



**Broadband Infrastructure Application  
Submission to NTIA – Broadband Technology Opportunities Program**

<b>Submitted Date:</b> 3/26/2010 7:51:32 PM	<b>Easygrants ID:</b> 7296
<b>Funding Opportunity:</b> Broadband Technology Opportunities Program	<b>Applicant Organization:</b> COM NET, INC.
<b>Task:</b> Submit Application - BTOP	<b>Applicant Name:</b> Mr. Tim Berelsman

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## A. General Application Information

Applicant Information	
Name and Federal ID for Applicant	
<b>DUNS Number</b>	957284334
<b>CCR # (CAGE)</b>	5LTC8
<b>Legal Business Name</b>	COM NET, INC.
<b>Point of Contact (POC)</b>	TIM BERELSMAN 4197393100 Ext. 3151 tberelsman@cniteam.com
<b>Alternate POC</b>	PHYLLIS MACKE 4197393100 Ext. 3193 pmacke@bright net
<b>Electronic Business POC</b>	DAVE FREY 4197393100 Ext. 3153 dfrey@cniteam.com
<b>Alternate Electronic Business POC</b>	PHYLLIS MACKE 4197393100 Ext. 3193 pmacke@bright net

Name and Contact Information of Person to be Contacted on Matters Involving this Application:	
<b>Prefix</b>	Mr.
<b>First Name</b>	Tim
<b>Middle Name</b>	
<b>Last Name</b>	Berelsman
<b>Suffix</b>	
<b>Telephone Number</b>	419-739-3151



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<b>Fax Number</b>	419-739-3154
<b>Email</b>	tberelsman@cniteam.com
<b>Title</b>	CEO

**Additional Contact Information of Person to be Contacted on Matters Involving this Application:**

Project Role	Name	Phone	Email
Secondary Point of Contact	Mr. Thomas Alan, Reid	7405900076	Tom@ReidConsultingGroup.com

**Environmental Point of Contact**

Prefix: Name: Bowman, Jen Suffix: Telephone Number: 740-597-3101 Title: Environmental Projects Manager, Voinovich School of Leadership
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**Organization Classification**

<b>Type of Organization</b>	For-profit Entity
<b>Is the organization a small business?</b>	Yes
<b>Does the organization meet the definition of a socially and economically disadvantaged small business concern?</b>	No

**Authorized Organizational Representative**

<b>AOR Name</b>	BERELSMAN, TIM
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<b>Result</b>	Applicant Authorized
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**Project Title and Project Description**

**Project Title:** GigEPAC--GigE PLUS Availability Coalition

**Project Description:** GigE PLUS Availability Coalition offers a far reaching public-private partnership among three existing network providers to address the compelling problem of the digital divide for rural communities in 28 counties in western Ohio. GigEPAC will provide over 700 miles of fiber optic cable construction providing access to affordable rates for 30,488 unserved households and 2,959 anchor institutions

**CCI Priority Checklist**

**The following items were selected from the CCI Priority Checklist:**

1. This project will deploy Middle Mile broadband infrastructure to community anchor institutions.
2. The project will deploy Middle Mile broadband infrastructure and has incorporated a public-private partnership among government, non-profit and for-profits entities, and other key community stakeholders.
3. This project will deploy Middle Mile broadband infrastructure in economically distressed areas.
4. This project will deploy Middle Mile broadband infrastructure to community colleges.
5. This project will deploy Middle Mile broadband infrastructure to public safety entities.
6. This project will deploy Middle Mile broadband infrastructure and either includes a Last Mile infrastructure component in unserved or underserved areas or has received commitments from one or more Last Mile broadband service providers to utilize the Middle Mile components. Any Last Mile components in rural areas do not exceed 20% of the total eligible costs of the project.
7. This project will deploy Middle Mile broadband infrastructure and the applicant has proposed to contribute 30 percent or more in non-federal cost match.

**Comprehensive Community Infrastructure Components**

**The following items were selected from the Comprehensive Community Infrastructure Components:**



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Middle Mile

**BIP Applicants**

Have you also applied to BIP for funding in the sample proposed funded service area?

- No

If Yes, please provide the project title and Easygrants ID number:

Title of Joint BIP Application:

Easygrants ID:

**Other Applications**

Is this application being submitted in coordination with any other application being submitted during this round of funding?

- Yes

<b>Easygrants ID</b>	<b>Project Title</b>
6233	Connecting Appalachian Ohio Middle Mile Consortium
4395	Transforming NE Ohio: From Rust Belt to Tech Powerhouse – An Ohio Middle Mile Consortium Project
6640	Southwest Ohio Comprehensive Fiber Ring with the application of Com Net

If YES, please explain any synergies and/or dependencies between this project and any other applications.

Please see letters of support and cross-reference attached.

**Individual Background Screening**

Is the Applicant exempt from the Department of Commerce requirements regarding individual background screening in connection with any award resulting from this Application?

- No, Applicant is subject to these requirements



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If the answer to the above question is "No," please identify each key individual associated with the Applicant who would be required to complete Form CD-346, "Applicant for Funding Assistance," in connection with any award resulting from this Application:

<b>Name</b>	<b>Title</b>	<b>Employer</b>
Tim Berelsman	CEO	Com Net, Inc.
Preston Meyer	Director	Com Net, Inc.
Chris Phillips	Director	Com Net, Inc.
Lonnie Pederson	Director	Com Net, Inc.
Ken Miller	Director	Com Net, Inc.
Eric Damman	Director	Com Net, Inc.
Phil Maag	Director	Com Net, Inc.
Don Hoersten	Director	Com Net, Inc.
Christopher Morley	CFO	Zayo Bandwith
John Scarano	COO	Zayo Bandwith
Marty Snella	CTO	Zayo Bandwith

## **B. Executive Summary, Project Purpose and Benefits**

<b>Essay Question</b>
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**Executive Summary of the proposed project:**



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GigE PLUS Availability Coalition [GigEPAC] involves 28 counties in western Ohio by addressing the compelling problem of the digital divide between urban (20%) and rural (80%) communities, and the subsequent inequality of economic development and quality-of-life opportunities resulting from inadequate residential, commercial, medical, public safety, and educational access to high-speed broadband services. GigEPAC's service delivery area includes 2,442 unserved square miles representing 30,488 unserved households. The service delivery areas finds 23 of the 28 counties having child poverty rates of 10% or worse with 8 counties greater than 15% and 3 counties higher than 18%. Directly impacting child poverty are the unemployment rates in western Ohio with 20 of 28 counties above the Ohio average of 11.8% ranging from 9.3% to 19.3% (January 2010). Automotive-related restructuring has had a negative impact on employment in 21 of the 28 counties in the region.

In May 2002 the Consumer Federation of America released a report noting the true measure of the digital divide is in assessing home Internet access. Being disconnected in the Information Age is not like being deprived of a luxury. Being disconnected means being disconnected from the economy and democratic debate. The GigEPAC project allows access in rural Ohio enabling these rural communities to enhance local economies, better manage natural resources, and improve access to education and health services. The service delivery area for the project finds 19.4% of the region unserved with 98% of the households underserved.

**Applicants Qualifications**—Com Net delivers big pipe transport solutions from Metro Ohio to Strategic Local Communication Provider Partners that have a foundation and focus on serving Tier 3 Markets and Rural Communities in Ohio. These cost-effective, high-availability transport solutions are utilized to power our Strategic Partners Local Service and Distribution Networks for delivering Voice, Video and Data service to Residential and Business subscribers located throughout the served community.

Today Com Net and its' 30 Last Mile Broadband Service Providers serve 120 unique school facilities directly or indirectly based on District-owned fiber from its' central hub connection to its' other buildings. Of these, 15 are served through wireless-to-the-school. Through the use of Middle Mile Components, these schools will be upgraded to Fiber-to-the Building. The schools are served by three of the Ohio Information Technology Centers (ITC)—NOACA, NOACSC and WOCO. Through the use of these Middle Mile Components the connection to the hub ITC sites will be transitioned from a lateral, unprotected connection to a protected, diverse path connection. The connection to NOACSC today is a single path 300 Mbps Ethernet Aggregate Hub connection.



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Partnerships—To achieve, build and operate the proposed middle-mile network, the GigEPAC offers a far reaching public-private partnership among three existing network providers including: Com Net [Lead Applicant] is the managing member of Broadband Network Group, LLC and Independents Fiber Network, LLC, an Ohio Interexchange Carrier, as well as a participant in other shared network arrangements. Their NW Ohio network currently spans more than 600 route miles and serves 30 independent last mile providers, both wireless and wireline. In addition, Com Net is the managing member of Tier 2 Communications, a Competitive Local Exchange Carrier, and Bright Long Distance, a Switchless Long Distance Provider, underscoring its knowledge of carrier relations. Zayo Bandwidth [Sub-Applicant] is a provider of fiber-optic telecom services in 23 states and 141 markets, including LH/Metro 2,006 miles of existing fiber in Ohio and over 20K total fiber miles nationally. Zayo’s successful growth strategy in the past several years has attracted \$325 million in private investment and secured \$150 million in debt financing. Zayo will strengthen its Ohio commercial backbone and provide links to carrier hotels and Tier 1 network service providers to carry commercial traffic to/from the service area. OARnet [Public Sub-Applicant] is a 23-year-old statewide network operated by the Ohio Board of Regents serving community colleges, universities, K-12 schools, health care and government offices. Operating on more than 1,850 miles of fiber-optic cable, OARnet will strengthen the redundancy and reach of its backbone network through the OMCC—Ohio Middle Mile Consortium. OARnet also provides peering to Internet 2, MERIT and PennREN, providing its constituents with inter-connection to academic and research networks worldwide.

Community Anchor Institutions—GigEPAC will improve connectivity for a total of 2,959 community anchor institutions in the 28-county western Ohio service area, including: 28 postsecondary institutions; 322 public safety facilities; 279 health care facilities and county health departments; 706 K-12 school buildings with enrollment of 325,881; 165 libraries; 14 State of Ohio parks; 575 State, county, and local government offices, 504 community support agencies, and 377 public housing.

