



CHARLOTTE FIRE DEPARTMENT
FIRE PREVENTION BUREAU
Fire Marshal's Office
500 Dalton Avenue
Charlotte, North Carolina 28206

Fire Alarm/Fire Sprinkler Shop Drawing Guidelines

Shop drawings for fire alarm systems and fire sprinkler systems shall be submitted to the Fire Prevention Bureau based on the following criteria:

Fire Alarm Systems:

- For the installation of 5 or more devices.
- The installation of or replacement of the main fire alarm control panel.

For simply replacing existing notification devices "like for like" with not more than 5 or more additional new devices, shop drawing submittal will not be required.

Fire Sprinkler Systems:

- The installation of 20 or more sprinkler heads.
- The installation of a new or replacement fire pump, or new sprinkler riser.
- A change in building use, sprinkler density requirements, or storage commodity class when such conditions will affect the hydraulic demand.

I. Plan Submittal:

Fire alarm systems:

Shop drawing submittal for fire alarm systems shall include, but not be limited to, the following information, in accordance with Section 907 of the North Carolina Fire Code:

1. A floor plan that indicates the use of all rooms.
2. Locations of alarm-initiating devices.
3. Locations of alarm notification appliances, including candela ratings for visible appliances.
4. Location of fire alarm control unit, transponders and notification power supplies.
5. Annunciators.
6. Power connection.
7. Battery calculations.
8. Conductor type and sizes.
9. Voltage drop calculations.
10. Manufacturer's cut sheets for equipment, devices and materials.
11. Details of ceiling heights and construction.
12. The interface of fire safety control functions.
13. Classification of supervising station.

Fire sprinkler systems:

Shop drawings for fire sprinkler systems shall include, at a minimum, the following:

1. Cut sheets for sprinkler heads.
2. Hydraulic calculations.
3. Utility plans indicating all below-ground piping and associated connections.
4. Fire hydrant flow test results, unless current test is within a 12 month period.

II. Submittal Timeline:

- Shop drawings shall be submitted within 90 days of building permit issuance. Installation shall not take place until plans are reviewed and approved.
- Plans will be reviewed within 5 business days ***from the date the reviewer receives them.*** We will notify the submitter when the review has been completed.

III. Submittal Procedure:

Plans must be submitted in electronic format. Submittal may be via:

- www.dropbox.com
- Other electronic format via the link below, or delivered in electronic format to our office at 500 Dalton Avenue.

When submitting electronically, submit via cfplansubmittal@charlottenc.gov. Upon receipt of your plans, ***we will contact you for payment arrangements.*** If you have any questions, contact Simmie Ford at 704-336-2101.

IV. Review Application and Fees:

The FY'16 shop drawing fee for fire alarm systems and fire sprinkler systems is \$135.00 per system.

In order to process and complete your review request, you must complete the "Charlotte Fire Department Shop Drawing Review Application" form. This form must accompany all shop drawings.