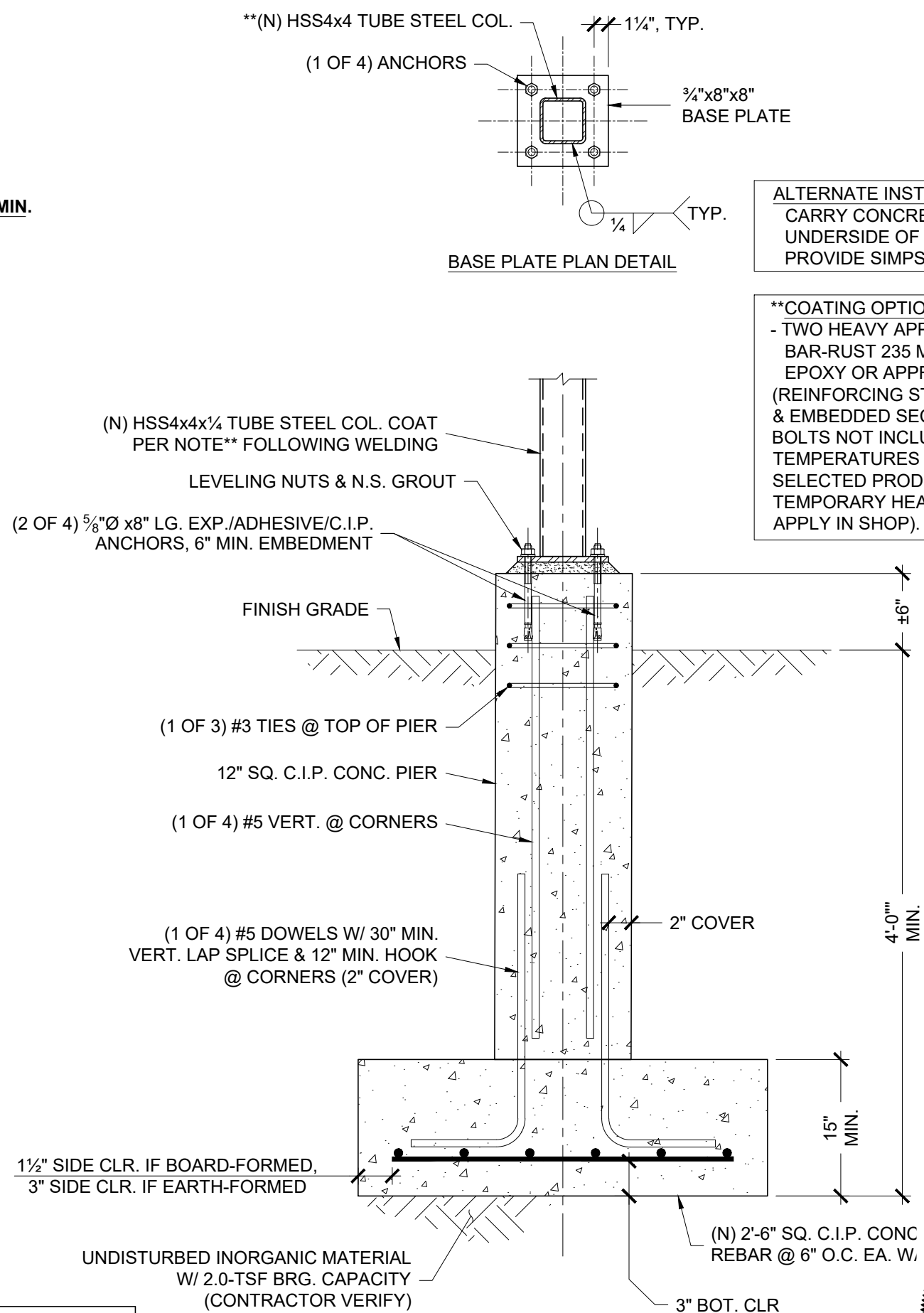
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S-2.2 NTS

