

City of Riverside

Building & Safety Division

Phone: (951) 826-5697

www.riversideca.gov



❖ PLAN CHECK – TOP 40 CORRECTIONS ❖

40 OF THE MOST FREQUENT RESIDENTIAL PLAN CHECK CORRECTIONS

Are your plans missing any of these items?

Electrical

1. Receptacle outlets shall be installed so that no point along the floor line in any wall space is more than 6', measured horizontally, from an outlet in that space, including any wall space 2' or more in width and the wall space occupied by fixed panels in exterior walls. (Article 210-52(a), 1993 NEC)
2. In dwelling units, hallways of 10 feet or more in length shall have at least one receptacle outlet. (Article 210-52(h), 1993 NEC)
3. In dwelling units, at least one, GFCI protected, wall receptacle outlet shall be installed in the bathroom adjacent to each basin location. (Article 210-8(a)(1) & 210-52(d), 1993 NEC)
4. All 125-volt, single-phase, 15- and 20-ampere receptacles which serve counter top surfaces, installed within 6' of a wet bar sink or kitchen sink, shall have GFCI protection. (Article 210-8(a)(5), 1993 NEC)
5. In kitchen and dining areas of dwelling units, a receptacle outlet shall be installed at each wall counter space 12 inches or wider. Receptacle outlets shall be installed so that no point along the wall line is more than 24 inches, measured horizontally from a receptacle outlet in that space. (Article 210-52(c), 1993 NEC)
6. Receptacle outlets to serve island or peninsular counter tops shall be installed above, or within 12 inches below the counter top. Receptacle outlets shall be installed so that no point along the centerline of the long dimension is more than 24 inches, measured horizontally from a receptacle outlet in that space. (Article 210-52(c), 1993 NEC)
7. HVAC equipment shall have a positive means of disconnect adjacent to and in sight from the equipment served. A 120 volt receptacle shall be located within 25 feet of the equipment for service and maintenance purposes. (Section 309.1, 1994 UMC)
8. All 125-volt, single-phase, 15- and 20-ampere receptacles installed in garages shall have ground-fault circuit-interrupter protection for personnel. (Article 210-8(a)(2), 1993 NEC)
9. For a one-family dwelling and each unit of a two-family dwelling that is at grade level, at least one receptacle outlet accessible at grade level shall be installed at the front and back of the dwelling. All exterior receptacle outlets must be weather-proof and GFCI protected. (Article 210-8(a)(3), 210-52(e) & 410-57(a) & (b), 1993 NEC)
10. All 125-volt, single phase, 15- and 20-ampere receptacles installed in crawl spaces at or below grade level and in unfinished basements shall have ground-fault circuit-interrupter protection for personnel. For purposes of this section, unfinished basements are defined as portions or areas of the basement not intended as habitable rooms and limited to storage areas, work areas, and the like.

Exception #1: A single receptacle supplied by a dedicated branch circuit that is located and identified for specific use by a cord- and plug connected appliance, such as a refrigerator or freezer.

Exception #2: The laundry circuit as required by Sections 210-52(f) and 220-4(c).

Exception #3: A single receptacle supplying a permanently installed sump pump. (Article 210-8(a)(4), 1993 NEC)

11. At least one wall switch-controlled lighting outlet (fixture) shall be installed in every habitable room; in bathrooms, hallways, stairways, attached garages, and detached garages with electric power; and at outdoor entrances or exits. (Article 210-70(a), 1993 NEC)
12. Hydromassage bathtubs and their associated electric components shall be protected by a ground-fault circuit-interrupter. (Article 680-70, 1993 NEC)
13. Provide the required working clearance in front of the A/C disconnecting device(s) and/or electrical circuit breaker panel(s). The work space shall not be less than 30 inches wide and 36 inches in length away from the face of the device or panel. (Article 110-16(a), 1993 NEC)
14. Overcurrent devices shall not be located in the vicinity of easily ignitable material such as in clothes closets. (Article 240-24(d), 1993 NEC)

