



# SUBMITTAL REQUIREMENTS FOR RESIDENTIAL PHOTOVOLTAIC PROJECTS

## Building Division

Economic and Community Development  
34009 Alvarado-Niles Road  
Union City, CA 94587  
510-675-5313 – [building@unioncity.org](mailto:building@unioncity.org)

### ANY DEVIATIONS FROM APPROVED PLANS WILL REQUIRE A REVISION SUBMITTAL TO THE BUILDING DIVISION

1. Size of the plans: 11"x17" minimum / 24"x 36" maximum (2 complete sets).  
Font size: minimum 10 pt. for viewing/all information must be suitable and legible for scanning.
2. On the Cover Sheet, please provide the following information (CRC R106.1.1):
  - a) List Applicable Codes (e.g. 2022 CRC, CPC, CMC, CEC, CGBSC, CA Energy Code, all municipal codes, and local ordinances).
  - b) Project Data:
    - i) Occupancy Group (e.g. R-3/U for Single Family Dwelling w/attached garage)
    - ii) Type of Construction (e.g. Type V-B for wood framed construction)
    - iii) Number of Stories.
    - iv) Existing Fire Sprinklers: yes/no.
    - v) Project in a WUI Area (Wildlife Urban Interface): yes/no.
  - c) Scope of Work: *detail the proposed equipment* - size / amperage on (N) Electrical Panels, (# of modules), electrical equipment e.g Gateways / Sub- Panels, Combiner Boxes, Breakers, Disconnects, ESS / Battery Backup, Racks, Rails etc. for the applicable residential project.
  - d) The Responsible Designer shall provide their name and signature on the plan set (Business and Professions Code 5537 and 6737).
  - e) Add note that all conduits shall be painted to match background per UCMC.
3. Site and roof plans shall clearly show the location of the electrical supply panel, PV array, modules, (each string shall be identified), combiner box, inverter, ac and dc disconnects, conduit, junction boxes and battery banks, etc.
4. Show property line setback distances to the proposed equipment when solar array not attached to the structure.
5. Plans shall reflect the required clearances for all equipment, on the roof and at grade requiring servicing (CEC 110.26).
6. Access pathways and fire setbacks shall be clearly shown on plans (CFC Section 1205.2/CRC R324.6.1).
7. On Site Map Placard, provide dimensions and color scheme for placard (CEC 705.10/CFC 1205.4.1).
8. Please provide an 8"x11" legible photo of the electrical panel showing the entire enclosure (include sub panel when used to back feed) with the dead front removed with the main breaker visible. Ensure the Manufacturer's Nameplate Rating is also visible with the Panel's Max Amperage reflected.  
**Advisory: existing main electrical panels that are not solar ready/PV compatible (e.g. Federal Pacific, Zinsco), damaged, or degraded will be required to be replaced.**

9. Identify the size and location of the service for the dwelling unit(s).
  - a. The rating of the service disconnecting means shall be in accordance with CEC 220 Article 220.
  - b. For a single-family dwelling, the minimum service disconnecting means shall be a minimum rating of 100 AMP, 3-wire (CEC 230.79(C)).
  - c. Ensure the location of (E) Gas Service Equipment is reflected.
10. Provide a three-line diagram showing the following all system components: wire sizes, conductor insulation type, method of protection (e.g. EMT, RMC, etc.), wire distances between each piece of equipment, grounding electrode system, equipment grounding system (conductor size) and disconnects. Clearly indicate the number of modules per string, strings per array and number of modules total.
11. Provide a Residential Load Calculation on existing loads for verification on equipment sizing (CEC Article 220 and Annex D).
12. For Line Side/Supply Side Tap, equipment shall be identified and listed for the application (CEC 690.4(D)).
13. Please provide a copy of the complete manufacturer's specification sheets for all proposed equipment: inverters, modules, combiner boxes, racking systems (including tilt up systems), flashing junction or transition boxes (e.g. Quick Mount), disconnects, battery, battery cabinet, etc.
14. For Tile Hook installations on Clay Tile, Concrete Tile and Composite Tile Roofs, Flashing is required on the Tile Hook Penetrations at the Waterproofing Membrane per CRC R903.2 and manufacturer specifications. Please revise detail.
15. For ESS Battery Back-Ups, please address the following;
  - a. Provide the location of the battery backup. Refer to CRC R328.4 for permitted locations.
  - b. Maintain 3 ft. separation from openings (e.g. doors and windows). Dimension the ESS from openings on the plans.
  - c. Suspended (hung on the wall) doubled up Storage Batteries/components weighing over 400 lbs. require structural anchorage and calculations (ASCE 7-10 Sections 6.5.15.1/13.6).
  - d. Electrical equipment in the vehicular path will require protection, e.g. bollards (CFC 1207.4.5)
16. Electric Panel changeouts/upgrades will require additional fees.
17. Electric Vehicle Charging Station will require a separate building permit.

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