



QUICK RESPONSE

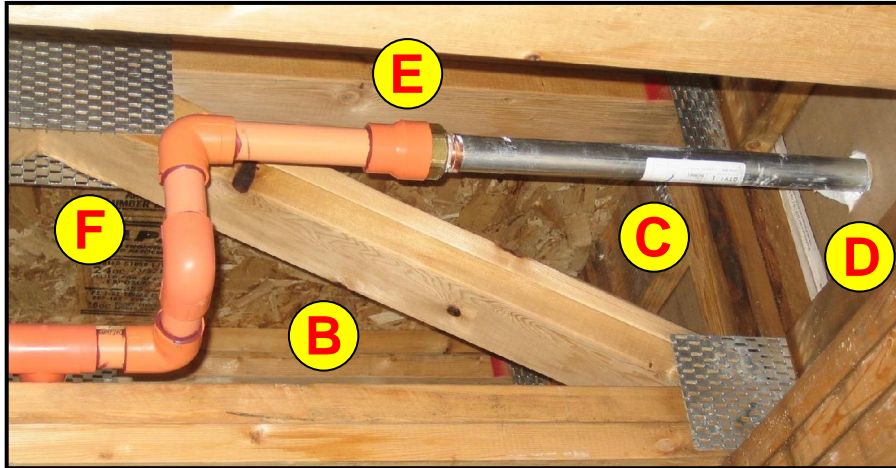
*Saving life and property through effective licensing, plan review,
and inspection of fire protection systems.*

November 2007

DRY SIDEWALL SPRINKLERS

When dry sidewall sprinklers are to be used in wet pipe sprinkler systems to protect areas subject to freezing temperatures (e.g. exterior balconies), numerous considerations must be taken into account.

Refer to the following picture of a dry horizontal sidewall sprinkler that extends through an exterior wall to protect an exterior balcony.



A = Outside temperature for Minnesota should be based on a minimum of minus 40°F.

B = The ambient temperature around the wet pipe system shall be a minimum of 40°F.

Note: Surrounding the pipe with insulation (e.g. filling the floor / roof space with insulation) prevents heat from reaching the pipe.

C = Careful consideration must be given to the appropriate length of the sprinkler in order to prevent freezing of the water in the connecting pipes due to conduction. The minimum recommended manufacturers' length refers to the amount of dry sprinkler that is exposed to the minimum ambient of 40°F (**D** to **E** in the picture above). It is likely that insulation would be installed along the exterior wall at **D**; therefore, the minimum length is measured from the inside edge of the insulation to point **E**. The total length of the dry sprinkler would be the minimum length plus the additional length necessary to pass through the insulation and the exterior wall.

E = The dry type sprinkler shall be attached to a fitting that is compatible with its listing. It is important to refer to the sprinkler manufacturers' installation instructions for specific guidance.

F = Piping is to be properly supported.

Quick Response is presented monthly by the
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