

December 10, 2021

Request for Proposal

**Troy Learning Center
Network Connectivity**

For

TSD Bid # 9938
Troy School District
4400 Livernois
Troy, MI 48098

Prepared by

Convergent Technology Partners, LLC

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Troy School District
Troy Learning Center Network Connectivity
Request for Proposal – Bid #9938

1. INTRODUCTION

1.1. Objective

1.1.1. The Troy School District (hereinafter referred to as “The Owner”) is accepting sealed bids for connectivity between the Troy Service Center (TSC) and the Troy Learning Center (TLC). Bidders shall provide, install, configure, test and commission a fully operational installation. To meet the requirements of the District, this project is requesting E-rate funding under the E-rate Category 1 funding program. As such, we are requesting proposals for services between the 2 sites. Services may be provided through either of two methods. The chosen option will be based on an analysis of all bids for performance and cost effectiveness.

- WAN Transport Services
 - This is any service wired or wireless delivered over a third party owned (Service Provider or other) network that meets the bandwidth, and other Service Level Agreement specifications of the fully managed service.
 - In accordance with E-rate rules outlined in the second E-rate Modernization Order, to seek bids for any fully managed service over a third party owned network. This service is not to include ISP service. It will only include transport services.
 - The bid proposal form includes an area to enter pricing for requested bandwidth leased options. See bid form for more information.
- Self-Provisioned Network
 - The self-provisioned fiber construction for delivery of Wide Area Network Services including all eligible special construction charges. Maintenance and operations.
 - In E-rate terminology, special construction refers to the upfront, non-recurring costs associated with the installation of new fiber to or between eligible entities. Applicants may seek funding for special construction charges in connection with self-provisioning. Special construction charges eligible for Category One support consist of three components:
 - Construction of network facilities
 - Design and engineering
 - Project management.

- 1.1.2. The intent of this specification is to implement network connectivity capable of supporting high speed data transmission between these two locations.

Troy Service Center
4420 Livernois
Troy, MI 48098

Troy Learning Center
1522 E. Big Beaver Rd
Troy, MI 48083

- 1.1.3. This RFP is composed of:

1.1.3.1. Request for Proposal

1.1.3.2. Scope of Work

1.1.3.3. Appendix A – Bid Submission Forms

1.1.3.4. Appendix B – OSP Installation Specifications

1.2. Schedule of Events

- 1.2.1. The following is the requested schedule of events for this project. The schedule may change depending on the results of the responses and a final schedule will be established prior to contracting with the successful Vendor.

EVENT	DATE
Bid Release	December 10, 2021
Site Inspection, arranged upon request	
Final Date and time for Questions – 5:00 PM	December 20, 2021
Final Addendum	January 4, 2022
Bid Due Date - 1:30 PM	January 12, 2022
Contract Award	February 15, 2022
Earliest Project Start Date	April 1, 2022
Project Completion	August 1, 2022 (based on availability of material)

2. TERMS AND CONDITIONS

2.1 Response Submission

- 2.1.1 All proposals must be submitted on the Bid Submission Form (Appendix A). No forms other than photocopies of the originals will be accepted.
- 2.1.2 Any Vendor proposal for value added options or services, submitted in addition to a valid bid, may be used in Vendor selection.
- 2.1.3 Along with the bid response, each Vendor shall supply product specification sheets for their proposed components and services.
- 2.1.4 Bidders must include a Bill of Material (BOM), in Excel format, with line-item pricing for all components proposed.
- 2.1.5 The Owner considers this RFP legally binding and will require that this Request for Proposal and the Bid Proposal be incorporated by reference into any subsequent Contract between the Contractor and the Owner. It should be understood by the Bidder that this means that the Owner expects the Bidder to satisfy all of the requirements and specifications contained in the RFP. Any exceptions to the RFP must be explicitly noted in the Bid Proposal. Lack of listing all exceptions will be considered acceptance of all of the specifications as presented in this RFP
- 2.1.6 There will be no pre-bid conference. However, we have specified a date and time for site inspection. Those details are included in the Schedule of Events.
- 2.1.7 It is the bidder responsibility to have examined the premises and site(s) so as to compare them with the contract drawings and specifications, and to have satisfied him/herself as to the condition of the premises, and obstruction, the actual levels, and all excavating, filling in, measurements and quantities involved in the bid package, and be familiar with weather conditions of the project areas, etc., necessary for carrying out the work before the delivery of the proposal. It is the Vendor's responsibility to be in compliance with all acceptable specifications including, materials, manufacturers, etc.
- 2.1.8 All bids submitted must be signed by the authorized agent of the company. Proposals must be in a sealed envelope marked "*TLC Network Connectivity*", in the lower left-hand corner. Please remit three (3) hard copies and one (1) digital copy on USB flash drive of bids to the attention of:

Beth Soggs, Director of Technology
Troy School District
4420 Livernois
Troy, MI 48098

All bid responses must include signed and notarized copies of the Familial Disclosure Affidavit and the Affidavit of Compliance – IRAN Economic Sanctions Act. Copies of these documents are attached.

- 2.1.9 Proposals will be opened publicly immediately following the due date/time of the proposals.

- 2.1.10 Bidders may request that the School District clarify information contained in this RFP. All such requests must be made in writing via email to Mr. John Foster, Convergent Technology Partners, at jfoster@ctpartners.net. Requests For Clarifications and inquiries may only be made via email. Questions will be answered via addendum.
- 2.1.11 The Owner will not be liable for any cost incurred by the respondents in preparing responses to this RFP or negotiations associated with award of a contract. Any information, attachments, documentation, quotes, proposals, or other contents of any bid proposal will not be returned.

