

## TRENCH RESCUE

### Purpose:

Trench Rescue Operations present a significant danger to personnel and may involve complex requirements for shoring, hand tools, earth-moving equipment and other specialized resources. The safe and effective management of this operation requires special considerations. **Therefore, it shall be the policy of the Burlington Fire Protection District to NOT allow the entry of any personnel into an unsafe trench or excavation.** This guideline identifies some of the critical issues that must be included in managing these incidents.

For the purpose of emergency response, a depression, hole, trench or earth wall, man-made or natural, of four feet or greater shall define an **excavation**.

Cave-ins and collapses generally occur because of unstable soil conditions combined with improper or inadequate shoring. The potential for additional collapse must always be considered as a primary hazard and personnel must be aware that any action may disrupt the temporary stability and cause an additional collapse. The temporary stability, at any point in an operation, may be disturbed by removing soil or debris, by adding weight near the edge of an open cut, by vibration (such as vehicle movement), rain, or simply by the passage of time.

### Tactical Considerations:

- A. Arrival on scene:
  - 1. First arriving company officer should take Incident Command and begin an immediate size-up of the situation.
  - 2. Spotting Apparatus. The first-in company should spot the apparatus at least 50 feet from the location of the trench failure. The Incident Commander should set up a staging area at least 150 feet from the scene.
  - 3. The Incident Commander should have all equipment shut down and any person that may be working in the hole should be removed.
  - 4. The Incident Commander should have the TRT dispatched by PSCC, if this has not already been done.
- B. The Primary Assessment:
  - 1. Command should determine exactly what has happened.
  - 2. Assess the potential hazards to the rescuers.
  - 3. Secure an RP (responsible party), job foreman, or witness to the accident.
  - 4. Identify any language barriers that may be present between witness(es) and rescuers. If there are barriers, the Incident Commander

should call for a bilingual individual to assist with communications.

5. An immediate assessment of the victim's injuries should be determined without entering the trench.
  6. Determine how many victims are affected by the accident.
  7. Consider calling for an aeromedical helicopter as long as the incident has been determined to be a rescue.
  8. If no witness is present, the Incident Commander may have to look for clues on the scene as to what has happened.
  9. If there are victims, the Incident Commander should determine how long the victim has been buried.
  10. An early decision must be made as to whether this operation will be run in the rescue or recovery mode.
- C. The Secondary Assessment:
1. Assess on-scene capabilities; confer with a representative from TRT to determine if additional equipment or personnel is needed.
  2. Assign a safety officer.

### **Guidelines:**

- A. Make the General Area Safe:
1. Create a hot, warm, and cold zone.
    - a. Hot zone extends 0-50 feet.
    - b. Warm zone from 50-150 feet.
    - c. Cold zone from 150-300 feet.
  2. Control traffic movement.
    - a. Shut down all roadways as needed.
    - b. Re-route all non-essential traffic at least 300 feet around the scene.
  3. Control the crowd.
    - a. Remove all non-essential civilian personnel to at least 150 feet from the incident.
    - b. Remove all non-essential rescue personnel at least 50 feet from the incident.
  4. Shut down all heavy equipment operating within 300 feet of the collapse.
- B. Make the Rescue Area Safe:
1. Control all hazards in the area.
  2. Monitor the atmosphere in the trench.
  3. Ventilate the trench if necessary.
- C. Additional Considerations:
1. Heat. Consider rotation of crews.
  2. Cold. Consider affects of hypothermia on victim and rescuers.
  3. Rain/Snow. Consider the affects of rain or snow on the hazard profile.

4. Time of day. Is there sufficient lighting for operations extending into the night.
5. Consider the affect on family and friends; keep family informed.
6. Consider news media; assign a PIO.
7. Call for OSHA. Command should consider calling on OSHA representative to the scene if there has been a serious injury or death.