

Outside Plant Cabling Infrastructure

The data center site should have multiple duct banks with customer-owned maintenance holes from the property line to the data center.

The Duct banks should consist of a minimum of four 100 mm (trade size 4) or equivalent conduits or raceways. If initial plans include more than three access providers providing service to the facility, one additional 100 mm (trade size 4) or equivalent conduit or raceway should be provided for every additional access provider.

Each carrier's cabling should be in separate, dedicated conduits or raceways. Carriers should not share pathways.

The upper surface of underground cable pathways shall be no less than 600 mm (24 in) below the surface. Non-metallic conduits shall be encased in concrete with a minimum 17,000 kPa (2500 lb/sq in) compressible Strength where there is vehicular traffic above or a bend in the conduits.

Cabling entrance pathways shall terminate in a secure area within the data center, The telecommunications entrance pathways shall be coordinated with other electrical underground pathways (e.g., conduits) and mechanical underground piping systems (e.g., water, waste) while maintaining appropriate pathway separation from physical and operational perspectives.

In regions susceptible to iciness, the top of the conduit(s) should be below the frost line. Where this is not practical, adequate protection should be provided to ensure that conduits do not become damaged as a result of ground shifting, particularly at the point of entry into the building.

Maintenance holes and hand holes on the data center property should have locks or other means of deterring access such as nonstandard bolts.

The maintenance holes and hand holes should have intrusion detection devices connected to the building security system and monitoring of the maintenance holes and hand holes by CCTV or other means.

Redundant duct banks should have a 20 m (66 ft) separation minimum along the entire route from the property line to the facility.

Where possible; redundant maintenance holes should relate to at least 100 mm (trade size 4) or equivalent conduit or raceway.

Conduits for cable replacement should be designated and marked separately from those for additional cables.

When multiple access providers are providing service to the facility, coordination of security requirements of each individual access provider should be within the secure space.

The secure area that houses the telecommunications entrance facility (pathway termination) should preferably be in a telecommunications entrance room that is separate from the computer room.

Any pull boxes or splice boxes for data center cabling (entrance cabling or cabling between portions of the data center) that are in public spaces or shared tenant spaces should be lockable. They should also be monitored by the data center security system using either a camera or remote alarm.

Entrance to utility tunnels used for telecommunications entrance rooms and other data center cabling should be lockable. If the tunnels are used by multiple tenants or cannot be locked, they should be monitored by the data center security system using either a camera or remote alarm.

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