

STRUCTURAL GENERAL NOTES

584 Congress St
Portland, Maine
SI Job #: 15-0151

DESIGN LOADS: International Building Code; IBC 2009 Edition, except as noted

Occupancy Category, Table 1604.5 II Standard

Roofs: Ground Snow, Pg 60 psf (used for drifting calculations); Flat Roof Snow, PF 38 psf; Snow Exposure Factor, Ce Table 1608.3.1 0.9; Snow Importance Factor, Is Table 1604.5 1.0; Snow Thermal Factor, Ct Table 1608.3.2 1.0

Floors: Residential 40 psf; Corridors above first floor 40 psf; Storage Areas 125 psf; Stairs 100 psf

Lateral: Wind IBC 1603.1.4, ASCE 7-05 Analytic Method; 3 Second Gust Velocity 100 mph; Importance Factor 1.0; Building Category and Internal Pressure Coefficient Enclosed GCpi=0.18; Exposure C; Components and Cladding Pressures DP 50 uno. Also see specs; Seismic Use Group 1; Importance Factor 1.0; Spectral Response Acceleration Coefficient

Short Period Ss 0.217 g; One Second S1 0.075 g; So1 0.175 g; So2 0.362 g; So3 0.175 g; Soils Site Class Table 1615.1.1 D; Design Category Table 1616.3 B; Basic Force Resisting System, Table 1617.6.2; Design Base Shear 28 kips; Seismic Response Coefficient Cs 0.056; Response Modification Coefficient R 6.5; Analysis Procedure Equivalent Lateral Force

STRUCTURAL WOOD FRAMING:

In-Grade Base Values have been used for design. 2x framing shall be Spruce-Pine-Fir S4S No. 2 and better unless noted. All lumber shall be 19% maximum moisture content, unless noted. Solid timber beams and posts shall be Douglas Fir-Larch No. 1. Studs shall be Spruce-Pine-Fir S4S No. 2 and better.

Top and bottom plates shall be Spruce-Pine-Fir S4S No. 2 and better. Wood in contact with concrete shall be pressure-treated Spruce-Pine-Fir S4S No. 2 or Southern Yellow Pine. Conventional light framing shall comply with IBC Section 2308.

Except as noted otherwise, minimum nailing shall be provided as specified in IBC Table 2304.9.1 "Fastening Schedule." Plywood and oriented strand board (OSB) floor and roof sheathing shall be APA graded with panel identification index, thickness, and nailing as noted on the drawings.

Nail wall sheathing with 8d commons at 4" o.c. at panel edges, and 12" o.c. at intermediate framing except as noted. SHEATH ALL EXTERIOR WALLS. SHEATH INTERIOR WALLS AS SHOWN ON THE DRAWINGS. BLOCK AND NAIL ALL EDGES BETWEEN STUDS. Sheathing shall be continuous from bottom plate to top plate. Cut in "L" and "T" shapes around openings. Lap sheathing over rim joists min. 4" at all floors to the upper and lower stud walls together.

Minimum height of sheathing panels shall be 16" to assure that plates are tied to studs. Minimum 3-8d per stud and nail plates with "edge nail" spacing. Sole plate at all perimeter walls and at designated shear walls shall be nailed as for braced panels with 3-16d x 3 1/2" long box nails (coated or deformed shank) per 16". 12d nails are not acceptable. Provide solid blocking between joists under jamb studs of openings.

Pre-engineered, prefabricated trusses shall be designed for the fabricator by a Professional Engineer Registered in the State of construction, and shall comply with Code Requirements. Truss to truss connections specified shall be by truss supplier, unless specifically noted on the drawings. Lower chord of gable end trusses shall be anchored to wall plate with framing anchors at 4'-0" spacing and laterally braced to roof framing at 8'-0" spacing. Truss supplier shall specify all floor and roof truss bracing and bridging. All roof rafters, joists, trusses, and beams shall be anchored to supports with metal framing anchors. Light gage framing anchors shown or required, shall be Simpson "Strong Tie" and installed with the number and type of nails recommended by the manufacturer to develop the rated capacity.

