STANDARD OF CARE FOR FIRE PROTECTION SYSTEM DESIGN
(Effective Date April 1, 2003)

I. Scaled floor plan drawings on sheets of uniform size, no smaller scale than 1/8"=1'0" to include the following information:

A. Name of owner.
B. Location, including street address.
C. Point of compass.
D. Floor plan of each floor (if identical floors, typical plan permitted).
E. Description of occupancy and commodity classification as defined in Chapter 2 of NFPA 13, *Standard for the Installation of Sprinkler Systems,* 1999 edition.
F. Type of construction and building height in feet.
G. Full height building cross section if required to clarify installation of system.
H. Location of fire walls, large unprotected floor openings, unprotected window openings, fire doors.
I. Distances to and construction and occupancy of adjacent or nearby exposing buildings or structures where additional protection may be required, e.g., exposure protection.
J. Type, temperature ratings, and locations of all sprinkler heads in finished areas. Areas subject to build-out at a future date may be described by notes delineating spacing, type of sprinkler heads, etc.
K. Size and location of risers and standpipes with description and arrangement of valving and accessories, including the location of any and all hose valves, alarms, and signal devices.
    1. Area protected by each riser, each system, each floor.
L. Size and location of all mains and branch lines as required to provide preliminary hydraulic calculations. (See Section III-A, Hydraulic Calculations for further information.)
M. If the project is in a seismic area, information attesting to this shall be included on the drawings or in the specifications.
N. The location and size of the hydraulically remote area of coverage.
O. Fire pump design, specifications and room layout (if required).
P. Standpipe design (if required) must be completely delineated on the drawings.
Q. If extensions are made to existing systems, the same information shall be provided for the existing as well as that for the extension, including point of connection to the existing main.
R. The design drawings shall fully identify the intent of the type of system, such as dry, wet, preaction, and/or deluge.
S. The engineer shall establish a practical and flexible margin of safety between available water pressure and required demand pressure.

II. Site Plans: The plan (may be combined with floor plans) shall be drawn to scale and shall include all essential details such as:

A. Size and location of all water supplies.
B. Size and location of all piping, indicating, where possible, the class and type of new pipe to be installed, and the depth to which it is to be buried.
C. Indicate size, type, and location of valves. Indicate if located in pit or if operation is by post indicator or key wrench through a curb box.
D. Indicate the size, type, and location of meters, and backflow devices.
E. Size and location of hydrants, showing size and number of outlets, and if outlets are to be equipped with independent gate valves. Indicate if hose houses and equipment are to be provided and by whom.
F. Sprinkler and standpipe risers and monitor nozzles to be supplied by the system.
G. Location of fire department connections; if part of private fire service main system, including detail of connections.

H. Water Supply Information:

1. Information regarding whether the main is circulating or dead end.
2. Pressures under flowing and static conditions. If available, information on orifice size and co-efficient of orifice used in the test, as well as pitot pressure.
3. Applicable elevations of slab, floors, ceilings, street main connection, etc.
4. Information regarding who conducted flow test, when, and where the test was conducted. If reliable or current (less than six months old), information is not available, a new flow test should be done under the supervision of the registrant.

III. Hydraulic calculations.

A. The Engineer shall prepare and submit preliminary hydraulic calculations proving availability of adequate water, (volume and pressure) for protection of the area of greatest demand. This shall be for the hydraulically most remote area, or if present, the standpipe demand. Calculations shall include the information required by NFPA-13.

IV. Specifications

A. Specifications shall be prepared for fire protection the same as for any other portion of the project.

V. Engineer's Seal

A. The engineer of record submitting fire protection system design construction documents shall seal, sign, and date each page or sheet of drawings and the first page of specifications and calculations.

VI. Legend

A. The work to be performed by the fire sprinkler contractor and the site utility contractor should be differentiated on the drawings. Installation work shall be performed in accordance with applicable state law, including but not limited to, Tennessee Code Annotated, Title 62, Chapters 6 (General Contractors) and 32 (Fire Sprinklers Contractors) and the following rules chapter of the Department of Commerce and Insurance Division of Fire Prevention, 0780-2-7.