**City of Scottsdale**

**THE FOLLOW CODES APPLY TO ONE- AND TWO-FAMILY DWELLINGS**

2021 INTERNATIONAL BUILDING CODE (ORD #4550, resolution #12498)

2021 INTERNATIONAL RESIDENTIAL CODE (ORD #4575, resolution #12499)

2021 INTERNATIONAL FIRE CODE (ORD #4562, resolution #12583)

**NOTES 1-12 REFLECT 2021 CODE UPDATES**

1. \*Doors and **windows** shall be separated from the swimming pool/spa, by an approved pool barrier. IPSC 305.4.
2. \***Plumbing fixtures** shall comply with the following conservation requirements: Lavatory faucets: 1.5 gal/minute; Shower heads: 2.0 gal/minute; **Kitchen faucet: 1.8 gal/minute**; water closets: 1.28 gal/flush. (Table P2903.2. amended).
3. \*A **demand-controlled hot water circulation system** shall be provided in accordance with Section N1103.5.1.1 amended.
4. \***Cool/light reflective coated roofs**. Roof solar reflectance and thermal emittance for roof slopes less than 2:12. Three-year-aged solar reflectance index (SRI) of 64, Three-year-aged solar reflectance of 0.55 and a three-year aged thermal emittance of 0.75 over **conditioned and non-conditioned spaces**. N1102.6 amended.
5. \*The building thermal envelope shall comply with climate zone 2. Energy complianceshall be demonstrated by UA trade-off (REScheck) **OR** performance (REM/Rate, ERI, HERS) compliance path **OR** by the following prescriptive values (Table N1102.1.3): **Prescriptive** **minimum** **R-values**: (\***Ceiling=R-49)** / (Walls=R-13).

**Prescriptive** **maximum** **Window Fenestration** values: (**U-Factor=0.40**) / (**SHGC=0.25**).

1. **\*Exterior lighting** over 30 watts shall include an automatic shut-off. (N1104.3).
2. **\***All permanently installed lighting fixtures shall contain only **high-efficacy** lamps. (N1104.1).
3. **\***All permanently installed **interior lighting** fixtures shall be controlled with either a **dimmer**, an **occupant sensor** **control** or other control such as an automatic timer shut-off switch. Exceptions include bathrooms and hallways. (N1104.2).
4. **\***E3606.5 **Surge protection**. All electrical 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.
5. **\*Electric Vehicle Charging Capacity**. Reserve electrical service panel space for a full size 2-pole circuit breaker labeled “Future EV Charging”. A raceway shall be installed from the electrical service panel to a location within the garage, where it shall terminate in a junction box or outlet and be labeled “Future EV Charging”.
6. **\*Solar-Ready Zones** – RB103. Minimum 10% of roof area but not less than 300 sq. ft. free and clear of obstructions including mechanical equipment and vents. Provide electrical pathway for conduit run from solar-ready zone to electrical service panel with reserved space for 2-pole circuit breaker. Capped roof penetration sleeve shall be provided on roofs with a slope of 1 in 12 or less.
7. **\*The following three notes are applicable to New Construction only** (BPI certified professionals are approved for testing air leakage in existing buildings, otherwise RESNET professionals are approved for new and existing):
8. \*The building shall be provided with a whole-house mechanical ventilation system that meets the requirements of Section M1505. Outdoor air intakes and exhausts shall have automatic or gravity dampers that close when the ventilation system is not operating. (N1103.6).
9. \*The building or dwelling unit shall be tested and verified as having an air leakage rate not exceeding five air changes per hour for detached dwelling units and seven air changes per hour for attached dwelling units. Testing shall be conducted in accordance with ASTM E 779 or ASTM E 1827 and reported at a pressure of 0.2 inch w.g. (50 Pascals). Testing shall be conducted by an approved third party (RESNET certified). A written report of the results of the test shall be signed by the party conducting the test and provided to the code official. Testing shall be performed at any time after creation of all penetrations of the building thermal envelope. (N1102.4.1.2).
10. **\***Ducts, air handlers, and filter boxes shall be sealed in accordance with N1103.3.4. Joints and seams shall comply with Section M1601.4.1. Ducts shall be pressure tested to determine leakage by one of the following methods (N1103.3.5):
11. Rough-in test: Total leakage shall be measured with a pressure differential of 0.1 inches w.g. (25 Pa) across the system, including the manufacturer’s air handler enclosure if installed at the time of the test. All registers shall be taped or otherwise sealed during the test.
12. Post-construction test: Total leakage shall be measured with a pressure differential of 0.1 inches w.g. (25 Pa) across the system, including the manufacturer’s air handler enclosure. Registers shall be taped or otherwise sealed during the test.

