POWELL COUNTY
NG 9-1-1 DATA PREPARATION

MONTANA LAND INFORMATION GRANT APPLICATION

STATE FISCAL YEAR 2018

SECTION 1 – APPLICANT, PARTNER, AND PROPOSAL INFORMATION

Primary Applicant:	
Name of principle individual:	Ricki Ann Bauer
Name of agency/entity:	Powell County
Street:	409 Missouri Ave.
City:	Deer Lodge
County:	Powell
State:	Montana
Zip Code:	59722
Contact email address:	rbauer@powellcountymt.gov
Contact fax address:	406-846-2784
Contact phone:	406-846-9711
Department:	Powell County GIS
Division:	GIS Department

Funding Partners:	
(required for each partner, copy box as needed)	
Name of contact:	Sheriff Howard
Name of Agency:	Powell County Sheriff
Street:	409 Missouri Ave
City:	Deer Lodge
County:	Powell
State:	MT
Zip Code:	59722
Contact email address:	scotth@pcsomt.org
Contact phone:	406-846-2742

Funding Partners:	
(required for each partner, copy box as needed)	
Name of contact:	Ken Wall
Name of Agency:	Geodata Services, Inc.
Street:	P.O. Box 8081
City:	Missoula
County:	Missoula
State:	Montana
Zip Code:	59807
Contact email address:	kwall@geodataservicesinc.com
Contact phone:	(406) 203-4684

Proposal Information	
Date Submitted:	February 14, 2017
Date Received by State:	

Short Title of Proposal: **Preparing Powell County Required Data Layers for Next Gen 9-1-1**

Executive Summary:

Powell County has a basic set of GIS layers for road center lines with address ranges, structures, and administrative boundaries, but they are not ready for Next Generation 9-1-1. Unlike our previous preparation for Enhanced 911, Geographic Information Systems (GIS) is a critical part of the data preparation for our Next Generation 9-1-1 (NG 9-1-1).
Geospatial data related to NG 9-1-1 will need to conform to the National Emergency Number Association's (NENA) standards. As part of this project, Powell County's GIS data will be migrated to a standardized database schema based on NENA standards and Esri's Local Government Information Model (LGIM). This will provide an important base upon which to implement and enable the development of consistent update procedures related to NG 9-1-1 data. Once standardized, this data will be shared via ArcGIS Online (AGOL) allowing other county departments to easily access accurate and current geospatial information on multiple platforms including testing mobile devices located in emergency response vehicles. When the draft NENA data model is released in final form, we will work with our consultant to develop a script and workflow to update remaining NENA attributes and facilitate conversion of the LGIM to a NENA compliant dataset.

List All Past Awarded MLIA Grants:
Powell County Road Inventory Road assets Grant MLIA_2015_045
Powell County Enhancement of Geodetic Control in Powell County 2017

B. **Land Records (MSDI)**

<u>Next Generation 9-1-1 Data Standardization</u>: Data partners should receive funding support and outreach that enables them to assess, improve and maintain required Next Generation 9-1-1 data, including road centerlines, address points and jurisdictional boundaries, according to the NENA standards.

The project directly relates to FY 2018 Land Plan Priority 1.A. Next Generation 9-1-1 Data Standardization in the FY 2017-2018 Land Plan.

Geographic Information Systems (GIS) is a critical part of the NG 9-1-1. Accurate and standardized geospatial data will be a core requirement of the solution, and keeping those data up to date in an efficient manner. Developing and maintaining the ability to convert our required local government data to a final NENA standard data format will be essential in a successful implementation of NG 9-1-1 in our Public Safety Answering Points (PSAP). Our geospatial data related to NG 9-1-1 will need to conform to those standards.

The geodatabase in Powell County for the required NG 9-1-1 data layers is partially ready through the efforts of previous GIS staff and consultants. It is not, however, currently complete or compliant with the Esri Local Government Data Model, nor the NENA NG 9-1-1 standards. This project will build the foundation for a solid GIS geodatabase structure, staff procedures and training following NG 9-1-1 best practices, and establish our GIS tool kit, workflows and procedures. It will allow our GIS staff to work efficiently on data modifications, analysis and quality control and quality assessment to prepare our data for NG 9-1-1.

