307.2 Outline Specification Example – Fire Suppression

Division 210000

1.1 CODES AND STANDARDS

A. Codes:

1. The Kentucky Building Code (KBC)
2. Applicable Local Codes and Ordinances
3. National Electrical Code (NEC)
4. Occupational Safety and Health Administration (OSHA)

B. Standards:

1. American National Standards Institute (ANSI)
2. American Society for Mechanical Engineers (ASME)
3. American Society for Testing and Materials (ASTM)
4. American Water Works Association (AWWA)
5. National Electrical Manufacturers Association (NEMA)
6. National Fire Protection Association (NFPA)
7. Underwriters' Laboratories (UL)

1.2 DESIGN CRITERIA

A. Available fire-hydrant flow information (from the Clinical Translational Laboratory on South Hancock Street) indicate the following conditions:

1. Static Pressure at Residual Fire Hydrant R: 89 psig (kPa).
2. Measured Flow at Flow Fire Hydrant F: 10,000 gpm (L/s).
3. Residual Pressure at Residual Fire Hydrant R: 20 psig (kPa).

B. Sprinkler Occupancy Hazard Classifications:

1. Building Service Areas: Ordinary Hazard, Group 1.
2. Electrical Equipment Rooms: Ordinary Hazard, Group 1.
3. General Storage Areas: Ordinary Hazard, Group 1.
4. Mechanical Equipment Rooms: Ordinary Hazard, Group 1.
5. Other Areas: Light Hazard.

C. Minimum Density for Automatic-Sprinkler Piping Design:

1. Light-Hazard Occupancy: 0.10 gpm over 1500-sq. ft. (4.1 mm/min. over 139-sq. m) area.
2. Ordinary-Hazard, Group 1 Occupancy: 0.15 gpm over 1500-sq. ft. (6.1 mm/min. over 139-sq. m) area.
3. Special Occupancy Hazard: As determined by authorities having jurisdiction.

1.3 FIRE PROTECTION SYSTEMS

A. Standpipe and Sprinkler System

1. Provide standpipes in each stair in the building and at other locations per code. Each intermediate stair landing shall have 2-1/2" fire department hose valve.
2. Provide the building with a complete wet pipe sprinkler system. Provide dry sprinkler systems or glycol loops for any area subject to temperatures below 32 deg. F.

END