	<b>Cincinnati Fire Department Fire Training Supplement DRILL BOOK</b>	<b>SECTION #4</b> Ladder Company Operations
Date: January 2006	<b>TOPIC TITLE:</b>	Total # of Pages: 7
Section #: 4	Roof Laddering	Topic #: 6

## **TOPIC #6                      ROOF LADDERING**

Sometimes it is necessary to carry ladders up portable or aerial ladders to do the following:

- To provide a means of rescue
- Escape
- Accessibility to a remote area.
- Provide a safe working platform on a pitched or flat roof


When carrying one ladder up another ladder, either one or two fire fighters are used. The number of fire fighters used depends upon the situation and/or length / weight of the ladder.

### **ONE FIRE FIGHTER METHOD:**

When one fire fighter carries an adjustable hook ladder up another ladder he should follow this procedure:

1. Carries the adjustable hook ladder to the ladder that is already “boomed” into the building.
2. Rotates hooks outward
3. Places the ladder on his shoulder, ***hooks towards to the top and rotated out.*** The best place to position the ladder is directly above the 3<sup>rd</sup> rung from the top with the 2<sup>nd</sup> rung resting on your shoulder.
4. Begin to ascend the ladder and ***CLIMB WITH BOTH HANDS GRASPING THE LADDER***
5. Climb to the roof and lock in (if possible) near the roof level on the primary ladder.
6. Lift the adjustable hook ladder onto the roof, slide it up to the peak on the beam until the tip passes the ridge line.
7. Rotate the ladder onto the roof so both beams are resting on the roof and the hooks are pointed down and then pull towards the peak to allow the hooks to dig into the ridge line.
8. The fire fighter then un-locks and places his closest hand and closest foot on the center of the rungs of the hook ladder. His other hand and other foot remain on the ground ladder. The fire fighter then tests the hook ladder by exerting a downward pressure. If it feels solid, he may climb the ladder, keeping hands and feet in center of rungs.




	<b>Cincinnati Fire Department Fire Training Supplement DRILL BOOK</b>	<b>SECTION #4 Ladder Company Operations</b>
Date: January 2006	<b>TOPIC TITLE:</b> Roof Laddering	Total # of Pages: 7
Section #: 4		Topic #: 6

## **TWO FIRE FIGHTER METHOD:**

When two fire fighters carry an adjustable hook ladder up another ladder they should follow this procedure:

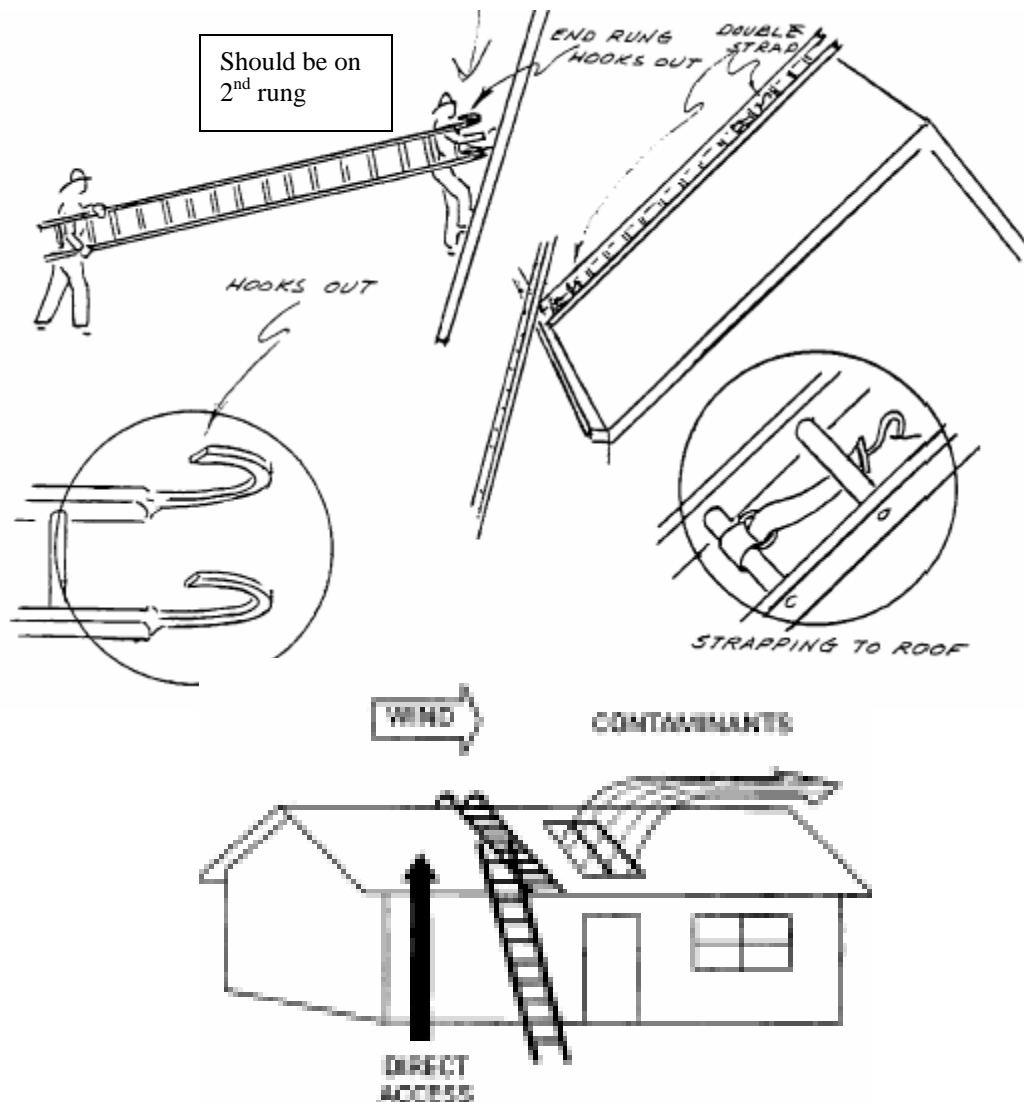
1. Carries the adjustable hook ladder to the ladder that is already “boomed” Into the building.
2. Rotates hooks outward
3. The first fire fighter places the ladder on his shoulder, ***hooks towards to the top and rotated out.*** The best place to position the ladder is directly above the 3<sup>rd</sup> rung from the top with the 2<sup>nd</sup> rung resting on your shoulder.
4. The first fire fighter begins to ascend the ladder.
5. ***CLIMB WITH BOTH HANDS GRASPING THE LADDER***
6. When at a suitable height, the second fire fighter places his same arm / shoulder at a convenient rung and begins to climb the ladder at the speed and direction of the 1<sup>st</sup> fire fighter
7. Climb to the roof and lock in (if possible) near the roof level on the primary ladder.
8. Lift the adjustable hook ladder onto the roof.
9. First fire fighter should slide it up to the peak on the beam until the tip passes the ridge line.
10. Rotate the ladder onto the roof so both beams are resting on the roof and the hooks are pointed down and then pull towards the peak to allow the hooks to dig into the ridge line.
11. The fire fighter then un-locks and places his closest hand and closest foot on the center of the rungs of the hook ladder. His other hand and other foot remain on the ground ladder. The fire fighter then tests the hook ladder by exerting a downward pressure. If it feels solid, he may climb the ladder, keeping hands and feet in center of rungs.




	<b>Cincinnati Fire Department Fire Training Supplement DRILL BOOK</b>	<b>SECTION #4</b> Ladder Company Operations
Date: January 2006	<b>TOPIC TITLE:</b>	Total # of Pages: 7
Section #: 4	Roof Laddering	Topic #: 6

### ROOF LADDERING NOTES:

- Always carry with hooks out
- Consider strapping ladders (as shown below) for added security when placing over a ridge line.
- Use caution when resting ladders in gutters. This should be a last resort and only used if the length of the roof rise is too long for adjustable hook ladders to reach the peak with one ladder.
- ALWAYS WORK FROM AN ADJUSTABLE HOOK LADDER ON PEAKED ROOFS.
  - i. They provide a stable work surface
  - ii. They distribute weight
  - iii. They allow you to grasp something if you loose your balance
  - iv. They provide a location to rest tools and power saws



	<b>Cincinnati Fire Department Fire Training Supplement DRILL BOOK</b>	<b>SECTION #4</b> Ladder Company Operations
Date: January 2006	<b>TOPIC TITLE:</b>	Total # of Pages: 7
Section #: 4	Roof Laddering	Topic #: 6

## **CHANGING POSITION OR MOVING ROOF LADDERS ALREADY ON A ROOF**

The following is the suggested method for moving a roof ladder to a different location, while on the peak.

