

Structural Specifications - Outline Form

- Note: Certain Sections below may not be used in this particular project: EXCAVATION & BACKFILL - SECTION 02200
- 1. If no soils testing/geotechnical report is available to the Architect, then the Architect assumes no responsibility for any site/soils/water related problems - such as, but not limited to -
- surface water, subsurface water, rock, ledge, bearing capacity, backfill materials, etc. 2. Footings are designed to bear on undisturbed soil having a minimum safe bearing capacity of
- 15 tons per square foot. Confirm in field prior to placing footings. 3. Finish all footing excavations by hand. No footings shall be placed in water or on
- frozen ground. Protect footings from frost after they are placed. 4. Fill and backfill material - Clean run-of-bank material, free of deleterious organic material.
- Conform to the following graduation: 100% smaller than 4" sieve, max. 15% smaller than \$200 sieve.
- 5. Do not place fill or backfill unless foundation walls are adequately braced.

CAST-IN-PLACE CONCRETE - SECTION Ø33ØØ

1. Concrete shall attain the following compressive strengths at 28 days:

Basement walls and foundations not exposed to weather -2,500 psi Basement slabs and interior slabs-on-grade 3*000* psi Basement walls, foundation & other walls exposed to weather -Porches, slabs and steps exposed to weather and garage floors - 3,500 psi

2. Concrete exposed to the weather shall be air-entrained, 5% to 7% by volume.

with the latest edition of the ACI Building Code.

3. Reinforce all slabs-on-grade with 6x6 WI.4 x WI.4 WWF, minimum. 4. Concrete work shall be designed, reinforced, placed and cured in conformance

CONCRETE MASONRY - SECTION 04200

- 1. Concrete masonry units (CMU) shall be lightweight aggregate, and shall conform to ASTM C-90.
- 2. Provide all masonry work in accordance with IBC or IRC and other applicable codes. 3. Mortar shall be ASTM C 270, Type M for below grade and Type M or S for above grade work
- 4. Horizontal reinforcing No. 9 gauge truss-type "Dur-O-Wall" or equal, spaced @ 16" o.c. vertically and above all lintels.
- 5. Provide fabricated corner sections at all corners and intersections.
- 6. Solid grout at cells as indicated Type M mortar or 2500 PSI concrete in accordance with ASTM C 476, install in accordance with ACI-531 for high or low lift procedures.

STEEL FABRICATIONS - SECTION 05500

- 1. Provide structural steel shapes, tubes, pipes, bars and/or rods conforming to ASTM A-36.
- 2. Fabricate and erect structural steel in accordance with the latest specifications of the AISC. 3. Galvanize all structural steel exposed to the weather, shop prime all interior steel.
- 4. Steel pipe columns (where indicated) 4" diameter schedule 40 steel pipe with 8"x8" x^34 " steel base plate, fastened with (2) 34 " ϕ anchor bolts ϕ a 6 12 " $\times 10^9$ " $\times 2^34$ " cap plate with (4) 34 " ϕ lag bolts.

