

Community Development Department · City of Petaluma, California

- 9. Provide building section showing load path from roof to foundation. Specify building components from grade to roof; wood clearance to grade, floor-to-ceiling height, foundation, floor, wall, roof, and finishes.
- 10. Where addition or remodel is attached to or includes a garage, provide and detail fire-resistant construction for walls and ceiling separating garage and dwelling.[CRC 302]
- 11. Dimension all windows and doors; indicate window energy features, operation, and type (double hung, horizontal sliders, fixed). Label emergency escape windows. Glazed area is to be at least 8% of room floor area with 4% operable. Verify existing rooms maintain requirements with an addition. [CRC 303]
- 12. At least one emergency escape or rescue opening shall be provided in basements, habitable attics, and every sleeping room. Emergency escape and rescue openings must be open to a yard, court or public way. Openings must be a minimum of 5.7 square feet in size except for grade floor openings which have a minimum of 5 square feet. Opening dimensions are a minimum:
 - 24 inches clear opening height
 - 20 inches clear opening width
 - 44 inches at the bottom of the clear opening above floor

The minimum area and dimensions shall be measured after the window is opened. The requirements are to be met without removal or destruction of the window unit. Also, a window with minimum width and height does not provide the minimum required area. [CRC 310]

- 13. Provide stairway, landings, and handrail details. Specify stair tread rise and run compliance. Specify handrails, and guard construction. Show handrail height above nosing, distance from wall, and handrail graspability compliance. [CRC 311 & 312]
- 14. Designate foundation ventilation. Underfloor access openings through the floor shall be a minimum of 18 inches by 24 inches. Openings through a perimeter wall shall be not less than 16 inches by 24 inches. Provide positive drainage for the under floor area. [CRC R408]
- 15. Designate attic ventilation and access. Minimum dimension of attic access opening is 22"x30". Attics with a maximum vertical height of less than 30 inches need not be provided with access openings. The opening shall be located in a hallway or other readily accessible location. [CRC R806, R807]
- 16. Specify interior wall and ceiling covering and finish materials. [CRC 702]
- 17. Specify or dimension ceiling height. Minimum ceiling height in habitable rooms, hallways, bathrooms, toilet rooms, laundry rooms and portions of basements containing these spaces is 7 feet. [CRC 305]
- 18. Specify roof covering (comp, shakes, tile, etc.) Note that "All roof covering materials shall have a minimum fire rating of Class B" per city of Petaluma Ordinance.
- 19. Note that "All roof covering materials applied as exterior wall covering shall have a minimum fire rating of Class B" per City of Petaluma Ordinance

Structural

- 20. When a building of otherwise conventional construction contains structural elements exceeding the limits of Section R301 or otherwise not conforming to the residential code, these elements shall be designed in accordance with accepted engineering practice. [CRC R301]
- 21. Provide a scaled and dimensioned structural plan set including foundation, floor, wall, ceiling, and roof construction.
- 22. Specify structural connections between new construction and existing elements.
- 23. Designate slab floor with reinforcement, vapor barrier, and capillary break. [CRC 501] Welded wire fabric is not an approved reinforcement method in Petaluma.

