

**QUARTERLY PERFORMANCE PROGRESS REPORT FOR BROADBAND INFRASTRUCTURE PROJECTS**

**General Information**

<b>1. Federal Agency and Organizational Element to Which Report is Submitted</b>  Department of Commerce, National Telecommunications and Information Administration	<b>2. Award Identification Number</b>  NT10BIX5570070	<b>3. DUNS Number</b>  147368641
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<b>4. Recipient Organization</b>  Massachusetts Technology Park 75 North Drive , Westborough, MA 01581-3335
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<b>5. Current Reporting Period End Date (MM/DD/YYYY)</b>  12-31-2012	<b>6. Is this the last Report of the Award Period?</b>  <input type="radio"/> Yes <input checked="" type="radio"/> No
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**7. Certification:** I certify to the best of my knowledge and belief that this report is correct and complete for performance of activities for the purposes set forth in the award documents.

<b>7a. Typed or Printed Name and Title of Certifying Official</b>  Lisa Erlandson	<b>7c. Telephone (area code, number and extension)</b>
	<b>7d. Email Address</b>  erlandson@masstech.org

<b>7b. Signature of Certifying Official</b>  Submitted Electronically	<b>7e. Date Report Submitted (MM/DD/YYYY):</b>  02-27-2013
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**Project Indicators (This Quarter)**

**1. Please describe significant project accomplishments completed during this quarter (600 words or less).**

MassBroadband 123 accomplishments for the quarter ending December 31st, 2012:

**Agreements and Administration**

- Executed pole attachment agreement with Fairpoint Communications
- Executed Indefeasible Rights of Use agreement with Westfield Gas & Electric Light Department
- Executed Indefeasible Rights of Use agreement with South Hadley Electric Light Department
- Submitted 3rd formal Award Action Request for modification of construction plans pending NTIA approval of route adjustments

**Make Ready and Licensing**

- Received 6,805 Verizon pole licenses for a total of 28,601 (87% complete)
- Received 4,119 WMECO pole licenses for a total of 14,674 (86% complete)
- Received 3,782 National Grid pole licenses for a total of 11,536 (87% complete)
- Released 345 fully-licensed fiber miles to construction for aerial installation for a total of 740 miles for the project (79% complete)
- Received licenses for 10,718 feet of conduit for a total of 138,118 feet to date (70% complete)

**Network Design and Construction**

- Installed 263 miles of messenger strand for a total of 470 miles for the project (51% complete)
- Installed 168 miles of aerial fiber optic cable for a total of 288 miles for the project (31% complete)
- Installed 422 feet of conduit for a total of 7,181 feet for the project (15% complete)
- Completed designs for 13 Community Anchor Institutions for a total of 782 locations (97% complete)
- Completed 85 Community Anchor Institution site installations for a total of 538 locations for the project (67% complete)
- Completed 179 Community Anchor Institution fiber terminations (22% complete)
- Completed 5 Point of Interconnection and collocation site installations for a total of 8 to date (36% complete)

**Jobs Created or Retained**

- The total number of jobs created or retained during the quarter was 62.91

**Sustainability**

- Executed one Letter of Intent with an Internet Service Provider for a total of 27 to date
- Executed 3 "last mile" Connecting Agreements with Internet Service Providers for a total of 6 to date. MTC has also executed 2 wholesale agreements with Axia Networks USA and Massachusetts Information Technology Division/Executive Office of Public Safety and Security

**2. Please provide the percent complete for the following key milestones in your project. Write "0" in the Percent Complete column and "N/A" in the Narrative column if your project does not include this activity. If you provided additional milestones in your baseline plan, please insert them at the bottom of the table. Unless otherwise indicated in the instructions, figures should be reported cumulatively from award inception to the end of the most recent reporting quarter. Please provide a narrative description if the percent complete is different from the target provided in your baseline plan (300 words or less).**

	Milestone	Percent Complete	Narrative (describe reasons for any variance from baseline plan or subsequent written updates provided to your program officer)
2a.	Overall Project	88	Throughout this report, we are calculating Percentage Complete with reference to the approved NTIA budget. Costs are now projected to be higher than that approved budget, and MTC has secured additional non-federal funds from the Commonwealth of Massachusetts to cover those amounts that exceed the approved NTIA budget. Tracking closely to budget projections; 3% behind baseline due to cumulative reasons set forth below. In comparison to the new project budget, 69% of the budget has been spent.
2b.	Environmental Assessment	100	Complete and at baseline projection. Compliance requirements with environmental mitigation included in Design-Build RFP and the Owner's Project Manager will oversee work
2c.	Network Design	100	Ahead on budgeted expenditures by 15%, due to front-loaded focus of Owner's Project Manager, Design Builder and other consultants as network design progressed
2d.	Rights of Way	100	On par with baseline budget as pole survey work and make ready application costs are essentially complete

