



## UCD FIRE SPRINKLER PLAN SUBMITTAL INTAKE CHECKLIST

UC Project Number: \_\_\_\_\_ Date: \_\_\_\_\_

Project Name: \_\_\_\_\_ Project Manager: \_\_\_\_\_

Requirements for fire sprinkler plans to be reviewed for approval by this department shall be in accordance with NFPA 13 submittal guidelines as identified below:

### Plans (rolled or folded; minimum 2 sets)

**(14.1.1)** Working plans shall be submitted for approval to the authority having jurisdiction before any equipment is installed or remodeled. Deviation from approved plans shall require permission of the authority having jurisdiction.

Working plans shall be drawn to an indicated scale, on sheets of uniform size, with a plan of each floor, and shall show and identify those items from the following list that pertain to the design of the system:

- Title block includes the contractor's name, address, telephone number and stamp of the contractor's C-16 license number.
- Title block includes project site address and University CAAN number.
- Point of compass.
- A graphic representation of the scale used on all plans.
- Full height cross section, or schematic diagram, including structural member information if required for clarity and including ceiling construction and method of protection for nonmetallic piping.
- Floor plans show the entire project area, location of partition walls and location of fire rated walls.
- Name and room number of each area or room.
- Location and size of concealed spaces, closets, attics, and bathrooms.
- Any small enclosures in which no sprinklers are to be installed, and the code section of exception to coverage.

- Small plot plan showing size of city main in street and point of connection for sprinkler supply piping, and its pipe size.
- Make, type, model, number of each, temperature and nominal K-factor of sprinklers.
- Temperature rating and location of high-temperature sprinklers.
- Total area (square footage) protected by each system (riser) on each floor.
- Number of sprinklers on each riser per floor.
- Pipe type and schedule of wall thickness.
- Nominal pipe size and cutting lengths of pipe (or center-to-center dimensions). Where typical branch lines prevail, it shall be necessary to size only one typical line.
- Riser detail.
- Size and location of standpipe risers, hose outlets, hand hose, monitor nozzles, and related equipment.
- Type and location of hangers, sleeves, braces, and methods of securing pipe.
- Calculation of loads for sizing and details of sway bracing.

**Hydraulic Calculations (submitted on 8 1/2" x 11" sheets, Minimum 2 sets)**

**(14.3.1)**Hydraulic calculations shall be prepared on form sheets that include a summary sheet, detailed worksheets, and a graph sheet.

- Date
- Name and address of contractor or designer
- Location
- Name of owner and occupant
- Building number or other identification
- Description of hazard or hazard category
- System design requirements, as follows:
  - Design area of water application, ft<sup>2</sup> (m<sup>2</sup>)
  - Minimum rate of water application (density), gpm/ft<sup>2</sup> (mm/min)

- Area per sprinkler, ft<sup>2</sup> (m<sup>2</sup>)
- Total water requirements as calculated, including allowance for inside hose, outside hydrants, and water curtain and exposure sprinklers.
- Equivalent pipe lengths of valve fittings.

**(14.3.4) Graph Sheet** – A graphic representation of the complete hydraulic calculation shall be plotted on semi-exponential graph paper (*Q*1.85) and shall include the following:

- Water Supply Curve
- Sprinkler system demand
- Hose demand (where applicable)

**Material Data Sheets (Minimum 2 sets)**

- All control valves, check valves, drain pipes, and test connections, with UL listings.
- Information about backflow preventers (manufacturer, size, type).
- Type and location of alarm bells.
- Private fire service main sizes, lengths, locations, weights, materials, point of connection to city main; the sizes, types, and locations of valves, valve indicators, regulators, meters, and valve pits; and the depth that the top of the pipe is laid below grade.
- Piping provisions for flushing.
- For hydraulically designed systems, the information on the hydraulic data nameplate.
- Hydraulic reference points shown on the plan that correspond with comparable reference points on the hydraulic calculation sheets.
- The minimum rate of water application (density), the design area of water application, in-rack sprinkler demand, and the water required for hose streams both inside and outside.
- The total quantity of water and the pressure required noted at a common reference point for each system.
- If room design method is used, all unprotected wall opening throughout the floor protected.