

Methodology of Service Area Details

Merit Network utilized a number of different data sets to best complete the REACH-3MC II Service Area Details section of the application. The following provides a breakdown of the sources by data.

Rural Areas:

The rural status of a given service area was determined using the BroadbandUSA Mapping Tool. Merit staff compared the areas indicated as rural in the Mapping Tool with a map of census tracts per county to estimate which census tracts in a given county are considered rural and which are not.

Square Miles:

The area in square miles of a given service area was determined using American FactFinder (U.S. Census Bureau, www.census.gov) for homogeneous counties with regard to served/underserved status. Because American FactFinder could not produce metrics with census tract-level granularity, for counties that contain both served and underserved census tracts, Merit staff consulted ESRI GIS (Geographic Information System) Version 9.2 Census Data to determine the area in square miles for individual census tracts.

Underserved census tracts in a given county are indicated with individual service area names for the Service Area Details section and Service Area Data upload. The remaining served census tracts in that county were then consolidated into one service area with summed metrics. There are slight variations in data between American FactFinder and ESRI GIS 9.2. Merit staff accounted for these slight variations by ensuring the total square miles of underserved areas and total square miles of served areas in a given county sum to equal the total square miles for the entire county provided by American FactFinder.

Total Population:

The total population of a given service area was determined using American FactFinder (U.S. Census Bureau, www.census.gov) 2000 Census Data. Because American FactFinder could not produce metrics with census tract-level granularity, for counties that contain both served and underserved census tracts, Merit staff consulted ESRI GIS (Geographic Information System) Version 9.2 Census Data to determine the population for individual census tracts.

To account for slight variations in ESRI GIS 9.2 and American FactFinder data Merit staff followed the same procedure described under Square Miles.

Total Households:

The total number of households in a given service area was determined using American FactFinder (U.S. Census Bureau, www.census.gov) 2000 Census Data. For given census tracts within a county, Merit staff determined the population of the census tract using ESRI GIS 9.2, then compared that census tract population to the population of the entire county to create a ratio. The ratio was then applied to the

total number of households in the county to determine the number of households in a given census tract.

Total Number of Businesses:

The total number of businesses in a given service area was determined using County Business Patterns (U.S. Census Bureau, www.census.gov) 2007 Census Data. For given census tracts within a county, Merit staff determined the population of the census tract using ESRI GIS 9.2, then compared that census tract population to the population of the entire county to create a ratio. The ratio was then applied to the total number of businesses in the county to determine the number of businesses in a given census tract.

Community Anchors and Public Safety Entities in the Service Area:

As Michigan's education and research provider to Community Anchor Institutions (CAIs), Merit maintains a database of potential membership in Michigan. Merit staff queried the database for CAIs and public safety entities in the service area in the proximity of the proposed fiber route.

For CAIs and public safety entities in Wisconsin, Merit relied on the input of WiscNet, Wisconsin's education and research provider.

In St. Louis County, Minnesota, Merit mapped REACH-3MC II fiber in the county on Google Maps and used the same software to identify CAIs and public safety entities in proximity to the fiber.

Unemployment Rate:

The unemployment rate in a given service area was determined at the county level and then applied to any census tracts within that county. County unemployment rates were determined by consulting the U.S. Bureau of Labor Statistics (<http://bls.gov/lau/>), Labor Force Data by County, not seasonally adjusted for December 2009.

Median Income:

The median income in a given service area was determined at the per capita county level and then applied to any census tracts with that county. County per capita income was determined by consulting the U.S. Bureau of Economic Analysis, Regional Economic Accounts, 2007 Local Area Personal Income Tables (<http://bls.gov/regional/index.htm>).

Estimated Percentage of Households with Access to Broadband:

Merit enlisted the services of Broadband Consulting Group (BBCGi) to obtain numbers for this data entry.

BBCGi purchased over 150,000 current household records from Experian Marketing Solutions to obtain a representative sample of household addresses and demographics within each proposed funding service area for Merit. BBCGi processed active telephone numbers and corresponding addresses against public switched telephone number databases, cable and telephone franchise databases, individual provider

broadband availability websites, and internal databases to determine the availability of broadband service for each household in the representative sample. BBCGi took additional steps to collect broadband availability data for a geographically dispersed set of households necessary to determine the percentage of broadband availability within each proposed funding service area.

BBCGi performed the preceding for 29 of the 38 counties in the REACH-3MC II Service area. The remaining nine counties were added as the fiber routes were finalized with input of REACH-3MC II partner and sub-recipients. For each of these remaining nine counties, Merit identified a county BBCGi had analyzed that consisted of similar demographics and applied the same estimated percentage to that county.

Estimated Percentage of Households Subscribing to Broadband:

The estimated percentage of household subscribership was determined by consulting the most up-to-date FCC Form 477 form Broadband Deployment Data referenced in the FCC's "High-Speed Services for Internet Access: Status as of December 31, 2008" report.

Subscribership data by county: http://www.fcc.gov/Bureaus/Common_Carrier/Reports/FCC-State_Link/IAD/excel_dec_2008_county.zip

Subscribership data by census tracts: http://www.fcc.gov/Bureaus/Common_Carrier/Reports/FCC-State_Link/IAD/excel_dec_2008_tract.zip