Twelve school districts with identified needs for Ethernet or Fiber-to-the-School will be served through Middle Mile Fiber Components from the project. Com Net has identified an additional 1,502 sites throughout the service area. A portion of these sites are served today by Time Warner Cable, Buckeye Cable and/or Cincinnati Bell. Time Warner has a contract with the State of Ohio that the school districts can purchase from. Com Net understands that in certain areas Time Warner is the only provider of Ethernet over Fiber, and in many instances an ICB is





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required to construct fiber to the schools. In other areas competition already exists in serving the schools via fiber through Buckeye or Cincinnati Bell. Of these 1,502 sites, 788 are in the Ohio Middle Mile Consortium in the interconnected counties, which are viewed to be competitive service areas. This leaves a balance of 714 Sites, which in Com Net's view, the state's interest would be best served by maintaining carrier diversity, as f Com Net and its' Last Mile Broadband Service Providers were to provide Fiber-to-the-School to half of the locations or 357 sites. Com Net is therefore projecting to serve another 357 sites through the use of the expanded network's Middle Mile Facility Components coupled with investment in new Last Mile Facilities by its Last Mile Broadband Service Providers. The build-out service plan will therefore be based on Fiber to the Building and not a wireless deployment.

Com Net plans to serve the PSAPs in all but the interconnected counties (or 25 County PSAPs plus individual municipality PSAPs). Com Net - between it and its' Broadband Service Providers (BSPs) - already serves 3 of the 25 County PSAPs, leaving a balance of 22 PSAPs which Com Net and its BSPs plan to serve with Fiber to the County PSAP location.

Com Net has identified 82 wireless tower sites that Com Net or its BSPs have legacy fiber facilities running by that could be put into service through the upgrade of capacity of the network using the proposed wave technology. These 82 tower sites are primarily in Phase 2 or 3 roll-out plan areas and many have already been served by Time Warner Cable. There is concern over a single fiber cut disabling service to multiple towers at a time. Com Net believes it will be able to successfully service 50% of these locations over time, as current term requirements expire, or as cell sites go into the implementation stages through Phase 2 or Phase 3 roll out. In addition to these sites, the expanded Network coverage in the 25 non-interconnected counties will present an opportunity to reach three (3) times the number of tower sites, however these will be on routes that will be competitive with ZAYO and OARnet as Com Net's sub-recipients on the project. Com Net's estimate is for a third of this business or 82 Tower Sites through the use of the new construction Middle Mile Components.

Potential for Job Creation—The Council of Economic Advisors' ARRA job creation formula and guidelines were used to estimate the job creation benefit of the GigEPAC project. To this end, the total governmental project request amount was divided by \$92,000 to determine the number of Full-Time Equivalents (FTE). These FTE numbers were divided by into the direct, indirect and induced job estimations for the proposed project. The resulting estimate for job creation for the GigEPAC project was 329.



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**Project purpose:**

GigEPAC’s effective solution is important for the future of underserved communities in Ohio, delivering next-generation capacity (100 Mbps–10 Gbps) to 28 counties that have not received the benefits of commercial-grade investment due to the high-cost-of-entry for service providers traditionally handicapped by short-term return-on-investment demands by shareholders. Our public-private collaboration produces an open and carrier-neutral approach that brings together both public and private investment for the provisioning of back-haul and mid-haul services to economically challenged areas. It simultaneously provides the highest level access services to community anchor institutions at costs comparable to those enjoyed by institutions in more well-developed urban communities, expands broadband access for state and local public safety institutions, and spurs economic development and job creation within underserved communities and vulnerable populations.

The project lead, Com Net, allows for the creation of a single middle mile telecommunications network and Internet Service Exchange for 28 western Ohio counties. With its partners, Com Net is able to interconnect to interstate service providers to create a regional exchange beyond the Ohio borders. As a whole (including existing assets not funded under this proposal), the resultant network will seamlessly link hundreds of rural communities with the key urban areas [Columbus, Dayton, Toledo] in the State of Ohio on a single network, presenting connectivity to over 24 Last Mile Broadband Service Providers committed to using Middle Mile Network components in order to provide direct connectivity for community anchor institutions to the OARNet Intrastate Research and Education core network and to Interstate Carrier PoPs of ZAYO .

The network will provide high-speed broadband fiber access to 2,959 community anchor institutions at speeds ranging from 5 Mbps to 40 Gbps, fixed point-to-point wireless at 5 Mbps to 600 Mbps, and (in select service areas) fixed WiMAX services at 3 Mbps to 40 Mbps to residents, businesses, and federal, state and local public safety personnel. Each point on the proposed network serves as an interconnection point from which independent carriers may construct a last mile network due to our open and carrier neutral network architecture and operating model. Thirty local and national carriers are using Com Net’s infrastructure for middle mile transport. In addition, each middle mile interconnection point in the defined service area provides the capacity for accepting service area traffic in excess of 100 Gbps that can scale in multiples to over 38 Tbps onto Com Net’s proposed urban-to-rural core network.



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Proposed Funded Service Area is Underserved—High-speed broadband access (100 Mbps to 1 Gbps) is widely recognized across the United States as the minimum requirement for commercial investment in a community by any Fortune 2000 or Global 5000 firm. 21st century learning environments designed to create the leaders and workers of the digital age require synchronous connections at minimum speeds of 100 Mbps to exploit global information pathways, multi-media resources, distance learning and advanced STEM curricula. Real-time access emergency response and criminal record data, regardless of geographic location, is mission critical for public safety personnel to effectively respond in times of crisis or suspected criminal activity. Electronic medical records, remote diagnostic capabilities and advanced telemedicine services require minimum synchronous connectivity at speeds of 100 Mbps to 10 Gbps to bridge the enormous gulf between medically-underserved communities and the urban core. Service options are limited in the service area funded through this proposal with 98% of the households underserved. GigEPAC in cooperation with its' fellow Ohio Middle Mile Consortium (OMMC) partners delivers a sustainable and robust solution to each of these problems across Ohio with a solution designed to scale with exponentially growing demand for generations to come.

The project fully addresses the following elements of four (4) of five (5) BTOP statutory purposes: (1), (2), (3) Provide improved access to underserved consumers, public safety agencies, and school, libraries, medical and healthcare providers, higher education, and other community support organizations, (4) stimulate demand for broadband, economic growth, and job creation.

Potential for Job Creation—The Council of Economic Advisors' ARRA job creation formula and guidelines were used to estimate the job creation benefit of the TONIC Project. To this end, the total governmental project request amount was divided by \$92,000 to determine the number of Full-Time Equivalents (FTE). These FTE numbers were divided by the direct, indirect and induced job estimations for the proposed project. The resulting estimate for job creation for the GigEPAC project was 329.

Recovery Act and Other Governmental Collaboration—GigEPAC is not receiving, nor requested, federal support for non-recurring costs that would result in our receipt of duplicative federal funding to cover the same costs in the service areas for which we are seeking an award. There are no other federal sources directly contributing to the scope of work envisioned under this project. The project leverages existing dollar awards from the Federal Communications Commission (FCC) through the Rural Health Care Pilot Program to Southern Ohio Health Care Network (SOHCN) and OneCommunity HealthNet along with ARRA BIP-BTOP Round 1



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funded projects to Consolidated Electric Company, MERIT, iLITE, Benton Ridge Telephone Company and Wabash Mutual Telephone Company through the establishment of Network-to-Network Interface (NNI) points. This provides a core middle mile transport backbone with last mile facilities to build off of which the funded middle mile network expansion rings requested under this project will interconnect.

**Recovery Act and Other Governmental Collaboration:**

GigEPAC is not receiving, nor requested, federal support for non-recurring costs that would result in our receipt of duplicative federal funding to cover the same costs in the service areas for which we are seeking an award. There are no other federal sources directly contributing to the scope of work envisioned under this project.

The project leverages an established six hundred plus middle mile network built by Com Net, Incorporated through the efforts of its wholly owned subsidiary Independents Fiber Network and twenty-one Independent Last Mile Broadband Service Providers. The Last Mile Broadband Service Providers utilize the middle mile components from this established network to provide Fiber-to-the-Premise Broadband services to residences, businesses, schools and other public institutions within its footprint. The middle mile components also power VoIP, IP LD Termination IPTV, Wireless Broadband, Cable Modem Broadband and xDSL Broadband services.

The project does leverage existing dollar award from the Federal Communications Commission (FCC) through the Rural Health Care Pilot Program to Southern Ohio Health Care Network (SOHCN) and OneCommunity HealthNet along with ARRA BIP-BTOP Round 1 funded projects to Consolidated Electric Company, MERIT, iLITE, Benton Ridge Telephone Company and Wabash Mutual Telephone Company through the establishment of Network-to-Network Interface (NNI) points.

Leveraging existing FCC projects and Round 1 BIP-BTOP funded projects in this fashion significantly reduces the overall cost of the network expansion into underserved rural communities across the Western Ohio footprint represented as the outcome of the Rural = Urban: From Rust Belt to Tech Powerhouse project, not only through the construction of redundant middle mile rings from the closest network point rather than building from the urban core, but also through a careful integration of the build-out itself, allowing for collapsed costs through



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parallel construction activities through the tri-region approach of the OMMC and an economy of scale for fiber and equipment purchases, as well as construction and make ready services.

There is no physical overlap between the other funded project designs excepting interconnection points, resulting in a single unified middle mile network backbone across Ohio with connection points to neighboring states that will provide direct services to hundreds of hospitals, thousand of schools, hundreds of state, county and municipal agencies, and long-haul and mid-haul transport for dozens of commercial carriers and service providers. There is also no overlap in equipment purchases required to light up the dark fiber laid by the projects.

In addition, there is no requested federal support for non-recurring costs that would result in Com Net receiving duplicative federal funding to cover the same costs in service areas for which we are seeking an award under the BIP program in our BTOP Infrastructure.

