

**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>  NT10BIX5570082	<b>3. DUNS Number</b>  111089470
<b>4. Recipient Organization</b>  University System of New Hampshire 51 College Road Service Building 107, Durham, NH 03824-3585		
<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	
<b>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>		
<b>7a. Typed or Printed Name and Title of Certifying Official</b>  Scott A Valcourt  Director	<b>7c. Telephone (area code, number and extension)</b>  6038624489	<b>7d. Email Address</b>  sav@unh.edu
<b>7b. Signature of Certifying Official</b>  Submitted Electronically	<b>7e. Date Report Submitted (MM/DD/YYYY):</b>  02-27-2013	

**Project Indicators (This Quarter)**

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

**A - Middle Mile Fiber, New Hampshire Optical Systems (NHOS) - (68% of total project):**

- The Award Action Request (AAR) for route change has been approved.
- Completed an additional 2 committed Community Anchor Institution (CAI) building entrances to prepare for connection to the Middle Mile network.
- 95% of make-ready estimates have been paid and 82% of licenses have been received.
- Installed strand and fiber in licensed portions of the route (491 miles strand cumulative; 450 miles of fiber cumulative). Aggressive build occurred in November with 12 crews from various states over 6 weeks and constructed 110 miles.
- Continuing to monitor and report on increased third party make-ready costs and monitor NH Public Utilities Commission Dockets DT 12-107 and DT 12-246 for progress.
- Monitor and report on third party make-ready progress and delays affecting project timeline.
- Agreements have been made with 4 Internet Service Providers (ISPs) to utilize Broadband Technology Opportunities Program (BTOP) assets.

**B - Last Mile Fiber- NH FastRoads - (11.6% of total project):**

- Network Operator Agreement is being negotiated and finalized.
- Middle Mile indefeasible rights of use (IRU) Lease and Maintenance Agreement is being negotiated and finalized.
- Overlash Agreement with New Hampshire Optical Systems was completed in November.
- 25 of 167 CAI building entrances have been completed from the building to the Middle Mile connection point
- 17 of 86 Fiber Route miles have been constructed
- Internet Service Provider Agreements are under review with 5 providers
- AAR submitted for Fast Roads route and technology change (wireless to a single neighborhood in Rindge)
- Collocation and facility lease in Keene completed
- Equipment closet lease signed in Rindge

**C - Middle Mile DOT Fiber, New Hampshire Department of Transportation (NH DOT) - (10.5% of total project):**

- All underground conduit has been installed. Six bridge crossings to be completed in Q1 2013.

**D - Middle Mile Microwave, NH SafeNet Public Safety Microwave Network - (9.2% of total project):**

- Commenced testing of Routers and creation of a network acceptance plan
- Completed MPLS (Multiprotocol Label Switching) training for NH Department of Safety (DOS), NH DOT, NH National Guard, NH Public Television, and NH Department of Information Technology (DOIT)
- Digital television (DTV) Datacasting RFP was completed and responses are being evaluated

**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	80	<p>Overall project spending was consistent with last quarter's 80% projection.</p> <p>The project continues to observe higher than expected make-ready charges from Competitive Local Exchange Carriers (CLECs) and longer than anticipated make-ready timelines. These delays have also pushed out design and construction on some routes of the Middle Mile.</p> <p>A docket was opened last quarter with the New Hampshire Public Utilities Commission (NH PUC), Docket DT 12-107, regarding a review of third party make ready costs in New Hampshire. Additional information has been provided to the NH PUC this quarter as was requested in an order in September to allow the PUC to perform their review of the Docket. Consequently, third party make-ready expenses on the Middle and Last Mile have been difficult to project.</p>

