



SINGLE FAMILY RESIDENTIAL STRUCTURES AND ACCESSORY BUILDINGS MINIMUM SUBMITTAL REQUIREMENTS FOR STRUCTURAL PLANS

One (1) set of plans must be submitted for review. Plans must be drawn to scale ($\frac{1}{4}'' = 1'0''$ minimum) and be clear and legible enough to indicate the location, nature, and extent of work proposed. Detailing must be adequate to ensure that the proposed project will conform to all applicable laws, codes, ordinances, rules, and regulations.
Plan size requirements: Use a minimum size of 11"x17" paper for projects 600 square feet or less. A minimum size of 18"x24" paper is to be used for projects larger than 600 square feet.

Foundation plans shall include:

- ▶ Length, width, and location of foundation footing and wall, piers, or location of holes and posts for pole buildings
- ▶ Location and size of footings and slabs
- ▶ Size and location of vents (1 vent required within 3 feet of each corner) and underfloor access.
- ▶ Location and specific model numbers of required holddowns
- ▶ Reinforcing steel and anchor bolts (size, spacing, and embedment depth)
- ▶ Foundation plates
- ▶ Ground cover (6 mil black poly)
- ▶ In flood hazard areas, provide surveyed elevations at the 4 corners and show proposed elevations if finish grade is different.

Floor framing plans shall include:

- ▶ Location, size, grade, and species of posts, beams, headers, and bearing walls
- ▶ Size, grade, species, and spacing of floor joists. For manufactured I-joists, provide all required details for the use of I-joists and label the plans as to where a specific detail is required. This would include any nailing patterns, filler material, squash blocks, rim material, blocking including pressure blocks, and any other design component required by the joist manufacturer. The beams and joists called out on the I-joist plan must match the floor plans.
- ▶ Blocking, beams, cross-bracing, flooring, insulation, etc.
- ▶ Floor truss design specifications per R 502

First floor framing may be shown on the foundation plan if clarity is not compromised.

Framing for other floors may be shown on the floor plans if clarity is not compromised.

Floor plans shall include:

- ▶ Length, width, and location of all walls
- ▶ Size and locations of all windows and doors
- ▶ Location and type of all required bracing panels, and/or shear walls
- ▶ All appropriate engineering requirements
- ▶ Location of all plumbing fixtures, appliances used for heating and cooking, cabinets, smoke detectors, exhaust fans, stairways, attic access, underfloor access, fireplaces, etc.
- ▶ Identify the use of each room
- ▶ For additions, please provide a floor plan of the existing areas adjoining the addition. Show the use of the existing rooms and all doors and windows. Provide sufficient structural information about the existing building that loads for new framing can be calculated.

Wall section plans to include:

- ▶ Side view from bottom of footing or post to roofing
- ▶ Size of foundation, location of finished grade, size and location of rebar, sill plate, and anchor bolt size and spacing, holddowns, etc.
- ▶ Size, grade, and species of headers, beams, studs, insulation, wallboard, etc.
- ▶ Rafters, ceiling joists, trusses, sheetrock, insulation, venting, roof sheathing, roof felt, roof covering, roof pitch, vaulted ceilings, etc.
- ▶ Show size, grade, species, and spacing of materials as appropriate
- ▶ In flood hazard areas, show flood resistant materials for building elements below the Base Flood Elevation (BFE).

Roof framing plans to include:

- ▶ Size, grade, species, and spacing of all roof beams, headers, posts, rafters, purlins, and ceiling joists. For manufactured I-joists used for rafters, please provide details as required for floor framing.
- ▶ Location of bearing walls and any details that may be required.
- ▶ Roof truss layout including specific location of girder and hipmaster trusses, ridges, valleys, and hips.
- ▶ Roof truss design specifications per R 802.10.1

Roof framing plan may be included on the floor plan if clarity is not compromised.

Cross-Section plans to include:

- ▶ Complete section views - front-to-back, side-to-side, bearing soil to roof peaks
- ▶ Side view from bottom of footing or post to roofing

Elevation plans shall include:

- ▶ Minimum of four (4) elevation views
- ▶ Side view of structure from tallest side
- ▶ Show finished earth grade, windows, doors, decks, landings, chimneys, roof pitch, and overhangs
- ▶ In flood hazard areas, surveyed existing elevation and proposed finished grade elevations are required.

Other: Some structures may require additional plans, details, or information - for example:

- ▶ Connection details for additions.
- ▶ Manufacturer's specifications for any non-standard or prefabricated building materials

- ▶ Any/all unusual framing details
- ▶ Stair details
- ▶ Deck details, including method of attachment, ledger flashing
- ▶ Any/all engineering details
- ▶ Wall bracing schedule
- ▶ Shear wall schedule
- ▶ Holddown schedule
- ▶ Washington State Energy Code analysis, if not using prescriptive options
- ▶ Details for slab insulation, below grade insulation, thermal break, etc.
- ▶ Designate heated and unheated areas

Engineering will be required when:

- ▶ Plans submitted for review do not meet all prescriptive code provisions found in 2006 IRC 3, 4, 5, 6, 7, and 9.
- ▶ Proposed structures (by definition) are of unusual shape and design.
- ▶ Site conditions exist that could undermine or jeopardize the proposed construction.

Several examples where engineering requirements have been waived are:

One-Story Pole Buildings having:

- ▶ Clear span not more than 24 feet
- ▶ Eave height not more than 12 feet
- ▶ Bay spacing not more than 12 feet

Other:

- ▶ Retaining walls not over 2 feet in height measured from the bottom of the footing to the top of the wall and not supporting a surcharge.
- ▶ Conventional wood-frame structures not having an unusual size, shape, or design which comply with all provisions of the 2006 IRC.

DESIGN CRITERIA

SEISMIC ZONE: D2

WIND SPEED: 85 mph (based on 3 second gust wind velocities)

EXPOSURE: B, C, or D (Design professional to determine by site visit)

SOIL BEARING CAPACITY: 1,500 psf assumed

FROST LINE DEPTH: 18 inches

ROOF SNOW LOAD: Minimum 25 psf (may increase depending on site location)