



Comprehensive Community Infrastructure **Budget Narrative Template**

Applicant Name: University of Wisconsin - Extension

EasyGrants Number: 5710

Organization Type: Other

Proposed Period of Performance: October 1, 2010 – September 30, 2013

Total Project Costs: \$42,726,744

Total Federal Grant Request: \$29,884,914

Total Matching Funds (Cash): \$9,241,102

Total Matching Funds (In-Kind): \$3,600,728

Total Matching Funds (Cash + In-Kind): \$12,841,830

Total Matching Funds (Cash + In-Kind) as Percentage of Total Project Costs: 30.06%

1. Administrative and legal expenses - \$1,567,042

- **\$1,157,621** of this category is estimated for Project Management staff. This consists of a project manager in each of the Community Area Networks (CANs) (FTE varies amongst communities), a Technical Project Manager (1 FTE) who will supervise progress in all of the CANs and oversee the Inter-Community Middle Mile Backbone Network (ICMMBN) build-out, and a Project Manager (.5 FTE) who will monitor the technical progress, ensure adherence to timeline, oversee the fiscal, compliance, and reporting staff, ensure overall success of the project, and coordinate this project with the UWEX BCCB Sustainable Broadband Adoption project.
- **\$390,935** of this category is estimated for Fiscal Management of the project. 0.5 FTE is assigned to Fiscal Compliance for the grant, 0.5 FTE is assigned to Reporting Compliance for the grant, and the Chippewa Valley Area has included 1 FTE for Fiscal and Reporting Management for their CAN. This person will work closely with both 0.5 FTEs.
- **\$18,486** of this category is for pre-application expenses. This includes time spent by WiscNet's Executive Director working with UWEX to develop the strategy for this project and WiscNet's Budget and Policy Analyst to develop the project budget and the pro-formas for the project.



Match Detail – Please see Question 14.03 (Match Detail) and Additional Supplemental Materials #5 - Required Match Detail By Partner.

The following match is committed to the Administrative and Legal Expense category, and corresponds to the match attributed to lines identified as part of this category in the Detailed Project Budget:

Cash Match: \$236,278 in cash is committed to administrative expenses.

In-Kind Match: \$43,780 of in-kind match is committed to administrative pre-application expenses.

The following table is a detailed list of all costs in this category:

Staff	Hours Per Year	Years	Total Hours Spent on Project	Rate	Total Cost
BTOP Project Manager	1044	3	3132		
BTOP Technology Project Manager	2088	3	6264		
Superior Area Project Manager	1044	1	1044		
Wausau Area Project Manager	125.28	1	125.28		
Chippewa Valley Contract Project Manager	1250	2	2500		



Platteville Area Project Manager	208.8	1	208.8	
BTOP Fiscal Manager	1044	3	3132	
BTOP Reporting Compliance Manager	1044	3	3132	
WiscNet Executive Director – Pre-Application Expense	41	N/A	41	
Budget and Policy Analyst – Pre-application Expense	356.9	N/A	356.9	
WiscNet Project Manager – Pre-application Expense	342	N/A	342	
Chippewa Valley Area BTOP Financial Manager	2088	2	4176	
TOTAL:				\$1,567,042

2. Land, structure, rights-of-way, appraisals, etc. - \$3,493,600

- **\$1,543,200** of this category is estimated for new tower and ground facilities needed to support the WiMAX antenna system in the Chippewa Valley area.
- **\$1,509,000** of this category is estimated for Wisconsin Department of Transportation Right-of-Way costs.



- \$20,000 of this category is estimated for easement costs in the Platteville area.
- \$421,400 of this category is estimated for regeneration huts along the ICMMBN.

Match Detail – Please see Question 14.03 (Match Detail) and Additional Supplemental Materials #5 – Required Match Detail By Partner.

The following match is committed to the Land, structure, rights-of-way, and appraisals category, and corresponds to lines identified as part of this category in the Detailed Project Budget:

Cash Match: There is \$0 in cash commitment to this project.

In-Kind Match: \$1,509,000 of in-kind is committed to Right-of-Way costs.

The following table is a detailed list of all costs in this category:

Description	Unit Cost	Number of Units	Total Cost
Chippewa Valley Area – Tower and ground facilities		12	
Platteville Area – Easement Costs		1	
Wisconsin Department of Transportation Right-of-Way: U.S. Highway 53 Chippewa Falls to Superior		136	
Wisconsin Department of Transportation Right-of-Way: U.S. Highway 151 Madison to Platteville		69	
Wisconsin Department of Transportation Right-of-Way: Interstate Highway 39 Stevens Point to Wausau		30	
ICMMBN Regeneration Huts		4	
TOTAL:			\$3,493,600



3. Relocation expenses and payment - \$0

There are no relocation expenses in this budget.

4. Architectural and engineering fees - \$1,439,132

- \$728,504 of this category is estimated for engineering labor of ICMMBN.
- \$695,181 of this category is estimated for engineering labor for Community Area Networks.
- \$15,447 of this category is for Pre-Application expenses.

Match Detail – Please see Question 14.03 (Match Detail) and Additional Supplemental Materials #5 – Required Match Detail By Partner.

The following match is committed to the Architectural and Engineering fees category, and corresponds to lines identified as part of this category in the Detailed Project Budget:

- Cash Match: \$100,553 of cash is committed to ICMMBN Engineering labor.
- In-Kind Match: \$15,447 of in-kind is committed to pre-application expenses.

