



Community Broadband Planning Grant Program

**Town of Bridgton, Maine**  
**Bernard King, Jr. – Select Board Chair**  
**Robert A Peabody Jr. – Town Manager**  
**Anne Krieg, AICP – Planning & Development Director**

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Bridgton, Maine 04009

Sent by email to:  
Contact Person: Lisa Leahy  
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**Application Due: April 15, 2016**  
Grants Awarded: April 22, 2016

Community Broadband Planning Grant Application

# **APPLICATION PACKET**

# Community Broadband Planning Grant Application

## Round One Community Planning Grant Application

**Due Date: April 15, 2016**

- 1. Date:** April 15, 2016
- 2. Submitting Community:** Town of Bridgton, ME
- 3. Grant Amount Requested:** \$45,680
- 4. Community Project Point of Contact:**  
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- 5. Party Who Prepared Application:**  
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Senior Consultant, Tilson  
245 Commercial St., Ste. 203  
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- 6. Executive Summary of the Project:**

The Town of Bridgton seeks funds to produce a plan that defines our local broadband needs and meets our economic development goals.

The Plan will inventory existing broadband infrastructure assets within the town of Bridgton and include a gap analysis defining the additional broadband infrastructure necessary to meet identified needs and goals. The town has a leg of the 3-ring binder here, which also is part of the plan; that is; how best do we tap into this resource?

Our plan will include one or more potential network designs, cost estimates, operating models and potential business models. We will also assess procedures, policies, rules and ordinances that have the effect of delaying or increasing the cost of broadband infrastructure deployment.

The town of Bridgton receives “set aside” funds from the Community Development Block Grant Program. According to the US Census, almost 16% of our households live below the poverty line. Our median household income is \$42,420, lower than the state of Maine’s average of \$46,933. Over half of the students at Stevens-Brook Elementary School meet the requirements for free or reduced lunch; this sets up the likelihood that there is no internet service in their home. This will severely impact their education as many homework assignments rely upon internet usage. The town has a wide gap of income from low income households to our visitors and second home owners with assumed higher disposable incomes. We also have seen a 35% increase in population over the

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last decade in people between the ages of 45-64. This population works remotely or is starting a second career and have high demands for increased uploading as well as downloading. Of final note, Bridgton is a service center as defined.

Our broadband needs are planning for 3 goals:

1. Extending service to unserved remote areas for both our rural households and visitors
2. Making service affordable for our low income households and elderly/veteran populations
3. Increasing the bandwidth capabilities to allow for large document uploading and downloading to serve our existing research and development companies, as well as our visitors working remotely.

The Town of Bridgton and the Bridgton Division of Planning, Economic and Community Development has selected Tilson Technology Management, Inc. ("Tilson"), and its subcontractor Axiom Technologies, LLC ("Axiom") for the broadband planning work to be performed under this grant. Tilson's project plan for the Town of Bridgton includes a definition of Bridgton's broadband needs and goals through a review of existing work Bridgton has done as well as holding a community meeting and developing a list of community anchor institutions, evaluating needs/opportunities for collaboration, and defining operational requirements for broadband service. In addition Tilson will conduct a survey of existing broadband service and assets for use in documenting service gaps and assets that may have potential for use in future broadband deployments. Axiom Technologies will lead Bridgton's digital inclusion effort. Axiom will participate in the three-way kick-off meeting to establish local relationships, to develop an inventory of public computer and Internet access sites, and to develop a list an outreach list for its Computer Skills/Digital Literacy Training work. After the Broadband Service and Asset Inventory is complete, Tilson will articulate the gaps between the community's operating requirements and existing service. Using its industry knowledge, Tilson will develop a list of viable infrastructure enhancements that may close that gap. Once this is done, Tilson will focus on solutions that fulfill the unmet operating requirements. Solutions may include upgrading incumbent providers' networks or introducing an additional provider. In addition, Tilson will work with community planning and code enforcement in the Town to develop an inventory of local policies and regulations before preparing the final deliverable in a cohesive end-product.

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## ATTACHMENT A

### Precertification Checklist

**A community must answer each of these items, in the format below, to be certified for the planning grant process. A “no” answer is perfectly acceptable; this is stakeholder and information gathering process. Once certified, a community will be eligible to participate in the competitive process to receive funds from the ConnectME Authority for a broadband planning grant.**

#### **1. Create a Community Broadband Team**

- **Provide list of members, including name and title:**
  - **Must include at least one representative from municipal government for each community seeking certification**
  - **If it is known that a non-profit or economic development entity will ultimately be seeking a grant using this precertification, should include one member of that non-profit**
  - **Members could include residents and representatives with experience in health care, business, and education.**
- **Must designate single point person for communications with ConnectME for certification process, provide email address to ConnectME.**

The Town of Bridgton’s Community Development Committee (CDC) is the Community Broadband team.

- List of members:
  - Charles Renneker, Chair – local downtown and residential developer, and investor
  - Dave Crowell, Co-Chair – retired
  - Evan Miller – musician
  - Mark Lopez – local commercial and residential developer, and investor – Board member, Bridgton Economic Development Corporation (BEDC)
  - Nelle Ely – mural artist
  - Ursula Flaherty – retired
  - Phyllis Roth - retired
  - Justin McIver – local developer, builder, alternative energy construction, investor
  - Stephen Rickert – Management staff at Hancock Lumber
  - Mitchell Thomas – owner of local construction company
  - Robert J. McHatton Sr., Select Board Liaison – retired business owner in Bridgton
  - Anne Krieg, AICP – Planning, Economic & Community Development Director – staff support
  - Robert A Peabody, Jr. – Town Manager
  - Carmen Lone – Bridgton Community Center Director – Resource member on Committee
  - Margaret Lindsey – Rufus Porter Museum – Resource member on Committee
- Designated single point person for communications with ConnectME is Anne Krieg, AICP 207-647-8786 [krieg@bridgtonmaine.org](mailto:krieg@bridgtonmaine.org).

