TOWN OF ORO VALLEY AMENDMENTS TO THE INTERNATIONAL RESIDENTIAL CODE, 2018 EDITION

The following provision of the International Residential Code, 2018 Edition, as published by the International Code Council, Inc., is hereby amended as follows:

CHAPTER 1

In Section R101.1 where it asks for [NAME OF JURISDICTION], insert [TOWN OF ORO VALLEY, ARIZONA].

Add the following text to the end of Section R102.5:

THE FOLLOWING APPENDICES ARE CONSIDERED TO BE ADOPTED AS PART OF THIS CODE: A, B, C, G, H, J, N, O, P, Q, R AND S.

Revise Section R105.2, Sub-Sections 1, 3, and 7, and add new sub-section 11 as follows:

R105.2 Work exempt from permit.

Building:

1. One-*story* detached *accessory structures*, provided the floor area does not exceed 200 120 square feet (18.58 11.15 m²). PERMITS ARE REQUIRED FOR ELECTRICAL, PLUMBING, OR MECHANICAL INSTALLATIONS IN STRUCTURES OF ANY SIZE.

- 3. Retaining walls that are not over 4 feet (1219 mm) in height measured from the bottom of the footing to the top of the wall, unless supporting a surcharge AND FREE STANDING MASONRY WALLS NOT OVER 6 FEET (1829 MM) IN HEIGHT ABOVE NATURAL GRADE.
- 7. Pre-fabricated swimming pools that are less than 24 18 inches (610 457 mm) deep.

11. RE-ROOFING OF WEATHER RESISTANT ELEMENTS OF EXISTING BUILDINGS WITH EQUIVALENT MATERIALS AND LOADS.

Insert the following text at the end of Section R105.3.2:

IN ORDER TO RENEW ACTION ON AN APPLICATION AFTER EXPIRATION, THE APPLICANT SHALL RESUBMIT PLANS AND PAY A NEW PLAN REVIEW FEE. AN APPLICATION MAY NOT BE EXTENDED IF THIS CODE OR ANY OTHER APPLICABLE LAWS OR ORDINANCES HAVE BEEN AMENDED SUBSEQUENT TO THE DATE OF APPLICATION.

Insert the following text at the end of Section R105.5:

IF A PERMIT HAS EXPIRED, EXTENSION REQUESTS MAY NOT BE GRANTED UNLESS APPLICABLE FEES HAVE BEEN PAID. BEFORE WORK DEEMED TO HAVE EXPIRED CAN RECOMMENCE, THE PERMIT SHALL BE RENEWED, AND THE FEE THEREFORE SHALL BE ONE-HALF THE AMOUNT REQUIRED FOR A

NEW PERMIT FOR SUCH WORK, PROVIDED NO CHANGES HAVE BEEN MADE TO THE ORIGINALLY APPROVED CONSTRUCTION DOCUMENTS FOR SUCH WORK, AND THAT SUCH SUSPENSION OR ABANDONMENT HAS NOT EXCEEDED ONE YEAR. IF THE PERMIT HAS BEEN EXPIRED OR ABANDONDED FOR A PERIOD GREATER THAN ONE YEAR, THE FEE(S) FOR RENEWAL SHALL BE AS REQUIRED FOR A NEW PERMIT.

Revise Section R106.3.1 as follows:

R106.3.1 Approval of construction documents. Where the *building official* issues a *permit*, the *construction documents* shall be **CLEARLY INDICATED AS** *approved* **BY A METHOD ESTABLISHED BY THE** *BUILDING OFFICIAL*. in writing or by a stamp which states "REVIEWED FOR CODE COMPLIANCE." One set of *construction documents* so reviewed shall be retained by the *building official*. The other set shall be returned to the applicant, shall be kept at the site of work and shall be open to inspection by the *building official* or a duly authorized representative.

Revise Section R108.2 as follows:

R108.2 Schedule of permit fees. On buildings, structures, electrical, gas, mechanical, and plumbing systems or *alterations* requiring a *permit*, a fee for each *permit* shall be paid as required, in accordance with the schedule as established by the applicable governing authority TOWN OF ORO VALLEY BUILDING VALUATION DATA SCHEDULE AND FEE SCHEDULES AS ESTABLISHED BY THE TOWN OF ORO VALLEY. PLAN REVIEW FEES SHALL BE 65% OF THE PERMIT FEE AND SHALL BE PAID AT THE TIME OF APPLICATION.

