



at the MassTech  
Collaborative

**FISCAL YEAR 2017  
OPERATING PLAN**

## Overview

The MBI's core priority in Fiscal Year 2017 will be the implementation of the Last Mile Program for 44 unserved Western Massachusetts towns. MBI will also manage several key initiatives to success, including the Broadband Extensions Program and the oversight of the MassBroadband 123 network.

### **Last Mile Program for Unserved Towns – Context for New Strategic Framework**

In Fiscal Year 2016, the Baker/Polito Administration engaged with MBI in a thorough review of the Last Mile program that led to the development of a revised strategic approach that recognizes there is no "one size fits all" solution that will work for all of the 44 unserved towns.

On May 10, 2016, Governor Baker and Lieutenant Governor Polito met with Senate President Rosenberg, other legislative leaders, MBI officials and local representatives from unserved municipalities in Western and Central Massachusetts to discuss a strategic pathway forward for the Last Mile program designed to accelerate progress. The Baker/Polito Administration also announced a new Last Mile project leadership team to guide the MBI's high-speed internet accessibility efforts and appropriately disburse state capital Last Mile funds to approved projects.

The MBI is building a flexible framework that will help all unserved towns achieve broadband access, allowing for a range of project models, including multi-town collaborations, locally-owned networks, and industry partnerships. Many technology and operational choices will be supported, as long as they meet core speed, affordability, and sustainability standards. MBI has now prioritized embracing a wider range of options, projects and choices after spending significant effort over the prior two years testing the political and economic viability of the "one size fits all" approach that originated from a groundswell of local support for a regional ubiquitous fiber-to-the-home ("FTTH") solution.

MBI recognized the complexity of that project framework, and believed that the most prudent and effective approach would involve a FTTH network that was centrally designed and built under MBI's management and oversight and operated by a qualified third party. The prospects for attracting private sector investment were limited by statutory provisions requiring that the network assets be publicly owned. With no tangible prospects for private sector or federal funding at that time, it was widely recognized that the project would be funded solely from state and municipal sources.

MBI undertook an in-depth planning process and developed a programmatic framework to implement a regional FTTH solution. MBI developed detailed and sophisticated capex and opex models informed by desktop modeling and financial sustainability analysis that provided a transparent, conservative and realistic budget to inform municipal decision makers. MBI projected the capital cost of a regional, ubiquitous FTTH network to be in excess of \$100 million. It was clear that towns would need to share the cost of designing and constructing a FTTH network. MBI published town-by-town allocations of state bond funds that formed the basis for a shared understanding of the cost share breakdown for each town. Interested towns used the allocation information to establish the amount of municipal debt that each town would need to authorize at Town Meeting.

The regional, ubiquitous FTTH solution was championed by WiredWest, a grassroots, citizen-led organization located in Western Massachusetts. A significant number of unserved towns joined WiredWest and took tangible actions to pursue a FTTH project, including (i) Selectboards submitting non-binding letters of intent to MBI in late 2014, (ii) establishing a Municipal Light Plant, and (iii) voting on warrants at Town Meetings to authorize debt obligations to fund the municipal share of the costs for a FTTH project and taking a debt exclusion vote when necessary.

The landscape has fundamentally shifted based on (1) MBI's intensive analysis and scrutiny of WiredWest's business plan and proposed operating agreement with their member towns, which revealed a number of serious flaws that called into question the fundamental viability of their plan; (2) the Baker-Polito Administration's intensive engagement with MBI (as mentioned above); and (3) a change in the law that permits MBI to invest state bond funds in broadband infrastructure that will be owned by a private sector company. State law still requires that infrastructure financed, in whole or in part, by municipal funds must be publicly owned.

The change in law on the use of state bond funds has become part of MBI's toolbox and is being utilized to form a public-private partnership with Charter Communications to bring broadband access to Hinsdale, Lanesborough and West Stockbridge. Charter is the incumbent cable provider serving these communities. The residents of these towns do not have high speed internet access. The infrastructure serving these towns is geographically isolated from the rest of Charter's network and as a result of this isolation, these towns have not received the network upgrades that allow for broadband internet connectivity or HD video. Additionally, Charter's network in these towns only reaches between 75% and 90% of residences. Through the merger of Charter and Time Warner Cable, Charter has acquired Time Warner's national cable network. Time Warner served 15 communities in Massachusetts, several of which are adjacent to Charter's network in the unserved towns of Hinsdale, Lanesborough, and West Stockbridge. Charter now controls the Time Warner network infrastructure surrounding these three towns, which will allow it to connect the networks together, and more easily upgrade outdated infrastructure.

In FY17, MBI and Charter are working out the details on a public-private partnership to upgrade and extend the existing cable infrastructure in the towns of Hinsdale, Lanesborough, and West Stockbridge. The upgrade and extension of infrastructure will allow Charter to offer residents in these three towns dramatically improved cable services, including HD video and video on demand, as well as broadband internet services that meet or exceed the FCC standard bandwidth requirements of 25 Mbps download and 3 Mbps upload. Charter expects to offer 60/4 mbps broadband service after the upgrade is complete. MBI estimates that, upon project completion, over 3,000 previously unserved residential and commercial premises within the three towns will have access to broadband services.

