

## RFP No. 2010-MBI-05

### Request For Proposals For Network Operator For Western Massachusetts Middle Mile Broadband Initiative

The following is a list of answers to questions posed at the Massachusetts Broadband Institute's June 30, 2010 Bidders' Conference held at the Massachusetts Technology Collaborative, 75 North Drive, Westborough, Massachusetts. The questions have been summarized and in most cases have been abbreviated. Questions have been grouped and organized for clarity. They do not appear in the order asked. If any of the responses provided, either at the bidders' conference or in this document, conflict with the terms of the RFP, the RFP shall govern. The RFP may only be modified via a published amendment, and these answers are not an amendment to the RFP.

Questions and answers are not verbatim from the meeting, and these written responses supersede the verbal responses provided at the meeting.

The bidders' conference participants were in receipt of RFP No. 2010-MBI-05, issued on June 22, 2010. No documents were distributed at the meeting.

1. **Question:** Can you provide a sense of the level of interest of non-state CAIs, given the assumed price caps.

**Answer:** We received almost 400 letters of support, the majority of them coming from state agencies, libraries, and hospitals; we had letters from parent organizations, ITD, Executive Office of Education, Housing and Community Development, Public Safety, Workforce Development, the Western Mass Regional Library System, and Towns. Those totaled 1,074 anchor institutions who expressed a need for affordable high speed internet. The letters of support were submitted prior to the development of the wholesale service price caps listed in Attachment G of the RFP.

2. **Question:** How long will price caps remain in effect?

**Answer:** The intent is for the price caps to remain in effect for the entire ten years of the contract. The MBI is open to considering proposals by respondents that recommend objective, quantifiable triggers to reassess the status of the wholesale service price caps.

3. **Question:** Does the NTIA grant proposal include funding for the network's electronics? Is the Operator responsible for maintaining the electronics?

**Answer:** Yes, the grant funding will cover the initial cost and installation of the network's electronics. The Operator will be responsible for ongoing maintenance, repair, and upgrades of the electronics, as stated in the RFP (see sections 4.1.7, 4.1.8 and 4.3.1.2).

4. **Question:** Is it correct that the MBI will build laterals to and be responsible for procuring all of the active components housed in community anchor institutions?

**Answer:** Yes, MBI will build laterals to and procure the initial equipment for the 1392 CAIs as part of the grant project.

5. **Question:** Can you provide more information on the electronics you will be purchasing for the network? Weren't these sorts of details necessary to develop the budget you provided the NTIA?

**Answer:** The MBI budgeted \$6,559,725 for core network electronics to include: Multiservice Provisioning Platforms (MSPPs) and Carrier Ethernet Switches. Lambda services are provisioned from OADMs in several key locations along the primary backbone route, with 10 Gbps lambdas provided initially and options to upgrade OADMs (or ROADMs) to 40 (or 100 Gbps) lambdas. OADMs will also provide amplification for connections to Boston and other areas outside the MassBroadband 123 region.

The specific budgetary numbers and equipment allocation used in the federal grant application are included in Attachment A.

MBI anticipates that the equipment selection and actual deployment will vary slightly from the submitted budget to reflect design refinements and network operator requirements. MBI is subject to state procurement laws which will require a competitive bidding process.

6. **Question:** Can the Operator make recommendations relating to the electronics to be installed for the network?

**Answer:** Yes. It is the MBI's intention to collaborate with the Operator and offer opportunities for the Operator to provide input on matters relating to the specification and selection of electronics and others matters related to the design and construction of the network. However, MTC will be in charge of the procurement process and any such procurement will be conducted competitively and in accordance with applicable state procurement laws. MTC will make all final decisions related to the design and construction of the network to promote the public interests related to the NTIA grant and the statutory mission of the MBI.

7. **Question:** Are all services, lit or dark, including transport services between active components in the Points of Interconnection (POI) and CAIs, subject to the revenue share?

**Answer:** Yes, all services, including the wholesale service provided to CAIs, are subject to the revenue share requirements. As an example, the Operator can provide point to point lit services on the network and provide services that transit the network. All of these services are potential revenue opportunities for the operator to pursue and are subject to the revenue share. Prices for these types of services would be unregulated.

8. **Question:** Is there only an Ethernet Internet component to the network or is there also a TDM component?

