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OMB Number: 4040-0004
Expiration Date: 01/31/2009

Application for Federal Assistance SF-424

Version 02

* 1. Type of Submission:	* 2. Type of Application:	* If Revision, select appropriate letter(s):
☐ Preapplication	☒ New	
☒ Application	☐ Continuation	* Other (Specify)
☐ Changed/Corrected Application	☐ Revision	

* 3. Date Received:	4. Applicant Identifier:
09/01/2009	

5a. Federal Entity Identifier:	* 5b. Federal Award Identifier:

State Use Only:

6. Date Received by State:	7. State Application Identifier:

8. APPLICANT INFORMATION:

* a. Legal Name:	Governor's Office of Information Technology

* b. Employer/Taxpayer Identification Number (EIN/TIN):	* c. Organizational DUNS:
840644739	808573559

d. Address:

* Street1:	601 E. 18th Ave. Ste. 250
Street2:	
* City:	Denver
County:	
* State:	CO: Colorado
Province:	
* Country:	USA: UNITED STATES
* Zip / Postal Code:	80203

e. Organizational Unit:

Department Name:	Division Name:
Governor's Office	Information Technology (OIT)

f. Name and contact information of person to be contacted on matters involving this application:

Prefix:	Mrs.	* First Name:	Dara
Middle Name:	Vaill		
* Last Name:	Hessee		
Suffix:			

Title:	Chief of Staff
Organizational Affiliation:	Governor's Office of Information Technology

* Telephone Number:	303-764-7709	Fax Number:	303-764-7725
* Email:	dara.hessee@state.co.us		

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Application for Federal Assistance SF-424

Version 02

9. Type of Applicant 1: Select Applicant Type:

A: State Government

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

* Other (specify):

*** 10. Name of Federal Agency:**

Department of Commerce

11. Catalog of Federal Domestic Assistance Number:

CFDA Title:

*** 12. Funding Opportunity Number:**

0660-ZA29

* Title:

Recovery Act - State Broadband Data and Development Grant Program

13. Competition Identification Number:

Title:

14. Areas Affected by Project (Cities, Counties, States, etc.):

State of Colorado

*** 15. Descriptive Title of Applicant's Project:**

Mapping the Road to Sustainable Economic Growth: Colorado's Broadband Data and Development Program

Attach supporting documents as specified in agency instructions.

Add Attachments | Delete Attachments | View Attachments

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Application for Federal Assistance SF-424

Version 02

16. Congressional Districts Of:

* a. Applicant: CO-001 * b. Program/Project: CO-All

Attach an additional list of Program/Project Congressional Districts if needed.

Add Attachment | Delete Attachment | View Attachment

17. Proposed Project:

* a. Start Date: 10/01/2009 * b. End Date: 09/30/2014

18. Estimated Funding ($):

* a. Federal	4,299,409.00
* b. Applicant	873,347.00
* c. State	0.00
* d. Local	0.00
* e. Other	0.00
* f. Program Income	0.00
* g. TOTAL	5,172,756.00

*** 19. Is Application Subject to Review By State Under Executive Order 12372 Process?**

☐ a. This application was made available to the State under the Executive Order 12372 Process for review on .

☐ b. Program is subject to E.O. 12372 but has not been selected by the State for review.

☒ c. Program is not covered by E.O. 12372.

*** 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes", provide explanation.)**

☐ Yes ☒ No Explanation

21. *By signing this application, I certify (1) to the statements contained in the list of certifications and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances** and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)**

☒ ** I AGREE

** The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

Authorized Representative:

Prefix: Mrs. * First Name: Dara

Middle Name: Vaill

* Last Name: Hessee

Suffix:

* Title: Chief of Staff

* Telephone Number: 303-764-7709 Fax Number: 303-764-7725

* Email: dara.hessee@state.co.us

* Signature of Authorized Representative: Dara Hessee * Date Signed: 09/01/2009

Authorized for Local Reproduction

Standard Form 424 (Revised 10/2005)
Prescribed by OMB Circular A-102

OMB Number: 4040-0004
Expiration Date: 01/31/2009

Application for Federal Assistance SF-424 Version 02

*** Applicant Federal Debt Delinquency Explanation**

The following field should contain an explanation if the Applicant organization is delinquent on any Federal Debt. Maximum number of characters that can be entered is 4,000. Try and avoid extra spaces and carriage returns to maximize the availability of space.

ABSTRACT

Mapping the Road to Sustainable Economic Growth:
Colorado's Broadband Data and Development Program
Colorado Governor's Office of Information Technology
State Broadband Data and Development Grant Program: 0660-ZA29

The Governor's Office of Information Technology (OIT) seeks $4,299,409 in funding assistance under the State Broadband Data and Development Grant Program Notice of Funds Availability (NOFA) to continue its ongoing assessment and geographic inventory of broadband deployment in the state. The inventory will identify available broadband speeds and technology platforms and identify demand for broadband service. The funds will also support planning activities.

The State is currently engaged in a broadband mapping project. This project began before the NOFA was released, so the deliverables do not exactly match those required by the NTIA. The proposed project will utilize data delivered to the State through the current project and will provide the products delivered to the State to the NTIA for the November 1 deadline. It will also use the delivered data as a basis for validating the data collected in this project.

The proposed project will be accomplished through soliciting external expertise. The State will engage a contractor to collect broadband availability data and develop address data for priority portions of the state. Separately solicited services will provide for independent validation and verification of the data collected, project management, and planning and outreach activities.

The State's recommended procedures for collecting broadband availability data will start with lists of addresses served from providers. These addresses, once mapped, can be transformed to the identification of census blocks as required by NTIA through geoprocessing methods. If addresses are not available, the next desired basis is a delineation of areas served. Last, if neither of these sources is available, an inferential model based on a variety of factors will be pursued. The State will use the US census TIGER files as a basis for addresses to start, but these files can be inaccurate in rural areas of the state, so the State will develop accurate address data for priority areas by combining local data with aerial photography or field data collection methods.

Areas of non-facility based service (wireless) will be requested from the service providers, and if not available from them, the State's will pursue propogation models to estimate these areas. Infrastructure data will be derived from information from providers or other information on record. Community anchor institution data will be produced by leveraging existing efforts in the state to generate locations of these institutions and then contacting the institutions directly or other potential sources to ascertain the type of service to them.

All of these data will be validated independently through surveys and on-line data collection with the assistance of external experts. OIT has identified four positions with varying roles to perform the data validation tasks as well as project management and planning tasks.

This project contains a planning portion that will help identify priority areas for activities to promote the deployment and use of broadband service. It will involve outreach to and coordination with local groups, broadband providers, and other potential stakeholders to promote broadband adoption and enhance broadband market information. The outreach will involve communicating data collection results to stakeholders and assessing gaps in broadband adoption.



Colorado Governor's Office of Information Technology (OIT)

Application for Funding
ARRA - State Broadband Data and Development Grant Program
0660-ZA29

9/01/2009

Mapping the Road to Sustainable Economic Growth:
Colorado's Broadband Data and Development Program

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Program Narrative

I. Executive Summary

The Governor's Office of Information Technology (OIT), on behalf of the State of Colorado, seeks funding assistance in the amount of $4,299,409 under the provisions of this Notice of Funds Availability (NOFA) for the State Broadband Data and Development Grant Program to continue its ongoing assessment of broadband deployment in the state and to create a geographic inventory of broadband services in Colorado. OIT has been designated as the entity authorized to request and receive funds for this purpose by Colorado Governor, Bill Ritter Jr.

As required in the NOFA, the inventory and map of broadband service will identify the available broadband speeds and technology platforms and identify demand for broadband service. The requested funds will also support planning activities for outreach to and coordination with local groups, broadband providers, and other potential stakeholders to promote broadband adoption and enhance broadband market information.

The State is currently engaged in a mapping project to identify areas served by broadband. This project began before the NOFA was released, so the deliverables do not identically match the products required by the NTIA in the State Broadband Data and Development Grant Program; however, the proposed project will utilize the data delivered to the State through the current project to the extent feasible. Specifically, it will provide the data and maps delivered to the State to the NTIA for the November 1 deadline mentioned in the NOFA. It will also use the data as a basis for validating the data provided in the project proposed here.

The proposed project will be accomplished through soliciting external expertise to assist the State in meeting the requirements of the NOFA. The State will engage at least one contractor to collect data regarding broadband availability and develop address data for high priority portions of the state. Address data is critical to support geocoding of addresses where broadband is available or to generate lists of addresses in census blocks greater than two square miles in area, as required by the NTIA. Additionally, separately solicited services will provide for independent validation and verification of the data collected, project management, and planning and outreach activities.

The State's recommended procedures for collecting broadband availability data will start with lists of addresses served from providers. These addresses, once mapped, can be transformed to the identification of census blocks as required by the NTIA through standard geographic processing methods. If these addresses are not available, the next desired basis is a delineation of areas served. Standard geoprocessing methods can be used to identify census blocks served from these data. Lastly, if neither of these sources is available, an inferential model based on a variety of factors will be pursued.

Address data is critical to support this work, particularly since lists of addresses are required for census blocks with areas greater than two square miles. The State will start by using the US Census Bureau's TIGER files as a basis for addresses, but these files can be inaccurate in rural areas of the state. The State will develop accurate address data for areas of high priority for this project by combining parcel data or other local data with aerial photography or field data collection methods.

Areas of non-facility based service (wireless) will be requested from the service providers, and if not available from them, the State's contractor will pursue propogation models to estimate these areas.

Infrastructure data will be derived from information from providers or other information on record. Community anchor institution data will be produced by leveraging existing efforts in the state to generate locations of these institutions and then contacting the institutions directly or other potential sources to ascertain broadband service availability.

All of these data will be validated independently through surveys and on-line data collection mechanisms. The data collection will be performed by a contractor, and OIT will hire or contract for services of several personnel to independently verify the data. OIT has identified four positions with varying roles to perform these, as well as project management and planning, tasks.

The project contains a significant planning portion that will promote broadband adoption and help identify priority areas for activities to promote the deployment and use of broadband service. This will include a variety of concerted outreach efforts involving communicating the results of the broadband data collection to stakeholders around the state and collecting and analyzing information gaps in broadband adoption.

II. Background

II.1 Purpose

The Colorado Governor's Office of Information Technology (OIT), on behalf of the State of Colorado, seeks funding assistance in the amount of $4,299,409 under the mapping provisions of this NOFA to:[1]

1. Continue to develop and provide an ongoing assessment of broadband deployment in Colorado;
2. Create a geographic inventory map of broadband services in Colorado, which will be available for public review and interaction;
3. Identify the available speeds for broadband connection;
4. Collect and analyze detailed market data concerning use and demand for broadband service; and
5. Identify and track the areas with low levels of deployment, the rate at which residential and business users adopt broadband service and other related information technology services, and possible suppliers of such services.

Additionally, OIT seeks planning funding to support Colorado's efforts to:

6. Collaborate with broadband service providers and information technology companies to encourage deployment and use;
7. Facilitate information exchange regarding use and demand for broadband services between public and private sector users;
8. Identify barriers to the adoption of broadband and information technology services in Colorado;
9. Create and facilitate local technology planning teams; and
10. Establish computer ownership and Internet access programs in un-served and areas with lower than average penetration on a national basis.

[1] BDIA § 106(e), 122 Stat. at 4100–4101.

OIT is an instrumentality of the State of Colorado and has been designated by Governor Bill Ritter Jr. as the single entity to receive a grant under this section. OIT will provide and document at least 20 percent non-Federal in-kind matching funds toward the total project cost. This also includes pre-award monies spent on broadband mapping and geographic data development.

OIT seeks funding assistance under this NOFA to expand its broadband mapping and planning efforts in Colorado. This program is a cooperative effort among OIT, the Statewide Internet Portal Authority (SIPA), and the Colorado Public Utilities Commission (COPUC). The Department of Local Affairs and the Office of Economic Development also lend their support to these efforts. Further, as explained later, Colorado's Innovation Council (and its Broadband Working Group) is a private/public partnership that will assist in resolving roadblocks to meeting the broadband policy goals of the Broadband Data Improvement Act (BDIA) and the American Recovery and Reinvestment Act (ARRA).

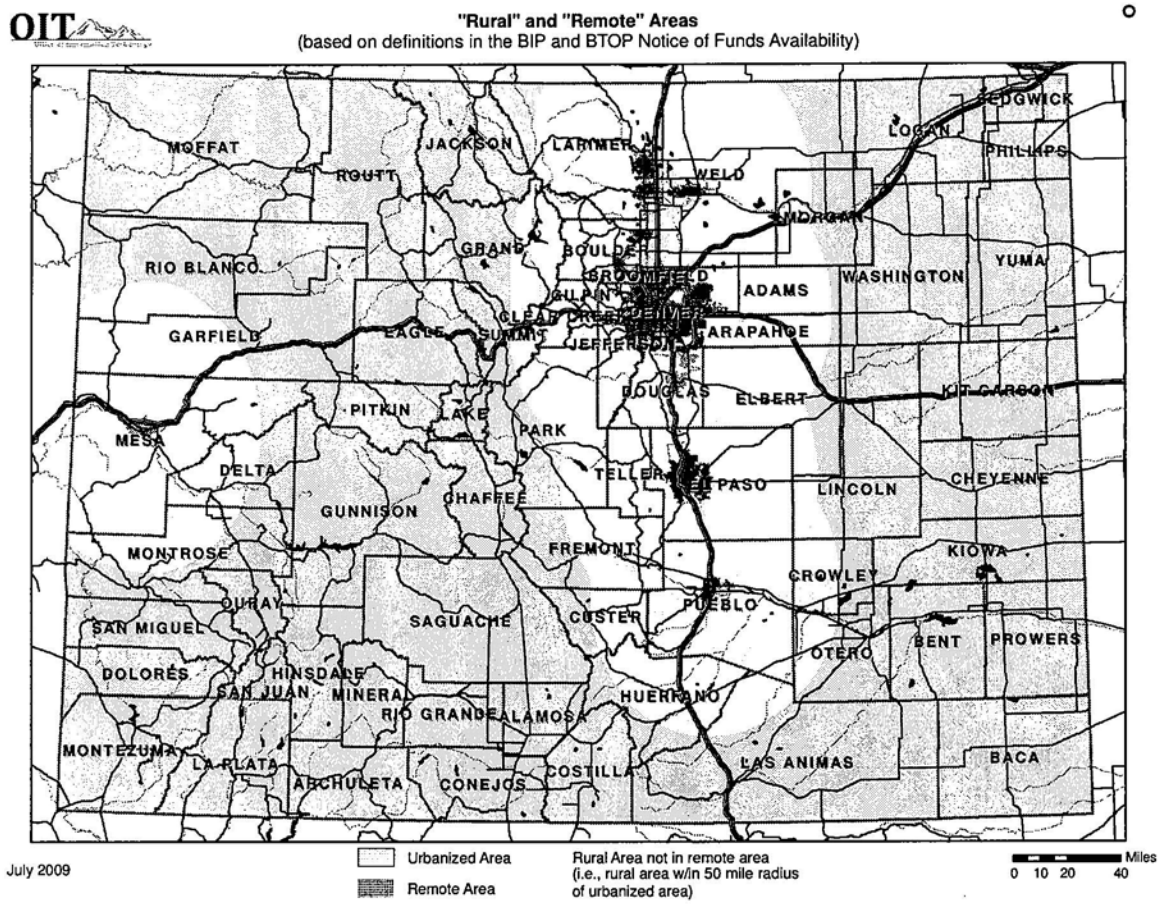
Colorado has been dedicated to expanding broadband availability since Governor Ritter explicitly identified broadband access and use as a linchpin to new economic development in his "Colorado Promise." The State began its own broadband mapping effort to guide further development of broadband service in Colorado prior to NTIA's release of this funding opportunity. While Colorado's goals and objectives for broadband development remain aligned with the over-arching goals of both the BDIA and the ARRA, NTIA's BDIA requirements are broader and more data-intensive than currently included in the deliverables contracted for under Colorado's current broadband mapping initiative. The history and context of Colorado's broadband program provides important background for the approach described in this proposal, and these details are included in Appendix A. The remainder of this narrative follows the outline suggested in the NOFA. First, we discuss underserved and un-served areas. We then address the five criteria for evaluating the proposal: (1) data, (2) project feasibility, (3) expedient data delivery, (4) process for repeated data updating, and (5) planning and collaboration.

II.2 Description of Un-served and Underserved Areas of State

Colorado's vast areas of mountainous terrain present many challenges for construction of wireless and terrestrial facilities. Absent special incentives, the population dispersion throughout the state often makes it uneconomical for the private sector to deploy facilities. Colorado faced these issues before in bringing telephone service to rural areas where the need for government assistance became critical. Over the past six years, Colorado telecommunications providers have received over $360 million in funding support from the Colorado High Cost Support Mechanism and over $480 million in federal Universal Service Fund support for the deployment of telecommunications services. While availability of wireless technologies for broadband deployment may mitigate the need for government support to some extent, the challenges of deploying infrastructure throughout Colorado should not be minimized.

Based on the definitions contained within the NOFA for the State Broadband Data and Development Grant Program (RIN 0660-ZA29), the Broadband Initiatives Program (RIN 0572–ZA01), and the Broadband Technology Opportunities Program (RIN 0660–ZA28), Figure 1 illustrates the areas of Colorado considered to be remote and rural, which are extensive.

Figure 1: Rural and Remote Areas

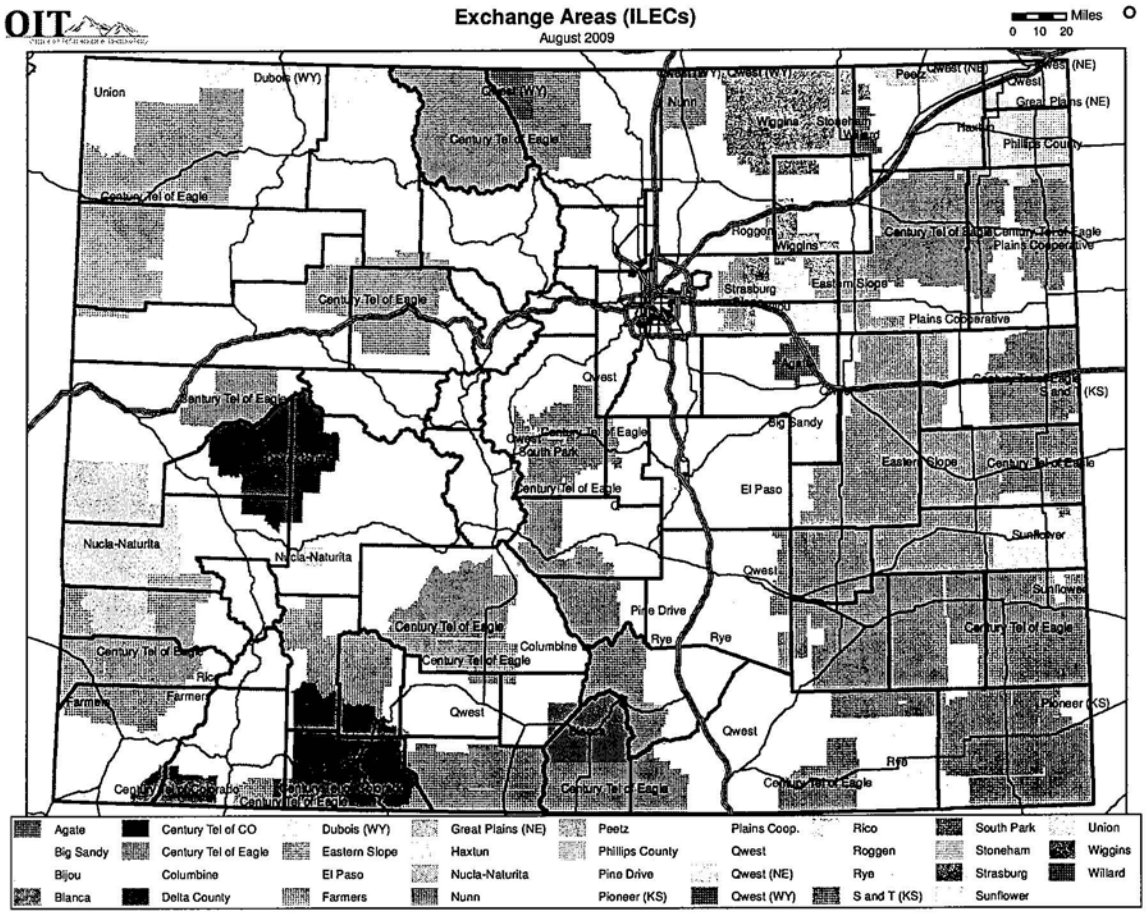


II.3 Assessment of Current Knowledge

If a Colorado incumbent local telephone provider or one of its affiliates uses facilities to deploy broadband, it is required to submit aggregated information about broadband availability and penetration rates for broadband services annually to the COPUC. Nevertheless, our current knowledge of the un-served and underserved areas in Colorado remains limited since this information offers only a partial view of the total broadband footprint. In subsequent paragraphs, we identify what we know at this time about broadband deployment within Colorado, based on supplier technology choices. We begin with incumbent local exchange telephone providers (ILECs) and then describe competitive local exchange providers (CLECs), wireless providers, cable companies, and then electric companies and municipal co-operatives. Finally, we describe recent studies and analyses of broadband service in Colorado and conclude with a description of the expected deliverables from the broadband mapping project that is currently underway in Colorado.

A map of the exchange areas served by ILECs is shown in Figure 2 below. Qwest Communications, Inc. is the largest of these providers, covering approximately 43% of the land area of the state but delivering a far greater percentage of access lines in Colorado as they serve major urban areas. Consequently, the remaining telephone companies cover approximately 57% of the area, but serve a smaller percentage of the access lines.

Figure 2: Telephone Exchanges



COPUC possesses information regarding broadband availability and penetration rates for these companies along with the speeds and types of services and technology supporting the service offerings, as reported to the COPUC in April of 2009. As this information was the result of self-reporting, it has not been verified by the COPUC.

We also know that approximately 269 telecommunications companies of all types serve parts of Colorado, some of which provide broadband services in addition to telecommunications services. Based on annual report filings with the COPUC, sixty-seven of these 269 companies (25%) self-report as primarily a "CLEC", a "Transport", or a "Wholesale" provider, suggesting that they may have "middle mile" or "connection points" on their networks that would provide opportunities for broadband deployment. None of these self-report that providing "ISP" or "IP-Enabled" services are their primary business in Colorado.

Based on High Cost Support Mechanism data filed at the COPUC, we believe there are approximately 35 wireless carriers serving some portion of Colorado. Four of the wireless carriers have sought and received designation as an "Eligible Telecommunications Carrier" (ETC) in Colorado and two are currently serving customers in rural areas. With such designations, it is possible (if not likely) that these two wireless providers have facilities that jointly provide broadband services along with basic local exchange services in rural areas.

There are also cable companies that provide broadband services in parts of Colorado. The largest cable provider is Comcast, which predominantly serves the larger urban areas and has a significant base of high speed cable modem customers. Bresnan Broadband of Colorado, LLC, has also begun serving the Western Slope area of Colorado and provides both phone and Internet service. However, the COPUC does not collect state-level data for these companies as they are not subject to rate oversight by the COPUC.

It is unknown at this time whether any of the rural Colorado electric co-operatives or municipal electric utilities serving less densely populated areas of the state currently offer broadband services over their power lines. Neither of the two investor-owned electric utilities currently provides broadband services over their power lines, though both have limited plans for deploying "Smart Grid" technologies throughout the state, suggesting possible longer-term opportunities for enhanced broadband use or connections in limited areas across Colorado. At least one of these utilities has fiber optic facilities that have been leased to other entities in the past. It is unclear if those facilities offer any "end-user", "middle-mile", or "aggregation" options for broadband services in some areas of the state.

Currently, our knowledge of deployment of broadband facilities for Colorado's Tribal Nations is limited to knowledge related to telecommunications providers and satellite service providers who serve the Tribal Nations.

In June 2007, the COPUC sponsored an assessment of broadband availability and deployment throughout Colorado. However, much of the detailed data supporting the report is confidential and not available for public review because many providers co-operated with the report writers only upon agreement of confidentiality. A non-confidential version is available and can be provided to NTIA if it would assist in the evaluation of this application.

As there is currently no Federal or State requirement for broadband providers to submit detailed data to OIT, such as the FCC-required Form 477 data, the State has begun investigating other novel proxies to gain some initial understanding of the broadband landscape. One of the unique methodologies that we have used to determine un-served areas is the mapping of customers subscribing to satellite broadband service under the assumption that a customer will only subscribe to the more costly satellite service if neither a wireline nor a wireless service offering is available. Figure 3 shows a map of the distribution of satellite customers for two particular companies. As expected, there are many customers in rural and mountainous areas of the state, but surprisingly, there are also many customers in the metropolitan areas. We assume (without having done further investigation) that these customers are just outside the effective range of service from central offices of wireline providers.

Figure 3: Satellite Customers



A significant piece of Colorado's broadband data development program is the current broadband mapping project underway in the state. Colorado has contracted with a third-party vendor to map broadband availability on a census block basis. The required deliverables from the contractor include:

1. Geographic data set referenced to US census blocks of broadband coverage in the state constructed from provider data.
2. Analysis of the population not served by broadband.
3. Maps in digital and hard copy format depicting broadband service areas and population density in areas not served by broadband.
4. Validation and verification of broadband data through a variety of mechanisms.
5. Market analysis describing barriers to deployment and adoption of broadband.
6. Interactive web map depicting broadband coverage and supporting user entry of addresses to identify provider information and verify service information at addresses.
7. Data of backhaul availability across the state, at a county level.
8. Digital and hard copy map depicting backhaul capacity in the state.