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## 2. Hold at least one Community Broadband Meeting

- **Send emails to broadband providers currently serving your community and invite them to the community meeting.**
- **Share results of ConnectME Mapping for this community.**
- **Questions for attendees:**
  - **Which providers are currently serving your community?**
  - **Which providers attended your meeting?**
  - **How do the mapping results compare with members' actual experiences?**
  - **Does existing broadband access meet your needs?**
  - **If it is inadequate in what ways does it fall short?**
  - **If you have broadband, how do you use it now?**
- **Provide documentation showing meeting dates, notes, agenda and number of attendees, emails to providers and responses to the questions above.**
- **[ConnectME may need to provide guidance/suggestions on how address areas of this section]**

### TOWN OF BRIDGTON RESPONSE - Community Broadband Meetings

- Members of the Community Development Committee attended a Connect Me workshop in late 2015.
- We held an informational meeting with David Maxwell at ConnectMe on February 2, 2016.
- Subsequent to this, Anne Krieg attended the Send emails to broadband providers currently serving your community and invite them to the community meeting.
- As part of the planning process, the CDC will hold public meetings to answer the questions below and analyze mapping
  - Questions for attendees:
    - Which providers are currently serving your community?
    - Which providers attended your meeting?
    - How do the mapping results compare with members' actual experiences?
    - Does existing broadband access meet your needs?
    - If it is inadequate in what ways does it fall short?
    - If you have broadband, how do you use it now?
- Minutes will be provided for the noted meetings.

## 3. Identify Key Documents/Existing Efforts

- **Does the municipality use broadband to deliver municipal services? Describe the services, and how broadband is used to deliver these services. (e.g., town office has a broadband connection it uses to submit information to state government, police department uses broadband to communicate with state or federal databases or assessors' office make access to property records and maps available to the general public)**

The town has a website currently; however funds have been placed in the upcoming fiscal year to redo the website. The planned website will be more interactive to allow for greater capacity for filing for permits and approvals, and making requisite payments to the town. Interactive

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capabilities will also expand to allow residents to comment on projects, draft documents and respond to meetings in real time. All department use broadband access for connections to state, county, and federal agencies for both reporting needs and grant applications. We also have a social media strategy to send positive messages about our community as well as to inform, educate and notify.

- **Is there local or regional economic development plans in which broadband could play a role? If so, provide a list of these documents.**

The 2014 ratified and state-approved Comprehensive Plan has in its Economic Policies to expand and grow our broadband network as part of our infrastructure investments. Both the CDC and the BEDC are noted in the plan as the responsible parties to implement these strategies, along with staff and the Select Board.

- **Does the town have a cable franchise agreement?**

The town has a cable franchise agreement with Time-Warner

- **Are there any on-going community projects focusing on the digital divide or information technology (public access through schools or libraries, training, improving access to broadband, etc.?)**

The Bridgton Community Center has a CDBG-funded position called a Navigator. The person helps a resident access assistance and job information. The primary method of accessing and filing for this information on the state and federal level is online, which most of the town's poor, elderly and veterans do not have in their homes.

- **Is there a TIFF or other economic development grant for all or part of the area to be served?**

We have a Tax Increment Financing TIF district (map attached) which is planned for upgraded service from the 3 ring binder as part of this process. We also received CDBG funds, as noted. We are also working on a Main Street streetscape plan which we propose to use the opportunity of re-constructing the road to place the necessary conduit for this service. We are also planning a new wastewater system to encompass the TIF zone and downtown residential neighborhoods, and again, we propose to use the opportunity to construction to place the necessary conduit for this service.

- **Does the town have a municipal electric company? If not, what electric utilities serve the area?**

CMP is our power company.

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## 4. Identify potential Community Anchor Institutions

- Provide a list of potential community anchor institutions.

Potential community anchor institutions include:

- Stevens-Brook School
- Bridgton Academy
- Birthwise Midwifery Institute
- Lakes Region Adult Education
- Bridgton Library
- Bridgton Hospital
- Local medical offices, including wellness centers and physical therapy offices
- Bridgton Police & Fire Departments
- Lakes Environmental Association Research Center
- Bridgton Community Center

- **Community anchor institutions are entities such as schools, libraries, hospitals and other medical providers, public safety entities, institutions of higher education. Anchor institutions can also be community support organizations that facilitate greater use of broadband by vulnerable populations, including low-income, the unemployed, and the aged.**
- **Provide a list of commercial institutions that could benefit from lower cost, higher bandwidth, and/or improved reliability of broadband.**

Potential Commercial operations include:

- Howell Laboratories
- Downeast Research
- Second home owners working remotely, as well as year-round residents with home based businesses
- Local retail with a web marketing and sales presence
- Reliable access to sites as Yelp and TripAdvisor for our visitors
- Shawnee Peak ski area
- Local transient accommodation businesses and campgrounds

## 5. Create a Vision Statement

- **A Vision Statement is created by Community Broadband Team with input from public at the Community Broadband Meeting, with the goal to take a first step toward being able to set a direction for the community's future broadband efforts.**
- **The statement should describe the role broadband would play in this community's future, using input from the other steps in the precertification process.**
  - **Identify specific priority areas (e.g., connecting community anchor institutions, ensuring older citizens can age in place, closing the "homework gap", providing affordable high speed connections to a business park).**

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- **Explain how this effort conforms to other planning documents/published visioning efforts on other issues in your community.**

Initially, the Select Board has directed staff to plan for 3 goals:

1. Extending service to unserved remote areas for both our rural households and visitors
  2. Making service affordable for our low income households and elderly/veteran populations
  3. Increasing the bandwidth capabilities to allow for large document uploading and downloading to serve our existing research and development companies, as well as our visitors working remotely.
- A Vision Statement will be further honed through the public process.
  - The statement will further delineate the role broadband plays in our town's future, using input from the other steps in the precertification process.
  - The vision statement will align with the 2014 Comprehensive Plan to improve broadband access and capacity.