**Answer:** The network design and planned equipment purchases provide for both Ethernet and TDM/SONET services.

9. **Question:** Will the MBI supply the addresses of the 20 sites with the active components?

**Answer:** The MB123 grant application budgeted to place active components supporting Carrier Ethernet and SONET/TDM at over 20 sites so that no CAI is more than 30 miles from an active node, and most are within 10 miles. The network design is based on specific locations in the towns listed below, but those locations are not confirmed and are subject to change based on discussions with the Network Operator and the facility managers.

A typical network node will consist of an internal location for active electronics and an outside “hut” suitable for use for electronics which do not require climate control and for cross connections. This will allow interconnection to occur without requiring building entry by ISPs or the Network Operator.

Listed below are the 23 towns listed in the grant application as active points of interconnection.

<b>TOWN</b>	<b>ZIP CODE</b>
BECKET	01223
BELCHERTOWN	01007
CHARLEMONT	01339
GOSHEN	01032
GREAT BARRINGTON	01230
GREENFIELD	01301
HINSDALE	01235
HOLYOKE	01040
LEE	01238
NEW BRAintree	01531
NORTH ADAMS	01247
NORTHAMPTON	01060
ORANGE	01364
PITTSFIELD	01201
PLAINFIELD	01070
RUSSELL	01071
SANDISFIELD	01255
SAVOY	01256
SPRINGFIELD	01105
STURBRIDGE	01566
WESTFIELD	01086
WESTMINSTER	01473

See Attachment B for two diagrams illustrating the planned network architecture and equipment locations.

10. **Question:** Can the Decommissioning Fund be used for expenses related to replacing operational equipment?

**Answer:** No.

11. **Question:** Can you provide a list of the participants in today's bidders' conference?

**Answer:** Yes. The list has been posted to the MBI website - [http://www.massbroadband.org/mbi\\_rfp/net\\_op\\_062210/net\\_op.html](http://www.massbroadband.org/mbi_rfp/net_op_062210/net_op.html).

12. **Question:** Can you provide more clarity around the Operator cost assumptions that are included in Attachment G?

**Answer:** To date, the actual costs that the Operator will be contractually obligated to assume have not been finalized and, in part, will be determined based on the outcome of negotiations between the MBI and third parties that have yet to commence. In order to apply for and receive a BTOP grant, the MBI created a budget model to demonstrate how the ongoing operations of the network could be sustained. All inherent costs in the budget model are based on industry benchmarks and statistics of fiber operations of a similar size. RFP respondents should develop their own cost assumptions and highlight assumptions that are significantly different from those included by the MBI on Attachment G.

13. **Question:** Will agreements between MTC and pole owners be made available?

**Answer:** The MTC/MBI is currently in the process of negotiating these agreements. It is our expectation that the agreements will be made available to the Operator once they have been executed.

14. **Question:** Will the maps and other GIS -related information included in the application to the NTIA be made available?

**Answer:** Many of the maps that were included in the application to the NTIA have been incorporated into the RFP. The MBI is considering whether to release additional GIS level information relating to the contemplated network route.

15. **Question:** Are there any issues that would prevent an Operator from building outside the 123 towns in the network's coverage area, including areas outside of Massachusetts?

**Answer:** Although the MBI's primary objective is to select an Operator that will help the MBI fulfill its mission to bring affordable broadband to the unserved and underserved communities of Massachusetts, the MBI is not opposed to an Operator extending or interconnecting its operations beyond the MBI's area of focus.

16. **Question:** Can you make available a list of the providers who wrote letters of intent for the federal grant application?

**Answer:** Yes. See Exhibit C to this Q&A document.

17. **Question:** Attachment G in the RFP assumes a 90% penetration rate for state community anchor institutions. How did you arrive at this figure and how confident are you that it is accurate?

**Answer:** The 90% penetration rate was utilized by the MBI for the preparation of the NTIA application. We expect that each Respondent to the RFP will develop its own set of assumptions to inform the development of its proposal. The state's Information Technology Division ("ITD") and the Executive Office of Public Safety and Security ("EOPSS") are integral parts of the federal grant and have expressed their intent to move all of their traffic to the network. ITD and EOPSS have signed letters indicating their intent to purchase bandwidth services from the Operator. This will account for many of the community anchor institutions.