Under the direction and guidance of a revamped leadership team - Peter Larkin has been appointed to serve as Special Advisor to the Secretary of Housing and Economic Development and has assumed the role of Chairman of the MBI Board of Directors; and Bill Ennen has been appointed as the Last Mile Implementation Liaison and is focusing on local community engagement and planning – the MBI has put forward an aggressive schedule, an ambitious set of priorities and a new operational structure to implement the strategic framework for the unserved towns that was announced by Governor Baker on May 10, 2016. MBI's approach reflects the following assumptions and lessons learned:

1. **A “one size fits all” approach will not work.** A significant number of unserved towns cannot afford a FTTH solution that requires the town to pay two-thirds of the capital cost. Towns can now consider wireless and hybrid fiber-wireless technologies that can deliver broadband speeds. MBI has funded wireless pilot projects in Royalston and Middlefield and will apply lessons learned to other towns that are interested in a wireless solution.
2. **Unserved towns have varying degrees of technical capabilities.** Some unserved towns appear to be better positioned to manage a design and construction project for a municipally owned broadband network. MBI will provide a construction grant from the initial allocations that were approved in January 2015 for towns that desire to “go it alone” and propose a broadband project that meets the threshold eligibility criteria established by MBI. Towns that feel that they lack the resources and capacity to manage their own projects may still utilize MBI's services to design, construct and commission a network.

3. **MBI continues to recognize that broadband is essentially an enabling technology that impacts quality of life, economic growth and educational attainment.** The 44 towns in Western Massachusetts that currently lack broadband access are experiencing depressed home values and declining population as younger residents leave for other areas that offer better opportunities. MBI is committed to accelerating the pace of progress and achieving tangible and meaningful results in a compressed time frame.
4. **New funding opportunities are being pursued** that could lower and in some instances, may eliminate the need for municipalities to share in the upfront costs of constructing a broadband network. MBI is exploring public-private partnerships with experienced providers that are financially stable and have a track record of success. These partnerships can yield significant benefits in the near term (reducing the level of public funding needed for broadband projects; relieving the extensive burden on the state and/or the town in managing complex design and construction projects; getting projects built more quickly and more efficiently) and long term (shifting the responsibility of maintaining broadband networks to private partners; allocating the risk of financial sustainability to the private sector). The most attractive towns for public-private partnerships are often towns that are deemed to be “low hanging fruit” based on factors such as population density, demographics and topology. As described in more detail below, MBI is also investigating potential federal funding sources, including the Connect America Fund II and USDA loan programs.
5. **MBI remains committed to fostering collaborations among towns,** particularly for network operations. MBI no longer requires towns to make decisions on a network operator/ISP at the early stage in the process where design and construction decisions are being made. We are preserving flexibility to accommodate multi-town networks by supporting network design specifications that allow discrete networks to be interconnected. MBI is in the process of developing a template agreement for regional and sub-regional operating consortiums.

#### **Last Mile Program for Unserved Towns – Program Criteria and Models**

Projects covering residents in the 44 remaining unserved Western and North Central Massachusetts communities are eligible to participate in the Last Mile program. MBI is supporting broadband projects that provide access to minimum speed requirements, demonstrate viable funding and financing plans, and achieve operating sustainability. To that end, the MBI team is engaging directly with unserved towns to assess each town’s readiness to move forward by exploring technology options, funding strategy and operational plans. MBI continues to refine the operational parameters of the Last Mile Program for unserved towns as we learn more about the needs of the towns, the range of partners and financing vehicles that can be leveraged, and local technology preference and choices.

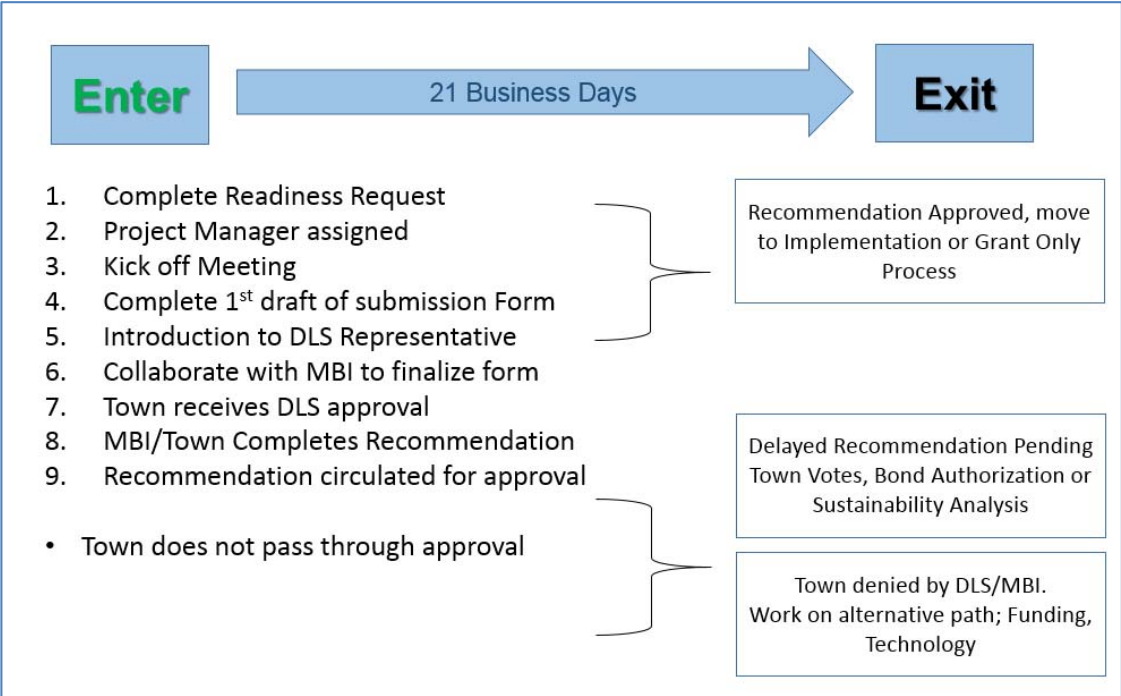
To receive financial support and MBI approval, broadband access projects must meet minimum baseline requirements:

<b>Minimum Project Requirements:</b>	<b>Technology and Operations:</b>
<ul style="list-style-type: none"> <li>• Project’s technology must provide access to broadband speeds as defined by the FCC (25/3)</li> <li>• Project must be capable of demonstrating long-term operating sustainability without ongoing state subsidy</li> <li>• Project must be affordable</li> <li>• Project should seek a minimum goal of 96% residential coverage in its service area</li> <li>• Endorsed by MBI professional staff</li> <li>• Financing Endorsed by DLS (as needed)</li> <li>• Approved by MBI board</li> </ul>	<ul style="list-style-type: none"> <li>• Preference for network operations to be managed by experienced professional partners when possible</li> <li>• Many technology choices: fiber, wireless, cable, and/or hybrid solutions</li> <li>• Preference for utilization of <i>MassBroadband 123</i> network when appropriate</li> </ul>

Unserved towns can pursue a broad range of options that reflect the key tenet of the strategic framework that there is no “one size fits all” solution. MBI will support projects that involve a variety of project approaches (e.g. expansion by a private provider, multi-municipal networks, independent municipal networks, pilot projects), financing mechanisms (state grant funding, private partner investments, municipal investments, federal funds) and technologies (fiber, wireless, cable, hybrid systems). These options have informed the development of five project models that address the diverse needs and capacities of the 44 unserved towns:

<b>Model A: Expansion by Private Provider</b>	<b>Model B: Extension of Existing Cable Infrastructure</b>	<b>Model C: Multi- Municipal Network</b>	<b>Model D: Independent Municipal Network</b>	<b>Model E: Pilot Projects</b>
<ul style="list-style-type: none"> <li>•Ownership: The private party would own the network</li> <li>•Operations: The private party would operate the network</li> <li>•Financing: Likely a combination of state and private funding with a possibility for CAF II funding</li> <li>•Technology: Fiber, Coax, or Wireless depending on provider</li> <li>•Operating Considerations: Sustainability concerns would be minimized</li> <li>•Challenges: Effectively incenting the private sector to invest with modest public investment</li> </ul>	<ul style="list-style-type: none"> <li>•Ownership: Incumbent cable provider</li> <li>•Operations: Incumbent cable provider under existing franchise agreement</li> <li>•Financing: Likely a combination of state and private funding with a possibility for CAF II funding</li> <li>•Technology: Likely the same as existing technology provider deploys in that town</li> <li>•Operating Considerations: Minimal</li> <li>•Challenges: Effectively incenting the private sector to invest with modest public investment</li> </ul>	<ul style="list-style-type: none"> <li>•Ownership: Municipal</li> <li>•Operations: Outsourced and based on consortium model</li> <li>•Financing: Combination of state/MBI funds and municipal borrowing; unlikely availability for CAF II funds</li> <li>•Technology: Fiber, wireless, or hybrid</li> <li>•Operating Considerations: Emphasis on attaining broadband speeds with maximum coverage at affordable prices while focusing on long term sustainability</li> <li>•Challenges: Fostering a flexible structure that will allow a town to exit with its assets</li> </ul>	<ul style="list-style-type: none"> <li>•Ownership: Municipality</li> <li>•Operations: Outsourced</li> <li>•Financing: Combination of state/MBI funds and municipal borrowing; unlikely availability for CAF II funds</li> <li>•Technology: fiber or wireless</li> <li>•Operating Considerations: emphasis on attaining broadband speeds with maximum coverage at affordable prices while focusing on long term sustainability</li> <li>•Challenges: Achieving a sustainable network</li> </ul>	<ul style="list-style-type: none"> <li>•Ownership: Variable, but likely the applying municipality</li> <li>•Operations: Variable, but preferably outsourced</li> <li>•Financing: Variable depending on project</li> <li>•Technology: Dependent on pilot program (wireless, fiber, hybrid, etc.)</li> <li>•Operating Considerations: Ensuring that the pilot model will foster long term sustainability</li> <li>•Challenges: Balancing the need to invest in new programs with a desire to be responsible stewards</li> </ul>

The MBI team is working closely with town designees to determine the project readiness status of each eligible town. MBI has provided the towns with tools to develop their own projections on the take rates and broadband service pricing that will need to be achieved for long term financial sustainability. MBI is deferring to the judgments of town officials that the take rate and pricing projections are reasonable, affordable by a sufficient number of town residents and attainable. The readiness process is collaborative and is intended to result in successful, approved project proposals. Towns are partnering with the MBI on an intensive readiness process, requiring best effort by all parties and resulting in a status report, which may produce a project approval recommendation. MBI has targeted a 21 day cycle to complete the readiness process for a town. However, if more time is needed, the MBI will provide a written status report and recommendation for moving forward.



**FY17 Summary of Activities:**

**Broadband Extensions Program**

During Fiscal Year 2016, MBI reached an agreement in principle with Comcast to extend their infrastructure in seven of the nine Western Massachusetts towns that have gaps in broadband coverage – Buckland, Conway, Chester, Huntington, Northfield, Pelham and Shelburne. Many of these towns have significant gaps in broadband access and each town falls below the regional average of 96% of residences having access to broadband services. The other “partial cable” towns – Hardwick and Montague – were subject to a more extensive due diligence process to evaluate the proposals submitted by Comcast and Matrix Design Group. MBI’s determination to recommend the Comcast proposal was reviewed and validated by the Department of Telecommunications and Cable. Montague and Hardwick recently confirmed their intent to participate in the Broadband Extensions Program and accept the MBI determination to proceed with Comcast.

