# Monhegan Plantation
# Request for Information

## Submitted by:


Mark Ouellette

Axiom

February 22, 2019
207.255.0679

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Dear Monhegan Plantation Broadband Committee,

Over the past year Axiom has worked closely with the Broadband Committee to set goals, create a strategic roadmap forward and ultimately deliver a design plan. Through the process we hope that our passion and eagerness to support your community's objectives has come through.

Axiom is a different type of company. Because of our company roots and philosophy starting with our founder's commitment to bring high-speed internet to every home in Maine, we have become known for our ability to work creatively to help remote communities achieve their broadband connectivity goals. That commitment is just as strong today in working with Monhegan Plantation.

As we have gotten to know the Broadband Committee members and the greater community, we have come to appreciate the unique challenges and the opportunities that better Broadband connectivity will bring to the residents of the island and the seasonal population.

We are responding to this RFI because we believe we have the particular set of skills and values that make us an exceptional fit to construct and operate a Broadband internet system on Monhegan Plantation. We would appreciate you giving us your most serious consideration.

Should you have any questions about this RFI response, do not hesitate to reach out to me at mark@connectwithaxiom.com or (207) 272-5617.

Sincerely,

Mark Ouellette, CEO

## 5.1 Company Description

# Axiom believes every connection counts.

We are pioneers, technologists, and teachers. We believe that broadband access is vital in today's digital age to create and sustain jobs and provide equal opportunity healthcare and education to all. We strive to create economic opportunities for everyone and to advance rural telecommunication models that are sustainable, scalable, and replicable.

### COMMITTED TO RURAL BROADBAND DEPLOYMENT

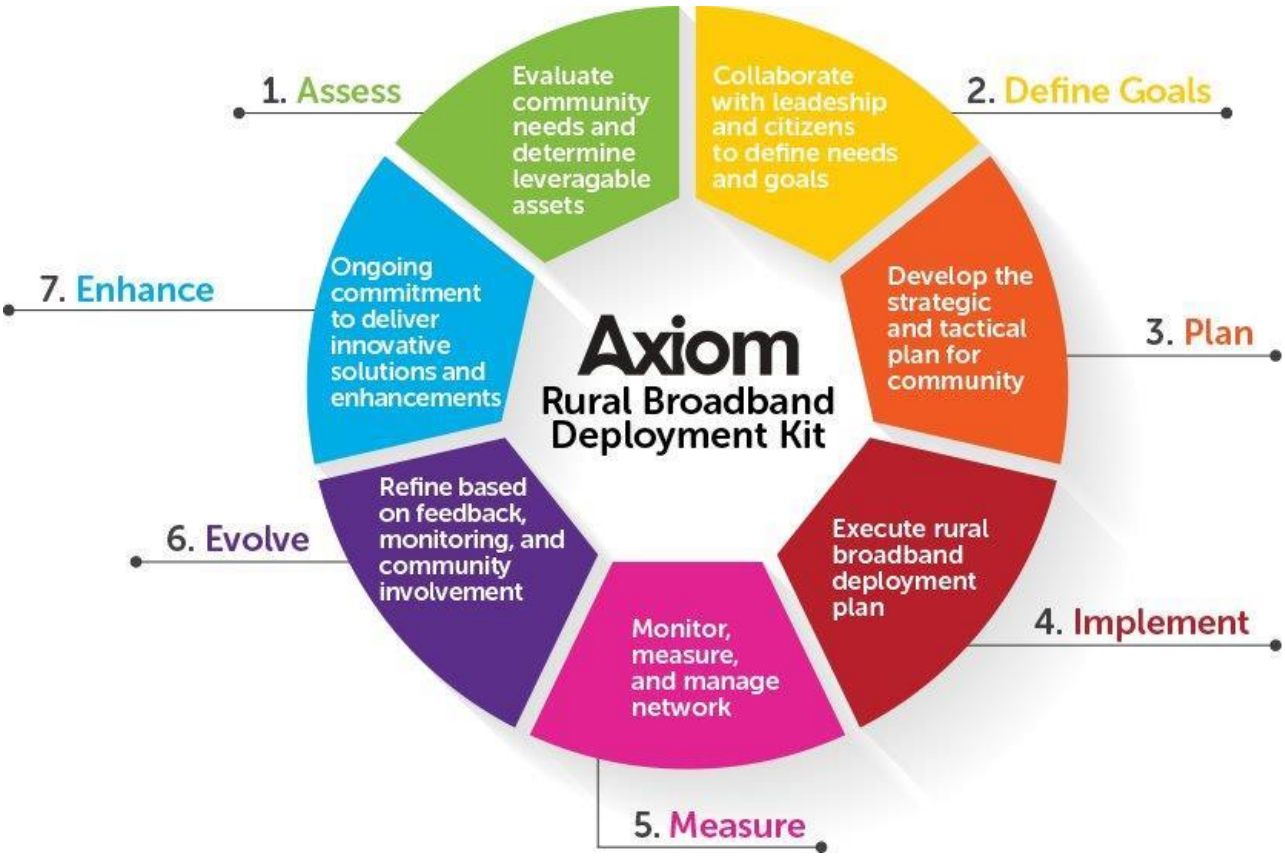
Axiom is working to deliver critical broadband services to rural communities and to connect them to each other and to the world. This is about much more than a fast connection — it is about people's livelihoods, education, and well-being.

