(7) The tap conductors are sized 6 AWG copper or 4 AWG aluminum or larger.
(8) The tap conductors do not penetrate walls, floors, or ceilings.
(9) The tap is made no less than 9 m (30 ft) from the floor.

Exhibit 240.8 illustrates an installation complying with 240.21(B)(4).

(5) Outside Taps of Unlimited Length. Where the conductors are located outside of a building or structure, except at the point of load termination, and comply with all of the following conditions:

(1) The tap conductors are protected from physical damage in an approved manner.
(2) The tap conductors terminate at a single circuit breaker or a single set of fuses that limits the load to the ampacity of the tap conductors. This single overcurrent device shall be permitted to supply any number of additional overcurrent devices on its load side.
(3) The overcurrent device for the tap conductors is an integral part of a disconnecting means or shall be located immediately adjacent thereto.
(4) The disconnecting means for the tap conductors is installed at a readily accessible location complying with one of the following:
   a. Outside of a building or structure
   b. Inside, nearest the point of entrance of the tap conductors
   c. Where installed in accordance with 230.6, nearest the point of entrance of the tap conductors

This tap conductor requirement is similar in some respects to an installation of service conductors. The conductors are supplied from a feeder at an outdoor location and run to a building or structure without limitations on the tap conductor length. The OCPD provides overload protection for the tap conductors. The fused switch or circuit breaker is installed at a readily accessible location either inside or outside a building or structure at a point nearest to where the tap conductors enter the building or structure. This disconnect is subject to the applicable requirements covering feeder disconnecting means in Part II of Article 225.

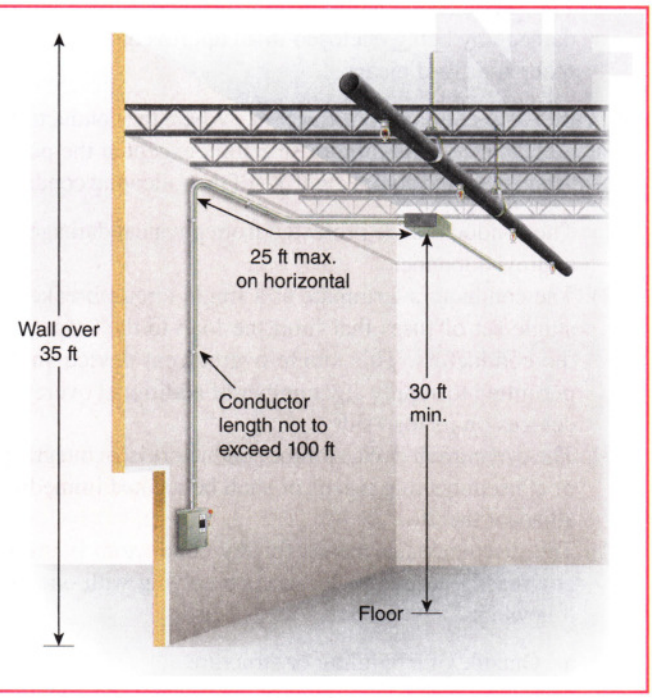

EXHIBIT 240.8 An illustration of a feeder tap in a high bay building.

Δ **(C) Transformer Secondary Conductors.** A set of conductors feeding a single load, or each set of conductors feeding separate loads, shall be permitted to be connected to a transformer secondary, without overcurrent protection at the secondary, as specified in 240.21(C)(1) through (C)(6). Section 240.4(B) shall not be permitted for transformer secondary conductors.

Informational Note: See 450.3 for overcurrent protection requirements for transformers.

Section 240.21(C) prohibits using the next higher standard size OCPD to protect transformer secondary conductors.

The secondary terminals of a transformer are permitted to supply one or more than one set of secondary conductors. For example, the secondary terminals could supply two separate sets of secondary conductors that feed two panelboards. One set of conductors could be installed using the 25-foot secondary conductor rule of 240.21(C)(6), while the other set of conductors could be installed using the 10-foot secondary conductor rule of 240.21(C)(2). Each set is treated individually in applying the applicable secondary conductor requirement.

The *NEC* requires the protection of both conductors and transformers. Article 240 contains requirements for protection of conductors, and Article 450 contains requirements for the protection of transformers. It is possible to protect both conductors and transformers with the same device, if the device meets the requirements of both articles.

(1) Protection by Primary Overcurrent Device. Conductors supplied by the secondary side of a single-phase transformer having a 2-wire (single-voltage) secondary, or a three-phase, delta-delta connected transformer having a 3-wire (single-voltage) secondary, shall be permitted to be protected by overcurrent protection provided on the primary (supply) side of the transformer, provided this protection is in accordance with 450.3 and does not exceed the value determined by multiplying the secondary conductor ampacity by the secondary-to-primary transformer voltage ratio.

Single-phase (other than 2-wire) and multiphase (other than delta-delta, 3-wire) transformer secondary conductors are not considered to be protected by the primary overcurrent protective device.

Δ **(2) Transformer Secondary Conductors Not over 3 m (10 ft) Long.** If the length of secondary conductor does not exceed 3 m (10 ft) and complies with all of the following: