

**Iowa Communications Network****OSP Log #82180401, New Iowa DOT Link, 24 fiber ADSS****Scott, Bettendorf, Iowa DOT, I-74 Cable Relocation: Grant St south to Mississippi River**

REVISED 08/16/2018 – Revisions in Red pertaining to splice times and bid dates.

**Overview of the Project:**

The ICN intends to install a new 24 fiber all dielectric self-support single mode cable from the existing Iowa DOT HH 15-7 at Grant St. & I-74 south to the Mississippi River to intercept the existing cable attached to the I-74 bridge structure. Please see the maps and pictures in the attached ENGINEERING PLAN. All work to be completed per the attached STANDARD INSTALLATION REQUIREMENTS and TYPICALS except where noted within this STATEMENT OF WORK (SOW). Upon notification of completion, the ICN will perform a review using the attached PUNCHLIST. Any corrections will need to be made prior to ICN issuing payment for work completed.

**Preparatory Tasks & Responsibilities:**

1. Secure all necessary locates from "Iowa One Call."
2. Construction signing shall comply with the Manual on Uniform Traffic Control Devices.
3. The contractor must notify the local IDOT maintenance garage/County/City (per permit) of intent to proceed at least 48 hours prior to commencement of work.
4. ANSI/ISEA 107-2004 CLASS 2 SAFETY VESTS are required at all times within Iowa Department of Transportation right-of-way
5. **Exceptions/Additions to Standard Installation Requirements:**
  - 5.1. This project is in conjunction with the Iowa/Illinois I-74 Bridge Construction over the Mississippi River. Contractor is required to coordinate all activities with the Project Coordinator; contact listed below.
  - 5.2. See the Engineering Plans for additional comments and requirements for the cable installation.
  - 5.3. **Bike Path Closure:**
    - 5.3.1. Contractor will be required to coordinate the closure of the bike path to complete the cable installation and cutover to the new cable.
    - 5.3.2. Contractor shall minimize the duration of the bike path closure for the cable installation so that it coincides with the cable cutover.
    - 5.3.3. Per Engineering Plans: Contractor shall document the condition of the existing bike path. Any damage due to installation activities is required to be repaired at the contractor's expense. Measures shall be taken to avoid damage to the path.

**Duct Installation**

1. Provide 1-1 ¼" HDPE, SDR 13.5 duct from Station 3+03 HH 15-4 to 8+13 bottom of bridge pier.
2. Provide 1-1 ¼" HDPE, SDR 13.5 duct from 8+13 bottom of bridge pier to 8+48 top of bridge pier; conduit to attach to concrete pier and beam per engineering drawings; see Drawing One.
3. It shall be the sole responsibility of the contractor to ensure that the fiber installation is in the public Right-of-Way. Contractor shall have the ROW location surveyed and staked prior to boring and coordinate with the ICN and Iowa DOT on the exact location of the new running line.
4. See engineering plans for locations and distances off existing public ROW when provided.

**Handholes:** Existing – see Engineering Plans

**Fiber Installation: 24 fiber ADSS single mode cable to be supplied by the contractor.**

1. Install approximately 2300' of contractor provided, 24 fiber all dielectric self-support single mode fiber from Station 0+03 to 17+60.
  - 1.1. 0+03 to 3+03: Pull through existing Iowa DOT 2" conduit.
  - 1.2. 3+03 to 8+48: Pull through new contractor supplied conduit.
  - 1.3. 8+48 transition to aerial cable
  - 1.4. 8+48 to 17+60 new aerial cable installation attached to I-74 structure.
2. **Slack Loops** shall be installed at the following locations:
  - 2.1. 0+03 75' for splicing into new Tyco 600D splice case.
  - 2.2. 1+13 100' of storage slack
  - 2.3. 3+03 100' of storage slack

2.4. 17+60 100' of slack for new splice.

**Aerial Installation:** From Station 8+48 to 17+60 the contractor shall complete the installation of the ADSS cable. It will be attached to the I-74 Bridge Steel Beam and Mississippi River Bridge Abutment. See engineering plans for details.