	Milestone	Percent Complete	Narrative (describe reasons for any variance from baseline plan or subsequent written updates provided to your program officer)
			New Hampshire Optical Systems (NHOS) and the University of New Hampshire (UNH) continue to work with one CLEC to strive for resolutions in concert with the NH PUC review regarding make-ready.
2b.	Environmental Assessment	100	Complete
2c.	Network Design	100	Actual is 136%; Baseline forecast 100 (Variance +36); Q3 PPR forecast 127 (Variance +9)  NH FastRoads had anticipated to be completed with splice diagrams and fiber allocation. These expenses have been reallocated into projections for Q1 2013 and Q2 2013. They are also continuing to reach an agreement with the town of New London to locate equipment.
2d.	Rights of Way	100	No expenditures scheduled in this milestone.
2e.	Construction Permits and Other Approvals	100	Actual is 113%; Baseline forecast 100 (Variance +13); Q3 PPR forecast 86 (Variance +27)  NH FastRoads spent approximately 10% more than projected make-ready costs due to utility pole licensure taking longer than expected. This has delayed make-ready construction for CLECs.  All licensing requests have been submitted to pole owners for the last mile and are now in make-ready. Licensure is anticipated in Q1 2013. NHOS surpassed their projection this quarter because of significant cost overruns in make-ready.
2f.	Site Preparation	100	Actual is 138%; Baseline forecast 100 (Variance +38); Q3 PPR forecast 126 (Variance +12)  NHOS and NH FastRoads make-ready expenses were higher than originally budgeted.
2g.	Equipment Procurement	69	Baseline forecast 100 (Variance -31); Q3 PPR forecast 70 (Variance -1) Both NHOS and NH FastRoads expected to have segments lit that are currently still in construction or waiting for make-ready. Equipment was purposely delayed to coincide with the availability of the network.  The original microwave project timeline assumed that the system would come on line on a link-by-link basis. The engineering process revealed that the nature of the public safety communications system required us to modify the original plan so that the new network would be constructed in parallel with the existing T1-based network and then a single transition would take place.  The entire system must be operational before the datacasting portion can be completed, therefore, we delayed the procurement process for this component of the project by a few quarters. Datacasting will be completed before Q2 2013.
2h.	Network Build (all components - owned, leased, IRU, etc)	62	Baseline forecast 96 (Variance -34); Q3 PPR forecast 66 (Variance -4)  Both NH FastRoads and NHOS expended less in this category than expected. NHOS needed to spend funds originally allocated this quarter for Network Build to complete work for make-ready with NH CLECs.

	Milestone	Percent Complete	Narrative (describe reasons for any variance from baseline plan or subsequent written updates provided to your program officer)
	2i. Equipment Deployment	48	Baseline forecast 87 (Variance -39); Q3 PPR forecast 54 (Variance -6)  Previous PPR projection was not achieved as 2 pieces of Microwave equipment to be deployed missed year-end invoicing and will be realized in Q1 2013. While the percentage was high, the dollar amount is less than \$100K.
	2j. Network Testing	0	Baseline forecast 55 (Variance -55); Q3 PPR forecast 50 (Variance -50)  NH FastRoads had forecast they would be testing in Q4 2012, but have been delayed as they await route construction and coinciding equipment procurement. These expenses have been reallocated into projections for Q2 2013.
	2k. Other (please specify): Project Management	68	Baseline forecast 82 (Variance -14); Q3 PPR forecast 70 (Variance -2)  No significant variance from previous PPR projections. Project management actuals were lower than forecast due to a reduction in project management resources.

**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).**

In New Hampshire, third party make-ready costs and timelines stand as primary roadblocks to constructing broadband networks. The make-ready process requires coordination between the pole owners and the telecommunications firms that have already attached to the pole. In New Hampshire, each third party is responsible for moving its own wires and equipment. As a result, each third party is free to establish its own pricing and timelines, and no rules or procedures exist to prevent excessive pricing or payment demands that contravene the policies underlying PUC 1300 and the federal and state broadband policies. Network NH Now has been meeting with the New Hampshire Public Utilities Commission, National Telecommunications and Information Administration (NTIA), and Federal and NH state representatives to update them on these challenges.

All third parties have been cooperative in completing make-ready except for one Competitive Local Exchange Carrier (CLEC). This lone CLEC appears to be causing significant delays to the project. Weekly meetings between Network NH Now and this CLEC were established in October 2012 in an effort to improve communications and complete make-ready. Priorities to complete the make-ready on the route were provided to this CLEC in mid-November, and we continue to work with them to accelerate make-ready throughput.

NHOS continues to work with the utility pole owners and third parties on the poles to complete make-ready for this project. NH PUC Docket DT 12-246 was opened last quarter to investigate rules regarding pole access in NH, and this docket has been stayed and is pending the outcome of NH PUC Docket DT 12-107. Docket DT 12-107 was opened by NHOS last quarter petitioning the PUC to investigate charges and timelines for utility pole make-ready by specific third-party CLECs.

**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	467	Baseline 390.2; Actual 467. 450 miles of Middle Mile fiber construction +17 miles of NH FastRoads last mile fiber.
New network miles leased	0	No variance
Existing network miles upgraded	0	No variance
Existing network miles leased	0	No variance

Indicator	Total	Narrative (describe your reasons for any variance from the baseline plan or any other relevant information)
Number of miles of new fiber (aerial or underground)	467	Baseline 258; Variance +209  Although we are ahead of baseline projections in new network miles deployed, we had anticipated 258 miles of in-kind fiber from vendors that had made initial commitments before our RFP process. These vendors did not receive the award. We have reallocated a portion of these miles into new build in the recently approved route change Award Action Request. As of the end of this quarter, 491 miles of strand were completed along with 450 miles of Middle Mile fiber construction along with 17 miles of NH FastRoads last mile fiber.
Number of new wireless links	0	Baseline 21; Variance -21  We had anticipated completion of 21 wireless links in the microwave public safety network in our baseline. Due to the critical nature of public safety communications, this project was re-engineered to construct and test a parallel system alongside the existing TDM system. Once operational, we will transfer existing services to the new 20 links and then decommission the old links, expected somewhere in the periods of Q1/Q2 2013.
Number of new towers	0	No variance
Number of new and/or upgraded interconnection points	3	Baseline 9; Variance -6  Third party make-ready has delayed construction and addition of interconnection points.

