



City of Hillsboro, Oregon
Invitation to Bid – Public Improvement

**Fiber Optic Cable Installation
ITB No. 2016-07-ISFOP**

Bids Due:	Due Date and Time: Not Later than 2:00:00 PM Pacific Time, August 9 th , 2016. Bid Closing is the Due Date and Time shown above. Late Bids shall be rejected. First Tier Subcontractor Disclosure: Not later than 4:00:00 PM Pacific Time, August 9 th , 2016.
Submit Bids to:	City of Hillsboro Greg Mont Information Services 150 E Main St Hillsboro, OR 97123 All bid documents shall be submitted in hard copy to address above no later than the Due Date and Time. Electronic or e-mailed bids shall be rejected.
Contact:	Direct questions to: ITB Contact: Greg Mont Email: Greg.Mont@Hillsboro-Oregon.gov Phone: 503-681-5401
Request Deadline:	For all substitution, clarification and change requests as well as solicitation protests: August 2 nd , 2016
Prevailing Wages:	This project is a Public Work and subject to ORS 279C.800 – ORS 279C.870 including but not limited to: payment of prevailing wages, reporting and public works bond.
Bidder Prequalification	Bidder Prequalification is not required
Pre-bid Conference:	An Optional pre-bid conference will be held at 2:00 PM on July 26 th at the Hillsboro Civic Center, 150 E Main St., Hillsboro, OR, 97123, Third Floor, Room 333.
Public Bid Opening:	A Public Bid Opening to be held at the following time and location: 2:15 PM, August 9 th , at the Hillsboro Civic Center, 150 E Main St., Hillsboro, OR, 97123, Third Floor, Room 333.

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ATTACHMENT A:

FORM OF CONTRACT, GENERAL CONDITIONS
SUPPLEMENTARY CONDITIONS (IF ANY)

PART B:

DRAWINGS AND SPECIFICATIONS

LIST OF DRAWINGS:

- A: EVERGREEN 15TH-BROOKWOOD VAULTS
- B: EVERGREEN BROOKWOOD-ALOCLEK VAULTS
- C: EVERGREEN SPLICE PLAN

TECHNICAL SPECIFICATIONS

ATTACHMENT TS-A: SPECIFICATION STANDARD: OPTICAL FIBER BACKBONE CABLING

This Invitation Bid Document is comprised of all Part A and Part B documents, including, but not limited to: instructions, forms, drawings and specifications. The drawings and specifications pertaining to this ITB are hereby incorporated by reference.

SCHEDULE

ITB ISSUED	July 20, 2016
Optional Pre-bid Meeting	See Page 1
<u>REQUEST DEADLINE</u> FOR: SUBSTITUTION, CLARIFICATION, OR CHANGE AND SOLICITATION PROTEST DEADLINE	August 2nd, 2016
LAST ADDENDA ISSUED	NOT LATER THAN 72 HOURS PRIOR TO BIDS DUE
BIDS DUE	See page 1
FIRST-TIER SUBCONTRACTOR DISCLOSURE	See page 1
ANTICIPATED CONTRACT START	August 23rd, 2016
ANTICIPATED SUBSTANTIAL COMPLETION	September 15th, 2016
ANTICIPATED FINAL COMPLETION	October 1st, 2016
ANTICIPATED # OF DAYS	45

NOTE: The City reserves the right to deviate from this schedule.

ADVERTISEMENT

CITY OF HILLSBORO
Information Services
Invitation to Bid (ITB) – Public Improvement
Fiber Optic Fiber Installation and Termination
No. 2016-07-ISFOP

Bids due and Bid Closing Date and Time: **August 9th, 2016 2:00 PM**
First Tier Subcontractor Disclosure due: Not later than **August 9th, 2016, 4:00 PM**

The City of Hillsboro (City) seeks sealed bids from qualified firms able to provide the installation of a fiber optic cable in existing conduit, installation of splice closures with identified strands accessible at specific locations, and termination of strands at one end point.

The City and Washington County are coordinating on this project and have identified a path and key locations as identified in the attached drawings A and B. The City will act as the lead agency in this work and will hold any contracts resulting from this ITB. The path will consist of underground installation in existing conduit.

The project will also include the installation and termination of fiber into the Telx Data Center as well as locations where splice cases will be installed to provide future access to the required fiber as shown in Attachment C.

There is no pre-qualification process for this ITB.

Optional pre-bid conference will be held at 2:00 PM on July 26th, 2016 at the Hillsboro Civic Center, 150 E Main St., Hillsboro, OR, 97123, Third Floor, Room 333. Late bids will be rejected as non-responsive.

Sealed bids will be received by Greg Mont, Information Services Director at: Hillsboro Civic Center, 150 E Main St., Hillsboro, OR, 97123, Third Floor, Information Services. A public bid opening will be held at this location at Hillsboro Civic Center, 150 E Main St., Hillsboro, OR, 97123, Third Floor, Room 333 at 2:15 PM. Questions about this ITB may be directed to the Contact: Greg Mont, Greg.Mont@Hillsboro-Oregon.gov, 503.681.5401.

ITB documents may be obtained on ORPIN at <http://orpin.oregon.gov/open.dll/welcome> or <http://hillsboro-oregon.gov/PublicWorksITB>. This ITB is for construction of a Public Work subject to ORS 279C.800 to 279C.870 (prevailing wage law).

FOR ADVERTISEMENT: DJC, JULY 20, 2016

PART A:

SECTION 1- SUMMARY AND INSTRUCTIONS TO BIDDERS

1.01. BRIEF SUMMARY OF THE WORK

- A. The City of Hillsboro seeks sealed bids from qualified firms able to provide the installation of a fiber optic cable in existing conduit, installation of splice closures with identified strands accessible at specific locations, and termination of strands at one end point.

1.02. IMPORTANT ITB EVENTS

A. PRE-BID CONFERENCE

An Optional Pre-Bid Conference will be held at the time, place and date shown on page 1 of this document. City Staff will take questions during the meeting. Statements or remarks made by City's representatives shall not be binding on the City unless confirmed by written addendum. Questions asked during the pre-bid meeting may not be responded to in an addendum unless also submitted in writing to the ITB Contact.

B. RECEIPT OF BIDS

Sealed bids ("Bids") will be received at the location, Due Date and Time specified on page 1 of this document.

C. BID CLOSING

Bid Closing is shown as the Due Date and Time on page 1 of this document. Bids received after Bid Closing will be considered Late. The City will not accept Offers after Bid Closing.

D. FIRST-TIER SUBCONTRACTOR DISCLOSURE

The first-tier subcontractor disclosure form is due at the time and date shown on page 1 of this document. Failure to submit first-tier subcontractor disclosure form by this due date and time may result in Bid rejection.

E. PUBLIC BID OPENING

The Public Bid Opening will be held at the location, time and date shown on page 1 of this document.

1.03. BID REQUIREMENTS

Bid Requirements Checklist		
The following is a listing of Bid submission components		
	Signed Bid Form – all pages	Submit with Bid
	Bid Security	Submit with Bid
	Bidder Responsibility Information Form – all pages	Submit with Bid
	First-Tier Subcontractor Disclosure	Submit as per page 1
	Any additional items specified in Supplementary Instructions to Bidders.	Submit with Bid

The Bid Requirements checklist is provided for the Bidder’s convenience. Bidder is advised to thoroughly review ITB documents to be certain that it has met all requirements and included all required documents, forms and information in its Bid. In the event of a conflict between the Bid Requirements Checklist and other ITB Documents, other ITB Documents shall take precedence.

A. FIRST-TIER SUBCONTRACTOR DISCLOSURE

As per the form of first-tier subcontractor disclosure set forth in ORS 279C.370, Bidder shall submit to the City a disclosure of the first-tier subcontractors that:

- (a) Will be furnishing labor or will be furnishing labor and materials in connection with the public improvement contract; and
- (b) Will have a contract value that is equal to or greater than five percent of the total project Bid or \$15,000, whichever is greater, or \$350,000 regardless of the percentage of the total project base bid. Bidder must submit this documentation in accordance with Section 1, 1.08 and Section 3, 3.4.

B. BID SECURITY

Bid security shall accompany each Bid exceeding \$100,000 as per Section 1, 1.08, F.

C. OREGON CONSTRUCTION CONTRACTORS BOARD

Bidders shall be licensed with the Oregon Construction Contractors Board prior to bidding on this project.

D. BIDDER’S QUALIFICATIONS AND RESPONSIBILITY

Each Bidder shall submit a completed Bidder’s Responsibility Information Form along with its Bid. The Bidder’s Responsibility Information Form will be used to evaluate the qualifications of any Bidder whose Bid is under consideration for Contract Award (in addition to Bidder Pre-qualification, if applicable). Bidder’s responses to requirements in Supplementary Instruction to Bidders may also be utilized in this evaluation.

Prior to award and execution of a Contract, the City will evaluate whether the apparent successful Bidder meets the applicable standards of responsibility identified in ORS 279C.375 and COH-49-0390. See also COH-49-0440(1)(c)(H). In doing so, the City may investigate Bidder and request information in addition to that already required in this document, when the City, in its sole discretion, considers it necessary or advisable. Submission of a signed Bid shall constitute approval for the City to obtain any information that the City deems necessary to conduct the evaluation.

Bids will be evaluated to identify the lowest responsive Bid submitted by a responsible Bidder which is not otherwise disqualified. (Refer to ORS 279C.375 and COH-49-0390. See also COH-49-0440(1)(c)(H)).

The City may postpone the award of the Contract after announcement of the apparent successful Bidder in order to complete its investigation and evaluation. Failure of the apparent successful Bidder to demonstrate responsibility shall render the Bidder non-responsible and shall constitute grounds for Bid rejection, as required under COH-049-0390.

Any Bidder who fails to submit a complete Bidder Responsibility Information Form will be deemed to be non-responsive and will not be considered for Award of Contract.

If a Bidder is found not to be responsible, documentation of the reasoning will be sent to the Oregon Construction Contractor's Board (OCCB). Such documentation will be based upon the criteria set forth in ORS 279C.375(3).

1.04. CONTRACT REQUIREMENTS

A. PREVAILING WAGES

The selected Contractor and its subcontractors shall pay the applicable prevailing wages to their workers as required by ORS 279C.840. This ITB and the resulting Contract are subject to the following BOLI wage rate requirements and the prevailing wage rates set forth in the following booklets:

- (a.) The "Prevailing Wage Rates for Public Works Contracts in Oregon" dated July 1, 2016 and any applicable amendments to these rates.
- (b.) The "PWR Apprenticeship Rates" dated July 1, 2016 and any applicable amendments to these rates.

The complete publications may be found online at the BOLI website at: http://www.oregon.gov/boli/WHD/PWR/Pages/pwr_state.aspx and are incorporated by reference.

B. DAVIS BACON ACT – FEDERALLY FUNDED CONTRACTS

This project is subject to the Davis-Bacon Act (40 U.S.C. 3141 et seq.), Federal Department of Labor Prevailing Wages. Yes: No: . If Yes, see Attachment B for applicable Prevailing Wage Rate information.

C. CONTRACT, BONDS AND INSURANCE

The successful Bidder must enter into a Contract with the City in the form included here as Attachment A. Agreement Form. The successful Bidder must obtain and maintain insurance and bonding as per Section 1, 1.11 A., Section 3, 3.7 Performance Bond, 3.8 Labor and Materials Payment Bond, and 3.6 Agreement Form. The successful Bidder shall obtain a Payment Bond and a Performance Bond issued by a surety which is authorized to transact surety business in the State of Oregon and which has an A.M. Best "A" or better rating.

D. WARRANTY BONDING

The selected Contractor will be required to provide the City a Warranty Bond.

YES: NO:

1.05. AVAILABILITY OF ITB DOCUMENTS

This ITB notice is posted on the Oregon Procurement Information Network (ORPIN) at <http://orpin.oregon.gov> and on the City website at www.hillsboro-oregon.gov/PublicWorksITB. Bidders should consult the Orpin system and the City of Hillsboro website regularly until Bid Closing to assure bidder obtains all Addenda.

Bidders obtaining documents from a plan center or other third party are advised that the City recognizes as plan holders only those bidders downloading documents or expressing interest in a solicitation posted on ORPIN.