The following table is a detailed list of all costs in this category:

Staff	Hours Per Year	Years	Total Hours Spent on Project	Rate	Total Cost
Chippewa Valley Area Contract WiMAX Engineer Labor	2500	1	2500		
Platteville Area Contract Engineering Labor	(Rate based on number of feet) 55,305	1	(Rate based on number of feet) 55,305		



Middle Mile Backbone Fiber Manager	1044	3	3132	
Community Area Network Fiber Manager	1044	3	3132	
Middle Mile Backbone Network Engineer	2088	3	6264	
Superior Area Technical Engineer	417.6	1	417.6	
Chippewa Valley Network Engineer	2088	2	4176	
Wausau Area Contract Network Engineer	2800	1	2088	
Middle Mile Backbone Engineer – Pre-application expense	155.5	N/A	155.5	
CCI Systems Consultation Labor – Pre-application expense	251	N/A	251	
TOTAL:				



5. Other architectural and engineering fees - \$7,500

We include \$7,500 in this category for pre-application expense. We hired an environmental engineering firm to assist in the preparation of the environmental essay pieces of this application.

Match Detail – Please see Question 14.03 (Match Detail) and Additional Supplemental Materials #5 – Required Match Detail By Partner.

The following match is committed to the Other architectural and engineering fees category, and corresponds to lines identified as part of this category in the Detailed Project Budget:

- Cash Match: \$0 of cash is committed to this category.
- In-Kind Match: \$7,500 of in-kind is committed to pre-application expenses.

6. Project inspection fees - \$0

There are no project inspection fees in this budget.

7. Site work - \$0

There are no site work costs in this budget.

8. Demolition and removal - \$0

There are no demolition and removal costs for this project.

9. Construction - \$30,047,811

- **\$10,259,118** is estimated for the Chippewa Valley Demonstration CAN operated by the Chippewa Valley Internetworking Consortium (CINC).
 - Per fiber mile rates in the Chippewa Valley Area are based on their extensive fiber-building experience, as well as quotes from CCI Systems. These quotes take into account a mixture of urban and rural environments and a mixture of installation methods. The rates reflect the variance in cost between urban and rural fiber builds.
- **\$1,761,671** is estimated for Wausau Demonstration Community CAN operated by NorthCentral Technical College.
 - Per fiber mile rates in the Wausau area are based on a response from Michels Communications to a Request for Information. Their response assumes that 8.4% of the underground path is installed in 1.25" conduit via the plowing installation method. It also assumes that 91.6% of the underground path is installed in 1.25" conduit via the directional bore installation method. Their quote assumes that 2.7% of the path is river crossings, 2.6% of the path is an elevated bore along Interstate 39, and 11.4% of solid rock.



- There is a separate path in Marshfield to connect a University of Wisconsin – Eau Claire Nursing Satellite Facility. The cost for this path is based on estimates from CCI Systems and assumes an urban fiber build.
- **\$735,127** is estimated for the Platteville Demonstration Community CAN operated by the University of Wisconsin – Platteville.
 - Per fiber mile rates in the Platteville area are based on a detailed quote from Koch Telecommunications. The rates include costs for handholes, splice cases, conduit costs, and surface and lawn restoration.
- **\$409,600** is estimated for the Superior Demonstration Community CAN operated by the University of Wisconsin – Superior.
 - Per fiber mile rates in the Superior area are based on a quote from our private, for-profit partner, CCI Systems. The rates assume the entire build will be a directional bore installation, with conduit, in the downtown area.
- **\$14,606,932** is estimated for the ICMMBN operated by WiscNet and CCI Systems.
 - The rates for the ICMMBN were developed by CCI Systems. The rates are for each major leg of the ICMMBN and take into conditions on each path. Assumptions for each path are:
 - Summit Lake to Wausau: 15% of the path will be installed via directional bore with conduit. The rest of the path will be direct bury of armored cable via plowing. 96 strands of fiber optic cable will be installed on the entire path.
 - Wausau to Stevens Point: 9.5% of the path will be installed via directional bore with conduit. The rest of the path will be direct bury of armored cable via plowing. 96 strands of fiber optic cable will be installed on the entire path.
 - Stevens Point to Eau Claire: 10% of the path will be installed via directional bore with conduit. The rest of the path will be direct bury of armored cable via plowing. 96 strands of fiber optic cable will be installed on the entire path.
 - Chippewa Falls to Superior: 10% of the path will be installed via directional bore with conduit. The rest of the path will be direct bury of armored cable via plowing. 33.4% of the path will have 144 strands of fiber optic cable. The rest of the path will have 96 strands.
 - Madison to Platteville: 10% of the path will be installed via directional bore with conduit. The rest of the path will be direct bury of armored cable via plowing. 92.7% of the path will have 96 strands of fiber optic cable. 7.3% of the path will have 144 strands of fiber optic cable.
- **\$34,000** is estimated for building entrance costs. CCI Systems provided a per entrance estimate of \$2,000. We assume 17 entrances.



- **\$479,930** is estimated for the Last Mile Network operated by our private, for-profit partners CCI Systems.
 - CCI Systems is proposing to install RF Distribution systems in 2 of the 8 Last Mile Service areas. Those are fully allocated to Last Mile costs. They are also installing optical equipment to provide both Last Mile and Middle Mile Services in the 8 Last Mile Service Areas. We have allocated portions of the ICMMBN fiber paths based on a percentage calculation. CCI Systems will own half of the installed fiber strands to be used for providing Middle Mile Services, and to provide Last Mile Services. It is estimated that 4 fiber optic strands will be dedicated to Last Mile Services on 3 of the ICMMBN paths. By using the formula $4/96$ (4 fiber optic strands divided by the 96 strands to be installed on the paths), 4.2% of the fiber cost on the paths between Summit Lake and Eau Claire is attributable to Last Mile Services.