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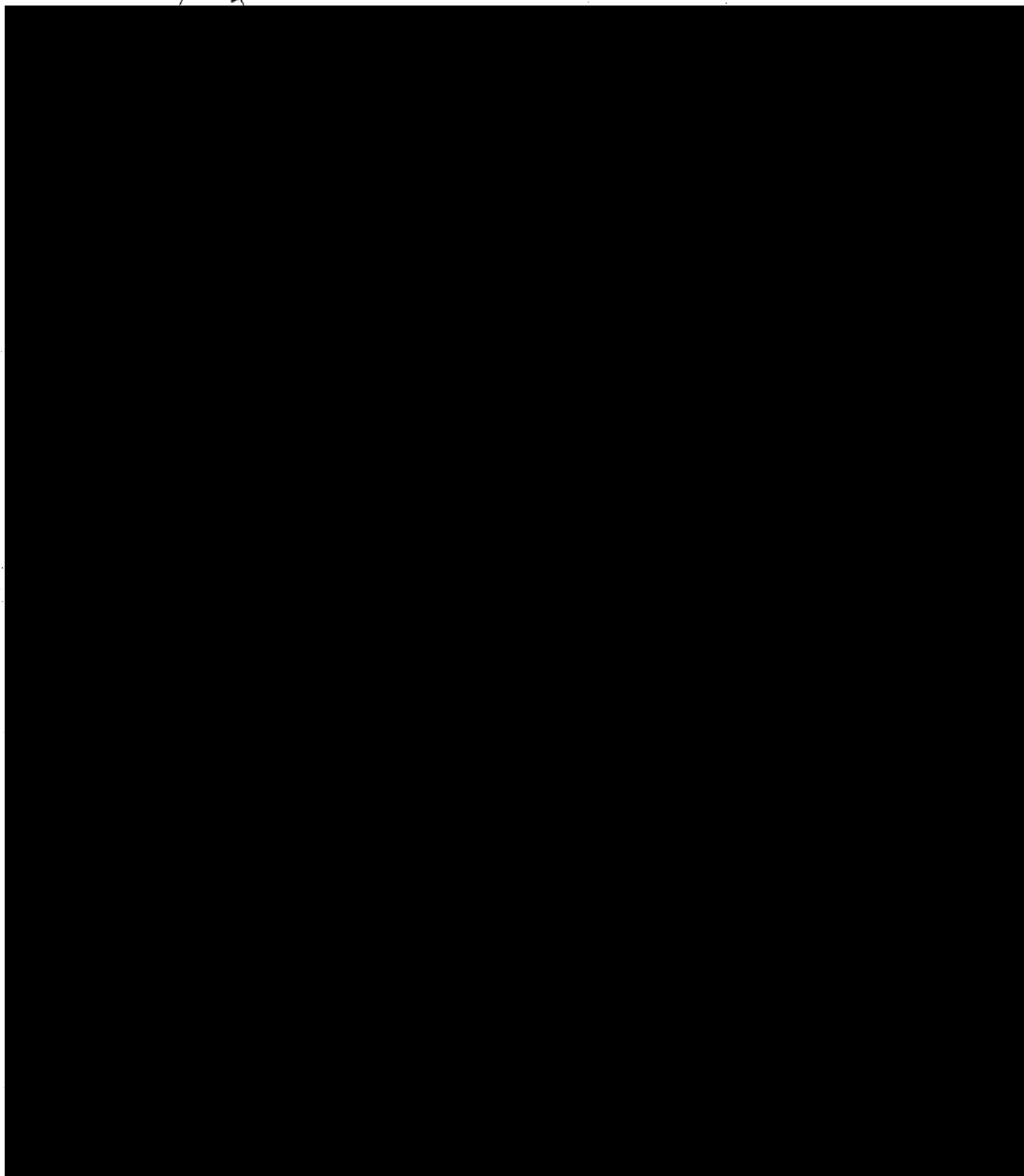
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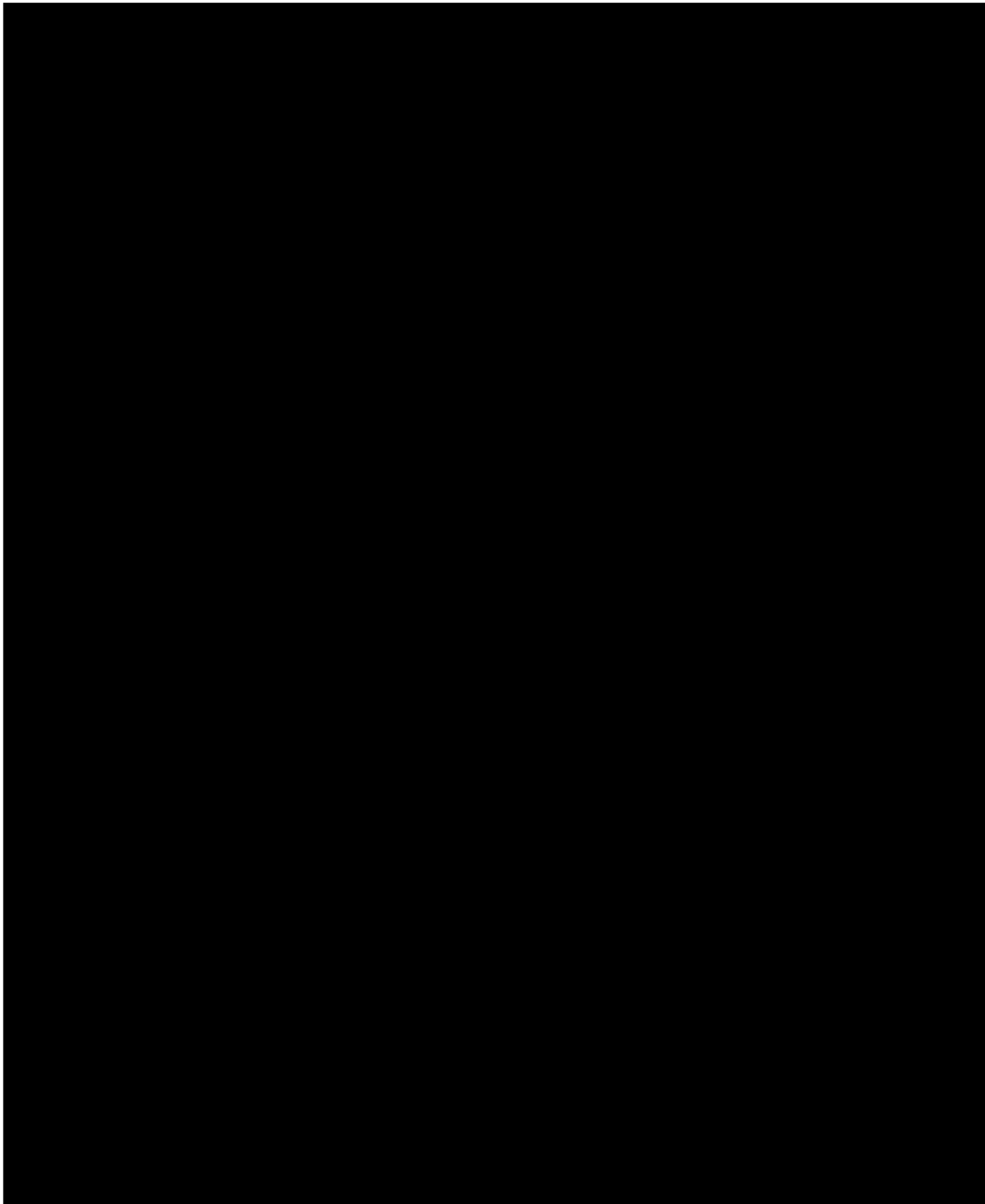
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Letters of Non-Binding Commitment from Internet Service Providers	
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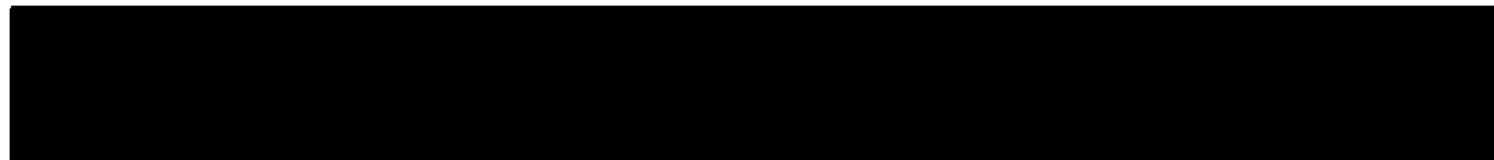
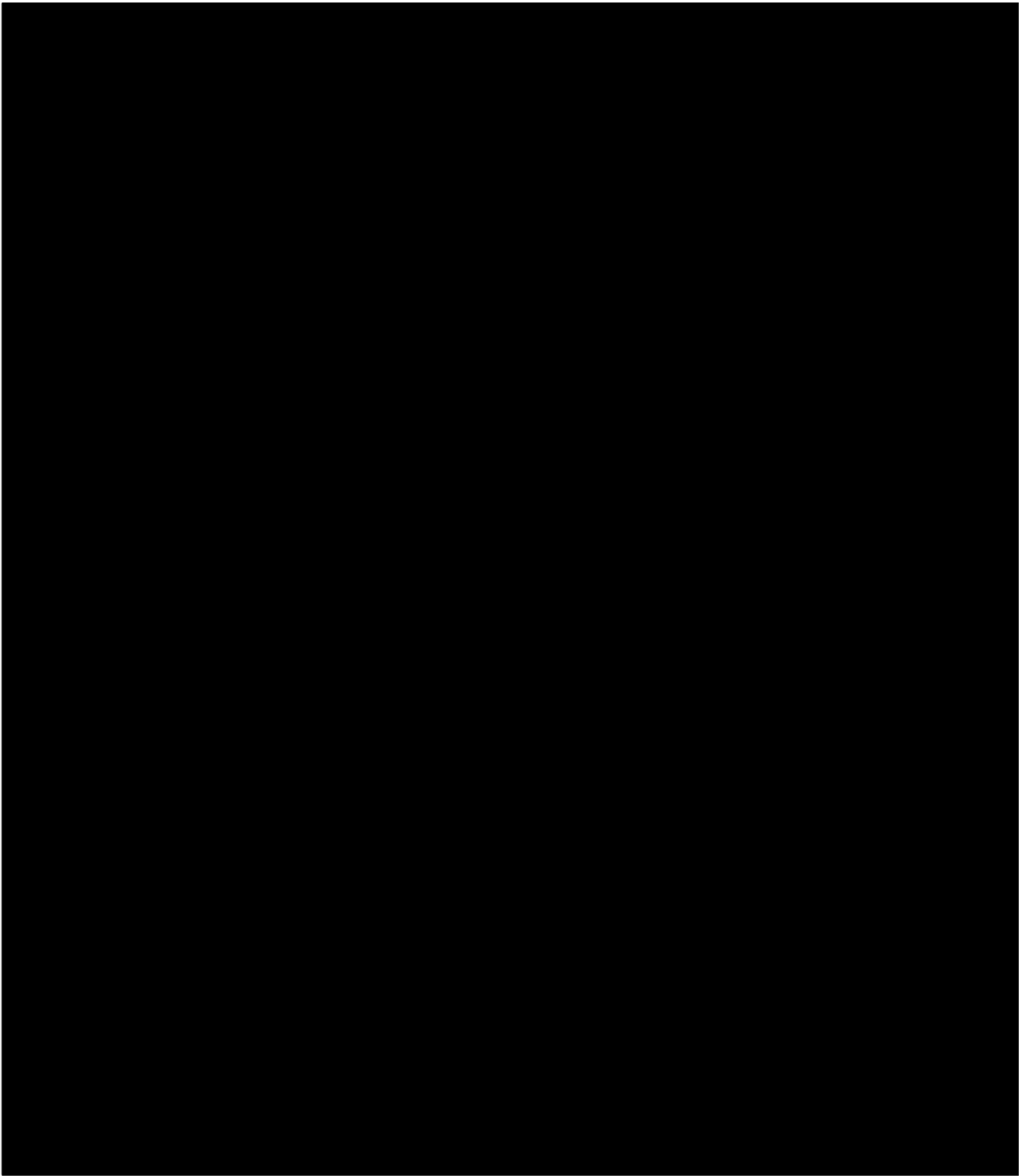
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(5 U.S.C. § 552 (b)(4))