Geodata Services, a funding partner, will provide training and consulting on tools and best practices and assist us to synchronize our GIS files against the tabular enhanced 911 data and land line records to develop, improve and maintain our Next Generation 9-1-1 data.

SECTION 3 – PUBLIC BENEFIT

NG 9-1-1 dependence on GIS is a major challenge for rural areas. ArcGIS Online (AGOL) provides tools to enhance sustainability. NG 9-1-1 provides the best opportunity in a generation to demonstrate the capability and value of GIS to community leaders with direct bearing on public safety. We maintain our own road centerline, structures and administrative boundaries. We contract our E911 synchronization of the two tabular databases that support Enhanced 911 to a consultant. These tabular databases have not been systematically synchronized with our local GIS layers in many years. This synchronization is critical to NG 9-1-1 and will have to remain synchronized in the future as local changes are made to the data. Syncing our administrative boundary lines will emergency responders are efficient and successful. This project is designed to help us accomplish that. We will maintain greater local control and increase our GIS program skills and tools, ultimately saving our tax payers dollars that go to consulting fees while allowing us to leverage the data for daily work on other projects serving our citizens.

We will work with Geodata to leverage Collector and Survey 123 apps to enabling county staff assist in maintaining NG 9-1-1 data. This suite of Esri tools, along with ArcGIS Pro provide an affordable solution for managing and maintaining GIS data.

Once we process our internal county data road center line files, structures, and administrative boundaries, with appropriate metadata, we will provide geodatabase updates to the MSDI data stewards and benefit the Montana MSDI infrastructure..

We will share our results with other rural local governments through MAGIP conferences and workshops and the meetings of the Montana Association of Counties (MACO) to benefit other rural local government GIS and DES staff in Montana.

SECTION 4 – SCOPE OF WORK

Goal 1: Improve the accuracy of required NG 9-1-1 GIS data layers

Objective A: Improve the spatial accuracy and field validate 1,000 addresses and structures in Deer Lodge, MT. Updates to the attribute information for these records will occur in near-real time via Collector for ArcGIS. Deer Lodge is the largest incorporated town in Powell County. By validating 1,000 address we will have covered one third of the population of Deer Lodge. With this grant the process can be developed and adopted to collect additional structures during the calendar year 2018 and in the future.

Task and activities

1. Purchase a Mesa 2 tablet from Frontier Precision with associated peripherals for field verification of addresses.
2. Work with Geodata Services, Inc. (Geodata) to develop a database schema to use with Collector for ArcGIS for updating and verifying the point address records in the field.
3. Develop a logistic plan to review and field verify 1,000 structures in Deer Lodge in August, 2017. We plan to run a 1 mile buffer around the County courthouse and select the 1000 structures for field verification.
4. Collect locations at front doors of each apparent residential structure entry.
5. Verify and document visible addresses.
6. Update master structure and address records in our county structures layer.
7. Validate structure type from parcel data and verify or modify the type using standard MSDI structure domain types.
8. Run a pilot project for sub addressing required by the NENA standard. We will assign sub addresses to the courthouse, city building, hospital, and elementary and secondary schools, and 3 apartment complexes that are all included in the 1,000 structures to be field verified.
9. Update existing structure photos.

Objective B: Conduct QA/QC on required NG 9-1-1 data layers.

Tasks and Activities:

1. Systematically review PLSS and parcel adjustments published by MSDI geodetic control and cadastral data stewards through the Catspaw program compared to our road centerline files (this was the result of or 2017 MLIA grant application). The proximity and alignment are important in our ability to make decisions on how to store and carry our authoritative administrative boundary data and NENA best practices and requirements for attributing data attributes in the road centerline file relating to administrative boundaries.
2. Acquire the latest Master Street Address Guide (MSAG). This is the tabular version of the road centerline segments developed for Enhanced 911 and updated by Zuercher for Powell County.
3. Acquire the Telephone Number (TN) extract for the latest Automatic Location Identification (ALI). This is the database used by each local telephone exchange company to store phone records for land lines.
4. Process MSAG and ALI database from Centurylink and West Safety Services and perform database and GIS functions to synchronize the MSAG and ALI with the road centerline,