The contractor must complete and deliver all of its products by November 2, 2009. The timing of Colorado's mapping project was determined by State legislation. Consequently, it was starting just as

the NTIA released the State Broadband Data and Development NOFA, and, therefore, the Colorado mapping project does not include all of the data elements required by the NTIA NOFA. In addition, some of the data considered non-confidential by the NTIA will not be delivered to the State because the mapping contract that is currently in place has a broader definition of what data are to be held confidential. This grant application proposal leverages the current mapping project as much as possible given the confidentiality and data ownership restrictions, and early deliverables from the State to the NTIA will be from this project. In addition, as described below, the challenges that have arisen in this project have provided critical experience and knowledge in pursuing the larger scale project sought by the NTIA.

If BDIA funding is received, future vintages of the maps will refine the data delivered in this project and expand the interactive capabilities of the project. A more detailed description of Colorado's mapping project is included in Table A of Appendix A, along with a comparison that contrasts the expected deliverables from this project to the NTIA mapping requirements.

II.4 Prioritization of Allocation of Grant Funds

Although our broadband mapping-focused proposal for BDIA support does not by itself have a prioritization of allocation of grant funds, the program fits into the State of Colorado's broader plan for broadband deployment and adoption, which has undergone a prioritization review. To help move Colorado toward ubiquitous broadband coverage, the State has established a framework of priorities to help guide broadband-related ARRA grant applications, particularly those submitted under the Broadband Technology Opportunities Program (BTOP). Our primary focus is to work with industry around the state to provide broadband to community sites that are un-served or underserved. The State will prioritize BTOP applications that seek to create or improve high-speed Internet access at community anchor institutions. The state believes that the best grant application(s) will coordinate with industry partners, local governments, and other public entities to create a comprehensive approach to providing broadband coverage throughout the state. The State would like to see proposals that build from our state's existing infrastructure instead of building new lines where there is existing access.

The Colorado Governor's Office has established priorities for each of the three BTOP categories of grants. These include:

1. ***Broadband Infrastructure:*** The highest priority of the Colorado Governor's Office regarding broadband stimulus funds is to support services to community anchor institutions. In accordance with the NTIA, for purposes of this framework, 'community anchor institutions' are defined as: schools, libraries, medical and healthcare providers, public safety entities, community colleges and other institutions of higher education, and other community support organizations and agencies that provide outreach, access, equipment, and support services to facilitate greater use of broadband service by vulnerable populations, including low-income, unemployed, and elderly residents.

2. ***Public Computer Centers:*** The Governor's Office will support applications that focus on maximizing the accessibility of these centers by either increasing the number of computers available or the number of participants that can access the site.

3. ***Sustainable Broadband Adoption:*** This category is designed to fund innovative projects that promote broadband strategies and access around the state. The Governor's Office will give

priority to applications that include a combination of rural and urban territories, increase the overall penetration rate of new subscribers, and contain the lowest cost per new subscriber.

The State of Colorado has submitted a sustainable broadband adoption grant proposal through the BTOP opportunity, believing that these adoption-related activities directly align with and compliment the mapping and planning activities that would occur under a BDIA-funded program. However, the State – as a governmental entity – decided against submitting an application for infrastructure or community centers during round one of the BTOP, preferring instead to play a more advisory role in the process by aiding the private and non-profit sectors with their applications.

The mapping program as laid out in this proposal would play a significant role in evaluating the success of ARRA-funded broadband deployment efforts, particularly to community anchor institutions, by collecting data longitudinally to assess progress made to increase broadband access and to identify persistent coverage gaps. Further, funded planning strategies as part of the five-year program would help ensure that the benefits of broadband are realized through increased usage of the technology. The data collected and maps produced will help determine if State-defined priorities are being addressed and will enable the State to take appropriate action if they are not, either by submitting for future BTOP rounds to meet unmet needs or collaborating with the private and nonprofit sectors to guide their efforts in a direction that is in the best interest of Colorado citizens.

III. Program Description

III.1 Data

III.1.(a) ***Data Gathering***

The NOFA Technical Appendix specifies the delivery of four major sets of data to the NTIA. The subsequent clarification issued on August 6, 2009, (Clarification) modified these deliverables due to data confidentiality concerns from broadband providers. The required data are:

1. Broadband availability
   a. US census block data for each broadband provider indicating the type and speed of service; for census blocks with an area greater than two square miles, the NTIA is requiring the list of street segments and address ranges that receive specific broadband service.
   b. Shape file of coverage area for non-facility based service.
2. Residential broadband weighted average speed.
3. Broadband infrastructure, specifically middle-mile/backbone interconnection points.
4. Community anchor institutions and broadband service to each institution.

To preserve space, we do not repeat here the specific data formats and required attributes for each of these data. However, OIT will provide NTIA with the data for Colorado in the format and with the content specified in the NOFA and as modified in the Clarification. Although not comprehensive with respect to the data required by the NOFA, OIT will provide to the NTIA data delivered by our current broadband mapping contractor to the State within 10 days of its delivery to and approval by the State of Colorado. OIT will also deliver to the NTIA the maps produced by the contractor and will provide the NTIA with a hyperlink to these products on the OIT website. As required, these data sets will be at least as current as June 30, 2009, consistent with the NOFA requirements. Absent alternative information, this information can be used by NTIA to assist in its evaluation of BTOP proposals. OIT

will make all reasonable efforts to provide a substantially complete dataset by February 1, 2010, and a complete dataset by March 1, 2010.

The specific deliverables and milestones are listed in Section III.3 below, Expedient Data Delivery. This section describes the method by which OIT will collect the data required by the NTIA.

OIT will employ at least one contractor to assist with the data collection and analysis functions described in this section. As described later in the proposal, OIT will procure separate and distinct services for program and project management and data validation and verification functions. These latter services will either be procured through a single solicitation or individual hires of the positions that will carry out this work; these positions are described in more detail further in the proposal. OIT agrees to treat any matter that is a trade secret, commercial or financial information, or confidential as not subject to public disclosure except as otherwise mutually agreed upon by the broadband provider, and OIT will institute procedures to ensure protection of these data and will require its contractors to do likewise. However, OIT will insist on receiving the raw data used to develop the data to be delivered to the NTIA.

OIT will solicit recommendations from the selected contractor on the most effective and accurate method for collecting and constructing the broadband data, but OIT will suggest desired means for this construction and include these methodologies in the required scope of work when soliciting proposals from potential contractors. For community anchor institution information, these data collection mechanisms will actually be required to leverage initiatives currently occurring in the State.

III.1(a)(i) Deliverable 1 – Broadband Availability

Deliverable 1a) Census block based data

The primary desired source data from broadband providers for broadband availability will be address level data. Although the NTIA does not require this level of data, it provides the most accurate representation of where broadband service exists and is adopted. It requires a standard geospatial process to transform this granularity of data to census block-based data required by the NTIA. In some cases, these addresses may be geocoded (*i.e.*, mapped) by the provider. If not, they will be geocoded by the contractor. The geocoded addresses will then be overlaid with census blocks to identify those blocks with service for each provider. Using address points from providers also assists in remedying the problems raised by the standard street segment-address range models in rural areas of the state, which is discussed in more detail below.

In the cases where this granular data is not available from providers, the State will request a definition of areas served from each provider. Ideally, this definition would be based on an identification of census blocks served, but if providers do not provide an indication of service areas according to census blocks, the State will accept a delineation of service areas. These service areas will be overlaid with census blocks to identify the specific block served.

Last, if providers refuse to provide any information, the State will attempt to infer the presence of broadband availability based on a combination of infrastructure information, population density, demographics, and knowledge of individual points of broadband service from surveys or other input. The specific model to infer broadband availability will be developed by the contractor with input from

OIT. Additionally, OIT and the COPUC are prepared to work with NTIA and the FCC to develop practical national and state legislative solutions to address provider co-operation issues.

For census blocks greater than two square miles in area, the State will determine street segments and address ranges covered in these blocks by identifying the street segments associated with the address points or by overlaying the blocks served on an address file or street database with address ranges.

This collection process will obtain the transmission technology information and the maximum advertised upstream and downstream speed as required by NTIA. Typical upstream and downstream speed information will be requested from the provider but may also be gathered by the State through interactive web sites and surveys that will also be used for the data verification and validation process.

Address Information in Colorado

A reliable address data set is critical to this project both for locating census blocks served by broadband and for identifying the address ranges served within a census block. Approximately 8,700 of the 141,000 (6.2%) Colorado census blocks (from 2000 census) have an area of greater than two square miles. This 6.2% represents approximately 4.3% of the state's population and 5.1% of the housing units in the state, based on the 2000 census. However, it represents approximately 82% of the area of the state. The Clarification specifies that address information provided for blocks greater than two square miles may be based on the US Census Topologically Integrated Geographic Encoding and Reference (TIGER) files or similar data. Initial data sets delivered to NTIA by OIT will likely use TIGER data. However, TIGER data do not always provide good depictions of addresses in rural or rapidly developing areas.

TIGER data suffers from two sources of inaccuracy. The first is inherent in the data itself. TIGER data tends to be dated and have incomplete address and street name information in rural or developing areas. The data for most of the counties in Colorado is from 2005 or earlier, which is particularly problematic for areas that are experiencing rapid rates of growth. For example, the vintage of the street segment data in the TIGER file for Weld County, Colorado, a rapidly changing county northeast of the Denver Metropolitan area is from 2003. That is when the Census Bureau collected its data for the Local Update of Census Address program in Weld County. As this community has been one of the fastest growing areas in the nation in the past decade, we expect a substantial effort to verify and update information.

The second source of inaccuracy results from the way actual addresses are structured in rural areas of the state. In many rural areas, addresses do not follow the typical address range format with odd addresses on one side of the street and even addresses on the other and house numbers consistently increasing along the street segment. In these areas, house numbers may be out of sequence along a street segment or on the "wrong" side of the street segment. This raises a question about whether reporting an address range for street segments is the most appropriate way of reporting addresses served in rural areas. OIT will still report a maximum and minimum address for each street segment either based on address points received or on a street address data set such as TIGER data. We will also explore means for characterizing the magnitude of inconsistencies with the address range model posed by actual addresses in an area.

Colorado currently does not have a statewide address file. To provide the most accurate depiction of address information possible, we are including in our proposal activities to iteratively improve address

data to deliver a better data set than required by the minimum specifications. Addresses are generally created by local governments. However, of the 64 counties in the state, fewer than 10 have a spatially referenced data set of address points in the county.

Various sources of data can be used as the foundation for accurate address information statewide. These include: local parcel data, third-party address information, voter registration records at the state, and other administrative records. Tax parcel data is often used as a starting point for creating address point data because the property parcel data is generally verified when properties are bought and sold, resulting in a relatively high degree of data accuracy. Approximately 35 Colorado counties have parcel data with addresses. Consequently, this information could be used as the basis for creation of address point data. Aerial photography or GPS field data collection may then be used to pinpoint the locations of each address. In counties without this parcel data, lists of addresses, such as those from County Clerks, may serve as a starting point.

The amount of money requested by the State is not sufficient to construct accurate address data over the entire state, so Colorado will prioritize this address data development to selected areas of the state. This prioritization will be based on a number of factors including feasibility of generating address information based on available foundation data, population change, anticipated change in broadband service, and current presence of broadband service. In those areas where we do not develop new data, we will continue to use TIGER data or a similar source.

Deliverable 1b) Shapefiles of coverage area for non-facility service

The contractor will be invited to suggest an approach to mapping non-facility service; however, the State will start with the recommendation of contacting wireless providers to ask whether they have delineated the footprint of their wireless service. If they have, the contractor will ensure the necessary attribute information is included and deliver it to OIT for transmittal to the NTIA.

If the providers have not delineated their footprint, the contractor will use standard propogation modeling methodologies to estimate the service footprint. The contractor will have to obtain information necessary to parameterize the propagation models. Field collection may also be required to define an area with adequate wireless signal strength.

III.1(a)(ii) Deliverable 2 – Residential broadband average weighted speed

Conceptually this information is straightforward to develop. However, it is highly dependent on the appropriate information being provided by broadband providers. The key to this data is the number of subscribers at each speed tier for each provider. If this is available from each provider, the formula for calculating this is simple.

If this data is not available from providers, the State will have to infer subscription rates at specific speed tiers. The State will investigate models or inferential approaches based on demographics and "business geographics" to estimate subscription information to use in the formula for weighted speed.

III.1(a)(iii) Deliverable 3 – Broadband infrastructure

The only way to collect the information on middle-mile and backbone interconnection points is to rely upon information from broadband providers. Some data from telecommunications and public-entity

providers may be available from network disclosure sites, local exchange routing guides, or through public records; however, this will not always be the case. The contractor will be responsible for this collection. As with the other data, if the contractor recommends another method for collecting the data, the State will be receptive to it. While the Clarification identified that OIT will not be required to report last-mile connection points, to the extent OIT is unable to verify the network service area by other means, OIT is prepared to ensure that its contractors conduct verification by reference to the first point of aggregation in the networks used by facilities-based providers to provide broadband service to end users.

As part of the State's current broadband mapping project, we will be collecting aggregated backhaul data at the county level in an effort to better understand the degree to which backhaul availability, or lack of it, is an inhibitor of broadband availability. This information will indeed provide some baseline data and prove useful for validating infrastructure data collected under a BDIA-funded program. Unfortunately, it will not completely fulfill the broadband infrastructure data collection requirements outlined in the NOFA and more granular data would be sought under this proposed five-year program.

III.1(a)(iv) Deliverable 4 – Community Anchor Institutions

Colorado has already begun identifying the locations of community anchor institutions in Colorado for a variety of purposes. Among the set of these institutions, the State has data sets with locations of:

- Public schools
- Public libraries
- Health care facilities

Colorado has incomplete location data sets representing:

- Police stations
- Fire stations
- Government buildings

The State has already collected the broadband service availability information at public libraries; however, it has not yet collected any broadband service information for the other community anchor institutions.

Colorado has been pursuing completing the location and broadband service portion of these incomplete data sets through collaboration with local governments. The state assisted a consortium of several counties in southern Colorado to obtain federal grant funding to complete a data set on these facilities for their area. This data will be integrated at the state level and then provided to the federal government. Similar collaborations are under discussion in other regions as well, including the Denver Metropolitan area. We also expect collaboration with industry associations and quasi-governmental entities will be necessary.

OIT will continue to leverage these joint efforts with other departments to collect data. For example, law enforcement facilities are of critical interest to the Colorado Department of Public Safety and the Colorado Division of Emergency Management. The initial, and potentially limited, data set for these facilities came from the Department of Public Safety, and the broadband mapping project will provide an opportunity to enhance this data and return a value added data set to these departments. Similar considerations are salient for fire stations, government buildings, and educational institutions. The State will also consider purchasing third party data sets with locations of specific sets of these facilities

as a starting point to be validated and improved through local-state partnership. This collaborative approach will ensure the sustainability of these data over time.

The broadband service to these facilities will be queried by the State's contractor either through contact with each facility directly or with the district or government entity responsible for the facilities (*e.g.*, fire district, school district, municipality, etc.). We expect the contractor to develop a method to electronically update the information once initial personal relationships are established and once a core database is developed to meet the on-going update requirements of the NOFA. OIT will insist upon owning the contact lists and database as part of its contract requirements.

OIT does not view this effort as an insignificant task. Initial counts suggest that there may be over 25,000 Colorado entities that could be included in the "Community Anchor Institution" definitional list.

III.1.(b) Accuracy and Verification

As described earlier and in more detail below, the State will secure external expertise to provide validation and verification of the broadband data. This additional set of personnel will also assist with program and project management functions and with planning activities. OIT has identified specific positions that are to be filled for this purpose. These are described in Section III.2(a) below, Applicant Capabilities.

As with the data collection process, OIT will be receptive to methodology suggestions from these personnel, but will require at least some specific methods to be used to validate and verify the mapping data. While the primary geographic information from providers obtained by the current broadband mapping contractor for Colorado cannot be delivered to the NTIA for confidentiality purposes, early deliverables to the NTIA will be results from this project. Further, the data delivered by the contractor to the State will be used to validate the mapping information provided by the vendor for the proposed project. It can also be used, but in a more limited sense, to verify and validate the data from community anchor institutions.

The State also plans to deploy an interactive web site with a map and an interface for collecting broadband adoption and use information directly from Colorado citizens. This site will include survey components and a speed test component. The results from this site will be used to verify the accuracy of the data received from providers and community anchor institutions to the extent feasible. This effort will also build on trends in "crowd-sourcing" or "volunteered geographic information" to the extent possible to collect input from residents across the state. Other more direct outreach to gather and verify data will be considered if these passive methods do not result in adequate response rates. Additionally, the data and information will be verified, to the extent necessary, against facility-based middle-mile connection points. Again, OIT intends to leverage deliverables from Colorado's current broadband mapping contractor to assist in these efforts where possible.

The State intends to stratify the sampling either regionally and/or demographically. This will allow for statements about the validity of data across regions of the state and demographic groups. It will facilitate more representative sampling for the validity testing and will potentially increase the statistical power of the test. The sample size will be sufficiently large to obtain a 95% confidence level of accuracy within each region of the state and for the Tribal Nations. The goal of the validity testing will be to have it performed within one month of each release of the mapping data, with the objective

to provide information to increase the accuracy and validity of the next vintage of the information. This sample will be used to verify both the accuracy of provider data and community anchor institution data.

The contracted personnel will work with the State to define the required sample size and geographic and demographic strata across the state to test and validate the data. The individual points or input from Colorado residents will also be mapped to show spatial clusters and ensure adequate geographic distribution.

III.1.(c) Accessibility

The NTIA has made the determination that individual provider information by census block will not be considered confidential information, so the census block based mapping data as well as versions of the State's broadband map in pdf format will be publicly available for download on the OIT web site. A hyperlink to NTIA's website will also be included on the OIT site, and the hyperlink to the State's site will be provided to the NTIA.

The State will also deploy an interactive web-based map displaying the broadband availability data. This map may be hosted by the Statewide Internet Portal Authority or OIT. The determination of the optimal hosting environment will be made early in the project. The map will use legible, state-of-the-art cartography and will allow users to zoom in and pan around the map. Of course, the website's general availability is 24 hours a day, seven days as week. It should be noted that there is a synergistic opportunity between this project deliverable and the sustainable broadband adoption grant proposal (BTOP) submitted by OIT in August. The information made available through this interactive website would be used by the sustainable broadband adoption program to determine what technologies are offered in a certain area in order to demonstrate to members of that community the speeds and applications that are available to them. It would also be used to identify provider partnership opportunities to facilitate the registration of new broadband users while out in the field.

The State will prominently link this site to other relevant state web pages including the State's economic recovery page and the State home page. The State will engage in other outreach activities, for example through the state GIS community and county associations, to direct citizens to the broadband mapping site.

III.1.(d) Security and Confidentiality

The State of Colorado acknowledges that some data collected under this proposal may be considered highly sensitive or confidential. Confidential information under this program is defined in the NOFA and the Clarification. The State agrees to treat any matter that is a trade secret, commercial or financial information, or privileged or confidential, as a record not subject to public disclosure except as otherwise mutually agreed to by the broadband service provider and the entity. The State will not agree to a more restrictive definition of confidential information than the definition adopted by the NTIA.[2] That is, the State will treat those data determined to be public or not confidential as public data and make them available. We will employ the services of an attorney to review established confidentiality procedures to ensure that all confidential materials are protected and not accessible to those who have not signed the appropriate non-disclosure agreements.

[2] Federal Register/ Vol. 74, No. 129/Wednesday, July 8, 2009/ Notices, Pg. 32550, Section V. B.

The following paragraphs describe how the State of Colorado proposes to protect collected data using the following data protection mechanisms and methods:

- Non-disclosure agreements
- Confidentiality Procedures
- Colorado Open Records Laws
- Information and System Security

Non-disclosure Agreements – The State will execute nondisclosure agreements (consistent with applicable state and federal law) to protect and secure any data that is a proprietary trade secret, commercial or financial information, or privileged or confidential except where mutually agreed upon by the broadband provider. Conversely, the State will not enter into a non-disclosure agreement that (a) restricts providing data to the NTIA that is required under this grant, or (b) restricts the NTIA's use of the data as contemplated under the NOFA. The State will require all consultants, independent contractors and agents involved in projects under this award to agree in writing to protect from unauthorized disclosure all confidential and proprietary information, of whatever source, to which they have access.

Confidentiality Procedures – The State will include in the non-disclosure agreement the necessary procedures for the treatment of confidential and proprietary information. Such procedures include but are not limited to the requirements for designating confidential and proprietary data, exceptions to the designations, disclosure of information pursuant to court orders, treatment of copies of the information, ownership of the information, duration of the obligation, and remedies for violation of the obligation.

Colorado Open Records Act – Colorado laws governing open records subject to inspection contain exemption of certain types of information from designation as a public "writing." This allows the State to deny requests for inspection of these records. Specifically, subsections of 24-72-204, C.R.S., provide for denial of inspection in the following cases:[3]

1) Situations that would be contrary to any federal statute or regulation issued there under having the force and effect of law;
2) On the ground that disclosure to the applicant would be contrary to the public interest;
3) Trade secrets, privileged information, and confidential commercial, financial, geological, or geophysical data, including a social security number unless disclosure of the number is required, permitted, or authorized by state or federal law, furnished by or obtained from any person; and
4) Names, addresses, telephone numbers, and personal financial information of past or present users of public utilities, public facilities, or recreational or cultural services that are owned and operated by the state, its agencies, institutions, or political subdivisions.

Further, the State legislature has established precedence for enacting laws to protect confidentiality when necessary. An exemption to the requirement for allowing inspection of records was passed after 2001 for data related to "specialized details of security arrangements," which is often interpreted to include data sensitive for security reasons. In addition, 24-72-204(2)(a)(XX), C.R.S., was enacted in 2008, as part of Senate bill 08-215 which established the current state broadband mapping project, in

[3] See 24-72-204 (1) (b), C.R.S., 24-72-204(2) (b), C.R.S., 24-72-204(3)(a)(IV), C.R.S., and 24-72-204(3)(a)(IX), C.R.S., respectively.

response to the providers concern regarding proprietary information. This section provides that the data custodian can specifically deny inspection of all proprietary information submitted by a provider of broadband service in connection with the broadband inventory authorized by the bill.

Information and System Security – As required by 24-37.5-404, C.R.S., OIT applies information security policies, standards, and guidelines that provide security for communications and information resources for the operations of the agency and vendors who develop and operate systems on behalf of the State. Among the requirements set forth by the Colorado Office of Cyber Security are the following:

- Effectively deployed and administered firewalls
- Intrusion Detection with 24x7 alerting capability
- An individual or group responsible for Incident Response, available 24x7
- Access controls to enforce restrictions on a need-to-know basis
- Established and tested policies and procedures
- Contingency Plans and Disaster Recovery Plans
- Security testing and evaluation process for security controls
- Configuration settings required to maintain the system's security
- Physical security through the use of an acceptable physical access system
- Established access policies and tested controls

The State's Chief Information Security Officer within OIT has developed a series of cyber security policies defining levels of data security and appropriate data handling procedures for each level. According to this policy (available upon request), data must be classified into one of these levels.

It is unclear if there will be any confidentiality issues with community anchor institutions releasing their broadband service information. It is possible that some of the institutions have contracts that prohibit disclosure of that type of information. In such event, OIT commits to working with NTIA to resolve those issues.

As necessary, OIT will develop and implement suitable data retention policies to dispose of the confidential information consistent with the needs of NTIA, consumers, providers, and other interested stakeholders.

III.2 Project Feasibility

III.2.(a) ***Applicant Capabilities***

If BDIA mapping funding assistance is received, the funds will be used to expand Colorado's existing broadband mapping initiative. The State will apply the requested funds to address the objectives listed previously and will deliver the products specified in Section III.3, Expedient Data Delivery. Specifically, the State will:

1. Hire qualified contract services and/or individual subject matter experts to collect, verify, and validate broadband mapping-related data and assist with program and project management and planning functions.
2. Purchase and maintain necessary mapping software and third-party data and provide for necessary training on the software.

3. Purchase and maintain necessary computing equipment to support the mapping, analysis, and planning efforts.

This section describes these steps. Actual cost estimates for each step are itemized in the budget narrative attachment to this grant application. Operating and travel costs are also described in the budget narrative.

III.2(a)(i) Personal Services and Staffing for Colorado Broadband Initiative Management, Data and Market Development

OIT will solicit at least one contractor to assist with this project. The contractor is anticipated to perform the data collection and analysis functions described in this section. Separate and distinct from this contract will be the program and project management and data validation and verification functions. This will be procured either through a single solicitation or individual hires of the positions that will carry out this work. Competitive biding and hiring procedures will be followed when soliciting all external expertise, whose responsibilities are described below.

In addition, the State will require the assistance of the Colorado Attorney General's Office to review non-disclosure agreements with contractors, providers, and community anchor institutions (if necessary) and to ensure on-going compliance with confidentiality provisions of those agreements.

Data Collection Contract

OIT intends to enter into a contract with a third-party vendor to develop and maintain statewide broadband data files using data from providers and community anchor institutions consistent with the requirements of the NOFA and the Clarification and according to the process outlined in Section III.1(a). This contractor will be expected to deliver to the State all of the data sets indicated in Section III.3, Expedient Data Delivery. OIT will subject these data to validation and verification through a separate function described below.

The contract will require that the data be made available to the State of Colorado in a format that will allow the State to map the data at a census block level and analyze and compare it with demographic information tabulated at the census block level. The terms and conditions of the contract will also include provisions that meet the technical specifications outlined in the NOFA and the Clarification, including permitting NTIA to transfer the final information to other federal agencies. The State of Colorado will require that it retain ownership of the developed products, with the right of Colorado to transfer final data to NTIA or a similar federal agency. The contract will be for the full performance period of the grant according to the NOFA and will require that the data files be updated periodically, consistent with the process described in Section III.4, Process for Repeated Data Updating.[4] [5]

This contractor will also gather the information for the community anchor institutions, again following the process outlined above. The contractor will need to develop and implement a means to store, collect, update, and manage the information once it has been received.