Comcast currently offers voice, video and broadband services in each of the nine towns. Comcast will buildout their existing infrastructure to expand broadband access in each of the nine towns at no cost to the towns. The existing cable/hybrid fiber-coaxial cable network that deploys DOCSIS 3.0 modems will be extended to provide broadband access to at least 96% of all residential and commercial premises in each town. Comcast will offer broadband services that meet or exceed the FCC standard of 25 Mbps down and 3 Mbps up. Comcast will offer services to new customers on the same terms and conditions as existing customers in each town. This means that new customers will pay the same prices for the same service options, which include double play and triple play packages. When the project is complete, over 1,000 additional residential and commercial premises will have access to broadband services.

During Fiscal Year 2017, MBI will focus on:

1. Executing a grant agreement with Comcast for a nine town broadband expansion project;
2. Working with Comcast during the 180 day design development period to finalize a detailed project schedule that includes buildout targets for the nine towns and other milestones;
3. Supporting engagement between Comcast and the towns to identify projected costs and financing mechanisms to further extend broadband service to the remaining premises that will not be reached through the Broadband Extensions program; and
4. Grant oversight and management activities.

As outlined above, the Last Mile Program is completing a strategic and programmatic realignment in FY17 and therefore there is a certain degree of uncertainty around activities. The program is proceeding with allocations that were based on cost estimates for a regional, ubiquitous FTTH network. The shift to a diversified strategy that supports a range of town preferences and project models could materially impact project costs. For example, overall costs could increase as we lose the efficiencies of building an integrated regional network. Having up to 44 separate projects may cost more to manage and implement. Conversely, costs could go down for projects that utilize lower cost alternative technologies and/or scale back the scope of coverage (ubiquitous coverage is no longer required). MBI continues to be sensitive to the legacy of WiredWest setting unrealistic expectations that towns may not need to borrow funds to support their upfront capital cost obligations and that any debt service for bonds that would be issued could be covered through profits generated by a network operated by WiredWest. In some instances, the language of town debt authorization and debt exclusion votes that incorporate model language proposed by WiredWest may be invalidated by municipal bond counsel. Specific FY17 Last Mile Program activities are anticipated to likely include:

**Readiness Assessments:**

The MBI team is working closely with town designees to determine the project readiness status of each eligible town. The readiness process will be collaborative and is intended to result in successful, approved project proposals. Towns partner with the MBI on an intensive readiness process, requiring best effort by all parties and resulting in a status report, which may produce a project approval recommendation. Achieving readiness involves a detailed process of collaboration, review, engagement, planning, and evaluation. Elements of readiness for each town include:

- Preferred Project Model (based on consensus recommendation between MBI and the town)
  - Preferred Engineering and Construction Approach
- Division of Local Services (DLS) Approval Guidelines
  - Project Budget and Funding and Sources
  - Debt Authorization (if necessary)
  - Debt Exclusion (if necessary)
  - Financial Advisor and Bond Counsel Information (if necessary)
  - Accounting Procedures for Revenues/Expenses

- Municipal Light Plant Structure (if applicable)
- Technology Selection
- Regional Collaboration (if applicable)
- Network Operator/Service Provider
- Operating Expense and Sustainability Projections

The MBI is engaging in intensive readiness review with towns on a rolling basis. The Readiness process was completed for (1) town in FY16, with 33 towns expected to participate in early FY17. In FY17, the MBI will complete the readiness assessment process with a goal of 100% completion for interested towns by Fall of 2016.

### **Planning Grants:**

The MBI offers modest (\$5,000) planning grants to municipalities to support their project evaluation and planning. In FY17, the MBI will continue to review and manage planning grants, including oversight of the 17 grants which were awarded in FY16.

### **Review of Alternative Technologies:**

The MBI will offer planning support to communities interested in exploring alternative technology options, including a range of wireless options. The MBI is budgeting \$50,000 in FY17 for specialized technical planning support for towns reviewing alternative technologies.

### **Regional Collaboration Options:**

Many towns are interested in joint procurement, ownership, or operations related to a broadband network. In FY17, the MBI anticipates continued engagement with the towns, subject matter experts, and the Baker-Polito Administration to refine and pursue regional collaboration or consortium models. As these models are developed, the MBI will work to educate and organize towns around the opportunities and challenges they present.

### **Funding and Financing Options:**

#### **Community Facilities Fund:**

The USDA Community Facilities (“CF”) Loan Program may adjust their rules to allow towns to finance broadband networks. This program traditionally was used for schools, firetrucks, waste facilities, libraries, etc., but given the demand for broadband in rural communities, federal officials are considering expanding the range of eligible projects. The program could allow eligible towns to borrow up to \$3 Million at a competitive interest rate (currently 3.125%). In FY17, the MBI will continue monitoring the development of the USDA's determination about the re-purposing of the program. If the program allows for broadband expansion projects, the MBI may work to support local engagement with the program, offering educational opportunities to towns and supporting the application process.

#### **Connect America Fund II:**

The FCC is creating a process to fund residential broadband projects to unserved locations, known as the FCC CAF II program. The CAF II program could provide approximately \$4 million per year for 10 years to 17,000 unserved Western Massachusetts locations. The FCC will distribute funds through a reverse auction where the lowest rated scores will win the auction.