	Milestone	Percent Complete	Narrative (describe reasons for any variance from baseline plan or subsequent written updates provided to your program officer)
2e.	Construction Permits and Other Approvals	100	Ahead on budgeted expenditures by 10% due to high make ready costs offset by additional matching funds from the Commonwealth of Massachusetts
2f.	Site Preparation	42	Behind on budgeted expenditures by 58% due to costs being allocated in other categories. Costs will be less than baseline projection
2g.	Equipment Procurement	100	Ahead on budgeted expenditures by 1%, tracking closely to baseline projections
2h.	Network Build (all components - owned, leased, IRU, etc)	54	Behind on budgeted expenditures by 37%. Design Build ramp-up and slower-than-expected make ready construction work by utilities has led to less expenditures to date than planned. Some work was also delayed while MTC sought NTIA approval of route and installation type changes. Additionally, some costs included in the baseline report under this category are being captured under Network Design
2i.	Equipment Deployment	100	On par with baseline budget
2j.	Network Testing	2	Behind by 42% due to the aforementioned construction delays that have subsequently delayed the anticipated testing schedule
2k.	Other (please specify):	100	Ahead on budgeted expenditures by 5% due to costs including: -Federal Compliance Staff -BTOP Non-Construction Staffing -Application and Post Application Submission Costs included in approved budget -Staff, Consulting, and legal costs

**3. To the extent not covered above, please describe any challenges or issues faced during this past quarter in achieving planned progress against the project milestones listed above. In particular, please identify any areas or issues where technical assistance from the BTOP program may be useful (600 words or less).**

MTC received approval of its August 2012 Award Action Request for Route and CAI changes during the quarter. MTC submitted its third Award Action Request regarding route adjustments for the project on November 13th 2012. Approval of this Award Action Request is still pending as of 12/31/2012.

**4. Please report the following information regarding network build progress. Write "0" in the Total column and "N/A" in the Narrative column if your project does not include this activity. Unless otherwise indicated in the instructions, figures should be reported cumulatively from award inception to the end of the most recent reporting quarter. Please provide a narrative description if the total is different from the target provided in your baseline plan (600 words or less).**

Indicator	Total	Narrative (describe your reasons for any variance from the baseline plan or any other relevant information)
New network miles deployed	470	Behind on baseline projection by 430 miles due to slower-than-expected make ready completion and temporary construction hold instituted by NTIA. MTC is working with its construction contractor to compress construction schedule in future quarters to make up for these delays
New network miles leased	193	Behind on baseline projection by 114 miles. Lease miles reduced from 307 to 192.5 per approved AAR due to switch to all dark fiber IRUs
Existing network miles upgraded	57	Ahead on mileage projection in baseline by 2 miles. The 57 miles along I91 were officially active as in-kind contribution on 6/29/12. The extra 2 miles are from an added section from I91 to the internet point of presence in Springfield
Existing network miles leased	0	N/A
Number of miles of new fiber (aerial or underground)	663	Behind on baseline projection by 599 miles as described in the preceding new network miles deployed and leased. Based on updated mileage projections through the second approved Award Action Request, number of miles of new fiber (aerial and

Indicator	Total	Narrative (describe your reasons for any variance from the baseline plan or any other relevant information)
		underground) is 1182 (excluding the 57 miles of existing network miles upgraded)
Number of new wireless links	0	N/A
Number of new towers	0	N/A
Number of new and/or upgraded interconnection points	2	Behind on baseline projection by 22. MTC has completed the new connection at internet Point of Presence at 1 Federal St. in Springfield, as well as a second internet Point of Presence in Boston. MTC has several Points of Interconnections with equipment installed, and aims to have connections achieved during the next two quarters

For questions 5 and 6 please include information relating to agreements that you are negotiating or have entered into, or that your sub recipient, contractor or subcontractor is negotiating or entered into.

5a. If applicable, please provide the following information with regard to agreements with broadband wholesalers and/or last mile providers as a result of your project.

