

Woodside Fire Protection District

Prevention Division



rev 1/13

SOLAR PHOTOVOLTAIC SYSTEM INSTALLATION STANDARD

Per the Woodside Fire Protection District, (WFPD) Ordinance #11 a standard of specific installation conditions is in place to ensure firefighter and public safety for all Solar PV systems. Solar PV power systems shall also follow section 605.11 of the 2013 California Fire Code.

WFPD appreciates the environmental friendly technologic advances these systems bring, however, traditional firefighting techniques, such as roof venting, water extinguishment and fire overhaul will have to be modified to ensure human safety.

Roofs that contain Solar arrays will be most difficult for firefighters to vent. Delayed roof venting may increase the time factor in fire containment resulting in a greater extent of fire damage overall. Conventional water extinguishment on roofs may not be an option for firefighters if the integrity of any portion of the Solar array is threatened. The risk of accidental electric shock is greatly increased with systems that have been compromised.

Fire overhaul will also be a challenge for firefighters and inspectors as broken panels or compromised Solar conduit will remain energized during daylight hours.

The following conditions will apply to all roof and ground mount Solar PV systems:

1. There will be a minimum of 36” of clearance at the ridge line where Solar Array’s are installed on roofs. Arrays are allowed to be installed down to the eave if there remains (3) three access points from the ground to the ridge. If there is less than (3) three access points to the roof ridge then there shall remain a 36” perimeter of walking area around the array to the ridge.

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2. Ground mounted Solar arrays will be erected in areas clear of combustible vegetation. A minimum vegetation clearance perimeter of 10' shall be maintained.
3. All Solar conduits, interior or exterior, will be permanently labeled with fade resistant material stating: **CAUTION: Solar PV Wiring May Remain Energized After Disconnection During Daylight Hours**
(see attached signage req)
4. Permanent placard installed on exterior and interior of main electrical panel stating: **CAUTION: Solar PV System Installed-When Power Disconnected Solar Panels And Wiring May Remain Energized During Daylight Hours**
5. Battery storage in enclosed rooms to be mounted a minimum of 24" above floor. If contained within cabinet a permanent placard to be posted.
6. All disconnects shall be accessible to fire department and located together when possible.
7. A separate emergency DC disconnect is required at the roof top combiner box for roof mounted solar arrays. This disconnect must be permanently labeled, in reflective, fade resistant material, "**Emergency Solar DC Disconnect**"
Exception: *Systems with microinverters or maximizers which have built in DC disconnects.*

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SIGNAGE REQUIREMENTS FOR SOLAR PV SYSTEMS

Two forms of signage are required for Solar PV Systems. Permanently affixed reflective labels should have a red background with white lettering. Printed material should resist fading. Size of lettering should be equal to the example below.

1. Exterior/Interior Conduit signage:

Horizontal and Vertical to be installed every 20'. For vertical conduit a minimum of 1 label to be affixed at eye level.

CAUTION Solar PV Wiring May Remain Energized After Disconnection During Daylight Hours.

2. Exterior/Interior of Electrical Panel signage:

CAUTION
Solar PV System Installed. When Power Disconnected Solar Panels And Wiring In Conduit May Remain Energized During Daylight Hours.

