

READINESS EVALUATION AND RECOMMENDATION FOR THE TOWN OF COLRAIN, MA

MBI Technical Project Manager: John Furey

Municipal Liaison: Kevin Fox

Grant Model Type: MBI Managed

MBI PROFESSIONAL STAFF RECOMMENDATION

Colrain, operating as an Municipal Light Plant, has met the requirements identified in the Last Mile Program Guide, completed the readiness assessment process and the MBI Professional Staff recommends that the Colrain proceed with pole survey work, as managed by MBI.

EVALUATION

To receive financial support and state approval, broadband access projects must meet minimum baseline requirements as outlined in the Last Mile Program Guidelines.

PROJECT MODEL

Colrain has chosen the Independent Municipal Network model (Model D), and the town is open to potentially joining a regional collaboration in the future.

The choice of an Independent Municipal Network, as the model in the Readiness Submission Form, has been made for the purpose of demonstrating that Colrain can sustain its own network. It does not represent a final decision. The Town of Colrain reserves the right to choose a different model as more appropriate options become available.

PROJECT'S TECHNOLOGY MUST PROVIDE ACCESS TO MINIMUM BROADBAND SPEEDS AS DEFINED BY THE FCC (25/3 MBPS)

Colrain has identified a preference for Gigabit Passive Optic Network (GPON). This technology meets the FCC minimum bandwidth requirements. Colrain's network will offer voice and data services only.

PROJECT MUST BE CAPABLE OF DEMONSTRATING LONG-TERM OPERATING SUSTAINABILITY WITHOUT ONGOING STATE SUBSIDY

There are two key elements that will drive the sustainability of the project, costs per subscriber and take rate. These elements work together to determine the break-even costs.

TAKE RATE

Colrain has projected their initial take rate at 60% in year one, 70% in year two, 75% in year three, 80% in year four, and 80% in year five.

COSTS PER SUBSCRIBER

Colrain has projected the initial break even cost per subscriber in year one to be estimated at \$93.45 at a 60% take rate. Cost decreases per subscriber from year two through year five based on increased take rates from \$87.23 to \$58.08 to \$83.22 to \$83.36 respectively.

MLP expense projections were primarily calculated utilizing Leverett's model with some recommendations provided by the MBI. There are four large expense items which towns need to consider; insurance, depreciation, network operator, and contingency.

Colrain plans on utilizing MIIA as their insurance provider and is working through the process in obtaining estimates for their broadband network. At this point, estimated cost of insurance was calculated via Leverett's model with a cost factor of \$442/route mile with a total of 90 route miles estimated for the town of Colrain. This cost is estimated at \$39,700 annually with an inflation increase of 3% each year thereafter.

Colrain has decided to utilize a different methodology than suggested by MBI when determining fiber plant depreciation, but will utilize the suggested MBI methodology when determining the electronics depreciation.

Colrain is expecting the useful life of the fiber plant to extend out to 20 years, and 7 years for the electronics. With this, the depreciation amount of the fiber plant is set at 5% percent and the electronics at 10%. Over \$1.6M will be accrued for the fiber plant over the 20 years, and just over \$280K for the electronics. It is the opinion of MBI that the money accrued will be enough to replenish the fiber plant and the electronics when required.

Colrain will utilize an estimate from the MBI for network operator fees in the amount of \$15,000 annually with an additional \$36.00/drop x 772 drops in year one for operations and maintenance equaling \$27,792 annually with an inflation increase of 3% each year thereafter.

Colrain has determined it will recover an amount equal to 8% of its operating cost for its contingency which equals \$17,576 annually with an inflation increase of 3% each year thereafter.

PROJECT MUST BE AFFORDABLE

Colrain is a rural community of moderate means. The per capita income in 2012 was \$24,281. A 2013 census listed the current population at 1661.

Currently, there are no true broadband options available to residents of Colrain. Approximately 30% of the town have access to DSL up to 3Mbps and the remainder of Colrain residents only have dial-up or satellite services where available. Verizon is not accepting any new DSL accounts and will be discontinuing this service in the next few years. A typical Verizon phone and DSL bill costs approximately \$120. Satellite has high latency, is not sufficient for VOIP or other real time applications and has very limited data caps. Despite its deficiencies, satellite service costs more than DSL and averages \$86 for 10 Mbps of service with a 10 GB data cap, excluding the \$9.99/month equipment lease fee, per the HughsNet website. There are quite a few residences that cannot get DSL service and do not have line-of-sight to satellite, so they have no other option except dialup and are desperate for service that can address modern needs for connectivity.

PROJECT SHOULD SEEK A MINIMUM GOAL OF 96% RESIDENTIAL COVERAGE IN ITS SERVICE AREA

Colrain plans to pass 100% of all homes on the public right of way; this meets the coverage requirement. In addition, Colrain plans to provide drops to all presubscribed residents/businesses. These plans could change based on actual costs provided by the design/engineer.