1.06. ITB/PROJECT CONTACT

All questions, requests for clarification, requests for change, requests for substitution and any solicitation protests must be addressed to the ITB Contact shown on page 1 of this document.

1.07. SOLICITATION PROTEST; REQUEST FOR CHANGE; REQUEST FOR CLARIFICATION; REQUEST FOR BRAND NAME/PRODUCT SUBSTITUTION

- A. PROCEDURE: Questions and clarification requests must be directed to the contact shown on page 1 of this ITB. The appropriate means of seeking changes to provisions of this ITB are through (a) requests for approval of an “approved equivalent” (b) requests for changes to contractual terms, Specifications, or Plans; and (c) protests of contractual terms, Specifications, or Plans.

Any Offer/Bid response that includes non-approved alternate product brands or products, that takes exception to the Specifications or Plans or contractual terms of the ITB may be deemed non-responsive and may be rejected.

- B. METHOD OF SUBMITTING REQUESTS FOR CHANGES TO THIS ITB: Emailed or mailed requests must be marked as follows:
- (a) Bid Request for Substitution Request (Request for Clarification, Request for Change, or Protest, whichever is applicable)
 - (b) ITB Number

Requests must be received by the contact listed on Page 1 of the ITB, in writing, either in hardcopy or by email, no later than the Request Deadline on the Schedule shown on Page 2 of the ITB. Unless this specific deadline is extended by subsequent Addenda, no requests for substitution, requests for clarification, requests for change, or protests pertaining to provisions contained in the originally-issued ITB will be considered after the date specified herein.

- C. REQUEST FOR APPROVAL OF AN “APPROVED EQUIVALENT”: Bidders shall provide the named product unless another is approved through a request for approval of an “or approved equal” or an “or approved equivalent, or a product exemption has been issued (ORS 279C.345). Other brands of equal quality, merit and utility will be considered upon proper submittal of the request with appropriate documentation:
- (a) Requests must provide all of the information necessary for the City to determine product acceptability.
 - (b) Failure to provide sufficient information with the request will cause the request to be considered not equivalent.
 - (c) Any product subsequently approved for substitution will be listed on an Addenda issued by the City and posted on ORPIN.
 - (d) Bidders are advised to use the “Substitution” form for such requests. (Section 3, 3.3A).
- D. REQUEST FOR CLARIFICATION: Any Bidder who finds discrepancies in, or omissions from, any provision of the ITB, Plans, Specifications, or Contract Documents, or has doubt as to the meaning, shall make a request for clarification in writing, to the contact listed on Page 1 of the ITB. To be considered, the request for clarification must be received by the Request Deadline as specified in 1.06 B.
- E. REQUEST FOR CHANGES TO CONTRACTUAL TERMS OR SPECIFICATIONS OR PLANS: Any Bidder may submit a request for changes to contractual terms, Plans, or Specifications, in writing, to the contact listed on Page 1 of the ITB. To be considered, the request for changes must be received by the Request Deadline specified in 1.06 B. above. The request must include the specific changes requested, and the reason for requested changes supported by factual documentation, and any proposed changes.
- F. PROTEST OF CONTRACT TERMS AND CONDITIONS OR SPECIFICATIONS: Any Bidder may submit a protest of solicitation terms and conditions, in writing, in accordance with COH-049-0260 to the contact listed on Page 1 of the ITB. To be considered, the protest must be received by the deadline specified in 1.07 B. above. The protest shall include the legal and factual grounds for the protest, a description of the resulting prejudice to the Bidder if the protest is not granted, and a statement of the relief or changes proposed.
- G. RESPONSE TO REQUESTS FOR CLARIFICATION: Clarifications, whether verbal, or in writing, or included in an addendum as “*clarification*”, do not change Plans, Specifications, contractual terms, or procurement requirements of an ITB. If a request for clarification raises an issue that the City determines should be handled by formally amending the ITB, the City will do so only by announcing such a change in an Addendum, not through

information identified as a "clarification."

- H. RESPONSE TO REQUESTS FOR BRAND APPROVAL, REQUESTS FOR SUBSTITUTION, REQUESTS FOR CHANGE, AND PROTESTS: The City shall promptly respond to each properly-submitted written request for brand approval, request for substitution, request for change, and protest no less than 72 hours before Closing. Where appropriate, the City will issue ITB revisions via Addendum and will post these on ORPIN at <http://orpin.oregon.gov> and on the City of Hillsboro website at <http://hillsboro-oregon.gov/PublicWorksITB>.

Failure to protest solicitation terms and conditions, Contract terms and conditions or Specifications, as indicated in this section, precludes appeal or protest of a decision to award based upon such solicitation terms and conditions, Contract terms and conditions, or Specifications.

- I. PROTEST OF ADDENDUM: Requests for clarification, requests for change and protests of Addendum must be received by the time and date specified in the Addendum or they will not be considered.

1.08. OFFER FORMAT AND BID SUBMISSION

A. FORMS TO BE USED

Bids shall be submitted on unaltered Bid Forms furnished by the City, or on exact duplicates thereof. Bids shall be made in accordance with all instruction, requirements and specification to be considered. All blanks on Bid Forms shall be completed in ink or typewritten. Alterations and erasures shall be initialed by the signatory of the Bid.

A Bidder shall not make their Bid contingent upon the City's acceptance of Specifications, Plans or Contract terms that conflict with or are in addition to those in the ITB documents.

B. REQUIRED SIGNATURES

Bids shall be signed in ink, with the signer's name typed or printed in the space provided. Where Bidder is a corporation, Bids shall be signed with the legal name of the corporation and the legal signature of an officer authorized to bind the corporation to a contract. Digital signatures are not acceptable. At least one Bid submitted by Bidder must bear an original signature.

C. NUMBER OF COPIES

Bidders shall submit one (1) original Bid.

D. SEALED BIDS

Sealed Bids will be received at the location shown on page 1 and by the Contact shown on page 1. All Bids shall be time stamped no later than the Due Date and Time shown on page 1.

Bids must be submitted in a sealed envelope appropriately marked with the Bid Title, Bid Number, and the name of the Bidder.

It is the sole responsibility of the Bidder to assure that the Bid is delivered and time stamped at the location shown on page 1 by the deadline specified. All late Bids shall be rejected.

E. STATE OCCB REGISTRATION REQUIREMENTS

Bidders shall be licensed with the Oregon Construction Contractors Board prior to bidding on this project. Failure to comply with this requirement shall result in Bid rejection. Bidders shall insert Bidder's current, valid registration number and expiration date thereof in the spaces provided on the Bid Form. Landscaping contractors and all subcontractors participating in this project shall be licensed respectively, by the State Landscape Contractors Board, as required by ORS 671.530 and the Oregon Construction Contractors Board, as required by ORS 701.026, at the time they propose to engage in subcontract work. Any Bid received from a Bidder identified by the Oregon Construction Contractors Board as ineligible to hold public contracts in accordance with ORS 701.227 shall be disqualified from consideration.

- F. BID SECURITY: Each Bid exceeding \$100,000 shall be accompanied by Bid security in the form of:

- (a) a Bid bond as set forth in Section 3,
- (b) an irrevocable letter of credit issued by an insured institution as defined in ORS 706.008, or
- (c) a certified check or cashier's check,

Such Bid security must be in an amount equal to ten percent (10%) of the total amount of the submitted Bid, which has been executed in favor of the City of Hillsboro, 150 E. Main St., Hillsboro OR 97123.

Bid security of the successful Bidder will be returned or released after the Bidder's written Contract, Performance Bond, Payment Bond, and required certificates of insurance have been promptly and properly executed, delivered to, and accepted by the City. If the successful Bidder fails to (1) promptly and properly execute the Contract, (2) furnish a good and sufficient Performance Bond and a good and sufficient Payment Bond, and/or (3) furnish required certificates of insurance within seven (7) calendar days of the written notification of intent to award a Contract, then the City may cash the check, draw under the letter of credit or otherwise collect under the Bid security.

The City reserves the right to retain the Bid security of the next two (2) lowest Bidders until the successful Bidder has been awarded a Contract or until no more than 60 days after Bid opening, whichever is shorter. Bid security of all other Bidders will be returned as soon as practicable after Bid opening.

G. MODIFICATION OR WITHDRAWAL OF BID

After submittal, Bids may be modified or withdrawn on written request received from Bidders prior to the Bid Closing. Modifications shall be sealed and submitted in same manner as the Bid. Offers may also be withdrawn in person before Closing upon presentation of appropriate identification and evidence of authorization to act for Bidder to the Contact listed on page 1 of this ITB.

Bids may not be modified or withdrawn after closing except as provided in ORS 279C and City's Public Contracting Rules.

H. DURATION OF BIDS

Each Bid shall be irrevocable for a period of 60 days from the date of Bid. Award of a Contract to any Bidder shall not constitute rejection of any other Bid.

The City may request that Bidders extend, in writing, the time during which the City may consider their Bids. If a Bidder agrees to such an extension, the Bid shall continue as a firm Offer, irrevocable, valid and binding on the Bidder for the agreed upon extension period.

I. RESIDENT BIDDER

Bidder shall indicate on the Bid Form whether Bidder is a "resident bidder" as defined in ORS 279A.120. A "nonresident bidder" means a Bidder who has neither paid unemployment taxes nor income taxes in the State of Oregon during the 12 calendar months immediately preceding submission of its Bid, nor has a business address in the State of Oregon.

In determining the lowest responsive Bidder for this Work, a percentage may be added to the Bid of a non-resident Bidder equal to the percentage, if any, of the preference given to that Bidder in the state in which the Bidder resides. This percentage, if utilized, shall not be added to the dollar value of Contract to be awarded as a result of this ITB.

J. LIST OF FIRST-TIER SUBCONTRACTORS

In accordance with ORS 279C.370, Bidders are required to complete and submit the first-tier subcontractor disclosure form, provided as Section 3, form 3.4, within two (2) hours of the Bid Closing Date and time.

K. ACCEPTANCE OF CONDITIONS/SITE VISITATION

The Bidder, by making a Bid, represents that:

- (a) The Bidder has read and understands the Bid documents and the Bid is made in accordance with the Bid documents.
- (b) The Bidder has visited each project site, become familiar with the local conditions under which the Work is to be performed, and has correlated the Bidder's personal observations with the

requirements of the proposed Contract Documents.

- (c) The Bid is based upon the materials, equipment, systems, required by the Bid documents without exceptions.

L. RESERVATIONS

1. The City reserves the following rights:

- (a) To reject all Bids.
- (b) To reject any Bid not in compliance with all prescribed public bidding procedures and requirements, including the requirement to demonstrate the Bidder's responsibility under ORS 279C.375(3)(b), and to reject for good cause any or all Bids upon a finding that it is in the public interest to do so.
- (c) To reject Bids which it determines to be non-responsive.
- (d) To reject Bids upon the City's finding that the Bidder:
 - i. Has been declared ineligible under ORS 279C.860 by the Commissioner of Bureau of Labor and Industries
 - ii. Has been identified by the Oregon Construction Contractors Board as ineligible to hold public contracts in accordance with ORS 701.227; or
 - iii. Is not responsible.
- (e) To waive any informalities in Bids submitted.
- (f) In the event two or more Bidders quote identical amounts for the same Work, to award the contract by drawing lots between such Bidders or by such other means as it deems appropriate.
- (g) To return the Bid unopened, in the event only one Bid is received.

M. ASBESTOS ABATEMENT

Work to be performed under the contract will not require the Bidder or any subcontractors to be licensed for asbestos abatement work under ORS 468A.720.

1.09. BID EVALUATION

A. BID EVALUATION CRITERIA

Bids will be evaluated to identify the lowest responsive Bid submitted by a responsible Bidder and not otherwise disqualified. (Refer to COH-049-0390 and 137-049-0440). Adjustments made to account for reciprocal preferences will be for Bid evaluation purposes only. No such adjustments shall operate to amend a Bid or any Contract awarded pursuant thereto.

B. RESPONSIVENESS:

To be considered responsive, the Bidder must substantially comply in all material respects with applicable solicitation procedures and requirements and the solicitation documents. In making such evaluation, City may waive minor informalities and irregularities.

