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

NT10BIX5570011

3. DUNS Number

018946590

4. Recipient Organization

MCNC 3021 Cornwallis Road, Research Triangle Park, NC 27709-2889

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

06-30-2012

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

Patricia Moody

Chief Financial Officer

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

9192481820

7d. Email Address

pmoody@mcnc.org

7b. Signature of Certifying Official

Submitted Electronically

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

08-20-2012

Project Indicators (This Quarter)

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

MCNC had previously reported completion of the originally approved project in the March reporting quarter. During the first half of this quarter MCNC worked with the NTIA on developing a plan to utilize savings realized during execution of the project for deploying 54 more additional miles of fiber to serve additional CAI's in the previously approved proposed service funding area, as well as an upgrade to the North Carolina Research and Education core backbone to 100Gbps (gigabits per second). Formal approval of these requests was provided on May 22nd, and work began on all required engineering efforts shortly thereafter. For the balance of the quarter, all activities on the project related to network design, permitting, and the start of equipment ordering toward completion of this effort. No actual construction or execution of the indefeasible rights to use (IRU's) on the new 54 miles has commenced yet, but it is expected that those efforts will start in August.

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	84	As the project was initially outlined and funded, we are 100% complete from a deployment perspective. The spend rate relative to the now approved budget with the additional builds sits at 84%
2b.	Environmental Assessment	100	This task is 100% complete.
2c.	Network Design	100	This task is 100% complete.
2d.	Rights of Way	100	This task is 100% complete.
2e.	Construction Permits and Other Approvals	100	This task is 100% complete.
2f.	Site Preparation	100	This task is 100% complete.
2g.	Equipment Procurement	44	All original equipment outlined to operate the network have been ordered and deployed as the project was originally funded. Items relative to supporting the additional builds to the CAI's and 100G infrastructure that were approved is ongoing and should complete in the September reporting quarter.
2h.	Network Build (all components - owned, leased, IRU, etc)	95	Relative to the additional miles added to the project during the quarter to the overall number now to be built, we stand at 88% complete. As it relates to dollars spent on the project, we are at 95%.
2i.	Equipment Deployment	90	All original equipment outlined in the original proposal has been deployed. Equipment related to the additional CAI's is pending and will occur toward the end of the September reporting period and in to the start of the December reporting period.
2j.	Network Testing	94	Relative to the additional miles added to the project during the quarter to the overall number initially funded in the project and now in operation, we stand at 94% complete, and thus 94% tested.
2k.	Other (please specify): N/A	0	N/A

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).

Related to this project, there were no major challenges or obstacles. The initial funded work was largely completed except for close out activities with the contractors on minor ground restorations and corrections. Most efforts in the first half of the quarter centered around discussions with NTIA on how to leverage those savings found within the project to which there were no major challenges other than identifying and working through the process to get those approved. Once the approval was received, it did set in motion, on a smaller scale, implementing variables in the project that are now under tight time lines. At this point there is no reason for concern in being able to complete the additional funded builds.

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	414	The 414 miles represented here matches the amount of mileage reported last quarter. Baseline would have projected 467.1 miles for this quarter, but included miles that NTIA allowed to be acquired under IRU (indefeasible right to use) once the project began. The 414 miles represented here are the final constructed miles in the project after final engineering and builds were complete, and do not represent any of the additional miles approved by the NTIA as they are not yet under construction per the savings request that was submitted and approved.
New network miles leased	291	Our projections on network miles leased have been inaccurate due to misinterpretation of network miles leased versus network miles upgraded in our baseline projections. As it relates to leasing (or in our case acquisition under Indefeasible Right to Use-IRU), we have now fully executed all that were planned or approved by NTIA for the original project. The total of 291 miles is made up of 197 from ERC and FRC routes communicated in application, 61 from Morris Broadband acquisition, and 33 from the Balsam and Plateau IRU's approved during the project. This number will always be less than the final projection of 420. The higher number reported in baseline are miles that now reside in the upgraded section below. None of the additional miles approved during this quarter are shown in the 291 miles as those efforts were not fully complete at the end of the quarter.
Existing network miles upgraded	197	These miles represent fiber that MCNC already had the rights to via IRU and presented in the project and BTOP funded the equipment. Baseline always showed 0 throughout the project and were moved from the "network miles leased" area here in a previous quarter.
Existing network miles leased	0	N/A
Number of miles of new fiber (aerial or underground)	414	This mileage represents the final constructed miles of the project as initially funded. Over the next two quarters the amount will increase due to the newly approved CAI connections.
Number of new wireless links	0	N/A
Number of new towers	0	N/A
Number of new and/or upgraded interconnection points	1,062	We are ahead of baseline as this number is representative of all splice enclosures and hand holds on the route, which enable interconnect points. This number will further increase over the next two reporting quarters as we finalize the builds associated with the newly approved miles to the project.