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## ATTACHMENT B

### Scoring Criteria

A community should provide a response to each of the items below, in the format outlined.

#### 1. Project Plan – 25 points

##### 1.1. Provide documentation of project management plan.

The Town of Bridgton and the Bridgton Division of Planning, Economic and Community Development has selected Tilson Technology Management, Inc. (“Tilson”), and its subcontractor Axiom Technologies, LLC (“Axiom”) for the broadband planning work to be performed under this grant. Tilson’s project plan for the Town of Bridgton includes seven major categories, outlined below:

Broadband Needs and Goals: The Town’s economic development office has done some initial work to develop a vision statement and identified a number of community priorities and broadband-related goals, among them serving areas of the Town that are currently unserved—a significant portion of which is home to the Town’s large summer population, and improving capacity and the ability of these residents to telework and upload large files when staying in Bridgton. Bridgton also would like to utilize the section of the Maine Three Ring Binder, which passes through the Town, and potentially invest in broadband infrastructure that would connect the following Community Anchor Institutions (CAI’s) as well as local businesses.

The proposed methodology for this category is for Tilson to review Bridgton’s existing work, including any community data collected up to this point as well as the broadband vision statement; to hold a kick-off meeting between Tilson, its subcontractor, Axiom Technologies, LLC (“Axiom”) and the Town; to develop a list of supporting community institutions and contacts; to hold discussions with the supporting community institutions to evaluate their needs and opportunities for collaboration; and to develop a set of operational requirements for broadband service. Where appropriate, Tilson will prioritize operational requirements by type of user, geography, or other attributes.

The kick-off meeting would be in-person, and the purpose of including Axiom is to facilitate collaboration between the three working groups and to ensure coordination between the information gathering required for Axiom’s digital literacy training and public computer access deliverables, and Tilson’s community collaboration and existing service deliverables.

Broadband Service and Asset Inventory: Tilson will conduct a survey of existing broadband service and assets for use in documenting service gaps and assets that may have potential for use in future broadband deployments. The survey will include the following components:

- Service maps from incumbent carriers, including Time Warner Cable and FairPoint Communications
- Review of broadband service used by Community Anchor Institutions (CAI’s), including the local hospital, large employers, town offices, school and library
- Review of any data collected by Bridgton on existing service, including speed tests and meetings with local incumbent carriers
- Verification of offered speeds in locations not covered by Time Warner Cable. This will be done by calls into providers’ customer service centers by members of the Bridgton community
- Locations of known nearby fiber networks

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- Locations of registered telecommunications towers in the area
- Potential existing locations for a network hub

Data gathering on DSL coverage will be conducted by members of the community making calls into customer service and asking for the speeds and price for internet access offered in their locations. These data points will be included on a spreadsheet for inclusion in the final asset inventory.

Data gathering on CAI service will be conducted during the community collaboration meetings that will be done as part of the goal setting process.

Other elements of the survey will be conducted via a “desktop” analysis of known databases and sources for school and library connectivity in Maine.

Digital Inclusion: Axiom Technologies will lead Bridgton’s digital inclusion effort. Axiom will participate in the three-way kick-off meeting to establish local relationships, to develop an inventory of public computer and Internet access sites, and to develop a list and outreach list for its Computer Skills/Digital Literacy Training work.

Most of Axiom’s Affordable Internet and Affordable Equipment work will be conducted remotely. However, their Digital Literacy Training and Public Computer Access work will require community outreach.

Gap Analysis: After the Broadband Service and Asset Inventory is complete, Tilson will articulate the gaps between the community’s operating requirements and existing service. Using its industry knowledge, Tilson will develop a list of viable infrastructure enhancements that may close that gap.

Network Solutions: This part of the project plan will focus on solutions that fulfill the unmet operating requirements. Solutions may include upgrading incumbent providers’ networks or introducing an additional provider.

Tilson will design a reference fiber architecture that addresses Bridgton’s unmet operating requirements. This reference architecture will be used as the basis of comparison for other network solutions proposed by Tilson. For the fiber solution, Tilson will create a network design, capital cost estimate, operating cost estimate, and overview of potential operating structures. The fiber network design will be conducted by a Tilson engineer using proprietary fiber planning software and GIS files of E-911 locations and road center lines.

Tilson will summarize other network solutions which may include wireless, hybrid fiber/coax, or existing copper line infrastructure offered by incumbents and regional service provider. Tilson will solicit input from these providers on these other potential solutions, and present the expected tradeoffs between the reference architecture by attributes of cost, speed, reliability, scalability, and local control.

Capital and operating cost estimates will use Tilson assumptions based on the firm’s existing network deployment and consulting work. Potential operating structures will be based on established public private partnership models, plus new research conducted by Tilson on the feasibility of a multi-town broadband utility.

For the baseline fiber design, Tilson will create a network design, capital cost estimate, operating cost estimate, and overview of potential operating structures. The network design will be conducted by a Tilson engineer using proprietary fiber planning software and GIS files of E-911 locations and road center lines. Capital and operating cost estimates will use Tilson assumptions based on the firm’s existing network deployment and consulting work. Potential operating structures will be based on established public private partnership models, plus new research conducted by Tilson on the feasibility of a multi-town broadband utility.

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Overview of Local Regulations: Tilson will work with community planning and code enforcement personnel in the Town to develop an inventory of all local policies, such as acceptable use exceptions, height requirements, right of way limitations, etc., that may delay deployment. Or the local community could choose to do this on their own.

Deliverable Preparation: The Tilson team will work prepare the final deliverable, as described below. Tilson’s lead contact will project manage the work conducted by Bridgton and Axiom to ensure a cohesive end-product.