Indicators	
Number of signed agreements with broadband wholesalers or last mile providers	8
Number of agreements currently being negotiated with broadband wholesalers or last mile providers	20
Average term of signed agreements (in quarters)	70

5b. Please list the names of the wholesale and last mile providers with whom you have signed agreements (100 words or less). Providers: Axia Networks, USA; Massachusetts Information Technology Division (ITD), Crocker Communications, FTG Technologies, Center for Education Leadership (CELT), Access Plus, Community WISP, Inc., Streamline Networks

5c. What wholesale services are being provided by this project? Please describe below. As an attachment to this report, please provide pricing plans (in \$ per month) associated with each wholesale service provided by your product (100 words or less). Wholesale services description:

Wholesale services currently being provided are:  
 -Ethernet-100 Service - Ethernet-based bandwidth services that provide up to 100% of the line rate speed of the physical connection. It services a single User Network Interface (UNI) and a single Virtual Private Network membership (VPN)  
 -NNI (Network-to-Network Interface Service) - one port in Springfield and one port in Cambridge. Allows customers to access "off-net" services such as determined by the customer network.  
 -Gigabit Ethernet Boston Transport Service - Provides connectivity from either network Regional Gateway (Springfield Internet Point of Presence) to the Boston Global Gateways (Cambridge and Boston Points of Interconnection).

5d. If you have designated a third party to operate all or a portion of your network, please provide the name and contact information for this third party, indicate if this entity is a sub recipient, contractor, and/or subcontractor, and describe with specificity the portion of your network this this third party operates (600 words or less).

MTC has hired Axia NGNetworks USA as a contractor to run the entirety of the MassBroadband 123 network. They will also assist with equipment specifications and network and fiber design during the construction period. Tim Scott, Vice President, may be contacted at Tim.Scott@axia.com

6. Please provide the data according to the type of subscriber. Write "0" in the Total column and "N/A" in the Narrative column if your project does not pass or serve a particular subscriber type. Unless otherwise indicated in the instructions, figures should be reported cumulatively from award inception to the end of the most recent reporting quarter. Please provide a narrative description if the total is different from the target provided in your baseline plan (300 words or less).

Subscriber Type	Access Type	Total	Narrative (describe your reasons for any variance from the baseline plan or any other relevant information)
Broadband Wholesalers or Last Mile Providers	Providers with signed agreements receiving new access	8	Ahead on baseline by 7; interest of service providers has exceeded expectations held at the time of grant submission. While only 8 wholesaler or last mile agreements have been executed; many letters of intent have been signed (20) and will lead to connecting agreements. Agreements originally categorized as "receiving improved access" are being categorized as "receiving

Subscriber Type	Access Type	Total	Narrative (describe your reasons for any variance from the baseline plan or any other relevant information)
			new access" based on updated interpretation of the baseline category.
	Providers with signed agreements receiving improved access	0	Behind on baseline by 7. MTC interpreted the baseline differently and is now categorizing all signed agreements as "receiving new access" and does not expect to categorize any agreements as "receiving improved access".
	Providers with signed agreements receiving access to dark fiber	0	Per NTIA guidance, MTC now lists service providers who receive access to both lit and dark services on the primary method they will use to obtain services. MTC now anticipates that all service providers will primarily receive lit services, causing the value to remain at zero.
	Please identify the speed tiers that are available and the number of subscribers for each	0	5Mbps 10Mbps 20Mbps 100Mbps 1Gbps 5Gbps 10Gbps+
Community Anchor Institutions (including Government institutions)	Total subscribers served	0	In preparing the baseline, MTC considered CAI connections as occurring upon installation of systems, but is now reporting based on when Community Anchor Institutions are capable of connecting to its serving POI, resulting in a delay in the metrics. 538 site installations have been performed vs. the projected 551 sites.
	Subscribers receiving new access	0	In preparing the baseline, MTC considered CAI connections as occurring upon installation of systems, but is now reporting based on when Community Anchor Institutions are capable of connecting to its serving POI, resulting in a delay in the metrics. MTC anticipates 1199 CAIs receiving "new access".
	Subscribers receiving improved access	0	In preparing the baseline, MTC considered CAI connections as occurring upon installation of systems, but is now reporting based on when Community Anchor Institutions are capable of connecting to its serving POI, resulting in a delay in the metrics. MTC anticipates 108 CAIs receiving "improved access".
	Please identify the speed tiers that are available and the number or subscribers for each	0	5Mbps 10Mbps 20Mbps 100Mbps 1Gbps 5Gbps 10Gbps+
Residential / Households	Entities passed	0	N/A
	Total subscribers served	0	N/A
	Subscribers receiving new access	0	N/A
	Subscribers receiving improved access	0	N/A
	Please identify the speed tiers that are available and the number of subscribers for each	0	N/A
Businesses	Entities passed	0	N/A
	Total subscribers served	0	N/A
	Subscribers receiving new access	0	N/A
	Subscribers receiving improved access	0	N/A
	Please identify the speed tiers that are available and the number of subscribers for each	0	N/A

**7. Please describe any special offerings you may provide (600 words or less).**

MTC offers a 15% discount off of wholesale rates to our state partners, Information Technology Division and Executive Office of Public Safety and Security. Our state partners contributed matching funds to the MassBroadband 123 grant application and they have committed to being an anchor tenant on the new network.