structures, and administrative boundaries. Synchronizing the ALI database and the MSAG with our local government GIS data is critical in today's 9-1-1 environment for these tabular databases to systematically check whether changes in any of the data sets have had differences introduced over time. Zuercher processes our MSAG updates. We checked with them and they have not compared it to or synchronized it against the ALI or road centerlines. This step will include dozens of GIS processing steps and approximately 20 audit reports. The major categories of processing can be summarized as follows:

    a. Parsing, summarizing and internal data standardization, and tabular and spatial QA/QC within each data set.
    b. Geospatial and tabular comparison of the road centerline GIS file with the MSAG.
    c. Geocoding the addresses in the tabular ALI and geospatial comparison and QA/QC to the structures and structure addresses and road centerline address ranges.
    d. Parsing, summarizing and internal data standardization, and tabular and spatial QA/QC within each administrative boundary GIS layer and the ESN assignments in the MSAG and ALI.

We will be working with Geodata on these processing steps. They will provide GIS processing methods, models, scripts and standardized workflows related to the synchronization and associated audit reports. We plan to split the county road centerline file, structures and administrative boundaries into two halves, and split the processing labor.

5. Review digitizing direction in our road centerline layer against address ranges to review compliance with NENA best practices.
6. Create a queue of road centerline segments and addresses discrepancy corrections that are identified in the MSAG and ALI synchronization that will require field verification. The road centerline segments, and structures along them that are not coincident with administrative boundaries in this queue will not all be processed during this grant period. We anticipate this will take place over the next few years. During this grant the field validation will focus on the field verification for the 1,000 addresses in Deer Lodge, administrative boundaries, and procedures, scripts and workflows required to process the queue.
7. Identify and fix topological errors in our incorporated and unincorporated community boundaries, emergency service zones, and road centerlines.
8. Re-publish the official Powell County map book using data driven pages.
9. Submit updated structures, road centerlines and administrative boundaries to MSDI data stewards.
10. Provide corrected EMS boundaries to MSDI boundary layer steward with metadata. Although this is not an official MSDI boundary, it can be made available on the Montana State Library GIS data list.
11. Hold a conference call with Zuercher to discuss QA/QC results and discuss NENA standards and collaborate on future updates and MSAG batch updates of results.

Goal 2: Update Powell County's GIS data to be compliant with the draft NENA NG 9-1-1 database schema.
Objective A: Migrate Powell County's GIS data into the Esri Local Government Information Model (LGIM).

Tasks and Activities

1. Work with Geodata to compare the schema for our existing structures, road centerlines, and administrative boundary layers to the LGIM schema.
2. Review the LGIM recommended attributes and crosswalk our existing data schema.

Objective B: Make changes to LGIM schema as needed to comply with NENA standards
Tasks and Activities

1. Review the final NENA NG 9-1-1 geodatabase model and work with Geodata Services' recommendations to identify additional data attributes required for NENA NG 9-1-1.
2. Customize the crosswalk of LGIM to NENA template to match our data.
3. Review and implement workflows required to process additional NENA required attribution, such as left and right road centerline ESN assignments. Our EMS boundaries will be based on our road centerline feature class where those boundaries follow roads. The left and right administrative boundary attributes required by NENA in these instances will be populated with automated using geoprocessing tools and models. Incorporated town boundaries, the county boundary and fire districts are based on parcels and public land survey and have legal boundary and levy district characteristics. Where these boundaries follow roads, often the the road centerline does not exactly match the road centerline file. These will require some manual procedures to populate the required NENA left and right database assignments.
4. We will work with Geodata to develop web applications to facilitate the collection of alias name tables for our road centerline and landmark layers. Develop procedures to incorporate alias name table into our GIS database.
5. Work with Geodata Services to develop an automated method for exporting our NG 9-1-1 data into a NENA compliant format.