On June 21, 2016, the FCC issued a Notice of Proposed Rulemaking to determine the rules of the auction and what entities can apply and be awarded CAF II funds. In FY17, the MBI will coordinate efforts with the Massachusetts Department of Telecommunications and Cable (“DTC”) and engage with the FCC, towns, federal policymakers, and broadband providers to continue exploration of this funding opportunity. This activity is anticipated to include:



- Filing comments describing how the FCC should favor state-initiated broadband projects;
- Determining the viability of CAF II and best positioning Massachusetts to benefit from CAF II funding through: accounting of unserved locations; identifying eligible Internet Service Providers who could lead or partner in the CAF II bidding, developing a preliminary business plan; and developing a preliminary design of a CAF II-eligible project.

**Project Grants:**

The MBI anticipates making and managing grant awards to several approved projects that do not require detailed project planning and project management support.

**Cable Expansion:**

The MBI is exploring partnerships with existing cable broadband providers who may be interested in expanding their footprint to cover unserved towns. In some towns, state funding support to offset network construction costs may make towns more commercially attractive to cable broadband providers. In FY16, the MBI, in partnership with DTC, initiated negotiations with Charter Communications to provide cable broadband access to three unserved towns: Hinsdale, Lanesborough, and West Stockbridge. In FY17, the MBI expects to execute and implement a comprehensive grant award agreement with Charter to provide broadband access to all residents in these three unserved communities, and the plan and budget assume that \$1.6 million will be expended under this program in FY17. The MBI will also continue ongoing engagement with a broader network of cable broadband providers to evaluate their interest in network expansion in the region.

**Town-Managed Projects:**

As towns have the option to manage network design and construction independently, the MBI will negotiate, execute, and manage grant award agreements to eligible towns that elect this option in FY17. Eligible towns who have completed the Readiness assessment and have MBI-approved broadband expansion projects may receive grants of up to their total construction allocation. Towns that elect to manage projects independently have made their own determination that they possess the requisite capacity to effectively and successfully oversee the design and construction process. Towns must commit to comply with all applicable procurement laws. MBI will not play a role in managing town procurements or advising on the qualifications of vendors and contractors selected by a town. While the exact number of towns who will pursue this option is unknown, the MBI FY17 budget includes an assumption that MBI will make and manage grants to 4-7 towns in this category in FY17 and that \$2 million will be expended to these towns in the fiscal year.

**Network Design and Engineering:**

The MBI expects to manage network design, planning, and construction for eligible towns who have completed the Readiness assessment and have approved broadband expansion projects. While the exact universe of communities that will be prepared for this work in is unknown, the MBI can project that various stages of this work will initiate for up to 20 towns in FY17.

**Pole Survey Work:**

The MBI expects to execute a pole survey contract by August under which it will conduct up to \$1 million of pole survey work on behalf of up to 20 towns in FY17. Pole survey work is the first step in the process of retaining a license to install fiber on the utility poles. The MBI has implemented an RFP process to retain prequalified vendors to perform this work. The pole survey work will commence starting in late August and continue throughout FY17. The MBI will select towns to participate in the pole survey work as part of the readiness process.

**Make-Ready:**

The MBI expects to conduct early stages of make-ready work on behalf of up to 10 towns in FY17 and its plan and budget assume a total of 15,522 poles at a cost of \$1.5 million expended in FY17. (Note that the towns share in the cost of the make-ready work, and under this assumption the towns' share of the costs in FY17 would be \$4.7 million.) Make ready work is so determined by the utilities through an application process that is kicked off post pole survey work mentioned above. The ownership of the poles by the utilities affords them the right to assess fees based on the level of activity required to make space on the pole for each town's fiber cable.

**Design and Engineering:**

The MBI expects to issue an RFP for a Design-Engineering firm in August, begin the engagement with the firm during the Fall on the design process for up to 20 towns in FY17. The plan assumes an overall cost for the Design-Engineering work of \$8.5 million over the lifetime of the program, of which \$2 million is assumed to be expended in FY17. Note that the Design-Engineering contract amount is a highly speculative assumption at this point, and it will be refined once the full design parameters are developed and bids have been received. The selected Engineering firm's primary role and responsibility will be to perform design, engineering and project management services for up to 20 last mile towns.

**MassBroadband 123 Network**

The **MassBroadband 123** network has been fully operational for two years and is currently providing service to 514 community anchor institutions (46%) out of the 1108 originally connected. The **MassBroadband 123** network footprint has grown through the addition of alternative access points and network extensions. MBI is working extensively with Axia on several major sales initiatives (e.g. Fiber to the Tower, NG911, and other dark fiber projects).

While the **MassBroadband 123** network has been lauded by the National Telecommunications and Information Administration (the agency that administered BTOP) for being one of the leading projects in the nation in securing commitments from CAIs to purchase services, the **MassBroadband 123** network continues to operate at a deficit that is being solely funded by Axia pursuant to its network operator agreement with MassTech. The annual cost to Axia of operating the **MassBroadband 123** network is approximately \$4.4 million (including more than \$1 million in direct payments to MassTech; approximately \$1.3 in payments to third parties; and \$2.1 million in other operating costs directly incurred by Axia). As a result, Axia is incurring annual operating losses on the **MassBroadband 123** network of approximately \$2.5 million. Axia has indicated that it projects break-even operations to occur in 2018.