### CONNECTING REMOTE AREAS OF MAINE AND OF THE WORLD

Axiom has a proven ability to shape rural deployment strategies, while driving innovative thinking. Over the past decade, we have designed and constructed more than 120 access points connecting more than 2,500 square miles in one of America's most challenging terrains — rural Maine. Today, we are working to provide these proven rural deployment solutions across Maine and beyond. We continue to innovate and use a combination of solutions including fiber, wireless, DSL, and TV White Space.

Axiom Technologies was incorporated in 2004 and has designed, built and maintained a blended network that include 30 miles of high-capacity fiber optics, several DSL deployments and a fixed wireless network that connects some of the remotest areas of Washington County. Axiom's operational footprint has grown beyond Washington County in the last couple of years and we have added 250 customers on Chebeague Island using a hybrid set of DSL, fixed wireless and fiber technologies and up to 220 customers on Cranberry Isles with a Fiber-To-The-Home Project connected with a high capacity wireless solution. With sustained growth of 25% over the past few years and many projects in the pipeline, we are poised to grow another 25% or more this year.

Over our 14 years in business we have evolved, not just as a network operator and constructor, but into a company that delivers a full suite of professional planning and development tools. Understanding the needs of communities and regions, Axiom has developed a Broadband Deployment Kit that helps communities understand their assets, develop goals and a plan for implementation and evolution that ensures that the broadband operating system continues to meet the needs of the community for many, many years to come.




Axiom does not deliver one-size-fits-all solutions. We customize our products and solutions based upon a number of factors including proximity to existing community assets, population density and terrain.

Axiom uses the best combination of product solutions. Our planning and deployment framework provides a methodology that allows for flexibility, but at the same time adheres to a clearly defined path. This helps ensure the best product mix and execution plan is used for each community. We are constantly pushing the technology envelope and are deeply familiar with Fiber Optic, DSL and a variety of Fixed-Wireless solutions, including emerging LTE and TV White Space… all are being used to connect real customers in our current operational network now.

We currently operate our main office in Machias and have satellite workers on Chebeague Island and Cranberry Isles with a total of 12-20 employees, depending on the season and our workload. Once we are completed building the Cliff Island network this spring, we will have an island employee there to efficiently and quickly address any networking and connectivity issues. We tend to do things ourselves, and all of our customer service, field crew, billing and engineering are done in-house in Machias.

## KEY STAFF AND EXPERIENCE

Axiom has been a pioneer of Broadband deployment in Maine. From its roots, the first wireless Broadband connection in Washington County in 2005, Axiom has grown to be a full-service engineering, planning and deployment, management and professional services team that assists communities to get connected or upgrade connectivity, while maintaining a network both in Washington County, Chebeague Island, Cranberry Isles and Cliff Island.

## Key Team Members:

### MARK OUELLETTE
CEO and President

Mark Ouellette is the CEO and President of Axiom with responsibility for overseeing and growing Axiom's Internet and wireless businesses and oversee all aspects of Axiom. Mr. Ouellette has held a number of senior leadership positions in the state of Maine. Previously, Mr. Ouellette was the Executive Director of Mobilize Maine, where he worked with regions across the state to help develop and implement measurable, private sector economic development strategies. Before that, Mr. Ouellette served as Director of Business Development for the State of Maine. Earlier, he served as Chief of Staff to U.S. Representative Tom Allen.

