



## **Construction Plan Submittal and Review Guideline**

Plans review and inspections are conducted through the Office of Lee County Fire Marshal. The Plan Reviewers office is located at the City of Sanford Municipal Building, 225 E. Weatherspoon Street, Sanford, NC 27330.

Fire Detection/Protection Equipment submittals shall include at least one (1) complete set of documents. Parties desiring a signed set of documents with comments approved by the Fire Marshal's Office shall submit at least two (2) sets of documents at the time of submittal along with a full-size, self-stamped addressed envelope. The second set of plans will be stamped "Approved" and returned to the applicant. A complete set of documents including comments shall be available on-site at all times during installation. Submittals for New and Up-fit Construction shall be made in accordance with the Office of Lee County Fire Marshal Developmental Services Policies and Guidelines.

Fire detection/protection equipment and associated systems shall be a separate plan submittal and permit fee from Site and Building Plan submittals. Permits shall be issued for each individual plan submittal with all subsequent inspections and test being conducted accordingly.

Plans approved by the Office of Lee County Fire Marshal give permission for installation of the fire protection system. Installation shall not begin without a permit. Final approvals are subject to field inspections. Any approval issued by the Fire Marshal's Office does not release the contractor or property owner from the responsibility of full compliance with applicable codes.

All installations shall be in accordance with the approved plans. Any deviations from the plans should be discussed with the Plan Reviewer for your project prior to making changes. Some changes will require a re-submittal to the Fire Marshal's Office for re-approval.

### **Contractors License Required:**

When the General Statutes require that general construction, plumbing, mechanical, electrical, fire protection, or gas work be performed by an appropriately licensed individual. No permits for such work shall be issued to an unlicensed person or firm (Chapter 3, Section 301.6 – North Carolina Administrative and Enforcement Code).

### **Site Plan Submittal Requirements:**

Site Plan documents for new construction shall be submitted for review and approval prior to site preparation work beginning. Design, Construction and installation shall be in accordance with the appropriate Lee County Ordinances, North Carolina Fire Prevention Code requirements and NFPA Standards.

Site plan documents for construction projects shall contain the following information:

1. Fire lane locations and pavement marking specifications;
2. Fire hydrant locations with associated water lines;
3. Fire department connection locations and "FDC" sign specifications;
4. Turning radius drawings and pavement driving lane markings;
5. Landscaping details including overhanging trees and shrubbery;
6. Building overhangs and drive-through locations and height clearances;
7. Building entrance and exit locations;
8. The anticipated fire flow requirements for the building;
9. The intended use of the building including secondary uses;
10. A NFPA 241 letter shall be submitted at the time of plan submittal;
11. Drawings shall be scaled;
12. Any other items requiring fire department consideration.

### **Building Plan Submittal Requirements:**

Construction documents for new and up-fit construction shall be submitted for review and approval prior to work beginning. Construction, installation and testing shall be in accordance with the appropriate Lee County Ordinances, North Carolina Building/Fire Prevention Code requirements and NFPA Standards.

Building plan submittals shall contain the following information:

1. Building Floor Plan with an Appendix B;
2. Intended occupancy use classifications and secondary uses;
3. Building Elevations and Topography;
4. Fire rated assembly locations and specifications;
5. Fire separation locations and specifications;
6. Fire door locations and door specifications;
7. Hazardous Materials storage array locations and specifications;
8. Installation or Removal of Tanks for liquid motor fuels and LPG, LNG, CNG;
  - a. The sizes and locations of tanks shall be indicated;
  - b. Tank specifications shall be included.