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	4
Number of agreements currently being negotiated with broadband wholesalers or last mile providers	20
Average term of signed agreements (in quarters)	60

5b. Please list the names of the wholesale and last mile providers with whom you have signed agreements (100 words or less). Providers: The University System of New Hampshire (USNH) has signed an agreement to lease dark fiber from New Hampshire Optical Systems (NHOS). NHOS has signed an additional 3 agreements with three companies for dark fiber use. These three providers have requested to remain unnamed at this time, and are simply referenced as Company "A", Company "B", and Company "C".

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:

Dark fiber IRU lease.

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).

Sub recipient and designated owner/operator -- New Hampshire Optical Systems (NHOS), 10 North Southwood Drive, Nashua, NH 03063 -- will operate 100% of the dark fiber network.

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	2	Baseline 2 No variance
	Providers with signed agreements receiving improved access	0	No Variance
	Providers with signed agreements receiving access to dark fiber	2	Baseline 2 No variance
	Please identify the speed tiers that are available and the number of subscribers for each	0	Once built, Middle Mile dark fiber will provide 10Gbps, and Last Mile service will have tiers beginning at 100Mbps.
Community Anchor Institutions (including Government institutions)	Total subscribers served	7	Baseline had estimated 67 CAIs connected.  Due to a delayed start in subprojects, CAI connections are below projections. To date, the project has 305 commitments to connect once the network is available. The project has also completed work on 40 building entrances with fiber installed from the building to the pole line. These CAIs are poised to connect to the Middle Mile network once it is installed. Microwave's 26 CAIs were included in the baseline estimate as the original plan had been to bring up links as they were constructed. The implementation was rescheduled to bring all sites on at the same time to minimize impacts to the public safety networks. Last Mile has readied 25 sites and is working on equipment closets to coincide with middle mile construction.
	Subscribers receiving new access	0	Baseline 9 Variance -9  Due to a delayed start in subprojects, CAI connections are below projections. To date, the project has 305 commitments to connect once the network is available.
	Subscribers receiving improved access	7	Baseline 58 Variance -51  Due to a delayed start in subprojects, CAI connections are below projections. To date, the project has 305 commitments to connect once the network is available.
	Please identify the speed tiers that are available and the number of subscribers for each	7	Once built, Middle Mile dark fiber will provide 10Gbps, and Last Mile service will have tiers beginning at 100Mbps.
Residential / Households	Entities passed	0	Baseline 879; Variance -879.  NH FastRoads had been delayed due to securing matching funds. This has delayed construction to their Phase 1 households in Enfield, NH and Phase 2 Households in Rindge, NH. Phase 1 and 2 construction should be completed in Q2 2013.
	Total subscribers served	0	Baseline 263; Variance -264
	Subscribers receiving new access	0	Baseline 175; Variance -175
	Subscribers receiving improved access	0	Baseline 89; Variance -89
	Please identify the speed tiers that are available and the number of subscribers for each	0	Once built, Middle Mile dark fiber will provide 10Gbps, and Last Mile service will have tiers beginning at 100Mbps.
Businesses	Entities passed	0	254; Variance -254  NH FastRoads make-ready is underway and Phase 1 construction

Subscriber Type	Access Type	Total	Narrative (describe your reasons for any variance from the baseline plan or any other relevant information)
			should be completed by Q2 2013.
	<b>Total subscribers served</b>	0	31; Variance -31 NH FastRoads make-ready is underway and Phase 1 construction should be completed by Q2 2013.
	<b>Subscribers receiving new access</b>	0	3; Variance -3 NH FastRoads make-ready is underway and Phase 1 construction should be completed by Q2 2013.
	<b>Subscribers receiving improved access</b>	0	28; Variance -28 NH FastRoads make-ready is underway and Phase 1 construction should be completed by Q2 2013.
	<b>Please identify the speed tiers that are available and the number of subscribers for each</b>	0	Once built, Middle Mile dark fiber will provide 10Gbps, and Last Mile service will have tiers beginning at 100Mbps.

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

None.

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

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

No variance.

