# U.S. Department of Commerce Broadband Technology Opportunities Program Authentication and Certifications

- 1. I certify that I am the duly Authorized Organization Representative (AOR) of the applicant organization, and that I have been authorized to submit the attached application on its behalf.
- 2. I certify that I have examined this application, that all of the information and responses in this application, including certifications, and forms submitted, all of which are part of this grant application, are material representations of fact and true and correct to the best of my knowledge, that the entity(ies) that is requesting grant funding pursuant to this application and any subgrantees and subcontractors will comply with the terms, conditions, purposes, and federal requirements of the grant program; that no kickbacks were paid to anyone; and that a false, fictitious, or fraudulent statements or claims on this application are grounds for denial or termination of a grant award, and/or possible punishment by a fine or imprisonment as provided in 18 U.S.C. §1001 and civil violations of the False Claims Act.
- 3. I certify that the entity(ies) I represent has and will comply with all applicable federal, state, and local laws, rules, regulations, ordinances, codes, orders and programmatic rules and requirements relating to the project. I acknowledge that failure to do so may result in rejection or deobligation of the grant or loan award. I acknowledge that failure to comply with all federal and program rules could result in civil or criminal prosecution by the appropriate law enforcement authorities.
- 4. I certify that the entity(ies) I represent has and will comply with all applicable administrative and federal statutory, regulatory, and policy requirements set forth in the Department of Commerce Pre-Award Notification Requirements for Grants and Cooperative Agreements ("DOC Pre-Award Notification"), published in the Federal Register on February 11, 2008 (73 FR 7696), as amended; DOC Financial Assistance Standard Terms and Conditions (Mar. 8, 2009); the Department of Commerce American Recovery and Reinvestment Act Award Terms (Apr. 9, 2009); and any Special Award Terms and Conditions that are included by the Grants Officer in the award.
- I certify that any funds awarded to the entity(ies) I represent as a result of this application will not
  result in any unjust enrichment of such entity(ies) or duplicate any funds such entity(ies) receives
  under federal universal service support programs administered by the Universal Service
  Administrative Corporation (USAC).

0.	petitioned the Assistant Secretary o				t or has
	2/22/10	2/	.7/	A	

3/23/10 Date

Authorized Organization Representative Signature

Print Name

Title

#### DISCLOSURE OF LOBBYING ACTIVITIES

Approved by OMB 0348-0046

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352

(See reverse for public burden disclosure.) 1. Type of Federal Action: 2. Status of Federal Action: 3. Report Type: a. contract a. bid/offer/application a. initial filing b. grant b. initial award b. material change c. cooperative agreement c. post-award For Material Change Only: d. loan year \_\_\_\_ quarter e. loan guarantee date of last report f. loan insurance 4. Name and Address of Reporting Entity: 5. If Reporting Entity in No. 4 is a Subawardee, Enter Name X Prime Subawardee and Address of Prime: Tier \_\_\_\_\_, if known: Iowa Communications Network Grimes State Office Building 400 E. 14th Street Des Moines, IA 50312 Congressional District, if known: lowa Congressional District, if known: 6. Federal Department/Agency: 7. Federal Program Name/Description: Broadband Technology Opportunities Program, CCI Department of Commerce, NTIA CFDA Number, if applicable: 11.557 8. Federal Action Number, if known: 9. Award Amount, if known: \$ 16,230,118 10. a. Name and Address of Lobbying Registrant b. Individuals Performing Services (including address if (if individual, last name, first name, MI): different from No. 10a) (last name, first name, MI): Not Applicable Not Applicable Information requested through this form is authorized by title 31 U.S.C. section
 1352. This disclosure of lobbying activities is a material representation of fact Signature;\_\_

upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Federal Use Only:

Print Name: Dave Lingren

Title: Interim Executive Director

Telephone No.: 515-725-4707

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5/12/10

Standard Form LLL (Rev. 7-97)

Date:

#### OMB Approval No. 4040-0008 **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. c. Total Allowable Costs b. Costs Not Allowable a. Total Cost **COST CLASSIFICATION** (Columns a-b) for Participation Administrative and legal expenses \$ \$ \$ Land, structures, rights-of-way, appraisals, etc. \$ \$ 3. Relocation expenses and payments \$ \$ \$ Architectural and engineering fees \$ \$ \$ Other architectural and engineering fees \$ \$ \$ Project inspection fees \$ \$ \$ Site work \$ \$ \$ Demolition and removal \$ \$ \$ Construction 9. \$ \$ \$ Equipment \$ \$ \$ 11. Miscellaneous \$ \$ \$ SUBTOTAL (sum of lines 1-11) \$ Contingencies \$ \$ \$ SUBTOTAL \$ \$ Project (program) income \$ \$ \$ 16. TOTAL PROJECT COSTS (subtract #15 from #14) FEDERAL FUNDING 17. Federal assistance requested, calculate as follows: % (Consult Federal agency for Federal percentage share.) Enter eligible costs from line 16c Multiply X Enter the resulting Federal share.

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#### **INSTRUCTIONS FOR THE SF-424C**

Public reporting burden for this collection of information is estimated to average 180 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0041), Washington, DC 20503.

# PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET. SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.

This sheet is to be used for the following types of applications: (1) "New" (means a new [previously unfunded] assistance award); (2) "Continuation" (means funding in a succeeding budget period which stemmed from a prior agreement to fund); and (3) "Revised" (means any changes in the Federal Government's financial obligations or contingent liability from an existing obligation). If there is no change in the award amount, there is no need to complete this form. Certain Federal agencies may require only an explanatory letter to effect minor (no cost) changes. If you have guestions, please contact the Federal agency.

Column a. - If this is an application for a "New" project, enter the total estimated cost of each of the items listed on lines 1 through 16 (as applicable) under "COST CLASSIFICATION."

If this application entails a change to an existing award, enter the eligible amounts *approved under the previous award* for the items under "COST CLASSIFICATION."

Column b. - If this is an application for a "New" project, enter that portion of the cost of each item in Column a. which is *not* allowable for Federal assistance. Contact the Federal agency for assistance in determining the allowability of specific costs.

If this application entails a change to an existing award, enter the adjustment [+ or (-)] to the previously approved costs (from column a.) reflected in this application.

Column. - This is the net of lines 1 through 16 in columns "a." and "b."

- Line 1 Enter estimated amounts needed to cover administrative expenses. Do not include costs which are related to the normal functions of government. Allowable legal costs are generally only those associated with the purchases of land which is allowable for Federal participation and certain services in support of construction of the project.
- Line 2 Enter estimated site and right(s)-of-way acquisition costs (this includes purchase, lease, and/or easements).
- Line 3 Enter estimated costs related to relocation advisory assistance, replacement housing, relocation payments to displaced persons and businesses, etc.