Goal 3: Publish, manage and update NG 9-1-1 data in a web based environment
Objective A: Build support for Powell County GIS capacity and lower consulting costs by providing access to NG 9-1-1 datasets for County Commissioners and key staff members via ArcGIS Online (AGOL).
Tasks and Activities
1. Publish structures, road centerlines and NG 9-1-1 administrative boundaries to ArcGIS Online.
2. Purchase five ArcGIS Online Level 1 named user accounts (View only) to allow internal data sharing via AGOL (these accounts will be in addition to our 7 existing Level 2 named users).
3. Purchase and additional 2,000 ArcGIS Online credits to supplement the 700 we currently have.
4. Form a committee within the county to establish standards and governance rules for publishing AGOL maps and apps on the County web site and AGOL home page.
5. Work with Geodata Services, Inc. to provide training, consulting, and recommended best practices for working with and maintaining data in AGOL and ArcGIS Pro.
Objective B: Set up workflows, procedures, models, scripts and tools to enable updates to the County's point data in real time.
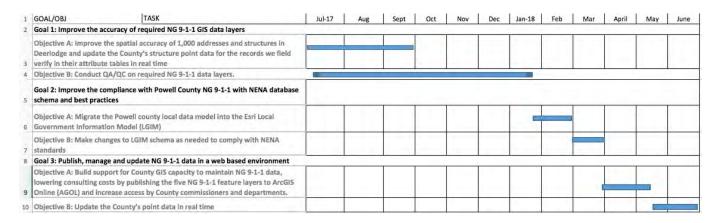**Task and activities**

1. Work with Geodata Services, Inc. to assist with training, geodatabase domain assignments,

Survey 123 data form workflows, and Collector deployment to update community anchor institutions and assets such as fire hydrants and capture geotagged photos where required, using the purchased equipment and staff tablets and smartphones.

Equipment – Purchase a Mesa 2 tablet to collect 1,000 addresses and structures. Tablet, GNSS receiver, and docking will be used to field verify structures with sub meter accuracy. The Mesa 2 tablet will help Powell County continue to update address to insure the process continues long after the grant is complete.

Project Schedule –The following timeline lists the project schedule. Tasks listed in the detail above are listed in the expected start-up sequence by objective. The tasks are listed in sequential order and dependencies for completion are shown in the Gannt bars. The contract for our contracting partner project will be set up July 1, 2017, and data provided to our 911 contractor Zuercher will be prior to June 30, 2018.

	GOAL/OBJ	TASK	Jul-17	Aug	Sept	Oct	Nov	Dec	Jan-18	Feb	Mar	April	May	June
1														
2	**Goal 1: Improve the accuracy of required NG 9-1-1 GIS data layers**													
3	Objective A: Improve the spatial accuracy of 1,000 addresses and structures in Deerlodge and update the County's structure point data for the records we field verify in their attribute tables in real time		▬▬▬											
4	Objective B: Conduct QA/QC on required NG 9-1-1 data layers.		▬▬▬▬▬▬											
5	**Goal 2: Improve the compliance with Powell County NG 9-1-1 with NENA database schema and best practices**													
6	Objective A: Migrate the Powell county local data model into the Esri Local Government Information Model (LGIM)									▬▬				
7	Objective B: Make changes to LGIM schema as needed to comply with NENA standards										▬			
8	**Goal 3: Publish, manage and update NG 9-1-1 data in a web based environment**													
9	Objective A: Build support for County GIS capacity to maintain NG 9-1-1 data, lowering consulting costs by publishing the five NG 9-1-1 feature layers to ArcGIS Online (AGOL) and increase access by County commissioners and departments.											▬▬		
10	Objective B: Update the County's point data in real time												▬	

We will implement a contract with Geodata Services, Inc on July 3, 2017 and begin work on the project. The initial Goal 1 tasks will commence during the first week of July and will be completed October 1, 2017. The updated structure layer will be merged with the master county structures layer and after QA/QC work in Goal 2 will be delivered to the MSDI Structures theme lead no later than June 30, 2018.