Mr. Ouellette has 20 years of economic and community development experience. He has a strong track record of successfully writing and securing federal, state, and foundation grants. Most recently, he was pivotal to receiving Axiom's premiere Microsoft grant award to provide Internet access to homes in Washington County, Maine, using TV white space. Under Mark's leadership the company has begun to grow, acquiring Chebeague.net in 2016 and designing, constructing and operating a Fiber-to-the-Home Network on Cranberry Isles and continues to expand the Professional Services side of the company working with over a dozen communities and counties across Maine, Massachusetts and Rhode Island to expand broadband and bridge the Digital Divide.

Mr. Ouellette is an active speaker and participant in panel discussions on a wide range of economic development topics and strategies, including providing broadband access to rural communities.

### NATE BRIMMER
Vice President of Operations

Nate has served in a variety of roles at Axiom and was named Vice President of Operations a year ago, charged with overseeing all aspects of day to day deployments and overseeing all of Axiom's various projects including all of our construction and operations on islands. Nate has spearheaded our Fiber-To-The-Home projects on Cranberry Isles and Cliff Island, which is scheduled to be built and operational by May 2019.

Because of Nate's personal connection to Monhegan Plantation, he has taken a special interest in this project, and you can expect him to act as a Project Manager on this build, should we win the RFI. Nate's expertise includes fiber optic network planning and construction, as well as managerial responsibilities with Axiom staff and all contractors.

### KIM EMERSON
Director of Special Projects

Kim Emerson serves as Director of Special Projects for Axiom, where he assists with wireless technologies, DSL, and fiber optic build-outs. His role includes network and technology planning, development of architecture and roadmaps, and the continued evolution of broadband deployment methodologies.

Mr. Emerson is proficient in a multitude of programming scripts and languages including Perl/CGI, Javascript, SQL, and ASP. He completed training and received certifications to administer and deploy the Mikrotik RouterOS platform including MTCRE, MTCWE and MTCTCE, as well as an A+

Certification, which he obtained to teach a certification course to high school and adult education students.

IAN SAWYER
Director of Network Services

Ian Sawyer serves Axiom's entire organization across many disciplines including managing Axiom's network infrastructure, maintenance and installations. Ian is the architect of many of Axiom customized builds for clients and communities and is an advisor on all significant projects at Axiom.

Mr. Sawyer is a CompTIA A+ Certified Technician with over ten years of hands-on experience with hardware and software technologies. He has the proven skills necessary to support complex IT infrastructures across rural communities. Mr. Sawyer has extensive experience in Windows Operating Systems, networking, firewalls, as well as identifying and preventing malware.

**Please find a summary of all of your questions addressed:**

1. How long has the company been in operation?
    a. Since 2004, coming up on our 14-year anniversary in June

2. The location of the field office closest to the island?
    a. Machias is our headquarters and all of our services are delivered from this office. We would commit, as we have in other locations to hiring someone on island to assist with customer relations and technical issues should we be chosen as the operator of a new fiber internet system

3. Technical, managerial and operational experience of the team
    a. Please see section labeled "Key Staff and Experience" above

4. How long has the company engineered internet infrastructure networks?
    a. Over 13 years

5. How long has the company constructed broadband networks?
    a. 5 years, if you are referring to fiber networks.

6. How long has the company provided internet services?
    a. Over 13 years, we were the first provider to bring wireless internet into Washington County.

7. The number of communities we serve?
    a. Close to 50. We have customers spread out across almost every Washington Country community including the unorganized territories and Chebeague Island and Cranberry Isles and soon on Cliff Island.

8. Number of internet customers and retention rate?
    a. We currently have approximately 1,200 customers and have a 1.5% turn rate, which is much lower that national industry average of 5%. A typical loss of customer would be for moving out of Washington County.

