APPLICATION FOR GRANT FUNDING

STEP 1 – Applicant and Partner Information

Primary Applicant (Required):
Name of principle individual: **Larry J. Bonderud, Mayor**
Name of agency\entity: **City of Shelby, Montana**
Street: **112 1st Street South**
City: **Shelby**
County: **Toole**
State: **Montana**
Zip Code: **59474**
Contact email address: **larry@shelbymt.com**
Contact fax address: **(406) 434-2039**
Contact phone: **(406) 434-5222**
Organizational Unit (if applicable)
Department:
Division:

Other Project Partners – complete for each partner (copy box as needed):
Name of contact: **Allan Underdal**
Name of Agency: **Toole County Commissioners**
Street: **226 1st Street South**
City: **Shelby**
County: **Toole**
State: **Montana**
Zip Code: **59474**
Contact email address: **aunderdal@toolecountymt.gov**
Contact phone: **(406) 424-8310**

Date Submitted (Required): 1-31-14 Date Received by State:

Descriptive Title of Applicant's Project (Required):

City of Shelby Water Utility Infrastructure GPS/GIS Technology Project

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.

The City of Shelby has embraced this purpose in completing a pilot project for water utility mapping in the fall of 2013. From the 10-block area verified and mapped ~ a scope of work and cost estimate for location and mapping of the city's entire water utility infrastructure was determined. The City if seeking funding to verify and map city curb stops, gate valves, meter pits and fire hydrants for the entire community.

As identified in the Land Plan Priorities – **B2 – Local, Regional and Tribal GIS Support**, the City of Shelby believes this investment leverages local, regional and state funding, time and talent to coordinate a strong Montana GIS system – improving the quality of life for Shelby, Toole County and Montana citizens. Utilizing GIS technology will enhance our community in relevant decision making ~ serving to compete globally for economic development on a city, regional and state-wide level while at the same time creating a high level of efficiency in addressing local infrastructure issues.

The expansion of Shelby's multi-modal facility; industrial park; border protection services; residential; and commercial enterprises directs the essential need for the locating/mapping of the city's water infrastructure. This technology is essential for land use in municipal and economic development planning. It is critical in the engineering design, financial estimates and bidding process for projects within the city. The project also serves to assist in fire protection services. It assists the city's water utility staff in location of lines in times of repair and replacement. It aids gas and electric utility companies in line location and provides efficient and exact information for homeowners as well as commercial enterprises. It will aid the North Central Montana Regional Water Authority as another phase of line extension through Shelby and Toole County approaches.

The collection of Shelby's land information beginning with water utilities will create a consistent, maintainable and accessible format critical to the growing needs of users, both public and private. Future economic growth prospects and current development projects dictate the need to implement GIS technology in verifying and mapping the water utility infrastructure.

STEP 3 – Scope of Work Narrative

Project Goal: Build a city geodatabase of the water utility infrastructure including curb stops, gate valves, meter pits and fire hydrants.

Objective 1: Hire Contractor/Finalize Scope of Work

- The City of Shelby will hire our proposed contractor and finalize a scope of work.
  Deliverables:
  - Signed contract
  - Final scope of work

Objective 2: Develop Collection Plan

- Contractor will coordinate with the City to determine the pre-defined field data collection units/areas.
- Contractor and the City will determine a field data collection schedule.
  Deliverables:
  - Collection Priority Map
  - Collection Schedule

Objective 3: Pre-Collection Startup

- City water department personnel will canvass the field data collection units/areas to locate and pre-mark the water utility infrastructure.

Objective 4: Data Collection

- Contractor will begin data collection in pre-defined areas with city personnel assisting contractor with location of curb stops, gate valves, meter pits and fire hydrants.
  Deliverables:
  - Data collected to Field Data Collection System

Objective 5: GIS Processing/Data Updates

- Contractor will translate the raw GPS data into shapefiles and load them to the City geodatabase.
- Utilizing the city's current CAD data for reference, contractor will create an initial set of pipe network lines.
- Contractor will coordinate with city personnel to conduct discrepancy review and discussion.
  Deliverables:
  - GIS database of Shelby water utility infrastructure

Objective 6: ArcGIS Installs & On-site Training

- Under coordination with the contractor, the City will purchase two (2) ArcGIS licenses.
- Contractor will install them on city computers

- Contractor will train city staff on use of software programs
- City staff will attribute the initial pipe network with detailed CAD information.