- **\$1,761,433** is estimated for Indirect Costs associated with the installation labor for the ICMMBN.
 - UWEX is assessing an 16% indirect cost rate on labor associated with the installation of the ICMMBN fiber. This fiber will serve 3 UW Colleges. The average percent of total cost attributable to installation is 75.5%. The actual labor cost for each ICMMBN path was used to calculate indirects.

Match Detail – Please see Question 14.03 (Match Detail) and Additional Supplemental Materials #5 – Required Match Detail By Partner.

The following match is committed to the Construction Cost category, and corresponds to lines identified as part of this category in the Detailed Project Budget:

Cash Match: \$6,437,652 in cash is committed to construction costs.

- [REDACTED] is committed by partners in the Chippewa Valley area for the CINC network.
- [REDACTED] is committed by partners in the Wausau area for the Wausau CAN.
- [REDACTED] is committed by partners in the Superior area for the Superior CAN.
- [REDACTED] is committed by partners in the Platteville area for the Platteville CAN.
- [REDACTED] is committed by Statewide partners for the Inter-Community Middle Mile Backbone Network.

In-Kind Match: \$1,997,662 of in-kind is committed to construction costs.

- [REDACTED] of existing fiber network and conduit is committed by the CINC partners in the Chippewa Valley area.
- [REDACTED] of existing conduit is committed by the City of Wausau in the Wausau area.
- [REDACTED] of existing fiber network is committed by the Platteville School District for the Platteville CAN.



- [REDACTED] of existing fiber network is committed by CCI Systems in support of the ICMMBN.

10. Equipment - \$6,083,477

- [REDACTED] is estimated for equipment needed for the Community Area Networks.
- [REDACTED] is estimated for WiMAX equipment in the Chippewa Valley Area.
- [REDACTED] is estimated for optical hardware on the ICMMBN.
- [REDACTED] is estimated for router equipment on the ICMMBN.
- [REDACTED] is estimated for switch equipment on the ICMMBN.
- [REDACTED] is estimated for 1 unit of test/spare Optical Add/Drop equipment.

Match Detail – Please see Question 14.03 (Match Detail) and Additional Supplemental Materials #5 – Required Match Detail by Partner.

The following match is committed to the Equipment Cost category, and corresponds to lines identified as part of this category in the Detailed Project Budget:

Cash Match: \$2,466,620 in cash is committed to equipment costs.

- [REDACTED] of cash is committed to CAN equipment.
- [REDACTED] of cash is committed for WiMAX equipment.
- [REDACTED] of cash is committed to ICMMBN Optical Hardware.
- [REDACTED] of cash is committed to ICMMBN Router Hardware.
- [REDACTED] of cash is committed to ICMMBN Switch Hardware.
- [REDACTED] of cash is committed to ICMMBN Test Hardware.

In-Kind Match: There is no in-kind match for equipment costs.

The following table is a detailed list of all costs in this category. All hardware is purchased:

Category of Equipment (CAN, WiMAX,	Description	Unit Cost	Number of Units	Total Cost



Optical, Router, Switch, Test)				
Community Area Networks (CAN)	Cisco 3560G Switch or equivalent		15	
	Cisco 3750 Metro Routing Switch or equivalent		61	
	Cisco 3750 Routing Switch or equivalent		53	
	Cisco IE3000 Switch or equivalent		23	
	OptiSwitch OS304 or equivalent		22	
	Enterasys 12 10/100/1000baseT, 2 1000baseX SFP Switch or equivalent		10	
	Enterasys SSA Distribution/Core switch/router 48 1000baseX SFP, 4 10GbaseX SFP+, 625W power supply or equivalent		2	
	Enterasys Rack Mount Kit for D2 switch or equivalent		1	
	Enterasys Wall mount kit for D2 switch or equivalent		9	



	Cisco 888 Wireless Router or equivalent		39	
	Enterasys 1Gb 1000base-T RJ45 SFP or equivalent		14	
	Enterasys 1Gb 1000base-LX SMF LC SFP 10km or equivalent		49	
Total: CAN Equipment				\$1,085,672
WiMAX	BWG – ASN Gateway or equivalent		2	
	Cisco Access Registrar (AAA) or equivalent		2	
	Cisco Network Registrar (DHCP) or equivalent		2	
	Cisco WX-SW-EMSSVR-R7.0 or equivalent		2	
	Cisco AIR-CT5508-250-K9 Wifi Controller or equivalent		12	
	Cisco AIR-LAP1252AG-A-K9 Access Point or equivalent		101	
	Cisco WCS-ENT-2500 Wireless Control System or equivalent		2	
	WiMAX Basestation 8415 & Antennas or		14	



	equivalent			
Total: WiMAX				\$2,418,846
ICMMBN Optical Hardware	Reconfigurable Optical Add-Drop Multiplexer (ROADM) for Cisco 15454 equipment or equivalent	[REDACTED]	2	[REDACTED]
	DWDM XFPs or equivalent		15	
	Milwaukee – Infinera DWDM Add/Drop Equipment or equivalent		1	
	Sheboygan – Infinera DWDM Optical Amplifier equipment, or equivalent		1	
	UW Green Bay - Infinera DWDM Add/Drop Equipment, or equivalent		1	
	Marion - Infinera DWDM Optical Amplifier equipment, or equivalent		1	
	Wausau - Infinera DWDM Add/Drop Equipment, or equivalent		1	
	Marshfield - Infinera DWDM Optical Amplifier Equipment, or equivalent		1	
	Eau Claire East Bound - Infinera DWDM Add/Drop Equipment or equivalent		1	
	Eau Claire North Bound - Cisco 15454 Optical DWDM Add/Drop Equipment, or equivalent		1	



