

CITY OF CALABASAS

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The following information is provided for applicants in an effort to expedite the processing of permits for residential (one- and two-family dwellings) and commercial roof-mounted and ground-mounted solar photovoltaic (PV) electrical systems.

APPROVAL REQUIREMENTS

PV systems shall comply with all applicable requirements, City ordinances and regulations including zoning, structure height, and conditions of prior development permits governing the site.

PV systems over 10kW require approval from Planning Department. Planning requires one set of plans and a wet signed <u>General Land Use and Development Application</u> form with payment prior to submitting to Building & Safety.

I. SUBMITTAL REQUIREMENTS

The following documents and plans shall be provided along with the appropriate fees:

A. Application Package

- 1. Provide Building Project Identification form.
- 2. Provide Building Permit/Plan Review Application.
- 3. Provide Electrical Permit Application if modification of main service panel is required.

B. Plans

1. Residential installations per Solar PV Standard Electrical Plans (Standard Plans)

These Standard Plans were developed to guide you in preparing residential solar PV plans for systems less than 10kW. These Standard Plans shall be used only for a residential PV project when installed on a sloped roof with the panel weight of five pounds per square foot or less. Provide the following items for submittal:

- a. Two copies of the Standard Plan. The Standard Plan sheets shall be modified to reflect the actual project-specific details.
- b. Two copies of the manufacturer's specifications for the proposed PV panels with all electrical information.
- c. Two copies of the manufacturer's specifications for the proposed PV inverter(s) showing all electrical information.

2. All Other Plans

Commercial installations and residential installation where the Standard Plans cannot be used; provide two sets of each of the following plans and documents:

a. Site Plan

The site plan for ground-mounted PV system must show property lines and setback dimensions. For roof-mounted PV systems, provide a site plan with the property lines showing the footprint of the building and the location of the PV system on the building or structure.

Provide a detailed roof plan showing the slope of the roof and location of the array on the roof in relation to any ridge, hip or valley. The plans must also include the site address, legal description, assessor's parcel number, and property owner's name/address.

Include a plan showing the location of all existing and proposed PV panels, AC or DC combiners, all disconnects, inverters, and sub-panels connected to the solar PV system and the meter panel.

b. Single Line Diagram

An electrical one-line diagram showing the number of photovoltaic panels (include the



manufacturer model number) with voltage and kilowatt output, all disconnects, all combiners, all inverters (include the manufacturer model number) with input ratings, the ampere rating of any sub-panels connected to the PV system, the ampere rating of the meter panel bussing, the ampere rating of the main service disconnect, the ampere rating of the PV circuit breaker, size and type of all raceways and the size and type of all conductors.

c. Electrical Load Calculation

Provide an electrical load calculation based upon Article 220 of the California Electrical Code. See "<u>City of Calabasas Building and Safety Division Electrical Load Calculations for a Single-Family Residence</u>" for a checklist/form.

d. Framing Plan

Roof mounted solar projects shall include a framing plan showing the supporting structure and the attachment of the panels to the structure of the roof. If using pre-manufactured racking systems, provide the manufacturer's installation specifications.

Provide a cross-section showing the height of the proposed PV panel above the roof, the supporting structure and the distance down the slope from any roof ridge.

Where alterations are required to existing structures to support and provide attachment for PV systems, structural plans shall be provided that are sufficient in detail and scope to demonstrate the required load path to the ground.

Ground mounted arrays shall include a framing plan showing the supporting structure and the attachment of the panels to the structure and must include details that are sufficient in detail and scope to show the load path to the ground.

e. Manufacturer's Electrical Data Sheets

Include one copy of the manufacturer's specifications for the proposed PV modules, inverter(s) and meter with all of their electrical information.

f. Signature on Plans

All plans shall be signed and stamped in accordance with the California Business and Professions Code. PV Plans may be signed and stamped by a registered electrical engineer or a licensed electrical contractor (C-10 License) or a solar contractor (C-46 License) who is responsible for the installation of the system. A general contractor (B-License) may also sign the plans only if the PV Panels are installed in a new building or new addition area. A registered architect, civil engineer or structural engineer shall sign and stamp structural plans and calculations when required.

II. OTHER REQUIREMENTS

A. Structural Plan Review

A structural review and structural calculations for roof-mounted installations will be required for the following cases:

- 1. Where alterations to the structure are required to support and provide an attachment for PV systems;
- 2.PV array exceeds five pounds per square foot;
- 3. Any piece of equipment weighing more than 400 pounds;
- 4. Mounting height above the roof is greater than 30 inches;
- 5. The array is mounted with a ballasted system or a ground mounted PV systems located more than five ft. above the ground.