Goal 1 Objective B will commence by July 7, 2017 with our request of the latest MSAG and ALI from CenturyLink/West Safety Services. The scripts, models and workflows will be developed by Geodata Services, and documented over the following three months with a deliverable of the synchronization audit tool kit by October 1, 2017. This will allow us time to continue to work through our field season with the field verification. The MSAG synchronization audit and updates will be complete by January 12, 2018 and geodatbase results merged with master County NG 9-1-1 database before starting Goal 2 January 16, 2018. Goal 2 deliverables will include the field verification queue database for future field verifications and the updated MSDI geodatabae layers and metadata for road centerlines, structures, addresses and administrative boundaries provided to the MSDI data stewards by April 2, 2018.

Goal 3 objectives and tasks will begin no later than April 2, 2018 and will be completed by June 30 with the deliverable of a first generation Powell County NENA compliant geodatabase for NG 9-1-1.

SECTION 5 – PROJECT MANAGEMENT AND ORGANIZATIONAL CAPABILITY

This project will be managed and carried out by Ricki Ann Bauer, GIS coordinator for Powell County. We also plan to work with Geodata Services, Inc. who will provide training, consulting, and project work. Ricki Ann Bauer, GISP, and a County employee who has provided GIS services for the County for the two years. Mrs. Bauer has sixteen years of GIS experience and is registered as a GISP. She has developed nearly all the GIS databases for the County and is familiar with land records management at the County. She has also worked with local Land Surveyors for 6 years for a local land surveying firm and is knowledgeable with the public land survey, CadNSDI, survey control and documentation. Mrs. Bauer has managed one previous MLIA grants for the County and is very familiar with the scope and grant requirements of the program. Ricki also served as the project manager for Powell County's MLIA_2017 grant.

The administrator of this grant proposal has working relationships with Teton County EMS, Sheriff, and Fire Departments that will be integral in making the the 2018 project successful. The previous grant experience along with ***Ricki and Powell County staff experience*** well situated to administer and implement the goals and objectives of this proposal.

Geodata Services, Inc.

Geodata Services, Inc. specializes in GIS services for local, state and federal governments, natural resource management, regional and community planning, and demographic and socioeconomic analysis.

 For 21 years Geodata has provided training and services in GIS including, spatial analysis, image analysis, database development, collaborative GIS, suitability modeling, and 3D scenario visualizations. Geodata has been an Esri business partner for 19 years, and more than 60 years of combined experience with GIS.

Geodata has worked with ten previous successful MLIA projects, including two NG 9-1-1 MLIA projects in the 2017 fiscal year with Carbon and Teton counties. Geodata has presented testimony on behalf of the Montana State Library at interim legislative sessions demonstrating the effectiveness of the grant program and has presented at past MACO conferences on the success of the MLIA program.

The two primary staff who will provide training, consulting and support will be Ken Wall and Kyle Balke. Ken Wall has 25 years of experience in GIS experience, founder and president of Geodata Services, Inc. since 1993. Ken served on the MLIAC council for 6 years, and currently serves on the Montana State Library Commission. He served as a senior analyst for GIS projects throughout the US, Canada, and Australia. Geodata Services has been a business partner with ESRI for 18 years.   Ken Wall has earned certification as an Esri Desktop Associate and served as a certified ArcGIS Desktop instructor, and is a CompTIA CTT+ Certified technical trainer. Geodata is the only ArcGIS Online Specialty Partner in Montana. Ken serves on the NENA NG 9-1-1 data review subcommittee, reviewing the current data standard.

Kyle Balke has 13 years of applied GIS experience in the local government, engineering, natural resources, and telecommunication fields. He has worked as a GIS analyst for firms in Wisconsin and

Montana. His professional experience includes GIS data maintenance and editing, project development, CAD and GIS integration, geodatabase design, spatial and statistical analysis, web mapping and cartography. He has extensive expertise with the full suite of Esri GIS programs and modules, including ArcMap, Business Analyst, ArcGIS Online for Organizations, ArcGIS Pro and Spatial Analyst. For the last two years Kyle has taught a course on Internet GIS at the University of Montana focused on ArcGIS Online and ArcGIS Pro.