18. **Question:** Is it correct that the Operator(s) and builder(s) of the MB123 network must be separate entities?

**Answer:** Yes. MTC/MBI intends to pursue a "design-build" construction process under M.G.L. c. 149A. The requirements of c. 149A and application of the state's conflict of interest provisions (located at M.G.L. c. 268A) require separate entities for building and operation of the network. All competitive procurements initiated by MTC shall be performed in accordance with applicable state procurement laws.

19. **Question:** Will the Operator(s) have input in decisions related to the fiber as well as splice points, active node locations, and routing?

**Answer:** It is the MBI's intention to collaborate with the Operator and offer opportunities for the Operator to provide input on matters relating to the specification and selection of fiber and others matters related to the design and construction of the network. However, MTC will be in charge of the procurement process and any such procurement will be conducted competitively and in accordance with applicable state procurement laws. MTC will make all final decisions related to the design and construction of the network to promote the public interests related to the NTIA grant and the statutory mission of the MBI.

20. **Question:** How will revenue sharing off of extensions to the network be calculated? Is it based on mileage, or some other metric? Will revenue sharing apply to all revenue or a percentage of it?

**Answer:** MBI's intent is to establish a reasonable revenue sharing arrangement. MBI asks bidders to propose a specific arrangement for revenue sharing on network extensions.

21. **Question:** The RFP indicates that MTC / MBI may select more than one Operator. Can you verify?

**Answer:** The MTC / MBI reserves the right to select more than one Operator if it deems that there is a logical basis to do so. MTC / MBI is simply maintaining this option and does not have any specific plans to select multiple Operators.

22. **Question:** Can you provide more guidance around when the price caps do and do not apply?

**Answer:** As stated more completely in the RFP, the price caps apply to the 1,392 community anchor institutions directly connected to the MB123 network as well as any bandwidth services sold from the points of interconnections and community anchor institutions in unserved and underserved service areas of the network. For any bandwidth services sold outside of these unserved and underserved areas, the Operator will have the authority to price at market rates in these areas, subject to a

mutually agreed upon price cap that will be subject to periodic adjustment (see Section 4.3.3 of the RFP). This is summarized in the following table:

Customer Type	Directly Connected w/ Grant Funding	Price Cap
State CAI	Yes	Yes
State CAI	No	Yes
Other CAI	Yes	Yes
Other CAI Unserved/Underserved Area	No	Yes
Other CAI in Served Areas	No	No
Non-CAI Unserved/Underserved Area	No	Yes
Non-CAI Served Area	No	No
All Others (businesses and consumers)	No	No

23. **Question:** Can an Operator provide direct wholesale services to community anchor institutions that are on the network?

**Answer:** No. For the 559 directly connected, state-sponsored community anchors, the Operator will provide wholesale service to ITD and EOPSS. For all others, the Operator will provide wholesale services to ISPs and last-mile service providers, who will provide direct retail service, subject to the requirement that the Operator will be required to offer retail service to non-state CAIs that are not able to obtain retail connectivity from a third party service provider. As mentioned in the RFP the Network Operator may have an arms-length separate organization unit which provides these retail services. (See section 4.1.1.1, 4.1.1.2 and 4.1.1.2.1 of the RFP).

24. **Question:** Are you confident that community anchor institutions will subscribe to the levels of service that you predict in Attachment G of the RFP?

**Answer:** We believe that the subscriber levels assumed in Attachment G of the RFP are based on reasonable assumptions, but Respondents should make their own assessments of the reasonableness of the anticipated revenues. The figures for state community anchor institutions were derived with the advice and counsel of ITD and EOPSS. ITD and EOPSS have signed letters indicating their intent to purchase bandwidth services from the Operator. The other figures are consistent with what we reasonably expect would be required. The basic assumption underlying these predictions was that entities would continue to pay what they are currently paying in order to receive enhanced services.

25. **Question:** Who is responsible for obtaining private right-of-way agreements necessary to connect community anchor institutions?

**Answer:** The **MBI** or one of its construction or engineering contractors is responsible for obtaining all right-of-way agreements including the 1392 CAIs to be connected as part of the federal grant application.

26. **Question:** Is it correct that you are expecting 67% of the network to be completed in two years?

