



**CONNECTME FUND
GRANT APPLICATION**

TOWN OF SULLIVAN BROADBAND PROJECT

MARCH 22, 2010



Axiom Technologies
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ConnectME Fund
Fourth Round Grant Application
March 2010

1. **Date:** **March 22, 2010**
2. **Project Title:** **Town of Sullivan Broadband Project**
3. **Submitting Entity:** **Axiom Technologies**
4. **Grant Amount Requested:** **\$82,032.68**
5. **Project Contact Information:**

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susan.corbett@axiom-tech.net

6. **Party Who Prepared Application:**

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7. Executive Summary of the Project:

Axiom Technologies, in collaboration with the Town of Sullivan, submits this Grant Application in response to the ConnectME Authority Grant Funding Program for deployment of broadband in rural Maine.

The Town of Sullivan has 709 homes, based on the 2009 State Planning Office Projections. Axiom Technologies and the Town of Sullivan have a goal of bringing high-speed broadband access to 70 to 90% of the unserved households. We expect a “take-rate” of 35% in Year One.

At a Town of Hancock Selectmen’s meeting on January 21, 2010, (Invited guests were officials from Lemoine and Sullivan) town officials and the public confirmed that Sullivan has no broadband availability in specific areas and requested Axiom to apply to the ConnectME Authority for funding. Following discussions with Time Warner Cable and Fairpoint Communications, we are unclear of the number of homes that are presently served as it is difficult to attain an accurate assessment of broadband coverage. We are therefore estimating that the town has approximately 40% existing broadband coverage.

Axiom recognizes that there may be some broadband coverage from Premium Choice’s tower locations in Eastbrook and Franklin. Axiom confirms that when doing site surveys for broadband signal, if the subscriber can be better served by a pre-existing access point on Premium Choice’s network, we will inform Premium Choice and not install a radio at the subscriber’s location. Axiom confirms that it will not use “public funding” if the subscriber can be served by “private funding”. Additionally, in areas that there is a possibility of Premium Choice coverage, Axiom recognizes their use of 900 MHz radio transmitters, and will not deploy 900 MHz radio gear that causes interference on currently utilized channels.

Lack of broadband in several areas of Sullivan was confirmed via the ConnectME Broadband Availability mapping, from discussions with officials from the Town of Sullivan, and from the multiple Sullivan residents who have contacted Axiom requesting to be included in Axiom’s database for Internet service. Axiom confirms with the residents that they are not able to receive broadband service from another Internet Service Provider and documents this confirmation in our database.

This due diligence assessment demonstrated the essential need for broadband capability in the *unserved* areas in Sullivan, Maine.

The Board of Selectmen and residents of Sullivan strongly support the approval of Axiom’s grant application to the ConnectME Authority for funding.

Axiom has engineered and will build a wireless infrastructure in Sullivan, Maine. Axiom’s engineers and Town of Sullivan officials will identify the tower site pending approval of this grant application.

ConnectME Authority – Fourth Round Grant Application

Page 4

The tower in Sullivan will receive its signal from Axiom's transmitter site at Black Cap Mountain, Eddington, Maine. There will also be radio gear at the tower site and at least two mini-PoP's built at other locations in the town to ensure maximum coverage. This tower site will also be incorporated into Axiom's existing wireless infrastructure in Washington County, specifically the tower constructed from the Town of Steuben ConnectME 2008 grant, enabling redundant service to the Town of Sullivan. Without this tower build, wireless, high-speed Internet service would not be possible in the unserved areas of Sullivan.

Axiom has a Resellers Agreement with Fairpoint Communications. Fairpoint is planning on bringing DSL high-speed capability to many of its Remote Terminal locations throughout Maine in 2010. Sullivan has not been identified as a potential site as of this date. However, should Fairpoint bring DSL service to a Remote Terminal in Sullivan, Axiom will also offer DSL service, moving its wireless subscribers off of the wireless network. This serves two purposes; first it supports Axiom's business model of collaboration and blending technologies; and second, it allows the "recycled" subscriber radio to be deployed to an area that is unserved, stretching public and private investment.