Smoke Detectors

15. When the valuation of an addition, alteration or repair to a Group R Occupancy exceeds \$1000 and a permit is required, or when one or more sleeping rooms are added or created in existing Group R Occupancies, smoke detectors shall be installed in accordance with Sections 310.9.1.3, 310.9.1.4 and 310.9.1.5 of the 1994 Uniform Building Code. (Section 310.9.1.2, 1994 UBC)
16. In dwelling units, a smoke detector shall be installed in each sleeping room and at a point centrally located in the corridor or area giving access to each separate sleeping area. (Section 310.9.4, 1994 UBC)
17. In dwelling units where the ceiling height of a room open to the hallway serving the bedrooms exceeds that of the hallway by 24 inches or more, smoke detectors shall be installed in the hallway and in the adjacent room. (Section 310.9.1.4, 1994 UBC)

Mechanical

18. Furnace and Water Heater enclosures must have openings for combustion air. One combustion air opening shall be located within the upper 12 inches of the enclosure and one opening shall be located within the lower 12 inches of the enclosure. Louvered doors or vents in doors typically do not meet these location requirements. (Section 702.1, 1994 UMC)
19. Ducts for domestic kitchen downdraft grill-range ventilation installed under a concrete slab floor may be of approved Schedule 40 PVC provided:
 1. The under-floor trench in which the duct is installed shall be completely backfilled with sand or gravel.
 2. Not more than 1 inch of 6" diameter PVC coupling may protrude above the concrete floor surface.
 3. PVC pipe joints shall be solvent cemented to provide an air- and grease-tight duct.
 4. The duct shall terminate above grade outside the building and shall be equipped with a backdraft damper. (Section 504.2, 1994 UMC)
20. Unless otherwise permitted or required by the dryer manufacturer's installation instructions and approved by the building official, domestic dryer moisture exhaust ducts shall not exceed a total combined horizontal and vertical length of 14 feet including two 90-degree elbows. Two feet shall be deducted for each 90-degree elbow in excess of two. (Section 504.3.2, 1994 UMC)

Safety Glazing

21. Approved Safety Glazing shall be installed in all windows in walls which enclose hot tubs, whirlpools, saunas, steam rooms, bathtubs and showers where the bottom exposed edge of the glazing is less than 60 inches above a standing surface and drain inlet. (Section 2406.4.5, 1994 UBC)
22. Approved Safety Glazing shall be installed in all windows with fixed or operable panels which are adjacent to a door where the nearest exposed edge of the glazing is within a 24 inch arc of either vertical edge of the door in a closed position and where the bottom exposed edge of the glazing is less than 60 inches above the walking surface. (Section 2406.4.6, 1994 UBC)
23. Approved Safety Glazing shall be installed in all windows in walls enclosing stairway landings or within 5 feet of the bottom and top of stairways where the bottom edge of the glass is less than 60 inches above the walking surface. (Section 2406.4.10, 1994 UBC)

Natural Light & Ventilation

24. Habitable rooms within a dwelling shall be provided with natural light by means of exterior glazed openings with an area not less than one tenth of the floor area of such rooms. (Section 1203.2, 1994 UBC)
25. Habitable rooms within a dwelling shall be provided with natural ventilation by means of openable exterior openings with an area of not less than one twentieth of the floor area of such rooms. (Section 1203.3, 1994 UBC)

Safety Railings

26. Stairways shall have handrails on each side. Exception: Stairways in Group R, Division 3 Occupancies may have one handrail. The top of handrails shall be placed not less than 34 inches or more than 38 inches above the nosing of treads and landings. Handrails shall be continuous the full length of the stairs. Ends shall be returned or shall terminate in newel posts or safety terminals. The handgrip portion of handrails shall not be less than 1-1/4 inches nor more than 2 inches in cross sectional dimension or the shape shall provide an equivalent gripping surface. The handgrip portion of handrails shall have a smooth surface with no sharp corners. Handrails projecting from a wall shall have a space of not less than 1-1/2 inches between the wall and the handrail. (Section 1006.9, 1994 UBC)
27. Open guardrails shall have intermediate rails or an ornamental pattern such that a sphere 4 inches in diameter cannot pass through. The top of guardrails shall not be less than 36 inches in height for single family residences. (Section 509.3, 1994 UBC)

