

RECIPIENT NAME:Massachusetts Technology Park

AWARD NUMBER: NT10BIX5570070

DATE: 05/08/2013

OMB CONTROL NUMBER: 0660-0037

EXPIRATION DATE: 12/31/2013

QUARTERLY PERFORMANCE PROGRESS REPORT FOR BROADBAND INFRASTRUCTURE PROJECTS

General Information

1. Federal Agency and Organizational Element to Which Report is Submitted

Department of Commerce, National
Telecommunications and Information
Administration

2. Award Identification Number

NT10BIX5570070

3. DUNS Number

147368641

4. Recipient Organization

Massachusetts Technology Park 75 North Drive
, Westborough, MA 01581-3335

5. Current Reporting Period End Date (MM/DD/YYYY)

03-31-2013

6. Is this the last Report of the Award Period?

☐ Yes ☒ No

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.

7a. Typed or Printed Name and Title of Certifying Official

7c. Telephone (area code, number and extension)

7d. Email Address

7b. Signature of Certifying Official

7e. Date Report Submitted (MM/DD/YYYY):

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 March 31st, 2013:

Agreements and Administration

- Executed overlash agreement with Russell Municipal Cable TV & Internet
- Executed pole attachment agreement with Time Warner Cable Northeast, LLC
- Executed Indefeasible Rights of Use agreement with Chicopee Electric Light Department
- Executed Indefeasible Rights of Use agreement with Holyoke Gas & Electric Department
- Executed permitting agreement with Pan Am Railways
- Executed permitting agreement with New England Central Railroad
- Submitted 4th formal Award Action Request for modification of construction plans pending NTIA approval of route adjustments

Make Ready and Licensing

- Received 3,002 Verizon pole licenses for a total of 31,603 (96% complete)
- Received 3,218 electric utility pole licenses for a total of 29,428 (97% complete)
- Released 155 fully-licensed fiber miles to construction for aerial installation for a total of 895 miles for the project (96% complete)
- Received licenses for 14 miles conduit for a total of 39 miles to date (93% complete)

Network Design and Construction

- Installed 305 miles of messenger strand for a total of 775 miles for the project (83% complete)
- Installed 388 miles of aerial fiber optic cable for a total of 676 miles for the project (72% complete)
- Installed 8,131 feet of conduit for a total of 15,312 feet for the project (32% complete)
- Completed designs for 8 Community Anchor Institutions for a total of 790 locations (97% complete)
- Completed 44 Community Anchor Institution site installations for a total of 582 locations for the project (72% complete)
- Completed 81 Community Anchor Institution fiber terminations for a total of 260 locations for the project (32% of locations complete)
- Completed 6 Point of Interconnection and collocation site equipment installations for a total of 17 to date (63% complete)

Network Testing and Turnover

- Completed turnover of first network segment to Network Operator, connecting 3 Points of Interconnection and 2 regeneration sites

Sustainability

- Executed 4 Letters of Intent with an Internet Service Providers for a total of 31, as well as signing 5 connecting agreements to total 13 connecting agreements for the project

Jobs Created or Retained

- The total number of jobs created or retained during the quarter was 103.91

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	100	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. In comparison to the new project budget, 80% 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 5%, due to front-loaded focus of Owner's Project Manager, Design Builder and other consultants as network design progressed and due to aforementioned higher costs
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	On par with baseline percentage; high costs offset by additional matching funds from the Commonwealth of Massachusetts
2f.	Site Preparation	58	Behind on budgeted expenditures by 42% due to costs being allocated in other categories. Costs will be less than baseline projection
2g.	Equipment Procurement	100	On par with baseline percentage; high costs offset by additional matching funds from the Commonwealth of Massachusetts
2h.	Network Build (all components - owned, leased, IRU, etc)	72	Behind on budgeted expenditures by 24%. Design Build work has caught up with delays to close gap of expenditures, while some work continues to be delayed while MTC awaits 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 percentage; high costs offset by additional matching funds from the Commonwealth of Massachusetts
2j.	Network Testing	18	Behind by 49% due to the aforementioned construction delays that have subsequently delayed the anticipated testing schedule
2k.	Other (please specify):	100	Ahead on budgeted expenditures by 2% 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 Costs will be offset by additional matching funds from the Commonwealth of Massachusetts

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 had anticipated being able to re-engage underground construction activities in mid-March, based on town moratoriums on road construction being lifted and a delay in asphalt plant production. Due to late winter weather it is now anticipated that construction will not fully re-engage until the end of April. It will be critical to have a productive crew count during May and the beginning of June to meet schedule needs.

MTC submitted its fourth Award Action Request regarding route adjustments in February 2013. As of the end of March it had not yet been approved and NTIA has anticipated a 4-6 week lead time on that approval. The work affected will become critical path starting in early April and cause a day-for-day delay in project completion. MTC will continue to work with NTIA in any way possible to facilitate the expedited review and approval of the Award Action Request. MTC will also be submitting, under the guidance of NTIA, a schedule extension request due to the aforementioned delays across the project

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	775	Behind on baseline projection by 175 miles due to slower-than-expected make ready completion and temporary construction hold instituted by NTIA. MTC has worked with its construction contractor to compress construction schedule and believes it will make up for the delays without them becoming critical path to completion
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. 39 additional miles via IRU expected to become leased mileage in a future quarter

Indicator	Total	Narrative (describe your reasons for any variance from the baseline plan or any other relevant information)
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 on 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)	968	Behind on baseline projection by 289 miles as described in the preceding new network miles deployed and leased. The 289 miles do not include 55 additional miles from the baseline categorized as 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 21. 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 17 Points of Interconnections with equipment installed, and aims to have connections achieved during the next quarter as testing is completed

