

**Nebraska State
Records Board**
440 S 8th St Ste 210
Lincoln, NE 68508
(402) 471-2745



John A. Gale
Chairman

APPLICATION FOR STATE RECORDS BOARD GRANT TO IMPROVE ACCESS TO PUBLIC INFORMATION

The Nebraska State Records Board is sponsoring a grant program for Nebraska government agencies for the development of programs and technology to improve electronic access to state government information and services. Grants will be awarded for one time funding of small projects. No grant request shall exceed \$25,000.00. The grants may be used for the creation or enhancement of electronic access and delivery of government services and information, but not to fund ongoing operations. Nebraska government agencies wishing to apply for these grants may want to first contact Nebraska.gov to establish feasibility and scope of the project.

Applications received by April 20, 2011 will be considered for funding by the NE State Records Board at their meeting on July 20, 2011.

NOTE: Loss of Funding. The NE State Records Board may be unable to award grant funds, in whole or in part, in the event funding is no longer available.

Grant Criteria

Grant projects requesting funding must meet criteria #1-3.

1. Enhance the delivery of local government agency services and improve the public and business access to those services.
2. Meet the all applicable Nebraska Information Technology Commission Standards and Guidelines. State's technology access clause for providing equal access to services for persons with disabilities. A copy of the technology access clause is available at: <http://www.nitc.state.ne.us/standards/index.html> under 2. Accessibility Architecture.
3. If the project or service created or improved pursuant to the grant application involves the licensing, permitting or regulation of businesses, then the project or service must allow integration with the State of Nebraska's Business Portal at: <http://www.nebraska.gov/index.phtml?section=business>, and the One-Stop Online Business Registration System at: <http://www.nebraska.gov/osbr/cgi/domestic.cgi?/osbraapplication/init/init/None>.

In addition, the following criteria will be considered when reviewing applications:

- Does the project enhance the delivery of state/local government agency services and improve the public, government and business access to those services?
- Does the project reduce the amount of reliance on human capital, paper, and office overhead?
- Does the project span more than one office or agency?
- What is the size of the customer base for this service and the geographic impact?
- Is there financial and or in kind contribution from other partners?
- Is there documented community support for the project?

Responses are required to all questions in Parts I, II & III in order to be considered for funding:

Part I. Grant Summary

- 1. Name of agency applying for grant:** City of Nebraska City, Nebraska
- 2. Title of project:** City-wide WebGIS Implementation
- 3. Brief description of project:** Installing a GIS system in City of Nebraska City will not only make is accessible to the general public and various entities, it will also help all departments in the City by letting them access land record information easily and quickly.
- 4. Grant amount requested:** \$ 25,000
- 5. If the grant is to create an application, is the application to have a fee associated with its use for accessing public records, or is the application free for use by the public, businesses and other governmental agencies?**
No, no fee is associated with access.
If there is to be a fee, provide any statutory authorization for assessing the fee.
- 6. If the grant application is for a Geographic Information System project, do you and the agency you represent agree to share the data collected in that project, without costs, with other interested government agencies in the State that may have a need for such data?** Yes

Part II. Grant Detail

1. Please describe the project in detail, to include your vision for the project. (You may attach this description).

The City of Nebraska City has chosen to install a Geographic Information System (GIS) that will be accessed through the internet on a specific website designed for City of Nebraska City.

The City will initially create two layers; sign management and storm sewer inlet and pipe locations. The City is under a federal mandate to change out all traffic signs to a higher reflectivity and currently has no record of signs, locations or maintenance. This layer will allow staff to create records and maintain our sign inventory in a much more efficient manner. The City does not currently have maps of our storm sewer system or records involving maintenance and flow patterns. By creating this layer, the City will be able to conduct/record maintenance and plan for future projects and interconnectivity in the system. The City plans to add additional layers in the future including flood plain maps, zoning maps and a street maintenance program.

The Nebraska City Utilities department which delivers electrical, natural gas, water and wastewater services to the community is also working with GIS Workshop, Inc. to plot out their infrastructure and records on this system. Some of this information will not be available to the public for security reasons. The information will be password protected and will be made available to all key city staff. By putting this information on GIS including all maintenance records and data, city staff will be able to much more efficiently conduct maintenance, quickly view records and service connections. The Nebraska City Utilities' service territory extends beyond the corporate limits of the City, extending into Lancaster and Nemaha counties. Through collaboration with these governmental entities, this additional data will also be available.

