City of John Day

Request for Competitive Quotes – Fiber Optic Network Infrastructure Construction
Grant County ESD – 911 Lateral

In accordance with ORS 279C.412 and ORS 279C.414, City of John Day ("City") is informally soliciting competitive quotes ("Quotes") from licensed and qualified contractors to provide certain construction services for and on behalf of City (the "Services") as described in this Request for Competitive Quotes (this "RFQ").

PROJECT BACKGROUND

Grant County has the second poorest broadband infrastructure of any county in Oregon. Our maximum advertised data rates are three times slower than the FCC's definition for high-speed broadband and 100-times slower than the broadband speeds available in major metropolitan areas throughout Oregon. Lack of broadband infrastructure also creates risk for critical community facilities (CCFs) such as the hospital; schools; government administrative buildings; public safety facilities; and water, sewer and electric utilities.

The Grant County Digital Network Coalition (Grant County Digital) was organized under Oregon Revised Statue 190.010 as an intergovernmental agency supporting Grant County, John Day and Seneca. Grant County Digital's goal is to create options for a digital network in Grant County that is robust, resilient, scalable, accessible to all residents and businesses and competitive with major metropolitan areas. City is the fiduciary agent and contracting authority for Grant County Digital.

SCOPE OF WORK

City is soliciting competitive quotes from licensed and qualified contractors to provide labor, equipment, material and related construction services necessary to safely construct a new fiber optic network connection between the Grant County Education Service District Building (ESD) located at 835 S. Canyon Blvd and the John Day Fire Station located at 316 S Canyon Blvd, in John Day. In accordance with the General Construction Guidelines for Communications Infrastructure along with the plans prepared by Commstructure Consulting, LLC (the "Plans") referenced herein as Exhibit A including, without limitation, the following work (collectively, the "Services").

The total estimated project route distance is approximately 3,170 feet of new aerial infrastructure; 15 feet of new underground infrastructure; approximately 205 feet of existing underground infrastructure; and two (2) Building Entries. Total project route is approximately 3,384 feet.

The scope of work will include but not limited to:

- New Aerial Strand Placement
- New Aerial Fiber Cable Lashing
- Existing Conduit Intercepts
- Existing Conduit Proofing
- Ground Rods, Ground Wire & Bonding Clamps
- New Underground Conduit & Fiber Cable Pulling
- Fiber Optic Splicing and Termination
- Utility Vaults
- Locate Wire Access Points
- Building Entrances
- Building Interior Grounding
- Building Interior Pathway
- Fiber Optic Cable Testing
- Fiber Cable Slack Storage

*Please see Construction Drawings for additional details and specifications.

Backbone:
Beginning at Oregon Trail Electric Co-op (OTEC) pole #190256217 located on the west side of S. Canyon Blvd approximately 300 feet south of the Grant County Education Service District Building, a new aerial 6.6M strand pathway will be constructed along the west side of S. Canyon Blvd heading north for approximately 3,020 feet to OTEC pole #190256739. A new aerial 6.6M strand pathway will also be constructed east across S. Canyon Blvd for approximately 75 feet from OTEC pole #190256439 to OTEC pole #19023963. A new 48F cable will be lashed to this new strand beginning at OTEC pole #190256120 to OTEC pole #190263963 and then transition underground to the John Day Fire Station.

Grant Education Service District Building Entry:
Beginning at OTEC pole #190256120 lash new 12F OFNR indoor/outdoor cable to new strand heading south for approximately 24 feet. Create a mid-span pull off and attach to peak of roof of the Grant Education Service District Building. The 12F OFNR cable will enter the building near the peak of roof and enter into existing attic space. A new 1 ¼" flex conduit will be secured to rafter hangers in the existing attic space. Place new 12F OFNR cable through new 1 ¼" flex conduit. The new 12F OFNR cable will then enter an existing 4" ceiling penetration to the server equipment room. Once in the server equipment room a new 1 ¼" flex conduit will be placed along the existing cable ladder racking to an existing fiber rack location (Rack #4). Place new 12F OFNR cable through new 1 ¼" flex conduit. Leave 30' slack storage at rack location for termination. Place 12 port rack mount Fiber Delivery Point (FDP) and terminate 12F OFNR cable.

John Day Fire Station Building Entry:
A new conduit riser will be placed on existing OTEC riser brackets at OTEC pole #190263963. Construct a new conduit pathway to new intercept vault located on private property. New intercept vault will be placed over existing conduit pathway to mechanical room. A new 48F cable will be placed in the new riser through the existing conduit pathway to the mechanical room in new Fire Station. Place new 48F cable through existing conduit pathway through ceiling space from the mechanical room to new server room. Leave 30 feet of slack storage for termination. Place 48 port wall mount Fiber Delivery Point (FDP) and terminate 48F cable.

Contractor will be responsible for compliance with all applicable city, county, state and private agency right of way and pole attachment permit requirements including traffic control, work hour restrictions, notifications and restoration. Cable reel locations along with slack storage in the fiber cable will be placed at aerial storage and vault locations as designated in the construction drawings and fiber ownership tags will be placed on the cable at every pole and every vault location. The contractor will plug all vacated holes from abandon or relocated attachments per pole owner specifications. Contractor will test and verify the existing conduit prior to installation of the new fiber optic cable and locate wire. Contractor will clean and tag fiber coils; prep fiber for splice; place locate wire, test stations, ground rods, and ground wire as required and detailed in the construction drawings; and replace any missing locate wire within the existing conduit pathways.

