

Top 10-Fire Safety

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1. **Table of Fire Resistance Ratings** – HECOM requires that a table of all fire resistance ratings be provided. This assists reviewers and, more importantly, contractors and inspectors in ensuring fire resistance assemblies are installed where required and in accordance with the design. An example: HECOM 8.8.8. #5.

ELEMENT	RATING	DESIGN REFERENCE	DETAIL LOCATION
Columns	2 hour	UL# XXXX	3/S-2
Floor-Ceiling Assembly	2 hour	IBC Table XXX, Item X.x	4/S-7
Elevator Shaft	2 hour	UL# XXXX	Partition Type 2/A-4.2
Top of Elevator Shaft	2 hour	UL# XXXX	5/S-7
Use Group Separation	1 hour	IBC Table XXX, Item X.x	Partition Type 4/A-4.2
Etc.			

2. **Design References for Fire Resistance Ratings** – Provide specific designs that will achieve fire ratings. Designs may be from third-party testing agencies such as UL or accepted engineering practice such as designs from the Gypsum Association or the International Building Code. (VUSBC Section 703.2)
3. **Interior Finishes** – Specifications must include the required fire test response characteristics (flame spread index, smoke developed index, critical radiant flux, etc.) for all interior finishes. This is particularly problematic for wood wall finishes but is achievable when proper specifications are provided. (VUSBC Chapter 8)
4. **Through-Penetration Firestop Systems** – When penetrating a fire resistance-rated assembly a fire rated penetration assembly is required. When penetrating a floor assembly the through penetration assembly requires both F-ratings and T-ratings. A listed assembly is required to be provided with plans. See VUSBC Section 714 for requirements and for exceptions.
5. **Mixed Use Occupancies** – The Building Code provides a number of alternatives to designers related to mixed uses including non-separated, separated with fire barriers, and separation of buildings. The code summary should specify method chosen by designers. (VUSBC Section 508)
6. **Spray on Fire Proofing**-Spray on fire proofing is used to fire rate roof/floor assembly. Installation of hangers, relocation of partitions and penetrations will disturb the existing fire proofing. Disturbed fire proofing is required to be repaired. The statement repair to “same as before” will not be sufficient. Provide repair detail. Identification of existing SFRM material will be required and a patching material that is compatible shall be chosen. Identify the maximum area to be repaired consistent with patching material instructions. **[FDG 1.4.4.1.3, 4.2.4, VUSBC 704.13].**

7. **Show Sprinklers on the RCP Drawings** – Required by HECOM 8.8.7, this is necessary to ensure sprinklers are not obstructed by soffits, lights, HVAC diffusers, etc. (NFPA 13)
8. **Fire Alarm and Sprinkler Shop Drawings** – Shop drawings shall be reviewed and approved by the A/E of record prior to submittal to the University Building Official for approvals. (HECOM 8.17)
9. **Drawing Submittals:** Each design phase; Schematic, Preliminary, and Construction Document, require a specific detail of scope in their submittal for OUBO review. The HECOM manual, section 8.6, 8.7, and 8.8 details each design phase’s required submittal for “fire protection”. In addition, NFPA 13 also has specific “plans and calculations” that shall be meet as part of the “fire protection” submittals. (*HECOM 8.6, 8.7, 8.8 and 2010 edition NFPA 13 Chapter 22*)
10. **Water Supply Flow Testing:** Indicate the water flow tests results, the date and time taken, and who conducted the test. A small scale drawing showing the locations of fire pumps, fire water tanks, test and flow hydrants and routing of underground pipe shall be included in submittals. Where a water flow test is performed for the purpose of a system design, the test shall be conducted no more than 12 months prior to working plan submittal. (*FDG 6.5.2.2 #1 and 2010 edition of NFPA Chapter 22.2*).