## 1.2. Provide the timeline to complete the proposed community plan deliverable.

Project Plan Item	Month					
	1	2	3	4	5	6
Kick-Off Meeting	x					
Needs, Goals, Collaboration Opportunities	x	x				
Broadband Service and Asset Inventory	x	x				
Digital Inclusion Work	x	x				
Gap Analysis			x			
Network Solutions			x	x	x	
Business Model Review			x	x	x	
Local Regulations Review		x	x			
Final Deliverable						x
Wrap-Up Meeting						x

## 2. Plan Deliverables –20 points

### 2.1. Provide narrative addressing how the items A. – F. below will be addressed in the final plan delivered to the community.

Tilson will deliver one final report containing all of the plan deliverables. The overarching goal of the report will be to:

- Align future investment with community goals;
- Defray the cost of deployment;
- Speed up implementation;
- Maximize future adoption; and
- Develop documentation that will increase transparency, result in a publicly supported solution, and assist in public or private financing.

The report will be an output of the project plan work, and at a minimum, contain the deliverables as defined in sections A-F below.

#### A. Define local broadband needs and goals.

Tilson’s final report will contain a section on broadband needs and goals. This portion of the report will combine past public input with additional input gathered by Tilson as a result of outreach in the community for community collaboration opportunities. Digital inclusion will be referenced, but will likely be called out in a separate section.

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This section will include a list of operational requirements. The number of end users will be identified by type, e.g. business/residential, CAIs, seasonal/year round, by town, etc. Where appropriate, Tilson will prioritize operational requirements by type of user, geography, or other attributes.

**B. Inventory existing broadband infrastructure assets within the municipality, municipalities or regions.**

The final report will contain a section addressing existing service and assets. This information will be delivered with maps and supporting text outlining:

- Existing infrastructure/DSL coverage statistics. If possible, these will include realized versus subscribed speeds, subscription speed availability, price plans, and planned incumbent enhancements;
- Existing area and known nearby fiber routes, if any;
- Registered area telecommunications towers;
- Potential existing locations for a network hub;
- Network serving the local school and libraries

**C. Include a gap analysis defining the additional broadband infrastructure necessary to meet identified needs and goals.**

The final report will contain a section addressing gaps in service. This section may contain maps. It will contain a list of viable infrastructure options to close the gaps, and the pros and cons of each option.

**D. Include one or more potential network designs, cost estimates, operating models and potential business models based on input from broadband providers operating within the municipality, municipalities or region and any other parties that submit a network design solution in the course of developing the plan to address any broadband gaps identified in paragraph C.**

Tilson will develop a high level network design, plus capital and operating cost estimates. The design will be based on meeting community goals and may include new fiber networks, new fixed wireless networks or extensions of existing networks.

Tilson will use FiberPlanIT software for its network designs. Using the software, Tilson will generate a printed map and KMZ file detailing the designs including, but not limited to: Middle Mile and Last Mile Fiber, Remote Terminals and Central Offices, drops to homes and businesses. Fixed wireless designs will include towers, links to Middle Mile fiber, equipment and coverage area. Detailed cost estimates will be included with the designs, giving communities enough information to make informed choices about how to proceed in upgrading internet service.

Tilson will also work with the community to determine the best business strategy—does the region prefer to own its own network or does it prefer to work with and perhaps invest in a privately owned network? These are

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important strategic questions that will be addressed with community leaders and answered in this broadband plan.

In addition, Tilson will provide business modeling that will show the optimal subscription take rate, pricing and level of investment needed to address the internet needs and gaps in the community. Up to potential business scenarios will be identified, using Tilson's computer modeling capability. This deliverable will give the community the information needed to make fully informed choices about broadband investments.

The final report will contain a section on network designs. The deliverables under this section include:

- A baseline fiber design –
  - Map
  - Bill of materials (BOM)
  - Capital cost estimate
  - Operating cost estimate
  - Up to three operating scenarios with variations in price, adoption and subsidy
  
- A review of potential operating structures including –
  - Subsidizing the initial buildout of a privately owned network
  - A local utility

**E. Include an assessment of all municipal procedures, policies, rules and ordinances that have the effect of delaying or increasing the cost of broadband infrastructure deployment.**

Tilson will work with Town officials in contacting respective town governments if needed. This work will include an inventory of all local policies, such as acceptable use exceptions, height requirements, and right of way limitations, etc., that may delay deployment. Guidance on types of policies, examples, and town councils will direct planning commissions and CEOs.

**F. Digital Inclusion**

The final report will contain a digital inclusion section. This section will be completed by Axiom, with input from Tilson where appropriate.

1. **Affordable Internet – Cost continues to be a major barrier to broadband adoption. Applicants will need to address “ability to pay” rather than “willingness to pay.” Applicants should realize the role that persistent poverty plays in shaping people’s abilities to access and use computers and the Internet.**  
[www.pewinternet.org/2015/12/21/home-broadband-2015](http://www.pewinternet.org/2015/12/21/home-broadband-2015)
  - Describe how community will address providing affordable internet options.

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During the planning phase, Axiom will inventory the low-cost broadband plans offered by current broadband providers serving the community. Axiom is working with state and federal officials to implement the FCC Lifeline program, subsidized low-cost broadband, for low-income residents in Maine.

[www.cnet.com/news/fcc-broadband-high-speed-internet-lifeline-subsidy](http://www.cnet.com/news/fcc-broadband-high-speed-internet-lifeline-subsidy)

- 2. Affordable Equipment – Low-cost or free computers are often just as important as having access to low-cost or free Internet options, particularly for people in low-income communities. PC's for Maine [www.pcsformaine.org](http://www.pcsformaine.org) has embraced this reality by refurbishing older computers donated by businesses in Maine and making them available to low-income people and non-profit organizations at a free to reduced cost.**
  - **Describe how community will expand the availability of affordable equipment to low-income residents.**

During the planning phase, Axiom will inventory the low-cost computers/laptops offered by local and regional companies that are located within the community. Axiom will collaborate with its industry partner, PC's for Maine [www.pcsformaine.org](http://www.pcsformaine.org) and the local companies, to set up a program for low-income residents and non-profit organizations to purchase equipment at a free to reduced cost.

