



Residential Construction Drawing Detail Guide

Information needed for Residential Construction Drawings:

- Residential construction drawings typically do not need to be prepared by an architect or engineer, but must be drawn clearly, accurately to scale, and with sufficient detail. However, an engineer or architect must prepare and stamp construction drawings for stressed concrete deck/floors (not supported by the ground), installation of hot tubs on decks, or any other construction method which is outside the scope of the building code.
- Please refer to the “Quick Guide for a Residential Deck Permit” for deck construction drawing requirements.
- Please refer to the “Quick Guide for a Residential Roof Permit” for deck/porch roof construction drawing requirements.
- Please refer to the “Swimming Pool, Spa, and Hot Tub Permit Packet” for pool, spa, and hot tub requirements and submittals.
- Please refer to the “New and Used Manufactured Home Permit Guide” for manufactured home construction requirements and details to be provided.
- Please refer to the “New Industrialized Home Permit Guide” for industrialized home construction requirements and details to be provided.

If the proposed project does not include one of the above, please submit the following construction drawings:

1. **Footer** - size (width and thickness), re-bar and depth (must be below the frost line of thirty-six (36) inches).
2. **Foundation Wall** - size of block or poured wall thickness, rebar reinforcement as required, size and spacing of anchor bolts/straps, French drain with gravel and filter fabric details. (Note: French drain only required if foundation is enclosing a basement, garage, or habitable space.)
3. **Concrete Floor Slab** - indicate the base, thickness, vapor barrier, and reinforcement details.
4. **Floor Joists** - indicate the size, spacing, and floor span of floor joists from support-to-support and floor sheathing thickness.
5. **Walls** - Indicate size of wall studs (2" x 4" or 2" X 6") and spacing details.
6. **Garage Separation from Home** - Indicate the size and type of drywall and door type between the garage and house.
7. **Locations of Tempered Glazing** - Indicate all locations of tempered glass.



8. **Smoke and Carbon Monoxide Detectors** - indicate locations, hard-wired, interconnection, and battery back-up.
9. **Bedroom and Basement Egress Windows/Doors** - indicate the actual opening size (openable area), opening height and width, and sill height for windows or indicate where there will be a door opening directly to the outside.
10. **Attic and Crawl Space Access** - indicate size and location.
11. **Stairs, Handrails and Guardrails** - indicate risers heights, tread depths, width, and graspable handrail for stairs and guardrail height and spacing between pickets.
12. **Fireplace** - indicate if gas or wood burning. If gas, indicate where shut off valve will be within 6 feet, flue pipe, and ventilation. If wood burning, indicate flue type, clean out, and fresh air intake.
13. **Exterior Wall Coverings** - indicate exterior walls coverings (i.e., brick, stone veneer, or siding)
14. **Floor and/or Wall Beams and Headers** - indicate size and material supporting floors and/or walls and header sizes over openings. If LVL Beam, provide specification sheet from manufacturer or lumber company.
15. **Roof Rafters or Trusses** - indicate size, span, and spacing of rafters. If trusses, indicate on drawings and you must also provide specifications on permit or at framing inspection.
16. **Roofing** - Indicate roof pitch, type of sheathing and covering (i.e., shingle or metal). Also, indicate roof truss or rafter hurricane clips and the use of snow/ice guard (minimum 24" from edge of roof).
17. **Elevations** - Indicate front, side, and rear elevations.
18. **Energy/Insulation** - for all heated and/or cooled spaces, indicate the insulation values for concrete slabs, foundation walls, exterior walls, floor joist (typically over an unheated garage or crawl space), and attic insulation values and window U-Factors. See charts below. **We are Climate Zone 5 and Marine 4.**

CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA

GROUND SNOW LOAD	WIND SPEED (MPH)	SEISMIC DESIGN CATEGORY	SUBJECT TO DAMAGE FROM				WINTER DESIGN TEMP	ICE SHIELD UNDER LAYMENT REQUIRED	FLOOD HAZARDS	AIR FREEZING INDES	MEAN ANNUAL TEMP
			WEATHERING	FROST LINE DEPTH	TERMITE	DECAY					
25	115	A	SEVERE	36"	MOD/HVY	SLT/MOD	5	YES	FEMA	1500 OR LESS	48



INSULATION TABLE

TABLE N1102.1.2 (R402.1.2) INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT^a

CLIMATE ZONE	FENESTRATION U-FACTOR ^b	SKYLIGHT ^b U-FACTOR	GLAZED FENESTRATION SHGC ^{b, e}	CEILING R-VALUE	WOOD FRAME WALL R-VALUE	MASS WALL R-VALUE ^e	FLOOR R-VALUE	BASEMENT ^c WALL R-VALUE	SLAB ^d R-VALUE & DEPTH	CRAWL SPACE ^c WALL R-VALUE
1										
2										
3										
4 except Marine										
5 and Marine 4	0.32	0.55	NR	49	20 or 13 + 5 ^h	13/17	30 ^g	15/19	10, 2 ft	15/19
6										
7 and 8										

For SI: 1 foot = 304.8 mm.

- a. R-values are minimums. U-factors and SHGC are maximums. When insulation is installed in a cavity which is less than the label or design thickness of the insulation, the installed R-value of the insulation shall not be less than the R-value specified in the table.
- b. The fenestration U-factor column excludes skylights. The SHGC column applies to all glazed fenestration.
Exception: Skylights may be excluded from glazed fenestration SHGC requirements in Climate Zones 1 through 3 where the SHGC for such skylights does not exceed 0.30.
- c. "15/19" means R-15 continuous insulation on the interior or exterior of the home or R-19 cavity insulation at the interior of the basement wall. "15/19" shall be permitted to be met with R-13 cavity insulation on the interior of the basement wall plus R-5 continuous insulation on the interior or exterior of the home. "10/13" means R-10 continuous insulation on the interior or exterior of the home or R-13 cavity insulation at the interior of the basement wall.
- d. R-5 shall be added to the required slab edge R-values for heated slabs. Insulation depth shall be the depth of the footing or 2 feet, whichever is less in Zones 1 through 3 for heated slabs.
- e. There are no SHGC requirements in the Marine Zone.
- f. Basement wall insulation is not required in warm-humid locations as defined by Figure N1101.10 and Table N1101.10.
- g. Or insulation sufficient to fill the framing cavity, R-19 minimum.
- h. The first value is cavity insulation, the second value is continuous insulation, so "13+5" means R-13 cavity insulation plus R-5 continuous insulation.
- i. The second R-value applies when more than half the insulation is on the interior of the mass wall.

