Advanced Certificate in Bridge Fire Protection

Human behavior in fire emergencies

Aboveground storage tank (AST): A tank that is situated above the ground and is used to store flammable or combustible liquids. ASTs are subject to fire codes and regulations to minimize the risk of fire.

Automatic fire sprinkler system: An engineered system of water-filled pipes and automatic sprinklers that are designed to detect and suppress fires. When a predetermined temperature is reached, the sprinkler heads activate, releasing water to control or extinguish the fire.

Bonding: The process of connecting two conductive objects together to ensure electrical continuity and prevent the buildup of static electricity, which can ignite flammable vapor or dust.

Building egress: The path of travel that occupants must take to exit a building during an emergency. Building egress includes doors, corridors, stairs, and evacuation routes.

Combustible liquids: Liquids that have a flashpoint at or above 100 degrees Fahrenheit (37.8 degrees Celsius) but below 200 degrees Fahrenheit (93.3 degrees Celsius). These liquids are subject to fire codes and regulations.

Containment: The ability to restrict the spread of a fire within a defined area or space, such as a room or compartment.

Compartmentation: The division of a building into smaller, fire-resistive compartments to contain a fire and prevent its spread.

Egress design: The process of planning and designing building egress systems to ensure safe and efficient evacuation during a fire emergency.

Emergency planning: The development of plans and procedures to prepare for, respond to, and recover from fire emergencies.

Exit access: The portion of an egress system that leads to an exit or a series of exits.

Exit enclosure: A fire-resistive compartment that provides a protected path of travel from one story to another or to the exterior of a building.

Fire alarm system: An engineered system of devices and components that detect and alert occupants to the presence of a fire.

Fire barrier: A fire-resistive assembly that restricts the spread of fire between adjacent spaces.

Fire code: A set of regulations that govern the design, construction, maintenance, and use of buildings and facilities to minimize the risk of fire.

Fire compartmentation: See compartmentation.

Fire detection system: A system that detects the presence of a fire and activates alarms, sprinklers, or other suppression systems.

Fire department connection (FDC): A connection point for fire department apparatus to supply water to a building's fire protection system.

Fire endurance: The ability of a building component or assembly to withstand fire exposure for a specified period of time.

Fire exit: An exit that provides a means of egress from a building during a fire emergency.

Fire hazard: A situation or condition that poses a risk of fire.

Fire load: The total amount of heat that would be released if all combustible materials in a building were to burn.

Fire partition: A fire-resistive wall that separates buildings or portions of buildings.

Fire protection engineer: A professional engineer who specializes in the design, analysis, and implementation of fire protection systems and strategies.

Fire protection rating: The time in hours that a fire protection system or assembly can resist fire exposure.

Fire protection system: An engineered system of devices, components, and assemblies that are designed to detect, suppress, or control fires.

Fire protection water supply: The source of water used to supply fire protection systems, such as fire hydrants, tanks, and pumps.

Fire resistant: The ability of a building component or assembly to resist fire exposure and maintain its structural integrity.

Fire retardant: A chemical or material that is applied to a surface to reduce its flammability.

Fire resistance: The ability of a building component or assembly to withstand fire exposure and maintain its function.

Fire resistance rating: The time in hours that a fire-resistive building component or assembly can resist fire exposure.

Fire safety: The practices and procedures used to minimize the risk of fire and protect people and property.

Fire separation distance: The distance between a building and a property line or another building.

Fire sprinkler system: See automatic fire sprinkler system.

Fire suppression: The use of water, foam, or other agents to control or extinguish a fire.

Fire triangle: A model that explains the three elements necessary for a fire: fuel, heat, and oxygen.

Flame spread: The rate at which a fire spreads across a surface.

Flashpoint: The lowest temperature at which a liquid produces flammable vapor.

Fuel load: The amount of combustible materials in a building or space.

Hourly fire rating: See fire resistance rating.

Ignition source: A spark, flame, or other source of heat that can initiate a fire.

Life safety: The protection of human life from fire and other hazards.

NFPA: The National Fire Protection Association, a non-profit organization that develops and promotes fire codes and standards.

Passive fire protection: Fire protection measures that are built into a building, such as fire-resistive walls and floors.

Smoke detection system: A system that detects the presence of smoke and activates alarms, sprinklers, or other suppression systems.

Smoke management: The use of engineering principles and technologies to control the movement and behavior of smoke during a fire emergency.

Standpipe system: A system of pipes and valves that provide a source of water for fire department use.

Structural fire protection: The use of materials, coatings, and designs to protect building structures from fire damage.

Suppression system: See fire suppression.

Travel distance: The distance that occupants must travel to reach an exit during a fire emergency.

Upholstered furniture: Furniture that is covered in fabric or other combustible materials.

Ventilation: The process of providing fresh air to a building or space to reduce the risk of fire and smoke inhalation.

Volatile organic compounds (VOCs): Organic chemicals that evaporate at room temperature and can contribute to indoor air pollution and fire hazards.

Water supply: The source of water used for fire protection, such as fire hydrants, tanks, and pumps.