Axiom has contacted Tom Federle, attorney for Time Warner Cable, regarding overlap of service in the proposed service area of Sullivan. Axiom has stated to Time Warner Cable that they will sign an "Overlap Avoidance Agreement" and not deploy wireless service if the subscriber can get Time Warner's cable Internet service. Time Warner Cable understands that wireless service knows no boundaries and that there will be crossover of Axiom's wireless network over Time Warner's existing coverage.

In April 2010, Stinson Seafood Plant in Gouldsboro will close its doors and 128 workers will lose their jobs. This plant has been operating in Prospect Harbor for more than 100 years and is the last sardine cannery in the United States. Axiom is collaborating with Eastern Maine Development Corporation and Machias and Ellsworth Career Centers to recruit two to four displaced Stinson employees for ConnectME grant projects. If awarded this grant, Axiom will train these individuals as Field Technicians to install subscriber radio units in Sullivan and the surrounding area.

- 8. A description of the geographic area proposed to be served by the project and sufficient information to establish that it is an unserved area, preferably at street-level granularity, and not likely to be served in the foreseeable future. (Most applicants conduct independent research to determine if a community has broadband or are sufficiently familiar with the community to know that there isn't any terrestrial broadband available).**

Applicants must be aware of recent legislative changes that require the ConnectME Authority to give priority to grant proposals that, relative to other proposals, seek to extend access to broadband internet service to a

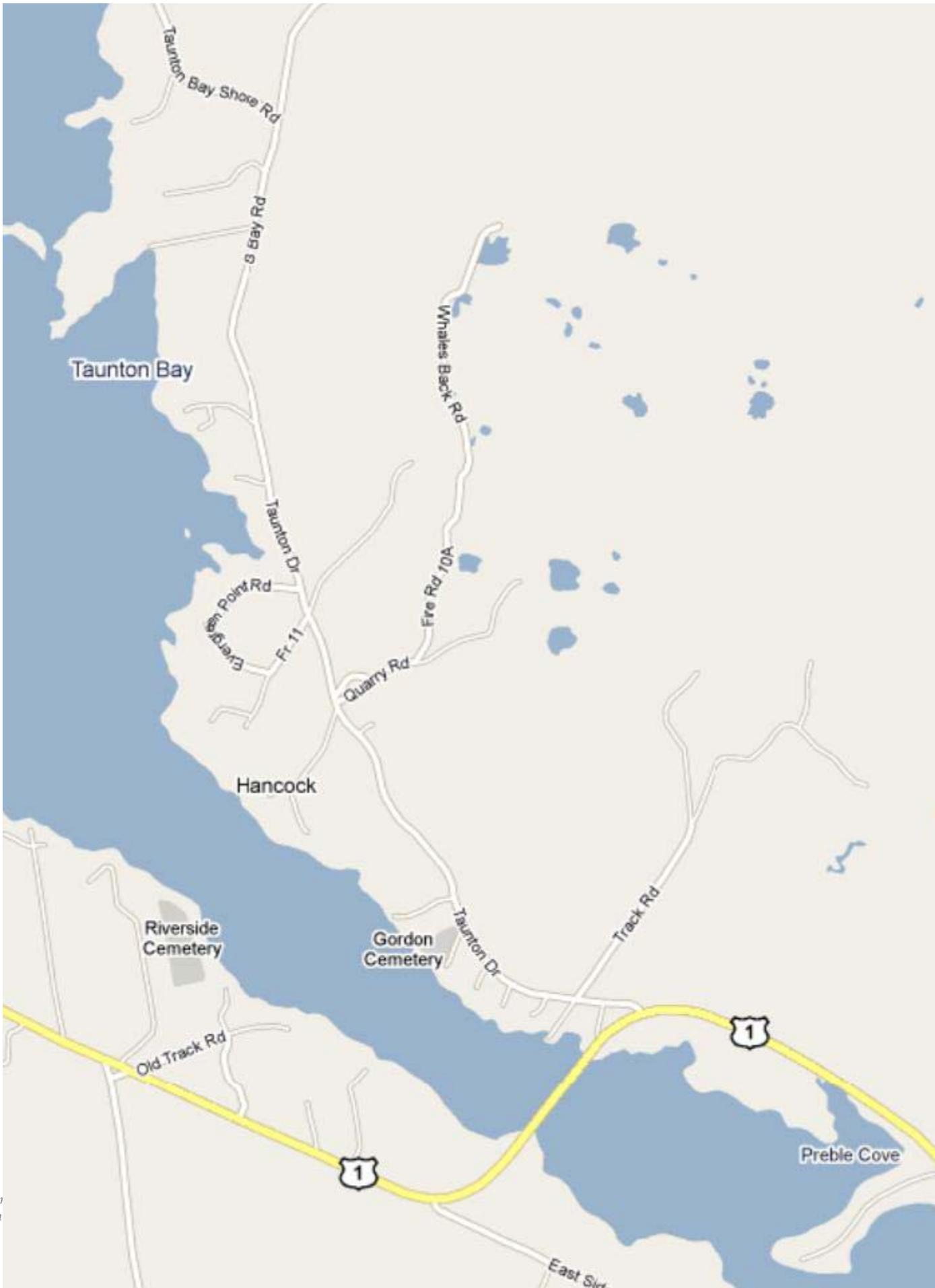
ConnectME Authority – Fourth Round Grant Application

