General Budget Overview

Budget	Federal Funding Request	Matching Funds (Cash)	Matching Funds (In-Kind)	Budget TOTAL	Last Mile Allocation	Middle Mile Allocation	Allocated TOTAL
Network & Access Equipment (switching, routing, transport, access)	$816,000	$204,000	$638,279	**$1,658,279**		$1,658,279	**$1,658,279**
Outside Plant (cables, conduits, ducts, poles, towers, repeaters, etc.)	$19,288,864	$4,822,216	$6,332,513	**$30,443,593**		$30,443,593	**$30,443,593**
Buildings and Land – (new construction, improvements, renovations, lease)	$280,000	$70,000	$892,231	**$1,242,231**		$1,242,231	**$1,242,231**
Customer Premise Equipment (modems, set-top boxes, inside wiring, etc.)				**$0**			**$0**
Billing and Operational Support Systems (IT systems, software, etc.)				**$0**			**$0**
Operating Equipment (vehicles, office equipment, other)	$24,000	$6,000		**$30,000**		$30,000	**$30,000**
Engineering/Professional Services (engineering design, project management, consulting, etc.)	$2,229,146	$557,287		**$2,786,433**		$2,786,433	**$2,786,433**
Testing (network elements, IT system elements, user devices, test generators, lab furnishings, servers/computers, etc.)				**$0**			**$0**
Site Preparation				**$0**			**$0**
Other	$60,000			**$60,000**		$60,000.00	**$60,000**
TOTAL BROADBAND SYSTEM:	**$22,698,010**	**$5,659,503**	**$7,863,023**	**$36,220,536**	**$0**	**$36,220,536**	**$36,220,536**
Cost Share Percentage:	**62.67%**	**15.63%**	**21.71%**				

DETAIL OF PROJECT COSTS

PLEASE COMPLETE THE TABLE BELOW FOR THE DIFFERENT CATEGORIES OF EQUIPMENT THAT WILL BE REQUIRED FOR COMPLETING THE PROJECT. EACH CATEGORY SHOULD BE BROKEN DOWN TO THE APPROPRIATE LEVEL FOR IDENTIFYING UNIT COST

