INDIAN WELLS
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RESIDENTIAL PHOTOVOLTAIC (P.V.) SYSTEMS PLAN SUBMITTAL REQUIREMENTS:

The purpose of this guideline is to assist permit applicants in streamlining the permitting, installation and inspection process for Residential PV.

1. **COVER SHEET / TITLE BLOCK**: Name(s) and address of property owner(s) shall be on all plan sheets and the plans shall be specific to the project. Include scope of work, specify size of the P.V. system in kW AC, and all applicable codes as adopted by the City of Indian Wells as follows:

   ALL WORK SHALL COMPLY WITH THE CURRENT EDITION OF THE CALIFORNIA CODE OF REGULATIONS TITLE 24, THE UNIFORM SWIMMING POOL/SPA HOT TUB CODE, THE INTERNATIONAL PROPERTY MAINTENANCE CODE, AND ALL ORDINANCES AS AMENDED AND ADOPTED BY THE CITY OF INDIAN WELLS.

NOTE: Signed affidavit for the installation of carbon monoxide detection per SB183 is required prior to finalization.

2. **PLOT PLAN:** Provide plan showing the location of P.V. modules, equipment, batteries and route of conduit/conductors to the electrical service interface of the structure. Show location of vents, skylights, and dimension fire access pathway. Plan must accurately depict the ratio of the P.V. system are to roof area.

3. **ROOF CONSTRUCTION:** Specify roof pitch, type of roof covering, number of layers, and roof construction (member size, spacing, and span).

4. **MOUNTING:** Specify method of weatherproofing and detail mounting system of the P.V. modules and spacing of attachments to roof structure. Provide manufacturer's testing report and engineering analysis for the racking system.

5. **ELECTRICAL:** Provide a complete electrical diagram of the P.V. system and interconnection to the A.C. system of the structure. Also include service size and means of grounding and bonding. Specify conductor sizes and give heat correctio factor calculation. Specify conduit size and number of conductor fill in each conduit. Provide load calculation and derating calculation of overcurrent protection when necessary. Submit manufacturer's specification sheets with approval listings for all equipment (solar module, inverters, panel boxes, breakers, disconnects, ground weebs, etc.).

6. **ENGINEERING:** Structural Design Criteria:
   1) Wind design at 110mh Exposure C, and 2)Seismic design Category
   Calculations for gravity, wind, and seismic forces shall be required on P.V. applications **when**:
   - P.V. systems exceed 3.5 lbs. per sq. ft.
   - P.V. systems with mounts exceeding 48" o.c.
   - P.V. arrays exceeding 50% coverage of each roof diaphragm section for pitched tile roofs and 35% coverage of each room diaphragm section for flat roofs
   - P.V. installations utilizing a ballasted hold down system

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Calculations shall demonstrate the demand capacity ratio of the lateral load carrying structural elements is not exceeded by more than 10% per CBC 3404.4 and gravity force is not exceeded by more than 5% per CBC 3403.3.

Where engineering or structural calculations are provided, all related documents shall bear the seal and signature of the responsible California Licensed Design Professional (Civil Engineer, Structural Engineer, or Architect). Signatures may be either handwritten (wet) or digital, provided the digital signature complies with California law and is verifiable as belonging to the license holder.

7. **WARNING SIGNAGE AND MARKINGS:** Specify wording and locations of all warning signage and markings per Article 690 of the current California Electrical Code.

All submittals are electronic via the Indian Wells Permit Hub at
https://cityofindianwellsca-energovweb.tylerhost.net/apps/SelfService#/home