Shoreline Fire Department
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Shoreline Fire Department Standard

SHFDS 3.0
Stationary Pumps for Fire Protection
Revised 11/17/2025

3.0 General

3.1. Scope:

This standard covers the permitting, installation, inspection testing and maintenance of stationary pumps for fire protection in the City Shoreline, Kenmore Lake Forest Park and the Town of Woodway as administered by the Fire Code Official. Stationary pumps for fire protection shall meet the requirements of the currently adopted codes and standards, unless specifically amended or noted otherwise, and as approved by the fire code official.

Referenced Standards and Codes

1. NFPA 20 Standard for the Installation of Stationary Pumps for Fire Protection.
2. NFPA 25 Standard for the inspection, testing and Maintenance of Water-Based Fire Protection Systems.
3. The International Fire Code (IFC) as amended by State of Washington and the Cities of Shoreline, Kenmore, and Lake Forest Park Municipal Code.

3.1.1 Stationary Fire Pump

1. Fire pump apparatus shall be chosen and made part of the fire sprinkler design as required by the fire sprinkler designer and currently adopted codes and standards.
2. System designer qualifications shall comply with the currently adopted Washington State codes and possess a current NICET level III or higher design certificate.
3. All plans and provided calculations shall be stamped with a valid Washington State certificate seal identifying the appropriate level of competency.

3.1.2 System Design Requirements

1. Electrical wiring shall be in accordance with NFPA 70, Article 695, and other applicable articles.
2. The fire pump, driver and controller shall be protected in accordance with NFPA 20 against possible interruption of service through damage caused by explosion, fire, flood, earthquakes, rodents, insects, windstorm, freezing, vandalism and other adverse conditions.
3. Fire pumps shall be located in rooms that are separated from all other areas of the building by a 2-hour fire barrier constructed in accordance with section 707

of the International Building Code or 2- hour horizontal assemblies constructed in accordance with section 711 of the International Building Code, or both.

4. Fire Pump rooms shall be required to be accessible directly from the exterior of the building as required by this standard and SHFDS 12.0.
5. Cables used for survivability of circuits supplying fire pumps shall be protected using one of the following methods:
    a. Cables used for survivability of required critical circuits shall be listed in accordance with UL 2196 and shall have a fire-resistance rating of not less than 1 hour.
    b. Electrical circuit protective systems shall have a fire-resistance rating of not less than 1 hour. Electrical circuits protective systems shall be installed in accordance with their listing requirements.
    c. Construction having a fire-resistance rating of not less than 1 hour.
    d. The cable of raceway is encased in a minimum of 2 inches of concrete.
6. Suitable means shall be provided for maintaining the temperature of a pump room or pump house, where required above 40 degrees F.
7. Where provided, the fire pump suction, discharge and bypass valves, and isolation valves on the backflow prevention device or assembly shall be supervised open by Central-station, proprietary or remote-station signaling service.
8. Fire pump test outlet valves shall be supervised in the closed position.
9. When fire pumps are required, back-up power shall be supplied by a level one emergency generator. Generator shall be installed in accordance with section 1203, NFPA 110 and NFPA 20 Standards.

3.1.3 Permit requirements

A fire permit is required for all new installations and or modification work. Installation shall not begin until the permit has been issued. 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. 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. 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.

3.1.4 Permit Submittal Requirements

The following is a list of information required on all plan submittals for review of the installation of stationary pumps for fire protection 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 IFC section 913 and Washington State Amendments section 913.2.1. Plans shall include the following:
    a. System location, name and address of installing contractor, pump make and model.

b. Pump driver, controller, power supply, fittings, suction and discharge for approval.
c. Pump Rating____gpm @___PSI____RPM
d. Suction main size, length, location, type and class/schedule of material, and point of connection to water supply, as well as depth to top of pipe below grade.
e. Size and type of valves, regulators, meters, and valve pits, if applicable.
f. Water supply information including the following flow test information, if applicable:
    - Location and elevation of static and residential test gauge with relation to the elevation reference point.
    - Flow location
    - Static Pressure, PSI (bar)
    - Residual pressure, psi (bar).
    - Flow, gpm (L/min).
    - Date
    - Time
    - Name of person who conducted the test or supplied the information.
    - Other sources of water supply, with pressure or elevation.
g. Pump driver details including manufacture and horse power.
h. Voltage for electric motor-driven pumps.
i. Controller manufacturer, type, and rating.
j. Suction and discharge pipe, fitting, and valve types.
k. Test connection piping and valves.
l. Flow meter detail, if applicable.
m. Pressure maintenance pump and controller arrangement including sensing line details, if applicable.

3.1.5 Inspections and Acceptance Testing

New fire pumps shall be tested, inspected and commissioned by a representative of the fire sprinkler contractor or a third party chosen by the manufacturer. A fire department representative from the Shoreline Fire Department will also be present at the time of commissioning. The following is a list of recommended inspection steps to perform for system acceptance.

1. Acceptance testing shall be done in accordance with the requirements of NFPA 20.
2. 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.
3. At the completion of commissioning and acceptance testing, the contractor responsible for the commissioning will upload all testing and commissioning reports to The Compliance Engine. The permit associated with the fire pump will not be signed off until all report materials have been uploaded.

3.1.6 System Maintenance

Fire pumps shall be inspected, tested and maintained in accordance with the requirements of section 913.5 of the IFC, and NFPA 25. Records of inspection, testing and maintenance shall be maintained and uploaded to The Compliance Engine.

1. Emergency Generator sets supplying emergency or stand-by power to fire pump assemblies shall be periodically tested in accordance NPFA 110. Records shall be maintained and uploaded to The Compliance Engine.
2. Automatic transfer Switches shall be periodically tested in accordance with NFPA 110. Records shall be maintained and uploaded to The Compliance Engine.
3. Tests of the pump room environmental conditions, including heating, ventilation and illumination, shall be made to ensure proper manual or automatic operation of the associated equipment.