



Fire Prevention

Location: 701 E. 3rd Avenue
Mail to: P.O. Box 1579•Moses Lake, WA 98837
(509) 765-2204
www.ci.moses-lake.wa.us

Automatic Fire Sprinkler System Checklist

Please print in Black or Blue ink only

Scope

This checklist pertains to the installation of automatic fire sprinkler systems in light, ordinary and extra hazard occupancies and for storage occupancies where the commodity is stored up to 12 feet high. For warehouses and speculative use buildings see high piled and rack storage section of this handout.

NOTE: A fire department permit is required for the installation and / or modification of any sprinkler system within the jurisdiction. Permit applications and the fee schedule may be downloaded at www.ci.moses-lake.wa.us/240.html.

A separate fire department permit is required for the underground portion of the system if the scope of work is split between two or more contractors between the above ground and below ground portions of the system.

Minimum Requirements for Construction Drawings

Plans which do not contain the minimum information required will not be accepted for plan check. Plans shall be of sufficient clarity to indicate the location, nature and extent of the work proposed and show that it will conform to the provisions of the adopted International Codes and local ordinances.

• Three (3) copies of plans (24" x 36", or 30" x 42") must be submitted for review. All plans must bear a valid Washington State Level III Certificate of Competency holders stamp. Underground Installers shall be required to present proof of Washington State Level "U" certification at the time of permit application.

- Copies shall all be the same size.
- Working Drawings -scale to 1/8" = 1'.
- Shall be drawn in indelible ink.
- Sheets that are cut and pasted, taped, or that have been altered by any means (pen, pencil, marking pen, etc.) will not be accepted for plan check.
- Site Plans – scale to 1" = 20' or 1" = 40'
- Washington State law requires that any registered professional who prepares or supervises the preparation of drawings and construction documents stamp and sign such documents.

Project Name: _____

Other Checklists/Permits that may be Required

- Fire Department New Construction Permit
- Fire Pump Checklist

General

Yes/No

Is there a construction permit application on this project?

Owner's name, address and telephone number.

Contractor's name, address, telephone and fax numbers and Washington State Contractor's license number.

How many heads are you replacing? _

How many new?

For systems with 20 or fewer new heads, as built drawings will be required.

For systems with 21 or more new heads, drawings & calculations are required, and review is required prior to construction.

Documentation One Set

The design information to be included on the hydraulic data name plate is: Pipe schedule/ hydraulic calculations.

A summary sheet for the hydraulic calculations, including:

- Date
- Location
- Name of owner or occupant
- Building identifier
- Description of hazard
- System design criteria
- Design density
- Area of discharge
- Total water requirements including:
 - Hose streams allowance.
 - Water supply information, source and data.
 - Detailed worksheets or computer printouts containing the following:

- Sheet number.
- Sprinkler head description and discharge constant (K-Factor).
- Hydraulic reference points up to and including the point of connection.
- Flow in gallons per minute.
- Pipe size.
- Pipe lengths, center-to center, of fittings.
- Equivalent pipe lengths for fittings and devices.
- Friction loss in psi per foot of pipe.
- Total friction loss between reference points.
- In-rack sprinkler demand, if applicable.
- Elevation head loss in psi between reference points.
- Required pressure in psi at each reference point.
- Small hose stream demand
- Other sources of supply, with quantity, pressure and elevation.
- Sway brace calculations for each type of brace used.

Working Drawings

Floor Plans

- Compass direction and clearly marked scale.
- Ceiling construction.
- Full-height cross section.
- Location of area and/or occupancy separation walls, partitions and stairway enclosures.
- Location and size of concealed spaces and closets.
- Any questionable enclosures in which no sprinklers are to be installed.
- Key Plan (Location within existing structure, if applicable).

Pipe, Valves, Fittings

- Size of municipal or private water main and whether dead-end or looped. If dead-end, direction and distance to nearest circulating main.
- Nominal pipe size and cut lengths of pipe or center-to-center dimensions.
- Location and size of riser nipples.
- Type of fittings and joints.
- Type and location of hangers
- Type, size and location of bracing, including calculations and fasteners.
- All control valves, check valves, drains and test pipes.
- Total area protected by each system on each floor.
- Make, type, model and size of alarm, dry-pipe valve, preaction, or deluge valve.
- Pipe type and schedule of wall thickness.

Fire Sprinklers

- Make, type and nominal orifice size of sprinklers.
- Temperature rating and location of high temperature sprinklers.

