

RESIDENTIAL CONSTRUCTION NOTES

For the City of West Jordan

(Effective January 1, 2007)

NOTE: *Engineered plans and specifications must be built and followed as designed. IRC (International Residential Code) construction notes become part of the approved plans and are for your information. This is not a complete list of code requirements.*

GENERAL -

1. **Design:** Seismic category - D-2 Frost Depth - 30" Elevation - 4375
Snow load - 30 PSF (live) Ground Snow Load 43lbs psf for drifting
Wind Speed 90 mph, Exposure B or C, with 3 second wind gusts. (70 mph sustained)
2. **Address:** Approved numbers shall be plainly visible and legible from the street or road fronting the property on all new buildings R321.1
3. **Footings:** Minimum 12" below undisturbed ground with the bottom of footing to be 30" deep (frost line) R403.1.4
4. **Foundation:** State amendment allows maximum 9' X 8" wall using 3000 psi concrete. Engineered designs are exempt from State amendment. (see State amendment for details TABLE 1805.5(5))
5. **Anchor bolts:** Required on all exterior walls, interior braced and bearing walls. 1/2" anchor bolts embedded a min. 7" into concrete, minimum 2 bolts per section with one bolt located not more than 12 inches or less than seven bolt diameters from each end of the plate section. Plate washers 1/4 inch 3 inches by 3 inches in size shall be provided between the foundation sill plate and the nut. R403.1.6, R403.1.6.1, R602.11.1 and State amendment
6. **Sole plate/sill:** Treated lumber or other approved material. Minimum 6" clearance from earth to untreated wood. R319.1
7. **Grading:** Slope away from SFD 6" (5%) in the first 10', drainage to go to an approved point of collection. R401.3 (*cannot drain onto neighboring property*)
8. **Solid blocking:** Required at bearing points for roof rafters, trusses, ceiling joists, and at all floor and roof perimeters. R802.8, R502.7, 502.11.2, Table R602.3(1)
9. **Straps and shoes:** Required at weakened or non-continuous top plates, and at all studs notched or bored beyond acceptable code limits. R602.6
10. **Energy Efficiency:** All new construction will require an energy compliance document stating the U-value of exterior glazing and doors, the R-value of all insulation to be installed, and the efficiency rating of the heating system. IRC Chapter 11 Insulation shall have a vapor retarder installed on the warm-in-winter side of the insulation. R318.1
11. **Attic ventilation:** 1/150 sq. ft. net free area of attic floor area (may be reduced to 1/300 sq. ft. provided 50% - 80% of the required ventilation occurs at least 3' above the cornice or eaves with the balance obtained from eave or cornice vents) R806.2
12. **Attic access:** Minimum 22" X 30" with a minimum of 30" headroom above the access, located in a hallway or other readily accessible location. R807.1
13. **Gypsum board:** 1/2" standard gypsum board allowed on interior surfaces only, one layer of 1/2" board required on the garage side of house to garage separation wall and on posts and ceilings supporting living areas. One layer of 5/8" type X board required to separate the garage from all habitable rooms above. Water resistant board shall not be used over vapor barriers or on ceilings with framing spaced at more than 16" centers. R702.3, R309.2, R702.3.8.