**Answer:** Yes. The federal grant requires that 67% of the work is completed within 2 years of the notice of award and 100% of the work is completed within 3 years of the notice of award.

27. **Question:** Will right-of-way agreements entered into by MTC / MBI with utilities and municipalities for the network carry over to the Operator?

**Answer:** Our intention is to negotiate appropriate assignment provisions for agreements with utilities and municipalities to allow rights afforded to MTC / MBI to be extended to the Operator(s). Generally speaking, MTC/MBI intends to negotiate agreements that will provide Operators with any and all legal rights necessary to run the network.

28. **Question:** Do you have a sense of the general level of opposition to the project from the ILECs? Will the Operator be expected to play a role in addressing this opposition?

**Answer:** The ILECs were given an opportunity to challenge the characterization of service areas during the BTOP application review process. The NTIA has not released the list of challenges filed to BTOP, Round 2 applications. We have received a letter of support from the primary ILEC in western Massachusetts. The MBI does not believe it is appropriate to speculate about the intentions of other entities.

**Answers to the following questions are being developed and will be provided in a document that will be subsequently posted on the MBI's website:**

29. **Question:** Please explain the difference between extensions from POIs and CAIs, and the ownership relative to those versus the splice point extensions. Meaning if it is an open access network, wouldn't you really allow anybody to gain access to a splice point station?

30. **Question:** How does an ISP or the Operator extend the network from a POI or a community anchor location? Wouldn't splicing from a community anchor institution entail access to a building? What would this entail?

31. **Question:** Are there any state-specific licensing-related issues that an Operator should be aware of?

32. **Question:** We understand that the successful prime contractor responding to RFP No. (2010-MBI-05) will not be able to provide a response to the design build RFP for the network. Should the successful prime contractor utilize subcontractors in the performance of the maintenance activities required by the RFP are those subcontractors precluded from responding to the design build of the network as a prime contractor or as a subcontractor?

33. **Question:** Will Operators be required to operate under a state contract like ITT37 for Internet service?