Through a partnership with the Otoe County Assessor's Office, all of the data will be overlaid onto parcels in the City. This collaboration will allow City and Utility staff to contact residents as service interruptions occur and to conduct planning and zoning research.

The GIS System will be generated and maintained by GIS Workshop, Inc.

The City of Nebraska City feels that this system will be useful and a time saver for the City, by being available on the Internet it enables the general public to access this information at any time.

2. Please describe who the beneficiary or recipient of this service will be.

The City of Nebraska City, 2,700 residential property owners, Banks, Insurance Companies, Appraisers, Realtors, Engineering firms and Contractors will have access to the information at no extra cost to them. Efficiencies realized from 24/7 access will result in increased productivity and cost savings within the City Departments.

3. What is the projected activity for access or use of the proposed service?

The WebGIS is internet-based so access will be available to the general public via a web address. Sensitive data is able to be password protected so that departmental staff may access even though public access may need to be limited. City of Nebraska City Offices will have access to all information at no cost to them. The public will be notified of the WebGIS site by mailings, newspaper notices/press releases, through the City's website and informing people in person at the City Offices.

4. Timeline for implementation of the project (a specific completion date (MM/YYYY) must be provided). Grant funds may lapse if not expended prior to completion date.
March 15 2012

5. Please specify in detail your, or any other Subdivision(s) contribution to the project (financial, labor, equipment etc.). Provide specific dollar amounts.

City of Nebraska City staff will be assisting in compiling information and maintaining data collection to assure all information is correct and up to date. GIS Workshop will be compiling data and designing and building the GIS site in tandem with the City. Affected City staff will participate in GIS training provided by an approved Esri trainer from GIS Workshop, Inc.

6. Is other funding available for this project (explain)? Please explain what efforts your agency has made to obtain funding.

Yes, the City of Nebraska City and the Nebraska City Utilities both plan to dedicate general operating funds to the completion and ongoing maintenance of the project beginning in FY12.

7. Does the project require additional statutory authority (explain)?

No

8. Specify (in detail) what the grant money will be used for. Include a complete cost breakdown of the project. Please attach bids from vendors (if applicable) and describe the relationship, if any, between a vendor and you or your agency.

We are in discussions with vendor GIS Workshop, Inc. to develop a GIS for City of Nebraska City. We anticipate a proposal for the development of a GIS for City of Nebraska City, which will include updating of the GIS and development of a WebGIS site for the City. The total amount of grant money awarded to City of Nebraska City will be used to defray the following initial GIS development expense.

Development of GIS by GIS Workshop, Inc - \$50,000

9. Why the grant money is needed for the project, and, if applicable, how will the service be sustained once the grant money is expended?

The grant money is needed to allow the public access to important City information and to increase efficiency in the future. The City of Nebraska City will agree to maintain the program and any fees that go along with it to keep the system up and running for future years through budgeting of this City-wide GIS project and by making it a priority.

10. Should available fund not allow the NSRB to grant the full amount requested, but a reduced amount, would this project still be financially feasible?

The full amount will be necessary to initially defray the cost to City of Nebraska City of implementing the GIS. The City fully anticipates being able to fully meet annual maintenance costs of the GIS after it is implemented.

11. Please describe how this project will enhance the delivery of government agency services and improve the public and/or business access to those services.

The GIS System will enhance the ability to retrieve up-to-date information faster and more efficiently via a web-based application. It will give the ability to access critical data, not only to the public but also to City Offices and the many different entities that we serve and interface with daily.

12. Please describe how this project will improve the efficiency of agency operations.

The program will better serve the public with the ability to acquire information in a timely manner. The office staff will realize significant time savings which will provide us the time needed to perform other tasks. The system will also allow staff to meet federal requirements in a variety of areas in a much more efficient manner than keeping paper records or drawing on existing maps. Cost savings will occur as a result of these efficiencies.