33 Pages

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(5 U.S.C. § 552 (b)(4))



50 Pages

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(5 U.S.C. § 552 (b)(4))

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7 Pages

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pursuant to FOIA Exemption 4
(5 U.S.C. § 552 (b)(4))

Information provided in this document includes last mile service providers who have expressed in writing their intention to connect to the proposed network. Following is a list of community anchor institutions and public safety entities in the Michigan service area that Merit intends to connect over the life of the network. Subscriber counts are based on engagement meetings Merit has had over the years with the majority of these institutions who are eager for access to broadband infrastructure and the benefits it will bring to their communities. Please see Section 6, Letters of Support and Upload 18.6 Key Partnerships and Governmental Collaboration for letters written in support of the REACH-3MC II application.

Merit has also facilitated and coordinated comprehensive meetings with middle mile and last mile providers to ensure accurate information.

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Estimated Subscribers, See Upload 18.11 for full allocation:				
Service Type	Total based on 2000 Census Data	Estimated Michigan Subscribers	Estimated Subscribers by end of Year 5	
Total Michigan Businesses	32,679	5,393	By end of Yr5	
Total Michigan Households	525,668	53,994	By end of Yr5	
Total Merit Projected Anchor Institutions	497	289	By end of Yr5	

12 Pages

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pursuant to FOIA Exemption 4
(5 U.S.C. § 552 (b)(4))



Merit Network, Inc.

REACH-3MC II



Upload 18.6

Government and Key Partnerships

March 26, 2010

Easygrants Number: 4658

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Section 1

Memorandums of Understanding

Boardman River Communications – Small Disadvantaged Business

Letter of Support from Department of State Police 9-1-1

Next Generation 911 Feasibility Study

Section 2

[REDACTED]

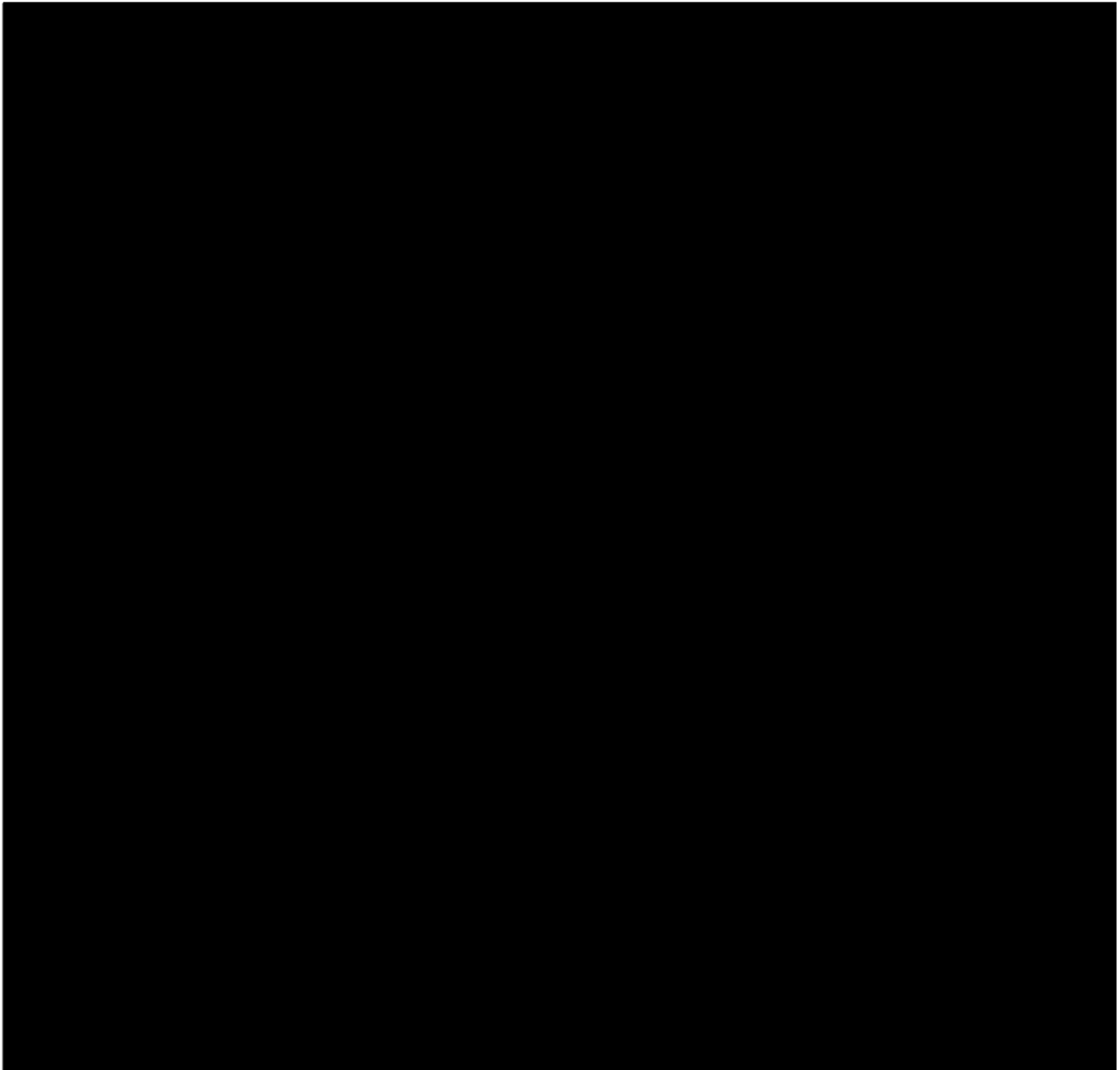
Michigan’s Push for Broadband – A “Call to Action” for Community Leaders

State of Michigan Broadband Overview

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**Broadband Technology Opportunities Program
Round 2
Memorandum of Understanding
Sub-recipients**



92 Pages

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pursuant to FOIA Exemption 4
(5 U.S.C. § 552 (b)(4))

SBA Search Results

SBA Search Results

Table Listing, where

the firm is active in searches;
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 the firm is at least one of: self-cert SDB and/or veteran owned;
 the firm is DBE-certified in: 'MI';
 the firm is located in Minority Enterprise Development office 0515;
 the firm is small in all of these NAICS codes: 515210, 517110;
 the firm has at least \$72,000 average annual gross revenue;
 the firm has at least 3 employee(s);
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 the profile's phone number is "231-369-2500";
 the profile location is in: 'MI';
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Please notify CCR if you discover any inaccurate contact information (address, e-mail address, fax or phone number) in the way most convenient for you:

CCR Customer Service Contact Information

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 CCR: <http://www.ccr.gov>

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JENNIFER M. GRANHOLM
GOVERNOR

STATE OF MICHIGAN
DEPARTMENT OF STATE POLICE
EAST LANSING



COL. PETER C. MUNOZ
DIRECTOR

March 11, 2010

Mr. Donald Welch
President and CEO
Merit Network, Inc.
1000 Oakbrook Drive, Suite 200
Ann Arbor, Michigan 48104-6794

Dear Mr. Welch:

Please accept this letter on behalf of the State of Michigan 9-1-1 Office in support of Merit Network, Inc.'s application related to the Broadband Technology Opportunities Program (BTOP) under the second round of funding of the American Recovery and Reinvestment Act (ARRA). The Merit Network's application for broadband expansion could immeasurably assist towards the connectivity needed to move Michigan's current 9-1-1 system to an IP-based Next Generation 9-1-1 system (NG9-1-1) in Michigan.