	Rice Lake - Cisco 15454 Optical DWDM Add/Drop Equipment, or equivalent		1	
	Spooner - Cisco 15454 Optical DWDM Add/Drop Equipment, or equivalent		1	
	Solon Springs - Cisco 15454 Optical DWDM Amplifier Equipment, or equivalent		1	
	Superior - Cisco 15454 Optical DWDM Add/Drop Equipment, or equivalent		1	
	Platteville - Cisco 15454 Optical DWDM Add/Drop Equipment, or equivalent		1	
	Dodgeville - Cisco 15454 Optical DWDM Amplifier Equipment, or equivalent		1	
	Madison - Cisco 15454 Optical DWDM Add/Drop Equipment, or equivalent		1	
	Elcho - Cisco 15454 Optical DWDM Add/Drop Equipment, or equivalent		1	
	Wittenburg Area - Cisco 15454 Optical DWDM Add/Drop Equipment or equivalent		1	
	Auberndale - Cisco 15454 Optical DWDM Add/Drop Equipment or equivalent		1	
	Greenwood - Cisco 15454 Optical DWDM Add/Drop Equipment or equivalent		1	
	Fall Creek - Cisco 15454 Optical DWDM Add/Drop Equipment or equivalent		1	
Total: ICMMBN Optical Hardware				\$1,981,430



ICMMBN Router Hardware	Cisco 7600 Series Router or equivalent		5	
ICMMBN Switches	Juniper EX4200 or equivalent		7	
	Force10 2 port 10GB line card or equivalent		2	
Total: ICMMBN Switches				
ICMMBN Test Hardware	Cisco 15454 Optical DWDM Add/Drop Hardware for Testing/Spare purposes		1	
GRAND TOTAL:				\$6,083,477

11. Miscellaneous - \$88,182

- **\$3,841** of this category is estimated for fiber jumper cables.
- **\$27,339** of this category is estimated for Pre-application expenses that do not fit in another category.
- **\$57,002** is estimated for Consultation/Contractor services.

Match Detail – Please see Question 14.03 (Match Detail) and Additional Supplemental Materials #5 – Required Match Detail By Partner.

The following match is committed to the Miscellaneous Cost category, and corresponds to lines identified as part of this category in the Detailed Project Budget:

Cash Match: There is no cash match for miscellaneous costs.

In-Kind Match: There is \$27,339 of pre-application expenses to be used as in-kind match.

The following table shows the detail for the labor categorized as a Miscellaneous Cost:

Description	Hours Per	Number of Years	Total Hours	Rate	Total Cost



	Year				
Wausau Area Contract Edge Device Configuration Labor	2088	1	2088		
Grant Writer – Pre-application expense	368	N/A	368		

13. Contingencies - \$0

- Contingencies are an unallowable expenditures under BTOP.

15. Project (program) income - \$0

- The value for this line-item on the SF-424C is \$0. Please do not provide an estimated Project (program income) on the SF-424C.

BTOP Comprehensive Community Infrastructure Detailed Budget

Please complete the General Budget Overview and Detailed Project Costs worksheets.

Please refer to the Comprehensive Community Infrastructure Grant Guidance for detailed instructions on the completing this upload.

Applicants are required to provide this upload as an Excel file, and not to convert it to a PDF prior to upload. Applicants should not alter the layout of the provided templates, except to insert additional line-items as needed in the Detailed Project Costs worksheet.

Important Update - 3/19/2010: This template has been updated with the addition of a new column in the Detailed Project Costs worksheet. The new column, titled "Cash Match Percentage" allows Applicants to specify the percentage of the line item cost that will be provided by the cash match. This column is only relevant if "Cash Match" is selected in column C (the "Match" column). If "Cash Match" is selected in column C, Applicants should specify a percentage in the Cash Match Percentage field--100% means that the line item will be paid for entirely from the cash match, 0% means that it is paid for entirely from the federal request, any other amount will allocate the costs between the federal request and the cash match.

Note that it is not required for Applicants to use this updated template. Applicants that submit their detailed budget using the previously available template will not be penalized. In the previous version of this template, selecting "Cash Match" in column C indicates that 100% of the line item cost will be paid from the cash match.

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)	\$3,583,990	\$2,452,527		\$6,036,517	\$38,661.00	\$5,997,856.00	\$6,036,517
Outside Plant (cables, conduits, ducts, poles, towers, repeaters, etc.)	\$23,141,698	\$6,437,651	\$1,997,662	\$31,577,011	\$479,930.00	\$31,097,081.00	\$31,577,011
Buildings and Land – (new construction, improvements, renovations, lease)	\$421,400	\$0	\$0	\$421,400	\$0.00	\$421,400.00	\$421,400
Customer Premise Equipment (modems, set-top boxes, inside wiring, etc.)	\$37,841	\$0	\$0	\$37,841		\$37,841.00	\$37,841
Billing and Operational Support Systems (IT systems, software, etc.)	\$0	\$0	\$0	\$0	\$0.00	\$0.00	\$0
Operating Equipment (vehicles, office equipment, other)	\$0	\$0	\$0	\$0	\$0.00	\$0.00	\$0
Engineering/Professional Services (engineering design, project management, consulting, etc.)	\$2,667,118	\$336,831	\$94,066	\$3,098,015		\$3,098,015.00	\$3,098,015
Testing (network elements, IT system elements, user devices, test generators, lab furnishings, servers/computers, etc.)	\$32,872	\$14,088	\$0	\$46,960	\$0.00	\$46,960.00	\$46,960
Site Preparation	\$0	\$0	\$0	\$0	\$0.00	\$0.00	\$0
Other	\$0	\$0	\$1,509,000	\$1,509,000		\$1,509,000.00	\$1,509,000
TOTAL BROADBAND SYSTEM:	\$29,884,919	\$9,241,097	\$3,600,728	\$42,726,744	\$518,591	\$42,208,153	\$42,726,744
Cost Share Percentage:	69.94%	21.63%	8.43%				