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[4] See Federal Register/Volume 74, No. 129, Wednesday, July 8, 2009/Notices page 32553.

[5] While Colorado will make every effort to meet the full requirements of the March 2010 date, we believe realistically that collecting and validating all the data by that date may not be possible. In either case, we will make the map and data created by Colorado's current broadband mapping initiative available to NTIA for its use.

Last, this contract will include developing and maintaining point address data or accurate address range-street segment data for selected counties in Colorado. These counties will be identified early in the mapping effort based on several factors including population (rural vs. urban), recent and projected population change, presence of broadband service, anticipated change in broadband service, and availability of data to support generating address information. Consequently, in addition to experience with the broadband or telecommunications industry, this contractor must have experience in managing address information and the issues related to this type of information. OIT will also explore the possibility of passing grant dollars directly through to counties to assist them with address data development. OIT would consider this only for counties that have a GIS infrastructure to sustain the data.

Program and Project Management, Data Verification, Outreach and Market Development
This program area will include four expert-level staff working on-site with the State over the grant period to champion and manage Colorado's broadband data and development initiative. The state has identified these positions as specific roles required to support the broadband initiative in the state. These positions will be located on-site in the offices of OIT and will work closely with state personnel from OIT, COPUC, and SIPA throughout the five-year grant period.

These positions, which could be a single contract or individual hires, will serve several functions for the state. First, they will assist with program and project management related to the first contractor and with making the data products available on state systems. Second, they will supply quality assurance and independent validation of the data collected by the first contractor, and third they will provide outreach, planning, and market analysis and development activities.

The four positions staffed by this contractor are: Program Manager, Broadband Data Project Manager, Quality Assurance Manager, and Communications Project Manager.

The ***Program Manager*** will be responsible for overall implementation of the broadband mapping and planning program, including program coordination with BTOP grant recipients to ensure a synergetic statewide broadband effort and maximize outcomes. The Program Manager will assure that all activities are in compliance with Federal grant guidelines and that accurate and timely project reporting is accomplished. The Program Manager will supervise the efforts of the other positions established through this contract and will assist them in resolving roadblocks particularly in the area of facilitating the exchange of information to match the "supply" with "demand" for broadband resources throughout Colorado. The Program Manager will also perform overall program risk mitigation, assure necessary funding is in place, and work with the OIT financial team to ensure funds are appropriately tracked and audited. This full-time position will work with the State on any State-sponsored grant applications. He or she will identify broadband policy issues and will work with state personnel, the Innovation Council Broadband Working Group, and other stakeholders to resolve those issues. The position will be responsible for developing and maintaining effective working relationships with all stakeholders for Colorado's broadband program.

The ***Broadband Data Project Manager*** will be the team's Geographic Information System (GIS) and information technologies expert that is responsible for managing the development and implementation of an accurate, web-based, publicly available geographic inventory of broadband services throughout Colorado and for ensuring that accurate and complete data files in the NTIA-mandated format are transmitted to NTIA. This is a full-time position requiring expertise in geospatial technologies and data management, spatial analysis, cartographic production, and development of web mapping services.

The inventory map and data files will reflect both the "supply-side" information received from providers of broadband service in Colorado and "demand-side" information received from community anchor institutions. The position will oversee the contract activities relating to all data collection and data validation activities, including data collected from providers and community anchor institutions and including contract activities that map address locations to census blocks. In addition, the position will be responsible for developing and implementing tools that validate, analyze, and synthesize the data received into maps that depict accurately and transparently the availability and adoption of broadband services throughout Colorado. As necessary, he or she will target priority areas for mapping updates, including identifying areas with dynamic changes in adoption rates or population.

In addition, he or she will be responsible for developing and maintaining a transparent, easy-to-use, interactive public-facing website that communicates the accessibility, availability, and adoption of broadband services throughout Colorado. Both the maps and the website will be updated at least with each new delivery of data to the NTIA to reflect additional market intelligence that is gained from further outreach and information gathering. This will include on-going posting of updates, designing the website including, but not limited to designing it for efficient data uploads and effective interactions with end-users, and architecting the infrastructure to support the web site.

Finally, he or she will participate in documenting and resolving discrepancies identified by all validation and verification efforts.

The ***Quality Assurance Manager*** will be responsible for validation, analysis, and synthesis of broadband mapping and market information. This will include analysis and verification of infrastructure information as well as analysis and verification of speed and spectrum data provided by both broadband providers and community anchor institutions and received from the interactive website. He or she will take the lead role in resolving discrepancies identified by all validation and verification efforts.

This half-time position will design and implement, with the assistance of the Broadband Data Project Manager, the quality assessment and assurance program for the data collected by the first contractor. This will include designing necessary sampling schemes, statistical tests for validity and accuracy, and standard protocols for reviewing data deliverables to the State and the NTIA. The programs for evaluating data quality will follow the general methodology described in Section III.1(b), Accuracy and Verification. This position requires knowledge of statistics, statistical sampling, and statistical data quality modeling and estimation.

The ***Communications Project Manager*** will be responsible for cultivating and facilitating activities of technology planning teams at the county level and for Tribal Nations throughout Colorado and for facilitating the exchange of information to match "supply" with "demand" for broadband services throughout Colorado. The full-time position will be responsible for assisting local technology teams in each of the counties to develop and maintain assessments of the state of broadband development and deployment throughout Colorado. He or she will develop and initiate surveys and other demand assessment tools to identify how broadband availability, accessibility, and use can be effectively expanded in Colorado. He or she will also perform market mapping assessments including: analyzing gaps in availability throughout Colorado; identifying and tracking areas with low levels of deployment and identifying the rate at which residential and business users adopt broadband services; and identifying barriers to the adoption of broadband services. He or she will also perform market

assessments by analyzing gaps in availability throughout Colorado and collaborating with broadband service providers and information technology companies to encourage deployment and use.

The function will be responsible for developing and managing an effective communication and media management plan to educate and inform Colorado citizens about broadband capabilities and benefits. He or she will work with the State, the Program Manager, and local media on communicating to the public the status of local and State efforts to deploy and use broadband throughout Colorado. He or she will lead stakeholder group discussions and will work with local and state industry and government stakeholders to resolve issues identified in those discussions. He or she will assist in identifying areas for market outreach and education campaigns.

III.2(a)(ii) Software and Data Requirements

The State of Colorado will purchase and maintain GIS software necessary to support this mapping effort including subscriptions to on-line data or analytical services. Specifically, the state will purchase:

- One license of ESRI, ArcGIS Server software (standard enterprise edition) for enterprise data management and web map services.
- One license of ArcGIS desktop software.
- One copy of ArcGIS Spatial Analyst, ArcGIS Statistical Analyst and ArcGIS Business Analyst extensions.
- Demographic and other data. This may include demographic segmentation data used for "business geographics," third-party data sets of anchor facilities to bootstrap this data collection, third party address data on which address data collection will build, and potentially online services providing this and other data.

The grant application also includes necessary training on the ArcGIS software to ensure staff are knowledgeable enough to maintain an effective and well-performing set of web sites.

III.2(a)(iii) Equipment Requirements

The grant application includes the purchase of computer servers and disk storage to support the data and applications and web services developed for this grant. Hardware costs change very rapidly, but the costs in this proposal are estimated to include two servers and approximately three terabytes of storage. We have also included this amount at the four-year mark of the grant period to cover replacement costs of this hardware, which is the industry norm.

III.2(a)(iv) Match

The State will provide in-kind funds in an amount totaling $873,347 for this grant from a variety of sources. The first is from the money the State of Colorado has directed toward the current broadband mapping project in the form of producing the first set of data to be delivered to the NTIA from the third party contractor effort and other baseline data collection activities and technology acquisitions related to this project. This amount totals $350,000.

In-kind matches also come from personnel who will be devoting time to this ongoing program and investments made in data at the State level. The data includes statewide aerial photography that is being flown this summer by leveraging a USDA aerial photography acquisition effort. This photography will be used in the interactive web map displaying broadband availability and as a source for the creation of address information. The state and local partners contributed $97,000 (non-Federal) to this effort.

Personnel working on this effort that will be included in the match calculation can be found in the budget narrative that accompanies the grant proposal. In addition, other staff will participate in this project although their time is not being used for the match estimation. In particular this includes telecommunications experts from COPUC and the Director of SIPA.

III.2.(b) Applicant Capacity, Knowledge, and Experience

OIT and its partners have broad and extensive experience in the telecommunications industry, geographic information systems, and managing projects. In addition, as described above, the State intends to retain experienced and qualified subject matter experts to perform much of the technical work as well as serve as project managers for the data collection and outreach and planning efforts. OIT's personnel involved in this project include OIT's Chief of Staff who has managed the current broadband mapping effort since its inception, has coordinated three statewide broadband summits, has nearly three years of experience as a performance auditor, and is ITIL Foundation certified. The State GIS Coordinator in OIT, who will be involved in much of the technical oversight related to data collection, analysis, and map development, has approximately 25 years of experience in the GIS field and has managed many GIS projects. OIT also is responsible for managing the State's government data center and the cyber security programs and policies for the State of Colorado – both of which will play important roles in the broadband program.

OIT employs standard project management techniques and has a Project Management Office (PMO) to assist in the oversight of large projects. The PMO Director, who has over 30 years of experience in managing complex diverse organizations, will have a direct role in the project. OIT has managed several projects of the size and complexity of the proposed project or larger. For example, OIT recently completed re-procurement of the Colorado Benefits Management System which integrates benefits related information systems from several different programs and Colorado counties into a unified state system. This project lasted 18 months and involved managing stakeholders from three state agencies, selecting two vendors through an RFP process, overseeing a vendor charged with creating an RFP, building system requirements, and managing both external and internal communications. The proposed broadband data and development project will likely be included in OIT's project management governance structure to ensure successful progress and ultimate delivery.

Further, OIT has a body of technical staff with in-depth knowledge of telecommunications technologies. OIT has been leading the Colorado Integrated Communications Network project which is upgrading the telecommunications infrastructure among state offices. OIT also has the staff responsible for the implementation of the State's multi-use network (MNT). In the late 1990s, Colorado issued an RFP to provide for a state network for voice and data services. The enacting legislation allowed non-state agencies (NSA) to purchases bandwidth from this network, and Colorado was successful in on-boarding over 900 NSAs. This project brought fiber-optic connectivity to every county seat in the state, except one, which is served by reliable high-speed microwave. The original contract is expiring, and Colorado plans to release another RFP in the coming year to build on this infrastructure and knowledge. This project demonstrates Colorado's ability and direct experience with implementing a large network that is relied upon for basic and advanced services such as video conferencing, data transmission, long-distance education, and benefit distribution. Further, it provides a strong foundation of experience within Colorado that can support the broadband data and development program.

The above projects point out Colorado's experience with running projects similar in size and complexity. It is also important to note that the Governor's Office of Information Technology is an organization of over 1,000 dedicated professionals who directly understand the benefit of broadband and its deployment. Most, if not all, of the services offered by the State need a reliable and robust network to be effective and efficient.

While OIT is the lead organization in this effort, it has the full support of other organizations in Colorado. OIT has involved other experts in state government in the State's broadband initiative, notably experts from the COPUC. It recently added the Section Chief of the Telecom Unit at the COPUC to the Innovation Council's Broadband Working Group. The Section Chief, who will also assist with this project directly, has over 20 years of experience in the telecommunications industry including direct experience addressing confidentiality issues and working with many telecommunications companies. This experience includes managing large-scale network and information technology projects which involved ($100+ million dollar) vendor contracts. It also included program management coordination across incumbent and competitive telecommunications providers and state and federal government agencies. As Section Chief at the COPUC, she has a support staff with extensive knowledge and experience in engineering, cost analysis, and market development as well as an established relationship with telecommunications providers in the state and nationally.

Lastly, this project will benefit from the help and support of members of the Innovation Council's Broadband Working, which includes members from the telecommunications and information technology industries, educational institutions, and state and local government. The Innovation Council will continue to serve as a champion for the broadband initiative.

Resumes and skill sets for key individuals are available upon request.

Lessons learned from current broadband mapping project

The challenges encountered in the current mapping project with the third party contractor have provided important experience to the State regarding the issues that may arise in managing a mapping project such as the one required by the NTIA. Consequently, we discuss these lessons here as a further demonstration of the State's ability to manage and overcome obstacles in a project directly relevant to the proposed effort. These challenges from the current project include:

- Request for proposal and contract negotiation processes.
- Negotiation of non-disclosure agreements and provider participation.
- Data availability in format required from smaller providers.
- Continued productive linkages between federal, state, and local governments, and the private sector.

Request for proposal and contract negotiation processes

A time consuming and critical step in this type of mapping project involves contract negotiation with potential vendors. Ownership of the data and the work product, particularly data and source code underlying the web map services, was a key negotiation element with the current contractor. They considered much of these negotiated elements proprietary or too revealing of broadband providers' trade secrets. Such issues will likely appear in future contract negotiations, although the guidance from the NTIA will clarify some of the sources of contention, specifically those related to data confidentiality. In addition, Colorado's IT consolidation includes developing a model IT contract with

specified terms and conditions regarding intellectual property. OIT will hold these terms as non-negotiable. The state will mitigate this issue of rights to and ownership of data by making these terms and conditions explicit during the bidding process.

Negotiation of non-disclosure agreements and provider participation

Developing and executing non-disclosure agreements with providers and convincing providers to participate in such a mapping project is time consuming. It involves identifying the providers that should be contacted and then identifying the appropriate point of contact for each provider. In our current project, the contractor is just finishing this identification process after almost two months of work.

To mitigate the time required, Colorado can use this work to its benefit for the proposed project. OIT has the list of providers from the current contractor, and the State has developed a rapport with providers through its work on the current broadband mapping project and the broadband summits described in Appendix A. In addition, the Statewide Internet Portal Authority (SIPA) has held weekly meetings to gain provider support for the broadband mapping effort. Colorado also has committed support from the Innovation Council and the executive level leadership of the State, including Governor Ritter, and OIT to increase provider participation.

Data availability in format required from smaller providers

Initial discussions with some of the smaller providers suggest that while they may have some data available, it will require some form of unique translation to map to the Colorado format. Resolution of these issues will likely require time-consuming personal contacts to technical personnel at individual companies. OIT intends to automate the process of this conversion as much as possible for future data calls. The RFP and contract terms will seek solutions from the vendors on how to address this issue and will include contract performance requirements to meet NTIA deliverables for small providers' participation as well as for larger providers. Additionally, we included resource time for the program and project managers for creative solutions to this issue.

Continued productive linkages between government and the private sector

Colorado has been successful at providing for open participation and inclusion, and we believe this will be even more critical in the future. There is a role to play for industry, for government, and for the public. As an example, Colorado recently added a member of the COPUC as a standing member of the Innovation Council Broadband Working Group. While initially broadband providers were concerned that COPUC involvement would lead to regulatory oversight by the COPUC, there is a new recognition that its knowledge of traditional utility infrastructure is critical to smart planning. Additional organizational changes may be required as well. Our project plan actively develops such intergovernmental linkages through local technology planning teams, data sharing, and other communication efforts and includes time and resources for these important activities.

III.3 Expedient Data Delivery

OIT will make all reasonable efforts to provide a substantially complete dataset by February 1, 2010. As described earlier, OIT will provide NTIA with the data delivered through the contract with the current third-party vendor and with a hyperlink to the contractor maps delivered to OIT within 10 days of submission to and approval by OIT. The contractor is currently targeted to complete the project by November 2, 2009.

The funds requested in this proposal will be used throughout the entire time period allowed by the funding opportunity. We've classified our activities into four categories. These include:

- **Phase I:** Staffing and Resource Acquisition
- **Phase II:** Initial Data Collection and Verification Activities
- **Phase III:** Gap Analysis and Action
- **Phase IV:** Continued Data Collection, Verification, Gap Analysis, and Action

III.3(a) Phase I: Staffing and Resource Acquisition

During Phase I, OIT will acquire the necessary resources to complete the project. To expedite this process, OIT has already begun (1) drafting the request for proposals for the data collection contractor, with the explicit condition that it would be contingent upon OIT receiving the grant award, and (2) developing detailed position descriptions for the management and quality assurance resources. We anticipate that these activities will take six weeks. Deliverables resulting from this Phase will include negotiated contracts and new staff.

III.3(b) Phase II: Initial Data Collection and Verification Activities

After the management resources and contracted resources are obtained, focus will shift toward collecting and then verifying and validating the initial data received from providers and community anchor institutions. The data will eventually include all the data components required by NTIA. However, it may be necessary and more realistic to phase-in the full collection of data, depending upon whether and to what extent the data is readily available from providers and community anchor institutions. After data is validated and outstanding issues are resolved, it will be formatted to align with the Colorado mapping requirements and the NTIA requirements and will be provided to the NTIA. The new map will be posted on the State's website and will be available for additional validation by the general public in addition to validation performed by the State. Best efforts will be made to resolve the discrepancies found. We expect this data collection phase to take six months, notwithstanding potential delays in obtaining provider data.

III.3(c) Phase III: Gap Analysis and Action

In parallel with the data collection and the validation process, the contractors will begin regional market assessments and initiate activities with Colorado stakeholders in each region to increase access to, availability of, and adoption of broadband services in Colorado.

These market assessments will include analyzing gaps in availability throughout Colorado, identifying barriers to the adoption of broadband services, analyzing market data concerning use and demand for broadband services throughout the state, facilitating exchange of information between "supply" and "demand", and identifying and tracking the rate at which residential and business users adopt broadband services and possible suppliers of such services. We will work with regional and local organizations to perform these assessments and create a plan for each of Colorado's 64 counties. This work will include establishing the local technology planning teams.

The resources obtained for this program will also work with stakeholders to initiate actions that will expand the accessibility to and adoption of broadband services in Colorado. In conjunction with the Program Manager, the Communications Project Manager may develop advertising and marketing

campaigns that educate Colorado consumers about broadband services. Should BTOP fund OIT's sustainable broadband adoption program, there would certainly be cross-collaboration between the adoption and the mapping programs. Information could be leveraged and shared to benefit the other program, and planning activities funded through BDIA would be coordinated and aligned with the sustainable broadband adoption program efforts. We believe the two programs would compliment one another and strengthen outcomes for both.

III.3(d) ***Phase IV: Continued Data Collection, Verification, Gap Analysis, and Action***

After the initial data collection, validation, and market mapping assessment cycle is complete, the process will continue with refinements every six months until five years after the award date, according to the milestones timeline below, assuming that Colorado receives the award by September 15, 2009[6]:

Milestone	**Estimated Completion Date**
RFP for contractors published.	9/11/09
Contractors selected and contracts executed.	10/30/09
Data and map products from current broadband mapping project delivered to State. Implementation of state interactive web map site with data from current mapping project.	11/2/09
Data and map products from current broadband mapping project and link to maps provided to NTIA.	11/19/09
NDAs with broadband providers executed.	11/27/09
Establishment of local technology planning teams.	11/30/09
Implementation of state web site allowing user validation of broadband data	12/31/09
Development of survey instrument for collecting availability and adoption information from Colorado residents and initiation of outreach to collect survey information.	12/1/09
Census block-based data matching the technical specifications outlined in the NOFA and the Clarification.*	2/1/10
Infrastructure data matching the technical specifications outlined in the NOFA and Clarification.*	2/1/10
Weighted average speed data matching the technical specifications outlined in the NOFA and Clarification.*	2/1/10
Community anchor institutions data matching the technical specifications outlined in the NOFA and Clarification. Locations of anchor institutions data will be substantially complete, with best efforts to also gather service information.*	2/1/10
Quality assessment report indicating the completeness of the data based on estimates of land area and households covered by the data, attribute accuracy of the data where it exists, sources of uncertainty in the data, and plans for addressing gaps and inaccuracies.	2/1/10
Maps in pdf format of the broadband service based on the delivered data.	2/1/10
Market analysis identifying gaps in broadband accessibility and adoption.	2/28/10
Development of on-line system for uploading provider data.	2/28/10

[6] Federal Register, page 32553, Volume 74, No. 129/Wednesday July 8, 2009/Notices assuming that OIT received the award by September 30, 2009.

*As described these data may not be substantially complete depending on cooperation from broadband providers and community anchor institutions, but OIT will be able to provide some assessment of the completeness.

The first portion of the project will establish many of the structures and processes that will support the project throughout the grant period. Ongoing data collection and revision of mapping data will follow the schedule specified in the NOFA and is described in the next section.

III.4 Process for Repeated Data Updating

The State will update the data at least semi-annually, consistent with the schedule below. Each delivery date also identifies the vintage of the data required with each submission.

Vintage of Data Date	Data Due to NTIA
6/30/2009	2/1/2010
12/31/2010	9/1/2010
6/30/2010	9/1/2010
12/31/2010	3/1/2011
6/30/2011	9/1/2011
12/31/2011	3/1/2012
6/30/2012	9/1/2012
12/31/2012	3/1/2013
6/30/2013	9/1/2013
12/31/2013	3/1/2014
6/30/2014	9/1/2014

Federal Register, page 32553
Volume 74, No. 129/Wednesday July 8, 2009/Notices

As the State is planning to use the requested funds to retain contract staff during the full period of the grant, resources will remain available throughout the grant period to sustain planning and data collection and validation tasks. In addition, the State will implement a system by which broadband providers may upload their data to the state. This system will include automated tracking of the status of data received from the providers. In addition, to the extent feasible, the contractors will implement automated transformation tools to convert provider data into the required format for state use in a batch mode.

This type of system relies on a "push" from providers rather than an automated "pull" or harvesting of provider data. Therefore, it will continue to rely on active participation from providers. The State will also investigate web crawling tools to collect information regarding provider service offerings. This requires provider cooperation to some degree, so the feasibility is unknown at this point.

III.5 Planning and Collaboration

Effective planning and collaboration across the public and private sectors is essential to the success of all phases outlined in this grant application. It is also critical that a self-sustaining planning infrastructure be created that will continue beyond the term of the grant award in order to measure success, identify additional broadband deployment and adoption needs, and evolve capabilities as technology and other factors dictate.

III.5.(a) ***Collaboration***

As previously described, the Governor established the Innovation Council and the Broadband Working Group as the collaborative planning oversight team to achieve statewide broadband deployment as envisioned in his "Colorado Promise." While the Broadband Working Group has made initial strides in identifying broadband strategies and deployment issues, grant funding will enable this effort to move from a strategy phase to a tactical deployment and sustainability phase. The Broadband Working Group's membership is currently made of up rural and urban wireline, wireless and satellite broadband providers, OIT, SIPA, COPUC, Office of Economic Development, technology companies, and local government representation.

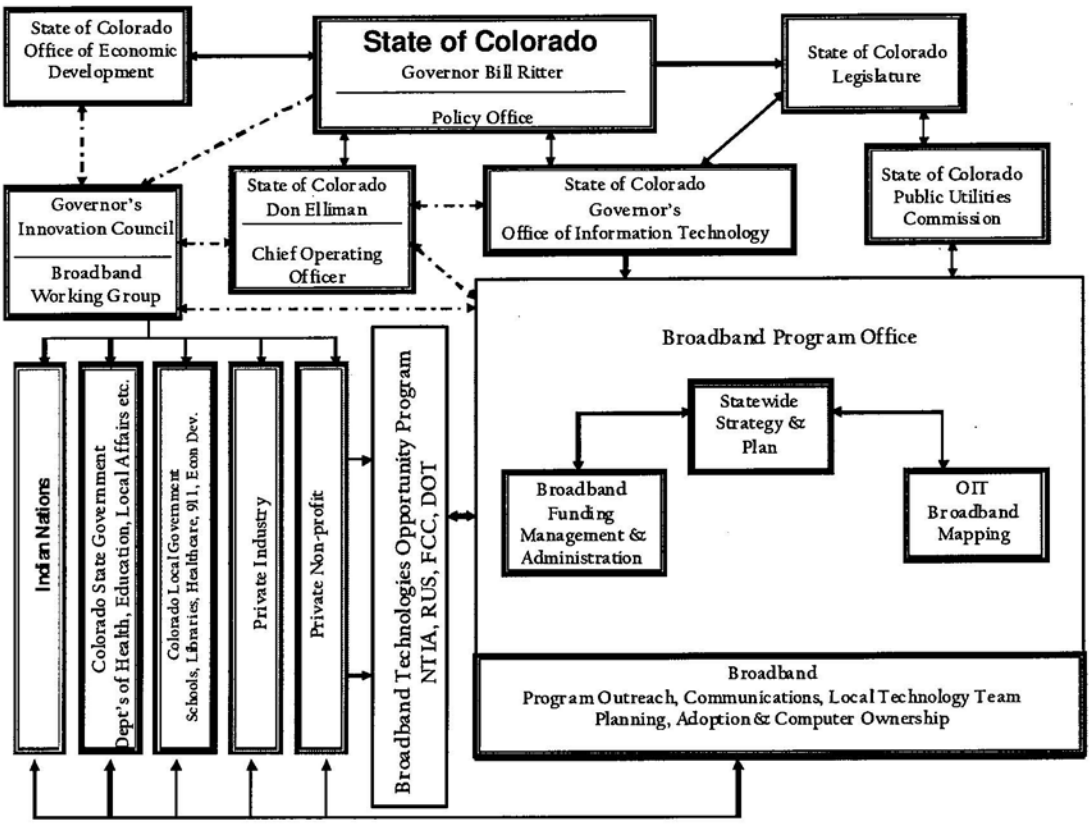
As part of the broadband mapping and planning program, committee members will solicit input from subject matter experts and relevant stakeholders in order to accomplish a complete statewide collaborative effort as outlined in the Broadband Data and Development Grant Program. Specifically, the committee will seek participation from additional technology and mapping companies, GIS agencies and councils, Southern Ute and Ute Mountain Tribal nations, community anchor institutions, consumer and public interest groups, statewide emergency services representatives, the E-911 Task Force & Resource Center, community anchor associations, regional local planning groups, and the state legislature. The Program Manager, in conjunction with the Communications Project Manager, will be responsible for ensuring that the Broadband Working Group members and additional stakeholders are fully engaged by identifying additional "tasks" and "activities" that will leverage the knowledge of existing participants.

