



Village of Los Lunas Fire Marshal's Office

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Los Lunas Fire Marshal's Office
Fire Sprinkler Systems
Minimum Information Required with Shop Drawing Submittal's

NOTE: All shop drawings shall be submitted for review and approval through the Los Lunas Fire Marshal's office.

A maximum of two copies of shop drawings, calculations, and submittal data shall be provided to the Los Lunas Fire Marshal's Office with a copy of the Construction Industries Permit, Permitting evaluation of the system **PRIOR TO** installation. Upon request for review of drawings, the designer shall clearly designate the system as being **required** for compliance with the appropriate building and fire code or any other applicable codes and standards, or installed as an **elective** system at the discretion of the owner.

General:

All Submissions shall include the following:

- Shop drawing submittals to the Los Lunas Fire Marshal's Office shall be stamped by either the following: NICET Level III Technician (or higher), Fire Protection Engineer, or a New Mexico Professional Registered Engineer.
- Shop drawings and calculations shall be prepared as outlined by NFPA 13.
- Shop drawings and calculations shall clearly indicate the name of the owner and/or occupant; project street address, tenant space designation, the responsible designer's name, address, and telephone number.
- Shop drawings and calculations shall clearly indicate the design standard(s) and edition used to prepare the submission. (Ex: NFPA 13 1996 Edition or NFPA 13R 1996 Edition)
- Minimum of four-inch underground water main will be required for NFPA 13R and NFPA 13 systems.
- Drawings shall include a schematic drawing of the fire protection underground showing point of entry into the building, size and length of pipe, point of connection to village main and referenced water flow test location. Schematic drawings shall also include the location and type of valves, meters, backflow prevention devices, and water supply sources other than city mains(Ex: Storage tanks, wells, etc.).
- Drawings shall be drawn to scale, on sheets of uniform size. Drawings and calculations shall clearly show a floor plan of each story, indicating the location of all walls, partitions, and fire rated assemblies, and the intended use of each area, room, or void space.
- Drawings shall clearly indicate total area, expressed in square feet, per floor protected by each system riser.

- Drawings shall include full height cross-section elevation detail(s) indicating construction, and vertical/horizontal distances of sprinklers relative to underside of roof/ceiling and structural members.
- Drawings shall clearly indicate the type and location of all control, test, and drain valves, alarm devices, hose outlets, and related equipment.
- Drawings shall clearly indicate the manufacturer, temperature rating, orifice size, hydraulic K-factor, and quantity of each type of sprinkler to be installed.
- Drawings shall clearly indicate the location of special sprinklers (example: extended coverage, sidewalls, and intermediate/high temperature sprinklers).
- Drawings shall clearly indicate pipe types and wall thickness, type of fittings and joints, and the type of locations of hangers, sleeves, braces, and methods to support sprinkler components.
- Drawings shall clearly indicate normal pipe size, and length of pipe including riser/drop nipples.
- Drawings shall clearly indicate method of protection for non-metallic piping as required by pipe manufacturer.

- Hydraulically designed systems:
 - A. Hydraulic data nameplate information:
 1. The minimum rate of water application (density).
 2. The location and size of the design area.
 3. Inside and outside hose stream allowances as actually provided.
 - B. Hydraulic reference points shall be indicated on the plan corresponding with hydraulic calculations sheets.
 - C. Provide a copy of water flow test results (dated within one year of drawing submission date)
 - D. Minimum safety margin of 10% shall be allowed and indicated on hydraulic calculation form.
- Drawings shall clearly indicate method of maintaining minimum temperature of 40 degrees Fahrenheit for sprinkler system piping installed in unconditioned space.

Special Systems

- Drawings shall clearly indicate the make, type, model and size of dry pipe, pre-action, or deluge valves.
- Drawings shall clearly indicate the water capacity in gallons of each dry pipe system.

- Drawings shall clearly indicate air pressure settings for valves and supervisory air functions at normal and abnormal conditions.

Hydraulic Calculation Forms

- Hydraulic calculations shall be prepared on form sheets that include a summary sheet, detailed work sheets, and a graph sheet.
- Calculation summary sheet shall indicate the hazard classification. When multiple design densities are required to protect various hazards within a common system area, separate calculations shall be provided for each hazard area.
- Calculations summary sheet shall include:
 1. Design density and total design area (ex: .15gpm/ft²/1500ft²).
 2. Maximum area of coverage per sprinkler.
 3. Total system demand at base of riser. Water for inside and outside hose streams shall be represented as actually provided.
 4. Minimum safety margin of 10% shall be allowed and indicated on hydraulic calculation form.
 5. Graph Sheet: A graphic representation of the hydraulic demand shall be plotted on graph paper or computer generated hydraulic program based upon:
 - A. Water flow data (dated within one year of drawing submission).
 - B. Total sprinkler systems hydraulic demand including hose streams.

Tenant Up fit

Where existing systems are to be modified, sufficient details of the existing system shall be shown on the plans to determine effect of proposed modification on total system.

- Provide complete floor plan of the building indicating start and location of modification.
- Drawings shall clearly indicate location and floor level of the hydraulic remote area and its design criteria.
- Work being performed in the hydraulic remote area shall include hydraulic calculations utilizing water flow test results (dated within one year of drawing submission date).
- When pipe schedule is to be used, all aspects under pipe schedule section of NFPA 13 shall be applied.

Limited Area Sprinkler System

- Provide key plan showing the room or space to be sprinkled. Provide location in the building and room number(s), floor, etc.

Revised as of June 01, 2015