



MACON COUNTY NORTH CAROLINA

Request for Proposals

Fiber Optic Deployment and Network Operator Nantahala Township

RFP No:	02-119900
Date:	January 23, 2023
Proposal Submission Deadline:	March 3, 2023, 4:00PM EST

Prepared for Macon County by Little T Broadband Services, Inc.

EXECUTIVE SUMMARY

The County of Macon, North Carolina, seeks proposals from qualified internet service providers to deploy and operate a high-speed fiber to the premises network within Nantahala Township. The County will offer funding in the form of a general funds grant to help subsidize a portion of the infrastructure cost.

The project defined in this Request for Proposals is the first part of a three-phase plan to bring high-speed internet service to Nantahala Township and is referred to as Nantahala Phase 1. The goal of this initial phase is to establish fiber infrastructure in the primary population corridors of the Township in and around Nantahala Lake within 2 years. The fiber deployed for this phase will initially be used to provide high-speed internet service to four County facilities and as many residences and businesses as possible located within 500 feet of the fiber routes.

- Proposed fiber deployment method: aerial
- Proposed primary fiber distances: 11.6 miles
- Number of County facilities to be connected: 4

RFP Schedule

Date	Milestone	Description
01-23-2023	RFP Release	RFP Posted for general public release. Potential providers notified.
02-03-2023	RFP Intent to Respond	Providers interested in responding to the RFP are requested to notify the County of intent to respond.
03-03-2023	RFP Deadline to Respond	Response proposals submitted to the County.

Submission and Contact Information

Proposal Submission: Per applicable NC statutes, all proposals received by the County must be enclosed in a sealed envelope and either delivered by hand or USPS to the following address.

Macon County Finance Department
Attn.: Ms. Lindsay Leopard
5 West Main Street
Franklin, North Carolina 28734

RFP Email Inquiries: MCBroadbandRFP@littletbroadband.org

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REVISION HISTORY

Date	Revision	Editor	Description
10-22-2022	0.0	Jeff Lee	Document creation
01-06-2023	RC1	Jeff Lee	Release Candidate 1 – for review by MC BOC
01-23.2023	1.0	Jeff Lee	Public Release

DOCUMENT REFERENCES

Document	Revision	Description
Macon County Broadband Expansion Proposal for Nantahala	V1.0 Nov 10, 2022	Initial proposal which outlines a plan to expand broadband infrastructure in Nantahala Township of Macon County

NANTAHALA BROADBAND PROJECT INFORMATION

1. OVERVIEW

1.1. Purpose

Through this Request for Proposals, the County of Macon, North Carolina seeks proposals from unaffiliated qualified internet service providers to deploy and operate a high-speed fiber to the premises network within Nantahala Township located in northwestern Macon County. Such a high-speed network is desired to improve safety and education for residents and promote general economic development for businesses in the area. Based on responses received for this RFP, the County intends to select a qualified Provider and enter into an agreement to start the project.

1.2. Background

Nantahala Township is a rural and remote community in Northwest Macon County. Primary access to this community from central Macon County is gained via Wayah Road by traversing Wayah Gap. The area is also accessible from Cherokee County to the west via Junaluska Road, or from Swain County and US 74 to the north via Wayah Road.

The terrain in this area is very rugged and composed as a series of creek valleys and gorges that feed into Nantahala Lake. The primary population in the area lies to the northern and eastern sides of Nantahala Lake, with a more isolated community located on the west side of the lake and south of the dam.

Nantahala Township currently has no high-speed broadband internet service available to businesses and residences. Though solutions may be possible in a 2-6-year timeframe from either the Frontier GREAT grant or Charter RDOF awards, neither of these programs are guaranteed. The County therefore wishes to accelerate the deployment of broadband to bring much needed connectivity and help to improve education, safety, and economic development to citizens in this area.

1.3. Objective

After completing numerous studies of alternative technology solutions with multiple consultants and providers, the County believes that a fiber solution is needed to meet coverage, reliability, and longevity requirements. The County has therefore defined a broadband expansion plan that would develop critical fiber infrastructure needed to bring high-speed broadband service into Nantahala Township area in three deployment phases. The project specified in this RFP is defined as **Nantahala Phase 1**.

The fiber infrastructure deployed during this phase is intended to initially provide connectivity to four County facilities, and some number of residences and businesses within 500 feet of the primary fiber routes. It is also intended that fiber infrastructure deployed during Nantahala Phase 1 will be used for expansion of service to additional residences and businesses through subsequent deployment phases.

In accordance with N.C.G.S. 153A-349.60. Authorization to Provide Grants, the County is prepared to provide grant funding through a grant agreement to subsidize a portion of the infrastructure cost. Additionally, the County is willing to offer and enter into Right of Way and Co-location Easement agreements as needed to assist the chosen Provider in developing and deploying the required fiber infrastructure.

1.4. RFP Schedule

Date	Milestone	Description
01-23-2023	RFP Release	RFP Posted for general public release. Potential Providers notified
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1.5. Proposal Submission and Contact Information

Per applicable NC statutes, all proposals and supporting attachments received by the County must be enclosed in a sealed envelope and either delivered by hand or USPS to the following address.

Macon County Finance Department
Attn.: Ms. Lindsay Leopard
5 West Main Street
Franklin, North Carolina 28734

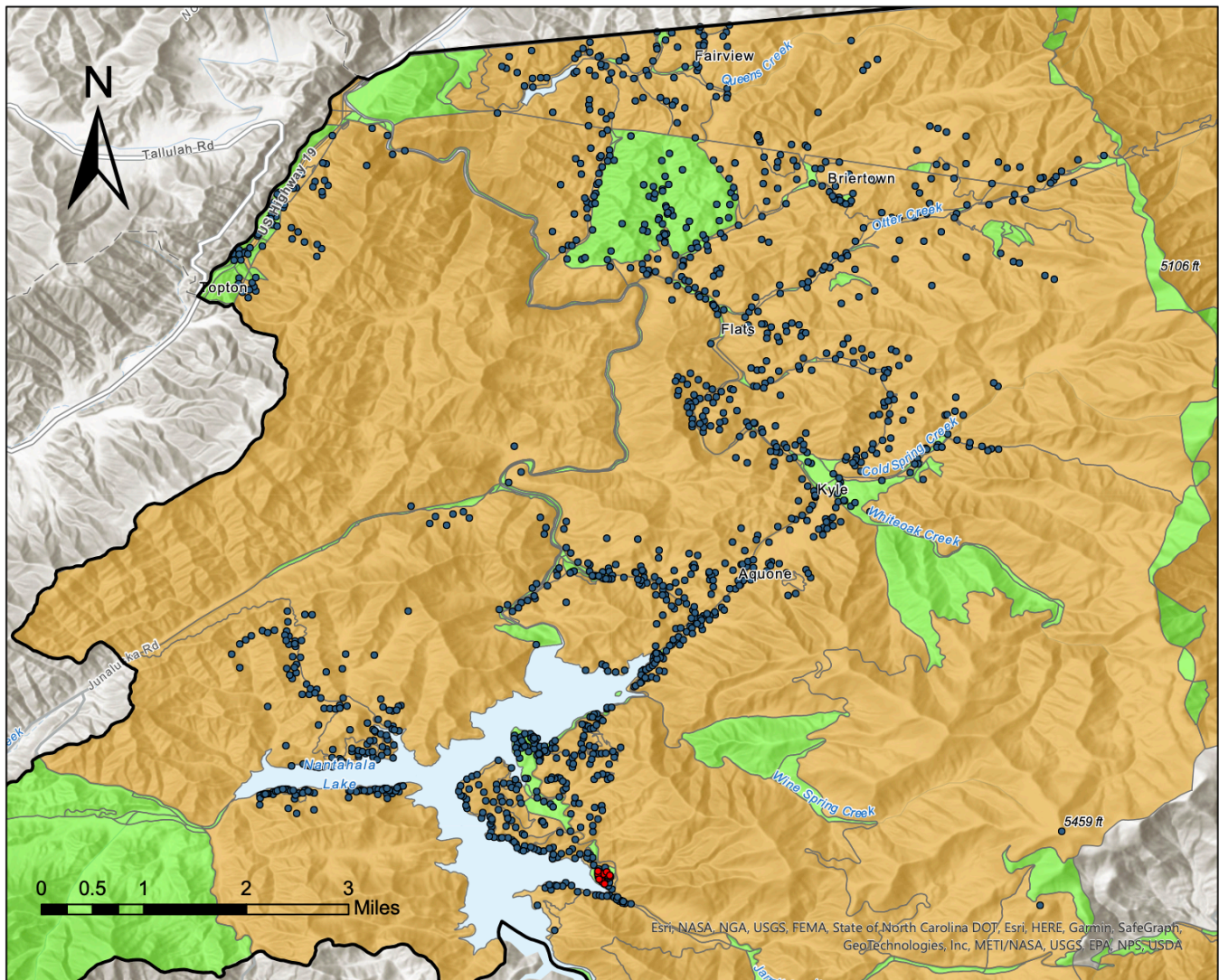
RFP Email Inquiries: MCBroadbandRFP@littletbroadband.org

To be considered for selection, a proposal must be received by 4:00 p.m. EST Monday, March 3, 2023. Any proposals received after this deadline will not be accepted or considered.

2. SCOPE OF WORK

2.1. Service Area

Macon County seeks a qualified Provider of high-speed internet service to implement the Nantahala Phase 1 project. The intended coverage area of Nantahala Township in northwest Macon County is shown in the following map.



Map Legend

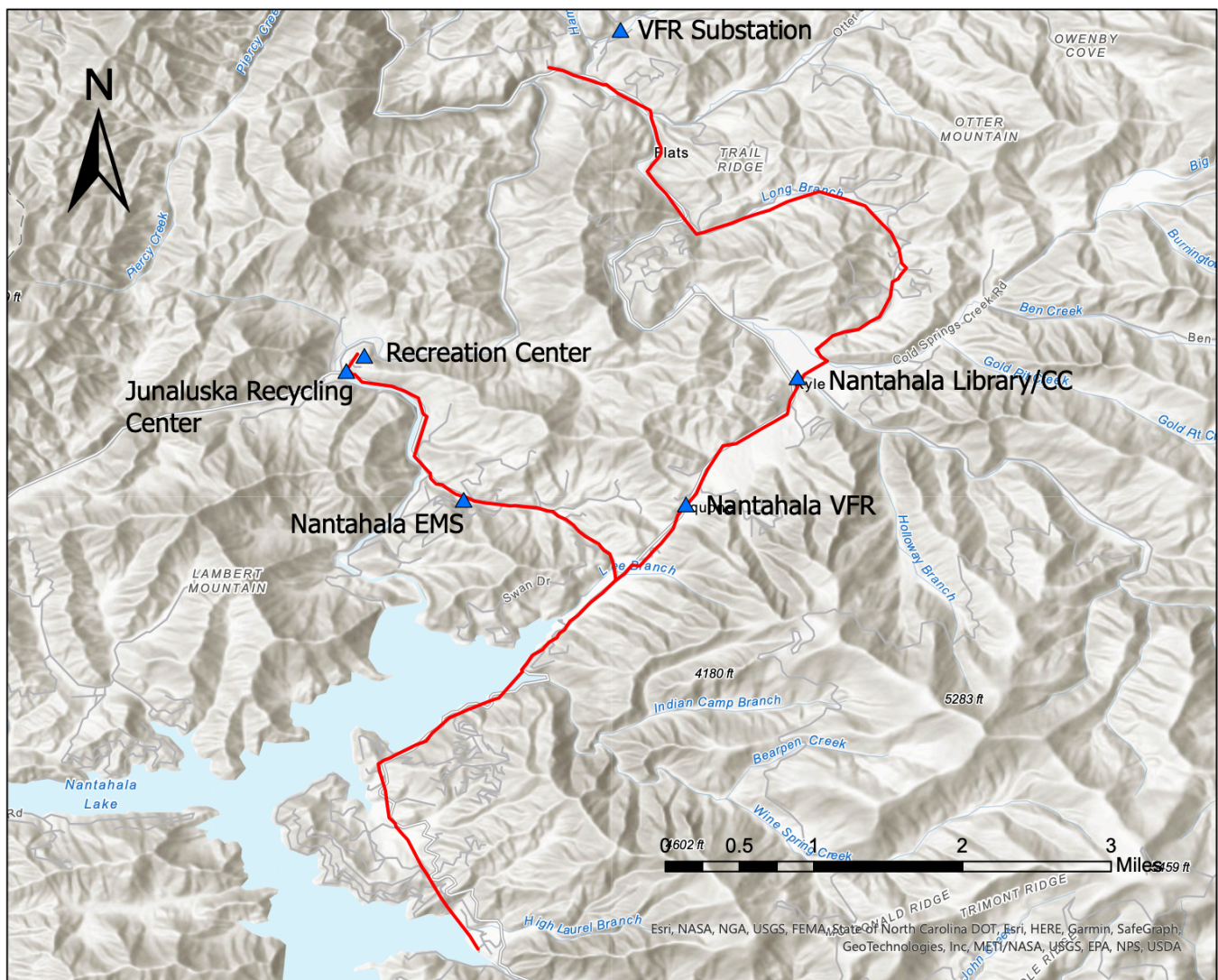
- | | |
|--------------------------------|---------------------------------|
| Macon County Boundary | FCC RDOF904 Ineligible Areas |
| AddressNC Servicable Locations | FCC477 GREAT/CAB Eligible Areas |
| Frontier GREAT Award Locations | |

Within the above map, blue dots indicate AddressNC broadband serviceable locations within the Township, and red dots indicate those locations awarded to Frontier under the GREAT 2022 program that may be served by 2025. Regions in tan represent RDOF areas awarded to Charter Communications that may be served by 2028. Areas in green represent those expected to be eligible for the future NC CAB grant program in 2023.

2.2. Initial Fiber Deployment

The Nantahala Phase 1 project is intended to create primary fiber infrastructure along the major corridors in the area which include:

- Wayah Road
- Junaluska Road



Map Legend

— Proposed Phase 1 Fiber

▲ Nantahala County Facilities

Given the rugged terrain in the area, it is anticipated that aerial fiber deployment along the Duke Energy power pole infrastructure will be the most cost-effective approach. However, this will not preclude a Provider from deploying buried fiber where desired.

The following table lists the estimated fiber distances anticipated.

Fiber Segment	Endpoints	Estimated Distance	Deployment Method
Wayah Road North	Winding Stairs Road -Junaluska Road	5.9 miles	Aerial
Wayah Road South	Junaluska Road -Lake Drive	2.5 miles	Aerial
Junaluska Road	Wayah Road -Old River Road	3.2 miles	Aerial

2.3. Fiber Network Requirements

The Nantahala Phase 1 fiber deployment must meet the following requirements:

- Network should be capable of delivering up to 2Gbps/2Gbps via direct FTTH service
- Deployed fiber must be capable of supporting future performance (speed) upgrades
- Deployed fiber must have the capacity (strand count) to support future coverage expansion
- All electronics and optics must be field upgradable to support future performance and capacity expansion
- Deployed fiber must provide a service life expected to exceed 20 years

2.4. Service Requirements

- Multiple speed tier fiber internet service plans available
- Available basic and lifeline VoIP telephone service
- No/low-cost access plans available through the FCC ACP program

2.5. County Facility Service Provisions

The following County facilities are candidates for connection. Connection of the facilities marked as “Required: Yes” are necessary components of Nantahala Phase 1.

Facility	Address	Description	Service Type	Required
Nantahala Library /Community Center	36 White Oak Lane Topton, NC 28781	New library and community building under development	Wired for computers Protected WiFi Public WiFi	Yes
Nantahala EMS	1096 Junaluska Rd Topton, NC 28781	Existing regional EMS	Wired for computers Protected WiFi Public WiFi	Yes
Nantahala VFR	19036 Wayah Rd, Topton, NC 28781	Existing primary fire and rescue	Wired for computers Protected WiFi Public WiFi	Yes
Nantahala Recreation Center	2341 Junaluska Rd Topton, NC 28781	Existing public rec center	Public WiFi	Yes
Nantahala VFR Substation (North)	405 Windingstairs Rd Topton NC 28781	Existing substation	Wired for computers/security Protected WiFi	No
Nantahala VFR Substation (Future West location)	5301 Junaluska Rd, Andrews, NC 28901	New substation facility under development	Wired for computers/security Protected WiFi	No
Nantahala Junaluska Recycling Center	2347 Junaluska Rd Topton, NC 28781	Existing recycling center	Public WiFi	No

2.6. Residential and Business Service Provisions

In addition to creating needed fiber infrastructure and connecting key County facilities, the Nantahala Phase 1 project also seeks to connect residences and businesses within 500 feet of the primary fiber deployment. Within the 11.6 miles served by the proposed corridor fiber deployment, there are 231 estimated locations within 500 feet that can be served.

Note: There are regions along the proposed fiber routes that are eligible for the upcoming NC CAB Grant program and are shaded green on the map in Section 2.1. At the time of this RFP release, it is recommended that the Nantahala Phase 1 project exclude connection in these areas to maintain their eligibility for NC CAB funding, with the intent that these locations will be served during a Nantahala Phase 2 project funded through CAB. The above estimated location count does not include these locations. This recommendation may be revised in the future once the CAB program is officially released.

2.7. Desired Deployment Schedule

A primary goal of this project is to accelerate the deployment of high-speed internet services beyond what can be accomplished through longer term and less certain federal and state grant programs. Accordingly, the County desires the completion of Nantahala Phase 1 within two (2) years from execution of final agreements.

3. GRANT PROVISIONS

In accordance with N.C.G.S. 153A-349.60. Authorization to Provide Grants, Macon County is prepared to provide partial grant funding for Nantahala Phase 1. The purpose of such grant funding is to create the availability of high-speed Internet service in the Nantahala Township of Macon County. This area is currently unserved by high-speed Internet access service, and such a grant would be used to promote safety, education, and economic development in the area. The grant amount to be allocated from Macon County general funds shall not exceed \$400,000.00. The grant funding awarded shall be made available to the selected Provider upon execution of a formal grant agreement between Macon County and the Provider.

All funding from Macon County must be applied during the two-year duration of the Nantahala Phase 1 project. It is also desired that subsequent phases beyond the first two years be considered by the Provider to connect additional residences and businesses. Subsequent phases would be funded by the Provider and/or through other grant programs.

4. RFP RESPONSE PREPARATION INSTRUCTIONS AND REQUIREMENTS

4.1. Provider Eligibility

Provider must demonstrate and show that it is a qualified private provider of high-speed Internet access service in the State of North Carolina at the time of RFP response.

Provider must be willing to provide high-speed internet and other services within the project area for at least 20 years.

Providers must closely review Section 5, Evaluation Criteria, of this RFP and be aware that this is a “Best Value” solicitation where the successful Provider will be selected based on evaluation criteria contained in Section 5 plus evaluation of all other elements contained in this section.

Provider understands and agrees that Macon County accepts no responsibility for any expense incurred by the Provider in the preparation and presentation of its proposal. Such expenses shall be borne exclusively by the Provider.

4.2. Required Proposal Elements

The following elements are required in all proposals submitted in response to this RFP.

4.2.1. Executive Summary

Provider must include in their proposal an executive summary (not to exceed two pages) that describes their approach and estimated costs for the project that is being proposed.

4.2.2. Map

A map must be included showing the deployment of Nantahala Phase 1 fiber and the locations of the residences and businesses that are proposed to be connected. This map should indicate aerial vs underground fiber installation, proposed co-location sites if any, and proposed backhaul route.

4.2.3. List of Locations to be Served

Include a list of locations to be served at the completion of the Nantahala Phase 1 project. This list must be delivered as a GIS shapefile, or as a CSV list of geocoded locations based on the AddressNC database used for the NC GREAT and CAB grant programs.

4.2.4. Network Technical Specifications

Describe in detail the type and specifications of technology and equipment that is being proposed including upload and download speeds and the service delivery methods. This description should include discussion of elements that may provide redundancy or other reliability enhancement. The Provider shall demonstrate and show how the proposed project will meet the technological needs of current and future businesses, public institutions, government buildings, volunteer fire departments, community centers, educational institutions, and residents within Nantahala Township.

4.2.5. Planned Point of Presence

Provider must identify and describe the infrastructure that will be used to provide the point of presence connection and whether that infrastructure is Provider owned or must be leased or procured from another provider.

4.2.6. Expansion Capacity

Providers must provide a description of the future growth capacity of their proposed high-speed internet access service solution and its ability to adapt to new broadband applications and requirements. This description must address the ability to support expanded coverage in the area through subsequent deployment phases.

4.2.7. Enhanced Features and Functionality

Provider should describe any enhanced features and network functionality that may add value to the highspeed internet access service network being proposed.

4.2.8. Services Offered

Describe all services that will be provided as part of the high-speed internet access network being installed, such as internet services, phone, television, home security, and ACP subsidized service packages.

4.2.9. Pricing for Services

Provider must include planned pricing for residential and business services that will be available on the high-speed internet access network.

4.2.10. Customer Support and Service Level Agreement

Providers must include a description of how customer service support will be provided, and typical wait times associated with service requests and service outages.

Provider must describe their Service Level Agreement. Macon County facilities will require timely resolution of service outages. Provider shall furnish a description of the process that will be used in the event of a service outage including whether customers will be notified when service outages occur, how customers will be notified, and how customers can report a service outage.

4.2.11. Company History and Experience

A narrative that accurately describes the company's history and experience in providing highspeed Internet access service is required.