FRAMING PERPENDICULAR
TO FOUNDATION WALL



REF. S-1.1 **3** **HOLD-DOWN DETAIL**
S-2.3 NTS **SEE PLAN FOR LOCATIONS, 5-TOTAL**

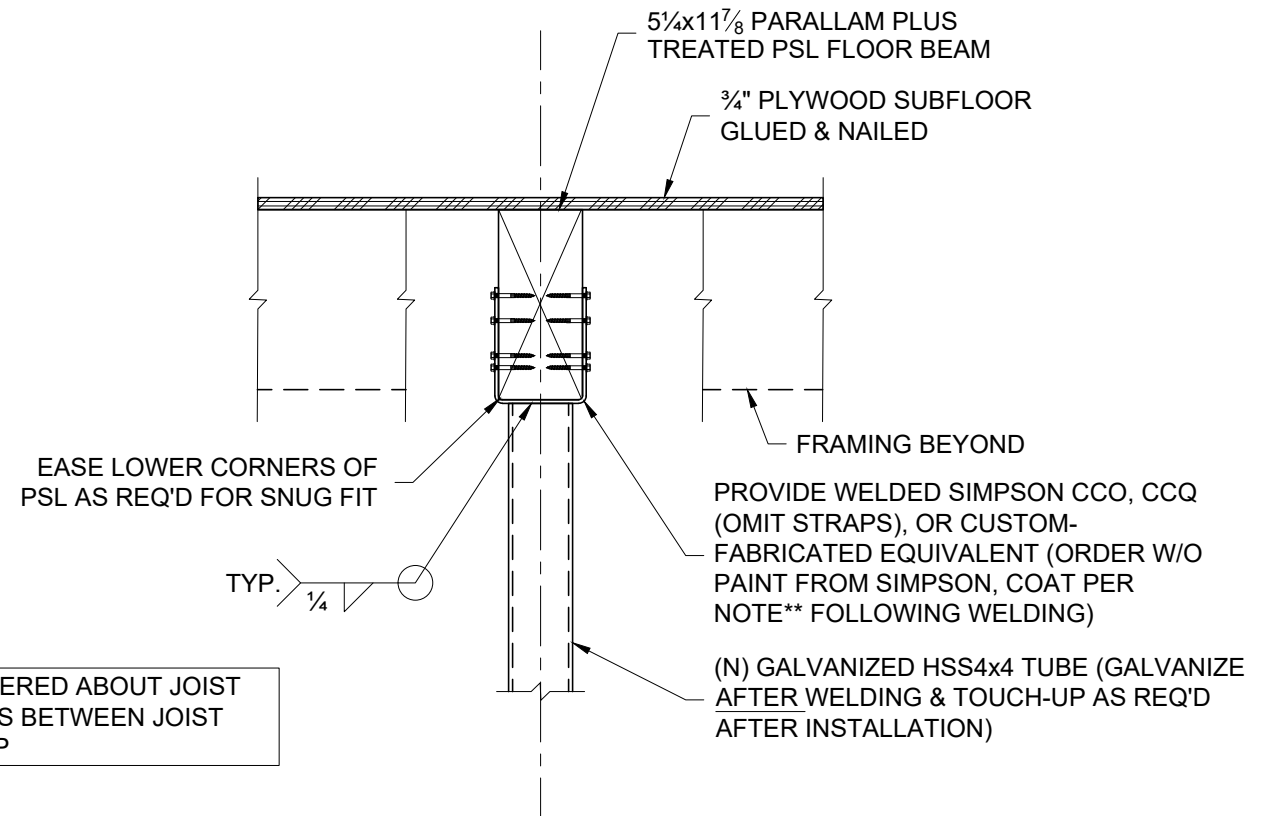
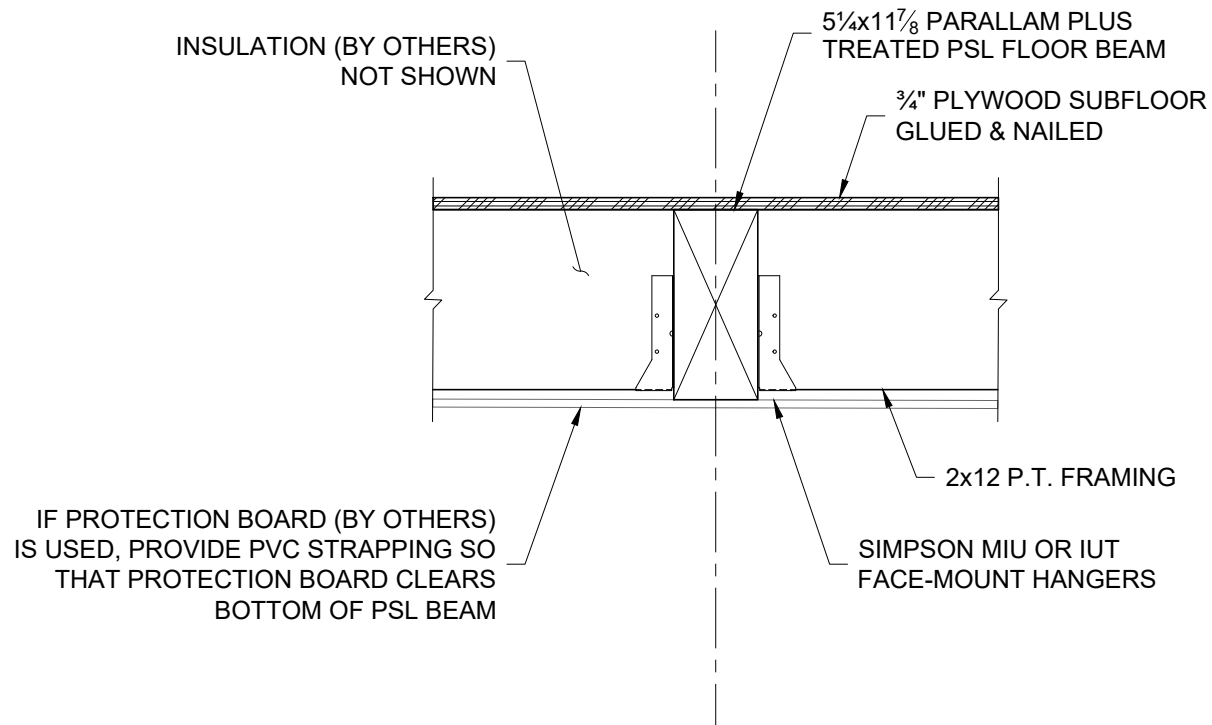
SEE DETAILS ON SHEET S-2.2 FOR INFO NOT REPEATED HERE