By way of a brief history and affirmation of need, the State 9-1-1 Committee (SNC) in Michigan has been working towards a system upgrade for years. In 2006, pursuant to Public Act 249 of 2006, the SNC issued a report to the Michigan Legislature with a set of recommendations in regard to Michigan's 9-1-1 system. In that report, one of the six recommendations recognized the need to upgrade to an IP-based 9-1-1 system. Page 10 of the report stated:

"Replacement of the existing 9-1-1 system will need to be done in order to effectively adapt to the changes facing public safety communications. An IP-based 9-1-1 network will provide redundancy, security, interoperability, and flexibility that will be paramount to maintaining a robust and reliable 9-1-1 system in Michigan, and provide options and functions to meet these demands."

The full report is available at: www.michigan.gov/documents/msp/PA249_of_2006_178037_7.pdf. While the Legislature did not adopt the SNC's 2006 recommendation to allocate the funds for the initial capital outlay of a new system, it did adopt the recommendation for an allocation of \$500,000 for a feasibility study for an IP-based system in Michigan.

The study, which was conducted by L.R. Kimball, was presented to the SNC on December 8, 2009. The report contained an evaluation and recommendations on operational, technical, and policy considerations for an IP-based 9-1-1 system in Michigan. On Page 17 of their report, L.R Kimball recognized and advised the SNC that "[a]n IP network would pave the way for the state of Michigan to migrate to an Emergency Services IP network (ESInet) and ultimately NG9-1-1." The full report can be found at: www.michigan.gov/documents/msp/Michigan_Next_Generation_9-1-1_Feasibility_Study_304211_7.pdf.

Another significant activity in pursuit of IP-based 9-1-1 is reflected in the application and project plan for Michigan's ENHANCE 911 grant. The grant, which was awarded by the National Highway Traffic and Safety Administration (NHTSA) in September of 2009, is to establish an integrated geographic information system (GIS) mapping system for use by all 9-1-1 centers in the state of Michigan. The project, which will allow for shared wireless 9-1-1 location information, has been shaped to serve as the future platform for location information for IP-based 9-1-1 when the system is capable. (Details on the ENHANCE grant project can be obtained by contacting millerhr@michigan.gov.)

The activities of both the State 9-1-1 Committee and the State 9-1-1 Office in Michigan clearly demonstrates the need for a flexible and technologically advanced 9-1-1 system. The opportunities and benefits that the Merit Network's proposal could bring to that advancement for public safety to all citizens and visitors of our great state has my backing and complete support. If there is anything further I can do to help in moving this initiative forward, please do not hesitate to contact me.

Sincerely,

Ms. HARRIET MILLER-BROWN
State 9-1-1 Administrator

Next Generation 9-1-1 Feasibility Study

Submitted to

The State of Michigan 9-1-1 Committee

December 2009 ©

1. EXECUTIVE SUMMARY

L. Robert Kimball & Associates, Inc. (Kimball) is pleased to provide the state of Michigan ("the state") and the State 9-1-1 Committee ("Committee") this Next Generation 9-1-1 (NG9-1-1) feasibility report.

1.1 Project Overview

The state sought a comprehensive study of multiple options for a NG9-1-1 network to serve all of the state of Michigan. Changing and affordable new technologies have altered the way the public accesses 9-1-1. In some areas, wireless calls are well above 70% of all calls received by the local public safety answering point (PSAP). The Committee understands that the increasingly technical nature of these services requires an upgrade of the current 40-year old analog 9-1-1 system.

When wireless devices (cell phones) started accessing 9-1-1, the system was unable to provide any of the information that routinely accompanied a landline (legacy) call. There was no call back number or caller location information. The changes to the system that were required just to get the cell tower location and call back number were lengthy. Despite the challenges, all of Michigan's counties have been capable of processing wireless Phase II calls since the end of 2005.

The Federal Communications Commission (FCC) through its seventh Network Reliability and Interoperability Council (NRIC VII) dedicated a subcommittee to look at the future of E9-1-1. The National Emergency Number Association (NENA) has spent time and effort working with PSAP managers and technology specialists to come up with the Next Generation 9-1-1 network. The federal Department of Transportation (DOT) brought in experts to conduct a proof of concept (POC) that demonstrated what could be done using upgraded IP technology.

The common theme of all the above is that the 40-year old technology currently used for 9-1-1 cannot provide the backbone of a 9-1-1 system that is being asked to meet the expectations of consumers that use newer modes of communication and the realities of a more complex and mobile society. Examples include text message calls from hearing-impaired callers, data from an automatic crash notification device, residents three counties over whose 9-1-1 center had to evacuate due to a flood, or the caller whose baby is not breathing and whose call is queued behind 15-20 other callers reporting the accident on the freeway at rush hour. All of these issues can be addressed by changing out the old technology and moving to a robust and redundant, scalable IP-based backbone.

The vision of NG9-1-1 is twofold. From a technology perspective, it addresses all of the new communications devices by changing from an archaic analog system to a robust and dynamic digital technology. From a local control perspective, it provides more control over local data and allows for call routing to be done by policy. Policy routing provides the ability for PSAPs to decide how calls will be handled under certain conditions such as unforeseen evacuations and spikes in 9-1-1 call volume. These policies can virtually eliminate 9-1-1 busy signals or unanswered calls, yet giving PSAPs more control over the information they receive and how they process and share it. The basic premise of NG9-1-1 is that it does not change local control of local calls, but provides opportunities to provide service for any device, anywhere at any time.

1.2 Methodology

Kimball has reviewed the status of PSAPs across Michigan. Using both a survey tool emailed to all PSAPs and visiting 16 sites of varying sizes and locations, Kimball developed an electronic inventory.

Three meetings with service provider were held to inform the industry about the study and to gather information about what IP services currently existed and where they were located. This aided in determining the status and availability of IP within Michigan.

1.3 Findings

Kimball found that IP technology is available throughout Michigan. Some of Michigan's telephone companies have built fiber optic networks to support a variety of voice and data services. Michigan's cable television companies have a vast infrastructure serving homes and businesses throughout the state, including voice and data services. Some wireless networks also utilize IP. It is clear that it is possible for one or more of these existing IP networks to serve 9-1-1 across all of the state.

After identifying four options, Kimball analyzed the regulatory, policy and political implications; and the operational, technical, and costs of each option.

1.4 Recommendations

Kimball recommends the following two options for Michigan. The first option is more cost effective than the second option, but either would provide a phased-in transition from an IP 9-1-1 network to a fully functioning NG9-1-1 network.

- A Statewide Prime Contractor Managed IP Network
- A Regional Prime Contractor Managed IP Network

1.4.1 Statewide Prime Contractor Managed IP Network

A prime contractor would provide the communications infrastructure and NG9-1-1 applications to all PSAPs. The state would establish the service levels, and meeting them would be the responsibility of the prime contractor. The state of Michigan would be the customer of record for the contract, and would hold the prime contractor responsible for all issues. The prime contractor would be the single point of contact for the state for all issues with the delivery of NG9-1-1 calls and associated applications to each PSAP in the state. The prime contractor could be:

- A qualified carrier providing the IP transport network and the public safety solutions
- A qualified carrier providing the IP transport network and subcontracting the services of a public safety solution provider
- A public safety solution provider subcontracting IP transport network connectivity from a qualified carrier or carriers
- A systems integrator subcontracting IP transport, connectivity and solutions

The prime contractor would be responsible for all service levels associated with NG9-1-1 call delivery along with supplemental and supportive¹ information as specified in NENA documentation.

Statewide IP connectivity could be accomplished with services available by carriers currently operating in Michigan.

Newer public safety solutions providers (i.e., those that are not incumbent or competitive telephone companies) have the capability to provide the service by leasing the IP connectivity from a qualified carrier and providing the NG9-1-1 functions as a service based on number of calls delivered or population served.

1.4.2 Regional Prime Contractor Managed Network

A prime contractor would provide the IP transport infrastructure and public safety solution applications to all PSAPs within a geographic area, or a single prime contractor could contract and manage local carriers within regions. Making sure required service levels are met would be the responsibility of the prime contractor within that region or the state could set required standards. The state of Michigan would hold the regional prime contractors responsible for all issues within their respective regions. Multiple providers could support this option.