Collaboration and discussion among and within the Broadband Working Group and the Innovation Council, while providing direction and oversight for the broadband program, is not sufficient to accomplish successful broadband planning or sustainable broadband deployment. The State envisions the entire resource infrastructure and linkages depicted above as necessary to ensure we achieve this goal. The personnel resources requested under this NOFA to staff the broadband program office are critical to the success of the Colorado efforts.

Figure 4 below depicts the structure and on-going relationships we believe are necessary to support a successful broadband planning initiative in Colorado.

Information regarding the State's broadband mapping and planning project and the sustainable broadband adoption programs will be available on the State web site as the broadband program progresses. The web page will also include information on meetings and conferences, links to the NTIA broadband programs as well as other resources currently on NTIA's website. It will also point to future deliverables such as RFPs, interactive state maps, the speed test tool, planning data and results, local technology team assessments, and other information once created.

Figure 4: Collaborative Process for Data Collection and State-level Broadband Mapping



III.5.(b) Planning

Section II.1, Purpose enumerates the objectives of the Colorado broadband data project. These objectives derive from the BDIA, although this proposal has reordered them. While some of these objectives appear to be specifically data collection related, and others are more related to broadband promotion and market assessment, in fact, planning functions are critical to every one of these objectives. However, per the requirements of the NOFA, for the purposes of budgeting and describing project activities, we have separated the planning functions associated with the collection of data and the development and maintenance of the state and national map from those associated with outreach and market development functions.

The majority of the costs associated with the "Planning" activities are associated with the duties of the Program Manager and Communications Project Manager. In contrast, the functions of the Data Development Project Manager and the Quality Assurance Project Manager are primarily mapping activities as is the data collection contract. However, we expect that each member of the team will perform some mapping activities and some planning activities. The percent of each of these functions for each position are detailed in the supporting budget documentation and may vary over the project life for each position. Estimates, by position and by year, are included in the budget document.

III.5(b)(i) Planning Activities Associated with "Mapping" Goals

The first five objectives in Section II.1 entail the primary data collection functions of this project. The planning functions of this project will assist with the outreach to ensure comprehensive data collection.

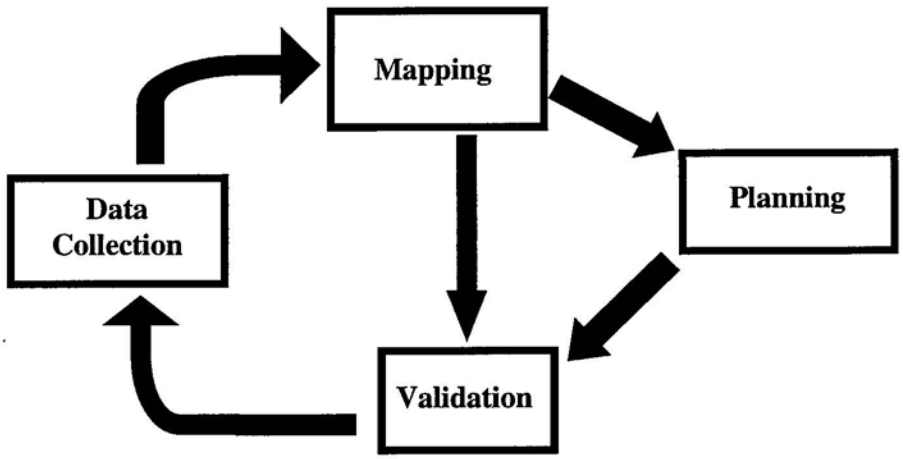
They will also provide the actions resulting from the collected data to fill gaps in the data collection process and direct actions to address the broadband availability and adoption gaps identified by the data collection. The planning efforts will provide mechanisms to gather market data across critical sectors such as business and industry, K-12, health, libraries, higher education, community-based organizations, government, tourism, recreation, parks, agriculture, and emergency services to identify and track the demand for (or reasons for lack of demand of) broadband access and services. It will support identifying broadband underutilization and the reasons for the underutilization by implementing methods such as face-to-face or on-line surveys.

The degree of broadband infrastructure and access availability does not generally correlate with the degree of broadband use. This identification of broadband underutilization will use mapping data to focus on areas of and the reasons for the underutilization of broadband. These data will inform the functions described below, such local technology teams, as well as the sustainable broadband adoption BTOP program to target funding for broadband deployment and adoption activities.

In turn, the adoption programs will cause a change in supply and demand, requiring data and mapping updates. As mentioned earlier in this document, these activities would be coordinated and aligned with the sustainable broadband adoption program efforts. Planning activities that analyze demographic factors to understand demand drivers can then be geocoded to the census block, or possibly even the address, of the current or desired broadband access and combined with a variety of physical, infrastructure, and environmental data to develop a better understanding of both current broadband availability and the potential for extending access to areas with unmet demand.

The relationship of these planning functions and the mapping task is one of a feedback loop, as illustrated in Figure 5. Mapping data will inform specific planning tasks, and information gathered from the outreach and communication functions related to planning efforts will further refine the mapping.

Figure 5: Feedback Relationship between Mapping and Planning Activities



III.5(b)(ii) Planning Activities Associated with "Planning" Goals

Objectives six through ten in Section II.1 explicitly entail planning activities. They are listed below with their respective objective number and the specific planning activities involved in accomplishing them.

6. ***Collaborate with service providers and information technology companies to encourage deployment and use.*** Specific collaboration activities will be informed by the mapping analysis activities. In addition, the collaboration will be facilitated by relationships established in the data collection process. The Communications Project Manager and Program Manager will be responsible for developing activities carried out jointly with service providers to encourage broadband use.

   Such activities will integrate the work described above, the work of providers to expand broadband deployment, and the activities outlined in OIT's BTOP sustainable broadband adoption grant application. The sustainable broadband adoption program focuses on increasing Internet awareness and use throughout the state by providing general information and education on broadband, increasing the awareness of broadband availability, working with state and national application developers to showcase beneficial applications, and working with providers to sign up consumers for broadband service.

7. ***Facilitation of information exchange regarding use and demand for broadband services between the public and private sector users.*** It is critical that the data about broadband demand and use be provided to providers, public sector agencies, and potential broadband users themselves. Colorado's planning activities will outline and implement a method for regular, systematic dissemination of data on broadband availability, demand, and use to local technology planning teams, providers, and community anchor institutions. Again, this information will be fed into the State's sustainable broadband program as well. The data will assist in refining the outreach efforts of all involved in increasing broadband deployment. The Communication Project Manager will be responsible for developing this method.

8. ***Creation and facilitation, by county or designated region in a State, of local technology planning teams***. Local technology planning teams will ensure sustained and self-generated funding opportunities for broadband deployment beyond the ARRA broadband grant award period and assist with communication of broadband use and benefits.

   The local planning teams will develop guidelines through which they can self-assess their communities' broadband readiness and needs, develop specific steps to fill the gaps for critical sectors of their community, and measure the ongoing success of the efforts. Each team will benchmark technology use across relevant community sectors, set goals for improving technology use within each sector, and develop a plan for achieving its goals, with specific recommendations for development of demand creation techniques. The teams will collaborate with broadband providers to encourage deployment and use, especially in areas not served, by aggregating local demand and creating market intelligence to improve the business case for providers to deploy.

   Each team should represent a cross section of the community, including, but not limited to representatives of business, education, healthcare providers, libraries, community-based organizations, local government, tourism, parks and recreation, and agriculture.

9. ***Identification of barriers to the adoption of broadband service and information technology services.*** This activity will identify by county or region the main barriers to

adoption of broadband technology services for critical sectors. These critical sectors include business and industry, education, health care, libraries, higher education, community-based organizations, government, tourism, recreation, parks, agriculture, and emergency services. This will assist the Program Manager in determining the best economic tradeoffs for additional grants or other funding support for adoption programs. Additionally, this planning function will establish the methods by which local technology planning teams will identify under-utilization and key barriers to adoption of broadband service by critical sectors.

10. ***Establishment of computer ownership and Internet access programs in un-served and areas with lower than average penetration on a national basis.*** This activity will identify by locality computer ownership statistics and Internet access programs by area of the State. Additionally, this planning function will establish the methods by which local technology planning teams will identify under-utilization and potential remedial actions to increase computer ownership and Internet programs.

IV. Compliance With Additional Requirements

If NTIA approves this grant application, OIT agrees to comply with:

- All award provisions including the provisions outlined in Form CD-450;
- The requirement to require its contractors to comply with the obligations set forth in the ARRA and the requirements established therein;
- The Department of Commerce Financial Assistance Standard Terms and Conditions (March 8, 2008);
- The Department of Commerce American Recovery and Reinvestment Act Award Terms (April 9, 2009);
- Any Special Award Terms and Conditions that are included by the Grants Officer;
- Any requirements to provide adequate environmental information and gather information from Federal and State agencies;
- The National Environmental Policy Act of 1969, as amended (NEPA), and Section 106 of National Historic Preservation Act of 1966, as amended;
- The Davis-Bacon Wage Requirements, to the extent applicable;
- The Buy America Act, as applicable;
- The applicable regulations set forth in OMB's Interim Final Guidance for Federal Financial Assistance; and
- Financial and Audit requirements, to the extent that more than $500,000 is spent during the fiscal year.

Additionally, OIT agrees to submit additional information if required and agrees to cooperate with NTIA and the FCC's national broadband mapping efforts. OIT also agrees to comply and to have its contractors comply with the applicable regulations and statutes regarding reporting on Recovery Act funds and with State Broadband Data and Development Program reporting requirements.

Appendix A

The State of Colorado has been actively working to enhance broadband deployment throughout the state since Governor Bill Ritter, Jr. made it a priority in his economic development policy for Colorado. This history provides an important context for the State's Broadband Data and Development Grant proposal, but it does not directly answer the questions and evaluation criteria posed in the NOFA, so we describe it in this Appendix. Included in this description is a discussion of the gap between NTIA's deliverables and Colorado's deliverables from the current project.

History of Colorado's Broadband Initiative

As a gubernatorial candidate in 2006, Bill Ritter Jr. outlined his plan to stimulate Colorado's economy and attract new jobs. Ensuring that broadband Internet access is available to all Coloradans was a key strategy within his economic development and job growth initiative. He articulated three roles of state government in this strategy: develop a clear vision for the importance of broadband, remove obstacles in the development of broadband services, and provide economic incentives to serving areas where broadband access is not currently available.

Upon his election, the Governor's Innovation Council was created to bring leaders from industry, government, and academia together. The Broadband Working Group of the Innovation Council was formed to evaluate strategies to spur broadband deployment and access. Members of the group include executives of wire-line, wireless, cable, satellite, technology and manufacturing companies, senior academic authorities, and local and state government officials. The Broadband Working Group outlined its initial strategy in a 10-page memo and recommended as a first step a mapping effort to evaluate where broadband exists as well as to "evangelize" the use of broadband and champion ways to get it deployed. The Broadband Working Group recognized the need to focus both on deploying tools to aid in the broadband deployment assessment as well as on initiating grass roots efforts to identify the broadband needs of those who live in areas not currently supported.

In the spring of 2008, Senate Bill 08-215 charged the State's Chief Information Officer, in conjunction with the Innovation Council, with mapping the availability of broadband service throughout the State. A third-party vendor was selected for this project, and it is scheduled to be completed in November 2009. The objectives of this project are detailed in the next section.

The initial Colorado broadband mapping effort began prior to the issuance of the State Broadband Data and Development Grant NOFA. It was initiated to assist the State in evaluating broadband efforts to address un-served and underserved areas of the state. However, the initial state map will also assist the NTIA in its policy formation related to broadband expansion and serve as a tool to validate the data to be delivered to the NTIA.

To begin outreach and identification of the broadband needs in un-served areas, OIT and the Broadband Working Group held two statewide Broadband Summits, three community outreach meetings, and one ARRA-related Broadband Technical Conference. They also recently co-hosted a series of weekly interactive webinars.

The Broadband Summits, held in November of 2007 and 2008, brought together federal, state, and local government, higher education, and private sector leaders for one-day forums aimed at assessing the "State of the State" of broadband in Colorado. They started the process of evaluating the importance of broadband to the state and how broadband intensive applications can make a difference in areas ranging from education to health care to energy conservation. They also began developing strategies for extending and enhancing broadband Internet access throughout the state. Presenters identified infrastructure capabilities and projects underway that could be expanded to meet the greater needs of the state and identified the critical need to develop public/private partnering opportunities to enable successful broadband deployment and adoption.

One such example is Colorado's Multi-use Network (MNT) and Bean Pole Project described in Section III.2(b) of this narrative. The MNT used the public sector as an "anchor tenant" for telecommunications investment. A sister program to the MNT, the Beanpole Program addressed the "last-mile" issue. To date the state and its partners (Qwest and several rural ILECs) have invested over $60 million to establish aggregated network points throughout Colorado to enable public sector access to a high speed network. The $4.6 million Beanpole Project helped 15 counties implement new last mile broadband infrastructure within their communities and has helped another 18 counties in their planning efforts.

Additionally, OIT, in conjunction with the Broadband Working Group, conducted three outreach sessions throughout Colorado to engage the local communities in the efforts and to more fully understand the needs and capabilities of these communities. These groups included Club 20 (a coalition of individuals, businesses, tribes and local governments in Colorado's 22 western counties), Progressive 15 (a coalition of 15 counties organized to provide a unified voice for Northeastern Colorado), and Action 22 (an organization of individuals, cities, communities, counties, associations, businesses and organizations in a 22-county region, banding together to give voice into shaping the policies for Southern Colorado). In all three meetings, numerous needs were identified including, but not limited to: distance learning, agriculture, research, healthcare, telecommuting, banking, shopping, emergency services, law enforcement, and general economic development. Additionally, barriers were identified and potential solutions were raised.

With the passage of the American Recovery and Reinvestment Act calling for an investment of $7.2 billion in broadband programs, the state convened a Technical Conference to bring stakeholders together again to discuss this opportunity and listen to the needs and issues felt around the state. The meeting had several sponsors including: OIT, Office of Economic Development, Department of Local Affairs, Innovation Council, Silicon Flatirons Center, and the School of Public Affairs, University of Colorado Denver.

At the Technical Conference, Colorado's broadband mapping initiative, as well as broadband stimulus efforts, was discussed. The conference included sessions that focused on: the Colorado mapping project, the Colorado strategy for producing the best possible results through broadband deployment grants and loans, and opportunities around innovative adoption programs.

Since this time, the State has continued work with the contractor on the current mapping effort and has served as a resource to the providers, government agencies, and other interested parties and as a liaison to the NTIA, RUS, and FCC efforts. The State has issued a statewide broadband framework and established weekly webinars to detail and answer questions regarding the federal programs, the State's role, and the State's requirements. Grant award dollars will not only aid in the ongoing development

and maintenance of the statewide broadband map, but will also support ongoing grass roots planning efforts in the areas of broadband adoption barrier identification, the creation and facilitation of local technology planning teams, and the establishment of computer ownership and Internet access in low penetration areas.

Gap Assessment and Challenges for Colorado

As previously explained, Colorado began its effort to create a state broadband map prior to NTIA's release of this funding opportunity. While Colorado's goals and objectives remain aligned with the over-arching goals of both the BDIA and the ARRA, NTIA's specific deliverable requirements are significantly broader and more data-intensive than currently included in the deliverables contracted for under Colorado's broadband mapping initiative. The scope of work with the current mapping contractor specifies the following products to be delivered to the State of Colorado:

1. Geographic data set in vector format of broadband coverage in the state aligned with US census block boundaries and containing information on speed tiers and broadband service technology platforms, including wireless and wire-line, for each block.
2. Analysis of the population not served by broadband.
3. Set of maps in digital and hard copy format depicting broadband service areas and population density in areas not served by broadband.
4. Validation and verification of broadband data through a variety of mechanisms including interactive speed test web sites, investigation of available data on provider services, detailed field verification and resident interviews in three pilot areas in the state.
5. Market analysis and report describing barriers to deployment and adoption of broadband technologies based on data gathered in the project.
6. Interactive web map depicting broadband coverage and allowing Colorado residents to enter their address and determine the providers at their address.
7. Data of backhaul availability across the state, at a county level.
8. Digital and hard copy map depicting backhaul capacity in the state.

Table A highlights the variances between Colorado requirements under the current broadband mapping project and the NTIA requirements.

Table A: Data Requirements - NTIA (August 6, 2009) vs. Current Colorado Mapping Project

Requirement	NTIA	Current Colorado Mapping Project
Non-disclosure agreements and confidentiality of information	Requires ability to transfer data to other parties; NTIA will condition its disclosure of confidential info to the FCC or other Federal agencies upon the agency's agreement to treat the info as confidential as provided in Notice and as otherwise consistent with applicable law.	Currently, contractor is entering into NDAs that restrict any transfer of data used to generate the census block based data delivered to the State. The restricted data includes addresses and coverage areas for specific providers.

1(a) Mapping: Broadband Service Availability in Provider's Service Area (Including Wireless Broadband Service Provided to a Specific Address)	For each facilities-based provider, list of all census blocks of no greater than 2 square miles in area in which broadband service is available to end-users; for those census block areas > 2 square miles, provide either address-specific information or a list of street segments with address ranges in such census blocks at least TIGER level of granularity, with associated service characteristics.	Currently no typical upstream or downstream speed information for each census block will be collected or reported, and the final deliverable to the State does not have to provide the names of individual providers with service to each census block. There is no distinct requirement for census blocks with areas greater than two square miles.
1 (b) Mapping: Wireless Broadband Services not Provided to a Specific Address	Subscriber authorized maximum downstream and upstream only.	The Colorado project will include and aggregate wireless service areas in the block based data. It will not represent wireless areas independently.
Residential Broadband Service Pricing and Speed Characteristics by County	Average weighted speed across a provider's service or local franchise area, by Metropolitan or Rural Statistical Area.	Not included in current Colorado initiative.
Middle-mile and Internet Backhaul connection points for each provider	To the extent necessary to reasonably verify the network service area availability.	While potentially collected by current contractor to determine areas served, this is not included in the deliverable to the State. Additionally, contractor will detail backhaul availability across the state, at a county level.
Broadband Demand Data for Community Anchor Institution	Address, Latitude/Longitude, Service Technology and Speed.	Not included in current Colorado initiative.
Periodic Updates	Semi-annually for five years.	One-time mapping effort.
Vintage of Data	First data set must be current as of June 30, 2009.	Data in the Colorado project is being collected as of the execution of the contract in June of this year.
Providers	Provider participation required by definition of substantially complete and complete, but no enforcement authority for states if providers do not participate.	Provider participation is optional.
Community Anchor Institutions	Community Anchor Institution participation required by substantially complete and complete, but no enforcement authority for states if institutions do not participate.	Not included in current Colorado initiative.
Confidentiality of Collected Data	Requires access by federal agencies, subject to agreement to maintain as confidential.	NDAs are executed between providers and the current contractor and do not allow access by federal agencies to specific data provided to the current contractor. Deliverable to the State of Colorado is owned by the State and will be shared freely.
Verification	Two methods of verification required.	Verification includes speed tests through public facing speed test web site, on-line surveys of citizens, research on provider packages through public databases and interviews with residents as well as field testing of signal strength in three pilot areas of the state.

Mapping source code ownership	Flexible.	Some source code retained by mapping consultant while code developed specifically for the Colorado deliverable will be delivered to and owned by the State of Colorado.

BUDGET INFORMATION - Non-Construction Programs

OMB Approval No. 4040-0006
Expiration Date 07/30/2010

SECTION A - BUDGET SUMMARY

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1. Mapping	11.558	$ 3,799,533.00	$ 772,039.00	$	$	$ 4,571,572.00
2. Planning	11.558	499,876.00	101,308.00			601,184.00
3.						
4.						
5. Totals		$ 4,299,409.00	$ 873,347.00	$	$	$ 5,172,756.00

Standard Form 424A (Rev. 7- 97)
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SECTION B - BUDGET CATEGORIES

6. Object Class Categories	GRANT PROGRAM, FUNCTION OR ACTIVITY (1) Mapping	(2) Planning	(3)	(4)	Total (5)
a. Personnel	$ 1,317,596.00	$ 349,713.00	$	$	$ 1,667,309.00
b. Fringe Benefits	278,183.00	71,872.00			350,055.00
c. Travel	22,927.00	6,998.00			29,925.00
d. Equipment	395,000.00				395,000.00
e. Supplies	13,250.00				13,250.00
f. Contractual	2,459,307.00	40,693.00			2,500,000.00
g. Construction					
h. Other	96,354.00	120,863.00			217,217.00
i. Total Direct Charges (sum of 6a-6h)	4,582,617.00	590,139.00			$ 5,172,756.00
j. Indirect Charges					$
k. TOTALS (sum of 6i and 6j)	$ 4,582,617.00	$ 590,139.00	$	$	$ 5,172,756.00
7. Program Income	$	$	$	$	$

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SECTION C - NON-FEDERAL RESOURCES

(a) Grant Program	(b) Applicant	(c) State	(d) Other Sources	(e)TOTALS
8. Mapping	$ 772,039.00	$	$	$ 772,039.00
9. Planning	101,308.00			101,308.00
10.				
11.				
12. TOTAL (sum of lines 8-11)	$ 873,347.00	$	$	$ 873,347.00

SECTION D - FORECASTED CASH NEEDS

	Total for 1st Year	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter
13. Federal	$ 1,191,492.00	$ 297,873.00	$ 297,873.00	$ 297,873.00	$ 297,873.00
14. Non-Federal	$ 532,008.00	471,567.00	20,147.00	20,147.00	20,147.00
15. TOTAL (sum of lines 13 and 14)	$ 1,723,500.00	$ 769,440.00	$ 318,020.00	$ 318,020.00	$ 318,020.00

SECTION E - BUDGET ESTIMATES OF FEDERAL FUNDS NEEDED FOR BALANCE OF THE PROJECT

(a) Grant Program	FUTURE FUNDING PERIODS (YEARS) (b)First	(c) Second	(d) Third	(e) Fourth
16. Mapping	$ 1,564,345.00	$ 947,823.00	$ 902,439.00	$ 598,368.00
17. Planning	159,155.00	108,025.00	110,238.00	110,911.00
18.				
19.				
20. TOTAL (sum of lines 16 - 19)	$ 1,723,500.00	$ 1,055,848.00	$ 1,012,677.00	$ 709,279.00

SECTION F - OTHER BUDGET INFORMATION

21. Direct Charges:

22. Indirect Charges:

23. Remarks:

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Tracking Number:GRANT10410114 Funding Opportunity Number:0660-ZA29 Received Date:2009-09-01T18:53:33-04:00

BUDGET NARRATIVE

Mapping the Road to Sustainable Economic Growth:
Colorado's Broadband Data and Development Program
Colorado Governor's Office of Information and Technology
State Broadband Data and Development Grant Program: 0660-ZA29

Applicant:
Colorado Governor's Office of Information Technology (OIT)
Date: September 1, 2009
Funding Request: $4,299,409
Total Project Cost: $5,172,756
Project Period: October 1, 2009 – September 30, 2014
Organization Type: State Government Agency

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I. Introduction

The Governor's Office of Information Technology's (OIT) estimate of its funding needs to support broadband mapping and planning activities includes labor-related costs and equipment needs, along with direct estimates of the expected costs of soliciting expertise external to the organization. These costs are for data collection activities, data verification and validation, and planning activities.

The budget estimate identifies costs for the five-year performance period of the grant. Rather than naming the specific calendar year, it simply indicates estimates for Year 1 through Year 5.

The estimated budget is detailed in this document. This budget narrative describes each portion of the budget items described in the program narrative document. These components are:

- Personal services for:
  - Data collection
  - Project management, data verification and validation, planning
- Support or operating expenses related to personal services including basic operating expenses such as lease space, furniture costs, copy costs, PC support, etc., training, and larger costs such as those related to the outreach to and coordination with counties
- Software including annual maintenance
- Equipment including purchases of data and computers
- Travel to meetings

For personal services, it details the specific subject matter expert costs by year for the mapping and planning portion of the project. This document sums the amounts for mapping, planning and project totals for each year of the project then itemizes the in-kind match from the state.

II. Requested Federal Funds

1. *Personal Services*

As discussed in Section III.2(a) - Applicant Capabilities in the program narrative, the State will be soliciting assistance from external experts in two separate steps. The first set of assistance will perform the data collection for broadband availability data and will develop address data in selected areas of the state. We will engage a contractor in a firm-fixed price contract, and the budgeted amounts for this contractor are expected to be:

Table 1: Contract 1 -- Data Collection Budget Estimates

Description/Explanation	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Broadband service data	400,000	200,000	200,000	200,000	200,000	1,200,000
Address data	300,000	350,000	300,000	0	0	950,000
Data Collection/Creation Total	**$700,000**	**$550,000**	**$500,000**	**$200,000**	**$200,000**	**$2,150,000**

These estimates for the broadband service data collection are based on the State's experience with the current mapping project and publicly available announced bids for other mapping efforts throughout the United States along with the expected work activities in Colorado

compared to other states. It builds in certain assumptions about the process over time allowing the estimates for data collection in later years to be lower than the first full year. These assumptions are:

- There will be no need to re-execute NDAs after they are established with providers at the beginning of the project.
- Data collection will become more efficient as data collection, integration and analysis processes are automated after the initial data collection.

