APPLICATION FOR GRANT FUNDING

STEP 1 – Applicant and Partner Information

Primary Applicant (Required):
Name of principle individual: *David Corcoran*
Name of agency/entity: *Powell County*
Street: *409 Missouri Ave, Suite 101*
City: *Deer Lodge*
County: *Powell*
State: *Montana*
Zip Code: *59722*
Contact email address: *dcorcoran@co.powell.mt.us*
Contact fax address: *(406) 846-2784*
Contact phone: *(406) 846-9711*
Organizational Unit (if applicable)
Department: *Planning*
Division:

Other Project Partners – complete for each partner (copy box as needed):
Name of contact: *Chris Laity, PE*
Name of Agency: *Great West Engineering*
Street: *PO Box 4817*
City: *Helena*
County: *Lewis and Clark*
State: *Montana*
Zip Code: *59604*
Contact email address: *claity@greatwesteng.com*
Contact phone: *(406) 587-6701*

Date Submitted (Required): 02/13/13 Date Received by State:

Descriptive Title of Applicant's Project (Required):
An inventory of legal and physical transportation-related infrastructure in Powell County

STEP 2 – Relevance and Public Benefit

The purpose of the Montana Land Information act is to develop a standardized, sustainable method to collect, maintain, and disseminate information in digital formats about the natural and artificial land characteristics of Montana.

Powell County proposes to develop an inventory of its transportation related features. The county will inventory its roads, road right of ways, easements culverts, cattle guards, road signs, and other related features using GIS. Currently, there is no uniform system for inventorying these features, with each of Powell County's three road districts maintaining records independently of each other. Road right of way and easement information is currently stored exclusively on paper records by Great West Engineering and road crews and is not linked to spatial data in any way. The creation of a county data dictionary for infrastructure and the development of a system for digitally inventorying road right of way information will create a sustainable foundation that can be maintained in the future through low cost, incremental updates.

In support of MLIA priority B2.2: "*Localized GIS solutions that demonstrate the value of GIS in improving the quality of life for Montana citizens and build grass roots support for location based services,"* the creation of a GIS-based transportation database will allow for more efficient provision of maintenance by providing documentation of the age and condition of various features. A developed information system will aid in prioritizing the replacement and maintenance of features, as this data will be more readily available. Additionally, having this information in a single geo-referenced database will help to facilitate emergency and disaster response.

This project will benefit the county Planning Department, county Road Crews, the county Weed Coordinator, Powell County Emergency Services, local utility companies, Great West Engineering, and the public by allowing data to be shared more seamlessly between these bodies and allowing road information to be accessed and evaluated more efficiently. With this information, the county will be able to respond to public inquiries about road infrastructure and right of ways and easements in a more streamlined and thorough manner.

STEP 3 – Scope of Work Narrative

Goal #1: Build a county-wide geodatabase with culverts, cattle guards, road signs, and bridges.

Objectives:
- Using Pathfinder Office, develop data dictionaries for each feature to easily and efficiently collect data.
- Develop QA/QC methodology to ensure data is collected in an accurate manner.
- Collect GPS points with a Trimble Juno 3B GPS with built-in camera, inventorying and photographing all culverts, cattle guards, road signs, and bridges. This will be completed by November 1, 2013.

Tasks

1. Acquire a Trimble Juno 3B GPS with Pathfinder Pro at a cost of $2,800. This allows for the creation of data dictionaries, which will greatly increase the efficiency of data collection when multiple data types are being inventoried. The Trimble Juno 3B includes a built in camera, which will allow us to photograph the features in the field and link these photos to the feature points.
2. Acquire laptop computer for use in the field at a cost of $800. This will assist with navigation, entry of any complex notes regarding data, assist with QA/QC, and allow for field level verification of existing data.
3. Develop data dictionaries for culverts, cattle guards, road signs, and bridges in Pathfinder, including attributes for the following data:
    a. Culverts: diameter, condition, waterway served, roadway served, age if known.
    b. Cattle guards: length, width, condition, roadway served, age if known.
    c. Bridges: length, width, type, roadway served, waterway served, NBI Structure Number (this will allow the county to join its data with MDT Bridge Inspection data).
    d. Road Signs: location type, condition, post type, date of installation, roadway served.