C. RESPONSIBILITY:

Prior to award of a Contract, City will evaluate whether the apparent successful Bidder meets the applicable standards of responsibility identified in COH-049-0390. See also, COH-049-0440(1)(C)(h). In doing so, City may investigate Bidder and request information in addition to that already required in the ITB, when City in its sole discretion, considers it necessary or advisable.

D. OREGON PREFERENCE:

Awards shall be subject to preference for goods or services that have been produced or manufactured in Oregon, if price, fitness, availability and quality are otherwise equal (ORS 279A.120); See also; COH-046-0300.

E. RECIPROCAL PREFERENCE:

Solely for the purpose of evaluating offers, City will add a percent increase to the Bid of a non-resident Bidder equal to the percent, if any, of the preference given to the Bidder in the state in which the Bidder resides. For example, if the Bidder is from a state that grants a ten (10) percent preference to local Bidders, City will add ten (10) percent to that Bidder's Bid price. (COH-046-0310).

F. PROCESSING OF BIDS:

Neither the release of a Bid Security, nor acknowledgment that the selection process is complete (whether by posting of a Bid tabulation sheet, issuance of notice intent to award, or otherwise), shall operate as a representation by City that any Bid submitted was complete, sufficient, lawful in any respect, or otherwise in substantial compliance with the ITB requirements.

G. WITHDRAWAL BY CITY OF BID ITEMS PRIOR TO AWARD:

City reserves the right to delete Bid items. The deletion of one or more Bid items will not affect the method of award.

H. NOTICE OF INTENT TO AWARD

The Notice of Intent to Award shall serve as notice to all Bidders that the City intends to make a contract award.

1.10. PROTEST OF INTENT TO AWARD

A. PROTEST OF INTENT TO AWARD

Adversely affected or aggrieved Bidders shall have **seven (7) calendar** days from the date of the Notice of Intent to Award within which to file a written protest of award. Protests received after that date will not be considered. Protests must specify the grounds upon which the protest is based.

1. Protests must be sent to:

Purchasing Manager
Finance Department
City of Hillsboro
150 E. Main St.
Hillsboro, OR 97123

2. In order to be an adversely affected or aggrieved Bidder, the Bidder must claim to be eligible for award of the Contract as the lowest responsible and responsive Bidder and that any and all lower Bids are ineligible to receive Contract award.

3. An actual Bidder who is adversely affected or aggrieved by the award of the Contract to another Bidder may protest award, in writing, within the timeline established. The written protest shall state the grounds upon which the protest is based. No protest of award shall be considered after the deadline.

4. Pursuant to COH-049-0260, no protest against award shall be considered because of the content of Bid Specifications, Plans, or contract Terms after the deadline established for submitting protests of Bid Specifications, Plans or Contract Terms.

B. RESPONSE TO INTENT-TO-AWARD PROTESTS:

The City Manager will respond in writing to intent-to-award protests submitted by adversely-affected or aggrieved Bidders. City may also respond to intent-to-award protests submitted by other Bidders for purposes of clarification. However, any response provided by City is not intended to, and shall not in and of itself constitute, confirmation that the bidder is, in fact, adversely affected or aggrieved, and therefore entitled to protest an intent to award, or that the protest was timely filed.

C. AWARD

After expiration of the intent-to-award protest period, and resolution of all protests, City will proceed with final award. (If City receives only one Bid, City may dispense with the intent-to-award protest period and proceed with award of a Contract.)

1.11. INFORMATION TO BE PROVIDED BY THE SUCCESSFUL BIDDER: CONTRACT, BONDS AND INSURANCE

A. CONTRACTOR CONTRACT EXECUTION

Within 7 days after receipt of Notice of Intent to Award, the successful Bidder shall be prepared to execute the Contract provided by the City. The City contract form is provided as Part A, Attachment A. of this ITB. At the same time, the successful Bidder shall furnish City: a Performance Bond, a Payment Bond, and all required Certificates of Insurance. Prior to starting work under the Contract, the selected Bidder shall provide a performance bond and a payment bond each issued by a surety satisfactory to the City, in an amount equal to the full dollar value of the Contract for the faithful performance of the Contract and all provisions thereof.

B. CITY CONTRACT EXECUTION

After receipt and acceptance of the properly executed Contract, Performance Bond, Payment Bond, and Certificates of Insurance, the City will execute the Contract and issue a Notice to Proceed. No work shall be performed until the Contract is fully executed and a written Notice to Proceed is issued.

C. FAILURE TO EXECUTE

A successful Bidder who fails to execute the Contract or furnish the Performance Bond, Payment Bond and provide Certificates of Insurance in the time and manner indicated herein shall forfeit its Bid security.

D. PUBLIC WORKS BOND

Before starting Work the successful Bidder shall file with the Oregon Construction Contractors Board, and maintain in full force and effect, the separate public works bond required by ORS 279C.836, unless otherwise exempt under those provisions. The successful Bidder shall also include in every subcontract a provision requiring the subcontractor to have a public works bond filed with the Oregon Construction Contractors Board before starting Work, unless otherwise exempt, and shall verify that the subcontractor has filed a public works bond before permitting the subcontractor to start Work.

A disadvantaged, minority, women or emerging small business enterprise certified under ORS 200.055 may, for up to four years after certification, elect not to file a public works bond as required under Section 279C.836 (1). If a business enterprise elects not to file a public works bond, the business enterprise shall give the Oregon Construction Contractors Board written verification of the certification and written notice that the business enterprise elects not to file the bond.

Questions regarding the public works bond may be directed to BOLI at the BOLI website (www.oregon.gov/BOLI) or at the following address:

Bureau of Labor and Industries
Wage and Hour Division
Prevailing Wage Unit
800 N.E. Oregon Street, #32
Portland, Oregon 97232

E. JOINT VENTURE/PARTNERSHIP INFORMATION

The successful Bidder, if a Joint Venture/Partnership, shall provide a copy of the joint venture agreement or partnership agreement evidencing authority to Offer and enter into the resulting Contract that may be awarded, together with corporate resolutions (if applicable) evidencing corporate authority to participate as a joint venture or partner. A contact person must also be designated for purposes of receiving all notices and communications under the Contract. All partners and joint venture members will be required to sign the awarded Contract.

1.12. COMPLIANCE WITH LAW

The selected Contractor shall be required to comply with the City's standard construction contract provisions as provided in Attachment A. In addition, the selected contractor shall comply with and require its subcontractors to comply with all applicable provisions of federal, state and local laws, statutes, ordinances, codes, orders, rules and regulations which pertain to the work specified in this ITB.

1.13. MINORITY-OWNED, WOMEN-OWNED AND EMERGING SMALL BUSINESSES (MWESB)

Minority-owned, Women-owned and Emerging Small Businesses (MWESB) are encouraged to respond to this ITB. All Bidders are encouraged to contact and seek sub-bids from MWESB subcontractors. MWESB subcontractors are encouraged to attend any pre-proposal conferences.

PART A:

SECTION 2 - SUPPLEMENTARY INSTRUCTIONS TO BIDDERS

1. **EXPERIENCE- SPECIFIC- FIBER OPTIC CABLE INSTALLATION AND SPLICING:** List, and briefly describe, a minimum of 3 similar projects performed by Bidder or Subcontractor. If Subcontractor, list Subcontractor name and address:

2. **EXPERIENCE- SPECIFIC- FIBER OPTIC CABLE TERMINATION AND TESTING:** List, and briefly describe three installations performed by Bidder or Subcontractor. If Subcontractor, list Subcontractor name and address:

PART A:
SECTION 3 - FORMS

3.1 BID FORM

BID FORM (PAGE 1 OF 3)

CITY OF HILLSBORO, OREGON

INVITATION TO BID NO. 2016-07-ISFOP FIBER OPTIC CABLE INSTALLATION The undersigned hereby certifies that Bidder: <Insert Bidder name>, <CCB#>

1. Has the authority and/or responsibility to submit a Bid and to represent the organization in all phases of this Bid process.
2. The information is true and accurate to the best of their knowledge.
3. Shall furnish, in strict compliance with the Bid and Contract Documents for the above-referenced Project, all labor, materials, equipment, apparatus, appliances, tools, transportation, and other facilities and services necessary to perform the Work described therein, and to perform said Work in strict compliance therewith, for the amounts set forth in this Bid.
4. Is a Resident Bidder, Non-Resident Bidder, as defined in ORS 279A.120

A "non-resident bidder" is a Bidder who has neither paid unemployment taxes nor income taxes in the State of Oregon during the 12 calendar months immediately preceding submission of this Bid, nor has a business address in the State of Oregon.

In determining the lowest responsive Bidder for this Work, a percentage may be added to the Bid of a non-resident Bidder equal to the percentage, if any, of the preference given to that Bidder in the state in which the Bidder resides. This percentage, if utilized, will not be added to the dollar value of the contract to be awarded as a result of this ITB.

5. Understands any false statement may disqualify this Bid from further consideration or be cause for contract termination.
6. Has read, understands and agrees to be bound by all terms and conditions herein.
7. Understands by submitting this Bid, the undersigned certifies conformance to the applicable Federal Acts, Executive Orders and Oregon Statutes and Regulations concerning Affirmative Action toward equal employment opportunities. All information and reports required by the Federal or Oregon State Governments, having responsibility for the enforcement of such laws, shall be supplied to the City upon request for purposes of investigation to ascertain compliance with such acts, regulations, and orders.
8. Acknowledges Receipt of Addenda No's. _____ through _____ inclusive.

Please check the applicable box regarding Bid security:

- Bid security in form of cashier's check , certified check , Bid bond in the form set forth in Section 3., 3.2 , irrevocable letter of credit issued by an insured institution as defined in ORS 706.008 (check applicable clause) in the amount of ten percent (10%) of the total amount of the submitted Bid, which has been executed in favor of City of Hillsboro, 150 E. Main St., Hillsboro OR 97123, is enclosed.
- Bid Price is for \$100,000 or less; therefore, Bid security is not required.

BID FORM (PAGE 2 of 3)

Bidder Name: _____ **Bidder CCB#** _____

Provide Bids on all items below.

Line #	Description	Quantity	Unit of Measure	Unit Price	Extended Price
1	Installation of 144 strand single mode fiber optic cable (as per drawings A and B)	21,500	LF	\$	\$
2	Installation of splice closures (incl. at least 25ft of service cable per closure)	11	EA		
3	Installation and termination of of strand fiber at Telx Data Center	1	LS		
4	Installation of 250 feet of spare 144 strand single mode fiber optic cable	5	EA		
5					

Total Lump-Sum Base Bid: \$ _____

The following five lines are not for inclusion in base bid. These prices will be applied in the event that additional product is required and ordered through an executed change order to the contract.

Line #	Description	Price Bid
1	144 strand single mode fiber optic cable, priced per foot.	\$
2	Splice closures, priced per each.	
3		
4		
5		

There are no alternates for this Invitation to Bid.

If this ITB requires a lump-sum base Bid without additive or deductive alternates, or if the City elects not to Award additive or deductive alternates, Bids will be compared on the basis of lump-sum prices, or lump-sum base Bid prices, as applicable. If the ITB calls for a lump-sum base Bid, plus additive or deductive alternates, the total Bid price will be calculated by adding to or deducting from the base Bid those alternates selected by the City for the purpose of comparing Bids.

Bidder Name: _____

BID FORM (PAGE 3 of 3)

REPRESENTATIONS AND CERTIFICATIONS

Bidder shall submit 3.5 Bidder’s Responsibility Information Form as per Section 1, 1.03 along with the Bid Form and any other required Bid submittals.

BIDDER’S EMPLOYERS FEDERAL TAX IDENTIFICATION NUMBER (EIN) < >

OR

SOCIAL SECURITY IDENTIFICATION NUMBER < >

State of Oregon Certified Minority-owned, Women-owned or Emerging Small Business YES NO

IF YES, PROVIDE CERTIFICATION NUMBER < >

The undersigned hereby certifies under penalty of perjury that to the best of my knowledge the Bidder does not discriminate in its employment practices with regard to race, creed, age, religious affiliation, sex, disability, sexual orientation, or national origin. Nor has Bidder or will Bidder discriminate against a subcontractor in the awarding of a subcontract because the subcontractor is:

- A minority-owned, women-owned, or emerging small business enterprise certified under ORS 200.055, or
- A business enterprise that is owned or controlled by or that employs a disabled veteran, as defined in ORS 408.225.