  Deliverables:
    - Software for utilization of GIS data

Objective 7: Grant Reporting & Close-out

- The City of Shelby will complete all grant reporting; reimbursement requests; and grant close-out information
- The Montana State Library-GIS Division will close-out grant

  Deliverables:
    - Register data at Montana GIS Portal
    - Final draw request
    - Grant close-out ~ reporting

Project Schedule:

The project is contingent upon the award of Montana Land Information Act funding. The schedule for this project may be implemented as follows:

Scheduled Date	Activity
July 2014	Grant award notification
July 2014	Contractor agreement
July - March 2015	City personnel will pre-mark utility infrastructure
Aug. - April 2015	Field data collection with 1-2 areas/units per month
Aug. - April 2015	Discrepancy reviews on GPS data after each community area/unit is completed
Sept. - May 2015	GIS processing/ data updates
Sept. – May 2015	ArcGIS install and training with city personnel; Pipe network attribution by city personnel
July 2015	Estimated project completion and closeout

STEP 4 – Project Management and Organizational Capability Narrative

It is proposed that this project be contracted to MaPS, Inc. and managed by the City of Shelby. MaPS, Inc. conducted a 10-block pilot project in relation to this larger endeavor. The initial intent was to convert the city's current CAD data and then perform GPS field verification and data collection to add accuracy. After a lengthy review of the city's CAD data and numerous attempts to work with the data, MaPS, Inc. determined the information could not readily convert due to an incomplete and inaccurate coordinate system and underlying spatial qualities. MaPS, Inc. then proposed the pilot project focusing on the more accurate field review. MaPS, Inc. is very familiar with the city's current data system. They have an accurate estimate of the area/unit information to be collected and have given us a reliable project cost we believe is fair and the best use of MLIA grant funding.

Project Manager is Mayor Larry Bonderud. Mayor Bonderud is in his seventh term as Mayor of Shelby. He has been instrumental in leveraging funding for city/county projects over the last twenty years totally an estimated $200 million of which he has been the project manager on many of these projects. He serves as the Executive Director of the Port of Northern Montana as well as a Doctor of Optometry with practices in Shelby and Conrad.

Community Development Director, Lorette Carter will assist Mayor Bonderud in the administration of the project. She has served as Community Development Director for 10 years. Carter oversees the reporting on numerous grant-funded projects within the community. She will complete the required reporting and administrative duties in the successful completion of the mapping project.

The pre-marking of the water utility infrastructure and staffing to work with MaPS in locating water utility components will be undertaken by city employees, Gene Stratman and Terry Bentley. These employees oversee the water systems in public areas and complete maintenance and repair work as needed. They are most familiar with the location of curb stops, gate valves, meter pits and fire hydrant locations.

Those city staff trained on the ArcGIS software will be the Public Works Office Clerk and City Hall administrative personnel.

Upon grant award, the City of Shelby will contract with MaPS, Inc. to complete the project. Mapping and Planning Specialists, Inc. (MaPS, Inc.) was organized as a sole proprietorship in 2000 to assist several Counties in Montana to complete their unfinished mapping and E-911 implementations. MaPS, Inc. was incorporated in 2002 and has become a premier provider of professional E-911 and GPS/GIS consulting and implementation services in the region. MaPS, Inc.'s personnel have over 30 years of combined experience in GPS field data collection, GIS development and E-911 implementation and have worked on over forty projects in many states across the nation. MaPS Inc. has been working with Toole County since 2001, successfully

completing an E-911 system. The City also partnered with MaPS Inc. in 2013 to conduct a 10-block pilot project to begin location and mapping of the water utility infrastructure and with that, determine a scope of work and cost estimate for completing the city's entire water utility infrastructure.

Key Personnel for MaPS, Inc include Matthew Pearce, President and Founder of the company. Matt is a graduate of the University of Minnesota with a B.S. in Geography with GIS/Cartography emphasis. He has been working in the field for over 20 years and is a certified Emergency Numbering Professional (ENP) and a member of the National Emergency Numbering Association. MaPS, Inc. is currently providing E-911 and GPS/GIS mapping and addressing services for a significant number of MT counties, including Toole, Pondera, Chouteau, Valley, Granite, Anaconda-Deer Lodge, Mineral and Sanders. To service their MT clients, MaPS, Inc. has a local field office in Helena, MT.