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	2
Number of agreements currently being negotiated with broadband wholesalers or last mile providers	5
Average term of signed agreements (in quarters)	80

5b. Please list the names of the wholesale and last mile providers with whom you have signed agreements (100 words or less). Providers:
MCNC has signed agreements for an approved swap with ERC and FRC as part of the project that was defined at application. We also signed an agreement with Haywood County Government on a 5 year lease of fibers in the western portion of the project over a short 2 mile segment of the route. Because this is not a wholesaler we do not include in the numbers above.

FRC, our subrecipient, has now signed an agreement with Pangea for access to fibers as of 6-5-2012. They have also been discussing agreements with Dukenet Communications for fibers in the route but final contracts are not signed. Terms are agreed to but the delay at this point is now related to colocation availability on the route by FRC to Dukenet. It is anticipated these issues will be worked through.

MCNC is exploring additional agreements with ERC for more fibers they would IRU along the BTOP route than originally planned. Contract was near signing at the end of the June quarter.

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:

MCNC is not providing wholesale services. The Agreements and providers noted above will be providing wholesales services as these agreements are formalized and these providers begin deploying equipment and services in those regions.

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).

Both MCNC, as the prime recipient, and FRC, as a sub-recipient, will operate their respective fibers (48 each) in the sheath. MCNC has the ultimate responsibility for maintenance of the sheath as the cable owner, but has contracted with FRC to provide this maintenance (locate services, break/fix, etc.) on an annual basis under an operational contract. MCNC will operate their strands in the sheath to provide service to the public sector, while FRC will operate their strands for commercial based opportunities (service to wholesalers, private sector enterprise, etc.)

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	Discussions continue between FRC and Dukenet, but nothing is formally signed between these as of yet. While lower to baseline, we do expect further agreements to materialize now that the route is completed and discussions to leverage portions of both project footprints make some areas more viable.
	Providers with signed agreements receiving improved access	0	We have discovered that most providers we've talked to are interested in dark services and not lit wholesale services so our projection here has been inaccurate to date.
	Providers with signed agreements receiving access to dark fiber	2	Discussions continue between FRC, Dukenet, and Pangea, but nothing formally signed between these. We are lower to baseline by one but expect when one of these signs later this year we will recover. We have discovered that some interest is there, but didn't start becoming more apparent until route was close to completion. Some interest has also been tied to the round 2 footprint as a complimentary route to help entice to the round 1 routes.
	Please identify the speed tiers that are available and the number of subscribers for each	0	To date, no wholesalers have signed on to provide wholesale lit services. Once this occurs, we would anticipate a provider that can provide services from 10M to 100G as required.
Community Anchor Institutions (including Government institutions)	**Total subscribers served**	1,870	As our understanding of the reporting requirements refined during the project, we now know that projections in our initial application and baseline are inaccurate due to misinterpretation of the guidance. Initial projections were based on community anchor institutions located in the counties in which our fiber route passes through, but not necessarily on-net with the North Carolina Research and Education Network (NCREN) today. Based on the clarifications from a previous quarter, what we report here are CAI's that were already connected to the NCREN backbone in some capacity that have received improved access due to the deployment of fiber and higher grades of service (i.e. 10Gbps internet service) out of NCREN maintained facilities. The newly funded direct fiber connections to the 20 additional CAI's are not yet included in this count as the construction has not yet commenced.

Subscriber Type	Access Type	Total	Narrative (describe your reasons for any variance from the baseline plan or any other relevant information)
	Subscribers receiving new access	0	Now that the NTIA has approved 54 miles of additional builds or acquisition there will be 20 more CAI's receiving direct fiber access. These efforts will commence over the next quarter.
	Subscribers receiving improved access	1,870	As our understanding of the reporting requirements refined during the project, we now know that projections in our initial application and baseline are inaccurate due to misinterpretation of the guidance. Initial projections were based on community anchor institutions located in the counties in which our fiber route passes through, but not necessarily on-net with the North Carolina Research and Education Network (NCREN) today. Based on the clarifications from a previous quarter, what we report here are CAI's that were already connected to the NCREN backbone in some capacity that have received improved access due to the deployment of fiber and higher grades of service (i.e. 10Gbps internet service) out of NCREN maintained facilities.
	Please identify the speed tiers that are available and the number or subscribers for each	0	None of the improved access is due to directly connected CAI's but rather an improved middle mile infrastructure. That infrastructure has capability for 100G. On the system deployed, direct point to point services as shown below are possible: 100M, 250M, 500M, increments of 1G, 10G, 100G.
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).

