

# FIREHOUSE<sup>®</sup>

## Weekly Drill

### DRILL #73: HOSELINE SELECTION

#### Introduction

One of the most important functions, if not the most important function, is that of getting a hoseline in place as quickly as possible. However, selecting the proper size and length of hose must be determined in your size-up. Sounds easy enough, but how many fires have you been to where the first line stretched has been one of the pre-connected lines? As an engine company officer, it is your responsibility to make this hoseline selection. Will you chose the right one for the job?

Despite the consequences, your first decision will be to determine the amount of water needed to allow the hoseline team to cool the fire and keep the hoseline moving towards the seat of the fire. A quick way of figuring the flow requirement is by using the National Fire Academy's Fire Flow Formula:

$$\text{Needed Fire Flow} = (\text{Length} \times \text{Width} / 3) \times \text{Percent Involvement}$$

#### Residential Occupancy

In your size-up, items that are going to help you make the right decision will be the type of occupancy and construction. At a normal residential occupancy, we can expect to find more compartmentalized features, making hoseline movement somewhat difficult. Typically, a 1½-inch or 1¾-inch size hose works best. This gives us the maneuverability we need. At a normal residential occupancy, these size lines will deliver between 150 gallons per minute (gpm) to 180 gpm of water flow.

#### Commercial Occupancy

In a commercial occupancy, a 2½-inch or 3-inch hose-line would be our hoseline of choice as the areas in these structures are open more and movement would not be encumbered. Additionally, in these types of structures, we are going to need the volume of water that only can be achieved with the larger hose, usually 250 gpm.

#### How Much Hose?

Our next consideration will be that of how much hose will be required to reach the fire area from the engine. Again, size-up will assist in determining the needed hose. Things to take into consideration are the height and area of the building, how far of a building setback we have and we need to determine if we are going to be



advancing the hose up an interior stairwell.

A building with a significant setback may be best served by advancing a 2½-inch hoseline, as friction loss in the small 1½-inch and 1¾-inch hose will limit the stretch to 200 feet and 300 feet respectively.

Knowing your district is vital, as some of these building with significant setback are equipped with standpipes, in which case hooking up to the fire department connection and carrying in our hotel rolls would be the way to operate. In any event, you need to stretch enough hose to cover the entire fire floor area. Ideally, it would be nice to have enough hose to cover the floor area above the fire as well.

Generally, a good rule of thumb for figuring this hose need is to have sufficient amount of hose to equal the width of the building, plus the length of the building and add one additional length for each floor above or below the fire floor.

*—Prepared by Russell Merrick*