

Structural Collapse Indicators

The Walls are Falling

Background: The possibility of collapse is present at virtually every fire scene. Explosions, fire consumption of load bearing members, fuel loads and water loading from fire streams are all conditions that could trigger catastrophic collapses. Early identification of these hazards is an essential function of the Safety Officer. Knowledge of building construction characteristics and the hazards associated with each type is a career long effort. Some collapse indicators may be present within all building construction types and must be watched for during the entire operation. Indicators may not be present and sudden collapse is always a possibility. Most collapses occur at defensive operations. Collapse zones must be established and personnel and equipment must be kept out of the zones at all times.

General Collapse Indicators

Smoke issuing or pushing through mortal joints or exterior finishes

Sagging floors or walls

Building construction type
Wood frame may be most prone

Extreme or extended fire conditions

Overloading of crews on unsupported areas of building

Fire that breaches load bearing members of the structure

Sudden breaking of glass, doors or windows that do not close

Poor initial condition of structure prior to fire event

Intuition
If it doesn't feel right or look right

Creaking or moaning of building. Loud cracks or sounds.

Unsupported walls

