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CITY PLANNING & DEVELOPMENT

Electrical Service Permit Application Requirements
Information Bulletin No. 160

Purpose

The purpose of this document is to advise applicants of the information needed for city staff to properly evaluate a permit application for electrical services. Please take note of when a plan case application is required to be approved before a permit may be issued.

General Requirements and Procedures

City Planning and Development issues electrical permits for replacement/upgrade of existing electrical services and new electrical services (including temporary) as follows (see Page 2 for checklist and see Page 3 for example of standard acceptable line drawing formats):

1. Electrical services less than 400 amps and where none of the below apply - no drawings required. Submit permit application through [CompassKC](#).
2. Electrical services of 400 amps to 799 amps, and generators or energy storage systems (battery) on one- & two-family residential services not exceeding 799 amps - a line drawing **with a completed checklist** shall be submitted for review through [CompassKC](#) as a permit application.
3. Any electrical service involving electrical transformer, generator (see 1-2 family exception above), energy storage system (battery), fire pump, wind turbine, automatic transfer switch, etc. - plans prepared and sealed by a Missouri Registered Engineer shall be submitted as a [CompassKC plan case](#) for plans review. For one- and two-family residential services, line drawings are submitted as a permit case.
4. Any solar panel installations, plans are required be submitted as a [CompassKC plan case](#) for plans review; please see [IB162](#) and see page 2 of this document for checklist of items required to be on plans.
5. Electrical services of 800 amps to 1199 amps - a line drawing prepared and sealed by a Missouri Registered Engineer shall be submitted as a [CompassKC plan case](#) for plans review. For one- and two-family residential services, line drawings are submitted as a permit case.
6. Electrical services of 1200 amps or greater, and all services over 600 volts - complete engineered drawings, including floor plans and equipment layout plans, prepared and sealed by a Missouri Registered Engineer shall be submitted as a [CompassKC plan case](#) for plans review.

General notes

- For an addition to an existing electric service, the total size of the electric service shall be considered (example: adding a 200-amp service switch to an existing 400-amp service creates a 600-amp service).
- Installations may be subject to Floodplain Development Permit requirements - see [IB120](#).
- Plans Review for Items 3, 4, 5, and 6 (above) may be eligible for a scheduled express review. See [IB115](#).

Contact the Code Questions line at 816-513-1511 or codequestions@kcmo.org for further clarifications.

Electrical Service Permit Checklist

The following information shall be shown on all drawings submitted for electrical service permit application. This checklist shall be submitted along with any drawings as outlined in points #2 through #6 above:

Yes NA

- Project address - note separate buildings require separate permit applications with their own line drawing.
- System Voltage and Number of Phases.
- Type of service transformer if 3-phase (wye; grounded-B phase delta, etc.).
- Amperage rating of each service disconnect switch.
- Amperage rating of each service overcurrent device.
- Available Fault Current (AFC) at utility transformer (or the AFC available at the equipment's line terminals).
- Ampere Interrupting Capacity (AIC) rating of the overcurrent device - must be no less than the AFC available at the equipment's line terminals or the transformer.
- Conductor size, material (Cu or Al), and insulation type (suitable for wet location, when applicable).
- Conduit/raceway size and type.
- Complete grounding electrode system, including conductor sizes, and electrode types.
- Ground-Fault Protection of service where required due to service amperage/voltage.
- There shall be not more than six sets of disconnects per service and they shall be grouped.
- Service load calculations may be required when any demand factors are used to reduce service load.

The acceptance of drawings for electrical service permit application is based on the following limitations (unless the drawings specifically address the item otherwise):

- Equipment located on the exterior of the building does NOT encroach upon any portion of the public right of way or other property line. Equipment must be designed and located to not impede pedestrian, bicycle, or wheelchair movement or create safety hazards on circulation paths.
- Equipment is entirely exterior or is located immediately at the point of entrance into the building.
- Equipment access, clearance, and workspace are provided as required.
- The service shown is the ONLY electrical service that serves the building.
- Equipment is listed and labeled.
- Service equipment is protected against physical damage where required.
- All grounding electrodes available in the building are shown.
- Installation complies with all requirements of standards established by the serving utility company in addition to the adopted NEC.

I certify that the submission provides all items, as applicable, from checklist above and that the project complies with the limitations listed above:

Signature:

Date:

Format Examples

(Line drawings must contain all information from the checklist on page 2)

