

**To:** Department of Commerce  
National Telecommunications and Information Administration (NTIA)

**From:** Virginia Tech Foundation, Inc.

**Subject:** Broadband Technology Opportunities Program (BTOP) Extension Request,  
Allegheny Fiber: Extending Virginia's Open Access Fiber Backbone to the Ridge  
and Valley (Award ID: NT10BIX5570016) for Award Period February 1, 2010  
to January 31, 2013

**Date:** December 21, 2012

To Whom It May Concern:

Virginia Tech Foundation, Inc. requests a period of performance extension until June 30, 2013, but not to exceed September 30, 2013, to continue the successful implementation of our Broadband Technology Opportunities Program (BTOP) award. This request includes this project's extension rationale and provides supporting documentation as attachments to the Award Action Request (AAR).

- 1) **Reason(s) for Extension Request:** Virginia Tech Foundation, Inc. has experienced circumstances that have caused the need for an extension beyond the original project end date. There have been four unexpected issues that impacted the project schedule:
  - a. Environmental and Historic Preservation (EHP) requirements including the Environmental Assessment (EA) Special Award Condition (SAC) and the issuance of the Finding of No Significant Impact (FONSI) resulted in the delay of final engineering and start of construction.
  - b. Permitting challenges and route modification preparations associated with award amendments that allowed for the addition of a new interconnection point.
  - c. Unforeseen weather conditions in the project footprint impacted the placing contractor and resulted in loss of 20 days of construction activity.
  - d. Fiber Cable Shortage and the change in cable vendors during the shortage resulted in delay in obtaining certain sizes of cable.

The narrative below provides an explanation of how the project-specific circumstances resulted in the need for a period of performance extension, our proposed plan for addressing any outstanding issues, and the project benefits that will be delivered during the extension period. To the extent possible, Virginia Tech Foundation has accelerated construction and fiber deployment in order to minimize the impact of these factors. However, the efforts have not fully closed the gap. In order to successfully complete the project, VTF is requesting a no cost extension through June 30, 2013.

**Project specific circumstances resulting in a need for a performance extension were as follows:**

- **EHP Requirements:** The time required for satisfaction of the EHP requirements resulted in unexpected delays in starting the construction phase of this project. Because of the requirement to have detailed engineering and route layouts completed in order to start the EA process, there was a delay providing the needed engineering detail for the EA. The process of engineering 105 miles of fiber over mountainous terrain was expedited as much as possible. Although the EA consultant was engaged on May 3, 2010, and the field engineering work started on June 3, 2010, the FONSI was approved on May 17, 2011. No construction work started until after the approval of the FONSI.

- **Permitting challenges and route modification preparations:** The proposed buried fiber route crossed through the National Forest Service land (Jefferson National Forest) on Hwy 460 between Blacksburg and Hwy 42 near Pembroke and on Hwy 615 and Hwy 606 between New Castle and Fincastle. We experienced an unexpected delay of thirteen (13) months by the National Forest Service in the approval of the permits for these crossings. The permits were approved on September 1, 2011.

A route modification was approved July 5, 2012 by the NTIA to add 2 IRUs, an additional node (interconnection point) and approximately 5,000 feet of cable to the route to expend approximately \$1.4 million in excess funding. This modification required time for the preparation of the route modification request, engineering, permitting, approval from the NTIA, and the addendum to the EA.

- Engineering was completed September 15, 2012
- Material procurement took 1.5 months (6 weeks)
- Town of Blacksburg site specifications review and approval and building permit approval took 4 months (was approved 12-12-12)
- Construction started December 17, 2012 and is expected to take 6-10 weeks, (complete by 2-15-12) depending on weather.
- Complete equipment turn-up and testing of node equipment and ring equipment will be delayed until March awaiting completion of work on the node.

The deliberate pace of the review and approval of the site plan by the Town of Blacksburg delayed the start of construction by approximately 2.5 months (10 weeks).