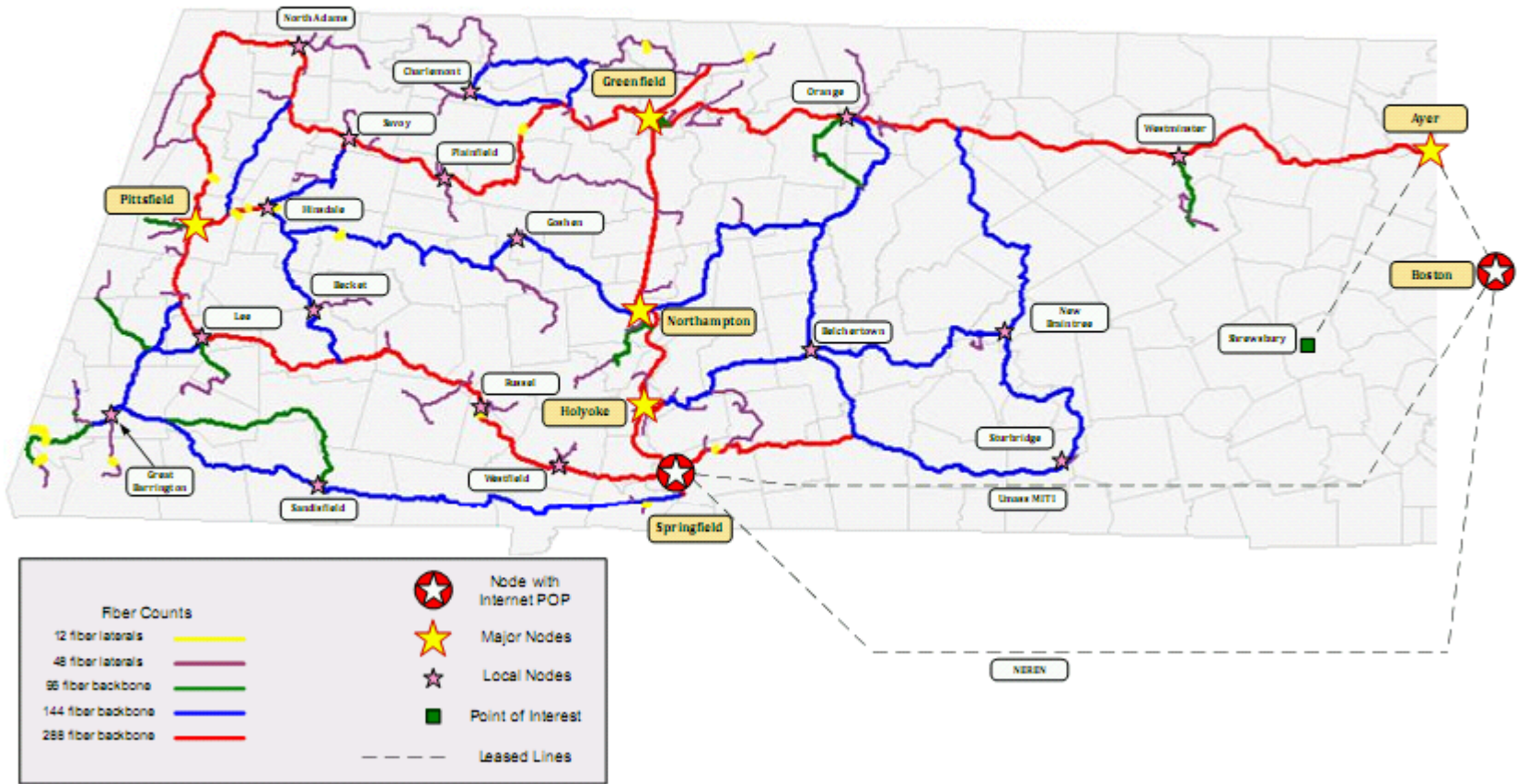
## Attachment A

NETWORK & ACCESS EQUIPMENT		Location	QTY	Budget Cost	Support of Reasonableness
Switching	Carrier Ethernet - 10 Gbps and 1 Gbps (Large Nodes)	Active Nodes (core)	4	\$819,957.65	<p>Network design has been completed to provide Carrier Ethernet services from 50 Mbps to 1 Gbps as well as WDM wavelengths up to 10 Gbps. In addition SONET is transported at OC-48 with TDM services available at OC-12, OC-3, DS-3, and DS-1. The network design provides 99.999% redundancy through path redundancy, infrastructure design and equipment specifications (i.e. dual power supplies and other requirements)</p> <p>-</p> <p>There are 7 Major Central Facility Nodes and 17 Local Centralized Facility Nodes that host services for community anchor institutions ISPs and Carriers. Access to the network is cable plant is facilitated through slack loops throughout the network and outdoor equipment cabinet at the 17 Local Centralized Facility Nodes and the 7 Major Central Facility nodes in the service area.</p> <p>-</p> <p>Equipment costs were based on quotes (including discounts) obtained from multiple equipment vendors. Costs also include labor for installation.</p>
	Carrier Ethernet - 10 Gbps and 1 Gbps (Medium Nodes)	Active Nodes (large)	9	\$1,222,246.10	
	Carrier Ethernet - 10 Gbps and 1 Gbps (Small Nodes)	Active Nodes (small)	11	\$399,490.54	
Transport	ROADM - 10 Gbps - 2 Degree	Major Centralized Facility Node	5	\$773,947.71	
	ROADM - 10 Gbps - 3 Degree	Major Centralized Facility Node	3	\$776,283.91	
	SONET MSPP OC-48	Major Centralized Facility Node	7	\$392,909.27	
	SONET MSPP OC-48	Local Centralized Facility Node	17	\$954,208.22	
	ROADM - 10 Gbps - 2 Degree to Support Umass MITI IRU	MITI Locations	3	\$464,368.63	
	LINE CARD and OPTICS Upgrade to Support NEREN IRU	Springfield and Boston	2	\$104,652.00	
Access	SONET miniMSPP	Community Anchor Institutions & Points of Interest	41	\$651,661.23	
<b>Category Total</b>				<b>\$6,559,725.25</b>	