**A written report of the results shall be signed by the party conducting the test and provided to the code official** **prior to the Final Building Inspection.**

1. All products listed by an Evaluation Service Report (ESR) shall be installed per the report and the manufactures written instructions. Product substitutions shall also be listed by an ESR.
2. Provide Fire Sprinkler System per Scottsdale Fire Code (IRC R313 amended).
3. Separate permits required: pools, spas, fences, site walls, retaining walls, and gas storage tanks.
4. Foundation & Footing depth shall be a minimum of 18 inches **below grade** (or per property soil report), provide a minimum of 3-inch clearance between Rebar and soil. (R403.1 amended).
5. Doors between the garage and residence shall be self-closing minimum 1 3/8” thick solid core or 20-minute fire rated. (R302.5.1).
6. Wood sill plates shall be pressure treated or decay resistant. Exterior sill plates shall bear a minimum of 6 inches above finish grade. (R317.1).
7. Gypsum board applied to a ceiling shall be 1/2” when framing members are 16” o.c. or 5/8” when framing members are 24” o.c. or use labeled **1/2” sag-resistant gypsum ceiling board**. (Table R702.3.5 (d)).
8. Showers and tub-shower combinations shall be provided with individual control valves of the pressure balance or thermostatic mixing valve type. (P2708.4).
9. Shower area walls shall be finished with a smooth, hard non-absorbent surface, such as ceramic tile, to a height of not less than 72 inches above the drain inlet. Cement, fiber-cement, or glass mat gypsum backers installed in accordance with manufacturers’ recommendations shall be used as backers for wall tile in tub and shower areas and wall panels in shower areas. (R702.4.2).
10. Storage-tank type water heaters shall be installed with a drain pan and drain line. (P2801.6).
11. Provide roof/attic ventilation unless insulation is applied directly to underside of the roof-sheathing, or the depth is 24 inches or less between the ceiling and bottom of roof sheathing. (R806.1 Amended).
12. Provide Minimum R-3 insulation on hot water pipes. (N1103.5.2).
13. Supply and return ducts located outside conditioned space shall be insulated to a minimum **R-8**. Ducts and air handlers located completely within the continuous air barrier and within the building thermal envelope are exempt from insulation. (N1103.3.1 and N1103.3.2).
14. Exhaust air from kitchens, bathrooms and toilet rooms shall be exhausted directly to the outdoors, not recirculated, or discharged indoors. (M1505.4.4 amended).
15. Exhaust fans in bathrooms with a shower or tub shall be provided with a delay timer or humidity/condensation control sensor. Exhaust fans shall be switched separately from lighting systems. (R303.3).
16. Provide a wall mounted GFCI protected receptacle outlet within 36” of a bathroom or powder room lavatory. (E3901.6).
17. Receptacles serving kitchen countertops installed in bathrooms, garages, unfinished accessory buildings, outdoors and located within 6 feet of sinks shall have **GFCI** protection for personnel. (E3902).
18. All branch circuits that supply 15- and 20-ampere outlets installed in kitchens, family rooms, dining rooms, living rooms, parlors, libraries, dens, bedrooms, sunrooms, recreations rooms, closets, hallways, laundry areas and similar rooms or areas shall be protected by a combination type arc-fault circuit interrupter **(AFCI)** installed to provide protection of the branch circuit. (E3902.12).
19. General purpose 15- and 20-ampere receptacles shall be listed **tamper-resistant.** (E4002.14).
20. Provide interconnected and hardwired **Smoke Alarms** in new and existing areas of home. (R314).
21. Approved **Carbon Monoxide Alarms,** hardwired and interconnected**,** shall be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms in dwelling units within which fuel-fired appliances are installed and in dwelling units that have attached garages. (R315).
22. Recessed luminaires installed in the building thermal envelope shall be IC-rated and labeled as having an air leakage rate not more than 2.0 cfm. All recessed luminaires shall be sealed with a gasket or caulk between the housing and the interior wall or ceiling covering. (N1102.4.5).
23. Provide illumination with wall switches for stairways when there are 6 or more risers. (R303.7).
24. Receptacle outlets shall be installed so that no point along the floor line in any wall space is more than 6 feet, measured horizontally, from an outlet in that space, including any wall space 2 feet or more in width. (E3901.2).
25. Provide a minimum of two 20-amp small appliance branch circuits for the kitchen/dining/breakfast. (E3703.2).
26. Provide outside combustion air to all indoor fireplaces per manufactures specifications. (R1006.1).
27. At least one thermostat shall be provided for each separate heating and cooling system. (N1103.1).