- Line 4 Enter estimated basic engineering fees related to construction (this includes start-up services and preparation of project performance work plan).
- Line 5 Enter estimated engineering costs, such as surveys, tests, soil borings, etc.
- Line 6 Enter estimated engineering inspection costs.
- Line 7 Enter estimated costs of site preparation and restoration which are not included in the basic construction contract.
- Line 9 Enter estimated cost of the construction contract.
- Line 10 Enter estimated cost of office, shop, laboratory, safety equipment, etc. to be used at the facility, if such costs are not included in the construction contract.
- Line 11 Enter estimated miscellaneous costs.
- Line 12 Total of items 1 through 11.
- Line 13 Enter estimated contingency costs. (Consult the Federal agency for the percentage of the estimated construction cost to use.)
- Line 14 Enter the total of lines 12 and 13.
- Line 15 Enter estimated program income to be earned during the grant period, e.g., salvaged materials, etc.
- Line 16 Subtract line 15 from line 14.
- Line 17 This block is for the computation of the Federal share. Multiply the total allowable project costs from line 16, column "c." by the Federal percentage share (this may be up to 100 percent; consult Federal agency for Federal percentage share) and enter the product on line 17.

#### **ASSURANCES - CONSTRUCTION PROGRAMS**

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0042), Washington, DC 20503.

# PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET. SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.

**NOTE**: Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the Awarding Agency. Further, certain Federal assistance awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant, I certify that the applicant:

- Has the legal authority to apply for Federal assistance, and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project costs) to ensure proper planning, management and completion of the project described in this application.
- Will give the awarding agency, the Comptroller General
  of the United States and, if appropriate, the State,
  the right to examine all records, books, papers, or
  documents related to the assistance; and will establish
  a proper accounting system in accordance with
  generally accepted accounting standards or agency
  directives.
- 3. Will not dispose of, modify the use of, or change the terms of the real property title, or other interest in the site and facilities without permission and instructions from the awarding agency. Will record the Federal awarding agency directives and will include a covenant in the title of real property acquired in whole or in part with Federal assistance funds to assure non-discrimination during the useful life of the project.
- 4. Will comply with the requirements of the assistance awarding agency with regard to the drafting, review and approval of construction plans and specifications.
- Will provide and maintain competent and adequate engineering supervision at the construction site to ensure that the complete work conforms with the approved plans and specifications and will furnish progress reports and such other information as may be required by the assistance awarding agency or State.
- Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
- 7. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.

- Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4728-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
- Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.) which prohibits the use of lead-based paint in construction or rehabilitation of residence structures.
- 10. Will comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681 1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290 dd-3 and 290 ee 3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) underwhich application for Federal assistance is being made; and, (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.

- 11. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal and federally-assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
- 12. Will comply with the provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.
- 13. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§276a to 276a-7), the Copeland Act (40 U.S.C. §276c and 18 U.S.C. §874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§327-333) regarding labor standards for federally-assisted construction subagreements.
- 14. Will comply with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.
- Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the

- National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of Federal actions to State (Clean Air) implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended (P.L. 93-523); and, (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-205).
- 16. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
- 17. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. §470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §§469a-1 et seq).
- 18. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-1 33, "Audits of States, Local Governments, and Non-Profit Organizations."
- 19. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations, and policies governing this program.

*SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL	*TITLE	
*APPLICANT ORGANIZATION		*DATE SUBMITTED

# **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)	\$6,122,590	\$2,047,890		\$8,170,480	\$105,407.00	\$8,065,073	\$8,170,480
Outside Plant (cables, conduits, ducts, poles,							
towers, repeaters, etc.)	\$1,281,751	\$549,322		\$1,831,073	\$757,878	\$1,073,195	\$1,831,073
Buildings and Land – (new construction,							
improvements, renovations, lease)				\$0			\$0
Customer Premise Equipment (modems, set-							
top boxes, inside wiring, etc.)	\$48,895	\$20,955		\$69,850	\$69,850.00		\$69,850
Billing and Operational Support Systems (IT							
systems, software, etc.)				\$0			\$0
Operating Equipment (vehicles, office							
equipment, other)				\$0			\$0
Engineering/Professional Services							
(engineering design, project management,							
consulting, etc.)		\$274,001		\$274,001		\$274,001.00	\$274,001
Testing (network elements, IT system							
elements, user devices, test generators, lab							
furnishings, servers/computers, etc.)				\$0			\$0
Site Preparation		\$1,819,630		\$1,819,630	_	\$1,819,630.00	\$1,819,630
Other	\$8,776,883	\$2,925,628		\$11,702,510		\$11,702,510.00	\$11,702,510
TOTAL BROADBAND SYSTEM:	\$16,230,118	\$7,637,426	\$0	\$23,867,544	\$933,135	\$22,934,409	\$23,867,544
Cost Share Percentage:	68.00%	32.00%	0.00%		_	_	

