TO:Director, Occupational Health Surveillance Program,
Massachusetts Department of Public Health

FROM:Massachusetts Fatality Assessment and Control
Evaluation (MA FACE) Project Field Investigator

SUBJECT:Massachusetts Carpenter Dies in Fall Through Floor
Opening at a Home Construction Site MA-93-13

DATE: April 1, 1994

SUMMARY

On August 11, 1993, a 33 year old male carpenter died from injuries sustained in a twenty foot fall through a floor opening at a homesite under construction in Massachusetts. In the moments prior to his fall, the victim was reportedly fastening two framed wall sections together near the floor opening. The victim's supervisor and co-worker saw the victim fall headfirst through the second story floor opening to the concrete basement floor below, and rushed to his aid. They summoned emergency medical services who arrived within minutes. The victim was transported to the regional hospital where he died approximately three hours and forty-five minutes later.

The Massachusetts FACE Project concluded that to prevent similar occurrences in the future, employers should:

- require floor openings to be adequately protected and/or personal protective equipment to be used in the presence of fall hazards

- develop, implement, and enforce a comprehensive safety program that includes, but is not limited to, worker training in fall hazard recognition and the use of fall protection devices

- consider and address worker safety in the planning phase of construction projects, and do so, if necessary, on a daily basis.

INTRODUCTION

On August 12, 1993, the Medical Examiner's Office telephoned the Massachusetts FACE Project's 24 hour hotline to report the death of a 33 year old male carpenter on the previous day. An investigation was immediately initiated.

On September 9 and 10, 1993, the MA FACE Investigator traveled to the region and visited the construction site, police department and town offices. The Investigator conducted interviews with the victim's employer, municipal police personnel, and a town building department representative. The death certificate, police incident records, employer statement and assorted newspaper clippings were obtained during the investigation.

The employer was a construction company in business for over 8 years at the time of the incident. The company specialized in structural framing and employed 6 persons, 4 of whom were carpenters.

The victim was a carpenter with over 10 years of carpentry experience. He was employed by the company for approximately 11 months. His known safety training was "on-the-job." The employer did not provide safety training, or have written safety rules, procedures or programs in place at the time of the incident.

INVESTIGATION

On the day of the incident, the victim's employer was under contract to provide structural framing services at a homesite under construction in Massachusetts.

The employer and the victim had been on the jobsite for approximately three weeks when the incident occurred. The victim reported to the incident site at approximately 9:30 a.m., having worked a couple of hours on another jobsite. He worked for an hour on the incident site, and then took a fifteen minute coffee break with his boss and co-worker at 10:30 a.m. The three then resumed their work on the second floor of the home, erecting framed wall sections close to a floor opening where the chimney was to be built.

The victim was following instructions to nail two top plates together (top part of wall sections), when his supervisor and co-worker saw him fall head first through the chimney opening. According to the employer it is unlikely he tripped, because the work surface was secure, dry and free of clutter. Although the exact cause of the fall remains uncertain, it is likely that the victim fell into the chimney opening because he was unaware of his proximity to it.

The supervisor and co-worker immediately rushed to aid the critically injured victim. They summoned emergency medical personnel who quickly arrived on the scene, and transported the victim to a major area hospital. The victim was pronounced dead three hours and forty-five minutes following the incident.

CAUSE OF DEATH

The Medical Examiner listed the cause of death as multiple injuries due to blunt trauma.

RECOMMENDATIONS/DISCUSSION

Recommendation #1: Employers should require floor openings to be adequately protected and/or personal protective equipment to be used in the presence of fall hazards.

Discussion: OSHA Standard 29 CFR 1926.500 (b) requires temporary or emergency floor openings to be guarded by a standard railing and toeboard, or with a secured cover capable of supporting the maximum intended load. In instances where a guardrail or cover is not practical for the work being done, alternative forms of equally protective fall protection, such as a safety net, catch platform, or safety harness and lanyard could be used. Had some form of fall protection been used to guard the chimney opening, this death could have been prevented.

Recommendation #2: Employers should develop, implement, and enforce a comprehensive safety program that includes, but is not limited to, worker training in fall hazard recognition and the use of fall protection devices.

Discussion: The employer did not have a written safety program, training program or a designated safety officer. Comprehensive safety programs should include, but not be limited to, routine job site hazard surveys, the use of appropriate fall protection, and worker training on the recognition and avoidance of fall hazards. Furthermore, employers should appoint an individual with safety knowledge, and the authorization to take corrective measures to eliminate hazards, to be the designated safety officer, or competent person, on site. Currently most OSHA construction standards (29 CFR 1926) require the involvement of a "competent person" in the implementation of safety provisions.

Recommendation #3: Employers should consider and address worker safety in the planning phase of construction projects and do so on a daily basis if necessary.

Discussion: Prior to project engagement and prior to each phase thereafter, the employer or project foreman, and the designated safety officer, should identify and review the potential hazards with the employees, and discuss how to control the hazards and how the work can be safely performed. These discussions should include information about hazards in the immediate work area as well as information about the overall site that could create additional hazards for workers. Regular safety meetings are constant reminders to employees of the dangers associated with their job, and the actions they can take to protect themselves.

REFERENCES:

Code of Federal Regulations, Title 29 Part 1926 Section 500(b)