2.2 Universal Service Fund (USF) Conditions

- 2.2.1 The service provider's USF Service Provider Identification Number (SPIN) *must* be included in the Bid Proposal Form. Direct all questions regarding the USF requirements in this RFP to the Universal Service Administrative Company (USAC), Schools and Library Division (SLD) at (888) 203-8100.
- 2.2.2 The specified products and/or services are to be provided for FY2022 (July 1, 2022-June 30, 2023) and must qualify for universal service discounts under the FY2022 universal service support mechanism, E-Rate.
- 2.2.3 The USF eligible products and/or services identified on the USAC FY2022 Eligible Services List, must be identified separately from any and all "ineligible" products and/or services in the Bid.
- 2.2.4 CONDITIONAL UPON USF - This contract is 100% conditional upon Universal Service Funding. Further, the District reserves the unrestricted right to reduce the contract amount by reducing the scope of work and/or components in order to meet budget requirements in the event the level of the USF discount is reduced. Unit pricing, as specified in the bid proposal, will be used to control contract adjustments. Any such action will be taken before specific work on a building, or on a project component, has commenced.
- 2.2.5 DISCOUNT IMPLEMENTATION - The District reserves the unrestricted right to specify the reimbursement filing option for implementing the USF E-rate discounts; Billed Entity Applicant Reimbursement (BEAR) or Service Provider Invoice (SPI).
- 2.2.6 The Bidder is required to identify in the Bid Form those items that are e-rate eligible and which items are ineligible.

2.3 Consideration of Bids

- 2.3.1 The Bidder acknowledges the right of the Owner to accept or reject any or all Bid proposals, in whole or in part, with or without cause, to waive any irregularities or informalities in this RFP process or any Bid Proposal, and to award the contract to other than the low bidder. In addition, the Bidder recognizes the right of the Owner to reject a Bid Proposal:
 - 2.3.1.1 If the Bidder fails to furnish any required Bid Security, or to submit the data required by the Bid Documents; or
 - 2.3.1.2 If the Bid Proposal is in any way incomplete or irregular; or

2.3.1.3 If the Bidder's performance was unsatisfactory under a prior contract for the construction, repair, modification, or demolition of a facility with the Owner, or a contractor in privacy of contract with the Owner, which was funded, directly or indirectly, by the Owner.

2.3.1.4 Other than price, bids will be evaluated on several factors as identified in this RFP.

2.4 Interpretations and Additional Information

2.4.1 Any interpretation, correction, or change of the RFP will be made by ADDENDUM. Interpretations, corrections, or changes to the RFP made in any other manner will not be binding, and the Vendors shall not rely upon such interpretation, corrections, or changes. Convergent will issue changes or corrections. Addenda will be posted to the USAC E-rate site as well as the State VSS site. Addenda will be issued as expeditiously as possible. It is the responsibility of the Vendors to determine whether all addenda have been received.

2.4.2 It will be the responsibility of all respondents to contact Convergent Technology Partners, prior to submitting a response to the RFP, to ascertain if any addenda have been issued, and to obtain any and all addenda, execute them, and return addenda with the response to the RFP.

2.5 Proposal Binding Period

2.5.1 Prices quoted in The Vendor's response for all labor and materials will remain in effect for at least ninety (90) business days from the issuance date of the Vendor's response.

2.6 Payment Conditions

2.6.1 The Owner shall make payment upon acceptance by the Owner of the completed job. The installation will be deemed acceptable when the Vendor delivers to the Owner:

2.6.2 Vendors may request and the Owner will entertain partial payments based on specifically negotiated milestones. Determination of partial payments will be the sole decision of the Owner.

2.7 Warranty

2.7.1 Materials and workmanship hereinafter specified and furnished shall be fully guaranteed by the Vendor for *one year (365 calendar days)* from transfer of title against any defects. The Vendor shall correct defects, which may occur as the result of faulty materials or workmanship within one year after installation and acceptance by the Owner, at no additional cost to the Owner. The Vendor shall promptly, at no cost to the Owner, correct (including modifications or additions as necessary) any non-conforming or defective work within *one year* after completion of the project of which the work is a part. Any defects not addressed for correction by the Vendor within 90 days of identification will be corrected through alternate resources and the Vendor will be billed for all charges for correction.

2.7.2 The Vendor shall pass along to the Owner any additional warranties offered by the manufacturers, at no additional costs to the Owner, should said warranties extend beyond the *one-year* period specified herein.

- 2.7.3 This warranty shall in no manner cover equipment that has been damaged or rendered unserviceable due to negligence, misuse, acts of vandalism, or tampering by The Owner or anyone other than employees or agents of the Vendor.

2.8 Price Quotations

2.8.1 Self-Provisioned Fiber Wan

2.8.1.1 The Contractor will be responsible for planning the route between buildings, submitting all required permits and paperwork, coordinating make-ready work with the utility companies, etc. for a complete turnkey installation.

2.8.1.2 All planning, engineering, coordination, labor, railroad crossings, permit costs and make ready are to be included in the Contractor's base bid.

2.8.1.3 Make ready costs will be reimbursed without markup. The pricing forms include a line item for make ready estimates for this project.

2.8.1.4 Contractor is to provide complete as-built documents for the network.

2.8.2 WAN Transport Services

2.8.2.1 The solution must include guaranteed Transport Bandwidth to this end point throughput (upload and download) of 10 gbps, upgradeable to 40 gbps with Service Level Agreement (SLA) guarantees. Bidders are to submit pricing of transport circuits at the 10 Gbps levels over 12, 36 and 60 months pricing.

2.8.2.2 The approved provider will be responsible for any costs related to building out the network to bring service to the buildings.

2.8.3 The Owner will not be liable for any costs beyond those proposed herein and awarded. Time and materials quotes will be unacceptable. The Vendor shall include all applicable sales, consumer, use, and other similar taxes and licenses in the price quotations.

2.9 Qualifications of Vendor

2.9.1 The selected Vendor and their supplier shall have been actively engaged in supplying and installing similar type systems for a period of five years and shall be required to provide names and addresses where those systems have been installed. This information must be submitted with the bid package.

2.9.2 To enable the Owner to evaluate the competency and financial responsibility of the Vendor, the selected Vendor shall, upon written or verbal request by the Owner, furnish the following information within 24 hours of request:

2.9.2.1 A list of projects completed in the previous twelve (12) months, including the contract values and the names of the owners involved. Such additional information may be required to satisfy the Owner that the Vendor is adequately prepared in technical experience or otherwise, to fulfill the contract.