Estimates for address data creation may follow the rule of thumb used for parcel data creation used by practitioners, $4/parcel. In fact, the costs of creating address data may be different. Regardless, the budgeted amount will not cover addresses for the entire state, so the State will be forced to prioritize areas for creating addresses. If, based on the 2000 census, approximately 92,000 housing units are in the larger census blocks (i.e., those greater than two square miles), the budgeted amount will potentially cover these areas, depending on the amount of field work required. OIT will evaluate these areas for address data first, and then assess exurban areas. The amount of area covered by this address data creation process will depend on the actual costs, and the State will select a subset of the priority areas or expand them if the costs are higher or lower than the budget estimates respectively.

The second set of external assistance will assist the state with:

- Project management of the data collection contractor
- Independent validation and verification of the data created by the first contractor including development and deployment of sampling and data collection programs (e.g., survey, interactive web sites) to obtain data necessary to support the data validation
- Planning and outreach activities

The State has identified four specific positions to be filled. These positions will work on-site at the Governor's Office of Information Technology throughout the project period. The four positions to be staffed are:

- Program Manager
- Broadband Data Project Manager
- Quality Assurance Manager
- Communications Project Manager

Again, Section III.2(a) - Applicant Capabilities describes the roles and responsibilities of each of these positions in detail. As these personnel will be performing mapping and planning duties, we have estimated the portion of their time and cost allocated to mapping and planning and then calculated separate, aggregate personal service costs for mapping and planning as required by the NOFA. We plan for the Quality Assurance Project Manager to be a half-time position and be employed for the first three years of the project only. Once the quality assurance program is in place and fully functioning, the other positions can maintain it.

We have calculated the costs of these positions by estimating salary for a comparable position within the state personnel system and loading benefits and other personnel costs based on 20% of the base salary. This 20% is a standard factor used by OIT when billing for its services.

We then allocated these loaded salaries for each position to the mapping and planning portion of the project based on the estimated portion of their time dedicated to mapping and planning tasks. We also applied a 2.5% annual inflation factor over the grant period and then rolled up the sum of these allocated, loaded salaries. Table 2 below lists the base and loaded salary estimates for each contracted position and the portion of time dedicated to mapping and planning activities for each position.

Table 2: Contract 2 – Annual and Loaded Salary Estimates**Error! Not a valid bookmark self-reference.** indicates the estimates for the mapping portion of their responsibilities, and Table 4 indicates the planning estimates.

Table 3: Contract 2 – Loaded Personal Service Costs for Mapping Tasks

Position	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Program Manager	96,900	99,323	101,806	104,351	106,959	$509,338
Broadband Data Project Manager	66,960	68,634	70,350	72,109	73,911	$351,964
Quality Assurance Project Manager	52,155	53,459	54,763	0	0	$160,377
Communications Project Manager	50,700	51,968	53,235	54,503	55,770	$266,175
Mapping Personal Services Total	**$266,715**	**$273,383**	**$280,153**	**$230,962**	**$236,641**	**$1,287,854**

Table 4: Contract 2 – Loaded Personal Service Costs for Planning Tasks

Position	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Program Manager	17,100	17,528	17,955	18,383	18,810	$89,775
Broadband Data Project Manager	3,720	3,813	3,906	3,999	4,092	$19,530
Quality Assurance Project Manager	2,745	1,407	1,441	0	0	$5,593
Communications Project Manager	50,700	51,968	53,235	54,503	55,770	$266,175
Planning Personal Services Total	**$74,265**	**$74,715**	**$76,537**	**$76,884**	**$78,672**	**$381,073**

The amounts listed in Tables 3 and 4 are listed under Personnel and Fringe Benefits in Form SF-424A. However, after consultation with OIT procurement and human resource specialists, OIT may decide to engage a single contractor to fill these positions, in which case these amounts should be considered part of Contractual.

2. *Operating*

There are several other costs that must be included in the budget to support the work of the contractors. Table 5 lists the specific items that are included in these support or operating costs. Other than legal expenses, these costs are based on PUC and OIT experience of operational expenses related to adding staff. Routine operating includes basic overhead costs like photocopying, phone bills, etc. Training includes software classes on subject matter related classes. All of these costs will be included in the Other category in form SF-424A.

Table 5: Operating/Support Expenses for Mapping

Description	Cost Basis	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Routine Operating	$500 per FTE per year	1,388	1,422	1,457	981	1,004	6,251
Training (Personnel)	$750 per person per year	1,688	1,730	1,772	1,814	1,856	8,859
Legal Services	$75.10/hour (blended weight)	6,008	1,540	1,577	1,615	1,652	12,392
Mapping Operational Total		**$9,083**	**$4,691**	**$4,806**	**$4,410**	**$4,512**	**$27,502**

The planning component includes the same operating expenses (minus legal) allocated to the portion of contractor time spent on planning activities. It also includes coordination with and outreach to counties. Table 6 itemizes the operating/supports expenses for the planning efforts.

Table 6: Operating/Support Expenses for Planning

Description	Cost Basis	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Routine Operating	$500 per FTE per year	363	372	381	363	371	1,849
Training (Personnel)	$750 per person per year	525	538	551	564	578	2,756
Coordination Expenses for 64 Counties Planning	$200 avg per county per year	12,800	13,120	13,440	13,760	14,080	67,200
Community Surveys/Media Info		8,000	8,000	8,000	8,000	8,000	40,000
Planning Operational Total		**$21,688**	**$22,030**	**$22,372**	**$22,687**	**$23,029**	**$111,805**

To summarize, the total amounts for operational expenses are:

Mapping $27,502
Planning $111,805

Total $139,307

3. *Travel*

Travel includes travel within the state to attend meetings or meet with stakeholders for outreach, education, or information gathering. The travel budget also includes amounts for travel to meetings outside the state. The itemized estimates for travel are shown in Tables 7 and 8.

Table 7: Travel Expenses for Mapping

Description	Cost Basis	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Travel (national)	$1200 per trip/person/year	2,700	2,768	2,835	2,903	2,970	14,175
Travel (within the state)	$700 avg per FTE per year	1,943	1,991	2,040	1,373	1,405	8,752
Mapping Travel Total		**$4,643**	**$4,759**	**$4,875**	**$4,276**	**$4,375**	**$22,927**

Table 8: Travel Expenses for Planning

Description	Cost Basis	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Travel (national)	$1200 per trip/person/year	840	861	882	903	924	4,410
Travel (within the state)	$700 avg per FTE per year	508	520	533	508	520	2,588
Planning Travel Total		**$1,348**	**$1,381**	**$1,415**	**$1,411**	**$1,444**	**$6,998**

To summarize, the total amounts for travel are:

Mapping $22,927
Planning $6,998

Total $29,925

4. *Equipment*

Equipment costs include large computer hardware purchases to support the data maintenance and processing for the mapping tasks. Hardware estimates are based on the current cost for storage and purchases of servers similar to those expected to be required for the mapping task.

Equipment also includes enterprise geographic information systems software to support the geographic databases collected through the data collection process, the geographic analysis of this data, and creation of map and internet map sites. Software is included under equipment because it is expensive. This equipment cost also includes annual maintenance for the software to ensure access to technical support and version upgrades. The costs estimates are based on software prices as listed in a master price agreement currently in place between the software vendor ESRI and the State of Colorado.

Lastly, the equipment category is used for purchases of demographic, address, or points of interest data for analysis and initiating address and community anchor point data collection. Again, the magnitude of these purchases put it in the equipment category. We expect to purchase several data sets in the first year of the grant and then maintain subscriptions to a subset of these data sets throughout the grant period. Specifically, points of interest and address data will not be purchased in years two through five of the grant.

All of these expenses are mapping related and do not fall into the planning component. Table 9 lists the equipment expenses.

Table 9: Equipment Expenses for Mapping

Description		Year 1	Year 2	Year 3	Year 4	Year 5	Total
Hardware	Disk storage and server	40,000	0	0	40,000	0	80,000
GIS software	ArcGIS Server, Arc GIS desktop, ArcGIS extensions	40,000	20,000	20,000	20,000	20,000	120,000
GIS training	Training in managing multi-user databases and administering software	7,500	7,500	5,000	5,000	5,000	30,000
Demographic/geographic data		20,000	12,000	12,000	12,000	12,000	68,000
Mapping Equipment Total		**$107,500**	**$39,500**	**$37,000**	**$77,000**	**$37,000**	**$298,000**

5. *Supplies*

Supplies include the smaller purchases of computing or printing supplies that will be necessary over the grant period. Specifically, supplies include personal computers and software as well as plotter supplies to plot large maps. The supply costs have been allocated completely to mapping. The small amount budgeted for supplies do not warrant prorating for the time spent on mapping versus planning. Table 10 itemizes supply costs for mapping.

Table 10: Supply Expenses for Mapping

Description	Cost Basis	Year 1	Year 2	Year 3	Year 4	Year 5	Total
PC, Software	$1,500 per person	6,000	0	0	6,000	0	12,000
Plotter Supplies	$250 per year	250	250	250	250	250	1,250
Mapping Supply Total		**$6,250**	**$250**	**$250**	**$6,250**	**$250**	**$13,250**

6. *Total Request*

The subtotals of these categories of expenses as well as the total of requested funds are shown in Tables 11 and 12. The overall total request for federal funds for this project is $4,299,409. The figures show in tables 11 and 12 are reported on the SF-424A.

Table 11: Requested Mapping Funds

Category	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Personal Services (contractual)	966,715	823,383	780,153	430,962	436,641	$3,437,854
Operating (other)	9,083	4,691	4,806	4,410	4,512	$27,502
Travel	4,643	4,759	4,875	4,276	4,375	$22,927
Equipment	107,500	39,500	37,000	77,000	37,000	$298,000
Supplies	6,250	250	250	6,250	250	$13,250
Total Mapping Request	**$1,094,191**	**$872,583**	**$827,084**	**$522,897**	**$482,778**	**$3,799,532**

Table 12: Requested Planning Funds

Category	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Personal Services (contractual)	74,265	74,715	76,537	76,884	78,672	$381,073
Operating (other)	21,688	22,030	22,372	22,687	23,029	$111,805
Travel	1,348	1,381	1,415	1,411	1,444	$6,998
Equipment	0	0	0	0	0	$0
Supplies	0	0	0	0	0	$0
Total Planning Request	**$97,300**	**$98,126**	**$100,324**	**$100,982**	**$103,145**	**$499,876**

III. Match

The state is planning to meet the required 20% match with in-kind. These match amounts are detailed in this section.

1. Personnel

The following positions from OIT will work on this mapping project and their loaded salaries will contribute to the in-kind match. Table 13 shows the positions, their loaded salary, the portion of their time dedicated to this project, and the resulting match amount. Only 80% of the fully loaded salaries is being put toward the match, because 20% of OIT's funding derives from federal sources.

Table 13: Personnel Match

Position	Time (% effort)	Loaded Salary	Match amount/yr	Total Match Amount
Chief of Staff	8%	107,236	6,863	$34,316
Project Management Office Director	3%	161,193	3,869	$19,343
Project Management Assistant	25%	62,745	12,549	$62,745
GIS Director	20%	114,752	18,360	$91,802
Controller	8%	129,650	8,298	$41,488
Contracts/Procurement Director	8%	110,052	7,043	$35,217
Budget Director	8%	139,787	8,946	$44,732
Grants support	5%	93,974	3,759	$18,795
Total Personnel Match			**$69,687**	**$348,437**

2. Current Mapping Project

As described in the program narrative, the State has obtained gifts, donations, and grants to pay for the current mapping effort. As this project will feed the proposed effort, OIT is applying the entire dollar amount collected for the current mapping project as a match to the proposed projects. These funds are as follows:

PUC (CPAP funds, Qwest penalty) $200,000
CO Dept. of Local Affairs, Energy Mineral Impact Grant Funds $100,000
Gifs from Telecommunications Companies $50,000
Total Matching funds from Mapping Project $350,000

3. Leased Office Space

The cost of additional office space to house the personnel is being included as part of the match. The amount for this portion of the match is based on the lease rates currently under by OIT for its office space. This rate is $17/square foot and increases $0.50 annually. The typical cubicle OIT would provide for the project staff would be approximately 65 square feet. The total lease amount is $23,400.

4. Hosting and Server Maintenance

OIT will be hosting the data for the mapping project and maintaining servers, storage, and databases to house this data. OIT typically charges state agencies for hosting services. To calculate the match, we assumed two servers would be maintained for this project. OIT's hosting rate is 567.82 per month for hosting and maintaining a server. For two servers, the in-kind amount per year is $10,902 (again this amount is prorated for the portion of non-federal funds

composing OIT budget). Over the five year period of the grant, the in-kind contribution for hosting and maintaining servers is $54,510.

5. Aerial Photography Data

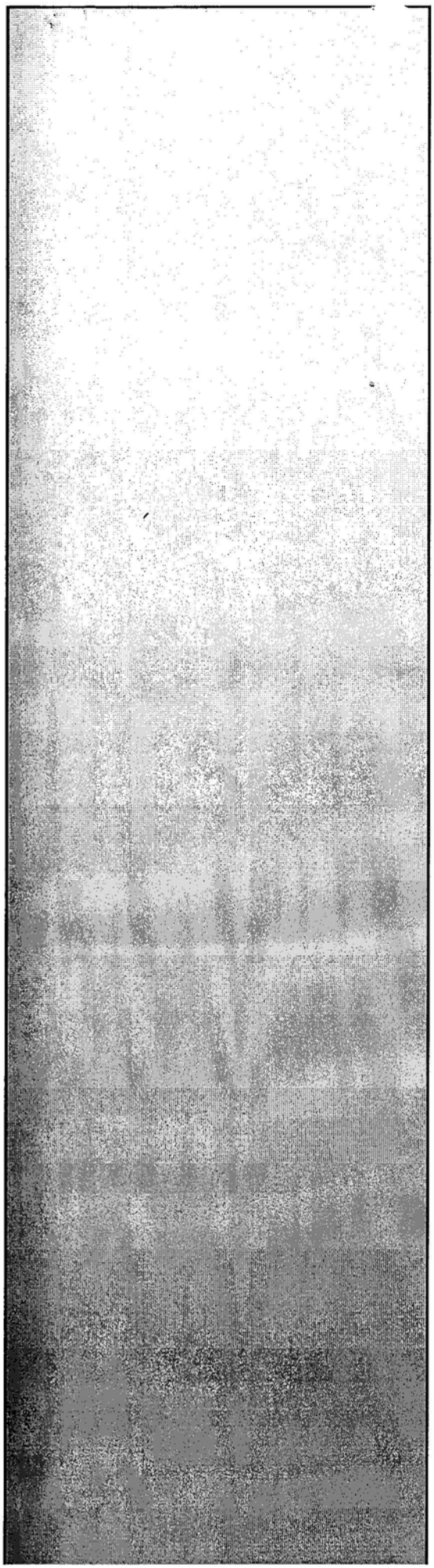
The last in-kind contribution is the amount contributed by the state and local partners to aerial photography acquisition this summer. This money is being provided to the USDA as part of the National Agricultural Imagery Program so the state can obtain color aerial photographs over the state. The state will transmit this full amount of the participation when the final aerial photography product is received. The amount of contributions for this photography is $117,000. Of this amount $20,000 derives from federal sources. This leaves $97,000 to apply to the match. Of this amount, $19,998 is from state agencies and the remainder, $77,002 is from local partners. We have listed the entire $97,000 as applicant match on SF-424A because we were not certain whether to treat these "pass through" contributions as local match or from OIT.

These amounts are summarized in Table 14 below which shows the State contributing more than the required $859,882 (20% of $4,299,409).

Table 14: Total Match Amount

Description	Cost Basis	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Personnel	65 sq. ft. @ $17 per sq. ft. / position	69,687	69,687	69,687	69,687	69,687	348,437
Current Mapping Project		350,000					350,000
Leased space		4,420	4,550	4,680	4,810	4,940	23,400
Aerial Photography		97,000					97,000
Hosting and Server Maintenance		10,902	10,902	10,902	10,902	10,902	54,510
Match Total		**532,009**	**85,139**	**85,269**	**85,399**	**85,529**	**$873,347**

OIT is allocating this total match to mapping and planning based on the relative portion of the requested funds represented by mapping and planning. That is, the mapping budget in the grant request is 88.4% of the total of requested funds, so OIT is allocating 88.4% of the total match to mapping. This amount is $772,039. Similarly, the planning portion of the requested budget is 11.6% of the total requested budget, so we are allocating $101,308 to the planning match.



STATE OF COLORADO

GOVERNOR'S OFFICE OF INFORMATION TECHNOLOGY

American Recovery and Reinvestment Act (ARRA) Broadband Provisions under the Federal Broadband Data Improvement Act (BDIA)

Broadband Data Collection and Mapping

RFP-003-JG-10

Governor's Office of Information Technology (OIT)
Procurement Office
601 E 18th Ave., Suite 250

Denver, CO 80203

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DRAFT

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REQUEST FOR PROPOSALS (RFP) SIGNATURE PAGE

RFP INFORMATION

RFP# RFP-003-JG-10 TITLE: Broadband Data Collection and Mapping

SUBMIT INQUIRIES & SEALED PROPOSALS TO:

Governor's Office of Information Technology (OIT)
Procurement Office
601 E 18th Ave., Suite 250
Denver, CO 80203

Judy Giovanni
[303-764-7938 Phone]

OITpurchasing@state.co.us

Submit one (1) Original, one (1) Electronic Copy, and [6] Hard Copies.

OFFERORS CONTACT INFORMATION

COMPANY NAME: CONTACT:

STREET ADDRESS: PHONE:

CITY/STATE/ZIP: E-MAIL:

FEIN:

OFFERORS AUTHORIZED SIGNATURE

AUTHORIZED SIGNATURE:

PRINTED NAME: TITLE:

IMPORTANT

The following information must be on the OUTSIDE of the sealed RFP response:
Your Company Name, RFP Number and RFP Submission Deadline

RETURN THIS PAGE WITH YOUR RESPONSE

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SCHEDULE OF ACTIVITIES

ACTIVITY	DATE/TIME (MTN STD TIME)		
RFP Notice Published on BIDS	As posted on BIDS (www.gssa.state.co.us/vensols)		
Prospective Offerors Written Inquiry Deadline (No questions accepted after this date/time; e-mail preferred)	[date]		[time]
Responses to Written Inquiries Published on BIDS [1]	[date]		[time]
Pre-Proposal Conference	As posted on BIDS as applicable (www.gssa.state.co.us/vensols)		
Proposal Submission Deadline	[date]		[time]
Oral Presentations/Site Visits/Best and Final Offers [2]	Optional and to be determined		
Notice of Award Published on BIDS [1]	[date]		[time]
Awarded Offeror Returns Signed Contract By [1]	[date]		[time]
Initial Contract Period [1]	[date]	**thru**	[date]

The resulting contract may be renewed for **[One(1)]** additional year, and if additional grant funds are received three (3) one year renewals for a total of four one year options at the sole discretion of the State.

1 Estimated
2 To be held at the discretion of the State, as applicable

Section 1: Administrative Information

1.1 ISSUING OFFICE

This Request for Proposals (RFP) is issued by the State of Colorado, Governor's Office of Information Technology (OIT), Procurement Office for the benefit of the State of Colorado (State). The OIT Procurement Office and Purchasing Agent listed on the Request for Proposals (RFP) Signature Page is the sole point of contact concerning this RFP. All communication must be done through the OIT Procurement Office.

1.2 BID INFORMATION AND DISTRIBUTION SYSTEM (BIDS) AND REGISTRATION

This solicitation is published using the Colorado Bid Information and Distribution System (BIDS). Offeror must be registered on BIDS in order to download solicitation documents and information and to be considered responsive at the time of proposal submission. BIDS and its registration information may be accessed through the State Purchasing Office website at http://www.gssa.state.co.us/VenSols.

1.3 MODIFICATION OR ADDENDUM TO REQUEST FOR PROPOSALS

In the event it becomes necessary to revise any part of this RFP, a modification/addendum will be published on the BIDS web page at www.gssa.state.co.us/VenSols. It is incumbent upon Offerors to carefully and regularly monitor BIDS for any such postings.

1.4 INVITATION TO SUBMIT PROPOSALS

OIT is posting this RFP on the Colorado Bid Information and Distribution System (BIDS) so that Offerors who have an interest may submit a proposal in accordance with terms of this RFP. Please read and be aware of the administrative information attached to this RFP.

1.5 PURPOSE

This RFP provides prospective Offerors with sufficient information to enable them to prepare and submit proposals for consideration to satisfy the need for expert assistance in the completion of the scope of this RFP.

1.6 SCOPE

This RFP contains the instructions governing the proposal to be submitted and the material to be included therein; mandatory requirements which must be met to be eligible for consideration; and other requirements to be met by each proposal.

1.7 STRUCTURE OF THIS REQUEST FOR PROPOSALS

The State of Colorado Solicitation Instructions and Terms and Conditions linked through the BIDS Solicitation Page govern except as modified or supplemented in these instructions.

1.8 OFFICIAL MEANS OF COMMUNICATION

During the solicitation process, for this RFP, all official communication will be via notices on BIDS. Notices may include any modifications to administrative or performance requirements, answers to

inquiries received, clarifications to requirements, and the announcement of the apparent winning Offeror. It is incumbent upon Offeror to carefully and regularly monitor BIDS for any such notices.

1.9 INQUIRIES

Unless otherwise noted, prospective Offerors may make written or electronic mail inquiries concerning this RFP to obtain clarification of requirements. E-mail is the preferred method for Offerors to submit inquiries. No inquiries will be accepted after the date indicated in the Schedule of Activities section of this RFP.

Inquiries shall be made to the sole point of contact as listed on the Request for Proposals (RFP) Signature Page.

Clearly identify your inquiries by referencing the RFP number. Where appropriate include references to RFP section, paragraph and or question numbers; using page numbers as references is problematic because not all printers number the pages consistently.

Response to Offerors' inquiries (if required) will be published as a modification on the BIDS system in a timely manner. Offeror should not rely on any other statements, either written or oral, that alter any specification or other term or condition of the RFP. Offerors are responsible for monitoring BIDS for publication of modifications to this solicitation.

1.10 PRE-PROPOSAL CONFERENCE

A Pre-Proposal Conference will be held (as applicable) as stated in the Schedule of Activities. The purpose of this conference is to provide prospective Offerors with pertinent information regarding this procurement, answer questions, and cover managerial and administrative items as they pertain to this RFP.

Unless otherwise noted, attendance by prospective Offerors is mandatory for anyone who will be submitting proposals for the requirements within this RFP. Proposals from Offerors who do not attend this meeting will not be considered by the State. Attendance at the conference will be officially noted by signature.

1.11 OFFEROR REGISTRATION

Offeror registration (BIDS Registration) MUST be current at the time and date of the Bid Submission Deadline, specific to this RFP, and as noted on the BIDS webpage. Offeror registration status is based on the Offerors' Federal Employer Tax ID Number (FEIN), as provided by the Offeror, on the Request for Proposals (RFP) Signature Page. This FEIN shall be the number used to determine if or if not an Offeror is registered. Only registered Offerors will be considered. Offerors shall be registered in accordance with the Vendor Identification section of this RFP.

1.12 VENDOR IDENTIFICATION

The tax identification number provided must be that of the Offeror responding to the RFP. Offeror must be a legal entity with the legal right to contract in the State of Colorado and shall be the entity that is used to determine Offeror Registration status.

1.13 PARENT COMPANY

If an Offeror is owned or controlled by a parent company, the name, main office address and parent company's tax identification number shall be provided in the proposal.

1.14 MODIFICATION OR WITHDRAWAL OF PROPOSALS

Proposals may be modified or withdrawn by the Offeror prior to the established due date and time.

1.15 NEWS RELEASES

News releases or contact with media representatives pertaining to this RFP or concerning any Offeror's proposal shall NOT be made prior to execution of the contract without prior written approval by the State.

1.16 CERTIFICATION OF INDEPENDENT PRICE DETERMINATION

1.16.1 By submission of this proposal each offeror certifies, and in the case of a joint proposal each party, thereto certifies as to its own organization, that in connection with this procurement:

(a) The prices in this proposal have been arrived at independently, without consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other offeror or with any competitor;

(b) Unless otherwise required by law, the prices which have been quoted in this proposal have not been knowingly disclosed by the offeror and will not knowingly be disclosed by the offeror prior to opening, directly or indirectly to any other offeror or to any competitor; and

(c) No attempt has been made or will be made by the offeror to induce any other person or firm to submit or not to submit a proposal for the purpose of restricting competition.

1.16.2 Each person signing the Request for Proposals (RFP) Signature Page of this proposal certifies:

(a) She/he is the person in the offeror's organization responsible within that organization for the decision as to the prices being offered herein and that she/he has not participated, and will not participate, in any action contrary to (1.16.1)(a) through (1.16.1)(c) above; or she/he is not the person in the offeror's organization responsible within that organization for the decision as to the prices being offered herein but that she/he has been authorized in writing to act as agent for the persons responsible for such decision in certifying that such persons have not participated, and will not participate, in any action contrary to (1.16.1)(a) through (1)(c) above, and as their agent does hereby so certify; and she/he has not participated, and will not participate, in any action contrary to (1.16.1)(a) through (1.16.1)(c) above.

1.16.3 A proposal will not be considered for award where (1.16.1)(a), (1.16.1)(c), or (1.16.2) above has been deleted or modified. Where (1.16.1)(b) above has been deleted or modified, the proposal will not be considered for award unless the offeror furnishes with the proposal a signed statement which sets forth in detail the circumstances of the disclosure and the head of the agency, or her/his designee, determines that such disclosure was not made for the purpose of restricting competition.

