



# Town of Fountain Hills

## One and Two Family Residential 2024 IRC Plan Submittal Checklist

**Fees:** Building Permit A/C -\$0.73/ sq.ft.      NON A/C -\$0.55/ sq.ft      Landscape \$50.00

Fire-\$340.00 for first 4400 sqr ft. then \$.08 sq.ft      Ret. Walls -\$300.00 for first 100 ft then + \$3.20 per LF

**Development Fees:** Single-Family - \$3974.00

TABLE R301.2 (1)  
CLIMATE AND GEOGRAPHIC DESIGN CRITERIA

GROUND SNOW LOAD	WIND SPEED (mph, 3-sec. gust)	SEISMIC DESIGN CATEGORY	SUBJECT TO DAMAGE FROM				WINTER DESIGN TEMP	ICE SHIELD UNDER-LAYMENT REQUIRED	FLOOD HAZARDS	AIR FREEZING INDEX	MEAN ANNUAL TEMP
			Weathering	Frost line depth	Termite	Decay					
<b>0 psf</b>	<b>105</b>	<b>B</b>	<b>Negligible</b>	<b>12"</b>	<b>Moderate to Heavy</b>	<b>None to Slight</b>	<b>34° F.</b>	<b>No</b>	<b>Varies</b>	<b>0</b>	<b>69° F.</b>

### Minimum Plan Submittal Requirements

- Project description. State the Code edition (2024 is adopted) Identify and describe the work to be included in this permit.
- Address and legal description. Indicate on the drawings the correct and complete address and legal description.
- Site plan. Indicate the location of the proposed building on the lot, property lines with dimensions, distances from property lines and any other building(s) on the lot, setbacks and easements.
- Square footage summary. Provide a square footage summary for each of the following: livable, garage, and covered patios, porches, storage and mechanical. If an addition, include existing square footages.
- Engineering. Engineering, such as a lateral analysis for shear, retaining and gravity when required, shall be sealed, signed and dated by an architect or engineer registered in the state of Arizona in accordance with the applicable state statutes.
- Landscape plans, NOI Notice of intent and Erosion control plans required.  
<http://fountainhillsaz.gov/DocumentCenter/View/3490>
- Floor Plan Identify all rooms with dimensions.
- Special inspection. If Special inspection is required for this project. Please complete Town forms.
- Manufacturer's installation instructions. Manufacturer's installation instructions listed appliances, components or specialized systems may be required to obtain approval.
- Automatic Fire Sprinklers are required. Submit plans separately. Note on house plans Fire Sprinklers are required.

- Schedules, provide Window and Door schedules, Identify Safety Glazing, Emergency Escape, sill and header heights, and energy values.
- Unsupported glazing such as guardrails or shower enclosures require an engineered design with details.
- Provide stair details showing, width, headroom, treads run, tread riser, handrails, Guards (guardrails). Handrails. Tread depth 10" minimum, Riser height maximum 7 ¾". Headroom minimum 6' 8", Handrails 34" – 38", Guards required 36" minimum when greater than 30" above floor or grade. Provide details

### **Foundations**

- Soils Report. Where footings will bear on compacted fill material a report prepared by soils engineer or civil engineer is required. Compaction testing by third party required.
- Footing details, width, thickness, reinforcement.
- Stem wall type, thickness, height, reinforcement, anchor bolts and Hold-downs.
- Retaining wall heights, locations, reinforcement details.

### **Floors**

- Slab on grade details, reinforcement, thickness.
- Provide floor-framing plans showing complete floor system. Specify size and spacing of all framing members. Show all post locations and sizes, hold downs, headers, beams, hangers and ties. Details and notes may be necessary.
- Preservative-treated wood. Lumber, timber, plywood, piles and poles supporting permanent structures in contact with concrete or masonry, or within 2 inches of concrete slab or 6" of soil to be preservative treated.

### **Wall Construction**

- Wall bracing. Label all prescriptive braced wall lines and alternate braced wall panels on the floor plan.
- Lateral analysis' is required when the structure does not comply with prescriptive braced wall criteria. The lateral analysis shall be prepared by an Arizona-licensed Architect or Engineer. Transfer the resulting specifications from the analysis to the foundation, framing and floor plans, details, etc.
- Building and Wall Sections. Show size, height, spacing, insulation, interior and exterior finishes, flashing, weep screed, weather-resistive barrier, stone and masonry veneer.
- Garage-dwelling fire separation. Specify gypsum board, penetrations in walls and ceilings, maximum opening protections with assembly details, fire door 20-minute self-closing.

### **Roof-Ceiling Construction**

- Roof slope, direction and materials
- Truss calculation may be a deferred submittal if noted on the plans.
- Connections, label all beams and headers, show all truss to wall, truss to truss, and truss to beam connections.
- Provide details for Uplift resistance. Hold downs, straps, bolts

- Show Roof drains with secondary drains or scuppers. Specify size and termination locations.
- Roof ventilation. Specify vented or un-vented, if vented provide calculation and details. Show number and locations of all vents. Patios and garages require ventilation regardless.

