

RECIPIENT NAME:University of Arkansas System

AWARD NUMBER: NT10BIX5570102

DATE: 01/21/2014

OMB CONTROL NUMBER: 0660-0037

EXPIRATION DATE: 6/30/2015

## ANNUAL 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> NT10BIX5570102	<b>3. DUNS Number</b> 122452563
<b>4. Recipient Organization</b>  University of Arkansas System 4301 W. Markham St, ST63, Little Rock, AR 72205-7101		
<b>5. Current Reporting Period End Date (MM/DD/YYYY)</b> 12-31-2013	<b>6. Is this the last Annual Report of the Award Period?</b>  <input checked="" type="radio"/> Yes <input 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>  Suzanne Alstadt	<b>7c. Telephone (area code, number and extension)</b>  X	
	<b>7d. Email Address</b>  sealstadt@uams.edu	
<b>7b. Signature of Certifying Official</b> Submitted Electronically	<b>7e. Date Report Submitted (MM/DD/YYYY):</b> 01-21-2014	

**OVERALL PROJECT PERFORMANCE INDICATORS**

1. Please provide the following average cost figures for your project. Please review the instructions to determine how to calculate these figures. Write "0" in the second column and "N/A" in the third column if your project does not yet have this information. Depending on whether your project contains Middle Mile and/or Last Mile components, some metrics may not apply. Please provide a narrative description if the total is different from the target provided in your baseline plan (600 words or less).

Cost Indicator	Average Cost / Speed	Narrative (describe your reasons for any variance from the baseline plan or any other relevant information)
Average cost per new mile (Middle Mile)	\$146,498	This is calculated as the total allocated cost of construction of fiber and conduit, engineering, and splicing of all fiber laterals constructed in the project.
Average cost per household passed (Last Mile)	0	N/A
Average cost per subscriber (Last Mile)	0	N/A
Maximum broadband speed advertised (Middle Mile)	10 Gb	The Arkansas e-Link backbone can support connection speeds up to 10 Gb.
Maximum broadband speed advertised (Last Mile)	0	N/A
Average broadband speed provided (Middle Mile)	1 Gb	All ARE-ON fiber-connected CAIs have 1 Gb connections, and all ARE-ON circuit-connected CAIs have 100 Mb.
Average broadband speed provided (Last Mile)	0	N/A

2. Please provide each facility name and type, the county where the facility is located, and census tract information for any facilities funded by your project during this annual reporting period. Report only facilities for which construction has been completed.

Facility Identifier / Name	Facility Type	County	Census Tracts
See addendum	See addendum	See addendum	See addendum

Add Facility

Remove Facility

3. Please identify (1) the total number of interconnection, peering, and/or transit agreements entered into during this annual reporting period; (2) the total number of agreements of each type that you are currently negotiating; and (3) whether you have denied any request for interconnection and if so, why. If you have not entered into any agreements, please write "N/A."

**Interconnection Agreements (600 words or less)**

N/A

**Peering and Transit Agreements (600 words or less)**

N/A

**CAPACITY, UTILIZATION, AND CAPABILITY INDICATORS**

**4. Community Anchor Institutions:** In the chart below, please provide information on the types of community anchor institutions capable of receiving service (i.e., anchor institutions connected to your network plus those passed by your network) as a result of BTOP funds.

Type of Community Anchor Institution	Total Number Within Service Area	Type of Community Anchor Institution	Total Number Within Service Area
Schools (K-12)	0	Public Housing	0
Libraries	8	Other Institutions of Higher Education	12
Medical and Healthcare Providers	410	Other Community Support Organizations	0
Public Safety Entities	1	Other Government Facilities	6
Community Colleges	21	Total Community Anchor Institutions	458

**5. Please indicate the average increase in broadband speed provided to the community anchor institution customers as a result of your project, including a description of how this increase was calculated (600 words or less).**

The project's healthcare CAIs were provided with improved broadband, therefore their increase would be 100%.

This consists of:

- 296 sites with <10 Mb
- 80 sites with >= 10 Mb and <50 Mb
- 8 sites with >= 50 Mb and <100 Mb
- 21sites with >=100 Mb and <1 Gb
- 9 sites with >= 1 Gb

The remaining 44 sites received BTOP-funded equipment but are using their own connectivity bringing our total to 458.

The average broadband speed is 980 Mb. Typical broadband speeds for the community colleges was previously 6-20 Mb. All college CAIs received 1 Gb connections. The average was calculated by subtracting the high end of the two numbers.

