



Company Name: \_\_\_\_\_ Job Site Location: \_\_\_\_\_  
 Date: \_\_\_\_\_ Start Time: \_\_\_\_\_ Finish Time: \_\_\_\_\_ Foreman/Supervisor: \_\_\_\_\_

**Topic 426: Lift-Slab Operations Requirements**

**Introduction:** Lift-slab operations must be designed and planned by a registered professional engineer who has experience in lift-slab construction. Plans and designs must be used by the employer and include detailed instructions and sketches indicating the prescribed method of erection. These plans and designs must also include provisions for ensuring lateral stability of the building/structure during construction. Following are OSHA §1926.705 requirements for lift-slab construction:

- **Employers must ensure** that all personnel involved in lift-slab construction operations are properly trained in safe techniques and procedures.
- **Jacks/lifting units** must be marked to indicate their rated capacity (at least two and one-half times the load being lifted during jacking) as established by the manufacturer, and must not be loaded beyond their rated capacity. They must be designed and installed so that they will not lift, or continue to lift, when they are loaded in excess of their rated capacity.
- **Jacking equipment** should be in good repair and includes any load bearing component which is used to carry out the lifting operation. Such equipment includes, but is not limited to, the following:
 

* Threaded rods	* Lifting nuts	* T-caps	* Columns
* Lifting attachments	* Hook-up collars	* Shear-heads	* Footings
- **Jacks/lifting units** must have a safety device installed which will cause the jacks/lifting units to support the load in any position in the event any jack/lifting unit malfunctions or loses its lifting ability.
- **Jacking operations** must be synchronized to ensure even and uniform lifting of the slab. During lifting, all points at which the slab is supported must be kept within 1/2 inch of level. If leveling is automatically controlled, the lift must stop the operation when the 1/2 inch tolerance is exceeded, or where there is a malfunction in the jacking (lifting) system.
- **When leveling** by manual controls, the controls must be in a central location and attended by a competent person while lifting is in progress. The competent person must be experienced in the lifting operation and with the lifting equipment being used.
- **The maximum number** of manually controlled jacks/lifting units on one slab must be limited to a number that will allow the operator to maintain the slab level within the 1/2 inch tolerance, but in no case may that number exceed 14 units.
- **No employees**, except those essential to the jacking operation, are permitted in the building/structure while any jacking operation is taking place unless the building/structure has been reinforced sufficiently to ensure its integrity during erection. The integrity must be ensured by an engineer to remain stable in the event of a loss of support at any jacking location. One method to comply with this provision is for the employer to ensure that continuous bottom steel is provided in every slab and in both directions through every wall or column head area.
- **Under no circumstances** is any employee, not essential to the lift, permitted immediately beneath a slab while it is being lifted.
- **A jacking operation** begins when a slab, or group of slabs, is lifted and ends when such slabs are secured (with either temporary connections or permanent connections).
- **When making temporary connections** to support slabs, wedges must be secured by tack welding, or an equivalent method of securing the wedges to prevent them from falling out of position. Lifting rods may not be released until the wedges at that column have been secured.
- **All welding** on temporary and permanent connections must be performed by a certified welder, familiar with the welding requirements specified in the plans and specifications for the lift-slab operation.
- **Load transfer** from jacks/lifting units to building columns may not be executed until the welds on the column shear plates (weld blocks) are cooled to air temperature.
- **Jacks/lifting units** must be positively secured to building columns so that they do not become dislodged or dislocated.
- **Equipment must** be designed and installed so that the lifting rods cannot slip out of position, or the employer must institute other measures such as the use of locking or blocking devices which will provide positive connection between the lifting rods and attachments, and will prevent components from disengaging during lifting operations.



**NOTE:** In addition to the above requirements, no construction loads may be placed on a lift-slab structure or portion of the structure unless the employer determines, based on information received from a person who is qualified in structural design, that it is capable of supporting the loads. Also, see meetings **324-325 Heavy Concrete Construction (Part A & B)**, **340: OSHA Requirements for Concrete Tools and Equipment, 20: Aerial Devices and Cranes**, and **274: Rigging for Safe Lifts** for additional safety information pertinent to lift-slab construction.

**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.)

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**Foreman/Supervisor's Signature:** \_\_\_\_\_  
 These guidelines do not supercede local, state, or federal regulations and must not be construed as a substitute for, or legal interpretation of, any OSHA regulations.