- 3. Digital Literacy Training – Computer Skills Training /Digital Literacy Training plays a critical role in technology and workforce development training. It is vital to addressing business development needs and skill inadequacies. The need for improved digital literacy skills heightens as companies seek to grow, increase workflow efficiencies, and compete in changing industry. Digital Literacy has shown to be a catalyst for employer engagement and is a path to additional conversations about educational and workforce skills training. <http://2010-2014.commerce.gov/news/fact-sheets/2011/05/13/fact-sheet-digital-literacy>**
  - a. **Describe how community will teach people to use technology.**

During the planning phase, Axiom will meet with businesses, community and municipal leaders, as well as residents to discuss Computer Skills/Digital Literacy Training.

○ Business - For the business community, this often takes a grass-roots approach by working with a business owner to understand the company's plan for sustainable growth and development. Once the business owner understands the technology tools available, and Axiom understands the skill level of the employee, a learning plan can be created for a specific business.

○ Community & Municipal Leaders – A series of meetings will be held to gauge the interest, as well as the skill level of the participants. During these meetings, discussions are facilitated to ensure that the participant is aware of what is technologically possible to do when you have a broadband connection. Demonstrating distance

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learning education, telehealth, telecommuting, cloud-based services and software available begins the process of developing Digital Literacy plans for a community.

- Residential – As with Business, Community & Municipal leaders, a series of meetings for the residential community will be scheduled. It is the goal of the meetings that residents become engaged and excited about learning new skills, a pathway to lifelong learning. TASK FORCE identify with people to meet with, schedule times. Include that in project plan.

The outcome during the planning phase is a Digital Literacy Plan and recommended schedule, as well as suggested locations that classes will be held. In rural communities, time, distance, travel is a barrier to educational attainment; holding classes that are geographically spread out throughout the designated service footprint will ensure participation.

- 4. Public Computer Access – Increasing Public Access Computing allows residents to access technology in places in which they feel comfortable and supported is essential. These spaces can also complement digital literacy classes that are often offered in the same location. In Maine, most public libraries have public computer access, as well as computer labs for public use. [www.maine.gov/msl/libs/directories/wireless.shtml](http://www.maine.gov/msl/libs/directories/wireless.shtml)**
  - a. Describe how community will increase public computer access locations.**

During the planning phase, Axiom will inventory the available Public Computer Access locations throughout the community, including the number of available computers for public use. If a business or resident cannot afford equipment or an Internet subscription, and if broadband is not available at their location, Public Computer Access is essential.

Axiom will meet with Community and Municipal leaders to discuss “Community Hot Spots”. Community HotSpots are open access networks that allow citizens in a downtown or other public spaces access to the Internet. This is a simple, straightforward way to help a town or region get more connected. It is an affordable, convenient way to help visitors and residents obtain easy, seamless connectivity.

### **3. Value Added Collaborations– 20 points**

- 3.1 Describe how the broadband community planning grant may generate improvements to community strength through collaborating in such areas as economic development, education, employment, governmental services, health care, public safety or other regional community oriented activities.**

The final report will contain a section separately outlining potential added collaborations. This work may engage surrounding areas. As part of the project plan, Tilson will have engaged supporting community institutions in order to fully develop the community needs and goals. These institutions typically include school administration, public safety, health care providers, institutions of higher learning, senior programming organizations, county governments and locally active non-profits.

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In this portion of the deliverable, Tilson will outline potential collaboration opportunities that include network infrastructure and cost sharing, workforce readiness training, K-12 education support, telemedicine, downtown revitalization, and emergency communication networks.

## 4. Budget – 15 points

### 4.1 Submit budget aligned to significant Project Plan milestones, costs and tasks.

The following chart outlines project plan items, significant milestone costs, and the total estimated budget that a plan Bridgton would require. Tilson estimates that it and Axiom can perform the planning tasks outlined in this proposal for a total estimated cost of \$45,680.

Significant Milestone Tasks			Cost	% of Total Cost
Kick-Off, Goals, Collaboration, Inventory, Digital Inclusion			\$16,300	36%
Gap Analysis, Wired and Wireless Designs			\$25,000	55%
Business Model and Regulation Review, Deliverable Prep			\$3,840	8%
Wrap-Up Meeting			\$540	1%
Total			\$45,680	100%

## 5. Overall Financial Feasibility – 15 points

### 5.1 Describe the applicant's experience relevant to proposed project.

Tilson is a multi-service technology firm that works with nonprofits, private enterprise and governments as they seek to improve and upgrade their communications networks. Tilson's in-house consulting team has leverages this experience to help communities throughout New England create a broadband roadmap that will help achieve their economic development goals. Over the past two years, Tilson has conducted broadband feasibility study projects for 25 municipalities, 20 of them in Maine. These feasibility projects have helped communities articulate their goals and equipped them with key information needed to gain public support for a self-directed solution.

Tilson has helped several communities take the next step by crafting public-private partnerships between municipalities, network operators, and Internet service providers. Tilson has currently has implementation projects underway in Islesboro, ME, New Shoreham, RI and Ellsworth, ME.

Tilson prides itself in offering clients objective advice on technologies, potential partners, and partnership structures. Because Tilson does not provide or resell broadband services, there is no conflict of interest that might bias the firms view as it counsels clients on the tradeoffs of various technologies, potential service providers or operating models for a network. In addition, through Tilson's work in network deployment and past consulting projects, the consulting staff have relationships with most of Maine's service providers and are well informed of the latest developments in technology and public policy.