The payments Axia makes to MBI consist of guaranteed oversight fees (\$578K in FY17), dark fiber fees (\$202K projected in FY17), and payments to be held by MassTech for future upgrades to network equipment and for decommissioning of the network (\$400K and \$60K, respectively, in FY17). While the latter two amounts are held in reserve for those purposes, the first two amounts are used by MBI first to pay for its oversight of the network and, to the extent there is a surplus, to build a contingency fund in case the network incurs unanticipated costs or if funds are needed for the network at the end of the Axia agreement's term. In FY17, MBI has planned to use the \$483K of projected profit to help cover last-mile and broadband extension program costs that are not being funded by bond funds.

Axia's parent company is in the process of being acquired by the Partners Group AG, a global private markets investment management firm headquartered in Switzerland. The parent company will be privately held after the acquisition is completed. It is too early to evaluate the impact of the Axia acquisition but MBI will continue to engage with Axia representatives to identify any potential shifts in

Axia's strategic focus that could impact Axia's approach to operating the network and the implications for the growth of the network and revenue sharing.

### **MassVetsAdvisor**

MassVetsAdvisor.org is a web portal, launched in May 2012, which provides a comprehensive list of programs and benefits available to veterans and their families to help them transition to and succeed in civilian life. The portal has been used by tens of thousands of veterans, family members and service providers and provided a strong reason for a large, diverse group of people to use broadband services and the Internet. It contains all 140 Massachusetts State and Federal veterans' benefits, 305 programs and services provided by private and non-profit organizations, and listings and contact information for all 331 Veterans' Service Officers in the state. The site has had more than 90,000 unique individual users. MassVetsAdvisor.org has received significant attention at the national level, including many mentions by the NTIA and interest in replicating the site in the State of Florida. MBI will continue to operate the site through the early months of Fiscal Year 2017 as a transition plan is being developed with the Massachusetts Department of Veterans' Services (DVS) to take responsibility for the site as soon as possible.

### **G4S Litigation**

MassTech encountered serious issues with the performance of G4S Technology, the Design-Builder of the **MassBroadband 123** Network. MassTech exercised its rights under the Design-Build contract to assess liquidated damages and withhold payments to G4S for costs incurred by MassTech to address the deficiencies in G4S's work. MassTech ultimately withheld \$4.1 million from G4S, including the assessment of liquidated damages for delays in project completion.

G4S filed suit in Suffolk Superior Court in September 2014 seeking to recover the \$4.1 million withheld by MassTech and asserting damage claims in excess of \$12 million. MassTech has mounted a vigorous defense and asserted its own counterclaims. During the discovery phase, MassTech uncovered evidence that bolstered our belief that the claims asserted by G4S are completely without merit. We also uncovered evidence of a systematic and pervasive effort by G4S to defraud MassTech by falsifying project schedules and requisitions for payment. G4S was intentionally slow paying subcontractors to improve G4S' quarterly financial statements while filing 60 false payment certifications to MassTech indicating that all subcontractors were being paid on a timely basis.

MassTech filed for summary judgment on the basis that G4S is barred from pursuing its contract claims based on the fact that it filed numerous fraudulent payment certifications. Superior Court Judge Janet Sanders granted MassTech's motion for summary judgment on March 29, 2016. MassTech has followed up with a motion for summary judgement on damages, where we are seeking to recover interest due on account of invoices that we paid prematurely due to the false certifications as well as attorney's fees and costs. During Fiscal Year 2017, MassTech has budgeted \$800K to pursue its damages claims against G4S and defend against any appeals filed by G4S.

## FY17 Goals and Measures

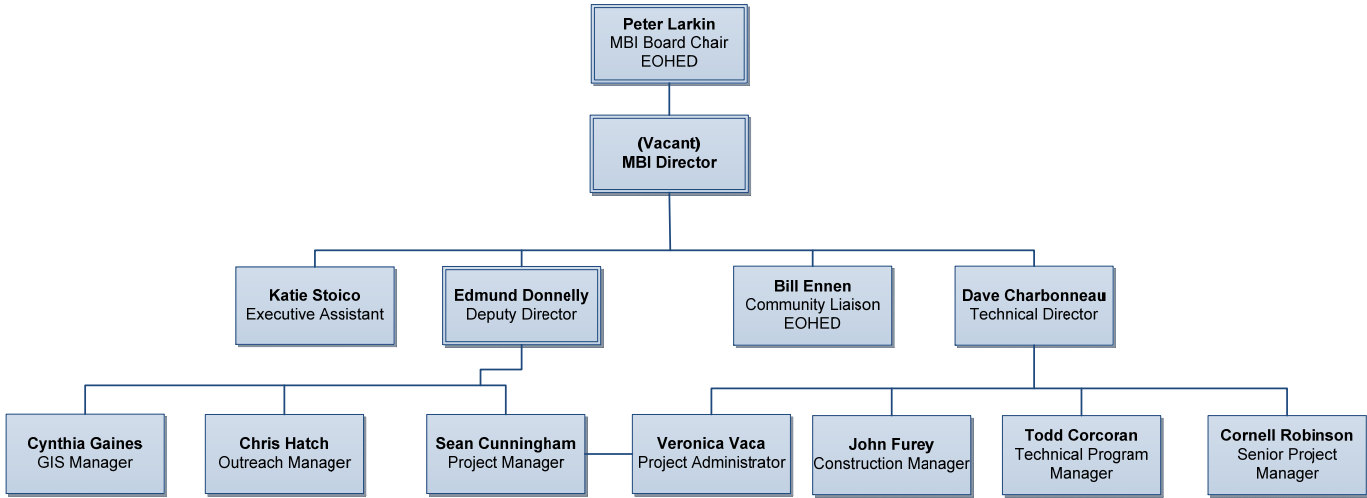
Program	Strategy/Goal	Metric
<b>Broadband Extensions Program</b>	<ul style="list-style-type: none"> <li>• Finalize agreement with Comcast for the extension of broadband access in the nine partial cable towns.</li>   <li>• Manage the grant award to Comcast.</li> </ul>	<ul style="list-style-type: none"> <li>• Execute grant agreement with Comcast by August 2016.</li> <li>• Develop detailed project schedule informed by Comcast field surveys and design and engineering work that will include buildout timeframes for each town.</li> <li>• Comcast to commence make ready process and complete buildout of at least one partial cable town.</li> </ul>
<b>MassBroadband 123 Network</b>	<ul style="list-style-type: none"> <li>• Improve relationship with network operator and monitor compliance</li> <li>• Support Axia in increasing revenue via the following:               <ul style="list-style-type: none"> <li>• Increased Dark Fiber sales</li> <li>• New product sales</li> <li>• Extensions/AAPs</li> <li>• Sale of services to State Partners</li> <li>• Support Axia on new product initiatives</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Continue to hold regularly scheduled meetings that focus on finance, sales and operations</li> <li>• Ensure timely delivery of plans and reports from network operator</li> <li>• Ensure compliance with Operator Agreement</li> <li>• Network operated and maintained according to SLAs/KPIs</li> <li>• Required payments made by Axia as stipulated in the agreement.</li> <li>• Develop sales reporting and lead tracking procedures with Axia</li> <li>• Work with Axia on qualifying dark fiber leads</li> <li>• Analyze market to determine competitive pricing of services</li> <li>• Analyze market demand for new services (e.g. Layer 2</li> </ul>