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	13
Number of agreements currently being negotiated with broadband wholesalers or last mile providers	18
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
- Cornerstone Communications
- Holyoke Gas & Electric
- MECnet
- Ayacht Technology Solutions
- Warwick Broadband Service

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 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	13	Ahead on baseline by 11; interest of service providers has exceeded expectations held at the time of grant submission. While 13 wholesaler or last mile agreements have been executed; many additional letters of intent have been signed (18) and will lead to connecting agreements. Agreements originally categorized as "receiving improved access" are being categorized as "receiving 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	1	5Mbps 10Mbps 20Mbps 100Mbps 1Gbps 5Gbps - 0 subscribers 10Gbps - 1 Subscriber
Community Anchor Institutions (including Government institutions)	Total subscribers served	1	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. 796 installations have been performed vs. the projected 911 sites.
	Subscribers receiving new access	1	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 1184 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 107 CAIs receiving "improved access".
	Please identify the speed tiers that are available and the number of subscribers for each	1	5Mbps 10Mbps 20Mbps 100Mbps 1Gbps 5Gbps - 0 subscribers 10Gbps - 1 Subscriber
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

Subscriber Type	Access Type	Total	Narrative (describe your reasons for any variance from the baseline plan or any other relevant information)
	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
Second Data Center	Springfield	Other Government Facilities	No	The CAI is using a 10Gbps circuit on BTOP funded infrastructure to establish a cost-effective link between the Commonwealth's data centers in eastern and western Massachusetts.

Project Indicators (Next Quarter)
1. Please describe significant project accomplishments planned for completion during the next quarter (600 words or less).
Administrative

- Execute Pole Attachment and Conduit Agreement with Massachusetts Department of Conservation and Recreation, Time Warner Cable, City of Pittsfield, and PJ Keating Company
- Obtain NTIA approval of all remaining route and installation type changes to ensure remaining work on hold may be released for installation/construction
- Obtain NTIA approval for project time extension

Design and Engineering

- Finalize approvals for all remaining permits and route designs

Construction

- Continue to install network equipment at Community Anchor Institution sites. Goal is to reach 85% 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 complete the remaining 7 points of Interconnection
- Install messenger strand as utility pole licenses become available; estimated to reach 95% completion
- Install fiber optic cable as messenger strand is completed; estimated to reached 90% completion
- Install fiber optical cable in existing and new conduit as conduit becomes available

Acceptance Testing

- Complete testing and turnover of Segment 1 of the network
- 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 three (3) 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. Against new budget with extra funds, expected to be at 90% 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	On par with baseline percentage; costs projected to be higher than baseline budget and accounted for with additional funds from the Commonwealth of Massachusetts
2d.	Rights of Way	100	On par with baseline percentage; costs projected to be higher than baseline budget and accounted for with additional funds from the Commonwealth of Massachusetts
2e.	Construction Permits and Other Approvals	100	On par with baseline percentage; costs projected to be higher than baseline budget and accounted for with additional funds from the Commonwealth of Massachusetts
2f.	Site Preparation	79	Behind on projected expenditures by 21% based on work being categorized in other budget categories
2g.	Equipment Procurement	100	On par with baseline percentage; costs projected to be higher than baseline budget and accounted for with additional funds from the Commonwealth of Massachusetts
2h.	Network Build (all components - owned, leased, IRU, etc.)	87	Behind on projected expenditures by 13% due to (a) some projected costs accounted for under other categories, (b) schedule recovery from the delay pending NTIA approval of Award Action Requests.
2i.	Equipment Deployment	100	On par with baseline percentage; costs projected to be higher than baseline budget and accounted for with additional funds from the Commonwealth of Massachusetts
2j.	Network Testing	82	Behind on projected expenditures by 18% due to construction delays which have pushed back the anticipated progress of testing, and the subsequent payment milestones
2k.	Other (please specify):	100	On par with baseline percentage no significant expenditures planned next quarter which aligns with PPR projections and baseline. Costs include: <ul style="list-style-type: none"> • Federal Compliance Staff • BTOP Non-Construction Staffing • Application and Post Application Submission Costs • Staff, Consulting and Legal Costs with procurements

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).

Because of the aforementioned moratoriums on underground construction, progress during the upcoming quarter will be critical to the schedule and in making up for the delays. In addition, NTIA approval of the Award Action Request for route adjustments is important for several areas of route and CAI installation that have become critical path items. MTC will coordinate closely with NTIA regarding any schedule extensions and associated items as they arise.

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	\$2,380,725	\$818,977	\$1,561,748	\$2,511,412	\$895,220	\$1,616,192
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	\$13,001,906	\$4,669,276	\$8,332,630	\$15,496,891	\$6,124,851	\$9,372,040
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	\$258,854	\$105,492	\$153,362	\$489,841	\$240,249	\$249,592
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	\$47,998,725	\$21,871,378	\$26,127,347	\$53,312,596	\$24,971,425	\$28,341,171
j. Equipment	\$7,044,808	\$2,252,680	\$4,792,129	\$9,323,284	\$3,819,265	\$5,504,019	\$10,193,254	\$4,326,805	\$5,866,449
k. Miscellaneous	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
l. SUBTOTAL (add a through k)	\$71,645,444	\$26,200,000	\$45,445,444	\$72,963,494	\$31,284,388	\$41,679,106	\$82,003,994	\$36,558,550	\$45,445,444
m. Contingencies									
n. TOTALS (sum of l and m)	\$71,645,444	\$26,200,000	\$45,445,444	\$72,963,494	\$31,284,388	\$41,679,106	\$82,003,994	\$36,558,550	\$45,445,444

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: \$469,677