STEP 5 – Budget Justification Narrative and Tables

The proposed cost for services includes the following tasks:

Task 1 ~ GPS Field Data Collection
With a field data collection schedule determined and city personnel pre-marking the water utility infrastructure, MaPS Inc. will conduct on-site visits for GPS field data collection utilizing a Trimble sub-meter DGPS receiver and mobile GeoLink Field Data Collection System. City personnel will guide the MaPS, Inc. staff to each pre-located /marked water utility component within the system. The cost to conduct field data collection is $8.00 per point. The cost includes on-site labor and expenses. There are 2,000 anticipated points for a total cost of **$16,000.00.**

Task 2 ~ GIS Processing/Data Updates
MaPS, Inc. will translate the raw GPS data into shapefiles and load them to City geodatabase. MaPS, Inc. will create an initial set of pipe network lines for the collected/mapped water utility point data. MaPS, Inc. will present each area/unit completed to city staff for discrepancy review and discussion. MaPS, Inc. staff will then finalize the collected points and lines based on these meetings. MaPS, Inc. will regularly load updated datasets to the city computers (either remotely or on-site). The cost for GIS processing and data updates is $8.00 per unit for a total of **$16,000.00.**

Task 3 ~ ArcGIS Install, On-site Training
The initial pipe network will contain fields as preliminarily defined in the GIS data specification/sample. This initial pipe network will need to be attributed with specific data including size/diameter of pipe, pipe type and age which will be done by City staff. The city will purchase two (2) ArcGIS licenses and have them installed on two (2) city workstations/computers ~ one at City Hall and one at the City Shop. With this new software, city personnel will be trained on software familiarization and data attribution. Cost for the two ArcGIS is $1,500 each for a total of $3,000. The cost of training by MaPS, Inc. is $1,050. Total cost to purchase ArcGIS licenses and on-site training is **$4,050**. MaPS, Inc. will provide ongoing technical support which will be included in the city's water budget.

In-kind Contribution
The City of Shelby anticipates in-kind contributions of **$38,688.08.** In-kind will include grant administration from Mayor Bonderud and Lorette Carter. It is anticipated Mayor Bonderud will spend approximately 40 hours on this project through the period of eligibility. His rate is $160.00/hour for a total of $6,400.00. Carter anticipates 60 hours devoted to reporting and administration. Her rate is $30.56/hour for a total of $1,833.60. Total administration is anticipated at $8,233.60. City personnel~ Gene Stratman and Terry Bentley will pre-mark all water utility components and work with MaPS, Inc. staff to locate points during the collection process. The anticipated time to canvass the entire community to pre-mark and work with MaPS, Inc. staff is 520 hours. Salary/benefit for Gene is $34.40/hour and Terry is $23.79/hour totaling $30,258.80. City personnel would also be needed for the training component. Three staff members will be trained

on the ArcGIS software ~ two staff from City Hall and the Public Works Office Clerk. MaPS, Inc. anticipates 2 hours for staff training for a total of $145.68. City staff will attribute the initial pipe network. Randi Lamb, Public Works Office Clerk will complete this portion of the project at a cost of $1,691.20. Her hourly rate is $21.14 for 80 hours of work. Supplies/copies are anticipated at $50.00 during the project period.

- The City of Shelby will include all ongoing technical support in water budget expenditures.

Applicant budget summary

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Category	MLIA Share	Applicant Share	Other Share	Total
a. Personnel/Fringe Benefits		**40,329.28**		**40,329.28**
b. Travel				
c. Equipment				
d. Supplies		**50.00**		**50.00**
e. Contractual	**36,050.00**			**36,050.00**
f. Other				
Totals	**36,050.00**	**40,379.28**		**76,429.28**

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 must 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 FY2014 MLIA Grant for the same project or 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.

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.

Larry J. Bonderud
_____
Name (print or type)

Mayor of Shelby
_____
Title (print or type

_____

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

Date_____