14. **Safety Glazing:** **A.** Required less than 60" above the drain of a shower or tub. **B.** Within 24" arc of a door when closed. **C.** Within 36" adjacent to stairways and less than 60" above. **D.** Within 60" horizontally of the bottom tread of a stairway and less than 60" above. **E.** When used as rails or guards. **F.** Bottom edge 18" of a floor and top edge over 36" and over 9 sq ft unless protected. R308
15. **Egress/rescue windows:** Required in all bedrooms unless there is an exterior door, at least one in every basement, maximum finished sill height of 44". R310.1
16. **Egress window wells:** Must project a minimum of 36" and provide at least 9 sq. ft. of net clear area. Ladders required if well is over 44" deep. Ladders shall be a min. 12" wide, project a min. of 3" from the wall at an 18" max. rung spacing. Note: egress wells are required for basement egress windows and bedroom or future bedrooms egress windows. (*bays, pop-outs, and cantilevers not allowed over egress wells unless 36" above top of well*) R310.2 R310.5
17. **Stairways:** Minimum 36" wide, minimum headroom 6'-8", maximum rise 8", minimum run 9", maximum variation in rise, run, or projection in a run of stairs - 3/8". Solid risers (concrete, etc.) Requires a 3/4" - 1-1/4" nosing or a 10" minimum tread depth. R311.5.3
18. **Storage areas:** Enclosed accessible space under stairs requires 1/2" gyp board protection of walls and ceiling. R311.2.2
19. **Handrails:** 1 handrail min. on any stair consisting of 4 or more risers. 34" - 38" in height measured from the nosing of the treads. Continuous the full length of the stairs from a point directly above the top riser to a point directly above the lowest riser of a stairway. Ends must return into a wall or terminate into a newel post or safety terminal. Min. 1-1/2" between wall and handrail. R311.5.6
20. **Landings:** Min. 36"D x 36"W or width of door at all required exterior egress doors, and Min. 36"D x 36"W or width of stairs at top and bottom of all stairways. (Exception: Top of interior stairs, door does not swing over stairs.) R311.4.3, R311.5.4 (State Amendment)
21. **Guard (rails):** min. 34" high required on open sides of stairs, 36" high landings, and platforms over 30" above grade or floor. Baluster spacing such that a 4" sphere cannot pass through at any point. R312
22. **Doors:** Required exit door shall be side hinged 3 ft wide and 6'8" in height. House to garage - 1-3/8" solid core wood, metal clad, or 20-minute fire rated. Doors may not swing over stairs. R309.1, R311.4, R311.5.4

PLUMBING -

23. **Water Heaters:** shall be anchored or strapped in the upper and lower third of the appliance to resist a min. 1/3 of the operating weight of the appliance. T & P valves shall be piped to within 6" of the floor and approved floor drain. Expansion tank required. P2801.7, P2803.6.1, P2903.4
24. **Shower:** min. 900 sq. in. floor area and not less than 30" in minimum dimension. The area must be maintained from the door threshold to a height 70" above the drain. Maximum flow rate of 2.5 gallons/minute heads. Shower doors with a 22" minimum clear width, tempered, and that swing outward will be provided. P2708.1 and Table P2903.2
25. **Water closets:** 15" min. clearance from center line to adjacent wall/partition, 30" min. between similar fixtures, and 21" min. front clearance. Max. flow rate 1.6 gallon low-flush type. R307 T-P2903.2
26. **Plumbing vents:** shall terminate at least 2' above or 10' away from outside air-intake openings. Cannot be flag poled. P3103.4 & P3103.5
27. **Jetted Tubs:** provide access to pump per manufacturers installation instructions. Provide access to electrical without damage to building or finishes. Electrical outlet for tub to be GFCI protected. All metal piping systems, metal parts or electrical equipment, and pump motors associated with the hydromassage tub shall be bonded together using a copper bonding jumper not smaller than No. 8 solid unless it is an approved listed double insulated system. P2720.1 E4109

28. **Nail Plates:** (shield Plates) shall be installed to protect concealed piping passing through or notched into structural members where there is less than 1-1/2" to the face of the member. A steel plate not less than 1/16" thick with appropriate length and extend a minimum 2" width above bottom plates and 2" below top plate. P2603.2.1