1053073 1053062 20.95 50265.48926

		Match (Cash/In-kind)	Cash Match Percentage	Unit Cost	No. of Units	Total Cost	Cash Match Amount	Last Mile Allocation	Middle Mile Allocation	Allocated Total	SF-424C Budget Category	Support of Reasonableness
NETWORK & ACCESS EQUIPMENT						**$1,658,279**		**$0**	**$1,658,279**	**$1,658,279**		
Switching						$0	$0			$0		
						$0	$0			$0		
						$0	$0			$0		
Routing						$0	$0			$0		
						$0	$0			$0		
						$0	$0			$0		
Transport						$0	$0			$0		
						$0	$0			$0		
						$0	$0			$0		
Access	[redacted]	Cash Match	20.00%	[redacted]			$71,680		$358,400	$358,400	10. Equipment	Access to Last Mile Network
		Cash Match	20.00%				$56,000		$280,000	$280,000	10. Equipment	Interfaces Backbone to GPON
		Cash Match	20.00%				$61,320		$306,600	$306,600	10. Equipment	1 GB Lasers
Other	Spare Electronics	Cash Match	20.00%				$15,000		$75,000	$75,000	10. Equipment	Spare Cards, Shelves for network electronics
	Fiber Electronics	In-kind Match					$0		$638,279	$638,279	10. Equipment	Existing Fiber Electronics
						$0	$0			$0		
OUTSIDE PLANT						**$30,443,593**	**$0**	**$0**	**$30,443,593**	**$30,443,593**		
Cables	Aerial Fiber	Cash Match	20.00%			$1,053,061	$210,612		$1,053,061	$1,053,061	9. Construction	20.95 Miles of fiber at $50,265.46 per mile
	Buried Fiber	Cash Match	20.00%	[redacted]		$22,983,019	$4,596,604		$22,983,019	$22,983,019	9. Construction	366.22 Miles of fiber at $62,757.41 per mile
	Buried Fiber	In-kind Match				$2,448,986	$0		$2,448,986	$2,448,986	9. Construction	Existing Fiber Network
Conduits						$0	$0			$0		
						$0	$0			$0		
						$0	$0			$0		
Ducts						$0	$0			$0		
						$0	$0			$0		
						$0	$0			$0		
Poles						$0	$0			$0		
						$0	$0			$0		
						$0	$0			$0		
Towers						$0	$0			$0		
						$0	$0			$0		
						$0	$0			$0		
Repeaters						$0	$0			$0		
						$0	$0			$0		
						$0	$0			$0		
Other	Fiber Inventory	Cash Match	20.00%	[redacted]		$75,000	$15,000		$75,000	$75,000	9. Construction	Spare fiber needed for maintenance and repairs
	Rights-of-Way	In-kind Match				$1,533,225	$0		$1,533,225	$1,533,225	9. Construction	VDOT Rights-of-Way
	Aerial Fiber	In-kind Match				$2,350,302	$0		$2,350,302	$2,350,302	9. Construction	Existing Fiber Network
		Match (Cash/In-kind)	**Cash Match Percentage**	**Unit Cost**	**No. of Units**	**Total Cost**	**$0**	**Last Mile Allocation**	**Middle Mile Allocation**	**Allocated Total**	**SF-424C Budget Category**	**Support of Reasonableness**
BUILDINGS						**$1,242,231**	**$0**	**$0**	**$1,242,231**	**$1,242,231**		
New Construction						$0	$0			$0		
						$0	$0			$0		
						$0	$0			$0		
Pre-Fab Huts	Pre-fab Hut, Installed	Cash Match	20.00%	[redacted]		$350,000	$70,000		$350,000	$350,000	2. Land, structures	Hut with Power, racks
						$0	$0			$0		
						$0	$0			$0		
Improvements & Renovation						$0	$0			$0		
						$0	$0			$0		
						$0	$0			$0		
Other	Network POP Sites	In-kind Match		[redacted]		$892,231	$0		$892,231	$892,231	2. Land, structures	Existing POP Buildings
						$0	$0			$0		
						$0	$0			$0		
CUSTOMER PREMISE EQUIPMENT						**$0**	**$0**	**$0**	**$0**	**$0**		
Modems						$0	$0			$0		
						$0	$0			$0		
						$0	$0			$0		
Set Top Boxes						$0	$0			$0		
						$0	$0			$0		
						$0	$0			$0		
Inside Writing						$0	$0			$0		
						$0	$0			$0		
						$0	$0			$0		
Other						$0	$0			$0		
						$0	$0			$0		
						$0	$0			$0		
BILLING SUPPORT AND OPERATIONS SUPPORT SYSTEMS						**$0**	**$0**	**$0**	**$0**	**$0**		
Billing Support Systems						$0	$0			$0		
						$0	$0			$0		
						$0	$0			$0		
Customer Care Systems						$0	$0			$0		
						$0	$0			$0		
						$0	$0			$0		
Other Support						$0	$0			$0		
						$0	$0			$0		
						$0	$0			$0		
		Match (Cash/In-kind)	**Cash Match Percentage**	**Unit Cost**	**No. of Units**	**Total Cost**	**$0**	**Last Mile Allocation**	**Middle Mile Allocation**	**Allocated Total**	**SF-424C Budget Category**	**Support of Reasonableness**
OPERATING EQUIPMENT						**$30,000**	**$0**	**$0**	**$30,000**	**$30,000**		
Vehicles						$0	$0			$0		
						$0	$0			$0		
						$0	$0			$0		
Office Equipment / Furniture						$0	$0			$0		
						$0	$0			$0		
						$0	$0			$0		
Other	Test Equipment	Cash Match	20.00%	[redacted]		$30,000	$6,000		$30,000	$30,000	10. Equipment	Fiber Test Equipment
						$0	$0			$0		
						$0	$0			$0		

General Budget Overview Total	Check:	
$0	$1,658,279	Cash Match
		In-kind Match
		No Match
$0	$30,443,593	
$0	$1,242,231	
$0	$0	
$0	$0	
$0	$30,000	
$0	$2,786,433	