13. Please describe how this project will facilitate collaboration between either local, state, federal and/or other public or private institutions.

This program will allow for faster service among the offices of the City of Nebraska City, Nebraska City Utilities and the Otoe County Assessor. There are also other agencies which will benefit from this program such as the Nebraska City Tourism & Commerce office, Nebraska City Area Economic Development, and the many entities and organizations that we serve and partner with.

14. Does the project involve the licensing, permitting or regulation of business? If yes, explain how the project or service will allow integration with the State of Nebraska's Business Portal, located at:

<http://www.nebraska.gov/index.phtml?section=business>, and the One-Stop Online Business registration system located at: <https://www.nebraska.gov/osbr/index.cgi>

No. This is not applicable.

15. Community Support. Please include letters of support to document the public expression that has caused you to implement this application.

See letters of support attached to this application.

Part III. Technical Information

1. Describe the hardware, software, and communications needed for this project and explain why these choices were made.

The construction of the Website is included in the fee with GIS Workshop. City of Nebraska City will purchase the additional years of maintenance fees, which will include unlimited maintenance, which will continue to keep this program current, and to continue to be beneficial. Access to the data from the GIS program will be throughout the Internet.

City of Nebraska City believes that this program is necessary to keep the public up to date and informed and to increase efficiency across all departments.

2. Address any technical issues with the proposed technology including:

- **Conformity with general accepted industry standards. Projects which interface with other state systems (such as distance learning systems) must meet NITC technical standards and guidelines. (The NITC standards and guidelines are located at: <http://www.nitc.state.ne.us/standards/>).**
- **Compatibility with existing institutional and/or statewide infrastructure.**
- **Reliability, security and scalability (future needs for growth or adaptation).**

The GIS system will interface with IT and Arc Map systems in use in City of Nebraska City today.

The proposed software/technology is Esri based. This is the industry standard GIS technology in Nebraska today.

Our proposed vendor, GIS Workshop, Inc. has stated to us (informally) that any systems or data they construct meets all the applicable NITC and FGDC standards for GIS data and metadata.

3. Describe how the project will comply with the State's Technology Access Clause: meet all applicable Nebraska Information Technology Commission Standards and Guidelines. A copy of the Standards are available at:

<http://www.nitc.state.ne.us/standards/index.html>, under 2. Accessibility Architecture.

The WebGIS for City of Nebraska City will be built and designed by GIS Workshop, with adherence to standards established by the State of Nebraska. The system will comply with any other applicable NITC items.

4. Describe how technical support will be provided.

GIS Workshop will edit and maintain the GIS data on our redundant servers. City of Nebraska City will be responsible for sending updated information to GIS Workshop.

**Supplemental Questionnaire for State Funded Entities on
Land Record Information and Mapping-Related Grant Applications**

Numbers refer to specific NITC Land Record Information and Mapping Standards

For a complete listing of these standards and guidelines please see:

http://nitc.nebraska.gov/gisc/docs/LRMS_20060127.pdf

- 1.1 Datum.** Local government multipurpose GIS/LIS (Geographic Information System/Land Information System) and their associated geospatial data layers should be based on the North American Datum (NAD) 83 and the North American Vertical Datum (NAVD) 88. Any existing systems developed based on other datums should consider conversion to this datum.

Please describe how you would comply with this standard if you are awarded a Nebraska State Records Board grant.

GISW has developed Otoe County's land record GIS, including the Parcel, Section Points, Section Lines, and Sections feature classes based on NAD83 and the NAVD88. Any CAD data available for the towns in Otoe County such as the city of Nebraska City has been converted to NAD83 and NAVD88. The City of Nebraska City will be utilizing this information in their WebGIS.

- 1.2 Projection.** The Nebraska Plane Coordinate System, NAD 83, should be used as the primary map projection system for the recording of positions in local land-data systems in Nebraska. Selection of any other projection should be done reluctantly and only after most careful consideration. The plane coordinate values for a point on the earth's surface may be expressed in either meters or feet.

Please describe how you would comply with this standard if you are awarded a Nebraska State Records Board grant.