4.2.12. Profit/Loss Statement

Provider shall include a copy of its most recent profit and loss statement.

4.2.13. Associated Business Partnerships and Relationships

Provider should describe any business or partnership relationships with other providers or entities that may affect the capability and/or services provided by the proposed high-speed internet access service network.

4.2.14. Professional Qualifications and Technical Staff

Provider must detail the qualifications of the company's technical staff that will oversee and ensure reliable operation of high-speed internet access service network.

4.2.15. References

All proposals must contain three (3) customer references (including name, address, and phone number of the contact person) to help indicate the Provider's fitness as an acceptable source possessing the ability to meet the requirements for this project.

4.2.16. Provider Economic Benefit to the Area

Provider shall comment on how their company's selection might have a positive direct and/or indirect impact on economic development in Nantahala Township.

4.2.17. Financial Estimates and Grant Justification

Provide a detailed estimate of the total dollar cost for the project. Demonstrate how Macon County grant funding will be incorporated into the project budget.

4.2.18. Deployment Schedule

Include a high-level deployment schedule/timeline which provides projected dates for the following milestones:

- Estimated start of construction
- Completion of primary fiber build and activation
- Completion and activation of connections to required County Facilities
- Completion of service activation to proposed list of residence and business locations

4.3. Agreement Requirements**4.3.1. Assignment of Rights**

During the performance under any grant agreement, the Provider shall not assign, transfer, convey, sublet, or otherwise dispose of any grant agreement or any of its rights, title or interest therein, without the prior written consent of Macon County, North Carolina.

4.3.2. E-Verification Compliance

Provider is required to comply with the requirements of Article 2 of Chapter 64 of the North Carolina General Statutes concerning e-verification at the time of entering any grant agreement, and at all times during the performance of any grant agreement. All subcontractors utilized by the Provider are likewise required to comply with the requirements of Article 2 of Chapter 64 of the North Carolina General Statutes concerning e-verification at the time of entering into a contract, and at all times during the performance of the contract. Provider shall take necessary steps to include this provision in all contracts with subcontractors who will perform any portion of the work covered by the contract.

4.3.3. Insurance Requirements

Upon entering into a grant agreement with Macon County, Provider shall be required to purchase and maintain insurance that will protect the Provider from claims which may arise out of or result from the Provider's execution of work by its employees, agents, or subcontractors. If any of such work is to be performed on Macon County owned or leased premises, the Provider agrees to carry liability and workman's compensation insurance, and to indemnify Macon County against all liability, loss, and damage arising out of any injuries to persons or property caused by the Provider's employees, agents, or subcontractors.

4.3.4. Provider Status Under Grant Agreement

A Provider entering into a grant agreement with Macon County shall be an Independent Contractor with respect to Macon County.

5. EVALUATION CRITERIA

The following factors listed below will be used in evaluating Provider's proposal responses:

- The number of unserved residences and businesses proposed to be connected.
- The number of County facilities to be connected
- Best overall project cost model proposed.
- Best technical performance proposed.
- A projected deployment schedule that meets or completes ahead of the desired project duration.
- Provider's plan for having a local presence in Macon County and adding local jobs and/or facilities in Macon County as part of the proposed high-speed internet access service network.
- Provider's stability, experiences, and record of past performance in delivering such services in North Carolina and other areas.
- Positive impacts on economic development in Macon County associated with the proposed Nantahala Phase 1 project including but not limited to increasing the population, taxable property, employment, and/or business prospects of Macon County
- Provider partnership or joint business arrangements which may positively impact economics and/or the high-speed internet coverage and related services.

6. ADMINISTRATIVE

6.1. Proposal Submission Instructions

Per applicable NC statutes, all proposals and supporting attachments received by the County must be enclosed in a sealed envelope and either delivered by hand or USPS to the following address.

Macon County Finance Department
Attn.: Ms. Lindsay Leopard
5 West Main Street
Franklin, North Carolina 28734

In addition to a printed proposal package, the County also requests an electronic copy be provided via a USB FLASH drive. Proposals must be received by 4:00 p.m. EST Monday, March 3, 2023. Any proposals received after this deadline will not be accepted or considered

6.2. Signatures

All proposals must be signed with the Provider name and by an officer or employee with authority to bind the Provider to the proposal given in response to the RFP. Legal title of the signer must be indicated. The officer or employee signing the proposal on behalf of the Provider shall certify that he/she has carefully read the same and certify that the same is truthful in all regards. Obligations assumed by such signature must be fulfilled or Provider shall be removed from Macon County's active file of providers.