CONTRACTOR FURNISHED MATERIALS
The Contractor shall provide all material, unless otherwise noted below and contractually agreed to for this project. All material shall be new and free from defects. Refer to construction drawings for quantities. Materials with a manufacturer and part number must be supplied as noted unless otherwise specified. All other materials need not be from the designated manufacturer but must be of equal or better quality. Contractor to provide specifications for alternate materials proposed as a submittal.

The following is a list of major materials the Contractor will be expected to provide:

- **Conduit**
  - 2" SCHD 40 PVC (Including all Sweeps, Bends and Fittings)
  - 2" HDPE SDR11 (Including all Sweeps, Bends and Fittings)
  - 2" GRC (Including all Sweeps, Bends and Fittings)
  - 2" 3-Cell MaxCell Innerduct

- 1 ¼" Riser Rated Flex Conduit
- Simplex and Blank Duct Plugs – sized as required

https://www.maxcell.us

- **Utility Vaults**
  - 24" x 36" Open Bottom Vault (Quazite PG2436BA36) or equivalent

https://www.hubbell.com/hubbellpowersystems/en/hps-brands/quazite

- **Aerial Hardware**

All aerial attachment hardware shall be ordered according to the strand size and cable required for each segment. Refer to construction drawings for quantities. Below is a list of the major attachment hardware needed:

- 6.6 M strand
- 0.045-in. Stainless Steel Lashing Wire
- Aerial Line Hardware (bolts, nuts, washers, eyes, spacers, clamps, lags, hooks, dead ends, etc.)
- ¾" – Triple Eye Screw / Plate / Rock Anchor
- Strand Mounted Cable Storage Systems (snow shoes) – size specific to the cable bend radius
- Strand Insulators
- Guy Guards – 6 foot (yellow)
- Cable Tree Guards
- No. 6 solid bare copper wire with associated bonding clamps
- Riser Stand-Off Brackets
- Sidewalk Guy Assembly

https://www.hubbell.com/hubbell/en/Products/Data-Communications/cl/535410

- **Locate Wire & Ground Wire**
  - 12 AWG HDPE 30 MIL CU Stranded Locate Wire – no color specification (Orange optional)
  - 6 AWG HDPE 30 MIL CU Solid Copper Wire – no color specification (Black or Green optional)

www.kristechwire.com

- **Locate Wire Access Points & Terminals**
  - T-3 CP Test Station w/ 5 Binding Posts & Ground Straps (Orange Cover Optional)

www.tinker-rasor.com

- **Ground Rods & Ground Clamps:**
  - 5/8" x 5' Copper Clad Ground Rods
  - Fargo (Hubbell): Bronze GC5000 Series Vice Type Ground Connectors
  - Fargo (Hubbell): Bronze GA9000 Series Vice Type Strand to Ground Connectors
  - Fargo (Hubbell): Bronze GCA Series Ground Clamp to Pipe Connectors
  - Fargo (Hubbell): Bronze GC Series Ground Clamp to Rod Connectors

www.hubbellpowersystems.com

- **Splicing & Termination Materials & Network Interface Devices**

All Aerial and Underground Splice Cases and miscellaneous splicing materials including splice trays, end plates and fusion heat shrink protectors are the responsibility of the Contractor.

- Field Splice Cases
  - TYCO Electronics FOSC 450B (including trays and hardware for a complete system)
- 12 Port Fiber Termination Panel
  - Rack mount 12 port panel with single-mode SC/UPC ports
  - Clearfield Item No. GPJ-012-A1F-FAZ-B
- 48 Port Fiber Termination Panel
  - Wall mount 48 port panel with single-mode SC/UPC ports
  - Clearfield Item No. WNB-048-A1F-ZZZ (96 fiber capacity loaded with cassettes for 48 fibers)

www.seeclearfield.com

- **Fiber Optic Cable**
  - ALTOS Lite Loose Tube, Gel-Filled, Single-Jacket, Single-Armored Cable 48F, Single-mode (OS2)
    - Part Number: 048EUC-T4100A20
  - FREEDM Loose Tube, Gel-Free, Interlocking Armored Cable, Riser 12F, Single-mode (OS2)
    - Part Number: 012EUF-T4101DA1

https://www.corning.com/worldwide/en/products/communication-networks/products/fiber-optic-cable/outdoor-cables/altos.html

https://www.corning.com/worldwide/en/products/communication-networks/products/fiber-optic-cable/indoor-outdoor-cables.html

- **Miscellaneous Materials**
  - Extra Stretch Warning Tape, orange with black lettering, 3 in. wide
  - Asphalt, Concrete, Clean Backfill, Stone, etc. as needed
  - All Restoration Materials
  - All other miscellaneous materials, not shown above, required providing a complete system

PERMITS

The City of John Day will provide (or cause to be provided) all necessary permits for the project with the exception of building permits for interior raceway and cable installation. The Contractor will be required to identify, obtain and pay for any building permits required. The successful Contractor shall be provided with copies of all applicable City, County, and State permits prior to the start of construction and will be required to maintain a copy on site at all times.

