



City of Santa Barbara  
Building & Safety Division  
**Photo Voltaic System  
Requirements**

Community Development  
630 Garden Street  
805-564-5485

### **General requirements:**

- The minimum paper size is 18" x 24" and the maximum paper size is 36" x 42". (A maximum of (2) 8.5" x 11" sheets may be used if all information can be provided.)
- Plans must be complete, accurate and drawn to scale.
- Provide three complete sets of plans with numbered pages and a sheet index (if needed).
- All photovoltaic projects must meet the requirements listed on page 2 of this handout.
- For projects in: El Pueblo Viejo Landmark Districts I or II, the Mission Area Special Design District, a historic district (Brinkerhoff or Riviera Campus), Lower Riviera Survey Area (Bungalow District), on a City Landmark or Structure of Merit or on the City's list of Potential Historic Resources, provide one set of color photographs of the installation site. Photographs must be at least 3"x5", submitted on 8.5"x11" paper, and not Polaroid or instamatic

### **Information required on the plans:**

- The first sheet of the plans must contain the following:
  - Name, address and phone number of owner, engineer, architect or designer as appropriate
  - Address of proposed project with assessor's parcel number and land use zone
  - A complete site plan (as described above)
  - A complete description of the scope of work as follows: "*Install (x) kW solar photovoltaic system including solar array and (x) inverters mounted on (BUILDING NAME) as a supplemental electrical supply system connected to the utility supply through the service equipment.*"
  - The Meter Service Request (MSR) number from Southern California Edison Co. [683-5211].
- The site plan must show the following:
  - All property lines and easements, include north arrow.
  - Existing structures with distances in between and from property lines (include patio covers, decks, trellises, pools, etc.)
  - Location of all proposed work, showing distances from property lines and other structures on the parcel
  - Maximum height of proposed work measured from natural or finished grade, whichever is lower
  - Distance between maximum height of proposed work and structure or ground it is mounted on.
  - For ground mounted systems, show required open yard area on plans.
- Include plan details showing all structural elements including roof framing members affected (e.g., spacing and spans of roof joists), connectors and, if applicable, engineering calculations and design.
- An electrical plan must be included showing the following:
  - Location of new controlling equipment
  - Wiring methods and material between equipment
  - Single line diagram of existing and new equipment including grounding electrode system
  - All new equipment and specifications (kVA, size, weight, manufacturer, make)
  - Disconnecting means for both existing and new systems
  - Location of existing service

### **Optional information to include in plan submittals:**

Height and location of nearest vegetation on neighboring properties. This may help determine neighboring property structures' future compliance with the State's solar access laws (Public Resources Code § 25980).

### **Installation requirements for photovoltaic systems:**

The City of Santa Barbara's Community Development Department and/or Fire Department require photovoltaic systems to comply with the following:

1. Photovoltaic systems must comply with building height, setback, open yard area, solar access and other Zoning Ordinance requirements. See Municipal Code Title 28. In some cases, elevation drawings may be required to verify compliance with height and solar access Zoning Ordinance requirements, especially for systems installed at heights over 20'.
2. All photovoltaic systems and equipment must be listed or otherwise approved by Building & Safety Inspection Staff for its use (California Electrical Code 110-3).
3. Photovoltaic systems shall comply with all applicable portions of Article 690 of the California Electrical Code including, but not limited to, the following:
  - a. Disconnecting means, at a readily accessible location, shall be provided for both the DC and AC output of the photovoltaic systems (CEC 690-17, 690-53, 705-21). DC disconnecting means shall also be provided for all roof-mounted arrays, with one disconnect per group or array of panels. The AC disconnecting means shall be provided at a readily accessible location within view of the electrical service entrance, as per local utility requirements.
  - b. Signage shall be provided at all disconnects indicating function. Signage shall be permanent and conspicuous and shall comply with CEC 690-17. Marking and identification of all wiring and equipment is required (CEC 690-51-53).
  - c. All photovoltaic systems and equipment shall be grounded, and individual panel arrays and equipment shall be grounded continuously without interruption (CEC 690). The size of grounding conductors shall comply with CEC 690-45.
  - d. Roof-mounted photovoltaic arrays located on dwellings shall be provided with ground-fault protection (CEC 690-5).
  - e. Connectors shall be polarized, of a latching or locking type, non-interchangeable and secured against inadvertent contact with live parts by persons (CEC 690-33).
  - f. Wiring, where exposed to the direct rays of the sun, shall be of type SE, UF, or USE or other wiring listed and approved as suitable for wet locations and exposed to sunlight per CEC 690-31(b).
  - g. Working space for switch boards, panel boards, inverters, disconnects and other equipment shall be provided per Table 110-26(a) of the CEC, which requires that equipment clearances shall be at least 30" wide and 36" deep for equipment operating from 0-150 volts to ground.
  - h. Working space for equipment shall be level, illuminated and have a minimum headroom of 6'6". (6' is minimum headroom if equipment is installed in an existing dwelling unit.) (CEC 110-26)
  - i. All structural attachment methods and details utilized in the field shall match what is shown on the approved plans.