Chapter 21
FIRE SUPPRESSION DRAWINGS

SECTION 2101 – GENERAL

2101.1 Application: The standards of this chapter apply to all fire suppression designers.

2101.2 General: A fire suppression drawing delineates equipment, materials, components, piping and accessories to convey liquids and gases for the construction of fire suppression systems. The drawings shall indicate complete design. Drawings shall be complete and coordinated with other disciplines to ensure there are not conflicts and that the systems can be installed as delineated. Section 1804 Flow Diagram Requirements and Section 1805 Drawings for Piping shall apply to the fire suppression drawings as needed.

2101.3 Design / Build: With prior approval of the CSU Project Manager, fire suppression systems may be implemented through design / build performance specifications. The Design Consultant shall be responsible for overall system drawings, calculations, general compliance with relevant code and coordination with other disciplines to ensure that the systems specified can be installed without spatial conflict.

SECTION 2102 - SEQUENCE

2102.1 Fire suppression Drawings are divided into specific groups. Drawings within a group are numbered consecutively, ie F2.01, F2.02, etc. The group designation shall always remain the same, regardless of the size or scope of the individual project. If specific projects do not include work related to a group, that group shall be eliminated from the drawings. When appropriate, the Consultant shall obtain written permission from the Project Manager to vary the sequence.

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SECTION 2103 – FIRE SUPPRESSION FLOW DIAGRAMS

2103.1 Fire suppression flow diagrams shall illustrate the following:

A. Standpipe systems and fire risers.
B. Flow direction
C. Valves and alarms
D. Automation and temperature controls

SECTION 2103 - FIRE SUPPRESSION

2103.1 Drawings: Fire suppression drawings delineate the components required to provide fire suppression to the design facility. This includes all methods of fire suppression, wet-pipe, dry-pipe, deluge systems, carbon dioxide systems, mist systems, foam systems, pre-action systems, fire extinguishers, fire hoses and standpipes. These drawings shall establish procedures for construction of
the fire suppression system design, including water connections to the fire main, sprinkler heads, piping, alarms, valves, etc. The delineation for these drawings shall incorporate dimensions, codes, conventions, schedules, diagrams, etc., in describing the fire suppression system design. To aid in checking drawings and resolving potential interferences among other components, such as ductwork, electrical equipment, etc.) The fire suppression drawings shall be prepared to the same scale as the site plans and floor plans.

A. Provide a scaled site plan showing the outline of the building and public water supply information (pipe main size and location, fire hydrant locations)

B. Identify where and when the hydrant flow information was obtained that the sprinkler system is based upon. Show actual hydrant flow test information.

C. List the sprinkler information number (SIN) in tabular form with sprinkler heat type, model number, quantity, etc. in the sprinkler head tabulation information block

2103.2 Detailing: The following rules shall apply when detailing these drawings:

D. Drawings shall be prepared showing routing of fire suppression piping. The preferred scale for arrangements is 1/4” = 1'-0”.

E. To aid in checking drawings and resolving potential interferences among other components, such as ductwork, electrical equipment, etc.) The fire suppression drawings shall be prepared to the same scale as the drawings of the other disciplines.

F. Fire suppression drawings shall include pipe sizes and routing, direction of flow, test connections points, riser diagrams showing valves and alarms, fire extinguisher and hose locations.

G. Materials for piping, valves, sprinkler heads, alarm devices and fire department connections shall be covered in the technical specifications of Division 21.

H. Density and remote square footage requirements shall also be indicated.

SECTION 2104 – FIRE SUPPRESSION DESIGN

2104.1 General: Prior to commencing design, the Consultant shall study and be familiar with the CSU Construction Standards, Part III, Divisions 20 General Mechanical and 22 Fire Suppression, along with all other parts of the CSU Construction Standards (Administrative, Design and Construction Standards), current edition, as posted on the Facilities Management website.

END OF CHAPTER 21