SCHEDULE

The schedule for completion of this project shall be 60 calendar days from written Notice to Proceed (NTP) allowing 30 calendar days for material ordering and delivery; and 30 calendar days for installation. Upon notice to proceed, the Contractor must mobilize and dedicate crews and staff of sufficient size to meet completion date.

Interested contractors are responsible for and strongly encouraged to visit and inspect the site to evaluate site conditions. The Plans may be viewed and/or acquired at John Day City Hall, 450 East Main Street, John Day, Oregon 97845 and/or at City's website http://www.cityofjohnday.com/.

GENERAL CONSTRUCTION GUIDELINES FOR COMMUNICATIONS INFRASTRUCTURE

1. INTRODUCTION

This specification covers the installation of aerial and underground fiber optic cable and the splicing and terminating of such. Vaults will be installed for use as pull boxes and/or splice boxes, at intervals or locations specified. This specification also includes building entrance work.

The Contractor shall install the cable according to standard telecommunication installation procedures and OTEC joint use specifications as identified in the joint use permit and detailed in the construction drawings. Aerial installations will include make-ready work, tree trimming, strand placement and cable placement using lashing, placement of aerial cable storage systems, placement of anchors and guys, and all other work necessary to provide a complete installed system.

The underground conduit shall be placed in the rights-of-way, roadways, and private properties as shown on the construction drawings. The Contractor shall place the designated size and number of conduits the length of the underground routes. Inner duct and/or fiber cable will then be placed in the conduit by pulling or blowing methods. Locate wire to be installed in all conduit segments.

All vaults and hand holes shall be permanently sealed where conduits enter and at all locations where debris can enter. All conduits are to be plugged utilizing blank duct plugs and simplex duct plugs at all vaults and riser locations. Foam sealants shall not be a substitute for these above-mentioned plugs.

The underground methods used may include trenching, rock sawing, boring, directional boring, hand digging, or other. The Contractor shall install cable route warning signs along underground cable routes as designated in the drawings and notes.

The Contractor shall be held responsible, in all cases, to return the areas of construction to original or better condition. Restoration of the work areas shall be done on a daily basis. The City of John Day or its appointed representative reserves the right to stop the Contractor's work until restoration of affected areas has passed inspection.

Refer to the construction drawings for additional general guidelines that the Contractor will be expected to comply with.

2. EXISTING SITE CONDITIONS

The Contractor shall be satisfied with the work and soil and site conditions before submitting a bid. Any special handling, back pulling, restoration and all other special conditions shall be included in the Contractor's bid.

The Contractor shall provide the labor, supervision, materials, tools, machinery, services, incidental materials, supplies, insurance, bonds, and licenses necessary to install the cabling system as described herein. All work shall be performed as described herein and in strict accordance with all applicable Federal, State, County, and City Regulations.

3. PROTECTION OF EXISTING UTILITIES

The Contractor shall locate or verify the locating of underground facilities of third parties in the cable route area and/or contact the responsible third party for those locations. Utility companies are to be notified a minimum of two (2) business days prior to any work being performed. The Contractor shall be responsible for hand digging out any pipeline, drainage tile, cable, or any other buried facility prior to performing any mechanical excavations in the area. The Contractor shall take every precaution to avoid damage to all existing facilities. The Contractor shall be responsible to repair and pay for any damage that may occur due to excavations of existing utilities.

4. PRE-INSTALLATION / ON-REEL CABLE TESTING

The Contractor may employ the use of an optical time domain reflectometer (OTDR) to verify that the cable has not been damaged during shipment. The Contractor bears full responsibility for assuring that the fiber system operates within specification at the completion of the project.

If the Contractor elects to pre-test the cable prior to installation, costs associated for pre-installation, on-reel testing shall be included in the installation pricing.

Cable fiber testing will be done at the cable yard prior to the Contractor loading the cable for delivery to the jobsite. The Contractor shall supply all tools, test equipment, consumables, and incidentals necessary to perform quality testing.

Each fiber shall be tested with an OTDR and shall be checked for continuity, length, anomalies, and approximate attenuation. Each measurement shall be recorded with color, location, and type of fiber measured. The cable ends shall be sealed after testing.

5. AERIAL FIBER INSTALLATION

The Contractor shall install all aerial fiber cable according to the manufacturer's Installation procedures, industry standard acceptable practices, and the Pole Owner construction standards and specifications for joint pole attachments. The contractor must also conform to the requirements and specifications of the current edition of the National Electrical Safety Code (NESC) as well as the rules and regulations of the Occupational and Safety Health Act (OSHA).

The Contractor must use the appropriate installation equipment including pulling machines, bull wheels, travelers, sheaves, chain hoists, dynamometers, and pulling grips for the size of the cable to be installed and must adhere to the requirements of the manufacturer with respect to maximum pulling tensions and static and dynamic bend radii.

