

Residential Fire Sprinkler System



Informational Booklet

Schaumburg Fire Department



Dear Home Owner:

On behalf of the Schaumburg Fire Department, we welcome you to your new home. We hope that you will find the Village of Schaumburg a pleasant place to live.

Your new home is equipped with a residential fire sprinkler system. Modern advances in technology and building techniques have enabled builders to install fire sprinklers in homes at a reasonable cost. These systems are effective in controlling fires and have a relatively low cost of installation and maintenance. Since the adoption of the 2009 International Fire and Residential Codes in 2010, the Village of Schaumburg has required all newly constructed homes to have a fire sprinkler system.

The primary goal of residential fire sprinkler systems is **life safety** with property protection secondary.

The sprinkler system is designed to provide protection and a safe means of escape for residents. The system is provided with a series of pipes similar to your plumbing system. Attached to the pipes are a number of sprinkler heads designed to protect a specific area. The sprinkler heads activate when they reach a certain temperature, usually 155° F. It is important to recognize that the sprinkler heads will only activate when they reach that temperature and not from smoke alone. Also, each sprinkler head operates independently – they do not all activate at once.

Upon activation of the sprinkler system, an interior bell and exterior white strobe/horn device will activate to provide local alarm notification for the residents. You must still contact the fire department in the event of an emergency.

This informational booklet has been provided for your review. This booklet will provide an introduction to your residential sprinkler system and its components. If you have any additional questions or comments, please contact the Schaumburg Fire Department at (847) 885-6300.

Sincerely,

A handwritten signature in black ink, appearing to read "Jim Walters". The signature is written in a cursive, flowing style.

Jim Walters
Fire Chief

Sprinkler Facts

- ✓ If you have a reported fire in your home, the risk of dying decreases by 83 percent when sprinklers are present
- ✓ Fire sprinklers use far less water than firefighter hose lines which helps reduce direct property damage by 69 percent per fire
- ✓ The high temperature of an early-stage fire (135°-165°F) will cause the sprinkler to activate. Only this high heat initiates the sprinkler to flow water - neither smoke nor a smoke alarm can activate a fire sprinkler
- ✓ Roughly 85 percent of the time, just one sprinkler operates
- ✓ Home fire sprinkler systems are much like home plumbing systems – when installed and maintained properly, there is a very low risk of leaks. The likelihood of a sprinkler activating without a fire is extremely rare - the odds are about 1 in 16 million
- ✓ In 2013, the Fire Protection Research Foundation issued an updated report which revealed that the cost of installing home fire sprinklers averages \$1.35 per sprinklered square foot for new construction
- ✓ Residential sprinkler systems can reduce insurance rates 5 to 15 percent
- ✓ The only “inspection and maintenance” you will need for your sprinkler system is to (a) walk around your home and make sure the sprinklers are not obstructed by something that would block the water coming out, (b) avoid turning off the main control valve, which you don’t normally operate anyway, (c) have the backflow preventer certified
- ✓ To prevent sprinkler pipes from freezing do not remove any insulation that is protecting the sprinkler piping and ensure heating appliances in the home are operational at all times. Do not turn off the heat if you are going on vacation
- ✓ According to a research project from FM Global and the Home Fire Sprinkler Coalition (HFSC) on the environmental impact of fires, automatic fire sprinklers can reduce greenhouse gas emissions by 98 percent, reduce fire damage by up to 97 percent, and reduce water usage to fight a home fire by as much as 91 percent, resulting in reduced water pollution

