

INSERT PAGES
IBC CHAPTER 18

To be inserted between pages 360 & 361.

Comm 62.1808 Pier and pile foundations. (3) DETERMINATION OF ALLOWABLE LOADS. Substitute the following wording for the requirements in IBC section 1808.2.8.1:

- (a) The allowable axial and lateral loads on piers or piles shall be determined by an approved formula, load tests or static analysis.
- (b) The factor of safety to be used for pier or pile design shall depend on the extent of field testing performed to verify capacity.
- (c) If the ultimate capacity is assessed solely by static analysis, a minimum factor of safety of 3.0 shall be applied to the ultimate capacity to determine allowable load capacity.
- (d) If only static analysis and dynamic field testing are performed, a minimum factor of safety of 2.5 shall be applied to the ultimate capacity to determine load capacity.
- (e) If one or more static load tests are performed, in addition to a static analysis, a minimum factor of safety of 2.0 shall be applied to the ultimate allowable capacity.
- (f) A minimum factor of safety of 2.0 shall be used for occupiable structures provided that all of the conditions in pars. (a) to (e) are met. A minimum factor of safety of 1.5 may be used for non-occupiable structures, provided that the deep foundations are required only to control settlement, and it can be demonstrated that deep foundations are not required to prevent a bearing capacity failure.

(4) LOAD TESTS. This is a department alternative to the requirements in IBC section 1808.2.8.3: The ultimate capacity of the pile shall be defined as the load at which the average pile head deflection is defined by the following equation:

$$\delta = (Pl/AE) + 0.15" + (B/120)$$

Where:

δ = average pile head deflection, inches

P = applied load, pounds

l = pile length, inches

A = transformed pile area of pile (to steel)

E = modulus of elasticity (of steel)

B = outside diameter (or width) of pile, inches

The calculation shall be predicated on an assumed end-bearing condition.

Comm 62.1808 Pier and pile foundations. (5) PILES IN SUBSIDING AREAS.

Substitute the following wording for the requirements in IBC section 1808.2.11:

- (a) Where piles are installed through subsiding fills or other subsiding strata and derive support from underlying firmer materials, consideration shall be given to the downward drag load that may be imposed on the piles by the subsiding upper strata.
- (b) Where the influence of subsiding fills is considered as imposing loads on the pile, the allowable stresses specified in this chapter are permitted to be increased where satisfactory substantiating data are submitted.
- (c) The position of the pile's neutral plane shall be determined, and the settlement of the soil at the level of the neutral plane shall be estimated. The maximum load in the pile, which occurs at the neutral plane, shall be determined.

(6) SPECIAL INSPECTION. The requirements in IBC section 1808.2.22 are not included as part of this code.