REF. S-1.0 **4** **COLUMN/FOOTING SECTION**
S-2.3 NTS

ALTERNATE INSTALLATION:
CARRY CONCRETE PIER UP TO
UNDERSIDE OF CENTER BEAM &
PROVIDE SIMPSON

**COATING OPTIONS:
- TWO HEAVY APPLICATIONS OF
BAR-RUST 235 MULTIPURPOSE
EPOXY OR APPROVED EQUAL
(REINFORCING STEEL FOR FOOTINGS
& EMBEDDED SECTIONS OF ANCHOR
BOLTS NOT INCLUDED) NOTE THE
TEMPERATURES REQUIRED FOR THE
SELECTED PRODUCT AND PROVIDE
TEMPORARY HEAT AS REQUIRED (OR
APPLY IN SHOP).



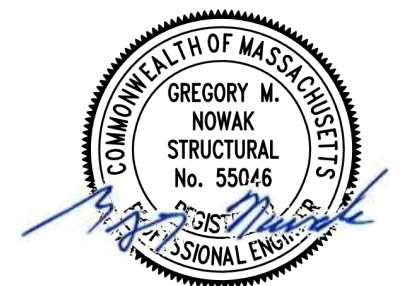
COLUMN SHALL BE CENTERED ABOUT JOIST BAY TO AVOID CONFLICTS BETWEEN JOIST HANGERS & COLUMN CAP

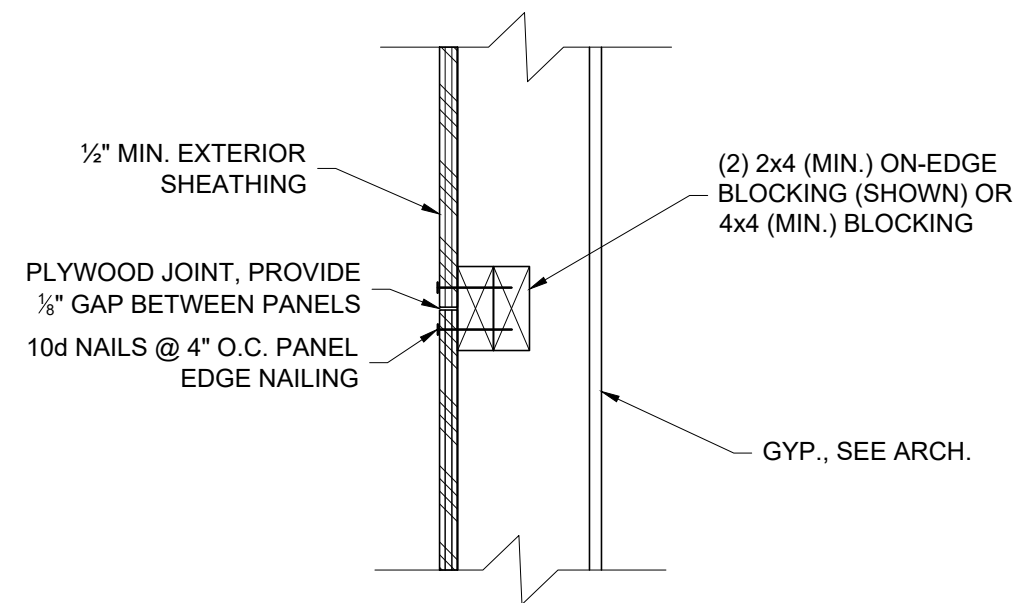
REF. S-1.1 **5** BEAM SECTION BETW. COLUMNS
S-2.4 NTS