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**5.2 Provide a description of financial viability by submitting pro-forma financial statements for the project and applicant financial statements. Confidential financial information may be submitted and should be so marked and submitted in a separate file.**

Tilson is a privately held company that was incorporated in the State of Maine in 1996. Tilson employs 160 people, and serves a diversified client base that includes federal, state and local governments and private customers across its network deployment and consulting practices. Tilson has submitted its confidential financial documentation demonstrating its financial viability to the ConnectME Authority directly.<sup>1</sup>

**5.3 Provide a description of team member's background and roles.**

**5.3.1 Principal point of contact.**

Liza Quinn, Tilson  
[lquinn@tilsontech.com](mailto:lquinn@tilsontech.com)  
(207) 358-7459

And

Nick Bournakel  
[Nbournakel@tilsontech.com](mailto:Nbournakel@tilsontech.com)  
(207) 358-7415

**5.3.2 Team member bios and role in planning project.**

## **Chris Campbell, Executive Sponsor**

**Chris Campbell** is Tilson's Director of Broadband and Energy Consulting. He leads a team of professionals who provide strategic consulting expertise to states, communities, and firms seeking to improve telecommunications infrastructure and services and manage or develop networks.

Chris has 20 years of experience in technology, public policy and community development. Prior to joining Tilson, Chris was the Executive Director of the Vermont Telecommunications Authority (VTA) for almost five years. At the VTA, Chris led efforts to build new fiber networks and expand access to broadband and cellular service. In addition to fiber optic construction and cell site development, Chris had oversight of commercial contract development, grant making, and federal grant seeking. Prior to the VTA, Chris served as Director for Telecommunications at the Vermont Department of Public Service and Assistant Chief Information Officer for the State of Vermont.

He holds a B.A. in Economics and Environmental Studies from the University of Pennsylvania and a Master's Degree in Regional Planning from the University of Massachusetts-Amherst.

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<sup>1</sup> The "Community Broadband Planning Grant Clarification Items" document dated March 18th, 2016 stated that the intent of section 5 was to "ascertain the community contractor's experience, financial viability, point of contact, team member bios and roles." However, the final text asks for applicant financial statements. After further clarification from ConnectME, applicant will provide supplemental financial information as necessary.

# Community Broadband Planning Grant Application

## **Liza Quinn, Lead Consultant**

**Liza Hartmann Quinn** brings her background in energy, telecommunications and town planning to her role as a **Senior Consultant** at Tilson. In the energy sector she worked with power producers and utilities to lower their cost of service and increase revenues. She also worked on teams to secure project and corporate financing, and provide analytical support to acquisitions and divestitures. Liza's telecommunications background started with cost modeling, pricing and transactional support of wholesale services, and progressed to a role a general manager of a \$77 million colocation services business unit providing space, power, security, and interconnection services to large telecommunications customers. At Tilson, Liza has worked with federal, state and local clients on broadband planning, partner selection, community engagement, and business model analysis. She holds an AB from Dartmouth College and an MBA and an MFS from Yale University. She has taught Macroeconomics at SMCC has was on the Cape Elizabeth Planning Board for several years.

## **Nick Bournakel, Writing Support**

**Nick Bournakel** is a **Senior Consultant** in Tilson's Energy and Broadband Group. Nick possesses a background steeped in regulatory analysis and business and has significant experience working with government agencies at both the state and federal level. At Tilson, Nick has worked with several municipalities, meeting with community leaders and residents to develop broadband plans for the towns of Bar Harbor and Mount Desert in Maine, as well as 13 Maine offshore island communities. He has previously worked as an independent consultant with a variety of clients in the cleantech sector and provided market and regulatory analysis for clients. Nick holds a BA in Philosophy from Bates College, as well as a JD from the University of Maine School of Law.

## **Sue Inches, Lead Consultant**

**Susan Inches** is a **Senior Consultant** at Tilson. She has over 20 years' experience in municipal planning, public policy and community outreach, with a demonstrated record of success in managing challenging political environments and developing and executing new programs. Prior to Tilson, Sue served three years as Chair of the Board of Coastal Enterprises Inc (CEI), an entity that provides financing and technical assistance to rural communities throughout Maine and the US. CEI has over \$800 million in assets under management and 85 employees. Sue also served as Deputy Director of the Maine State Planning Office, a 45-person state agency that provided policy analysis, research, and municipal assistance. Prior to that she served as Director of Industry Development at the Maine Department of Marine Resources, and was on the Board of the Maine Technology Institute, an organization that granted over \$20 million in R&D funds to businesses each year. She holds a BA from the College of the Atlantic and an MBA from the University of New Hampshire.

## **Brenden DeAndrade, Analytical Support**

**Brenden DeAndrade** is an **Associate Consultant** in Tilson's Energy and Broadband Group. Brenden joined Tilson after working for five years at Verizon, where he held several positions with successively increasing responsibility in network engineering and operations support as a business analyst. At Verizon, Brenden performed project management and business analysis in a fast-paced, dynamic environment that required cross-functional coordination. This work included frequent coordination with municipalities on network operational issues. Brenden has a Bachelor of Science from the University of Massachusetts and is working towards his Master of Business Administration at Northeastern University.

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## John Costa, Network Design

**John Costa** is a **Senior Outside Plant Engineer** at Tilson. John brings expertise in field engineering, in particular, knowledge regarding siting, and radio frequency engineering. John has worked with many municipalities throughout New England, supporting the work of Tilson's broadband group in providing communities with telecom asset inventories, as well as high level fiber designs and cost estimates for these communities. Prior to Tilson, John worked as a Network Engineering Manager for the Maine Fiber Company as well as a Senior Manager of OSP planning and alternate access for FairPoint Communications.

\*For bios of Axiom Technologies' staff, please see Appendix A, below.

### **5.3.3 Provide proof of support and endorsement from the participating local municipalities.**

Please see the attached letter of support from the Town of Bridgton, Appendix C

### **5.3.4 Provide the names of local officials and community representatives that will be directly involved as members of the team.**

Please refer to the list that the Town of Bridgton has supplied above in the precertification checklist.