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

		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						\$6,036,517	\$2,452,527	\$38,661	\$5,997,856	\$6,036,517			
Switching	Cisco 3560G Switch or equivalent	Cash Match	50.00%								10. Equipment	Price is based on State of Wisconsin Cisco Procurement Contract	
	Cisco 3750 Metro Routing Switch or equivalent										10. Equipment	Price is based on quote from Cisco Sales Representative with additional discount.	
	WiMAX - Cisco 3750 Metro Routing Switch or equivalent										10. Equipment	Price is based on quote from Cisco Sales Representative with additional discount.	
	Cisco 3750 Switch or equivalent										10. Equipment	Price is based on State of Wisconsin Cisco Procurement Contract	
	Cisco IE3000 Switch or equivalent	Cash Match	50.00%								10. Equipment	Price is based on like equipment purchased in 2009.	
	OptiSwitch OS304 or equivalent	Cash Match	50.00%								10. Equipment	Price is based on like equipment purchased in 2009.	
	Juniper EX4200 or equivalent	Cash Match	50.00%								10. Equipment	Price is based on recent purchases.	
	Enterasys 12 10/100/1000baseT, 2 1000base X SFP Switch or equivalent	Cash Match	50.00%								10. Equipment	Price is based on State of Wisconsin Enterasys Procurement Contract.	
	Enterasys SSA Distribution/Core switch/router 48 1000baseX SFP+, 625W power supply or equivalent	Cash Match	50.00%								10. Equipment	Price is based on State of Wisconsin Enterasys Procurement Contract.	
	Enterasys Rack mount kit for D2 switch or equivalent										10. Equipment	Price is based on State of Wisconsin Enterasys Procurement Contract.	
	Enterasys Wall Mount Kit for D2 switch or equivalent	Cash Match	50.00%								10. Equipment	Price is based on State of Wisconsin Enterasys Procurement Contract.	
	Force10 2 port 10GB line card or equivalent	Cash Match	50.00%								10. Equipment	Price is based on estimate from Force10 Sales Representative.	
Routing	WiMAX - BWG - ASN Gateway or equivalent	Cash Match	50.00%								10. Equipment	Price is based on like equipment purchased in 2009.	
	WiMAX - Cisco Access Registrar (AAA) or equivalent	Cash Match	50.00%								10. Equipment	Price is based on State of Wisconsin Cisco Procurement Contract	
	WiMAX - Cisco Network Registrar (DHCP) or equivalent	Cash Match	49.70%								10. Equipment	Price is based on State of Wisconsin Cisco Procurement Contract	
	WiMAX - Cisco WX-SW-EMSSVR-R7.0 or equivalent	Cash Match	50.00%								10. Equipment	Price is based on State of Wisconsin Cisco Procurement Contract	
	WiFi - Cisco 888 Wireless Router or equivalent	Cash Match	50.00%								10. Equipment	Price is based on State of Wisconsin Cisco Procurement Contract	
	Cisco 7600 Series Router or equivalent	Cash Match	30.00%								10. Equipment	This equipment will be purchased by CCI Systems. They are a Cisco Reseller and this pricing is based on that relationship.	

Transport	Reconfigurable Optical Add-Drop Multiplexer (ROADM) for Cisco 15454 equipment or equivalent	Cash Match	50.00%		10. Equipment	Price is based on State of Wisconsin Cisco Procurement Contract
	DWDM XFPs or equivalent	Cash Match	50.00%		10. Equipment	Finisar.
	Enterasys 1Gb 1000base-T RJ45 SPF or equivalent	Cash Match	42.00%		10. Equipment	Price is based on State of Wisconsin Enterasys Procurement Contract.
	Enterasys 1Gb 1000base-LX SMF LC SFP 10km or equivalent	Cash Match	50.00%		10. Equipment	Price is based on State of Wisconsin Enterasys Procurement Contract.
	Milwaukee - Infinera DWDM Add/Drop Equipment or equivalent	Cash Match	50.00%		10. Equipment	Price is based on a quote from an Infinera Sales Representative, with standard educational discounts.
	Sheboygan - Infinera DWDM Optical Amplifier equipment, or equivalent	Cash Match	50.00%		10. Equipment	Price is based on a quote from an Infinera Sales Representative, with standard educational discounts.
	UW Green Bay - Infinera DWDM Add/Drop Equipment, or equivalent	Cash Match	50.00%		10. Equipment	Price is based on a quote from an Infinera Sales Representative, with standard educational discounts.
	Marion - Infinera DWDM Optical Amplifier equipment, or equivalent	Cash Match	50.00%		10. Equipment	Price is based on a quote from an Infinera Sales Representative, with standard educational discounts.
	Wausau - Infinera DWDM Add/Drop Equipment, or equivalent	Cash Match	50.00%		10. Equipment	Price is based on a quote from an Infinera Sales Representative, with standard educational discounts.
	Marshfield - Infinera DWDM Optical Amplifier Equipment, or equivalent	Cash Match	50.00%		10. Equipment	Price is based on a quote from an Infinera Sales Representative, with standard educational discounts.
	Eau Claire East Bound - Infinera DWDM Add/Drop Equipment or equivalent	Cash Match	50.00%		10. Equipment	Price is based on a quote from an Infinera Sales Representative, with standard educational discounts.
	Eau Claire North Bound - Cisco 15454 Optical DWDM Add/Drop Equipment, or equivalent	Cash Match	50.00%		10. Equipment	Price is based on State of Wisconsin Cisco Procurement Contract
	Rice Lake - Cisco 15454 Optical DWDM Add/Drop Equipment, or equivalent	Cash Match	50.00%		10. Equipment	Price is based on State of Wisconsin Cisco Procurement Contract
	Spooner - Cisco 15454 Optical DWDM Add/Drop Equipment, or equivalent	Cash Match	50.00%		10. Equipment	Price is based on State of Wisconsin Cisco Procurement Contract
	Solon Springs - Cisco 15454 Optical DWDM Amplifier Equipment, or equivalent	Cash Match	50.00%		10. Equipment	Price is based on State of Wisconsin Cisco Procurement Contract
	Superior - Cisco 15454 Optical DWDM Add/Drop Equipment, or equivalent	Cash Match	50.00%		10. Equipment	Price is based on State of Wisconsin Cisco Procurement Contract
	Platteville - Cisco 15454 Optical DWDM Add/Drop Equipment, or equivalent	Cash Match	50.00%		10. Equipment	Price is based on State of Wisconsin Cisco Procurement Contract
	Dodgeville - Cisco 15454 Optical DWDM Amplifier Equipment, or equivalent	Cash Match	30.00%		10. Equipment	Price is based on State of Wisconsin Cisco Procurement Contract

