

Plan review checklist for Hood Fire Suppression Systems

- Plans are drawn to scale or suitably dimensioned**
 - To Scale:**
 - Scale is adequate to represent the system and provide necessary information
 - Scale is simple enough to provide ease of calculation. (Architect or Engineering scales are recommended.)
 - Dimensioned:**
 - Length and width of exhaust hood
 - Length and width of exhaust duct
 - Distance of exhaust duct from end of exhaust hood
 - Dimension of transition ducts (if applicable)
- Provide sufficient detail to identify the hazard**
 - Identify type of hood (V-Bank or Single Plenum)
 - Type of cooking devices and dimensions of cooking surfaces. (If the fryer has a dripboard, you need to identify it as such and provide the dimensions of the dripboard. Where burners of ranges are covered by a backshelf, you should provide the dimensions of the backshelf and show it on the plans.)
 - Identify the energy sources for each appliance (i.e. gas, electric, solid fired, etc.)
 - Additional information as may be required by the system manufacturer (see the manufacturer's design, installation, and maintenance manuals for special design concerns relating to the system installation.)
- Provide system details**
 - Identify the pipe size and pipe type of all pipe sections.
 - Identify the length of each pipe. (The length of branch line piping shall be within 3" +/- tolerance of the field installed length. The length of supply line piping shall be within 6" +/- tolerance of the field installed length.)
 - Approximate nozzle locations are shown on the plans
 - Manufacturer's design and installation data is provided to show the specific locations of nozzles with respect to the cooking surface.
 - The piping arrangement is shown using an isometric (3-dimensional) view or a coordinated top, front, and side view are provided. (If a coordinated top, front, and side view are used, the contractor should verify that each view shows all of the required piping and identifies the length of each pipe. Top, front, and side views shall not provide conflicting information as to the length or arrangement of pipes.)
 - The system design shall comply with the manufacturer's design, installation, and maintenance manual.
- Provide information pertaining to:**
 - The location and function of detection devices
 - Operating devices (i.e. manual pull stations, etc.)
 - Auxiliary Equipment (i.e. gas shutoff valves, electrical shutoff switches, alarm activation, etc.)
 - Electrical circuitry
- Provide a floor plan showing the location of the agent suppression tank(s), gas shutoff valve, and manual pull station in relation to the exhaust hood and exit(s).**

Fire Alarm Submittal Checklist

The following Fire Alarm Submittal Checklist is required information for fire alarm permit review. Use of this form does not guarantee that plans will be accepted on the first submittal, but will aid in reducing the number of resubmittals required due to lack of information or conflicting information being provided. **This checklist should not be considered to be all inclusive. Additional information may be required. Use of this checklist will not eliminate the requirement for a good knowledge and understanding of NFPA 72, National Fire Alarm Code, and/or NFPA 70, National Electrical Code.**

For issuance of the fire alarm permit and prior to fire alarm concealment inspections, the following information and/or forms shall be provided:

- Mail-in permit forms (if used) are correct and complete. All addresses, license data, etc. correct.
- Include payment for permit fees.
- Three (3) sets of plans showing the following items are attached:
 - Candela intensities of all strobe devices
 - Unique device numbers for **all** devices (horns, strobes, pull stations, smoke detectors, etc.)
 - Proposed* point to point wiring and *proposed* location of junction boxes.
 - Symbol legend showing the meaning of all symbols used.
 - Plans drawn to an approved scale or showing all dimensions.
 - Occupancy labels provided on all rooms.
 - Plans neat and professionally drawn.
 - Plans show the location of all devices. (initiating, notification, power supplies & panels, etc.)
 - Strobe locations in accordance with NFPA 72, 7.5.4.3.1(a) or (b).
 - Strobes provided in all common use areas (As identified in Bulletin #2 for Visual Alarms as provided by the U.S. Architectural and Transportation Barriers Compliance Board.)
 - Plans signed and sealed by an engineer if system cost is more than \$5,000.00. Copy of signed contract attached to fire alarm layout plans if system cost is \$5,000.00 or less.

Three (3) sets of the following information shall be provided at least 10 working days prior to the scheduling of the fire alarm final inspection:

- Fire alarm riser diagram showing the circuit arrangement of all devices (identified by device number).
- Provide battery calculations for **all** control panels, power extender panels, dialers, etc.
 - Use manufacturer's forms for calculations when available.
 - Check calculations to insure that all devices are accounted for.
 - Check calculations against data sheets to insure that all device values are correct.
 - Check calculations to insure that math is correct.
 - Check calculations to insure that circuits or panels are not overloaded or extenders required.
- Provide submittal data for all devices to be installed.
 - Initiation Devices (pull stations, smoke detectors, waterflow switches, etc.)
 - Notification Appliances (Horns, Strobes, Horn/Strobes, Speakers, etc.)
 - Control panels (FACP's, Communicators, power extender panels, etc.)
 - Other devices or components

I attest that the information noted above has been provided for review and approval and take full responsibility for it's content.

