

**TOWN OF ORO VALLEY
AMENDMENTS TO THE
INTERNATIONAL RESIDENTIAL CODE
2006 EDITION**

The following provisions of the Residential Code, 2006 Edition, as published by the International Code Council, Inc., are hereby amended as follows:

CHAPTER 1

Revise Section R101.1 as follows: “These provisions shall be known as the Residential Code for One- and Two-Family Dwellings of the [TOWN OF ORO VALLEY, ARIZONA]...”

Revise Section R102.5 as follows:

R102.5 Appendices. Provisions in the appendices shall not apply unless specifically referenced in the adopting ordinance. **THE FOLLOWING APPENDICES ARE ADOPTED: A, B, C, D, H, J, N, O, P AND Q.**

Revise Section 105.2 as follows:

105.2 Work exempt from permit.

Building:

1. One-story detached accessory structures used as tool and storage sheds, playhouses and similar uses, provided the floor area does not exceed 120 square feet (11 m²). **ANY ELECTRICAL, PLUMBING, OR MECHANICAL PORTIONS OF A STRUCTURE UNDER THIS SECTION WILL REQUIRE A BUILDING PERMIT.**

Revise Subsection R105.3.2 as follows:

R105.3.2 Time limitations of application. An application for a permit for any proposed work shall be deemed to have been abandoned 180 days after the date of filing unless such application has been pursued in good faith or a permit has been issued; except that the building official is authorized to grant one or more extensions of time for additional periods not exceeding 180 days each. The extension shall be requested in writing and justifiable cause demonstrated. **AN APPLICATION SHALL NOT BE EXTENDED IF THIS CODE OR ANY OTHER PERTINENT LAWS OR ORDINANCES HAVE BEEN AMENDED SUBSEQUENT TO THE DATE OF APPLICATION. IN ORDER TO RENEW ACTION ON AN APPLICATION AFTER EXPIRATION, THE APPLICANT SHALL RESUBMIT PLANS AND PAY A NEW PLAN REVIEW FEE.**

Revise Section R105.5 as follows:

R105.5 Expiration. Every permit issued shall become invalid unless the work authorized by such permit is commenced within 180 days after its issuance, or if the work authorized by such permit is suspended or abandoned for a period of 180 days after the time the work is commenced. The building official is authorized to grant, in writing, one or more extensions of time, for periods not more than 180 days each. The extension shall be requested in writing **PRIOR TO EXPIRATION OF THE PERMIT**, and justifiable cause demonstrated. **BEFORE WORK DEEMED TO HAVE EXPIRED CAN BE RECOMMENCED, A NEW PERMIT SHALL BE FIRST OBTAINED TO DO SO, AND THE FEE THEREFORE SHALL BE ONE HALF THE AMOUNT REQUIRED FOR A NEW PERMIT FOR SUCH WORK, PROVIDED NO CHANGES HAVE BEEN MADE OR WILL BE MADE IN**

THE ORIGINAL PLANS AND SPECIFICATIONS FOR SUCH WORK; AND PROVIDED FURTHER THAT SUCH SUSPENSION OR ABANDONMENT HAS NOT EXCEEDED ONE YEAR. IN ORDER TO RENEW ACTION ON A PERMIT AFTER THE ONE YEAR LIMIT, THE PERMITTEE SHALL PAY A NEW FULL PERMIT FEE.

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.**

Strike Amendment to Section R108.3 in its entirety and substitute Section 108.3 in its entirety of the International Building Code, 2006 edition.

Revise Section R108.3 as follows:

~~**R108.3 Building permit valuations. THE APPLICANT FOR A PERMIT SHALL PROVIDE AN ESTIMATED PERMIT VALUE AT TIME OF APPLICATION.**~~ 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 and labor. ~~**THE FINAL PERMIT VALUATION SHALL BE DETERMINED BY TOWN OF ORO VALLEY BUILDING VALUATION DATA SCHEDULE AND FEE SCHEDULES AS ESTABLISHED BY THE TOWN OF ORO VALLEY.**~~

Revise Section 110.1 as follows:

R110.1 Use and occupancy. No building or structure shall be used ~~or~~, occupied, **OR FURNISHED IN WHOLE OR IN PART**, and no change in the existing occupancy classification 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 the section unchanged).

Revise Table R301.2(1), by inserting the following text:

Ground Snow Load; insert **N/A**

Wind Speed; insert **90**

Seismic Design Category; insert **(B)**

Weathering; insert [**MODERATE**]

Frost Line Depth; insert [**N/A**]

Termite; insert [**MODERATE TO HEAVY**]

Decay; insert [**NONE TO SLIGHT**]

Winter Design Temp; insert **32**

Flood Hazards; insert **PER PIMA COUNTY FLOOD CONTROL DISTRICT**

Air Freezing Index; insert **4**

Mean Annual Temp; insert **68**

Revise Subsection R301.2.2.2.2 as follows:

R301.2.2.2.2 Irregular Buildings. Prescriptive construction as regulated by this code shall not be used for irregular structures located in Seismic Design Categories **B**, C, D0, D1 and D2. (remainder of the section unchanged).

Revise Table 301.5 in part as follows:

TABLE R301.5

MINIMUM UNIFORMLY DISTRIBUTED LIVE LOADS

(In pounds per square foot)

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

(other sections and uses in table to remain unchanged)
(footnotes a through f to remain unchanged)

G. For attics with ~~limited storage and constructed with trusses~~ **TRUSSED SYSTEMS**, this live load... (balance of footnote g, and footnotes h, and i, to remain unchanged)

Delete Section R303.3 in its entirety and replace it with the following:

R303.3 Bathrooms and Kitchens. Bathrooms, water closet compartments, kitchens and other similar rooms shall be provided with mechanical exhaust systems. The minimum ventilation rates for bathrooms, kitchens, and similar spaces shall be per Table M1507.3.