    **This task is dependent on Task 1.*
4. Develop QA/QC methodology for data collection.
5. Collect data points for infrastructure in the field using GPS and laptop.
    **This task is dependent on Tasks 1 & 2.*
6. Post-process collected infrastructure points using Pathfinder and ArcGIS.
    **This task is dependent on Task 1.*

Goal #2: Create a road right-of-way polygon data layer based on existing paper documents that is topologically congruent with statewide parcel data.

Objectives:
- Find and assemble legal descriptions of right of ways and easements that currently exist and hyperlink to the existing road data layer.
- Using the topology feature in ArcGIS Standard Edition (ArcEditor), create polygon geodatabase consisting of legally defined right of ways and easements that is topologically consistent with the state parcel layer and whose data can be joined to the road line data.
- Once data is collected it will be added to the Transportation Framework within the County's GIS and shared with the state government.

Tasks

1. Upgrade from ESRI ArcGIS Basic Edition 10.1 (ArcView) to ESRI ArcGIS Standard Edition 10.1 (ArcEditor) at a cost of $5,225. This upgrade allows for the use of the topology feature, which will improve data integrity and ensure accurate boundaries between road rights of way and parcels.
2. Research and gather road right of way and easement documents, scanning and/or photographing them as they are located.
3. Digitize a road right of way and easement polygon geodatabase based on paper documents, developing a topological framework to ensure this data is consistent with MSDI parcel data. Scanned data will be hyperlinked to this data, and a field will be created to ensure that this polygon layer can easily be joined to existing MSDI road line data. **This task is dependent on Task 1.*
4. Perform QA/QC on collected infrastructure points and road right of way and easement geodatabase.

Project Schedule

Date	Activity
July 2013	- Receipt of MLIA Funds - Acquire Hardware and Software - Develop Data Dictionaries - Develop QA/QC Methods
August 2013 – October 2013	- Collect Data Points for Infrastructure
November 2013	- Process Infrastructure Data Points
December 2014 – February 2014	- Gather Road ROW Records
March 2014 – April 2014	- Create Road ROW Polygon Layer
May 2014 – July 2014	- Perform QA/QC on Infrastructure and Road ROW, revisiting in field as needed.

STEP 4 – Project Management and Organizational Capability Narrative

This project will be carried out by the Powell County Planning Department by David Corcoran, Environmental/GIS Technician and Brian P. Bender, Planning Director. The Planning Department will work in conjunction with county road crews and Great West Engineering to ensure that it is gathering data that is useful and accurate.

The majority of the work for this project will be done by David Corcoran. He is a graduate of the University of Arizona with an M.S. in Planning and the University of Wyoming with a B.S. in Geography with GIS emphasis. David has four years of GIS experience, including time with the city of McCall, Idaho where he did extensive fieldwork, inventorying public utilities and verifying addresses using Trimble hardware and software. While working for the city of McCall, David researched road rights-of-ways and worked extensively on parcel editing, using topology to perform these edits. David has experience with QA/QC from contract work with the Wyoming Department of Transportation.

Brian Bender will provide oversight and assist with the administration of grant funds. Mr. Bender is a member of the American Institute of Certified Planners and the Planning Director of Powell County, Montana since January 2011. Mr. Bender has over thirteen years of experience collaborating with elected and appointed officials in both rural and urban communities on zoning enforcement, plan making and implementation, floodplain administration, and citizen participation.

Chris Laity with Great West Engineering will provide information and guidance related to the physical infrastructure, as they are currently in possession of many of the records pertaining to the infrastructure within the county.