ROUGH CARPENTRY - SECTION 06100

- FRAMING LUMBER (CONVENTIONAL)
- 1. Structural framing lumber 545 Douglas Fir or Southern Pine No. 2 or better, as graded by WCLIB or WWPA, Fb = 1200 PSI minimum, E = 1,500,000 minimum, 19 % Moisture content at time of dressing.
- 2. Light framing members 545 construction grade Douglas Fir or Southern Pine or better, as graded by WCLIB or WWPA, 19 % moisture content at time of dressing.
- 3. Boards construction grade minimum, or as noted.
- 4. Comply with the recommendations of the NFoPA Manual for House Framing, NFoPA Recommended Nailing Schedule, and National Design Specification for Wood Construction.
- STRUCTURAL SHEATHING 1. Provide panels rated for span, use and exposure. Comply with the recommendations
- of the APA Design & Construction Guide Residential & Commercial.
- 2. Floor sheathing APA sheathing, 3/4" thick T & G 48/24 span rating, APA "Sturd-i-Floor" or equal. Glue and screw sheathing to floor joists (glue and nail to 1-joists).
- 3. Wall sheathing APA sheathing CDX Exposure I, or OSB structural panels 1/2" thick
- 4. Roof sheathing APA sheathing, C-D Exterior, 5/8" thick. Fasten with 8d galvanized nails. ENGINEERED WOOD PRODUCTS
- 1. Wood I-Joists Provide engineered wood I-Joists, sizes and series as shown, as manufactured by Georgia-Pacific, Trus-Joist, Boise-Cascade, or approved equal. Install in strict compliance with the manufacturer's standard recommendations and details, including construction bracing,
- minimum bearing lengths, web stiffeners, squash blocks, blocking, knockouts and holes, etc. 2. Rim boards - Provide continuous 11/4" thick rim boards, "Timberstrand LGL" as manufactured by Trus-Joist, or approved equal. Install in compliance with the manufacturer's
- recommendations at the perimeter of all floor platforms. 3. Engineered beams - Provide engineered beams, sizes as shown, "Microlam" LVL or "Parallam" PSL as manufactured by Trus-Joist, or approved equal. Install in strict compliance with the manufacturer's standard recommendations and details.
- 1. Fastening Schedule Comply with the most restrictive of either the manufacturer's recommended fastening schedules, or with the most current IRC or IBC fastening schedules.
- 2. Provide metal fastening components where indicated, as manufactured by Simpson Strong-Tie,
- or approved fasteners with equivalent structural loading capacities.
- 3. Provide G90 min. galvanized steel fasteners at all preservative treated wood.

PRESERVATIVE TREATED WOOD

- 1. Provide preservative treated lumber at all sill plates, at all lumber in contact with concrete or masonry, and at all exterior decks or as otherwise noted.
- 2. Provide arsenic- and chromium-free treatments, produced in accordance with ACQ Preserve

Standard ACQ-94 and AWPA Standards CI, C2, C9 & CI5.

Floor Loading Schedule	Roof Loading Schedule	
DEAD LOAD:	DEAD LOAD:	
HARDWOOD 34" /TILE FLOORING 3.0 PS	F ROOFING SHINGLES 2.8 PSF	
PLYWOOD SUBFLOOR - 34" 225 PS	F PLYWOOD SHEATHING - 3/8" 2.0 PSF	
FLOOR JOISTS - 2x10 @ 16" oc 2.4 PS	F ROOF RAFTERS - 2x10 @ 16" 2.4 PSF	
GYP9UM BOARD - 1/2" 2.0 P9	F MECH/ELEC. 1.0 PSF	
BATT INSULATION 1.6 PS	F MISCELLANEOUS <u>1.8 PSF</u>	
MISCELLANEOUS <u>0.15 PS</u>	TOTAL DEAD LOAD 10.0 PSF	
TOTAL DEAD LOAD 12.0 PS	F LIVE LOAD:	
LIVE LOAD:	DESIGN LOAD 30.0 PSF	

40.0 PSF

GROUND SNOW LOAD 20.0 PSF

LATERAL LIVE LOAD:

SLEEPING ROOMS

ALL OTHER ROOMS

PARTITIONS 5.0 PSF

WIND EXPOSURE CATEGORY (IRC 2006 - R3012.1.4) EXPOSURE B - URBAN & SUBURBAN, WOODED

BASIC WIND SPEED (IRC 2006 - R3012(4)) 90 MPH, 50 YEAR RECURRENCE

Wood Header Schedule

ROUGH OPENING WIDTH:	HEADER:		
	For 2x4 stud wall:	For 2x6 stud wall:	
Up to 3'-0" W	(2) 2x6	(3) 2x6	(1) jack stud each end
3'-1" W - 4'-0" W	(2) 2x8	(3) 2x8	(1) jack stud each end
4'-1" W - 6'-0" W	(2) 2×10	(3) 2×10	(2) jack studs each end
6'-1" W - 8'-0" W	(2) 2x12	(3) 2x12	(2) jack studs each end
<i>0∨e</i> r 8'-1" W	SEE PLAN	SEE PLAN	