Existing - Chippewa Valley Area - 96 strands of existing fiber optic cable, installed in 2004 - CINC ring to I-94	In-kind Match			9. Construction	Price based on actual construction expenditures and the remaining useful life. The new network in the Chippewa Valley area ties back into the existing network.
Existing - Chippewa Valley Area - 192 strands of fiber optic cable, installed in 2008 - Chippewa Falls to Eau Claire Highway 53	In-kind Match			9. Construction	Price based on actual construction expenditures and the remaining useful life. The new network in the Chippewa Valley area ties back into the existing network.
New - Platteville Area - 12 strands of fiber optic cable, conduit installed, directional bore installation method	Cash Match	50.00%		9. Construction	Price based on quote from local contractor, Koch Communications, and projects built recently.
New - Platteville Area - 12 strands of fiber optic cable, conduit installed, plowing installation method	Cash Match	50.00%		9. Construction	Price based on quote from local contractor, Koch Communications, and projects built recently.
Augmented - Platteville Area - 12 strands of fiber optic cable, installed in existing conduit	Cash Match	50.00%		9. Construction	Price based on quote from local contractor, Koch Communications, and projects built recently.
New - Platteville Area - 36 strands of fiber optic cable, conduit installed directional bore method	Cash Match	50.00%		9. Construction	Price based on quote from local contractor, Koch Communications, and projects built recently.
New - Platteville Area - 36 strands of fiber optic cable, conduit installed, plowing installation method	Cash Match	50.00%		9. Construction	Price based on quote from local contractor, Koch Communications, and projects built recently.
New - Platteville Area - 36 strands of fiber optic cable, installed in existing conduit	Cash Match	50.00%		9. Construction	Price based on quote from local contractor, Koch Communications, and projects built recently.
New - Platteville Area - 48 strands of fiber optic cable, conduit installed, directional bore installation method	Cash Match	50.00%		9. Construction	Price based on quote from local contractor, Koch Communications, and projects built recently.
New - Platteville Area - 48 strands of fiber optic cable, conduit installed, plowing installation method	Cash Match	50.00%		9. Construction	Price based on quote from local contractor, Koch Communications, and projects built recently.
Augmented - Platteville Area - 48 strands of fiber optic cable, installed in existing conduit	Cash Match	50.00%		9. Construction	Price based on quote from local contractor, Koch Communications, and projects built recently.
New - Platteville Area - 72 strands of fiber optic cable, conduit installed, directional bore installation method	Cash Match	10.00%		9. Construction	Price based on quote from local contractor, Koch Communications, and projects built recently.
Augmented - Platteville Area - 72 strands of fiber optic cable, installed in existing conduit	Cash Match	3.00%		9. Construction	Price based on quote from local contractor, Koch Communications, and projects built recently.
Existing - Platteville Area - 4.29 miles of existing fiber owned by the School District of Platteville	In-kind Match			9. Construction	Price based on remaining useful life of existing fiber network. This fiber network will link up the new network.
New - Summit Lake to Wausau - 96 strands of fiber optic cable, assumes 15% of path is directional bore				9. Construction	Price based on quote from our private, for-profit partner CCI Systems.

New - Chippewa Falls to Superior - 33.4% of path is 144 strands of fiber optic cable, 66.6% of path is 96 strands of fiber optic cable, assumes 10% of path is directional bore	Cash Match	50.00%		9. Construction	Price based on quote from our private, for-profit partner CCI Systems.
New - Wausau to Stevens Point - 96 strands of fiber optic cable, assumes 9.5% of path is directional bore.				9. Construction	Price based on quote from our private, for-profit partner CCI Systems.
New - Stevens Point to Eau Claire - 96 strands of fiber optic cable, assumes 10% of path is directional bore.	Cash Match	25.00%		9. Construction	Price based on quote from our private, for-profit partner CCI Systems.
New - Madison to Platteville - 7.3% of path is 144 strands of fiber optic cable, 92.7% of path is 96 strands of fiber optic cable, assumes 10% of path is directional bore				9. Construction	Price based on quote from our private, for-profit partner CCI Systems.
New - Superior Area - 72 strands of fiber optic cable, installed in urban setting, directional bore installation method	Cash Match	30.00%		9. Construction	Price based on a response to a Request for Information in the Superior Area.
New - Superior Area - Fiber connection from street to building - 72 strands plus conduit, directional bore	Cash Match	47.80%		9. Construction	Price based on a quote from our private, for-profit partner CCI Systems.
New - Wausau Area - 96 strands of fiber optic cable installed with conduit, plowing and boring installation methods	Cash Match	28.00%		9. Construction	Price based on a response to a Request for Information in the Wausau Area.
New - Wausau Area - 48 strands of fiber optic cable installed, aerial installation method	Cash Match	27.50%		9. Construction	Price based on a response to a Request for Information in the Wausau Area.
New - Marshfield - Up to 144 strands of fiber optic cable, urban installation, variety of methods				9. Construction	Based on projects built under 2009 State of Wisconsin Contract pricing.
Greenwood - RF Distribution System				9. Construction	Price based on a quote from our private, for-profit partner CCI Systems.
Junction City - RF Distribution System				9. Construction	Price based on a quote from our private, for-profit partner CCI Systems.
Existing - Existing fiber owned by CCI Systems - between Augusta and Altoona and between Hewitt and Auburndale	In-kind Match			9. Construction	Cost based on actual construction costs and remaining useful life.
Indirect Costs - 16% of labor expenses, Summit Lake to Wausau				9. Construction	Indirect costs based on labor portion of the Summit Lake to Wausau build. Labor is 76.7% of total build cost. UWEX indirect cost rate is 16%.