PROFESSIONAL SERVICES						**$2,786,433**	**$0**	**$0**	**$2,786,433**	**$2,786,433**			
Engineering Design	Engineering - Direct Costs	Cash Match	20.00%			$902,295	$180,459		$902,295	$902,295	4. Architectural and en	See Budget Narrative for Detail	
	Inspection - Indirect Costs	Cash Match	20.00%			$414,934	$82,987		$414,934	$414,934	6. Inspection fees	See Budget Narrative for Detail	
	Construction Management - Direct Costs	Cash Match	20.00%			$493,956	$98,791		$493,956	$493,956	9. Construction	See Budget Narrative for Detail	
Project Management						$0	$0			$0			
						$0	$0			$0			
						$0	$0			$0			
Consulting						$0	$0			$0			
						$0	$0			$0			
						$0	$0			$0			
Other	Engineering Indirect Costs	Cash Match	20.00%			$485,853	$97,171		$485,853	$485,853	4. Architectural and en	See Budget Narrative for Detail	
	Inspection Indirect Costs	Cash Match	20.00%			$223,418	$44,684		$223,418	$223,418	6. Inspection fees	See Budget Narrative for Detail	
	Construction Management - Indirect Costs	Cash Match	20.00%			$265,977	$53,195		$265,977	$265,977	9. Construction	See Budget Narrative for Detail	
TESTING						**$0**	**$0**	**$0**	**$0**	**$0**			
Network Elements						$0	$0			$0			
						$0	$0			$0			
						$0	$0			$0			
IT System Elements						$0	$0			$0			
						$0	$0			$0			
						$0	$0			$0			
User Devices						$0	$0			$0			
						$0	$0			$0			
						$0	$0			$0			
Test Generators						$0	$0			$0			
						$0	$0			$0			
						$0	$0			$0			
Lab Furnishings						$0	$0			$0			
						$0	$0			$0			
						$0	$0			$0			
Servers/Computers						$0	$0			$0			
						$0	$0			$0			
						$0	$0			$0			
		Match (Cash/In-kind)	**Cash Match Percentage**	**Unit Cost**	**No. of Units**	**Total Cost**	**$0**	**Last Mile Allocation**	**Middle Mile Allocation**	**Allocated Total**	**SF-424C Budget Category**	**Support of Reasonableness**	
OTHER UPFRONT COSTS						**$60,000**	**$0**	**$0**	**$60,000**	**$60,000**			
Site Preparation						$0	$0			$0			
						$0	$0			$0			
						$0	$0			$0			
Other	Grant Preparation - Direct Costs	Cash Match	0.00%			$49,500	$0		$49,500	$49,500	1. Admin and Legal	Grant Preparation Costs	
	Grant Preparation - Indirect Costs	Cash Match	0.00%			$10,500	$0		$10,500	$10,500	1. Admin and Legal	Grant Preparation Costs	
						$0	$0			$0			
					PROJECT TOTAL:	**$36,220,536**		**$0**	**$36,220,536**	**$36,220,536**			

		$0	$0
		$0	$60,000
		$0	$36,220,536

24C Cross-check Totals	
1. Admin and Legal	$60,000
2. Land, structures	$1,242,231
3. Relocation expenses	$0
4. Architectural and engr	$1,388,148
5. Other archit. and engr.	$0
6. Inspection fees	$638,352
7. Site work	$0
8. Demolition/removal	$0
9. Construction	$31,203,526
10. Equipment	$1,688,279
11. Misc.	$0

Matching Contribution Cross-check Totals	
Federal Funding Request	$22,698,010
Cash Match Contribution	$5,659,503
In-kind Match Contribution	$7,863,023

Approach to allocating Last Mile and Middle Mile costs:

This grant is 100% Middle Mile.

Comprehensive Community Infrastructure Budget Narrative Template

Applicant Name: Bristol Virginia Utilities

EasyGrants Number: 4506

Organization Type: Municipality

Proposed Period of Performance: 2011 - 2015

Total Project Costs: $36,220,536

Total Federal Grant Request: $22,698,010

Total Matching Funds (Cash): $5,659,503

Total Matching Funds (In-Kind): $7,863,023

Total Matching Funds (Cash + In-Kind): $13,522,526

Total Matching Funds (Cash + In-Kind) as Percentage of Total Project Costs: 37.3%

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1. Administrative and legal expenses - $60,000

- Provide a breakout of position(s), time commitment(s) such as hours or level-of-effort, and salary information/rates with a detailed explanation, and additional information as needed.