Page 5

higher percentage of an "unserved" area within a municipality or other appropriate geographic area. The legislation requires the Authority to also consider the percentage of households with access to broadband service when establishing criteria to define unserved and "underserved" areas;

Sullivan is a town in Hancock County. It is a summer resort community on U.S. Route 1 and Maine Route 100 and overlooks Frenchman's Bay at Sullivan Harbor. It covers 28 square miles, has 709 homes and 1185 residents.

At the Hancock Selectmen's meeting on January 21, 2010, Sullivan town officials and the public confirmed that Sullivan has areas of no broadband availability and requested Axiom to apply to the ConnectME Authority for funding. Lack of broadband in the unserved areas of Sullivan, Maine was confirmed via the ConnectME Broadband Availability mapping and through a due diligence assessment. These reports demonstrated the essential need for broadband capability in the *unserved* areas of the Town of Sullivan.



9. A description of the proposed project, including:

a. public-private partnerships that have been established;

Axiom Technologies, in collaboration with the Town of Sullivan, desires to bring high-speed Internet service to the residents and businesses of Sullivan, Maine. A letter of support from Sullivan Selectmen is attached.

b. evidence that the private partner in the project is eligible to receive funding from the Authority;

Axiom Technologies, LLC was founded and incorporated in the fall of 2001. It reorganized as a Maine Limited Liability Corporation October 13, 2004, and Articles of Incorporation were filed with the Secretary of State. All Members unanimously adopted a revised Operating Agreement in October 2005. Axiom Technologies, LLC maintains its business office at 3 Water Street, Machias, ME 04654.

Axiom Technologies is a Maine for-profit corporation. It has been the recipient of three ConnectME grants since 2007 and has a proven track record in public-private partnerships. It is through the collaboration of municipalities, economic development groups, businesses and residents that Axiom's business model has proven successful. Of the 80+ Access Points that have been installed by Axiom to date, all but the mountain sites (four towers) are at no rent. This is a testimony to the support and commitment of the communities.

c. the type of service to be provided, indicating the technology used and the upstream and downstream speeds of the service to be provided;

Service is provided to the customer's premises (either business or residential) via wireless technology. The systems utilized are fixed point to multipoint radio networks whereby multiple subscriber radios at the customer's premises connect to master transmitter sites on towers, hilltops and buildings that possess geographical advantages including height and clear sight lines. In this manner, site selection for these "Access Points" is similar in process to that of a cellular phone carrier; however, our cost to deploy transmitters is much lower, allowing more transmitters to be installed within a geographical area, thereby improving coverage and accessibility.

