

21 30 00 Fire Pumps

Revision 01/04/2019

Purpose:

The Architect and/or Engineer shall incorporate the Rice specific requirements indicated in this standard's section into their design. The Architect and/or Engineer shall further produce project specifications in line with industry standards that are updated to reflect these Rice specific requirements.

1. General Requirements

- a. All Rice University Buildings must be provided with an automatic sprinkler system, unless directed otherwise. Remodels should be upgraded with sprinkler systems.
- b. A hydraulic analysis needs to be done on each site to determine if a fire pump is required. Typically one and two story buildings do not require a fire pump. Typically four stories and higher do require a fire pump.
- c. If a fire pump is required it will also require:
 - i. A break tank with a minimum of 2,500 Gallons
 1. Break tank shall drain to the exterior of the building, not to an internal floor drain/floor sink.
 - ii. Two sources for electrical power
 1. Two independent and isolated electrical feeds
 2. One feed and a backup life-safety generator

2. Design Standards

- a. Fire Pumps are to be electrically driven.
- b. Rice prefers not to have the fire pumps, jockey pumps and controls as a skid mount package.
- c. Fire Pumps shall be placed on housekeeping pads.
- d. Install piping between fire water break tank and fire pump suction with straight pipe run.
- e. Fire pump shall have a meter loop to the fire water storage tank. This return line shall include a flowmeter for code compliance testing.
- f. Fire pumps and jockey pumps shall be painted red.
- g. Horizontal split case fire pumps shall be utilized.
- h. A test header shall be installed for pump testing.
- i. Installation shall comply with current adopted NFPA and City of Houston standards.
- j. Patterson pumps are not to be used for fire pump applications.