OSHA Safety Training  
Demolition

Before the start of every demolition job, the manager and safety personnel for the demolition contractor should take a number of steps to safeguard the health and safety of workers at the job site.

Prior to starting all demolition operations, OSHA 1926.850 (a) requires that an engineering survey of the structure be conducted by a competent person.

One of the most important elements of the pre-job planning is the location of all utility services. All electric, gas, water, steam, sewer, and other services lines should be shut off, capped or otherwise controlled at or outside the building before demolition work is started.

Prior to starting work, provisions should be made for prompt medical attention in case of serious injury.

A “fire plan” should be set up prior to a demolition job. The plan should outline the assignments of key personnel in a fire, and provide an evacuation plan for workers.

Mechanical demolition refers to demolition using equipment like a jackhammer or wrecking ball, rather than explosives.

The different forms of construction used in a number of more or less conventional structures built during the last few decades will give rise to a variety of problems when the time comes for them to be demolished. Prestressed concrete structures fall in this general category.

There are four main categories of prestressed members. The category or categories should be determined before attempting demolition, bearing in mind that any prestressed structure may contain elements of more than one category. This is an important step of the planning process, since prestressed members present particular safety concerns.
**Confined Spaces**

The hazards encountered when entering and working in confined spaces are capable of causing bodily injury, illness, and death. Accidents occur among workers because of failure to recognize that a confined space is a potential hazard. It should therefore be considered that the most unfavorable situation exists in every case and that the danger of explosion, poisoning, and asphyxiation will be present at the onset of entry.

**Safe Work Practices When Demolishing a Chimney, Stack, Silo, or Cooling Tower**

**Inspection and Planning**

When preparing to demolish any chimney, stack, silo, or cooling tower, the first step must be a careful, detailed inspection of the structure by an experienced person.

When hand demolition is required, it should be carried out from a working platform.

- Experienced personnel must install a self-supporting tubular scaffold, suspended platform, or knee-braced scaffolding around the chimney. Particular attention should be paid to the design, support, and tie-in (braces) of the scaffold.
- A competent person should be present at all times during the erection of the scaffold.
- It is essential that there be adequate working clearance between the chimney and the work platform.
- Access to the top of the scaffold should be provided by means of portable walkways.
- The platforms should be decked solid and the area from the work platform to the wall should be bridged with a minimum of two-inch thick lumber.
- A back rail 42 inches above the platform, with a midrail covered with canvas or mesh, should be installed around the perimeter of the platform to prevent injury to workers below. Debris netting may be installed below the platform.
- Excess canvas or plywood attachments can form a wind-sail that could collapse the scaffold.
- When working on the work platform, all personnel should wear hard hats, long-sleeve shirts, eye and face protection, such as goggles and face shields, respirators, and safety belts, as required.
- Care should be taken to assign the proper number of workers to the task. Too many people on a small work platform can lead to accidents.
General Safe Work Practice

Prior to the blasting of any structure or portion thereof, a complete written survey must be made by a qualified person of all adjacent improvements and underground utilities. When there is a possibility of excessive vibration due to blasting operations, seismic or vibration tests should be taken to determine proper safety limits to prevent damage to adjacent or nearby buildings, utilities, or other property.

Vehicle Safety

Vehicles used for transporting explosives shall be in good mechanical condition, and have tight floors, and any exposed spark-producing metal on the inside of the body shall be covered with wood or some other nonsparking material. No passengers should be allowed in any vehicle transporting explosives.

Explosives, blasting agents, and blasting supplies shall not be transported with other materials or cargoes. Blasting caps shall not be transported in the same vehicle with other explosives. If an open-bodied truck is used, the entire load should be completely covered with a fire and water-resistant tarpaulin to protect it from the elements. In no case should the explosives be piled higher than the closed sides and ends of the body.

Every motor vehicle or conveyance used for transporting explosives shall be marked or placarded with warning signs required by OSHA and the DOT.

Inventory Handling and Safe Handling

All explosives must be accounted for at all times and all not being used must be kept in a locked magazine. A complete detailed inventory of all explosives received and placed in, removed from, and returned to the magazine should be maintained at all times. Appropriate authorities must be notified of any loss, theft, or unauthorized entry into a magazine.

Proper Use of Explosives

Certain precautions must be taken to prevent accidental discharge of electric blasting caps from current induced by radar, radio transmitters, lightning, adjacent power lines, dust storms, or other sources of extraneous or static electricity.
These precautions shall include:

- Ensuring that mobile radio transmitters on the job site that are less than 100 feet away from electric blasting caps, in other than original containers, shall be de-energized and effectively locked.
- The prominent display of adequate signs, warning against the use of mobile radio transmitters, on all roads within 1,000 feet of the blasting operations.
- Maintaining the minimum distances recommended by the IME between the nearest transmitter and electric blasting caps.
- The suspension of all blasting operations and removal of persons from the blasting area during the approach and progress of an electric storm.

Disposal of Explosives

In general, explosives should be disposed of by burning them at an isolated outdoor location, at a safe distance from thoroughfares, magazines, and other structures.