	Indirect Costs - 16% of labor expenses, Chippewa Falls to Superior	Cash Match	50.00%		9. Construction	Indirect costs based on labor portion of the Chippewa Falls to Superior build. Labor is 72% of total build cost. UWEX indirect cost rate is 16%.
	Indirect Costs - 16% of labor expenses, Wausau to Stevens Point				9. Construction	Indirect costs based on labor portion of the Wausau to Stevens Point build. Labor is 79% of total build cost. UWEX indirect cost rate is 16%.
	Indirect Costs - 16% of labor expenses, Stevens Point to Eau Claire	Cash Match	25.00%		9. Construction	Indirect cost based on labor portion of the Stevens Point to Eau Claire build. Labor is 73.5% of total build cost. UWEX indirect cost rate is 16%.
	Indirect Costs - 16% of labor expenses, Madison to Platteville				9. Construction	Indirect cost based on labor portion of the Madison to Platteville build. Labor is 76.5% of total build cost. UWEX indirect cost rate is 16%.
Conduits	Existing - Chippewa Valley Area - 2.2 miles of existing fiber conduit	In-kind Match			9. Construction	Price based on actual construction expenditures and remaining useful life of infrastructure. This conduit would have been installed if it didn't already exist.
	Existing - Wausau - Existing fiber conduit: Sherman St (17th to 22nd)	In-kind Match			9. Construction	Price based on actual construction expenditures and remaining useful life of infrastructure. This conduit would have been installed if it didn't already exist.
Ducts						
Poles						
Towers	Tower and ground facilities				2. Land, structures	New tower and ground facilities to support WiMAX antenna system. Price based on a recent estimate from PSC Technologies, St. Paul, MN.
Repeaters						
Other	Platteville Area - Easement Costs				2. Land, structures	Price based on quote from local contractor, Koch Communications.

		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												
New Construction												
Pre-Fab Huts	Regeneration Facility										2. Land, structures	Price is based on an estimate from our private partner, CCI Systems.
Improvements & Renovation												
Other												
CUSTOMER PREMISE EQUIPMENT												
Modems												
Set Top Boxes												
Inside Writing	Building entrances										9. Construction	Price based on a quote from our private, for-profit partner CCI Systems.
	1m duplex ST-DT duplex SMF jumper										11. Misc.	Price based on recent purchases.
	2m duplex ST-DT duplex SMF jumper										11. Misc.	Price based on recent purchases.
	3m duplex ST-LC duplex SMF jumper										11. Misc.	Price based on recent purchases.
	3m duplex ST-ST duplex SMF jumper										11. Misc.	Price based on recent purchases.
	5m duplex ST-LC duplex SMF jumper										11. Misc.	Price based on recent purchases.
	7m duplex ST-LC duplex SMF jumper										11. Misc.	Price based on recent purchases.
Other												
BILLING SUPPORT AND OPERATIONS SUPPORT SYSTEMS												
Billing Support												
Customer Care												
Other Support												

		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												
Vehicles												
Office Equipment /												
Other												
PROFESSIONAL SERVICES												
Engineering Design	Chippewa Valley Area Contract WiMAX Engineer										4. Architectural and engr.	Price based on an estimate from Finley Engineering.
	Platteville Area Contract Engineer										4. Architectural and engr.	Price based on estimate from local contractor, Koch's Telecommunications. Estimate is \$1 per foot.
	Middle Mile Backbone Fiber Manager	Cash Match	50.00%								4. Architectural and engr.	Price based on expected salary and fringe benefits over 3 years. Salary also assumes a 2% pay increase in Years 2 and 3. Unit cost is average of hourly salary for Years 1, 2, and 3.
	Community Area Network Fiber Manager										4. Architectural and engr.	Price based on expected salary and fringe benefits over 3 years. Salary also assumes a 2% pay increase in Years 2 and 3. Unit cost is average of hourly salary for Years 1, 2, and 3.
	Middle Mile Backbone Network Engineer										4. Architectural and engr.	Price based on expected salary and fringe benefits over 3 years. Salary also assumes a 2% pay increase in Years 2 and 3. Unit cost is average of hourly salary for Years 1, 2, and 3.
	Superior Area Technical Engineer										4. Architectural and engr.	Price based on expected salary and fringe benefits of expected position description.
	Chippewa Valley Area Network Engineer										4. Architectural and engr.	Price based on expected salary and fringe benefits of expected position description.
	Middle Mile Backbone Engineer	In-kind Match									4. Architectural and engr.	Price based on actual salary and fringe benefits.
Project Management	BTOP Project Manager										1. Admin and Legal	Price based on expected salary and fringe benefits over 3 years. Salary also assumes a 2% pay increase in Years 2 and 3. Unit cost is average of hourly salary for Years 1, 2, and 3.
	BTOP Technology Project Manager	Cash Match	50.00%								1. Admin and Legal	Price based on expected salary and fringe benefits over 3 years. Salary also assumes a 2% pay increase in Years 2 and 3. Unit cost is average of hourly salary for Years 1, 2, and 3.

