

Brace Mechanical and Electrical Systems Per NFPA 13

Standardization is Conservative

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In my opinion, using NFPA 13 sway bracing is perfectly appropriate for piping and conduit components of mechanical and electrical systems. Since these systems are not emergency systems, I believe sway bracing them per NFPA 13 is prudent and conservative. The NFPA 13 sway brace standard is unrivaled in academic and engineering prestige. Therefore, implementing NFPA 13 bracing will accomplish standardization, economies of scale and product choice using listed/approved components.

Reasons to implement NFPA 13 sway bracing, include:

- The NFPA 13 standard defines the fire sprinkler system as an emergency system with an Importance Factor (Ip) of 1.5 and aligns its seismic load with that of the building structure.
- NFPA 13 is the standard referenced by FM, IBC, OSHPD, and the I-Codes and comports with and is recognized by ASCE 7 - NEHRP - USGS
- NFPA 13 methodology incorporates conservative simplifying assumptions
- Well respected and recognized world wide
- It is efficient and conservative to standardize the mechanics of sway bracing for all pipe and tube
- Eliminates expensive professional engineering
- NFPA 13 requires listed product
- Sway brace programs are available

I think it is always prudent to simplify, as simplicity enhances reliability. Implementing a uniform approach is conservative and prudent engineering, by producing a consistent standardized analogy incorporating a conservative methodology that is easier to quantify by engineers, contractors and AHJ's.



Kraig Kirschner is a third generation fire sprinkler contractor and a journeyman fitter. He is a Principal Member of NFPA 13 - Hanging and Bracing Technical Committee and serves on Standard Technical Panels of UL 203, UL 203A and FM 1950. Kraig is a Life Member of the National Fire Protection Association and was named Person of the Year in 2009 Fire Protection Contractor Magazine. He holds dozens of patents that enhance the installation and application of hangers and sway braces.