**Fit with BTOP CCI Priorities:**

The GigEPAC project meets or exceeds all CCI priorities. GigEPAC will contribute a 30 percent cash match. Central to the project is the estimated 700 miles of Middle Mile Broadband infrastructure being deployed to the following Community Anchor Institutions—Com Net plans to utilize Middle Mile Facility Components to enable service to the following:

Anchor # Higher Education City State

Com Net plans to utilize Middle Mile Facility Components to enable service to the following colleges as a primary connection or as a provider of diverse alternative/fail-over connection

- |    |                                |             |    |
|----|--------------------------------|-------------|----|
| 1  | Clark State University         | Springfield | OH |
| 2  | Wittenberg University          | Springfield | OH |
| 4  | Edison State Community College | Piqua       | OH |
| 6  | Ohio Northern University       | Ada         | OH |
| 7  | OSU Lima                       | Lima        | OH |
| 9  | Bluffton University            | Bluffton    | OH |
| 10 | University of Findlay          | Findlay     | OH |
| 11 | Heidelberg University          | Tiffin      | OH |
| 12 | Tiffin University              | Tiffin      | OH |

Com Net plant to utilize Middle Mile Components to establish a Point of Connect with Consolidated Electrics Round 1 funded project to serve the following Universities:

- |    |                              |          |    |
|----|------------------------------|----------|----|
| 14 | Ohio Wesleyan University     | Delaware | OH |
| 15 | Methodist Theological School | Delaware | OH |





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16 Pontifical College Josephinum Worthington OH

Com Net Plans to Utilize Middle Mile Components to connect with facilities of its existing Last Mile Broadband Service Providers to deliver more cost effective connectivity between these universities and an OARnet PoP where Com Net establishes a Network Connection:

- 3 Urbana University Urbana OH
- 5 Wright State University Lake Campus Idlewild OH
- 13 Defiance College Defiance OH
- 8 University of Northwestern Ohio Lima OH

GigEPAC offers a far reaching public-private partnership among three existing providers— (1) Com Net, lead applicant and managing member of Broadband Network Group LLC and Independents Fiber Network LLC, an Ohio Interexchange Carrier, (2) Zayo Bandwidth a provider of fiber-optic telecom services, and (3) OARnet is a public partner with a 23 year-old statewide network operated by the Ohio Board of Regents serving community colleges, universities, K-12 Schools, health care and government.

Western Ohio represents an economically distressed areas with 23 of the 28 counties having poverty rates of 10% or worse, with 8 counties greater than 15% and 3 counties higher than 18%; 21 of the 28 counties have been impacted by the automotive-restructuring with unemployment rates ranging from 11.8% to 19.3% (January 2010).

GigEPAC will provide broadband access to 322 public safety entities across the 28 counties including fire departments and EMS providers. The Ohio Department of Administrative Services (DAS) operates Multi-Agency Radio Communications System (MARCS) for communicating with Public Safety agencies including police and fire departments. The MARCs system today utilizes older Motorola radio equipment that requires T1-TDM connectivity. The GigEPAC Broadband Service Provider participants can deliver Last Mile Wireless, Last Mile Copper or Last Mile Fiber. This allows Com Net and DAS to jointly work together to deliver the connectivity needed in the most cost-effective manner.

Com Net has developed excellent relationships with multiple 911-PSAP Coordinators. PSAPs are required to be on-line 24/7. Most of the PSAPs rely on legacy T1 connectivity. Each county PSAP was selected based on the knowledge we were able to acquire that indicates the local PSAPs within the county are already networked with the County PSAP and depend on the



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County PSAP for coordination efforts. We also understand the legacy TDM Voice Network and its interface limitations between tandems and with wireless operators that can occur in attempting to transfer callers to the proper county coordinator for dispatching the appropriate first responders. We project cost efficiency gains and improved responsiveness to the general public if the PSAPs are networked together in a highly reliable manner such that they could share caller local mapping applications rather than depending on isolated systems.

The real-time mapping capabilities and data extraction capabilities over the Internet can help police and fire departments be much more effective. As Com Net and its' partners have initiated connecting the county PSAPs, we have received an outcry from county and local police and fire departments expressing need to have their own offices connected with Ethernet connectivity back to county operation hubs. Com Net has already identified 268 fire stations in the service area which indicate the need for enhanced broadband connectivity. Com Net projects that all fire and police stations will in time see a need for Broadband Connectivity and eventually for protected, diverse-path connectivity to their stations.

GigEPAC will assist county court houses, which tend to be the hub of most county networks, to provide secure, fully isolated virtual local area network connections over an aggregate hub connection pipe between them and the OARnet PoPs which can transport the court house information back to the state's Broadband Ohio Network (BON) where they can receive their Dedicated Internet Access. Com Net has received a Master Service Agreement from the BON and is currently reviewing such for execution based on providing Ethernet and traditional TDM service offerings. Com Net will give the customer to select a term commitment for discounted pricing. Com Net will also treat an upgrade from TDM to Ethernet as an upgrade within term with no penalty. A one-time charge may apply depending on physical delivery media of copper or wireless for fiber-to-the premise.

The proposal includes a Last Mile infrastructure component to underserved areas—Com Net originally established a 435-mile SONET network serving 14 Last Mile Broadband Service Providers in Northwest Ohio. Second and third networks were added expanding, to a total of 30 providers.

**Is the applicant seeking a waiver of the Buy American provision pursuant to section x.Q of the NOFA?**

- No

**Is the applicant delinquent on any federal debt?**

- No



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If Yes, justification for delinquency:

**Are you seeking a waiver of any requirement set forth in the NOFA that is not mandated by statute or applicable law?**

- No

**Is the applicant a current recipient of a grant or loan from RUS?**

- No

### **C. Partners**

**Are you partnering with any other key institutions, organizations, or other entities for this project?**

- Yes

If YES, key partners are listed below:

Project Role: Sub-recipient Name: Shah, Pankaj Phone: 6142921486 Email: pshah@oar.net Address 1: 1224 Kinnear Road Address 2: Address 3: City: Columbus State: Ohio Zip Code: 43212 Organization: OARnet Organization Type: State or State Agency Small business: No Socially and economically disadvantaged small business concern: No
Project Role: Sub-recipient Name: Morley, Christopher Phone: 6106289295 Email: cmorley@zayo.com Address 1: 901 Front. St. Address 2: Suite 200 Address 3: City: Louisville





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State: Colorado  
Zip Code: 80027  
Organization: Zayo Bandwith  
Organization Type: For-profit Entity  
Small business: No  
Socially and economically disadvantaged small business concern: No

**Description of the involvement of the partners listed above in the project.**

To achieve, build and operate the proposed middle-mile network, the GigEPAC offers a far-reaching public-private partnership among three existing network providers to, include:

Com Net [Lead Applicant] is the managing member of Broadband Network Group, LLC and Independents Fiber Network, LLC, an Ohio Interexchange Carrier, as well as a participant in other shared network arrangements. Their NW Ohio network currently spans over 600 route miles and serves over 20 independent last mile providers, both wireless and wireline. In addition, Com Net is the managing member of Tier 2 Communications, a Competitive Local Exchange Carrier, and Bright Long Distance, a Switchless Long Distance Provider, underscoring its knowledge of carrier relations.

Zayo Bandwidth [Sub-Applicant] is a provider of fiber-optic telecom services in 23 states and 141 markets, including LH/Metro 2,006 route miles of existing fiber in Ohio, with over 20K total fiber miles nationally. Zayo’s successful growth strategy in the past several years has attracted \$325 million in private investment and secured \$150 million in debt financing. Zayo will strengthen its Ohio commercial backbone and provide links to carrier hotels and Tier 1 network service providers to carry commercial traffic to and from the service area.

OARnet [Public Sub-Applicant] is a 23-year-old statewide network operated by the Ohio Board of Regents. Today, OARnet consists of more than 1,850 miles of fiber-optic backbone. The network provides backbone services to Ohio's colleges and universities, K-12 schools, public broadcasting stations, academic medical centers, state and state local government agencies, federal and partnering research organizations. In the Ohio Middle Mile Consortium (OMMC) set of proposals, OARnet acts as the “glue” to interconnect all the regions and providing redundancy and services for the OMMC partners. Additionally, partners will leverage OARnet’s existing



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fiber for wave services, which will augment the benefits of their proposals and maximize the investment of program capital for maximum impact.

OARnet currently has fiber rings touching major population centers and smaller underserved regions, which the backbone fiber passes within reasonable proximity. Through the OMMC proposals OARnet will receive fiber IRUs that will expand its footprint, bringing backbone access closer to more remote sections of the state. Coupled with the middle mile fiber construction performed by the state regional OMMC partners, OARnet will help anchor institutions connect to services at higher bandwidth and more affordable rates. An additional benefit to OARnet will be greater reliability and redundancy by leveraging the new fiber to reduce dependency on the single point of failure within the Columbus area. The impact to Emergency Broadcasting provided by the Public Broadcasting System and Medical applications are an immeasurable improvement. Additional benefits will be seen by initiatives such as the Board of Regents Digital Learning Clearing House.

Com Net has leveraged an innovative business model for partnering with unaffiliated organizations in the project area from the public, non-profit and private sectors. It will leverage an open, carrier neutral (providing middle mile transport for over 35 last mile providers) and multi-stakeholder approach that aggregates community investments from multiple sources to increase availability, capacity and value-added services. This lowers the total cost of ownership while increasing the social value of the communities' involvement. Our approach for community anchor institutions is focused on:

- Reducing the burden of government: The OMMC participants have deep partnerships with the State of Ohio, dozens of county port and economic development authorities, and hundreds of county and municipal governments. In addition to providing direct services, Com Net works closely on economic development initiatives, infrastructure planning, and interconnecting local government I-Nets on a regional level for collective cost reductions.
- Creating 21st century learning environments through robust middle-mile transport solutions for the local and regional K-12 school systems and higher education institutions, including fiber-to-the-building solutions when otherwise unavailable. There are over 1500 K-12 schools and universities currently on the OMMC participants networks.