The only item in this category is $60,000 of estimated grant preparation costs. These costs were incurred about half from BVU and about half from external conusltants.

2. Land, structure, rights-of-way, appraisals, etc. - $1,242,231

The grant has new construction of $350,000 which consists of 7 pre-fabricated huts to act as POP sites. These huts are large enough to allow for collocation with last mile providers. The huts included the full cost of building the huts and the power equipment needed to supply power and cool the huts. There are also several base quipment racks being installed in each hut, some of which will be used to house the network electronics that are used to light the proposed network. The fully installed cost of each hut is estimated at $50,000. BVU has built many such huts and knows that this is a good approximation of the cost. The actual cost for each hut will probably vary slightly.

These huts will be secured through external vendors.

The cash match for this grant is guranteed by the Virginia Tobacco Indemnification and Community Revitaliztion Commission. This is a state fund of Virginia that is funded through settlements with the tobacco companies. There is a letter in the grant filing from the Tobacco Commission guaranteeing to provide the **$5,659,503** in cash matching should this grant be awarded. That matching grant will cover the 20% match for the new capital costs in this category.

This category of cost also includes $892,231 of In-kind assets. This represents the net book value of the existing huts that are needed at network POPs between Bristol and the new construction.

3. Relocation expenses and payment - $0

The are no costs estimated for this category.

4. Architectural and engineering fees - $1,388,148

This category os expense represents the cost of engineering the project. This work is expected to be done by BVU staff.

Following are some of the tasks that are included in this cost:

- Writing an RFP and helping to select the construction contractor(s)
- Negotiating and finalizing a contract with the contractor
- Establishing a process for how the contractor will bill the project
- Securing any rights-of-ways for huts.
- Acquiring all needed permits for raiload crossings, bridge crossings, etc.
- Ordering all construction materials
- Pole attachment analysis – determing which poles will need make-ready work.
- Field engineering – determining exactly how the network will be built. For example, which side of the road will the construction be done on, how will be get through intersections, how will we deal with streams, bridges, railroads, freeways, etc.
- Daily monitoring of construction – Making sure the contractors are doing what they are supposed to. Answering contractor questions.
- Preparing as-built drawings showing how the network was actually built.

The detail of the estimated cost is as follows:

Engineering	Positions	Hours	Years	Rate	Total Cost
Senior Engineer	2	1,200	3	$56.25	405,000
Engineering Aide	2	1,000	3	$32.72	196,320
Vehicle	6	1,000	3	$20.52	369,360
Senior Technician	1	1,000	3	$32.54	97,620
Junior Technician	1	1,200	3	$28.53	102,708
Draftsperson	2	1,500	2	$36.19	217,140
Total					1,388,148

The cash match for this grant is guranteed by the Virginia Tobacco Indemnification and Community Revitaliztion Commission. This is a state fund of Virginia that is funded through settlements with the tobacco companies. There is a letter in the grant filing from the Tobacco Commission guaranteeing to provide the **$5,659,503** in cash matching should this grant be awarded. That represents 20% of the new capital costs in this category.

5. Other architectural and engineering fees - $0

There are no cost estimates for this category.

6. Project inspection fees - $638,352

This category of expense represents the cost of inspection. Inspection is the process whereby BVU will verify that every part of the fiber network meets the specifications. We will make sure that splices are done properly. We will make sure that buried cable is buried to the right depth. We will make sure that fiber strunbg on poles has the proper tension.

This work will be done by BVU staff.

The detailed estimate of this cost is as follows:

Engineering	Positions	Hours	Years	Rate	Total Cost
Senior Engineer	1	1,200	3	$56.25	202,500
Inspector	1	1,200	3	$41.24	148,464
Vehicle	3	1,000	3	$20.52	184,680
Junior Technician	1	1,200	3	$28.53	102,708
Total					638,352

The cash match for this grant is guranteed by the Virginia Tobacco Indemnification and Community Revitaliztion Commission. This is a state fund of Virginia that is funded through settlements with the tobacco companies. There is a letter in the grant filing from the Tobacco Commission guaranteeing to provide the **$5,659,503** in cash matching should this grant be awarded. That represents 20% of the new capital costs in this category.