### **THE SLIDE METHOD:**


This allows you to change positions on the same side of the peak of the roof.

- One fire fighter straddles the ridge of the gable, taking hold of the ladder.
- The fire fighter pulls the ladder up and balances it on the ridge in front of himself.
- The fire fighter then slides backward or forward, depending on the situation, until the ladder is at the proper place and lets the ladder back down the gable, with hooks over the ridge, ready for service.
- ***Remember, when sliding backwards; be sure there is more roof to advance to. Conditions may require you to "feel" your way across.***

### **CHANGING LADDERS TO OPPOSITE SIDES OF A GABLE:**

This allows you to change positions to allow fire fighters to work on the other side of a roof.

- This can be done with one or two persons, taking into consideration the velocity of the wind as in all roof ladder work.
- Fire fighters straddle the ridge, facing each other, on opposite sides of ladder.
- Fire fighters take hold of the ladder and pull it up to the balance point and then raise it overhead
- Fire fighters then turn it end for end and slide it down the other side of the gable, with the hooks over the ridge, ready for service.

	<b>Cincinnati Fire Department Fire Training Supplement DRILL BOOK</b>	<b>SECTION #4 Ladder Company Operations</b>
Date: January 2006	<b>TOPIC TITLE: Roof Laddering</b>	Total # of Pages: 7
Section #: 4		Topic #: 6

## HOISTING A LADDER

### Equipment Needed

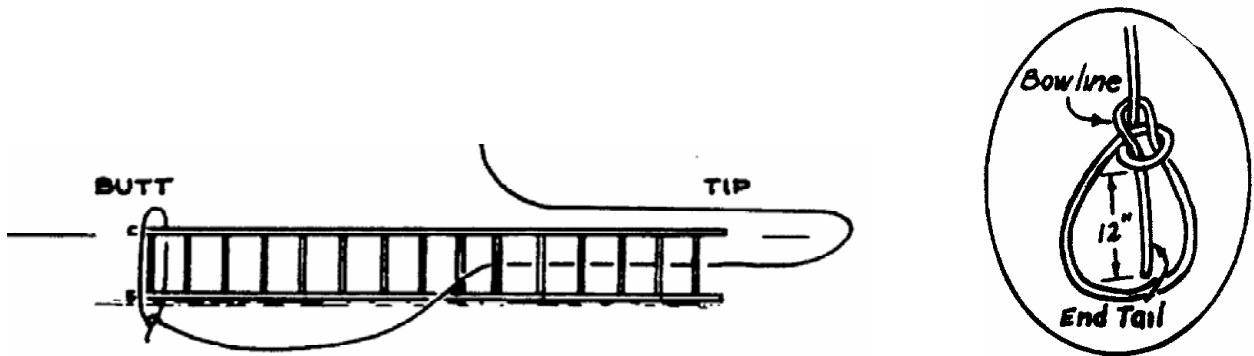
- ◆ 1 Portable Ladder
- ◆ 1 Utility Rope
- ◆ 1 Life Belt
- ◆ Forcible Entry Tools


Used to provide a means of rescue, escape or accessibility to a remote area with ground ladders.

### OPERATION

- Crew goes to the roof with utility rope, life belt and forcible entry tools.
- Rope is lowered to ground over the roof or window.
- Ladder to be raised is placed on beam on ground, centered on raising point.
- Man on ground inserts rope between the two marked rungs (see #6 under Notes), carries the rope to butt and ties a large loop bowline. (Sketch "A")

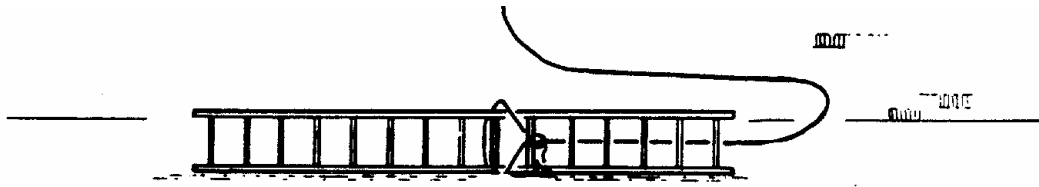
### SKETCH A



	<b>Cincinnati Fire Department Fire Training Supplement DRILL BOOK</b>	<b>SECTION #4</b> Ladder Company Operations
Date: January 2006 Section #: 4	<b>TOPIC TITLE:</b> Roof Laddering	Total # of Pages: 7 Topic #: 6

