



PHOTOVOLTAIC SOLAR SYSTEMS

2 hard sets & 1 thumb drive needed for permit submittal

Permits are required for all photovoltaic (PV) systems. Permit submittals shall include:

- ✓ **General permit application form completed;**
- ✓ **Site plan that locates all equipment on the drawing:**
Only Legible size plans are acceptable, show PV array, combiner/junction boxes, disconnects, inverters, meter and service panel/tie-in locations, show general footprint of structure and relation to property lines, show a roof plan with location and physical size of all PV panels, b-vents, attic vents, and plumbing vents.
- ✓ **Manufacturer's specification sheets for the PV panels and the PV inverter;**
- ✓ **Complete 3 line electrical diagram:**
 - **Electrical specifications shall indicate**
 - System size (DC - STC "nameplate" rating);
 - Module manufacturer and model number;
 - Module specs (@ STC) including VOC, VMP, ISC, and IMP;
 - Array specs (@ STC) show max VOC (w/ temp corrections), VMP, ISC, and IMP;
 - Number of strings;
 - String fuse rating (if appropriate);
 - Current carrying conductors show size and type (ie. USE-2);
 - Grounding (equip grounding conductor) indicate size and type;
 - Over current protection/disconnects with voltage rating, current rating, and indicate if "integrated" in inverter;
 - Inverter, note manufacturer, model number, rated AC output (wattage), AC voltage, and max AC current;
 - Grid interconnection location shall show AC load panel with backfeed breaker rating (voltage and amperage), panel rating (busbar rating and main breaker rating), and line / load side tap.
- ✓ **Mounting / racking system details:**
 - Shall include manufacturer's spec sheets with uplift capacity for wind loads (116 mph, exposure 'C', 3 second gust), Roof snow loads (30 psf), attachment details (type, size, and spacing of fasteners), and Colorado stamped engineer's verification letter; if custom racking, a site specific engineered design is required.
- ✓ **Structural information:**
 - Size, type and spacing of roof framing members, type and thickness of roof sheathing, type and number of layers of roofing materials, and indicate whether array is flush or tilt mounted. Specify method of locating framing members. Additional information or stamped engineer's letter approving roof load on existing roof framing.
 - The photovoltaic installation company shall be registered as a city of Golden contractor. Installation of the electrical wiring shall be performed by a licensed electrician. The permit will not be issued without a licensed electrician indicated on the permit. Permit fees shall be based on the total value (materials, labor, overhead and profit) of the photovoltaic system before any rebates. The valuation shall be divided into general (racking and mounting) and electrical (panels, equipment, wiring) portions.
 - Solar PV arrays are not permitted to be installed over existing roof vents



Contractor shall call for 3 inspections for the project: a **Rough Frame / Rough Elec. inspection** after the racks are installed and bonded; and a **final Elec. inspection** when the system is complete.