

4.20 Design of Fire Pump Suction Piping and Fire Pump Location (2016)

Reference: 2016 NFPA 20, Sections 4.15.6.1 and 4.2.3; SFFC 913

Purpose: Design of the fire pump suction pipe must be approved by the Fire Department. As required by NFPA 20, fire pump suction piping from the city main and fire water storage tank to the fire pump suction flange shall be designed and installed to avoid air pockets.

- I. The location of the fire pump SHALL be reviewed and approved by the San Francisco Fire Department before the site permit is approved and issued. **NOTE: The fire pump/room location is a critical component of the building's life safety design, and generally should be located at/near an exterior wall (nearest to point of connection).**
- II. Per SFPUC requirements, an approved Backflow Prevention Assembly is required to be installed as close to the point of connection as practical; **but not to exceed 25 feet from this point.**
- III. For new building installations, air pockets in the fire pump suction piping are not allowed.
- IV. Providing an automatic release valve for the air pockets, instead of avoiding air pockets, is NOT acceptable.
- V. For existing buildings, design of the fire pump suction piping must avoid air pockets. If it is impossible to do so, the San Francisco Fire Department will review these installations on a case by case basis.