#### **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

	SERVICE AREA or COMMON NETWORK FACILITES:	Match (Cash/In-kind)	Unit Cost	No. of Units	Total Cost	Last Mile Allocation	Middle Mile Allocation		24C Budget Category	Support of Reasonableness
NETWORK & AC	CESS EQUIPMENT				\$8,170,480	\$105.407	\$8,065,073	\$8,170,480		
Switching	10Gbps County Aggregation (All Counties)		\$5,396,76	104	\$561,263	<b>V.003,101</b>	\$561,263,04	\$561,263 10. Equip	oment	Based on recent, competitively bid, Ethernet demarc RFP
	10Gbps County Aggregation (All Counties)	Cash Match	\$1,798.92	104	\$187,088		\$187,087,68	\$187,088 10. Equip		Based on recent, competitively bid, Ethernet demarc RFP
	Ethernet Switch - New County CAI Locations		\$807.80	347	\$280,305		\$280,305	\$280,305 10. Equip		Based on recent competitively bid Ethernet demarc RFP
	Ethernet Switch - New County CAI Locations	Cash Match	\$269.27	347	\$93,435		\$93,435	\$93,435 10. Equip		Based on recent competitively bid Ethernet demarc RFP
	Ethernet Switch - K12 & Library Upgrade Locations		\$2,622,74	198	\$519,303		\$519,303	\$519,303 10. Equip		Based on recent competitively bid Ethernet demarc RFP
	Ethernet Switch - K12 & Library Upgrade Locations	Cash Match	\$874.25	198	\$173,101		\$173,101	\$173,101 10. Equip		Based on recent competitively bid Ethernet demarc RFP
	Ethernet Switch - Other CAI Upgrade Locations		\$2,622.74	258	\$676,668		\$676,668	\$676,668 10. Equip		Based on recent competitively bid Ethernet demarc RFP
	Ethernet Switch - Other CAI Upgrade Locations	Cash Match	\$874.25	258	\$225,556		\$225,556	\$225,556 10. Equip		Based on recent competitively bid Ethernet demarc RFP
Routing	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1				\$0		, .,	\$0		
					\$0			\$0		
					\$0			\$0		
Transport	DWDM Systems (Statewide)		\$92,435.41	43	\$3,974,723		\$3,974,722.50	\$3,974,723 10. Equip	oment	Based on recent DWDM RFI and vendor cost estimates
	DWDM Systems (Statewide)	Cash Match	\$30,811.80	43	\$1,324,908		\$1,324,907.50	\$1,324,908 10. Equip		Based on recent DWDM RFI and vendor cost estimates
			<del>,</del>		\$0		<b>\$1,021,001.00</b>	\$0		
Access	CWDM Systems (Tama & W Des Moines)		\$7,308.75	5	\$36,544		\$36,543.75	\$36,544 10. Equip	oment	Based on recent, competitively bid, FCC Project
	CWDM Systems (Tama & W Des Moines)	Cash Match	\$2,436.25	5	\$12,181		\$12,181.25	\$12,181 10. Equip		Based on recent, competitively bid, FCC Project
	Network Electronics for Last Mile - Sac & Fox Tribe		\$73,784.90	1	\$73,785	\$73,784.90	<b>\$12,10112</b>	\$73,785 10. Equip		Based on Vendor cost estimates & industry standard cost/home
	Network Electronics for Last Mile - Sac & Fox Tribe	Cash Match	\$31,622,10	1	\$31,622	\$31,622,10		\$31,622 10. Equip		Based on Vendor cost estimates & industry standard cost/home
Other	TOTAL ELECTRICATION FOR EAST TIME CAS AT OX TIME	Cuon materi	\$01,022.10		\$0	ψο 1,022.10		\$0	J	Sacra di Tondo dest scamaco a masca y ciandara destricino
01.10.					\$0			\$0		
					\$0			\$0		
OUTSIDE PLANT					\$1,831,073	\$757.878	\$1,073,195	\$1.831.073		
Cables	Fiber Builds Decorah (Cost per Foot Installed)		10.5	49511.333	\$519,869	ψ101,010	\$519,869	\$519,869 9. Constr	truction	Based on recent, competitively bid, projects
Cubico	Fiber Builds Decorah (Cost per Foot Installed)	Cash Match	4.5	49511.334	\$222.801		\$222,801	\$222,801 9. Constr		Based on recent, competitively bid, projects
	Fiber Sac/Fox Clinic & School(Cost per Foot Installed)	Cash Materi	10.5	22035	\$231,367		\$231,367	\$231,367 9. Constr		Based on recent, competitively bid, projects
	Fiber Sac/Fox Clinic & School(Cost per Foot Installed)	Cash Match	4.5	22035	\$99,158		\$99,158	\$99,158 9. Constr		Based on recent, competitively bid, projects
	Preconnectorized fiber for homes - Sac & Fox Tribe	Casii Matcii	418.1857143	196	\$81,964	\$81,964	ψ99,130	\$81.964 9. Constr		Based on Vendor cost estimates & industry standard cost/home
	Preconnectorized fiber for homes - Sac & Fox Tribe	Cash Match	179.222449	196	\$35.128	\$35.128		\$35.128 9. Constr		Based on Vendor cost estimates & industry standard cost/home
	Trenching labor for homes - Sac & Fox Tribe	Casii Matcii	1225.892857	196	\$240,275	\$240,275		\$240,275 9. Constr		Based on Vendor cost estimates & industry standard cost/home
	Trenching labor for homes - Sac & Fox Tribe	Cash Match	525.3826531	196	\$102.975	\$102,975		\$102,975 9. Constr		Based on Vendor cost estimates & industry standard cost/home
	Backbone fiber install for homes - Sac & Fox Tribe	Casii Watcii	14	13060	\$182,840	\$182,840		\$182,840 9. Constr		Based on Vendor cost estimates & industry standard cost/home
	Backbone fiber install for homes - Sac & Fox Tribe	Cash Match	6	13060	\$78,360	\$78,360		\$78,360 9. Constr		Based on Vendor cost estimates & industry standard cost/home
Conduits	Dackbone liber install for nomes - Sac & Lox Tribe	Casii Matcii	0	13000	\$0	Ψ10,300		\$0	iraction	based on Vendor cost estimates & industry standard cost nome
Ooridaits					\$0			\$0		
		+		-	\$0 \$0			\$0		
Ducts					\$0			\$0		
Duois		+			\$0 \$0			\$0		
					\$0			\$0		
Poles		+		-	\$0 \$0			\$0		
roles		+		-	\$0			\$0		
					\$0 \$0			\$0		
Towers					\$0 \$0			\$0 \$0		
Towers					\$0 \$0			\$0 \$0		
					* * * * * * * * * * * * * * * * * * * *					
Damastana					\$0			\$0 \$0		
Repeaters					\$0					
		+		ł	\$0			\$0		
Other		1			\$0			\$0		
Other	Fiber Splicing - Sac & Fox Tribe		35	432	\$15,120	\$15,120		\$15,120 9. Constr		
	Fiber Splicing - Sac & Fox Tribe	Cash Match	15	432	\$6,480	\$6,480		\$6,480 9. Constr		
	Fiber Distribution Panels - Sac & Fox Tribe		1289.4	8	\$10,315	\$10,315		\$10,315 9. Constr		
	Fiber Distribution Panels - Sac & Fox Tribe	Cash Match	552.6	8	\$4,421	\$4,421		\$4,421 9. Constr	truction	

COMMON		Match	Unit Cost	No. of	Total Cost	Last Mile	Middle Mile	Allocated Total	SF-424C Budget	Support of Reasonableness
BUILDINGS		-			\$0	\$0	\$0			
New Construction					\$0	, , , , , , , , , , , , , , , , , , ,		\$0		
					\$0			\$0		
					\$0			\$0		
Pre-Fab Huts					\$0			\$0		
					\$0			\$0		
					\$0			\$0		
Improvements &					\$0			\$0		
					\$0			\$0		
					\$0			\$0		
Other					\$0			\$0		
					\$0			\$0		
					\$0			\$0		
CUSTOMER PREM	IISE EQUIPMENT				\$69,850	\$69,850	\$0	\$69,850		
Modems	Outdoor ONTs for 196 Homes - Sac & Fox Tribe		249.4642857	196	\$48,895	\$48,895		\$48,895	10. Equipment	
	Outdoor ONTs for 196 Homes - Sac & Fox Tribe	Cash Match	106.9132653	196	\$20,955	\$20,955		\$20,955	10. Equipment	
					\$0			\$0		
Set Top Boxes					\$0			\$0		
					\$0			\$0		
					\$0			\$0		
Inside Writing					\$0			\$0		
					\$0			\$0		
					\$0			\$0		
Other					\$0			\$0		
					\$0			\$0		
					\$0			\$0		
BILLING SUPPOR	T AND OPERATIONS SUPPORT SYSTEMS				\$0	\$0	\$0			
Billing Support					\$0			\$0		
					\$0			\$0		
					\$0			\$0		
Customer Care					\$0			\$0		
					\$0			\$0		
					\$0			\$0		
Other Support					\$0			\$0		
					\$0			\$0		
					\$0			\$0		

