



Permit Application Requirements for Solar Panel Installations

Information Bulletin 162

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Solar water heating panels and solar electric panels are regulated by the Kansas City Building & Rehabilitation Code, KCMO Code of Ordinances Chapter 18 (KCBRC). Requirements for construction permits apply to all disciplines involved in the installation. As with any permit application, drawings, calculations and specifications, prepared by a Missouri registered design professional, may be required for any and all portions of the proposed work for commercial buildings and for multi-family residential buildings. On a case-by-case basis, requirements for sealed construction documents may be waived due to the minor nature of the scope of work as determined by the Building Official.

An engineer's seal will not be required on construction documents for the installation of solar electric or solar water heating panels serving a detached one- or two-family dwelling or an attached townhouse (where the installation serves each townhouse separately). At a minimum, documentation submitted for such permits shall include an electrical line drawing and other information as may be required to demonstrate that the installation will comply with applicable building and zoning codes.

A permit application shall be submitted for the scope of work for electrical, plumbing and building (if structural modification is required) in accordance with [Information Bulletin Number 100 \(for one- and two- family structures\)](#) or [110](#) (for other than one- and two-family structures).

Scheduled Express review option is available for solar panel installation projects. Please refer to [Information Bulletin IB115](#) for details about this option.

NOTE: Ground-mounted systems are required to have a building permit (in addition to an electrical permit) if over 200 square feet in area.

This checklist is provided to identify the minimum information required for permit application. Completing this checklist prior to permit application will assist in the preparation of a complete application. It is recommended that a copy of the completed checklist be submitted with your permit application. Failure to provide all information identified in the checklist will prevent the application from advancing:

- Complete description of the equipment, including manufacturer's installation requirements and product listing information.
- Location and means of structural support and attachment of all panels. When supported by an existing structure, documentation shall be submitted to substantiate the adequacy of the existing structure to resist all required vertical and lateral forces. The submittal shall also include the following structural information:
 1. Grade, species, spacing and span of lumber for rafters.
Grade _____ Species _____ Span _____
 2. Engineer or truss manufacturer review of loads to trusses (requires engineer stamp).

3. Design calculations for rafters showing they will resist the loads imposed without exceeding the shear, stress or deflections limits of the lumber (engineer stamp NOT required for one- and two- family projects).
4. Either manufacturer's uplift resistance specifications or uplift resistance calculations (engineer stamp NOT required for one- and two-family projects).
5. If support for the roof system employs wood beams, then the ability of the beam to resist the applied loads shall be addressed by calculations (engineer stamp NOT required for one- and two- family projects).

NOTE: Structural design calculations are required where noted above due to the change from uniform to point loading imposed by the system support structure.

6. A layout diagram showing location of all point loads on rafter system

- Electrical and plumbing plans showing wiring and plumbing systems associated with the panels, materials and all points of connection to the existing systems, detailing compliance with the applicable codes.
- Documentation to substantiate that the location of the equipment is in accordance with the Zoning & Development Code, KCMO Code of Ordinances Chapter 88 (e.g. a site plan if the installation projects beyond existing building walls; building height information if the installation projects above the existing building height; etc.).
- Documentation in the form of a roof plan to substantiate that the location and spacing of components is in accordance with the requirements of the 2018 International Fire Code.

All work, including the panel installation, is subject to the requirements of the KCBRC for contractor licensing. The submitted project valuation shall include the entire scope of the project, including the solar panels. Where multiple trades are involved (e.g. building, electrical, etc.), separate permits are required for each trade.

For any questions, please feel free to call the City Planning and Development Department – Development Services code question line at (816) 513-1511.