GISW has developed Otoe County's land record GIS, including the Parcel, Section Points, Section Lines, and Sections feature classes in NAD83 Nebraska State Plane Feet Projection. Cadastral Maps used during the GIS parcel data creation process are georeferenced in the NAD83 State Plane Feet Projection. Any CAD data available for the towns in Otoe County such as the City of Nebraska City were converted to the NAD83 Nebraska State Plane Feet Projection. The City of Nebraska City will be utilizing this information in their WebGIS.

- 1.3 Geodetic Control.** GIS/LIS systems developed with the goal of providing a multipurpose cadastre for local government use should be referenced to a local geodetic reference framework that is properly connected to the National Spatial Reference System (NSRS).

Please describe how you would comply with this standard if you are awarded a Nebraska State Records Board grant.

GISW has used the Nebraska State Plane Feet Coordinate System based on NAD83 to seamlessly integrate with the NSRS in the development of the Otoe County Land Record GIS. The City of Nebraska City will be utilizing this information in their WebGIS.

1.4 Public Land Survey System Control.

- 1.4.1 PLSS Geodetic Framework.** For all land in Nebraska that is subdivided according to the Public Land Survey System (PLSS), the geodetic reference framework for the cadastre should be the section corners of the PLSS for each section.

Please describe how you would comply with this standard if you are awarded a Nebraska State Records Board grant.

GISW developed a Section Points feature class as the initial step in the creation of the Otoe County Parcel feature class. The Section Points feature class contains a point feature for each section corner within the boundary of Otoe County and was used to georeference the Otoe County Cadastral maps. The City of Nebraska City will be utilizing this information in their WebGIS.

- 1.4.2 Locate, Monument, and GPS Primary Corners.** At a minimum, local government entities developing a geospatial land information system should initially invest in a precision Global Positioning System (GPS) survey to locate, re-monument as necessary, and obtain the geographic coordinates of the major boundary defining corners that legally define the boundaries of their county jurisdiction(s). These precision GPS survey coordinates for the boundary defining corners should be collected and integrated as framework data into the land information system. This effort should be coordinated with officials from the adjacent county(ies) to ensure agreement on the location of the shared corners.

Please describe how you would comply with this standard if you are awarded a Nebraska State Records Board grant.

GISW utilized all GPS corner control that the Surveyor provides. The system is constructed to incorporate new corner and quarter control the Surveyor may collect in the future. Incorporation of new survey control into the GIS over time will gradually "tighten" the accuracy of the GIS. The base dataset will utilize the NAD83 Nebraska State Plane Coordinate System [NESPCS]. The City of Nebraska City will be utilizing this information in their WebGIS.

- 1.5 PLSS Base Map.** Local governments considering the development of a multipurpose GIS, should consult with the Nebraska State Surveyor's Office to locate and access the best available data on the Public Land Survey System (PLSS) for their geographic area. To assist the State Surveyors Office in maintaining a repository of the best available PLSS data, local governments participating in the Nebraska Land Information System Program should share any enhanced PLSS data, for their geographic area, with the State Surveyors Office so that it might be integrated into the PLSS repository database.

Please describe how you would comply with this standard if you are awarded a Nebraska State Records Board grant.

GISW utilized all GPS corner control that the Surveyor provides. The system is constructed to incorporate new corner and quarter control the Surveyor may collect in the future. Incorporation of new survey control into the GIS over time will gradually "tighten" the accuracy of the GIS. The base dataset will utilize the NAD83 Nebraska State Plane Coordinate System [NESPCS]. Any GPS corner control that GISW obtains for Otoe County will be made available to the State Surveyors Office. The City of Nebraska City will be utilizing this information in their WebGIS.

- 1.6 Ortho-base (Aerial Layer) or Base Maps.** Both a Public Land Survey System base map and an orthophoto (surface features) base map should be used to provide the geospatial reference framework upon which a local government multipurpose land information system is developed. Both base maps should be tied to the National Spatial Reference System and have a level of spatial accuracy appropriate to the range of applications planned for a given area.

Please describe how you would comply with this standard if you are awarded a Nebraska State Records Board grant.

GISW obtains all available years of Farm Service Agency (FSA) National Agricultural Imagery Program Orthophoto Imagery for Otoe County to use in the development of the Land Record GIS. The latest FSA Orthophoto Imagery will also be available on the Otoe County Web GIS. The City of Nebraska City will be utilizing this information in their WebGIS.

