

Iowa Communications Network**OSP Log #64190205, New 48 fiber armored****Marshall County, City of Marshalltown Police and Fire Station, 909 South Second Street, 50518**

1/23/19

Overview of the Project:

The ICN intends to extend a 2700-foot 48-strand armored fiber connection from the new City of Marshalltown Police and Fire Station at 909 South Second Street, herein after referred to as the "Station", to a Windstream slack loop on the second pole south of West High Street on West 6th Street herein after referred to as the "pole". This will require boring a new 1 – 2 inch HDPE conduit approximately 1851 feet, extending the Owner's 4-inch conduit approximately 14 feet, and installing 3 handholes. Route fiber from the server room (2nd Floor), Station 0+00, through approximately 194 feet of existing 4-inch conduit, and new 2" HDPE to the top of the pole at Station 20+70. Please see the maps, drawings and pictures in the attached ENGINEERING PLAN. All work to be completed per the enclosed STANDARD INSTALLATION REQUIREMENTS and TYPICAL DRAWINGS except where noted within this STATEMENT OF WORK (SOW). Upon notification of completion, the ICN will perform a review using the enclosed PUNCHLIST. Any corrections will need to be made prior to ICN issuing payment.

Access Point for this project will be a splice to be performed by Windstream at the second pole south of West High Street on South 6th Street.

SPlicing EXCLUDED FROM THIS CONSTRUCTION BID
SPlicing SHALL BE COORDINATED WITH NOC OSP

Preparatory Tasks & Responsibilities:

1. Secure all necessary locates from "Iowa One Call."
2. Locate all private utilities on City property.
3. The contractor SHALL coordinate with the General Contractor for the new building. Contact them no less than 48 hours prior to arrival on site.
4. Construction signing shall comply with the Manual on Uniform Traffic Control Devices.
5. ANSI/ISEA 107-2004 CLASS 2 SAFETY VESTS are required at all times.
6. **Exceptions/Additions to Standard Installation Requirements:**
NONE

Duct Installation

1. It shall be the sole responsibility of the contractor to ensure that the installation is in the public Right-of-Way, or on STATION property.
2. Extend a 4-inch conduit from the Owner's conduit at Station 1+80 to Station 1+94.
 - 2.1. The end of the Owner's conduit at 1+80 is marked with a vertical pipe as pictured in the Engineering Plan.
 - 2.2. Extend the 4-inch conduit to Station 1+94, the new handhole in the W. High Street Right-of-Way. See drawings.
3. Provide 1-2-inch HDPE, SDR 13.5 duct from Station 1+94 outside the STATION to Station 20+45 at the pole.
4. There is a new sidewalk planned at the STATION along the north side of W. High Street.
 - 4.1. Coordinate with the general contractor as to the location of the sidewalk.
 - 4.2. Ensure that the handhole specified below will be in the ROW.
5. Typical bore depth shall be 48 inches below grade.
6. At Station 6+70 a Box culvert will be installed during the spring.
 - 6.1. The bore shall be 17 feet below grade from Station 6+70 to 7+70 as shown on the Engineering Plan.
 - 6.2. The bore from Station 6+70 to Station 7+70 shall be level.
 - 6.3. If a bore depth of 17 feet below grade can not be maintained, **STOP BORING** and contact ICN for instructions.
7. Bore under S. 6th St at Station 19+88 as shown on the Engineering Plan.
8. Route the HDPE to the pole.
9. Install a riser on the pole per the ICN Typical drawing in the Engineering Plan.
10. Use VM tape where the fiber leaves the HDPE to seal the HDPE/fiber joint against rodents and moisture.
11. See the detailed drawings in the Engineering Plan.

Handholes:

1. Install 3 ICN-furnished 24"x36"x36" Tier 22 Channell Bulk handholes at the following locations per ICN Standard Practice/Typical Drawings:
2. Station(s): 1+94, 15+81, 19+88
3. Ensure all handholes are in the Right-of-Way.

Building Entry at the STATION

1. Exterior Installation: Use the Owner's 4-inch conduit, as extended, from the HH at 1+94 to 0+00 in the Server Room on the 2nd Floor.
2. Interior Installation: The 4-inch conduit comes through the floor as pictured in the Engineering Plan.

Fiber Installation

1. Install a 2700-foot ICN furnished, armored 48-strand single mode fiber.
2. Install fiber from Station 0+00 to the top of the pole riser at Station 20+70.
 - 2.1. There is a vertical cable tray in the Server Room where the conduit comes through the floor.
 - 2.2. Secure the fiber to the tray as pictured in the Engineering Plan.
 - 2.3. Install the Leviton Fiber Storage Ring on the wall above the conduit as pictured.
3. **Slack Loops** shall be installed at the following locations:
 - 3.1. In the Server Room, Station 0+00, install a 50-foot service loop on the Leviton Storage Ring, **AND**
 - 3.2. Leave an additional 30-foot coil at that location for splicing and termination by others.
 - 3.3. Leave a 150 foot slack loop in the handholes at the following stations:
 - Station 1+94
 - Station 15+81
 - Station 19+88
 - 3.4. Leave a 100-foot slack loop at the top of the riser on the pole at Station 20+70. Ensure that the coil is secure on the top of the pole.
 - 3.5. Bind all slack loops with tape if outside or Velcro if inside a building.
 - 3.6. Coil slack neatly in handholes so that the cable does not rub or interfere with the lid.
4. Install the ICN-furnished "Snap around" cable identifiers.