Revise Section 308.4 Item #5 as follows:

Glazing in ~~doors and enclosures for ANY ROOM~~ containing a hot tubs, whirlpools, saunas, steam rooms, bathtubs, and **OR** showers. ~~Glazing in any part of a building wall enclosing these compartments~~ where the bottom exposed edge of the glazing is less than 60 inches (1524 mm) measured vertically above any standing or walking surface.

Revise Section R309.1 as follows:

R309.1 Opening protection. Openings from a private garage directly into a room used for sleeping purposes shall not be permitted. Other openings between the garage and residence shall be equipped with solid wood doors not less than 1³/₈ inches (35 mm) in thickness, solid or honeycomb core steel doors not less than 1³/₈ inches (35 mm) thick, or 20-minute fire-rated doors. **DOORS PROVIDING OPENING PROTECTION SHALL BE MAINTAINED SELF-CLOSING AND SELF-LATCHING.**

Revise Subsection R311.4.3 as follows:

R311.4.3 Landings at doors. There shall be a floor or landing on each side of each exterior door. The floor or landing at the exterior door shall ~~not~~ be **FLUSH WITH THE INTERIOR FINISH FLOOR ELEVATION, OR A MINIMUM OF 4 INCHES (52 MM)** ~~more than 1.5 inches (38 mm)~~

lower than the top of the threshold. **WHEN LOCATED LOWER THAN THE THRESHOLD, THE DOOR, OTHER THAN AN EXTERIOR STORM OR SCREEN DOOR, SHALL NOT SWING OVER THE LANDING.** The landing shall be permitted to have a slope not to exceed 0.25 units vertical in 12 units horizontal (2 percent).

Revise Section R313.2 by inserting new item #4 to read:

- 4. WHERE THE CEILING HEIGHT OF A ROOM OPEN TO THE HALLWAY SERVING SLEEPING AREAS EXCEEDS THAT OF THE HALLWAY BY 24 INCHES (610 MM), OR MORE, SMOKE ALARMS SHALL BE LOCATED IN THE HALLWAY AND IN THE ADJACENT ROOM.**

Add new Section 325 Sound Attenuation as follows:

R325 SOUND ATTENUATION. BUILDINGS COVERED UNDER THE INTERNATIONAL RESIDENTIAL CODE SHALL BE SUBJECT TO THE FOLLOWING PROVISIONS:

- 1) EXTERIOR WALL PENETRATIONS BY PIPE DUCTS OR CONDUITS SHALL BE CAULKED.**
- 2) MAILBOXES SHALL NOT BE USED THROUGH THE DOOR OR WALL.**
- 3) WINDOWS SHALL HAVE TWO PANES OF GLASS AND SOUND TRANSMISSION RATING OF STC-22. ALL OPERABLE WINDOWS SHALL BE WEATHER STRIPPED AND AIRTIGHT IN ACCORDANCE WITH ASTM R-283-84-T STANDARD. PERIMETER WINDOW FRAMES SHALL BE SEALED TO AIRTIGHT SPECIFICATION.**
- 4) ALL NON-GLAZED PORTIONS OF EXTERIOR SIDE-HINGED DOORS SHALL BE SOLID-CORE WOOD OR INSULATED HOLLOW METAL OR AT LEAST ONE AND THREE-QUARTERS INCH THICK AND FULLY WEATHER STRIPPED. THE PERIMETER DOORFRAMES SHALL BE SEALED TO AIRTIGHT SPECIFICATIONS.**
- 5) FIREPLACES SHALL BE PROVIDED WITH FITTING DAMPERS, UNLESS OTHERWISE PROHIBITED ELSEWHERE IN THE CODE.**
- 6) EXTERIOR WALLS SHALL BE AT LEAST FOUR INCHES IN NOMINAL DEPTH AND SHALL BE FINISHED ON THE OUTSIDE WITH BLOCK, SIDING, SHEATHING, OR STUCCO ON ONE-INCH STYROFOAM. FIBERGLASS OR CELLULOSE INSULATION AT LEAST THREE AND ONE-HALF INCHES THICK SHALL BE INSTALLED CONTINUOUSLY THROUGHOUT THE CAVITY SPACE BEHIND THE WALL. TOTAL INSULATION R-VALUE OF THE EXTERIOR WALL ASSEMBLY SHALL BE R-18.**
- 7) ATTICS AND ROOF RAFTER SPACES SHALL BE INSULATED WITH A MINIMUM INSULATION R-VALUE OF AT LEAST R-30.**

IF THE SPECIFIED REQUIREMENTS OF SECTION R325 ARE NOT MET, THE BUILDING OFFICIAL MAY APPROVE AS AN ALTERNATIVE, A CERTIFICATION BY A REGISTERED ARCHITECT OR ENGINEER PURSUANT TO TITLE 32, CHAPTER 1 TO ACHIEVE A MAXIMUM INTERIOR NOISE LEVEL OF FORTY-FIVE (45) DECIBELS AT TIME OF FINAL CONSTRUCTION.

