

the column in each direction at the top of the column shaft.

(3) Columns shall be set on level finished floors, pre-grouted leveling plates, leveling nuts, or shim packs which are adequate to transfer the construction loads.

(4) All columns shall be evaluated by a competent person to determine whether guying or bracing is needed; if guying or bracing is needed, it shall be installed.

(b) *Repair, replacement or field modification of anchor rods (anchor bolts).* (1) Anchor rods (anchor bolts) shall not be repaired, replaced or field-modified without the approval of the project structural engineer of record.

(2) Prior to the erection of a column, the controlling contractor shall provide written notification to the steel erector if there has been any repair, replacement or modification of the anchor rods (anchor bolts) of that column.

#### § 1926.756 Beams and columns.

(a) *General.* (1) During the final placing of solid web structural members, the load shall not be released from the hoisting line until the members are secured with at least two bolts per connection, of the same size and strength as shown in the erection drawings, drawn up wrench-tight or the equivalent as specified by the project structural engineer of record, except as specified in paragraph (b) of this section.

(2) A competent person shall determine if more than two bolts are necessary to ensure the stability of cantilevered members; if additional bolts are needed, they shall be installed.

(b) *Diagonal bracing.* Solid web structural members used as diagonal bracing shall be secured by at least one bolt per connection drawn up wrench-tight or the equivalent as specified by the project structural engineer of record.

(c) (1) *Double connections at columns and/or at beam webs over a column.* When two structural members on opposite sides of a column web, or a beam web over a column, are connected sharing common connection holes, at least one bolt with its wrench-tight nut shall remain connected to the first member unless a shop-attached or field-at-

tached seat or equivalent connection device is supplied with the member to secure the first member and prevent the column from being displaced (See appendix H to this subpart for examples of equivalent connection devices).

(2) If a seat or equivalent device is used, the seat (or device) shall be designed to support the load during the double connection process. It shall be adequately bolted or welded to both a supporting member and the first member before the nuts on the shared bolts are removed to make the double connection.

(d) *Column splices.* Each column splice shall be designed to resist a minimum eccentric gravity load of 300 pounds (136.2 kg) located 18 inches (.46 m) from the extreme outer face of the column in each direction at the top of the column shaft.

(e) *Perimeter columns.* Perimeter columns shall not be erected unless:

(1) The perimeter columns extend a minimum of 48 inches (1.2 m) above the finished floor to permit installation of perimeter safety cables prior to erection of the next tier, except where constructibility does not allow (see appendix F to this subpart);

(2) The perimeter columns have holes or other devices in or attached to perimeter columns at 42–45 inches (107–114 cm) above the finished floor and the midpoint between the finished floor and the top cable to permit installation of perimeter safety cables required by § 1926.760(a)(2), except where constructibility does not allow. (See appendix F to this subpart).

#### § 1926.757 Open web steel joists.

(a) *General.* (1) Except as provided in paragraph (a)(2) of this section, where steel joists are used and columns are not framed in at least two directions with solid web structural steel members, a steel joist shall be field-bolted at the column to provide lateral stability to the column during erection. For the installation of this joist:

(i) A vertical stabilizer plate shall be provided on each column for steel joists. The plate shall be a minimum of 6 inch by 6 inch (152 mm by 152 mm) and shall extend at least 3 inches (76 mm) below the bottom chord of the joist with a  $\frac{13}{16}$  inch (21 mm) hole to