Kimball recommended eight regions based on the current emergency management and homeland security districts in Michigan. Coordination of regional interconnections to create statewide IP connectivity would have to occur. This could be accomplished by the state, a third party, or by one of the regional prime contractors. Because this requires centralized coordination, we recommend this be done at the state level. Each of the regional prime contractors would provide a single point of contact for the state for all issues with the delivery of NG9-1-1 calls and associated applications within their respective geographical area. The prime contractor could be:

- A qualified carrier providing the IP transport network and the public safety solutions
- A qualified carrier providing the IP transport network and subcontracting the services of a public safety solution provider
- A public safety solution provider subcontracting IP transport network connectivity from a qualified carrier or carriers
- One or more system integrators subcontracting the IP transport backbone, connectivity and solutions

¹ NENA Technical Information Document on Network to IP PSAP Interface, 08-501, June 2004, pages 2-19 – 2-21. The NENA Future Path Plan describes three types of information related to an emergency call that are either delivered with the emergency call or that can be made available to the PSAP either through a query/response method initiated by the PSAP or as initiated by the network or a third party. These sets of data include essential data, supportive data and supplemental data. Essential data are used to route the call and are delivered with the call. Supportive data are analogous to ALI data. They may be delivered with a call or requested by the PSAP during an ongoing call. Supplemental data are data that can assist the emergency responder(s) in preparing to respond to the emergency. These data may include, for example: medical records, motor vehicle records, vehicle collision information, etc.

Statewide IP connectivity utilizing a regional design could be accomplished with services available through several regional carriers in Michigan.

Kimball believes that the challenges could be addressed successfully through an open process and united effort between all stakeholders in conjunction with the Committee and the 9-1-1 Office.

1.4.3 Regulations and Statutes

Michigan's ability to move forward will necessitate changes to state regulation and statute. The Legislature should act to eliminate statutory provisions that would prevent the deployment of a statewide ESInet or regional, interconnected ESInets capable of supporting NG9-1-1, and provide the Committee and/or the Office with the means to exercise effective authority in a NG9-1-1 environment. In Kimball's experience, the most successful state 9-1-1 programs are those that have broad powers and authority for the statewide provisioning of 9-1-1, have adequate funding and control over that funding, and function autonomously. The following list presents our key recommendations. Comprehensive recommendations are provided in section seven of this report.

- MCL 484.1102 – update and expand definitions to include Next Generation 9-1-1 features and functions.
- MCL 484.1201 – expand this section to include the state, thereby enabling the state to implement a statewide system and provide for the interconnection of regional systems.
- MCL 484.1712 – modify this section to change the committee from advisory to a fully empowered board or commission with broad authority and powers.
- MCL 484.1713 – reduce the size of the committee to nine members, and streamline its composition.
- MCL 484.1714 – give the reconstituted committee the broad authority and powers necessary to lead the transition to statewide NG9-1-1 and oversee its operation. This is essential if Michigan is to effectively meet the requirements of E9-1-1 and NG9-1-1. The changes recommended include:
 - Relocation of rulemaking authority from the MPSC to the state 9-1-1 Committee and/or Office
 - Authority to establish and enforce service standards
 - Authority to design and procure statewide NG9-1-1 system components and oversee their implementation and operation
 - Authority to manage or contract for the management of the interconnections between local, regional or interstate ESInets
- Tariffs – update the tariffs to reflect industry requirements for NG9-1-1 and eliminate any roadblocks to achieving statewide NG9-1-1.

1.5 Conclusion and Acknowledgements

It is certain that Michigan is at a cross roads. The full benefits of NG9-1-1 will not be available to Michigan's PSAPs or its citizens unless known and identified roadblocks are cleared away.

We would like to thank the Committee and 9-1-1 Office for their support throughout this study. We would also like to thank the industry representatives who took time to meet with us and provide information, as well as the many 9-1-1 service district representatives who responded to our survey, telephone calls and emails. It is our hope that this report will provide Michigan with a clear roadmap forward.

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2. INTRODUCTION

Michigan Compiled Laws (MCL) 484.1101–484.1717, also known as the Emergency Telephone Service Enabling Act (Act), governs the state of Michigan’s 9-1-1 service. The Act provides for the technical and managerial aspects of the state’s 9-1-1 system, funding mechanisms for the 9-1-1 network backbone and the 181 PSAPs’ capital and operating costs.

State-level oversight is provided by the Committee with the assistance of the State 9-1-1 Administrator’s Office (Office, or 9-1-1 Office). The Michigan State Police (MSP) is responsible, by statute, for providing staff assistance to the Committee as necessary to carry out the Committee’s duties and fulfills this responsibility through the 9-1-1 Office. The Committee has authority to recommend technical and operational standards for PSAPs, to recommend model 9-1-1 systems and to provide assistance for the design, implementation and operation of those systems. However, the Committee does not have rulemaking authority. Rather, that authority rests with the Michigan Public Service Commission (MPSC), in consultation with the Committee, for the following specific 9-1-1 matters:

- Uniform policies, procedures and protocols for 9-1-1 services in counties and PSAPs in the State
- Training standards for PSAP personnel
- Standards for the receipt and use of 9-1-1 funds
- Requirements for multi-line telephone systems

However, since NG9-1-1 is inherently different from the historic regulated telephone service, this opens an opportunity for the State to reconsider the locus of rulemaking to reflect the changing 9-1-1 environment.

Michigan has made tremendous progress in implementing both landline and wireless Enhanced 9-1-1 service (E9-1-1) statewide, according to the Committee’s 2009 Report to the Michigan Legislature. All 83 Michigan counties provide E9-1-1 for landline telephones and Phase II E9-1-1 for mobile / wireless telephones. Despite these advances in the level of 9-1-1 service, communication technologies (and consumer adoption of them) are advancing at an even faster rate than 9-1-1 can accommodate. A recent NENA publication summed up the issue this way:

Our nation’s 9-1-1 system is being pushed to the edge and is increasingly falling behind as technology in the hands of consumers rapidly advances past the capabilities of the current E9-1-1 system. Texts messaging and instant messaging are becoming a more common method of communication than the traditional two-way voice telephone call. Pictures and videos from phones and PDAs are being shared instantly with friends and colleagues around the world. Video and text based communications are replacing traditional TTY communications for the deaf and hard of hearing. Automobiles are being outfitted with telematics systems that automatically open up a voice call and provide valuable crash data when a car is involved in an accident. These are all amazing technologies, and citizens can reasonably expect to be able to contact 9-1-1 with technologies they use to communicate every day. Yet, all of these advancements in consumer communications technology have one important characteristic in common:

*today's legacy 9-1-1 system cannot deliver any of this information to 9-1-1 centers [emphasis added].*²

Several years ago, Dale Hatfield, former Federal Communications Commission (FCC) Office Chief, described today's 9-1-1 system as "...an analog technology in an overwhelmingly digital world."³ This is the reason today's E9-1-1 system cannot handle these new modes of communication and new types of information: the decades-old analog technology is simply too antiquated to do the job.

Understanding this, the Committee determined that it must study the feasibility of upgrading Michigan's current E9-1-1 system to modern, digital IP-based technology. An IP-based 9-1-1 system would provide a flexible backbone transport for 9-1-1 with the capability to encompass the existing landline and wireless voice and data, as well as Voice over Internet Protocol (VoIP), telematics, still image and video transmissions, text / data messaging and yet-future communications technologies.

Although development work regarding the technical architecture of NG9-1-1 is still underway, it is timely for the State of Michigan to focus on what it will take to move in that direction. The NG9-1-1 service model anticipates "a system with shared networks, databases and applications in which the communications costs of public safety agencies are shared amongst all participants in the NG9-1-1 system..."⁴ The United States Department of Transportation (US DOT) has stated that once implemented, NG9-1-1 will enable the following:

- The transfer of 9-1-1 calls between geographically dispersed PSAPs (and from PSAPs to remote public safety dispatch centers) if necessary
- Increased aggregation and sharing of data, resources, procedures and standards to improve emergency response
- Maximized public capital and operating cost savings for emergency communication services
- Increased coordination and partnerships within the emergency response community⁵

Next generation functions that enable the transferring of 9-1-1 calls, the sharing of data and resources, the maximizing of cost savings and the increased coordination and partnerships among the stakeholders involved require a coordinated and interconnected environment. This level of coordination and interconnection has not been necessary in the past, and with it comes new institutional and public policy challenges. Current policy—and its related regulation and legislation—reflects the origin of E9-1-1 as a regulated telephone company service where each PSAP or local 9-1-1 system stands alone and where there is little, if any, sharing of information and data beyond the bounds of the individual 9-1-1 system. NG9-1-1 is more than just a swap of one technology (analog CAMA) for another (IP) within the existing telephone company model.

