

**CS Part 25 Concrete Construction  
Compared With  
29 C.F.R. 1926 Subpart Q – Concrete and Masonry Construction**

as of October 2016

**Summary:** The significant differences between CS Part 25. Concrete Construction and 29 C.F.R. 1926 Subpart Q – Concrete and Masonry Construction are in:

- Construction equipment and material requirements; adoption by reference
- Reinforcement steel
- Concrete mixing, pouring, and floating
- Forms and shoring generally
- Placing and removing forms
- Vertical slip forms
- Vertical shoring generally
- Metal frame shoring
- Tube and coupler shoring
- Single-post shores
- Flying forms
- Pre-stressed and post-stressed concrete operations
- Precast and tilt-up operations
- Lift-slab operations

The comparisons show only those provisions where MIOSHA rules are different than OSHA or where MIOSHA rules are not included in 29 C.F.R.

\*\*\*\*means there is a comparable OSHA rule to this paragraph

MIOSHA	OSHA
<p><b>R 408.42517 Construction equipment and material requirements; adoption by reference.</b>  <b>Rule 2517.</b> (1) Equipment and material used in concrete construction and masonry work shall meet the applicable requirements prescribed in American national standard institute standard ANSI A10.9, "Concrete Construction and Masonry Work," 1983 edition, as adopted in R 408.42502.            (2) The minimum safety factors of formwork accessories shall be as prescribed in table 1, as follows:            See Table 1.</p>	<p><b>No comparable OSHA provision.</b></p>

MIOSHA	OSHA
<p><b>R 408.42518 Reinforcing steel.</b>  <b>Rule 2518.</b> (1) A route designated as a means of access or egress across reinforcing steel for general traffic shall be provided with a walkway.  (2) All protruding reinforcing steel, onto and into which employees could fall, shall be guarded to eliminate the hazard of impalement.  (3)****  (4) Reinforcing steel shall not be used as a scaffolding hook or stirrup or as a load-bearing member in a lifting device.  (5) Reinforcing steel shall not be welded and used as a load-bearing member.  (6)****</p>	<p><b>No comparable OSHA provisions</b></p> <p>Equivalent</p> <p><b>No comparable OSHA provisions</b></p> <p>Equivalent</p>
<p><b>R 408.42520 Concrete mixing, pouring, and floating.</b>  <b>Rule 2520.</b> (1) to (6)****  (7) An employee shall not be permitted to ride a bucket or walk or work under a bucket that is suspended from a crane or cableway.  (8) A concrete bucket that is positioned by a crane or cableway shall be suspended from an approved swivel safety-type hook.  (9) A pumpcrete or similar system using discharge pipe shall have pipe supports that are designed for a 100% overload. Compression air hoses in the system shall be provided with positive fail-safe joint connectors to prevent the separation of sections when pressurized.  (10) A runway, ramp, or scaffold shall be provided for placement of concrete in areas such as walls, piers, columns, and beams, as prescribed in Construction Safety Standards Part 12 "Scaffolds and Scaffold Platforms," Part 21 "Guarding of Walking and Working Areas," and Part 45 "Fall Protection," as referenced in R 408.42503.  (11) to (12)****</p>	<p>Equivalent</p> <p><b>No comparable OSHA provision.</b></p> <p>Equivalent</p>
<p><b>R 408.42521 Forms and shoring generally.</b>  <b>Rule 2521.</b> (1) to (2)****  (3) No construction loads shall be placed on a concrete structure or portion of a concrete structure unless the employer determines, based on information received from a person who is qualified in structural design, that the structure or portion of the structure is capable of supporting the loads.</p>	<p>Equivalent</p> <p><b>No comparable OSHA provision.</b></p>