REF. S-1.1 **6** BEAM SECTION AT COLUMN LOC'N
S-2.4 NTS

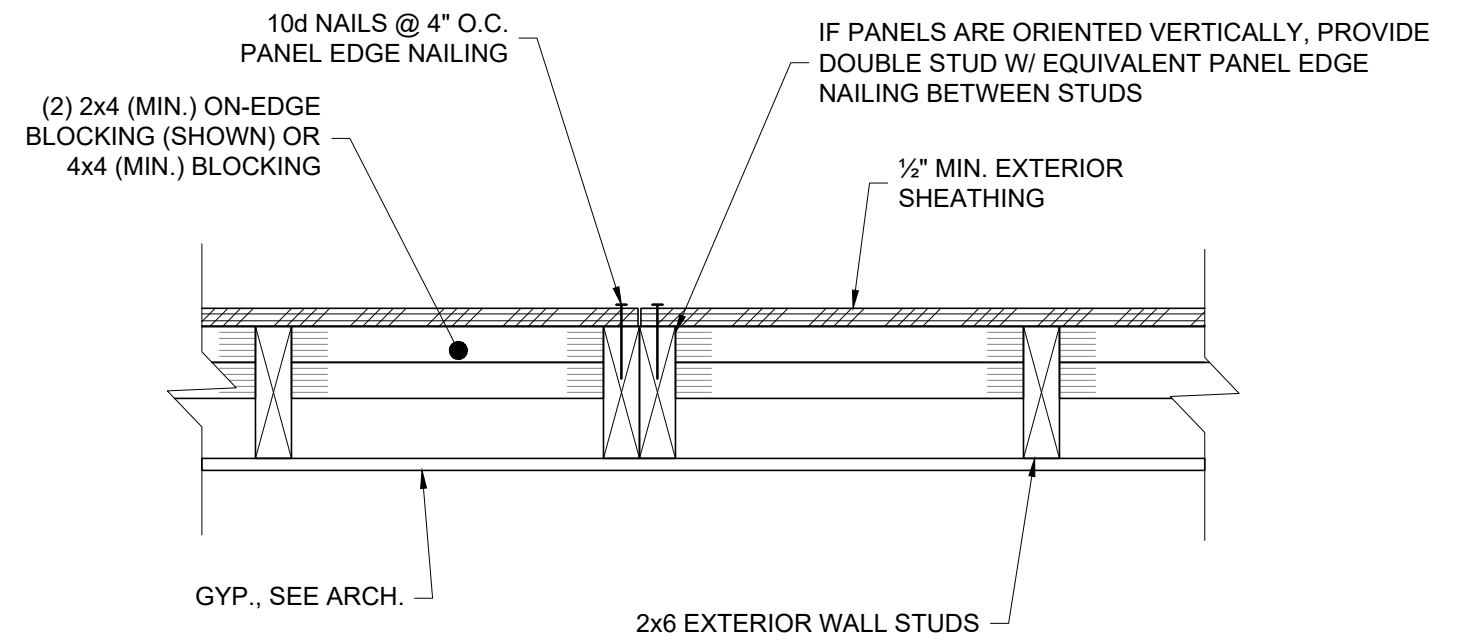
NOT SHOWN:
PROVIDE CLOSED-CELL FOAM INSULATION TO FILL ENTIRE JOIST BAY VOID

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	Structural Details	S-2.4



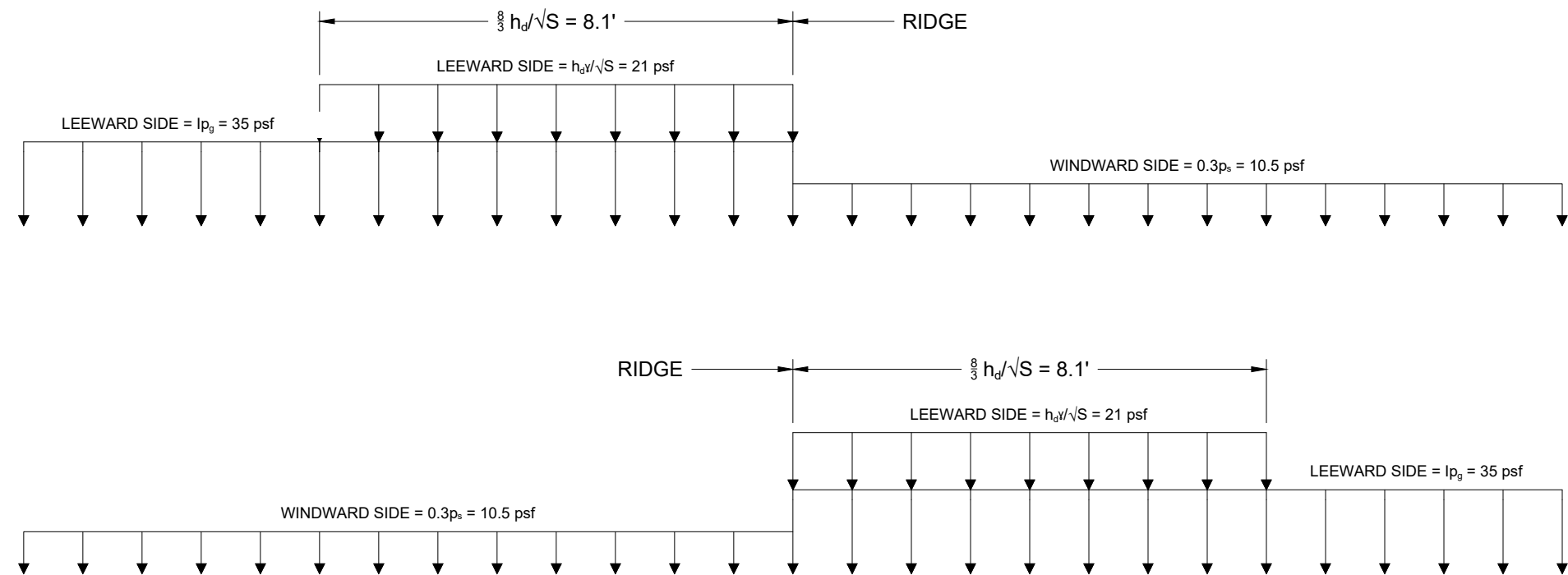


7 TYP. SECTION AT EXTERIOR WALLS
S-2.5 NTS

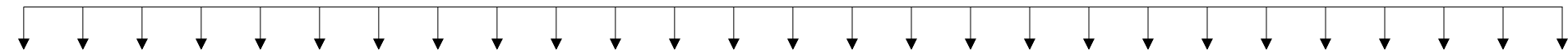


8 TYP. PLAN DETAIL AT EXTERIOR WALLS
S-2.5 NTS

TRUSS DESIGN SHALL CONSIDER LOAD CASES WITH UNBALANCED SNOW PER ASCE-7 SECTION 7.6.1 AS SHOWN BELOW



TYP. DEAD, SNOW, AND WIND LOADING, SEE STRUCTURAL GENERAL NOTES AND PERFORMANCE SPECIFICATIONS ON SHEET S-3.2



REFER TO S-3.2 FOR PERFORMANCE SPECIFICATIONS AND REQUIREMENTS FOR ROOF TRUSSES

PRE-FABRICATED ROOF TRUSS NOTES:

1. DESIGN ROOF TRUSSES, TO BE SPACED AT 16" OR 24" O.C., FOR ALL CODE REQUIRED LOADS, AND THE FOLLOWING MINIMUM LOADS:

TOP CHORD LIVE LOAD (CODE SNOW): SNOW: 35 PSF SNOW LOAD (50 PSF GROUND SNOW WITH 0.70 TOTAL CORRECTION FACTOR PER ASCE-7)

BOTTOM CHORD LIVE LOAD: 20 PSF STORAGE LOAD AT CENTER 1/3 OF TRUSS

WIND, ASCE-7 16:
116-MPH, RISK CATEGORY II
EXPOSURE D (DIRECTIONAL PROCEDURE)

TOP CHORD DEAD LOAD: 10 PSF
BOT. CHORD DEAD LOAD: 8 PSF
BOT. CHORD MECH. ALLOWANCE: 2 PSF

2. LIMIT VERTICAL DEFLECTION DUE TO TOTAL LOAD OF ALL TRUSSES L/600 MAX.

3. LIMIT HORIZONTAL DEFLECTION DUE TO TOTAL LOAD OF ALL TRUSSES TO 1/4" MAX.