2.9.2.2 A statement regarding past, present or pending litigation with an owner.

- 2.9.3 The Vendor certifies that it does not maintain or provide for its employees any segregated facility at any of its establishments, and that it does not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The Vendor agrees that a breach of this certification is a violation of the Equal Opportunity Clause in this contract. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, rest rooms, and washrooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains provided for employees which are segregated by explicit directive or are in fact segregated on the basis of race, color, religion, or national origin, because of habit, local custom, or otherwise. The Vendor agrees that (except where it has obtained identical certifications from proposed subcontractors for specific time periods) it will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity Clause, and that it will retain such certifications in its files.

2.10 Compliance with Laws and Regulations

- 2.10.1 The Vendor performance of the work shall comply with applicable federal, state, and local laws, rules, and regulations. The Vendor shall give required notices, shall procure necessary governmental licenses and inspections, and shall pay without burden to The Owner all fees and charges in connection therewith unless specifically provided otherwise. In the event of violation, The Vendor shall pay all fines and penalties; including attorney's fees and other defense costs and expenses in connection therewith.
- 2.10.2 Equipment requiring FCC registration or approval shall have received such approval and shall be appropriately identified.
- 2.10.3 All work shall conform to the latest Edition of the National Electric Safety Code, the Building Code, and all local codes and ordinances, as applicable. EIA/TIA Documents 568 and 569 shall be adhered to during all installation activities. Methodologies outlined in the latest edition of the BICSI *Telecommunications Distribution Methods Manual* shall also be used during all installation activities. Should conflicts exist with the foregoing, the authority having jurisdiction for enforcement will have responsibility for making interpretation.

2.11 Safety

- 2.11.1 The Vendor shall take the necessary precautions and bear the sole responsibility for the safety of the methods employed in performing the work.
- 2.11.2 The Vendor shall always comply with the regulations set forth by federal, state, and local laws, rules, and regulations concerning "OSHA" and all applicable state labor laws, regulations and standards.
- 2.11.3 The Vendor shall indemnify and hold harmless The Owner from and against all liabilities, suits, damages, costs, and expenses (including attorney's fees and court costs), which may be imposed on The Owner because of the Vendor, subcontractor, or supplier's failure to comply with the regulations, stated herein.

2.12 Environmental Safety and Clean up

- 2.12.1 It shall be the responsibility of the Vendor to pay all costs incurred from the clean-up related to any environmental hazard created by means of release, spill, leak or any other means of contamination caused by accident or negligence.
- 2.12.2 It shall be the responsibility of the Vendor to dispose of any product(s) and/or material following EPA, DNR and local applicable laws and regulations.
- 2.12.3 It shall be the responsibility of the Vendor, if required, to notify the proper authorities prior to commencing said project or, should a “release” take place, to notify proper authorities of any such release.
- 2.12.4 It shall be the responsibility of the Vendor to maintain on site blood born pathogen plan and all necessary safety supplies associated with any spill or clean up that may occur.
- 2.12.5 The Vendor shall not use the owner’s dumpsters for environment hazardous materials. Disposal shall be by legally accepted methods.
- 2.12.6 The Vendor shall submit verification and confirmation of the above.

2.13 Replacement of Damaged Materials

- 2.13.1 The Vendor, at no additional cost to the Owner, shall replace any existing property damaged by the Vendor, during the course of installation. This includes ceiling tiles and/or grid.

2.14 Sequence of Work Events

- 2.14.1 The Vendor will contact the following entities prior to construction start:

- 2.14.1.1 Alcona Comm. Schools – Mike Sutor, Troy School District, 989-736-8534

3. SCOPE OF WORK

3.1 Introduction

Troy School District, hereafter referred to as Applicant, is requesting proposals for delivery of wide area network (WAN) services. Service is expected to connect the Service Center with the Troy Learning Center as identified above at speeds no less than 10Gbps. Both locations and demarcation points, are shown on the attached project drawings. The new service is being planned to begin on July 1, 2022.

3.2 Service Requests

- 3.2.1 Applicant is seeking bids for 4 services. Respondents may bid one, all, or any combination of options. See Section 3 for requirements of each solution.
 - 3.2.1.1 The first service is a fully managed, leased, wired or wireless, third party provider solution.
 - 3.2.1.2 The second service is a leased dark fiber solution with multiple contract options:

3.2.1.2.1 A traditional, year to year lease that is billed monthly and includes fiber maintenance as part of this monthly recurring cost.

3.2.1.2.2 A long-term IRU agreement with one-time IRU fees paid up-front and fiber maintenance as a separate service. **The IRU agreement between Applicant and the fiber lessor will include terms outlining survivability of the IRU in case the lessor is acquired, insolvent, or experiences any change in ownership.**

3.2.1.3 The third service is for a self-provisioned (applicant owned and operated) fiber network.

3.3 Network Design and Construction Routes

3.3.1 Due to current and future bandwidth needs, respondents are encouraged to provide dedicated infrastructure to Applicant. Designs are encouraged to utilize the private fiber approach, where there exists no other aggregation or third-party equipment on fiber strands between sites and modulating equipment at each site is dedicated to Applicant and not shared in any way with other customers. If this is not possible, then designs should limit the use of shared infrastructure as much as possible.

3.3.2 Respondents should clearly illustrate proposed network design and construction routes.

3.3.3 Applicant is not advocating or mandating any preconceived network design or construction route and leaves this decision up to the vendor to present their best solution while recognizing the cited termination locations.

3.4 Special Construction

3.4.1 In E-rate terminology, **special construction** refers to the upfront, non-recurring costs associated with the installation of new fiber to or between eligible entities.

3.4.2 Special construction and service eligibility for reimbursement have changed starting funding year 2016. See the Federal Communications Commission E-rate modernization order 2 (WC Docket No. 13-184) (<https://www.fcc.gov/document/fcc-releases-order-modernizing-e-rate-21st-century-connectivity>) for more information.