1.17 PROPRIETARY/CONFIDENTIAL INFORMATION

Any restrictions on the use or inspection of material contained within the proposal shall be clearly stated in the proposal itself; written requests for confidentiality shall be submitted by the Offeror with their proposal. The Offeror must state specifically what elements of the proposal are to be considered confidential/proprietary.

Confidential/Proprietary information must be readily identified, marked and separated/packaged from the rest of the proposal. Co-mingling of confidential/proprietary and other information is not acceptable. Neither a proposal, in its entirety, nor proposal price and/or rate information will be considered confidential and proprietary. Any information that will be included in any resulting contract cannot be considered confidential.

The Governor's Office of Information Technology, Procurement Director and or delegate will make a written determination as to the apparent validity of any written request for confidentiality. In the event the Governor's Office of Information Technology does not concur with the Offerors' request for confidentiality, the written determination will be sent to the Offeror. Ref. Section 24-72-201 et. seq., C.R.S., as amended, Public (open) Records Act.

1.18 RFP RESPONSE MATERIAL OWNERSHIP

All material submitted regarding this RFP becomes the property of the State of Colorado. As such, the State of Colorado may retain or dispose of all copies as is lawfully deemed appropriate. Proposals may be reviewed by any person after the "Notice of Intent to Make an Award" letter has been issued, subject to the terms of C.R.S. Title 24, Article 72, Part 2 as amended. The State of Colorado has the right to use any or all information/material presented in reply to the RFP, subject to limitations outlined in the clause, Proprietary/Confidential Information. Offeror expressly agrees that the State may use the materials for all lawful State purposes, including the right to reproduce copies of the material submitted for purposes of evaluation, and to make the information available to the public in accordance with the provisions of the Public Records Act.

1.19 ACCEPTANCE OF RFP TERMS

A proposal submitted in response to this RFP shall constitute a binding offer. Acknowledgment of this condition shall be indicated by the autographic signature of the Offeror or an officer of the Offeror, legally authorized to execute contractual obligations. It is assumed by the Offeror's response that it acknowledges all terms and conditions of this invitation for an offer. An Offeror shall identify clearly and thoroughly any variations between its proposal and the State's RFP. Failure to do so shall be deemed a waiver of any rights to subsequently modify the terms of performance, except as outlined or specified in the RFP.

1.20 PROPOSAL CONTENT ACCEPTANCE

The contents of the proposal (including persons specified to implement the project) of the successful offeror will become contractual obligations if acquisition action ensues. Failure of the successful offeror to accept these obligations in a contract, purchase document, delivery order or similar acquisition instrument may result in cancellation of the award and such offeror may be removed from future solicitations.

1.21 CONTRACTUAL OBLIGATIONS OF RFP DOCUMENTS

The contents of the proposal and the terms of this request for proposals will become contractual obligations of the successful Offeror(s). This RFP solicitation consists of all documents listed under the Table of Contents and are hereby referenced and incorporated herein. "The State of Colorado Solicitation Instructions and Terms and Conditions" linked to the BIDS Notice on the website govern except as modified or supplemented within the Request for Proposals. The final contract shall provide the order of precedence of all related documents, in the following order: Colorado Special Provisions, Contract, RFP, Offeror's response and, applicable Exhibits. In responding to this RFP, Offerors agreeing to abide by the requirements of the RFP are also agreeing to abide by all terms and conditions contained herein, so Offerors should identify or seek to clarify any problems with contract language or any other document contained within this RFP packet through their written inquiries about the RFP or within their proposal. It may be possible to negotiate some of the wording in the final contract, but there are many provisions, such as all of those contained in the Special Provisions pages, that cannot be changed. To avoid the possibility of their proposal being rejected or of any delay in the finalization of the resulting contract, it is highly recommended that Offerors NOT take any exception to any of the State's terms and conditions. Failure of the successful Offeror(s) to accept these obligations may result in cancellation of the award.

1.22 STANDARD CONTRACT

Except as modified herein, the standard State Contract Terms and Conditions and the Model Contract (see attached) included in this RFP shall govern this procurement and are hereby incorporated by reference.

1.22.1 Legislative Changes

The State of Colorado reserves the right to amend the contract in response to legislative changes, which affect this project.

1.22.2 Order of Precedence

In the event of any conflict or inconsistency between terms of this request for proposals and the offer, such conflict or inconsistency shall be resolved, first, by giving effect to the Colorado Special Provisions, Contract, RFP, Offeror's response and, applicable Exhibits.

1.22.3 Venue

The parties agree that venue for any action related to performance of this contract shall be in the City and County of Denver, Colorado.

1.23 OFFEROR PROPOSED TERMS AND CONDITIONS

Except as specified in the Offeror's proposal, the submission of the Offeror's proposal will indicate its acceptance of these terms and conditions. Offerors must disclose in their proposals terms and conditions or required clarifications of terms and conditions consistent with these instructions. The State reserves the right to clarify terms and conditions not having an appreciable affect on quality, price/cost risk or delivery schedule during post-award formalization of the contract.

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1.24 STATE OWNERSHIP OF CONTRACT PRODUCTS

All products produced in response to the contract or agreement resulting from this RFP will be the sole property of the State of Colorado. Any exceptions must be outlined in detail. Exceptions may serve as cause for rejection of proposal.

1.25 PROPOSAL PRICING

Estimated proposal prices are not acceptable. Offers submitted must include all related costs (e.g. surcharges, travel, etc.). Any costs not included, as part of the offer will be disallowed. Pricing must be in U.S. funds. Best and final offers may be considered in determining the apparent successful offeror. Proposals shall be firm for a period of not less than one hundred eighty (180) calendar days.

1.26 CONTRACT TERM

This RFP may result in a multiple year contract(s); estimated term stated in the Schedule of Activities. The initial contract(s) will be effective upon approval by the State Controller or designee. The contract performance contemplated herein shall commence as upon the effective date of applicable contracts and shall be undertaken and performed in the sequence and manner set forth herein.

1.27 LATE PROPOSALS

Late proposals will not be accepted. It is the sole responsibility of the Offeror to ensure that their proposal arrives in the designated office prior to the date and time as specified on BIDS.

1.28 REJECTION OF PROPOSALS

The State of Colorado reserves the right to reject any or all proposals, to waive informalities and minor irregularities in proposals received, and to accept any portion of a proposal or all items proposed if deemed in the best interest of the State of Colorado.

1.29 ESTIMATED QUANTITIES

Estimated quantities where provided are estimates only, no volumes can be guaranteed.

1.30 NUMBER OF AWARDS

The State intends to award one or more awards/contracts as a result of this RFP.

1.31 AGREEMENT EXECUTION

An Awarded Offeror may have no longer than fifteen (15) calendar days to enter into agreement after being notified by the State. If this date is not met, the State may elect to cancel the award and award the selection to the next most successful Offeror(s) if the delay is not the fault of the State.

1.32 PRE PERFORMANCE MEETING

Upon execution of the contract, an OIT Contract Administrator shall conduct a review of the contract requirements with key personnel of the State and Awarded Offeror(s). The purpose of the meeting is for all working parties to gain a better knowledge of the contract requirements, have questions answered, and conduct a needs assessment so that transition to performance will commence timely and smoothly.

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1.33 INCURRING COSTS

The State of Colorado is not liable for any cost incurred by Offerors prior to issuance of a legally executed contract or procurement document. No property interest, of any nature shall accrue until a contract is awarded and signed by all concerned parties.

1.34 AUDIT

The States reserves the right to require that the successful Offeror(s) has a process audit conducted of its program at least once every three (3) years. If the successful Offeror(s) has not had such an audit prior to awarding of this contract, and the State requires one, then an audit must begin within six months of the award of this contract. The State reserves the right to approve the selected firm. A complete copy of the audit must be provided to the Governor's Office of Information Technology within five (5) working days of its completion. The Governor's Office of Information Technology will negotiate directly with the successful Offeror(s) regarding any exceptions or findings from the audit.

1.35 TAXES

The State of Colorado, as purchaser, is exempt from all federal excise taxes under Chapter 32 of the Internal Revenue Code (Registration No. 84-730123K) and from all state and local government use taxes C.R.S. 39-26-114(a). Our Colorado State and Local Sales Tax Exemption Number is 98-02565. Seller is hereby notified that when materials are purchased in certain political sub-divisions (for example, City and County of Denver) the seller may be required to pay sales tax even though the ultimate product or service is provided to the State of Colorado. This sales tax will not be reimbursed by the State.

1.36 INSURANCE

The Awarded Offeror(s) shall obtain, and maintain at all times during the term of this agreement, insurance in the kinds and amounts outlined in the linked State of Colorado Solicitation Instructions/Terms and Conditions and the attached model contract.

1.37 CYBER SECURITY

The Awarded Offeror(s) may be required by the Governors Office of Information Technology (OIT) to comply with the Cyber Security Policies issued by the Office of Cyber Security. Those policies are available at: www.colorado.gov/cs/Satellite/Cyber/CISO/1167928186414. Offerors should become familiar with those policies. All responses to this solicitation may be evaluated, in part, according the Offerors compliance with the Cyber Security Policies.

1.38 TELEGRAPHIC/ELECTRONIC RESPONSES

Telegraphic or electronic bids (Fax, Western Union, Telex, e-mail, etc.) cannot be accepted as a sealed proposal. Offerors are urged to read the solicitation document thoroughly before submitting a proposal.

1.39 ADMINISTRATIVE REVIEW FACTORS – PASS/FAIL

Offerors must demonstrate in writing their ability and willingness to comply with the Mandatory Minimum Requirements found in the Proposal Requirements section of this RFP, as applicable, to be considered responsive to this RFP. These items are judged as a pass or fail in order for the Offeror's response to be considered for further review by the evaluation committee.

1.40 COOPERATIVE AGREEMENTS

Pursuant to 24-37.5-105(3)(i) CRS, the Governor's Office of Information Technology (OIT) will be the primary state party to the contract resulting from this procurement. All Executive Branch state agencies are included in this solicitation and any resulting award/contract. The Legislative and Judicial branches of State government are eligible to participate. OIT will extend the resulting award and contract to Institutions of Higher Education and Local Governments.

1.41 RFP CANCELLATION

The State reserves the right to cancel this entire Request for Proposals or individual Phases at any time, without penalty.

1.42 PROTESTED SOLICITATIONS AND AWARDS

Any actual or prospective Offeror or Offeror who is aggrieved in connection with the solicitation or award of a contract may protest to Governor's Office of Information Technology (OIT), Procurement Director, 601 E 18th Ave., Suite 250, Denver, CO 80203. The protest shall be submitted in writing within seven working days after such aggrieved person knows, or should have known, of the facts giving rise thereto. Reference C.R.S. Title 24, Article 109.

1.43 ADDITIONAL AMERICAN RECOVERY AND REINVESTMENT ACT (ARRA) TERMS AND CONDITIONS

a.) Sub-Recipients Requirements

Offeror shall include these terms, including this requirement, in any of its subcontracts or subgrants in connection with projects funded in whole or in part with funds available under the American Recovery and Reinvestment Act of 2009, Pub. L. 111-5.

b.) Reporting & Registration Requirements (Section 1512)

Division A, Title XV, Section 1512 of the ARRA outlines reporting requirements. Not later than ten calendar days after the end of each calendar quarter, the State must submit a report that, at a minimum, contains the information specified in Section 1512 of the ARRA. It is imperative all contracts involving the use of ARRA funds include requirements that the Offeror supply the State with the necessary information to provide these reports in a timely manner.

The Offeror's failure to provide complete, accurate, and timely reports shall constitute an "Event of Default". Upon the occurrence of an Event of Default, the state department or agency may terminate this contract upon 30 days prior written notice if the default remains uncured within five calendar days following the last day of the calendar quarter, in addition to any other remedy available to the state department or agency in law or equity

c.) Buy American Requirement (Section 1605)

I. Required Use of American Iron, Steel, and Other Manufactured Goods

(a) **Definitions**. As used in this Section I:

"Designated Country" means Aruba, Australia, Austria, Belgium, Bulgaria, Chile, Cyprus, Czech

Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hong Kong, Hungary, Iceland, Ireland, Israel, Italy, Japan, Korea (Republic of), Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Singapore, Slovak Republic, Slovenia, Spain, Sweden, Switzerland, the United Kingdom, Australia, Costa Rico, Dominican Republic, El Salvador, Guatemala, Honduras, Nicaragua, and Morocco.

"Designated country iron, steel, and/or manufactured goods" mean iron, steel and/or a manufactured good that:

(1) Is wholly the growth, product or manufacture of a Designated Country; or
(2) In the case of a manufactured good that consists in whole or in part of materials from another country, has been substantially transformed in a Designated Country into a new and different manufactured good distinct from the materials from which it was transformed.

"Domestic iron, steel and/or manufactured good" is iron, steel and/or a manufactured good that:

(1) Is wholly the growth, product or manufacture of the United States; or
(2) In the case of a manufactured good that consists in whole or in part of materials from another country, has been substantially transformed in the United States into a new and different manufactured good distinct from the materials from which it was transformed. There in no requirement with regard to the origin of components or subcomponents in manufactured goods or products, as long as the manufacture of goods occurs in the United States.

"Federal Agency" means the department or agency of the federal government that awarded funds to the State of Colorado from the ARRA that finance the project described in this solicitation.

"Foreign iron, steel and/or manufactured good" means iron, steel and/or manufactured good that is not domestic or designated country iron, steel and/or manufactured goods.

"Manufactured good" means a good brought to the construction site for incorporation into the building or work that has been--

(1) Processed into a specific form and shape; or
(2) Combined with other raw material to create a material that has different properties than the properties of the individual raw materials.

"Public building" and "public work" means a public building of, and a public work of, a governmental entity (the United States; the District of Columbia; commonwealths, territories, and minor outlying islands of the United States; State and local governments; and multi-State, regional, or interstate entities which have governmental functions). These buildings and works may include, without limitation, bridges, dams, plants, highways, parkways, streets, subways, tunnels, sewers, mains, power lines, pumping stations, heavy generators, railways, airports, terminals, docks, piers, wharves, ways, lighthouses, buoys, jetties, breakwaters, levees, and canals, and the construction, alteration, maintenance, or repair of such buildings and works.

"Steel" means an alloy that includes at least 50 percent iron, between .02 and 2 percent carbon, and may include other elements.

(b) ***Domestic preference.***

(1) This term and condition implements:

(i) Section 1605(a) of Division A, Title XVI of the ARRA by requiring that all iron, steel, and manufactured goods used in the public building or public work are produced in the United States; and

(ii) Section 1605(d) of Division A, Title XVI of the ARRA, which requires the application of the Buy American requirement in a manner consistent with U.S. obligations under international agreements. The restrictions of Section 1605 of the ARRA do not apply to designated country iron, steel, and/or manufactured goods procured for projects with an estimated value of $7,433,000 or more.

(2) The Offeror shall use only domestic or Designated country iron, steel and/or manufactured goods in performing work funded in whole or in part with funds available under the ARRA, except as provided in subparagraphs (3) and (4) of this paragraph (b).

(3) The requirement in paragraph (2) of this Section does not apply to the material listed by the Federal Agency as follows: NONE

(4) The Federal Agency may add other iron, steel, and/or manufactured goods to the list in paragraph (b) (3) of this Section if the Federal government determines that—

(i) The cost of the domestic iron, steel, and/or manufactured goods would be unreasonable. The cost of domestic iron, steel, or manufactured goods used in the project is unreasonable when the cumulative cost of such material will increase the cost of the overall project by more than 25 percent;

(ii) The iron, steel, and/or manufactured good is not produced, or manufactured in the United States in sufficient and reasonably available quantities and of a satisfactory quality; or

(iii) The application of section 1605 of the ARRA would be inconsistent with the public interest.

(c) ***Request for determination of inapplicability of Section 1605 of the ARRA.***

(1)(i) Any Bidder's request to use foreign iron, steel, and/or manufactured goods in accordance with paragraph (b) (4) of this Section shall include adequate information for Federal Agency evaluation of the request, including—

(A) A description of the foreign and domestic iron, steel, and/or manufactured goods;

(B) Unit of measure;

(C) Quantity;

(D) Cost;

(E) Time of delivery or availability;

(F) Location of the project;

(G) Name and address of the proposed supplier; and

(H) A detailed justification of the reason for use of foreign iron, steel, and/or manufactured goods cited in accordance with paragraph (b)(3) of this term and condition.

(ii) A request based on unreasonable cost shall include a reasonable survey of the market and a completed cost comparison table in the format in paragraph (d) of this Section.

(iii) The cost of iron, steel, and/or manufactured goods material shall include all delivery costs to the construction site and any applicable duty.

(iv) Any Offeror's request for a determination submitted after ARRA funds have been obligated for a project for construction, alteration, maintenance, or repair shall explain why the Offeror could not reasonably foresee the need for such determination and could not have requested the determination before the funds were obligated. If the Offeror does not submit a satisfactory

explanation, the Federal Agency need not make a determination.

(2) If the Federal Agency determines after funds have been obligated for a project for construction, alteration, maintenance, or repair that an exception to section 1605 of the ARRA applies, the State will amend the contract to allow use of the foreign iron, steel, and/or relevant manufactured goods. When the basis for the exception is non-availability or public interest, the amended contract shall reflect adjustment of the contract amount, redistribution of budgeted funds, and/or other actions taken to cover costs associated with acquiring or using the foreign iron, steel, and/or relevant manufactured goods. When the basis for the exception is the unreasonable cost of the domestic iron, steel, or manufactured goods, the State shall adjust the award amount or redistribute budgeted funds by at least the differential established in 2 CFR 176.110(a).

(3) Unless the Federal Agency determines that an exception to section 1605 of the ARRA applies, use of foreign iron, steel, and/or manufactured goods is noncompliant with section 1605 of the American Recovery and Reinvestment Act.

(d) **Data**. To permit evaluation of requests under subparagraph (b)(4) of this Section based on unreasonable cost, the Bidder shall include the following information and any applicable supporting data based on the survey of suppliers:

FOREIGN AND DOMESTIC ITEMS COST COMPARISON			
Description	Unit of Measure	Quantity	Cost (Dollars)*
Item 1:			
Foreign steel, iron, or manufactured good	_____	_____	_____
Domestic steel, iron, or manufactured good	_____	_____	_____
Item 2:	_____	_____	_____
Foreign steel, iron, or manufactured good	_____	_____	_____
Domestic steel, iron, or manufactured good			

[List name, address, telephone number, email address, and contact for suppliers surveyed. Attach copy of response; if oral, attach summary.]
[Include other applicable supporting information.]
[* Include all delivery costs to the construction site.]

II. NOTICE of Required Use of American Iron, Steel, and Other Manufactured Goods

REQUIRED USE OF AMERICAN IRON, STEEL, AND MANUFACTURED GOODS—SECTION 1605 OF THE AMERICAN RECOVERY AND REINVESTMENT ACT OF 2009

(a) **Definitions**. "Designated country iron, steel and/or manufactured goods," "domestic iron, steel and/or manufactured goods", "Federal Agency", "Foreign iron, steel and/or manufactured good", "Manufactured good," "public building and public work," and "steel," as used in this Section, are defined in Section I..

(b) **Requests for determinations of inapplicability**. A prospective Bidder requesting a determination regarding the inapplicability of section 1605 of the ARRA should submit the request to the Federal Agency in time to allow a determination before submission of applications or proposals. Bidders should provide a copy of this request to DMB. The prospective applicant shall include the information and applicable supporting data required by paragraphs (c) and (d) of Section I of this solicitation in the request. If Bidder has not requested a determination regarding the inapplicability of Section 1605 of the ARRA before submitting its application or proposal, or has not received a response to a previous request, the applicant shall include the information and supporting data in the application or proposal. The Federal Agency is the sole entity authorized to make determinations regarding the inapplicability of Section 1605 of the ARRA.

(c) *Evaluation of project proposals.*

If the Federal Agency determines that an exception based on unreasonable cost of domestic iron, steel, and/or manufactured goods applies, the State will evaluate a project requesting an exception to the requirements of section 1605 of the ARRA by adding to the estimated total cost of the project 25 percent of the project cost, if foreign iron, steel, or manufactured goods are used in the project based on unreasonable cost of comparable manufactured domestic iron, steel, and/or manufactured goods.

d) Alternate project proposals.

(1) When a project proposal includes foreign iron, steel, and/or manufactured goods, other than designated country iron, steel and/or manufactured goods, not listed in paragraph (b)(3) of the Section 6.022, the Bidder also may submit an alternate proposal based on use of equivalent domestic iron, steel, and/or manufactured goods.

(2) If an alternate proposal is submitted, the Bidder shall submit a separate cost comparison table prepared in accordance with paragraphs (c) and (d) of Section I of this solicitation for the proposal that is based on the use of any foreign iron, steel, and/or manufactured goods for which the Federal Agency has not yet determined an exception applies.

(3) If the Federal Agency determines that a particular exception requested in accordance with paragraph (b) of Section I of this solicitation does not apply, the State will evaluate only those proposals based on use of the equivalent domestic or designated country iron, steel, and/or manufactured goods, and the Offeror shall be required to furnish such domestic or designated country items.

d.) Wage Rate Requirements (Section 1606)

All laborers and mechanics employed by Offerors and subOfferors on projects funded in whole or in part with funds available under the ARRA shall be paid wages at rates not less than those prevailing on projects of a character similar in the locality, as determined by the United States Secretary of Labor in accordance with subchapter IV of chapter 31 of title 40 of the United States Code. (See ARRA Sec. 1606). The Secretary of Labor's determination regarding the prevailing wages applicable in Colorado is available at http://www.gpo.gov/davisbacon/co.html. (GEO should seek DOE Guidance on Weatherization contracts.)

e.) Inspection & Audit of Records

The Offeror shall permit the United States Comptroller General or his representative or the appropriate inspector general appointed under section 3 or 8G of the Inspector General Act of 1998 or his representative (1) to examine any records that directly pertain to, and involve transactions relating to, this contract; and (2) to interview any officer or employee of the Offeror or any of its subOfferors/subgrantees regarding the activities funded with funds appropriated or otherwise made available by the ARRA.

f.) Whistle Blower Protection for Recipients of Funds

Offeror shall not discharge, demote or otherwise discriminate against an employee for disclosures by the employee that the employee reasonably believes are evidence of: (1) gross mismanagement of a contract or grant relating to Covered Funds; (2) a gross waste of Covered Funds; (3) a substantial and specific danger to public health or safety related to the implementation or use of Covered Funds; an abuse of authority related to implementation or use of Covered Funds; or (5) a violation of law, rule, or regulation related to an agency contract (including the competition for or negotiation of a contract) or grant, awarded or issued relating to Covered Funds. In this Subsection, "Covered Funds" shall have the same meaning as set forth in Section 1553(g)(2) of Division A, Title XV of the ARRA.

(a) Recipient must post notice of the rights and remedies available to employees under Section 1553 of Division A, Title XV of the ARRA. (For Colorado employees see the State Personnel Employee Protection Act CRS §24-50-101 et. seq. and obtain the complaint form at www.colorado.gov/dpa/spb/docs/WhistleblowerComplaint.doc

(b) The Offeror shall include the substance of this clause including this paragraph (b) in all subcontracts.

g.) Funding of Programs

The Offeror acknowledges that the programs supported with temporary federal funds made available by the American Recovery and Reinvestment Act of 2009, Pub. L. 111-5, will not be continued with state financed appropriations once the temporary federal funds are expended.

h.) Fixed Price - Competitively Bid

Offeror, to the maximum extent possible, shall award any subcontracts funded, in whole or in part, with ARRA funds as fixed-price contracts through the use of competitive procedures.

i.) Segregation of Costs

Offeror shall segregate obligations and expenditures of ARRA funds from other funding. No part of funds made available under the American Recovery and Reinvestment Act of 2009, Pub. L. 111-5, may be comingled with any other funds or used for a purpose other than that of making payments for costs allowable under the ARRA.

j.) Publication

All contract solicitations funded in whole or in part with ARRA funds will be posted on the State BIDS website https://www.gssa.state.co.us/VenSols. All contracts resulting from the ARRA will be published on the State of Colorado's Recovery Web site, www.colorado.gov/recovery.

Offeror shall include the Colorado Recovery logo on all signage or other publications in connection with the activities funded by the State of Colorado through funds made available by the American Recovery and Reinvestment Act of 2009, Pub. L. 111-5.

k.) Non- Discrimination

The Offeror shall comply with Title VI and Title VII of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, Title IX of the Education Amendments of 1972, the Age Discrimination Act of 1975, and other civil rights laws applicable to recipients of Federal financial assistance.

l.) Prohibition on Use of Funds

None of the funds made available under this contract may be used for any casino or other gambling establishment, aquarium, zoo, golf course, swimming pools, or similar projects.

m.) False Claims Act

The Offeror shall promptly refer to an appropriate federal inspector general any credible evidence that a principal, employee, agent, Offeror, sub-grantee, subOfferor or other person has committed a false claim under the False Claims Act or has committed a criminal or civil violation of laws pertaining to fraud, conflict of interest, bribery, gratuity, or similar misconduct involving those funds.

n.) Conflicting Requirements

Where ARRA requirements conflict with existing state requirements, ARRA requirements control.

o.) Job Opportunity Posting Requirements

Offeror shall post notice of job opportunities created in connection with activities funded in whole or in part with ARRA funds in the Connecting Colorado Job Site, http://www.connectingcolorado.com/.

p.) Compliance with National Environmental Policy Act

In accordance with ARRA § 1609, the state agencies, Offerors/grantees and sub-Offerors/sub-grantees must comply with any applicable environmental impact requirements of the National Environmental Policy Act of 1970, (NEPA).