CHAPTER 4

Replace Figure R403.1.7.1 with Figure 1805.3.1 from the 2006 edition of the International Building Code

CHAPTER 6

Revise Subsection R602.10.3 to delete method 1 in its entirety and all related references to this method (re-number all other methods accordingly)

CHAPTER 8

Revise Subsection 802.11.1 as follows:

R802.11.1 Uplift resistance. ~~ALL roof assemblies which are subject to uplift pressures of 20 pounds per square foot (960 Pa) or greater shall have roof rafters or trusses attached to their supporting wall assemblies by connections capable of withstanding the resistance required in Table R802.11, OF NOT LESS THAN 400 POUNDS. Wind uplift pressures shall be determined using an effective wind area of 100 square feet (9.3 m²) and zone 1 in Table R301.2(2), as adjusted for height and exposure per Table R301.2(3).~~ **A CONTINUOUS LOAD PATH SHALL BE PROVIDED TO TRANSMIT THE UPLIFT FORCES FROM THE RAFTER OR TRUSS TIES TO THE FOUNDATION.**

CHAPTER 13

Revise Subsection M1305.1.1 as follows:

M1305.1.1 Central Furnaces and AIR HANDLERS. ~~Central Furnaces AND AIR HANDLERS~~ within compartments or alcoves shall have a minimum working space clearance of 3 inches (76 mm) along the sides, back, and top with a total width of the enclosing space being at least 12 inches (305 mm) wider than the furnace **OR AIR HANDLER**. Furnaces having a firebox open to the atmosphere shall have at least a 6 inch (152 mm) working space along the front combustion chamber side. Combustion air openings at the rear and side of the compartment shall comply with the requirements of chapter 17.

Exception: This section shall not apply to replacement appliances installed in existing compartments and alcoves where the working space clearances are in accordance with the equipment or appliance manufacturer's installation instructions.

Add new Subsection M1305.1.5 as follows:

M1305.1.5 HEATING, AIR CONDITIONING, AND REFRIGERATION EQUIPMENT OUTLET. **A 125-VOLT, SINGLE PHASE, 15 OR 20 AMPERE RATED RECEPTACLE OUTLET SHALL BE INSTALLED IN AN ACCESSIBLE LOCATION FOR THE SERVICING OF HEATING, AIR CONDITIONING, AND REFRIGERATION EQUIPMENT. THE RECEPTACLE SHALL BE LOCATED ON THE SAME LEVEL AND WITHIN 25 FEET (7.5 METERS) OF THE HEATING AND AIR CONDITIONING, AND REFRIGERATION EQUIPMENT. THE RECEPTACLE OUTLET SHALL NOT BE CONNECTED TO THE LOAD SIDE OF THE EQUIPMENT DISCONNECTING MEANS.**

Add new Section M1307.6 as follows:

M1307.6 LIQUEFIED PETROLEUM APPLIANCES. **LIQUEFIED PETROLEUM (LPG) APPLIANCES SHALL NOT BE INSTALLED IN AN ATTIC, PIT, OR OTHER LOCATION THAT WOULD CAUSE PONDING OR RETENTION OF GAS.**

CHAPTER 14

Revise Section M1403.2 as Follows:

M1403.2 Foundations and supports. Supports and foundations for the outdoor ~~unit of a heat pump~~ **MECHANICAL SYSTEMS** shall be raised at least 3 inches (76 mm) above the ~~ground~~ **FINISHED GRADE**, ~~to permit free drainage of defrost water~~ and shall conform to the manufacturer's installation instructions.

Amend the 4TH sentence of Subsection M1411.3.2 as follows:

“Where the drain pipes from one or more units are manifolded together for condensate drainage, the pipe or tubing shall be sized in accordance with an approved method-, **OR IN ACCORDANCE WITH SECTION M1411.3.2.1.**”

Add new Subsection M1411.3.2.1 as follows:

M1411.3.2.1 COMBINING OF CONDENSATE DRAINS.

COMBINING OF CONDENSATE DRAINAGE LINES SHALL BE ALLOWED AS FOLLOWS:

EQUIPMENT CAPACITY	MINIMUM CONDENSATE PIPE DIAMETER
UP TO 10 TONS OF REFRIGERATION	¾ INCH
11-20 TONS	1 INCH
21-40 TONS	1-1/4 INCH
41-100 TONS	1-1/2 INCH
OVER 100 TONS	2 INCH

WHEN TWO OR MORE UNITS ARE TIED TOGETHER, THE MINIMUM DRAIN SIZE SHALL BE 1 INCH.

CHAPTER 15

Revise Section M1503.3 as follows:

M1503.3 Kitchen exhaust rates. ~~Where Domestic kitchen cooking appliances are~~ **SHALL BE** equipped with ducted range hoods or down-draft exhaust systems, ~~the fans shall be sized in accordance with Section M1507.3.~~

Revise Section 1507.1 as follows:

M1507.1 General. ~~Where T~~toilet rooms and bathrooms ~~are~~ **SHALL BE** mechanically ventilated **AND** the ventilation equipment shall be installed in accordance with this section.

CHAPTER 17

Revise Section M1703.2 as follows:

M1703.2 Two openings or ducts. Outside combustion air shall be supplied through openings or ducts, as illustrated in Figures M1703.2(1), M1703.2(2), M1703.2(3) and M1703.2(4). One opening shall be within 12 inches (305mm) of the top of the enclosure, and one within 12 inches (305mm) of the bottom of the enclosure. **FOR LPG APPLIANCES, ANY DUCT SERVING THE LOWER OPENING SHALL BE AT THE FLOOR LEVEL AND SLOPE TO THE OUTDOORS WITHOUT TRAPS OR POCKETS.** Openings are permitted to connect to spaces directly communicating with the outdoors, such as ventilated crawl spaces or ventilated attic spaces. The same duct or opening shall not serve both combustion air openings. The duct serving the upper opening shall be level or extend upward from the appliance space.

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 installed in a bedroom or bathroom shall be installed in a sealed enclosure so that the combustion air will not be taken from the living space. Installation of direct-vent water heaters within an enclosure is not required.

