

ICC Code Technology Committee

BFP – ROOF VENT STUDY OUTLINE (Approved by SG 2/22/07)

Objective:

- Review IBC/IFC proposals to delete the requirements for smoke/heat vents
- Review IBC proposal to delete provision which allows extended travel distance in storage and industrial occupancies

Work Plan:

1. Discuss the issue of smoke/heat vents as part of a balanced fire protection design
2. Review the current IBC/IFC requirements for smoke/heat vents and draft curtains
 - a. Determine purpose/intent of code requirements for smoke/heat vents
 - b. Discuss the expected performance of designs complying with the current IBC/IFC provisions for smoke/heat vents and draft curtains
3. Review regional legacy model building and fire code provisions for the installation of roof vents and draft curtains
4. Review of current and previous NFPA 204/NFPA 204M provisions for the installation of roof vents and draft curtains in both sprinklered and unsprinklered buildings.
5. Review of listing requirements for smoke/heat vents (UL/FM/ICC)
6. Review activation/operating mechanisms for smoke/heat vents
7. Review of sprinkler mechanisms for controlling and extinguishing a fire
8. Review of NFPA 13 commentary on the ability of standard sprinklers to control and extinguish fires in (rack) storage occupancies
9. Review of NIOSH 2005-132 recommendations for fire fighting operations in buildings constructed with trusses
10. Review NFPA investigation report on fire in bulk retail facility on March 19, 1998 Heat/Smoke Vent Study Group 1 January 12, 2007
11. Review NFPA large loss fire reports involving very large factory/warehouse buildings with/without smoke/heat vents and/or automatic sprinklers
12. Review FMRC reports on testing of the interaction of sprinklers and draft curtains (1994)

13. Review of NIST reports on the National Fire Protection Research Foundation testing at Underwriters Laboratories (1998)
14. Review of Beyler/Cooper paper titled "Interaction of Sprinklers with Smoke and Heat Vents" (1999)
15. Review European approach to the use of/requirements for smoke/heat vents
16. Review Hughes Associates computer modeling study
17. Interview various fire departments that have a large stock of very large area factories/warehouses to determine their SOP for such buildings provided with smoke/heat vents