Revise Section R108.3 as follows:

R108.3 Building permit valuations. APPLICANTS FOR A PERMIT SHALL PROVIDE AN ESTIMATED PERMIT VALUATION WHEN APPLICATION IS MADE. Building *permit* valuation shall include total value of the work for which a *permit* is being issued, such as electrical, gas, mechanical, plumbing *equipment* and other permanent systems, including materials, TAX and labor. THE PERMIT VALUATION SHALL NOT BE LESS THAN AS PRESCRIBED IN THE ORO VALLEY *BUILDING VALUATION DATA SCHEDULE* AND FEE SCHEDULES AS ESTABLISHED BY THE TOWN OF ORO VALLEY. FINAL VALUATION SHALL BE DETERMINED BY THE BUILDING OFFICIAL.

Revise Section R108.5 as follows:

R108.5 Refunds. The *building official* is authorized to establish a refund policy. WHEN A FEE FOR A PERMIT OR PLAN REVIEW HAS BEEN PAID OR COLLECTED ERRONEOUSLY, THE *BUILDING OFFICIAL* IS AUTHORIZED TO GRANT A REFUND BASED ON THE FOLLOWING CRITERIA:

A) NOT MORE THAN 80 PERCENT OF THE PERMIT FEE MAY BE REFUNDED WHEN NO WORK HAS BEEN DONE UNDER A PERMIT ISSUED IN ACCORDANCE WITH THIS CODE AND THE PERMIT HAS NOT EXPIRED.

B) NOT MORE THAN 80 PERCENT OF THE PLAN REVIEW FEE MAY BE REFUNDED WHEN AN APPLICATION FOR A PERMIT FOR WHICH A PLAN

REVIEW FEE HAS BEEN PAID IS WITHDRAWN OR CANCELLED PRIOR TO ANY REVIEW OF PLANS.

A WRITTEN REQUEST THAT IS SIGNED BY THE PERMIT APPLICANT SHALL BE PROVIDED BEFORE A REFUND WILL BE CONSIDERED.

Revise Section R110.1 as follows:

R110.1 Use and occupancy. A building or structure shall not be used or, occupied, **OR FURNISHED IN WHOLE OR IN PART**, and a *change of occupancy* or change of use of a building or structure or portion thereof shall be made, until the *building official* has issued a certificate of occupancy therefore as provided herein.

(Remainder of section is unchanged)

CHAPTER 3

At Table **R301.2(1)** CLIMACTIC AND GEOGRAPHIC DESIGN CRITERIA insert the following text:

Wind Speed -insert [115 MPH -3 SECOND GUST] Seismic Design Category -insert [B] Weathering -insert [MODERATE] Termite -insert [MODERATE TO HEAVY] Winter Design Temp –REFER TO SECTION N1109.09.1 Flood Hazards -insert [PER PIMA COUNTY FLOOD CONTROL DISTRICT] Air Freezing Index -insert [4] Mean Annual Temp -insert [68] All categories not noted -insert [N/A –NOT APPLICABLE]

At Table **R301.2(1)** MANUAL J DESIGN CRITERIA^a by inserting the following text:

Elevation –insert 2545 Latitude –insert 32° N – 111° E Winter heating –insert 24% Dry Bulb Summer cooling –insert 103% Dry Bulb Altitude correction factor –insert 0.89 Indoor design temperature –insert 70 Degrees Design temperature cooling –insert 75 Degrees Heating temperature difference –insert 31 Degrees Cooling temperature difference –insert 15 Degrees Wind velocity heating –insert 15 MPH Wind velocity cooking –insert 7.5 MPH Coincident wet bulb –insert 66 Daily range –insert High Winter humidity –insert 43 Summer humidity –insert 47

TABLE R301.5

MINIMUM UNIFORMLY DISTRIBUTED LIVE LOADS

(in pounds per square foot)

USE	LIVE LOAD
Uninhabitable attics with limited storage ^{b, g,}	20 40
Sleeping rooms	30 40

(Other sections and uses in table to remain unchanged)

At Section R308.4.1, add an exception 3. as follows:

3. WHERE THE EXPOSED BOTTOM EDGE OF GLAZING IS GREATER THAN 60 INCHES (1524 MM) MEASURED VERTICALLY ABOVE AN ADJACENT STANDING OR WALKING SURFACES.

Revise the exception in Section R308.4.5 as follows:

Exception: Glazing that is more than 60 inches (1524 mm), measured horizontally and in a straight line, from the water's edge of a bathtub, hot tub, spa, whirlpool, or swimming pool, or from the edge of a shower, sauna or steam room.

Delete the text in Section R309.5 Fire Sprinklers in its entirety and replace with the following:

R309.5 Fire sprinklers. FIRE PROTECTION WATER SUPPLIES FOR RESIDENTIAL GARAGES SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 507 OF THE INTERNATIONAL FIRE CODE (IFC) AND FIRE FLOW SHALL BE PROVIDED IN ACCORDANCE WITH THE IFC, APPENDIX B.

Add the following text at the end of Section R311.3.1 and prior to the exception, as follows:

WHEN EXTERIOR LANDINGS OR FLOORS ARE LOWER IN ELEVATION THAN THE INTERIOR FINISH FLOOR LEVEL, A DOOR SHALL NOT SWING OVER THE LANDING OR FLOOR.

(Exception is unchanged)

Delete Section **R313 AUTOMATIC FIRE SPRINKLER SYSTEMS** in its entirety and replace with the following:

SECTION R313 FIRE PROTECTION WATER SUPPLY

R313.1 ONE- AND TWO-FAMILY DWELLINGS AND TOWNHOUSE WATER SUPPLY. FIRE PROTECTION WATER SUPPLIES FOR RESIDENTIAL STRUCTURES SHALL BE PROVIDED IN ACCORDANCE WITH THE INTERNATIONAL FIRE CODE (IFC)

SECTION 507, AND FIRE FLOW SHALL BE PROVIDED IN ACCORDANCE WITH THE INTERNATIONAL FIRE CODE, APPENDIX B.

At Section R314.3 to add a number **5.** as follows:

5. WHERE THE CEILING HEIGHT OF A ROOM OPEN TO A HALLWAY SERVING SLEEPING AREAS EXCEEDS THAT OF THE HALLWAY BY 24 INCHES (610 MM) OR GREATER, SMOKE ALARMS SHALL BE LOCATED IN THE ROOM OR AREA IMMEDIATELY PRECEEDING THE HALLWAY.

Add new Section R328 Sound Attenuation as follows:

SECTION R328 SOUND ATTENUATION

R328.1 SOUND ATTENUATION. ONE AND TWO FAMILY DWELLINGS SHALL BE SUBJECT TO THE FOLLOWING PROVISIONS:

- 1) EXTERIOR WALL PENETRATIONS BY PIPE DUCTS OR CONDUITS SHALL BE CAULKED.
- 2) WINDOWS SHALL HAVE MINIMUM SOUND TRANSMISSION RATING OF STC-22.
- 3) NON-GLAZED PORTIONS OF EXTERIOR SIDE-HINGED DOORS SHALL BE SOLID-CORE WOOD OR INSULATED HOLLOW METAL OF NOT LESS THAN 1-3/4 INCHES (44.5 MM) THICKNESS.
- 4) FIREPLACES SHALL BE PROVIDED WITH TIGHT FITTING DAMPERS.
- 5) EXTERIOR WALLS SHALL BE NOT LESS THAN 4 INCHES (102 MM) IN NOMINAL THICKNESS AND SHALL BE FINISHED ON THE OUTSIDE WITH BLOCK, SIDING, SHEATHING, OR STUCCO OVER MINIMUM ONE INCH (25 MM) THICK STYROFOAM. FIBERGLASS OR CELLULOSE INSULATION NOT LESS THAN 3-1/2 INCHES (89 MM) THICK SHALL BE INSTALLED WITHIN THE WALL CAVITIES.

