LOCATION OF CONSUMER’S SERVICE CONDUCTORS
AND CONSUMER’S SERVICE EQUIPMENT

This bulletin clarifies requirements of location of the consumer’s service conductors and consumer’s service equipment, and explains regulated work in respect of consumer owned service raceways intended for installation of the BC Hydro run conductors. This bulletin supersedes Bulletin 2007-003-EL.

Background

A. Raceways or cables containing consumer’s service conductors shall be located outside buildings in accordance with CE Code Rule 6-208. Rule 6-206, in part, requires that each consumer’s service box shall be as close as practicable to the point where the consumer’s service conductors enter the building. For the purpose of the interpretation of “as close as practicable” requirement, it is deemed to be the installation of a consumer’s service box within 1.5 m from the point where the consumer’s service conductors enter the building.

B. CE Code Rule 36-000(2) requires that the supply authority and the inspection department must be consulted before proceeding with any high-voltage installations. Rule 36-200 requires that the service equipment shall be installed in a location that complies with the requirements of the supply authority and, in the case of a building, shall be at the point of service entrance.

Directions

1. Raceways or cables containing consumer’s service conductors located outside of buildings are permitted to be enclosed in ducts (boxed in) provided that these ducts are attached to exterior surfaces of the buildings (to vinyl or aluminum siding, or to stucco finish). (Refer to Background A)

2. When it is impracticable to install a consumer’s service box within 1.5 m from the point where conductors enter the building, a Special Permission may be granted by the City Electrician to install a consumer’s service box in a location that could be extended up to 6 m within the point where conductors enter the building. Refer to Bulletin 2009-004-EL. (Refer to Background A)

3. Provisions of the CE Code do not apply to the supply service conductors run within the consumer owned service raceways by the supply authority to a consumer’s service. The installation of consumer’s service raceways is regulated work (i.e. it is done by an electrical contractor under permit in accordance with applicable requirements of the CE Code), provisions of the CE Code apply to the consumer owned service raceways intended for installation of the BC Hydro run conductors. For the purpose of CE Code Rules 6-206, 6-208 and 36-200, consumer’s service raceways containing BC Hydro run supply service conductors shall be permitted to enter the building for connection to a service box or other consumer’s service equipment provided these raceways are encased in concrete.
4. Where the raceways are intended for the installation of high-voltage conductors or cables run indoor by BC Hydro, these raceways shall be installed in conformance with CE Code Rule 36-100(2). The requirement of Rule 36-100(1)(a) is not permitted to be amended by the provisions of Rule 6-208(1). It is important to note that metal raceways embedded in areas subject to vehicular traffic such as parkade slabs and parking lot slabs must comply with the requirements of CEC Rule 2-116(1) for corrosion protection; also refer to Rule 12-944. The locations of concrete-encased consumer’s service raceways containing BC Hydro run conductors must be provided with permanent markers in accordance with Rule 36-100(4). (Refer to Background B)

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**Question 1**

Why do the provisions of the CE Code apply to the consumer owned service raceways intended for installation of the BC Hydro run conductors?

**Answer 1**

The supply service conductors may not have adequate O/C protection on the supply side, the consumer’s service conductors should be run outside a building to prevent fire hazards to the building or occupants. To prevent a fire or shock hazard, Rules 6-206(1)(c) and 6-208(2) require that the length of the consumer’s or supply service conductors be as short as practicable. Where it is impractical to locate the service box close to the service conductor entry into a building, Rule 6-208(1) contains the methods for installing service raceways and cables so that unprotected consumer’s service conductors can be run inside a building for an unlimited distance before terminating in a service box, without presenting a hazard.

Conductors operating at high voltage can pose a threat to human life, the wiring methods with metal protective barrier bonded to ground must be provided in accordance with Rule 36-100(2) for the consumer’s service raceways intended for installation of the BC Hydro run conductors; so that any discharge is conducted safely to ground.

The Object of Section 0 of the CE Code addresses the fundamental principles of protection against electric shock, thermal effects, overcurrent, fault currents and overvoltage in electrical installations. Strict compliance with the prescriptive rules (Rules 2-116, 6-206, 6-208, 36-100, 36-200) of the CE Code is required to meet these fundamental safety principles and to provide an essentially safe installation.

**Question 2**

If it is not feasible to locate the service equipment at the point of service entrance as required by CE Code Rule 36-200, what is the alternative?
Answers 2

CE Code Rule 6-208(1) requires that consumer’s service conductors are to be run outside a building to prevent fire hazards to the building or occupants. Rule 6-206, in part, requires that each consumer’s service box shall be as close as practicable to the point where the consumer’s service conductors enter the building. Rule 36-200 requires that service equipment shall be at the point of service entrance of a building. It is interpreted that the service equipment must be located at the first point where the supply service conductors enter the building, this will limit the length of the unprotected conductors in the building. Where it is impractical to install the service equipment at the point where the supply service conductors enter the building;
(a) the supply authority and the inspection department must be consulted before proceeding with any such installation;
(b) the wiring methods used indoor must meet the applicable requirements of Rule 36-100(2) for the consumer’s service raceways intended for installation of the BC Hydro run conductors;
(c) where applicable the consumer’s service raceways in item (b) must be encased in concrete; and
(d) the locations of concrete-encased consumer’s service raceways containing BC Hydro run conductors must be provided with permanent markers in accordance with Rule 36-100(4).

Conclusion

Strict compliance with the CE Code requirements must be achieved to ensure safe installations in the interests of public safety.