1.7 Map Scale and Spatial Accuracy.

- 1.7.1 Minimum Horizontal Accuracy Standard.** Public entities developing a GIS/LIS program should conduct data collection and development in a manner to achieve at least the minimum level of horizontal spatial accuracy consistent with the National Horizontal Map Accuracy Standards corresponding to a 1:12,000 (1"= 1,000') scale map (90% of the "well defined" horizontal locations must be within ± 33.3 ft. of their real world location).

Please describe how you would comply with this standard if you are awarded a Nebraska State Records Board grant.

1.8 Legal Lot and Parcel Layers. Two graphic data layers are necessary to provide the foundation for a wide variety of local government GIS/LIS applications that involve land subdivision and/or ownership.

a). The legal lot layer consisting of legal land subdivisions. These are aliquot portions of the PLSS, filed subdivision plats and irregular tracts defined by filed deeds.

b). The parcel layer that defines ownership tracts of land. These tracts may group multiple legal lots into one taxable account and that typically represents the boundaries of a landowner's property. These data layers include locational coordinates for points representing property corners, lines between property corners representing property boundaries and closed polygons representing the property area.

Please describe how you would comply with this standard if you are awarded a Nebraska State Records Board grant.

1.9 Parcel Identifiers.

a). Each county/region should adopt a system of unique, permanent feature identifiers (PID) that provide the link between each graphic land ownership parcel polygon and the attribute information (ownership, size, situs address, value, etc.) related to that specific land ownership property parcel.

b). A county/region PID system must be designed in a manner such that a unique, statewide PID can be defined and maintained for each property parcel by using the county FIPS code (Federal Information Processing Standards Publications) as a prefix to the county/region's PID system.

c). To maintain this unique one-to-one association between a specific property parcel and its related attribution information, new PIDs should be assigned whenever a property parcel is altered by either splitting it into two or more parcels or by combining two or more parcels to form a new parcel. The previous PIDs should not be used for these new modified parcels, but the historical PID associations should be maintained through a parent/child PID reference table.

Please describe how you would comply with this standard if you are awarded a Nebraska State Records Board grant.

Otoe County has established a unique PID system which GISW used to populate the PID field for each Parcel in the county's Parcel feature class attribute

information. GISW used the established PID system in Otoe County and will obtain new PIDs from the Otoe County Assessor for future splits.

- 1.10 Spatial Data Format.** A broad range of state and regional applications require property parcel information. Many of these applications require the combining of data across jurisdictional boundaries. To facilitate these applications, the property parcel spatial (graphic) data should be either maintained in a manner that allows it to be readily integrated in a common geographic data format (i.e., shapefile) or be capable of being exported into a common geographic data format (i.e., shapefile), while including the parcel identifiers.

Please describe how you would comply with this standard if you are awarded a Nebraska State Records Board grant.

The Otoe County Land Record GIS was developed using Esri Software. The data will be stored as feature classes in a personal geodatabase format. These feature classes and associated attribute information (i.e., PID) can be exported out of the geodatabase into a shapefile format or easily integrated with a shapefile. The City of Nebraska City will be utilizing this information in their WebGIS.

Data Sharing-Data Integration. A major focus of the State Records Board grant program is enhancing access to public records. Not only the general public, but also other public agencies benefit from facilitating access to public records. As noted in the NITC standard above there are numerous applications for which substantial benefits can be derived by integrating data across jurisdictional boundaries. Please describe whether your agency would be willing to share periodic updates of GIS-enabled property parcel data, such that other agencies might integrate that data into statewide or regional datasets to provide a resource for public agencies and the general public and any restrictions that you anticipate might apply. *(Note: this is not a current NITC standard, but is an interest of the State Records Board)*

The WebGIS format that we have selected from GIS Workshop allows access to valuable Otoe County data. The internet-based site is available to all agencies and we have received positive feedback from these agencies by our decision to make the information available to them.

