



Shoreline Fire Department

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Shoreline Fire Department Standard SHFDS 8.0

UL 300 Wet Chemical Suppression Systems Revised 11/17/2025

8.0 General

8.1. Scope:

This standard covers the permitting, installation, inspection, testing and maintenance of Commercial Kitchen UL 300 Hood Suppression systems in the Cities of Shoreline, Kenmore, Lake Forest Park and the Town of Woodway as administered by the Fire Code Official (FCO). Kitchen Hood Suppression systems shall meet the requirements of the currently adopted codes and standards, unless specifically amended or noted otherwise, and as approved by the FCO.

Referenced Standards and Codes

1. NFPA 17A Standards for Wet Chemical Extinguishing Systems.
2. NFPA 96 Standard for Ventilation Control and Fire Protection of Commercial Cooking Operations.
3. The International Fire Code (IFC) as amended by State of Washington and the Cities of Shoreline, Kenmore, and Lake Forest Park Municipal Code.

8.1.1 UL 300 Suppression Systems

1. System shall be designed under the currently adopted codes and standards.
2. System designer qualifications shall comply with currently adopted State codes and possess a current manufacturers certificate and or ICC/NAFED certification.
3. All plans and calculations shall be stamped with a valid Washington State certificate seal identifying the appropriate level of competency.

8.1.2 Design Requirements

1. Electrical wiring shall be in accordance with NFPA 70.
2. Automatic fire-extinguishing systems shall be automatically actuated and provided with a manual means of actuation in accordance with IFC section 904.13.1. Where more than one hazard could be simultaneously involved in fire due to their proximity, all hazards shall be protected by a single system designed to protect all hazards that could become involved.
 - a. Exception: Multiple systems shall be permitted to be installed if they are designed to operate simultaneously.

3. Automatic equipment interlocks with fuel shut offs, ventilation controls, door closers, window shutters, conveyor openings, smoke and heat vents and other features necessary for proper operation of the fire-extinguishing system shall be provided as required by the design and installation standard utilized for the hazard.
4. Upon activation of the system, an audible or visual indicator shall be provided to show that the system has activated. Where a building fire alarm system is installed, automatic fire-extinguishing systems shall be monitored by the building fire alarm system in accordance with NFPA72.
5. Automatic fire extinguishing systems shall be interconnected to the fuel and/or electrical current supply for the cooking equipment. The interconnection shall be arranged to automatically shut off all cooking equipment gas supply and circuits feeding electrically supplied equipment located under the hood. Shut-off valves or switches shall be of a type that requires manual operation to reset.
6. Upon activation of the system, the exhaust fan shall continue to operate. Exhaust system make-up air, if provided through mechanical means internally to a hood, shall shut off when the extinguishing system actuates.
7. Portable fire extinguishers shall be provided within 30 feet travel distance of commercial type cooking equipment. Cooking equipment involving vegetable or animal oils and ats shall be protected by a class K rated portable fire extinguisher.

8.1.3 Permit Required

1. A fire permit is required for all new installations and or modifications made to existing cook line equipment.
2. Follow all required permit application submittal requirements for the city in which the work is being performed in and all fire department requirements.
3. Installation shall not begin until the permit has been issued.
4. For work being conducted in the City of Shoreline, the application for a fire construction permit is available at: [Get a Permit | City of Shoreline](#).
5. For work being conducted in the City of Kenmore or Lake Forest Park the application for a fire construction permit is available at: [Fire Permit Application - Shoreline Fire Department](#).
6. Approved plans and permit inspection cards shall be available onsite for the permitted work. A permit is only valid for the contractor and work designated by the permit.

8.1.4 Permit Submittal Requirements

The following information is required at the time of application:

1. Completed fire construction permit submittal application.
2. Completed “pre-engineered Kitchen fire-suppression system submittal checklist.”
3. Working Plans signed by the designer of the system.
4. Provide an electronic copy of the system designers current factory training certificate issued by the manufacturer of the system or ICC/NAFED certificate for pre-engineered kitchen fire extinguishing systems issued to the designer of the

system as required per International Fire Code, Washington State Amendments 904.1.1.

5. Provide an electronic copy or hyper link to the manufacturers design, installation, operation, and servicing manual.
6. Cut sheets for fire nozzle, valves, connectors, hangars, bracing and tanks.
7. Additional mechanical permitting required on the installation of the make-up air unit and the type 1 commercial hood and duct installation.
8. Appliance listings, technical data sheets, and manuals including installation instructions.
9. Pigtails when appliances are on wheels (International mechanical Code 96,507)

8.1.5 Contractor Licensing

Contractor must be licensed to work within the State of Washington and possess the minimum qualification for design and installation as required by ICC/NAFED and or manufacture's certificate. Proof of licensing shall be available upon request and submitted at the time of plan submittal.

