

STRUCTURAL GENERAL NOTES

DESIGN LOADS: International Building Code; IBC 2009 Edition, except as noted Occupancy Category, Table 1604.5

Table with columns: Roofs, Floors, Ground Snow, Snow Exposure Factor, Snow importance Factor, Snow Thermal Factor, Pg, Ce, Is, Ct, 60 psf, 40 psf, Analytic Method, 100 mph, 1.0, Enclosed, C

FOUNDATION:

* Foundations are designed without an engineer's soil investigation. Foundation design criteria was assumed for purposes of foundation design and shall be confirmed by a soils engineer, at owner's expense, prior to construction.

REINFORCED CONCRETE:

We encourage the use of blast furnace slag. Design is based on "Building Code Requirements for Reinforced Concrete"(ACI 318). Concrete work shall conform to "Standard Specifications for Structural Concrete" (ACI 3019).

Table with columns: Intended Use, F'c, psi, Max W/C Ratio, Maximum Aggregate, Slump inches, Entrained Air Percent, Cement Type, Admixtures, Comments

Detailing, fabrication, and placement of reinforcing steel shall be in accordance with the Manual of Standard Practice for Detailing Reinforced Concrete Structures (ACI 315).

Welded wire fabric shall conform to ASTM A185.

Reinforcing bars shall conform to ASTM A615, Grade 60,

except ties or bars shown to be field-bent, which shall be Grade 40.

Epoxy coated reinforcing bars shall conform to ASTM 775.

Zinc coated (galvanized) reinforcing bars shall conform to ASTM 767.

Bars to be welded shall conform to ASTM 706.

At splices, lap bars 50 diameters unless noted otherwise.

At corners and intersections, make horizontal bars continuous or provide matching corner bars.

Around openings in walls and slabs, provide 2-#5, extending 2'-0" beyond edge of opening.

In continuous members, splice top bars at mid-span and splice bottom bars over supports.

Provide intermittent shear keys at all construction joints and elsewhere as shown on the drawings.

Except as noted on the drawings, concrete protection for reinforcement in cast-in-place concrete shall be as follows:

- a. Cast against and permanently exposed to earth 3"
b. Exposed to earth or weather: #6 through #18 bars 2" #5 bar, W31 or D31 wire, and smaller 1-1/2"
c. Not exposed to weather or in contact with ground: Slabs, walls, joists: #11 bar and smaller 3/4" Beams, columns: Primary reinforcement 1-1/2" Stirrups, ties, spirals 1-1/2"

Fibremesh admixture shall be 100% virgin polypropylene, fibrillated fibers as manufactured by Fibremesh Co. per ASTM C-1116 type 111 4.1.3 and ASTM C-1116 performance level one, 1.5 lbs per cubic yard of concrete.

Anchor bolts and rods for beam and column-bearing plates shall be placed with setting templates.

Permanent corrugated steel forms for concrete floor slabs shall be manufactured and erected according to the "Specifications and Code of Standard Practice" of the Steel Deck Institute.

All concrete work is subject to inspection by a qualified special inspector employed by the owner in accordance with IBC Section 1704.4.

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-N 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 -typ.

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.

Groat 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

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."

ALL PLYWOOD SHEATHING SHALL BE OSB SHEATHING AND 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 tie 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" or equal Code approved connectors 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 6.23 of the AITC Timber Construction Manual, 3rd edition.

ABBREVIATIONS KEY

Large table with multiple columns listing abbreviations and their full names, such as AB Anchor Rod (Bolt), ADJ Adjustable, etc.

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RESIDENCES 107 INDIA STREET PORTLAND, MAINE



RYAN SENATORE ARCHITECTURE 565 CONGRESS ST. SUITE 304 PORTLAND, MAINE 04101 207-650-6414 senatorearchitecture.com

CONSULTANTS:

STRUCTURAL: Structural Integrity 77 Oak Street Portland, ME 04101 207-774-4614

REVISIONS:

PERMIT SET

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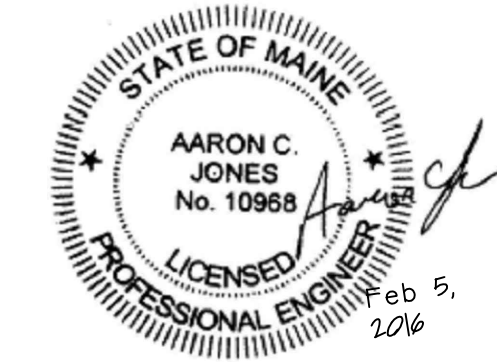
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SCALE: AS NOTED

SHEET TITLE:

GENERAL NOTES ETC.

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Consulting Engineers, Inc. SI # 15-0242

77 Oak Street Portland, ME, 04101 p. 207-774-4614 f. 866-793-7835 www.structuralintegrity.com

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