1. All hardware, anchors, etc for the cable installation will be supplied by the contractor.
2. Aerial cable will be located over Canadian Pacific Railroad Tracks. ICN will obtain the permit.
3. Contractor is responsible for coordination with Canadian Pacific Railroad for the cable installation crossing the tracks:
  - 3.1. Provide railroad liability insurance.
  - 3.2. Coordinate with railroad on flaggers.
  - 3.3. Include an allowance for railroad flagging fees; actually fees to be reimbursed. Contractor must provide RR invoice as backup.

**Cable Slack Relocation – Existing 144 Fiber:** Relocate the existing slack from handholes 17-1, 17-3 and 17-4 (see drawing 3) and pull back to HH 15-7 in order to mid-sheath the cable for splicing.

**NOTE: At the conclusion of the project, ensure that a pull rope is left in ALL pathways, both inside and outside, new and existing.**

**Locate Facilities** (The conduit/cable installation contractor is responsible for placement of all locate facilities and wires in preparation for the splicing contractor): Locate Pedestals shall be placed per ICN typical: “Locate Pedestal Typical - TriView w/ISO Lever” or “Locate Pedestal Typical

1. **Locate Points: Bond new tracer wire to the existing TriView locate pedestal at station 3+03.**
2. **Pull in new locate wire from Sta 3+03 to 8+48.** Ground locate wire to steel structure.
3. **Dielectric Cable** - Where dielectric cable is installed and tracer wire is called out for on the engineering plans, the contractor shall furnish and install a “#12 AWG, Solid HF CCS 30 Mil HDPE High Flex Tracer Wire” orange in color and labeled “Caution Communication Line” (standard communication tracer wire) inside the conduit from Station 3+03 to Station 8+48. See engineering plans.
4. **Labeling:** Label all wires in the pedestal and label direction they are facing.

**Splicer Responsibilities: Detailed Splice Documentation will be provided prior to Splicing**

1. **Field Splicing – Daytime:**
  - 1.1. Bettendorf City Hall: Terminate fibers 25-144 of the existing 144 fiber cable in new Corning Pigtailed Cassettes. 120 terminations.
  - 1.2. Station 17+60 at Bridge Abutment: Prep new 24f ADSS cable into new Tyco 450B splice case with one tray (contractor supplied).
  - 1.3. OTDR the 12 fibers upon completion of the terminations at City Hall and the completion of the MidSheath at 0+03 on the 144f cable and splicing into the new 24f ADSS to verify the fiber path.
2. **Field Splicing After Hours During Maintenance Windows: 09:30-3:30 or 18:30 – 24:00 This can be done during these time frames with proper notifications.**
  - 2.1. In coordination with the Iowa DOT Maintenance Contractor DTS.
  - 2.2. Step 1: Prior to Cutover, at 0+03 Mid-sheath the existing 144f cable into a new splice case. Enter the 24f ADSS cable into the splice case and splice 12 fibers. Install a contractor supplied Tyco 600D and install 4 trays. Tubes shall be prepped for current and future access. Detailed splice documentation will be provided.
  - 2.3. Step 2: For the Hot Cutover, cut the existing 96f cable at Pier 30, pull back the cable and splice the 96f (2 tubes) Tubes to the 24f ADSS Blue/Orange tubes; splice 24 fibers to be spliced. Contractor must verify which conduit the 96 fiber resides in at Pier 30 at the riser pull box prior to cutover.
  - 2.4. Loss for each splice shall be .03 dB or less.
  - 2.5. Contractor SHALL label all fibers terminated pursuant to this Scope of Work.
3. **Labeling:**
  - 3.1. Wall FDP - Affix a machine-produced tape label to the OUTSIDE stating where each pair of fiber faces (i.e. Pair 1-2 facing High School or Fibers 1 & 2 facing Sheriff.)
  - 3.2. Rack-mounted FDP SHALL be labeled by one of the following methods:
    - 3.2.1. Make printed entries on the proper FDP directory card.
    - 3.2.2. Use one line per fiber.
    - 3.2.3. If no directory card exists, affix a machine-produced to the inside the FDP, so that it is visible when the door is opened.