CHAPTER 23

Revise Section M2301.1 as follows:

M2301.1 General. This section provides for the design, construction, installation, alteration and repair of equipment and systems using solar energy to provide space heating or cooling, hot water heating and swimming pool heating.

ALL SINGLE FAMILY OR TWO FAMILY RESIDENCES SHALL INSTALL SLEEVES, CONDUITS, WATER STUB-OUTS, ROOF TO WATER HEATER SPACE CONDUIT, OR OTHER CONNECTIONS REQUIRED FOR THE FUTURE CONNECTION OF SOLAR SYSTEMS. THE BUILDING OFFICIAL SHALL DEVELOP STANDARDS TO PROSCRIBE INSTALLATION REQUIREMENTS.

THE BUILDER OR OWNER SHALL INSTALL:

- 1. FULL SOLAR HOT WATER SYSTEM ; OR**
- 2. CONDUIT TO THE ROOF AND TWO T'S WITH VALVES IN THE COLD AND HOT WATER PIPING FOR THE WATER HEATER FOR LATER INSTALLATION OF A SOLAR HOT WATER SYSTEM WITH ; OR**
- 3. INSULATED PLUMBING FROM WATER HEATER TO ROOF WITH VALVES IN THE COLD AND HOT WATER PIPING FOR THE WATER HEATER FOR LATER INSTALLATION OF A SOLAR HOT WATER SYSTEM; AND**
- 4. THE WATER HEATER(S) MUST BE INSTALLED IN AN AREA THAT IS LARGE ENOUGH FOR THE FUTURE INSTALLATION OF AN 80 GALLON WATER HEATER, EXPANSION TANK, AND A HEAT EXCHANGER.**

Add new Subsection M2301.1.1 to read:

M2301.1.1 SOLAR SYSTEM DEFINED. SOLAR SYSTEMS SHALL BE DEFINED AS THE FOLLOWING:

1. PHOTO VOLTAIC SYSTEMS,
2. SOLAR DOMESTIC HOT WATER SYSTEMS,
3. SOLAR HOT WATER HEATING SYSTEMS (ACTIVE),
4. PASSIVE SOLAR HEATING SYSTEM WHEN DESIGNED BY A REGISTRANT,
5. WIND TURBINE FOR ELECTRICAL GENERATION,
6. OTHER TECHNOLOGIES THAT UTILIZE SOLAR ENERGY AS APPROVED BY THE BUILDING OFFICIAL.

OTHER SOLAR SYSTEMS, SUCH AS POOL HEATERS, SHALL NOT BE CONSIDERED MEETING THE REQUIREMENT FOR SOLAR SYSTEMS.

CHAPTER 24

Revise the first sentence of Section 2406.2 as follows:

G2406.2 (303.3) Prohibited locations. Appliances shall not be located in sleeping rooms, 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:

Revise Section 2415.9 as follows:

G2415.9 (404.9) Minimum burial depth. Underground piping systems shall be installed a minimum depth of 12 inches (305 mm) below grade ~~except as provided for in Section G2415.9.1~~ **FOR METAL PIPING AND 18 INCHES (457MM) FOR NON-METALLIC PIPING.**

Delete Subsection G2415.9.1 in its entirety.

Revise Subsection G2427.6.4 as follows:

In subsection 1. revise “8 feet (2438 mm)” to **4 FEET (1219MM)**.

CHAPTER 25

Revise Section P2503.6 as follows:

P2503.6 Water-supply testing. Upon completion of the water-supply system or a section of it, the system or portion completed shall be tested and proved tight under a water pressure of not less than the working pressure of the system or, ~~for piping systems other than plastic,~~ by an air test of not less than 50 psi (345 Pa). This pressure shall be held for not less than 15 minutes. The water used for tests shall be obtained from a potable water source.

CHAPTER 26

Add new Subsection P2602.1.1 to read:

P2602.1.1 GRAY WATER APPLICATIONS. ALL SINGLE FAMILY AND TWO FAMILY DWELLINGS SHALL HAVE PROVISIONS TO UTILIZE GRAY WATER. ALL GRAY

WATER SYSTEMS SHALL BE DESIGNED AND OPERATED ACCORDING TO THE PROVISIONS OF THE ADEQ TYPE 1 GENERAL PERMIT (A.A.C. RI8-9-711) AND APPENDIX O AS REVISED.

- 1. DWELLINGS LOCATED ON PROPERTIES LESS THAN 10,000 SQUARE FEET SHALL HAVE PLUMBING AND FIXTURES INSTALLED TO DIVERT CLOTHES WASHING MACHINE WATER FOR USE IN A DIRECT IRRIGATION SYSTEM. TWO DWELLINGS LOCATED ON THE SAME LOT OF LESS THAN 20,000 SQUARE FEET SHALL MEET THE SAME REQUIREMENT.**
- 2. DWELLINGS LOCATED ON PROPERTIES 10,000 SQUARE FEET OR GREATER SHALL BE PROVIDED THE CLOTHES WASHING MACHINE WATER DIVERter SYSTEM AND BE PROVIDED WHOLE HOUSE DRAINAGE PLUMBING FOR FUTURE INSTALLATION OF A DISTRIBUTED GRAY WATER SYSTEM. TWO DWELLINGS LOCATED ON THE SAME LOT OF 20,000 SQUARE FEET OR GREATER SHALL MEET THE SAME REQUIREMENT.**
- 3. WHERE EVER POSSIBLE, THE GRAY WATER SYSTEM SHALL UTILIZE GRAVITY FLOWS. THE PLUMBING INVERTS OF THE GRAY WATER DRAINS AND THE BUILDING SEWER SHALL BE INSTALLED TO FACILITATE THE USE OF GRAVITY TO DRAIN AND DISCHARGE THE GRAY WATER COLLECTOR THROUGH INDIRECT WASTE TO THE BUILDING SEWER. WHEN NOT PRACTICAL TO UTILIZE GRAVITY, PROVISIONS SHALL BE MADE TO PROVIDE ELECTRICAL POWER PER SECTION E3603.8.**

At Subsection P2603.6.1 insert **12 INCHES (305 MM)** at both locations where it says [NUMBER].