**6. What retail services are being provided by this project? Please describe below. (600 words or less). As an attachment to this report, please provide pricing plans (in \$ per month) associated with each retail service. Retail services description:**

N/A

**7a. What network management policies (e.g., bandwidth limitations, traffic prioritization) are in place for the services provided by your project? 7b. Have you ever limited or blocked consumers from accessing any lawful content, service, service provider, or application, or prevented any consumers from attaching any legal device to the network? If so, please explain why (300 words or less)?**

7a. The Arkansas e-Link portion of the network is a membership-only network, open only to defined and HIPAA compliant medical purposes. This is not a public, consumer-oriented network. The fiber project's (ARE-ON) network management policies are to provide commodity Internet services up to the amount of bandwidth contracted for by the CAI and rate limit based on that contracted bandwidth. However, connections to other ARE-ON members and to research networks, such as Internet2 and National LambdaRail, are not rate limited. No traffic prioritization is planned or occurring unless specifically requested by the CAI (such as to give video-conferencing traffic a higher priority over that CAI's other traffic). ARE-ON does not block or filter content of any type to its members.

7b. Only standards-compliant devices will function on the e-Link network. The e-Link network is not a public, consumer-oriented network. ARE-ON has no policies or practice that restricts the connection of any legal device to its network. However, ARE-ON's members, which are institutions of higher education, define their own policies about content filtering for their users or what devices they will permit to connect to their respective campus networks.

**8. If applicable, please provide the total number and the percentage of subscribers who have dropped the broadband service provided through this project (total number of households and/or businesses and the "churn rate") and the subscribers' reasons for discontinuing their service (600 words or less).**

N/A

**9. Please provide the following information regarding the number of fiber strand-miles:**

Total Number of Strand-miles	Total Number of Active Fiber Strand-miles Used by Recipient	Total Number of Leased Fiber Strand-miles	Total Number of Dark Fiber Strand-miles	Total Number of Strand-miles Being Built		
				Active	Leased	Dark
11,820	1,583	0	10,237	0	0	0

**10. If you wholesale dark fiber, please list your wholesale customers and the number of fiber miles you currently are leasing to those customers:**  
N/A

**11. Please provide the following information regarding the facility collocation capacity:**

Total Facility (total square feet for all facilities)	Number of Square Feet Used by Recipient	Number of Square Feet Leased	Number of Square Feet Available
8,738	8,310	114	314

**12. If you do not own collocation space, please describe how and where other network providers and/or customers interconnect with your network (600 words or less).**  
Network providers will interconnect with the network at meet points outside our collocation facilities and transition via our fiber into the collocation facility. Network providers can also interconnect at one of our member institutions where we maintain a presence.

**13. To the extent that you have made any subcontracts or sub grants, please provide the number of subcontracts or sub grants that have been made to socially and economically disadvantaged small business (SDB) concerns as defined by section 8(a) of the Small Business Act, 15 U.S.C. 647, as modified by NTIA's adoption of an alternative small business size standard for use in BTOP. Please also provide the names of these SDB entities (150 words or less).**  
N/A

**14. Please describe any best practices/lessons learned that can be shared with other similar BTOP projects (900 words or less).**  
UAS suggests these best practices/lessons learned:  

- Start the Environmental Assessment (EA) process as early as possible and monitor consultant for timely completion.
- Develop and implement operational procedures.
- To help stay focused, review project goals often with your team.
- Identify and understand institutional and regulatory requirements.
- Develop a checks and balances system to ensure that sub-recipient is compliant with regulatory requirements.
- Maintain effective communication with partners and vendors.
- Develop strategy for inventory management.
- Maintain schedule of compliance deadlines.
- Define data that is needed from CAIs and develop comprehensive plan for acquiring and managing the data.
- Keep a reference log of decisions made between recipient and NTIA program officer and/or other representatives of NTIA.
- Allow sufficient time in the process to develop, release, evaluate, and award bids for RFPs, including order lead time to avoid delays during deployment.
- When selecting contractors for fiber construction, consider an interview or selection process that identifies specific skill levels needed and include these written specifications in the contract.
- Use only contractors experienced in installing, splicing, and testing the type of fiber plant you are building, such as long-haul, metro, residential, etc.
- Contracts should include specifics about every aspect of the construction, including setting minimum standards for testing and acceptance.
- Perform independent inspection by your engineering firm to ensure that construction meets all engineering design standards.
- Be as detailed as possible on every aspect of hut construction.
- Consider having the hut manufacturer install as much internal infrastructure as possible, including generators, racks, power, security, etc. at the factory.
- Ensure there are comprehensive contracts with all vendors that assure grant requirements are met and flexibility is included.

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**15. Using the Excel spreadsheet template titled "Annual PPR CCI Addendum", please provide an updated list of Community Anchor Institutions (CAIs) that you have connected and plan to connect to your network.**

**16. Using the Excel spreadsheet template titled "Annual PPR CCI Addendum", please provide a list of community pairs that are receiving new or improved broadband service as a result of BTOP grant funds.**

**17. Please provide up-to-date network route maps in a single file, in a Google Earth compatible format (e.g., KMZ file).**