- 1.11 Metadata.** All geospatial land record databases, and their associated attribute databases should be documented with Federal Geographic Data Committee (FGDC) compliant metadata outlining how the data was derived, attribute field definitions and values, map projections, appropriate map scale, contact information, access and use restrictions, etc.

Please describe how you would comply would this standard if you are awarded a Nebraska State Records Board grant.

GISW will create Metadata for each geospatial database developed for Otoe County/City of Nebraska City containing information about the how the data was created, the spatial projection, the appropriate map scale, attribute field definitions, contact information, any data use or access restrictions.

1.12 Attribute Data. To provide the foundation necessary for a wide variety of local government applications, non-graphic, attribute data should be organized within the GIS/LIS, which describes individual property parcels relative to their basic parcel characteristics, tenure, value, history, buildings and units within the parcel, and tax status. In most cases, much of this attribute data will already exist in separate databases within a variety of local agencies and should be tied to the graphic property parcel via the unique PID. To meet a range of state and regional applications that require property parcel information, the following types of property parcel data should be maintained (for every property parcel?) and (be) available in a manner that allows it to be harvested, translated, and integrated into a statewide property parcel attribute dataset.

PID# Parcel identifier (county FIPS code plus local government PID)
 Situs Address Address of parcel (may be multiple fields)
 Owner Address Address of property owner (may be multiple fields)
 Township Township #
 Section Section #
 Range Range #
 Range Direction East or West
 Legal Description Narrative legal description of parcel
 Assessed Value Total assessed value of property (land and improvements)
 Land Value Assessed value of land
 Area (Deeded) Area of parcel according to the deed
 Property Class (Res, Ag, Com, Rec., Ind.)
 Property Sub-class i.e., Ag (Dryland, Irrigated, Grassland/Pasture, Waste)
 Ownership type Federal, State, County, Private, Tribal, Exempt, Other and Unknown
 Tax District County ID plus Tax Dist. #
 School District State number definition
 Landuse Actual landuse with NPAT defined general categories
 Property Parcel Type ... NPAT defined categories
 Status (Vacant, Improved or Improved only) (NPAT defined)
 Location (Urban, Sub-urban, Rural)(NPAT defined)
 City Size 1st class, 2nd class, primary, metro, or village
 Source Document Sales/transfer reference or document (book & page)
 Recording Date Most recent sales/transfer date
 Sales Value Most recent sales value

Please describe how you would comply with this standard if you are awarded a Nebraska State Records Board grant.

After completion Otoe County's GIS Parcel Layer, GISW populated the Parcel Identification Number for each Parcel. This allows for a simple join of the Parcel layer with the Assessor's CAMA database, which contains the information listed above, based on the Parcel ID Number. The City of Nebraska City will be utilizing this information in their WebGIS.

Collaboration. In most instances, the development of a local government GIS system and the related geospatial data involves a fairly costly initial upfront investment. These costs are frequently offset by the benefits gained through coordination and collaboration that an integrated GIS can bring to local government and related public entities. For example, with property parcel data and maps the County Register of Deeds, the County Surveyor, and the County Assessor all frequently maintain and make changes to aspects of this data and the data is also commonly used by local public safety agencies, local emergency responders, local transportation agencies and state agencies such as the Dept. of Revenue, Dept. of Roads, and Game and Parks Commission. Please describe the level and nature of any multi-agency/department involvement in the planning and proposed management of your proposed GIS system.

This program will allow for enhanced service among the offices of the City and County. The WebGIS format will allow departments to easily and quickly access information and use valuable on-line tools in the daily operation of their department. It will leverage the County's investment in their own GIS and promote collaboration between the City and County through the sharing of data and communication. The WebGIS system will also grow with the City and County as more departments add their data on-line over the course of time, in a phased approach. There are many other agencies which will benefit from this program, as well as the public.



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April 11, 2011

Nebraska State Records Board
440 S. 8th Street, Suite 210
Lincoln, NE 68508

To Whom It May Concern:

I write this letter in support of the City of Nebraska City's application for the State Records Board Grant to Improve Access to Public Information.

As Executive Director of Nebraska City Tourism & Commerce, I understand the importance of community involvement in the governmental process and the ability to provide up-to-date, relevant information to the citizens. Currently, the City of Nebraska City is able to provide only a limited amount of information to its citizens through paper copies which generally require a personal visit to City Hall.