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Diagram 1: Cross Gable Roof

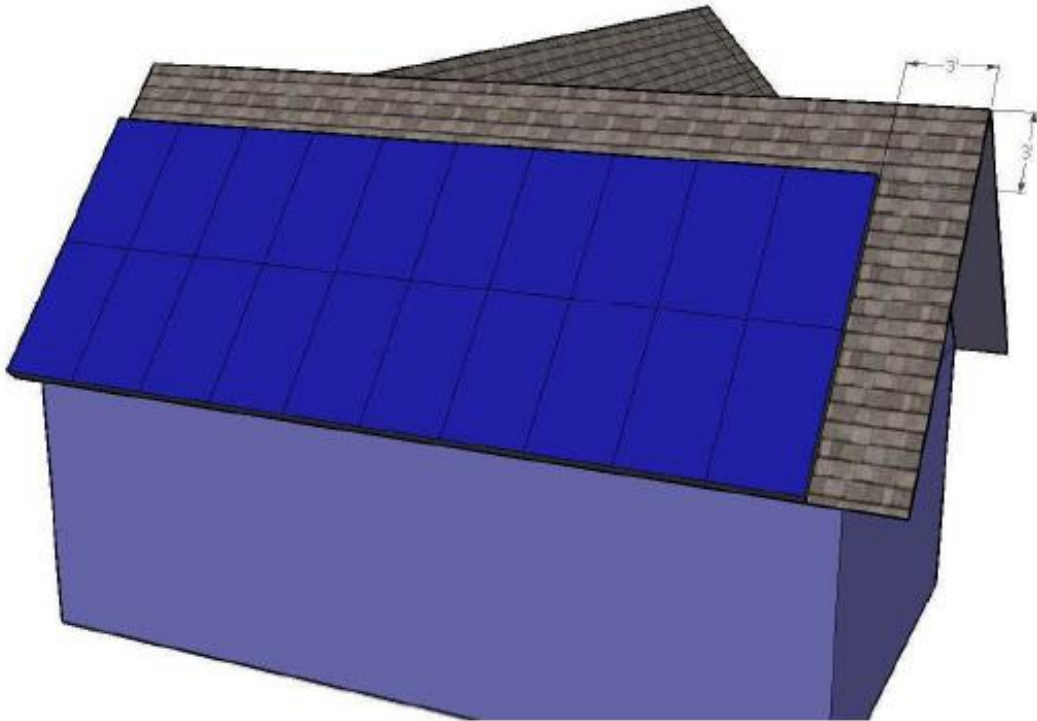
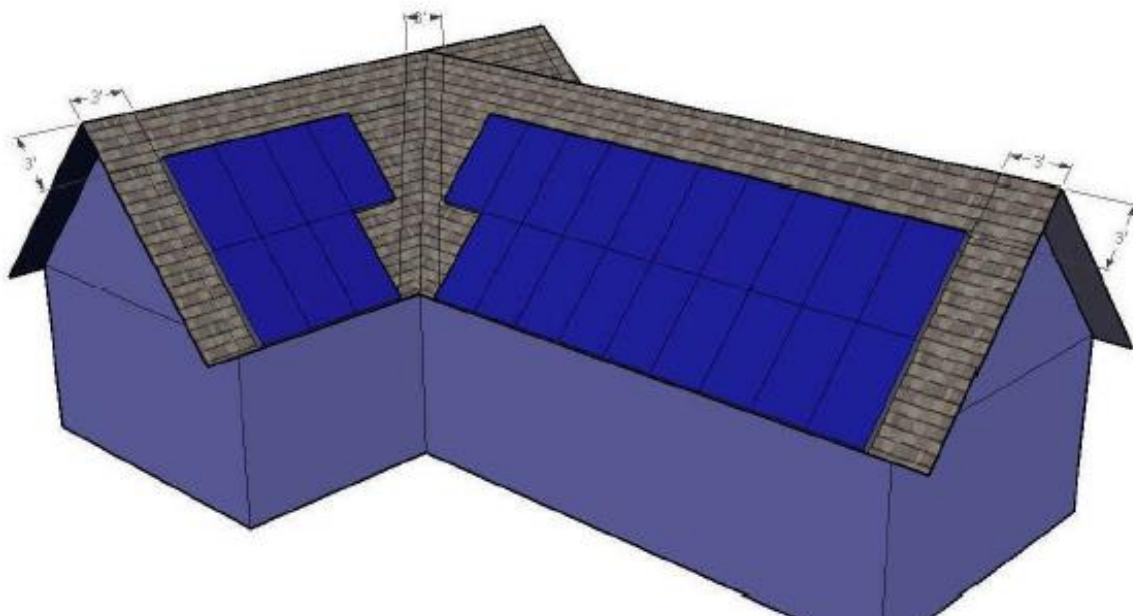


