



UNIVERSITY OF  
MARYLAND  
*Department of Fire Protection Engineering*



# Implementing Fire Safety Designs

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Associates, Inc.



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## Agenda

- Concepts of Fire Safety Design
- Code/Prescriptive-Based Approach
- Performance-Based Design Approach
- Engineering Methods



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# Concepts of Fire Safety Design

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### Concepts of Fire Safety Design

- Overview
- Concepts
- Goals
- Approaches
- Additional Resources

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### Concepts of Safety Design

- Protection Options
  - Install sprinklers/detection
  - Alarm and mass communication
  - Provide exits and where
  - Smoke control
    - Passive
    - Active
  - Protect structural features
    - Passive
    - Active
  - Other




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### Goals of Fire Protection

- Fundamental
  - Life safety
  - Property protection
  - Continuity of operations
  - Environmental protection
- Other
  - Code compliance
  - Reduce costs
  - Maximize flexibility
  - Limit damage to historic fabric




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**Approaches**

- Evaluation Methods
  - Code/Prescriptive-Based
  - Performance-Based






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**Overall Approach to Fire Protection**

- Level of code compliance
- Ability to meet goals & objectives
- Appropriateness for area/building protected
- Reliability of proposed system/approach
- Severity of fire hazards
- Feasibility & cost
- Engineering judgment



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**Further Guidance**

- SFPE Handbook of Fire Protection Engineering*
- Fire Protection Handbook*

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### Summary of Concepts



- Concepts of Fire Protection
  - Many options for protection
  - Stakeholders' needs effect choice
- Two approaches to Fire Protection
  - Code/Prescriptive
  - Performance
- Handbooks exist for additional guidance

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