- **Unforeseen weather conditions:** The loss of 20 work days due to inclement weather hampered our ability to complete the project as originally scheduled. There was snow in the winter time and flooding in the spring that prevented the contractor from plowing for several days at a time and site work on the nodes were hampered awaiting a “drying out” period.
- **Fiber Cable Shortage:** VTF’s initial cable supplier informed us on May 5, 2011 that they would no longer be able to supply our forecasted cable requirements as scheduled for the grant and the lead time would be extended seven months to December, 2011. This had the potential to stop our entire construction effort on this project. However, through negotiations with another fiber cable supplier, we were able to have cable shipments resumed after a 6 week delay.

**Proposed Plan to address any Outstanding Issues:**

- Complete the construction of the node and 4.5 kilofeet of fiber lateral cable by February 15, 2013
- Complete the installation of the node equipment, turn-up and testing by the end of March, 2013.
- Complete the turn up and testing of the new 14.6 mile IRU fibers to Carilion School of Medicine by April 15, 2013.
- All materials and equipment have been purchased. All that remains on this project is construction, installation, turn-up, and testing costs.

**Project Benefits to Be Delivered During the Extension Period**

The full benefits of this grant award can be achieved with a no cost extension of 180 days (6 months). Those benefits include:

- Completion of an interconnection point in the Town of Blacksburg.

- **Full testing and turn up of all node equipment on this project**
- **Completion of interconnection with Citizens Telephone to deliver diverse routing for Virginia Tech and other providers.**
- **Increase the interconnection contracts to Wholesale or Last Mile Providers to 7.**
- **Complete the connection to one (1) CAI-(Carilion School of Medicine)**

2) **Supporting Documentation:** Virginia Tech Foundation, Inc. submits the following documentation to assist NTIA with the review of this extension request. The attached materials have been updated according to revised project plans for an extended award period and reflect the narrative provided above.

- **SF-424 Revised Budget**
- **Revised Performance Projections** (justification of all revised project goals provided in above narrative – see table below)

**Revised Performance Projections**

<b>Performance Indicator</b>	<b>Revised Project Goals</b>
New Network Miles Deployed	<b>106</b>
New Network Miles Leased	<b>15</b>
Existing Network Miles Upgraded	<b>0</b>
Existing Network Miles Leased	<b>0</b>
CAIs Receiving New Access	<b>1</b>
CAIs Receiving Improved Access	<b>0</b>
BB Wholesale or Last Mile Providers	<b>7</b>
Number of new interconnection points	<b>4</b>

- **Project Plan (with updated milestones)**

Virginia Tech Foundation, Inc. understands that it must continue to comply with all statutory and programmatic requirements and that this is a no-cost period of performance extension request only (i.e., no additional BTOP funding will be provided under this extension request).

Sincerely,

John E. Dooley  
 Chief Executive Officer  
 Virginia Tech Foundation, Inc.

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**Recipients are encouraged to work with their Federal Program Officer (FPO) prior to submitting the extension request. Upon submission of the extension request and supporting documentation as an AAR, the FPO will forward to the Grants Office. The Grants Office reviews the request and communicates the decision to the recipient.**

3/9/2012

## VT GRANT # 248

## MODIFICATION REQUEST 3-9-12

Budget	Federal Funding Request	Matching Funds	TOTAL	Modified Federal Budget 9-9-11	Modified Matching Budget 9-9-11	Modified Total Budget 9-9-11	Modified Federal Budget 3-6-12	Modified Matching Budget 3-6-12	Modified Total Budget 3-6-12	Spent to date 12-21-12	Estimated Amount to be spent during Ext. Period
a. Administrative and legal expenses	\$120,000.00	\$30,000.00	\$150,000.00	\$200,000.00	\$14,963.45	\$214,963.45	\$208,495.00	\$24,418.00	\$232,913.00	\$225,997.00	\$6,500.00
b. Land structures, right-of-ways, appraisals, etc.	\$240,000.00	\$60,000.00	\$300,000.00	\$129,851.33	\$134,190.03	\$264,041.36	\$705,137.00	\$134,190.00	\$839,327.00	\$680,176.00	\$20,000.00
c. Relocation expenses and payments	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
d. Architectural and engineering fees	\$290,000.00	\$72,500.00	\$362,500.00	\$481,506.90	\$118,945.82	\$600,452.72	\$481,507.00	\$118,945.00	\$600,452.00	\$594,800.00	
e. Other architectural and engineering fees	\$16,000.00	\$4,000.00	\$20,000.00	\$46,411.08	\$15,536.62	\$61,947.70	\$64,464.00	\$15,536.00	\$80,000.00	\$73,535.00	
f. Project inspection fees	\$108,000.00	\$27,000.00	\$135,000.00	\$80,000.00	\$867.00	\$80,867.00	\$90,946.00	\$1,186.00	\$92,132.00	\$90,820.00	\$1,000.00
g. Site work	\$72,000.00	\$18,000.00	\$90,000.00	\$77,000.00	\$50,000.00	\$127,000.00	\$85,750.00	\$93,174.00	\$178,924.00	\$104,558.00	\$65,000.00
h. Demolition and removal	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	
i. Construction	\$4,400,000.00	\$1,100,000.00	\$5,500,000.00	\$4,525,230.69	\$588,564.65	\$5,113,795.34	\$3,409,984.00	\$405,788.00	\$3,815,772.00	\$3,657,642.00	\$158,000.00
j. Equipment	\$240,000.00	\$60,000.00	\$300,000.00	\$0.00	\$436,000.00	\$436,000.00	\$493,717.00	\$565,453.00	\$1,059,170.00	\$1,038,249.00	\$20,500.00
k. Miscellaneous	\$54,000.00	\$13,500.00	\$67,500.00	\$0.00	\$25,932.43	\$25,932.43	\$0.00	\$26,310.00	\$26,310.00	\$26,112.00	
l. SUBTOTAL (add through k)	\$5,540,000.00	\$1,385,000.00	\$6,925,000.00	\$5,540,000.00	\$1,385,000.00	\$6,925,000.00	\$5,540,000.00	\$1,385,000.00	\$6,925,000.00	\$6,491,889.00	\$271,000.00
m. Contingencies	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
<b>TOTAL BROADBAND SYSTEM:</b>	<b>\$5,540,000.00</b>	<b>\$1,385,000.00</b>	<b>\$6,925,000.00</b>	<b>\$5,540,000.00</b>	<b>\$1,385,000.00</b>	<b>\$6,925,000.00</b>	<b>\$5,540,000.00</b>	<b>\$1,385,000.00</b>	<b>\$6,925,000.00</b>	<b>\$6,491,889.00</b>	<b>\$271,000.00</b>

Grant 248 (0016) Revised Milestones – 12/21/12

Time Period	Quarter		List All Relevant Milestones	Support for Reasonableness/Data Points
Year 0		-		
Year 1	Qtr 1	Originally Proposed	<ul style="list-style-type: none"> <li>Hire staff and start work on node sites</li> <li>Complete detailed Engineering for Project, complete permit applications</li> </ul>	<ul style="list-style-type: none"> <li>Weather issues will hamper construction in mountainous regions of service area</li> </ul>
		Actual	<ul style="list-style-type: none"> <li>RFP released for Environmental Assessment (EA) consultant</li> </ul>	
	Qtr 2	Originally Proposed	<ul style="list-style-type: none"> <li>Begin fiber construction, complete 15 miles</li> </ul>	<ul style="list-style-type: none"> <li>Based on project work required to be completed and timeline for ordering cable (currently 45 days delivery time).</li> </ul>
		Actual	<ul style="list-style-type: none"> <li>Contract signed with EA consultant on May 3<sup>rd</sup></li> <li>Field work for EA began</li> <li>RFP released for EF&amp;I contractor</li> <li>Began correspondence with permitting agencies</li> </ul>	
	Qtr 3	Originally Proposed	<ul style="list-style-type: none"> <li>Fiber construction, complete 30 miles</li> <li>Complete node sites, place shelter buildings</li> </ul>	<ul style="list-style-type: none"> <li>Work for project timeframes and estimated completion of 10 miles of fiber per month, based on soil and rock conditions</li> </ul>
		Actual	<ul style="list-style-type: none"> <li>Work on EA continued</li> <li>Contract signed with EF&amp;I contractor</li> <li>Continued correspondence with permitting agencies</li> <li>First draft of EA sent to NTIA for approval</li> </ul>	
		Originally Proposed	<ul style="list-style-type: none"> <li>Fiber construction, complete 25 miles</li> </ul>	<ul style="list-style-type: none"> <li>Work for project timeframes and weather/holiday delays for completion of segment builds</li> </ul>
		Actual	<ul style="list-style-type: none"> <li>Work on EA continued</li> <li>Continued correspondence with permitting agencies</li> </ul>	
Year 2	Qtr 1	Originally Proposed	<ul style="list-style-type: none"> <li>Fiber construction, complete 20 miles</li> <li>Install electronics in node buildings</li> </ul>	<ul style="list-style-type: none"> <li>Work for project timeframes and weather delays for completion of segment builds</li> </ul>