SECTION 6 – BUDGET JUSTIFICATION AND BUDGET TABLE

The following figure includes the total direct labor for this project, broken out by hours and budget for each goal and

GOAL / OBJECTIVE	POWELL COUNTY LABOR (HOURS)	POWELL COUNTY LABOR BUDGET	CONSULTANT LABOR (HOURS)	CONSULTANT LABOR BUDGET
Goal 1: Improve the accuracy of required NG 9-1-1 GIS data layers				
Objective A: Improve the spatial accuracy of 1,000 addresses and structures in Deerlodge and update the County's structure point data for the records we field verify in their attribute tables in real time	160	$4802	26	$1,950
Objective B: Conduct QA/QC on required NG 9-1-1 data layers.	316	$9483	122	$9,150
Goal 2: Improve the compliance with Powell County NG 9-1-1 with NENA database schema and best practices				
Objective A: Migrate the Powell county local data model into the Esri Local Government Information Model (LGIM)	34	$1020	14	$1,050
Objective B: Make changes to LGIM schema as needed to comply with NENA standards	64	$1,921	22	$1,650
Goal 3: Publish, manage and update NG 9-1-1 data in a web based environment				
Objective A: Build support for County GIS capacity to maintain NG 9-1-1 data, lowering consulting costs by publishing the five NG 9-1-1 feature layers to ArcGIS Online (AGOL) and increase access by County commissioners and departments.	63	$1,891	28	$2,100
Objective B: Update the County's point data in real time	55	$1,651	26	$1,950
TOTALS	**692**	**$20,768**	**238**	**$17,850**

objective. The labor on the project will be completed by Powell County and our consultant Geodata Services, Inc. The Powell County labor will be conducted by Ricki Ann Bauer.

The labor hours and budget broken out by objective in the table above show the entire labor for the project from Powell County. A total of 92 of the 692 total hours in labor by Powell County are requested from MLIA in the Budget Summary, totaling $2,334 in labor and $427 for fringe benefit costs. The remainder of the labor is from cash match by Powell County totaling $15,222 in labor and $2,784 in fringe benefits.

The table below shows detail on equipment, software cost and travel expense breakouts for our consultant Geodata Services to travel to our offices in Deer Lodge.

EQUIPMENT	BUDGET
Juniper Mesa 2 Geo Tablet	$1,999
uBlox NEO-M8T GNSS Receiver & External Antenna Connection	$189
GNSS Magnetic Mount Antenna, 10-foot (3m) cable	$129
Mesa 2 Office Docking Station	$429
Mesa 2 Anti-Glare Screen Protector	$24
Subtotal	**$2,770**
ESRI ARCGIS ONLINE	
ArcGIS Level 1 Users (View Only) 5 seat license	$500
Subtotal	**$500**
CONSULTANT TRAVEL	
Rental car and fuel (Two 3 day trips)	$220
Lodging (2 nights)	$150
Subtotal	**$370**
GRAND TOTAL	**$3,640**

The equipment costs are based on a quotation totaling $2,770 from Frontier Precision provided 1/27/2017 for the Juniper Mesa 2 Geo Tablet and associated peripherals to be used in Goal 1, Objective A for improving structure locations in Deerlodge and Goal 3, Objective B updating the county's point data in real time. It will be used for similar purposes in the future.

We currently maintain seven ArcGIS licenses in annual maintenance and an additional ArcGIS Online 5 named user (level 2) annual subscription. We plan to continue at that same level in FY 17-18 with the same configuration for Level 2 users ($2500) and are using this and our annual maintenance fees to Esri ($5,968), totaling $8,468 as part of our direct cash match, listed in the supplies, category d in the Budget Summary.

We anticipate growth in our use of ArcGIS Online and we are requesting MLIA funds for an additional 5 named users at level 1 for view only privileges ($500). This will allow our commissioners and other county staff who do not need to edit maps to review maps and apps that are shared internally within our organization but not shared with everyone. It will also allow them to access other ArcGIS premium content.

The consultant travel is calculated for two trips by Geodata Services staff to our office in Deerlodge. These will be two full working days minus the one hour travel to and from. We included one night overnight lodging for each two day trip. The rental car arrangements are for 3 days, since they require the car to be returned in 24 hour increments. The rental would be from 7am on day one, returning at 7am on the morning after driving back.