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- Enabling electronic medical record adoption and telemedicine services through direct fiber interconnectivity between urban and rural health care providers. HealthNet and SOHCN (Southern Ohio Health Care Network) connect hundreds of hospitals in Ohio, including world renown and Manipulation Under Anesthesia (MUA) hospitals, Federal Qualified Health Care Centers (FQHCs), and critical care facilities in rural areas. Offering connections at speeds up to 10 Gbps, HealthNet enables remote diagnostic services, advanced telemedicine, and remote specialties (e.g. pathology, neurology), collapsing costs and increasing the quality of patient care.

## D. Congressional Districts

### Applicant Headquarters

- Ohio

### Project Service States

Ohio

### Project Service Areas

Ohio - 1

Ohio - 2

Ohio - 3

Ohio - 4

Ohio - 5

Ohio - 8

Ohio - 15

**Will any portion of your proposed project serve federally recognized tribal entities?**



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➤ No

Indicate each federally recognized tribal entity your proposed project will serve.

Have you consulted with each of the federally recognized tribal entities identified above?

➤ No

## E. Service Area Details

Is the applicant seeking a waiver for providing less than 100% coverage of a service area?

➤ No

<b>Project Details</b>
------------------------

**Service Area Type:** Middle Mile  
**Service Area Name:** Com Net Darke County  
**Rural Classification of the Last Mile Service Area:** Rural  
**Service Status of the Last Mile Service Area:** Underserved

<p><b>If Service Status is "Underserved" please select at least one applicable option from this list.</b>          The rate of broadband subscribership for the proposed funded service area is 40% of households or less.</p>
--

**Total Square Miles in Service Area:** 600  
**Total Population in Proposed Service Area:** 53,309  
**Total Number of Households in Service Area:** 20,419  
**Total Number of Businesses in Service Area:** 4,767  
**Total Number of Community Anchor Institutions and Public Safety Entities in Proposed Funded Service Area:** 119  
**Unemployment Rate in the Service Area:** 12  
**Median Income in the Service Area:** 39,307  
**Estimated Percentage of Households with Access to Broadband:** 82  
**Estimated Percentage of Households Subscribing to Broadband:** 39



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**Service Area Type:** Middle Mile  
**Service Area Name:** Com Net Williams County  
**Rural Classification of the Last Mile Service Area:** Rural  
**Service Status of the Last Mile Service Area:** Underserved

**If Service Status is "Underserved" please select at least one applicable option from this list.**  
 The rate of broadband subscribership for the proposed funded service area is 40% of households or less.

**Total Square Miles in Service Area:** 424  
**Total Population in Proposed Service Area:** 39,188  
**Total Number of Households in Service Area:** 15,105  
**Total Number of Businesses in Service Area:** 3,179  
**Total Number of Community Anchor Institutions and Public Safety Entities in Proposed Funded Service Area:** 84  
**Unemployment Rate in the Service Area:** 15  
**Median Income in the Service Area:** 40,735  
**Estimated Percentage of Households with Access to Broadband:** 99  
**Estimated Percentage of Households Subscribing to Broadband:** 40

**Service Area Type:** Middle Mile  
**Service Area Name:** Com Net Hardin and Wyandot Counties  
**Rural Classification of the Last Mile Service Area:** Rural  
**Service Status of the Last Mile Service Area:** Underserved

**If Service Status is "Underserved" please select at least one applicable option from this list.**  
 The rate of broadband subscribership for the proposed funded service area is 40% of households or less.

**Total Square Miles in Service Area:** 878  
**Total Population in Proposed Service Area:** 54,853  
**Total Number of Households in Service Area:** 20,845  
**Total Number of Businesses in Service Area:** 3,943  
**Total Number of Community Anchor Institutions and Public Safety Entities in Proposed Funded Service Area:** 174



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**Unemployment Rate in the Service Area:** 12  
**Median Income in the Service Area:** 36,241  
**Estimated Percentage of Households with Access to Broadband:** 95  
**Estimated Percentage of Households Subscribing to Broadband:** 37

**Service Area Type:** Middle Mile  
**Service Area Name:** Com Net Clinton County  
**Rural Classification of the Last Mile Service Area:**Rural  
**Service Status of the Last Mile Service Area:** Underserved

<b>If Service Status is "Underserved" please select at least one applicable option from this list.</b> The rate of broadband subscribership for the proposed funded service area is 40% of households or less.
---

**Total Square Miles in Service Area:** 412  
**Total Population in Proposed Service Area:** 40,543  
**Total Number of Households in Service Area:** 15,416  
**Total Number of Businesses in Service Area:** 3,516  
**Total Number of Community Anchor Institutions and Public Safety Entities in Proposed Funded Service Area:** 82  
**Unemployment Rate in the Service Area:** 16  
**Median Income in the Service Area:** 31,033  
**Estimated Percentage of Households with Access to Broadband:** 88  
**Estimated Percentage of Households Subscribing to Broadband:** 36

**Service Area Type:** Middle Mile  
**Service Area Name:** Com Net Served Areas  
**Rural Classification of the Last Mile Service Area:**Rural  
**Service Status of the Last Mile Service Area:** Served

<b>If Service Status is "Underserved" please select at least one applicable option from this list.</b>
--

**Total Square Miles in Service Area:** 10,281  
**Total Population in Proposed Service Area:** 1,781,473  
**Total Number of Households in Service Area:** 665,261



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**Total Number of Businesses in Service Area:** 149,981  
**Total Number of Community Anchor Institutions and Public Safety Entities in Proposed Funded Service Area:** 2,501  
**Unemployment Rate in the Service Area:** 11  
**Median Income in the Service Area:** 45,218  
**Estimated Percentage of Households with Access to Broadband:** 96  
**Estimated Percentage of Households Subscribing to Broadband:** 56

## F. Community Anchor Summary

Community Anchor Summary	
Schools (k-12)	706
Libraries	165
Medical and Healthcare Providers	279
Public Safety Entities	322
Community Colleges	12
Public Housing	377
Other Institutions of Higher Education	16
Other Community Support Organization	504
Other Government Facilities	589
<b>TOTAL COMMUNITY ANCHOR INSTITUTIONS</b>	<b>2970</b>
Historically Black colleges and Universities	2
Tribal Colleges and	0



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<b>Universities</b>	
<b>Alaska Native Serving Institutions</b>	0
<b>Hispanic Serving Institutions</b>	0
<b>Native Hawaiian Serving Institutions</b>	0
<b>TOTAL MINORITY SERVING INSTITUTIONS</b>	2

## G. Project Benefits

### Demographics

<b>Jobs</b>	
<b>How many direct jobs-years will be created from this project?</b>	315
<b>How many indirect jobs will be created from this project?</b>	105
<b>How many jobs will be induced from this project?</b>	118

#### Methodology used to estimate jobs:

The Council of Economic Advisors' ARRA job creation formula and guidelines were used to estimate the job creation benefit of the GigEPAC-MMC Project. To this end, the total governmental project request amount was divided by \$92,000 to determine the number of Full-Time Equivalents (FTE). These FTE numbers were then further divided to determine the direct, indirect, and induced job estimations for the proposed project.

#### Project Impact:

The GigEPAC's project provides an effective solution for the creation of a single middle mile telecommunications network and Internet Service Exchange for a 13,450 square-mile area spanning 28 counties in western Ohio. With its partners, Com Net is able to interconnect to interstate service providers, providing a regional exchange beyond the Ohio borders. As a whole (including existing assets not funded under this proposal), the resultant network will seamlessly link hundreds of rural communities with the key urban areas [Columbus, Dayton, Toledo] in the State of Ohio on a single network, presenting connectivity to over 24 Last Mile Broadband Service Providers that are committed to using Middle Mile Network components in order to





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provide direct connectivity for community anchor institutions to the OARNet Intrastate Research and Education core network and to Interstate Carrier PoPs of ZAYO.

The network will provide high-speed broadband fiber access to 2,941 community anchor institutions at speeds ranging from 5 Mbps to 40 Gbps, fixed point-to-point wireless at 5 Mbps to 600 Mbps, and (in select service areas) fixed WiMAX services at 3 Mbps to 40 Mbps to residents, businesses, and federal, state and local public safety personnel. Each point on the network being built serves as an interconnection point from which independent carriers may construct a last mile network due to the open and carrier neutral network architecture and operating model. Over 30 local and national carriers are using Com Net’s infrastructure for middle mile transport. In addition, each middle mile interconnection point in the defined service area provides the capacity for accepting service area traffic in excess of 100 Gbps that can scale in multiples to over 38 Tbps onto Com Net’s proposed urban-to-rural core network ‘super-highway.’

Twelve school districts with identified needs for Ethernet or Fiber-to-the-School will be served through Middle Mile Fiber Components from the project. In addition to these known sites, Com Net has identified another 1,502 sites throughout the service area. A portion of these sites are served today by Time Warner Cable, Buckeye Cable and/or Cincinnati Bell. Of these 1502 sites, Com Net estimates that 788 are in what the Ohio Middle Mile Consortium in the Interconnected Counties, which are viewed to be competitive service areas. This leaves a balance of 714 Sites, which in Com Net’s view the state’s interest would be best served by maintaining carrier diversity if Com Net and its Last Mile Broadband Service Providers were to provide Fiber-to-the-School to half of the locations, or 357 sites. Com Net is therefore projecting to serve another 357 sites through the use of the expanded networks Middle Mile Facility Components coupled with investment in new Last Mile Facilities by its Last Mile Broadband Service Providers. Com Net has first-hand experience over the preference of fiber versus wireless connectivity by the local school administration with wireless as an acceptable interim solution. The build-out service plan will therefore be based on Fiber-to-the-Building and not a wireless deployment.