3.4.3 Special construction charges eligible for Category 1 support consist of three components:

3.4.3.1 construction of network facilities

3.4.3.2 design and engineering

3.4.3.3 project management

3.4.4 If no new fiber is being installed, then any installation costs are considered standard **non-recurring costs (NRC)**.

3.4.5 For leased lit fiber solutions requiring special construction, this means that the costs associated with building the fiber are considered special construction and the costs associated with the equipment required to activate the service are a standard NRC.

- 3.4.6 For leased dark fiber solutions, equipment required by the Applicant to light the fiber are not considered special construction.

3.5 Solution Specifications

3.5.1 Wired or Wireless Services Provided Over Third-Party Networks

- 3.5.1.1 Applicant must have dedicated, symmetrical transport bandwidth of 10 Gbps between the designated endpoints.

- 3.5.1.2 The solution must be scalable to 40 Gbps.

- 3.5.1.3 Contract options are requested for 12 month, 36 month and 60 month terms of service.

- 3.5.1.4 Each respondent is required to complete the attached pricing sheet with this RFP.

- 3.5.1.4.1 Special construction, monthly recurring cost, and any additional non-recurring costs are **required** to be broken out and listed separately.

- 3.5.1.4.2 Respondents are free to propose alternate pricing terms provided they have also included pricing in the requested format.

- 3.5.1.4.3 No increased pricing will be allowed during the term of the quoted special construction, NRC, and MRC rate in each pricing cell of the matrix.

- 3.5.1.5 If an increase in bandwidth is requested during the contract period the contract does not renew.

- 3.5.1.6 All solutions must adhere to the following Service Level Agreement (SLA) terms and the terms found in Section 4:

- 3.5.1.6.1 The provider will make all reasonable efforts to ensure 99.99% network availability of each circuit.

- 3.5.1.6.2 .25% frame/packet loss commitment

- 3.5.1.6.3 3ms network latency commitment

- 3.5.1.6.4 4ms network jitter commitment

- 3.5.1.6.5 There is no right of provider to limit or throttle the capacity of the circuit at any time for any reason

- 3.5.1.7 Vendor stated commitment is to respond to any outage within four (4) hours and an eight (8) hour restoration of service.

3.5.2 Leased Dark Fiber

- 3.5.2.1 Applicant must have four (4) strands (2 pair) of single mode fiber from the High School to the Elementary location.

- 3.5.2.2 Respondents are free to bid one or both contract options. It is not required to bid both.
- 3.5.2.3 Traditional leases
- 3.5.2.3.1 Contract options are requested for 36-month, 60 month, and 120 month terms of service.
 - 3.5.2.3.2 Each respondent is required to complete the attached pricing sheet with this RFP.
 - 3.5.2.3.2.1 Special construction and monthly recurring cost are **required** to be broken out and listed separately.
 - 3.5.2.3.2.2 Respondents are free to propose alternate pricing terms provided they have also included pricing in the requested format.
 - 3.5.2.3.2.3 No increased pricing will be allowed during the term of the quoted special construction and MRC rate in each pricing cell of the matrix.
 - 3.5.2.3.2.4 Traditional leases require fiber maintenance as part of the MRC.
- 3.5.2.4 IRU
- 3.5.2.4.1 A 20-year agreement is requested.
 - 3.5.2.4.2 Each respondent is required to complete the attached pricing sheet with this RFP.
 - 3.5.2.4.2.1 Special construction, IRU fee, and monthly recurring cost for maintenance are **required** to be broken out and listed separately.
 - 3.5.2.4.2.2 Respondents are free to propose alternate pricing terms provided they have also included pricing in the requested format.
 - 3.5.2.4.2.3 No increased pricing will be allowed during the term of the quoted special construction, IRU fee, and MRC rate in each pricing cell of the matrix.
 - 3.5.2.4.2.4 If special construction is required, Applicant expects significant reductions from prevailing market rates for the IRU fee and annual maintenance charges on all newly built segments.
 - 3.5.2.4.2.5 Fiber maintenance should be quoted as separate from the IRU fee.
 - 3.5.2.4.2.5.1 The fiber owner (not the district) must claim responsibility for repairs in the event of a catastrophic cut or relocate.
 - 3.5.2.4.2.5.2 Describe the process for relocates including assumption of costs.
 - 3.5.2.4.2.5.3 If maintenance cannot be quoted for entire time span of the IRU, please include alternate time span quote as well as explanation for the shorter time span.

3.5.2.5 The provider will make all reasonable efforts to ensure 99.99% network availability of all leased fiber strands.

3.5.2.6 All leased dark fiber solutions are subject to the terms found in Section 4.

3.5.3 Self-Provisioned Network

3.5.3.1 Applicant must have six (6) strands of single-mode fiber built from the Service Center to the Troy Learning Center or to an appropriate splice location that will facilitate the connectivity of the two sites.

3.5.3.2 Applicant intends to light two (2) strands in the first year. USAC rules stipulate the following when any constructed strands will remain dormant in the first funding year in which they are constructed:

3.5.3.2.1 It must be proven that it is more cost effective to install the higher strand count cable than one containing the exact number of strands being lit in the first year.

3.5.3.3 Each respondent is required to complete the attached pricing sheet with this RFP.

3.5.3.4 Applicant desires a fully “turn-key” project so respondents should provide explanation for Applicant’s involvement in the process including ownership and sourcing of permits, etc.

3.5.3.5 Specifications for a newly constructed fiber infrastructure are contained in Appendix B: OSP Installation Specifications.

3.5.3.6 Selected respondent and its subcontractors will provide all project management to accomplish the installation of all project work as outlined in Appendix B.

3.5.3.7 Respondent is responsible for all necessary paperwork and obtaining all permits including but not limited to rights of way, easements, and pole attachments.

3.5.3.8 The respondent will provide engineer(s), certified on selected fiber system specifications and procedures to manage all phases of project as outlined in this proposal. This includes ordering and managing the bill of materials as outlined in Appendix B, directing and managing cable placement and restoration, directing and managing splicing crews and providing detailed documentation at the end of the project.