The MLIA Grant Budget Summary is provided below. The Other Cash in category e. Contractual that we are using as part of our Other Cash is provided by the Powell County Sheriff as a funding partner. We did not itemize this by objective in the narrative above since MLIA funds are not being requested for this contractual arrangement. It is comprised of $14,344 from the sheriffs budget for Zuercher and $12,000 for CenturyLink/West Safety Services (formerly Intrado), totaling $26,344.

MLIA GRANT BUDGET SUMMARY								
	Applicant Summary					Project Partner* Summary		
Category	MLIA Share	Applicant Cash	Other Cash	In-kind	Applicant Subtotal	Geodata Services, Inc.	Powell County Sheriff	**Total**
a. Personnel	$ 2,334			$ 15,222	$ 20,488	$ 17,850		
a. 1. Fringe Benefits	$ 427			$ 2,784	$ 3,211			
b. Travel	$ -							
c. Equipment	$ 2,770				$ 2,770			
d. Supplies	$ 500			$ 8,468	$ 9,168			
e. Contractual	$ 18,220				$ 18,220		$26,344	
f. Other	$ -					$ 370		
Total	$ 24,251			$ 26,474	$ 50,725		$ 26,344	$77,069

The contractual subtotal of $18,220 for Geodata Services contract is listed under the MLIA Share in row e. Geodata Services is broken out in the project partner summary, but is not subtotaled to avoid double counting.

Office of the Sheriff Powell County
Scott F. Howard, Sheriff
Law Enforcement Center
313 4th Street, Deer Lodge, Montana 59722

February 7, 2017

To Whom It My Concern;

The Powell County Sheriff Office is aware the Powell County is applying for a MLIA grant to NG 9-1-1 that conform to the National Emergency Number Association's (NENA) standards. As part of this project, Powell County's GIS data will be migrated to a standardized database schema based on NENA standards and the Local Government Data Model (LGIM) developed by Environmental Systems Research Institute (ESRI). Getting the County ready for the NG 9-1-1 is very important to Law Enforcement.

The Sheriff's Office is in support of the Powell County GIS department.

Sincerely,

Scott F. Howard
Powell County Sheriff

Office: 406-846-2711   Fax: 406-846-2742   Email: scotth@pcsomt.org

ge●**data**

Erin Fashoway
State GIS Coordinator
Montana State Library

I am writing in support of this proposal in our role as funding partner and consultant. We have worked with Powell County on this project proposal and understand that we have been listed as a funding recipient. We support the project plan in the scope of work. Geodata Services is prepared to provide training and consulting to further the goals, objectives and tasks in the proposal. We understand that we are listed as a funding recipient for portions of the direct request from MLIA and are not providing any in-kind services. We are not providing data holdings or serving as a data provider for this project.

Sincerely,

Kenth E Wall

Ken Wall
President
Geodata Services, Inc.
P.O. Box 8081, Missoula, MT 59807

Section 8 – Renewable Grant Accountability

The Enhancement of Geodetic Control in Powell County, MLIA Grant went very well.

About the third week in June Powell County signed a Statement of Work with MLIA and was sent back.

Powell Counties GIS Department hired Hyalite Engineers through a sole source procurement process because they could contribute 14 additional points to the project and the because the project was under 80,000 dollars, the County could select the vender that would do the project for the asking price of $32,000 or roughly 450 dollars a point. This took working with our Powell County Engineer firm, the County Attorney and the Powell County Commissioners. The Contract was in compliance with Powell County procurement procedures.

Powell County contracted Hyalite Engineer's, PLLC to survey 31 sections (69 section corners; 4 per section) covering all town sites in Powell County. This area includes the following major roads: Interstate 90 and Highways 12, 141, 271, and 200. Communities include the City of Deer Lodge, and the following towns Elliston, Avon, Helmville, Ovando, Gold Creek, Garrison, and Racetrack. These 31 sections were selected based on: 1) Population density; 2) Existing road infrastructure; and 3) Estimated PLSS error.

On August 3rd of 2016 Powell County hosted a Kick off meeting with Hyalite Engineering, Robert (Bob) Holiday MSL Control theme steward, Powell County Commissioners and Powell County GIS Analyst who was the project manager.

