City of Henderson
Fire Safety Engineering Informational Bulletin
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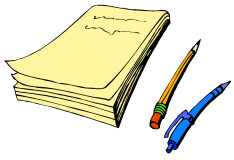
BULLETIN # 004 – REVISITED NOW BULLETIN # 117 UPDATE TO THE 1&2 FAMILY DWELLING FIRE PUMP TESTING CRITERIA

As the NFPA Standards do not provide testing criteria for acceptance testing of fire pumps that are used in 1 & 2 family dwellings, Fire Safety, with the assistance of an ad hoc industry committee, have developed criteria to use.

Attached to this Bulletin the document that contains the revised testing criteria.

The criteria is to be followed for acceptance testing of all fire pumps serving 1 & 2 family dwellings.



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CITY OF HENDERSON
BUILDING AND FIRE SAFETY DEPARTMENT
FIRE SAFETY DIVISION

1 & 2 FAMILY DWELLING
FIRE SPRINKLER PUMP
ACCEPTANCE TESTING CRITERIA

1. Hydrostatic test shall not be required on systems without a Fire Department Connection (FDC). The same "Leak" test that is performed on a 1 & 2 family dwelling sprinkler system shall be applied (working pressure).

2. The 1 and 2 family dwelling fire sprinkler pump tests may be performed during the rough sprinkler inspection. It will be the sprinkler contractor's responsibility to ensure that the discharge from the test does not damage any landscaping and/or building materials and that the water is discharged to safe location. The pump may be tested off temporary electrical power to avoid flowing water during the final stages of construction.

3. Flow test shall be accomplished by the following steps.

    a. The sprinkler riser shall be configured with a "Main Drain". The "Main Drain" shall be the same diameter as the smallest diameter branch line piping on the system.

    b. The sprinkler contractor shall supply a "Temporary Test Header". The "Temporary Test Header" shall be constructed with the same type and diameter pipe as the "Main Drain" with two orifices (broken sprinkler heads) for NFPA-13D and 13D Enhanced systems and four orifices installed for NFPA 13R Enhanced systems; and an outlet or outlets of sufficient size required for Modified NFPA 13 systems. The orifice size shall match the largest sprinkler orifice size installed on the system.

    c. The "Temporary Test Header" shall attach to the "Drain" piping from the system riser.

    d. Fully open the test valve and verify that the pump starts and is running. With the valve fully opened and water discharging fully from two to four orifices or outlets as required, note the pressure on the water gauge on the system riser. During the test the contractor may throttle the main drain valve to match the required flow per the number of outlets required to test.

    e. Flow water into one or more graduated, measured container(s) (e.g. garbage can with permanent marks noting the volume of water in gallons). Close the valve after one minute of water flow, or sooner if the container fills. Measure Modified NFPA 13 outlet(s) via pitot. An acceptable alternate method of measuring flow would be utilizing a pitot gauge or hose monster or other 'Approved' means.

    f. Check the approved set of fire sprinkler plans and approved pump data sheet. Measured flow (gallons per minute) must equal or exceed the required flow.

    g. Check the approved set of fire sprinkler plans and the hydraulic information block for the most demanding set of calculations. The pressure gauge reading shall be greater than or equal to the most demanding system pressure requirement.

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