NOTE: IN LIEU OF THE PRESCRIPTIVE REQUIREMENTS OF THIS SECTION, SOUND ATTENUATION TO A MAXIMUM INTERIOR TO EXTERIOR NOISE TRANSFER OF 45 DECIBELS MAY BE CERTIFIED BY A REGISTERED ARCHITECT OR ENGINEER AT TIME OF FINAL CONSTRUCTION.

CHAPTER 4

Revise the Exception: in Section R401.3 as follows:

Exception: Where *lot lines*, walls, slopes or other physical barriers prohibit 6 inches (152 mm) of fall within 10 feet (3048 mm), THE FINAL GRADE SHALL SLOPE AWAY FROM THE FOUNDATION AT NOT LESS THAN 5 PERCENT AND THE WATER SHALL BE DIRECTED TO drains or swales shall be constructed to ensure drainage away from the structure. SWALES SHALL BE SLOPED A MINIMUM OF 1 PERCENT WHEN LOCATED WITHIN 10 FEET (3048 MM) OF THE BUILDING FOUNDATION. SLOPES LESS THAN ONE PERCENT MAY BE UTILIZED WHEN APPROVED BY THE TOWN ENGINEER DUE TO

LIMITING FACTORS AND WHEN ROOF GUTTERS ARE PROVIDED TO DIRECT DRAINAGE AWAY FROM AREAS SLOPED AT LESS THAN ONE PERCENT. IN NO CASE SHALL SWALES BE SLOPED AT LESS THAN 0.5 PERCENT. Impervious surfaces within 10 feet (3048 mm) of the building foundation shall be sloped not less than 2 percent away from the building.

CHAPTER 8

Revise Section R802.11.1 by deleting the entire text and replacing it as follows:

Section R802.11.1 Uplift resistance. UPLIFT RESISTANCE SHALL BE DETERMINED BY ONE OF THE FOLLOWING METHODS (PLEASE NOTE THAT REQUIREMENTS OF THIS SECTION ARE IN ADDITION TO THOSE REQUIRED FOR STRUCTURAL CONNECTION OF WOOD FRAMING MEMBERS):

1. DESIGN-BASED WIND UPLIFT CRITERIA. WIND UPLIFT REQUIREMENTS SHALL BE DETERMINED BY USING THE DESIGN WIND VALUE OF 110 MPH WITHIN TABLE R802.11 FOR THE CONTINUOUS LOAD PATH TRANSMITTING THE UPLIFT FORCES FROM THE RAFTER OR TRUSS TIES TO THE FOUNDATION.

2. PRESCRIPTIVE-BASED WIND UPLIFT CRITERIA. CONVENTIONAL FRAMED WOOD OR COLD-FORMED STEEL STRUCTURES, BEARING WALL VERTICAL CONNECTIONS SHALL BE MADE BY USE OF APPROVED STRUCTURAL SHEATHING OR BY APPROVED STRAP TIES TO PROVIDE A CONTINUOUS LOAD PATH FROM THE JOIST OR TRUSSES THROUGH THE LEDGER OR TOP PLATE TO THE FOUNDATION SILL PLATE. WHERE STRAP TIE FASTENERS ARE USED THEY SHALL BE SPACED AT INTERVALS NOT TO EXCEED 24 INCHES (610 MM). KING STUDS REQUIRE NOT LESS THAN TWO FASTENERS AT THE TOP AND BOTTOM OF EACH STUD. ALL HEADERS SHALL BE CONNECTED TO KING STUDS WITH STRAP TIE FASTENERS LISTED FOR THAT PURPOSE. STUDS **ABOVE HEADERS SHALL BE FASTENENED AT INTERTVALS NOT TO EXCEED 24** INCHES (610 MM). FASTENERS ARE NOT REQUIRED FOR STUDS LOCATED BELOW WINDOW SILLS. PLATFORM FRAMING REQUIRES CONTINUOUS SHEATHING SPANNING ACROSS RIM JOIST. OR STUD TO STUD METAL TIE STRAPPING LISTED FOR THAT PURPOSE. NON-BEARING EXTERIOR WALLS SHALL BE FASTENED AT INTERVALS NOT TO EXCEED 48 INCHES (1219 MM).

CHAPTER 11

At Section N1101.4 (R102.1.1) add the following text at the end of the section:

COMPLIANCE WITH THE NET-ZERO ENERGY STANDARD SHALL BE DEEMED TO COMPLY WITH THIS CODE.