3.6 General Terms for All Proposals

3.6.1 Failure to include any requested information noted as required by the respondent is grounds for disqualification.

3.6.2 Description of Proposal

3.6.2.1 Respondent’s proposal should include all sites for the option bid. If the respondent bids leased dark fiber or leased lit fiber – all sites must be included in the bid. Failure to include all sites in a bid option could be considered ground for disqualification.

- 3.6.2.2 Respondent will provide a description of their proposal for all services and solutions.
- 3.6.2.3 Description will include an overview of the proposal, any deviations from the requested architecture, design or requirements, assumptions made, and other detail Applicant may find useful or necessary (or could differentiate the solution from a competing proposal).
- 3.6.3 Timeline
 - 3.6.3.1 For each response, respondents must include a timeline for bringing all sites online.
 - 3.6.3.2 Proposals requiring little to no special construction should be able to bring all sites online by the July 1 start of the funding year.
 - 3.6.3.3 For solutions requiring special construction, a schedule of bringing sites online must be included with an explanation of how this timeline shifts if the date of the E-rate funding commitment shifts.
- 3.6.4 Demarcation
 - 3.6.4.1 All solutions must terminate service or infrastructure in the demarcation point at each address specified in the project drawing.
 - 3.6.4.2 Solutions bringing service to the property line but not to the demarcation point are not acceptable.
 - 3.6.4.3 Respondent must specify specific demarcation setup included in base fees, e.g. wall mounted CPE and CAT6a handoff, rack mount patch panel, etc.
- 3.6.5 Network Diagram
 - 3.6.5.1 For each response, respondents must include a network diagram displaying the paths to be used to serve each endpoint.
 - 3.6.5.2 Diagrams must show if circuits are routed through any aggregation hubs, equipment, or third-party facilities between hub site and each endpoint.
- 3.6.6 References
 - 3.6.6.1 For each response, respondent must provide 3 references from current or recent customers (preferably K-12) with projects equivalent to the size of Applicant.
 - 3.6.6.2 If respondent responds to more than one option (e.g. leased lit fiber service as well as leased dark fiber), provide 3 references for each.
- 3.6.7 E-rate Program Integrity Assurance (PIA) Review
 - 3.6.7.1 If their solution is chosen, respondents are required to promptly provide Applicant with any information being requested as part of PIA review.
 - 3.6.7.2 Vendors may assist applicants with preparing funding requests or responding to PIA questions and may speak directly with PIA reviewers.

3.6.7.3 For all responses that include special construction, the respondent agrees to, by submitting its bid, produce all construction labor, construction materials and other cost information requested during PIA review.

3.6.7.4 **All responses must agree, in writing, to this section with a yes or no answer. Answering no or failure to answer at all is grounds for disqualification.**

3.6.8 Required Notice to Proceed and Funding Availability

3.6.8.1 Applicant will follow the purchasing policies of the Applicant Board and requirements and procedures of the FCC's E-rate program as administered by the Universal Service Administrative Company to be eligible for all available funding.^[1]_{SEP}

3.6.8.2 The implementation of any associated contracts resulting from this competitive bid process will be dependent on the district's' issuance of a written Notice to Proceed.

3.6.8.3 E-rate funding notification alone will not signify Notice to Proceed. The district will have the right to allow the contract to expire without implementation if appropriate funding (including any state matching funds for special construction projects) does not come available.

3.7 Evaluation Criteria

Services Provided Over Third-Party Networks, Leased Dark Fiber, Self-Provisioned Network (Applicant Owned and Operated Network)

% Weight	Criteria
40%	Cost to provide/construct service
5%	Ability to support requirements of this RFP
10%	Proposed contract terms and conditions
20%	Service reliability and dedicated infrastructure
5%	Previous experience with District
5%	Provider references

APPENDIX A

BID SUBMISSION FORMS

All pricing must be submitted on the following Cost Analysis Sheets. No forms other than photocopies of the originals will be accepted. Voluntary alternatives to this proposal must be submitted on separate forms.

The following must be submitted along with the Bid Submission Form and 5% Bond:

- ☐ Technical sheets of all proposed equipment
- ☐ References
- ☐ Familial Relationship Disclosure (PA 232 of 2004)
- ☐ Affidavit of Compliance – IRAN Economic Sanctions Act
- ☐ USAC spin # _____
- ☐ PIA Assistance and Documentation (Section 3..6.7.4)

ADDENDA (# and Date) _____

Directions:

Bid prices must include all supplies, warranties, shipping charges and labor as described herein.

Leased Third Party Provider Solution

	Special Construction Cost	Non- Recurring Cost	MRC 10 Gbps- 12 month term	MRC 10 Gbps- 36 month term	MRC 10 Gbps- 60 month term
TSC to TLC					

Leased Dark Fiber - Traditional

	Special Construction Cost	Non- Recurring Cost	MRC 36 month term	MRC 60 month term	MRC 120 month term
TSC to TLC					

Leased Dark Fiber - IRU

	Special Construction Cost	120 month IRU fee	240 month IRU fee	Annual maintenance cost
TSC to TLC				

Self-Provisioned Network

Cost Items	E-rate Eligible Cost	E-rate Ineligible cost
Engineering, Design and Route Finalization		
Materials		
Labor		
Performance and Payment Bond		
Subtotal Fixed Costs		

Cost Items	E-rate Eligible Cost	E-rate Ineligible cost
Make Ready Estimate (reimbursable without markup)		
Subtotal Reimbursable Costs		
Total Self-Provisioned Network Base Bid		

CREDIT FOR WORK DELETED:

Should any work be deleted from the Contract by order of the Owner, full cost savings realized thereby will be credited to the Owner.

ACCEPTANCE:

The prices stated in this proposal are guaranteed for a period of not less than 90 days, and if notified of acceptance of this proposal within this period, the undersigned agrees to execute a Contract for the above stated compensation within ten days after notification. The undersigned certifies that the bid contained herein meets or exceeds the attached specifications.