MIOSHA	OSHA
<p><b>R 408.42522 Placing and removing forms.</b>  <b>Rule 2522. (1)****</b></p> <p>(2) Vertical, horizontal, and overhead forms that are being raised or removed by lifting equipment shall be braced or secured before being released from the load line.</p>	<p>Equivalent</p> <p><b>No comparable OSHA provision.</b></p>
<p><b>R 408.42523 Vertical slip forms.</b>  <b>Rule 2523. (1)****</b></p> <p>(2) A lift shall proceed steadily and uniformly and shall not exceed the predetermined rate of lift.</p> <p>(3) The steel rods or pipe on which the jacks climb or by which the forms are lifted shall be specifically designed for such climbing or lifting. Such rods shall be adequately braced if they are not encased in concrete.</p> <p>(4) Jacks and vertical supports shall be positioned so that the vertical loads are distributed equally and do not exceed the capacity of the jacks.</p> <p>(5) The jacks or other lifting devices shall be provided with mechanical dogs or other automatic holding devices to prevent slippage due to the failure of the power supply of the lifting mechanism.</p> <p>(6) Vertical lift forms shall be provided with scaffolding or work platforms that completely encircle the area of placement. The scaffolds shall be as prescribed in Construction Safety Standard Part 12 "Scaffolds and Scaffold Platforms," as referenced in R 408.42503.</p> <p>(7) Lateral and diagonal bracing of vertical slip forms shall be provided to prevent excessive distortion of the structure during the jacking operation.</p> <p>(8) During a jacking operation, a qualified person shall maintain the form structure in line and plumb.</p>	<p>Equivalent</p> <p><b>No comparable OSHA provision.</b></p>
<p><b>R 408.42524 Vertical shoring generally.</b>  <b>Rule 2524. (1)</b> When temporary storage of reinforcing rods, material, or equipment on top of formwork becomes necessary, these areas shall be strengthened to support the intended loads.</p> <p>(2) The sills for shoring shall be sound, rigid, and capable of carrying the maximum intended load.</p> <p>(3) When shoring from soil, the soil shall be capable of supporting the load and the soil shall be inspected after each occurrence which could affect its load-bearing capacity. Soil weakened from any occurrence that reduces its load-bearing capacity to less than that required to support a specific load shall be strengthened by compacting or other equivalent means.</p> <p>(4) Baseplates, shore heads, extension devices, and adjustment screws shall be in firm contact with the footing sill and the form.</p> <p>(5) Eccentric loads on shore heads and similar members or shoring are prohibited, unless the shore heads are designed for the loading.</p>	<p><b>No comparable OSHA provision.</b></p>

MIOSHA	OSHA
<p><b>R 408.42524 (6)</b> Shoring equipment shall be inspected by a qualified person before erection to determine that it is as specified in the shoring drawings or plans. Any equipment found to be damaged shall not be used for shoring.</p> <p>(7) Before concrete is placed in the forms, all shoring equipment shall be inspected by a qualified person to determine whether it was erected as specified in the shoring drawings or plans.</p> <p>(8) Erected shoring shall be inspected by a qualified person during and immediately after pouring concrete. Shoring that is found to be damaged or weakened shall be reinforced or reshored.</p> <p>(9) Only designated employees shall be permitted on the first floor immediately under the forms during concrete placing work.</p> <p>(10) Shoring equipment shall not be released or removed without the approval and assurance of a qualified person that the remaining equipment will support the load.</p> <p>(11) Construction or superimposed loads shall not be placed on an uncured concrete pour unless either of the following provisions is complied with:</p> <p>(a) The strength of the concrete in the previous pour has been determined by testing to be capable of withstanding the load.</p> <p>(b) A qualified person indicates that the concrete has developed sufficient strength to support the load. This subrule does not apply to slip form operations and slabs built at grade elevation.</p> <p>(12) Reshoring shall be provided, when necessary, to support slabs and beams after stripping or where the members are subjected to superimposed loads due to the construction work done.</p> <p>(13) Vertical shoring shall not be adjusted to raise formwork after concrete is in place, unless specifically provided for in the design specifications.</p>	<p><b>No comparable OSHA provisions</b></p>
<p><b>R 408.42525 Metal frame shoring.</b></p> <p><b>Rule 2525.</b> Locking devices on frames and braces shall be in good working order; coupling pins shall align the frame or panel legs; pivoted cross braces shall have their center pivot in place, and all components shall be without defects.</p>	<p><b>No comparable OSHA provision.</b></p>
<p><b>R 408.42526 Tube and coupler shoring.</b></p> <p><b>Rule 2526.</b> (1) The couplers or clamps shall not be used if they are deformed, broken, have defective or missing threads on bolts, or have other defects.</p> <p>(2) The interlocking of the tubular members and the tightness of the couplers shall be checked before pouring concrete.</p>	<p><b>No comparable OSHA provision.</b></p>

