

Collapsed structure rescue

STOP Working in and around collapsed structures is inherently dangerous. The following diagram highlights some of the many safety considerations when working in such an environment.

Heavy items on the roof such as air-conditioning units or large water tanks may fall off or through a damaged roof.

Sections of floor or wall panels may only be hanging from rebar and likely to fall.

Broken glass from windows may fall with even the slightest wind.

Broken gas and water lines will be hazards.

Secondary explosions or aftershocks may lead to additional falling objects, but may also lead to further collapse.



Cables supplying electricity to the building may be damaged leading to an electrical hazard.

Various loose items such as signs or panels may fall.

Damaged columns are a sign of heavy structural damage.

In an effort to control movement in and out the hazardous area, always enforce the use of working zones. The inner, or action zone, is for rescuers actively involved in rescue operations; the secondary zone is reserved for all other emergency personnel. All non-emergency service persons should be kept clear of these two zones.

Window / doorway shores

The procedure

STRUT CHOICE: A good strut type for this application is any Locknut type strut.



- 1 This shore system makes use of two shores with one header and footer the width of the opening. The shore system should be assembled in a safe area and then moved into place.



- 2 First make rough measurements or estimations of the width of the opening.
On the basis of this, cut or choose two pieces of wood to use as the header and footer of the system.



- 3 After placing the header and footer on top of each other in the opening, measure the length of shore required.



- 4 Now select the appropriate struts and extensions for the measured space and assemble two shores of the same length.



- 5 Now that the shores are assembled, nail the heads to either end of the wood header ensuring the shores remain parallel.
In some cases it may be helpful to leave space to the outside of the shores to allow secondary shoring later if required. A wood footer can be prepared in the same way.



Always position any air or hydraulic connection points to the outside of the window or doorway.



- 6 The assembled shore system can now be moved into place.



- 7 Now extend and lock the shores in place using the required system.

Manual system used

Hydraulic system used



"T" / Spot shores

The procedure

STRUT CHOICE: A good strut type for this application is any Locknut type strut.



- 1 This type of shore should be assembled in a safe area and then moved into place. They are normally installed with wood above and below to spread the load.

Depending on the nature of the ground you are working on, it may be best to make use of tilting heads at the base.



- 2 Make rough measurements or estimations of the shore length needed.

If a doorway shore is already in place, a measurement of the extra length to the roof can be added to the height of the doorway shore.



- 3 Now select the appropriate struts and extensions for the measured space and assemble your shore in a safe environment. A beam support head should be nailed to the center of the timber header. A timber footer may be prepared in the same way if required.



- 4 Extend and lock the shore in place using the required system.



Remember never to lift or push with a shore system in a collapsed structure environment



- 5 Remember that as the length of any shore increases, load capacity decreases.



- 6 As a final step remove any hoses or other components that may get in the way during rescue operations.



As seen in
"Holmatro's Emergency Shoring & Lifting Techniques"

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