If awarded, the Bidder (Contractor) agrees to be bound by and will comply with the provisions of 279C.838, 279.840 or 40 U.S.C. 3141 to 3148.

The undersigned hereby certifies under penalty of perjury that to the best of my knowledge the Bid was prepared independently from all other Bidders, and without collusion, fraud, or other dishonesty.

The Bid submitted is in response to the specific language contained in the ITB, and Bidder has made no assumptions based upon either (a) verbal or written statements not contained in the ITB, or (b) any previously-issued ITB, if any.

The undersigned hereby certifies that Bidder has the authority and/or responsibility to submit a Bid and to represent the Bidder in all phases of this Bid process.

Bidder’s (Company) Name: < >

Date: < >

CCB#: < >

Signature _____

Name < >

Title < >

Street Address < >

City < >

State < > Zip < >

Phone < >

E-Mail < >

FAILURE TO COMPLETE, SIGN AND SUBMIT THIS FORM MAY BE CAUSE FOR BID REJECTION. ELECTRONIC SIGNATURES NOT ACCEPTED.

3.2 FORM OF BID BOND

We, _____ as "Principal," and _____
(Name of Principal) (Name of Surety)

an _____ Corporation,

authorized to transact Surety business in Oregon, as "Surety," hereby jointly and severally bind ourselves, our respective heirs, executors, administrators, successors and assigns to pay unto City of Hillsboro, 150 E. Main St., Hillsboro, OR 97123 ("Obligee") the sum of

(\$ _____) _____ dollars.

WHEREAS, the condition of the obligation of this bond is that Principal has submitted its proposal or Bid to the Obligee in response to Obligee's procurement document (_____) for the project identified as:

Title:

_____ which proposal or Bid is made a part of

this bond by reference, and Principal is required to furnish Bid security in an amount equal to ten (10%) percent of the total amount of the Bid pursuant to ORS 279C.365(5) and the procurement document.

NOW, THEREFORE, if the proposal or Bid submitted by Principal is accepted, and if a contract pursuant to the proposal or Bid is awarded to Principal, and if Principal enters into and executes such contract within the time specified in the procurement document and executes and delivers to Obligee its good and sufficient performance bond and payment bond required by Obligee within the time fixed by Obligee, then this obligation shall be void; otherwise, it shall remain in full force and effect.

IN WITNESS WHEREOF, we have caused this instrument to be executed and sealed by our duly authorized legal representatives this _____ day of _____ 20_____

PRINCIPAL: By _____ <div style="text-align: center; border-top: 1px solid black; width: 100%;">Signature</div>	BY ATTORNEY-IN-FACT: <i>Power-of-Attorney must accompany each surety bond]</i> _____ <div style="text-align: center; border-top: 1px solid black; width: 100%;">Name</div>
Attest: _____ <div style="text-align: center; border-top: 1px solid black; width: 100%;">Official Capacity</div>	_____ <div style="text-align: center; border-top: 1px solid black; width: 100%;">Signature</div>
SURETY: _____ <div style="text-align: center; border-top: 1px solid black; width: 100%;">Corporation Secretary</div>	_____ <div style="text-align: center; border-top: 1px solid black; width: 100%;">Address</div>
	_____ <div style="display: flex; justify-content: space-between;"> City State Zip </div>
	_____ <div style="display: flex; justify-content: space-between;"> Phone Fax </div>

3.3 SUBSTITUTION REQUESTS

REQUEST FOR BRAND NAME/PRODUCT SUBSTITUTION

3.01. SUBSTITUTION REQUEST

- A. During Bidding, the City will consider written Substitution Requests received up to the Request Deadline shown on page 2 of this ITB. Requests received after that time **will not** be considered.
- B. Submit a written request using the substitution request form included on the next page. Submit the form in hard copy or by email to the contact on page 1 of this ITB by the Request Deadline.
- C. Prepare separate requests for each product.
- D. Combined requests may not be considered.
- E. In making Substitution Requests, Bidder represents:
 - 1. Bidder has personally investigated proposed product or method, and determined that it is equal or superior in all respects to that specified.
 - 2. Bidder will provide the same guarantee for substitution as for product or method specified.
 - 3. Bidder will coordinate installation of accepted substitution into Work, making such changes as may be required for Work to be completed in all respects.
 - 4. Bidder waives all claims for additional costs related to substitutions which consequently become apparent.
- F. All accepted substitutions will be confirmed by inclusion in an addendum. Items not appearing in such addendum shall be deemed rejected.

3.02. SUBSTITUTION REQUEST FORM

- A. The Substitution Request Form is included on the next page.

City of Hillsboro

3.3A SUBSTITUTION REQUEST FORM

TO: <INSERT CONTACT NAME>

ITB NUMBER/TITLE: 2016-07-ISFOP, FIBER OPTIC CABLE INSTALLATION

SPECIFIED < >
ITEM/PRODUCT:

Page No. []

Item/Product No. []

Description []

PROPOSED SUBSTITUTION:

Attached data includes manufacturer’s product description, specifications, drawings, photographs, performance and test data, and includes, when requested by the City, one (1) sample adequate for evaluation of the request including identification of applicable data portions.

Attached data also includes the description of changes to Contract Documents and the requirements of the proposed substitution for proper installation.

The undersigned certifies the following items, unless modified by attachments, are correct:

1. Proposed substitution does not affect dimensions shown (only if supplied with Bid documents).
2. Undersigned pays for changes to building/equipment design, including engineering design, detailing, and proposed substitution has no adverse effect on other trades, construction schedule, or specified warranty requirements.
3. Maintenance and service parts are available locally or are readily obtainable for the proposed substitution.

Undersigned further certifies function, appearance, and quality of proposed substitution are equivalent or superior to specified item.

Undersigned agrees, if this page is reproduced, terms and conditions for substitutions found in Bidding Documents apply to this proposed substitution.

Request Submitted by:

Name (Printed or typed)

Signature

Vendor Name

Street Address

City, State, Zip

Date

Telephone Number

Email

Fax Number

Architect Approval:

<input type="checkbox"/> Approved	<input type="checkbox"/> Approved as noted
<input type="checkbox"/> Not Approved	<input type="checkbox"/> Received too late
By _____	
Date _____	
Remarks:	

For use by: City Staff

<input type="checkbox"/> Approved	<input type="checkbox"/> Approved as noted
<input type="checkbox"/> Not Approved	<input type="checkbox"/> Received too late
By _____	
Date _____	
Remarks:	

City of Hillsboro

3.4 FIRST-TIER SUBCONTRACTOR DISCLOSURE FORM

TITLE/PROJECT NAME: FIBER OPTIC CABLE INSTALLATION

ITB #:2016-07-ISFOP

BID CLOSING DATE: August 9, 2016 TIME: 2:00 PM, Pacific Time

This form must be submitted at the location specified in the Invitation to Bid on the advertised Bid Closing Date and within two hours after the advertised Bid Closing Time ("Disclosure Deadline"). List below the name of each subcontractor that will be furnishing labor or will be furnishing labor and materials and that is required to be disclosed, the category of work and the dollar value of the subcontract. Enter the word "NONE" if there are no first-tier subcontractors subject to disclosure. ATTACH ADDITIONAL SHEETS IF NECESSARY.

NAME	CATEGORY OF WORK	DOLLAR VALUE
1.		\$
2.		\$
3.		\$

The above listed first-tier subcontractor(s) are providing labor or labor and materials with a Dollar Value equal to or greater than:

- a. 5% of the total project Bid, or \$15,000, whichever is greater. [If the Dollar Value is less than 15,000.00, do not list the subcontractor above.]; or
- b. \$350,000 regardless of the percentage of the total Contract Price.

FAILURE TO SUBMIT THIS FORM BY THE DISCLOSURE DEADLINE WILL RESULT IN A NON-RESPONSIVE BID AND SUCH NON-RESPONSIVE BID WILL NOT BE CONSIDERED FOR AWARD.

Bids which are submitted by Bid Closing, but for which the disclosure submittal has not been made by the specified deadline, are NOT Responsive and shall NOT be considered for Contract award.

Form submitted by (Bidder Name): < _____ >

CCB#: < _____ >

Contact Name and phone number: CONTACT SHOWN ON PAGE 1 OF THIS ITB.

Deliver Form to Agency: CITY OF HILLSBORO, DEPARTMENT, CONTACT AND ADDRESS AS SHOWN ON PAGE 1 OF THIS ITB.

Person Designated to Receive form: CONTACT SHOWN ON PAGE 1 OF THIS ITB.

Agency's Address: 150 E Main St. Hillsboro, OR 97123

UNLESS OTHERWISE STATED IN THE ORIGINAL SOLICITATION, THIS DOCUMENT SHALL NOT BE FAXED. IT IS THE RESPONSIBILITY OF BIDDERS TO SUBMIT THIS DISCLOSURE FORM AND ANY ADDITIONAL SHEETS, WITH THE BID NUMBER AND PROJECT NAME CLEARLY MARKED, AT THE LOCATION INDICATED BY THE SPECIFIED DISCLOSURE DEADLINE. SEE INSTRUCTIONS TO BIDDERS.

City of Hillsboro
3.5 BIDDER'S RESPONSIBILITY INFORMATION FORM

BIDDER MUST COMPLETE ALL PAGES OF THIS FORM.

Bidder Name: _____ **CCB #:** _____

This form is designed for electronic use. It may also be completed by hand. Use additional pages as needed to provide full and complete responses.

1. **EXPERIENCE:** List the number of years Bidder has been operating its business under its current license. If Bidder's business has been in continuous existence under a current active license and a previous license number, then identify the previous license number. List and briefly describe a minimum of 3 similar projects performed by Bidder in the past 5 years that best characterize Bidder's capabilities. Include relevant data such as the type of work involved and project dates. Describe how Bidder meets this experience requirement (use separate sheet if additional space is needed):

2. **LAWSUITS/JUDGMENTS:** Within the past 5 years, has Bidder had any lawsuits filed against it involving contract disputes? For the purposes of this request, "lawsuits" include requests for arbitration and "judgments" includes arbitration awards. YES / NO If "YES" indicate dates and ultimate resolution of suit (with regard to judgments, include jurisdiction and date of final judgment or dismissal.)

3. **BANKRUPTCY:** Within the past 36 months, has Bidder filed a bankruptcy action, filed for reorganization, made a general assignment of assets for the benefit of creditors, or had an action for insolvency instituted against it? YES / NO If "YES" supply filing dates, jurisdictions, type of action, ultimate resolution, and dates of judgment or dismissal, if applicable.

4. **LAWSUITS BY CREDITORS:** Within the past 24 months, has Bidder had any lawsuits filed against it by creditors? YES / NO If "YES" indicate dates and ultimate resolution of suit (with regard to judgments include jurisdiction and date of final judgment or dismissal).

5. **OREGON CONSTRUCTION CONTRACTORS BOARD LICENSING:** Is Bidder licensed with the Oregon Construction Contractors Board at the time Bidder submits a Bid for the Work under this ITB? YES / NO If "YES" indicate Oregon Construction Contractors Board license number and expiration date.

6. **ABILITY TO PERFORM WITHIN TIME SPECIFIED:** List the project titles, original contract time and change order extensions for three specific projects in the past five (5) years. Bidder shall document that it achieved substantial completion of such three projects of similar size and scope within no more than 105% of the final contracted time for completion (including change ordered adjustments). If the Bidder cannot document three such projects, the Bidder may submit alternative documentation of one or more similar projects where the Bidder did not achieve substantial completion within 105% of the final contract time, a calculation of the total percentage of time over the final contract time necessary to achieve substantial completion, and an explanation as to why the required additional time was beyond the Bidder's control.

City of Hillsboro
3.5 BIDDER'S RESPONSIBILITY INFORMATION FORM

BIDDER MUST COMPLETE ALL PAGES OF THIS FORM.

Bidder Name:

7. **DEBARMENT:** Has Bidder been debarred by any public agency within the past two (2) years?
YES / NO If "YES" identify the public agencies.