3.3. NOTE: Failure to label the fiber in the manner specified above will result in the Contractor being sent back to provide labels before any project payment is made.

3.4. Fiber within a handhole shall be labeled with permanent metal tags showing the location it faces.

4. OTDR all fibers. Provide test results in an “.sor” format and PDF format for ICN review and acceptance.

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5. Provide Pictures of the completed splicing in cases or panels showing preparation, splice trays and final installation.

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**ICN Provided Materials per attached table:** Contractor shall pick up ICN-provided materials at the ICN warehouse in Des Moines. Contact the ICN warehouse 48 hours in advance to pick up materials; contact Paul Damage (515-725-4749) to ensure availability.

**Contractor shall supply** all other materials required for proper installation, including but not limited to: Splice Cases, HDPE, Grounding and Tracer Wires, Rock, Wire Mesh, ADSS cable, anchors, aerial attachments, etc. Contractor shall submit material specification sheets for contractor provided materials including 24f ADSS, ADSS mounting blocks, anchoring hardware, etc.

**ICN Responsibilities:**

- 1. Project Management
- 2. ICN will secure all necessary DOT, City and Railroad permits.
- 3. ICN provided materials; see above.

**ICN Point of Contact for this Project:**

**Engineering/Design:**

Tim Flickinger  
515-725-4699 office  
515-491-3750 cell

**Materials:**

Paul Damage  
515-725-4749 office  
515-491-1429 cell

**Other Points of Contacts:**

- 1. Construction Site Contacts: Jeff Koenig, HR Green 319.841.4312/319.538.2268 or Thomas McQuillan HNTB 312.771.8537.
- 2. DTS Contact: Ken Franklin, kenneth.franklin@digitaltrafficsystems.com, 515.721.8380

**Bid/Job Showing:** N/A – Contractors may request on site meeting if required.

**Work Start Date:** Work may begin upon award of the bid and completion of the contract. The ICN anticipates work to begin in September or October 2018 upon receipt of the railroad permit. Only written modifications to this Scope of Work are binding - Verbal changes to this scope of work by any person or persons are not binding, unless confirmed in writing.

**Completion Date:** Not later than October 31<sup>st</sup>, 2018, preferred delivery date September 28<sup>th</sup> (extension may be negotiated based upon weather and/or unforeseen construction problems in the ROW)

**IF THE CONTRACTOR CANNOT MEET THESE DATES, PROPOSE ALTERNATE DELIVERY DATE.**

**Quotes Due Date:**

Quotes must be received by Sheri Stephens, ICN Contracting, **NLT 2 PM on August 28<sup>th</sup>.**

**Quotes:** Contractors must submit a quote for Construction Bid as outlined in the SOW and per the Engineering drawings. ICN requires a breakdown of lump sum bids into labor and materials. **Provide separate line items for the following items:**

- 1. Complete construction and cutover of the cable as outlined in this SOW and the attached Engineering Drawings excluding items 2 and 3 below.

2. Railroad Flagger Allowance (actual Railroad fee will be reimbursed).
3. Bike Path Closure (possibility this may be accomplished with other work on the bridges)

**Completion of Work:**

1. Upon notification of construction completion, ICN will have 2 weeks to complete the Punch List.
2. Upon initial completion of Punch List, the Contractor will have 2 weeks to correct any issues identified on the Punch List.
3. Upon notification of corrections, the ICN will have 1 week to verify corrections were completed to the ICN's satisfaction.
4. No payment will be made until all work is completed per the contract unless agreed upon by both parties.

**Attachments:**

Statement of Work (SOW), this document

Engineering Plans (Construction Drawings)

Punch List

Materials List

Standard Installation Requirements

Splice Documentation – Details to be provided after award of bids.