

Why You Should Choose a Third Party to Perform a Fire Hydrant Flow Test

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When designing a fire sprinkler system for any building, one of the first, and most important, steps is to analyze the water system in the area by having a fire hydrant flow test performed. Why is this so important? To work properly and control a fire, a sprinkler system must flow a certain amount of water with enough pressure to be effective. The entire design must be based upon how much water flow and pressure is available from the water system – if this information is not accurate, the design may fail and the fire will not be controlled!

There are many choices when it comes to getting a flow test done. Some will go right to the source and have the water department or fire department perform a test. Others have the fire sprinkler contractor working on the project go out and run a test, while yet another option is to have third party engineers perform this analysis. Which option provides the greatest benefit for the project? Let's look at each one.

The water department seems like a logical choice, however, there can be some unexpected issues. Some water departments have a great deal of pride in their systems which, intentionally or unintentionally, can result in inflated test numbers because they want to look good. Similarly, inflated numbers can come from some water or fire departments who want their city to be the one where the project gets built. Another issue I have personally witnessed doing flow tests all over the country is the equipment used by water and fire departments. Many times maintenance is not a high priority and the devices just get thrown in the truck to bounce around the city each and every day. This can seriously affect the results this equipment will give you. Trust me, I also work for a fire department and I don't trust their flow test gear – I borrow from the engineering firm! Another issue I can attest to is that most firefighters just do not have much experience with flow testing.

What about the sprinkler contractor that is already working on the project? Once again, many sprinkler contractors also do not have much experience with flow testing. They can go through the motions and perform the test to get numbers, but they do not have the background to understand where the numbers come from. If the numbers do not match what should be produced by a water system, a sprinkler contractor may not catch it. This can cost the owner unnecessary money.

So what are the benefits to hiring a third party engineering firm, like Alternatives In Engineering (AIE)? First and foremost, we have the experience and ability to understand both the water supply system that is producing the test results and the fire sprinkler system the test is used to design. This allows us to immediately understand if the flow test results make sense based on the capability and operation of the water system. This is important because if we believe the water system is not performing properly, we can help the water department troubleshoot the system while we are still on site. This saves time and money. AIE has discovered closed valves, partially closed valves, and other system problems at various sites all over the country. Another advantage of our engineering experience is the ability to use our knowledge of water systems and fire sprinkler systems to suggest possible alternates to a site's water line layout that will satisfy fire water demands without the costly additions of fire pumps and/or water storage tanks. AIE can recognize possible alternates before visiting the site, which can allow us to perform simultaneous flow tests on two different water mains to see if there is a benefit to connecting them to supply the site. Some of our clients that use our services on a regular basis have realized savings on some projects that exceeded the costs of those services. The bottom line is using a third party engineering firm can help protect your bottom line!

Scott Repke is the Vice President of Engineering at Alternatives In Engineering. He has a bachelor's degree in Civil Engineering and holds Professional Engineer licenses in Fire Protection Engineering in twenty states. Mr. Repke has traveled throughout the United States performing flow tests and analyzing water supplies for numerous commercial and industrial projects.