8. **NON-COMPLETION:** Has Bidder failed to complete a contract in the last five (5) years? YES / NO If "YES" identify the project(s).

9. **COMPLETION BY SURETY:** Has Bidder ever defaulted on a contract forcing a surety to suffer a loss? YES / NO If "YES" identify the project(s).

10. **SUSPENSION, DISMISSAL, DEFAULT:** Has Bidder been suspended, dismissed or declared in default from a project during the last five (5) years? YES / NO If "YES" identify the project(s) and the type of action taken against Bidder.

11. **BONDABILITY REQUIREMENT:** For the project described under this ITB, Bidder shall obtain payment bond and performance bond issued by a surety which is authorized to transact surety business in the State of Oregon and which has an A.M. Best "A" or better rating. YES / NO If "YES" identify name of surety, contact name, address, phone number, & email address.

12. **LIENS AND SURETY CLAIMS:** Have there been any liens or surety claims against Bidder's company on any contracts which have been performed or are in the course of being performed?
YES / NO If "YES" identify the project and explain the nature of the claims.

13. **REVOKED LICENSE:** Has Bidder's company or any key person in the company, had a license revoked by the Oregon Construction Contractors Board? YES / NO If "YES" explain the underlying reason for the revocation of the license.

14. **CRIMINAL OFFENSE:** Has Bidder's company or any key person in the company been convicted of a crime involving fraud, material misrepresentation or any crime involving the awarding of a contract for a government construction project or the bidding or performance of a government contract? YES / NO

15. **DEMAND ON PERFORMANCE BOND:** In the last five years, has an owner ever made a demand on your performance bond?
YES / NO

City of Hillsboro
3.5 BIDDER'S RESPONSIBILITY INFORMATION FORM

BIDDER MUST COMPLETE ALL PAGES OF THIS FORM.

Bidder Name:

16. TERMINATION OF BONDING/INSURANCE COVERAGE: In the last five years, has a surety or insurance company terminated your or your company's existing bonding and/or insurance coverage due to excessive claims history and/or nonpayment of premiums?
YES / NO

17. CITATIONS OR ENFORCEMENT ACTIONS. Within the last five years, have you or your company been cited or subject to any enforcement action for violation of any applicable law or regulations related to its performance of a prior construction contract? For the purposes of this section, "applicable law or regulations" includes without limitation, any building, zoning, environmental, site development, or Oregon Public Contracting Code regulations with which a prior project was required to comply, including non-discrimination regulations and prevailing wage requirements.

Answer Yes or No. If Yes: please state the date, nature, and final resolution of every such citation or enforcement action.

18. BONDING. What is the largest contract you have had bonded through the surety company named in Question #11 above? Please identify the project name, the nature of the project, the date of the project and the original contract price.

19. BIDDER INSURANCE

Provide Liability Insurance Certificate showing that your company is covered by liability insurance in amounts required in the sample contract (Attachment A). Prior to contract execution, Successful Bidder must provide City all Insurance Certificates as specified in 1.11.

20. WORKER'S COMPENSATION: CARRIER-INSURED EMPLOYER OR SELF-INSURED EMPLOYER.

Does your company qualify as a carrier-insured employer or self-insured employer under [ORS 656.407](#)?

Answer Yes or No. If Yes, indicate which:

If No, has your company elected coverage under [ORS 656.128](#)?

City of Hillsboro

3.5 BIDDER'S RESPONSIBILITY INFORMATION FORM

BIDDER MUST COMPLETE ALL PAGES OF THIS FORM.

Bidder Name:

21. BIDDER REFERENCES FOR COMPARABLE PROJECTS IN SIZE AND SCOPE

Bidder shall provide a list of three different project references with their Bid that can be contacted regarding the quality of workmanship and service that the Bidder provided on projects of comparable size and scope within the past 5 years. Bidder must provide all information requested below and may use either the form provided in this section or their own form. PLEASE NOTE: If a different form is used, it must still include ALL information required below, including a project description.

Project Reference #1
Name and Dates of Project:
Project Location:
Project Description:
Contact Person #1 Name:
Contact Person #1 Firm Name:
Contact Person #1 Phone, Email:
Contact Person #2 Name:
Contact Person #2 Firm Name:
Contact Person #2 Phone, Email:
Project Reference #2
Name and Dates of Project:
Project Location:
Project Description:
Contact Person #1 Name:
Contact Person #1 Firm Name:
Contact Person #1 Phone, Email:
Contact Person #2 Name:
Contact Person #2 Firm Name:
Contact Person #2 Phone, Email:
Project Reference #3
Name and Dates of Project:
Project Location:
Project Description:
Contact Person #1 Name:
Contact Person #1 Firm Name:
Contact Person #1 Phone, Email:
Contact Person #2 Name:
Contact Person #2 Firm Name:
Contact Person #2 Phone, Email:

Failure to submit the above-required information to the satisfaction of the City may render the Bid non-responsive.

City of Hillsboro

3.6 FORM OF AGREEMENT AND LIQUIDATED DAMAGES

1.01. FORM OF AGREEMENT

- A. The Contract between the Owner and the selected contractor for the Work of this project, will be executed on the City of Hillsboro Large Construction Contract and General Conditions. This is the City's required "Form of Agreement".
- B. A sample copy of the Contract is attached as Attachment A.
- C. Do not sign or complete this sample contract.

1.02. LIQUIDATED DAMAGES

- A. Liquidated damages are addressed in the "Miscellaneous Provisions" section of the City's sample contract. Liquidated damages for this project will be \$100 per day.

City of Hillsboro
3.7 FORM OF PERFORMANCE BOND

Bond No. _____ **Bond Value: \$** _____ **Invitation to Bid No.** _____

Principal: _____	Surety: _____	Obligee: City of Hillsboro
Address: _____	Address: _____	Address 150 E. Main St.
Phone: _____	Phone: _____	Hillsboro, OR 97123
		Phone (503) 681-6100

Agreement: Principal has entered into a contract ("Contract") with Obligee for the following Project: _____

We, _____ as Principal, and the above identified Surety, authorized to transact surety business in Oregon, as Surety, hereby jointly and severally bind ourselves, our respective heirs, executors, administrators, successors and assigns firmly by these presents to pay unto the Obligee the sum of (Total Penal Sum of Bond) \$_____.

and

WHEREAS, the Principal has entered into a contract with the Obligee, the plans, specifications, terms and conditions of which are contained in the above-referenced Solicitation;

WHEREAS, the terms and conditions of the contract, together with applicable plans, standard specifications, special provisions, schedule of performance, and schedule of contract prices, are made a part of this Performance Bond by reference, whether or not attached to the contract (all hereafter called "Contract"); and

WHEREAS, the Principal has agreed to perform the Contract in accordance with the terms, conditions, requirements, plans and specifications, and all authorized modifications of the Contract which increase the amount of the work, the amount of the Contract, or constitute an authorized extension of the time for performance, notice of any such modifications hereby being waived by the Surety:

NOW, THEREFORE, THE CONDITION OF THIS BOND IS SUCH that if the Principal herein shall faithfully and truly observe and comply with the terms, conditions and provisions of the Contract, in all respects, and shall well and truly and fully do and perform all matters and things undertaken by Contractor to be performed under the Contract, including without limitation warranty and maintenance work required under the Contract, upon the terms set forth therein, and within the time prescribed therein, or as extended as provided in the Contract, with or without notice to the Sureties, and shall indemnify and save harmless the Obligee, its officers, employees and agents, against any direct or indirect damages or claim of every kind and description that shall be suffered or claimed to be suffered in connection with or arising out of the performance of the Contract by the Principal or its subcontractors, and shall in all respects perform said contract according to law, then this obligation is to be void; otherwise, it shall remain in full force and effect.

Nonpayment of the bond premium will not invalidate this bond nor shall the Obligee be obligated for the payment of any premiums.

This bond is given and received under authority of ORS Chapter 279C, the provisions of which hereby are incorporated into this bond and made a part hereof.

IN WITNESS WHEREOF, WE HAVE CAUSED THIS INSTRUMENT TO BE EXECUTED AND SEALED BY OUR DULY AUTHORIZED LEGAL REPRESENTATIVES.

Dated this _____ day of _____ 20 _____

PRINCIPAL: _____

By: _____

Signature

Official Capacity

Attest: _____

Corporation Secretary

SURETY: _____

BY ATTORNEY-IN-FACT:

[Power-of-Attorney must accompany each surety bond]

Name

Signature

Address

City

State

Zip

Phone

Fax

City of Hillsboro
3.8 FORM OF LABOR AND MATERIAL PAYMENT BOND

Bond No. _____ **Bond Value: \$** _____ **Invitation to Bid No.** _____

Principal: _____	Surety: _____	Obligee: City of Hillsboro
Address: _____	Address: _____	Address: 150 E. Main St.
Phone: _____	Phone: _____	Hillsboro, OR
		Phone: (503) 681-6100

Agreement: Principal has entered into a contract ("Contract") with Obligee for the following Project: _____

We, _____ as Principal, and the above identified Surety, authorized to transact surety business in Oregon, as Surety, hereby jointly and severally bind ourselves, our respective heirs, executors, administrators, successors and assigns firmly by these presents to pay unto the Obligee the sum of (Total Penal Sum of Bond) \$ _____.

and

WHEREAS, the Principal has entered into a contract with the Obligee, the plans, specifications, terms and conditions of which are contained in above-referenced Solicitation;

WHEREAS, the terms and conditions of the contract, together with applicable plans, standard specifications, special provisions, schedule of performance, and schedule of contract prices, are made a part of this Payment Bond by reference, whether or not attached to the contract (all hereafter called "Contract"); and

WHEREAS, the Principal has agreed to perform the Contract in accordance with the terms, conditions, requirements, plans and specifications, and schedule of contract prices which are set forth in the Contract and any attachments, and all authorized modifications of the Contract which increase the amount of the work, or the cost of the Contract, or constitute authorized extensions of time for performance of the Contract, notice of any such modifications hereby being waived by the Surety:

NOW, THEREFORE, THE CONDITION OF THIS BOND IS SUCH that if the Principal shall faithfully and truly observe and comply with the terms, conditions and provisions of the Contract, in all respects, and shall well and truly and fully do and perform all matters and things by it undertaken to be performed under said Contract and any duly authorized modifications that are made, upon the terms set forth therein, and within the time prescribed therein, or as extended therein as provided in the Contract, with or without notice to the Sureties, and shall indemnify and save harmless the Obligee, its officers, employees and agents, against any claim for direct or indirect damages of every kind and description that shall be suffered or claimed to be suffered in connection with or arising out of the performance of the Contract by the Contractor or its subcontractors, and shall promptly pay all persons supplying labor, materials or both to the Principal or its subcontractors for prosecution of the work provided in the Contract; and shall promptly pay all contributions due the State Industrial Accident Fund and the State Unemployment Compensation Fund from the Principal or its subcontractors in connection with the performance of the Contract; and shall pay over to the Oregon Department of Revenue all sums required to be deducted and retained from the wages of employees of the Principal and its subcontractors pursuant to ORS 316.167, and shall permit no lien nor claim to be filed or prosecuted against the Obligee on account of any labor or materials furnished; and shall do all things required of the Principal by the laws of the State of Oregon, then this obligation shall be void; otherwise, it shall remain in full force and effect.

Nonpayment of the bond premium will not invalidate this bond nor shall the Obligee be obligated for the payment of any premiums.

This bond is given and received under authority of ORS Chapter 279C, the provisions of which hereby are incorporated into this bond and made a part hereof. For the purposes of this bond, a claimant is any person who has a right of action against the bond under ORS 279C.600. A claimant's right of action on this bond and limitations on the institution of an action shall be governed by ORS 279C.380.