Axiom utilizes several different radio frequencies, 900 MHz, 2.4 GHz and 5.8 GHz which have proven very effective in high-speed broadband

ConnectME Authority – Fourth Round Grant Application

Page 8

deployment. We have added 3.6 GHz radio gear to transmitter sites which enables the availability of a 10Mbit symmetrical product that is cost effective.

Axiom has obtained the necessary FCC licensing to field and operate radio electronics in the 3.65 GHz band. The technologies utilized are capable of over-the-air data transmission rates up to 100mbit. Axiom's subscriber plans set customer bandwidth at between 1 and 10mbit downstream and 500k – 1.5mbit upstream for residential service. Up to 10mbit symmetrical service is available for businesses requiring increased upstream bandwidth for server hosting or similar applications. In addition to the advanced radio systems, Axiom will also be installing augmented power systems for protection against AC grid outages; the primary cause for service interruption in the Downeast region. These power systems utilize deep battery arrays and, where terrain permits, power generation via hybrid solar and wind generators.

A 190 foot tower will be built in Sullivan. There are no existing towers or buildings of high elevation in the area that could be utilized to deploy Access Points.

There will be a direct link from Axiom's transmitter site at Black Cap Mountain in Eddington, Maine, which receives its signal from Oxford Network's location in Bangor, Maine. This microwave system brings bulk bandwidth via Oxford's fiber network to Axiom's wireless infrastructure. Additionally, a Fairpoint DS3 Circuit located at Axiom's headquarters in Machias will provide a redundant link via its existing wireless network. Four additional Mini-PoP's will also be constructed in order to reach 70 to 90% of the unserved residents of Sullivan.

d. an estimate of the time required to complete the proposed project;

The Town of Sullivan Broadband project will take an estimated six to nine months, depending on weather.

e. the number and percentage of households and businesses within the area to be served by the project (i.e. who can be served given technical limitations);

The project is projected to reach 70 to 90% of the unserved homes and businesses in Sullivan.

f. the estimated price per customer of the service to be provided by the proposed project; and

Estimated cost per household is \$214.26.

- g. a map (preferably GIS compatible) or list of municipalities or parts of municipalities that may be covered by the proposed project with GEO Codes.**

Geo Code is: 09300. Map is attached.

- 10. The total amount of funding requested from the Authority;**

The total grant request is: \$82,032.68.

- 11. The applicant's financial commitment to the project in addition to the funding requested from the Authority;**

Axiom is committed to financing the remainder of the expenses of the project.

- 12. The estimated number of customers/households who will directly benefit from the project who are currently unserved (provide lists or numbers of potential customers that have indicated a strong commitment to subscribe);**

It is estimated that 70 to 90% of the unserved homes and businesses in Sullivan will have access to wireless broadband availability.

- 13. Evidence of community support for the proposed project, which may include letters or signatures of residents or businesses located within the area of the proposed project (also, provide letters of interest from landowners for placement of facilities and support commitments from municipalities or community groups);**

See the attached letter of support from town officials from the Town of Sullivan. Since the Selectmen's meeting on 1/21/10, multiple Sullivan residents and businesses have contacted Axiom to be included in Axiom's database. When adding potential subscribers to our data base, Axiom confirms with the residents that they are not able to receive broadband service from another Internet Service Provider.