6.3. Proposal Document Formats

All proposals should be submitted in a form that clearly addresses each of the requirements. The financial estimates quoted must include all costs associated with the requirements listed, including all installation costs and taxes, if applicable.

Specific Proposal Electronic Document Formats:

- General proposal narrative, and supporting statements: PDF
- List of Locations to be Served: Shapefile or CSV

6.4. Inquiries and Questions Related to RFP or Project

Inquiries concerning this RFP must be submitted via email prior to 4:00 p.m. March 3, 2023 to: **MCBBroadbandRFP@littlebroadband.org**

General questions and answers will be posted on the Macon County Website (maconnc.org) under "Nantahala Broadband Expansion Project Q&A".

6.5. Availability of Supporting Map Data

Macon County will make available all GIS map data developed for the Nantahala Broadband Project in the form of shapefiles. Providers may request this data by email through the inquiry email address listed in Section 6.4.

6.6. Evaluation

Macon County will enter into a grant agreement for high-speed Internet access service expansion within 60 working days after the proposal deadline in this RFP if a Macon County determines in its sole discretion that a suitable qualified Provider of high-speed Internet access service is found. Macon County intends to award and execute a grant agreement in accordance with applicable North Carolina laws.

6.7. Agreements

If Macon County will be required to sign a contract service agreement with the Provider, a copy of the same must be provided with Provider's response to this RFP.

The selected Provider shall be required to enter into a grant agreement with Macon County which is satisfactory to Macon County, and which is consistent in all regards to this RFP and Provider's response.

6.8. Delays or Withdrawal

The successful Provider shall not be held responsible for delays in performance of a contract caused by strikes, lockouts, labor disturbances, supply chain issues, acts of the government, or other causes which are beyond the control of and are not the fault of the Provider.

Any Provider may withdraw its proposal by written (email) request at any time prior to the entry of a grant agreement with Macon County.

7. OTHER PROPOSALS

Separate and apart from proposals regarding the Nantahala Phase 1 project, a Provider may make an additional proposal or proposals to expand the availability of high-speed Internet service in Nantahala Township beyond the scope outlined in this RFP.

8. MISCELLANEOUS

8.1. Provider Selection

This solicitation is a “Best Value” solicitation and is not based only on lowest cost/price. Macon County reserves the right to select the proposal which in its sole judgment best meets the unserved high-speed Internet access service needs of Macon County.

Macon County has total discretion in the determination of evaluation criteria weights and how those weights are applied to the individual evaluation criteria contained in this RFP.

8.2. Right to Reject or Waive

Macon County reserves the right to reject all proposals and discontinue the RFP process without obligation or liability to any potential Provider and without obligation to enter into any grant agreement.

Macon County reserves the right to waive any irregularities or informalities in any proposal or in the proposal process. Macon County reserves the right to unilaterally define irregularities or informalities should there be a need to do so.

8.3. Franchise

Macon County reserves the right to award more than one grant agreement to one or more eligible Providers. Provider shall gain no franchise, exclusive franchise, or other exclusive rights from Macon County.

8.4. Disputes

In the event of a dispute, the Provider and Macon County agree that the venue and forum to decide such dispute shall be in the General Court of Justice for the State of North Carolina in Macon County.

8.5. CAB Grants

Provider is encouraged to commit to Macon County its willingness to pursue “CAB Grants” from the State of North Carolina and other available grants for the purpose of expanding high-speed internet access to locations which remain unserved at the completion of the Nantahala Phase 1 project.