² NENA Next Generation Partner Program, "A Policy Maker Blueprint for Transition to the Next Generation 9-1-1 System: Issues and Recommendations for State and Federal Policy Makers to Enable NG9-1-1," September 2008, Page 2.

³ Hatfield, Dale N. "A Report on Technical and Operational Issues Impacting the Provision of Wireless Enhanced 911." October 2002, Page ii.

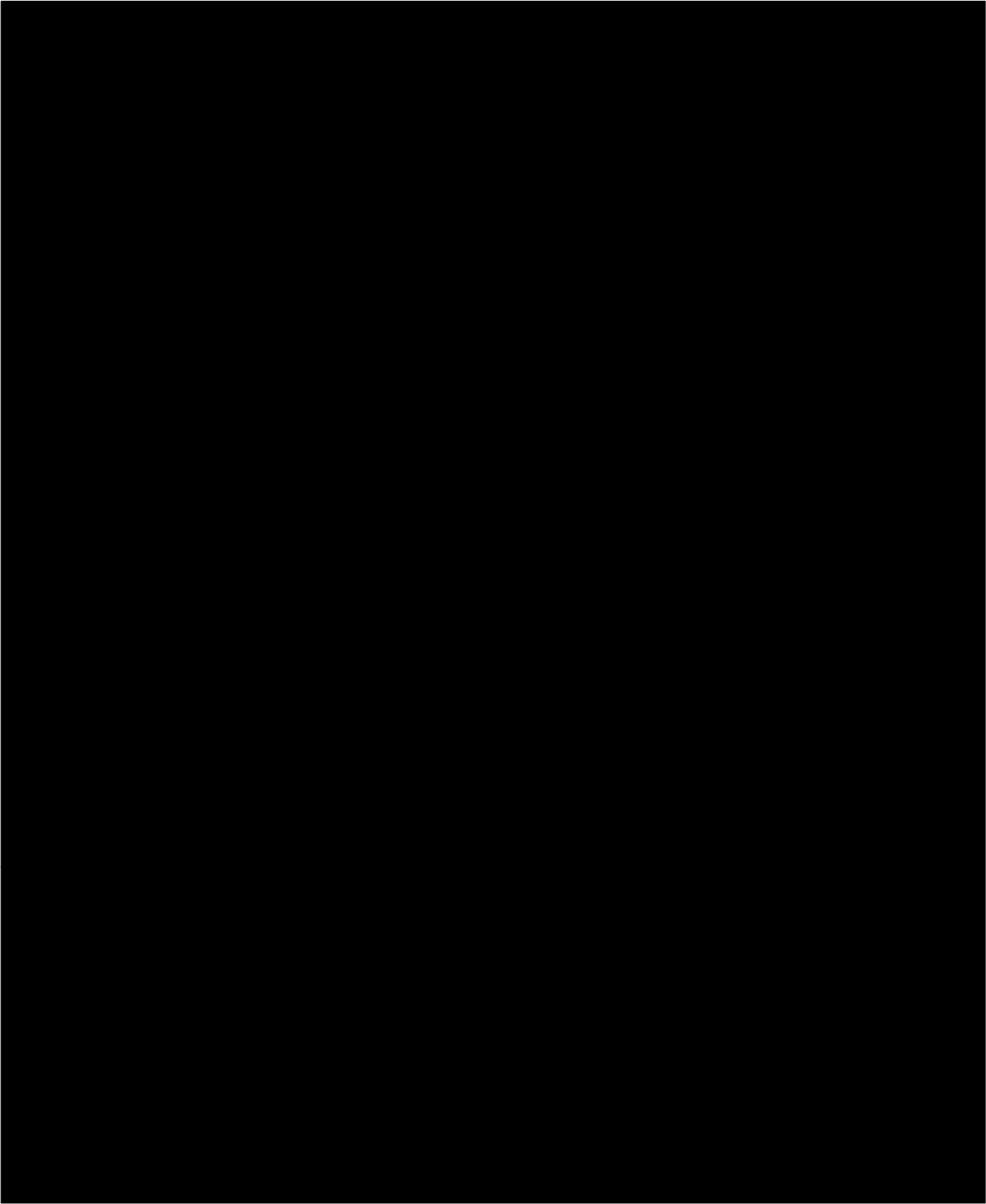
⁴ National Emergency Number Association Next Generation Partner Program, "Funding 9-1-1 into the Next Generation: An Overview of NG9-1-1 Funding Model Options for Consideration," March 2007, Page 3.

⁵ USDOT. "Next Generation 9-1-1 (NG9-1-1) System Initiative: Concept of Operations." April 2007, Page 12.

Any effort to change the way things are done may be met with concern among local 9-1-1 authorities and PSAPs that the State will take over their 9-1-1 service. That concern may get in the way of effective dialog. It will be necessary to help such critically important stakeholders more clearly understand that NG9-1-1 involves practical partnerships in ways that E9-1-1 did not. Local functions such as staffing, answering calls and dispatching will remain under local control. Functions associated with system interconnection, IP network management, data services and data rights, etc. simply must be managed at a higher level.⁶ It does not detract in any way from how Michigan's counties do what they do best: answer and respond to 9-1-1 calls. Traditional 9-1-1 service providers—the Local Exchange Carriers (LECs)—may be concerned that they will lose revenue. The states that have launched pilot projects in partnership with their LECs and PSAPs demonstrate the positive benefits of approaching the challenge collaboratively.

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⁶ NENA Next Generation Partner Program. "Next Generation 9-1-1: Responding to an Urgent Need for Change." February 2006, Page 9



33 Pages

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pursuant to FOIA Exemption 4
(5 U.S.C. § 552 (b)(4))

Michigan's Push for Broadband

A "Call to Action" for Community Leaders

The Economic Impact of Broadband

- A modest increase in broadband adoption could add \$134 billion annually to the US economy
- A 7% increase in national broadband adoption could lead to incredible economic changes including:
 - Creation of 2.4 million jobs
 - \$670 saved per household per year in health care costs
 - \$6.4 billion annual mileage savings
 - 3.8 billion hours of time saved for American consumers
- A study by Gartner Consulting concluded that accelerating the build out of a statewide broadband infrastructure in Michigan would result in a \$440 billion increase in Michigan's gross state product over the next 10 years.

Sources: Internet Innovation Alliance and Gartner Consulting

A Time for Vision

"When we launched our broadband plan, we likened it to the effort 55 years ago to build a great bridge linking our two peninsulas. Our broadband plan is every bit as transformational, allowing us to link every community in our state to economic opportunity. Broadband will be this generation's Mackinac Bridge."

— Governor Jennifer Granholm

The American Recovery and Reinvestment Act (ARRA) has made available \$7.2 billion dollars nationally in competitive grants and loans to expand the availability of high speed Internet services (broadband) to areas beyond the current reach of this technology.

For Michigan and its residents, this is a game changing opportunity. With broadband:

- Michigan businesses can tap into the world market and cast a wide net for attracting employees, customers, suppliers, and more;
- Students can take classes remotely, conduct research tasks, and engage in academic dialogues with other students and teachers around the world;
- Healthcare records can become fluidly available, with medical histories easily, but securely accessible no matter where a patient seeks care;

- Governments can become more efficient through shared services and infrastructure;
- Tourism can be bolstered through social media sites, online marketing, shared images;
- And first responders can be plugged into the necessary information they need.

The first round of applications for ARRA funding is now over (award announcements are pending). One round still remains. One last opportunity. The question is whether your community will benefit from this funding.

More than 500,000 households in Michigan do not have access to broadband.

In those same areas, a countless number of businesses are without access to this necessary tool for modern day commerce.

WHO SHOULD BE AT THE TABLE?