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Section 2: Background and Overview

2.1 INTRODUCTION

Project Introduction

The Governor's Office of Information Technology expects to be awarded a Broadband Data and Development grant from the National Telecommunications and Information Administration (NTIA) pursuant to the NTIA notice of funds availability (NOFA, RIM 0660-ZA29). The purpose of this grant program is to fund "projects that collect comprehensive and accurate state-level broadband mapping data, develop state-level broadband maps, aid in the development and maintenance of a national broadband map, and fund statewide initiatives directed at broadband planning." The notice requires several specific sets of information to be delivered to the NTIA by February 2010. This request for proposals invites proposals from potential Offerors to produce and deliver the necessary data sets to the NTIA and the State of Colorado.

This project will be managed by the Governor's Office of Information Technology (OIT) with assistance from the Colorado Public Utilities Commission (COPUC). The state's project team will consist of members of OIT and COPUC. The Offerors will be required to assign a project manager to be the primary point of contact with the State project team.

The purpose of the RFP is to solicit proposals for Broadband Data Collection and Mapping Services that are contingent on OIT receiving a grant funds from American Reinvestment and Recovery Act (ARRA). This RFP and resulting contract will incorporate all required ARRA terms and conditions.

2.2 BACKGROUND

Although this RFP is motivated by the federal grant program, a broadband development program beginning with comprehensive mapping of broadband service availability has been a high priority for the State of Colorado beginning with Governor Ritter's Colorado Promise. The Governor instituted the Governor's Innovation Council, which includes a Broadband Working Group to encourage expansion and adoption of broadband technologies. The Innovation Council's Broadband Working Group will periodically review this broadband mapping project and provide feedback on the methods and progress.

In 2008, the state legislature passed a bill mandating mapping of broadband availability across the state and investigating barriers to deployment and adoption of broadband technologies. This mapping project is in the final stages and will be complete by November 2, 2009.

The deliverables from the current contract that are particularly relevant to the NTIA funded project include:

1. Geographic data set in vector format of broadband coverage in the state. The coverage will be aligned with US Census block boundaries and will contain information on speed tiers and broadband service technology platforms, including wireless and wireline, for each census block.
2. Analysis of the population not served by broadband.
3. Set of maps in digital and hard copy format depicting broadband service areas and population density in areas not served by broadband.

The deliverables from this project do not satisfy the requirements of the broadband data and development grant from the NTIA. The purpose of the project for which Colorado is requesting proposals is to meet the NTIA requirements. To the extent possible, the current work should be leveraged either to expedite the delivery of the products for the NTIA or to help validate the data gathered through the proposed work

This RFP is posted in anticipation of sufficient grant funds being awarded from the NTIA. The project will only proceed if Colorado is awarded these funds. This project is a two year project, which may be extended depending on review by the NTIA at the end of two years for an additional three one year options.

The following specific deliverables will be provided by the Offeror. In addition, the Offeror will provide bi-weekly status reports to the state's project manager and be available for monthly status meetings via phone or in person with the state's project team. The Offeror will also meet in person with the state team at the start of the project, as well as half way through the first year, at the end of the first year and half way through the second year of the project. These meetings may also include presentations to the Innovation Council.

2.3 GLOSSARY

ARRA: The American Recovery and Reinvestment Act of 2009 (Public Law 111-5, enacted February 17, 2009), which is the federal stimulus package.

Awarded Offeror: "Awarded Offeror" means the Offeror whose proposal the State determines to be most advantageous considering the factors set forth in this RFP.

BIDS: The State of Colorado's Bid Information and Distribution System Web site, located at: https://www.gssa.state.co.us/VenSols. All solicitations published by State agencies and institutions are published on BIDS. All bidders or Offerors wishing to respond to a solicitation (including this RFP) must be registered with BIDS.

Offeror: The Offeror that is awarded a contract as a result of this RFP. Same as selected Offeror," and successful Offeror.

C.R.S.: Colorado Revised Statutes.

Offeror: Any organization or individual submitting a proposal in response to an RFP. Sometimes used interchangeably with the term "Bidder vendor or Offeror."

NITA: National Telecommunications and Information Administration

NOFA: Notice of funds availability

Proposal: An offer in response to a Request for Proposals (RFP). Sometimes used interchangeably with the terms "bid," "offer," or "response."

Request for Proposals (RFP): A procurement solicitation that seeks offers from organizations or individuals to perform the scope of work defined in the RFP, in accordance with the terms listed in the RFP. An RFP is issued with the intent of selecting the most advantageous proposal, making an award to that Offeror, and entering into a contract.

Selected Offeror: The Offeror that is awarded the contract that results from an RFP.

Solicitation: A document issued by a prospective buyer that requests competitive offers from organizations or individuals to sell the goods or services that are specified in the document. A solicitation typically results in an award of a contract or purchase order for the goods or services, based on an award methodology defined in the solicitation. Types of solicitations issued by State of Colorado agencies include: Requests for Proposals (RFPs),

Successful Offeror: Same as "selected Offeror."

Timeline: A document that details dates and targets for achieving program goals or requirements.

Vendor: Any organization or individual that seeks to provide, or is already providing, goods or services. Often synonymous with "selected, successful, or awarded Offeror".

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Section 3: Proposal Requirements

The broadband data and development grant requires four separate deliveries of data:

1. Broadband service information
   a. Census block based information on the service provided and broadband providers servicing each census block. In blocks larger than two square miles in area, the State must provide a list of address ranges and street segments within the block and the service and broadband providers appropriate for these addresses. The data required by the NTIA are lists rather than spatial data files, but the Offeror should derive them from spatial data and provide the spatial data to the State.
   b. For non-facility based service (wireless), the NTIA requires delineation of the areas served by each wireless broadband provider and the spectrum used in these areas. These data are to be delivered in shape files.
2. Weighted average user speed
3. "Middle mile" Interconnection locations
4. Locations of and service provided to "community anchor facilities"

In addition, the NTIA and the State expects these data to match specified levels of accuracy and be validated to a given level of statistical significance.

Offerors should be aware that the State must comply with the NTIA's definition of what constitutes confidential data, or conversely what data is not confidential, and treat any data used in this project accordingly. However, the State will be given all data collected and developed through this project. All data collected will be owned by the State of Colorado, unless it is purchased from a third party, in which case a license for use and distribution to other state agencies will be transferred to OIT. If a particular data set from a broadband provider cannot be delivered to the state, the Offeror will use an alternative method to derive or infer the data. The State will enter into necessary nondisclosure agreements with broadband providers and the Offeror to protect broadband providers' sensitive data. The State of Colorado has several rules and sections within statute that allow the State to protect confidential information.

For each of the sections below, proposals will be evaluated on their description of the methods and processes they will employ to gather the necessary data. Proposals simply stating that the Offeror will collect the required data and deliver it to the State will not be considered sufficient. In addition, proposals should identify risks and mitigation strategies for each section.

Time Frame and Completion Dates

The deadlines established by the NTIA are extremely aggressive. According to the NOFA, substantially complete data must be provided to the NTIA by February 1, 2010 and a complete data set is required by March 1, 2010. Colorado has expressed to the NTIA in its grant application that it will be extremely difficult to meet those deadlines. However, Colorado has stated that in absence of a complete data set, the State would provide a metric of the level of completeness of the data being provided at each milestone.

Consequently, in addition to the broadband availability information, the selected Offeror will establish a tracking mechanism to report to the state relative progress in collecting broadband information across the state. This mechanism should allow the state to express to the NTIA the percentage of completion of the data collection effort in terms of number of broadband providers, households or community anchor institutions reported in the provided data set. Specifically, the statement of completeness should relate to the definition of substantially complete defined in the NOFA.

3.1 MANDATORY MINIMUM REQUIREMENTS

Offerors must comply with the following mandatory requirements in order to be considered responsive to this RFP and to be eligible to be awarded a contract. These items are reviewed as a pass or fail during evaluation of proposals:

Mandatory Item 1. Signed Request for Proposals (RFP) Signature Page. The Request for Proposals (RFP) Signature Page MUST be signed by the Offeror or an officer of the Offeror legally authorized to bind the Offeror to the proposal.

Mandatory Item 2. Legal Review of Model Contract: Many of the terms and conditions in the model contract are required by statute; this is especially true for the Special Provisions. Therefore, your entities written acceptance or exceptions to the terms and conditions of the Model Contract, signed by your general counsel or attorney, must be included as part of your valid response to this RFP. The reason for requiring this is to facilitate contract execution as this project has tight timelines. Please use the attached Appendix C for your response. Return this appendix with your proposal. Failure to provide this information could result in disqualification of your proposal.

Mandatory Item 3: Data Ownership: The State is requiring that the data and deliverables listed in this RFP be Work Product and shall be the exclusive property of the State, and Offeror shall deliver all such Work Product to the State upon completion.

The following sections provide the Offeror with a general overview of the requirements contained within this RFP. Additional requirement information is contained in the attached appendices.

3.2 TECHNICAL

3.2.1

Requirement **Objective 1a and 1b – Broadband service availability data**

For this objective, the selected Offeror will develop the broadband availability data required by the NTIA that will meet the technical specifications of the Broadband Data Development Grant as outlined in the grant notice of funds availability (NOFA), as clarified on August 7, 2009 (published in the Federal Register on August 12, 2009).

This broadband data includes the facility based and non-facility based services. The facility based broadband availability will be delivered based on census block geography, and the non facility based services will be delivered as delineations of wireless availability.

Objective 1a – Facility based broadband availability

According to the NOFA, the availability of this type of broadband service will be delivered to the NTIA based on census block geography in two ways. For census blocks two square miles in area or smaller, the NTIA requires a list of blocks with information about broadband service in the block. One text file containing such a list will be delivered for each broadband provider. For blocks greater than two square miles in area, NTIA requires a list of street segments and address ranges receiving service within census blocks. Again, one file containing such a list is required for each broadband provider, and the list must also include information about the broadband service available for each street segment and address range. For the specific information required about broadband service, Offerors should consult the description of the grant program in the federal register. (docket no. 0908061222–91222–02, http://frwebgate5.access.gpo.gov/cgi-bin/PDFgate.cgi?WAISdocID=58946320626+3+2+0&WAISaction=retrieve)

In addition to the list files required by the NTIA, the state is requiring a spatial data set of census blocks with the appropriate attributes in addition to those required by the NTIA. The proposals should describe how the Offeror will acquire and manage any of the three following data scenarios described below:

1. Obtain data of specific addresses served from the broadband providers;
2. Obtain delineations of service areas from the providers; and
3. Where no information is available from broadband providers, service areas must be modeled or inferred.

After census blocks with broadband service are identified for each broadband provider, the Offeror will derive the list of street segments and address ranges that receive broadband service in the census blocks larger than two square miles in area. The Offerors may use address lists if provided under scenario 1 above or other address data. In either case, the address data must be provided to the state, and the Offeror must describe the method for identifying served addresses. In addition, the Offeror will describe how anomalous addresses will be handled (e.g., if addresses do not follow the standard street segment address range model).

Proposals should describe the resources, costs and procedures for each of the contingencies above. Specifically, the proposals should describe the potential of acquiring the data, obstacles that must be overcome, likely access restrictions and the method of transforming the data into the census block based data set required by the NTIA including the data underlying this process. The most current TIGER file from the US Census Bureau should be used for Census block geography.

It is assumed that addresses will be geocoded with and derived from one or several geographic address files. Colorado does not have a statewide address file. For the purposes of the first deliverable to the NTIA, the latest TIGER file may be used for this purpose. However, it is the desire of the state to improve the resolution and accuracy of the data used and the data products derived through this project over time. This aspect of the project is described under Objective 2.

Deliverables for Objective 1a:

1. Tab delimited text file for each broadband provider listing census blocks and broadband service information for blocks less than 2 square miles in area.
2. Tab delimited text file for each broadband provider listing street segments (street names) and address ranges and broadband service information for each address range for blocks greater than 2 square miles in area.
3. Geographic data set of census blocks with attributes representing broadband service information for blocks less than 2 square miles in area.
4. Geographic data set of street segments in blocks greater than 2 square miles in area receiving broadband service with attributes representing broadband service information and address information.
5. Geographic or non-geographic data sets of data from broadband providers used to identify census blocks with broadband service.
6. Geographic data set of address information used to geocode addresses from broadband providers and determine address ranges in large census blocks.
7. All geographic data shall be delivered to the state in file geodatabase format in a UTM projection, zone 13, using North American Datum of 1983 (NAD83). The data will be delivered with FGDC-compliant metadata that clearly describes: the processing steps to create the data, coordinate system, currentness of the data, field names, types and domains and what the fields represent, and uncertainty in the data. Geographic data should use a data model provided by the state based on a common accepted data model developed with the National States Geographic Information Council (NSGIC). This data model may be found at www.nsgic.org.
8. Individual data files should follow naming conventions established by the NTIA. The conventions will be provided following the award of the contract.

Q1a. State how your company will meet this objective.

Objective 1b – Non-facility based service

For non-facility based (wireless) broadband providers, the NTIA requires delivery of shape files depicting coverage for each broadband provider. The State foresees two possible scenarios for developing this coverage data: 1) wireless broadband providers maintain and provide delineations of coverage areas; 2) wireless providers do not have coverage areas delineated and provide necessary information to run model wireless availability. . In the second scenario, the Offeror will use propagation models reflecting the state of the practice to delineate the service area and provide a vector spatial data set with the appropriate attributes to the state

The Offeror will then transfer the spatial data set with the appropriate attribute information required by the NTIA to the state. The Offerors should consult the broadband data and development grant data requirements in the federal register referenced above.

Deliverables Objective 1b:

1. A vector geographic data set for each non-facility based broadband provider representing the area of service for each provider and the broadband service information for each area.
2. Geographic data shall be delivered to the state in file geodatabase format in a UTM projection, zone 13, using North American Datum of 1983 (NAD83). The data will be delivered with FGDC-compliant metadata that clearly describes: the processing steps to create the data, coordinate system, currentness of the data, field names, types and domains and what the fields represent, and uncertainty in the data. Geographic data should use a data model provided by the state based on a common accepted model developed with NSGIC.

Q1b. State how your company meet this objective.

3.3.2 Objective 2 – Address Data

As accurate address data is critical for the data deliverables of this project, the State will be improving address data in priority areas. There will not be enough funding to develop accurate address information over the entire state or even over all of the rural portions of the state as defined by the NTIA for broadband purposes. Prioritizing the areas in which to focus address data collection is a pivotal step. Address data collection will proceed in areas defined as rural for broadband development and as published in the Federal Register in the Broadband Technologies Opportunity Program and the Broadband data and Development Grant Program. The specific definition of rural areas is, "any area, as confirmed by the latest decennial census of the Bureau of the Census, which is not located within: 1. A city, town, or incorporated area that has a population of greater than 20,000 inhabitants; or 2. an urbanized area contiguous and adjacent to a city or town that has a population of greater than 50,000 inhabitants. For purposes of the definition of rural area, an urbanized area is, " a densely populated territory as defined in the latest decennial census of the U.S. Census Bureau". The rural and remote areas for Colorado are shown in Appendix A.

Further prioritization of address collection should be based on a variety of components including: availability of broadband data, recent and anticipated population growth, population density, potential for changes in broadband availability, availability of data useful for creating address information, and status and accuracy of address information from local or third party sources. Areas defined as rural and with expected higher probability for changes in broadband service will receive higher priority for address data collection. The potential for broadband changes will be identified by BTOP and BIP grant applications as well as conversations with broadband providers. Last, areas with digital data available to use as a foundation for address data (e.g., local parcel data) will be addressed first. In addition to these factors, OIT will work with other state agencies that have an interest in address information to leverage their efforts. Offerors must describe the information for and approach to identifying priority areas in their proposal, understanding that it may change somewhat after consultation with the state.

The Offeror will develop address point or address range information in the priority areas identified. The choice of address ranges versus points should be based on the state of addresses in these areas and existing information on which to base the address data development. Building address information can be based on a variety of sources including starting with a third-party address file, local parcel or assessor data, address files from local or state sources, state or local aerial photography and others. The State intends to purchase a third party address data set to support this process. Offerors should clearly describe

their process for combining these sources to create address points or address range data and plans for alternative methods should the desired sources not be available.

Deliverables for Objective 2:

1. Point address data for selected areas of the state or address range data for selected areas of the state delivered as a geographic data set of points or streets with address range information respectively.
2. Geographic data shall be delivered to the state in file geodatabase format in a UTM projection, zone 13, using North American Datum of 1983 (NAD83). The data will be delivered with FGDC-compliant metadata that clearly describes: the processing steps to create the data, coordinate system, currentness of the data, field names, types and domains and what the fields represent, and uncertainty in the data. Address data should use an addressing standard decided on in consultation with OIT.
3. Individual data files should follow naming conventions established by the NTIA. The conventions will be provided following the award of the contract.

Q1. State your company's general approach to identifying priority areas.

Q2. State your process for combining multiple data sources to create address points or address range data.

Q3. State alternative methods for gathering data if desired sources are not available.

Q4. State how you will meet this objective.

3.3.3 Objective 3 – Middle Mile Infrastructure Points

The NTIA requires delivery of middle mile interconnection points. These points must be delivered as a text file with x,y coordinates and other information indicated in it. The Offeror will collect these locations from the broadband providers or other available data. Offerors should identify potential sources for this information and their preferred source. Proposals should also describe potential obstacles to collecting the data, access restrictions and methods for mitigating these obstacles. All data collected to identify these points as well as the interconnection information itself will be delivered to the State and become the property of the State. In addition to the text files, the State is requiring delivery of a geographic data set containing these middle mile interconnection points.

Responses should describe the processes that will be pursued to collect this data, potential obstacles to the data collection including restrictions to proprietary data, and procedures to overcome these obstacles. Offerors should also describe any non-disclosure agreements that may be required to obtain such information.

Deliverables for Objective 3:

1. Tab delimited text file of interconnection points with appropriate attribute information required by the NTIA.
2. Geographic data set of points representing middle mile interconnection points with attributes required by the NTIA.
3. Geographic data set of representing information collected to derive or infer interconnection points.
4. Geographic data shall be delivered to the state in file geodatabase format in a UTM projection, zone 13, using North American Datum of 1983 (NAD83). The data will be delivered with FGDC-compliant metadata that clearly describes: the processing steps to create the data, coordinate system, currentness of the data, field names, types and domains and what the fields represent, and uncertainty in the data. Geographic data should use a data model provided by the state based on a common accepted model developed with the National States Geographic Information Council.
5. Individual data files should follow naming conventions established by the NTIA. The conventions will be provided following the award of the contract.

Q1. Identify potential sources for gathering middle mile interconnection points.

Q2. State your preferred source for this data.

Q3. Describe potential obstacles for collecting the data, access restrictions and methods for mitigating these obstacles.
Q4. State how you will meet this objective

3.3.4 Objective 4 – Average Weighted Speed

The NTIA requirement for average weighted speed appears to be a way of identifying actual speeds subscribed to over areas as compared to the maximum speeds offered by broadband providers. It essentially divides weighted speeds by the total number of broadband consumers. That is, the average weighted speed is the sum of the number of uses at a given speed tier multiplied by the speed of that tier over all of the FCC speed tiers. This sum is then divided by the total number of users. Mathematically, the average weighted speed is:

$$\frac{\sum_{i=1}^{n} \text{speed}_i \text{ (in kbps)} \times \#\text{subscribers}_i}{\textit{TotalAverageMonthlySubscribers}}$$

Where:

speed_i = maximum advertised download transmission rate in speed tier 1 through speed tier n

$\#\text{subscribers}_i$ = number subscribers at speed tier 1 through speed tier n

These average weighted speeds must be reported by metropolitan statistical area or rural statistical area for each broadband provider.

The key element in this formula is obtaining the number of users of each speed tier from each broadband provider. OIT suggests contacting the broadband providers directly for these aggregated figures or, if possible, aggregating individual address information. If that approach does not result in the necessary information, the Offeror is encouraged to pursue alternative means of collecting the information. This may include crowdsourced information or other data collected from web based or local input or inferential models based on approaches similar to geographic market analysis.

Responses must identify alternative approaches, their costs and obstacles to their completion. The description of how the necessary data will be collected will be part of the proposal evaluation process.

Deliverables Objective 4:

1. Tab delimited text file of average weighted speed.
2. Geographic data set of metropolitan statistical areas and rural statistical areas with average weighted speeds for each broadband providers.
3. Geographic data shall be delivered to the state in file geodatabase format in a UTM projection, zone 13, using North American Datum of 1983 (NAD83). The data will be delivered with FGDC-compliant metadata that clearly describes: the processing steps to create the data, coordinate system, currentness of the data, field names, types and domains and what the fields represent, and uncertainty in the data. Geographic data should use a data model provided by the state based on a common accepted model developed with the National States Geographic Information Council.
4. Individual data files should follow naming conventions established by the NTIA. The conventions will be provided following the award of the contract.

Q1. Describe how you will meet this requirement.

3.3.5 Objective 5 – Anchor institutions

The NTIA calls anchor institutions those facilities it considers important to have broadband access such as public safety facilities, health care facilities, schools, higher education institutions, etc. (see the NOFA for the exact list of these institutions). The Offeror will produce these data for the state to meet the NTIA requirements and deliver this data to the state.

The State has identified some of the Community Anchor Institutions and their locations in Colorado. Among the set of these institutions, the State has data sets with locations of:

- Public schools
- Public libraries
- Health care facilities

The state has already collected the broadband service at libraries as well. Colorado has incomplete data for:

- Police stations

- Fire stations
- Government buildings

Colorado has been pursuing completing these incomplete data sets through collaboration with local governments. For example, the state assisted a consortium of several counties in southern Colorado to obtain federal grant funding to complete data collection on the facilities for their area. Colorado will continue to work with local governments and other departments to collect this data. For example, law enforcement facilities are of critical interest to the Colorado Department of Public Safety and the CO Division of Emergency Management. The initial data set for these facilities came from the Department of Public Safety.

Offerors will work with locational data provided by the state Starting with the completed data sets, the Offeror will identify the type of broadband service and speed of service to each institution. If the data for a particular type of institution is not complete in time for the Offeror to begin collecting broadband information to the individual institutions, the Offeror will use a third party business location data set furnished by the state to identify the individual institutions for which broadband data should be collected. Responses should describe how the broadband service data will be collected from the institutions or their governing organizations (e.g., school districts for schools) or other sources.

Deliverables: Objective 5

1. Tab delimited text file for each type of community anchor institution with location and attribute data required by NTIA.
2. Geographic data set of anchor institutions with required attributes. Institutions may be combined into one file and distinguished by an attribute field in the database.
3. The state will deliver point data in a single geodatabase with the locations of the institutions and the attributes required by the NTIA. The data must be in a UTM projection, zone 13, using North American Datum of 1983 (NAD83). The data will be delivered with FGDC-compliant metadata that clearly describes: the processing steps to create the data, coordinate system, currentness of the data, field names, types and domains and what the fields represent, and uncertainty in the data
4. Individual data files should follow naming conventions established by the NTIA. The conventions will be provided following the award of the contract.

Q1. Describe how your company will meet this objective.

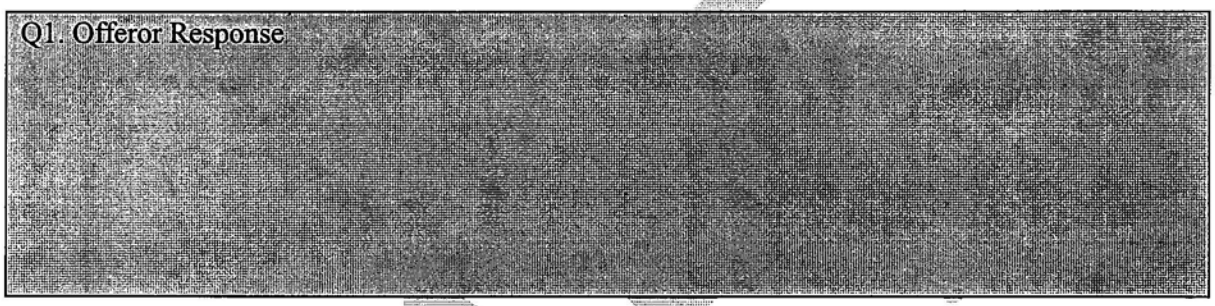
3.3 MANAGEMENT

3.3.1 Offeror's Business Entity Profile

Offeror must provide a business entity profile that includes:

Offeror business entity formation including the state in which the entity was formed and the date of such formation.. Please include the following information:

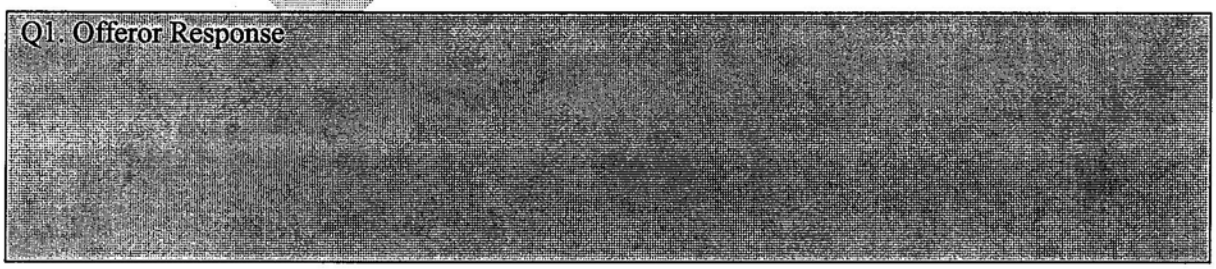
a. Location of the Offeror's offices.
b. Location of the office to service this account.
c. Number of employees both locally and nationally.
d. Location(s) from which employees will be assigned.
e. Offeror's business entity's background and history and why Offeror is qualified to provide the Services described in this RFP.
f. Length of time Offeror's business entity has been providing Services similar to those described in this RFP. A Responsive Offeror must have been providing similar Services to those described in this RFP..
g. Indicate how many years your company has been in business.



