

Peoples Telephone Company

West Tennessee Community Broadband Project

Request for Proposal

Engineering services on a fiber construction project

Response: Technical inquiries and specification clarifications are due by 4 PM on November 10, 2022, to Lisa Wigington at LisaW@tec.com. All inquiries must be in writing. Responses will be provided to all known respondents. Respondents are not entitled to rely on any verbal clarification or response from anyone in connection with this RFP. Respondents must have professional engineering license in the state of Tennessee and experience with grant projects. Final RFP due by November 18, 2022.

Description of Project: The proposed funded service areas cover approximately 40 square miles of Benton, Carroll and Henry counties in west Tennessee. This project will bring approximately 104.5 miles of core fiber to some of the most rural areas of Tennessee and make high speed broadband available to approximately 828 locations (and an additional 183 unfunded locations), per the desktop review and satellite imagery, through fiber to the home technology.

Note: The Benton county portion has already been engineered and this RFP is only for the remaining 93 miles in Henry and Carroll counties which will be 95% or more underground.

Detailed Description of Existing Operations: TEC has been meeting the communication needs of the rural south since 1923. Peoples Telephone Company (PTC) is a wholly-owned subsidiary of TEC and has provided voice service since 1962 and internet service since 1999. TEC has made fiber to the premise available to over 8,500 locations in Tennessee and continues to upgrade its copper infrastructure with fiber to provide the highest speeds and quality of service on its network.

A detailed description of the proposed network:

- **Benton PSA** – The Benton county proposed service area consists of 11.5 miles of fiber extensions of PTC current fiber to reach 62 more locations. This area has been staked and is ready for submission of permits. Benton will be phase 1 in this and can be started immediately, while phase 2 (Henry and Carroll) are included in this RFP for engineering.
- **Henry PSA** – The Henry county proposed service area falls mainly within the PTC ILEC certificated service area. PTC currently has 6 remote concentrators and one central office (Adtran TA5000) positioned throughout its network in Henry county, which are served as fiber to the node (FTTN). This transport fiber has been maximized and cannot be used for fiber to the home distribution, so portions will need to be overbuilt to serve locations along the route FTTH. Approximately 90% of the customers in Henry county are served internet by utilizing the existing copper plant. Utilizing ADSL2+ and VDSL technology in the remotes, this copper plant is being used to provide 25.0/3.0 broadband service up to 5,000 feet of the remote concentrators, where enough copper is available. PTC is proposing to overbuild this aging copper with 71 miles of fiber to the home distribution from the existing remotes. The Henry PSA will serve FTTH to 570 locations

A portion just outside the edges of our ILEC territory were eligible for RDOF (which by very definition, does not have 25/3 service) and PTC bid and won these areas in the FCC RDOF auction. This portion of the build represents approximately 21 miles, includes service to 91 locations.

- **Carroll PSA** – The Carroll county proposed service area falls mainly within the West Tennessee Telephone Company, Inc. (WTT) ILEC certificated service area. WTT and PTC are both wholly owned subsidiaries of TEC. WTT currently has 8 remote concentrators and 2 central offices (Adtran TA5000) positioned throughout its network in Carroll county, which are served as fiber to the node (FTTN). Approximately 90% of the customers in Carroll county within the ILEC boundary are served internet by utilizing the existing copper plant. Utilizing ADSL2+ and VDSL technology in the remotes, this copper plant is being used to provide 25.0/3.0 broadband service up to 5,000 feet of the remote concentrators, where enough copper is available. PTC is proposing to overbuild this aging copper plant with 22 miles of fiber to the home distribution for the existing remotes. The Carroll PSA will serve FTTH to 196 locations.

In all PSAs, 6 optical line terminals (OLTs) will be installed in the existing host remotes and 10 LCPs will be placed strategically in the PSAs. The smaller 1:32 splitters will be distributed strategically throughout the build to ensure scalability. This proposed design will deploy single mode fiber optic cables constructed utilizing RUS approved construction techniques. In Carroll and Henry this fiber will be mainly buried and in Benton county strung as aerial. All fiber will be buried, strung as aerial or bored and placed in existing previously disturbed public right-of-ways or on poles per the BCES pole attachment agreement. To provide a more secure reliable fiber footprint all the buried fiber will be placed at a minimum depth of 36 inches unless other depths are required by the affected highway, railroad, municipalities or other authorities. The two methods of buried construction that will be utilized are predominately plowing with directional boring utilized when road or stream or other types of crossings are required. Directional boring will also be utilized when it is not possible to plow or boring is more feasible construction. Along the buried fiber route, flush-mounted handholes will be deployed with the proposed fiber being accessible at each location. This will allow for easy access to the network and also makes future expansions more economical and feasible.

Network Diagrams: Attached for review – Exhibit A and KMZ of project area

Engineering Categories and Descriptions: Vendor needs to provide engineering services for fiber project. Response should include detailed projections of hours, rates and estimated expenses related to each of the categories presented in Exhibit B, as well as a not to exceed number for the entire project.

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Request for Proposal - Bid Sheet				
Peoples Telephone Company				
West Tennessee Community Broadband Project – Phase 2 (93 miles in Henry and Carroll counties)				
RFP Submitter:				
Contact:				
Contact e-mail & phone:				
ENGINEERING SERVICE CATEGORY	HOURS	AVERAGE RATE	ESTIMATED EXPENSES	TOTAL NOT TO EXCEED
Project Design				
Assistance to Owner				
Coordination				
Central Office Equipment Engineering Services				
Outside Plant Staking Services				
Outside Plant Contract Document Phase Engineering Services				
Outside Plant Construction Phase				
Totals				

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Deliverables:

1. Will comply with any requirements as pertaining to a RUS 217 contract.
2. Staking sheets complete with service addresses and GPS of all locations passed.
 - a. Address list should contain notations of inhabitable/noninhabitable, residential / business / church.
 - b. Engineering firm will secure all ROW as required.
 - c. Staking sheets will also indicate the existing ROW and any known obstacles to construction along with proposed construction route. It will also indicate manner of proposed construction along with estimate of construction cost. Will determine best side for construction depending on these factors.
 - d. Staking sheets will include any pertinent information needed for the construction corridor to complete any and all permit requirements, and for construction drawings.

- e. Staking sheets will be generated using GPS information for such items as centerline, ROW, driveways, culverts, poles if aerial construction, with suggested attachment heights.
 - f. Training contractor on environmental requirements.
3. Permits and Environmental requirements.
 - a. Permits and correspondence with environmental agencies to confirm requirements. Provide all required maps, applications and any other documents needed to be submitted with permits.
 - b. Assist with any environmental studies or finding experts to perform studies as needed.
 - c. Secure all permits for local, county, state, forestry, wetlands, railroads that maybe required in a timely manner as to meet construction schedules.
4. Plans and Specs
 - a. Will create Plans and Specs and review with Owner. Including any legend requirements and identification.
 - b. Will secure proper documentation from contractors to meets RUS Community Connect requirements.
 - c. Will provide owner with tally of units for materials to be used for construction with enough time to place orders and keep on schedules.
 - d. Bid ready plans and specs packet with required RUS contract completed.
 - e. Provide bid packages to all prospective bidders.
 - f. Management of the bid process for fiber contractors.
5. Project management and resident engineer.
 - a. All construction activity will be supervised by an on-site engineer to ensure RUS standards of construction and compliance with environmental regulations.
 - b. Training contractor on environmental requirements.
 - c. Will conduct any pre-bid meetings, and preconstruction meetings as needed.
 - d. Will provide adequate inspection to confirm construction units and quantities.
 - e. Will ensure all restoration is completed and generate any restoration punch lists as needed.
 - f. Will review tests results and notify owner and contractor of any concerns or failures to meet standards.
 - g. Does not include drop fiber, which will be constructed as services are sold and will be monitored by local employees.
 - h. Will provide weekly progress reports construction and track all non-construction days due to weather.
 - i. Bi-weekly calls with company and RUS GFRs to review updates and timelines for the project.
 - j. Test results from completed fiber construction.
6. Cut sheets and as-built maps in Auto-CAD format.
 - a. Cutsheets will be created for fiber and copper connections as needed.
 - b. Cutsheets will be labeled as to identify all cables and equipment with appropriate naming system utilized by Owner.
 - c. Will also include depth profiles for buried, as needed.
 - d. As-builts will be provided in a geospatial format to be usable by the owner for any mapping systems they are utilizing.