7. Site work - $0

There are no cost estimates for this category.

8. Demolition and removal - $0

There are no cost estimates for this category.

9. Construction - $31,203,526

This category includes several items. It includes aerial fiber, buried fiber, spare fiber inventory, and two in-kind matches, all described below.

How Fiber Costs were Estimated. BVU used a cost per mile to estimate the cost of building fiber. BVU has constructed nearly 900 miles of fiber in the region and the estimates of cost per mile are based upon the experience gained in those builds. All of the BVU network outside of the City of Bristol and Abingdon have been constructed using grant money. The other grants that BVU has obtained were satisfied with the accuracy of the BVU estimate using a cost per mile.

The grant review process has asked BVU to describe the labor rates and other cost components used in estimating the fiber costs. The following explanation shows how fiber projects are bid and why BVU cannot supply the estimated costs in the format requested.

In BVU's experience, all fiber projects in the region are bid using 'construction bid units'. In the bid unit method, a prospective vendor will supply a listed price for around 100 different units of fiber construction. This will include such things as the price of finished fiber per foot, boring, trenching, conduit, pedastals, pole guy wires, etc. Typically most bidders use a standard list of construction bid units that has been developed by RUS.

For each construction bid unit, the price offered by the contractor is final and will be honored during the construction of the project. The price quoted for any bid unit is all inclusive and includes materials, labor, overheads, vehicles and vendor profit. BVU, as the one awarding the contract does not know the cost componenets of each bid unit, just the total quoted price.

Virginia bid laws require that BVU accept the overall lowest cost bid. Within that structure we are allowed to pre-qualify bidders, to make sure that any given contractor is capable of delivering what has been offered, but once contractors have been qualified, the lowest overall price is the winning bidder.

Most of BVU's construction has been for grants and most of this work has required that the contractor meet Davis-Bacon wages. Since BVU does not know the labor componenet of any bid unit, BVU is unable to know directly if the contractor has met Davis-Bacon. BVU has always dealt with this issue by having the contractor certify that they meet the Bacon-Davis wage requirements.

In summary, BVU obtains prices by bid units. These bid units are not yet known since the detailed engineering has not begun for this process. However, BVU has build sufficient quantities of fiber, including in the current year, that we understand the expected price we will pay. BVU has tracked prior contruction projects in terms of the final cost per mile and we know that the estimate we are supplying for this grant request are very reasonable.

Aerial Fiber. The grant includes [redacted] of aerial fiber. This represents [redacted] of fiber at a constructed cost of [redacted] BVU has built over 900 miles of fiber in this region and we have always tracked the cost per mile, so we know this is a very good estimate of the cost in our area. This cost includes several items: the cost of the fiber cable, make ready work to fix any poles that are not able to accpt a new fiber line, and the labor to constuct the fiber line. In BVU's experience, the cost of materials for aerial fiber are about [redacted] The cost of make ready work to fix or upgrade existing poles is about [redacted] The remaining cost is labor. This construction will be done 100% by external vendors.

Buried Fiber. The grant includes [redacted] of buriedl fiber. This represents [redacted] of buried fiber at a constructed cost of [redacted] BVU has built over 900 miles of fiber in this region and we have always tracked the cost per mile, so we know this is a very good estimate of the costin our area. This cost includes several items: the cost of the fiber cable, make ready work to fix any poles that are not able to accpt a new fiber line, and the labor to constuct the fiber line. In BVU's experience, the cost of materials for buried fiber are about [redacted] The remaining cost is labor. This work will be done 100% by external vendors.

Fiber Inventory. The grant includes a small amount of fiber inventory, of [redacted]. It is important to keep spare fiber on hand for the variuous sizes of fiber in case there is a fiber cut. BVU would store this fiber in the grant region so that it is always close on hand in the case of a fiber cut. It has been BVU's experience over time that spare fiber eventually gets used. There are always fiber cuts due to somebody digging where they shouldn't and there are always aerial fiber failures due to storms or to poles that are knocked down due to accidents. While it is possible that some of the spare fiber will not be used, it is BVU's experience that over a five year period that most of the spare fiber will be needed.