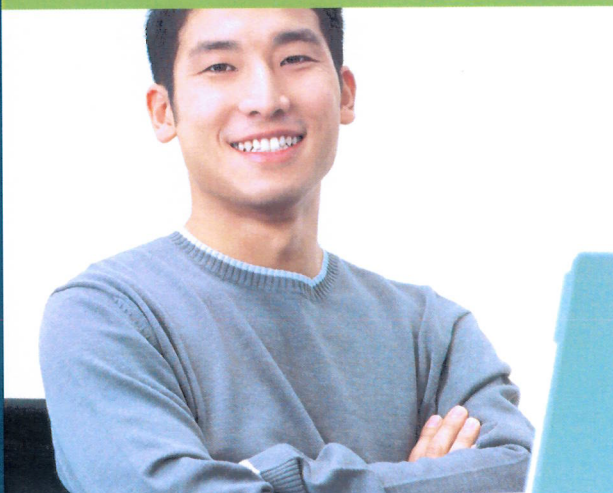
Key Local Stakeholders

(anchor institutions)

- County Government
- Township Government
- Village Government
- Municipal Government
- Intermediate School Districts
- Community Colleges
- Universities
- Healthcare
- Libraries
- Public Safety

"It is apparent that an accelerated broadband build-out would make a huge difference in Michigan's economy and employment picture."

— Michigan Economic Development Corporation



Community Leaders

Your Call to Action starts now

The promise of broadband is the promise of a better tomorrow.

Step 1

Form a consortium by identifying key stakeholders

in your community and inviting them to the table.

Go through the stakeholder list in the left sidebar and put names together for a solid community broadband consortium. Invite all stakeholders to the table and have them come with their broadband needs, concerns and priorities. Use this initial meeting for awareness and need assessment.

(TIP: Look for someone with a strong interest in broadband access and ask them to help champion/lead the effort for your community.)

Step 2

Identify broadband providers with an interest in your community.

Start with those providers who submitted Round One applications to provide coverage for your community and/or neighboring communities. For assistance, contact the State of Michigan at (517) 241-4457 or send an email to band@michigan.gov.

Step 3

Request that providers share Round One applications with your consortium.

These applications may or may not win Round One funding (awards will be announced in February 2010), however, they will provide a superb starting point for addressing broadband in your community.

Step 4

Identify available assets for providers to utilize.

Utilize your assembled consortium of stakeholders to identify key assets that will bolster the effort to expand the reach of broadband throughout your community. These assets include public property, buildings, towers, antennas, etc.

Step 5

Organize a meeting with broadband providers and stakeholders.

Step 6

Streamline processes for permits and licenses.

Providers cite lengthy processes for permits and licenses as one of their greatest hurdles in deploying broadband. Once ARRA money is awarded, broadband projects will have a start/finish timeframe of just two years. Local governments are strongly encouraged to evaluate their processes and look for opportunities to streamline protocols.

Step 7

Organize ongoing consultation meetings with providers to ensure coverage

for your community.



Changing the Lives of Citizens & Businesses

Now is the time for leadership. Your community may not win coverage from Round One and the brief window for Round Two opens February 16 and closes March 15.

Don't drop the ball. Work now with providers on their plans for Round

Two. Providers are already thinking ahead and you should be, too.

Note: Round Two will be the final opportunity to apply for these federal dollars, but opportunity still exists beyond ARRA! By collaborating with

providers now, your community will be firmly on the radar as a location for providers to build-out broadband coverage.

Remember, the effort you extend today will help your community tomorrow.

Questions & Answers

Which federal agencies are involved?

Two federal agencies have defined the framework for the broadband funding programs. Within the Department of Agriculture, the Rural Utilities Service (RUS) is implementing the Broadband Initiatives Program (BIP) that requires 75% of a funded area be within unserved/underserved rural locations. In Round Two, RUS will concentrate on Last Mile projects that deliver broadband directly to citizens. These awards can be a combination of grants and loans. In the Department of Commerce, the National Telecommunications and Information Administration (NTIA) is implementing the Broadband Technologies Opportunity Program (BTOP) which includes three categories:

- Comprehensive Community

Infrastructure (middle mile projects connecting anchor institutions)

- Public computing centers
 - Sustainable broadband adoption
- BTOP is a competitive grant program, with a 20% match required. Projects that meet or exceed a 30% match will be given priority.

Is an entity whose application is denied in Round One eligible to reapply for funding in Round Two?

If an application is not successful in the first round, the applicant may resubmit the proposal for the next round of funding. Applicants will be notified in writing of the reason for the rejection. As a result, applicants resubmitting their applications in Round Two will have an opportunity to

address the deficiencies identified in the first round.

Applicants should be aware that the funding agencies have made changes to their Notice of Funds Availability (NOFAs) to better achieve the agencies' goals and to adjust the process based on feedback from Round One. Please see Michigan.gov/broadband for a summary of these changes.

May an applicant who receives an award in Round One submit an application in Round Two?

Yes, provided that the subsequent application does not duplicate projects already funded.

Is there a limit to the number of applications one entity can submit during the application window?

No.

ARRA FUNDING SNAPSHOT

\$7.2 Billion

The Recovery Act will make \$7.2 billion available nationally for competitive grants and loans to improve and expand broadband services.

Application Rounds

Funding will be dispersed over two application rounds. Round One closed in August 2009. The Round Two window for applications is from **February 16 to March 15, 2010**. All awards will be announced by September 30.

Funding Programs

- Broadband Infrastructure
 - Last mile (service to end users)
 - Middle mile (broadband infrastructure that does not directly serve end users)
- Public Computing Centers
 - Public Internet access thru libraries, schools and other public sites
- Sustainable Broadband Adoption
 - Training and education programs to encourage broadband use

Round One Summary

\$4 Billion Available

Nationally...

- \$28+ billion in funding requests

Michigan...

- \$575+ million in requests
- **\$48.7 million** awarded to date*

* Round One awards will continue to be announced throughout February, therefore, this number may grow for Michigan



CONTACT

State of Michigan

Broadband Consortium

George W. Romney Building
111 S. Capitol Avenue, 10th Floor
Lansing, MI 48913
(517) 241-4457
Email: broadband@michigan.gov

KNOW WHAT'S HAPPENING

Web sites

Broadbandusa.gov
ConnectMi.org
Mel.org/broadband
Michigan.gov/broadband
Michigan.gov/broadbandmapping

Twitter

[MiBroadband](https://twitter.com/MiBroadband)

Email Updates

Register for broadband updates at
Michigan.gov/broadband

Highlights of Michigan's Push for Broadband

2009

- January Governor's "Call for Projects"
Planning Consortium Established (see below)
- February Broadband Framework Developed
- March to June Non-stop Outreach Campaign (providers and stakeholders)
- July Statewide Provider Meeting
- July to August Provider-to-Provider and Provider-to-Stakeholder Pairing
- August 80 Applications Submitted in Round 1 (totaling over \$575 Million)
- Sept to December State Launches a "Call to Action" for Round 2
- November Feds issue RFI for Round Two
- December Announcement of Round One Awards begins
 - Michigan receives first broadband stimulus award for \$8.6 Million to Chatham Telephone Company (BIP project) to bring high speed DSL broadband service to remote, unserved businesses and households within its rural territory. (December 17, 2009)
 - The Michigan Public Service Commission receives a \$1.8 million grant from the NTIA to launch a comprehensive broadband mapping initiative, Connect Michigan, which will help enable the state to collect data and develop a detailed map of its existing broadband infrastructure. Connect Michigan is a partnership between the Michigan Public Service Commission and Connected Nation, a national leader in broadband mapping. (December 22, 2009)

2010

- January Connect Michigan presentation to providers
Feds issue NOFA for Round Two
 - Application Window: February 16 - March 15NTIA awards a \$33.3 million infrastructure grant to Merit Network, Inc. and \$895,000 public computer center grant to Michigan State University (January 20, 2010)
- February Regional Winter Seminars for Round Two Broadband Stimulus Funding Strategies (combined with 2010 Census update). Seminars run from 10am to 3pm.
 - Marquette (February 8)
 - Houghton Lake (February 9)
 - Lansing (February 16)
 - Saginaw (February 17)
 - Detroit (February 22)Completion of Round 1 Award announcements anticipated
- September Completion of all award announcements (September 30, 2010)

To register, visit
<http://broadband.mel.org>

Seating is limited. Register early!
Cost: \$15 (lunch included)

The Michigan Broadband Consortium

In late January 2009, the State of Michigan formed a broadband consortium composed of key strategic partners to work cohesively toward advancing the State's vision for broadband. The consortium includes representatives from Michigan State University, the State 911 Office, the Michigan Public Health Institute, Convergent Technology Partners, Michigan Economic & Development Corporation, and several state agencies, including Information Technology, Education, Transportation, Michigan Public Service Commission, Library of Michigan, Energy, Labor & Economic Growth, and Community Health.