**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).

- A - Middle Mile Fiber, New Hampshire Optical Systems (NHOS) - (68% of total project):
- Continue to solicit Community Anchor Institutions (CAIs) to connect to the Middle Mile network.
  - 100% of make-ready estimates will be paid and 90% of licenses will be received.
  - Complete an additional 3 committed CAI building entrances to prepare for connection to the Middle Mile network.
  - Hang strand and fiber in licensed portions of the route (640 miles strand cumulative; 600 miles of fiber cumulative).
  - Monitor and report on increased third party make-ready costs and monitor NH PUC Dockets DT 12-107 and DT 12-246 for progress.
  - Monitor and report on third party make-ready delays affecting project timeline.
  - Solicit ISPs to offer services using BTOP assets.
  - Connect an additional 29 CAIs (36 total including the 7 connected in 2011)

B - Last Mile Fiber- NH FastRoads - (11.6% of total project):

- Operator Agreement in place
- IRU/ Maintenance Agreement Lease Complete

- CAI builds on locations = 98 of 167 are complete to the Middle Mile
- Fiber Route miles completed = 32
- ISP Agreements – 3
- RFP issued and awarded for technology changes in Rindge

C - Middle Mile DOT Fiber, New Hampshire Department of Transportation (NH DOT) - (10.5% of total project):

- Install 4" steel conduit to cross the following bridges: Bodwell Road, Bridge Street Extension, Hackett Hill Road, Pan Am Rail Road Bridge, Merrimack Street and South Main Street. This will complete the conduit installation. The project will be ready to pull fiber in Q2 2013.

D - Middle Mile Microwave, NHSafeNet Public Safety Microwave Network - (9.2% of total project):

- Complete MOUs with Maine and Massachusetts
- Complete testing of Routers
- Provide Ceragon training to NH DOS, NH DOT, NH National Guard, and NH DOIT
- Award of DTV Datacasting RFP

**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	87	Baseline 97.5
2b.	Environmental Assessment	100	Completed
2c.	Network Design	100	Baseline 100 PPR Actual Q1-2013 forecast 138
2d.	Rights of Way	100	N/A
2e.	Construction Permits and Other Approvals	100	Baseline 100 PPR Actual Q1-2013 forecast 122
2f.	Site Preparation	100	Baseline 100 PPR Actual Q1-2013 forecast 139
2g.	Equipment Procurement	75	Baseline 100 -see item 3 below
2h.	Network Build (all components - owned, leased, IRU, etc.)	70	Baseline 97 -see item 3 below
2i.	Equipment Deployment	66	Baseline 98 -see item 3 below
2j.	Network Testing	50	Baseline 85 -see item 3 below
2k.	Other (please specify): Project Management	84	Baseline 91

**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).**

Third party make-ready continues to be a challenge, but we are building in areas where NHOS is licensed to attached to the existing poles. This process has created a delay in all forecasts, but we continue to engage local, state, and federal contacts to assist the project with third party make-ready work.

**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	\$5,210,963	\$87,543	\$5,123,420	\$3,614,318	\$114,079	\$3,500,239	\$4,567,733	\$139,410	\$4,428,323
b. Land, structures, right-of-ways, appraisals, etc.	\$72,000	\$21,482	\$50,518	\$4,819	\$1,300	\$3,519	\$4,819	\$1,300	\$3,519
c. Relocation expenses and payments	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
d. Architectural and engineering fees	\$4,792,609	\$551,338	\$4,241,271	\$6,061,830	\$503,917	\$5,557,913	\$6,145,220	\$533,199	\$5,612,021
e. Other architectural and engineering fees	\$176,530	\$18,860	\$157,670	\$144,630	\$16,360	\$128,270	\$144,630	\$16,360	\$128,270
f. Project inspection fees	\$153,939	\$45,930	\$108,009	\$0	\$0	\$0	\$51,313	\$15,310	\$36,003
g. Site work	\$7,359,864	\$2,061,461	\$5,298,403	\$11,570,433	\$2,061,461	\$9,508,972	\$11,570,433	\$2,061,461	\$9,508,972
h. Demolition and removal	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
i. Construction	\$23,982,324	\$2,555,718	\$21,426,606	\$12,772,279	\$1,273,163	\$11,499,116	\$14,991,576	\$1,621,354	\$13,370,222
j. Equipment	\$23,073,046	\$15,918,722	\$7,154,324	\$17,631,494	\$13,687,857	\$3,943,637	\$19,064,908	\$14,326,764	\$4,738,144
k. Miscellaneous	\$1,026,617	\$105,846	\$920,771	\$624,097	\$29,400	\$594,697	\$723,409	\$29,400	\$694,009
<b>l. SUBTOTAL (add a through k)</b>	\$65,847,892	\$21,366,900	\$44,480,992	\$52,423,900	\$17,687,537	\$34,736,363	\$57,264,041	\$18,744,558	\$38,519,483
m. Contingencies	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
<b>n. TOTALS (sum of l and m)</b>	\$65,847,892	\$21,366,900	\$44,480,992	\$52,423,900	\$17,687,537	\$34,736,363	\$57,264,041	\$18,744,558	\$38,519,483

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: \$0
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