4. MANUFACTURER SHALL FURNISH DESIGN DRAWINGS BEARING THE SEAL OF A REGISTERED PROFESSIONAL ENGINEER IN THE COMMONWEALTH OF MASSACHUSETTS. DRAWINGS SHALL INCLUDE DESIGN LOAD AND DEFLECTION CRITERIA SPECIFIED HEREIN AND BE SUBMITTED FOR APPROVAL PRIOR TO FABRICATION. TRUSS DESIGN DRAWINGS SHALL BE APPROVED BY THE ARCHITECT PRIOR TO FABRICATION.

5. PROVIDE ALL TEMPORARY AND PERMANENT TRUSS BRACING NEEDED TO MAKE THE ROOF TRUSS SYSTEM WHOLE AND STABLE IN SHOP DRAWINGS.

6. TRUSS MANUFACTURER SHALL BE RESPONSIBLE FOR PROVIDING ALL REQUIRED METAL CONNECTORS, INCLUDING, BUT NOT LIMITED TO, HANGERS AND HOLD-DOWNS RATED FOR UPLIFT FORCES DETERMINED USING COMPONENTS AND CLADDING.

7. TRUSS DESIGN STANDARDS SHALL CONFORM WITH THE APPLICABLE PROVISIONS OF THE 2018 NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION (NDS), NATIONAL DESIGN STANDARD FOR METAL-PLATE-CONNECTED WOOD TRUSS CONSTRUCTION (ANSI/TPI-1 2014 AS PUBLISHED BY THE TRUSS PLATE INSTITUTE (TPI)), AND THE COMMONWEALTH OF MASSACHUSETTS BUILDING CODE, 10TH EDITION.

8. TRUSS DRAWINGS SHALL INCLUDE BUT NOT BE LIMITED TO THE FOLLOWING:

- 1. SPAN, DEPTH, SLOPE AND SPACING OF TRUSSES
- 2. REQUIRED BEARING WIDTH
- 3. DESIGN LOADS
- 4. PLATE SIZE, TYPE, GAGE, AND LOCATION OF EACH PLATE
- 5. LUMBER SIZE, SPECIES, AND GRADE
- 6. LOCATION OF ANY REQUIRED CONTINUOUS BRACING
- 7. CALCULATED MAX. DEFLECTION UNDER LIVE AND TOTAL LOADS
- 8. MAXIMUM AXIAL COMPRESSIVE FORCES IN TRUSS MEMBERS
- 9. CONNECTION REQUIREMENTS FOR ALL CONNECTIONS AND FIELD SPLICES.