		<p>Ethernet, IP Transit) and establish pricing</p> <ul style="list-style-type: none"> <li>Utilize Axia's Salesforce application, which will provide greater business intelligence around new sales, sales trending sales cycles and churn</li> <li>Review fiber to the tower initiatives</li> </ul>
<b>MassVetsAdvisor</b>	<ul style="list-style-type: none"> <li>Complete transfer of ownership of the website to the DVS by the end of September 2016.</li> <li>Provide DVS with training on website content management to ensure a successful transition.</li> <li>Continue website hosting and support contracts on behalf of DVS through this period, as needed.</li> </ul>	<ul style="list-style-type: none"> <li>Execute transfer agreement between MassTech and DVS by the end of August 2016.</li> <li>Begin close out of related hosting and support contracts by the end of October 2016.</li> </ul>
<b>Last Mile Program</b>	<ul style="list-style-type: none"> <li>Complete Readiness Assessment process across 34 Towns</li> <li>Complete Pole Survey work across 20 towns</li> <li>Complete Design and Engineering work across 20 towns</li> <li>Submit applications and Start Make Ready work across 10-15 towns</li> <li>Develop an Operator RFQ</li> <li>Develop construction management firm RFP</li> <li>Consortium options developed for towns</li> <li>Financing options develop for towns (CAFII and USDA)</li> <li>Finalize agreement with Charter and manage grant award.</li> </ul>	<ul style="list-style-type: none"> <li>Letter of Recommendation completed for 34 towns, execute Last Mile Program Grant Agreement for towns selecting MBI Professional Services. Execute grant only contracts with 4-7 towns.</li> <li>Contract with pole survey contractor(s). Survey work completed in 20 towns by end of June 2017</li> <li>Contract with Design Engineering firm October 2016 and complete Preliminary and final design work for 20 towns.</li> <li>Introductions and workshops delivered to explain consortium model to the communities.</li> <li>Execute grant agreement with Charter, complete network upgrade by August 2016 and complete buildout of upgraded infrastructure in</li> </ul>

		at least one town by June 2017.
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**Organization structure and staffing**

An organization chart for MBI is presented below. MBI’s FY17 staff is planned to include (i) the 10 positions that are currently filled, (ii) the MBI Director position (as of 10/1/16), and (iii) Peter Larkin and Bill Ennen, for a total of 13. Of those, 11 are included within the MBI budget. Peter and Bill are included within the EOHEd budget, although those costs will be reimbursed to EOHEd from the \$50 million bond fund covering the MBI programs. While staffing remains relatively steady, the FY17 budget increases the burden on staff to plan and implement complex activities in a compressed time frame. The FY17 budget reflects the direction of the Executive Office of Housing and Economic Development to reduce spending on external consulting and legal resources to minimal levels.



## MBI FY17 Budget Assumptions

MBI tracks its programmatic activities as follows (and as shown as the five columns in the “MBI Income Statement by Program” analysis included in the following budget materials). For each program, key assumptions underlying the FY17 budget are listed. These assumptions flow from, and are consistent with, the program plans outlined in the MBI FY17 Operating Plan, and they formed the basis for the budgeting process that has resulted in the attached proposed FY17 MBI budget and accompanying materials.