9. How the company typically builds, manages and maintains customer drops?
    a. We build and maintain our own drops and have two certified fiber optic splicing specialists
    b. We have technicians who build and maintain all of our DSL and Wireless connections at the home
    c. We have trucks that service customers with home visits to troubleshoot and maintain our network, including climbing towers, maintaining our core network, etc.
    d. All of this is done in-house with employees based out of our Machias HQs and with the assistance of a locally contracted technician on Chebeague, Cliff and Cranberry Isles

10. How customer service and troubleshooting is handled?
    a. Axiom currently is fully staffed in Machias with Tier I-III technical support staff available to take telephone calls and to remote into someone's computer to diagnose and fix issues
    b. Axiom maintains a Field Crew that is dispatched to fix issues at the home that cannot be fixed with phone technical help

11. Any contract termination and reason why?
    a. No

12. Growth of Company in recent years?
    a. 25% growth for several years, and increasing national, state and local recognition of our company

13. How services are marketed, and customers are recruited?
    a. Word of mouth is our preferred referral method, someone says nice things about us and tells their friends and neighbors. We also utilize mail, walking door to door with flyers or door hangers and on-line communication
    b. In the case of Monhegan Plantation, we would likely go door to door and use social media as much as possible to reach take rate expectations.

14. Services offered, including but not limited to, business and residential internet services and features, speed offered and other measures of internet quality, subscription/take rate for our services, seasonal or bundling services offered, tiers of service and pricing provided, and technology and equipment used
    a. We offer a wide variety of services, technology and plans. Technology- a variety of wireless including licensed and unlicensed, fiber optics and DSL. Our service levels range from 3Mbps up to 100/100Mbps symmetrical service, depending on the connection and location of the customer. We do offer VOIP phone service and have been testing TV service but have not formally offered a television package to subscribers. We do offer prioritized response and 24/7 network monitoring for business customers, but this has not traditionally been part of our core business and have found the majority of businesses are not interested in these enhanced services and would prefer to pay the same as a residential customer. Generally, our rates run from $45.99- $119.99 per month.

15. The payment options available for customers and how billing and collections are handled
    a. We offer paper and electronic billing
    b. We offer monthly, quarterly, semi-annual and annual billing
    c. Customers can pay by check, credit card, by phone, online or by mail

All of our billing and collections is handled from our office in Machias.

**Summary of Section 5.1**

- Nate Brimmer is a key employee who understand Monhegan Plantation, having lived there
- Axiom is committed to hiring and training a year-round, part-time technician on the island
- We are experienced in remote, difficult deployments and have an accumulated knowledge and understanding of island internet projects.

## 5.2 Example Project

Axiom currently serves 1,200 customers that utilize a variety of technologies - wireless, DSL and fiber optics. During our 13 plus years in business, we have done whatever it takes to get a connection to a potential customer to locations that the incumbent carriers have not connected. It is no understatement that 100s of customers would be left unserved without Axiom's efforts. We have done this work in some of the most difficult and remote areas in Maine.

### Cranberry Isles

In 2017, Axiom responded to an RFI for Cranberry Isles to plan, design, construct and operate a network on three of the islands that consist of Cranberry Isles. Axiom was awarded a contract of up to $1.3M to plan, construct and operate the network. According to a selectperson on the island, Malcolm Fernald, "*Axiom's proposal was so far superior to the other submissions that an RFP for the finalist that was planned, was cancelled, because Axiom's proposal did everything the town was looking for.*"

Our proposal made several recommendations that saved the Cranberries well over $100,000 of build cost, met an extremely aggressive deadline for deployment and has put in place a revenue sharing model that will return over $8,000 a year back into a town technology fund.
At the completion of the project every home on each island will be capable of receiving 1 Gigabyte of service (1000Mbps) and have the same level of service capability that you could obtain in New York City or the Google fiber cities of Austin and Kansas City.

This project features a number of innovative ideas including laying fiber on the ground and a first ever in Maine to install our own utility poles that produced cost savings and avoided large delays in implementing the project. In addition, we are using licensed wireless technology to bring the signal from Great Cranberry to Islesford and Sutton Islands.

Axiom was also a key contributor to the Cranberries receiving a $1.5M grant through USDA- the first grant of its kind awarded east of the Mississippi. Axiom wrote and supported all of the applications technical aspects and contributed significantly to almost all parts of the application.
The Cranberry Isles project would not have been possible without the outstanding leadership of the town's Broadband Committee and Select Board who were and continue to be great partners.

