



City of Atascadero
Community Development Department

PUBLIC INFORMATION - BUILDING SERVICES

Community Development Department 6500 Palma Avenue Atascadero, CA 93422 (805) 461-5035 fax (805) 461-7612

SOLAR PHOTOVOLTAIC INSTALLATION SUBMITTAL CHECKLIST

SEISMIC DESIGN CATEGORY C, D or E - CLIMATE ZONE 4 - WIND ZONES 85 M.P.H - EXPOSURE ZONE "B" OR "C"
ZONING ORDINANCE - NATIVE TREE ORDINANCE - ATASCADERO MUNICIPAL CODE - 2013 CBC - 2013 CRC - 2013 CEC
2013 CPC - 2013 CMC - 2013 CGBC - ENGINEERING STANDARDS - CALIFORNIA STATE ENERGY COMPLIANCE (TITLE 24)

PERMIT SUBMITTALS ACCEPTED MONDAY – FRIDAY BETWEEN 8:30 A.M. - 4:30 P.M.

Incomplete submittals will not be accepted at the permit counter

- Complete Application:** Must be signed by **Owner, Agent** (with approved written authorization), or **Licensed A, B, C-46 or C-10 Contractor**.
- Permit Fee:** \$ 346.60 (cash or check only). Permit fee covers two iterations of plan review.
Permit fees are required to be paid in full at submittal.
Ground Mount PV systems may require Tree Protection.
- One (1) Additional Array Plan Layout for County Assessor**
- Site Plan (2 sets)** – Provide fully dimensioned site plan. Show property lines and location, size and use of all structures. Show location of array, size and location of service panel, subpanels and inverters. Site plans for ground mount systems shall show distance from the array to property lines (10' min. per CFC 605.11.2) and to buildings (20' min. per AMC), easements, location of underground utilities after the meter (non-USA elements), building sewers, all elements of private sewage disposal systems, and locations of all native trees having drip lines within 20' of proposed footings and trenching excavations. The site plan/title sheet, or a separate title sheet, is to have the project address, DC system size, owner information, contractor information, reference conformance with the California Building Code (2013 CBC), California Electrical Code 2013 CEC, California Fire Code (2013 CFC), the Atascadero Municipal Code (AMC), and have a sequentially numbered complete sheet index.
- Structural Design Package (2 sets)** – Roof Mount: Describe and show roof structural elements including rafter type, size, span and species. Conventional residential light-frame wood construction roof framing within the limits of the code requires no analysis. Other roof construction and all commercial systems require analysis by a design professional. Provide a detail for mounting hardware attachment to roof framing members and flashing. For engineered, manufactured trusses this attachment detail is to be approved by a California registered design professional with limitations specified for location of attachment, number of attachments and required distance of attachments from nail plates, or "no limitations" specifically noted. Attachment to blocking nailed to truss chords does not require approved by a design professional. Provide manufacturer's information on rail-type systems including allowable span, cantilever and allowable rail splice locations. Show a job specific (not "typical") layout of arrays, attachment points, rail splices and cantilevers. Dimension spans and cantilevers. Provide module manufacturer's allowable top down clamp locations and show rail spacing accordingly. Ground Mount: Provide engineering calculations demonstrating the adequacy of footings and supporting members, including seismic and wind uplift effects. Provide footing detail showing size and reinforcement.

- ❑ **Electrical Line Drawing** – Provide a complete single line diagram. Show the number of modules in series, number of parallel source circuits, and total number of modules, DC operating voltage, operating current and short-circuit current. Show I_{sc} corrected for continuous load. Show series V_{oc} corrected for temperature per module specification sheet or Table 690.7 (21F, factor of 1.14 for Atascadero, CA). Show conductor types and sizes and conductor ampacity corrected for number of current carrying conductors in a raceway, ambient temperature (use 108F for Atascadero, CA before temperature adjustments for conduits exposed to sunlight on or above rooftops). Show all calculations. For circuits over 250 volts to ground, the electrical continuity of metallic raceways shall be ensured by connections using threaded couplings or listed devices such as bonding type locknuts or bushings with bonding jumpers. Size AC conductors from the inverter to panel at 125% of maximum rated inverter output.
- ❑ **Mounting System Grounding** – Provide detail. All hardware to be stainless steel or listed for direct burial.
- ❑ **Module Information and Grounding** – Provide module manufacturer specification sheet. Modules are to be listed to UL 1703 standard. Provide grounding detail per manufacturer’s grounding instructions and/or the electrical code. Provide the module manufacturer’s top down clamps locations with the structural package above.
- ❑ **Inverter Information and Grounding** – Provide inverter manufacturer specification sheet. Inverters to be listed to UL 1741 standard. Show a #8Cu grounding electrode conductor installed from the inverter to the service panel or grounding per manufacturer. Show AC and DC disconnects in a readily accessible location on the outside of the building. Inverter integral AC/DC disconnects must allow for the removal of the inverter for service or replacement. Exterior mounted inverters in not-readily-accessible locations shall have AC and DC disconnects located within sight of the inverter.
- ❑ **Rooftop DC Disconnects** - String inverter systems without automatic shutdown devices (i.e. power optimizers) must have load rated disconnects located prior to DC conduits penetrating the roof or building envelope.
- ❑ **Service Panel** – Show the PV source circuit breakers sized at a minimum of 125% of the maximum inverter output and the total value of all circuit breakers supplying the panel not to exceed 120% of the bus bar rating of the panel for end-fed and 100% for other panels. Note on plans that the PV breaker is to be located opposite the main breaker on the bus bar. In order to downsize a main breaker to allow for a larger PV source circuit a service load calculation per Article 220 is to be submitted showing that the downsized breaker is adequate for the calculated service load.
- ❑ **Labeling** – Marking to be placed on all interior and exterior DC conduit, raceways, enclosures and cable assemblies, every 10’, at turns and above and/or below penetrations and all DC combiner and junction boxes. Marking content: CAUTION: SOLAR CIRCUIT in red background, white lettering, minimum 3/8” letter height, all capital letters, Arial or similar font, non-bold, reflective, weather resistant material suitable for the environment (durable adhesives meet this requirement). Provide all other labeling per CEC Articles 690 and 705.
- ❑ **Roof Access** – Residential systems require two 3’ wide access paths from eave-to-ridge on each roof slope on which modules are located. Rake/gable paths are to be measured 3’ from load-bearing roof framing to array edge and around obstructions. Modules placed on one side of a hip/valley, the 3’ access path may be located on either side of the hip/valley. If modules will be placed on both sides of the hip/valley, there must be a 3’ access path on each side of the hip/valley and around obstructions. Modules are to be located a minimum of 3’ from ridges (Exception: *Roofs with a pitch 2-in-12 or less and non-habitable structures*).
- ❑ **Please refer to the [Fire Department Solar Guidelines](#) for access requirements on commercial buildings.**