Anchor #	Higher Education	City	State
Com Net plans to utilize Middle Mile Facility Components to enable service to the following Colleges as a primary connection or as a provider of diverse alternative/fail-over connection			
1	Clark State University	Springfield	OH
2	Wittenberg University	Springfield	OH



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- 4 Edison State Community College Piqua OH
- 6 Ohio Northern University Ada OH
- 7 OSU Lima Lima OH
- 9 Bluffton University Bluffton OH
- 10 University of Findlay Findlay OH
- 11 Heidelberg University Tiffin OH
- 12 Tiffin University Tiffin OH

Com Net plant to utilize Middle Mile Components to establish a Point of Connect with Consolidated Electrics Round 1 funded project to serve the following Universities

- 14 Ohio Wesleyan University Delaware OH
- 15 Methodist Theological School Delaware OH
- 16 Pontifical College Josephinum Worthington OH

Com Net Plans to Utilize Middle Mile Components to connect with facilities of its existing Last Mile Broadband Service Providers to deliver more cost effective connectivity between these universities and an OARnet PoP that Com Net establishes a Network Connection

- 17 Urbana University Urbana OH
- 5 Wright State University Lake Campus Idlewild OH
- 13 Defiance College Defiance OH
- 8 University of Northwestern Ohio Lima OH

Northwest Ohio Community College for potential connectivity to the OARnet PoP in Lima, OH potentially more cost effectively than how they connect to OARnet today

Com Net plans to serve the PSAPs in all but the interconnected counties, or 25 County PSAPs plus individual municipality PSAPs. Com Net, between it and its' Broadband Service Providers (BSPs), already serves 3 of the 25 County PSAPs leaving a balance of 22 PSAPs Com Net and its BSPs plan to serve with Fiber to the County PSAP location.

GigEPAC will provide broadband access to 322 public safety entities across the 28 counties including fire departments and EMS providers. The Ohio Department of Administrative Services (DAS) operates Multi-Agency Radio Communications System (MARCS) for communicating with Public Safety agencies including police and fire departments. The MARCs system today utilizes older Motorola radio equipment that requires T1-TDM connectivity. The DAS has indicated that it is looking to upgrade this equipment, which will require Ethernet connectivity in



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the future. The DAS is looking for cost effective connections to the MARCs towers. This could be through Last Mile Wireless, Last Mile Copper or Last Mile Fiber. The GigEPAC Broadband Service Provider participants can deliver all three. This allows Com Net and DAS to jointly work together to deliver the connectivity needed in the most cost effective manner. Furthermore, since the GigEPAC companies have agreed to treat a change in technology from T1s to Ethernet as an in-term upgrade the DAS can maximize its savings by electing a long term discount and not having to be concerned with term penalties based on when they may be able to upgrade the radios and need to migrate from TDM to Ethernet. The GigEPAC will work with DAS to deliver an effective solution.

The real-time mapping capabilities and data extraction capabilities over the Internet can help our police and fire departments be much more effective. As Com Net and its' partners have initiated connecting the county PSAPs, we have received an outcry from county and local police and fire departments expressing the need to have their own offices connected with Ethernet connectivity back to county operations hubs. Com Net has already identified 268 fire stations around the service area indicating the need for enhanced broadband connectivity. Com Net projects that all fire and police stations will in time see a need for Broadband Connectivity and eventually for protected, diverse-path connectivity to their stations.

Com Net has identified 82 tower sites where Com Net or its BSPs have legacy fiber facilities running adjacent to which could be put into service through the upgrade of capacity of the network through the deployment of wave technology. These 82 tower sites are primarily in Phase 2 or 3 roll out plan areas and many have already been served by Time Warner Cable. The wireless company design engineers express concern over a single fiber cut disabling service to multiple towers at a time. Com Net believes it will be able to successfully service 50 % of these locations over time as current term requirements expire or as cell sites go into the implementation stages through Phase 2 or Phase 3 roll out. In addition to these sites, the expanded network coverage in the 25 non-interconnected counties will present an opportunity to reach three (3) times the number of tower sites, however these will be on routes that will be competitive with ZAYO and OARnet as Com Net's sub-recipients on the project. Com Nets estimate is for a third of this business, or 82 tower sites, through the use of the new construction Middle Mile Components.

In Com Net's efforts to maintain strength in numbers and a high quality on-going service solution, the middle mile facility components utilized to provide the service to the K-12 schools, PSAPs and cell towers will be through long-term lease of fibers to its' BSP's in the local area with an interest in serving the community anchor institutions. In the event no BSP expresses



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interest, Com Net will arrange for the deployment of service through its controlled affiliates Independents Fiber Network and Tier 2 Communications. The monthly recurring revenue to the project will be through aggregate transport sales over the middle mile network to hub site connections of the customer, Network-to-Network Interfaces with OARnet, ZAYO or other carriers connecting to the network.

**Vulnerable Populations:**

GigEPAC’s service delivery area represents the following vulnerable populations:

- 13.3% of the population as veterans, higher than the 12.6% national average
- 19.3% of the population with a disability
- 16.3% or 321,175 individuals being 60+ years of age
- The average across the 28 counties for youth under 18 in poverty is 18.2% or 64,601 youth.

GigEPAC is dedicated to the potential that today’s broadband holds for people with disabilities and will strive to provide strategies for achieving full access by discussing inclusion as part of the planning from the beginning. New technologies offer opportunities to overcome barriers, for instance, giving this community greater access to 911 and other emergency services using pagers, e-mail, and real-time text and video. The elderly can access health care services that allow to continue living at home. Older people tend to have little experience with technology, and learning to use the Internet can be frustrating. Low-income people often cannot afford a monthly broadband subscription in addition to the minimum cost for a computer. These issues are compounded by our rural areas, where accessibility is limited. GigEPAC, through its community anchor institutions, provides venues for increasing technology access and literacy as well as support services.

**Level of Need:**

Broadband access is viewed as necessary to fully utilize the Internet’s potential. As the Internet economy has matured, more applications now require higher data transmission rates. In a recessionary economy a number of Internet activities—including job searches and home businesses—become more critical for households. Only 54.1% of the adults in rural households in the GigEPAC service area have adopted broadband access. This shortfall in broadband use is involuntary and due to the higher cost of broadband provision and lower returns to broadband investment in sparsely populated areas. The service area’s status as predominantly rural contends with low population size, an aging population and places where population is widely dispersed



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over demanding terrain which have had difficulty attracting broadband service providers. These characteristics have made the fixed cost of providing broadband access too high, or limited potential demand, thus depressing the profitability of providing service.

Today wholesale routes are primarily intercity and have lower fiber counts available commercially—Dayton to Columbus to Cleveland to Toledo. It is costly or impractical to splice intervals into routes to service the rural communities of western Ohio. Currently there are no wholesale routes between Lima and Dayton - leaving Dayton an isolated city with single entry. The geographic nature of the region requires special construction charges to place fiber. Outlying areas need reliable dedicated commitment to buildings that is not affected by adverse weather altering the ability of those businesses' ability to operate in a profitable manner.

The GigEPAC is out to diversify Northwest Ohio's economy and bring greater stability and prosperity to the region. This will be achieved by bringing together three competent partners with ZAYO as the Interstate exchange carrier which will bring a Point-of-Presence on the Information Superhighway to Lima, Ohio. This represents a fundamental change in how national carriers have bypassed the area to the north traversing Cleveland-Toledo-Detroit-Chicago and to the south traversing Columbus-Dayton-Cincinnati. From this PoPin Lima, tie-in with Com Net's legacy network brings the Superhighway to the doorsteps of residents, public institutions and businesses throughout Western Ohio in a highly cost-effective manner. Com Net and its' consortium members have been building out from their base infrastructure since 2003 to bring broadband services to more and more communities around Northwest Ohio. This expansion has created a fiber mesh used to deliver IPTV, Broadband Data Services, IP Centrex and IP Voice Services to the area. Com Net serves as the back offices for these companies, helping them survive and flourish in a rapidly changing marketplace that has evolved from dial-up to always-on to Ethernet-over-Fiber services in the course of less than ten years.

Com Net and its' partners have a proven track record of working together in a mutually beneficial manner to enhance the services available and the customer's experience. Com Net understands that rural customers require a rural provider with staying power which treats them with respect, honesty and integrity. Com Net's Last Mile Broadband Service Providers are affiliates of the Independent Telephone Companies which have served these communities for years as the Carrier of Last Resort, with many of them having been in business for over one-hundred years. In virtually all cases their roots can be traced back to a group of forward looking local farmers who wanted to bring telecommunications to their community, so they started-up a



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for-profit Independent Telephone Company owned by those it served or a co-op serving its' members. In either case, the company had its' roots in the local community and was responsible to its local patrons.

Cost of physical infrastructure is the primary consideration in extending the capacity into underserved areas. Population scarcity limits the exploitation of economies of scale, entails lower rates of demand and reduced expected returns from investment. Remoteness implies the need of bridging longer distances from the local exchanges to the premises and to the backbone. The rural counties in the service area lag behind urban areas in terms of connection speeds. In more urban areas, average speeds are in the range of 512 and 1,000 kbps. Download speeds between 144kbps and 512 kbps are most common in rural counties. A wholesale provider like Zayo would not normally option to extend services into this type of a region due to the lack of corresponding, cost effective inter-community routes. The core of Zayo's business is bringing carrier content closer to the edge. By interconnecting major markets to second, third and fourth tier cities, company's like Zayo enable and empower regional and local service providers to have diverse and cost effective access to national internet gateways. The other core of Zayo's business is helping WISPs and cellular carriers extend the reach of their networks via Fiber to the Tower (FTTT) applications.

When carriers look at areas to expand FTTT they evaluate one broad geographic region and issue an RFP. They award to a FTTT provider, and then do a final tower/cost evaluation. Phase 2 of these projects is within the industry referred to as "rural deselect." Carriers want to expand capabilities, but it has been our experience that density of fiber equals equality of coverage. FTTT applications require dedicated fiber, and traditional DWDM muxing does not give the scale or flexibility for which carriers are looking. It is not a question of finding another way. Many suburban and rural areas are being passed over as national cellular carriers perpetuate rapid expansion where feasible and move on to the next region as part of 5 year 3G and 4G roll outs, and they never look back.