Diagram 2: Cross Gable with Valley

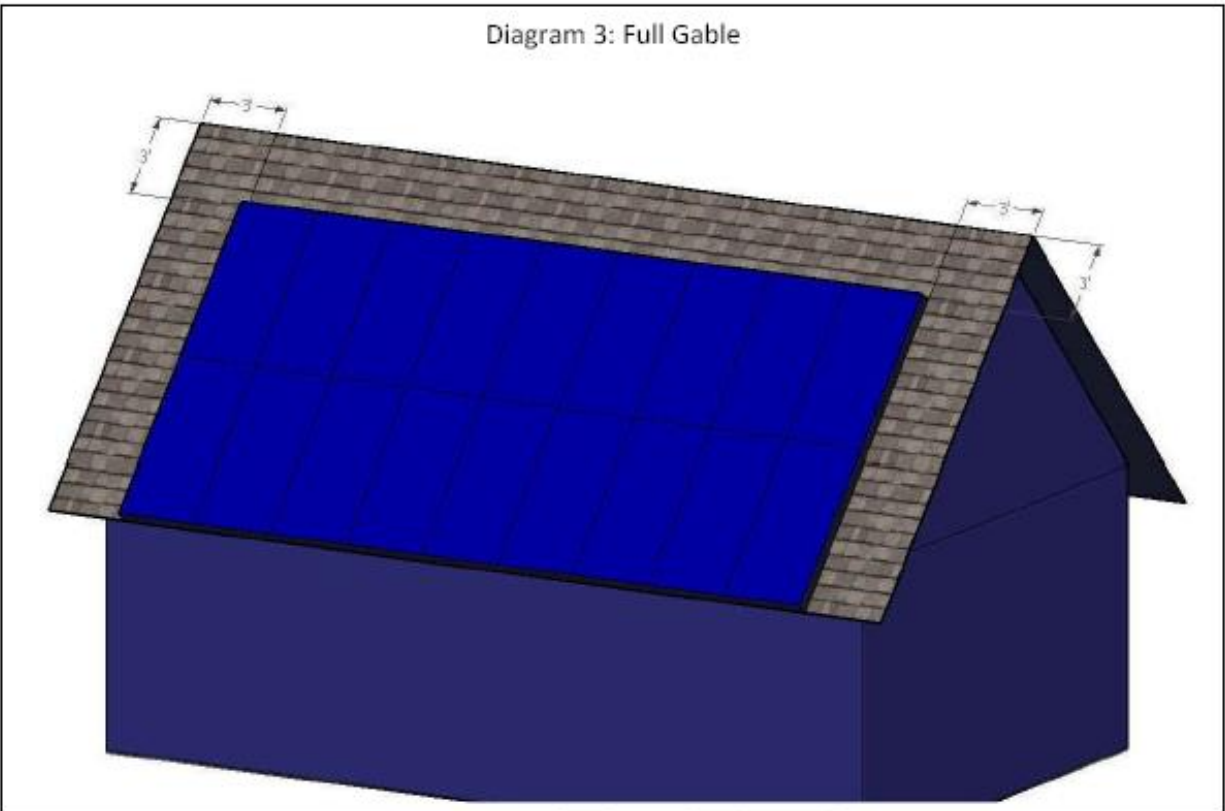


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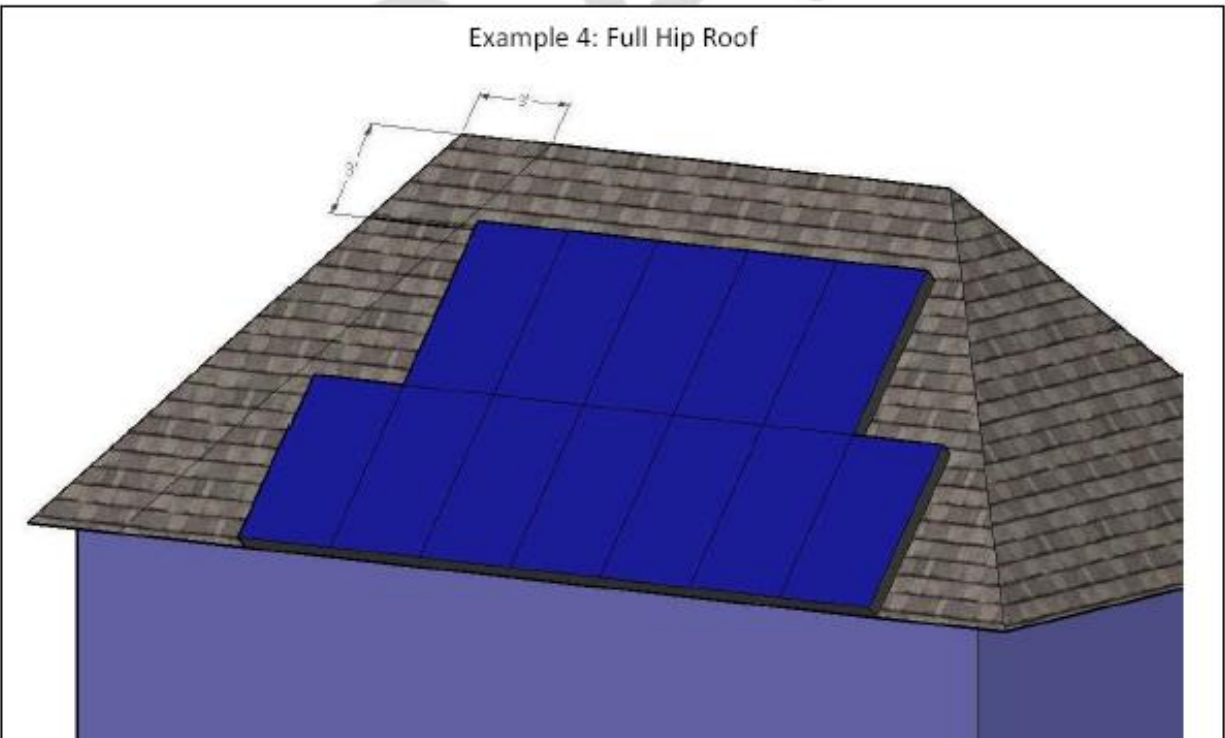
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Diagram 3: Full Gable