## **6. Past Performance – 5 points**

### **6.1 Provide documentation demonstrating past performance in executing grant funded programs.**

In addition to Tilson's extensive past performance in community-funded (as opposed to grant funded) broadband planning in Maine and other parts of New England, Tilson has worked as a contractor or sub-contractor for state and federal grant-funded recipients. Three examples for past performance on grant-funded projects are detailed below:

**BTOP Grant: The Three Ring Binder, Maine Fiber Company.** The three ring binder is a 1,100 mile fiber optic project designed to deliver high-speed broadband connectivity to rural communities throughout Maine. Costing roughly \$32 million, the project received \$25 million in BTOP funding and was supplemented by private investment. The Maine Fiber Company engaged Tilson to serve as owner's project manager of the construction. Tilson oversaw all aspects of the deployment, including managing pole licensing, construction, adds/moves/changes, testing, and network troubleshooting. The three-ring binder was completed in 2012 on budget and ahead of schedule.

**BTOP Grant: The MassBroadband Institute, MassBroadband 123 Project.** The MassBroadband 123 (MBI123) Project is a 1,300 mile fiber optic project designed to bring broadband service to the rural regions of Central and Western Massachusetts. Costing nearly \$90 million, the project leveraged \$45 million in BTOP funds and equal matching funds from the State of Massachusetts. The project links almost 1,400 community anchor institutions through a middle mile fiber network. Tilson served as the Project Manager through the Planning, Implementation, Monitoring and Closeout of the MassBroadband 123 project, overseeing the various project vendors and subcontractors, performing the actual construction and implementation of the project. Tilson project managed all vendors throughout the process in a complex Middle Mile Fiber Optic Buildout encompassing various stakeholders, including a large variety of Community Anchor Institutions (CAI's), Points of Interconnect (POI), and various Facility Owners on the project.

# Community Broadband Planning Grant Application

**State Broadband Initiative Grant: Broadband Rhode Island.** Tilson was as a sub-contractor of a National Telecommunications Information Agency (NTIA) State Broadband Initiative grant in the state of Rhode Island. Tilson assessed existing broadband and telecommunications infrastructure in two communities, and compared the community's available service to the rest of the state. As part of the grant, the Tilson team surveyed existing infrastructure including 13 towers, 120 unique demographic locations and conducted analyses of a year of Internet traffic metrics. Tilson also established working groups in both communities conducting a dozen outreach events to communicate the project mission and identify requirements, constraints and concerns. Tilson completed both projects with a final report that included detailed evaluation of the price and benefit for 10 different broadband service packages sized for project growth and demand.

\*For past performance for Axiom Technologies, please see Appendix B, below.

## 6.2 Provide three client references.

**Client:** Town of New Shoreham, RI

**Project Name:** Broadband Plan and Network Designs Study

**Contact Name/Title:** Nancy Dodge, Town Manager

**Address:** 16 Old Town Road, P.O. Box 220

New Shoreham, RI 02807

**Phone:** (401) 466-3210

**Email:** [townmanager1@new-shoreham.com](mailto:townmanager1@new-shoreham.com)

**Client:** Island Institute

**Project Name:** Maine Off-Shore Islands Broadband Study

**Contact Name/Title:** Briana Warner, Economic Development Director; Stephenie MacLagan, Economic Development Associate.

**Address:** 386 Main Street, Rockland, ME 04841

**Phone:** (207) 701-1576; (207) 745-3371

**Email:** [bwagner@islandinstitute.org](mailto:bwagner@islandinstitute.org); [smaclagan@islandinstitute.org](mailto:smaclagan@islandinstitute.org)

**Client:** Windham Economic Development Corporation

**Project:** High Speed Broadband Planning in the Lakes Region

**Contact:** Tom Bartell, Executive Director

**Address:** 8 School Rd Windham, ME 04062

**Phone:** 207-892-1936; **Email:** [thbartell@windhammaine.us](mailto:thbartell@windhammaine.us)

## Appendix A: Axiom Bios

### **Susan Corbett, CEO**

Ms. Corbett is the Chief Executive Officer of Axiom Technologies. She is responsible for the fiscal management of Axiom, has written numerous grants for broadband development, and works closely with economic development organizations and rural organizations. Ms. Corbett has over 30 years' experience in business and financial management, managed \$5 million dollars in grant funding and oversaw the fiduciary and reporting responsibilities for Axiom's Dept. of Commerce \$1.4 million NTIA grant award for the "Washington County Employment & Education through Sustainable Broadband Adoption" project.

Under Ms. Corbett's direction, Axiom Technologies has received the 2010 Maine Development Foundation "Champion of Economic Development Award"; in 2010 was the Recipient of a Senate Congressional Record and in 2011 received Coastal Enterprises, Inc. "Founders Award" and the 2011 and 2014 Machias Bay Area Chamber of Commerce's "Business of the Year" award. Axiom's CEO Susan Corbett received the 2010 MaineBiz "Woman to Watch Award" and was recognized by Bangor Daily News in 2011 as "1 of 11 People to Watch in 2011" and in 2011 was awarded Women Impacting Public Policy's "Technology Innovator of the Year" for the State of Maine. In 2014, Ms. Corbett formed a non-profit, the Axiom Education & Training Center answering the call for more digital literacy, adult education, work force development, and STEM education for our youth in Washington County and throughout Maine.

### **Jane Blackwood, M.Ed., Director Educational Services**

Ms. Blackwood is the Director Educational Services and the Adult Education Director at the Axiom Education & Training Center (AETC), a 501 c3 non-profit organization. Prior to the creation of AETC, Ms. Blackwood provided educational services for Axiom Technologies, an Internet Service Provider and Information Technology company located in Washington County, Maine.

Ms. Blackwood earned her Master's Degree in Education from University of New England and holds a Teaching Certificate in the State of Maine and is currently working on a Master's Degree in Education Leadership. She oversees AETC's Adult & Community Education program which includes Adult Basic Education, College Transitions and High School Completion (HiSET). AETC also provides WorkReady and Workforce Development training, CompTIA for high school and college students, Credit Recovery, Alternative High School classes, as well as Enrichment classes for adult learners. AETC recently became a STEM Hub for students 10-18 in Washington County.