IN WITNESS WHEREOF, WE HAVE CAUSED THIS INSTRUMENT TO BE EXECUTED AND SEALED BY OUR DULY AUTHORIZED LEGAL REPRESENTATIVES:

Dated this _____ day of _____ 20 _____ PRINCIPAL: _____ By: _____ _____ Signature _____ Official Capacity _____ Attest: _____ Corporation Secretary	SURETY: _____ BY ATTORNEY-IN-FACT: <i>[Power-of-Attorney must accompany each surety bond]</i> _____ Name _____ Signature _____ Address _____ City State Zip _____ Phone Fax _____
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PART B: DRAWINGS AND SPECIFICATIONS

SECTION 1- LIST OF DRAWINGS:

- A: EVERGREEN 15TH-BROOKWOOD VAULTS
- B: EVERGREEN BROOKWOOD-ALOCLEK VAULTS
- C: EVERGREEN SPLICE PLAN

SECTION 2- TECHNICAL SPECIFICATIONS

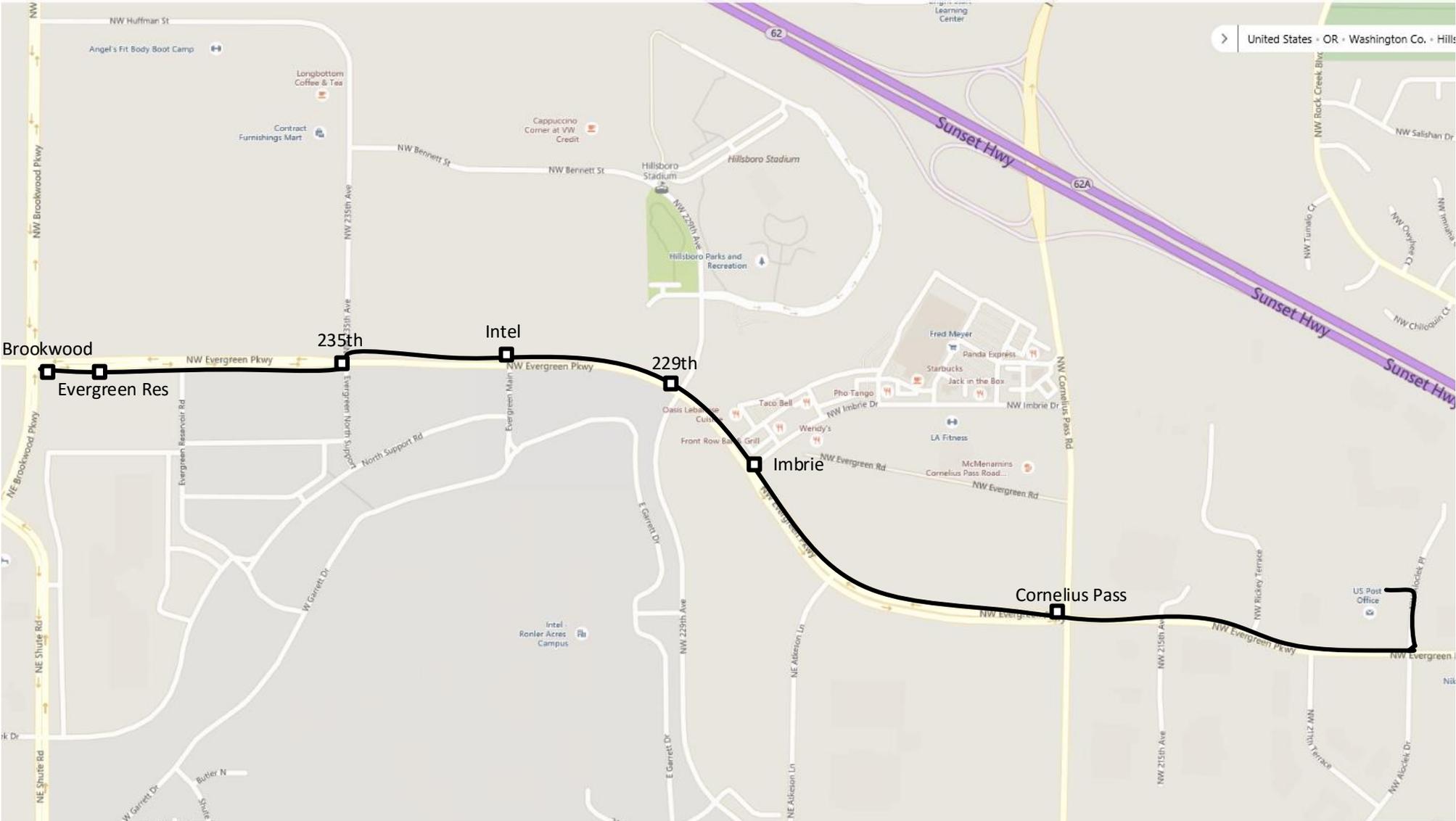
The Work shall conform to the *CITY OF HILLSBORO INFORMATION SERVICES SPECIFICATION STANDARD OPTICAL FIBER BACKBONE CABLING*. It is provided as **ATTACHMENT TS-A (1 of 13 pages)**

1. Scope of Work
 - a. General
 - i. The primary focus of the Work will be the installation of a fiber optic cable as shown in Drawings A and B. This includes providing all materials required to successfully complete the installation of the fiber such as the fiber optic cable, termination panels, and splice closures.
 - b. Contractor Deliverables/Responsibilities
 - i. A detailed project plan showing tasks, major milestones, and schedule.
 - ii. Installation of a 144 strand single mode fiber optic cable along the path specified in Drawings A and B.
 - iii. Installation of splice closures (including at least 25 feet of service cable) allowing access to the fiber strands as specified drawing C.
 - iv. Installation and termination of 24 strands of the 144 strand fiber at the Telx Data Center.
 - v. Installation of at least 250 feet of spare cable at 5 locations located along the path.
 - vi. It is preferable that a single reel of fiber be used for the entire installation to minimize costs and losses from splices. If a second reel is required, it is preferred that the two cables meet at Cornelius Pass Road to minimize the number of splices required.

Attachment A 15th to Brookwood Path and Vaults Fiber Optic Cable Installation ITB No. 2016-07-ISFOP

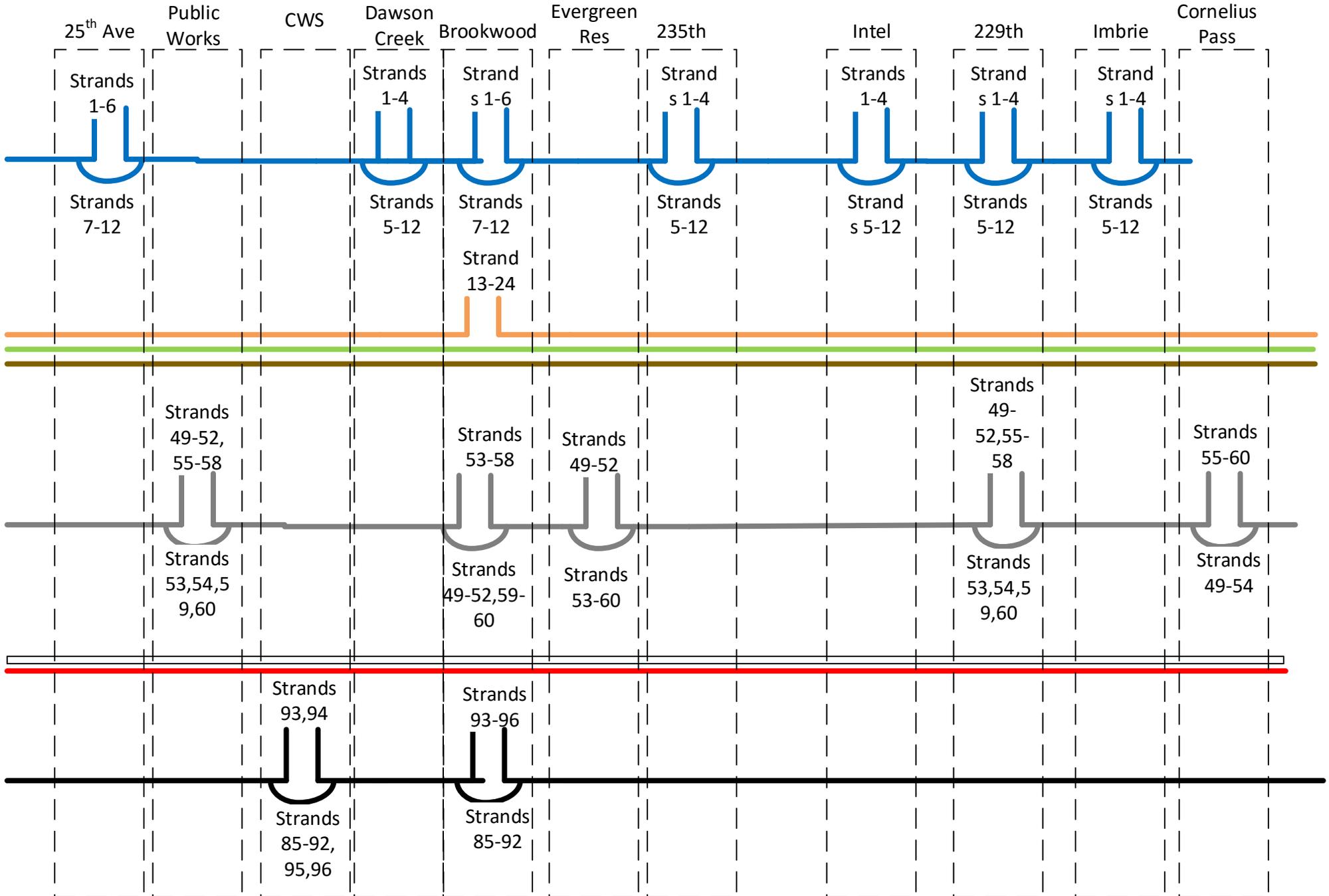


Attachment B Brookwood to Telx Fiber Optic Cable Installation ITB No. 2016-07-ISFOP



Attachment C Splice Plan

Fiber Optic Cable Installation ITB No. 2016-07-ISFOP



ATTACHMENT TS-A

CITY OF HILLSBORO INFORMATION SERVICES SPECIFICATION STANDARD

OPTICAL FIBER BACKBONE CABLING

1. GENERAL

1.01. SCOPE OF WORK

- 1.01.1. Work covered by this Section shall consist of furnishing labor, equipment, supplies, materials, and testing unless otherwise specified, and in performing the following operations recognized as necessary for the installation, termination, and labeling of horizontal optical fiber infrastructure as described on the drawings and/or required by these specifications.
 - 1.01.1.1. Installation, splicing, termination, testing, labeling and documentation of new fiber optic communication cable as specified and on the drawings.
 - 1.01.1.2. The installation environment could include tie in and coordination with existing and new optical fiber and copper facilities, underground duct banks, and direct-buried conduit.
 - 1.01.1.3. The Contractor shall be responsible for: placement of cable, installation and attachment of cable to support devices within the underground structures and pole lines, the placement of conduit, the installation of pull-boxes, the furnishings of fiber optic splice closures, and installation of termination hardware, and other as specified by the CoH.
 - 1.01.1.4. Contractor shall be responsible for providing and installing grounding and bonding materials, duct plugs, and fire stopping materials as required completing the installation.
 - 1.01.1.5. Other incidental hardware and appliances, necessary for the proper performance and operation of the communication cable system, which are consistent with the practices of cable installation, are to be provided by the Contractor as required to complete the installation.
 - 1.01.1.6. Contractor is responsible to ensure that utility locating has been performed as per the requirements of Oregon One Call. The Contractor is responsible for any damages to any utility caused during construction. In any area where a utility has been located, work activity must be verified through pot holing.
- 1.01.2. The Contractor shall complete all work and turn over a completed and standards compliant optical fiber cabling system to meet the CoH network installation system needs. The scheduled date for completion of optical fiber cabling and associated copper and wireless systems shall incorporate the activation dates for services need to activate all networked services including voice, data, special systems needed for a Certificate of Occupancy, the testing and operation of Building Monitoring Systems, and Electronic Safety and Security Systems.

1.02. RELATED SECTIONS & REFERENCE

1.02.1. Design, install and test data distribution systems per manufacturer's requirements and in accordance with NESC, NFPA 70 (National Electric Code), state codes, local codes, and requirements of authorities having jurisdiction.