COMMON		Match	Unit Cost	No. of	Total Cost	Last Mile	Middle Mile	Allocated Total	SF-424C Budget	Support of Reasonableness
OPERATING EQUI	PMENT				\$0	\$0	\$0	\$0		
Vehicles					\$0			\$0		
					\$0			\$0		
					\$0			\$0		
Office Equipment /					\$0			\$0		
					\$0			\$0		
					\$0			\$0		
Other					\$0			\$0		
					\$0			\$0		
					\$0			\$0		
PROFESSIONAL S	ERVICES				\$274,001	\$0	\$274,001	\$274,001		
Engineering					\$0			\$0		
					\$0			\$0		
					\$0			\$0		
Project	Project Planning, Implementation, & Reporting	Cash Match	155401	1	\$155,401		\$155,401		7. Site work	Based on recent experience with FCC grant program
	Project Management	Cash Match	93600	1	\$93,600		93600		7. Site work	Based on recent experience with FCC grant program
					\$0			\$0		
Consulting	Grant Preparation	Cash Match	25000	1	\$25,000		\$25,000	\$25,000	Admin and Legal	Based on recent experience with FCC grant program
					\$0			\$0		
					\$0			\$0		
Other					\$0			\$0		
					\$0			\$0		
					\$0			\$0		
TESTING					\$0	\$0	\$0			
Network					\$0			\$0		
					\$0			\$0		
IT O					\$0			\$0		
IT System					\$0			\$0		
					\$0			\$0		
					\$0			\$0		
User Devices					\$0			\$0		
					\$0			\$0		
T					\$0			\$0		
Test Generators					\$0			\$0		
					\$0			\$0		
Lab					\$0 \$0			\$0 \$0		
Lau			+		\$0 \$0			\$0 \$0		
			+		\$0 \$0			\$0 \$0		
Servers/Computer			+		\$0 \$0			\$0 \$0		
Servers/Computer			+		\$0 \$0			\$0 \$0		
					\$0 \$0			\$0 \$0		
					\$0			\$0		

COMMON		Match	Unit Cost	No. of	Total Cost	Last Mile	Middle Mile	Allocated Total	SF-424C Budget	Support of Reasonableness
OTHER UPFRONT	COSTS				\$13,522,140	\$0	\$13,522,140	\$13,522,140		
Site	Site Prep, Documentation, Installation, Programming	Cash Match	1218.45	913	\$1,112,445		\$1,112,445	\$1,112,445	7. Site work	Based on ICN experience in a running a statewide network
	Circuit Install and Service Cutover	Cash Match	451.95	1036	\$468,220		\$468,220	\$468,220	7. Site work	Standard ICN Circuit Install Charge is \$500.
	DWDM System Design, Installation, Cutover	Cash Match	5557.3201	43	\$238,965		\$238,965	\$238,965	7. Site work	Vendor Install Quote was \$561,476
Other	CAI 15 Year Fiber Indefeasible Right of Use (IRUs)		52304.63942	104	\$5,439,683		\$5,439,683	\$5,439,683	Construction	Vendors provided cost guidance for current market
	CAI 15 Year Fiber Indefeasible Right of Use (IRUs)	Cash Match	17434.87981	104	\$1,813,227		\$1,813,227	\$1,813,227	Construction	Vendors provided cost guidance for current market
	CAI 5 Year Fiber Indefeasible Right of Use (IRU)		16854.54545	198	\$3,337,200		\$3,337,200	\$3,337,200	Construction	Vendors provided cost guidance for current market
	CAI 5 Year Fiber Indefeasible Right of Use (IRU)	Cash Match	5618.181818	198	\$1,112,400		\$1,112,400	\$1,112,400	Construction	Vendors provided cost guidance for current market
			PRO	DJECT TOTAL:	\$23,867,544	\$933,135	\$22,934,409	\$23,867,544		

# CERTIFICATION REGARDING LOBBYING LOWER TIER COVERED TRANSACTIONS

Applicants should review the instructions for certification included in the regulations before completing this form. Signature on this form provides for compliance with certification requirements under 15 CFR Part 28, "New Restrictions on Lobbying."

#### LOBBYING

As required by Section 1352, Title 31 of the U.S. Code, and implemented at 15 CFR Part 28, for persons entering into a grant, cooperative agreement or contract over \$100,000 or a loan or loan guarantee over \$150,000 as defined at 15 CFR Part 28, Sections 28.105 and 28.110, the applicant certifies that to the best of his or her knowledge and belief, that:

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress in connecction with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying." in accordance with its instructions.
- (3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure occurring on or before October 23, 1996, and of not less than \$11,000 and not more than \$110,000 for each such failure occurring after October 23, 1996.

#### Statement for Loan Guarantees and Loan Insurance

The undersigned states, to the best of his or her knowledge and belief, that:

In any funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this commitment providing for the United States to insure or guarantee a loan, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

Submission of this statement is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required statement shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure occurring on or before October 23, 1996, and of not less than \$11,000 and not more than \$110,000 for each such failure occurring after October 23, 1996.

As the duly authorized representative of the applicant, I hereby certify that the applicant will comply with the above applicable certification.

NAME OF APPLICANT

AWARD NUMBER AND/OR PROJECT NAME

Iowa Communications Network

BTOP CCI Grant, EasyGrant 5390

PRINTED NAME AND TITLE OF AUTHORIZED REPRESENTATIVE

Dave Lingren, Interim Executive Director

SIGNATURE

DATE

5/12/10

#### CERTIFICATION REGARDING LOBBYING

Applicants should also review the instructions for certification included in the regulations before completing this form. Signature on this form provides for compliance with certification requirements under 15 CFR Part 28, "New Restrictions on Lobbying." The certifications shall be treated as a material representation of fact upon which reliance will be placed when the Department of Commerce determines to award the covered transaction, grant, or cooperative agreement.