AETC's flagship program, Digital Literacy, was created by Ms. Blackwood. The program is nationally recognized and is included in the U.S. Dept. of Commerce's National Broadband Adoption Kit. To date, over 3,000 adult learners and over 300 businesses have participated in digital literacy classes under Ms. Blackwood's direction.

### **Mark Ouellette, President & COO**

Mr. Ouellette is the President and Chief Operating Officer of Axiom Technologies. Mark was hired to increase the capability at the senior management level. The vision was to put Axiom on a growth path to a statewide presence and to handle the day-to-day operations. This has allowed Susan to take a true CEO role, setting the overall agenda and becoming a true ambassador for Axiom both in Maine and nationally. Both Susan and Mark have the same vision and passion for the company. As a next step, Mark is transitioning into a 50% ownership position

# Community Broadband Planning Grant Application

which will solidify the senior management team and create a stable duo as they begin to execute Axiom's three year growth plan.

Prior to joining Axiom, Mr. Ouellette was the Executive Director of Mobilize Maine; a statewide asset based economic development initiative. In this role he facilitated regional activities to create economic strategies and opportunities to grow Maine's economy. Previously, he also served as Director of the Office of Business Development for the Maine Department of Economic and Community Development where he oversaw the state's business attraction and retention activities. Mark also has an extensive federal background, having worked for over 12 years as a Congressional Aide and Chief of Staff to 1st District Congressman Tom Allen.

## **Kim Emerson, MTCRE, MTCWE, MTCTCE, Senior Network Engineer**

Mr. Emerson is a Network Systems Engineer, has over 18 years of IT experience, and is experienced in a multitude of operating systems. He attended University of Maine at Machias, and continued his education and training to best serve Axiom's network. Mr. Emerson oversees advanced projects involving Axiom's current wireless technologies, DSL and fiberoptic build-outs. He also has extensive experience in designing, implementing and managing business networks. He is experienced in Microsoft Office products, Microsoft Adobe Photoshop, Adobe Professional, Microsoft FrontPage, Dreamweaver CS3, Windows 95 –Windows 7 Professional, Windows Server OS from NT -2008 Unix/Linux, Active Directory, Microsoft Exchange, Ubiquiti OS and Mikrotik RouterOS. Mr. Emerson is also proficient in the following programming Languages: Perl/CGI, HTML, JavaScript, SQL, CSS and ASP. Mr. Emerson has completed training and received certification to administer and deploy the Mikrotik RouterOS platform.

## **Ian Sawyer, MTCRE, MTCWE, MTCTCE, Senior Network Engineer**

Mr. Sawyer has 15 years of experience in Customer Support and the IT industry. He is a "jack of all trades" and is utilized throughout Axiom's entire operation. He has a strong Customer Support background, Network Management, Wireless, DSL and Fiberoptic Installations and Computer Repair. He is a graduate of Washington County Community College and is a CompTIA A+ Certified Technician. He is experienced in all Windows Operating Systems, Networking, including routers, hubs, switches and cabling, and Firewalls, Malware, and Anti-Virus Software.

## **Jeremy Manning, Senior Field Engineer**

Mr. Manning has been employed by Axiom Technologies since 2009. He serves as Axiom's Senior Field Engineer and is involved in all of Axiom's deployments, including extensive knowledge of TVWS. He is nationally certified climber and has several climbers in which he oversees. In addition, Mr. Manning serves as Axiom's chief Safety Officer. He has a technology background and has been a carpenter and builder for over 15 years. Mr. Manning has been instrumental to the Axiom Team in tower build projects and works closely with Town Officials, Planning Board members and Code Enforcement Officers.

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## Appendix B: Axiom Past Performance on Grant-Funded Projects

**Employers' Initiative Program** – Funded through the Gorman Foundation, Adult Education classes, High School Completion, College Transitions, Digital Literacy classes, WorkReady training, Technology Assessments and Industry-Specific training are offered at the business location. The goal is to increase the educational attainment of our workforce by decreasing the barriers to education. Other partners include the University of Maine at Machias and Washington County Community College.

**Downeast STEM Hub** – The Maine Math & Science Alliance, funded with a grant from the National Science Foundation, has named Machias and the surrounding communities (3 school districts) as the 4th of 5 STEM Hubs in Maine. The Downeast STEM Hub will target 600-800 students from ages 10-18. AETC will be promoting “Family STEM Education”.

**iPad Lending Library** – Funded through the Maine Community Foundation, AETC has a lending library of 10 iPads to loan to students to connect to their instructors.

**WorkReady** – Funded through the CF Adams Foundation, AETC is currently researching offering WorkReady (soft-skills training) to high school students in Washington County. This program will work closely with area businesses.

## Appendix C : Town Letter of Support

### TOWN OF BRIDGTON



3 CHASE STREET  
BRIDGTON, MAINE 04009  
Phone- 207-647-8786

Select Board Chair, Bernard N. King, Jr.

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April 14, 2016

Lisa Leahy  
ConnectME Authority  
145 SHS  
Augusta, ME 04333-0145

To the Authority:

Please accept our application for a planning grant for broadband service improvements in Bridgton. We are pleased to be a part of the state's initiatives as this is a priority project in our 2014 comprehensive plan.

Service needs study in Bridgton is in 2 parts:

1. Areas without service – these are our rural areas
2. Areas without adequate bandwidth – these are our designated growth areas

The town is grateful the state sees broadband service as a crucial part of economic development, as well as promotion. We look forward to working with the state on this project.

Sincerely,

Bernard N. King, Jr.  
Chair, Bridgton Select Board

Cc: Robert A Peabody, Jr. – Town Manager  
Anne Krieg, AICP – Bridgton Planning & Development  
Community Development Committee