FINANCING ENDORSED BY DLS

The construction budget estimate for this project is \$3,550M, of which \$1.3M (\$690K construction allocation-\$610K Professional services) will be paid for through the Last Mile Grant program and \$2,250M will be financed by Colrain. DLS has provided approval indicating that Colrain can afford to borrow this amount.

Colrain's bond counsel First Southwest identified no potential risks, nor placed any conditions on the Colrain's financing plan.

RISKS AND CONSIDERATIONS

Colrain should consider the following in making its decision to move forward:

- 1) The costs provided in the sustainability model are largely based on estimates from Leverett; we recommend that Colrain obtain independent vendor quotes based on its particular demographics and project size to refine the expected expense projections.
- 2) Colrain has projected a take rate of 60%, in part based on a prior presubscription campaign which was based on the \$49 cost of service which resulted in a 40% take. We recommend that Colrain consider a follow up to those subscribers to determine if the additional cost negatively affects their desire to take service as part of this network.

NEXT STEPS

Prior to utility license application submission, the Town of Colrain and MBI need to take the following next steps based on the anticipated dates provided:

Colrain and MBI to execute Memorandum of Agreement to proceed with pole survey work	10/14/16
MBI and Colrain to execute a Project Agreement between Colrain & MassTech	12/9/16
Colrain to secure funds prior to make ready estimate payment and provides 30% of the towns project contribution to MBI for the make ready payment contingent upon successful execution of the Project Agreement between Colrain & MassTech	1/2/17
During this pole survey phase the MBI and Colrain will develop a timeline around Make Ready, Design and Construction of the network	

TOWN OF COLRAIN, MA

Kevin P. Fay

MASSACHUSETTS TECHNOLOGY COLLABORATIVE

Last Mile Town Designee



Chair, Board of Selectmen

MBI Technical Team Project Manager

MBI Board Chair

Memorandum of Agreement - Pole Survey Work

Whereas, the Town of *Colrain* (the "Town") has submitted a Readiness Request Form to the Massachusetts Broadband Institute ("MBI") seeking state grant funding from the Massachusetts Technology Collaborative ("MassTech") to support a proposed project to install and manage a Fiber to the Home (FTTH) broadband network (the "Project");

Whereas, the MBI's technical team has worked collaboratively with the Town to complete a readiness evaluation of the Project based on the Last Mile Town Readiness Submission Form and supporting documentation submitted by the Town to MBI (see Attachment 1);

Whereas, MBI's technical team has reached an initial determination that the Project satisfies the threshold criteria for an award under MBI's Last Mile Program for unserved towns; and

Whereas, the Town has committed to utilize MBI's services to oversee and manage the design, construction, testing and turnover of the broadband network as generally described in the documents referenced in Attachment 1.

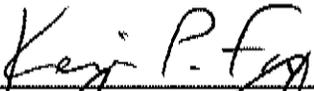
Now therefore, MBI and the Town mutually agree to proceed with the next steps on the Project as follows:

1. MBI, at the request of the Town, agrees to engage the services of a prequalified contractor to survey all applicable utility poles in the Town and collect certain data on each utility pole that may be used in the future to file pole license applications as part of the make ready process for the Project. MBI agrees to provide such data to the Town if requested.
2. The Town and/or MBI make the following representations and acknowledgments with regard to the Project:
 - a. MBI acknowledges that the Town will not have to reimburse MBI for the costs incurred to conduct the pole survey work on behalf of the Town.
 - b. The Town and MBI acknowledge that the pole owner(s) will only accept pole license applications with the pole data and information that is deemed to be timely and accurate. The Town further acknowledges that it will need to use the pole data and information collected by MBI expeditiously if the Town subsequently decides to directly procure and manage design and construction work for the Project. The Town and MBI agree that the timely use of pole data and information assures both parties that the expenditure of state funds to support this task will not result in a stranded investment of public funds.
 - c. The Town represents and warrants that it has taken actions that it deems necessary and appropriate to determine the level of interest of Town residents in purchasing broadband services from a municipally owned broadband network and further, has undertaken its own evaluation of the financial sustainability of the Project and the risks

associated with owning, operating and maintaining a municipally owned broadband network.

- d. The MBI warrants that the pole survey data will meet all necessary standards required by the utilities for pole license applications.

TOWN OF COLRAIN, MA



Last Mile Town Representative



Chair, Board of Selectmen

MASSACHUSETTS TECHNOLOGY
COLLABORATIVE

MBI Technical Team Project Manager

MBI Technical Director

MassTech Interim Executive Director

Attachment 1

Readiness Evaluation and Recommendation and Supporting Documentation

See attached supporting documentation:

- Town Readiness Submission Form – Colrain (dated August 23, 2016)
- Sustainability Worksheet – Colrain (dated July 21, 2016)
- Colrain Readiness Evaluation and Recommendation (dated August 11, 2016)