- 1. Provide 36 inch high guards at open-sided porches, balconies, ramps or floor surfaces located more than 30 inches above the floor or grade below. where indicated on the plans.
- 6 inches in diameter cannot pass through the opening.
- b. Handrails with a circular cross-section shall have an outside diameter of at it shall have a perimeter dimension of at least 4 inches and not greater than
- c. Handrails shall be continuous for the full length of the flight, from a point directly above the top riser of the flight to a point above the lowest riser of the flight.
- d. The clearance between a handrail and a wall or other surface shall be a
- e. A volute, turnout, staring easing or starting newell shall be allowed over the

Insulation - New Construction For new residential construction, provide thermal insulation

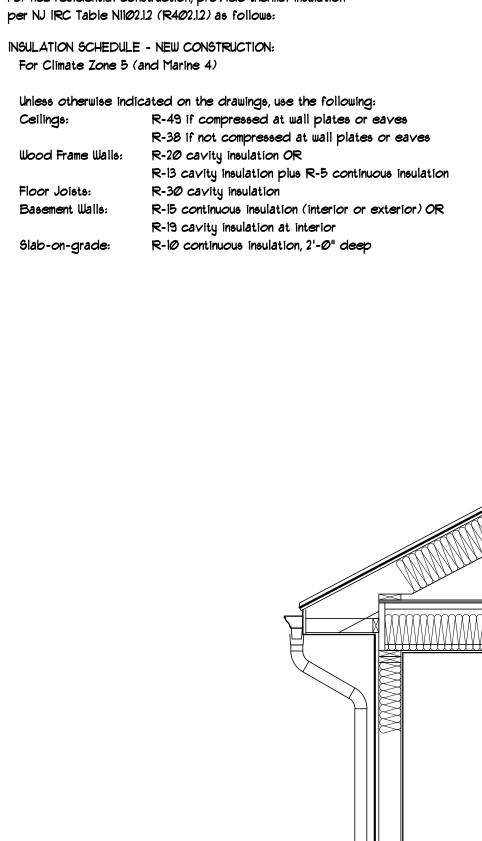
INSULATION SCHEDULE - NEW CONSTRUCTION:

Unless otherwise indicated on the drawings, use the following:

Ceilings:

Wood Frame Walls: R-13 cavity insulation plus R-5 continuous insulation Floor Joists: R-30 cavity insulation Basement Walls:

R-19 cavity insulation at interior Slab-on-grade:





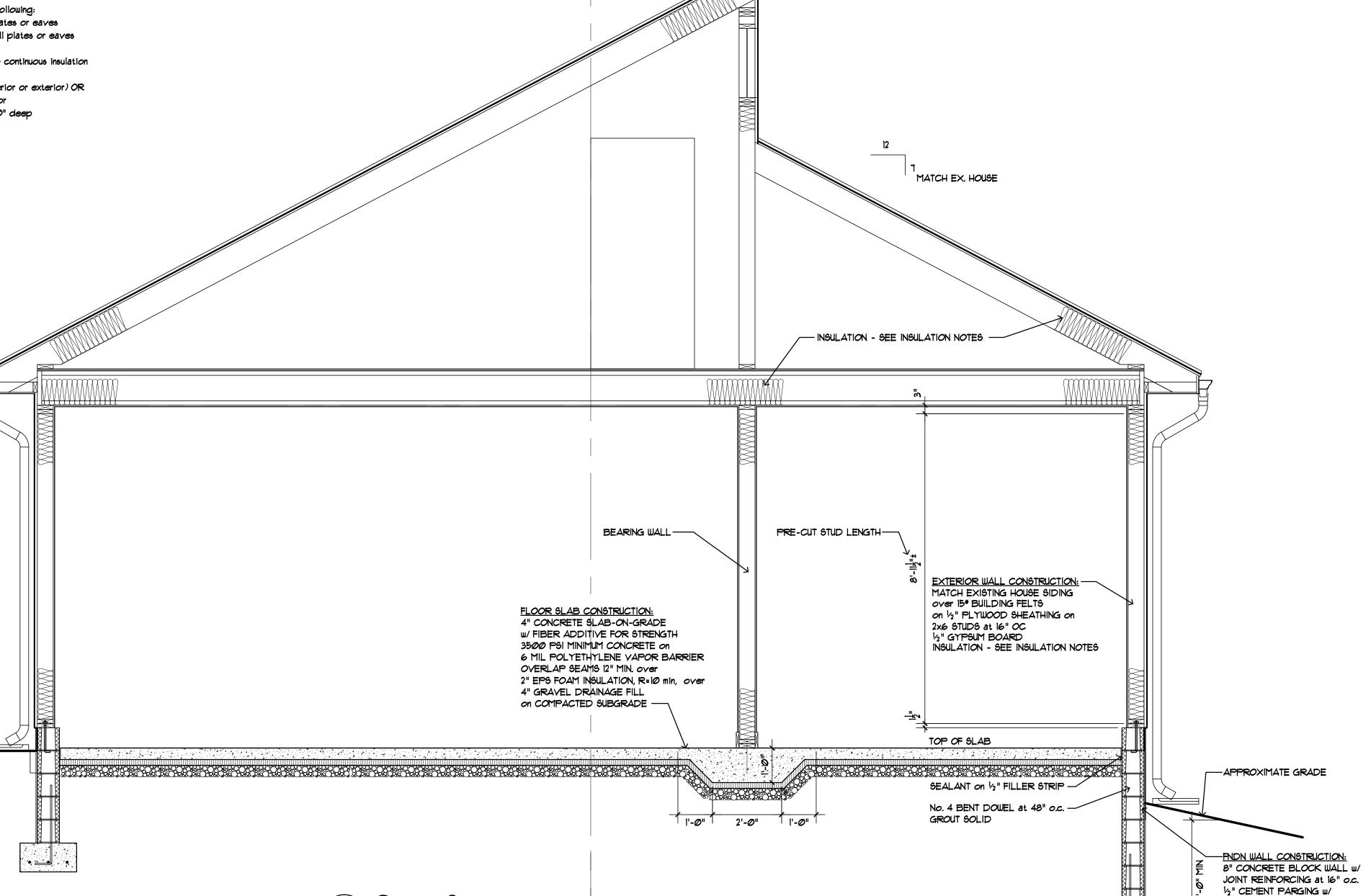
- Provide 34 inch high guards (measured vertically from the nosings of the treads) at open sides of stairs with a total rise of more than 30 inches above the floor or grade.
- a. Open guards shall have balusters or ornamental patterns such that a 4 inch diameter sphere cannot pass through any opening.
- b. The triangular openings formed by the riser, tread and bottom rail at the open side of a stairway shall be of a maximum size such that a sphere of

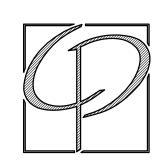
2. Provide a handrail on at least one side of each continuous run of treads or flight with four or more risers.

- a. Handrail height, measured vertically from the sloped plane adjoining the tread nosing, or ramp slope, shall be not less than 30 inches and not more than 38 inches.
- least $1\frac{1}{4}$ inches and not greater than $2\frac{5}{8}$ inches. If the handrail is not circular, 6.25 inches with a maximum cross-section dimension of 2.25 inches.
- Handrail ends shall be returned or shall terminate in newell posts.
- minimum of $1\frac{1}{2}$ inches.
- lowest tread.



Garage Section
A2 Scale: 1/2"=1'-0"





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> Issues & Revisions: Issued for Permit 10/23/20

Proposed Garage Sections & Details

October 23, 2020

DAMP-PROOFING BELOW GRADE

CONCRETE FOOTING - 20" W x 10" H

w/ (3) No. 4 REBARS, -OR-(2) No. 5 REBARS, CONTINUOUS

3000 PSI MIN. CONC.

on UNDISTURBED SOIL-

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