At Section N1102.4.1.2 (R402.4.1.2) replace the third sentence with the following text:

TESTING SHALL BE CONDUCTED BY INDIVIDUALS HOLDING CURRENT CERTIFICATION FOR SUCH TESTING FROM RESIDENTIAL ENERGY

SERVICES NETWORK (RESNET), BUILDING PERFORMANCE INSTITUTE (BPI) OR OTHER APPROVED AGENCIES.

CHAPTER 13

Add new Section M1307.7 as follows:

M1307.7 LIQUEFIED PETROLEUM APPLIANCES. LIQUEFIED PETROLEUM (LPG) APPLIANCES SHALL NOT BE INSTALLED IN A LOCATION, SUCH AS A PIT OR AN ATTIC, WHERE POTENTIAL FOR PONDING OR RETENTION OF GAS EXISTS.

CHAPTER 14

Revise Section M1411.3 by adding the following text at the end of the paragraph:

CONDENSATE DISPOSAL SHALL BE ALLOWED TO TERMINATE AS FOLLOWS: 1. INTO A FIXTURE TAILPIECE BY MEANS OF A DIRECTIONAL FITTING; OR TO A WASTE AIR GAP FITTING OR LAUNDRY TRAY EQUIPPED WITH A SECONDARY DRAIN.

2. ABOVE THE FINISHED GRADE OUTSIDE THE BUILDING IN AN AREA CAPABLE OF ABSORBING THE CONDENSATE FLOW WITHOUT SUB-SURFACE DRAINAGE

3. OVER ROOF DRAINS EQUIPPED WITH DRAINAGE PIPES THAT TERMINATE AT OR ABOVE GRADE, AND IN AN AREA CAPABLE OF ABSORBING CONDENSATE FLOW WITHOUT SURFACE DRAINAGE.

Revise the last sentence of Sub-Section M1411.3.2 as follows:

Where the drain pipes from more than one unit are manifolded together for condensate drainage, the pipe or tubing shall be sized in accordance with an *approved* method **THE INTERNATIONAL MECHANICAL CODE (IMC), TABLE 307.2.2**.

CHAPTER 15

<u>Revise Section M1503.3 Exhaust discharge. by adding the following text at the end of the section</u> and prior to the Exception:

CHANGES IN SIZE OR DIRECTION SHALL BE MADE BY USE OF AN APPROVED TRANSITION FITTING.

(exception unchanged)

CHAPTER 20

Revise Section M2005.2 as follows:

M2005.2 Prohibited locations. Fuel-fired water heaters shall not be installed in a room used as a storage **CLOTHES** closet. Water heaters located in a bedroom or bathroom shall be installed in a sealed enclosure so that *combustion air* will not be taken from the living space. Installation of direct-vent water heaters within an enclosure is not required.

CHAPTER 24

Revise the first paragraph of Section G2406.2 as follows:

G2406.2 (303.3) Prohibited locations. Appliances shall not be located in sleeping rooms, bathrooms, toilet rooms, storage **CLOTHES** closets or surgical rooms, or in a space that opens only into such rooms or spaces, except where the installation complies with one of the following: (remainder of text unchanged)

At Section G2407.11 add a new number 9. as follows:

9. OUTSIDE COMBUSTION AIR SHALL BE PROVIDED THROUGH AN OPENING OR DUCT LOCATED WITHIN 12 INCHES (305 MM) OF THE TOP AND WITHIN 12 INCHES (305 MM) OF THE BOTTOM OF ENCLOSED SPACES. OPENINGS MAY CONNECT TO SPACES DIRECTLY COMMUNICATING WITH THE OUTDOORS, SUCH AS VENTILATED ATTICS OR CRAWL SPACES. A SINGLE DUCT OR OPENING SHALL NOT SERVE BOTH COMBUSTION AIR OPENINGS. DUCTS SERVING THE LOWER OPENING FOR LIQUID PETROLEUM GAS (LPG) APPLIANCES SHALL BE LOCATED AT THE LOWEST POSSIBLE FLOOR LEVEL AND SHALL NOT CONTAIN POCKETS WHERE LPG COULD ACCUMULATE.

