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.