All anchors are to be installed prior to strand installation. Strand, overhead guys, and down guys are to be installed and properly tensioned prior to cable installation. All fiber will be installed under tension to avoid possible contact or clearance issues with road crossings, structures, and the ground. All cable and strand blocks, rollers, guides and stringing equipment shall be installed to prevent contact with or damage to existing power and communications facilities. Under no circumstances shall any equipment be attached to or supported from existing power or communications facilities that are not designed to support such attachment or loading.

All strand and cable segments are to be properly sagged and tensioned upon completion of the installation to match existing conditions. In locations where there are multiple existing communications and power facilities, the cable is to be sagged and tensioned to match the existing sag of facilities and maintain mid-span clearances.

Portions of the project may also involve installation on rear lot public utility easements and will require the contractor to coordinate access with the property owners or tenants for construction. The contractor shall provide at least 24 hours' notice to each property owner prior to construction.

The Contractor may be responsible for performing relocation make-ready work of existing communication joint-use facilities. Some communication joint-use facilities and electrical facilities will be relocated as required by their respective crews in advance of the construction.

6. TRENCHING

The Contractor shall be familiar with general guidelines covering the construction of buried and underground communications conduit and cable. The equipment and construction methods used by the Contractor shall be such as to cause minimum displacement of the soil.

Where required, the Contractor shall open a trench, either by hand or by machine, in which to place the ducts, ground wire, and warning tape. The depth of the trench shall be the specified minimum cover from ground level to the top of the conduit. The trench shall be as straight as practical. The bottom of the trench shall be smooth and free from any sharp edges. The trench shall be kept clear of debris and loose rock. All changes in trench grade shall be gradual. Any open trench shall be fenced, or steel plated in travel areas and during all non-working hours. Good judgment and care must be exercised to prevent the public or construction personnel from falling into open trenches at all times.

Driveways, lanes, or roadways, which are open cut, shall be opened just prior to duct placement. In no case shall the driveway, lane, or roadway be left impassable at the end of the day. The Contractor shall cut and restore asphalt or concrete where required. The cut shall be made with the use of a concrete saw or similar. The cut shall be a T-Cut, at a minimum, 12" wider on either side than the trench below. All asphalt/concrete cut and removed shall be disposed of and new asphalt/concrete shall be used to restore the area. The new asphalt/concrete shall match the existing asphalt/concrete in depth (4" min), type, appearance, wear surface and durability to the maximum extent practicable.

After placing the conduit in the trench, the trench areas that are designated to be filled with clean backfill will be filled using lifts of 12 inches with each layer being compacted to the density specified below (or as specified by the jurisdictional permit agency, if stricter):

- Improved areas such as street and sidewalks shall be compacted to at least 90% of maximum dry density to within 3 feet of sub-grade. The last 3 feet shall be compacted to at least 95% of maximum density.
- Unimproved area or landscape areas shall be compacted to at least 90% of maximum dry density.

This process shall be repeated until the trench is filled to the ground line. A warning tape shall be installed 18 inches below ground surface. The backfill will consist of the earth removed from the trench, unless this material is too rocky, or otherwise unsuitable. The surface restoration of the trench line shall be restored as specified in the trench details in the construction drawings.

For trench areas that are designated for reduced depth and conduit protection, the trench is to be filled with Controlled Density flowable concrete backfill meeting the specification of the jurisdictional permit agency to the depths as specified in the trench details in the construction drawings.

Where the conduits are buried near the edge of pavements, the Contractor shall take particular care to avoid damaging the pavement. If such damage does occur, repairs shall be made immediately to meet the complete satisfaction of state and/or local authorities having jurisdiction over the pavement. Damage to banks, ditches, driveways, and roads caused by trenching operations shall be immediately repaired to the satisfaction of the inspector and the agency having jurisdiction over highway and road rights-of-way.

The work shall include, but is not limited to, excavating a trench to provide the specified minimum cover over the conduit by whatever means required (i.e., machine trench, backhoe, hand, etc.), placing the conduit in the trench, backfilling, placing warning tape and/or marking balls, compacting, traffic control, and all other operations necessary to restore the area to original or better condition. The work also includes shoring, bracing, dewatering, and placing of select backfill as necessary. The contractor will need to be familiar with the jurisdictional permit agency requirements for hard surface restoration procedures and specifications and must include this knowledge and pricing within the bid proposal.

Refer to the construction drawing guidelines for additional trenching requirements.

7. DIRECTIONAL BORING / DRILLING

Where required on the construction drawings, the conduits shall be installed by directional boring methods. Contractor may also elect to install conduit by directional boring method in areas that are not specified as

bore. All work performed on public right-of-way or private property shall be done in accordance with requirements and regulations of the jurisdictional permit agency. In no case shall the boring be less than 36 inches from the surface of the ground or greater than 96 inches (unless otherwise specified or approved by Owner in areas that require clearance of existing utilities and substructures).

The directional boring work shall include but is not limited to the functions of boring or pushing to place conduits as specified. This work also includes the excavation, backfilling and compaction of pits, grouting of bore holes and placement of protective barricading and all other operations required to place conduit in this manner. All drilling mud and materials shall be recycled on site or disposed of according to state and local requirements at approved recycling facilities. Directional bore segments where drill casings require HDPE innerduct to be installed to include staging, pulling, proving, organizing and plugging innerducts to prevent intrusion of water, soil and contaminants. This work also includes the placing of warning markers in areas directly along the bore path and restoration of all disturbed areas to original condition or better.