MECHANICAL -

29. **Furnaces:** within compartments or alcoves shall have a min. 3" working space on sides, back, and top. Enclosing space shall be min. 12" wider than the furnace. Outside combustion air required to furnace and water heater. M1305.1.1 M1703
Garages: Fuel fired appliances in garages shall have sources of ignition installed at least 18" above the floor. M1307.3 G2408.2
30. **Flues/Exhausts:** shall be vented to the outdoors in accordance with their listing and label and manufacturers installation instructions. M1801.1
31. **Clothes Dryers:** shall be vented to the outdoors. Ducts to be metal with smooth interior surfaces, equipped with back-draft dampers. Sheet metal screws are not to be used. Max. length of duct is 25' less 2.5' for each 45 degree bend. M1502.1-6
32. **Ranges:** min. 30" vertical clearance to combustibles. M1901.1
33. **Exhaust Fans:** capable of exhausting min. 50 cfm of air to the outside required in bathrooms, toilet rooms, and similar compartments without a min. 1.5 sq. ft. openable window. R303.3 Exception

ELECTRICAL -

34. **Required Outlets:** (IRC E3801 & NEC 210.52)
- ! **Wall spaces** 2' or more wide so that any point is not more than 6' from a receptacle measured along the floor line.
 - ! **Wall counter spaces** 12" or wider shall have outlets spaced so that no point along the wall is more than 24" from an outlet.
 - ! **Peninsular and Island counter spaces** with a long dimension of 24" or greater shall have at least one receptacle. *Note - receptacles shall not be installed under countertop which extend more than 6" beyond their base.*
 - ! **Bathrooms**, at least one receptacle outlet shall be installed within 36" of the outside edge of each
 - ! **Outdoor**, at least one receptacle outlet shall be installed in the front and back of a dwelling, not more than 6.5' above grade
 - ! **Laundry**, at least one receptacle outlet required
 - ! **Hallways**, at least one receptacle outlet required in hallways of 10' or more in length.
 - ! **Basements & Garages**, at least one receptacle outlet required
35. **Required 20 amp Branch Circuits:** (IRC E3603 & NEC 210.11)
- ! Kitchen, dining room, pantry, breakfast room, or similar areas shall be served by at least 2 - 20 amp small appliance branch circuits.
 - ! Bathroom receptacles shall be served by a dedicated 20 amp circuit
 - ! Laundry areas
38. **Mechanical equipment:** a service outlet within 25' of any mechanical equipment. IRC E3801.11 & NEC 210.63
39. **GFCI protection:** shall be provided for all receptacle outlets on kitchen countertops, in bathrooms, garages, outdoors, within 6' of laundry, utility or wet bar, and in unfinished basements. IRC E3802 NEC 210.8A.
40. **AFCI protection:** required for all circuits serving bedrooms. IRC E3802.12 NEC 210.12B
41. **Electrical Panels:** fuse boxes, switchgear, and similar equipment will be provided with adequate working space. (min. 30" wide, 36" deep, and 78" high) IRC E3305.2 NEC 110.26

42. **Smoke Detectors:** required in all bedrooms, at all hallways leading to bedrooms, and at each floor level including basements. Smoke Detectors shall be hard wired together in series with battery back up. IRC R313
43. **Carbon Monoxide Detectors/Alarms:** required on every habitable level of a residence that contains a fuel burning appliance. SA – R313.2
44. **Alterations, repairs, and additions:** Interior repairs or alterations requiring a permit occur, the dwelling shall be provided with smoke alarms located as required for new dwellings. In existing construction, battery type alarms may be provided when hard wiring and interconnection is not feasible. SA-R313.5
45. **Lights in Closets:** min 12" clearance between incandescent fixture and storage space or 6" clearance between fluorescent fixture and storage space. IRC E3903.11 NEC 410.8
46. **Temporary Wiring:** shall conform to NEC Article 590
47. **Nail Plates:** (shield Plates) shall be installed to protect concealed wiring inside of framing members, where the bored hole is closer than 1-1/4" to the nearest edge of the framing member or the framing member is notched, a steel plate not less than 1/16" thick and appropriate length and width shall be installed to cover the area of the wiring. IRC TABLE E3702.1 NEC 300.4 (A)(1) & (2)