

Colorado FACE Investigation 92C0049

SUBJECT:

Carpenter dies when the trusses on a home under construction collapse in Colorado.

SUMMARY:

A carpenter in Colorado was fatally injured when the roof trusses he was standing on collapsed. In this incident a crew of three were getting ready to apply sheets of plywood to the roof trusses of a home under construction. The trusses had been erected the day before and a stack of 4'x8' sheets of plywood had been stacked on the framework. Employee #1 (the deceased) was helping to straighten the trusses that had been erected and held in place with a 2x4 stringer nailed in two places. A co-worker (employee #2) was at the other end of the roof. As employee #2 pulled the nail on the lower stringer the entire framework started to shift.

He yelled a warning to employee #1 who attempted to jump out of the way. The collapsing structure caught him and he was buried under the trusses at the ground level.

The Colorado Department of Health (CDH) investigator concluded that to prevent future similar occurrences, employers should:

- Ensure that design criteria is adequate to encompass changing conditions.
- Develop, implement, and enforce a comprehensive written safety program that includes an adequate fall protection policy.
- Conduct a job-site survey on a regular basis to identify potential hazards, implement appropriate control measures, and provide subsequent training to employees that specifically addresses all identified hazards.

#### INVESTIGATIVE AUTHORITY:

The Colorado Department of Health (CDH) performs investigations of occupational fatalities under the authority of the Colorado Revised Statutes and Board of Health Regulations. CDH is required to establish and operate a program to monitor and investigate those conditions which affect public health and are preventable. The goal of the workplace investigation is to prevent work-related injuries in the future by study of the working environment, the worker, the task the worker was performing, the tools the worker was using, and the role of management in controlling how these factors interact.

This report is generated and distributed to fulfill the Department's duty to provide relevant education to the community on methods to prevent severe occupational injuries.

#### INVESTIGATION:

The investigation of this work-related fatality was prompted by a report of the incident from Occupational Safety and Health Administration (OSHA) Area Office and the local county coroner. The CDH investigator was on site three hours after the incident occurred. The investigation included interviews with coworkers, the company owner, and the local investigating police officer. The incident site was photographed and autopsy and police reports were obtained from the local authorities.

The company employs three people. The company was a subcontractor on this construction project and had been onsite for 14 days. The company did not have a safety program and safety training was not conducted.

#### CAUSE OF DEATH:

The cause of death as determined by autopsy and listed on the death certificate as a massive head injury as a result of blunt force trauma.

#### RECOMMENDATIONS/DISCUSSION:

Recommendation #1: Ensure that design criteria is adequate to encompass changing conditions.

Discussion: In this incident, the added weight of the plywood sheets created stress on the 2x4 stringers used to hold the trusses in place. When one of the stringers was disconnected the integrity of the structure was compromised resulting in the collapse of the framework.

Recommendation #2: Develop, implement, and enforce a comprehensive written safety program that includes an adequate fall protection policy.

Discussion: Employers should emphasize safety of their employees by designing, developing, implementing and enforcing a comprehensive safety program to prevent incidents such as this. The safety program should include, but not be limited to, the recognition and avoidance of fall hazards and the use of appropriate fall protection.

Recommendation #3: Conduct a job-site survey on a regular basis to identify potential hazards, implement appropriate control measures, and provide subsequent training to employees that specifically addresses all identified hazards.

Discussion: According to 29 CFR 1926.21(b)(2), employers are required to instruct each employee in the recognition and avoidance of unsafe conditions, and to control or eliminate any hazards or other exposure to illness or injury. In this and similar situations the employer may need to provide additional training to ensure that these employees understand the hazards and how to properly use safety equipment to protect themselves.

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