- 1.02.1.1. ANSI/TIA-568-C.0, Generic Telecommunications Cabling for Customer Premises
- 1.02.1.2. ANSI/TIA/568-C.1, Commercial Building Telecommunications Cabling Standard
- 1.02.1.3. ANSI/TIA/568-C.2, Copper Cabling Components Standard
- 1.02.1.4. ANSI/TIA/568-C.3, Optical Fiber Cabling Components Standard
- 1.02.1.5. ANSI/TIA/EIA-569-B, Commercial Building Standard for Telecommunications Pathways and Spaces
- 1.02.1.6. TIA-590-A, Standard for Physical Location and Protection of Below Ground Fiber Optic Cable Plant
- 1.02.1.7. ANSI/TIA/EIA-606-A, Administration Standard for the Telecommunications Infrastructure of Commercial Buildings
- 1.02.1.8. ANSI/J-STD-607-A, Commercial Building Grounding (Earthing) and Bonding Requirements for Telecommunications
- 1.02.1.9. ANSI/TIA/758-A, Customer-owned Outside Plant Telecommunications Infrastructure Standard
- 1.02.1.10. ANSI/TIA-942, Telecommunications Infrastructure Standard for Data Centers

1.03. The Contractor is responsible to determine and adhere to the most recent edition of these standards when developing their responses and completing the project installation.

1.04. QUALITY ASSURANCE

1.04.1. The CoH will inspect installation in progress. It is the responsibility of the Contractor to schedule regular and milestone inspection times with the CoH. It is incumbent upon the Contractor to verify that the installation and material used has been inspected before it is enclosed within building features, buried, or otherwise hidden from view. The Contractor shall bear costs associated with uncovering or exposing installations or features that have not been inspected.

1.04.2. The Contractor will provide electronic test results and a 20 year manufacturer's warranty with a copy of the warranty to be submitted to the CoH at the completion of work.

1.05. OPTICAL FIBER BACKBONE SYSTEM DESCRIPTION

1.05.1. The main Entrance Facility (EF) and each Telecommunications Room (TR) shall house both voice and data backbone cabling and active equipment to support networking requirements. The EF in most cases shall be the main point of entry for outside services as well as main distribution point for all backbone cabling.

Fiber optic backbone cable shall be employed between the EF and each TR for voice, data and special systems connectivity.

- 1.05.2. Optical fiber cabling systems vary depending upon system design, but a 96 fiber SMF cable is typical.
- 1.05.3. Optical Fibers in the backbone shall be terminated using a pigtailed assembly that have incorporated into those assemblies a LC connector that is fusion spliced to the backbone optical fibers, unless otherwise specified and approved by the CoH; housed in rack-mount fiber optic enclosures with cable supports.
- 1.05.4. All cables and termination hardware shall be 100% tested for defects in installation and to verify cable performance under installed conditions. All conductors and fibers of each installed cable shall be verified useable prior to system acceptance. Any defect in the cabling system installation including but not limited to cable, connectors, feed-through couplers, patch panels, and connector blocks shall be repaired or replaced at the provider's expense in order to ensure 100% useable conductors in all installed cables.

2. PRODUCTS

2.01. GENERAL

- 2.01.1. The materials and products specified herein reflect the minimum acceptable standards of fabrication and manufacture.
- 2.01.2. All materials and products supplied by the Contractor and specified herein are to be new, unused, of first quality and in original packaging or shipping containers.
- 2.01.3. Provide materials as specified or as approved equivalent by the CoH.
- 2.01.4. Match optical fiber glass for tie in to existing optical fibers.
- 2.01.5. The following manufacturer's warranted systems are approved unless otherwise specified:
 - 2.01.5.1. AMP
 - 2.01.5.2. Belden
 - 2.01.5.3. Berk-Tek
 - 2.01.5.4. CommScope
 - 2.01.5.5. Corning
 - 2.01.5.6. Ortronics
 - 2.01.5.7. Siemons

2.02. SUBSTITUTIONS

- 2.02.1. Product substitutions shall be managed according to the following guidelines:
 - 2.02.1.1. All substitutions shall be submitted to and approved by the CoH.
 - 2.02.1.2. Acceptance of substitutions is at the CoH discretion. the CoH reserves the right to determine suitability of the substitute product and reject any and all materials submitted for substitution. Submit requests for substitutions in writing to the CoH for approval within 10 days of contract award, or sooner if required to maintain the construction schedule.

- 2.02.1.3. Products rejected or otherwise judged unsatisfactory by the CoH will not be authorized for use in completing the work. Any unapproved products discovered as part of the installation will be removed and replaced with the CoH specified and approved products at the Contractor's expense.
- 2.02.1.4. Project Drawings may be based on equipment configuration of a particular manufacturer. If a substitution is approved, the Contractor shall make changes needed to accommodate the substitution at no expense to the CoH, including work under other divisions.

2.03. OUTSIDE PLANT FIBER OPTIC CABLE

2.03.1. General:

- 2.03.1.1. Single mode fiber is the standard optical fiber media for backbone installations and optical fibers shall be low water-peak, laser optimized, suitable for CWDM use and complies with the ITU G.562.d. standard.
- 2.03.1.2. The cable types listed herein have been selected based on the typical environments and applications. It is the Contractor's responsibility to verify and submit an RFI on cables specified within that do not meet code or the environmental requirements of the project, environmental or code requirements of the installation before purchasing or providing.
- 2.03.1.3. When splicing into existing optical fibers the Contractor is to ensure the matching of optical fiber glass to the new and existing fibers and install the same glass type and manufacturer to prevent optical fiber mismatch.
- 2.03.1.4. Single Mode Optical Fiber Specification
 - 2.03.1.4.1. Optical Characteristics – Single-mode fiber optic cable 8.3µm/125µm single-mode low water peak optical fibers.
 - 2.03.1.4.2. Attenuation: 0.35dB/km @ 1310 nm; 0.25dB/km @ 1550 nm
- 2.03.1.5. Multi Mode Optical Fiber – When Specified by the CoH only.
 - 2.03.1.5.1. Install Multi Mode optical fiber when approved and specified by the CoH.
 - 2.03.1.5.2. Optical Characteristics – OM3 50µm/125µm laser optimized fibers, for new installations.
 - 2.03.1.5.3. Optical Characteristics – OM1 62.5µm/125µm multimode optical fibers as specified for additions and modifications to existing of the same optical fiber.
- 2.03.1.6. Mechanical Construction – Armored fiber optic cable for direct-buried and conduit installation. Construction shall include: locatable central strength member or an IT approved equivalent, water swell-able yarn, buffer tubes/fibers, water swell-able tape, ripcord,

polyethylene inner jacket, high tensile strength, corrugated steel tape armor (for direct buried applications), Polyethylene outer jacket, UV-stabilized jacket or equivalent.

2.03.1.7. Provide optical fiber color codes in compliance with Color TIA/EIA 527-7 and 14.

2.03.1.8. Cable shall be assembled to ensure that no more than 12 fiber strands occupy each buffer tube of like fiber strands.

2.04. FIBER OPTIC CONNECTORS

2.04.1. Provide for all new fiber optic installations with fusion spliced LC/APC pig tail connectors. The connectors shall be manufactured by the cabling system manufacturer and composed of the same optical fiber glass as used in the optical fiber cable specified by the project.

2.04.2. When adding to or modifying existing work coordinate connector type with the CoH.

2.04.3. Multimode connectors, when specified shall be LC pigtailed connectors. They shall all be fusion spliced unless otherwise specified by the CoH.

2.04.4. Use the CoH approved color code (no exceptions) for coupler panels as follows:

2.04.4.1. 62.5um couplers - Beige

2.04.4.2. 50um couplers - Aqua

2.04.4.3. SM APC couplers – Green

2.05. FIBER OPTIC ENCLOSURES

2.05.1. Wall mounted enclosures shall be approved by the CoH prior to system design and installation. The enclosure shall be equipped for a fusion spliced pigtail connector installation.

2.05.2. Provide wire management approved by the CoH to equipment and interconnection enclosures.

2.05.3. Rack Mount enclosures shall be approved by the CoH prior to system design and installation. The enclosure shall be equipped for pigtail connector splicing and installation.

2.05.4. Provide one 2RU wire manager, installed per rack at the top and one 2RU wire manager installed in the middle of the rack coordinated with the FDU installation to provide a crossover pathway for optical fiber jumpers.

2.05.5. Provide blank 2RU panel install below the top wire manager.

2.06. OPTICAL FIBER SPLICE CLOSURES

2.06.1. All splice closures shall be approved by the CoH prior to installation.

2.06.2. Provide splice enclosures that are rated for the environment they are to be installed.

2.06.3. All closures shall be pressure tested. No encapsulate shall be used on fiber enclosures.

- 2.06.4. Provide Preformed Coyote Fiber Optic Splice Closures Kits or other approved by the CoH that are sized as required for the maximum fiber count within the splice case including distribution fibers.
- 2.06.5. Install only the splice enclosure manufacturer's specified splice trays. Splice only 12 fibers per splice tray (no exceptions, unless with written approval prior to installation from the CoH project manager).
- 2.06.6. Splice trays shall be labeled with a permanent label on the front face of each splice tray indicating fiber count.
- 2.06.7. Support all closures with manufacturers approved brackets.

2.07. INNERDUCT

- 2.07.1. Aluminum threaded innerduct couplers shall be used to join two segments of corrugated innerduct together. Non-metallic couplers are not acceptable.
- 2.07.2. All innerduct shall have a measured pull tape rated for 400 lb. pulling tensile.
- 2.07.3. Each inner duct run shall be of the same manufacturer, model and size.
- 2.07.4. All runs with cables leaving the building shall be water and gas proof sealed using a method approved by the CoH.
- 2.07.5. Innerduct sealing plugs shall be used to seal used and unused innerducts. Use in conjunction with triplex duct sealing plugs.

2.08. LABELS

- 2.08.1. Plastic cable labels shall be mechanically printed and shall be attached to all fiber optic cables using black UV rated cable ties or stainless steel cable ties within six inches of the splice closure and 6" from all ducts and sleeves.
- 2.08.2. Provide electronically printed, waterproof, self adhesive, laminated labels installable on the external surface of the outside panel of all FDU's and closures.

3. EXECUTION

3.01. OPTICAL FIBER BACKBONE INSTALLATION

3.01.1. General

- 3.01.1.1. This Section describes the installation for the products and materials, as well as methods and the CoH Standards associated with the optical fiber backbone installation. These Specifications, along with the Drawings and other CoH supplied specifications shall be provided during the course of the installation.
- 3.01.1.2. The Contractor is instructed to coordinate his efforts with other trades who may be working within the same vicinity to avoid conflicts, lost time, cleaned environment for splicing and termination and potential injury. The CoH will assist in contractor coordination as requested or as required.
- 3.01.1.3. The Contractor shall install all materials plumb, square and in a workman-like manner.
- 3.01.1.4. The Contractor shall supply all necessary tools, equipment, accessories, safety equipment, protective clothing, etc., as customary for the craft and necessary for the installation.