We are able to provide lambda based point to point based circuits between all NCREN POP's enabled by the new infrastructure and to portions of the central core (defined as the Charlotte to Raleigh corridor) of the NCREN network that existed prior to application.

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	Type of Anchor Institution (as	Are you also the broadband	Narrative description of how anchor institutions are using BTOP-funded infrastructure

	or county)	defined in your baseline)	service provider for this institution? (Yes / No)	
See Addendum	**See Addendum**	**See Addendum**	**See Addendum**	**See Addendum**

Project Indicators (Next Quarter)

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

We will be full force in our efforts to complete the newly funded 54 miles of fiber and connections to the 20 CAI's. We would anticipate closing on all the IRU's related to the 23 leased miles to be acquired, and potentially 1/2 of the 31 miles to be constructed. Additionally final engineering with Cisco will occur during this quarter on the 100Gbps backbone upgrade such that it will be in place by December of this year. We do not project any further additional signed agreements for the next quarter although a few negotiations are ongoing.

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**	92	The project as originally funded is 100% complete. This level of completeness forecasted for next quarter represents our estimate of how quickly the remaining builds and deployments will execute over this quarter, and the associated spend to do so. We do not forecast greater than 92% here as we don't believe all equipment associated with the 100G upgrade to the core will have arrived by the end of the September quarter to allow us to show the equipment received and thus accounted for within the project.
2b.	**Environmental Assessment**	100	This task is 100% complete.
2c.	**Network Design**	100	This task is 100% complete.
2d.	**Rights of Way**	100	This task is 100% complete.
2e.	**Construction Permits and Other Approvals**	100	This task is 100% complete.
2f.	**Site Preparation**	100	This task is 100% complete.
2g.	**Equipment Procurement**	100	This task is 100% complete.
2h.	**Network Build (all components - owned, leased, IRU, etc.)**	98	We will be full force in our effort to complete the additional funded infrastructure. At the end of the quarter we would expect to 100% complete with the project as initially funded, and 98% complete as it relates to the percent complete relative to the additions to the scope of work.
2i.	**Equipment Deployment**	95	We are 100% complete with the equipment elements of the project as originally funded. With the additions, we will be at 95% completion.
2j.	**Network Testing**	100	This task is 100% complete.
2k.	**Other (please specify):** N/A	0	N/A

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).

Obstacles remaining for completion at this point would be timely delivery of materials and equipment associated with those things that we bought late in this quarter to facilitate the builds and deployment of equipment. We're confident in our ability to work with our providers such that this doesn't happen.

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.

Cost Classification	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		
	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	$476,900	$105,318	$371,582	$460,797	$101,762	$359,035	$469,797	$103,749	$366,048
b. Land, structures, right-of-ways, appraisals, etc.	$430,000	$94,961	$335,039	$435,479	$96,171	$339,308	$440,000	$97,169	$342,831
c. Relocation expenses and payments	$0	$0	$0	$0	$0	$0	$0	$0	$0
d. Architectural and engineering fees	$1,884,240	$416,113	$1,468,127	$1,795,562	$396,530	$1,399,032	$1,884,240	$416,113	$1,468,127
e. Other architectural and engineering fees	$0	$0	$0	$0	$0	$0	$0	$0	$0
f. Project inspection fees	$0	$0	$0	$0	$0	$0	$0	$0	$0
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	$27,250,151	$6,017,891	$21,232,260	$23,954,045	$5,574,376	$18,379,669	$26,791,000	$6,200,886	$20,590,114
j. Equipment	$8,470,800	$3,652,290	$4,818,510	$5,679,353	$2,751,437	$2,927,916	$6,000,000	$2,822,248	$3,177,752
k. Miscellaneous	$0	$0	$0	$0	$0	$0	$0	$0	$0
l. SUBTOTAL (add a through k)	$38,512,091	$10,286,573	$28,225,518	$32,325,236	$8,920,276	$23,404,960	$35,585,037	$9,640,165	$25,944,872
m. Contingencies	$0	$0	$0	$0	$0	$0	$0	$0	$0
n. TOTALS (sum of l and m)	$38,512,091	$10,286,573	$28,225,518	$32,325,236	$8,920,276	$23,404,960	$35,585,037	$9,640,165	$25,944,872

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