**Contact:**
**James Fortune, Administrator, Town of Cranberry Isles**
james@cranberryisles-me.gov
(207) 244-4475

- ✓ Designing, constructing and operating FTTP infrastructure on all three of the Cranberry Islands
- ✓ Out of the box thinking that saved over $100,000 on project
- ✓ Will serve up to 200 homes with service levels up to 1 Gigabyte

**Summary of Questions:**

1. Number of premises covered and served?
   a. There is a total of 300 homes across all three islands and this project can serve every home. Currently we have 190 customers who have taken service with a $99 deposit. Last week we took several more deposits for service and expect to serve well over 200 homes by the fall of 2019

2. Description of physical environment
   a. Because these are islands, we must use a combination of technologies and have engineered wireless microwave links to both Sutton and Islesford Islands. All of the islands sit approximately a mile off shore and can only be reached by ferry. The terrain is very forested across all three islands and homes can be quite spread apart with many a half mile or more in a very remote area.

3. Description of network capability?
   a. As mentioned, this is a system we believe does not exist in Maine today and is capable of delivering a symmetrical connection (equal speeds both for downloads and uploads) of 1000Mbps/1000Mbps to each home. Currently we are offering 3 speed packages starting at 25Mbps/5Mbps, 50Mbps/10Mbps and 100Mbps/20Mbps, but we can easily offer any amount of speed up to 1 Gigabyte to each home. This allows for unlimited growth to meet demand, without any additional investment in technology.
   b. As for reliability, this fiber system is the most reliable an internet provider can offer. It will not be affected by inclement weather or other outside factors such as heavy fluctuations in usage. It can be cut or damaged, but it is easily fixed, taking typically less than an hour to reconnect the broken line.

4. Timeline of engineering and date of completion of design
   a. This was mostly completed during the planning phase and took approximately one- two months to design.

5. Time period between completion of design to completion of deployment
   a. One year and a half (slow during winter)

6. Cost of Network deployment?
   a. $1.3M

7. Number of internet customers?
   a. At 100% take rate- 300, currently 190 and counting

8. The customer/client name?
   a. See Contact section above

9. Key lessons learned that would be relevant for this RFI
   a. **Have a strong and active Broadband Committee** that can talk to neighbors and fellow community members about the project objectives and costs

b. **Negative comments should not stop you.** Any significant project is going to receive feedback and objections as to why you should not move forward- strong goals keeps projects like this on track and typically can overcome the negativity of a handful of citizens who are always negative- typically community leaders can predict who these people are
c. **Be flexible.** Planning for broadband deployment can only give you so much detail. Be prepared for changes to the project or new challenges and solutions that emerge as construction and implementation proceed

10. Two additional references:

**Walt Swift** - Formed CI Fiber, an investor-based LLC to raise capital and oversee a FTTH network on Cliff Island. Expected to be constructed and operational by spring of 2019.
wlswift@me.com

**Heather Johnson, Commissioner, Maine Dept. of Economic & Community Development** (formally the Director of the Somerset County Economic Development Corporation and Executive Director ConnectME Authority)
Heather.Johnson@maine.gov
(207) 612-6618

## 5.3 Proposed Project

After completing the planning project with Monhegan Plantation, Axiom is very interested in becoming the partner chosen to construct and operate the network that we proposed in our engineering design work. We stand ready to work with Monhegan Plantation long past the completion date of the engineering work and can and will be available for presentations, community and select board meetings and ongoing consultation, as well as discussions around forming a Public–Private Partnership Agreement to be your Internet Service Provider.

We are committed to building political momentum for implementation and will work cooperatively with Monhegan Plantation to secure federal, state or local funds. Mark Ouellette have been successfully awarded millions of dollars in funding and we plan on working closely with you to assist with any funding opportunities that might be available, if we are chosen through the RFI.

As you described your goals to us through the planning process and after several meetings, we believe we are aligned closely with your goals.

- Equal Access for All- Right now your connectivity is based on the location of your home- over FTTH solution would give every home on the island access to the same levels of service
- Own Your Own- We believe in the community owning the infrastructure and promise to be stewards of this asset and operate it like it was own
- Scalable- Fiber Optics is our strong recommendation because it would allow you to scale and meet future demand for 30-40 years

A Fiber-to-the-Home has several attributes that are important to Monhegan Plantation. Fiber is the most reliable and easiest to scale technology, giving an individual business or home the ability to increase their Broadband speeds over many years, as demand occurs. This scalability is very attractive because it can be achieved without changing any of the original deployment methodology or fiber optic cable.