#### LOBBYING

As required by Section 1352, Title 31 of the U.S. Code, and implemented at 15 CFR Part 28, for persons entering into a grant, cooperative agreement or contract over \$100,000 or a loan or loan guarantee over \$150,000 as defined at 15 CFR Part 28, Sections 28.105 and 28.110, the applicant certifies that to the best of his or her knowledge and belief, that:

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- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying." in accordance with its instructions.
- (3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure occurring on or before October 23, 1996, and of not less than \$11,000 and not more than \$110,000 for each such failure occurring after October 23, 1996.

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As the duly authorized representative of the applicant, I hereby certify that the applicant will comply with the above applicable certification.

NAME OF APPLICANT

AWARD NUMBER AND/OR PROJECT NAME

Iowa Communications Network

BTOP CCI Grant, EasyGrant 5390

PRINTED NAME AND TITLE OF AUTHORIZED REPRESENTATIVE

Dave Lingren, Interim Executive Director

SIGNATURE

DATE 5/12/10 Applicant Name: Iowa Communications Network

EasyGrants Number: 5390

Organization Type: State Government Sub-division

Proposed Period of Performance: 9/10/10 to 9/10/12

Total Project Cost: \$23,867,544

Total Federal Grant Request: \$16,230,118

Total Matching Funds (Cash): \$7,637,426

Total Matching Funds (In-Kind)): \$0

Total Matching Funds (Cash & In-Kind): \$7,637,426

Total Matching Funds (Cash & In-Kind) as Percentage of Project Costs: 31.9992%

#### 1. Administrative and Legal Expense - \$25,000

\$25,000 of this category is for a consulting group to develop and write portions of the grant application.

## 2. Land, structures, rights-of-way, appraisals, etc. - \$0

No costs to allocate in this category.

#### 3. Relocation expenses and payments - \$0

No costs to allocate in this category.

#### 4. Architectural and engineering fees - \$0

No costs to allocate in this category.

#### 5. Other architectural and engineering fees - \$0

No costs to allocate in this category.

#### 6. Project inspection fees - \$0

No costs to allocate in this category.

#### 7. <u>Site work - \$2,068,631:</u>

This category is composed of Project Planning & Coordination, Project Management, ICN Installation of DWDM Systems, ICN Installation of CWDM & Ethernet Systems, and Provisioning of Customer Circuits.

#### \$155,401 Project Planning & Coordination:

This category is for project planning, implementation, coordination and reporting with an hourly cost of \$62.26 and an average of 16 hours a week over the life of the project. It is assumed with ramp-up, implementation, and end of project reporting the project will last 3 years.

#### \$93,600 Project Management:

This category is for augmentation of project management, utilizing an outside consultant who is familiar with ICN processes and procedures. Allocation assumes an average of 12 hours per week over a two year period at an hourly wage of \$75.

#### \$238,964.76 ICN Installation of DWDM Systems:

The ICN projects 3527 hours will be required to design, install, and cutover a parallel DWDM system and later decommission the old core. Estimates include 82 hours per system for installation at an average cost of \$5,557.32 per node with 43 nodes to be deployed. Specific labor to install all 43 systems is as follows:

<u>Personnel</u>	Hours	Rate	Total/Category
Engineering	1032	55.17	\$56,935.44
Data Operations	43	75.70	\$3,255.10
Training	160	55.1344	\$8,821.50
Paetec Personnel			
Training	400	74.75	\$29,900.00
Site Travel Time	860	74.75	\$64,285.00
Rack, Stack, Power	172	74.75	\$12,857.00
Fiber Testing	86	74.75	\$6,428.50
Coordination Group	129	74.75	\$9,642.75
Commissioning	258	74.75	\$19,285.50
Decommissioning	86	74.75	\$6,428.50
Data Terminal Techs	258	74.75	\$19,285.50
Warehouse	43	42.79	\$1,839.97
Totals	3527		\$238,964.76

#### \$1,112,444.85 Installation of CWDM & Ethernet Systems:

This project seeks to replace an aging ATM/SONET overlay network with an Ethernet access network. As part of this project 913 Ethernet switches and CWDM systems need to be deployed throughout Iowa. Planning, design, coordination, and commissioning will require an average of 17.75 hours per location with an average cost per site of \$1218.45. The hourly breakdown is as follows:

<u>Personnel</u>	<u>Hours</u>	<u>Rate</u>	Total/Category
Finance/Contracting	.5	42.91	\$21.46
Engineering	1.5	55.17	\$82.76
Warehouse	.75	42.79	\$32.09
Project Management	1.5	47.40	\$71.10
Data Operations	2	75.70	\$151.40
Site Travel (2 techs)	4	74.75	\$299.00
Site Prep	1	74.75	\$74.75
Fiber Testing (2 techs)	2	74.75	\$149.50
Coordination Group	1.5	74.75	\$112.13
Commissioning	1	74.75	\$74.75
Decommissioning	.5	74.75	\$37.38
Data Terminal Techs	1.5	74.75	\$112.13
Site Totals	17.75		\$1218.45
Project Total	913		\$1,112,444.85

#### \$468,220.20 Provisioning of Customer Circuits:

After the new core, aggregation, and access systems are in place customer circuits can be provisioned. At least 1036 customer circuits need to be provisioned with this access network drive and systems upgrade. The cost to provision customer circuits is as follows:

Personnel	Hours	Rate	Total/Category
Sales - Order Entry	.5	63.42	\$31.71
Project Management	1	47.40	\$47.40
Engineering	1.25	55.17	\$68.96
Data Operations	1.5	75.70	\$113.55
Data Terminal Techs	1.5	74.75	\$112.13
Coordination Group	.75	74.75	\$56.06
Finance – First Billing	.5	44.27	\$22.14
Total	7		\$451.95
Project Total		1036	\$468,220.20

#### 8. Demolition and removal -\$0:

No costs to allocate in this category.

#### 9. Construction - \$13,533,583:

\$742,670 of this category is for the construction of fiber in the city of Decorah, Iowa. The CCI partnership includes the city, county, local school district, local hospital, public works department, private college, and a regional education association. Project construction includes 49,511 and 1/3 feet of conduit and fiber along with the necessary handholes and building entrances. A minimum of 72 strands of fiber will be installed to link each facility with an average cost per foot of \$15.

\$330,525 of this category is to install a fiber from the ICN backbone to the Sac & Fox Tribe Settlement School, medical clinic and administrative center. The average cost of construction including conduit, fiber, handholes, building entrances, etc. is \$15 per foot. A total of 22035 feet will be constructed with a minimum of 72 strands per segment.

\$757,878 of this category is to install a fiber-to-the-home (FTTH) project linking the residents of the Sac & Fox Tribe to high speed internet. Five subcategories for this turn-key construction project include: Pre-connectorized fiber, trenching labor, backbone fiber installation, fiber spicing, and Fiber distribution panels.

