



City of Scottsdale  
**Green Building Program**  
 “Sustainable Building in the Sonoran Desert”

**SOLAR PANEL PLACEMENT DESIGN GUIDELINES  
 FOR SINGLE FAMILY HOMES**

The following guidelines are to be used in the design and placement of solar panels (photovoltaic and solar thermal systems) on pitched and flat roofs of single-family dwellings for the purpose of compatible design. With a little foresight and planning, a solar system can be effectively integrated into the design of new and existing roofs. Those projects which comply with the design guidelines qualify for over the counter plan review. All other proposals will be required to be submitted for plan review.

**A. South Facing Pitched Roofs (within 45° east or west of due south)**

- 1) Solar panels should be low profile and parallel with the plane of the pitched roof.
- 2) Top of the panels should not exceed 8 inches above the adjacent finish roofing surface (e.g. - tile, shingles). Panels should not project above the roof ridge line.
- 3) Placement of panels should be uniform. Consider the panels as part of the overall roof configuration. Match the shape and proportions of the array with the shape and proportions of the roof.
- 4) Color of panel frames and support structure should be neutral and compatible with roof surface color (exposed frames and components should have a non-reflective surface).



- + Per guidelines  
 - Not per guidelines



B. North and East/West Facing Pitched Roofs (within 45° of south of due east or west)

- 1) Panel tilt angle should not exceed 15 degrees above horizontal plane.
- 2) Height of panels should not exceed 24 inches above the roof surface at any point. Panels should not project above the roof ridge line.
- 3) Placement and height of panels should be uniform. Consider the panels as part of the overall roof configuration. Match the shape and proportions of the array with the shape and proportions of the roof.
- 4) Color of panel frames and support structure should be neutral and compatible with roof surface color (exposed frames and components should have a non-reflective surface).



Solar panels on west and east facing pitched roof below the maximum allowable height of 24 inches above roof surface at any point.

Match the shape and proportions of the array with the shape and proportions of the roof.





View from southwest corner  
Solar panels on west facing pitched roof exceed the maximum allowable height of 24 inches above roof surface at any point.



View from northwest corner  
Solar panels on west facing pitched roof also project above the roof ridge line. Support structure color is not compatible with roof surface color.

C. Flat roofs (1/2 inch or less per foot slope)

- 1) Top of panels should not exceed 30 inches above the adjacent finish roofing surface on flat roofs with or without parapets.
- 2) Placement and height of panels should be uniform. Consider the panels as part of the overall roof configuration.
- 3) Color of panel frames and support structure should be neutral and compatible with roof surface color (exposed frames and components should have a non-reflective surface).



Solar panels on flat roof with parapets.



Solar panels on flat roof without parapets.





Solar panels on flat roof with parapets.