- 14. A description of the applicant's experience relevant to the proposed project; and**

Axiom Technologies is a telecommunications company located in Machias, Maine that has been creating, researching and developing a wireless technology for

ConnectME Authority – Fourth Round Grant Application

Page 10

broadband deployment in rural Maine. Axiom has been working diligently for the past five years in researching and developing wireless networks, and has installed over 80 Access Points serving 80 previously unserved geographical areas, representing 40 towns in Washington County. Access Point installation work is ongoing as of this grant application.

Axiom is the recipient of three ConnectME grant awards in 2008/2009 (\$657,665.00 in total grant funding) and is continuing to deploy broadband using its existing business model to towns and territories in Washington County throughout 2010. At the completion of the ConnectME Washington County Broadband Project, Axiom will have a wireless infrastructure with approximately 100 Access Points, creating an umbrella over the entire County.

ConnectME Authority – Fourth Round Grant Application

Page 11

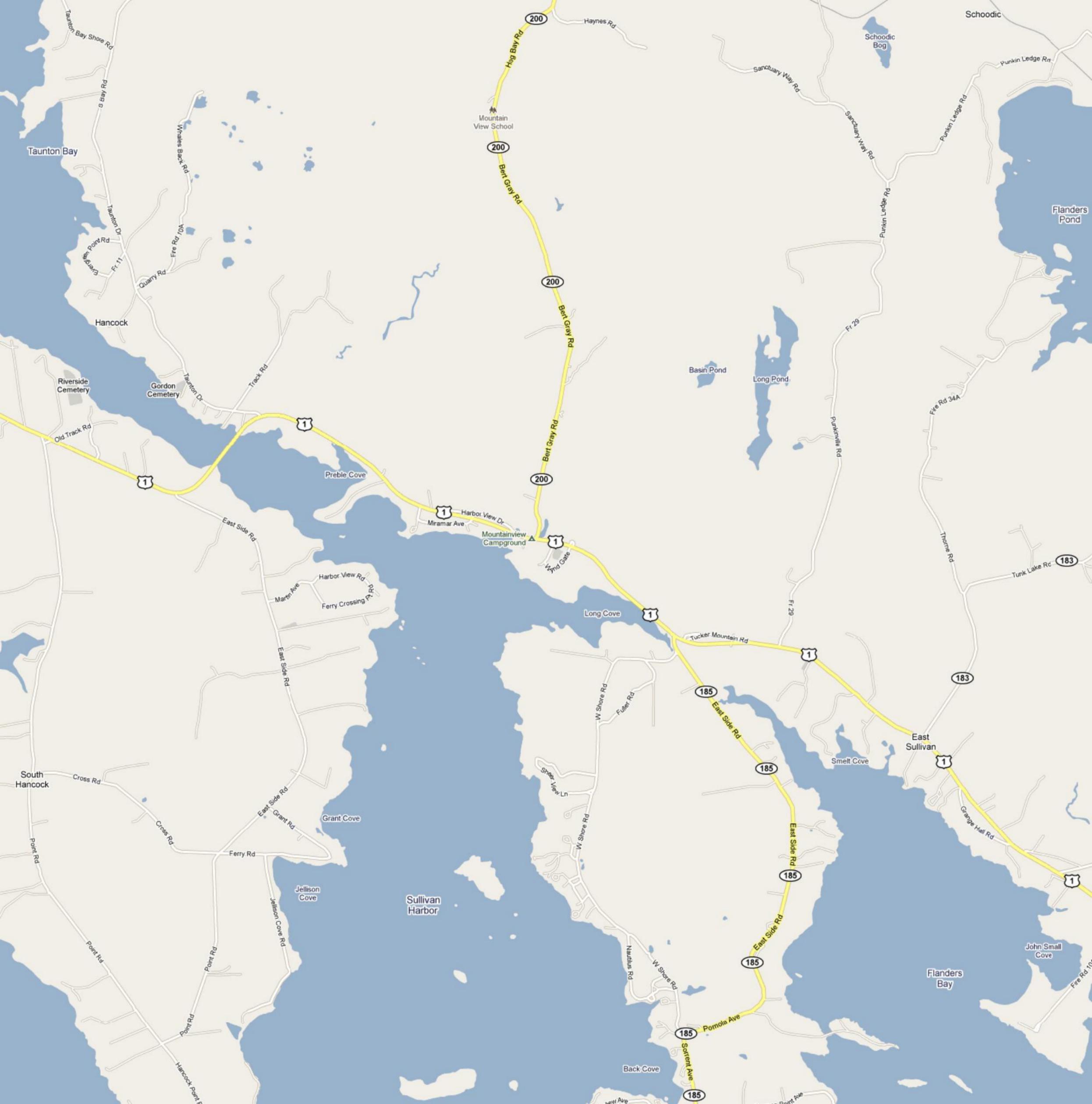
- 15. A demonstration of financial viability provided by pro-forma financial statements for the project and company financial statements. Confidential information may be submitted and should be so marked.**