Fiber optics also delivers the same signal strength anywhere it is deployed, meaning no matter where you live, you can get the same amount of speed– equal access to all, a very important goal. Once fiber optics is put in place it will last for well over 20 years, without expensive upgrades. In addition, and very importantly, off the shelf technology is available today that would deliver 10 Gigabytes to each premise– that is 10,000Mbps, making this technology futureproof, unlike other technologies currently being used in your community. In short, the technology we would propose would allow for speed offerings from 25Mbps/25Mbps all the way to 1000Mbps/1000Mbps.

There are some cost reasons why it would be difficult to offer very high speeds immediately and we can discuss this in full should we be chosen, but from a technology standpoint the capability of fiber is your best choice for reliability, scalability, equal access and an investment that would serve you for well over 20 years and likely well over 30 years.

### Summary of Section 5.3

- Monhegan Plantation presents some unique and challenging opportunities that will require a significant amount of engineering ingenuity to meet the cost, coverage and service levels being described in this RFI. These challenges include the topography of the island, the density of homes in some areas of the island and our alignment on keeping cost of construction as low as possible by implementing a series of solutions that are out of the box.

  This is precisely why you would hire Axiom.

- We continue to evolve a very discerning set of skills that apply to your situation. We welcome the opportunity to discuss in detail what we can bring to this project.

  Our design includes service to every home that wants to be served

  We expect to meet your aggressive construction timeline, fall of 2019 start date
  Discussed, but yes, we can meet any level of service but expect to offer three speeds packages to start, 25Mbps, 50Mbps, 100Mbps- all symmetrical. Also, we would also offer VOIP phone service

  - We continue to explore TV-type service, but this may be something in the future

- Our design is a complete design that includes backhaul from mainland, trunk line that would be placed on the ground around the island and all connections to each home requesting service

### Customer Pricing Model

| Potential Annual Revenue | Number of Subscribers | Monthly rate | Revenue per month | Revenue per year |
|---|---|---|---|---|
| 25M/5M | 12 | $69.99 | $839.88 | $10,078.56 |
| 50M/10M | 6 | $79.99 | $479.94 | $5,759.28 |
| 100M/20M | 2 | $109.99 | $219.98 | $2,639.76 |
| Seasonal 25M/5M | 45 | $59.49 | $2,677.12 | $32,125.41 |
| Seasonal 50M/10M | 22 | $67.99 | $1,495.81 | $17,949.76 |
| Seasonal 100M/20M | 7 | $93.49 | $654.44 | $7,853.29 |
| | Year-Round Revenue | | | $18,477.60 |

| | | | | |
|---|---|---|---|---|
| | Seasonal Revenue | | | $57,928.45 |
| | **Total Annual Revenue** | | | **$76,406.05** |
| | **Total Monthly Gross Revenue** | | | **$6,367.17** |

- Each rate of service category are approximate estimates of what we think each category will attract for subscribers.
- Seasonal rates are calculated as a 15% reduction in year-round residential rates, which may be much different depending on provider, as well as the monthly cost of service
- The number of customers is determined as a 75% take rate (three of four homes passed would take service) for a total number of customers that we estimate would take service is 94.

## 5.4 Design Content

Axiom has planned and engineered close to 20 projects over the past two years and we utilize our Broadband Deployment Kit to help guide the process and get communities ready for deployment.

Our planning and engineering work on this project will:

- Evaluate and leverage all available assets to reduce cost and complexity of engineering design
  - We are committed to running fiber on the ground to save costs and complexity of buried fiber, which would make the project cost prohibitive
  - We have good, ongoing discussions with the Electrical Coop which would eliminate the need for an expensive telco shack and duplicative generator on island
  - Open to discussions on island labor to reduce costs and employ islanders

- Consideration of possible bottlenecks in on-island and/or backhaul infrastructure, and how the proposed broadband infrastructure design would address or avoid these bottlenecks
  - Axiom carefully considered a number of backhaul options and settled on Benner Hill which was engineered to produce the maximum throughput and reliability.
  - With rock solid backhaul, the FTTH system will be extremely reliable
  - Our design would bring little to no compromise on service levels, reliability even at the height of the summer season

- Axiom has full mapping capabilities that can help communities visually with population density, existing coverage of current service providers, fiber route mapping and fixed wireless propagation mapping
  - As noted in conference call, our planning map signifies fiber being placed next to roads
  - We expect additional engineering to occur to better understand water line paths to create a more accurate mapping of assets and proposed routes- that can be used for meetings and to covey project scope