To construct or lease the facilities needed to serve this area would require an additional \$680,000 to \$866,000 per month in consistent monthly revenue to commercially justify this level of network expansion. The financial models for most carriers would never be commercially viable to bring this to fruition and support the \$150K to \$200K in operating expense.





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Telemedicine and telehealth, which have been hailed as vital to health care providers in rural communities, are limited by lack of access. The 279 health care facilities and county health departments in the service region are not able to economically benefit by reducing transportation time and expenses, treating emergencies more effectively, increasing lab and pharmacy work, or generate savings for health facilities by outsourcing specialized medical procedures. One study of 24 rural hospitals placed the annual cost of not having telemedicine at \$370,000 per hospital (USDA, ERS, August 2009).

GigEPAC will provide broadband access to 322 public safety entities across the 28 counties including fire departments and EMS providers. The Ohio Department of Administrative Services (DAS) operates Multi-Agency Radio Communications System (MARCS) for communicating with Public Safety agencies including police and fire departments. The MARCs system today utilizes older Motorola radio equipment that requires T1-TDM connectivity. The DAS has indicated that it is looking to upgrade this equipment, replacing it with new technology that will require Ethernet connectivity in the future. The DAS is looking for cost effective connections to the MARCs towers. This could be through Last Mile Wireless, Last Mile Copper or Last Mile Fiber. The GigEPAC Broadband Service Provider participants can deliver all three. This allows Com Net and DAS to jointly work together to deliver the connectivity needed in the most cost effective manner. Furthermore, since the GigEPAC companies have agreed to treat a change in technology from T1s to Ethernet as a-term upgrade, the DAS can maximize savings by electing a long term discount and not having to be concerned with term penalties based on when they may be able to upgrade the radios and need to migrate from TDM to Ethernet. The GigEPAC will work with DAS to deliver an effective solution.

Com Net has developed excellent relationships with multiple 911-PSAP Coordinators. These coordinators realize the critical nature of their role in connecting the general public with the first responders in the area. The PSAPs require on-line access 24/7 so when someone is in distress they can rely on the PSAP to be operational. Most of the PSAPs rely on legacy T1 connectivity. Com Net made a commitment during Round 1 of the BTOP process to work on building diverse paths in and out of the primary County PSAP centers so they would not be isolated in the event of a cable cut. Each county PSAP was selected based on the knowledge Com Net was able to acquire that indicates the local PSAPs within the county are already networked with the County PSAP and depend on the County PSAP for coordination efforts. We can see cost efficiency gains and improved responsiveness to the needs of the general public if the PSAPs could be networked together in a highly reliable manner such that they could share caller local mapping applications rather than depending on isolated systems. A high speed connection between the PSAPs and



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redundant data centers for housing common application servers would improve the quality and responsiveness to the public while realizing significant operating efficiencies allowing our police department to use their money to “put more feet on the street” to keep the public safe.

The real-time mapping capabilities and data extraction capabilities over the Internet can help our police and fire departments be much more effective. As Com Net and its’ partners have initiated connecting the county PSAPs, we have received an outcry from county and local police and fire departments expressing the need to have their offices connected with Ethernet connectivity back to county operation hubs. Com Net has already identified 268 fire stations around the service area, indicating the need for enhanced broadband connectivity. Com Net projects that all fire and police stations will in time see a need for broadband connectivity and eventually for protected, diverse-path connectivity to their stations.

GigEPAC will assist county court houses, which tend to be the hub of most county networks, in providing secure, fully isolated virtual local area network connections over an aggregate hub connection pipe between them and the OARnet PoPs which can transport the court house information back to the state’s Broadband Ohio Network (BON) where Dedicated Internet Access can be received. Com Net has received a Master Service Agreement from the BON and is currently reviewing such for execution based on providing Ethernet and traditional TDM service offerings. Com Net will give the customer the ability to select a term commitment for discounted pricing. We will also treat an upgrade from TDM to Ethernet as an upgrade within term with no penalty. A one-time charge may apply depending on physical delivery media of copper or wireless for fiber-to-the premise.

The geographic region serviced by GigEPAC has been severely impacted by the recessionary economy. Twenty-one of the counties in the project have been impacted by Automotive Restructuring. Unemployment rates in 20 of the 28 counties are higher than the Ohio average of 11.8%, with 8 counties greater than 15%. Unemployed adults are more likely to go online through our public libraries and schools when in-home access becomes unaffordable, making access to our community anchor institutions critical to western Ohio’s economy.

## **H. Technology**

### **Technology Type**

**Indicate the technology that will be used to deliver last mile services. The following items were selected:**

Wireline - Fiber-optic Cable





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Other:

**Technology Questions**

**Methodology for Area Status:**

The GigEPAC – Ohio Middle Mile Consortium contracted with the Voinovich School of Public Affairs at Ohio University to conduct our GIS and data analysis.

**Broadband Availability and Adoption:** In 2008, the State of Ohio’s Department of Development funded an extensive study of broadband availability and household broadband adoption in Ohio. The study, which was conducted by Connect Ohio, utilized GIS technology, coverage data from broadband service providers and data from a statewide telephone survey to estimate household broadband adoption rates by county and the number of households with and without broadband access by census block. Connect Ohio data were used to calculate all unserved and underserved statistics contained within this proposal. All broadband availability and adoption data provided by Connect Ohio are available online at [www.connectohio.org](http://www.connectohio.org).

**4 underserved sub-regions containing 5 counties:** This project consists of 28 contiguous counties. 4 of the counties qualify as underserved based on the criteria that 40% or less of households adopted broadband. The three separate underserved regions covers 2,314 square miles, contains 71,785 households and a population of 187,893. The aggregate broadband adoption rate (38%) was calculated using a weighted average. More specifically, each county’s broadband adoption rate was multiplied by the total number of households with the county to yield an estimate of the number of households within each county subscribing to broadband. However, each individual underserved service area also falls below 40% adoption.

**Unserved Households:** The percentage of households in the service region classified as unserved was calculated by dividing the number of households in the service region that lack broadband access by the total number of households in the service region and multiplying this result by 100. Based on these calculations, 17.8 percent of households within the proposed funded service area (30,488 households) lack access to broadband.

**Unserved Geographic Areas:** While we did not define unserved areas within the application due the complexity of the geo-contours, we report the analysis to communicate the severity of the



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problem in the proposed funded service area. Connect Ohio provides data on the number of square miles with and without broadband access by census block. These data were aggregated for the proposed funded service area to yield the total square miles served and the total square miles unserved. Total square miles unserved was then divided by the total square miles (served + unserved) and the result multiplied by 100 to yield the percentage of the geographic area that lacks broadband access. Based on these calculations, 19.4% percent of the service region (2,442 square miles) are classified as unserved.

**Description of Network Openness:**

The proposed GigEPAC Ohio Middle Mile Consortium (GigEPAC) network is open by design and intent.

The GIGEPAC will enter into any reasonable interconnection agreements to expand the reach and/or reduce the costs for all parties. The GIGEPAC will offer interconnection to facilities, where technically feasible, without exceeding current or reasonably anticipated capacity limitations on reasonable rates and terms to be negotiated with requesting parties. The GIGEPAC will negotiate in good faith with all parties making a bona fide request for access to the public Internet. Interconnection includes requesting parties' ability to connect to the public Internet and physical interconnection for the exchange of Internet traffic.

In addition, the GIGEPAC will:

- a. Interconnect through OARnet to educational and research networking in neighboring states including BTOP Round 1 winners PennREN, MERIT and I-Light.
- b. Provide high-speed links to urban "carrier hotels" in Columbus, Cincinnati and Chicago to provide access to the major global commercial networks.
- e. Peer with the other members of the Ohio Middle Mile Consortium to create a unified statewide middle mile network.

In terms of network management, the GIGEPAC will be non-discriminatory, using only industry standard best practices to manage service levels. Maintaining capacity for critical life-safety traffic will remain a top priority. As with any carrier network, the GIGEPAC will comply with all applicable law enforcement requests in the ethical and legal pursuit of evidence in criminal cases including CALEA compliance.



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The GIGEPAC do not discriminate or favor any lawful Internet applications, content, or services where lawfully used. We promote our customers’ ability to freely access and disseminate lawful content in a manner that respects others’ use of the network and that complies with the law. The GIGEPAC will support industry practices for safeguarding children, intellectual property rights and our customers’ privacy and security. The GIGEPAC follows standard best efforts for Internet delivery with respect to allocation of capacity without differentiation among applications, providers or sources. The GIGEPAC uses generally accepted technical measures to provide acceptable service levels to all customers, such as application-neutral bandwidth allocation, as well as measures to address service attacks, illegal content and other harmful activities to protect network integrity and reliability.

Specifically, Com Net:

1. Adopted and manage our networks according to all four (4) provisions of the FCC Broadband Policy Statement 05-151 adopted 08/15/2005;
2. Do not favor any lawful Internet applications or content over others, thereby ensuring neutral traffic routing;
3. Display network management policies in a prominent location on our website, and provide notice to customer to changes to these policies;

**System Design:**

ComNet’s network is primarily focused in the far Northwest corner of Ohio spanning from the Ohio-Michigan Border on the north to US33 on the south, and from the Ohio-Indiana border on the west to the I-75 corridor on the east. The network was first constructed through the leasing of existing fiber facilities from ComNet’s Last Mile Broadband Service Providers (BSPs) and then building bridging segments to fill in the gaps. This fiber facility is referred to as the legacy network. Two networks have been equipped across these ringed fiber facilities, a SONET OC48 network and a 10 Gigabit Ethernet Network.

The legacy network lacks the fiber and bandwidth needed to allow BSPs to provide metro grade bandwidth and networking features for business and “Triple Play” services to residential customers. The GigEPAC middle mile solution is designed to provide the bandwidth needed for the BSPs to offer these services in the 28-county area.



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The design will use DWDM and Ethernet equipment for interconnection and a high bandwidth transport between the Points of Presence (POP). Each POP will use Metro Ethernet and MPLS capable equipment to provide a variety of protocols for customer interconnections. Anchor Institutions will gain access to the ComNet backbone through the BSPs last mile service offerings.

