



The City of Clayton Solar Permitting Checklist for Residential Rooftop Photovoltaic (PV) Installations

The City of Clayton strives to create a community that promotes environmental stewardship and renewable energy practices. The City of Clayton offers options for residential rooftop solar PV installations.

The pre-submittal checklist below contains the minimum information and project plan details required to be submitted to the City of Clayton when applying for a permit to install a residential rooftop solar photovoltaic (PV) system. The checklist's intent is to provide transparent and well-defined information to minimize the required revisions, improve permit application quality, and accelerate the application and review process.

1. Codes and Design Criteria

City of Clayton: In the City of Clayton, the installation of residential rooftop solar PV panels is detailed in [Chapter 405](#) (Zoning Regulations), Article XXVIII “Renewable Energy Systems” of the Clayton City Code. This set of ordinances applies to every aspect of solar energy systems installation in Clayton. The City of Clayton has also adopted the 2021 International Residential Code (IRC), the 2021 International Building Code (IBC), the 2021 International Fire Code (IFC), the 2021 International Mechanical Code (IMC), the 2021 International Plumbing Code (IPC), the 2021 International Energy Conservation Code, and the 2021 International Existing Building Code.

Regarding residential rooftop solar PV systems, the following local design criteria should be used:

- Building-mounted solar energy collectors installed in residential zoning districts shall be: Installed in the plane of the roof (flush mounted); or Made part of the roof design (capping or framing compatible with the color of the roof or structure); or Building-integrated system.
- Mounting brackets shall be permitted to be placed parallel on the slope of a rear-facing roof if the applicant can demonstrate that the existing pitch of the roof would render the solar energy equipment ineffective or incapable of reasonable operation.
- Solar energy collectors may be located on any roof face.
- Solar energy collectors located on a front-facing sloped roof shall be installed parallel to the roof slope and in a manner that respects the architectural features of the structure including roof lines, colors, and materials.

- Solar energy systems shall not project vertically above the peak of a sloped roof to which it is attached.
- When located on a sloped roof, solar energy collectors shall be set back from any outside edge, ridge, or valley of the roof as required by the Building and Fire Code as adopted by the City.
- Solar energy collectors installed on a flat roof must be screened by the use of a parapet or other architectural feature to screen the view from the street or from ground level on adjoining properties.
- All exterior electrical or plumbing lines must be painted in a color scheme that matches as closely as possible the color of the structure and the materials adjacent to the lines when visible from the street.

St. Louis County: In St. Louis County, the code pertinent to residents interested in installing residential rooftop solar PV panels is:

- 2014 National Electrical Code (NEC) aka NFPA 70 and Ordinance #27, 654- Ch. 1102 (“E” references).

2. Required Permits

A permit must be obtained prior to the start of any work. Complete the following permit application form(s) and submit any additional required documents.

City of Clayton (Building Permit): Clayton residents interested in installing a residential rooftop solar PV system must first complete the building permit via the City of Clayton’s [CitizenServe Portal](#). If the property is considered to have historic context per Section 405.3930.B, then review by the Architectural Review Board is required.

St. Louis County (Electrical Permit):** Clayton residents must also submit an application for an Electrical Permit through the St. Louis County’s permit portal: [Electrical Permit](#). A [paper version](#) of this permit application is also available.

****Accelerated Plan Review:**

Additionally, STL County offers an expedited review process for select residential and commercial building projects. This premium plan review service is intended to offer a method to obtain many types of building permit reviews in half the usual time or less, hopefully allowing for a quicker start of construction. The additional fee for the Accelerated Plan Review service is fifty percent (50%) of the regular permit fee, with a minimum fee of \$500.00. This accelerated plan review fee is in addition to the regular permit fee. Please visit [Expedited Process Info Page](#) to learn more about this process.

To obtain an accelerated plan review, please download this [fillable form](#) and return by email to Public Works at permits@stlouiscountymo.gov.

3. Required Documents/Plans

The following documents are minimum required files for solar PV permits. Plans shall be submitted electronically with the associated permit application.

