



Building Division
12 Journey, Suite 100
Aliso Viejo, CA 92656
(949)425-2540
www.avcity.org

Solar Photovoltaic Submittal Guidelines, Checklist, and Incentives

REVIEW

Pursuant to AB 2188, residential solar photovoltaic systems of less than 10 kW will receive expedited plan review when the items indicated in the submittal guidelines below are complied with. (Homeowner's association approval is waived as a requirement for permit issuance however the owner must still comply with their CC&R's).

FEES

Permit fees will receive a 25% fee reduction. Contact the Building Department for further information.

PLAN SUBMITTAL GUIDELINES

ADMINISTRATIVE

Permit applications are available for download online at www.avcity.org. Completed applications and plans may be submitted electronically for review via email to building@avcity.org or in person at the Building Department counter. The plans shall conform to all applicable California Building, Electrical, and Fire codes as amended and adopted by the City of Aliso Viejo. Once the plans are approved, a permit can be issued in person from 7:30 am – 12:00 pm, Monday through Friday, closed alternate Fridays. The accepted method of payment is cash or check.

PLAN SUBMITTAL CHECKLIST

SITE PLAN

1. Provide full dimensioned site plan. Show lot size, street, alley, easements, parking spaces, location, size and use of all structures on the lot, and the property line. Identify property lines, lot dimensions, and distance to the property line.
2. Show size and location of the main service panel, solar panels, and all related equipment.

LINE DIAGRAMS

Provide a minimum of a single line diagram showing:

1. Array configuration
2. Array wiring identified
3. Combiner/junction box identified
4. Conduit/wiring from array to inverter identified
5. DC grounding system specified
6. Disconnecting means specified
7. Inverter specified
8. Conduit/wiring from panels to Utility point of connection identified
9. Specify main service panel bus bar rating and main breaker size. (Note, center-fed panels may not exceed the bus bar rating.)
10. The provisions of the NFPA, TIA #14-9, 14-10, 14-11 and 14-12 have NOT been adopted by the City of Aliso Viejo.
11. AC grounding and system grounding shall be specified
12. Point of connection attachment method identified
13. Show calculations to justify conductor sizes being used.

INVERTER INFORMATION

Provide inverter manufacturer specification sheet

PV MODULE INFORMATION

Provide module manufacturer specification sheet

ARRAY INFORMATION

Show the following on the plan:

- | | |
|---------------------------------------|---------------------------|
| 1. Number of modules in series | 5. Operating current |
| 2. Number of parallel source circuits | 6. Maximum system voltage |
| 3. Total number of modules | 7. Short-circuit current |
| 4. Operating voltage | |

WIRING AND OVERCURRENT PROTECTION

Show the following on plan:

1. Wire type shall be 90° C wet and continuous rated
2. Overcurrent protection on inverter output circuit is sufficient
3. When inverter is not within sight of the main service panel, provide a disconnect

ROOF INFORMATION (ROOFTOP SYSTEM)

Show the following information on the plan:

1. Total weight of the newly proposed assembly
2. Describe the roof structural elements and type of roofing.
3. Indicate the total square footage of the solar panels.
4. Provide detail of photovoltaic panel mounting hardware attachment to the roof framing members
5. Provide mounting hardware manufacturer specifications.
6. Provide engineering calculations for dead load, lateral resistance, and wind uplift effects.

REQUIRED PHOTOVOLTAIC SIGNS

1. **DC COMBINER/ JUNCTION BOX:**

- a. "Warning. Electrical shock hazard. The direct current circuit conductors of this photovoltaic power system are ungrounded but may be energized with respect to the ground due to leakage paths and/or ground faults."

2. **DC DISCONNECT:**

- a. "Warning. Electrical shock hazard. The direct current circuit conductors of this photovoltaic power system are ungrounded but may be energized with respect to the ground due to leakage paths and/or ground faults."
- b. "PV system- DC disconnect, operating current, max. system voltage, operating voltage, short circuit current." (Accessible location).

3. **INVERTER:**

- a. "If a ground fault is indicated, the normally grounded conductors may be energized and ungrounded."
- b. "Warning. Electrical shock hazard. Do not touch terminals. Terminals on both the line and load sides may be energized in the open position."

4. **AC DISCONNECT:**

- a. "PV system - AC disconnect rated AC output current amps, AC normal operating volts."

5. **METER:**

- a. “The maximum AC output operating current_____”
- b. “The operating AC voltage_____”
- c. “Dual sources: Second source is Photovoltaic”

- 6. Permanent directory or plaque providing the location of service disconnecting means and photovoltaic system disconnecting means, if not located at the same location.