- Necessary hardware and facilities
  - As described in our planning document- all hardware and proposed facilities needed are included in our final pricing

- Implementation Plan
  - We would expect to meet your desire to begin building in the fall of 2019 and expect full completion and operations to be phased to year-round residents first, then to seasonal customers starting in May-June 2020

- Phased implementation planning that includes
  - Cost of each phase
  - Narrative on each phase that can be a stand along project for grant or other funding
  - Complete cost and engineering analysis of all phases

- Service levels and cost to subscribers is included in previous section

- Financial Plan

In the plan that we produced for Monhegan Plantation, we suggested a construction cost of $879,000. This cost includes a number of assumptions that likely would reduce costs.

We suggested several pieces of duplicative equipment in our budget that if eliminated could reduce the budget up to $50,000. In addition, the cost of the tower installations and corresponding electrical and fiber work could come in lower than expected.

Additionally, we are willing to consider reducing our Project Management Fee to $108,000, saving another $50,000- however, this will need to be discussed, because if we use island labor the oversight will need to be increased substantially.

Lastly, if we can come to some agreement on using island labor, that may, *may* reduce the cost of the fiber installation line, but this will also need extensive discussions to determine how we might work together. Taken all together, it's conceivable that this would be a $700,000 project- but Monhegan Plantation would need to consider some compromises and we would need to contribute some of our costs to bring this closer to the $700,000 number.

This is still well above the BB Committee's thinking of a $500,000 project, so we are not sure you are really gaining anything politically with the potential lower number, except on the USDA grant application where you would need to guarantee a 25% match. If you submit for the full amount we are proposing, the match would be $220,000. If we could negotiate the number down closer to $700,000 the match would be $175,000- saving $50,000 in match from the community.

As far as what we would expect to make for profit in operations, we expect the operational cost to be in the range of $4000 a month. This would include an on-island customer service representative, monthly costs for bulk bandwidth, repairs and fixes to some part of the island infrastructure (depends how much of the infrastructure we will be responsible for), customer service coverage for phone support, and a revenue share of 5%, which (if we reach a 75% take rate, would be approximately $3500 a year).

All details of cost reduction in the construction phase and detailed operational budgets can be discussed in detail and be part of a larger discussion while negotiating a Public-Private Partnership agreement to move the project forward, should we be the partner you choose. Ultimately, we believe Axiom is a very good fit for the community and we remain open to discussions on all aspects of our relationship.

- Quality Assurance Plan
  This should be addressed in detail in any Public-Private Partnership with an Internet Service Provider. But in response to some of your specific questions, the system we are designing offers the most reliability of any technology. This means that when the system is operational, the customer experience will be entirely different than what Monhegan Plantation is experiencing now. There will be no dips in service speeds or reliability at peak season, if we say we are delivering 50Mbps to your home, that is what you will receive, consistently.

  Second, on day one the system will have the capability to deliver 1000Mbps to each home, so while we will offer plans up to 100Mbps to start, as demand grows over the next few decades, the system will be able to handle almost unlimited speed upgrades- while not compromising the reliability and not having to change any of the design of the system. In the next 20-30 years, for a relatively small amount, the system could be upgraded with new electronics to deliver 10,000Mbps to each home. In short, this system is futureproof, and will easily last you 40 years we believe.

- Other Options for future service
  As we said above, future upgrades are technologically easy, when the time comes, by switching out the electronics on the island. Also, increasing the bulk bandwidth is also relatively inexpensive to add additional internet capacity.

  This system would allow for 5G cellular capabilities, should that service be available on Monhegan in the distant future. This system supports phone and television streaming content in 4K and 5K. This system will support real-time teleconferencing in Hi-Definition, with no latency and high picture quality. Telemedicine is easily supported with fiber. Fiber opens up possibilities that are in the marketplace now, and those we cannot even imagine in the future.