<u>\$117,092 Pre-connectorized fiber</u>: Fiber with pre-connecterized sealed connections is used from a spliced backbone connection to an in-ground distribution point. A fiber drop cord provides the final connection to each home. A total of 68,650 feet of pre-connectorized fiber will be used with an average cost of \$1.70563729 per foot.

<u>\$343,250 Trenching Labor</u>: Contract labor to install fiber from the backbone to the distribution point and from the distribution point to the home will cost \$5 per foot with a total of 68.650 feet installed.

<u>\$261,200 Backbone fiber installation:</u> Costs include installation of conduit, setting of handholes, and pulling a minimum 144 strands of fiber per segment. Installation cost is \$20 per foot with 13,060 feet in total.

<u>\$21,600 Fiber Slicing:</u> 432 splices are required to connect the backbone to the distribution fiber at a cost of \$50 per splice.

\$14,736 Fiber Distribution Panels (FDP): Eight fully loaded 72 strand fiber distribution panels are required to terminate fiber at the headend. Average cost per strand for the FDP is \$25.58333.

\$7,252,910 of this category is to procure 15 year last mile fiber IRUs in 104 cities across Iowa with the average cost per IRU of \$69,739.5192307. Average cost per year is \$4649.30 or \$387.44 per month. The average distance per IRU is 5019 feet.

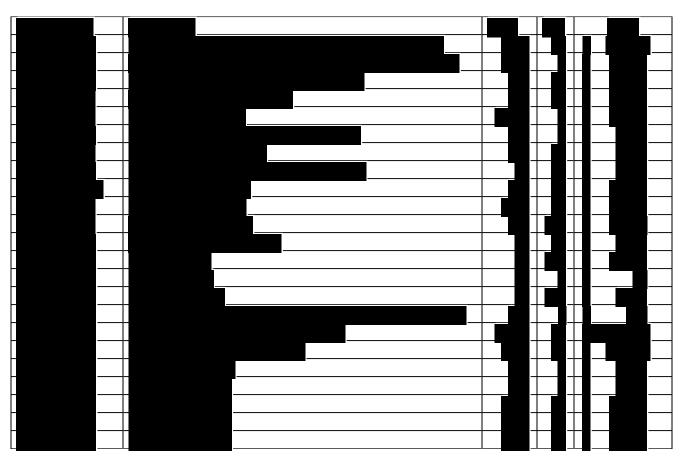
\$4,449,600 of this category relates to the procurement of 5 year IRUs in 198 locations. This project will convert each site from a DS3 lease to a dark fiber segment. Average cost per IRU is \$22,472.727272, with a rounded annual cost of \$4494.55 or a monthly average cost of \$374.55.

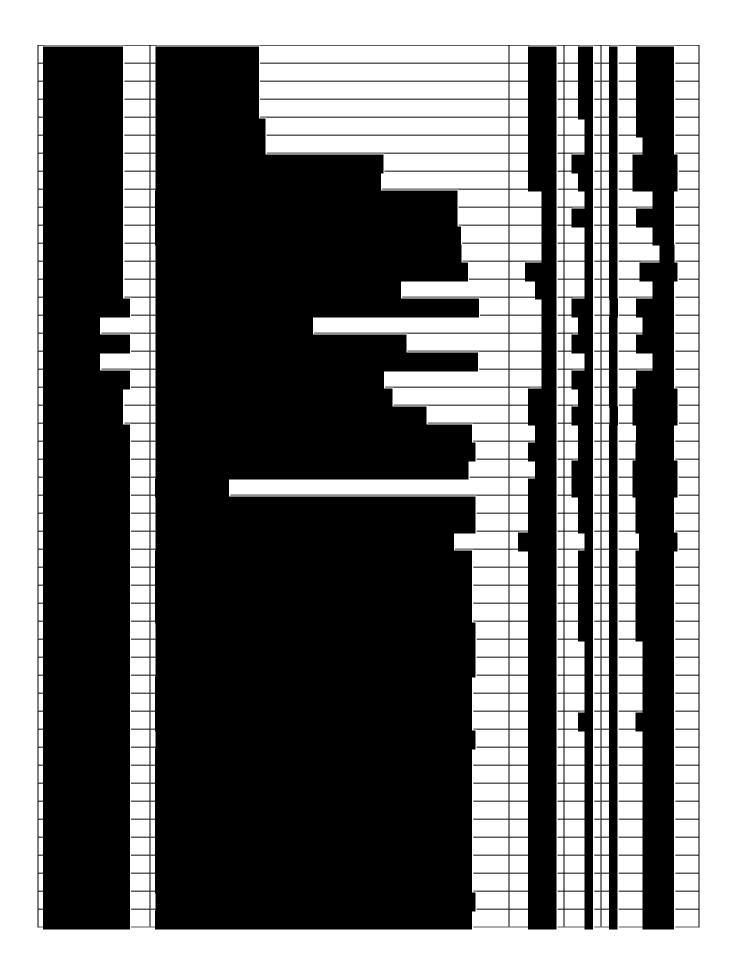
#### 10. <u>Equipment - \$8,240,330:</u>

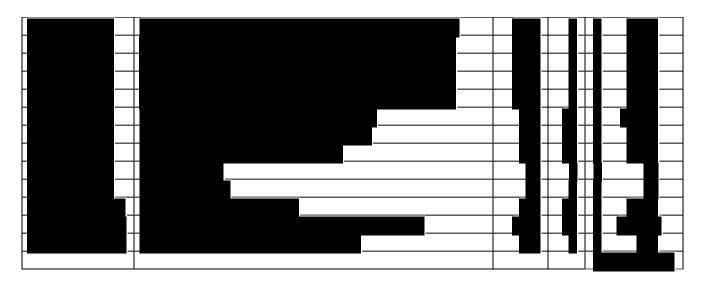
The cost to deploy network electronics can be divided into six distinct hardware categories: DWDM Systems, CWDM Systems, Ethernet Aggregation Switches, Ethernet Access Switches, FTTH Aggregation, FTTH Customer Premise.

#### \$5,299,630 DWDM Systems:

Costs include all hardware to deploy 43 core node locations around Iowa. The average cost per node is \$123,247.21 and includes all optics, multiplexers, amplifiers, transponders, DCMs, and other components to provide a scalable DWDM system. Total system cost is rounded to the closet dollar at \$5,299,630.







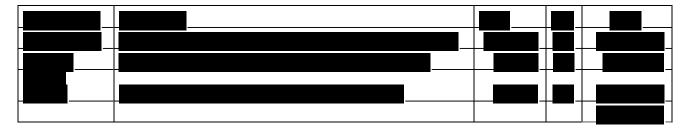
# **\$48,725 CWDM Systems:**

Five systems are to be deployed to aggregate wavelengths in lower density areas of the network with an average cost of \$9745 each.