9. High-piled combustible storage and rack storage array details;
  - a. Plans shall include drawings, diagrams and specifications on Rack Storage arrangements.
10. Kitchen Hood Installation locations and specifications;
  - a. See Fire Suppression System Plan Submittal Requirements.
11. Paint Spray Booths and Associated System locations and specifications;
  - a. See Fire Suppression System Plan Submittal Requirements.
12. Flammable/Combustible Liquid Storage Rooms, Hazardous Materials Storage Rooms and Clean Room locations and specifications;
  - a. Special Agent Protection Systems - See Fire Suppression System Plan Submittal Requirements.
13. Compressed Gas or Medical Gas System piping diagrams;
  - a. Plans shall indicate all valve locations;
  - b. Plans shall indicate all emergency shut off locations and associated equipment and signs;
  - c. Pipe sizes and working pressures shall be indicated.
14. Drawings and specification for all buildings shall indicate how required fire separations and fire resistive integrity will be maintained;
  - a. Where penetration of a fire separation wall, floor or rated assembly will be made, drawings shall indicate in sufficient detail how the fire resistive integrity will be maintained;
  - b. Where penetrations are sealed, plans shall include specification on what materials are to be used to seal penetrations.
15. Fire detection and protection equipment installations;
  - a. See Fire Alarm System Plan Submittal Requirements;
  - b. See Fire Sprinkler/Standpipe System Plan Submittal Requirements;
  - c. See Fire Suppression System Plan Submittal Requirements.
16. Any other items requiring fire department consideration.
17. Drawings shall be scaled.

### **Fire Alarm System Plan Submittal Requirements:**

Construction documents for fire alarm systems shall be submitted for review and approval prior to system installation. Submittals shall be made in accordance with Section 907.1 of the North Carolina Fire Code. Systems shall be designed and installed in accordance with NFPA 72 (2002).

1. The fire alarm submittal shall include battery calculations, sequence of operations, voltage drop calculations, a riser diagram, a symbol legend, and, if utilizing ceiling mounted strobes, the appropriate ceiling heights, as required in NFPA 72 (2002).
2. Fire alarm system plans and specifications shall be developed in accordance with NFPA 72 by persons who are experienced in proper design, application, installation, and testing of fire alarm systems.

(Reviewal by a NICET Level III or Level IV or Professional Engineer is preferred).

3. Drawings need to be clear and understandable. Drawings should be of a fire alarm design only, not combination drawings using reflected ceiling plans, electrical, mechanical, etc.
4. Drawings shall be scaled.

### **Fire Sprinkler/Standpipe System Plan Submittal Requirements:**

Working plans shall be submitted for approval before any equipment is installed or remodeled. The sprinkler submittal shall include hydraulic calculations, manufacturer's data sheets, and any other documents needed to be in compliance with NFPA 13 (2002), 14 (2003), 20 (2003), 22 (2003), 24 (2002) and 25 (2002).

1. The plans, calculations, specifications, and other required information shall be reviewed and signed by a design professional certified as a NICET Level III or Level IV, as defined by the National Institute for Certification in Engineering Technologies, or a Professional Engineer or other approved design certification or show equivalent training and experience.
2. Drawings need to be clear and understandable. Drawings should be of a sprinkler system only, not combination drawings with plumbing, mechanical, etc., unless those systems are critical to the sprinkler system design.
3. Systems shall be designed and installed in accordance with the appropriate NFPA standard (13, 13D, 13 R).
4. Drawings shall be scaled.

### **Fire Suppression System Plan Submittal Requirements:**

The suppression system submittal shall include a design manual or summary sheet of nozzle applications for the specific pre-engineered system to be installed. Systems shall be designed and installed in accordance with the appropriate NFPA standard.

The submittal shall also include the following:

1. Dimensions of the appliances, nozzle specifications for each appliance, duct, booth, room or plenum protected;
2. The design number of flow points and flow points used by each bottle;
3. The plans, calculations, specifications, and other required information shall be reviewed and signed by a design professional certified by the system manufacturer, a Professional Engineer, or other approved certification or equivalent training and experience.
4. Drawings shall be drawn to scale with sufficient clarity and detail to

indicate the nature and character of the work. Drawings shall be of a suppression system only.

5. In buildings with a fire alarm installed, activation of the system shall activate the fire alarm system. If possible, the system shall be zoned separately from other detection devices.
6. In buildings without fire alarms installed, a horn/strobe shall be installed. Activation of the system shall activate the horn/strobe. The location of the horn/strobe shall be at the discretion of the Fire Official. Specification sheets of the device(s) shall be submitted for review.
7. A sign reading "If Horn Activates, Call 911" shall be installed at the horn/strobe location. The sign shall be red in color with white letters. Sign and Letter size shall be determined by the Fire Official.

For additional information on New or Up-fit Construction Plans Submittal, Review and Inspections, contact the Fire Marshal's Office at (919) 775-8279.

