21 00 00 - Fire Suppression
Note: This document is a listing of University requirements and is not a complete specification. Consultant shall incorporate these requirements into a full technical specification.

General
Generally, the University requires that the consultant prepare a specification for a Contractor to design and construct (design-build) the fire protection systems to meet the specifications contained herein, including the various design and performance criteria delineated and to be responsible for the actual performance of the system according to these criteria. Verify with Project Manager that project will be design-build.

Quality Assurance
- Contractor to have C-16 license.
- Work shall be done in accordance with the N.F.P.A., the California Administrative Code, the Campus Standards including those of the Deputy State Fire Marshal, the California Building and Fire codes, and the requirements of the California State Fire Marshal. Plans shall be stamped by a California State licensed Fire Protection Engineer or mechanical engineer.

Submittals
- Provide standpipe and wet pipe fire sprinkler systems installation shop drawings, component submittal sheets and hydraulic calculations for approval of University representative and State Fire Marshal. University's Representative shall submit to Designated Campus Fire Marshal who is State Fire Marshal Representative. Do not begin installation until approval has been received.
- Shop drawings shall indicate standpipe and sprinkler assembly, wiring diagrams, including zone control and detection, flow, tamper switches and supervisory devices, inspector's test valve, fire department connection, post indicating valve, etc.
- Shop drawings shall indicate fire protection system connection to site water system including check assemblies.
- Contractor shall notify fire alarm subcontractor if water flow or tamper switch or P.I.V. devices are relocated from locations shown on bid documents.

Design Criteria
- Contractor may with permission of the Designated State Fire Marshal, in lieu of the hydraulic calculations specified, use the prescriptive sizing method outlined in NFPA No. 13.
- The sprinkler system shall provide complete automatic wet-pipe sprinkler protection throughout the building including the attic space.
- The sprinkler system shall be zoned. Generally a zone should cover no more than a single floor.
- The University's Representative shall work with the Deputy State Fire Marshal to determine the Project hydraulic requirements (including occupancy classification), allowing for future expansion of system, system pressure variations, and the desired margin of safety.
• The following minimum pressure values should be used for sprinkler system design regardless of available site pressure values.
  o Static - 50 psi
  o Residual - 40 psi
  o Flow pressure - 35 psi at 1000 gpm
• Sprinklers shall be provided in combustible construction both below and above ceilings. Quick response heads shall be provided where required by the State Fire Marshal. On-off heads shall be provided in extra hazard areas.
• Backflow prevention - Conform to AWWA recommendations for protection of potable water system. Currently this consists of a single check valve assembly.
• Gongs/Bells - Use fire alarm system horns for annunciation of flow switches and monitoring of tamper switches. Do not install water gongs or bells.
• Fire protection water connections to a building shall be made with a Post Indicating Valve, check valve and fire department connection that are unique to that building. For very small clusters of buildings, an exception to this policy may be made by the Fire Marshal after receiving a written request by the Project Manager and after evaluation of the site plan.
• Access to main shutoff valves shall be through no more than one door which is located on the exterior of the building.

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