Miscellaneous Information

- Size and location of all hand-held hose, hose outlets and related equipment.
- Hydraulically most remote area(s).
- Hydraulic reference points (nodes).
- When a fire pump is employed, provide submittal per NFPA 20.
- Moses Lake Municipal Code requires remotely located Fire Department Connections. NO on building FDC's will be approved or accepted.**
- Location and type of fire department hose connection for supply (FDC's shall be located at a location approved by the Fire Marshal's Office, that complies with the provisions of the Moses Lake Municipal Code and the International Fire Code.)
- Fire Department Connection caps shall be Knox locking type ONLY.** Knox order forms are available by calling Brenda Johnson at 509-765-2204.
- Location and type of backflow prevention device.
- Fire department connections shall be painted red, and equipped with a minimum of a 1" wide reflective stripe.

Automatic Sprinklers Over Cooking Surfaces

- Location and type of cooking appliances and char-broilers.
- Type, location and configuration of duct, plenum and surface nozzles.
- Type, size and configuration of sprinkler piping.
- Clearance of surface nozzles over cooking surface.
- Make, type and nominal orifice size of sprinklers.
- Cross-sectional view of sprinklers in hood and duct.
- Location of pendant sprinklers and frames in relation to deep fat fryers.
- Provision for water run-off control.
- Location of indicating-type control valve, test connection and water flow switch.
- Means of limiting sprinkler flow to thirty (30) psi.

Flammable/Combustible Liquids

- Provide calculation for 20 minutes of flow (number of heads in room/area $\times \sqrt{p}$ * K-Factor * 20 minutes) plus single largest container.
- Provide details and description of storage arrangement per IFC.

High Piled, Rack Storage and Speculative Use Occupancies

This section applies to storage occupancies with top of storage at 12' or more and speculative use buildings. It is applicable whether or not material is store in racks or on the floor. For speculative

use buildings assume Class IV commodity, nonencapsulated, double row racks. For so-called 24 foot clear space warehouses, assume 19 feet to top of storage. For taller building design to protect available rack storage height.

- Accurate description and classification of the commodity to be stored, including its height, array, packaging, encapsulation, banding, or other storage method. State which sprinkler system design curve was utilized for design criteria.
- Show draft curtains, smoke vent, with temperature ratings, and skylights on working plans.
- Show designated storage areas of idle pallets. State wood or plastic.

Testing & Acceptance:

REQUESTS FOR INSPECTION:

All requests for inspection should be addressed to Brenda Johnson at (509) 765-2204.

Generally same day inspection requests cannot be accommodated. Please plan accordingly.

Visual Inspections:

Underground: All joints and connections on the fire service main shall remain uncovered until inspected by an Inspector of the Moses Lake Fire Department. Thrust blocks, mega-lugs, or threaded rods shall be uncovered and available for inspection by an inspector of the Moses Lake Fire Department.

Hydrostatic Inspections:

Hydrostatic inspections are required to be completed in the presence of an Inspector from the Moses Lake Fire Department. Pumps shall be disconnected from the system for the duration of the hydrostatic inspection.

Underground: 200 psi x 2 hours

Aboveground: 200 psi x 2 hours

Flushing:

The underground fire service main shall be flushed in the presence of an Inspector from the Moses Lake Fire Department.

Flushing shall consist of a minimum of two, 2.5 inch sections (one section for small systems that have a single hose port on the Fire Department Connection) of fire hose that are secured to an immovable object. Each hose shall have a burlap sack wired to the discharge end. A flush at full system pressure shall be conducted until such time that the Inspector is satisfied that any foreign debris is removed from the pipe.

Acceptance Testing:

Acceptance testing for the above ground portions of the sprinkler system will not be conducted unless alarm system is fully operational and is ready for acceptance testing at the same time as the sprinkler system.

Test orifice: Testing shall be conducted through a sprinkler orifice representative of the sprinkler heads installed on the system.

Please read the information below and sign before submitting your application Your application shall be deemed complete only if this checklist is completed and submitted along with the submittal package. Submittals not accompanied by a checklist will not be accepted. Accuracy of the submittal package, including this checklist, is the responsibility of the applicant. Failure to submit an accurate submittal package will be considered an incomplete application by the Plan Reviewer. An incomplete submittal will result in a **HOLD**. A Resubmittal (new submittal package) will be required and always results in a delay.

I have checked the applicable boxes and have included those requirements in my submittal. Further, I understand that inspections must be scheduled in advance and in most cases same day inspection requests cannot be accommodated.

Print Name

Signature

Contact Phone Number: _____

Email: _____