9. LUMBER USED FOR TRUSS MEMBERS SHALL BE IN ACCORDANCE WITH PUBLISHED VALUES OF THE AMERICAN LUMBER STANDARDS COMMITTEE. LUMBER SHALL BE IDENTIFIED BY GRADE MARK OF A LUMBER INSPECTION BUREAU.

10. MOISTURE CONTENT OF LUMBER SHALL BE NO LESS THAN 7% INSTALLED AND NO GREATER THAN 15% AT TIME OF FABRICATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR KEEPING ALL MATERIALS ON SITE CLEAN AND DRY BEFORE, DURING AND AFTER INSTALLATION.

11. ALL METAL CONNECTOR PLATES SHALL BE A MINIMUM THICKNESS OF 0.036" (20 GAGE) AND SHALL MEET OR EXCEED ASTM A653-11 GRADE 37, AND SHALL BE HOT DIPPED GALVANIZED ACCORDING TO ASTM A653-11, COATING DESIGNATION G-60. WORKING STRESSES IN STEEL ARE TO BE APPLIED TO EFFECTIVE RATIOS FOR PLATES AS DETERMINED BY TEST IN ACCORDANCE WITH ANSI/TPI-1 2014.

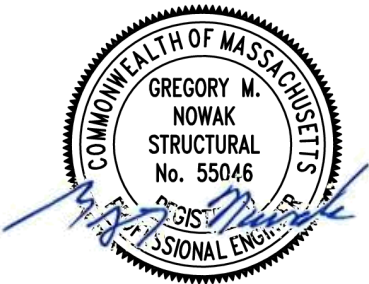
12. TRUSSES SHALL BE FABRICATED IN A PROPERLY EQUIPPED MANUFACTURING FACILITY BY EXPERIENCED PERSONNEL USING PRECISION CUTTING, JIGGING AND PRESSING EQUIPMENT AS SPECIFIED BY THE REQUIREMENTS OF ANSI/TPI-1 2014. ALL TRUSS MEMBERS SHALL BE CUT TO ACCURATE LENGTHS AND ANGLES TO ASSURE PROPER FITTING JOINTS WITHIN TOLERANCES SET FORTH IN ANSI/TPI-1 2014.

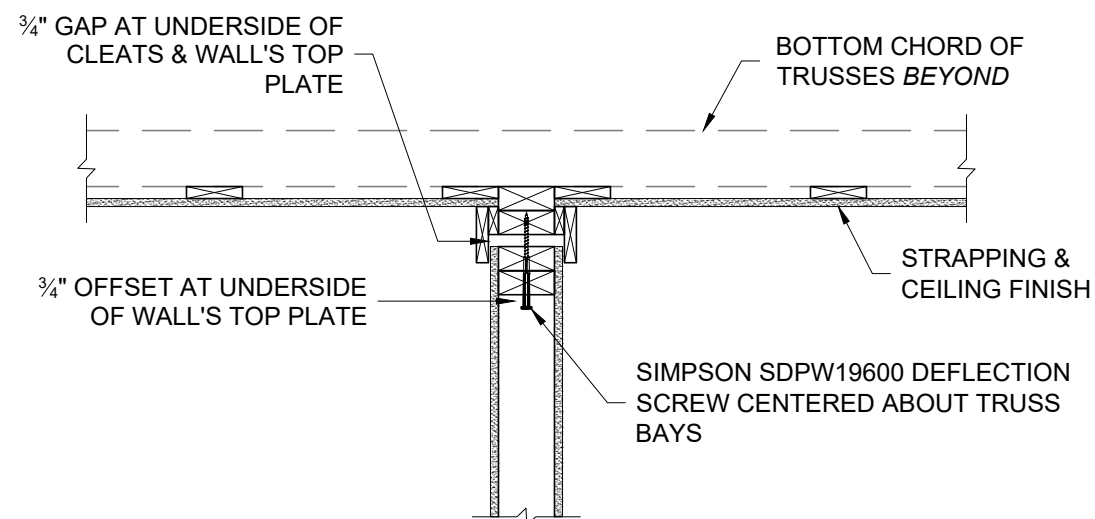
13. TRUSSES SHALL BE HANDLED, STORED, AND INSTALLED IN A MANNER THAT LIMITS LATERAL STRAIN TO THE TRUSS. DURING INSTALLATION TRUSSES SHALL BE IN ACCORDANCE WITH BUILDING COMPONENT SAFETY INFORMATION (BCSI)- GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING, RESTRAINING & BRACING OF METAL PLATE CONNECTED WOOD TRUSSES, AS PUBLISHED BY THE TPI AND ANSI/TPI-1 2014.