# Attachment B

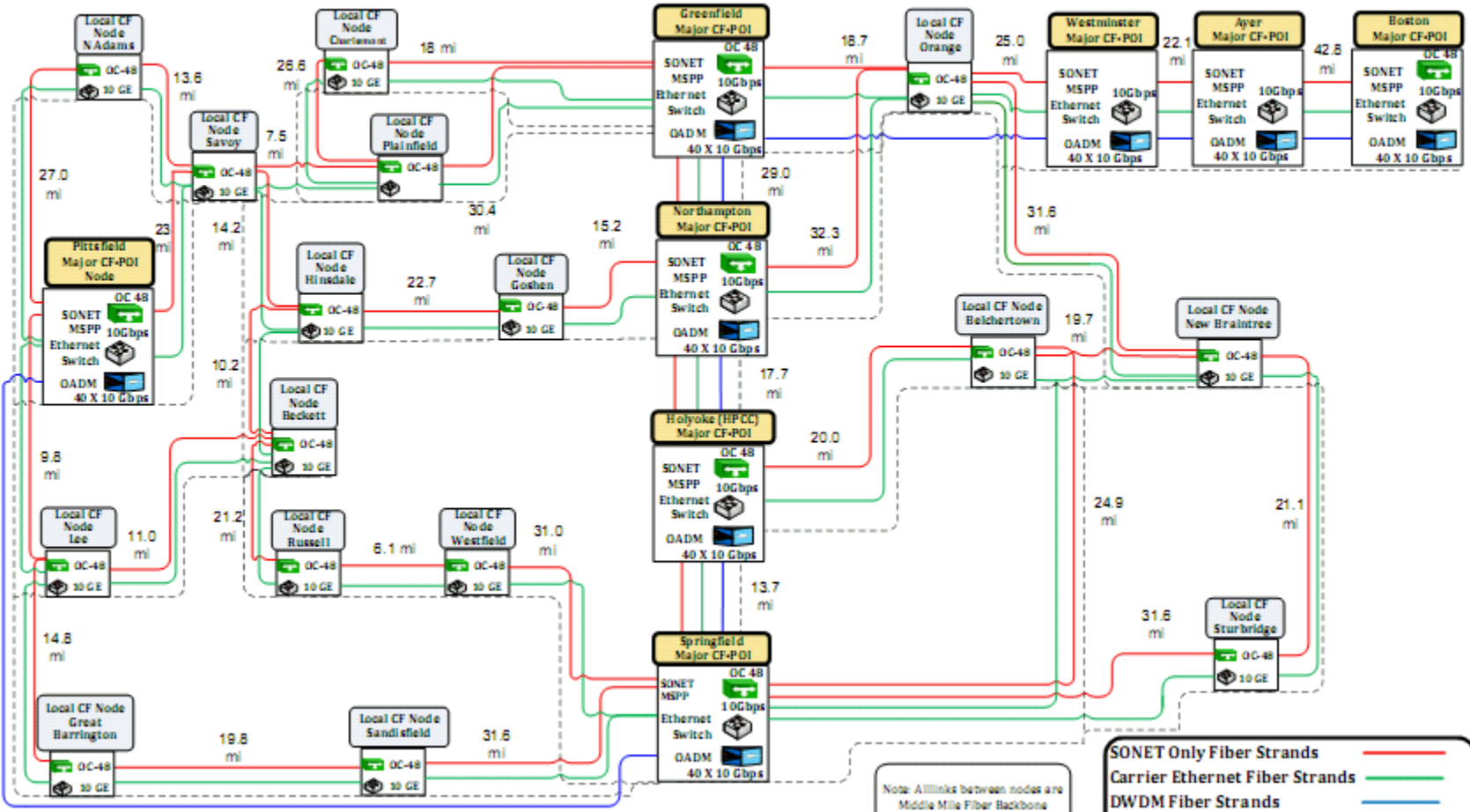
MassBroadband 123

Network Infrastructure  
Showing Physical Fiber Layout,  
Fiber Counts,  
Major and Minor Nodes,  
Internet Points of Presence



MassBroadband 123

Network Topology  
Showing Major and Local Nodes, Links and Mileage  
Between Nodes, and Fiber facilities



SONET Only Fiber Strands ———  
 Carrier Ethernet Fiber Strands ———  
 DWDM Fiber Strands ———  
 Dark Fiber Strands - - - - -

Note: All links between nodes are Middle Mile Fiber Backbone

## **Attachment C**

### List of Last Mile Providers

- Crocker Telecommunications, LLC
- FiberTower Corporation
- Galaxy Internet Services, Inc.
- Holyoke Gas and Electric
- MegaPath
- Richmond Network
- WiredWest
- WiSpring