SCOPE

This policy clarifies the Fresno Fire Department (FFD or Department) requirements for the preparation of hydraulic calculations for fire sprinkler systems designed for one and two family dwellings (NFPA 13D) within the City of Fresno and contract service areas. These requirements apply to both required and voluntary systems.

PURPOSE

This policy has been established to provide direction for designers and contractors for use when preparing fire sprinkler systems designed for one and two family dwellings in accordance with NFPA 13D – Standard for the Installation of Sprinkler Systems in One- and Two- Family Dwellings (2016 ed. With California Amendments).

BACKGROUND

As noted in the Fresno Municipal Code (FMC) Section 101.1.3, the fire code official is responsible for the enforcement of building standards and fire protection requirements relating to one and two family dwellings. Additionally, per the California Fire Code (CFC) and California Residential Code (CRC), the fire code official has the authority to formulate policies they deem necessary based upon local conditions related to fire sprinkler systems in one and two family dwellings.

REQUIREMENTS

Based upon the need for uniformity in application across the Department’s diverse service delivery area, and after careful deliberation, the Department has determined the following:

1. Because of the lower water pressures experienced by water purveyors in the City of Fresno and contract service areas, every fire sprinkler system to be installed in a one or two family dwelling shall be provided with hydraulic calculations in accordance with NFPA 13D.
2. The use of NFPA 13D Section 10.1.2 is prohibited. Designers and contractors shall use the City of Fresno prescriptive Water Supply Curves for Fire Sprinkler Design as the design basis for all fire sprinkler systems including those designed under NFPA 13D.

3. The use of any NFPA 13D section which uses the prescriptive pipe sizing method is prohibited.

4. When a single sprinkler head is protecting a single room and the spacing is different from that shown on the required two head calculation, the designer shall provide a single head hydraulic calculation.

REFERENCES

Fresno Municipal Code (FMC)
California Fire Code (CFC)
California Residential Code (CRC)
Fresno Fire Department Policy Water Supply Curves for Fire Sprinkler Design