PLANNING CONSORTIUM

- ✓ MDIT
- ✓ MDOT
- ✓ MDE
- ✓ DELEG
- ✓ MEDC
- ✓ MPSC
- ✓ The Library of Michigan
- ✓ Michigan State University
- ✓ Executive-on-loan (CISCO)
- ✓ Convergent Technologies
- ✓ Significant inputs from other local government and service provider communities

RECENT HIGHLIGHTS

- ✓ Working to unify stakeholders to strategically secure as much of the federal stimulus funding for Michigan as possible
- ✓ Informational meeting with broadband providers held in early July to review Round 1 funding requirements
- ✓ Ongoing awareness presentations before individuals and organizations across the state—more than one hundred sessions held thus far

ARRA Broadband Investment Michigan's Strategic Framework

The American Recovery and Reinvestment Act (ARRA) will make \$7.2 billion available nationally for competitive grants to improve broadband services. From this, \$4.7 billion will be awarded by the National Telecommunications and Information Administration in grants for building broadband infrastructure, increasing public computer center capacity, funding sustainable broadband adoption programs, and implementing detailed state broadband mapping. Also, the Rural Utilities Service will be utilizing the remaining \$2.5 billion for broadband infrastructure build in the form of loans, loan/grant combinations, and grants.

Project Status

On July 1, the federal government handed down guidelines for Round One (of three) for the broadband grants under the stimulus package. The goal of this project is to bring broadband and/or wireless Internet service to unserved and underserved areas throughout the state. Over \$2 billion is available in this first round, with billions available later. The application process for this phase is highly detailed with a fast-approaching deadline of August 14.

Collaborative Efforts Statewide

The State is currently working to pair up broadband providers, local counties and communities to wire areas throughout the entire state and ensure local needs are met. While Michigan is not submitting a combined proposal for the entire state during this initial round, the State is coordinating among providers to ensure projects align with the broadband vision and to maximize the number of Michigan proposals funded.

Michigan's Vision

The vision of the State of Michigan is to provide broadband coverage to every corner of the state:

- * Expanding and upgrading broadband service to unserved/underserved
- * Transforming Michigan's economy and technology infrastructure
- * Ensuring government efficiency
- * Strengthening public safety and homeland security

*The more we are able to unify our efforts,
the greater value we will be able to add for
Michigan's citizens and businesses*

MILESTONES

- * **January:** Initiated stakeholder outreach
- * **July 1:** Federal requirements released
- * **July:** Implementing communications plan with Michigan Recovery Office
- * **August 14:** ARRA deadline for infrastructure, adoption, and public computer center accessibility applications, as well as state broadband mapping
- * **Ongoing:** Adoption and deployment planning to build out public accessibility in partnership with Michigan State University

For additional information, and/or to receive updates on broadband activities please visit
www.michigan.gov/broadband



March 22, 2010

Dr. Donald J. Welch
President and CEO
Merit Network, Inc.
1000 Oakbrook Drive, Suite 200
Ann Arbor, Michigan 48104-6794

Dear Dr. Welch:

I am writing to express the non-binding commitment of Michigan Tech Enterprise Corporation (MTEC SmartZoneSM) in the cities of Houghton and Hancock, Michigan in Houghton County to connect to the network that will be created as a result of Merit Network's proposal submitted to the Broadband Technology Opportunities Program (BTOP) under the second round of funding of the American Recovery and Reinvestment Act (ARRA).

As an Anchor Tenant of Merit's REACH-3MC II proposal, MTEC SmartZoneSM will connect to the proposed network in the initial phase of the build-out plan. The connection you are proposing will deliver the benefits of affordable, high-speed access to Michigan's statewide education and research network to our organization and help us serve our community.

MTEC is a member of a network of SmartZonesSM in Michigan. There are fifteen SmartZonesSM throughout the state of Michigan, which are collaborations between public universities, industry, research organizations, government, and other community institutions intended to stimulate the growth of technology-based businesses and jobs by aiding in the creation of recognized clusters of new and emerging technology businesses.

MTEC is pleased to continue in a relationship that is beneficial to our organization and to Merit Network, Inc. We look forward to connecting to the network when it is completed.

Sincerely,

Sincerely,



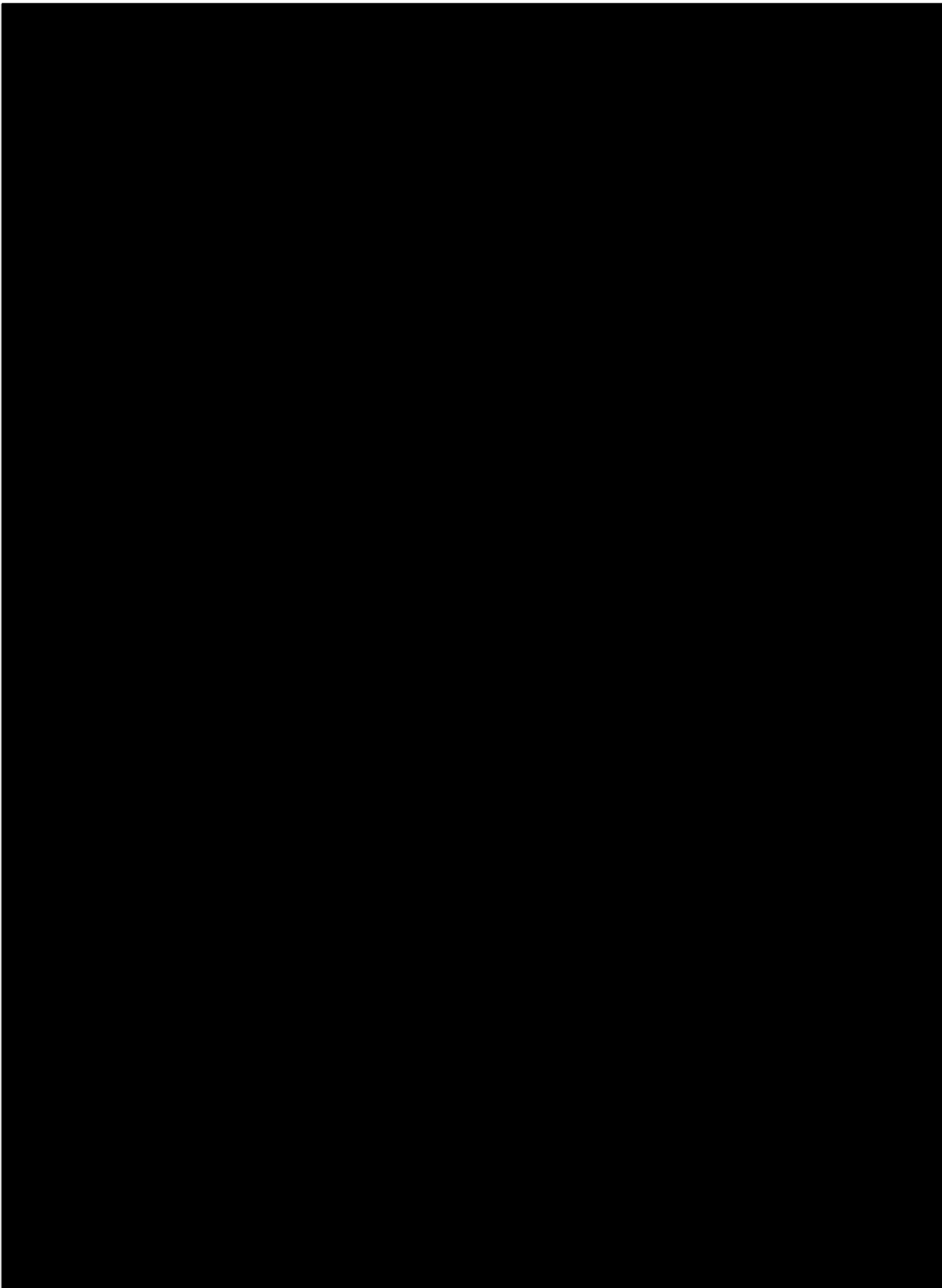
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MICHIGAN TECH ENTERPRISE CORPORATION



52 Pages

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(5 U.S.C. § 552 (b)(4))