

RESIDENTIAL BUILDING PERMIT: Residential Ground or Roof Solar



APPLICABILITY

This Residential Ground or Roof Solar Permit applies to residential ground-mounted, pole-mounted, or roof-mounted photovoltaic installations, including electrical equipment and conductors with raceways.

WHAT TO EXPECT

- **Read this document in its entirety before using the online portal to apply for a permit.**
- **Be Prepared** - Information to have ready and submittal requirements are noted below. All submittal items must be in electronic format PRIOR to initiating an online application. **Only PDF format will be accepted.**
- **Online Portal Tutorial** – please watch a very brief video [here](#) prior to applying online so you understand how to use the online portal permitting system.
- **Register** – You will need to register in the online portal [here](#) if you have not already done so. Please remember your e-mail address and password because you will need them for future log-ins.
- **Start Your Online Application** - When you have followed the steps above, initiate an application using the online portal [here](#). You will need to log in, select My Portal, then Apply Online, then Building Division, then select the permit type you desire and follow the prompts from there.
- **Submit** - Clicking “Save and Continue” at the end will submit your application and create a permit. You will have an opportunity to edit your information one last time prior to submitting, and if you need to make changes later you may contact staff for assistance.
- **Upload** – Once you have created your permit, you may scroll down to “Submittals” and upload your PDF documents as applicable to your project. *Please see the Online Submittal Requirements and Additional Requirements below.*
- **Pay** – You must pay the deposit as soon as you submit your application online. A permit technician will review your application and submitted documents and let you know if any submittal items are missing. After staff has processed your documents, you will receive a message from the online system telling you your permit is “**Ready to Issue.**” This means it is time to log into the online portal to pay for your permit. If someone else will be paying for your permit, please contact staff for assistance.
- **Communication** – A permit technician will be your main point of contact for your Counter Permit. They will let you know if anything else is needed to proceed with your permit.
- **Review** - To process a Building Permit Application, all plans (as mentioned in the *Online Submittal Requirements and Additional Requirements* sections below) shall be submitted for review and will be processed according to [stated time frames](#). You may need approvals from Planning and Zoning, Environmental Quality, Engineering, and the Building Division before a Counter Permit will be issued. During the review process, if there are comments, they are noted on the plans and in a comment letter. Once this is completed, the reviewed plans along with the comment letter will be given back to the Owner/Contractor so they can work on a new single set of corrected plans. The amended plans and the

original reviewed plans and comments shall be resubmitted for review. This process will be followed until all deficiencies have been corrected.

ONLINE APPLICATION INFORMATION

- **Authorization** - you must be the property owner or a representative of the property owner and certify as such in the online application
- **Parcel/Site** - be prepared with a Parcel Number or Site Address. You ***must*** select from the pop-down list when entering the parcel number or address in the online portal.
- **Ten Days** – you have ten working days to submit all required documents or your permit will be ***canceled***.

ONLINE SUBMITTAL REQUIREMENTS

What electronic formats can be accepted? At this time, only PDF format is accepted for plan review. PDFs must scale and must be unlocked.

Combined PDF or multiple PDFs? Required documents may be uploaded as a single, combined PDF document or as separate PDF documents. If some are combined and some are separate, that's okay – simply leave a comment (in the comment box provided in the upload window) letting staff know which plans are included together.

What documents must be uploaded? Please provide an electronic copy of the following in PDF format using scale ¼" = 1' (quarter inch equals one foot) unless otherwise noted:

- **Site Plan** – Visit [this webpage](#) for details on scale and what to include on your residential site plan.
- **One-Line Electric Diagram**
- **Roof Plan** showing adjacent framing when applicable
- **Roof Mounting** detail of rack assembly to the roof if applicable
- **Electric Panel** tie in detail
- **Foundation Plan** and detail for a grade set solar PV array
- **Manufacturer's Specifications and Installation Instructions** - on all electric equipment such as panel boards, disconnect switches, inverters, solar panels, and hardware. Include installation instructions.

ADDITIONAL REQUIREMENTS

- **Contractor's Information** – a licensed Arizona Register Contractor shall be required to perform the work if the project is for sale or is a rental
- **Other documents not listed here** – may be requested by staff in order to perform a review
- **Snow Loads and Roof Plans** – click [here](#) to view Climatic and Geographic Design Criteria; repair design for the reinforcement of framing members of the roof may be required; solar installation can begin after the repair work to the roof structure has been completed and inspected and the permit is issued
- **Roofing Layers** - Roofing utilized under solar systems should have only one layer of roof covering material, or as approved by the building official. The condition of the roof covering material should be in excellent to good condition, with a remaining life expectancy of at least 20 years.

- **Inspections** - Upon the issuance of the Building Permit, construction may commence on the installation of the system. The first inspection shall be requested when the supports, the racks, and the solar panels are installed with the grounding attachments and conductors in place. The inspector shall be provided a ladder to perform this inspection. (Note: A foundation inspection will be required prior to the placement of concrete for ground mount systems). The second and final inspection shall be requested when the system is installed and complete. When the final inspection is approved, the building inspector will place a Green Tag on the main panel indicating that the system is ready for APS to energize (if applicable).
- **Raceways and Conduits** - Areas of physical damage include spaces on walls from the ground to 8 feet above the ground. These areas require raceway and wire methods resistant to physical damage such as Electric Metallic Tubing (EMT) and Schedule 80 Rigid Non-metallic Conduit (RNC). These methods shall be used on wall spaces that are subject to physical damage as described above. Any Raceways emerging out of the ground shall be Rigid Metal Conduit (RMC), Intermediate Metal Conduit (IMC) or Schedule 80 Rigid Non-Metallic Conduit (RNC) from a point 18 inches below grade to where they enter a panel board or enter the building.
 - *Exception: A length not to exceed 6 feet of Liquid tight Flexible Metal Conduit (LFMC) may be used for the final connection to the main panel when anchored to the wall with 2 anchors minimum and installed according to the manufacturer's specifications.*

RESOURCES

- Solar and Wind Permitting [Frequently Asked Questions](#)