### Public-Private Partnership

We have referenced a Public-Private Partnership Agreement throughout this section and wanted to explain the model more fully here. Should the community move forward with Axiom to build and operate the new internet system, Axiom has created a model Public-Private Partnership agreement that includes:

- Returning 5% of yearly gross revenue to a community (approximately $3500/year)
- Committing to reduce our Project Management Fee over 30% ($50,000 in savings)
- An evaluation of equipment every three years for possible enhancements
- Potentially add Community HotSpots or other resources at our expense
- Support efforts to identify and support outside and unconventional funding opportunities that can help defray cost (if we are chosen through the RFI process)
- Hiring an on-island installer and troubleshooter to be trained by Axiom and enhanced service and installation response times to island residents (Creating a part-time contract job on island)

These projects are only as successful as the partnership between the build/operator and the community. We are open to partner with Monhegan Plantation and build pride of ownership and save cost by potentially leveraging town owned equipment to help with such tasks as trenching and

debris removal, clearing a tower site and readying for construction. We are open to on-island labor for cable distribution work and would be happy to discuss further.

In addition, creating investment opportunities for local or seasonal residents… sponsoring a road build or contributing to a Broadband investment fund would be a wonderful way for caring citizens to be involved. This is a fairly new approach that has been suggested to other communities to engage but has not been implemented. Monhegan Plantation could be the first to implement some of these community engagement opportunities.

Axiom is fully prepared to execute an engineering and implementation plan and negotiate an operational framework. We also are excited about the construction process, working with the community on unique strategies to build the network, save cost and deliver a world-class internet system.

## 5.5 Proposed Financial Model

Own your own:
We are in alignment that a good model is for Monhegan Plantation to own the infrastructure and Axiom to operate the system and service the customers.

Equal Access to All:
We are proposing a system that will allow for uniform service anywhere on the island. No matter where your home is located, you can receive the same speed and reliability as any other home in any other location.

Risk:
Once the network is built, we typically create a split in responsibilities where the owner of the network would insure the system and be responsible for trunk fiber and equipment, and Axiom would be responsible for all drops to the homes and equipment at the home. This is how we typically handle responsibilities on the network. Since Monhegan Plantation would purchase insurance to indemnify this newly owned asset, that insurance would cover the network for catastrophic loss.

An alternative would be to have Axiom insure the system, take responsibility for all aspects of repair and create a schedule that would eventually have us own the network, perhaps over the life of the initial contract of 12 years. This would allow Monhegan Plantation to eventually be out of the Internet Service Provider business altogether, while retaining control over the network during that initial period.

We are not opposed to taking full responsibility, while Monhegan Plantation retains ownership, and we are happy to discuss what makes most sense for both parties.

Subscriber rates:

| Potential Annual Revenue | Number of Subscribers | Monthly rate | Revenue per month | Revenue per year |
|---|---|---|---|---|
| 25M/5M | 12 | $69.99 | $839.88 | $10,078.56 |
| 50M/10M | 6 | $79.99 | $479.94 | $5,759.28 |
| 100M/20M | 2 | $109.99 | $219.98 | $2,639.76 |
| Seasonal 25M/5M | 45 | $59.49 | $2,677.12 | $32,125.41 |

| | | | | |
|---|---|---|---|---|
| Seasonal 50M/10M | 22 | $67.99 | $1,495.81 | $17,949.76 |
| Seasonal 100M/20M | 7 | $93.49 | $654.44 | $7,853.29 |

We propose subscriber rates to be between $69.99 and $109.99, with a 15% discount for seasonal residents (May 1- November 1).

The number of subscribers per rate group is an estimate from past experience and most likely will vary. Take rate is estimated at 75%.

It is possible that we could forgo the 5% of gross revenue back to the community and bring the prices down $10 per month for each rate group, if that is desirable for the Broadband Committee.

Given the survey responses, the poor service available now and the superior nature of fiber optics, we see no reason why a 75% take rate is not attainable. With a mix of materials that would be distributed at scheduled town meetings, door to door delivery and electronic distribution and the support of Monhegan Plantation, we expect that a fully saturated marketing campaign is achievable and would be extremely affective.

Axiom has extensive experience in applying for and being awarded federal, state and foundation grants, as well as assisting with materials in private fundraising efforts. We would be pleased to assist the community with these efforts as you consider what sources may be available to apply for.

## Final Thoughts

Axiom's mission is to strategically partner with remote communities and bridge the Digital Divide. Only a handful of communities nationwide have the capability of the network we propose to you. Ultimately, this network will serve the island for decades and be a tool in helping keep island life vibrant.

- Allow the year-round population to work and play more efficiently, potentially attract more year-round residents
- Allow seasonal residents to stay longer- increasing economic activity on the island
- Create buzz and optimism in the future of Monhegan Island

Thank you for the opportunity to work creatively with you to bring world-class internet service to your community.