Note that heavy-duty hangers and skewed hangers may not be stocked locally and require special order from the factory. All beams and trusses shall be braced against rotation at points of bearing. Unless otherwise indicated, install two lengths of solid blocking x joist depth x 12 inches long in floor framing under column loads. Columns must have a continuous load path to foundation. Lead holes for lag screws shall be drilled in accordance with Table 6.2.3 of the AITC Timber Construction Manual, 3rd edition.

SHOP DRAWINGS: Construction Documents are copyrighted and shall not be copied for use as erection plans or shop details. Use of SI Inc.'s electronic files as base for shop drawings requires prior approval by SI Inc, signed release of liability by subcontractor, payment of an administration fee of \$100 per drawing sheet to SI Inc, and deletion of SI Inc's name and Logo from all sheets so used. The General Contractor and his subcontractors shall submit in writing any requests to modify the plans or specifications. All shop and erection drawings shall be checked and stamped by the General Contractor prior to submission for Engineer's review. Unchecked submittals will be returned without review.

Furnish one (1) reproducible and two (2) prints of shop and erection drawings to the Structural Engineer for review prior to fabrication for reinforcing steel, structural steel, wood trusses. Submit in a timely manner to permit ten (10) working days for review. Shop drawings submitted for review do not constitute "in writing" unless specific suggested changes are clearly marked. In any event, such changes by means of the shop drawing submittal process become the responsibility of the one initiating such change.

FIELD VERIFICATION OF EXISTING CONDITIONS: Contractor shall thoroughly inspect and survey existing structure to verify conditions that affect the work shown on the drawings. Contractor shall report any variations or discrepancies to the Architect before proceeding.

STRUCTURAL ERECTION AND BRACING REQUIREMENTS: The structural drawings illustrate the completed structure with elements in their final positions, properly supported and braced. These construction documents contain typical and representative details to assist the contractor. Details shown apply at all similar conditions unless otherwise indicated. Although due diligence has been applied to make the drawings as complete as possible, not every detail is illustrated, nor is every exceptional condition addressed.

All proprietary connections shall be installed in accordance with the manufacturers' recommendations. All work shall be accomplished in a workmanlike manner and in accordance with the applicable code and local ordinances. The general contractor is responsible for coordination of all work, including layout and dimension verification, materials coordination, shop drawing review, and the work of subcontractors. Any discrepancies or omissions discovered in the course of the work shall be immediately reported to the architect for resolution.

Continuation of work without notification of discrepancies relieves the architect and engineer from all consequences. Unless otherwise specifically indicated, the drawings do not describe methods of construction. The contractor, in the proper sequence, shall perform or supervise all work necessary to achieve the final completed structure, and to protect the structure, workmen, and others during construction.

Such work shall include, but not be limited to, bracing, shoring for construction equipment, shoring for excavation, formwork, scaffolding, safety devices and programs of all kinds, support and bracing for cranes and other erection equipment. Do not backfill against basement or retaining walls until supporting slabs and floor framing are in place and securely anchored, unless adequate bracing is provided. Temporary bracing shall remain in place until all floors, walls, roofs and any other supporting elements are in place. The architect and engineer bear no responsibility for the above items, and observation visits to the site do not in any way include inspection of them.

STRUCTURAL STEEL:

Structural steel shall be detailed, fabricated, and erected in accordance with latest AISC Specifications, and Code of Standard Practice. Structural steel wide flange beams shall conform to ASTM A992. Except as noted, framed beam connections shall be bearing-type with 3/4" diameter, snug tight, A325-X bolts, detailed in conformance with Part 4, Tables II and III, for 0.6 times the allowable uniform loads tabulated in Part 2 of the AISC Manual, 9th Edition. Install bolts in accordance with AISC "Specification for Structural Joints Using ASTM A325 or A490 Bolts". All beams shall have full depth web stiffeners each side of webs above and below columns. Anchor rods shall conform to ASTM F1554, Grade 55, with weldability supplement S1. Headed anchor studs (HAS) shall be attached to structural steel with equipment approved by the stud manufacturer according to the stud manufacturer's recommendations. Welding shall be done by a certified welder in accordance with AISC and AWS specifications and recommendations using E70-electrodes. Where not specifically noted, minimum weld shall be 3/16" fillet by length of contact edge. All post-installed anchors shall have current National Evaluation Report, and shall be installed in accordance with the manufacturer's requirements.

