Sprinkler Design

Description:
The purpose of the section is to highlight the current applicable UMCP Design Standards for the design and installation of sprinkler systems.

Related Sections:
- TBD

Effective Date:
- July 10, 2009

Applicable Standards:
- TBD

General Requirements:

Sprinkler Systems Costs

Sprinkler System in New Construction
In cases of new construction, the life safety code mandates sprinklers, so there is no cost premium.
- Sprinkler System premium cost issue arises in the case of considering sprinkler systems in the smaller renovation projects - where the renovation cost is less than the cost of a new building - i.e. the codes do not mandate sprinklers and the University is free to use a minimal compliance to codes strategy in the (understandable) pursuit of lowest cost construction.
- To summarize - sprinkler systems, even where not specifically required by code, can sometime avoid the cost of other, often costly, architectural modifications to meet code in renovation projects.

Sprinkler System Challenges
By way of illustration, it is not unusual for a renovation project to pose the following design (and cost) dilemma:
- Double loaded corridors requiring a fire rating of the corridor walls
- Non-rated doors opening to the corridor
- A required retrofit to rated corridor doors, with door closers to establish and maintain the fire rating
  - If doors are left open, then fire rated doors are no longer considered fire rated
- A programmatic requirement to keep the fire rated corridor doors open, begetting:
  - A need for electric door hold-open devices, tied into the fire detection/alarm system is expensive and a tripping hazard

Sprinkler System in Building Renovation
- In similar cases on campus, installing a sprinkler system has been shown to cost the same, or less, than making all the required architectural modifications for code and program compliance.
- Furthermore, in the stairwells of many older campus buildings, there will already exist a (university installed) fire standpipe. This amounts to a head start on the cost of a sprinkler system installation.
- Thus, before opting for no sprinklers to control cost, UMCP will exercise and require the A/E to exercise due diligence to examine the total cost of code compliance.
- The adjusted differential cost even, if a premium, may be tolerable in light of the other life safety advantages afforded by sprinklers.