



This guideline establishes the minimum submittal & plan review requirements for solar water heating and photovoltaic systems for one and two family dwellings.

**Due Diligence for Solar System projects:**

Due diligence is the first step in determining if your project is feasible which will provide the best opportunity for a successful plan review and inspection process.

This includes:

- Verifying that an open permit for the same scope of work has not already been issued on the subject property
- Verifying that structures intended to support new solar systems are legally permitted structures

Please contact the Planning & Development Records section for information on permit records for a specific property address:

**Planning and Development Department**  
**Records Counter**

Phoenix City Hall, 3rd Floor  
602-262-7800

**NOTE:** The following statement will be shown on the scope of work for each solar system permit issued.

**“This approval is for compliance to the current adopted building codes for the proposed Solar System only. It is the owner’s/applicant’s responsibility to ensure that the proposed installation of solar systems and associated equipment is on legally permitted structures. If determined by inspection staff the proposed solar system is installed on non-permitted structures, any required modifications needed for code compliance will be at the owner’s/applicant’s expense”**

Below are the specific minimum submittal & plan review requirements. Additional submittal documentation may be required as necessary. Solar water heating system installations must comply with 2012 IRC Chapter 23 (Solar Systems), or 2012 IMC Chapter 14 (Solar Systems), 2012 IRC Chapter 29, sections P2902.5.5, (Backflow Prevention).

**Administrative Plan Requirements:**

- New submittals require 2 complete sets of plans and supplemental documents for first review
  - a) Correction reviews require 2 new plan sets plus the original marked drawings
  - b) Reviews for revisions to approved plans require 2 new plan sets plus the original approved drawings
- Minimum drawing sheet size 11x17, minimum supplemental document size 8.5x11
- Minimum plot plan scale 1”=20’, minimum drawing scale 1/8”=1’, minimum 10pt font size
- All plans and supplemental documents must be legible

**Plot Plan:**

- Provide all applicable information per the Residential Single Family Plot Plan Requirements guideline
  - Show location of all photovoltaic components including the panels' exact location on the roof. Maintain 3' clearance from roof edges and roof peak per Fire Dept. guidelines
- In addition, for solar water heating installations please show and provide:**
- The locations of all the components of the system
  - The location of temperature and pressure relief drain piping
  - The location of the backflow prevention device (if required)
  - Solar Rating and Certification Corporation (SRCC) Data Sheet

**Manufacturer's Specifications:**

**If solar panels are mounted on roof, provide plans for the existing roof framing.**

Specify size, type and spacing of existing framing members (Indicate if trusses, rafters, etc.)

- Specify pitch of roof
- Specify existing roof covering material (tile, asphalt shingle, built-up, etc.)
- Specify size and weight of each solar panel
- Provide details for mounting of panels to the existing roof structure
- Roof mounted collectors must be non-combustible or meet fire resistive requirements of fire retardant treated wood as stated in IRC Section M2301.2.1.

**Structural Engineering will be required:**

- For the existing roof framing members when the additional load from roof mounted solar equipment exceeds 5 psf (weights are typically included in the manufacturer's specifications)
- For new detached solar structure/arrays of any height (Requires plans to be logged in for review)

**Photovoltaic Systems require the following:**

- Electrical plans that include a 3 line diagram showing all conductors, equipment, modules, etc., from the service panel to the modules. Include all ratings, wire sizes, location of conduit runs, labeling and the open circuit DC voltage if the modules are of the crystalline type.

**Plan Review for Solar Systems:**

- First review of photovoltaic systems or solar water heating systems on existing legal/permitted buildings includes fees indicated on the photovoltaic system permit application or by project valuation for solar water heating systems
- Supplemental reviews for photovoltaic systems require an additional plan review fee at a minimum of ½ hour review based on \$150 per hour per the City of Phoenix fee schedule