Signature of contractor or contractor's representative

Date

Fire Sprinkler Submittal Checklist

The following Fire Sprinkler Submittal Checklist is required information for fire sprinkler permit review. Use of this form does not guarantee that plans will be accepted on the first submittal, but will aid in reducing the number of resubmittals required due to lack of information or conflicting information being provided. **This checklist should not be considered to be all inclusive. Additional information may be required. Use of this checklist will not eliminate the requirement for a good knowledge and understanding of NFPA 13, Standard for the Installation of Fire Sprinkler Systems, and/or other appropriate NFPA standards.**

For issuance of the fire sprinkler permit and prior to fire sprinkler concealment inspections, the following information and/or forms shall be provided:

- Mail-in permit forms (if used) are correct and complete. All addresses, license data, etc. correct.
- Include payment for permit fees.
- Plans showing the following items are attached:
 - Symbol legend(s) showing the meaning of all symbols used and identifying the make, type, nominal orifice size, and temperature rating of all fire sprinklers.
 - Plans drawn to an approved scale or showing *all* dimensions.
 - Occupancy labels provided on *all* rooms.
 - Plans neat and professionally drawn.
 - Full height cross section showing building construction details provided for new sprinkler systems. (Not required for adds and relocates.)
 - Plans shall show all walls, partitions, soffits, or other building construction that will affect the water distribution of fire sprinklers.
 - Sprinkler heads spaced and located in accordance with the applicable NFPA standards.
 - Total area protected by each system on each floor.
 - Approximate capacity in gallons of each dry pipe system.
 - Nominal pipe size and cutting lengths of pipe (or center-to-center dimensions) for all sprinkler piping. Where typical branch lines prevail, it is necessary to size only one typical line.
 - Pipe type(s) and schedule(s) of wall thickness.
 - For adds and relocates, enough of the existing system shall be shown to make all conditions clear.
 - Hydraulic reference points corresponding with comparable reference points in the hydraulic calculations.
 - Any other information identified in section 22.1.3 of the 2007 edition of NFPA 13 that may be deemed appropriate for review by the fire protection specialist.
 - Plans and hydraulic calculations signed and sealed by engineer if system involves more than 49 heads.
- Provide hydraulic calculations supporting pipe sizing. Calculations shall be checked to insure that they are complete and correct. This shall include, but not be limited to pipe sizes, pipe lengths, number and types of fittings, densities, piping arrangement, Hazen-Williams C-factors, elevations, and water flow availability.
- Provide exact specifications for any specialized devices or equipment which will have an effect of the fire sprinkler hydraulic calculations.
- Submittal data for all fire sprinkler equipment to be installed, including but not limited to: fire sprinklers, backflow prevention devices, fire sprinkler piping, valves, fittings, and any other specialized devices.

I attest that the information noted above has been provided for review and approval and take full responsibility for it's content.

Signature of contractor or contractor's representative

Date

Plans for Spray Booth Permit Application

Plans for spray booth permit applications shall be neatly drawn to an approved scale ($3/32'' = 1'-0''$ minimum for floor plan layouts, $1'' = 50'-0''$ minimum for site plan layouts) on sheets of uniform size, and shall show the following information:

Spray booth construction details:

- type and thickness of material (example: single thickness sheet metal, 0.0478 in. thick)
- how material is to be joined (examples: welded, riveted, screwed, etc.)
- Booth dimensions (shown in 3 dimensional view, include plenum space.)
- Size of exhaust duct
- Detail of exhaust duct termination above roof
- Capacity of exhaust and supply fans and how air pressure equalization is to be achieved

Floor plan layout:

- Location of spray booth in building
- proximity of the spray booth to other operations
- construction features for rated walls used to separate processes and their locations
- routing of all supply and exhaust ducts (exhaust duct shall not penetrate rated walls)
- Building construction features (cross section showing wall and roof construction)
- detail of clearance reduction system to be used to meet separation requirements to combustible construction

Site plan or roof layout plan:

- Show distances from the termination of the exhaust outlet to:
 1. adjacent buildings
 2. parking areas
 3. adjacent property lines
 4. adjoining exterior wall openings (doors, windows, etc.)
 5. air intake openings
 6. combustible construction