BSPs will connect customers to the GigEPAC through their aggregation network or directly to the DWDM network for wave level services. The last mile connections for customers connected to the aggregation network may be on fiber or copper connections depending on the BSP's service offerings. Once connected to the BSP's aggregation network, the traffic can be aggregated into the BSPs Internet connectivity or placed on a Ethernet Virtual Circuit (EVC). EVCs will be routed through the GigEPAC to one or more BSP locations or to an exchange carrier such as Zayo and OARnet. Customers with DWDM circuits will be connected to the BSPs POP through dedicated fiber, and their wave circuit can be carried to any POP on the network to an Inter Exchange point to be handed off to another carrier. EVCs can range from 3Mbit/s to 10Gbit/s in bandwidth in increments specified in the attached rate sheet, and DWDM connections can be 1Gbit/s or 10Gbit/s.

Additionally, partners will leverage OARnet's existing fiber for wave services, which will augment the benefits of their proposals and maximize the investment of program capital for maximum impact. Cisco 15454 DWDM equipment consistent with existing infrastructure and provides an upgrade path as articulated by the vendor. Upgrades to the MX480 Juniper routers in the core to supply services to the OMMC and is consistent with current architecture. All other requirements will use Cisco 3400M switch/routers to support middle mile connectivity.

Com Net considered Cisco, BTI, and Cyan for a DWDM Vender. The requirements were: Robust mesh network, Reasonable support costs, Capable of supporting 40 10G waves, Integrated Metro Ethernet system for a switched 1G packet service, and Central Management system.

Cyan Optics provides a DWDM system that matches these requirements, and was selected based upon its successful use by industry peers. Cyan networks are in active use at iRis networks, US Carrier, Great Plains Communications, and Great Lakes Com Net. The Cyan CyMS management system for controlling this multi-layer platform is an excellent way to optimize and manage the network. Cisco will be used for the routing platform as an extension of the existing network.

The cable to be installed will contain 96 fiber strands, and, where feasible, will be buried to reduce maintenance. If the fiber install is outside of corporate limits, it will be referred to as rural, and will have a splice point every mile. If the fiber is installed inside corporate limits, but not a heavily industrialized area then the install is classified as urban. Urban installations will



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require directional boring, and will have a splice point every 2500 feet due to a more dense population. If the install is in a very dense population and in an industrialized area, then the install will be classified as metro. In this instance, large buildings with concrete bases create an obstacle to an underground install. The install will still be buried or utilize existing conduits where possible in Metro areas. Aerial links will be used when needed.

Sigma Technologies will be a partner of the project. Sigma's role is the collaboration on the engineering services involved in designing, building, and implementation of the project. Sigma is going to provide the guidance needed to deploy a turnkey system for the requirements set by Com Net. Sigma's approach uses proven processes, work control plans, and performance metrics. The application of advanced quality planning and project management body of knowledge methodically drives coordination of key deliverable and process details with associated assurance metrics. Myers Construction has agreed to be the lead contractor on the fiber construction. Myers Construction is a proven company that has been installing telecommunication lines for 23 years from small companies to companies as large as AT&T. A detail of Sigma Technologies and Myers Construction backgrounds and Letters of Contract are attached in the auxiliary section of the Application.

40 channel DWDM will be placed at the distribution nodes with options of 1 Gbps to 10 Gbps connections. At the access nodes, a multitude of interfaces will be allowed to keep the network openness and availability.

DWDM allows for growth over time as the initial system is a 6 10G lambda with the ability to upgrade to 40 lambdas. DWDM equipment will be placed at every POP. The POP placements, distances. The Cyan Z33 card is used at most POPs, however when the slot count increased the Cyan Z77 is used to ensure the integrity of the network while accomodating demand.

**Is the applicant seeking a waiver pursuant to section IX.C of the NOFA so as to sell or lease portions of the award-funded broadband facilities during their life?**

No

## I. Project Budget

Project Budget		
	Federal Grant Request	Match
Last Mile	0	0
Middle Mile	30,031,849	12,872,419



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<b>Total</b>	30,031,849	12,872,419
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**Project Budget Total:** \$42,904,268

**Match Percent:** 30.0%

**Projects Outside Recommended Funding Range:**



<b>Outside Leverage</b>	
<b>Applicant is providing matching funds of at least 20% towards the total eligible project costs?</b>	Yes
<b>Matching cost detail</b>	The matching funds for the GigEPAC Project will be supplied by ComNet, Inc. The funding amount, which accounts for 30% of the total project cost, is \$12,872,419. The funding will be supplied in as combination of grant match, cash, and other fund types, and will be used toward the infrastructure, working capital, and operating losses of the project. There are no contingent financing terms or conditions with these match funds.
<b>Unjust enrichment</b>	ComNet, Inc. is not receiving and has not applied for any federal non-recurring cost support for the GigEPAC Project proposed funded service area.
<b>Disclosure of federal and/or state funding sources</b>	ComNet, Inc. does not currently receive state or federal funding for the GigEPAC Project, nor have they applied to any other state or federal entity for any such funding.
<b>Budget reasonableness</b>	Considerable time was spent researching the unit pricing of this offering. A number of similar size and scale projects were used as pricing benchmarks, including a handful of funded first round ARRA BTOP and BIP middle mile applications and a number of state fiber networks across the country. This background information, along with industry trends toward more competitive pricing for high-capacity bandwidths, helped shape the final pricing approach. Sensitivity was also given to the economic climate, the demographic makeup of the proposed funded service area, and the probably budgets of the entities served by the proposed GigEPAC Project. Determination of number of





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	units subscribed was based on total number of units passed, and the levels of support and endorsement given from those units. Need of the area for higher bandwidth connectivity was also a factor, as well as the unserved/underserved status of particular endpoints. Bandwidth requirements were estimated based on entity type, with larger institutions like schools and colleges being estimated at 100Mbps connections, while smaller entities like fire and police stations were estimated at 50Mbps. These estimations helped determine the robust nature and design of the network, to ensure the connectivity is adequate for today and years to come.
<b>Demonstration of need</b>	The project is not financially feasible without grant assistance. The Net Present Value of -\$23,499,574 and the IRR of -5.75% are insufficient to warrant the undertaking of this project without grant funding. Grant funding however provides a sufficient improvement in the NPV and IRR to make the project feasible, specifically bettering the NPV to 2,615,077 and the IRR to 21.2%.

**Funds to States/Territories**

States	Amount of Federal Grant Request
Ohio	30,031,849

**Funds to States/Territories Total:** \$30,031,849

## J. Historical Financials

<b>Matching Funds</b>			
	<b>2007</b>	<b>2008</b>	<b>2009</b>
<b>Revenue</b>	██████████	██████████	██████████
<b>Expenditures</b>	██████████	██████████	██████████
<b>Net Assets</b>	██████████	██████████	██████████
<b>Change in Net Assets from</b>	██████████	██████████	██████████



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<b>Prior Year</b>			
<b>Bond Rating (if applicable)</b>	na	na	na

## K. Project Readiness

### BTOP Organizational Readiness

Com Net will provide leadership for this project. Com Net’s Network Operations Center in Wapakoneta, Ohio is staffed 24/7/365. Com Net will focus on aggregating services and traffic from its’ over 30 last mile Broadband Service Providers that provide granular coverage throughout Northwest Ohio. Today Com Net operates Dense Wave Division Multiplexing (DWDM) over approximately 200 miles of the Network from Worthington-to-Findlay-to-Toledo-to Napoleon over a 2 Fiber IRU on legacy long haul carrier routes. These DWDM equipped facilities are complimented with the leased facilities network of the Broadband Network Group (BNG) members for three networks Com Net manages today: 10 Gigabit Ethernet Network, 1 Gigabit Resilient Packet Ring Network and an OC48 SONET Network. In order to oversee the construction and turn-up phase of the project and to operate the funded project as a Small Business Unit within Com Net, the organization plans to hire an additional Project Manager.

OARnet operates the State of Ohio’s network for Research and Education at higher education institutions. OARnet connects universities throughout the state back to Columbus at the core through a DWDM network operating over 2 fiber.

ZAYO is an Interexchange Carrier providing long-haul transport from New York to Chicago. ZAYO is committed to the project by (1) establishing a drop-off point in Lima, Ohio, (2) securing fiber to put in place an Intermetro network that will connect Lima to Toledo, Hillsdale MI, Dayton, Columbus and Richmond, IN. The connections in MI and IN will allow the Ohio Middle Mile Consortium Partners’ Networks to interface with MERIT and iLite, both Round 1 recipients.

Engineering, Make-Ready, Permitting and Construction Management: provided through Myers Construction and Sigma Technologies who manage new projects according to formal methodologies leveraging best-in-class design tools





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Network Operations Center, Customer Care and Field Support: operate 24/7/365 network operations centers, complete with ticket-tracking systems and staffed by senior network engineers. Customer care is a function of the network operations center, focused on customer relationship management, level of service, contractual issues and changing requirements

Service Bureau – employ seasoned carrier service sourcing and provisioning specialists, carrier relations, regulatory affairs manager, end user bill processing specialists, carrier-access billing specialists provide comprehensive customer care, customer records, end user and carrier billing

Provisioning: Com Net notifies customers in writing (typically e-mail) of the status of each stage in the provisioning process: Confirmed Order Receipt, Firm Order Commitment, Weekly Progress Updates, Installation Verification and Follow-Up

Sales and Marketing: employ seasoned sales and marketing staff to maximize market penetration for middle mile transport services and the on-boarding of community anchors

**Construction and Vendor Contracts**

Com Net will serve as the leader of the GigE Plus Availability Coalition based on its’ more than fifteen (15) years of success in leading a consortium-based organization focused on serving Rural Independent Operating Companies providing voice, video and data services. Com Net has established an on-line forum for on-going communications between the participants from the close of the joint application process, through due-diligence and post award. Com Net, upon submittal, will immediately begin working with the individual partners to formalize the details for a long-term agreement. Com Net believes this to be critical for the success of the coalition such that each member has a clear understanding for on-going operations prior to final award being received and accepted. Upon award, Com Net will utilize a combination of regular webinar meetings complimented with face-to-face meetings of the representatives from each company to the GigEPAC steering committee which will comprise Tim Berelsman, Com Net, Inc.’s CEO; Randy Plaisier, Com Net, Inc.’s CTO Denis Walsh from OARnet and Christopher Morley, CFO from Zayo Broadband.