CHAPTER 28

Add new Subsection P2803.6.2 to read:

P2803.6.2 REPLACEMENT WATER HEATERS.

REPLACEMENT WATER HEATERS SHALL COMPLY WITH THE FOLLOWING WHEN IT IS NOT PRACTICAL TO RUN THE TEMPERATURE AND PRESSURE RELIEF VALVE LINE TO THE EXTERIOR OF THE 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.**
- 3. A PRESSURE RELIEF VALVE SET AT NO GREATER THAN 125 PSI SHALL BE INSTALLED AT THE MAIN WATER SUPPLY CONNECTION OUTSIDE THE DWELLING.**

CHAPTER 29

Revise Subsection P2902.5.3 as follows:

P2902.5.3 ~~Lawn~~ Irrigation Systems. The potable water supply to lawn irrigation systems shall be protected against backflow by an atmospheric-type vacuum breaker, a pressure-type vacuum breaker or a reduced pressure principle backflow preventer. A valve shall not be installed down stream from an atmospheric vacuum breaker. Where chemicals are introduced into the system, the potable water supply shall be protected against backflow by a reduced pressure principle backflow preventer. **WHEN A WHOLE HOUSE GRAY WATER SYSTEM IS INSTALLED FOR IRRIGATION IN**

ACCORDANCE WITH SECTION P2602.1.1, AND WHERE AN IRRIGATION SYSTEM EXISTS THAT USES POTABLE WATER, THE DOMESTIC WATER SUPPLY TO THE HOME SHALL BE PROTECTED WITH A REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER MEETING ASSE 1013.

CHAPTER 30

Revise Subsection P3005.2.10 as follows:

P3005.2.10 Cleanout equivalent. A ~~fixture trap or a~~ fixture with an integral trap, readily removable without disturbing concealed piping shall be acceptable as a cleanout equivalent.

CHAPTER 33

Add new Section E3304.12 to read:

E3304.12 PHOTO VOLTAIC SYSTEM CONDUIT. A CONDUIT OR SLEEVE SHALL BE INSTALLED FROM THE SERVICE ENTRANCE LOCATION TO ABOVE THE ROOF AREA TO FACILITATE THE INSTALLATION OF CONDUCTORS FOR A FUTURE PV SYSTEM.

Revise Section E3305.1 as follows:

E3305.1 Equipment Location and Clearances. Sufficient access and working space shall be provided and maintained around all electrical equipment to permit ready and safe operation and maintenance of such equipment in accordance with this section and Figure E3305.1. **A SPACE NEAR THE SERVICE EQUIPMENT MUST BE PROVIDED TO MOUNT EQUIPMENT FOR PHOTO VOLTAIC SYSTEMS IN A MANNER SUITABLE FOR THE INSTALLATION.**

Revise Section E3306.3 by substituting “12” (AWG aluminum) with “6” (AWG aluminum).

Add new Section E3506.5 to read:

E3506.5 CIRCUIT BREAKER FOR SOLAR CIRCUITS. SERVICE EQUIPMENT SHALL BE SIZED AND SPACE PROVIDED SO THAT ONE 240 VOLT CIRCUIT BREAKER MAY BE BACK-FED FROM A PHOTO VOLTAIC SYSTEM.

CHAPTER 36

Revise Section 3603.1 by adding a sentence to the end of the paragraph to read:

EVAPORATIVE COOLER FAN AND PUMP MOTORS SHALL BE PERMITTED TO BE CONNECTED TO THE SAME BRANCH CIRCUIT AS CENTRAL HEATING.

Add new Sections E3603.7 and E3603.8 to read:

E3603.7 DISHWASHER AND GARBAGE DISPOSER BRANCH CIRCUITS. IN RESIDENTIAL OCCUPANCIES, DISHWASHER AND GARBAGE DISPOSER MAY BE ON THE SAME 20 AMPERE BRANCH CIRCUIT.

E3603.8 GRAY WATER EJECTOR PUMP CIRCUIT. A DEDICATED 20 AMPERE RATED BRANCH GFCI PROTECTED CIRCUIT SHALL BE PROVIDED AT THE LOCATION OF

GRAY WATER EJECTOR SUMPS OR FUTURE SUMP LOCATIONS WHEN THE HOUSE IS PROVIDED WITH A WHOLE HOUSE GRAY WATER SYSTEM PLUMBING.

CHAPTER 38

Add Section E3801.12 as follows:

E3801.12 ADDITIONAL OUTLETS. ONE SWITCH CONTROLLED WALL RECEPTACLE OUTLET SHALL BE PLACED UNDER THE KITCHEN SINK COUNTERTOP AND ONE SHALL BE LOCATED UNDER THE LAVATORY SINK COUNTERTOP IN THE OWNER'S BATHROOM (SUCH OUTLET MAY BE INSTALLED IN THE MAIN OR COMMON BATHROOM IF A BATHROOM IS NOT DESIGNATED FOR THE OWNER). OUTLETS TO BE INSTALLED SHALL BE ON A MINIMUM 15 AMPERE BRANCH CIRCUIT IN ACCORDANCE WITH SECTION E3602.3, AS SPECIFIED FOR UTILIZATION EQUIPMENT.