STEP 5 – Budget Justification Narrative and Tables

This project is expected to cost $27,844, of which Powell County will be contributing $11,759 in personnel and contractual expenses as in kind match funding. The County requests $16,085 in MLIA funding for the remaining project expenses.

a. Personnel

Powell County staff will conduct all field data collection and perform all of the research relating to road right of way and easements. David Corcoran will spend 500 hours performing the field collection, creating the GIS data, developing the topological framework, and performing QA/QC for the project. This project will be carried out under the guidance of Planning Director Brian Bender, who will provide oversight and assist with the administration of grant funds. A portion of the hours contributed at normal individual wage rates are considered to be an in-kind contribution for Powell County.

Great West Engineering will contribute 30 hours of support at a contractually negotiated rate of $130 per hour. Their involvement is crucial as they currently possess many of the written documentation regarding physical road infrastructure, and their expertise guides capital improvement. This cost will also be contributed by Powell County.

b. Travel

Powell County anticipates approximately 4,000 miles of travel to traverse the entire county road network at the current federal mileage rate of $0.565 dollars per mile.

c. Equipment

A Trimble Juno 3B with Pathfinder Office ($2,800) is necessary in order to efficiently and accurately gather data points, as it is a mapping grade GPS that allows for the creation of data dictionaries. A laptop computer ($800) will aid in navigation in the field and allow for the creation of more detailed notes regarding the condition of infrastructure. The upgrade to ESRI ArcGIS Standard (ArcEditor, $5,225) will provide access to more advanced editing features and the ability to create topologies to ensure accurate, coherent data.

Applicant budget summary

Category	MLIA Share	Applicant Share	Other Share	Total
a. Personnel				
David Corcoran	**$5,000**	**$4,135**		**$9,135**
Brian Bender		**$800**		**$800**
a.1 Fringe Benefits				
David Corcoran		**$2,680**		**$2,680**
Brian Bender		**$244**		**$244**
b. Travel	**$2,260**			**$2,260**
c. Equipment GPS Unit and Software, ArcGIS upgrade, Laptop	**$8,825**			**$8,825**
d. Supplies				
e. Contractual		**$3,900**		**$3,900**
f. Other				
Totals	**$16,085**	**$11,759**		**$27,844**

STEP 6 – Statements of Support

Statements of support must be included from any party listed as a project partner (see page six for the definition of a project partner). DO NOT include other statements of support as they will not be evaluated.

If the proposal proposes to support a particular MSDI framework layer(s), applicant <u>must</u> include a letter of support from the framework steward(s). See mandatory criteria # 3.

STEP 7 – Renewable Grant Accountability Narrative

If the applicant received a FY2013 MLIA Grant for the same project purpose, applicant must file a report documenting the progress made toward meeting the requirements of that grant. The report must include a status report on all tasks or deliverables included in the grant. If the applicant also received a FY2012 grant for the same project or purpose, applicant must include the final grant report submitted to the Department of Administration.

STEP 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.

_____
Name (print or type)

_____
Title (print or type

_____

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

Date_____

HELENA
PO Box 4817 ▪ 2501 Belt View Drive
Helena, MT 59604
406.449.8627 ▪ Fax 406.449.8631

GreatWest engineering ®

February 13, 2013

Mr. Brian Bender
Powell County Planning Director
409 Missouri Avenue, Suite 101
Deer Lodge, MT 59722

RE: Powell County – Montana Land Information Act Grant – Letter of Support

Dear Mr. Bender:

As the on-call engineer for Powell County, we greatly support the County's request for grant funding from the Montana Land Information Act grant program for the use of GIS to document road, bridge, and culvert conditions throughout the County. Powell County has been very proactive in documenting conditions of its roads and bridges, as illustrated by its comprehensive CIP and bridge CIP programs. The use of GIS would help make this data more cohesive and user friendly for analyzing existing infrastructure throughout the County and allow for long term planning and prioritization of future projects.

Thank you for giving us the opportunity to comment on this application.

Sincerely,

Great West Engineering, Inc.

Christoph Laity, PE
Project Manager

BILLINGS
115 N Broadway
Suite 500
Billings, MT 59101
406.652.5000
Fax 406.248.1363