#### \$748,351 Ethernet Aggregation Switches:

The project procures 10Gbps capable Ethernet switches for aggregation of traffic in each county. There are 99 counties in Iowa; however, some counties have multiple aggregation points. 104 switches are requested at \$7,195.68 per switch includes SFPs for optical transmission. Total system cost is rounded to the closet dollar at \$748,351.



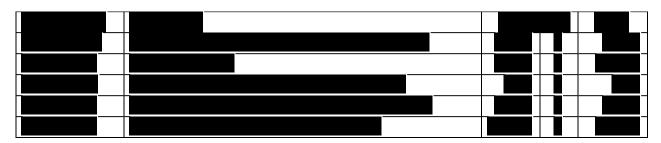
#### \$1,968,367 Ethernet Access Switches:

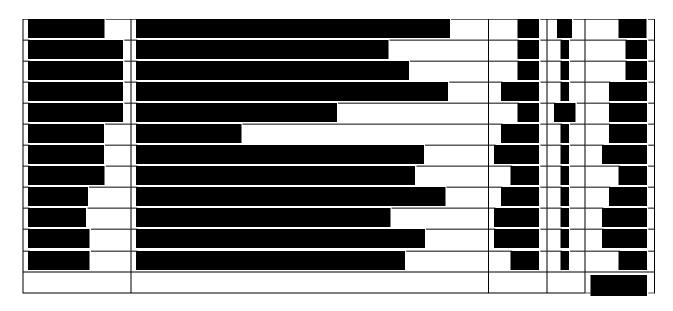
The application requests Ethernet switches with SFPs to upgrade or connect 803 customer sites around the state with a 1Gbps of symmetrical Ethernet service. The Ethernet switches and SFPs have an average cost of \$2,451.27 per site. Total system cost is rounded to the closet dollar at \$1,968,367.



#### \$105,407 FTTH Aggregation:

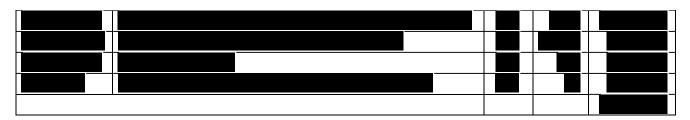
Costs include a Passive Optical Network (PON) headend to aggregate Ethernet services to the 196 tribal homes. The cost per home is \$537.79.





# \$69,850 FTTH Customer Premise:

The project requests 196 outside ONTs to terminate service at each tribal home served and 4 spares. The cost per home is \$356.38.



# 11. Miscellaneous - \$0:

No costs to allocate in this category.

# Comprehensive Community Infrastructure Budget Narrative Template

**Applicant Name: Iowa Communications Network** 

**EasyGrants Number: 5390** 

**Organization Type: State Government Sub-division** 

**Proposed Period of Performance: 9/10/10 to 9/10/12** 

Total Project Costs: \$ 23,867,544

**Total Federal Grant Request: \$ 16,230,118** 

Total Matching Funds (Cash): \$ 7,637,426

**Total Matching Funds (In-Kind): \$0** 

Total Matching Funds (Cash + In-Kind): \$7,637,426

Total Matching Funds (Cash + In-Kind) as Percentage of Total Project

Costs: 31.9992%

# 1. Administrative and legal expenses - \$25,000

\$25,000 of this category is for a consulting group to develop and write portions of the grant application.

#### 2. Land, structure, rights-of-way, appraisals, etc. - \$0

No costs to allocate in this category

# 3. Relocation expenses and payment - \$0

No costs to allocate in this category

# 4. Architectural and engineering fees - \$0

No costs to allocate in this category

# 5. Other architectural and engineering fees - \$0

No costs to allocate in this category

## 6. Project inspection fees - \$0

No costs to allocate in this category

#### 7. <u>Site work - \$2,068,631</u>

This category is composed of Project Planning & Coordination, Project Management, ICN Installation of DWDM Systems, ICN Installation of CWDM & Ethernet Systems, and Provisioning of Customer Circuits and is rounded to the nearest dollar.

#### \$155,401 Project Planning & Coordination:

This category is for project planning, implementation, coordination and reporting with an hourly cost of \$62.26 and an average of 16 hours a week over the life of the project. It is assumed with ramp-up, implementation, and end of project reporting the project will last 3 years.

#### \$93,600 Project Management:

This category is for augmentation of project management, utilizing an outside consultant who is familiar with ICN processes and procedures. Allocation assumes an average of 12 hours per week over a two year period at an hourly wage of \$75.

#### \$238,964.76 ICN Installation of DWDM Systems:

The ICN projects 3527 hours will be required to design, install, and cutover a parallel DWDM system and later decommission the old core. Estimates include 82 hours per system for installation at an average cost of \$5,557.32 per node with 43 nodes to be deployed. Specific labor to install all 43 systems is as follows:

<u>Personnel</u>	<u>Hours</u>	<u>Rate</u>	Total/Category
Engineering	1032	55.17	\$56,935.44
Data Operations	43	75.70	\$3,255.10
Training	160	55.1344	\$8,821.50
Paetec Personnel			
Training	400	74.75	\$29,900.00
Site Travel Time	860	74.75	\$64,285.00
Rack, Stack, Power	172	74.75	\$12,857.00
Fiber Testing	86	74.75	\$6,428.50
Coordination Group	129	74.75	\$9,642.75
Commissioning	258	74.75	\$19,285.50
Decommissioning	86	74.75	\$6,428.50
Data Terminal Techs	258	74.75	\$19,285.50
Warehouse	43	42.79	\$1,839.97
Totals	3527		\$238,964.76

#### \$1,112,444.85 Installation of CWDM & Ethernet Systems:

This project seeks to replace an aging ATM/SONET overlay network with an Ethernet access network. As part of this project 913 Ethernet switches and CWDM systems need to be deployed throughout lowa. Planning, design, coordination, and commissioning will require an average of 17.75 hours per location with an average cost per site of \$1218.45. The hourly breakdown is as follows:

<u>Personnel</u>	<u>Hours</u>	<u>Rate</u>	Total/Category
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Engineering	1.5	55.17	\$82.76
Warehouse	.75	42.79	\$32.09
Project Management	1.5	47.40	\$71.10
Data Operations	2	75.70	\$151.40
Site Travel (2 techs)	4	74.75	\$299.00
Site Prep	1	74.75	\$74.75
Fiber Testing (2 techs)	2	74.75	\$149.50
Coordination Group	1.5	74.75	\$112.13
Commissioning	1	74.75	\$74.75
Decommissioning	.5	74.75	\$37.38
Data Terminal Techs	1.5	74.75	\$112.13
Site Totals	17.75		\$1218.45
Project Total	913		\$1,112,444.85