### Last Mile (Bringing Broadband Services to 44 Unserved Towns)

- Pole survey contract signed by August.
- Quick move from pole survey results to make ready applications and estimates.
- MBI team supplemented by incremental resources of Design/Engineering firm by Oct
- Payments to third parties (Financial Assistance line item of P&L) budgeted to be \$8.2M
  - o Pole survey for up to 20 towns (33,333 poles at \$30/pole) - \$1M
  - o Make ready for up to 10 towns (15,522 poles at \$400/pole) – \$1.5M. (Note that the towns’ corresponding share of the make-ready costs is projected to be \$4.7M.)
  - o Construction-only grants (\$3.6 million)
    - 3 Charter towns \$1.6M
    - 4-7 other towns \$2M
  - o Design work begins for up to 20 towns - \$2M expended in FY17. Note that the overall design cost for the project is modeled at \$8.5M, roughly 9% of construction project. This is a speculative number that will be able to be refined once the full design scope is developed and bids are received.
  - o Planning grants – remaining payments for grants awarded during FY16 - \$74K
  - o Wireless: one-off studies as needed – total of \$50K
  - o Other: Technical assistance to towns \$25K
- Personnel \$1.1 million - 8.12 FTE’s. Personnel includes salary plus benefits for MassTech staff who work exclusively on MBI programs. It does not include the costs of Peter and Bill, whose costs are being paid through the EOHED budget. MBI bond funds will be used to reimburse EOHED for those costs. For a breakdown of how MBI and HED staff (Peter and Bill) are allocated to each programmatic activity, refer to the Staffing Analysis included in the attached budget materials).<sup>1</sup>
- Other Direct Program Expenses: Travel \$24K, Professional Services \$25K, Facilities \$109K
- Shared Services \$770K. Shared services includes the allocable share of MassTech’s costs that are not directly charged to any one division and primarily consist of staffing costs of those who work for all three of MassTech’s divisions<sup>2</sup>.

<sup>1</sup> The budget assumes that the MBI staff will remain as is, with the exception of a planned MBI Director replacement hire by 10/1/16. In FY17, we are budgeting for (i) the 10 MBI staff positions that are currently filled, (ii) the MBI Director position, and (iii) Peter Larkin and Bill Ennen, for a total of 13. Of those, 11 are included within the MBI budget, while Peter and Bill are included within the HED budget. HED will be reimbursed for Peter’s and Bill’s costs from the \$50 million MBI bond fund.

<sup>2</sup> Shared services costs allocable to MBI in FY17 are \$85K less than in FY16 and represent 22% of the total shared services costs (the other 78% of the shared services costs are allocated to MassTech’s other divisions).

### **Broadband Extensions Program (Extending Cable Broadband Services in 9 Towns)**

- Assumes contract with Comcast for \$4M signed in July; Expenditures to Comcast begin in January - \$2M projected in FY17
- Personnel \$105K - .95 FTE's
- Other Direct Program Expenses: Legal \$75K, Facilities \$10K
- Shared Services \$73K.

### **MassBroadband123 Network Operations (Operating the Middle-Mile Network)**

- Revenue assumptions based on annual plan provided by Axia. Includes \$578K of guaranteed oversight fees and \$202K of dark fiber fees, including from Charter deal.
- Operating expenses of \$298K (not including depreciation), netting an operating profit to MBI of \$483K
- In addition, Axia will pay to MBI \$460K of capital refresh and decommissioning fees that will go into reserves to cover those costs as they are incurred down the road
- Personnel \$113K - .88 FTE's
- Other Direct Program Expenses: Travel - \$10K, Legal \$60K, Management Consulting \$25K, Facilities \$11K
- Depreciation - \$6.1M (non-cash)
- Shared Services \$79K

### **G4S Dispute Resolution (Defending the Lawsuit)**

- Legal - \$775K
- Consulting - \$25K
- Based on a mid-point of a range of assumptions provided by Holland & Knight, depending on how the court rules on the parties' respective motions

### **MBI General (MBI-wide activities that do not get charged directly to one of the programs listed above; e.g., attending board or staff meetings; professional development; MA Vets Advisor)**

- Personnel \$90K – 1.05 FTE's
- Travel - \$6K
- Professional Fees: Communications \$2K, Legal \$3K, Management consulting \$3K
- Other Direct Program Expenses: IT Software (Sharepoint, ARC GIS, MA Vets Portal) \$23K, Travel \$6K, Facilities \$8.9K
- Shared Services \$63K

### **Sources of funding**

See "FY17 Funding Sources" included in the attached budget materials.

A&F has determined that \$10.1 million of the \$50 million bond fund would be available for drawdown to cover MBI's costs in FY17 (with another \$300K being available to cover HED's costs for Peter and Bill). MBI's plan and budget projects that it would need \$13.9 million to cover its costs in FY17 if it were to fully execute on its plan<sup>3</sup>. The plan and budget contemplate

<sup>3</sup> Note that although MBI's total expenses are shown as \$20,072,979 on the FY17 Income Statement, it does not need funding for the \$6.2 million of that amount that is a depreciation (non-cash) expense.



covering the difference between planned needs and available bond funds from the following sources:

- The \$521K remaining from the old (2008) Bond Fund<sup>4</sup>
- The \$1.1 million appropriated to MBI on its formation in 2008 that has remained available to cover situations where bond funding isn't sufficient to cover programmatic expense, as is the case in the proposed FY17 plan and budget
- \$231K from the net profit from the MassBroadband123 Network generated in FY16, and the \$780K of network revenues projected to be generated in FY17
- \$1.1 million from the \$4.1 million of liquidated damages that MassTech has withheld under its contract with G4S.

<sup>4</sup> These were funds authorized pursuant to Ch. 231, Section 2 of the Acts of 2008. This amount represents costs initially funded by A&F and then subsequently reimbursed under the federal grant. A&F permitted MBI to retain the \$521K to help cover the costs incurred by MBI prior to receiving reimbursements from A&F.