



# SOUTH METRO FIRE DEPARTMENT

Fire Prevention Division

1650 Humboldt Avenue • West St. Paul MN 55118

Phone: (651) 552-4172 • FAX: (651) 552-4195

[www.smfdmn.org](http://www.smfdmn.org)

## Clean Agent Fire Extinguishing System Permit Application

Application Date:	Permit Fee*
<b>Site Information</b>	
Site Name:	
Owners Name:	
Address:	
Phone:	E-Mail:
<b>Contractor Information</b>	
Name:	
Address:	
Contact Name:	
Phone:	E-Mail:
State License Number:	
<b>Project Information</b>	
Contract Value:	Estimated Date of Completion:
Project Description:	
<b>The undersigned hereby agrees to do all the work in accordance with the Local Jurisdiction, MN State Building Code, MN State Fire Code, to all recognized standards, and the conditions listed on the backside of this Permit application form.</b>	
Signature:	Date:
All permit applications must be accompanied with:  1. Submit a set of plans and cut sheets electronically to <a href="mailto:tjohnson@southmetrofire.com">tjohnson@southmetrofire.com</a>	

**\*Permit Fee is (1.25%) of contract value or the minimum fee of \$66.50.  
Enter contract value to calculate permit fee.**

Click submit form to send or print and email to [tjohnson@southmetrofire.com](mailto:tjohnson@southmetrofire.com).

## PERMIT SUBMITTAL

Specifications for total flooding and local application clean agent fire extinguishing systems shall be prepared under the supervision of a person fully experienced and qualified in the design of such systems and with the advice of the authority having jurisdiction. The specifications shall include all pertinent items necessary for the proper design of the system.

Working plans and calculations shall be submitted for approval to the authority having jurisdiction before system installation or remodeling begins. Deviation from these documents shall require permission of the authority having jurisdiction. Working plans shall be drawn to an indicated scale and shall show the following items that pertain to the design of the system:

1. Point of compass and symbol legend.
2. Location and construction of protected enclosure walls and partitions.
3. Location of fire walls.
4. Enclosure cross section, full height or schematic diagram, including location and construction of building floor/ceiling assemblies above and below, raised access floor and suspended ceiling.
5. Agent being used.
6. Design extinguishing or inerting concentration.
7. Description of occupancies and hazards being protected, designation whether or not the enclosure is normally occupied.
8. For an enclosure protected by a clean agent fire extinguishing system an estimate of the maximum positive and the maximum negative pressure, relative to ambient pressure, expected to be developed upon the discharge of agent.
9. Description of exposures surrounding the enclosure.
10. Description of the agent storage containers used to include internal volume, storage pressure, and nominal capacity expressed in units of agent mass or volume at standard conditions of temperature and pressure.
11. Description of nozzles used to include size, orifice port configuration, and equivalent orifice area.
12. Description of pipe and fittings used to include materials specifications, grade, and pressure rating.
13. Description of wire or cable used to include classification, gauge, 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.
14. Description of the method of detector mounting.
15. Equipment schedule or bill of materials for each piece of equipment or device, showing device name, manufacturer, model or part number, quantity and description.
16. Plan view of protected area showing enclosure partitions; agent distribution system including agent storage containers, piping and nozzles; type of pip hangers and rigid pipe supports; detection, alarm and control system including all devices and schematic of wiring interconnection between them; end-of-line device locations; location of controlled devices such as dampers and shutters; and location of instructional signage.
17. Isometric view of agent distribution system showing the length and diameter of pipe segment; node reference numbers relation to the flow calculations; fittings including reducers and strainers; and orientation of tees, nozzles including size, orifice port configuration, flow rate, and equivalent orifice area.
18. Details of each unique rigid pipe support configuration showing method of securement to the pipe and to the building structure.
19. Details of the method of container securement showing method of securement to the container and to the building structure.
20. Complete step-by-step description of the system sequence of operations, including functioning of abort and maintenance switches, delay timers and emergency power shutdown.
21. Point-to-point wiring schematic diagrams showing all circuit connections to the system control panel and graphic annunciator panel and to external or add-on relays.
22. Complete calculations to determine enclosure volume, quantity of clean agent, and size of backup batteries and method used to determine number and location of audible and visual indication devices, and number and location of detectors.
23. Details of any special features.

Exception: Per-engineered systems shall not be required to specify an internal volume of the container, nozzle flow rates, equivalent lengths of pipe and fitting and hose, or flow calculations, when used within their listed limitations. At the time of permit submittal, the information required by the listed system design manual shall be included for verification that the system is within its listed limitations.