

Request for Proposals for
Services, Operations, and Maintenance
of Municipal Fiber Optic Network

Village of Bald Head Island, NC

Issued: May 20, 2015

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I. Introduction

The Village of Bald Head Island is the southernmost population center in the state of North Carolina. Located at the southern end of Smith Island on the east side of the Cape Fear River in Brunswick County, it is only accessible by ferry from the nearby town of Southport. The Village is comprised of a nucleus of some 220 full-time residents, and a much larger group of part-time and seasonal residents, supported by approximately 100 local businesses. The Village's roughly equidistant regional proximity to the Research Triangle area of Raleigh, Durham, and Chapel Hill; Charlotte, NC; Columbia, SC; and Charleston, SC, as well as its closer proximity to Wilmington and Fayetteville, NC, creates an opportunity for telecommuting.

The Village does not lie on the routes of any major highways or rail lines, but Village officials are planning now to ensure that the local economy will have robust Internet access and strong connections to all information highways.

Village officials have prioritized pursuing access to affordable high-capacity broadband networks.

The Village is seeking a service provider to construct and operate a fiber-to-the-premises (FTTP) network, and is seeking private parties interested in providing robust broadband services to its homes and businesses.

The Village has initiated this Request for Proposals (RFP) to identify one or more private partners to enable or directly provide high-capacity broadband services over fiber to end-users within the Village. The Village seeks input from potential providers regarding the terms and conditions under which they would participate in such a project.

We are particularly interested in providers who will use the fiber to provide ultra-high-speed network access. We define ultra-high-speed as being in the multiple-hundred megabit-per-second (Mbps) to gigabit-per-second (Gbps) range.

We also seek partners who will, if necessary, consider a variety of models that share technological and operational responsibilities and financial risk between the partners in innovative ways.

We view the goal of this project to be the provision of 21st century communications services to residents, visitors, and local businesses. Broadband can enable communities, otherwise at a disadvantage, to participate on more equal footing in the emerging global economy. The Internet can enable many types of businesses to locate anywhere—as long as there is enough bandwidth at affordable prices. High tech firms and other companies that rely on high connection speeds will go where they can flourish. Rental property owners understand that many of their potential customers require broadband for entertainment and to stay connected

to their work. Broadband-enabled communities generally have higher property values, improved job creation and retention, and better quality of life.

Responses to this RFP should state how the respondent's approach will further the Village's goals of attracting visitors, businesses, and residents, and encouraging economic development in the Village.

We seek to make Bald Head Island a more desirable place for visitors, businesses, and residents—who will see the quality-of-life benefits of broadband both directly through home connections and through enhanced services provided by the business community.

II. Project Background

On February 20th, 2013 at a Village government planning retreat, the elected officials and staff of the Village of Bald Head Island determined that the lack of adequate high-capacity broadband, among other issues, warranted immediate attention and effort. This determination was based on specific feedback and requests from local residents and businesses.

At their Council meeting on June 19th, 2013, the Mayor and Village Council created by resolution the Strategic Issues Group (SIG) to look at several important challenges facing the community, broadband access being one. Specifically, the SIG was created "...to have citizen input in government so as to use the expertise and talents of Island residents, property owners, business operators, and other stakeholders to most effectively address the issues and challenges faced by the Island." The SIG was formally mandated by Council to develop recommendations for improving access to high-capacity broadband on the Island.

The SIG met several times over the ensuing months, interviewing citizens and business owners, as well as researching the local capabilities of current providers, Tele-Media and AT&T. This task included sending a letter to current local providers of broadband services on the Island in July 2014 to request their input. In August, the SIG summarized those findings to Council.

The SIG identified the lack of high-capacity broadband as a strategic issue threatening the immediate quality of life and economic interests of local businesses, as well as a long-term threat to the economic viability of the Village. Of note, members of the real estate community suggested that the lack of adequate broadband on the Island has hindered real estate transactions and suppressed interest in economic activity on the Island. In short, the members of the SIG stated, "development and sustainability of the Island in the future rides on this project."