- Site Plan: Show and note the following: 1" = 20', 30', or 40' type (B107.2.1; SLCO Policy)
- Roof-or-Wall mounted residential rooftop solar PV:
 - Show lot lines, North direction arrow, lot number, subdivision name, and name the street(s) adjoining the lot.
 - Show the existing configuration of the roof. Dimension the overall length and width of those roof planes upon which the solar panel array system shall be located.
 - Ensure that residential rooftop PV arrays are in compliance with [2021 IRC Fire Prevention Code: Article II](#), the 2015 International Residential Code and Chapter 16 of the 1015 Internal Building Code.
 - In the roof plan, show, label and dimension each of the solar panel arrays. Dimension the panels' distance(s) from the roof edges, ridges and valleys, and from another array.
- Electrical Diagram, the following minimum requirements are to be included in the drawings and documents submitted with a permit application:
 - Electrical diagrams/worksheets must show that residential rooftop solar PV panels and modules have the same fire classification as the roof assembly; diagrams must also show and make note of flashing and sealing requirements at the penetrations.
 - A 1-line diagram that provides an electrical data summary of the residential rooftop solar panel system to be installed. Please be sure to include the output voltage, current and manufacturer of the equipment. Include residential rooftop solar PV panels and their respective listing agency/ies.
 - Additional required electrical requirements for drawings and documents submitted with residential rooftop solar PV permit application can be found using this link: [Additional Electrical Requirements](#)
- Attached is an example of a rooftop solar panel array plan: [Rooftop Solar Array Plan](#)
- Additional Information may be requested by the City of Clayton or St. Louis County to support necessary review and analysis of the proposed plan and adopted codes.

4. Contractor Requirements

St. Louis County: For a list of approved, certified contractors in St. Louis County, please visit the following link: [Approved Electrical Contractors](#). For questions regarding this list, please contact St. Louis County's Electrical Licensing Department at 314-615-4591.

5. Permit Fees

City of Clayton: In the City of Clayton, general building permit fees (which include residential solar PV permits) depend on the construction project size and range from \$125 to less than or equal to \$18,500. A \$85 administrative architectural review fee is added to the Building Permit for any project that does not go through formal Architectural Review Board permits. A link to a breakdown of the City of Clayton's building permit fees can be found here: [Building Permit Fees](#).

St. Louis County: Electrical permit fees for solar PV in St. Louis County are \$156. This is the pricing for electrical permits for projects requiring plan review and at least two inspections (in the case of residential rooftop solar PV systems, both electrical and building permit inspections are required). For a more detailed breakdown of fees associated with St. Louis County's electrical permits, please visit the following link: [Electrical Permit Pricing Schedule](#).

6. Submit Permit Application

City of Clayton (Building Permit): First-time permit applicants must first register to use the [CitizenServe portal](#) using the following link: [First-time Permit applicants](#). The City of Clayton also offers detailed, step-by-step permit application guidance: [Building Permit Guide](#).

The City of Clayton's building permit application can be found at the following online link: [Building Permit Link](#). The permit submission process occurs online, and residential rooftop solar PV permit applications are embedded in the City of Clayton's overall building permit application process. After selecting "Building Permit" for the Application Type, residents should then select "Solar Panel" as the permit sub-type. If your permit includes drawings, the .pdf file(s) should be uploaded as prompted when completing the application. The maximum file size for a single file is **25 MB**. If your drawings are drawn by hand, they will need to be scanned to a .pdf file. Area print shops can assist you with that ability. Once the application has been submitted, it will be reviewed by our staff to determine that all required form fields were correctly completed and all materials provided. Once those items have been confirmed, the applicant will receive a notification of the initial application fee to be paid. All fees may be made via the portal. Upon payment, your review time will commence.

St. Louis County (Electrical Permit): St. Louis County's electrical permits can be applied for, reviewed, approved and issued through the following link: [Electrical Permit Link](#). Like with Clayton's building permits, the submission process for electrical permit applications occurs through an online portal. Unlike Clayton's Building Permits, however, residents have an option to apply for permits in-person. Walk-in permits are still available in St. Louis County

Town Hall, 1200 Market St, St. Louis, MO 63103, Building Division - Electrical Section, Room 425, between 8:00 a.m. and 4:30 p.m. Monday through Friday. For an in-depth, step-by-step breakdown of how residents should apply for electrical permits, follow the instructions on St. Louis County's Permits and Procedures page: [Permits and Procedures Page](#).