Financial Analysis and Budget

The budget will be reviewed on reasonableness and accuracy. Provide the following financial information with as much detail as possible:

	ConnectME Grant Funding	Cash Match	In-Kind Match	Other Funding Sources	Total
Personnel	\$.00	\$38,286.00			\$ 38,286.00
Contractual Services:					
Tower Build	\$38,532.43	\$18,603.67			\$ 57,136.10
Start up Expenses and Capital Expenditures:					
Access Points	\$10,000.00	\$.00			\$ 15,000.00
Supplies and Materials:					
Radio Receivers for Subscribers	\$ 33,500.25	\$.00			\$ 33,500.25
Job Supplies	\$.00	\$15,314.40			\$ 15,314.40
Telecommunications	\$.00	\$ 6,000.00			\$ 6,000.00
Training					
Travel	\$.00	\$ 3,828.60			\$ 3,828.60
Other costs					
Total	\$82,032.68	\$82,032.67			\$164,065.35

*See attached financial statements and reports.



Taunton Bay

Hancock

South Hancock

Sullivan Harbor

Flanders Bay

Flanders Pond

Schoodic

Mountain View School

Mountainview Campground

East Sullivan

John Small Cove

Schoodic Bog

Basin Pond

Long Pond

Long Cove

Smelt Cove

Preble Cove

Grant Cove

Jellison Cove

Back Cove

Hig Bay Rd

200

Bert Gray Rd

200

200

1

1

1

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185

185

185

185

185

185

183

183

Old Track Rd

Gordon Cemetery

Riverside Cemetery

East Side Rd

East Side Rd

East Side Rd

Jellison Cove Rd

Point Rd

Hancock Point Rd

Quarry Rd

Whales Back Rd

9 Bay Rd

Taunton Dr

Taunton Dr

Track Rd

East Side Rd

Miramar Ave

Ferry Crossing Pt

East Side Rd

Grant Rd

Ferry Rd

Jellison Cove Rd

Hancock Point Rd

Miramar Ave

Harbor View Dr

Ferry Crossing Pt

Harbor View Rd

East Side Rd

East Side Rd

Grant Rd

Ferry Rd

Jellison Cove Rd

Hancock Point Rd

W Shore Rd

Fuller Rd

Sheep View Ln

W Shore Rd

Naudus Rd

W Shore Rd

Sorrent Ave

Sorrent Ave

Tucker Mountain Rd

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Fire Rd 34A

Tunk Lake Rd

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Office of the Selectmen
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Town of Sullivan.....

January 26, 2010

Susan Corbett
Axiom Technologies
3 Water Street
Machias, ME 04654

Dear Susan,

This letter is to inform Axiom Technologies that the Town of Sullivan is interested in the possibility of participating in your collaboration with the ConnectME program. The Board of Selectmen is aware that some of our citizens are unable to receive high speed internet through existing providers. We would like to hear more about how your company can provide this service. Please keep us informed as the process is developing.

Sincerely,



Gary Edwards
Selectman