MIOSHA	OSHA
<p><b>R 408.42527 Single-post shores.</b>  <b>Rule 2527. (1)****</b></p> <p>(2) The top of single-post shores shall be restricted from movement by the use of retainers or other equivalent means.</p> <p>(3) Timber and fabricated single-post shores and the adjusting devices shall be inspected before erection. Timber for single-post shores shall not be used if it contains splits, cuts, rotting, or structural damage.</p> <p>(4) A metal single-post shore and the adjusting devices shall not be used if the shore or devices are heavily rusted, bent, dented, or re-welded or have broken weldments or other defects.</p> <p>(5) to (6)****</p>	<p>Equivalent</p> <p><b>No comparable OSHA provision.</b></p> <p>Equivalent</p>
<p><b>R 408.42528 Flying forms.</b>  <b>Rule 2528. (1)</b> Nothing shall be allowed on the forms during movement unless it is securely fastened to the forms.</p> <p>(2) A person, other than the rigger, shall not be permitted on top of the deck form after rollout operations have been completed.</p> <p>(3) Rigging of the deck form shall be completed before the line from the crane takes the total load of the form.</p>	<p><b>No comparable OSHA provision.</b></p>
<p><b>R 408.42531 Prestressed and poststressed concrete operations.</b>  <b>Rule 2531. (1)</b> An expendable strand deflection device that is used to pretension concrete members shall have a designed safety factor of not less than 2. A reusable device shall have a safety factor of not less than 3.</p> <p>(2) Expendable and reusable strand deflection devices shall not be loaded in excess of their maximum intended load.</p> <p>(3) An employer shall designate a qualified person to inspect all jacking and pulling equipment before each use and during use.</p> <p>(4) Tensioning strands that have kinks, bends, nicks, and other defects shall not be used.</p> <p>(5) Welding or cutting is prohibited near strand that has been unrolled, strung, or tensioned or at any other location where strand is stored.</p> <p>(6) During jacking operations of any tensioning element or group of tensioning elements, the anchor shall be kept turned up close to the anchor plate.</p> <p>(7) An employee shall not stand in the line of, in back of, or over the jacking equipment during tensioning operations.</p> <p>(8) Only an employee who is operating tensioning equipment shall be permitted in the immediate vicinity when tensioning is in progress.</p> <p>(9) Stress members shall be lifted with the lifting devices at points specifically designed. An employee shall not be under stressed members during lifting and erection.</p> <p>(10) Audible or visual signaling devices shall be operated to warn employees when tensioning operations are under way.</p>	<p><b>No comparable OSHA provision.</b></p>

MIOSHA	OSHA
<p><b>R 408.42531 (11)</b> All employees who are not directly involved in the tensioning operations shall be cleared from the area and shall remain clear until tensioning operations are completed and the signaling devices are turned off.</p>	<p><b>No comparable OSHA provision.</b></p>
<p><b>R 408.42532 Precast and tilt-up operations.</b>  <b>Rule 2532. (1)****</b></p> <p>(2) An erection and procedure plan, including placement of connections, shall be prepared by a qualified employee knowledgeable in precast concrete erection and be kept available at the jobsite.</p> <p>(3) to (4)****</p>	<p>Equivalent</p> <p><b>No comparable OSHA provisions</b></p> <p>Equivalent</p>
<p><b>R 408.42533 Lift-slab operations.</b>  <b>Rule 2533. (1) to (10)****</b></p> <p>(11) An employer shall ensure that an employee is not permitted under a slab during jacking operations.</p> <p>(12) to (16)****</p>	<p>Equivalent</p> <p><b>No comparable OSHA provisions</b></p> <p>Equivalent</p>

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