Sprinkler Riser & Components



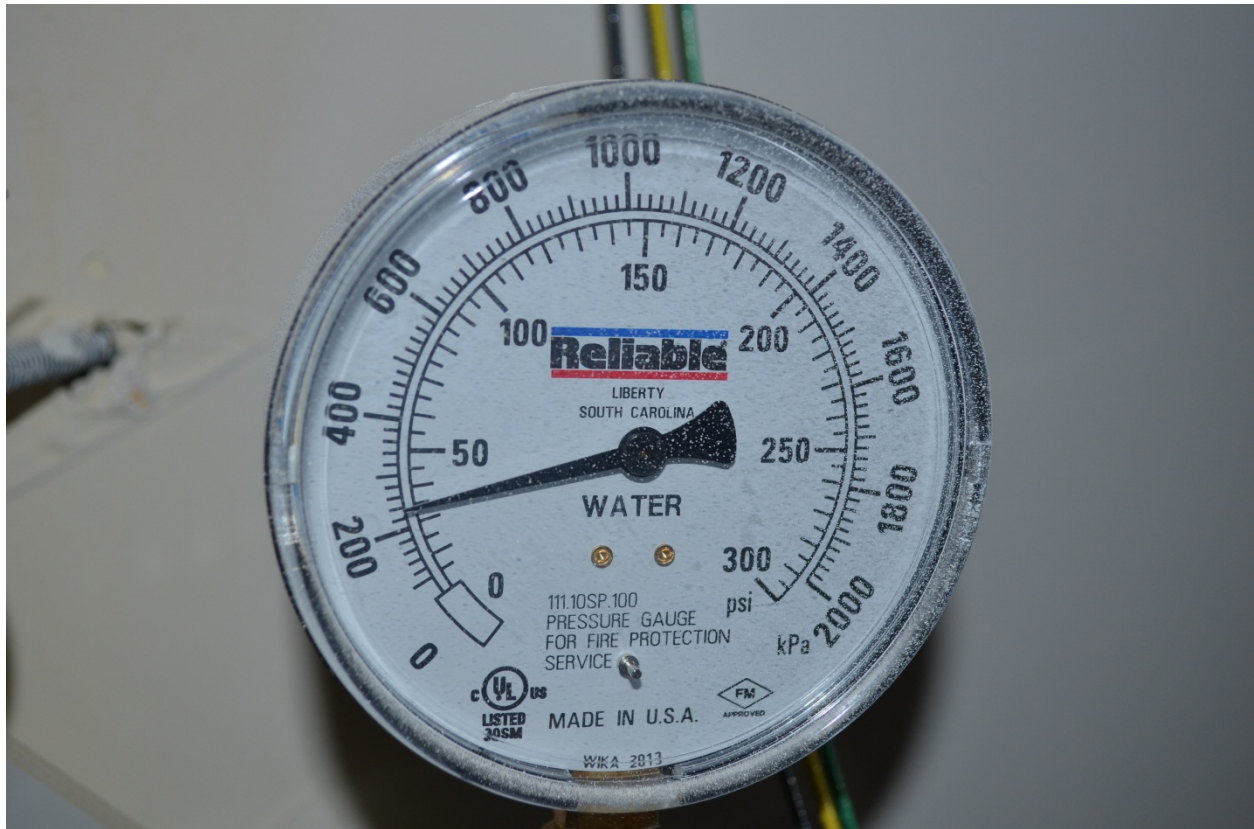
- ✓ Sprinkler Riser
- ✓ Backflow Preventer (Double Check Valve)
- ✓ Pressure Gauge
- ✓ Water Flow Detector
- ✓ Interior Bell
- ✓ Exterior Horn and Strobe
- ✓ Inspector's Test and Main Drain

Double Check Valve



- ✓ The double check valve (backflow preventer) is designed to prevent the sprinkler water from back flowing into the home owner's domestic water or the Village water supply
- ✓ The Illinois State Plumbing Code requires that a double check valve be installed and annually certified by a licensed plumber
- ✓ In the event of an unintentional sprinkler head activation, the check valve can be used to temporarily shut off the sprinkler system – it is important to know where this valve is located and how it operates

Pressure Gauge



- ✓ The pressure gauge indicates that there is water and pressure in the sprinkler system
- ✓ The average water pressure in Schaumburg ranges between 50 and 65 pounds per square inch (psi)

Water Flow Detector



- ✓ Upon activation, the water flow detector will activate the local water flow alarms – You must still contact the fire department in the event of an emergency
- ✓ The water flow detector will only activate the water flow alarms when water from the sprinkler system is flowing

Interior Bell



- ✓ An interior 6-inch bell water flow alarm provides audible warning to residents inside the home
- ✓ The 6-inch bell is mounted on the HVAC ductwork so that it will resonate throughout the residence
- ✓ The interior local alarm does not automatically notify the fire department

Exterior Horn/Strobe



- ✓ An exterior horn and strobe alerts neighbors of the sprinkler system activation
- ✓ The exterior horn and strobe also helps the fire department quickly identify your home when arriving on the scene
- ✓ The exterior alarm does not automatically notify the fire department