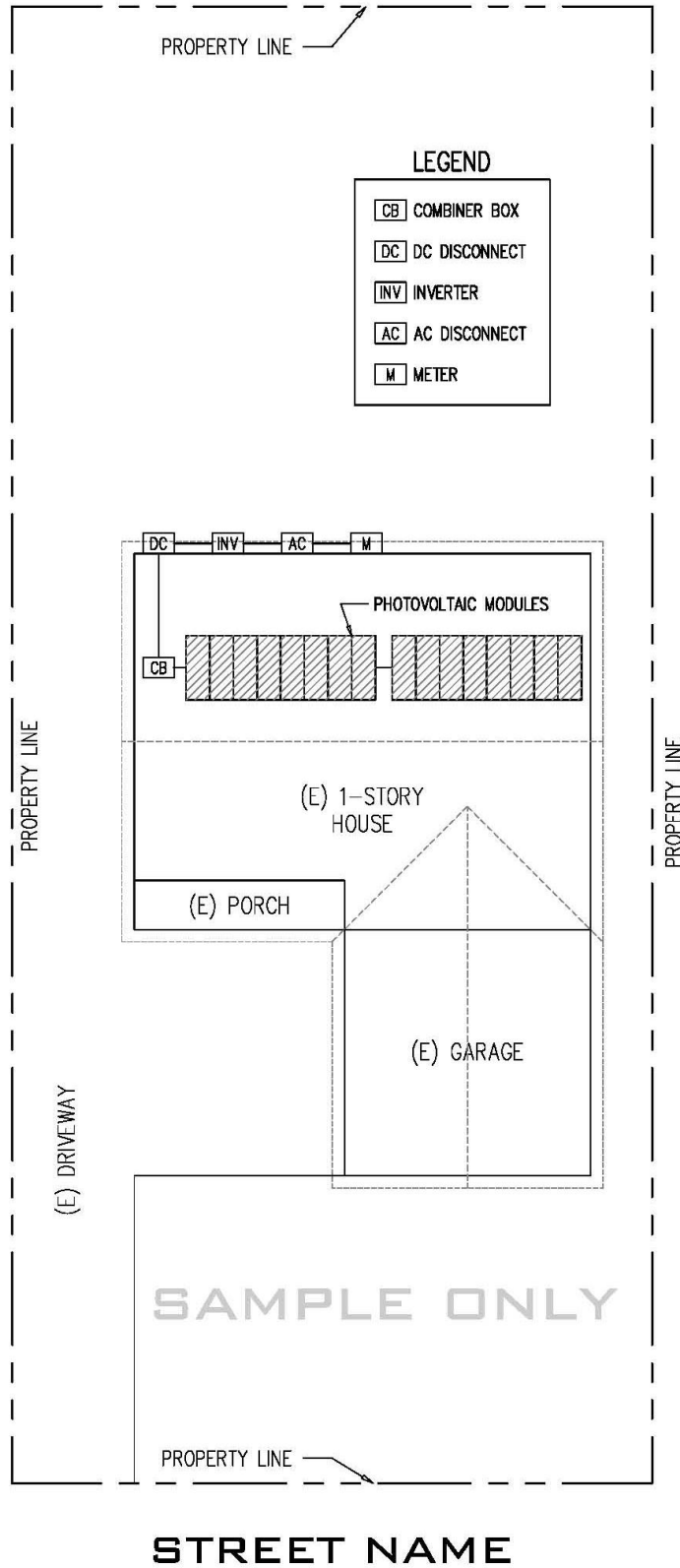
INSPECTIONS:

After completing the installation, call for a final Building and Electrical inspection of the panels and related equipment. Inspections can be made by calling the inspection request line at (949)425-2545.

SAMPLE SITE PLAN

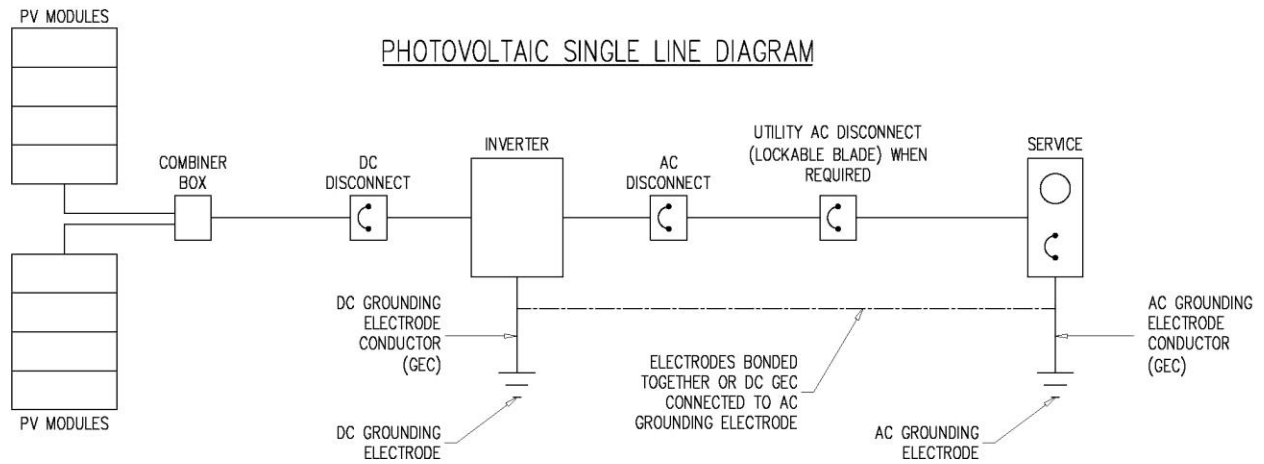
Site plan shown is to illustrate the necessary information required for full plan review. A complete and accurate site plan is required for review and approval.

For additional information regarding this permit process, please contact the Building Department at (949)425-2542.



SAMPLE LINE DIAGRAM

For informational purposes only



- ALL WIRING IN A SOLAR PHOTOVOLTAIC SYSTEM SHALL BE IDENTIFIED
- FOR INFORMATIONAL PURPOSES ONLY.