

A plan review is required for any project exceeding \$50,000. The City reserves the right to require a plan review when, in their opinion, the type of occupancy involved or unusual nature of the project merits plans to be submitted even though the project might be less than \$50,000.

The plans and/or specifications must be signed by a P.E. licensed with the State of Minnesota or, in some cases, the Master of Record from the company applying for the electrical permit.

Per Bloomington ordinance, the plan check fee shall be 10 percent of the permit fee when the job cost exceeds \$50,000.

Plan requirements

Two (2) copies of signed plans/specifications shall be submitted with the permit application.

The front page of the plans shall include:

1. Project/name of the facility.
2. Project address assigned by the City of Bloomington.
3. Address of the person or firm submitting the plans.
4. Registered project/property owner's name and address.
5. Phone and fax numbers for project's contact person. The contact must be the designer or individual who can answer any technical questions posed by the City's Plan Reviewer.
7. Detailed description of the complete scope of electrical work. Indicate whether the project is new construction, addition, remodel, etc.

Electrical floor plans

Show the following:

1. Locations of all panel boards, switchboards and transformers.
2. Locations of all lighting and power outlets.
3. Locations of all motors, compressors, heaters, stationary appliances. Identify each lighting outlet, power outlet, motor, appliance, etc.
4. Equipment and fixture schedules, either on the plans or in the specification book.

One-line riser diagram

Should show the following:

1. A clearly identified service point.
2. Service and feeder wire sizes and numbers.
3. Service and feeder over-current protection.
4. Service and feeder conduit sizes and numbers.
5. Switchboard and panel board bus rating. Indicate main lug or main circuit breaker.

Specifications

Provide detailed descriptions of electrical loads for equipment and mechanical systems that will be installed. Identify what wiring methods will be used.

Load calculations

Should show the following:

1. Panel ID (name).
2. Panel bus rating in amps.
3. Voltage.
4. Total connected load in VA or KVA.
5. A break down of total connected load into NEC categories.
6. NEC demand factors applied to each category of load.
7. Total calculated demand load in VA or KVA.
8. Total calculated amps.

Available fault current calculations

Should show the following:

1. Available fault current at the service point.
2. Point to point calculation of fault current at switchboards and panel boards, **OR** calculations of fault currents at clearly identified nodes in the distribution system.

Peak demand records per *NEC 220-35*

1. Starting and ending dates of metering.
2. Highest reading of the period clearly marked.
3. Power factor adjustment (when necessary).
4. Explain the details of seasonal and occupancy adjustment factors.
5. Utility demand records or recordings of demand metering for the peak demand period must accompany the submittal.

Panel schedule:

Should show the following:

1. Panel ID (name).
2. Panel bus rating in amps.
3. Voltage rating.
4. Main breaker size or main lugs only.
5. Double lugs or feed-thru lugs.
6. Description or coding of each branch circuit load category.
7. Connected load for each bus or phase in VA or KVA.
8. Total connected load for each bus or phase in VA or KVA.
9. Total connected load for the panel in VA or KVA.

Lighting fixture schedule

Provide a complete schedule with fixture types, lamp and input VA load.

Mechanical equipment schedule

Provide a complete mechanical/equipment schedule with motor sizes, KVA load and voltage amps. (This may not be required if the information is on the plans.)

Submittal check list

1. Service point: check one or describe.
2. Generator systems contain: Please check the ones that apply to the project. If more than one, please describe.