**8a. Have your network management practices changed over the last quarter?**     Yes     No

**8b. If so, please describe the changes (300 words or less).**

N/A

**9. Community Anchor Institutions:**

Using the table below, please provide a list by service area of the community anchor institutions (including Government institutions) connected to your network as a result of BTOP funds. Figures should be reported for the most recent reporting quarter only (NOT cumulatively). Also indicate whether your organization is currently providing broadband service to the anchor institution. Finally, provide a short narrative description with examples of how institutions are using BTOP-funded infrastructure (300 words or less).

Institution Name	Service Area (town or county)	Type of Anchor Institution (as defined in your baseline)	Are you also the broadband service provider for this institution? (Yes / No)	Narrative description of how anchor institutions are using BTOP-funded infrastructure
N/A	N/A	N/A	N/A	N/A

**Project Indicators (Next Quarter)**

**1. Please describe significant project accomplishments planned for completion during the next quarter (600 words or less).**

Agreements

- Execute Pole Attachment and Conduit Agreement with Massachusetts Department of Conservation and Recreation and Time Warner
- Execute dark fiber Indefeasible Rights of Use (IRU) agreement with Chicopee Electric Light Department
- Execute railroad permit agreements with CSX Transportation, New England Central Railroad, and Pan Am Railways
- Obtain NTIA approval of all remaining route and installation type changes

Design and Engineering

- Finalize approvals splicing diagrams for the remainder of the network
- Complete inside plant design for final 3% of the Community Anchor Institutions to complete the design process

Construction

- Continue to install network equipment at Community Anchor Institution sites. Goal is to reach 90% of installations complete
- Continue to perform fiber terminations at Community Anchor Institution sites. Goal is to reach 50% of terminations complete
- Continue to install network equipment at Points of Interconnection. Goal is to reach 70% of installations complete
- Install messenger strand as utility pole licenses become available (an estimated 385 miles of strand deployed for the quarter).
- Install fiber optic cable as messenger strand is completed (an estimated 400 miles of fiber deployed for the quarter).
- Continue make ready work on poles to provide more work released for fiber optic construction. Expected to complete aerial and conduit make ready by the end of the quarter.

Acceptance Testing

- Complete testing and turnovers of two (2) Points of Interconnection and co-location sites
- Expected to connect 78 Community Anchor Institutions across 53 unique locations

Sustainability

- Negotiate additional Letters of Intent with Internet Service Providers and work towards contracts to provide service. Expected to sign four (4) additional Connecting Agreements
- Conduct Community Outreach meetings in the service area

**2. Please provide the percent complete for the following key milestones in your project. Write "0" in the Planned Percent Complete column and "N/A" in the Narrative column if your project does not include this activity. If you provided additional milestones in your baseline plan, please insert them at the bottom of the table. Unless otherwise indicated in the instructions, figures should be reported cumulatively from award inception to the end of the next reporting quarter. Please provide a narrative description if the percent complete is different from the target provided in your baseline plan (300 words or less).**

	Milestone	Planned Percent Complete	Narrative (describe reasons for any variance from baseline plan or any other relevant information)
2a.	Overall Project	100	Throughout this report, we are calculating Percent Complete with reference to the original NTIA budget. Costs are now projected to be higher than that original budget, and MTC has secured additional non-federal funds from the Commonwealth of Massachusetts to cover those amounts that exceed the original NTIA budget. Tracking closely with baseline percentage as compared to