Construction Management. The grant includes $759,933 of Construction Management. This work will all be done by BVU staff. This consists of the following estiamted costs:

Staff	Hours	Years	Rate	Total Cost
CFO	244	3	$93.69	$68,581
CEO	200	3	$125.00	$75,000
CTO	500	3	$78.13	$117,195
Engineer	1,500	3	$56.25	$253,125
Project Manager	1,749	3	$46.89	$246,032
				$759,933

These are the senior staff at BVU who will be responsible for implementing the grant. This is all considered as construction management time. The hourly rates shown include a 35% benefit loading.

Cash Match. The cash match for this grant is guranteed by the Virginia Tobacco Indemnification and Community Revitaliztion Commission. This is a state fund of Virginia that is funded through settlements with the tobacco companies. There is a letter in the grant filing from the Tobacco Commission guaranteeing to provide the **$5,659,503** in cash matching should this grant be awarded. That represents 20% of the new capital costs in this category.

In Kind Match. BVU is providing two different in-kind matches for the grant, both related to outside plant.

First is right-of-way. BVU has been able to obtain a statewide guarantee of right-of-way that allows them to build on any state highway. This is a unique arrangement and normally anybody who wants to build along a state highway has to apply for rights-of-ways for each stretch of every state highway they want to build on. BVU's statewide agrement means that BVU must only file minor paperwork explainging where they are building.

The normal process of obtaining state rights-of-way is expensive and time consuming. It generally requires the preparation of extensive drawings and documentation, both of which BVU is alowed to avoid.

BVU has placed a value of $0.75 per foot of network constucted for this right-of-way. We estimate this is the savings from the ability to avoid the normal permitting process and the associated paperwork. This project proposes to build 2,044,300 feeet of buried fiber along state rights-of-way, which, at $0.75 per foot is an in-kind contribution of **$1,533,225**. If this grant was being proposed by anybody other than BVU in Virginia, they would incur that kind of cost which would be added as a real cost to this project.

The second in-kind contribution is for existing fiber, electronics and POPs. These are all portions of the existing BVU network, without which this middle mile project could not be functional. Basically, the current grant request for middle mile is adding fiber to existing fiber routes to reach further into Southwest Virginia. This grant would not be possible had these earlier fiber routes not already been constructed.

BVU has done a detailed analysis of the routes that are necessary for the grant fiber routes to be function. BVU has determined that there are 55.4 miles of aerial fiber and 51.3 miles of buried fiber that provide the connectivity of the grant routes back to the BVU hub.

The value of the in-kind contribution is as follows:

a) BVU determined the book value of the specific fiber routes that provide the in-kind matching. This was determined to be $2,742,300 for the aerial fiber and $3,180,600 for the buried fiber.

b) BVU then looked at the electronics used to light these existing fiber routes and determined tha value of the electronics to be $1,105,000.

c) BVU also determined that there were a number of POP sites, that is buildings that house the electronics that are necessary for the in-kind routes to function. The cost of the POP sites was determined to be $1,690,000.

d) BVU then deducted the accumulated depreciation from each of these in-kind investments to determine the book value today of these investments. The total in-kind value is calculated to be **$6,329,797**, which represents the book value of the in-kind assets less the amount that they have ben depreciated, to date.

10. Equipment - $1,688,279

The grant includes fiber electronics in the equipment category. All quoted prices include labor and with this sort of electronics the vendors typically supply the labor as part of the cost of buying the equipment. There is no expected BVU labor involved with installing any of these electronics. Vendor labor is generally quoted as fixed price and not as an hourly rate. The following types of electronics are included in this grant:

[redacted]. This is the electronics that us used to light the fiber for transport. This equipment is basically a laser and modulator system used to put light pulses on the fiber. [redacted] electroncis, [redacted] BVU has chosen [redacted] for this project since that is the vendor that is being used for the rest of the 900 mile BVU fiber network. It important that these new sections of fiber mesh seamlessly with the existing fiber network. [redacted]

BVU quoted a cost for the grant using [redacted] because this is the electronics that is already used for the existing 900-mile fiber network. BVU understands that this equipment will be put out for compeitive bid. The specifications for this bid will require the vendor to be able to be compatible with the existing fiber electronics. If this was not a requirement, then a significantly higher amount of electronics would be required since we would need to place repeaters for the new electronics back in all repeater points between the BVU hub and the new network.