8. VAULTS AND HAND HOLES

Vaults shall be installed to be used as pull points, transition points, slack storage, and splice points. The type and location of the vaults and hand holes are shown in the construction drawings, and the specifications are detailed in the notes section of the drawings.

Excavation to the correct depth for the vaults to be installed may be carried out by mechanical excavator or by hand. The floor of the completed excavation must be made level and compacted. The compacted excavation shall then receive a compacted layer of 6 inches of crushed rock. The top of the installed vault will be flush to grade or buried as specified. Backfilling shall commence after the vault is placed and leveled. Backfilling shall consist of placing backfill along the outside of the vault in 8-inch layers, thoroughly tamping each layer until ground level is reached.

The work shall include, but is not limited to, potholing to verify the suitability of the location for placement, digging to the required depth and dimension to allow 12” minimum clearance on all sides of the vault and the delivery, setting, and placement of the vault. The installation of ground rods, ground wire, locate terminal route markers and installation of the locate and ground wires are included. Backfilling, compaction, and restoration are also included.

9. BUILDING ACCESS

All work shall be done in a "neat and workman" like manner, in conformity with local, state and federal building codes. All work must comply with applicable data system standards and National Electric Code standard specifications. Standards include, but are not limited to, EIA/TIA 568-B commercial building wiring standards and EIA/TIA 569-A commercial building standard for telecommunications pathways and spaces. References:

- EIA/TIA Commercial Building Wiring Standard, 606 And All Recognized TSBS
- National Electric Code
- Underwriter's Laboratories (UL): Applicable Listings and Ratings

1. All conduits placed on private property are to be SCHD 40 PVC or SDR11 HDPE conduit if placed outside the building and riser-rated flex conduit if placed within the building.
2. Riser conduit or exposed conduit on the exterior of building is to be GRC conduit unless otherwise specified.
3. All conduits are to be equipped with inner duct as specified.
4. 90-deg. bends are to be "sweep" bends, 3' radius or larger, unless otherwise specified.
5. Conduit pathways within building interiors shall be supported with appropriate hardware specific to the existing material or structure.
6. All exterior wall penetrations are to be resealed per building and fire code.

7. All interior wall penetrations are to comply with pertinent building and fire codes and are to be constructed in such a manner as to insure the integrity of the penetrated wall.
8. All pull boxes are to be NEMA Type 3R or equivalent.
9. The Contractor shall route the conduit and cable into buildings per State and Local building codes. Refer to the construction drawings and notes for building entry details.
10. Notify the "building contact" person a minimum of 48 hours prior to commencing any work on the premises.

10. SPLICING, TERMINATION AND TESTING

Contractor shall use SC connectors with a UPC polish. The loss value of any pigtail connector and any associated fiber jumper or pigtail with matching mode field diameters will not exceed 0.5dB at 1550 nm. The loss value of a connector and its associated jumper with mismatched mode field diameters should not exceed 0.8 dB.

The Contractor shall perform fusion splicing at locations specified in the Construction Drawings. If applicable, splice locations with live traffic may be spliced between the hours of 12:00 AM and 6:00 AM PST on weekends (Saturday & Sunday) only or as approved by the City of John Day. All splicing and terminations on dark fiber and new fiber locations that do not pose risk to customers and live traffic can be performed during regular business hours.

The Contractor's fusion splicing equipment shall be cleaned, calibrated and adjusted to the fiber and environmental conditions at the start of the job and shall be checked daily and re-adjusted if necessary. Splicing includes picking up and hauling materials to the jobsite, opening the cable, splicing the fibers using the fusion splicing technique, placing a heat shrink on the bare fiber splice, loading the spliced fibers in a splice tray, and placing the splice tray in the closure as directed, encapsulating or sealing the splice, closing the closure.

Upon completing each individual fiber splice, the Contractor shall perform a lid test on the splice to determine loss. Any splice not meeting the test criteria of 0.1 dB shall be re-spliced. The Contractor shall clean up and dispose of excess material. The cost associated with testing the cable shall be included in the splicing and termination lump sum bid items.

Terminations include picking up and hauling materials to the jobsite, installation of rack / wall mounted fiber optic distribution panels (FDP's) and routing the cable(s) to the rack and FDP for termination. Some projects may specify pre-terminated cable stubs; therefore, no pigtails and splice trays will be required at the termination panel. The contractor shall be responsible for installing the bulkheads and connecting the pre-terminated SC connectors from the cable stubs into the panel. All fiber ports shall be labeled as to fiber assignment, cable and direction. In the event that termination is required, scope of work would include installing splice trays; opening the cable sheath; splicing the individual fibers to pigtails; placing a heat shrink on the splice; loading the fibers in a splice tray; placing the tray in the fiber optic distribution panel; assembly of the termination panel; and routing to and terminating the pigtails at the bulkhead. All excess cable shall be neatly coiled, secured and stored in each facility. The Contractor shall clean up and dispose of excess material. The cost associated with testing the cable shall be included in the splicing and termination bid items.

