

10-3. FIBER OPTIC SPLICE ENCLOSURE

Fiber optic cable field splices shall be enclosed in splice enclosures which shall be waterproof, rodent proof and re-enterable. The fiber optic splice enclosure shall be suitable for a temperature range of 0°C to 50°C.

The fiber optic splice enclosure shall consist of an outer closure, an inner closure and complete with splice organizer trays, brackets, plugs, clips, cable ties and sealants as needed and shall conform to the following special provisions.

The size of the enclosure shall allow all the fibers of the largest fiber optic trunk cable or buffer tube to be spliced to a second cable or buffer tube of the same size, plus fibers from fiber optic pigtail cable. The enclosure shall be not more than 36 inches in length and not more than 8 inches in diameter.

All materials in the enclosures shall be nonreactive and shall not support galvanic cell action. The outer-closure shall be compatible with the other closure components, the inner closure, splice trays, and cables.

The end plate shall consist of two sections and shall have capacity for two fiber optic trunk cables and fiber optic branch cables.

The outer-closure shall protect the splices from mechanical damage, shall provide strain relief for the cable, and shall be resistant to salt corrosion.

The outer-closure shall be waterproof, re-enterable and shall be sealed with a gasket. The outer-closure shall be flash-tested at 15 psi.

The inner-closure shall be of metallic construction. The inner-closure shall be compatible with the outer closure and the splice trays and shall allow access to and removal of individual splice trays. The splice trays shall be compatible with the inner closure and shall be constructed of rigid plastic or metal.

Adequate splice trays shall be provided to splice all fibers of the largest communication cable or buffer tube plus FPC in the splice cabinet.

Vinyl markers shall be used to identify each spliced fiber in the trays as described under "Fiber Optic Cable Labeling" elsewhere in these special provisions.

Each splice shall be individually mounted and mechanically protected in the splice tray.

The Contractor shall install the fiber splice enclosure in the splice vault or cabinet as shown on the plans where splicing is required. The Contractor shall provide all mounting hardware required to securely mount the fiber optic splice enclosures to the splice vault or cabinet.

The fiber splice enclosure shall be mounted as shown on the plans in a manner that allows the cables to enter at the end of the enclosure. Not less than 30 ft of each cable (2 or 3) shall be coiled in the splice vault or cabinet to allow the fiber splice enclosure to be removed for future splicing.

The unprotected fibers exposed for splicing within the enclosure shall be protected from mechanical damage using the fiber support tube or tubes and shall be secured within the fiber splice enclosure.

Upon completion of the splices, the splice trays shall be secured to the inner closure.

The enclosure shall be sealed using a procedure recommended by the manufacturer that will provide a waterproof environment for the splices. Encapsulant shall be injected between the inner and outer closures.

Care shall be taken at the cable entry points to ensure a tight salt resistant and waterproof seal is made which will not leak upon aging. It is not acceptable to have multiple cables enter the fiber splice enclosure through one hole.