Based on the research and recommendations of the SIG, Village officials have determined to move forward with the development of enhanced broadband services on the Island through this RFP.

Inquiries were made by Village officials to local providers of existing broadband and communication services. The largest local incumbent provider of wireline telephone and limited DSL service was unresponsive to inquiries. The local cable company expressed interest but qualified that interest with a categorical statement that it possessed limited capital for even minimal investments in additional or improved local infrastructure. The third local provider expressed interest in further discussions. To develop additional options, the leaders of the Village developed this RFP.

III. Background on Village of Bald Head Island

The Village of Bald Head Island is an incorporated community in Brunswick County, North Carolina. It comprises 3.9 square miles of settled land out of a total area of 5.8 square miles. The Village is bordered on the north side by a wilderness preserve of tidal marsh, on the east and south by Atlantic Ocean beaches, and to the east by the Cape Fear River.

According to the 2010 U.S. Census, the Village has a population of approximately 158 year-round residents, approximately 1,200 housing units used as part-time housing and vacation rentals, and 100 local businesses. There are also approximately 1,300 additional buildable lots, for a total of about 2,500 potential premises for an FTTP network. The Village is adding approximately 10 to 15 new housing units per year.

Adequate broadband service is at such a premium that current real estate transactions require conveyance of current Internet service. Otherwise, new installations can take a very long time. Inadequate broadband is a known and aggravating hindrance to daily operations of local businesses. There is very strong demand from prospective real estate buyers for high-speed broadband. Current services are of inadequate quality, and worsen in bad weather and during peak usage.

Median household income on the Island is \$93,692, with mean household income at \$145,815. Per capita income is \$77,768. These statistics are well above North Carolina and national benchmarks.

The population of the Island is well educated, with 77.4% earning a bachelor's degree or higher, and fully a third earning a graduate or professional degree.

In 2012, the median housing unit value was \$733,175, up from \$531,000 in 2000.

Currently about 10% of the housing stock is utilized year round. About 45% is used as a second home, and occupied intermittently. The balance is used as rental housing, primarily between Memorial Day and Labor Day, when the population of the Village peaks at about 7,000 residents. There is a secondary seasonal rental market for a subset of those properties from May until September or October, with additional surges of visitors at Christmas and Easter.

It is anticipated that with the availability of high-speed broadband, the number of year-round residents would increase, and the utilization of second homes by telecommuters would also increase. The portion of rental properties used for the longer rental season is also anticipated to increase with the availability of high-speed Internet access.

IV. Statement of Need

The Village is seeking one or more Service Providers to provide fast, affordable services over Village-constructed fiber optics. The Village will construct fiber to some or all Bald Head Island homes and businesses, either on its own or jointly with a partner. The Village will lease the fiber or lit capacity to Service Providers to sell services and manage the relationship with the customer. We wish to find prospective partners interested in either constructing and owning an FTTP system, or leasing Village-owned dark fiber or lit fiber capacity, and to determine what services these partners would propose to provide.

The Village also seeks partners willing to service and maintain the network infrastructure. This role may be performed by a Service Provider or by a separate partner.

This RFP is released for the purpose of optimizing the Village's initiative and incorporating the needs and creative ideas of potential FTTP Service Providers. This information will assist in finalizing the Bald Head Island FTTP network design and defining the relationship between the Village and Service Providers.

Though no contracts or formal relationships will be established through this RFP, it will provide valuable information that will significantly influence the Bald Head Island fiber project and create a community of potential Service Providers for Village homes and businesses. It will also enable the Village to understand the capabilities and interests of potential partners and determine how to best include them.

All interested Service Providers are strongly encouraged to respond. We welcome the responses of incumbent Service Providers, competitive providers, non-profit institutions, and public cooperatives, as well as entities that are not traditional Internet Service Providers, but are interested in offering service under innovative business models (application providers, as an example). Nontraditional providers may respond as part of a partnership with a network service provider, or may provide a separate response outlining their approach.