Engineering and Construction Management functions will be provided by Myers Construction and Sigma Technologies, which manage new projects according to formal methodologies leveraging best-in-class design tools.



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The applicant, Com Net, will enter into contractual agreements with OARnet, Zayo, Myers Construction, and Sigma Technologies.

**Customer Base**

Lead applicant Com Net, Inc. is truly a middle-mile provider, working with 30 last-mile providers in the service region who are also Com Net's shareholders and constituents. These 30 last-mile providers are responsible for all direct connects in the proposed GigEPAC service region. These 30 providers will continue to represent Com Net's customer base and have signed Memoranda of Agreement, which are included under the Government and Key Partnerships uploads section.

**Licenses, Regulatory Approvals and Agreements**

Sigma Technologies and Kenneth G. Myers Construction Co., Inc. will be providing a turnkey system and they will be responsible for all licenses, permits, and rights of way. Contracts and agreements between Com Net, Inc. and both Sigma and Myers have been included as a supplemental upload.

**SPIN Number**

For this application, the following Service Provider Identification Numbers (SPINs) apply:

- Recipient:  
Com Net, Inc.  
143022551
- Sub-recipients:  
OARnet  
143032480  
Zayo Enterprise Networks LLC  
143033526

## **L. Environmental Questionnaire**

**Project Description**



**Broadband Infrastructure Application**  
**Submission to NTIA – Broadband Technology Opportunities Program**

<b>Submitted Date:</b> 3/26/2010 7:51:32 PM	<b>Easygrants ID:</b> 7296
<b>Funding Opportunity:</b> Broadband Technology Opportunities Program	<b>Applicant Organization:</b> COM NET, INC.
<b>Task:</b> Submit Application - BTOP	<b>Applicant Name:</b> Mr. Tim Berelsman

**General**

This project will involve the construction of new facilities, electronic equipment, and approximately 688 miles of outside plant facilities in order to provide broadband services to rural areas of Ohio, Michigan and Indiana. The proposed construction will take place in Allen, Auglaize, Champaign, Clark, Darke, Defiance, Delaware, Franklin, Fulton, Greene, Hancock, Hardin, Henry, Logan, Madison, Mercer, Miami, Paulding, Preble, Putnam, Sandusky, Seneca, Shelby, Union, Van Wert, Williams, Wood and Wyandot of Ohio, Wayne County of Indiana and Hillsdale and Lenawee Counties of Michigan, as served by COM NET, Inc.

**Electronic Equipment**

Electronics are utilized to improve service by increasing transmission distances and channel capacity. During construction, every effort will be made to minimize the environmental effects of placing these cabinets

**Buried Plant**

The buried plant will consist of fiber optic cables placed at a minimum depth of 36 - 42 inches below the surface in most areas along established streets, roadways or travel routes in town areas. Cable installed adjacent to road ROW will generally be within 5 – 10 feet of the public easement. When river or stream crossings or U.S. water crossings are encountered, the construction will be either bored or via bridge attachments. Every effort is made to minimize environmental damage during the construction phase.

**Property Changes**

This project will involve the construction of approximately 688 miles of outside plant facilities in order to provide broadband services to rural areas of Ohio, Michigan and Indiana. The proposed construction will take place in Allen, Auglaize, Champaign, Clark, Darke, Defiance, Delaware, Franklin, Fulton, Greene, Hancock, Hardin, Henry, Logan, Madison, Mercer, Miami, Paulding, Preble, Putnam, Sandusky, Seneca, Shelby, Union, Van Wert, Williams, Wood and Wyandot of Ohio, Wayne County of Indiana and Hillsdale and Lenawee Counties of Michigan. Cable is proposed to be installed within to previously disturbed county and state road rights-of-way.

**Buildings**

No building constructions are proposed for this project. This project is a linear construction project that is to be located within previously disturbed rights-of-way.

**Wetlands**



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Based on data downloaded from the U.S. Fish and Wildlife Service’s National Wetland Inventory website, there are wetlands in the proposed construction area. Generally, stream crossings will be via bridge attachments, aerial inserts, or bores under the streambed. All construction activities will be designed to avoid or minimize impacts on wetlands, floodplains, and riparian drainage. The attached map shows the listed wetlands in the proposed area.

**Critical Habitats**

The attached maps show that there are no critical habitats encountered by the proposed construction.

The project does not anticipate any disturbance to any threatened or endangered species and will take necessary precautions to be aware of these species during construction. Upon encountering any threatened or endangered species or habitats during construction or along construction ROW, construction will be stopped in that area and the appropriate agencies will be notified immediately

**Floodplain**

Portions of the proposed project are located within 100 and 500 year floodplains. The attached map shows the areas located within these floodplains. All construction activities will be designed to avoid or minimize impacts on floodplains.

**Protected Land**

The listing for National Register of Historic Places from U.S. Department of Interior National Park Service is included on the map. 456 sites are located within one mile of the proposed project. However, COM NET does not anticipate any disturbance to these sites as the proposed construction does not enter any of these buildings or sites. The proposed construction will also have minimal to no surface disturbance in these areas. No data was available from the Ohio Historic Preservation Office (OHPO), the Indiana Historical Bureau (IHB) or the Michigan State Historical Preservation Office (SPHO) for historical or cultural listings. A project description and map of the proposed construction has been submitted to OHPO, IHB and SPHO.

1. No response from OHPO/IHB/SPHO has been received to determine if the project is located on, within or adjacent to any properties listed in or eligible for listing in the National Register of Historic Places.
2. No response from OHPO/IHB/SPHO has been received to determine if the proposed project will impact or alter a building or structure that was constructed more than 50 years ago.



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However due to the nature of the proposed linear construction, the project does not anticipate impact any buildings.

3. No portion of the project is located on tribal lands.
4. Correspondence with OHPO/IHB/SPHO is included as an attachment.

**Coastal Area**

There are no coastal areas affected by this project

**Brownfield**

There are brownfield sites located within the project area. The attached map shows the location of brownfield sites in relation to the proposed project. Construction methods and routes can be altered to avoid disturbance of any sites.



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**Uploads**

The following pages contain the following uploads provided by the applicant:

Upload Name	File Name	Uploaded By	Uploaded Date
Service Offerings and Competitor Data	section 18 1 service offerings middle mile rate table and competitor data.xlsx	Berelsman, Tim	03/26/2010
Network Diagram	Section 18-2.pdf	Berelsman, Tim	03/26/2010
Build Out Timeline	CCI Build-Out Timeline Attachment.doc	Berelsman, Tim	03/26/2010
List of Community Anchors and Points of Interest	CCI_Anchor_Detail_and_POI_Attachmentfor ComNet.xlsx	Berelsman, Tim	03/26/2010
List of Community Anchors and Points of Interest	Com Net CCI Anchor Detail and POI Attachment 26 March 2010 FINAL.xls	Berelsman, Tim	03/26/2010
Management Team Resumes and Organization Chart	Management Team for Gig E Plus Availability Coalition bios.pdf	Berelsman, Tim	03/25/2010
Management Team Resumes and Organization Chart	GigEPAC Project Organizational Chart.pdf	Berelsman, Tim	03/25/2010
Government and Key Partnerships	Support Letters for Com Net Project.pdf	Berelsman, Tim	03/26/2010



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Government and Key Partnerships	Letters of intent to use for Com Net project.pdf	Berelsman, Tim	03/26/2010
Historical Financial Statements	COMnet Historical Financials.xls	Berelsman, Tim	03/26/2010
Budget Narrative	Com Net Budget Narrative 26 March 2010 v4.1.docx	Berelsman, Tim	03/26/2010
Detailed Budget	General Budget Overview Chart FINAL.xlsx	Berelsman, Tim	03/26/2010
Detailed Budget	Detailed Project Budget information part 1.xlsx	Berelsman, Tim	03/26/2010
Pro-forma Forecast	Pro Forma Financial Projections Attachment - GigEPAC-OMMC Summary of Grant Request.xls	Berelsman, Tim	03/26/2010
Subscriber Estimates	Subscriber Projections 18-11.xlsx	Berelsman, Tim	03/26/2010
Dashboard Metrics	Com Net GigEPAC Dashboard Metrics 26 March FINAL.pdf	Berelsman, Tim	03/26/2010
Service Area Data	CCI Service Areas Attachment 26 March FINAL.xlsx	Berelsman, Tim	03/26/2010
Network Maps	network maps 18.15.docx	Berelsman, Tim	03/26/2010





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BTOP Certifications	BTOP Certifications.pdf	Berelsman, Tim	03/25/2010
SF-424 C and D	424D.pdf	Berelsman, Tim	03/25/2010
SF-424 C and D	424C.pdf	Berelsman, Tim	03/26/2010
Supplemental Information	Com Net BTOP Banking Comfort Letter 3-26-10.pdf	Berelsman, Tim	03/26/2010
Supplemental Information	20100326_OMMC_Executive Summary_FINAL for Confirmation.pdf	Berelsman, Tim	03/26/2010
Supplemental Information	ComNet detailed System Design.pdf	Berelsman, Tim	03/26/2010
Supplemental Information	Supplemental Information - Environmental Questionnaire.pdf	Berelsman, Tim	03/26/2010
Supplemental Information	ComNet Contractors.pdf	Berelsman, Tim	03/26/2010
Supplemental Information	Unemploy 2010.pdf	Berelsman, Tim	03/26/2010
Supplemental Information	Poverty 2008.pdf	Berelsman, Tim	03/26/2010



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