Wood Truss Construction Fatality File

Collapsed roof trusses kill carpenter foreman.

A 33-year-old carpenter foreman was killed when the roof truss system he and his crew were installing collapsed. The victim was hired to be the foreman for a project to construct a residential shop building. A few days before the incident the crew began framing, sheeting, and bracing the external four walls. On the day of the incident, vertical truss bracing (2 X 4s) were nailed to the north and the south wall.

The truss manufacturer arranged for the delivery of the trusses on a trailer pulled by a truck-mounted crane. The truck operator provided the foreman with the delivery packet containing the BCSI-B1 Summary Sheet Guide to Handling, Installing, Restraining and Bracing of Trusses before setting up to offload the trusses from the trailer. The foreman assigned each of his four-man crew their positions and tasks. The foreman worked the center span of the trusses installing bracing and runners and unhooking each truss from the crane rigging. After the thirteenth truss was toenailed into its place and the temporary short member top chord lateral restraint was installed, the victim disconnected the truss from the rigging. The truck operator and crew member on the trailer saw the truss system collapsing and yelled to warn the crew. The two crew members working on the top plates of the framed walls were knocked off the structure to the concrete floor below and were injured from the fall and falling trusses. The worker on the concrete floor beneath the erected trusses cutting lateral restraints to size sustained a head concussion. The victim sustained a fatal head injury when he was struck on the head by a falling truss.

RECOMMENDATIONS

- Employers and supervisors should assess the workplace hazards and plan each stage of construction to comply with manufacturers recommendations or standard best practice. In this case, the critical elements of standard practice provided in the BCSI-B1 Summary Sheet for adequate bracing prior to and during truss installation were not followed.
- Employers must train supervisors and employees, communicate their expectation for following safe practices and confirm that employees fully understand the hazards and controls required for the task assigned. In this case, training and expectations were lacking and the truss installation did not include a review of standard documents, pre-job assessment, risk mitigation planning or the use of personal protective equipment.
- Employers should develop and use a hiring process that is based on established best practices, including a process to determine candidates qualifications and training needs before they begin work on assigned tasks.