Delete Section E3808.1 in its entirety and replace it with the following:

E3808.8.1 FLEXIBLE METAL CONDUIT. FLEXIBLE METAL CONDUIT SHALL NOT BE PERMITTED AS A GROUNDING MEANS. AN EQUIPMENT GROUNDING CONDUCTOR, SIZED IN ACCORDANCE WITH TABLE E3808.12 SHALL BE INSTALLED IN ALL FLEXIBLE METAL CONDUITS. WHERE AN EQUIPMENT BONDING JUMPER IS REQUIRED AROUND FLEXIBLE METAL CONDUIT, IT SHALL BE INSTALLED IN ACCORDANCE WITH SECTION E3808.20.

EXCEPTION: LISTED AND LABELED FACTORY ASSEMBLED (PRE-WIRED) FIXTURES AND EQUIPMENT WITH FLEXIBLE METAL CONDUIT WILL NOT REQUIRE THE ADDITION OF THE GROUNDING CONDUCTOR IN PRE-WIRED RACEWAYS.

Delete Subsection E3808.8.2 in its entirety and replace it with the following:

E3808.8.2 LIQUID-TIGHT FLEXIBLE METAL CONDUIT. LIQUID-TIGHT FLEXIBLE METAL CONDUIT SHALL NOT BE PERMITTED AS A GROUNDING MEANS. AN EQUIPMENT GROUNDING CONDUCTOR, SIZED IN ACCORDANCE WITH TABLE E3808.12 SHALL BE INSTALLED IN ALL LIQUID-TIGHT FLEXIBLE METAL CONDUITS. WHERE AN EQUIPMENT BONDING JUMPER IS REQUIRED AROUND LIQUID-TIGHT FLEXIBLE METAL CONDUIT, IT SHALL BE INSTALLED IN ACCORDANCE WITH SECTION E3808.20.

EXCEPTION: LISTED AND LABELED FACTORY ASSEMBLED (PRE-WIRED) FIXTURES AND EQUIPMENT WITH LIQUID-TIGHT FLEXIBLE METAL CONDUIT WILL NOT REQUIRE THE ADDITION OF THE GROUNDING CONDUCTOR IN PRE-WIRED RACEWAYS.

CHAPTER 42

Add a new Section E4202.3 to read as follows:

E4202.3 LOCATION OF POWER SUPPLIES AND TRANSFORMERS.

E4202.3.1 ACCESSIBILITY. CLASS 1, CLASS 2 AND CLASS 3 POWER SUPPLIES AND TRANSFORMERS SHALL BE ACCESSIBLE.

E4202.3.2 PROHIBITED LOCATIONS. CLASS 1, CLASS 2 AND CLASS 3 POWER SUPPLIES AND TRANSFORMERS SHALL NOT BE LOCATED IN ANY CLOSET OR SPACE WHERE CLOSER THAN 6 INCHES FROM THE EDGE OF A SHELF.

Delete Appendix E, Manufactured Housing Used As Dwellings. (refer to Arizona State Law for requirements).

Delete Appendix F, Radon Control Methods.

Delete Appendix G Swimming Pools, Spas and Hot Tubs. (insert the Oro Valley Pool/Spa Code, 2006 Edition).

Delete Appendix I, Private Sewage Disposal. (refer to Arizona Department of Environmental Quality for requirements).

Delete Appendix K, Sound Transmission (See new Section R325, Sound Attenuation)

Delete Appendix L, Permit Fees (refer to Town of Oro Valley Building Valuation Data Schedule and Fee Schedules)

Delete Appendix M, Home Day Care-R3 Occupancy (refer to amended International Building Code for home care occupancies)

APPENDIX O

Revise Section AO101.2 to read:

GRAY WATER. Waste discharged from lavatories, bathtubs, showers, clothes washers and laundry trays. **WASTE DISCHARGED THROUGH A SINK LOCATED IN A GARAGE OR SIMILAR LOCATION THAT MAY INTRODUCE CONTAMINATION IN VIOLATION OF THE ADEQ REQUIREMENTS (A.A.C. RI8-9-711) SHALL NOT BE CONNECTED TO THE GRAY WATER SYSTEM. A WHOLE HOUSE SYSTEM IS A PIPING SYSTEM THAT COLLECTS GRAY WATER FROM MORE THAN TWO SOURCES.**

Revise Title of Figure AO101.1(2) to read:

GRAY WATER RECYCLING SYSTEM FOR SUBSURFACE AND SURFACE LANDSCAPE IRRIGATION

Revise Section AO101.3 to read:

AO101.3 Permits. Permits shall be required in accordance with Section R105 of the International Residential Code.

1. NO PERMIT FOR ANY GRAY WATER SYSTEM SHALL BE ISSUED UNTIL A PLOT PLAN WITH APPROPRIATE DATA SATISFACTORY TO THE AUTHORITY HAVING JURISDICTION HAS BEEN SUBMITTED AND APPROVED. WHEN LOT CONDITIONS DO NOT ALLOW FOR DISTRIBUTION OR SEPARATION FROM BUILDINGS OR OTHER STRUCTURES, AS DETERMINED BY THE BUILDING OFFICIAL, NO GRAY WATER SYSTEM SHALL BE PERMITTED.
2. NO PERMIT SHALL BE ISSUED FOR A GRAY WATER SYSTEM ON ANY PROPERTY SHOWN BY AN ENGINEERED SOILS REPORT TO BE NEGATIVELY AFFECTED BY ADDITIONAL GRAY WATER ABSORPTION AS DETERMINED BY THE BUILDING OFFICIAL.
3. THE PROVISIONS OF THIS CHAPTER MAYBE MODIFIED OR WAIVED WHEN IT CAN BE SATISFACTORILY DEMONSTRATED TO THE BUILDING OFFICIAL THAT COMPLIANCE WITH THESE REGULATIONS IS IMPRACTICAL DUE TO CONSTRUCTION CONSTRAINTS, AN ACCEPTABLE ALTERNATIVE METHOD OF COMPLIANCE THAT ALLOWS GRAY WATER USAGE IS PROPOSED, OR IF THE SEWER AUTHORITY HAS OBJECTIONS TO GRAY WATER UTILIZATION.
4. PIMA COUNTY WASTE WATER MANAGEMENT SHALL REVIEW FOR LOCAL GRAVITY SEWER SYSTEM NEGATIVE IMPACTS.