COMPLETENESS:

This proposal stands alone and is not contingent upon any other offer being accepted or rejected by the Owner.

The Owner reserves the right to accept or reject any or all Bids in whole or in part, or to waive any informality therein. If in the Owner's opinion it is in their best interest, the contract may be awarded to other than the low bidder for reason of establishing uniformity, delivery time, etc.

If award is made to us, the "Bidder", under this proposal, we agree to enter into an Agreement with Troy School District to furnish products and/or services, in strict accordance with this proposal; bid documents; and all pertinent plans, drawings, and specifications.

COMPANY NAME: _____

Address: _____

Authorized Signature*: _____

Title: _____ Telephone: _____

Date: _____

* Authorized Signature must be an individual who has authority to bind the Corporation in contractual agreement.

FAMILIAL DISCLOSURE AFFIDAVIT

The undersigned, the owner or authorized officer of _____ (the "Bidder"), pursuant to the familial disclosure requirement provided in the Troy School District (the "District") Request for Proposal(s), hereby represents and warrants that, except as provided below, no familial relationships exist between the owner or any employee of the Bidder, and any member of the Board of Education of the School District or the Superintendent of the School District.

List any Familial Relationships:

BIDDER:

By: _____

Title: _____

STATE OF MICHIGAN

COUNTY OF _____

This instrument was acknowledged before me on the ____ day of _____, _____, by

_____.

Notary Public

_____ County, Michigan

My Commission Expires: _____

Acting in the County of: _____

AFFIDAVIT OF COMPLIANCE – IRAN ECONOMIC SANCTIONS ACT

Michigan Public Act No. 517 of 2012

The undersigned, the owner or authorized officer of the below named applicant (the “Applicant”), pursuant to the compliance certification requirement provided in the Troy School District (the “District”) Request For Proposals for Network Equipment (the “RFP”), hereby certifies, represents and warrants that the Applicant (including its officers, directors and employees) is not an “Iran linked business” within the meaning of the Iran Economic Sanctions Act, Michigan Public Act No. 517 of 2012 (the “Act”), and that in the event Applicant is awarded a contract as a result of the aforementioned RFP, the Applicant will not become an “Iran linked business” at any time during the course of performing the Work or any services under the contract.

The Applicant further acknowledges that any person who is found to have submitted a false certification is responsible for a civil penalty of not more than \$250,000.00 or 2 times the amount of the contract or proposed contract for which the false certification was made, whichever is greater, the cost of the School District’s investigation, and reasonable attorney fees, in addition to the fine. Moreover, any person who submitted a false certification shall be ineligible to bid on a request for proposal for three (3) years from the date it is determined that the person has submitted the false certification.

APPLICANT:

Name of Applicant

By:

Title:

Date:

STATE OF Michigan

COUNTY OF _____)

This instrument was acknowledged before me on the ____ day of _____, ____, by

_____.

Notary Public

_____ County, Michigan

My Commission Expires: _____

Acting in the County of: _____

APPENDIX B

OSP Specifications

Appendix B: OSP Installation Specifications

Material Requirements

- Material will comply with those standards as established by UL or NEMA and shall be commercial grade. All materials will be new and free from defects.
- Selected contractor and its subcontractors will provide all material management to ensure that the project remains on track according to the project milestones,
- All due caution will be exercised in transporting and off-loading all materials to prevent any damage during shipping or placement. Any damage to any materials after their initial receipt and inspection by the respondent will be the sole responsibility of the respondent, who will replace such damaged materials at no additional expense to the district.
- Buried conduit shall be 1 ¼" HDPE (High Density Polyethylene). Conduit shall be equipped with a graduated pull tape or rope.
- The exact requirements for location and type of conduit within the building shall be verified with building owner.
- All Hand Holes shall be (State) DOT approved, 45,000 lb. load rated CDR or comparable enclosures on roadways and railways, and pedestrian rated hand holes for non-roadways and railways.
- Large-radius sweeps shall be provided where required for offset or change in direction of conduit. Bend radius rating of the cable must be adhered to for all conduit bends, pull boxes, and hand holes.
- Fiber must be single-mode with the following specifications:
 - TU-T G.652.C/D compliant
 - Maximum Attenuation @ 1310nm: 0.34 dB/km
 - Maximum Attenuation @ 1385nm: 0.31 dB/km
 - Maximum Attenuation @ 1550nm: 0.22 dB/km
- Connector types should be LC unless otherwise specified by the District.
- All fiber strands will be terminated in a wall mounted patch panel in both the High School and the Elementary.
- Any warranties associated with the fiber and any other outside plant materials must revert to the district as the fiber owner upon completion of construction,

Specifications

Survey

- Comply with all ordinances and regulations. Where required, secure permits before placing or excavating on private property, crossing streams, pushing pipe or boring under streets and railways. Pre-survey shall be done prior to each job.
- Respondent will locate underground lines of third parties in cable route area

Permits and Traffic Control

- The respondent must adhere to all applicable laws, rules and requirements and must apply for permits to place infrastructure per specification per county or city ordinance applicable to where the infrastructure is being placed.

- All traffic control, in accordance with local, state, county, or permitting agency laws, regulations, and requirements, will be the respondent's responsibility. The respondent's construction schedule will take into consideration sufficient time for the development and approval of a traffic control plan.

Tracer Wire Installation

- Tracer wire shall be placed with all conduit installed unless armored or traceable cable is used. The respondent will provide the tracer wire and shall install, splice and test (for continuity) the tracer wire. If the tracer wire is broken during installation, the wire should be repaired and tested for continuity after repair.
- For multi-duct installation, install a 5/8" X 8" copper clad ground rod in the hand-hole located on public right-of-way. Place a #12 insulated copper locate wire from the ground rod to the fiber optic termination room or to the outside of the building directly below the pull box and terminate on one side of an insulated indoor/outdoor terminal block to the master ground bar in the fiber optic termination room or place a ground rod on the outside of the building. Locate block in an accessible location. This is for "locate purposes only," not for grounding purposes. Note on as-built where ground is placed and tag located wire as "locate wire."