8.1.6 Plan Submittal Requirements

The following is a list of information required on all plan submittals for review of a “pre-Engineered Kitchen Fire Suppression System” permit application. The plan shall be drawn to 1/8” = 1.0’ minimum scale. The applicant is required to submit all of the information so an accurate and timely review may be done:

1. Copy of a scaled floor plan showing compliance with the 2021 WSFC section 904 including
 - a. System location
 - b. Designation of overlapping or appliance specific coverage
 - c. Cooking appliances
 - d. Plenum dimensions and filter type (V-bank, Single Bank).
 - e. Duct Dimensions
 - f. Manual pull station location ->10’ and <20’ from kitchen exhaust system, in the egress pathway.
 - g. Class K fire extinguisher type as per manufacture requirement and location.
 - h. Note indicating deferred submittal for fire alarm permit if building is so equipped.
 - i. Note on the plan stating that system shall be designed, installed, serviced and maintained in accordance with NFPA 17A, NFPA 96, and manufacturer's instructions.
 - j. Sequence of operation including fuel/electric/exhaust makeup air interlocks/fire alarm integration.
 - k. Note on drawing stating fusible link temperature to be determined by heat tape testing or heat gun method
 - l. Isometric plans showing the following:
 - Appliance location
 - Type of nozzles

- Nozzle location and height over appliances
- Listed heat detector locations
- Fusible link temp setting (after testing), and hood exhaust duct size.

The isometric plan is required to be laminated and permanently posted on the exhaust hood or the system cabinet.

- Add note to isometric plan stating:
INFORMATION TO SYSTEM OWNER/OPERATOR
Contact your system manufacturer/distributor to locate trained and certified personnel to perform repairs, maintenance, or servicing of the suppression system
- Certification and signature of system designer on layout drawings and calculations.
- Code editions utilized for design of system.
- Point of Compass

8.1.7 Existing Systems

1. Where changes in the cooking media, positioning of cooking equipment or replacement of cooking equipment occurs in existing commercial cooking systems, the automatic fire-extinguishing system shall be required to comply with the applicable provisions of sections 904.13 through 904.13.4 of the currently adopted International Fire Code and Washington State Amendments.
2. Changes to existing cook lines will require a permit, fire review and may require a redesign of the hood and extinguishing system.

8.1.8 Inspections and Acceptance Testing

Fire inspections are required by the Shoreline Fire Department for permitted work. For scheduling an inspection, please email the Shoreline Fire Department at inspections@shorelinefire.com. Response times and scheduling may vary depending on current workloads.

New extinguishing system shall be inspected and tested by a representative from the Shoreline Fire Department. The following is a list of recommended inspection steps to perform the system acceptance:

- a. Cooking appliances are sized and located as noted on the approved plan design.
- b. Each nozzle is per plan and listed for the hazard protected.
- c. Nozzles, appliances, plenum and duct are correct for height and perimeter location for hazard, blow off caps in place.
- d. Piping and conduit secure and have been verified for leaks.
- e. Location of manual pull correct.

- f. Correct temperature rated fusible links located over each appliance and at the duct opening (if applicable).
- g. Location of gas and electrical shutoff correct. All appliances must shut down upon system activation.
- h. Witness trip test for manual release and automatic operation: (heat test must be completed)
 - a. Control head trips to operate system.
 - b. Gas and power shut off completely under hood.
 - c. Shut down of mechanically supplied make up air.
 - d. Alarm system activates if present.
 - e. FACP zone and central station indicate hood zone activation.
 - f. Type "K" extinguisher mounted within 30 feet of cooking appliances, in an accessible location along the exit path and provided with the required signage.
 - g. Isometric drawing permanently mounted near hood.
 - h. System fully reset and left in "ready" condition.
 - i. At the completion of acceptance testing, all required testing and acceptance forms shall be uploaded into The Compliance Engine (Brycer) before permit will be finalized and closed out.

8.1.9 System Maintenance

Contractors performing inspection, testing and maintenance (ITM) as well as hood cleaning on Kitchen Hood Suppression Systems Shall submit all reports to The Compliance Engine within (5) five business days at the completion of work.

- 1. Hoods, grease-removal devices, fans, ducts and other appurtenances shall be serviced and maintained at intervals of every six months or after a system activation as required by section 904.13.5.2 of the International Fire Code.
- 2. Cleaning shall be not less than quarterly or once a year or as directed by the Fire Code Official to prevent the accumulation of grease. Cleaning shall be recorded, and records shall state the extent time and date of cleaning. Such records shall be maintained on the device as well as in The Compliance Engine.
- 3. Fusible link and automatic sprinkler heads shall be replaced at least annually; other protection devices shall be serviced and/or replaced in accordance with manufacturer's instructions.