- 3.01.1.5. The Contractor shall verify space requirements and locations with the project team and the CoH before starting cable installations and terminations proceed.
- 3.01.1.6. The Contractor shall verify the cable type and jacket rating required for use with the CoH before starting the fiber installation.
- 3.01.1.7. The Contractor shall verify existing cable fill in conduit, raceway or cable tray system prior to quote or bid and before installation of additional cables so as not to exceed 40% cable fill. Contractor will be responsible for installation of additional conduit, raceway or cable tray where additional cables to be added will exceed the 40% cable fill.
- 3.01.1.8. The Contractor shall comply with all National, State of Oregon and local codes and CoH Policies, Procedures, Standards AND Design Guidelines during the course of installation.
- 3.01.1.9. Should any portion of these Specifications conflict with applicable Codes, the Contractor shall cease work on that particular aspect of the Project and notify the CoH immediately.
- 3.01.1.10. All equipment shall be installed in a neat and professional manner, arranged for convenient operation, testing and future maintenance.
- 3.01.1.11. All fiber cables shall be installed and terminated / fusion spliced by technicians trained and experienced in the installation and termination of fiber cables.
- 3.01.1.12. The Contractor shall employ certified system installation technicians and have at least 5 years experience in the installation of similar and equivalent systems.
- 3.01.1.13. The Contractor shall supply verification of experience, for this type of work, to the CoH for approval before performing any work.
- 3.01.2. Field Conditions:
 - 3.01.2.1. Fixed facility locations shown on the Drawings are based upon the latest design information available at the time this Specification was prepared.
 - 3.01.2.2. The Contractor shall conduct field inspections to coordinate, verify and/or determine the actual as-built locations of conduits, manholes, handholes and all other special facilities that affect the installation, prior to commencing the installation in any area.
 - 3.01.2.3. All EF/TR's and underground structures including utility tunnels, conduit and manhole systems, handholes and related fixtures shall be kept as clean as possible during installation. Labor required for any cleaning work shall be included in the quote or bid and provided by the Contractor.
- 3.01.3. Pre Cable Installation:
 - 3.01.3.1. Ensure the correct product(s) for the project have been received by the Contractor, are compliant to the project's product specification and have been approved for installation by the CoH. The Contractor

- should verify part numbers and footages on cable reel shipping labels, bills of lading, invoices, etc., shall be compared to the original order upon receipt and before installation.
- 3.01.3.2. The Contractor shall inspect fiber optic cable reels for damage upon receipt from the shipper and verify the receipt of the specified product before installation.
 - 3.01.3.3. The contractor should verify the length of the cable both visually and by the results of the OTDR test to verify the project requirements prior to installation.
 - 3.01.3.4. The Contractor will retain the manufacturer's test data and provide it, along with all other specified test documentation to the CoH at the completion of the Project.
 - 3.01.3.5. All cable that does not meet the project or required CoH specification or approved by the CoH shall be removed and replaced at the contractor's expense.
- 3.01.4. Optical Fiber Installation Within Ductbanks & Innerducts
- 3.01.4.1. If field conditions prohibit the use of the designated duct, inner duct or multi-cell/sub duct, the Contractor is to contact the CoH for instructions prior to installation.
 - 3.01.4.2. If existing multi-cell or innerduct duct specified is available, install one fiber cable in each sub-duct.
 - 3.01.4.3. If cable is already installed within a duct without innerduct the Contractor is to contact the CoH for direction.
 - 3.01.4.4. Install cables in accordance to the manufacturer's approved installation methods, procedures and instructions to ensure warranty compliance.
 - 3.01.4.5. Install measured pull tapes with a minimum of 400 lb pulling tensile in conduits when installing cables or innerduct into occupied conduits.
- 3.01.5. Installation of Optical Fiber within the EF/TR
- 3.01.5.1. Upon entering the EF/TR the backbone fiber optic cable shall be routed on cable tray to the designated rack location.
 - 3.01.5.2. At least 25 feet of slack cable shall be included and stored as specified and approved by the CoH. A minimum of 2 times the diameter of the cable minimum bend radius shall be maintained. Cable slack in the TRs shall be contained and routed in the cable tray. Do not coil the cable to achieve the service loop. Store slack as approved by the CoH.
- 3.01.6. Splicing & Termination
- 3.01.6.1. The contractor is responsible to ensure that all outages associated with active cable and equipment is coordinated and approved by the CoH.

- 3.01.6.2. Fusion splice optical fibers in accordance to the approved fusion splicer, optical fiber and enclosure manufacturer's methods, procedures and instructions to ensure warranty compliance.
- 3.01.6.3. All optical fiber shall be neatly and efficiently dressed into splice tray management and the contractor is to ensure that splices are accessible without damage to the optical fibers or splices.
- 3.01.6.4. The contractor is to ensure that all splice trays are labeled and optical fibers and trays properly secured.
- 3.01.6.5. The contractor shall test and call for splice inspections of all optical fiber splices before closing cable splice enclosures.

3.02. FIBER OPTIC CABLE TESTING

3.02.1. Scope of Work

- 3.02.1.1. Work covered by this Paragraph shall consist of furnishing labor, equipment and supplies unless otherwise specified, and in performing the following operations recognized as necessary for the successful testing and verification of the installation of the Fiber Optic cable plant described on the Drawings and required by these specifications.
- 3.02.1.2. Notify the CoH 48 hours in advance when work, technicians and equipment are prepared for acceptance tests and inspections. Coordinate a meeting with the CoH personnel to discuss the required testing procedures, required performance, test equipment, documentation, etc. to verify to the CoH a complete understanding of project requirements.
- 3.02.1.3. Provide technicians that are trained and certified in the use of the test equipment used for the testing operations associated with the specified work.
- 3.02.1.4. Maintain test equipment to manufacturers' requirements, and ensure that all equipment is calibrated according to the manufacturer's requirements. Provide a copy of the current calibration certificate associated with all test equipment associated with the contracted work.

3.02.2. Testing

- 3.02.2.1. Verify through visual inspection using an optical fiber test scope all fiber optic cable terminations, splices and connecting cables for defects and cleanness.
- 3.02.2.2. The fiber optic cables shall be tested utilizing a power meter and stabilized light source capable of testing at 850 nm and 1300 nm for multimode and 1310nm and 1550nm for single-mode. Contractor shall complete a fiber optic post installation report at the time of testing containing meter readings at both 850 nm and 1300 nm for multimode and 1310nm and 1550nm for single-mode in one direction (TR to outlet) on each fiber, actual loss and other pertinent

data regarding the cables tested, including model and serial number of test equipment, cable part #, installed fiber length, building span loss at 850 nm and 1300 nm for multimode and 1310nm and 1550nm for single-mode and date tested. Testing required is 100%.

- 3.02.2.3. Place a printed copy and provide an electronic copy on a CD of the test results from the tester in a 3-ring binder, preceded by a tabbed divider and label as "Backbone Fiber": To _____
From _____.
- 3.02.2.4. Span loss calculations are required on the final test sheet for loss at 850 nm and 1300 nm for multimode and 1310nm and 1550nm for Single-mode.
(D = Length x L = Fiber Loss) + (C x # connectors Loss) + (# Splices Loss)
- 3.02.2.5. Maximum Acceptable Connector Loss Values

Fiber Type	Test Wavelength	Mated Pair Connector Loss (each including fusion splice)
50/125 Multimode	850nm	0.5 dB
50/125 Multimode	1300nm	0.5 dB
62.5/125Multimode	850nm	0.5 dB
62.5/125Multimode	1300nm	0.5 dB
Single-mode	1310nm	0.5 dB
Single-mode	1550nm	0.5 dB

- 3.02.2.6. Acceptable Fiber Type Test Wavelength Fusion Splice Loss (each)

Fiber Type	Test Wavelength	Splice Loss (each)
50/125 Multimode	850nm	0.25 dB
50/125 Multimode	1300nm	0.25 dB
62.5/125Multimode	850nm	0.25 dB
62.5/125Multimode	1300nm	0.25 dB
Single-mode	1310nm	0.25 dB
Single-mode	1550nm	0.25 dB

- 3.02.2.7. Testing requirements for Attenuation and Reflection
 - 3.02.2.7.1. Acceptable attenuation shall be calculated based upon on connector, type, number of splices and optical fiber length and shall comply with TIA/EIA 526. Attenuation shall not exceed the specified perimeters established by the manufacturer and the requirements of this section
 - 3.02.2.7.2. Reflection test perimeter shall not exceed > - 40 db per connector or splice.
- 3.02.2.8. The total optical fiber segment performance shall not exceed the summation of all the manufacturers components specified

performance parameters (Loss Budget) and/ or the combined loss values of components in Section 2.04 of this document.

- 3.02.2.9. Verify through bi-directional dual frequency power meter testing the attenuation and power loss of each point to point fiber optic strand and connectors. Test method (B) TIA/EIA 526 (7 and 14) is required.
- 3.02.2.10. Test all inter/intra building optical fiber segments using an OTDR with launch and receiving cables on each end during each test operation.
- 3.02.2.11. All optical fiber testing shall utilize the manufacturers specified and approved test jumpers and adapters.
- 3.02.2.12. Optical fiber cable that is left un-terminated at both ends shall be tested using a launch cable and bare fiber adapter.
- 3.02.2.13. Fiber optic cable that is left un-terminated at one end shall be tested at the connector end using an OTDR.
- 3.02.2.14. Submit all test results using LinkWare (or other wised approved software by the CoH) electronic disk formatted test results including trace and length reports directly from the test equipment to the CoH immediately upon completion of the testing.

3.03. LABELING

3.03.1. Fiber Color Code approved for sequencing follows:

Number	Color
1	Blue
2	Orange
3	Green
4	Brown
5	Slate
6	White
7	Red
8	Black
9	Yellow
10	Violet
11	Rose
12	Aqua

3.04. AS-BUILT INFORMATION

- 3.04.1. Contractor shall provide as-built information to the CoH to accompany all test result information.
- 3.04.2. As-built information shall be in electronic format as a PDF/A. Indicate location of all outlets, distribution cable trays, junction boxes, FDU with configuration, optical fiber cable equipment rack layout with cable designators and counts and

all additions and deletions pertaining to the backbone optical fiber cabling system.

- 3.04.3. Contractor shall provide one set of preliminary as-built information, splice diagrams and test results including all test result information 30 days prior to occupancy to ensure the scheduled installation and activation of the CoH equipment and services.
 - 3.04.4. Failure of the contractor to provide the required as-built information in a timely manner for the CoH to prepare cutover information may cause an installation delay for the project due to the contractors not meeting these requirements. The delivery of the as-built documentation needs to be coordinated with the CoH as a project milestone.
 - 3.04.5. The Contractor shall provide at substantial completion a list of all uncompleted work and a punch list of open items to the CoH Project Manager and prior to CoH scheduled activations.
 - 3.04.6. If construction drawings are not utilized, contractor shall provide all telecommunications location information on an accurate and electronic formatted scaled floor plan preapproved by the CoH.
 - 3.04.7. Partial as-builds shall be submitted as additional cabling is completed to meet installation schedules. The Contractor shall provide one set of preliminary as-built information, equipment layouts including elevations and test results to meet the schedule requirements of the CoH equipment installation and activation.
 - 3.04.8. As final submission, provide a CD with 2 copies of the IBNS in Excel format one copy shall be locked and the second shall be in an open, searchable format. Provide floor plans with outlet locations and ID's in Auto Cad and Complete Test results (not just summary sheet) in LinkWare.
 - 3.04.9. The final as-built shall be submitted with all corrections made no later than 30 days after cabling installation is completed.
- 3.05. SYSTEM WARRANTY
- 3.05.1. Contractor shall provide a 20-year extended manufacturer's warranty in addition to the contractor's warranty provided to the project. The warranty shall be titled to the CoH. The warranty shall begin at the system acceptance date and remain in effect for a period of 20 years from that date.
 - 3.05.2. The umbrella warranty provided for the optical fiber backbone cabling system shall be issued by the manufacture of the cabling system. The contractor shall provide to the CoH any additional warranties from partners in addition to the cabling system warranty, i.e. cable manufacturer, contractor warranties. Acceptable manufacturer warrantees include:
 - 3.05.2.1. AMP.
 - 3.05.2.2. Belden.
 - 3.05.2.3. CommScope/Systimax/Uniprise.
 - 3.05.2.4. Ortronics
 - 3.05.2.5. Siemons

3.05.2.6. Corning

- 3.05.3. All installed systems must conform to the manufacturer's official published specifications. Any exceptions agreed to by the contractor and the manufacturer shall be approved by the CoH. The contractor shall submit in writing and obtain approval from the CoH for all exceptions pertaining to the cabling system's warranty prior to the request being submitted to the manufacturer.
- 3.05.4. The warranty shall include a warranty of the applications published by the manufacturer at the time of the warranty application. The contractor is to provide to the CoH a list of these applications.
- 3.05.5. The contractor will provide the CoH with a copy of the warranty application at the time of submittal to the manufacturer.
- 3.05.6. Contractor shall perform all labeling requirements and provide testing documentation for verification and submittal to the manufacturer and the CoH. A copy of the warranty application and all documentation and test results shall be submitted simultaneously to the CoH and the manufacturer.
- 3.05.7. Contractor shall provide complete as-built copies intra and inter building cable and infrastructure plans sent to the manufacture showing final locations of all FDU's and splice enclosures prior to submission of the warranty application. The contractor is to ensure that the warranty submittals match the submitted as-built.
- 3.05.8. Contractor shall submit for the warranty all cable records to reflect moves, adds, and changes as built.
- 3.05.9. The contractor shall include and schedule the CoH in all site surveys and inspections that relate to the warranty application or processes.