CDR BULLETIN

Residential Fire Sprinklers

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By Bill Christenson

Fire sprinkler systems for new residential construction, including single family residences, are included in the new 2009 International Residential Code. Most municipalities and their building departments adopt the International Code for building standards. The 2009 IRC is scheduled to be adopted by July 1, 2010. Various organizations in Washington State are proposing that residential fire sprinklers be mandated by local jurisdictions for voluntary versus mandatory adoption. Either way, wide spread installation of fire sprinkler systems is coming to the building industry for new residential construction. The Code does not require existing residences to be retrofitted with fire sprinklers.

Builders and homeowners need to be knowledgeable about the various types of residential fire sprinkler systems. Isolated closed systems are kept separate from the plumbing system while flow-through systems are an extension of the house plumbing. Both systems have their benefits and detriments. Protection of water quality is a big concern for municipalities, and local jurisdictions dictate whether one or both types of systems are allowed. The water source also affects the system, as private wells may lack the necessary flow capacity and electrical pumps may be inoperative during a fire event.

Portions of the sprinkler systems will be installed in attic areas or cathedral ceilings so proper care is needed to prevent freezing of the systems and resultant water damage. Locating sprinkler piping on the warm side of the ceiling insulation is critical. This is especially important for vacation properties that may see very limited use, as well as heating systems that are turned down low or off during extended periods of vacancy. Isolated systems can use glycol or glycerin in the piping system for added protection against freezing. Maintenance requirements for the various systems differ and may be necessary on an annual basis. Fire sprinkler maintenance must be performed by a state certified technician.

Know your sprinkler options and understand the site specific criteria during the planning phase of your project so that an appropriate sprinkler system is installed that will serve your needs for years to come.

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