14. ALL TRUSSES MUST BE SECURELY BRACED BOTH DURING ERECTION AND AFTER PERMANENT INSTALLATION IN ACCORDANCE WITH BUILDING COMPONENT SAFETY INFORMATION (BCSI)- GUIDE NOTED ABOVE IN #13. ERECTION BRACING SHALL HOLD TRUSSES STRAIGHT AND PLUMB AND IN SAFE CONDITION UNTIL DECKING AND PERMANENT TRUSS BRACING HAS BEEN FASTENED FORMING A STRUCTURALLY SOUND ROOF FRAMING SYSTEM. ALL ERECTION AND PERMANENT BRACING SHALL BE INSTALLED AND ALL TRUSSES PERMANENTLY FASTENED BEFORE APPLICATION OF ANY LOADS. IF THE CEILING WILL NOT BE PRESENT ALONG THE BOTTOM CHORD OF THE TRUSS, PERMANENT BRACING WILL BE REQUIRED ALONG THE BOTTOM CHORD. PERMANENT STRUCTURAL CROSS-BRACING TO ENSURE OVERALL RIGIDITY OF THE ROOF SYSTEM SHALL BE IN ACCORDANCE WITH BOTH THE ARCHITECTURAL PLANS FOR THE BUILDING STRUCTURE. SEE TRUSS DESIGN DRAWINGS FOR ANY ADDITIONAL SPECIAL BRACING REQUIREMENTS. MATERIALS USED IN BRACING ARE OTHERWISE NOTED IN THESE SPECIFICATIONS. TEMPORARY BRACING SHALL BE INSTALLED AS NECESSARY TO RIGIDLY BRACE THE ROOF STRUCTURE HORIZONTALLY UNTIL PLYWOOD ROOF SHEATHING AND CEILING SHEATHING ARE COMPLETELY INSTALLED.

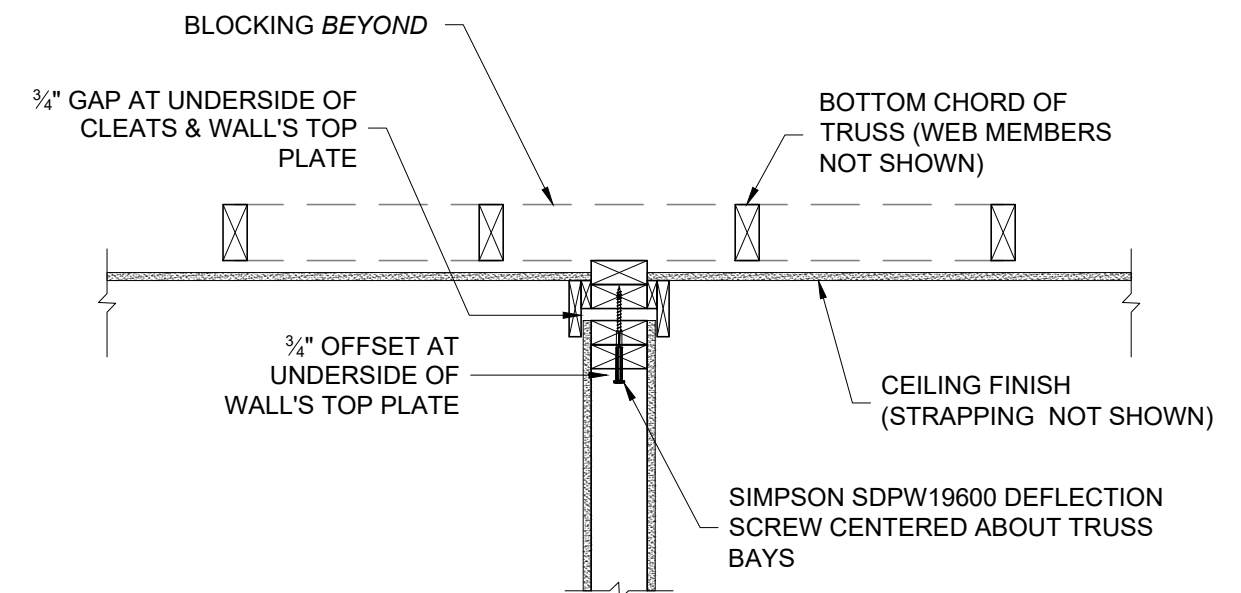
15. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADDITIONAL 2x6 "STRONGBACK" BRACING IN THE FIELD AT GABLE END WALL (GEW) TRUSSES. SUCH BRACING SHALL BE INSTALLED PERPENDICULAR TO THE GABLE END TRUSS MEMBERS.

