



Town of FOUNTAIN HILLS
Building Safety Department
Solar System plan review / Inspection Checklist
(Based MAG Building Codes Committee Standard)

7/30/08

PLAN REVIEW COMMENTS: The following items briefly summarize the minimum code requirements of the International Residential Code (IRC), National Electrical Code (NEC), and Fountain Hills Zoning Ordinance.

Administration & General Submittal Requirements	
1.	<p>Catalog Cut Sheets. Provide catalog cut sheets for Solar Photovoltaic Systems, inverter and other related equipments necessary for installation, alteration and repair. The sheets shall indicate all listing information such as:</p> <p style="padding-left: 40px;">1. Certified testing agency</p>
2.	<p>Solar Rating and Certification Corporation (SRCC). Provide standard plans including the SRCC System Data (Specification Sheet).</p>
3.	<p>Note on Plans. Indicate on the plans that Solar Energy Equipment shall be installed in accordance with the applicable Plumbing, Electrical, Building and/or Residential and the current Town codes and in accordance with SRCC and the State of Arizona Guidelines.</p>
4.	<p>Inspections. There will be a minimum of one inspections required.</p>
5.	<p>Solar Units. Solar heating, cooling units, solar greenhouses and associated apparatus shall be located behind the front line of the primary structure on the front, and behind the street side of the primary structure on the street side of a corner lot, shall not cover more that 30% of any side or rear yard, shall be at least 3 ft. from any rear or side lot lines, shall be at least 6 ft. from any structure, and shall not exceed 12 ft. in height. With the exception of the solar panels, any solar heating or cooling units shall be screened from public view.</p>
6.	<p>Sec. M2301.2 The roof shall be constructed to support the loads imposed by the roof-mounted solar-collector. Where mounted on or above the roof coverings, the collectors and supporting structure shall be constructed of non-combustible materials or fire-retardant-treated wood equivalent to that required for the roof construction.</p>
7.	<p>Sec. 2301.2.5 System components shall be protected from damage resulting from freezing of heat-transfer liquids at the winter design temperature provided with Table R302.2(1). Freeze protection shall be provided by heating, insulation, thermal mass and heat transfer fluids with freeze point lower than the winter design temperature , heat tape or other approved methods, or combination thereof.</p>
8.	<p>Sec M2301.3.1 Collectors shall be listed and labeled to show the manufacturer's name, model no., serial no., collectors wt. & the type of heat transfer fluids that are compatible with the collector.</p>
9.	<p>Sec 2301.2.7 Roof and wall penetrations shall be flashed and sealed to prevent</p>

	entry of water, rodents and insects in accordance with Chapter 9 of the IRC 2003.	
Residential Solar Photovoltaic Systems		
10.	Location of the Photovoltaic system shall be shown on the plans including the roof plan and the elevation plan.	
11.	The plans shall include mounting details for the photovoltaic system panel installation.	
12.	Electrical one-line and three-line diagram (showing phases, neutral and grounding).	
13.	Cut sheets and listing for inverter (DC to AC conversion)	
14.	Note on the plans that Photovoltaic equipment shall be installed in accordance with NEC 690 and posted with applicable warnings, signage and plaques per NEC 705-10, 690-17 and 690-64(b)95).	
Residential Solar Domestic Water Heating Systems		
15.	Locations. The location of the solar panel system shall be indicated on the plans, including roof plan, elevation and mounting details for panel installation.	
16.	Plans Submittal. Standard plans shall be submitted for the system with water storage on the roof (e.g. – integrated collector storage or thermosyphon systems).	
17.	System Structural Engineering analysis shall be required for flat plate collectors whose weight exceeds 20 lbs per square foot on roof slopes of 4/12 or less and 16 lbs per square foot on roof slopes greater than 4/12.	
18.	Plans Submittal. Standard plans shall be submitted for the system including Solar Rating and Certification Corporation (SRCC) System Data (specification Sheet).	
19.	Note on Plans that Solar Domestic Water Heating equipment shall be installed in accordance with SRCC and the state of Arizona Guidelines.	

NOTE:

The Town of Fountain Hills Zoning Ordinance regulations on setbacks, height limitations color, reflectivity or other design considerations shall be observed on the Solar systems installation, alterations and repairs