11. POST INSTALLATION TESTING

Fusion splicing is required for all permanent splices on the project. The maximum allowable splice loss for any splice is 0.10 dB, as measured bi-directionally with an OTDR at 1310 nm and 1550 nm. The average splice loss for the segment shall not exceed 0.05 dB. Set the fusion splice machine for standard single mode fiber.

The Contractor shall supply to the City of John Day the Optical Time Domain Reflectometer (OTDR) traces of individual optical fiber signatures. An access jumper shall be used which shall allow viewing of the entire length of the cable, including the launch end.

Optical attenuation shall be measured, using a stable laser light source and optical power meter, on the terminated fibers in both directions of transmission using the Insertion Loss Method and shall include the pigtails and couplings installed at the system endpoints. To ensure that an accurate measurement of connector loss is made, jumpers shall be used at both transmit and receive ends.

The cable shall also be tested to ensure that no fibers have been transposed along the route. Transmit light (using a stabilized light source) in each fiber at one end of the route segment and verify that light is received from the same fiber at the other end of the route segment using a power meter. Record continuity results and the light power loss between the light source and power meter for each fiber. Repair any transposed fibers that are found.

The Splicing Contractor shall test each fiber independently. Any cable found not to meet the acceptable test criteria due to the installation methods used shall be replaced at the Installation Contractor's cost. The Splicing Contractor shall supply all equipment and personnel necessary to conduct the tests. All test equipment shall be in good working order and shall have been calibrated prior to the tests being held.

The Contractor shall document all test results and provide those results to the City of John Day. The documentation shall include the name of the person performing the tests, the date and time the test was performed, the cable being tested, the equipment used, the procedures followed, and the results obtained. Provide OTDR traces with event tables identifying each splice point and splice loss for each splice in Excel format with each enclosure location, fiber, and the direction the OTDR is looking accurately identified. Contractor shall provide the documentation of OTDR traces with event tables on a CD / DVD / USB Drive.

12. LOCATE WIRE TERMINALS – T3 (VAULT INTERIOR)

T-3 Locate Wire Terminals will be installed at all vault locations that are located in hard surfaces such as streets and/or sidewalks. The terminals are Locate Wire Terminal enclosures made of polycarbonate and are mounted on an accessory angle bracket on the interior riser of a concrete vault lid or interior wall of a fiberglass / composite vault wall. The accessory angle bracket will be secured with screws, anchors or epoxy fasteners specific to the vault wall or riser. The terminal then mounts to the accessory bracket.

The Locate Wire Terminal will have a minimum of 5 Rapid Connect Binding Posts installed with Bonding Straps for each terminal. The binding posts are designed to mount in the terminal plate with a threaded stud on one side and compression set-screw wire termination on the other side. The locate wires and ground wires will terminate on the set-screw side of the plate with the stud side of the plate will having bonding straps and hex nuts to facilitate attachment of the Cable Locating Equipment and isolation of locate wire segments.

13. VAULT GROUNDING & LOCATE WIRE TERMINATIONS

All new vault locations as shown on the drawings will require the installation of a 5/8" x 5' copper clad ground rod in/or through the bottom of the vault, using caution so as not to damage existing substructure. A 6 AWG HDPE 30 MIL Copper Solid Ground Wire will be bonded to the ground rod with a ground rod clamp. The 6 AWG copper wires will be extended neatly from the ground rod to the T-3 Locate Wire Terminal on the interior of the vault and will terminate on the designated ground lug. At each of the vault locations, the new 12 AWG locate wire will be extended to the terminals and secured. The 12 AWG Locate wire will terminate on the T-3 Locate Wire Terminal on the interior of the vault on the designated lug, corresponding with the direction the locate wire departs from the vault.

14. POLE RISER LOCATE WIRE GROUNDING

At conduit locations where the underground transitions to aerial, the 12 AWG locate wire will be placed extending up the pole within the riser conduit to the top. At pole locations where a vertical ground exists on

the pole, the 12 AWG locate wire will be bonded to the existing 6 AWG copper ground wire with a vice-type compression ground connector. At pole locations where a vertical ground does not exist, a vertical # 6 AWG Solid vertical ground will be placed by the Pole Owner on the pole and the 12 AWG locate wire will be bonded to the new vertical # 6 AWG ground with a vice-type compression ground connector.

15. BUILDING INTERIOR GROUNDING

At building entry locations where the locate wire enters the building, a ground point will need to be established for bonding the locate wire. Extend the locate wire from the building entry location to the nearest suitable ground in the area of the building entry. Follow Local building and electrical codes for acceptable ground connection points.

16. RECORD DRAWINGS

Walk through inspection with the City of John Day Representative will be required upon project completion. Project shall not be considered complete until deficient items identified (if applicable) on final walk through inspection list have been corrected. Upon notification of completion of the work and acceptance by the City of John Day, the contractor shall provide to the City of John Day Project Manager a set of neat and accurate "As-Built" drawings within 10 business days of completion of the project.

As-Built data shall be updated and maintained daily on field copy drawings for the duration of construction. Upon completion of the project, the as-built data shall be transferred to a clean set of construction drawings for submittal to the City of John Day Project Manager.