The Maps of the sections corners with the section corner records from Powell County's Clerk and Recorder, and Bureau of Land Management where given to all parties at the Kick off meeting. Bob Holiday had requested that the data be given to him in an excel spreadsheet that he had sent over by email and I had given that information to Hyalite the day of the meeting.

The Landowner letters went out over the next week. The weather was great August, September, October, Hyalite's Survey crew went to work, and by the end of October, the work was completed. Control was submitted to the Clerk and Recorder for filing in October.

Hyalite invoiced us for August, September and October. Powell County paid the invoices to Hyalite Engineering. When the Quarterly report went out in November the August and September invoices where submitted along with the Powell County invoices. Then on October 11, 2016 after the final invoice from Hyalite Engineering Powell County submitted the quarterly grant report.

Then on November 17, 2016 Powell County submitted the Finial report with the final grant invoices.

The 2017 grant time was conservatively laid out to account for bad weather. Meaning, if the weather was good, the grant would be completed early and if the weather was bad, the grant was going to be completed this spring/summer. The time for the grant from the GIS and administrative tasks where 185 hours and that is roughly four and half weeks. The

administrative and GIS tasks fell into line with Hyalites speed.

Final Report for the MLIA FY17 Powell County Enhancement of Geodetic Control in Powell County.

The Following Items was submitted:

- 4580 Invoice for $9,652.90

- Invoice 3 From Powell County

- Excel spreadsheet in the PLSS format for 83 section corners for Bob Holiday.

- Pdf of Hours for GIS and Admin time.

To date Hyalite has collect 69 points and is at 100% complete. They have completed the section survey of all the Town sites. They included 14 extra points east of Deer Lodge.

Do to the great fall weather and a great Surveying crew in Hyalite Engineering the Project was completed in November. The budget for MLIA FY17 grant was for $37,622.38. The Surveying would come in at $31,997.03 and the Powell County Admin and GIS came in at 5422.95. The total spent for the Grant was 37419.98. The project finished $202.40 under Budget.

The invoices went to Erin Fashoway for her review and approval.

Bob Holiday received the excel spreadsheet that same day and asked for some elevations of four points and the Survey crew was asked to provide that information.

To my knowledge, all tasks are completed; all reports where turned in to the Montana State Library and all invoices are in and collected.

  We are awaiting results of that work. Although our MLIA 2017 grant was not directly related to NG 9-1-1 data, all of our data is dependent on accurate survey control. We do plan to use the results of that effort in Goal 1, Objective B, Task 1 to review the alignment of our road centerline GIS files with coincident public land survey.

SECTION 8 – Sign the Application

Authorizing Statement

I hereby certify that the information and all statements in this application are true, complete and accurate to the best of my knowledge and that the project or activity complies with all applicable state, local and federal laws and regulations.

I further certify that this project will comply with applicable statutory and regulatory standards.

I further certify that I am (by my signature) authorized to enter into a binding agreement with the Montana State Library to obtain a grant if this application receives approval.

Daniel G. Sager

Name (print or type)

County Commission Chair.

Title (print or type

Signature and Title of Authorized Representative(s) of Public Entity Applicant

2·8·17

Date

SECTION 9 – CHECKLIST – SIGNATURES REQUIRED

Initial or mark n/a	Completed Required Task
RAB	**Section 1 – Applicant, Partner, and Proposal Information**
RAB	Primary Applicant Information
RAB	Funding Partner *(if applicable)*
RAB	Project Partner *(if applicable)*
RAB	Proposal Information
RAB	List All Past Awarded MLIA Grants
RAB	**Section 2 – Relevance** *(300 max word limit)*
RAB	**Section 3 – Public Benefit**
RAB	**Section 4 – Scope of Work Narrative** *(4-page limit)*
RAB	**Section 5 – Project Management and Organizational Capability Narrative**
RAB	**Section 6 – Budget Justification Narrative and Table**
RAB	Budget Justification Narrative
RAB	Complete Budget Table
RAB	**Section 7 – Statements of Support** *(if applicable)*
RAB	**Section 8 – Renewable Grant Accountability Narrative** *(if applicable)*