#### \$468,220.20 Provisioning of Customer Circuits:

After the new core, aggregation, and access systems are in place customer circuits can be provisioned. At least 1036 customer circuits need to be provisioned with this access network drive and systems upgrade. The cost to provision customer circuits is as follows:

<u>Personnel</u>	<u>Hours</u>	<u>Rate</u>	Total/Category
Sales - Order Entry	.5	63.42	\$31.71
Project Management	1	47.40	\$47.40
Engineering	1.25	55.17	\$68.96
Data Operations	1.5	75.70	\$113.55

Data Terminal Techs	1.5	74.75	\$112.13
Coordination Group	.75	74.75	\$56.06
Finance – First Billing	.5	44.27	\$22.14
Total	7		\$451.95
Project Total		1036	\$468,220.20

#### 8. Demolition and removal - \$0

No costs to allocate in this category

#### 9. Construction - \$13,533,583

\$742,670 of this category is for the construction of fiber in the city of Decorah, Iowa. The CCI partnership includes the city, county, local school district, local hospital, public works department, private college, and a regional education association. Project construction includes 49,511 and 1/3 feet of conduit and fiber along with the necessary handholes and building entrances. A minimum of 72 strands of fiber will be installed to link each facility with an average cost per foot of \$15.

\$330,525 of this category is to install a fiber from the ICN backbone to the Sac & Fox Tribe Settlement School, medical clinic and administrative center. The average cost of construction including conduit, fiber, handholes, building entrances, etc. is \$15 per foot. A total of 22035 feet will be constructed with a minimum of 72 strands per segment.

\$757,878 of this category is to install a fiber-to-the-home (FTTH) project linking the residents of the Sac & Fox Tribe to high speed internet. Five subcategories for this turn-key construction project include:

<u>Pre-connectorized fiber</u>: Fiber with pre-connectorized sealed connections is used from a spliced backbone connection to an in-ground distribution point. A fiber drop cord provides the final connection to each home. A total of 68,650 feet of pre-connectorized fiber will be used with an average cost of \$1.70563729 per foot.

<u>Trenching Labor</u>: Contract labor to install fiber from the backbone to the distribution point and from the distribution point to the home will cost \$5 per foot with a total of 68,650 feet installed.

<u>Backbone fiber installation:</u> Costs include installation of conduit, setting of handholes, and pulling a minimum 144 strands of fiber per segment. Installation cost is \$20 per foot with 13,060 feet in total.

<u>Fiber Slicing:</u> 432 splices are required to connect the backbone to the distribution fiber at a cost of \$50 per splice.

<u>Fiber Distribution Panels (FDP):</u> Eight fully loaded 72 strand fiber distribution panels are required to terminate fiber at the headend. Average cost per strand for the FDP is \$25.58333.

Materials & Labor	<u>Units</u>	Cost/Unit	Total/Category
Preconnectorized -fiber	68,650	\$1.70563729	\$117,092
Trenching Labor	68,650	\$5.00	\$343,250
Backbone Fiber Install	13,060	\$20.00	\$261,200
Fiber Splicing	432	\$50.00	\$21,600
Fiber Distribution Panels	576	\$25.58333	\$14,736
Project Total			\$757,878

\$7,252,910 of this category is to procure 15 year last mile fiber IRUs in 104 cities across lowa with the average cost per IRU of \$69,739.5192307. Average cost per year is \$4649.30 or \$387.44 per month. The average distance per IRU is 5019 feet.

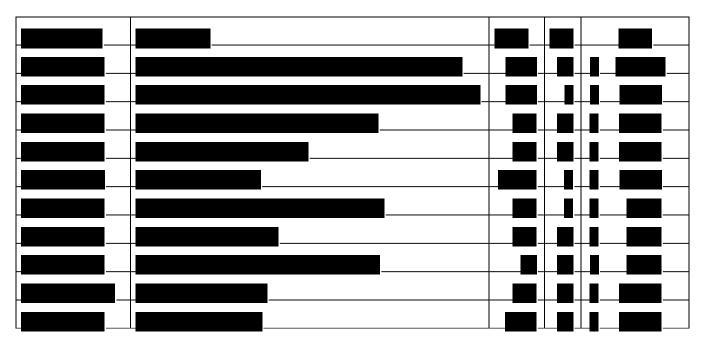
\$4,449,600 of this category relates to the procurement of 5 year IRUs in 198 locations. This project will convert each site from a DS3 lease to a dark fiber segment. Average cost per IRU is \$22,472.727272, with a rounded annual cost of \$4494.55 or a monthly average cost of \$374.55.

## 10. Equipment - \$8,240,330

The cost to deploy network electronics can be divided into six distinct hardware categories: DWDM Systems, CWDM Systems, Ethernet Aggregation Switches, Ethernet Access Switches, FTTH Aggregation, FTTH Customer Premise.

#### \$5,299,630 DWDM Systems:

Costs include all hardware to deploy 43 core node locations around lowa. The average cost per node is \$123,247.21 and includes all optics, multiplexers, amplifiers, transponders, DCMs, and other components to provide a scalable DWDM system. Total system cost is rounded to the closet dollar at \$5,299,630.



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#### **\$48,725 CWDM Systems:**

Five systems are to be deployed to aggregate wavelengths in lower density areas of the network with an average cost of \$9745 each.

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#### \$748,351 Ethernet Aggregation Switches:

The project procures 10Gbps capable Ethernet switches for aggregation of traffic in each county. There are 99 counties in lowa; however, some counties have multiple aggregation points. 104 switches are requested at \$7,195.68 per switch includes SFPs for optical transmission. Total system cost is rounded to the closet dollar at \$748,351.



#### \$1,968,367 Ethernet Access Switches:

The application requests Ethernet switches with SFPs to upgrade or connect 803 customer sites around the state with a 1Gbps of symmetrical Ethernet service. The Ethernet switches and SFPs have an average cost of \$2,451.27 per site. Total system cost is rounded to the closet dollar at \$1,968,367.



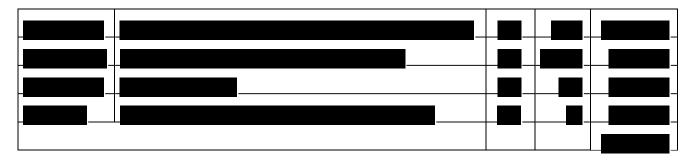
#### \$105,407 FTTH Aggregation:

Costs include a Passive Optical Network (PON) headend to aggregate Ethernet services to the 196 tribal homes. The cost per home is \$537.79.



#### \$69,850 FTTH Customer Premise:

The project requests 196 outside ONTs to terminate service at each tribal home served and 4 spares. The cost per home is \$356.38.





# 11. Miscellaneous - \$0

No costs to allocate in this category

# 13. Contingencies - \$0

No costs to allocate in this category

# 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.