[redacted]. This is the equipment that creates the bridge between the middle mile and the last mile. BVU uses [redacted] equipment throughout the network and this is the equipment that would allow a last mile provider to bring cable TV, data or telephone services from the network into the last mile network. This equipment costs [redacted] BVU understands that this equipment will be put out for competitive bid and there are several vendors that can meet the specifications for this equipment. We used [redacted] pricing since this is the equipment we use today, but this pricing should be representative of the pricing we can get from other vendors as well.

[redacted] An OLT is a device that allows a last mile provider to separate the signal into the individual fibers to get to customers. BVU uses [redacted] as the OLT provider throughout the system. This equipment would give last mile providers direct interface with customer foibers. [redacted] BVU understands that this equipment will be put out for competitive bid and there are several vendors that can meet the specifications for this equipment. We used [redacted] pricing since this is the equipment we use today, but this pricing should be representative of the pricing we can get from other vendors as well.

Spare Electronics. The grant includes spare cards for all of the above brands of electronics. This cost has been estimated to be [redacted] Typically, spare electronic are installed directly with the working equipment. For example, in the idea situation, a aspare card would be installed as an automaic rollover in case the primary card would fail. This estimate for spare electronics covers these sorts of 'active' spares that will be lit and will be a vital part of the network. This network is geographically distant from the BVU hub, so it is important that most field electronics be self-healing. This is the best way to protect against network outages and failures. Perhaps this category of equipment could better have been

called active redundent electronics, because the spare cards will be actively connected to the system to protect against failures.

Test equipment. BVU already owns a lot of test equipment, but it is important to put some new test equipment into vans that will be working in this area, due to the remoteness of some of these fibers to BVU. The cost of test equipment in the grant is $30,000 and would consist of equipment used to diagnose problems with fiber as well as equipment used to test the electronics.

The cash match for this grant is guranteed by the Virginia Tobacco Indemnification and Community Revitaliztion Commission. This is a state fund of Virginia that is funded through settlements with the tobacco companies. There is a letter in the grant filing from the Tobacco Commission guaranteeing to provide the **$5,659,503** in cash matching should this grant be awarded. That represents 20% of the new capital costs in this category.

This category also includes the In-Kind assets for existing electronics that light the fiber routes between the existing BVU network and the newly constucted sections.

11. Miscellaneous - $0

There are no cost estimates for this category.

13. Contingencies - $0

- Contingencies are an unallowable expenditures under BTOP.

15. Project (program) income - $0

There is no program income considered for this grant.

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BUDGET INFORMATION - Construction Programs *Expiration Date 07/30/2010*

NOTE: Certain Federal assistance programs require additional computations to arrive at the Federal share of project costs eligible for participation. If such is the case, you will be notified.

COST CLASSIFICATION	a. Total Costs	b. Costs not Allowable for Participation	c. Total Allowable Costs (a-b)
1 . Administrative and legal expenses	$60,000	$0	$60,000
2.Land, structures, rights-of-way, appraisals, etc.	$1,242,231	$0	$1,242,231
3.Relocation expenses and payments	$0	$0	$0
4.Architectural and engineering fees	$1,388,148	$0	$1,388,148
5.Other architectural and engineering fees	$0	$0	$0
6.Project inspection fees	$638,352	$0	$638,352
7.Site work	$0	$0	$0
8.Demolition and removal	$0	$0	$0
9.Construction	$31,203,526	$0	$31,203,526
10.Equipment	$1,688,279	$0	$1,688,279
11.Miscellaneous	$0	$0	$0
12.SUBTOTAL *(sum of lines 1- 11)*	$36,220,536	$0	$36,220,536
13.Contingencies			$0
14.SUBTOTAL	$36,220,536	$0	$36,220,536
15.Project (program) income	$0	$0	$0
16.TOTAL PROJECT COSTS (subtract #15 from #14)	$36,220,536	$0	$36,220,536
17.Federal Assistance Requested.	$22,698,010	$0	$22,698,010