North Collier Fire Control and Rescue District
Authority Having Jurisdiction (AHJ) Guidelines for Successful Review or Inspection

Article Number	FSPK 15-01
Effective Date	August 25, 2015
Subject	Uniform Reduction of Fire Flow Data for Fire Sprinkler Design
Objective	Change Current Requirements for Extrapolated Fire Flow to 10 Percent Reduction in Flow Test

BACKGROUND

Years ago, Collier County would not guarantee that their water system would have more than a static pressure of 50 psi. Therefore, the Fire Marshals determined that, in order to ensure fire systems would be operative throughout the life of the system, all fire hydrant flows would be extrapolated down to 50 psi static (minimum 5 psi for systems with 55 psi or less) for the design of the sprinkler system.

Today, Collier County no longer makes that statement and history has shown that in all but a few places, water supply pressures are not an issue. Additionally, the extrapolation formula hurt the systems with the highest static pressures and did very little to ensure adequacy for the lower pressures.

The issue was vetted through the Water Based Systems Committee, and the following Policy/Procedure proposed.

POLICY/PROCEDURE

All fire sprinkler systems shall be designed with the hydraulic calculation method.

System design shall be based on a hydrant flow test no older than 6 months performed as per the methodology in NFPA 291 “Recommended Practice for Fire Flow Testing and Marking of Hydrants”. The raw flow test data shall be adjusted by reducing the static and residual pressures by 10% as follows:

- Design Static Pressure = Raw Static Pressure x (0.90)
- Design Residual Pressure = Raw Residual Pressure x (0.90)

The measured residual flow shall remain unchanged.

The Authority Having Jurisdiction (AHJ) retains the authority to require additional adjustment for areas with deficient water supply.

CODE REFERENCE

NFPA 13 23.2.1.2 (See also Annex A)