	Milestone	Planned Percent Complete	Narrative (describe reasons for any variance from baseline plan or any other relevant information)
			original budget; ahead by 3%. Against new budget with extra funds, expected to be at 79% complete
2b.	Environmental Assessment	100	Environmental Assessment completed. No further expenditures planned. Compliance requirements with environmental mitigation included in the Design Build Request For Proposal and the Owner's Project Manager will oversee work
2c.	Network Design	100	Ahead on projected expenditures by 5%, due to front-loaded costs in areas of Owner, Owner's Project Manager, Design Builder and other consultants.
2d.	Rights of Way	100	On par with baseline projections; pole surveying and make ready applications projected to fully complete
2e.	Construction Permits and Other Approvals	100	On par with baseline projections; make ready expected to conclude during quarter
2f.	Site Preparation	100	On par with baseline projections, based on required improvements to Points of Interconnection buildings during installation
2g.	Equipment Procurement	100	On par with baseline projections
2h.	Network Build (all components - owned, leased, IRU, etc.)	71	Behind on projected expenditures by 25% due to (a) some projected costs accounted for under other categories, (b) slower than anticipated make-ready completion by utilities has delayed crew ramp-up, and (c) schedule recovery from the delay pending NTIA approval of Award Action Requests.
2i.	Equipment Deployment	100	On par with baseline projections
2j.	Network Testing	16	Behind on projected expenditures by 51% due to construction delays which have pushed back the anticipated progress of testing, and the subsequent payment milestones
2k.	Other (please specify):	100	Ahead on projected expenditures by 2%; however; no significant expenditures planned next quarter which aligns with PPR projections and baseline. Costs include: <ul style="list-style-type: none"> <li>• Federal Compliance Staff</li> <li>• BTOP Non-Construction Staffing</li> <li>• Application and Post Application Submission Costs</li> <li>• Staff, Consulting and Legal Costs with procurements</li> </ul>

**3. Please describe any challenges or issues anticipated during the next quarter that may impact planned progress against the project milestones listed above. In particular, please identify any areas or issues where technical assistance from the BTOP program may be useful (600 words or less).**

MTC anticipates receiving an early January approval of its November Award Action Request for Route and CAI changes. Due to the nature of pole and conduit licensing, MTC continues to be required to make minor route adjustments to work around problems, or to change installation types to address license denials. MTC expects that these changes will continue throughout construction and as a result MTC expects to submit another Route Change Award Action Request in January or February 2013. NTIA's requirement that all such changes be submitted for NTIA review and approval prior to construction presents a risk of blockages in what portions of the route are able to be built.

MTC is also concerned that harsh weather could introduce delays in construction, affecting the project schedule.

**Infrastructure Budget Execution Details**

**Activity Based Expenditures (Infrastructure)**

1. Please provide details below on your total budget, cumulative actual expenditures (for the period ending the current quarter), and cumulative anticipated expenditures (for the period ending next quarter) for each line item, including detailed disbursements of both matching funds and federal funds from project inception through end of this quarter (actual) or next quarter (anticipated). Actual and anticipated figures should be reported cumulatively from award inception to the end of the applicable reporting quarter.

Budget for Entire Project				Actuals from Project Inception through End of Current Reporting Period			Anticipated Actuals from Project Inception through End of Next Reporting Period		
Cost Classification	Total Cost (plan)	Matching Funds (plan)	Federal Funds (plan)	Total Cost	Matching Funds	Federal Funds	Total Costs	Matching Funds	Federal Funds
a. Administrative and legal expenses	\$1,871,196	\$598,342	\$1,272,854	\$2,318,187	\$793,108	\$1,525,079	\$2,520,055	\$890,005	\$1,630,050
b. Land, structures, right-of-ways, appraisals, etc.	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
c. Relocation expenses and payments	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
d. Architectural and engineering fees	\$9,317,022	\$2,979,253	\$6,337,769	\$12,225,955	\$4,350,107	\$7,875,848	\$13,234,137	\$4,834,034	\$8,400,103
e. Other architectural and engineering fees	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
f. Project inspection fees	\$2,218,560	\$709,417	\$1,509,143	\$0	\$0	\$0	\$343,264	\$164,767	\$178,497
g. Site work	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
h. Demolition and removal	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
i. Construction	\$51,193,858	\$19,660,308	\$31,533,549	\$40,146,090	\$18,495,369	\$21,650,721	\$46,775,127	\$21,677,278	\$25,097,849
j. Equipment	\$7,044,808	\$2,252,680	\$4,792,129	\$8,311,382	\$3,377,799	\$4,933,583	\$9,173,116	\$3,791,431	\$5,381,685
k. Miscellaneous	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>l. SUBTOTAL (add a through k)</b>	\$71,645,444	\$26,200,000	\$45,445,444	\$63,001,614	\$27,016,383	\$35,985,231	\$72,045,699	\$31,357,515	\$40,688,184
m. Contingencies	\$0	\$0	\$0		\$0	\$0	\$0	\$0	\$0
<b>n. TOTALS (sum of l and m)</b>	\$71,645,444	\$26,200,000	\$45,445,444	\$63,001,614	\$27,016,383	\$35,985,231	\$72,045,699	\$31,357,515	\$40,688,184

2. Program Income: Please provide the program income you listed in your application budget and actuals to date through the end of the reporting period.

a. Application Budget Program Income: \$0	b. Program Income to Date: \$396,444
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