Under Floor Access & Ventilation

28. Under-floor areas shall be ventilated by an approved mechanical means or by openings into the under-floor area walls. Such openings shall have a net area of not less than 1 square foot for each 150 square feet of under-floor area. Openings shall be located as close to corners as practical and shall provide cross ventilation. The required area of such openings shall be approximately equally distributed along the length of at least two opposite sides. (Section 2317.7, 1994 UBC)
29. Accessible under-floor areas shall be provided with a minimum 18-inch by 24-inch opening unobstructed by pipes, ducts and similar construction. All under-floor access openings shall be effectively screened or covered. Pipes, ducts and other construction shall not interfere with the accessibility to, or within under-floor areas. (Section 2317.3, 1994 UBC)

Structural

30. All stairways shall be designed to support a uniform load of 100 pounds per square foot, provide a footing designed to support the stairway. (Table 16-A, 1994 UBC)

31. Provide a cross-section detail of the masonry fireplace construction. (Section 106.3.3, 1994 UBC)
32. The maximum height to width (length) ratio for vertical diaphragms (shear wall panels) consisting of wood structural panels and particleboard, nailed all edges is 3.5:1. (Table 23-I-I, 1994 UBC, Volume 2)
Examples: The minimum width (length) allowed for shear wall panels which are 8, 9 and 10 feet in heights are;
8 feet = 96 inches height divided by 3.5 equals 27.42 inches width (length)
9 feet = 108 inches height divided by 3.5 equals 30.86 inches width (length)
10 feet = 120 inches height divided by 3.5 equals 34.29 inches width (length)

Miscellaneous

33. Show on the Site Plan the area of the lot, measured in square feet. (Section 106.3.3, 1994 UBC)
34. For walls and door openings between garages and residences, install materials approved for one-hour fire-resistive construction on the garage side and a self-closing, tight-fitting solid-wood door 1-3/8 inches in thickness, or a self-closing, tight-fitting door having a fire-protection rating of not less than 20 minutes when tested in accordance with Part II of U.B.C. Standard 7-2. (Section 302.4, exception #3, 1994 UBC)
35. An attic access opening shall be provided to attics of buildings with combustible ceiling or roof construction. The opening shall be located in a corridor, hallway or other readily accessible location. Indicate on the plans the location of the required attic access openings for each attic area which is 30 inches or more in height at it's highest point. (Section 1505.1, 1994 UBC)
36. At stucco finished walls a minimum 26 gage galvanized , corrosion resistant weep screed with a minimum vertical attachment flange of 3-1/2 inches shall be provided at or below the foundation plate line on all exterior stud walls. The screed shall be placed a minimum of 4 inches above the earth or 2 inches above paved areas and shall be of a type which will allow trapped water to drain to the exterior of the building. The weather resistive barrier shall lap the attachment flange, and the exterior lath shall cover and terminate on the attachment flange of the screed. (Section 2506.5, 1994 UBC)
37. Provide Title 24 Energy Calculations which are "WET" signed by the person who prepared them. Copies of the MF-1R and CF-1R Energy Calculation forms must reproduced on the plans.
38. All new residences constructed in the City of Riverside must be equipped with automatic fire sprinklers per Municipal Ordinance #6019. Indicate on the plans that this requirement will be complied with.
39. The water closet stool in all occupancies shall be located in a clear space not less than 30 inches in width. The clear space in front of the water closet stool shall not be less than 24 inches. (Section 2904, 1994 UBC)
40. All plans approved for permit issuance must be micro-filmed for permanent record keeping purposes and must therefore be clearly legible and have sufficient contrast so that they may be successfully reproduced.

Using this guide should help minimize the number of plan check corrections on your plans. Questions regarding any of the above corrections may be directed to the City of Riverside, Building & Safety Division, Plan Check Staff at (951)826-5697. This list of corrections is NOT intended to include all of the possible corrections which could occur on a set of plans. Rather, its intent is simply to aid you in avoiding some of the more common mistakes and missing information when preparing your plans.

