

# REQUIREMENTS FOR FIRE ALARM AND SPRINKLER PLAN SUBMITTALS

Revision: 08-8-2006

Due to inadequate information provided to the Fire Prevention Bureau when submitting plans for approval, the following is to help contractors/designers minimize the need to resubmit. **As of April, 2006, the Village of Oak Brook increased all plan review fees significantly.** Please keep in mind that unless a permit is issued by way of plans being reviewed and approved, the Village cannot schedule alarm or sprinkler tests. This will delay a certificate of occupancy from the Community Development Department. Therefore, it is in your best interest to submit all required documents and information. Submitted plans that are incomplete are returned to the contractor/designer for correction and a resubmittal will be mandatory, resulting in additional fees. Adherence to the following will reduce the need for resubmittals and unnecessary costs.

## FIRE ALARM

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The Village of Oak Brook Fire Prevention Bureau requires all designs to meet the criteria listed in the 1993 edition of NFPA 72 as well as various portions of other codes and standards. Contact the Village of Oak Brook Fire Prevention Bureau for a complete listing of current applicable fire and building codes.

Two (2) sets of fire alarm plans indicating the type and location of all devices. (Colored or highlighted devices is preferred, although not required)

The fire alarm plans must be to scale. (1/8" = 1'-0" is preferred)

A legend indicating symbols for all devices must be part of the submitted plan(s).

Manufacturer's data sheets must be submitted for all new devices and equipment. If the manufacturer's data sheets include multiple variations of a device type, the designer/contractor must indicate which specific device is being used.

If multiple strobe intensities are being utilized in the design, the designer/contractor must indicate the candela rating of each individual strobe on the drawing. Strobes on the submitted plan(s) that do not have a specified candela rating will be assumed the lowest candela rating listed in the manufacturer's data sheets (typically 15 candela). This includes existing strobe appliances. (Note: a "15/75" listed strobe is considered a 15 candela strobe by NFPA 72, 1993 edition.)

## SPRINKLER SYSTEM

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### GENERAL

The Village of Oak Brook Fire Prevention Bureau requires all designs to meet the criteria listed in the 1994 edition of NFPA 13 as well as various portions of other codes and standards. Contact the Village of Oak Brook Fire Prevention Bureau for a complete listing of current applicable fire and building codes.

Submit two (2) sets of sprinkler system plans indicating the type and location of all sprinklers. (We request folded plans, rather than rolled.)

A legend indicating symbols for all sprinklers and sprinkler system devices must be part of the submitted plan(s).

The sprinkler system plans must be to scale.

Designers/Contractors must base their system design or modification on an accepted basis of design such as *Pipe Schedule* design criteria (NFPA 13, 1994 edition, Section 6-5) or hydraulic calculations.

## **PIPE SCHEDULE DESIGN**

The addition of sprinklers to an existing sprinkler system or the sprinkler system is new; show both new and existing sprinkler piping within as well as outside the area of contract so that the reviewer can verify that the sprinkler system meets the criteria of Section 6-5, *Pipe Schedules*, in NFPA 13 (1994). This includes new and existing piping from the area(s) of modification all the way back to the source.

Submit manufacturer's data sheets for all new devices, piping, valves, and fittings.

## **HYDRAULIC CALCULATION DESIGN**

Provide hydraulic calculations for the hydraulically most remote area of the sprinkler system.

Indicate all fittings, valves, pipe diameters, pipe lengths, hydraulic nodes, pumps, and sprinklers on the submitted plan(s).

A riser diagram must be included (if applicable).

The hydraulic calculations must account for all piping back to the source, which is where the water supply test data is derived from (typically a hydrant). All piping must be shown on the submitted plan(s) back to the source as well.

Submit manufacturer's data sheets for all new devices, piping, valves, and fittings.

If a fire pump is part of the design, submit the manufacturer's data sheet for the pump, which must include a pump curve indicating pump performance (pressure) at various flows. The hydraulic calculations must incorporate the appropriate data from the pump curve.

Provide water flow test information. Water flow tests information should not be older than one year.

Remote Area Note: Although the Village of Oak Brook Fire Prevention Bureau currently recognizes the 1994 edition of NFPA 13, which does not allow for any design reduction with the use of quick response sprinklers, the Fire Prevention Bureau will allow for design reductions found in newer versions of NFPA 13 when quick response sprinklers are used throughout. In reduced remote area designs, the designer/contractor must identify the section and version of NFPA 13 that allows the reduction and must note the maximum ceiling height on the plans.

## **QUESTIONS AND CLARIFICATIONS**

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Address questions and clarifications regarding these or other requirements:

Village of Oak Brook Fire Prevention Bureau  
1200 Oak Brook Road  
Oak Brook, IL 60523  
(630) 368-5220