Firefighter Safety within Buildings Under Construction, Vacant or Being Rehabbed
HIGH-RISE BUILDINGS UNDER CONSTRUCTION
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Structural Steel Skeleton
HIGH-RISE BUILDINGS UNDER CONSTRUCTION

- Curtain Wall Systems hung on structure
- Exposed Structural Steel
- Floor systems often constructed of bar joist trusses
Curtain Wall Connectors
“Q Decking” used as a base for the floor
Q Decking based floors are typically 6 inches thick.
Metal decking is vulnerable, before being sprayed with fireproofing material.
HIGH-RISE BUILDINGS UNDER CONSTRUCTION

Cast-In-Place, Concrete Construction
HIGH-RISE BUILDINGS UNDER CONSTRUCTION

Formwork or False work is either combustible or unprotected metal.
High-Rise Buildings Under Construction

Post Tensioned Concrete Systems

Tremendous collapse potential is present prior to “Jacking Cables”
Forms are typically removed long before full cure is reached.
• Standpipe outlets are not present to the top floor
• Hose valve outlets may be, missing, damaged or in the open position
• Systems are dry
• Improper threads could be on hose valve outlets
HIGH-RISE BUILDINGS UNDER CONSTRUCTION
HIGH-RISE BUILDINGS UNDER CONSTRUCTION

Many construction companies will look for ways to cut corners
Roads accessing the construction site may be shut down or Blocked with construction equipment.
Hazardous/Flammable materials are abundant
Lighting in and around a construction site can be an issue
Defensive Tactics are preferred for any fire beyond incipient
HIGH-RISE BUILDINGS UNDER CONSTRUCTION

Deluge Unit

Fire Boat
HIGH-RISE BUILDINGS UNDER CONSTRUCTION

Aerial Tower 1

High Pressure Engine 5
3 of the last 5 Line of Duty Deaths for the Chicago Fire Department have been in Abandon, Vacant or Buildings Being Rehabbed.
Abandon/Vacant/Rehabbed Buildings

- The National Fire Protection Association reported a national average of 3.7 firefighter injuries per 100 special structure fires vs. 1.9 firefighter injuries per 100 structure fires in general occupied structures. The NFPA defines special structures as vacant buildings and buildings under construction.

- There are nearly double the injuries in vacant buildings and buildings under construction.
Section 31.219. Precautions to be Taken at Fires Involving Abandoned Buildings. When fighting a fire in an abandoned building, Fire Department personnel are not to enter such buildings except if it is necessary to affect rescues of vagrants or other persons. Fire fighting will be effected with streams from the outside using hand lines, multiversal nozzles, aerial ladder pipes, snorkels, or other high caliber equipment.

Signed by Robert J. Quinn on January 1st 1973
After FF Stringer and FF Ankum died a program was started to make all buildings that were unoccupied and in distress.
There have been no recorded injuries of firefighters in buildings marked with a Red X.
Visible fire is extinguished from the outside and NO entry is made unless there is noticeable life.
The designated Safety Chief conducting an inspection of the building marked with a Red X before any entry by firefighters.
Abandon/vacant/Rehabbed Buildings

The Next Challenge to the Fire Service:
How do arriving firefighters know if the building is vacant, being rehabbed or unauthorized work is being performed?
Is it vacant and dangerous? Unauthorized work?
Abandon/vacant/
Rehabbed Buildings

Open elevator shaft
Abandon/vacant/
Rehabbed Buildings

Exterior
Abandon/vacant/ Rehabbed Buildings

Interior
Abandon/vacant/ Rehabbed Buildings

Visibility inside the structure does not allow for firefighters to identify all the hazards within a structure.
Abandon/vacant/Rehabbed Buildings

What can be done to prevent injuries to firefighters in these structures
Can we put markers like the RED X on all buildings under construction, being rehabbed or that are known to be vacated?
Abandon/vacant/rehabbed Buildings

We have to do something to prevent this!!