V. Project Goals

There are several central goals to the Village's FTTP network undertaking. Respondents to this RFP and any possible subsequent RFP should indicate whether and how their proposal serves these goals:

1. Offer service to any customer connected to the Village fiber network; serving only limited areas of the Village or specific types of customers is less desirable.

2. Offer unique services and speeds not currently provided in the Village. For example, providing hundreds of megabits or gigabit per second speeds, providing symmetrical services, providing services that continue operating when commercial power fails, providing service level agreements, and providing direct connectivity between locations on the Village fiber.
3. Provide proposals that utilize innovative models, including:
 - a. Leasing Village-built and owned dark fiber to provide services
 - b. Partnering with the Village to construct and operate an FTTP network
 - c. Contracting with the Village to manage and provide services on a fiber network built, owned, and operated by the Village
4. Propose ways for the Village and prospective partners to share financial and operational risks.
5. Respond to the needs of the businesses connected to the Village fiber.
6. Provide cost-effective services for price-sensitive customers and flexible pricing plans given the large seasonal rental market.

For the network to have the intended economic and quality of life impacts, we consider both cost and availability of service to be important. We encourage responses that address both to maximize adoption of service.

VI. General Network Design and Construction Parameters

The Village is seeking a partner willing to deliver game-changing services using a best-in-class technical approach. Respondents are urged to consider fully fiber-based architectures providing long-term scalability and reliability. The following baseline technical attributes are preferred:

- Fully fiber-based connectivity to residential and business customers alike;
- Fiber strand capacity capable of providing direct homerun connections to businesses and residential “power” users;
- Fiber strand capacity and physical architecture (e.g., handhole placement, backbone routes, etc.) anticipating full development of up to 2,500 homes and businesses;

- Backbone topology capable of supporting connections over diverse paths from one or more central hub locations to fiber distribution cabinets distributed throughout the Village to facilitate high-availability service offerings;
- Fiber distribution plant placed in underground conduit (as opposed to direct burial cable) to more readily facilitate repairs and capacity upgrades; and
- Active components placed in environmentally hardened shelters and/or cabinets equipped with back-up power generation and/or batteries, as appropriate, capable of sustaining services in the event of extended power outages.

The Island is connected by fiber optic cable to the mainland in Southport. The fiber cable, owned by Duke Energy Progress, is collocated with the electric power transmission lines feeding the Island, which are placed under the Cape Fear River. The fiber has been made available for lease to local telecommunications providers in the past. The Village currently does not have existing fiber optic or communications conduit of its own.

Existing communications infrastructure and utilities on the Island are entirely underground; aerial construction utilizing existing utility poles is thus not an option. The Village anticipates that directional horizontal boring will be required for much of the underground conduit placement due to tree root systems and the congestion of the right-of-way in many cases. In total, the Village is comprised of approximately 31.2 miles of roadways.

Whether constructing the fiber infrastructure independently or in conjunction with its partner, the Village intends to actively support construction with whatever physical assets and cable pathways it is able to bring to bear, including rights-of-way, Village property, and utility easements. The Village has a large, centrally located lot suitable for construction contractor equipment and material staging.

As there is no bridge to the Island, access is by private boat or the ferry and barge system operated by Bald Head Island Limited. Rates and schedules for the barge, which may be used for transporting construction equipment and vehicles, can be found at www.bhibarge.com.

Construction activities will likely need to occur primarily during the off-season, essentially from Labor Day to Memorial Day, to minimize disruption to visitors vacationing on the Island.

VII. RFP Response Requirements

The Village of Bald Head Island requests the following information—in as much detail as is practicable—from respondents:

1. Affirm that you are interested in this partnership and address the core policy goals and requirements listed above. If you cannot meet any of those requirements, indicate the

requirements to which you take exception and provide an explanation of the exceptions.

