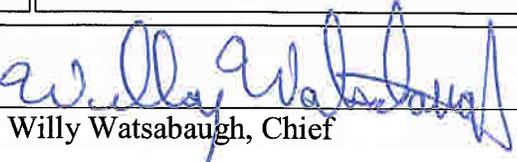




Jackson Hole Fire/EMS Operations Manual

Approved by:


Willy Watsabaugh, Chief

Title: Vertical Ventilation

Division: 16

Article: 17

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Pages 2

PURPOSE:

To establish guidelines to provide vertical ventilation on the roof of a structure, and to operate safely. Early ventilation of a building, whether vertical, horizontal, or a combination of each, is important to the success of fire control operations and the safety of fire fighters and victims. Building pre-planning and a sound knowledge of building construction are imperative to safe roof operations.

SECTION I – SAFETY:

1. Safety must be the primary consideration during every vertical ventilation procedure. Operating above a fire is an extremely hazardous situation.
2. The extent of the fire, the time burning and any signs of weakness must be considered before committing personnel above the fire. Also consider locations of heavy objects, such as HVACs, that are affected by fire conditions
3. Committing personnel to the roof should be avoided in the following conditions: over garages, bow truss or lightweight construction directly exposed to fire. No fire fighters shall operate on a bow string roof. In these cases, vertical ventilation shall only be achieved by working off of an aerial ladder.

SECTION II- ROOF SECTOR OPERATIONS:

1. The Incident Commander or Ops should evaluate roof conditions prior to committing to vertical ventilation.
2. Aerial apparatus should be strategically placed to allow for safe access to and from the roof, when possible.
3. All roof operations personnel shall wear full protective clothing, equipment and SCBA with face pieces connected at all times while operating above a fire.
4. “Get on, Get off”: This concept focuses on sending a minimum number of firefighters, with a minimum amount of equipment, to perform the ventilation in the minimum amount of time.
5. Recommended equipment for vertical ventilation includes, but is not limited to: Chainsaw, 10’ pike pole, Flathead axe, and Roof ladder.

6. Crews must enter the roof from an established safe area and must have a secondary means of escape, which should be on the same side of the structure as the original ladder, toward the unburned area of the structure.
7. Sound the roof before stepping off; continually sound as you walk. Attempt to stay close to building walls as you walk; avoid going cross-country.
8. Make access to a position as high on the roof as possible and over the fire.
9. Make inspection cut (may be used any time to determine extent of fire, type of roof decking).
10. Coordinate roof ventilation with interior crews.
11. Complete adequate size ventilation hole(s) and achieve effective ventilation. A ventilation hole of at least 4' x 4' for a residential fire, and 4' x 8', or larger, for a commercial fire is a good rule of thumb. Do not cut through the structural member, i.e. truss, as this weakens the roof system. As necessary, ensure that the ceiling is breached into the fire area.
12. Continually monitor roof structure and fire conditions and provide progress reports to Command.
13. To get off the roof, ideally follow your steps back, and sound as you go.

SECTION III – Cut Patterns

1. Minimum 4' x 4' cut with observation hole/purchase points
2. Trenching
 - a. This form of ventilation is a defensive operation aimed at stopping a fast moving fire. To properly perform a trench cut requires significant manpower, equipment, and time to perform. These factors must be considered.