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 Point:** There shall be a single locate point in the system located in the handhole at Station 19+88.
 - 1.1. Install an IsoLever mechanism and ground rod in the handhole. (IsoLever is the mechanism inside a TriView locate station)
 - 1.2. Terminate three (3) tracer wires on the IsoLever.
 - 1.3. Leave a neat unterminated coil of 20 feet on each tracer.
 - 1.4. The splicer will bond the tracers inside the splice case.
2. **Tracer Wire** - The contractor shall furnish and install "#12 AWG, Solid HF CCS 30 Mil HDPE High Flex Tracer Wire" orange in color and labeled "Caution Communication Line" (standard communication tracer wire).
3. **Building Termination of Armored Cable:**
 - 3.1. The splicer will bond the armored cable to ground in the STATION Server Room as pictured.

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.

Items under the "Splicer Responsibilities" are excluded from the Construction Bid. Splicing will be handled separately. Contractor is responsible for the installation all other items required in this Scope of Work.

Splicer Responsibilities: (Splicing excluded from Construction Bid)

1. Install an ICN-furnished rack-mounted FDP in the rack at the location pictured.
2. **Field Splicing – Daytime:**
 - 2.1. Terminate fibers 01-12 in an ICN-furnished rack mounted FDP in the STATION Server Room.
 - 2.2. A new splice will be added at station 19+88 for the ICN tie cable to Windstream. Splicing to be determined.
3. **Field Splicing After Hours** During Maintenance Window (00:01 – 06:00)
 - 3.1. At Windstream Aerial Splice, Windstream will hot cut all ICN owned fiber onto the new ICN 48f armored cable.

- 3.2. Loss for each splice shall be .03 dB or less.
- 3.3. Contractor SHALL label all fibers terminated pursuant to this Scope of Work.

4. Labeling:

- 4.1. Rack-mounted FDP SHALL be labeled by one of the following methods:
 - 4.1.1. Make printed entries on the proper FDP directory card.
 - 4.1.2. Use one line per fiber.
 - 4.1.3. If no directory card exists, affix a machine-produced to the inside the FDP, so that it is visible when the door is opened.
- 4.2. 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.
- 4.3. Fiber within a handhole shall be labeled with permanent metal tags showing the location it faces.
5. OTDR all fibers. Provide test results in an ".sor" format and PDF format for ICN review and acceptance.
6. Bond all armored cables per the "Locate Facility Requirements" (see above and standard drawings). Follow ICN standards and manufacturers' standard to ensure all bonds are connected to ground bar or locate pedestal for locating. 3M Scotchlock Shield bonding kits shall be used for connecting to the armored cable. Locate wires routed out of the splice case shall be sealed. For Tyco closures use the FOSC Closure Sealing Kit.

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

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

Contractor shall supply all other materials required for proper installation, including but not limited to: HDPE, Grounding and Tracer Wires, Rock, Wire Mesh, etc.

ICN Responsibilities:

1. Project Management
2. ICN will secure all necessary DOT, County, City permits.
3. ICN furnished materials; see above.

ICN Point of Contact for this Project:

Engineering/Design:

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

Materials:

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

Splice Coordination: (typically a minimum of 2 weeks notification is required)

Chris Harris (FNS)
515-725-8929

Other Points of Contacts

STATION General Contractor
Story Construction, Ethan Dix, Superintendent
Cell - 515-291-5448
ethan.dix@storycon.com

City of Marshalltown:
Justin Nickel, P.E. Director of Public Works
24 N. Center Street
Marshalltown, Iowa
641-754-5734(w)
641-750-5929(c)
jnickel@marshalltown-ia.gov

Bid/Job Showing: N/A

Work Start Date: Work may begin upon award of the bid and completion of the contract. The ICN anticipates work to begin around February 11, 2019. 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 February 25, 2019. This is a firm date with the understanding that spring clean up will be required.

Quotes Due Date:

Quotes must be received by Sheri Stephens, ICN Contracting, **NLT 2PM on February 5th, 2019.**

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.

Items under the "Splicer Responsibilities" are excluded from the Construction Bid. Splicing will be handled separately.
Contractor is responsible for the installation all other items required in this Scope of Work.

Attachments:

Statement of Work (SOW), this document

Engineering Plans with Typical Sheets & Channle Bulk Vault Installation Instructions (Construction Drawings)

Punch List

Materials List

Standard Installation Requirements