	WiscNet Project Manager	In-kind Match			1. Admin and Legal	Price based on actual salary and fringe benefits. Number of hours based on hours recorded in time management system.
	Superior Area Project Manager				1. Admin and Legal	Price based on expected salary and fringe benefits of expected position description.
	Wausau Area Project Manager				1. Admin and Legal	Price based on expected salary and fringe benefits of expected position description.
	Platteville Area Project Manager				1. Admin and Legal	Price based on expected salary and fringe benefits of expected position description.
	Chippewa Valley Area Contract Project Manager				1. Admin and Legal	Price based on an estimate from Finley Engineering.
Consulting	Wausau Area Contract Network Engineer				4. Architectural and engr.	Price based on quote from local contractor.
	Wausau Area Contract Edge Device Configuration				11. Misc.	Price based on quote from local contractor.
	Environmental Engineering Consulting	In-kind Match			5. Other archit. and engr.	Price based on quote from contractor, Boonstra.
Other	BTOP Fiscal Compliance Manager				1. Admin and Legal	Price based on expected salary and fringe benefits over 3 years. Salary also assumes a 2% pay increase in Years 2 and 3. Unit cost is average of hourly salary for Years 1, 2, and 3.
	BTOP Reporting Compliance Manager				1. Admin and Legal	Price based on expected salary and fringe benefits over 3 years. Salary also assumes a 2% pay increase in Years 2 and 3. Unit cost is average of hourly salary for Years 1, 2, and 3.
	WiscNet Executive Director	In-kind Match			1. Admin and Legal	Price based on actual salary and fringe benefits. Number of hours based on hours recorded in time management system. Time was spent providing direction and leadership for the project.
	Grant Writer	In-kind Match			11. Misc.	Price based on actual salary and fringe benefits. Number of hours based on hours recorded in time management system.
	Budget and Policy Analyst	In-kind Match			1. Admin and Legal	Price based on actual salary and fringe benefits. Number of hours based on hours recorded in time management system.
	Chippewa Valley Area BTOP Financial Manager				1. Admin and Legal	Price based on expected salary and fringe benefits of expected position description. Assumes a 2% salary increase in Year 2. Unit cost is an average of the hourly wage for 2 years.
	CCI Systems Consultation Labor	In-kind Match			4. Architectural and engr.	Price based on actual salary and fringe benefits. Labor spent assisting applicant in designing routes and gathering cost data for long-haul and CAN networks.
TESTING						

Network Elements	Cisco 15454 DWDM Optical Add/Drop hardware for testing	Cash Match	30.00%		10. Equipment	This equipment will be purchased by CCI Systems. They are a Cisco Reseller and this pricing is based on that relationship.
IT System						
User Devices						
Test Generators						
Lab						
Servers/Computer						

		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						\$1,509,000	\$0	\$0	\$1,509,000	\$1,509,000		
Site						\$0	\$0			\$0		
						\$0	\$0			\$0		
						\$0	\$0			\$0		
Other	Wisconsin Department of Transportation Right-of-Way: U.S. Highway 53 Chippewa Falls to Superior	In-kind Match		\$6,000.00	136	\$816,000	\$0		\$816,000	\$816,000	2. Land, structures	Price based on Letter of Commitment from WisDOT.
	Wisconsin Department of Transportation Right-of-Way: U.S. Highway 151 Madison to Platteville	In-kind Match		\$7,000.00	69	\$483,000	\$0		\$483,000	\$483,000	2. Land, structures	Price based on Letter of Commitment from WisDOT.
	Wisconsin Department of Transportation Right-of-Way: Interstate Highway 39 Stevens Point to Wausau	In-kind Match		\$7,000.00	30	\$210,000	\$0		\$210,000	\$210,000	2. Land, structures	Price based on Letter of Commitment from WisDOT.
PROJECT TOTAL:						\$42,726,744	\$9,241,097	\$518,591	\$42,208,153	\$42,726,744		

SF-424C Cross-check Totals	
1. Admin and Legal	\$1,567,042
2. Land, structures	\$3,493,600
3. Relocation expenses	\$0
4. Architectural and engr.	\$1,439,132
5. Other archit. and engr.	\$7,500
6. Inspection fees	\$0
7. Site work	\$0
8. Demolition/removal	\$0
9. Construction	\$30,047,811
10. Equipment	\$6,083,477
11. Misc.	\$88,182

Matching Contribution Cross-check Totals	
Federal Funding Request	\$29,884,919
Cash Match Contribution	\$9,241,097
In-kind Match Contribution	\$3,600,728

Approach to allocating Last Mile and Middle Mile costs:

It is estimated that 4 strands of fiber will be used to deploy Last Mile Services. CCI Systems will have full use of half of the strands that are installed in the ICMMBN. For purposes of estimating the portion of optical hardware CCI Systems will install, we calculated a percent use with the formula 4 strands/42 strands. The resulting percentage is 9.5%. This percent is applied to Cisco 15454 Optical to be purchased by CCI Systems.

To estimate the cost of fiber in the Summit Lake -> Wausau -> Stevens Point -> Eau Claire path, we used the formula 4 strands/96 strands. The resulting percentage is 4.2%. This percent is applied to the relevant ICMMBN paths to determine the amount to allocate to Last Mile Services.