

WAC 296-155-680 General provisions. (1) **General.** All equipment, material and construction techniques used in concrete construction and masonry work must meet the applicable requirements for design, construction, inspection, testing, maintenance and operations as prescribed in ANSI A10.9-1997, Concrete and Masonry Work Safety Requirements.

(2) **Construction loads.** You must not place any construction loads 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.

(3) **Vertical loads.** Vertical loads consist of a dead load plus an allowance for live load. The weight of formwork together with the weight of freshly placed concrete is dead load. The live load consists of the weight of workers, equipment, runways and impact, and must be computed in pounds per square foot (psf) of horizontal projection.

(4) **Lateral loads.** Braces and shores must be designed to resist all foreseeable lateral loads such as wind, cable tensions, inclined supports, impact of placement, and starting and stopping of equipment. The assumed value of load due to wind, impact of concrete, and equipment acting in any direction at each floor line must not be less than 100 pounds per lineal foot of floor edge or two percent of total dead load of the floor, whichever is greater. Wall forms must be designed for a minimum wind load of 10 psf, and bracing for wall forms should be designed for a lateral load of at least 100 pounds per lineal foot of wall, applied at the top. Walls of unusual height require special consideration.

(5) **Special loads.** Formwork must be designed for all special conditions of construction likely to occur, such as unsymmetrical placement of concrete, impact of machine-delivered concrete, uplift, and concentrated loads.

(6) You must check form supports and wedges during concrete placement to prevent distortion or failure.

(7) **Reinforcing steel.**

(a) You must guard all protruding reinforcing steel, onto and into which employees could fall, to eliminate the hazard of impalement.

(b) Wire mesh rolls: You must secure wire mesh rolls at each end to prevent dangerous recoiling action.

(c) Guying: You must guy or support reinforcing steel for walls, piers, columns, and similar vertical structures to prevent overturning and to prevent collapse.

(8) **Post-tensioning operations.**

(a) You must not permit any employee (except those essential to the post-tensioning operations) to be behind the jack during tensioning operations.

(b) You must erect signs and barriers to limit employee access to the post-tensioning area during tensioning operations.

(c) You must handle stressed members at pick points specifically designated on the manufacturer's drawings.

(d) You must lift stressed members with lifting devices recommended by the manufacturer or the engineer in charge.

(e) You must not allow anyone under stressed members during lifting and erecting.

(9) **Working under loads.**

(a) You must not permit any employee to work under concrete buckets while buckets are being elevated or lowered into position.

(b) To the extent practical, you must route elevated concrete buckets so that no employee, or the fewest number of employees, are exposed to the hazards associated with falling concrete buckets.

(10) **Personal protective equipment.**

(a) You must not permit any employee to apply a cement, sand, and water mixture through a pneumatic hose unless the employee is wearing protective head and face equipment.

(b) You must not permit any employee to place or tie reinforcing steel more than 6 feet (1.8 m) above any adjacent working surface unless the employee is protected by personal fall arrest systems, safety net systems, or positioning device systems meeting the criteria of chapter 296-155 WAC, Part C-1.

(c) You must protect each employee on the face of formwork or reinforcing steel from falling 6 feet (1.8 m) or more to lower levels by personal fall arrest systems, safety net systems, or positioning device systems meeting the criteria of chapter 296-155 WAC, Part C-1.

[Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.060. WSR 16-09-085, § 296-155-680, filed 4/19/16, effective 5/20/16. Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.440, 49.17.060, and 29 C.F.R. 1926, Subpart CC. WSR 12-01-086, § 296-155-680, filed 12/20/11, effective 2/1/12. Statutory Authority: RCW 49.17.010, 49.17.040, 49.17.050, 49.17.060 and chapter 49.17 RCW. WSR 10-11-103, § 296-155-680, filed 5/18/10, effective 7/1/10. Statutory Authority: RCW 49.17.010, [49.17].040, and [49.17].050. WSR 00-14-058, § 296-155-680, filed 7/3/00, effective 10/1/00. Statutory Authority: Chapter 49.17 RCW. WSR 94-15-096 (Order 94-07), § 296-155-680, filed 7/20/94, effective 9/20/94; WSR 90-17-051 (Order 90-10), § 296-155-680, filed 8/13/90, effective 9/24/90; WSR 90-03-029 (Order 89-20), § 296-155-680, filed 1/11/90, effective 2/26/90; WSR 89-11-035 (Order 89-03), § 296-155-680, filed 5/15/89, effective 6/30/89. Statutory Authority: RCW 49.17.040 and 49.17.050. WSR 86-03-074 (Order 86-14), § 296-155-680, filed 1/21/86; Order 74-26, § 296-155-680, filed 5/7/74, effective 6/6/74.]