



**BUILDING & SAFETY**  
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## Structural Criteria for Expedited One and Two Family Residential Rooftop Solar Energy Installations (10KW or Less)

**FORM PV 5**

### SITE CHECK FOR EXPOSURE B WIND CRITERIA

1. Wind Exposure Checks for Special Wind Regions:
  - a. Is the dwelling farther than 500 yards from large open fields or grasslands?  Y  N
  - b. Is the dwelling in a relatively flat area (grade less than 5%) and not within 500 yards of the crest of a tall hill?  Y  N
2. Steep Hill Wind Exposure Check:
  - a. Is the dwelling NOT on the top half of a very steep hill (average grade more than 15%), and NOT within 500 yards of the crest of such a hill?  Y  N
3. Map provided illustrates a 500 yard radius to justify conformance with items A and B above?  Y  N

### ROOF CHECK

1. Visual Review/Contractor's Site Audit of Existing Conditions:
  - a. Is the roof a single roof without a reroof overlay?  Y  N
  - b. Does the roof structure appear structurally sound, without signs of alterations or significant structural deterioration or sagging?  Y  N
2. Roof Structure Data:
  - a. Measured roof slope is 6:12 or less?  Y  N
  - b. Measured rafter spacing (center-to-center) is 24" o.c. or less?  Y  N
  - c. Roof framing (rafter or manufactured truss) are at least 2 x 4 DF #2?  Y  N

### SOLAR ARRAY CHECKS

1. Flush-mounted Solar Array:
  - a. Is the plane of the modules (panels) parallel to the plane of the roof?  Y  N
  - b. Is there a 2" to 10" gap between underside of module and the roof surface?  Y  N
  - c. Modules do not overhang any roof edges (ridges, hips, gable ends, eaves)?  Y  N
2. Do the modules plus support components weigh no more than: 4 psf?  Y  N
3. Does the array cover no more than half of the total roof area (all roof planes)?  Y  N
4. Are solar support component manufacturer's project-specific completed worksheets, tables with relevant cells circled, or web-based calculator results attached?  Y  N

5. Is a roof plan of the module and anchor layout attached?  Y  N

6. Downward Load Check (Anchor Layout Check):

- Horizontal anchor spacing (stand offs) in each direction does not exceed 4 ft.  Y  N

7. Wind Uplift Check (Anchor Fastener Check):

- Anchor fastener data:
  - Diameter of lag screw, hanger bolt or self-drilling screw: \_\_\_\_\_ inch
  - Embedment depth of rafter: \_\_\_\_\_ inch
  - Number of screws per anchor (typically one): \_\_\_\_\_
  - Are 5/16" diameter lag screws with 2.5" embedment into the rafter used, or does the anchor fastener meet the manufacturer's guidelines?  Y  N

## **SUMMARY**

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- All items above are checked YES. No additional calculations are required.
- One or more items are checked NO. Attach project-specific drawings and calculations stamped and signed by a California Registered Civil / Structural Engineer or California Licensed Architect.

**Job Address:** \_\_\_\_\_

**Contractor/Installer:** \_\_\_\_\_

**Signature:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Phone #:** \_\_\_\_\_