St. Louis County also offers detailed guides on navigating electrical permitting and licensing procedures: [St. Louis County Permit Help](#).

7. Review Process Timeline

City of Clayton: The City of Clayton is committed to providing a timely review of residential rooftop solar PV permit applications. Residential rooftop solar PV permits are classified under building permits; best efforts are made to review completed building permit applications within two to three weeks, or 14 to 21 business days. These turnaround times are typical, not guaranteed, and large projects may extend the time for plan review. The City of Clayton has a staff of dedicated individuals, but certain circumstances can prolong permit turnaround time, including the failure of applicants to submit all required documentation and application fees. For more information about the City of Clayton's building permit review timeline, please visit the following link: [City of Clayton: Plan Review Timeline](#).

St. Louis County: Electrical planning and permitting applications that are submitted through St. Louis County take 20 to 25 business days to be reviewed. As with the building permit process in the City of Clayton, certain circumstances can delay permit turnaround time. For more information about the electronic plan review process, please visit the following link: [STL County Electronic Plan Review](#).

8. Permit Status

City of Clayton: To check your building permit status, please visit the City of Clayton's [CitizenServe Permitting Portal](#) following the completion of the building permit application.

St. Louis County: To check the status of electrical permits, please visit St. Louis County at the following link: [Electrical Permit Link](#) and log into your permit portal following permit application completion.

9. Permit Expiration

City of Clayton: In the City of Clayton, all building permits expire six (6) months after the date of issue if construction of the project is not diligently pursued and inspected. Failure to start the work authorized by a permit within this six-month period renders the permit invalid and a new permit must be obtained. Once work begins, noticeable progress must continue until completion. Once panels are installed, work is completed, and a final inspection is approved, the building permits are closed.

St. Louis County: Electrical permits issued through St. Louis County also expire six (6) months after the date of issue if work authorized by a permit fails to start within a six-month timeline.

10. Scheduling an Inspection and the Permit Inspection Process

Inspections are required under both the Building Permit (Clayton) and the Electrical Permit (County).

City of Clayton: When a Building Permit is issued, the permit document will list the required inspections for the project. For permits applied for through the Clayton CitizenServe Portal, please schedule your inspections online by visiting [CitizenServe Portal](#). Inspections can also be requested by emailing inspectionsbd@claytonmo.gov with the following information: type of inspection, permit number, project address, contact name and contact phone number, and date of desired inspection and time. Inspection requests received prior to 4 p.m. will be eligible for next-day inspections. Inspection requests received after 4 p.m. will be placed on the schedule for the subsequent business day. All permit types may be accessed to check status or schedule inspections. You must be logged in to gain access to your building permit.

St. Louis County: To schedule an electrical permit inspection, residents must first submit an electrical permit application through St. Louis County's permitting portal. The electrical permit inspection process takes place online through St. Louis County's [Permitting Portal](#). If additional is required, the following link follows a more in-depth walkthrough through the permitting inspection process: [ACA/Citizen Permitting Portal Help Video](#). For more information on how to navigate STL County's permitting portal, visit: [Permitting Portal Help](#)

11. Contact Information

City of Clayton: For questions about the building permitting process, please contact the City of Clayton Building Department Office.

- Office Phone Number: (314) 290-8456
- Office Hours: Mon-Fri, 8:00 am - 5:00pm
- Address: City of Clayton Building Division, 10 N. Bemiston Ave, Clayton, MO 63105

St. Louis County: For questions about the electrical permitting process, please contact the St. Louis County Permit Processing Office.

- Office Phone Number: 314-615-5184
- Office Hours: Mon-Fri, 7:30am - 4:00pm
- Address: St. Louis County Department of Public Works, 41 South Lindbergh Blvd., 6th Floor, St. Louis, MO 63105