

RECIPIENT NAME:University of Wisconsin System

AWARD NUMBER: NT10BIX5570045

DATE: 09/23/2013

OMB CONTROL NUMBER: 0660-0037

EXPIRATION DATE: 6/30/2015

ANNUAL 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 NT10BIX5570045	3. DUNS Number 161202122
4. Recipient Organization University of Wisconsin System Research & Sponsored Programs 21 N. Park St., Ste. 6401, Madison, WI 53715-1218		
5. Current Reporting Period End Date (MM/DD/YYYY) 12-31-2013	6. Is this the last Annual Report of the Award Period? <input checked="" type="radio"/> Yes <input type="radio"/> 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 Dawn-Marie M. Roberts	7c. Telephone (area code, number and extension) 6082620152	
	7d. Email Address drobert4@rsp.wisc.edu	
7b. Signature of Certifying Official Submitted Electronically	7e. Date Report Submitted (MM/DD/YYYY): 09-23-2013	

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)	98302	We note our original baseline of \$62,245 is not calculated correctly and includes (31.25) leased miles in denominator and excludes our in-kind contribution match. Recalculating this correctly, our original baseline should have been \$152,811. Also, we received approval in Dec 2012 for a route change that adds 18.25 miles of fiber installed in existing conduit.
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)	0	We are offering dark fiber such that speeds can be anything from 10Mb to 100Gbps. Most CAIs and commercial groups are selecting 1Gbps with some at 10Gbps.
Maximum broadband speed advertised (Last Mile)	0	N/A
Average broadband speed provided (Middle Mile)	0	We are offering dark fiber such that speeds can be anything from 10Mb to 100Gbps. Most CAIs and commercial groups are selecting 1Gbps with some at 10Gbps or multiple wavelengths via dense wave division multiplexing (DWDM)
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
525 Science Drive / 525 Science Dr	PoP	Dane	480000004021006

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)

MUFN has entered into 2 new interconnection agreement during the reporting period. We are currently negotiating 7 additional interconnection agreements. We have not denied any request for interconnection.

Peering and Transit Agreements (600 words or less)

We have entered into 3 peering agreements at the Network222 Internet peering point we identified in our original proposal to NTIA. We have not entered into any transit agreements. We are not currently negotiating any additional peering or transit agreements and have not denied any requests for peering and transit agreements during the reporting period.

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)	51	Public Housing	3
Libraries	6	Other Institutions of Higher Education	6
Medical and Healthcare Providers	19	Other Community Support Organizations	64
Public Safety Entities	19	Other Government Facilities	35
Community Colleges	3	Total Community Anchor Institutions	206

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).

N/A - MUFN is a dark fiber project middle mile project such that we are not providing specific broadband speeds to members. However, most CAIs connected via MUFN to the Internet are increasing their connectivity by at least 100 times (10Mb to 1Gbps) if not as much as 667 times (1.5Mb to 1Gbps).

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 - MUFN is a middle-mile project and is not providing retail services directly to the public. Our pricing plan is attached for the wholesale services we are offering.

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)?

MUFN is providing dark fiber services. We support ubiquitous and pervasive network access that is open and affordable using open, standard protocols. MUFN supports network neutrality and will not limit, restrict, prioritize or otherwise hinder system users' access to any lawful Internet content, applications or services of their choice except for reasonable system preservation purposes (e.g. security events). Rather, we offer services on a best effort basis with all services subject to the legal needs of law enforcement.

MUFN has never 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.

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).

MUFN has not had any subscribers drop service though we have had a total of 5 CAIs (5.1%) request we not install fiber to their facility. All 5 were dropped due to planned office consolidation for budget reasons.

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
10,829	124	1,006	9,699	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:

MUFN has 2 wholesale customers (Mad City Broadband and WI Independent Network (WINs)). Neither entity has leased any fiber yet as they are currently building laterals and other connections into the MUFN middle-mile infrastructure.

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
13,858	13,645	0	213

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).

MUFN does not have a collocation service offering. Rather, our plan is to permit entities to interconnect to existing and grant-funded fiber infrastructure at 100 interconnect points (splice cases, patch panels within CAI facilities, Internet peering points). We have leased space at Network222 (an Internet peering point) where other commercial entities offer collocation space within the building (i.e. 5Nines data center, Fiore Company) and other network providers/customers can cross-connect to fiber infrastructure in our leased collocation space (many already do). Finally, individual MUFN consortium members are permitted to negotiate privately with other network providers and customers to offer collocation services within their facility as permitted by law and executive management/board of directors.

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).

We have not made any subcontracts/sub grants to socially and economically disadvantaged small businesses.

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

1. Perform engineering study for aerial fiber installations before hiring a contractor to furnish and install materials such that construction vendors will be able to bid jobs tighter than if engineering is not performed (buffer added).
2. Plot/use of GIS maps with portable shapefiles has been very helpful in order to overlay streets, other utilities, environmental assessment data (i.e. brownfields, wetlands, land use).
3. Sharing of information (i.e. RFPs/bids, problems) among affinity groups such as higher education and state education and research networks has been extremely useful.
4. Participating in groups performing similar BTOP CCI projects (e.g. Internet2 BTOPers) is helpful to discuss issues.
5. Attending NTIA BTOP events.
6. Meeting with area governmental traffic engineering groups to understand road construction plans and install conduit as part of those projects (when road is open) has been VERY helpful to reduce project costs and coordinate schedules.
7. Meeting with government leaders and the permitting offices of local jurisdictions has been helpful to ease permitting and right-of-way issues.
8. Advertise permit meetings in the newspaper to increase awareness of project and reduce surprises to neighborhoods.

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).