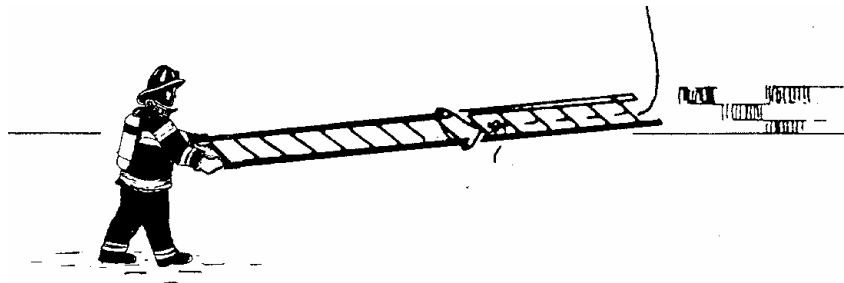
- Loop of bowline is slipped over both beams at butt and brought to region of marked rungs. Bowline knot is centered between beams. (Sketch "B")

**SKETCH B**



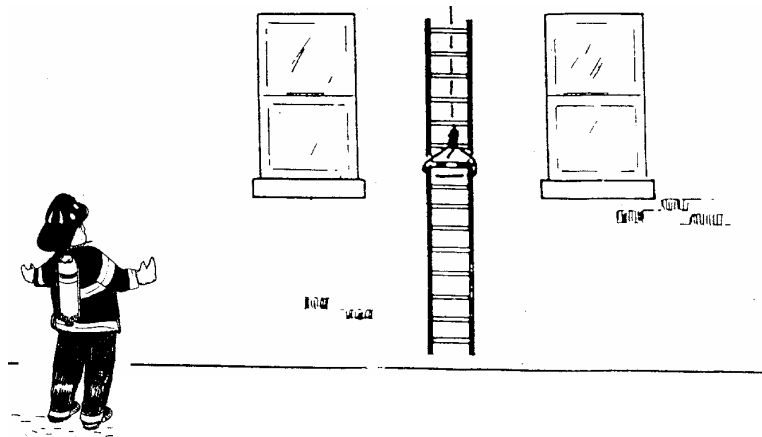
- Member returns to butt, turns ladder flat, with rope centered between beams under rungs of ladder. (Sketch "C")
- Signal to hoist is given. As ladder is raised, man on ground holding both butts (Wheel-barrow fashion) guides ladder as it approaches vertical. (Sketch "C")


**SKETCH C**



- Man on ground guides butt to building wall, releases hold and steps back, keeping all persons away from the area beneath ladder. (Sketch "D")
- Ladder is raised until bowline knot passes over roof or window. As three men hold rope, fourth man pulls ladder to horizontal and turns on one beam. Ladder is then hauled in on roof.

**SKETCH D**



	<b>Cincinnati Fire Department Fire Training Supplement DRILL BOOK</b>	<b>SECTION #4 Ladder Company Operations</b>
Date: January 2006	<b>TOPIC TITLE:</b>	Total # of Pages: 7
Section #: 4	Roof Laddering	Topic #: 6

## NOTES:

- To lower ladder to ground, knot is tied and affixed to ladder as in steps 5 & 6. Ladder is slid out on beam until knot is just past edge of roof or window, then ladder is laid flat over the edge. While two or three men hold rope, fourth man guides ladder to vertical. Ladder is lowered until tip is just below roller. Fourth man then turns ladder so that tip is between rope and building. Ladder is then lowered to ground.
- When difficulty will be experienced due to ladder size, roof configuration or other considerations by man guiding ladder to vertical, a clove hitch is tied on top rung(or rungs) with free end of rope before sliding ladder out on ledge. Ladder can then be slowly released until ladder is vertical. The knot is removed before ladder is turned prior to lowering ladder to ground.
- Rope can be affixed to ladder in near vertical position against building by dropping rope between marked rungs, laying loop out on ground and setting shoes of ladder inside loop. As ladder is raised it must be turned so that rope is between ladder and building.
- Bowline knot is tied 9 feet (one and one-half full arm lengths) from end of rope, with one foot end tail.
- When putting rope between rungs of an extension ladder, do not entangle rope in ladder halyard.
- Extension ladders are raised and lowered in nested position.
- **Life belt** is used to assist in lowering the ladder to the ground following the evolution.