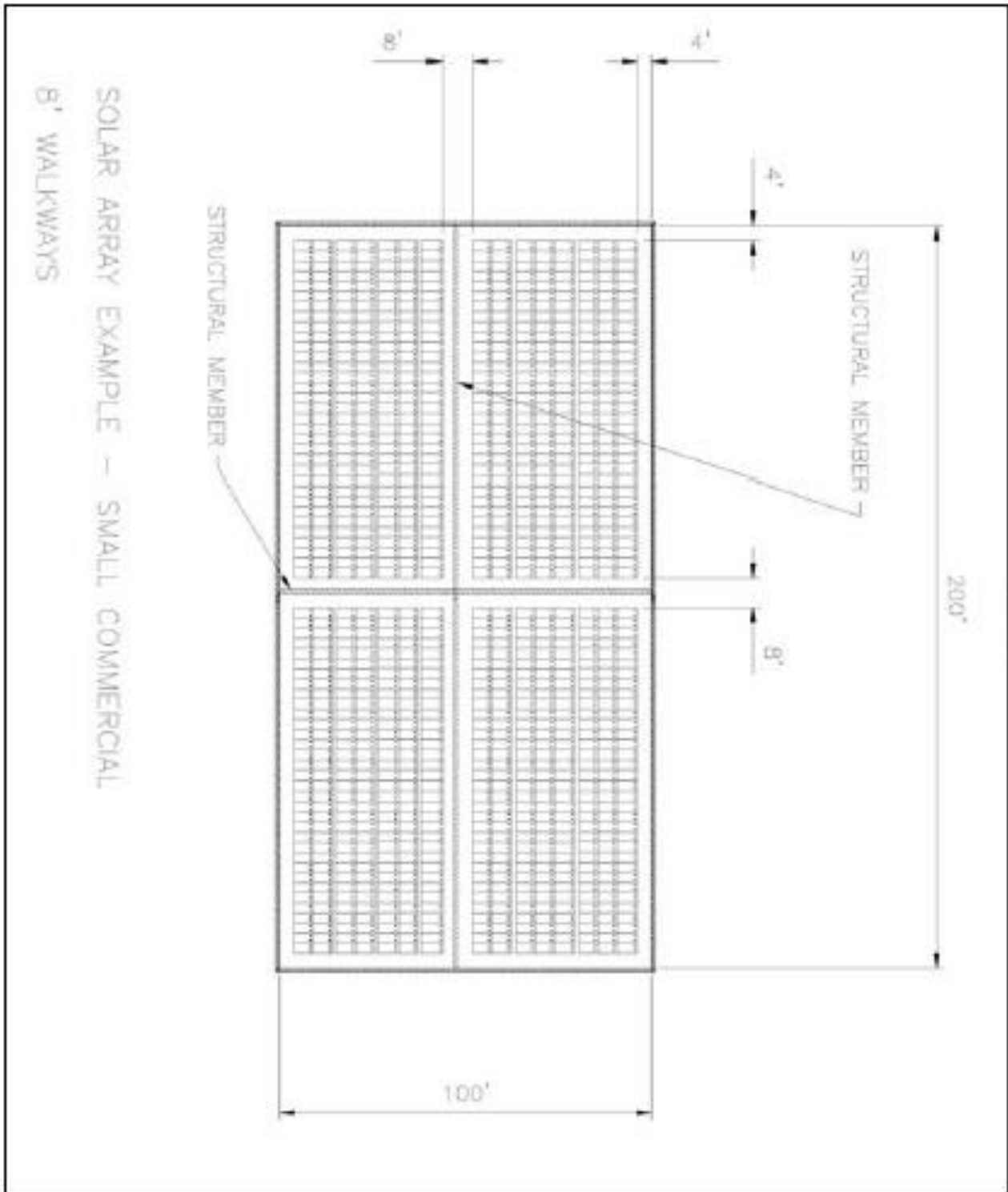


Example 4: Full Hip Roof



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