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- 24. Designate wood floor joist framing (size and spacing), girder size and spacing, post and piers (size and spacing), connections of all members. Designate under floor access opening. [CRC 501]
- 25. Designate wall framing size, spacing of studs, wall bracing methods, connection details, and locations of braced or shear wall lines. [CRC 601]
- 26. Designate roof and ceiling framing plan (dimension and direction) showing size, spacing, and span of rafters and joists, connections and support. Size of ridge, hip and valley rafters with applicable girders, connection details, blocking, and bracing. [CRC 801]
- 27. Additions up to 50% of existing floor area are permitted to match existing foundation type with no soil investigation. Where existing is a continuous spread footing foundation, the proposed foundation design must also be continuous spread footing foundation. Where existing is an engineered type, provide foundation design as required by a state licensed engineer.
- 28. Designate concrete mix design. Footing and foundation reinforcement and applicable details, retaining walls, embedded hold downs, anchor bolts (size and spacing), etc. [CRC 401]
- 29. Where pre-engineered trusses are proposed, include roof truss plans in submittal or list as a deferred submittal on the cover sheet. The submittal is deferred until the design and review by designer of record is complete. Submittal is then to be made to the building division for review and approval. The installation cannot occur until these approvals are completed.
- 30. Where engineering is included, provide calculations for designed building elements, such as foundation, beams or girders, and lateral shear bracing.
- 31. Specify structural connections of walls to foundation and roof to walls. Specify column to footings and column to beams or headers. Specify anchor bolts, post base, and post cap connectors.
- 32. Protection of wood and wood based products from decay shall be provided. Designate where pressure treated or naturally durable lumber is proposed. [CRC 317.1]
- 33. Identify wood frame lumber grade and species. Specify the structural panel grade (veneer grade front and back, i.e. A-C, C-D), bond classification (exterior, exposure 1), and Performance Category (panel thickness). Identify span rating of structural panels for roof, wall and floor applications.

Mechanical/Plumbing

- 34. Clearly scope all mechanical and plumbing work on the plans.
- 35. Provide a gas piping plan for the new or relocated appliances. Designate the material, size, lengths, and loads served. [CPC 1208.4]
- 36. Designate HVAC duct alteration, relocation, or replacement. Furnace return air is prohibited from a toilet room. [CMC 314.3]
- 37. Specify new plumbing system. Locate connections to existing or public services, service entry, fixture locations, drain waste, and vent modifications. Provide a plumbing plan or isometric diagram. Locate fixtures, cleanouts, and vents. Indicate pipe sizes and materials. [CPC 103]
- 38. If water heater, furnace and/or AC unit is to be replaced, added, or relocated, show location on plans. Plans need to reflect high efficiency furnaces of at least 90% per City General Plan 2025. Water heaters are to be low NOx.
- 39. The new heat source cannot be electric where gas is the current heat source. Include new heating system design or indicate use of existing heater with new ducts.
- 40. Additions greater than 1000 square feet require building ventilation per ASHRAE 62.2 ventilation verified by acceptance testing. [CEnC 150.2]

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- 41. Residential energy compliance requires diagnostic testing of duct system when 40 feet of new or replacement ducts are installed in unconditioned space, and when furnace, or air conditioner is replaced. [CEnC 150.2(b)1D & E]
- 42. Bathroom, toilet rooms, and kitchens require mechanical exhaust ventilation. Bathrooms and kitchens require mechanical ventilation even if an operable widow is provided. Specify vent directly to the outside of building and must not be closer than 3 feet to building openings. [CMC Table 403.7]
- 43. Designate the bathroom exhaust fan control by humidistat and vented to outdoors with a minimum exhaust rate of 20 cfm continuous or 50 cfm intermittent. [CMC 402.5]
- 44. Specify kitchen exhaust vented to outdoors with a minimum exhaust rate of 50 cfm minimum continuous or 100 cfm intermittent. The ducted kitchen exhaust is required to have a metal, smooth interior surface duct for vent hood or down draft exhaust vent. Aluminum flex duct is not approved. Provide back draft damper. [CMC 504.2]
- 45. CalGreen requires gas fireplaces to be direct-vent sealed-combustion type. [CalGreen 4.503]

Electrical

- 46. Clearly scope all electrical work on the plans.
- 47. Locate electrical service and panelboards on the plans. Provide electrical plans for new service or panelboards, lighting equipment, and power outlets or receptacles. Provide panel schedule designating overcurrent protection, feeder conductors, circuit conductors, and wiring methods.
- 48. Existing panelboards with new loads may require load calculations to confirm panel is adequate.
- 49. Provide electrical layout plan, showing location of electrical receptacles, electrical equipment, lighting, switches, smoke, and carbon monoxide alarms.
- 50. Additions require Ufer (concrete encased electrode) to be installed at new footing reinforcement steel, bonded to the grounding electrode system and grounded service conductor in the panelboard on the supply side of the electrical service for each building. [CEC 250 Part III]

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