**Energy Efficiency**

**BUILDING THERMAL ENVELOPE**

INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT								
CLIMATE ZONE	FENESTRATION U-Factor	Skylight U-Factor	GLAZED FENESTRATION SHGC	CEILING R-VALUE	WOOD FRAME WALL R-VALUE	MASS WALL R-VALUE	FLOOR R-VALUE	SLAB VALUE & DEPTH
2-B	0.40	0.60	0.25	38	13	4/6	13	0

- Building Thermal envelope shall be represented on the drawings with air sealing details. Note on plans that a blower door air leakage test is required.
- Compliance path, what was used to comply with energy code, prescriptive or performance.
- Hot water recirculation pump required with automatic shutoff.
- Pipe insulation, Hot water piping insulation required for ¾” and larger pipe, to be minimum 1” thick insulation.
- Mandatory Items, Specify and detail all mandatory Chapter 11 Energy items. Show on building sections, floor plans, door and window schedules, electrical, plumbing and mechanical pages. As an alternative you may submit a full RES-Check and paste it on a dedicated Energy page.

**Mechanical**

**MANUAL “J” TABLE 1A  
OUTDOOR DESIGN CONDITIONS FOR THE UNITED STATES  
(PHOENIX)**

Elevation Feet	Latitude Degrees North	Winter	Summer					
		Heating 99% Dry Bulb	Cooling 1% Dry Bulb	Coincident Wet Bulb	Design Grains 55% RH	Design Grains 50% RH	Design Grains 45% RH	Daily Range (DR)
1133	33	37	108	75	-21	-14	-8	H

- Approved software, Provide one copy of Manual-J, Manual-S and Manual-D Calculations. Mechanical Engineers calculations are an approved alternate.
- Plan requirements, Provide a mechanical page that incorporates the data from the supporting documents into a duct layout with all ducts and register sizes. Put the exact make and model numbers of HVAC equipment on the plans from Manual-S.
- Outside air, Provide Whole house mechanical ventilation design details. Note the required CFM and the method of control.

**Fuel Gas**

- Gas pipe sizing. Provide a gas piping schematic for all gas appliances, including piping type, size, length and Btu hr/ cubic foot rating of all gas-fired equipment.
- Gas fireplace efficiency. Vented gas fireplace heaters shall have a fireplace efficiency (FE) rating not less than 50 percent as determined in accordance with CSA P.4.1 and shall be listed and labeled in

accordance with CSA/ANSI Z21.88. Vented gas fireplaces (decorative appliances) shall be listed and labeled in accordance with CSA/ANSI Z21.50

## **Plumbing**

- Appliance and fixture locations. Designate the location of the water heater, furnace, kitchen and laundry appliances and other fixtures.
- Show Sumps, ejectors and Back water valves, irrigation backflows, hose bibs. Provide installation specifications from the manufacturer.

## **Electrical**

- Electrical plan. Provide an electrical plan indicating the location of receptacles, switches, lights, meter box and size, smoke detectors, carbon monoxide alarms, exhaust fans, GFCI-protected circuits, AFCI circuits etc.
- Provide electrical load calculation for all dwelling units include EV car chargers, pool, spa, heaters and elevators.
- Provide an electrical One-Line diagram.
- Lighting cut sheets required for outside fixtures and bulbs to verify Dark Sky compliance.
- Lighting. All permanently installed luminaires shall be capable of operation with an efficacy of not less than 45 lumens per watt or shall contain lamps capable of operation with an efficacy of not less than 65 lumens per watt. Provide fixture cut sheets.
- Lighting controls Habitable spaces require a manual dimmer or automatic shutoff. Other rooms require an automatic shutoff switch.
- Island and peninsula countertops and work surfaces, Outlet if provided shall only be installed on or above the counter. If no outlets are provided, a circuit shall be provided for future outlet installation.
- Surge protection. Services supplying one- and two-family dwelling units shall be provided with a surge-protective device (SPD) installed in accordance with Sections E3606.5.1 through E3606.5.3
- Arc-fault circuit interrupter protection. Branch circuits that supply 120-volt, single-phase, 10-, 15- and 20-ampere outlets installed in kitchens, family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreation rooms, closets, hallways, laundry areas and similar rooms or areas shall be protected.
- GFCI protection required for outlets 150 volts or less and 60 amps or less, including sump pumps, dishwasher, electric range, wall oven, clothes dryer, microwave oven.
- Receptacles in bathrooms, garages, outdoors, crawl space, basement, kitchen, food prep areas, within 6'ft sinks tubs showers and laundry areas shall GFCI protected.
- Smoke alarms and carbon monoxide alarms shall be hard wired with battery backup. Show locations.