Expansion anchors shall be approved "wedge" type unless specifically noted to be "sleeve" type. Chemical anchors shall be approved epoxy or similar adhesive type and shall have current National Evaluation Report. Where base material is not solid, approved screen tubes shall be used. Grout beneath column base and beam-bearing plates shall be minimum 28-day compressive strength of 7,500 psi, approved pre-bagged, non-metallic, non-gaseous, bleed free, non-shrink, when tested in accordance with ASTM C1107 Grade B or C at a flow cone fluid consistency of 20 to 30 seconds.

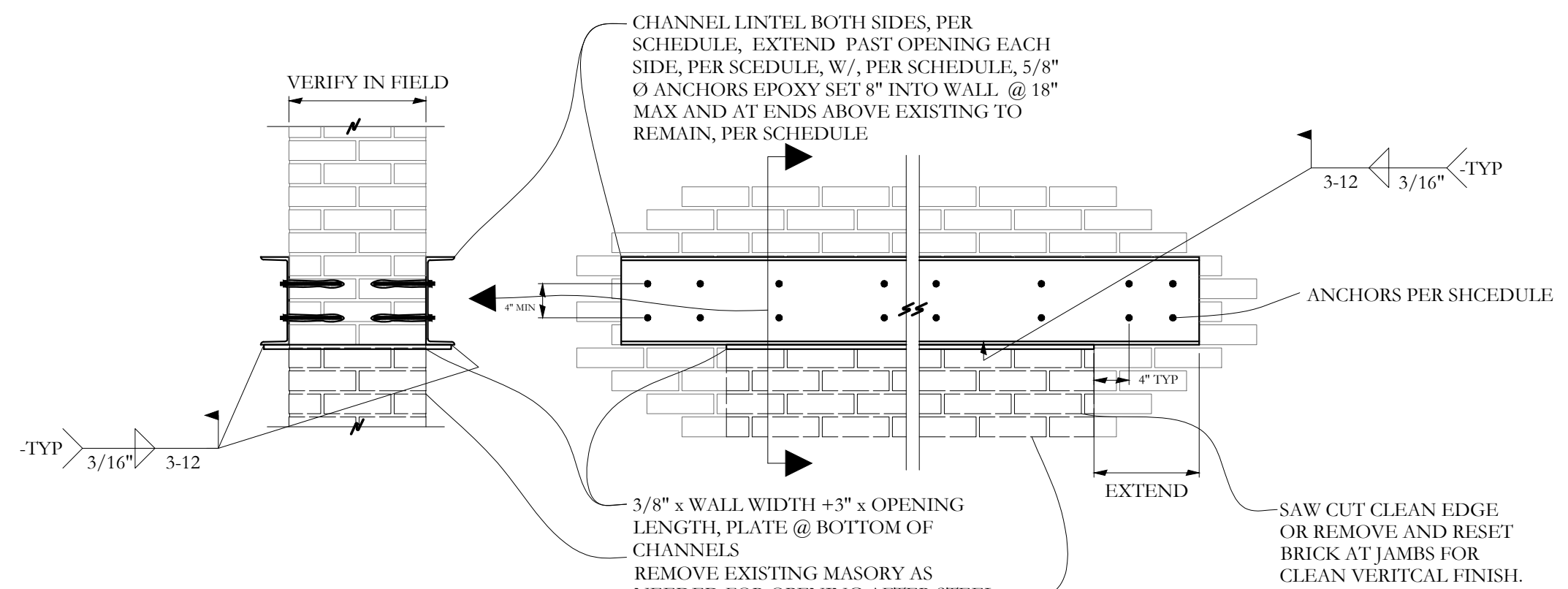
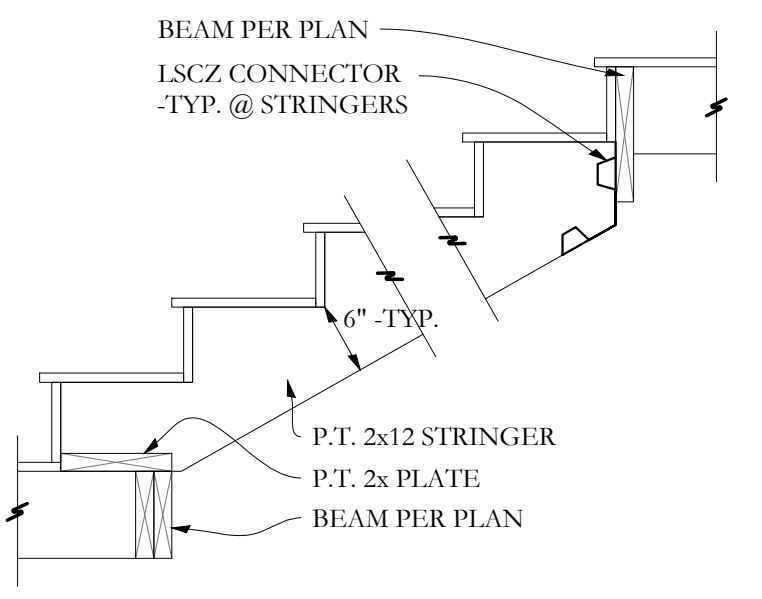
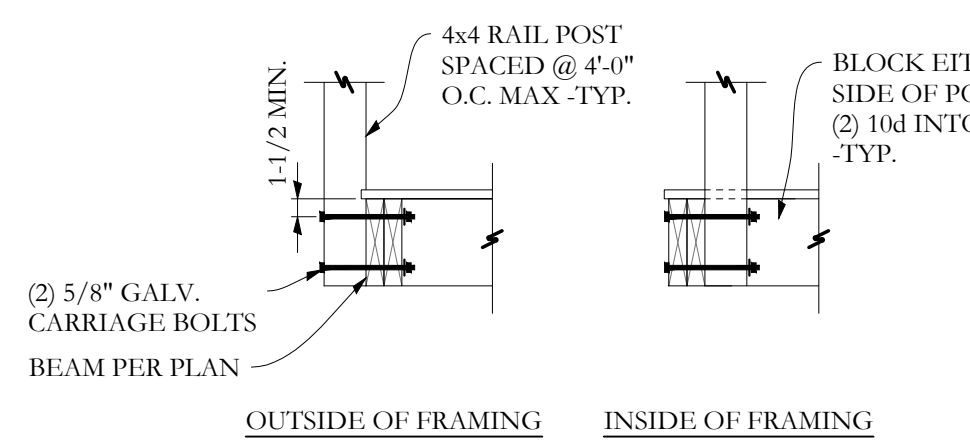