3.3.2 Offeror's Relevant Experience

Describe, up to three (3) projects of the size and scope described in this RFP in the last five (5) years as references. The State may contact each reference.
For each engagement, include the following information:

a. Narrative description of the engagement
b. Size of the engagement, either in person hours, dollar cost, geographic scope.,
c. Number of staff assigned to the engagement
d. Duration of the engagement in months
e. Challenges encountered in the engagement, including an explanation of how those challenges were addressed.
f. List at least three (3) references with contact information. The State of Colorado reserves the right to use agencies of the State and other States as additional references.



3.3.3 Offeror's Services, Ability, Capacity and Expertise

Offeror must include a complete description of the full range of relevant services and expertise that Offeror offers, focusing on the requirements in the Statement of Work section of the sample Model Contract. Proposals must contain a discussion that describes the approach the Offeror will take in managing the provision of Services for Agency. This discussion should be sufficiently thorough to allow for evaluation of an Offeror's management abilities and capacity for provision of all anticipated services. Response to include the following information:

a. Indicate proposed personnel assignments listing experience and estimated time allocation to this project.
b. Indicate proposed project roles for personnel listed above
c. Describe your project management processes and methodologies.
d. List any other State's projects that are similar to this one that is currently ongoing.

Q2. Offeror Response

3.4 COST

3.4.1 Cost Proposal

The proposal must contain prices, presented as annual amounts for the prospective term of the contract for each project component. Offerors may provide fixed amount cost proposals, as requested in Appendix D.

Cost proposals should reflect the understanding that once a contractual arrangement is established between the State and the Offeror, the Offeror will be required to perform all tasks specified without charges above the contract price, and that no separate billing of additional costs will be allowed, unless the State and the Offeror agree that the additional costs were caused by unanticipated changes to the operation of the funds mandated by the State.

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Section 4: Offeror Response Format

4.1 PROPOSAL SUBMISSION

Proposals must be received on or before the BIDS Submission Deadline as indicated on BIDS. **Late proposals will not be accepted.** It is the responsibility of the Offeror to ensure that their proposal is received by the OIT Procurement Office, on or before the BID Submission Deadline. Offerors mailing their proposals shall allow sufficient mail delivery time to ensure receipt of their proposals by the time specified. All proposals must be submitted, "sealed"; i.e. package, envelope, box, etc.

Proposals must be submitted in a **sealed** package with an appropriate label affixed. The label must show the following information:

Offeror's Name
RFP-No.
Proposal Due Date and Time

Offerors must segregate the portion of the proposal responding to the Cost in Section 3.

The proposal must be signed in ink, preferable in blue ink, by an officer of the Offeror who is legally authorized to bind the Offeror to the proposal. Proposals that are determined to be at a variance with this requirement may not be accepted. A Request for Proposals (RFP) Signature Page has been provided.

The State desires and encourages that proposals be submitted on recycled paper, printed on both sides. While the appearance of proposals and professional presentation is important, the use of non-recyclable or non-recycled glossy paper is discouraged.

Proprietary/confidential information must be submitted in accordance with the Proprietary/Confidential Information section of this RFP. In addition, Offeror(s) shall provide all proprietary/confidential information, in their electronic response, on a separate CD/USB flash drive and shall be clearly marked as such.

4.2 REQUIRED COPIES

The original hard copy in all cases is the official record and shall be used to resolve any differences.

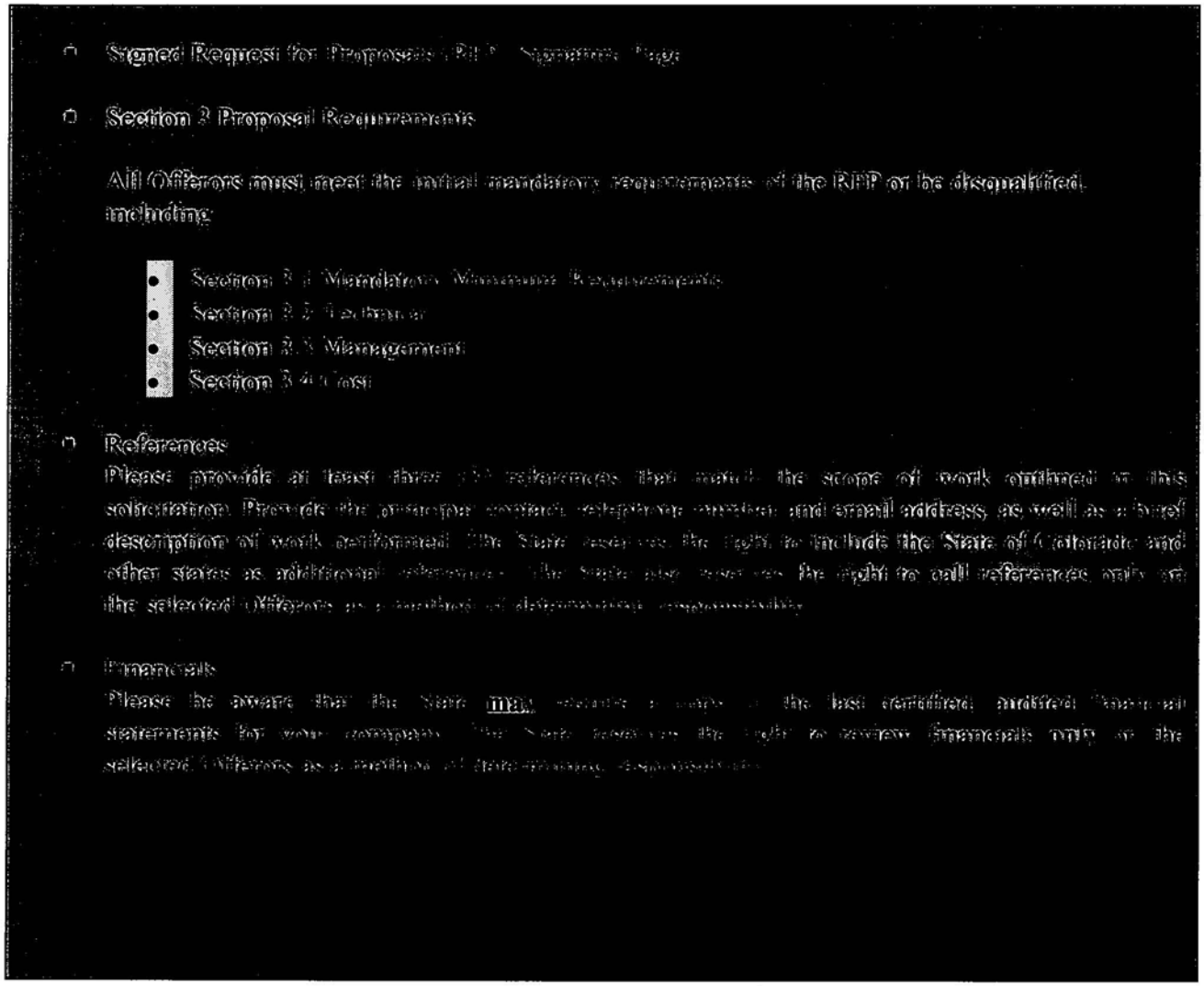
Offerors are required to submit one (1) original, one (1) electronic copy (preferably in Microsoft Word) and the required number of copies as stated on the Request for Proposals (RFP) Signature Page. Electronic copy shall be provided either on a CD or USB Flash Drive.

Proprietary/confidential information must be submitted on a separate CD/USB flash drive and be clearly marked as such.

4.3 ADDRESSING PROPOSAL REQUIREMENTS (OFFEROR RESPONSE)

The following information within this section shall outline specific information required in your response and assist in determining how well your agency will be able to meet the requirements set forth within the Proposal Requirements section of this RFP.

All Offerors, regardless of which option is being proposed, must respond to ALL portions of the following information and or related sections:



4.4 CONTENT QUALITY

Do not include a copy of the State's Request for Proposals, extensive artwork, unusual printing or binding, or other materials, which do not enhance the utility or clarity of the Offeror's proposal. Documents should be double sided on recycled paper, and easy to copy/scan (no bound material, clips,

etc). Paper should be white or extremely light paper and no dark backgrounds. Enhance electronic images for pages with a poor image quality.

4.5 PROPOSAL ORGANIZATION

The Offeror's proposal should be submitted in a binder (3 ring binder(s) preferred) with all material clearly labeled or, such other organization that will facilitate the committee members' evaluation. Offerors must respond to every item listed within this section and label his/her proposal with the corresponding number for each question or request for information. Responses should be limited to 40 pages or less.

4.6 CONFLICTS WITH TERMS, CONDITIONS, OR REQUIREMENTS

Offeror must review the attached model contract and list any exceptions or confirm that no exceptions are taken to the State's contract. Conflicts with stated requirements must be noted in the corresponding paragraphs within the Offeror's response format. Additional terms or conditions proposed by Offeror for consideration must be referenced within the corresponding paragraph or referenced here. References may direct reviewers to appendices within Offeror's response. See section 3.1 for Mandatory Requirement 2 regarding contract terms.

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Section 5: Proposal Evaluation

An Evaluation Committee will judge the merit of proposals received in accordance with the criteria outlined in Offeror Response Format section of this RFP.

This section supplements paragraph 3.8, "Evaluation and Award," in the Colorado Solicitation Instructions/Terms and Conditions that are available through the link on the BIDS solicitation page.

5.1 EVALUATION PROCESS

The State plans an intensive, thorough, complete and fair evaluation process. All Offerors shall be afforded fair and equal treatment throughout the evaluation process.

5.2 EVALUATION COMMITTEE

An Evaluation Committee will independently evaluate the merits of proposals received in accordance with the evaluation factors stated within this RFP followed by committee group discussion. The sole objective of the evaluation committee will be to recommend for award the proposal(s) determined most advantageous to the State's needs.

5.3 BASIS FOR AWARD

The purpose of this RFP is to solicit proposals for the goods/services specified herein. The requirements stated within this RFP represent the minimum performance requirements necessary for response as well as desired elements. All proposals must meet the minimum (mandatory) requirements established by this RFP to be eligible for award.

Evaluation and award will be based on the following factors in decreasing order of importance: Technical, Management, Cost Below are some of the factors that will be considered:

1. **Technical methods for collecting broadband data..**
2. **Technical methods for collecting address data.**
3. **Approach to handling and transmitting sensitive data.**
4. **Experience with telecommunications related mapping.**
5. **Experience with developing and managing local address and parcel spatial data.**
6. **Experience in implementing and managing large scale geographic databases.**
7. **Cost is reasonable and within budget.**

5.4 EVALUATION BASED ON INITIAL PROPOSALS

The State reserves the right to make an award(s) on receipt of initial proposals, so Offerors are encouraged to submit their most favorable proposal at the time established for receipt of proposals.

Proposals requiring major revision in order to be considered for any award, or otherwise not meeting the mandatory or other requirements required for further consideration as specified in the RFP, may be classified as unacceptable and ineligible for further consideration.

The technical aspects of the proposals will be assessed based on the soundness of the Offeror's approach and the Offeror's understanding of the requirement. The past experience/qualifications will be assessed by considering the extent to which the qualifications, experience, and past performance are likely to foster successful, on-time performance. Technical and past experience assessments may include a judgment concerning the potential risk of unsuccessful or untimely performance, and the anticipated amount of State involvement necessary to insure timely, successful performance.

5.5 COMPETITIVE RANGE

The State may establish a competitive range of those Offerors whose proposals have been initially evaluated as most responsive to the requirements and reasonably qualified to be selected for award.

5.6 CLARIFICATIONS/DISCUSSIONS

The State may conduct discussions with Offerors for the purpose of promoting understanding of the State's requirements and the Offeror's proposal, to clarify requirements, and to make adjustments in services to be performed and in prices and or rates. Those Offerors may be sent a list of questions to which they will then be given a specified number of days in which to formulate and submit written responses to the questions and to provide any related revisions to their initial proposal. The nature of the questions will be, generally, clarifying in nature and will permit related revisions to proposals. Such revisions will be at the option of the Offerors but will be limited to the guidelines defined by the State's requested clarifications. No major changes will be permitted nor will the State accept any additional written materials not relevant to the questions/clarifications requested. Clarifications/Discussions may be limited to Offerors within the Competitive Range as defined in the Competitive Range section of this RFP.

5.7 PRESENTATIONS/DEMONSTRATIONS

Offerors may be provided an opportunity to provide an oral presentation or demonstration. The State reserves the right to select the site. During the presentation, Offerors should provide specific responses to the questions posed to them and may also make a summary presentation of their offer. The presentation should include a description of how their revisions, if any, may have affected the over-all nature of their offer as compared to the initial proposal. The presentation is typically limited to 60 minutes. If the Evaluation Committee members believe it to be necessary, a question/answer period may follow. Presentations/Demonstrations may be limited to Offerors within the Competitive Range as defined in the Competitive Range section of this RFP.

5.8 ON-SITE INSPECTION

Offerors may be required to provide, at the Offeror(s)'s expense, an on-site visit at the prospective site where the work will be performed. The State will provide a list of reasonable and necessary expenses for these visits, which will be paid in advance by Offeror(s). The on-site evaluation members will arrive at the Offeror's office at the date and time mutually agreed to between the State and the Offerors providing the on-site inspection within 14 days of notice. If the on-site inspection is conducted by the State, these inspections will be evaluated as pass/fail. The State reserves the right to allow the Offerors to provide another site if the first site proposed fails the on-site inspection. On-site Inspection may be limited to Offerors within the Competitive Range as defined in the Competitive Range section of this RFP.

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5.9 BEST AND FINAL OFFERS (BAFO)

Adjustments may also be allowed in conjunction with clarifications, discussions, presentations and or demonstrations but only to the extent such revisions are consistent within the proposal requirements. These revisions will be considered as best and final offers. Such adjustments must be made in writing.

5.10 FINAL EVALUATIONS

After completion of clarifications, presentations, and BAFOs as required, the Evaluation Committee will then re-consider the initial proposal ratings and may make adjustments they believe to be warranted as a result of the additional information obtained.

5.11 AWARD RECOMMENDATION

Upon completion of the evaluation process, the committee will formulate a recommendation derived from evaluation findings on which proposal(s) is/are determined to be most advantageous, while within available resources, to the State. A formal recommendation of the committee will be forwarded to the Governor's Office of Information Technology (OIT), Purchasing Agent for review and approval.

5.12 NOTICE OF INTENT TO AWARD

Upon approval of the recommendation, a Notice of Intent to Award will be published on the BIDS system. Upon issuance of the notice, all non-proprietary/confidential documents submitted by all Offerors, not just the awarded Offeror(s) shall become public record and will be available for inspection. The time period for consideration of any protest of the award decision will commence at this time. The Awarded Offeror(s) will be contacted by the State to complete post award requirements.

5.13 ADEQUACY AND COMPLETENESS OF RESPONSE

In general, all aspects of the RFP will be evaluated based on the Offeror's adequacy and completeness of the proposal with regard to the information specified in the RFP; i.e., compliance with terms, conditions and other provisions contained in the RFP, as well as Offeror's ability to read and follow instructions. Failure of the Offerors to provide the information required in this RFP may result in disqualification of the proposal. This responsibility belongs to the Offerors.

5.14 CONTRACT REVIEW

Offerors must review the attached model contract and list any exceptions or confirm that no exceptions are taken to the State's contract.(Appendix C) The State will review the proposal to ensure the Offeror has not taken any exceptions to the State's contract provisions which may be deemed unacceptable, particularly the State of Colorado Special Provisions, attached to the draft contract or exceptions to stated requirements which may be deemed unacceptable in meeting the needs of the State. Any exceptions taken could result in elimination of the Offeror's proposal from further consideration, or result in delay or failure to execute a contract, whereby the State could terminate the award and commence negotiations with another Offeror. The State may consider contract exceptions as a component of evaluation.

5.15 REGISTRATION TO DO BUSINESS IN COLORADO

After award and before Contract execution the successful Offeror must be registered to do business in the State of Colorado. This registration is maintained through the Colorado Secretary of State Office. (http://www.sos.state.co.us/) If Offeror is a foreign corporation (formed under a statute or common law in a jurisdiction other than Colorado) or other foreign entity transacting business in the State of Colorado, shall warrant that it currently has obtained and shall maintain any applicable certificate of authority to transact business in the State of Colorado and has designated a registered agent in Colorado to accept service of process

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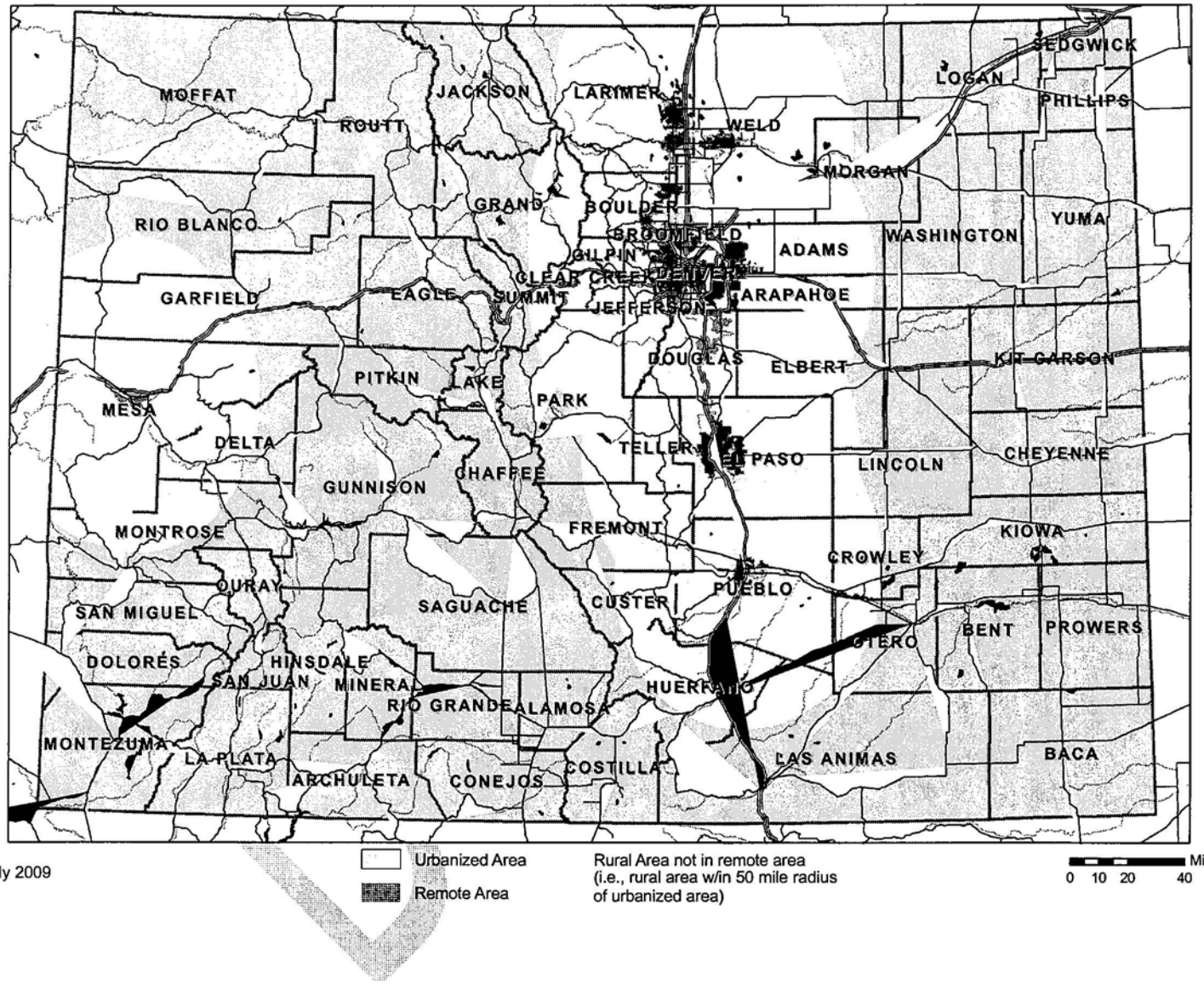
Appendix A

OIT

"Rural" and "Remote" Areas
(based on definitions in the BIP and BTOP Notice of Funds Availability)



July 2009

STATE OF COLORADO

OFFICE OF THE GOVERNOR
136 State Capitol Building
Denver, Colorado 80203
(303) 866 - 2471
(303) 866 - 2003 fax

Bill Ritter, Jr.
Governor

August 10, 2009

Ms. Anna Gomez
Deputy Assistant Secretary
U.S. Department of Commerce
National Telecommunications and Information Administration
Herbert C. Hoover Building (HCHB)
1401 Constitution Avenue, N.W.
Washington, D.C. 20230

Dear Secretary Gomez:

The Colorado Governor's Office of Information Technology, a agency of the state charged with advising the Governor of Colorado on matters concerning broadband accessibility, adoption, and deployment, shall among other things, serve as Colorado's designated eligible entity under the State Broadband Data and Development Grant Program pursuant to P.L. 110-385, the Broadband Data Improvement Act (Section 106, subsection (i)(2)(B)).

Sincerely,

Bill Ritter, Jr.
Governor

FORM **CD-511**
(REV 1-05)

U.S. DEPARTMENT OF COMMERCE

CERTIFICATION REGARDING LOBBYING

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

LOBBYING

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

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, 'Disclosure Form to Report Lobbying.' in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

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

Statement for Loan Guarantees and Loan Insurance

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

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

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

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

* NAME OF APPLICANT	Governor's Office of Information Technology
* AWARD NUMBER	0660-ZA29
* PROJECT NAME	CO Broadband Data & Development Program
Prefix:	Mrs.
* First Name:	Dara
Middle Name:	Vaill
* Last Name:	Hessee
Suffix:	
* Title:	Chief of Staff
* SIGNATURE:	Dara Hessee
* DATE:	09/01/2009

DISCLOSURE OF LOBBYING ACTIVITIES

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

Approved by OMB
0348-0046

1. * Type of Federal Action:
- [ ] a. contract
- [x] b. grant
- [ ] c. cooperative agreement
- [ ] d. loan
- [ ] e. loan guarantee
- [ ] f. loan insurance

2. * Status of Federal Action:
- [ ] a. bid/offer/application
- [x] b. initial award
- [ ] c. post-award

3. * Report Type:
- [x] a. initial filing
- [ ] b. material change

4. Name and Address of Reporting Entity:

[x] Prime [ ] SubAwardee

*Name: Office of Information Technology

*Street 1: 601 E. 18th Ave., Suite 250 Street 2:

*City: Denver State: CO: Colorado Zip: 80203

Congressional District, if known: CO-001

5. If Reporting Entity in No.4 is Subawardee, Enter Name and Address of Prime:

6. * Federal Department/Agency:
Department of Commerce

7. * Federal Program Name/Description:

CFDA Number, *if applicable:*

8. Federal Action Number, *if known:*

9. Award Amount, *if known:*
$

10. a. Name and Address of Lobbying Registrant:

Prefix * First Name: NA Middle Name

* Last Name: NA Suffix

* Street 1 Street 2

* City State Zip

b. Individual Performing Services (including address if different from No. 10a)

Prefix * First Name: NA Middle Name

* Last Name: NA Suffix

* Street 1 Street 2

* City State Zip

11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when the transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

*** Signature:** Dara Hessee

***Name:** Prefix * First Name: NA Middle Name

* Last Name: NA Suffix

Title: **Telephone No.:** **Date:** 09/01/2009

Authorized for Local Reproduction
Standard Form - LLL (Rev. 7-97)

OMB Approval No.: 4040-0007
Expiration Date: 07/30/2010

ASSURANCES - NON-CONSTRUCTION PROGRAMS

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0040), Washington, DC 20503.

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

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

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

1. Has the legal authority to apply for Federal assistance and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project cost) to ensure proper planning, management and completion of the project described in this application.

2. Will give the awarding agency, the Comptroller General of the United States and, if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the award; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.

3. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.

4. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.

5. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4728-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM's Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).

6. Will comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C.§§1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U. S.C. §§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§290 dd-3 and 290 ee- 3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. §§3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and, (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.

7. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal or federally-assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.

8. Will comply, as applicable, with provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.

9. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§276a to 276a-7), the Copeland Act (40 U.S.C. §276c and 18 U.S.C. §874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§327-333), regarding labor standards for federally-assisted construction subagreements.

10. Will comply, if applicable, with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is $10,000 or more.

11. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of Federal actions to State (Clean Air) Implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §§7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended (P.L. 93-523); and, (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-205).

12. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.

13. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. §470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. §§469a-1 et seq.).

14. Will comply with P.L. 93-348 regarding the protection of human subjects involved in research, development, and related activities supported by this award of assistance.

15. Will comply with the Laboratory Animal Welfare Act of 1966 (P.L. 89-544, as amended, 7 U.S.C. §§2131 et seq.) pertaining to the care, handling, and treatment of warm blooded animals held for research, teaching, or other activities supported by this award of assistance.

16. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. §§4801 et seq.) which prohibits the use of lead-based paint in construction or rehabilitation of residence structures.

17. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133, "Audits of States, Local Governments, and Non-Profit Organizations."

18. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations, and policies governing this program.

* SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL	* TITLE
Dara Hessee	Chief of Staff
* APPLICANT ORGANIZATION	* DATE SUBMITTED
Governor's Office of Information Technology	09/01/2009

Standard Form 424B (Rev. 7-97) Back