Add a new **Exception 2**. to Section G2408.2 as follows:

Exception:

1. Elevation of the *ignition source* is not required for *appliances* that are *listed* as flammable-vapor-ignition resistant.

2. ELEVATION OF IGNITION SOURCES IS NOT REQUIRED FOR DOMESTIC CLOTHES DRYERS WITHIN PRIVATE GARAGES FOR SINGLE FAMILY RESIDENCES.

Revise Section G2415.12 as follows:

G2415.12 (404.12) Minimum burial depth. METALLIC Underground *piping systems* shall be installed a minimum depth of 12 inches (305 mm) below grade. except as provided for in Section G2415.12.1 NON-METALLIC PIPING SHALL BE LOCATED NOT LESS THAN 18 INCHES (457 MM) BELOW GRADE.

Delete Section G2415.12.1 (404.12.1) Individual outside appliances. in its entirety.

Revise Section G2427.6.4, Item 1. as follows:

1. Gas vents that are 12 inches (305 mm) or less in size and located not less than 8 feet (2438 mm) 4 FEET (1219 MM) from a vertical wall or similar obstruction shall terminate above the roof in accordance with Figure G2427.6.4. VENTS LOCATED WITHIN 4 FEET (1219 MM) OF A PARAPET WALL MUST TERMINATE NOT LESS THAN 12 INCHES (305 MM) ABOVE THE TOP OF THE WALL.

CHAPTER 26

At Sub-Section P2603.5.1, where [NUMBER] is requested insert [12 INCHES (305 MM)].

CHAPTER 28

Add new section P2804.8 to read:

P2804.8 REPLACEMENT WATER HEATERS. THE FOLLOWING ALTERNATIVE METHOD MAY BE USED FOR REPLACEMENT WATER HEATERS WHEN IT IS IMPRACTICAL TO RUN THE TEMPERATURE AND PRESSURE RELIEF VALVE DISCHARGE LINE TO THE EXTERIOR OF A RESIDENCE:

1. A DRAIN PAN SHALL BE INSTALLED UNDER THE WATER HEATER.

2. THE TEMPERATURE RELIEF VALVE SHALL BE SET TO A MAXIMUM OF 210 DEGREES AND THE PRESSURE RELIEF VALVE TO 150 PSI WITH A LINE DRAINING INTO THE PAN.

CHAPTER 29

Delete Section P2904.1.1 "**Required sprinkler locations**" in its entirety and replace with the following:

P2904.1.1 FIRE PROTECTION WATER SUPPLY AND FIRE FLOW. FIRE PROTECTION WATER SUPPLIES FOR RESIDENTIAL STRUCTURES SHALL BE IN ACCORDANCE WITH THE INTERNATIONAL FIRE CODE (IFC) SECTION 507 AND FIRE FLOW SHALL BE PROVIDED IN ACCORDANCE WITH IFC, APPENDIX B.

CHAPTER 30

Revise Section P3005.2.5 by deleting Exception 1. in its entirety and reserving the numbering.

Revise Section P3008.1 as follows:

P3008.1 Where required. Where the flood level rims of plumbing fixtures are below FINISH FLOOR ELEVATION IS LESS THAN 12 INCHES (305 MM) ABOVE the elevation of the manhole cover of the next upstream manhole in the public sewer, the fixtures shall be protected by a backwater valve installed in the *building drain*, branch of the *building drain* or horizontal branch serving such fixtures THAT FLOOR LEVEL. PLUMBING FIXTURES ON FLOOR LEVELS AT ELEVATIONS 12 INCHES (305 MM) OR GREATER ABOVE THE ELEVATION OF THE MANHOLE COVER OF THE NEXT UPSTREAM MANHOLE IN THE PUBLIC SEWER SHALL NOT DISCHARGE THROUGH A BACKWATER VALVE SERVING A LOWER FLOOR LEVEL.

CHAPTER 37

Add new Section E3703.8 to read:

E3703.8 DISHWASHER AND GARBAGE DISPOSER BRANCH CIRCUITS (DWELLING UNITS). DISHWASHER AND GARBAGE DISPOSERS MAY SHARE A SINGLE 20 AMPERE BRANCH CIRCUIT.