FUSION SPLICE FIBER OPTIC CABLE END SPLICE

**From Hartford-Sharon FITS(503)

xx. DESCRIPTION. This work shall consist of cable end-to-end fiber fusions splicing in the specified fiber optic fusion splice enclosure for Outside the Plant (OSP) installations at the handhole locations indicated in the Plans.

xx. GENERAL REQUIREMENTS. The fiber optic fusion splicing shall include the preparation of fibers, the use of fiber fusion splice protector sleeves, fusions splicing, organization in the splice trays, securing within the splice enclosure, and air testing the fiber splice enclosure. The work will consist of fusions splicing 144 splices from two individual cable ends in a butt splice.

xx. MATERIALS. The Contractor is required to submit material specification sheets for all materials used, for approval by the Engineer.

Materials required shall include the following: Fiber optic OSP splice enclosure, fiber optic splice trays, fiber optic splice protection sleeves, and all associated materials to make a watertight splice enclosure.

The fiber optic splice enclosure shall meet or exceed the following requirements:

(a) The fiber optic splice enclosure shall be Corning LANscapes SCF-6C28-02, or an approved equal.

(b) The fiber optic splice enclosure shall be submersible.

(c) The fiber optic splice enclosure shall be re-enterable.

(d) Shall be designed for use with any cable construction (loose buffer tube, central core tube, loose fiber, and ribbon), in any environment (aerial, pedestal, buried, handhole, and manhole), and for numerous splice applications (express, tap-off, branch, and repair).

(e) The fiber optic splice enclosure shall feature a mechanical base-to-dome seal for ease of installation and re-entry.

(f) Shall be tested and rated as compatible for indefinite submersion.

(g) Shall feature a minimum of 4 cable entry locations. The cable entry locations shall be suitable for cable diameters ranging from 0.2”-0.75”.

(h) The splice enclosure shall have a mass fusion splice capacity of 288 incorporating the use of secured splice trays.

(i) The fiber optic splice enclosure shall allow for individual splice tray access.

(j) Silicon shall be used to assist in the watertight seal of the enclosure.

(k) The splice enclosure shall include internal buffer stain relief mounting hardware.

The splice trays shall be the Corning Evloant Solutions SCF-ST-112, or an approved equal. The splice trays shall accommodate a minimum of 24 fiber optic fusion splices and contain organizers compatible with heat shrink or crimp splice protectors. The splice trays shall be made of metal with a height of .2".

The fusion splice protective sleeves shall be a minimum of 60 mm in length, contain a metal strength member, and feature heat-shrink materials that will be heated and applied to the fiber splice by the fusion splice machine.

xx. CONSTRUCTION REQUIREMENTS. The Contractor shall follow all manufacturers' specifications during the fusion splicing of fibers and the installation of the fiber within the splice enclosures. The fiber optic splice trays shall be installed starting with fiber 144 on the innermost splice tray and fiber 1 on the outermost splice tray. The Contractor shall insert fibers in numerical order within the splice trays. The Contractor is responsible for marking the exterior of each splice tray with the associated fiber numbers within the tray.

All fibers shall be cleaned by completely removing all internal gels and water blocking agents from bare fibers, stripping the outer protective coating from the fiber to expose the bare glass, and cleaving the fiber end. All fusion splices shall be performed with an automated dual axis visual camera core alignment fusion splice machine featuring estimated fiber loss by final core offset. All fusion splices shall be protected with a 60 mm splice sleeve. If the fusion splice machine has an estimated splice loss of above 0.2 dB, the Contractor shall re-cleave and re-splice the fiber strands.

xx. METHOD OF MEASUREMENT. The quantity of Special Provision (Fusion Splice Fiber Optic Cable End Splice) to be measured for payment will be the number of splice locations in the complete and accepted work.

xx. BASIS OF PAYMENT. The accepted quantity of Special Provision (Fusion Splice Fiber Optic Cable End Splice) will be paid for at the Contract unit price per each. Payment will be full compensation for performing the work specified and for furnishing all materials, labor, tools, equipment, and incidentals necessary to complete the work.

Payment will be made under:

Pay Item	Pay Unit
900.620 Special Provision (Fusion Splice Fiber Optic Cable End Splice)	Each