GLOSSARY OF TERMS

Term	Definition
ACP	Affordable Connectivity Program. This is a federal subsidy/reimbursement program administered by the FCC which is designed to provide low or no cost internet service to qualified low-income individuals and families.
AddressNC	AddressNC is a geocoded database of addresses within the state of NC that can be served by broadband and correlates to the state 911 database. The NC broadband grant programs require use of this database in determining the number of locations that will be served by a given grant award
Aerial Fiber	Fiber optic cable that is suspended above ground, typically along power poles.
Backhaul	A connection which links a network to the global internet.
Broadband	A collection of technologies and networks used to distribute high-speed internet services to residences and businesses.
CAB	Continuing Access to Broadband. This is a secondary broadband grant program also initiated by the NC legislature in 2021 and is administered by NCDIT . The CAB program awards grants through the RFP process. RFPs are developed through collaboration between participating NC Counties and NCDIT .
DS/Downstream	For an internet connection this is the flow of information from the internet to the device connected. Connection speed is measured in both the downstream and upstream directions and is typically shown as DS/US which indicate downstream and upstream data rates.
EMS	Emergency Medical Services
Easement	An easement is a legal agreement between a property owner and provider which grants the provider access to the property and/or to place additional supporting equipment on the property.
FCC	Federal Communications Commission.
FCC 477	FCC Form 477 Broadband Availability Data . This data, which is mapped to census blocks, represents the most current broadband availability information from the FCC to date. FCC 477 data was used to help determine eligible locations for NC GREAT and CAB grant programs. This data is known to be highly inaccurate, depicts availability at the census block level, and is based on historically exaggerated coverage information from providers .
Fiber Optic Cable	Cabling made from glass fiber that is used to transmit broadband data in the form of light energy instead of electrical energy as transmitted through copper wire cables. Fiber Optic Cable can transmit broadband data at higher speeds and longer distances than tradition copper wire cables.

Term	Definition
Fiber Optic Network	A system of fiber optic cables and associated hardware used to deliver high-speed internet service.
FTTH	Fiber to the Home, also sometimes referred to as Fiber to the Premises. This is a type of wired internet connection which uses fiber optic cable instead of copper wire. Fiber internet connections are capable of delivering much greater speed than most forms of wired copper or wireless technology.
Gbps	Gigabits per second. The units used to measure data rate or speed over an internet connection equaling one billion bits per second.
GREAT	Growing Rural Economies with Access to Technology. This is the premier broadband grant program initiated by the North Carolina legislature in 2018. The NC GREAT grant program is governed by NC legislation and administered by NCDIT . The GREAT program awards grants to eligible applications submitted by providers based on a scored criteria.
High-Speed Internet	Internet connection that meets current federal standards for “high-speed”, currently defined as a data rate of 100/20 Mbps or greater.
Lateral	A fiber optic cable that branches off from a fiber backbone or another fiber lateral to serve a group of residences or businesses.
Mbps	Megabits per second. The units used to measure data rate or speed over an internet connection equaling one million bits per second.
Nantahala Phase 1	Nantahala Phase 1 is the initial deployment phase of a plan developed by Macon County for broadband expansion in Nantahala Township. Three deployment phases are planned, each building on work and infrastructure in the prior phases.
NC	State of North Carolina
NCDIT	North Carolina Department of Information Technology. Within NCDIT, the Division of Broadband and Digital Equity administers all broadband grant and related support programs for the state of North Carolina.
Network	A collection of cables, wireless radios, and supporting hardware that is used to distribute internet connectivity to residences and businesses.
PON	Passive Optical Network. This is a broadband network composed of fiber optic cables that requires no powered electronic equipment in the path between a distribution point and the end user.
Provider	An abbreviated term used to reference an unaffiliated qualified Internet Service Provider. In the context of this RFP: “Unaffiliated” means the Provider is not a subsidiary of Macon County; “Qualified” means that the Provider is recognized, meets all required qualifications, and is registered in the State of North Carolina to provide internet services.

Term	Definition
RFP	Request for Proposals. This is a document published which defines the scope of a project and other conditions and provides guidelines for the submission of proposals by interested Providers .
RDOF	Rural Digital Opportunity Fund. RDOF is a third-generation broadband subsidy program administered by the FCC which awards funding to service providers through a reverse auction process. Service providers place bids to serve eligible census block tracts, and the lowest bids wins the subsidy award. RDOF award winners have 6 years to provide service to awarded census blocks.
RDOF 904	RDOF Auction 904 was the most recent version of the RDOF program launched in 2020. The FCC began rolling out awards under this program in mid 2021. Charter Communications won all available census tracts in Western North Carolina, and their awards nation-wide were finalized in March of 2022. Charter's 6-year clock to provide service in Macon County thus ends in March of 2028.
ROW	Right of Way. A portion of a roadway or property where telecommunication cabling may be buried or run above ground on power or telecommunication poles.
Underground Fiber	Fiber optic cable that is buried below ground level. For large capacity cable used in backbones and laterals , this cable is typically run through plastic conduit which connects to a handhole at each end. For smaller fiber drop cable running to a residence or business, this cable can be direct buried.
US/Upstream	A flow of data coming from the user and going to the internet.
VFR	Volunteer Fire and Rescue.