

Fire Sprinkler Flow Test Requirements

A fire sprinkler system shall be connected to an automatic water supply that is capable of providing the required flow and pressure for the remote design area.

A. General

1. The municipal water supply that services Campus buildings fluctuates dramatically on a daily basis. In an effort to ensure that UA fire sprinkler systems have an adequate water supply at all times, the following procedure should be followed:
 - a. Prior to design, a flow test shall be conducted for every new sprinkler system and for substantial alterations to existing sprinkler systems that affect any remote design area.
 - b. Before the flow test is conducted, designers should contact the UA CA Mechanical Engineer or Building Life Safety Inspector for guidance on the best time to perform the flow test to ensure the flow test is performed during a low pressure point for the municipal water system. The Mechanical Engineer or Building Life Safety Inspector will provide an estimated lowest pressure to the designer based on historical data and the geographical location of the test.
 - c. Arrangements should be made with the City of Tuscaloosa to perform the flow test. The only change to the normal procedure with the City would be to request the time frame in which it is likely that the pressure will be at a low point.
 - d. If the static pressure on the test hydrant is significantly higher than the estimated lowest pressure provided, additional testing may be necessary.

B. Flow Test Documentation

1. The flow test shall be thoroughly documented and shall include the following:
 - a. A map showing water mains with sizes and the location and elevation of the test and flow hydrants with relation to the riser reference point.
 - b. Flow hydrant outlet size and type
 - c. Static pressure, pounds per square inch (psi)
 - d. Residual Pressure, psi
 - e. Flow, gallon per minute (gpm)
 - f. Date
 - g. Time
 - h. Name of person who conducted the test or supplied the information.
 - i. Other sources of water supply, with pressure or elevation.

C. Submittals

1. The flow test documentation should be submitted to the project Fire Protection Engineer of Record and UA Construction Administration before the sprinkler subcontractor begins hydraulic design of the sprinkler system.
2. The information will be reviewed and compared against recorded historical data to ensure that the system will be designed to provide protection during the daily fluctuations of the municipal water supply.

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