The As-Built data shall be detailed on the drawings in either colored ink or colored pencil according to the following color codes:

RED: Work placed according to design and changes to the design
GREEN: Work not placed according to the design; omit from design
BLUE: Existing utilities facilities, Comments and Notes

- Work performed according to the design shall be highlighted or traced in RED. Work performed according to approved changes or variations to the design shall be neatly drawn and detailed on the drawings showing how the changes were constructed in the field.
- Work that was designed but not performed as shown on the drawings shall be highlighted or traced in GREEN to show that the work function was not constructed as designed.
- Existing facilities or utilities encountered; construction notes; additional construction related information identified in the field shall be neatly drawn and detailed in BLUE.

Colored highlighter pens according to the color codes as detailed above are acceptable. Fluorescent yellow highlighter pens are not an acceptable form of as-built coloring.

As-Built drawings shall contain the following data at a minimum for each of the following work functions:

<u>Aerial Segments</u>

- Point of attachment height from the ground to the cable and/or strand on all poles.
- Cable footage (sequential) markings at all cable ends; start and end of slack storage and conduit entrance / exit points.
- Location of all slack storage and cable splice points.
- Anchor and down guy size placed and lead length between the anchor and the pole.

<u>Underground Segments</u>

- Depth of conduit measured every 25 feet and at every change in direction along the conduit alignment.
- Offset distance measured every 25 feet and at every change in direction from the alignment to a curb, edge of pavement or other physical reference object.
- Location and depth of vaults, hand holes and junction boxes placed.
- Depth, type and direction of any existing utility encountered crossing the conduit route.
- Location of magnetic locating targets placed.
- Cable footage (sequential) markings at all cable ends, start and end of slack storage, conduit entrance / exit points.
- Actual quantity of cable slack storage left in vault locations.
- Actual wall to wall measurements of conduit segments between vaults.

As-Built drawings shall have the words "As-Built" with the name of the contractor and the date stamped on every sheet in the drawing package.

Any changes or deviations from the construction drawings must be approved by the City of John Day Project Manager prior to making any of the said changes or deviations.

FORM OF QUOTE SUBMISSION

The following minimum requirements as to the form and manner of submitting Quotes must be strictly observed; variance from these requirements will result in rejection of the Quote as unresponsive. A contractor interested in performing the Services (or a portion of the Services) must submit a written Quote, on the quote form attached hereto as Exhibit B, containing the following information:

1. Contractor's name, CCB license number, address, contact information, and the name of the primary contact in reference to the proposal.

2. Brief information concerning the contractor (e.g., background, size, types of services provided, and examples of similar projects completed).

3. Identification of the person(s) who will be assigned and responsible to oversee performance of the Services.

4. A work plan and accompanying time schedule for timely completion of the Services (or the portion of Services the contractor desires to perform).

5. Contractor's lump sum cost to perform the Services

6. A brief description of contractor's experience, specific expertise, availability, project understanding, and any other factor related to outside plant fiber optic network construction.

Each contractor must sign its Quote. The quote form must be used without alteration. All blank spaces in the quote form must be filled in, in ink, or typed, in both words and figures, where required.

SUBMISSION OF QUOTES

To be considered, please submit your Quote to Nick Green, City Manager, via email at greenn@grantcounty-or.gov, or by mail or hand delivery at the addresses provided below:

City of John Day
Attn: Nick Green
450 east Main Street
John Day, Oregon 97845

Please clearly label the outside of the envelope (or fill in the email subject line with) "John Day Fiber Construction, Grant County ESD – 911 Lateral Construction Services Quote." Quotes must be received by City on or before _____ __, 2018. Quotes received after the deadline date/time will not be considered. Notwithstanding anything contained in this RFQ to the contrary, if in City's best interest, City reserves the right to, in accordance with Oregon law, (a) amend and/or revise this RFQ in whole or in part, (b) cancel this RFQ, (c) extend the submittal deadline for responses to this RFQ, (d) waive minor informalities and errors in such Quotes, and/or (e) reject all Quotes for any reason and/or without indicating reasons for rejection. Further, City reserves the right to seek clarification(s) from each contractor and/or require supplemental information for any contractor. This RFQ does not obligate City to award a contract and/or to procure the Services described herein.

INSURANCE REQUIREMENTS

The contractor(s) will be required to meet all provisions of the Agreement (defined below), including, without limitation, the following minimum levels of insurance:

1. Commercial General Liability Insurance covering bodily injury and property damage in a form and with coverages that are satisfactory to City, including personal injury liability, products and completed operations, and contractual liability coverage for the indemnity provided under the Agreement. The

insurance will have a combined single limit of not less than $1,000,000, and an aggregate limit of not less than $2,000,000. The insurance will name City and its officers, agents, and employees as additional insureds. Prior to execution of the Agreement, the contractor will deliver to City certificates (and any related endorsements) evidencing the insurance contractor is required to obtain under the Agreement.

2. Automobile Liability Insurance with limits of not less than $500,000 combined single limit or split limits of $250,000 per person, $500,000 per occurrence and $250,000 property damage. The insurance will name City and its officers, agents, and employees as additional insureds. Prior to execution of the Agreement, the contractor will deliver to City certificates (and any related endorsements) evidencing the insurance contractor is required to obtain under the Agreement.