Inspector's Test and Main Drain



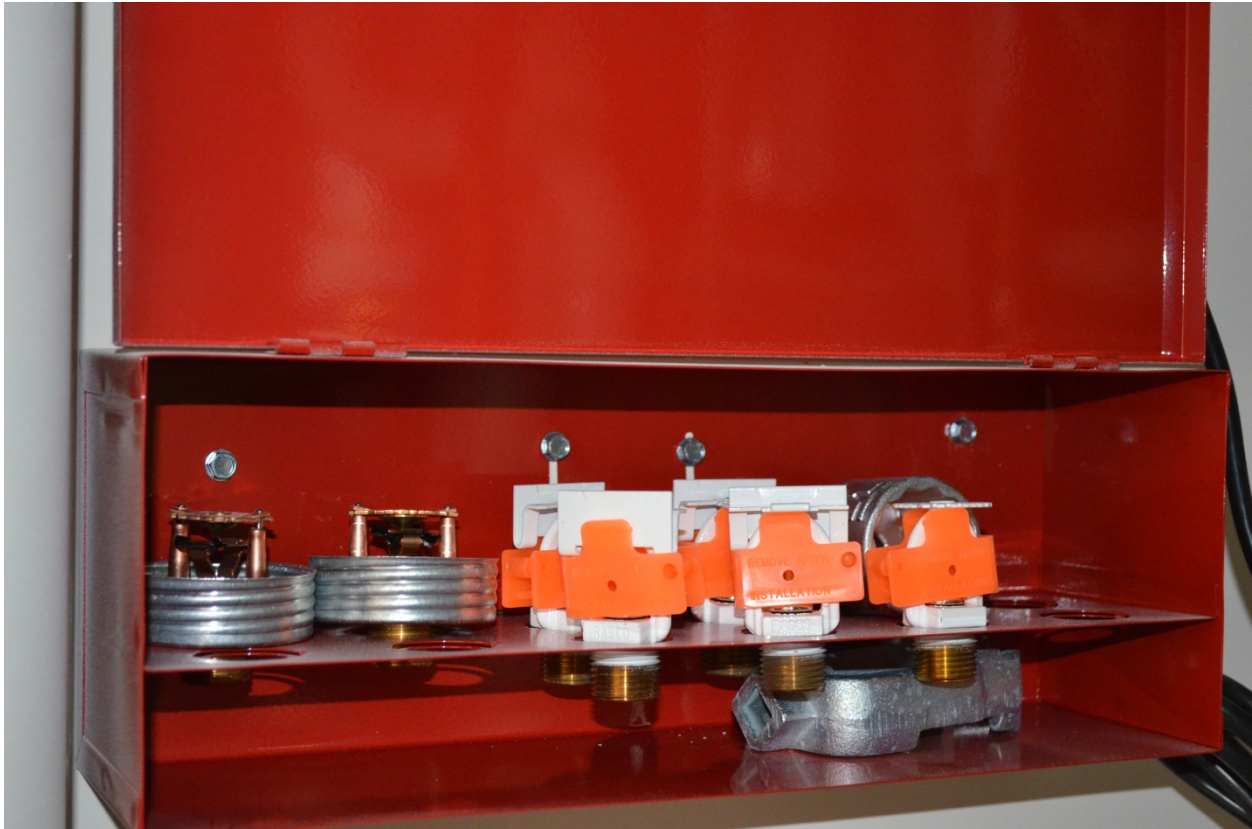
- ✓ The inspectors test valve is used for testing of the sprinkler system and water flow alarm
- ✓ When the drain is opened, the water in the sprinkler system will drain and will cause the local water flow alarm to activate within 30 to 45 seconds
- ✓ The main drain valve is used to drain the sprinkler system for repairs or alterations

Sprinklers



- ✓ Sprinklers are activated only by high temperatures of a fire and not by smoke
- ✓ Concealed sprinklers are provided with a cover plate for aesthetics. This plate will release prior to the activation of the sprinkler when exposed to high temperatures
- ✓ Care should be taken to avoid painting sprinklers or cover plates

Spare Sprinklers and Wrench



- ✓ Spare sprinkler heads for each type used and a sprinkler wrench are provided near the sprinkler riser
- ✓ Residential sprinkler systems may be designed with different types of sprinkler heads – it is important when sprinklers are replaced that the same type is utilized

Smoke Detector



- ✓ Smoke detectors shall be installed in each bedroom, outside each bedroom in the immediate vicinity, and on each floor level
- ✓ The activation of one smoke detector will cause all of the detectors to alarm
- ✓ Smoke detectors work independent from the residential sprinkler system

Carbon Monoxide Detector



- ✓ Carbon Monoxide detectors are required to be installed within 15 feet of every bedroom
- ✓ Carbon Monoxide detectors may be provided in combination with smoke detectors but operate independent of the residential sprinkler system

Private Monitoring



- ✓ Off-site monitoring of the sprinkler system water flow detector, smoke detectors, and Carbon Monoxide detectors can be provided by a private alarm company (Optional)
- ✓ If provided, the monitoring company will automatically notify the fire department and home owner in the event of a sprinkler water flow, smoke detector, or Carbon Monoxide detector activation

Knox Box



- ✓ A Residential Knox Box can be installed for use by only the Schaumburg Fire Department (Optional)
- ✓ If provided, the Knox Box will allow firefighters and paramedics to respond quickly to an emergency, without forcing entry into your home
- ✓ To order a box or for more information contact the Community Risk Reduction Division at (847) 985-4452