Grant 248 (0016) Revised Milestones – 12/21/12

		Actual	<ul style="list-style-type: none"> <li>• Work on EA continued</li> <li>• Continued correspondence with permitting agencies</li> <li>• Field engineering completed and field verified</li> </ul>		
	Qtr 2	Originally Proposed	<ul style="list-style-type: none"> <li>• Fiber construction, complete 20 miles</li> <li>• Testing, project clean up, and close-out</li> </ul>	<ul style="list-style-type: none"> <li>• Final segments completed and project close outs begin</li> </ul>	
		Actual	<ul style="list-style-type: none"> <li>• FONSI for EA was approved and signed on May 17<sup>th</sup></li> <li>• Construction work began</li> </ul>		
	Qtr 3	Originally Proposed	<ul style="list-style-type: none"> <li>• Final punch list checks, network operational</li> </ul>	<ul style="list-style-type: none"> <li>• Turning up network, testing and final verification of fiber results and requirements</li> </ul>	
		Actual	<ul style="list-style-type: none"> <li>• Construction work continued</li> <li>• Site work began at node sites</li> </ul>		
	Qtr 4	Originally Proposed	<ul style="list-style-type: none"> <li>• Provision first customer circuits</li> </ul>	<ul style="list-style-type: none"> <li>• Network operational and can be provisioning transport circuits for customers</li> </ul>	
		Actual	<ul style="list-style-type: none"> <li>• Construction work continued</li> </ul>		
	Year 3	Qtr 1	Originally Proposed	<ul style="list-style-type: none"> <li>• Continue full operations of the network</li> </ul>	<ul style="list-style-type: none"> <li>• 100% operational network ready for customer turnups</li> </ul>
			Actual	<ul style="list-style-type: none"> <li>• Construction work continued</li> <li>• Route modification proposal was sent to NTIA (Revised copy sent Y3Q2)</li> <li>• Construction completed on originally proposed nodes</li> </ul>	
		Qtr 2	Originally Proposed	N/A	
			Actual	<ul style="list-style-type: none"> <li>• Installation of transport equipment in originally proposed huts completed</li> <li>• Fiber testing completed on all sections of</li> </ul>	

Grant 248 (0016) Revised Milestones – 12/21/12

			original route	
	Qtr 3	Originally Proposed	N/A	
		Actual	<ul style="list-style-type: none"> <li>• Construction work on original (pre-route modification) route was completed</li> <li>• Route modification to add 2 IRUs, 4<sup>th</sup> node, and approximately 5,000 ft of cable to route was officially approved by NTIA on July 5<sup>th</sup></li> <li>• Engineering completed for route modification on September 15<sup>th</sup></li> <li>• Approval process began with Town of Blacksburg for Blacksburg node site</li> </ul>	
	Qtr 4	Originally Proposed	N/A	
		Actual/Prop	<ul style="list-style-type: none"> <li>• Material procurement complete for route modification</li> <li>• Town of Blacksburg site specification review and approval and building permit approval approved December 12<sup>th</sup></li> </ul>	
	Year 4 (Proposed)	Qtr 1	Newly Proposed	<ul style="list-style-type: none"> <li>• Complete the construction of the additional node and fiber cables</li> <li>• Complete the installation of the new node equipment, turn-up and testing</li> </ul>
Qtr 2		Newly Proposed	<ul style="list-style-type: none"> <li>• Completion of testing and turn up of IRU fibers to Carilion School of Medicine. Start close-out activities</li> </ul>	