

HARTFORD REST AREAS

**\*\*From Hartford-Sharon FITS(503)**

- xx. DESCRIPTION. This work consists of constructing new infrastructure with new and existing conduits at the Hartford Rest Areas.
- xx. GENERAL. The work under this Section incorporates all construction efforts required at the I-91 Northbound (NB) Hartford Rest Area and the I-91 Southbound (SB) Hartford Rest Area. The start of the project and the work covered herein is at the I-91 NB Rest Area then transitioning to the I-91 SB Hartford Rest Area prior to heading north on I-91. The work includes utilizing an existing 6" High Density Polyethylene (HDPE) bore casing and 2" HDPE innerduct located across I-91.
- xx. CONSTRUCTION REQUIREMENTS. The work includes spot locating a 4' x 4' x 6' deep concrete splice vault manhole on top of an existing 6" diameter HDPE pipe that contains a 2" HDPE duct, both of which are empty. The potential location of the concrete splice vault manhole is identified in the Plans. The proposed splice vault will intercept the existing 6" bore casing and 2" innerduct. The 6" and 2" HDPE pipes will be cut flush at the inside wall of the manhole on both the east and west walls. The 6" pipe will be plugged with a solid plug in the west wall for potential use in the future. At the east wall of the splice vault the 6" pipe will be plugged with a bushing sleeve with a 2" diameter access hole, allowing the 2" HDPE to enter the manhole. Inside the 2" innerduct the Contractor shall install a dual-cell, MaxCell or approved equal, soft innerduct. The dual-cell Maxcell, or approved equal, will cross I-91, enter to the existing manhole in the abandoned rest area, and serve as the terminus of VTrans ducts on this project.

From the concrete splice vault manhole placed at the SB Hartford Rest Area, two (2) 1.25" HDPE ducts shall exit, via sized to fit knock-outs placed during the casting of the manhole. These ducts shall travel via the trenched area for the splice vault and adjacent handhole, northeast toward the 4' x 6' x 3' handhole, but shall not enter the handhole. These ducts shall bypass the handhole and join with the four (4) 1.25" HDPE ducts exiting the adjacent 4' x 6' x 3' handhole. These ducts shall join the Spider plow operation shown on the Plans heading North up the I-91 SB ROW. The 4' x 6' x 3' handhole will serve as the terminus point of the tenant's ducts on this project.

In accordance with FIBER OPTIC CABLE of Section 900, it is required during the installation of fiber that a 500' coil be left in the existing manhole at the I-91 NB Hartford Rest Area and a 200' coil of fiber be left in the splice vault at the I-91 SB Hartford Rest Area.

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

The 4' x 6' x 3' handholes installed shall meet or exceed the following requirements:

- (a) The handhole shall be Quazite, or an approved equal.
- (b) The handhole must be UL listed and approved.

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- (c) Suitable for off-roadway applications.
- (d) Must meet or exceed the ANSI tier classification of "Tier 22" vertical and horizontal load ratings.
- (e) Internal dimensions: 4 feet in width, 6 feet in length, and 3 feet deep.
- (f) Shall have an open bottom.
- (g) Shall incorporate support and strength members for the lid.
- (h) Shall include lift assisting attachments for ease of installation.
- (i) Shall include two (2) 6" x 8" cut outs for conduit penetrations ingress and egress. Conduit cutouts shall be cut by the manufacturer.
- (j) The handhole lid shall have a "FIBER OPTICS" identification.
- (k) The handhole lid must meet or exceed the ANSI tier classification of "Tier 22" vertical and horizontal load ratings.
- (l) The handhole lid shall be constructed from the same material as the handhole body casting.
- (m) The handhole lid shall include a minimum of two lift assisting pull slots.

The 4' x 4' x 6' splice vault installed shall meet or exceed the following requirements:

- (a) Shall be manufactured by AC Miller, or an approved equal.
- (b) Shall have internal dimensions of 4' x 4' x 6'.
- (c) Shall be constructed of 5000 psi (at 28 days) reinforced concrete.
- (d) Shall have a minimum 6" wall thickness.
- (e) Shall be reinforced with Grade 60 rebar.
- (f) Shall conform to ASTM C 890 and C 913 specifications.
- (g) Shall contain (2) 3" core holes or penetrations at 18" from the bottom of the handhole, including the depth of the splice vault floor. Penetrations shall be completed by the manufacturer and not in field.

The material also includes dual-cell Maxcell innerduct, or an approved equal, a 4" nonmetallic utility warning tape, and a #6 ground wire. The Maxcell innerduct, or approved equal, shall be designed for use in 2" conduits or larger with a maximum cable diameter of .7".

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Additional select backfill may be required if the spoils from the excavation are deemed unsuitable for backfill by the Engineer.

xx. METHOD OF MEASUREMENT. The quantity of Special Provision (Hartford Rest Areas)(New Infrastructure with New and Existing Conduits) to be measured for payment will be a lump unit basis in the complete and accepted work.

xx. BASIS OF PAYMENT. The accepted quantity of Special Provision (Hartford Rest Areas)(New Infrastructure with New and Existing Conduits) will be paid for at the Contract lump unit price. 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:

<u>Pay Item</u>	<u>Pay Unit</u>
900.650 Special Provision (Hartford Rest Areas) (New Infrastructure with New and Existing Conduits)	Lump Unit