



**ROANOKE COUNTY DEVELOPMENT SERVICES**  
**Office of Building Safety**  
**COMMERCIAL FIRE SUPPRESSION**  
**SUBMITTAL CHECKLIST**



**Project Name:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Occupancy**  
**Address:** \_\_\_\_\_

**Owner:** \_\_\_\_\_ **Telephone:** \_\_\_\_\_

**Occupant/Tenant:** \_\_\_\_\_ **Telephone:** \_\_\_\_\_

**Owner's Address:** \_\_\_\_\_

**Designer: (print)** \_\_\_\_\_ **Signature** \_\_\_\_\_

**Address:** \_\_\_\_\_

**Telephone:** \_\_\_\_\_ **Fax:** \_\_\_\_\_ **Email:** \_\_\_\_\_

**This checklist is to accompany all plan submittals. Complete set of drawings, scaled to 1/8" or 1/4" per foot.<sup>2</sup> Design, layout, and installation is to be done in accordance with the current edition of the Uniform Statewide Building Code and all adopted standards.\* Information on shop drawings should include all of the following applicable items, and please mark N/A where appropriate:**

**Y N/A**

- Floor plans dimensioned showing, in plan view, locations and spacing of all devices, and the locations of all walls and/or partitions. Please indicate construction of the protected enclosure and partitions and how the rated assemblies will be maintained when penetrated by equipment and/or wiring, per 2021 VCC.
- Point of compass (i.e. direction of north)
- Enclosure cross section, full height or schematic diagram, including location of construction of building floor/ceiling assemblies above and below, raised access floor and suspended ceiling.
- Type of agent being used by brand name and chemical nomenclature; please include design extinguishing or inerting concentration of mixture as applicable
- Description of occupancies and hazards being protected, designating whether or not the enclosure is normally occupied
- Description of the agent storage containers used including internal volume, storage pressure and nominal capacity expressed in units of agent mass, or volume at standard conditions of temperature and pressure
- Description of nozzle(s) used including size, orifice port configuration, and equivalent orifice area
- Description of pipe and fittings used including material specifications, grade and pressure rating



- Description of wire or cable used including classification gauge (AWG), shielding, number of strands in conductor, conductor material and color-coding schedule. Segregation requirements of various system conductors shall be clearly indicated. The required method of making wire terminations shall be detailed
- Description of the method of detector mounting
- Equipment schedule or bill of materials for each piece of equipment or device showing device name, manufacturer, model or part number, quantity and description
- Plan view of protected area showing enclosure partitions (full and partial height); agent distribution system including agent storage containers, piping, nozzles; type and location of pipe hangers; detection, alarm, and control system including all devices and schematic wiring interconnection between them; end-of-line device locations; location of controlled devices such as dampers and shutters; location of instructional signage
- Isometric view of agent distribution system showing the length and diameter of each pipe segment; node reference numbers relating to the flow calculations; fittings including reducers and strainers; orientation of tees, nozzles including size, orifice port configuration, flow rate and equivalent orifice area
- Details of each unique rigid pipe support configuration showing method of securement to the pipe and to the building structure<sup>1</sup>
- Manufacturer's data sheets on all equipment used in the system. Where manufacturer's data sheets over multiple devices, indicate those devices used in the system.
- Complete step-by-step description of the system sequence of operations including functioning of abort and maintenance switches, delay timers, and emergency power shutdown
- Complete calculations to determine volume and quantity of agent and capacity of backup batteries, if necessary. Flow calculations shall be performed in accordance with approved engineering methods prescribed by the appropriate standard. The system shall be within the manufacturer's listed limitations

<sup>1</sup>Piping hanging supports in areas with a seismic design category of other than A or B must be reviewed and approved by the registered design professional in accordance with VCC and ASCE 7, section 9.6.

<sup>2</sup>Fire protection system design is considered engineering work and must be done under the supervision of the design professional of record, where applicable with State Law. Fire suppression shop drawings must first be submitted to the design professional, where applicable and stamped "approved" prior to submittal to our office