3. Workers' Compensation Coverage. Unless exempt, the contractor will have Workers' Compensation insurance satisfying the requirements of applicable Oregon law. Workers' Compensation coverage will contain a waiver of subrogation in favor of City.

AWARD OF CONTRACT

If a contract is awarded, City will award the contract to the contractor whose Quote will best serve the interests of City, taking into account price as well as considerations, including, without limitation, experience, specific expertise, availability, project understanding, contractor capacity, responsibility and similar factors. Contractors responding to this RFQ do so at their own expense and City is not responsible for any costs and/or expenses associated with the preparation and/or submission of any Quote. City reserves the right to enter into one or more contracts concerning certain portion of the Services.

If a contract is awarded, City and the selected contractor(s) will enter into City's Construction Services Agreement, substantially in the form attached as Exhibit C (the "Agreement"). The Agreement will contain terms and conditions required under applicable law and will otherwise be in form and content satisfactory to City. Without otherwise limiting the generality of the immediately preceding sentence, the Agreement will include terms and conditions concerning, among other things, acceptable standards of performance, compensation, minimum insurance requirements, compliance with laws, indemnification, representations and warranties, City's right to terminate the Agreement and/or declare a default under the Agreement, the consequences for contractor's failure to perform its obligations under the contract, and City's right to seek damages and other relief available to City under contract and applicable law. Each contractor is responsible for inspecting the project site, and confirming the project work conditions, prior to submitting a Quote.

If you have any questions regarding this request for quotes, or to arrange a site visit, please contact Mr. Green via email (provided above) or telephone (541-575-0028).

Exhibit A

1. Construction Plan Set – Grant County ESD – 911 Lateral

(attached to solicitation website)

Exhibit B
Quote Form

Date: _____ Time: _____

TO: City of John Day
Attn: Nick Green, City Manager
450 East Main Street
John Day, Oregon 97845

The undersigned, hereinafter called the "Contractor," declares that the only persons or parties interested in this Quote are those named herein; that this Quote is, in all respects, fair and without fraud; and it is made without collusion with any official of City of John Day, Oregon, hereinafter called "City"; and that this Quote is made without any connection or collusion with any person making another Quote on the Agreement (as defined below).

Contractor agrees that all of the applicable provisions of Oregon law relating to public contracts (ORS Chapter 279A, 279B & 279C) and the City's public contracting rules are, by this reference, incorporated in and made a part of this Quote. Contractor hereby states that Contractor agrees to be bound by and comply with the provisions of ORS 279C.838, 279C.840 or 40 U.S.C. 3141 to 3148, as applicable.

Contractor certifies that Contractor has not discriminated and will not discriminate against minority, women or emerging small business enterprises in obtaining required subcontracts.

Contractor agrees that if this Quote is accepted, Contractor will, within ten (10) days after notification of acceptance, execute an agreement with the City in the form of agreement attached to the Request for Competitive Quotes (the "Agreement"); and will, at the time of execution of the Agreement, deliver to the City proof of the required insurance; and will, to the extent of this Quote, furnish all labor necessary to complete the work in the manner, in the time, and according to the methods as specified in the Agreement and required by the City Manager.

Contractor agrees to commence work upon the issuance of a "Notice to Proceed" by the City and fully complete the project according to the times specifically set forth in the Agreement. Contractor further agrees to pay liquidated damages as set forth in the Agreement for failure to complete within the specified time.

CONTRACTOR INFORMATION

FROM: Contractor's Name: _____
Primary Contact: _____
Address: _____
City/State: _____
Telephone: _____
Facsimile: _____
Email: _____
CCB #:_____

Operating as (strike out conditions that do not apply) an individual, a Limited Liability Company, a Corporation, organized and existing under the law of the State of_____, or a Sole Proprietorship, a Partnership, or Joint Venture consisting of _____
_____.

[Circle one.] Contractor (is) (is not) a resident of the State of Oregon. If Contractor is a resident of another state, specify state of residency: _____.

QUOTE:

1. Having become completely familiar with the local conditions and legal requirements affecting the cost of Services (as the term is defined in the Request for Quotes) at the place where Services are to be executed, and having carefully examined the site conditions as they currently exist, and having carefully examined the plans prepared by Commstructure Consulting, LLC (the "Plans"), together with any addenda to such Plans, the undersigned hereby proposes and agrees to provide all labor, physical plant, equipment, transportation, and other facilities and services as necessary and/or required to execute all of the Services described by the aforesaid Plans and the Scope of Work (as defined in the Request for Quotes) for the following lump sum amount:

   LUMP SUM QUOTE: _____ Dollars ($ _____)

ADDITIONAL CRITERIA:

2. Contractor will address the following criteria on a separate sheet and attach to this form:

   a) Brief information concerning Contractor (e.g., background, size, types of services provided, and examples of similar projects completed).

   b) Identify the person(s) who will be assigned and responsible to oversee performance of the Services.

   c) Include a work plan and accompanying time schedule for timely completion of the Services.

   d) Contractor's experience, specific expertise, availability, project understanding, and any other factor related to constructing, assembling, and/or installing greenhouses and/or other related structures.

CONTRACTOR:

_____
[Company Name]

By: _____
Its: _____

Exhibit C

City's Construction Services Agreement

(template attached)