

## IX. FIRE PROTECTION PLANS: Required Information from PA L&I Form UCC2

Sheet #	N/A	a. Complete a sprinkler design data sheet and include it on the first plan of the sprinkler drawings.
Sheet #	N/A	b. Show floor plans for each floor with sprinkler piping layout, pipe sizes, pipe hanger details, piping materials, doors, walls and room identities. Often, these shop drawings are not available at the time of initial plan submission. If this is the case, write in "NA," but note the following: These shop drawings must be submitted for Department review and approval at least two weeks before the projected installation date. Failure to obtain approval of these drawings before installation could result not only in delay of the final inspection and issuance of an occupancy permit, but also in removal and reconstruction of installations which fail to meet UCC requirements.
Sheet #	N/A	c. Show ceiling plans with sprinkler head(s) layout, walls, soffits, openings, doors, dimensions and room identities.
Sheet #	N/A	d. Verify system design by providing hydraulic calculations along with the following:
		Recent water flow test
		10 percent safety margin
		Type of backflow-preventer or reduced pressure zone showing equivalent foot loss
		Fire pump summary
Sheet #	N/A	e. Note the type of sprinkler system used (e.g., 13, 13D, or 13R)
Sheet #	N/A	f. For residential occupancies such as apartments and condominiums, show sprinkler
		head locations at breezeways, if applicable.
Sheet #	N/A	g. Indicate the certified testing laboratory agency (e.g., U.L.), their test number and hourly ratings of all new and/or affected rated members and assemblies (i.e. columns, beams, floor/ceiling and ceiling/roof fire rated design assemblies). Show all new and/or affected fire-rated walls with their ratings, if not shown elsewhere.
Sheet #	N/A	h. All penetrations of fire-rated construction must be per manufacturer's details. Details shall meet or exceed ratings of construction being penetrated. Penetration details shall be exactly as tested by a certified testing laboratory or agency and shall include their system numbers. All new penetrations of existing fire-rated walls and assemblies shall be shown with appropriate designs.
Sheet #	N/A	i. Provide a fire alarm riser showing connection to a UL-approved central station. Show tamper switches on both OS and Y valves of backflow prevention device, unless shown elsewhere.
Sheet #	N/A	j. Indicate commodity class (per section 2303 of the International Fire Code) and height of any storage.
Sheet #	N/A	k. Provide Material Safety Data Sheets for any hazardous materials (also specified under
		"Architectural Plans").
Sheet #	N/A	l. Where special temperature-rated or high-temperature sprinklers are required, show sprinkler type(s) per area, office size, cut sheets with K-factor, water requirements, spray pattern, coverage and other pertinent data.



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## **SYSTEM CALCULATIONS (FIRE PROTECTION):**

Hydraulically calculated and pipe schedule fire systems should be designed with a 10 percent safety margin for all new buildings and additions to existing buildings. Calculations for hydraulic systems should include:				
Sheet #	N/A	a. Flow and pressure at each flowing sprinkler head		
Sheet #	N/A	b. Flow diagram for a grid system.		