



Company Name: _____ Job Site Location: _____

Date: _____ Start Time: _____ Finish Time: _____ Foreman/Supervisor: _____

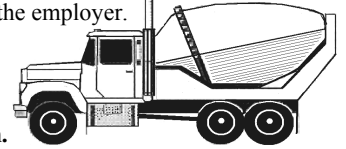
Topic 161: Concrete Construction

Introduction: Concrete is one of the most important building materials in use today. It is used in almost every type and size of architectural structure. Hardened concrete is durable, needs little maintenance, and can be used in many ways. However, working with concrete, concrete trucks, and concrete equipment can present hazards to personnel who are careless or ignorant of proper work procedures and use of equipment. Following are guidelines for construction with concrete and concrete equipment:

Employers must ensure that personnel who work with concrete and concrete equipment are properly trained to do the required work safely. Required fall protection systems and personal protective equipment must be provided and their use ensured by the employer.

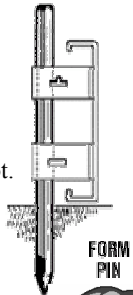
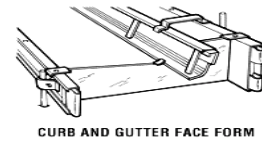
Concrete Pumps, Buckets, and Buggies:

- **Concrete buggy handles** shall not extend beyond the wheels on either side of the buggy.
- **No workers are permitted** to ride on, or hang on concrete buckets during movement.
- **No personnel are allowed** to work under concrete buckets while being swung, lowered, or elevated into position.
- **Ensure that** the signalman and pump operator maintain visual contact, and know the correct hand signals for safe operation of the equipment.
- **Make sure that** all workers are aware when the pump and pump hose is being moved. Do not hang or swing on the pump hose.



Working around Cement Trucks:

- **Use steps and handholds** to climb on the truck for service, washing, etc. Never place any part of your body in the rotating drum of the truck
- **Use two workers** to attach the chutes together to prevent injury to the hands and arms. Keep fingers clear from pinch points when attaching and using the chutes. Lock chutes to prevent swing when moving the truck.
- **Do not walk backward** when guiding a truck, and always keep visual contact with the driver.
- **Do not drink** the water from the hose on the truck, it may not be potable.



Forming, Shoring, Jacks, and Lifting Units:

- **Shoring and tilt ups** should be secured for at least two times the weight of the material.
- **Paint the ends** of forming stakes and pins for visibility to prevent trip and fall hazards.
- **Ensure sufficient bracing** is used on forms to support the load of concrete. Remember - concrete averages 140 lbs. per cubic foot.
- **Using blocking** to support the load in any position if the jack/lifting unit malfunctions.
- **When you work** on standard forms more than six feet above a lower level, you must use appropriate fall protection (personal fall-arrest, safety-net, or positioning-device systems) or work from a platform such as a carpenter bracket scaffold.

Concrete Dust, Silica, and Chemicals:

- **Cement mixtures and aggregates** contain silicates which may be a health hazard when inhaled. When batching, cutting, drilling, grinding, or chipping concrete wear a dust mask or respirator.
- **Contact with wet concrete**, mortar, or cement mixtures can cause skin irritation, severe chemical burns, or serious eye damage. Avoid contact with eyes and skin. Wear waterproof gloves, a fully buttoned long sleeve shirt, full-length trousers, and a tight-fitting eye protection when working with these materials. Wash wet concrete, mortar, cement, or cement mixtures from your skin with fresh, clean water as soon as possible after contact.



Reinforcing Steel and Wire-Mesh:

- **Wear gloves** to protect your hands from lacerations and the rust on rebar and wire-mesh.
- **Securing the ends** or turning wire-mesh over will help to prevent recoiling.
- **Whenever you work** above rebar that protrudes from the floor, cover the rebar with approved protective caps or troughs that will prevent you from being impaled if you fall. Cap rebar protruding horizontally to prevent scrapes, cuts, or eye injuries.
- **When doing** dismantling or erecting work outside protective guardrails, you must use a personal fall-arrest system.



Power Concrete Trowels: Always read the operators manual prior to using the machine. Never allow untrained employees to operate a concrete power trowel. Powered and rotating concrete trowel machines that are manually guided must be equipped with a control switch that will automatically shut off the power whenever the hands of the operator are removed from the machine.

Conclusion: Concrete construction poses unique hazards to individuals working on job-sites. Follow these guidelines to help ensure a safe and healthful workplace.

Work Site Review

Work-Site Hazards and Safety Suggestions: _____

Personnel Safety Violations: _____

Employee Signatures: _____
 (My signature attests and verifies my understanding of and agreement to comply with, all company safety policies and regulations, and that I have not suffered, experienced, or sustained any recent, job-related injury or illness.)

Foreman/Supervisor's Signature: _____

These guidelines do not supersede local, state, or federal regulations and must not be construed as a substitute for, or legal interpretation of, any OSHA regulations.