2. Provide a statement of experience discussing past performance, capabilities, and qualifications. Identify other networks your firm has designed, built, maintained, or operated; include the levels of broadband speed, availability, and adoption among different categories of end-users and unique capabilities or attributes. Discuss other partnerships with other service providers, government or non-profit entities you have undertaken, particularly any involving dark fiber leasing. Describe the nature of the projects and your firm's role. Explain how your firm is a suitable partner for this project.
3. At a high level, summarize the technological and operational approach you would use for this project.
 - a. How would you use technology to meet the Village's goals?
 - b. What approach would you use to interconnect with the Internet and other public networks?
 - c. How would you perform network management?
 - d. Under what scenarios would you require route diversity or other special features in the Village fiber? At what sort of facility (or facilities) would you place network electronics?
 - e. Would you require direct, dedicated fiber connectivity to all premises or would a passive optical network utilizing passive splitters be suitable in some cases?
4. Summarize the business approach you would use for the project. How would your business plan help meet the Village's goals? What are the key assumptions? What are your main areas of risk, and how can the Village help reduce the risks?
5. If you currently operate communications facilities, inform us as to whether they are operated on an open access basis.
6. Describe your proposed schedule for implementing service. Offer a timeline with key milestones. Would you be able to begin service before the entire Village was constructed? Are there areas of the Village you would recommend be constructed first?
7. If you are proposing to perform fiber network maintenance, describe your ability to perform maintenance on an ongoing and as-needed basis. Provide estimates of the operating cost of maintaining the fiber optic outside plant for a Village fiber network and include your main assumptions.

8. List any requirements the Village must meet in order for you to partner with the Village on this project. What, if any, are the financial requirements you have of the Village in order to enter into a partnership? If you do not address this question as to financial requirements, it will be assumed that you are interested in the partnership but have no financial requirements whatsoever of the Village.
9. Describe the service options you plan to offer over this network (for example, data only, voice and data, a triple play of voice, data, and cable television, etc.). What download/upload or symmetrical speeds would you offer and guarantee to end-users? How will your residential and business offerings differ?
10. Provide a statement of how your proposed participation would help the Village's economic development goals. Describe your interests and plans to hire local contractors and providers in Bald Head Island, and how your participation would help local job creation. Describe your relationships with local businesses in Bald Head Island, if any, as well as your interest and plans to engage them in this project.
11. Provide three (3) references, including contact information, from previous contracts or partnerships.

VIII. RFP Response Process

Letter of Intent

All interested respondents are asked to submit a letter of intent via email by June 15, 2015 to the Village's consultant, CTC Technology and Energy, via email (BaldHeadIsland@ctcnet.us).

Questions

Questions related to this RFP should be emailed to BaldHeadIsland@ctcnet.us no later than **4:00 PM on June 30, 2015**.

Proposal Deadline

Final RFP submissions must be received in electronic form by close of business on July 20, 2015. Please send RFP response by email in PDF format to BaldHeadIsland@ctcnet.us.

Please identify any proprietary and/or confidential information as such.

Summary of RFP Process Deadlines

The following is the schedule for responding to this RFP. The schedule is subject to change:

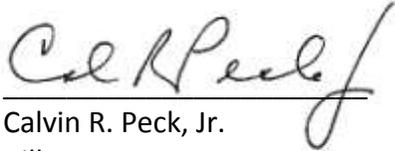
May 20, 2015 – RFP released

June 15, 2015 – Deadline for submitting letter of intent to respond to RFP

June 30, 2015 – Deadline for submitting questions

July 20, 2015 – RFP Responses Due

The Village of Bald Head Island thanks you in advance for your thoughtful response.

A handwritten signature in cursive script that reads "Cal R Peck, Jr." The signature is written in black ink and is positioned above a horizontal line.

Calvin R. Peck, Jr.
Village Manager