Delete Section AO101.8 in its entirety and replace it with the following:

AO101.8 POTABLE WATER CONNECTIONS. NO DIRECT CONNECTIONS SHALL BE MADE BETWEEN POTABLE WATER AND GRAY WATER SYSTEMS UNDER ANY CIRCUMSTANCES, WITH OR WITHOUT BACKFLOW PROTECTION. WHEN BOTH A GRAY WATER AND POTABLE WATER IRRIGATION SYSTEM EXISTS ON A SINGLE PROPERTY THE WATER SERVICE SHALL BE PROTECTED WITH AN RP BACKFLOW PREVENTER TO PROTECT THE PUBLIC WATER SUPPLY IN ACCORDANCE WITH SECTION P2902.5.3.

Revise Section AO101.11 to read:

AO101.11 Collection Reservoir. Gray water shall be collected in an approved reservoir constructed of durable, nonabsorbent and corrosion-resistant materials. ~~The reservoir shall be a closed and gas tight vessel.~~ Access openings shall be provided to allow inspection and cleaning of the reservoir interior.

1. IF A COLLECTION RESERVOIR IS TO BE INCLUDED IN THE DESIGN OF A GRAY WATER RECYCLING SYSTEM, PLANS FOR THE COLLECTION RESERVOIR SHALL BE SUBMITTED TO THE BUILDING SAFETY DEPARTMENT FOR APPROVAL.
2. COLLECTION RESERVOIRS SHALL BE CONSTRUCTED OF SOLID, DURABLE MATERIALS, NOT SUBJECT TO EXCESSIVE CORROSION OR DECAY, AND SHALL BE WATERTIGHT.
3. EACH COLLECTION RESERVOIR SHALL BE VENTED AND SHALL HAVE A LOCKING, GASKETED ACCESS OPENING FOR INSPECTION AND CLEANING.

4. EACH COLLECTION RESERVOIR VENT SHALL BE SIZED IN ACCORDANCE WITH CHAPTER 31 OF THE INTERNATIONAL RESIDENTIAL CODE AND BASED ON THE DIAMETER OF THE RESERVOIR INLET PIPE.
5. EACH COLLECTION RESERVOIR AND RESERVOIR VENT SHALL BE DESIGNED TO RESTRICT ACCESS AND TO ELIMINATE HABITAT FOR MOSQUITOES OR OTHER VECTORS.
6. THE OVERFLOW AND EMERGENCY DRAINPIPES SHALL NOT BE LESS IN SIZE THAN THE INLET PIPE. THE CONNECTION TO THE SEPTIC SYSTEM OR HCS WILL BE BY INDIRECT WASTE.
7. UNIONS SHALL BE PROVIDED FOR ALL PIPING ATTACHMENTS TO THE COLLECTION RESERVOIR.
8. EACH COLLECTION RESERVOIR SHALL BE STRUCTURALLY DESIGNED TO WITHSTAND ALL ANTICIPATED EARTH OR OTHER LOADS. COVERS FOR COLLECTION RESERVOIRS DESIGNED FOR UNDERGROUND INSTALLATION SHALL BE CAPABLE OF SUPPORTING A MINIMUM OF 300 POUNDS PER SQUARE FOOT.

Add new Section AO104 as follows:

**SECTION AO104
SURFACE IRRIGATION SYSTEMS**

AO104.1 DEFINITIONS. SURFACE IRRIGATION SYSTEMS SHALL BE INSTALLED TO MEET THE PROVISIONS OF ADEQ PROVISIONS FOR RESIDENTIAL GRAY WATER SYSTEMS AS DESCRIBED BELOW. DIRECT REUSE OF GRAY WATER IS PERMITTED IN SINGLE-FAMILY DWELLINGS WITH A FLOW OF LESS THAN 400 GALLONS PER DAY. THE PROVISIONS OF THIS APPENDIX SHALL GOVERN THE PERFORMANCE, MATERIALS, DESIGN, CONSTRUCTION, AND INSTALLATION OF GRAY WATER SYSTEMS FOR HOUSEHOLD GARDENING, COMPOSTING, LAWN WATERING, ORCHARD, OR LANDSCAPE IRRIGATION. THE FOLLOWING CONDITIONS MUST ALL BE MET:

1. HUMAN CONTACT WITH GRAY WATER AND SOIL IRRIGATED BY GRAY WATER IS AVOIDED,
2. GRAY WATER ORIGINATING FROM THE RESIDENCE IS USED AND CONTAINED WITHIN THE PROPERTY BOUNDARY FOR HOUSEHOLD GARDENING, COMPOSTING, LAWN WATERING, OR LANDSCAPE IRRIGATION,
3. SURFACE APPLICATION OF GRAY WATER IS NOT USED FOR IRRIGATION OF FOOD PLANTS, EXCEPT FOR CITRUS AND NUT TREES,
4. THE GRAY WATER DOES NOT CONTAIN HAZARDOUS CHEMICALS DERIVED FROM ACTIVITIES SUCH AS CLEANING CAR PARTS, WASHING GREASY OR OILY RAGS, OR DISPOSING OF WASTE SOLUTIONS FROM HOME PHOTO LABS OR SIMILAR HOBBYIST OR HOME OCCUPATIONAL ACTIVITIES,
5. THE APPLICATION OF GRAY WATER IS MANAGED TO MINIMIZE STANDING WATER ON THE SURFACE. ABSORPTION SHALL OCCUR WITHIN 24 HOURS,
6. THE GRAY WATER SYSTEM IS CONSTRUCTED SO THAT IF BLOCKAGE, PLUGGING, OR BACK UP OF THE SYSTEM OCCURS, GRAY WATER CAN BE DIRECTED INTO THE SEWAGE COLLECTION SYSTEM OR ON SITE WASTE WATER DISPOSAL SYSTEM, AS APPLICABLE. THE GRAY WATER SYSTEM MAY INCLUDE A MEANS OF FILTRATION TO REDUCE PLUGGING AND EXTEND SYSTEM LIFETIME,

7. ANY GRAY WATER STORAGE TANK IS COVERED TO RESTRICT ACCESS AND TO ELIMINATE HABITAT FOR MOSQUITOES OR OTHER VECTORS,
8. THE GRAY WATER SYSTEM IS SITED OUTSIDE OF A FLOODWAY,
9. THE GRAY WATER SYSTEM IS OPERATED TO MAINTAIN A MINIMUM VERTICAL SEPARATION DISTANCE OF AT LEAST 5 FEET FROM THE POINT OF GRAY WATER APPLICATION TO THE TOP OF THE SEASONALLY HIGH GROUND WATER TABLE,
10. FOR RESIDENCES USING AN ON SITE WASTEWATER TREATMENT FACILITY FOR BLACK WATER TREATMENT AND DISPOSAL, THE USE OF A GRAY WATER SYSTEM DOES NOT CHANGE THE DESIGN, CAPACITY, OR RESERVE AREA REQUIREMENTS FOR THE ON-SITE WASTEWATER TREATMENT FACILITY AT THE RESIDENCE, AND ENSURES THAT THE FACILITY CAN HANDLE A COMBINED BLACK WATER AND GRAY WATER FLOW IF THE GRAY WATER SYSTEM FAILS OR IS NOT FULLY USED,
11. ANY PRESSURE PIPING USED IN A GRAY WATER SYSTEM THAT MAY BE SUSCEPTIBLE TO CROSS CONNECTION WITH A POTABLE WATER SYSTEM CLEARLY INDICATES THAT THE PIPING DOES NOT CARRY POTABLE WATER,
12. GRAY WATER APPLIED BY SURFACE IRRIGATION DOES NOT CONTAIN WATER USED TO WASH DIAPERS OR SIMILARLY SOILED OR INFECTIOUS GARMENTS UNLESS THE GRAY WATER IS DISINFECTED BEFORE IRRIGATION,
13. SURFACE IRRIGATION BY GRAY WATER IS ONLY BY FLOOD OR DRIP IRRIGATION.

AO104.2 PROHIBITED USES. GRAY WATER USE UNDER THIS SECTION FOR PURPOSES OTHER THAN IRRIGATION AND THE USE OF GRAY WATER SPRAY IRRIGATION ARE PROHIBITED. FOUNTAINS, FISH PONDS, LANDSCAPE PONDS, AND OTHER SIMILAR USES SHALL NOT USE GRAY WATER TO FILL OR LEVEL THE WATER FEATURE.

AO104.3 INSTALLATION, CAPACITY. THE TYPE OF SYSTEM SHALL BE APPROPRIATE FOR THE BUILDING LOT, TAKING INTO ACCOUNT SOIL TYPE, LANDSCAPING AND TYPES OF PLANTS RECEIVING THE WATER. THE DISCHARGE SHALL BE ABSORBED INTO THE SOIL WITHIN A 24 HOUR PERIOD.

AO104.4 IDENTIFICATION. A SIGN STATING: "GRAY WATER IRRIGATION SYSTEM, DANGER UNSAFE WATER" SHALL ALSO BE PERMANENTLY MARKED ON THE COLLECTION RESERVOIR AND AT ANY HOSE CONNECTION OUTLET.

AO104.5 SPECIAL CONDITIONS. OTHER GRAY WATER RECYCLING SYSTEMS MAY BE APPROVED BY THE AUTHORITY HAVING JURISDICTION, AS ALLOWED UNDER SECTION R104.11, ALTERNATIVE MATERIALS, DESIGN AND METHODS OF CONSTRUCTION AND EQUIPMENT.

APPENDIX P

Revise Appendix P as follows:

~~SPRINKLING~~ AUTOMATIC FIRE SPRINKLER SYSTEM

The provisions contained in this appendix are not mandatory unless specifically referenced in the adopting ordinance.

AP101 ~~Fire sprinklers~~ AUTOMATIC FIRE SPRINKLER SYSTEM.

An approved automatic fire sprinkler system shall be installed in new one- and two-family dwellings and townhouses **USED AS MODEL HOMES WITH SALES OR CONSTRUCTION OFFICES, AND ONE- AND TWO-FAMILY DWELLINGS AND TOWNHOUSES WHICH EXCEED 3,600 SQUARE FEET IN FIRE-FLOW CALCULATION AREA HEREAFTER CONSTRUCTED WITHIN OR MOVED INTO THE JURISDICTION.**