Table with 4 columns: OPENING SIZE, LINTEL SIZE, JAMB ANCHORS, JAMB EXTENSION LENGTH. Rows include LESS THAN 4'-0", 4'-0" TO 8'-0", and 8'-0" TO 12'-0".

ABBREVIATIONS KEY

Large table listing abbreviations and their full names, such as AB Anchor Rod (Bolt), EJ Expansion Joint, MACH Machine, etc.

LINTEL INSTALLATION IN EXISTING BRICK BEARING WALL



TYPICAL HANDRAIL ATTACHMENT NO SCALE

TYPICAL STRINGER ATTACHMENT NO SCALE



65 NEWBURY STREET
PORTLAND, ME 04101
207.761.9000



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Portland, ME, 04101
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Consultants:

Structural Integrity Consulting Engineers, Inc. 46 Forest Street Portland, ME 04101 (207) 774-4614 contact: Chris O'Hara chris@structuralinteg.com

PERMIT SET - NOT FOR CONSTRUCTION

CONGRESS STREET MIXED USE

582-584 Congress Street Portland, Maine

Table with 3 columns: #, DATE, DESCRIPTION. Rows include 1 10/6/17 REVIEW DWG and 1 10/23/17 PERMIT SET

Date Issued October 23, 2017
Project Number 15102
Drawing Scale As Noted

GENERAL NOTES, ETC.

Drawn By CJO
Checked By CJO
S-1.0

Structural Drawing Index table with 2 columns: Drawing ID, Description. Rows include S-1.0 General Notes, Etc., S-1.1 First Floor Framing Plan, S-1.2 Second Floor Framing Plan, S-1.3 Third Floor Framing Plan, S-1.4 Fourth Floor / Low Roof Framing Plan, S-1.5 Roof Framing Plan, S-2.1 Details