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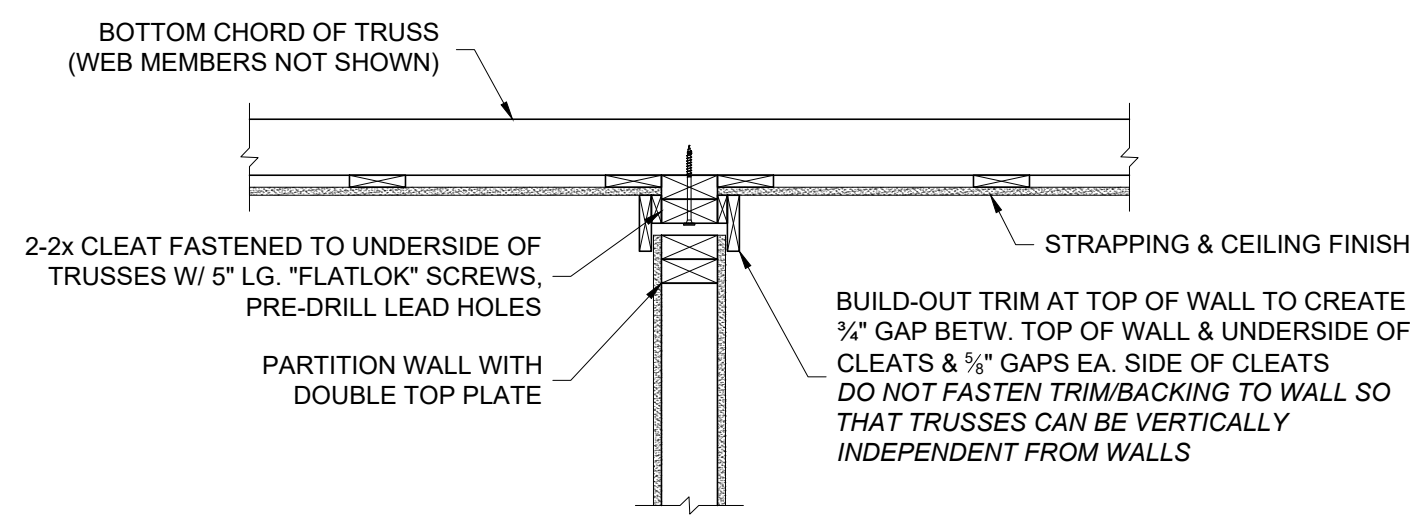




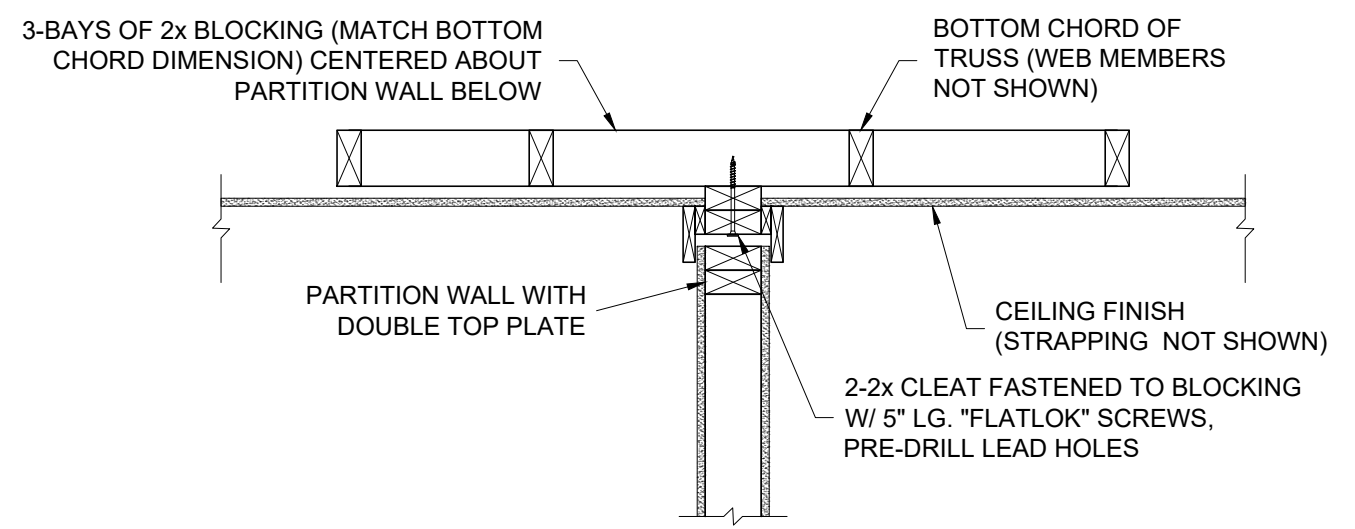
WALL PERPENDICULAR TO TRUSSES
CONDITION BETWEEN TRUSSES



WALL PARALLEL TO TRUSSES
CONDITION BETWEEN BLOCKING



WALL PERPENDICULAR TO TRUSSES
CONDITION BETWEEN TRUSSES



WALL PARALLEL TO TRUSSES
CONDITION AT BLOCKING

SEE PERPENDICULAR CONDITION DETAILS FOR INFO NOT REPEATED HERE

REF. S-1.2 **1** SUGGESTED DETAILS AT INTERIOR PARTITION WALLS
S-3.3 NTS

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