



# TOLEDO FIRE & RESCUE DEPARTMENT



## C-117 Technical Rescue Operations - Trench Rescue

### Emergency Manual

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### PURPOSE

The purpose of this procedure is to establish guidelines for the response of fire department personnel and equipment to trench rescue incidents. Because trench rescue operations present a significant danger to fire department personnel, the safe and effective management of these operations require special considerations. This guideline identifies some of the critical issues which must be included in managing these incidents.

### TACTICAL CONSIDERATIONS

OSHA Regulations Standard 29 CFR 1926 Subpart P regulates excavations for general industry and rescue service and shall be considered the basis for emergency trench rescue operations. For the purpose of emergency response, an excavation shall be defined by any depression, hole, trench or earth wall, man-made or natural of (4) four feet or greater in depth.

Trench collapses generally occur due to unstable soil conditions combined with improper or inadequate shoring. The potential for additional collapse is to be considered a primary hazard to victims and rescue personnel. Removing soil and debris, adding additional weight near the edge of an excavation, vibration, weather or gravity may cause unexpected and rapid collapse at any time during RECON or RESCUE operations.

Due to the inherent dangers associated with these operations, Toledo Fire and Rescue's Risk Management Profile shall be applied to all trench rescue operations and shall be continuously re-assessed throughout the incident. A phased approach to trench rescue operations which include; **Arrival**, **Pre-entry** operations, **Entry** operations, and **Termination**, can be utilized to safely and effectively mitigate these high-risk / low-frequency events.

**UNDER NO CIRCUMSTANCE SHALL ANY PERSONNEL OTHER THAN THE ON-DUTY RESPONDING TECHNICAL RESCUE COMPANIES ENTER THE TRENCH.**

- 1. Establish command and provide an initial size-up.**
- 2. Request the response of the Technical Rescue Team through Fire Dispatch.**
- 3. NO FIRST RESPONDER SHALL ENTER THE TRENCH OR EXCAVATION UNDER ANY CIRCUMSTANCE.**
- 4. Conduct air monitoring of the area. Request all utilities to respond through Fire Dispatch.**  
Consider the air monitoring of adjacent structures.
5. Establish zones at 0'-10', 10'-50' and 50'-100' from the lip (edge) of the trench or excavation.
6. Perform triage for all self-extricated victims. Attempt to obtain the number of victims and their possible location within the trench or excavation.
  - **Approach the trench from the end or a corner.**
7. Consider the evacuation of any adjacent structures that may have foundation compromise.
8. Non-entry methods of rescue may be considered, such as lowering a portable ladder, utilizing a pike pole to pull a victim, or by means of extending a rope to a victim. Utilize methods of weight distribution near the lip (edge).
9. Assist the Technical Rescue Team with the staging of equipment as directed.

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*First arriving Technical Rescue Unit that is staffed with a Technical Rescue Qualified Team Leader should be assigned Rescue Sector.*

*Rescue Sector responsibilities include:*

- Assuming technical rescue operations control.
- Identifying hazards and critical factors.
- Developing a rescue plan and back-up plan.
- Communicating with and directing resources assigned to Rescue Sector.
- Informing Command of conditions, actions, and needs during all phases of the rescue operation.

**Technical Rescue Team personnel refer to Standard Operating Guidelines for Trench Rescue.**

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See Also:

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