Depth of Burial

- Except where otherwise specified, the cable shall be placed to a minimum depth of 36" along roadways and 24" on private property. Greater cable depth will be required at the following locations:
 - Where cable route crosses roads, the cable shall be placed at a minimum depth of 48" below the pavement or 36" below the parallel drainage ditch, whichever is greater, unless the controlling authority required additional depth, in which case the greatest depth will be maintained.
 - Where cable crosses existing sub-surface pipes, cables, or other structures: at foreign object crossings, the cable will be placed to maintain a minimum of 12" clearance from the object or the minimum clearance required by the object's owner, whichever is greater.

Highway, Railroad, and Other Bored Crossings

- All crossings of state or federal highways and railroads right-of-way shall be made by boring and placing a pipe casing. The cable shall be placed through the pipe casing. Country road and other roadways shall be bored, trenched, or plowed as approved by the appropriate local authority.
- All work performed on public right-of-way or railroad right-of-way shall be done in accordance with requirements and regulations of the authority having jurisdiction there under.
- Respondent shall give all notices and comply with all laws, ordinances, rules and regulations bearing on the conduct of the Work as drawn.
- Where the cable route crosses railroad right-of-way, the cable shall be placed at a minimum depth of 60" below the railroad surface or 36" below the parallel drainage ditch, whichever is greater, unless the controlling authority requires additional depth, in which case the greatest depth will be maintained.

Cable Markers

- Cable markers shall be placed within 48 hours of cable installation. Unless the right-of-way or property owner specifies otherwise, cable markers shall be placed at all change in directions, splices, fence line crossings, at road and stream crossings, and other points on the route not more than 1,000 feet apart.

- In addition, on highway right-of-way, the markers shall be located at the highway right-of-way line. Markers shall always be located so that they can be seen from the location of the cable.

Hand Holes

- UON, hand holes will be placed in accordance with standard industry practices. A minimum of 2 should be located in the route for slack storage and assistance in pulling the cable. Special attention and planning must be exercised to ensure accessibility by other groups after construction has been completed.
- UON, hand holes shall be 24 x 36 x 18.
- All hand holes unless otherwise stipulated by the drawings will be buried with 12" to 18" of cover at final grade.
- Immediately after placement, the soil around and over the hand hole will be tamped and compacted. Should any washouts occur, the respondent will be responsible for correcting the problem immediately without additional cost to the district.
- After cable placement, all ducts will be sealed.
- All splice hand holes/manholes will be grounded
- A minimum of 100' coil of cable shall be left in each hand hole/building for splicing use.

Splicing

- Fiber to fiber fusion splicing of optical fibers at each point including head ends is required.
- Complete testing services, such as end to end, reel testing, and splice loss testing, ORL, power meter/laser source testing and WDM testing is required.
- Individual splice loss will be 0.10 dB for single-mode unless after 3 attempts these values cannot be achieved, then the fibers will be re-spliced until a splice loss within 0.05 dB of the lowest previous attempts is achieved. Splice loss acceptance testing will be based on the fusion splicer's splice loss estimator.
- All cables to buildings shall be fusion spliced within a minimum of 50' of entering a building at a location to be determined by the owner with an existing single mode fiber and terminated at customer's rack.

Aerial Plant

- District is not open to aerial fiber runs.

Testing Cable

- The respondent shall be responsible for on-reel verification of cable quality prior to placement.
- Completed test forms on each reel shall be submitted to the district.
- Respondent assumes responsibility for the cable after testing. This responsibility covers all fibers in the cable.
- The respondent shall supply all tools, test equipment, consumables, and incidentals necessary to perform quality testing.
- The cable ends shall be sealed upon completion of testing.
- In addition to splice loss testing, selected respondent will perform end-to-end insertion loss testing of single-mode fibers at 1310 nm and 1550 nm from one direction for each terminated fiber span in

accordance with TIA/EIA-526-7 (OFSTP 7). For spans greater than 300 feet, each tested span must test to a value less than or equal to the value determined by calculating a link loss budget.

Restoration

- All work sites will be restored to as near their original undisturbed condition as possible, all cleanup will be to the satisfaction of the district and any permitting agencies.
- Respondent shall provide a brief description of restoration plan in the response, with the expectation that a more detailed restoration plan will be delivered prior to construction beginning.
- Work site restoration will include the placement of seed, mulch, sod, water, gravel, soil, sand, and all other materials as warranted.
- Backfill material will consist of clean fill. Backfilling, tamping, and compaction will be performed to the satisfaction of the district, the representative of any interested permitting agency, and/or the railroad representative.
- Respondent will be responsible for any restoration complaints arising within one year after the district's final acceptance.
- Excess material will be disposed of properly.
- Debris from clearing operations will be properly disposed of by the respondent/subcontractors as required by permitting agencies or the railroad. Railroad ties, trees, stumps or any foreign debris will be removed, stacked, or disposed of by the respondent as per requirements by other interested permitting agencies, and/or the district.
- Road shoulders, roadbeds, and railroad property will be dressed up at the end of each day. No payment for installation will be permitted until cleanup has been completed to the satisfaction of any permitting agencies, and/or the district.
- Site clean-up will include the restoration of all concrete, asphalt, or other paving materials to the satisfaction of the other interested permitting agencies, and/or the district.

Documentation

As-built drawings will include:

- Fiber cable routes
- Drawings, site drawings, permit drawings, and computerized design maps and electronically stored consolidated field notes for the entire route must include:
 - Verification of as-built and computerized maps
 - Splicing locations
 - Optical fiber assignments at patch panels
 - Optical fiber assignments at splice locations
 - Installed cable length
 - Date of installation
 - Underground installation documents should include
 - Conduit design and detailing
 - Manhole/handhole detailing

- Preparation of all forms and documentation for approval of conduit construction and/or installation,
- Fiber details will include:
 - Manufacturer
 - Cable type and diameter
 - Jacket type: singlemode
 - Fiber core and cladding diameter
 - Fiber attenuation per kilometer
 - Fiber bandwidth and dispersion
 - Index of refraction
- OTDR documentation will include:
 - Each span shall be tested bi-directionally from endpoint to endpoint.
 - Each span's traces shall be recorded and mapped. Each splice loss from each direction and the optical length between splices as well as any of the information required by Span Map.
 - Reel acceptance
 - Individual fiber traces for complete fiber length
 - Paper and computer disk records of all traces
 - Losses of individual splices
 - Anomalies
 - Wavelength tests and measurement directions
 - Manufacturer, model, serial number, and date of last calibration of OTDR
- Power Meter documentation will include:
 - Total link loss of each fiber
 - Wavelengths tested and measurement directions
 - Manufacturer, model, serial number, and date of last calibration for all equipment used

References, Standards, and Codes

Specifications in this document are not meant to supersede state law or industry standards. Respondents shall note in their response where their proposal does not follow the requested specification to comply with state law or industry standard. The following standards are based upon the *Customer-Owned Outside Plant Design Manual* (CO-OSP) produced by BICSI, the *Telecommunications Distribution Methods Manual* (TDMM) also produced by BICSI, ANSI/TIA/EIA and ISO/IEC standards, and NEC codes, among others.

It is required that the respondent be thoroughly familiar with the content and intent of these references, standards, and codes and that the respondent be capable of applying the content and intent of these references, standards, and codes to all outside plant communications system designs executed on the behalf of the district.

Listed in the table below are references, standards, and codes applicable to outside plant communications systems design. If questions arise as to which reference, standard, or code should apply in a given situation, the more stringent shall prevail. As each of these documents are modified over time, the latest edition and addenda to each of these documents is considered to be definitive.

Table 1 — References, Standards, and Codes

Standard/Reference	Name/Description
BICSI CO-OSP	BICSI Customer-Owned Outside Plant Design Manual
BICSI TDMM	BICSI Telecommunications Distribution Methods Manual
BICSI TCIM	BICSI Telecommunications Cabling Installation Manual
	Customer-Owned Outside Plant Telecommunications Cabling Standard
TIA/EIA - 568	Commercial Building Telecommunications Cabling Standard
TIA/EIA - 569	Commercial Building Standard for Telecommunication Pathways and Spaces
TIA/EIA - 606	The Administration Standard for the Telecommunications Infrastructure of Commercial Buildings
TIA/EIA - 607	Commercial Building Grounding and Bonding Requirements for Telecommunications
TIA/EIA - 455	Fiber Optic Test Standards
TIA/EIA - 526	Optical Fiber Systems Test Procedures
IEEE 802.3 (series)	Local Area Network Ethernet Standard, including the IEEE 802.3z Gigabit Ethernet Standard
NEC	National Electric Code, NFPA
NESC	National Electrical Safety Code, IEEE
OSHA Codes	Occupational Safety and Health Administration, Code of Federal Regulations (CFR) Parts 1910 - General Industry, and 1926 - Construction Industry, et al.



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ADDENDUM 1

Client / Address	Troy School District	Project / Location	Troy Learning Center – Network Connectivity
Date Issued	January 3, 2022	Project Number	9938

ADDENDUM # 1

A1-1 NOTICE: The bid documents are amended herein which adds to and/or supersedes conflicting or additional information in the Request for Proposal and Project Prints.

Work covered by this Addendum shall be subject to the Introduction, Terms and Conditions, Technical Specifications and Drawings.

Acknowledge this Addendum on the Cost Analysis Worksheet and include the cost of the work herein specified in the Bid.

A1-2 Responses to Bidder Questions

- Page 21 – RFP states – Patch Panel in Wall Mount in HS & ES – please clarify?
 - Disregard the reference
- Will an extra pull rope need to be installed with the fiber in any underground duct installed?
 - Yes
- Termination Connector Type?
 - LC
- Is a Bid Bond needed?
 - Yes, a 5% Bid Bond
- Is this point to point a “new” connection for the district or already in place? If so, what is the connection today?
 - The current connectivity is provided via a VPN over Comcast Internet.
- Bid states a 5% bid bond requirement. Is this for all options including leased services?
 - Yes

7. Also, is there a specific form for the Bid Bond, and please verify the named entity?
- Each Bid Proposal must be accompanied by Bid Security in the form of a certified check or Bid Bond in the amount not less than 5% of the Bid Proposal amount, made payable to Troy School District or naming Troy School District as the obligee. Bid Bonds shall be issued by a company licensed to do business in the State of Michigan.



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ADDENDUM 2

Client / Address	Troy School District	Project / Location	Troy Learning Center – Network Connectivity
Date Issued	January 7, 2022	Project Number	9938

ADDENDUM #2

A1-1 NOTICE: The bid documents are amended herein which adds to and/or supersedes conflicting or additional information in the Request for Proposal and Project Prints.

Work covered by this Addendum shall be subject to the Introduction, Terms and Conditions, Technical Specifications and Drawings.

Acknowledge this Addendum on the Cost Analysis Worksheet and include the cost of the work herein specified in the Bid.

A1-2 Specifications

1. Appendix B – OSP Specifications - Page 23

Aerial Plant

- District is not open to aerial fiber runs.

This should be changed to read:

Aerial Plant

- District is open to aerial fiber runs.

End Of Addendum 2

Troy School District - TLC Connectivity Bid #9938

Due Date: January 12, 2022
Due Time: 1:30 p.m.

Bidder	WOW, Inc	123.Net	Crown Castle	FiberLink	
LeasedService MRC	Disqualified - No bid bond	\$193,032 120-month IRU \$138,583 240-month IRU	\$760 36 - month \$640 60 -month \$550 120-month		
Leased Service NRC		\$25,745.00	\$120,000.00		
Construction Base Bid				\$74,562.60 Construction \$63,000.00 Make Ready Estimate	
Alternate 1				\$233,701.45 Underground	
Alternate 2					
Other/Notes		AnnualMtce \$6,600			

Signed: John Foster

Verified: Todd Hensley