Through the implementation of a web-based Geographic Information System, the City will be able to provide a tremendous amount of information to its citizens through their home or work computers. This will create greater efficiencies for city staff and citizens alike.

I support the City's application for these grant funds to implement a GIS program in the community and commend them for taking this important step in increasing public access to information.

Sincerely,

Rebecca Turner
Executive Director, Nebraska City Tourism & Commerce

NEBRASKA CITY AREA Economic Development Corporation

SERVING OTOE COUNTY

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Nebraska City, NE 68410
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Stephanie Shrader, Executive Director
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April 12, 2011

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Nebraska State Records Board
440 S. 8th Street, Suite 210
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Nebraska City Upholstery & Design
Melissa Turner
Nebraska City Tourism & Commerce, Inc.

Dear State Records Board Members:

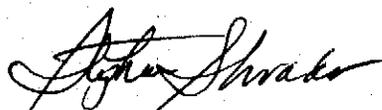
This letter in support of the City of Nebraska City's application for the State Records Board Grant to Improve Access to Public Information.

As Executive Director of Nebraska City Area Economic Development Corporation, I understand the critical importance of pertinent city information being available to our citizens as well as prospective employers. A web-based Geographic Information System will not only provide efficiencies in my office but would also be utilized by companies seeking information about particular development sites or basic infrastructure information in our community.

The use of a web-based Geographic Information System will also create efficiencies in the delivery of information. Currently, the City keeps the majority of their records on paper maps and files. By using GIS, the City will be able to more quickly provide this crucial information rather than the antiquated and bulky paper map system currently in use in the community today. This system should free up staff time and enable faster delivery of information to the public.

I support the City's application for these grant funds to implement a GIS program in the community and applaud their efforts to initiate a system of this type.

Sincerely,

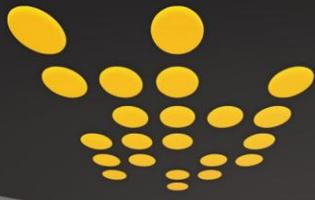


Stephanie Shrader
Executive Director
Nebraska City Area Economic Development Corporation

Government Partners
City of Nebraska City
Otoe County
Nebraska City Utilities
Platinum Partners
St. Mary's Community Hospital
Gold Partners
Arbor Bank
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Cargill Value Added Meats
Concrete Industries
Farmer's Bank & Trust Co.
VanderVeen & Goracke, CPA
Silver Partners
American National Bank
Commercial State Bank
Hampton Commercial Construction, Inc.
HWS Consulting
JEO Consulting Group
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Olsson Associates
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Schemmer Associates
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Windstream Communications
Tri-State Office Products
Century21-Bremer Agency
Bronze Partners
Heartland Community Bank
Borns Financial Planning, Inc.
Professional Mortgage Services
Miller-Monroe-Farrell/Home Real Estate
JJ Palmtag
Nebraska Business Development Center
National Arbor Day Foundation/Lied
Lodge Conference Center
Affiliate Partners
Dan Gittinger
Compound Profit Advisors



Otoe County: A Place To Grow



NEBRASKA CITY

DRAFT PROPOSAL Geographic Information Systems

April 20, 2011



Project No. 0379-001

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INTRODUCTION

Geographic Information Systems (GIS) are valuable for managing large volumes of spatial information. GIS can increase staff efficiency while decreasing the number of inquiries from the public.

This proposal includes tasks for developing a GIS for the City of Nebraska City. The GIS will leverage data developed by Otoe County combined with readily available datasets from other agencies and field data collection to produce a comprehensive view of City assets. GISW will also provide a visually-pleasing WebGIS interface for City staff and the public to easily access the GIS dataset.

GISW will do the field data collection and then provide City staff with a mechanism to send updates to GISW for ongoing support. Effective GIS relies on quality data.

The WebGIS interface will function as a read-only tool for City staff to view GIS data from Otoe County, Nebraska Department of Natural Resources and several City layers. General information such as school districts and council wards will be available to the public and city asset information will only be available after logging in.

TASK DISCUSSION

TASK I: ASSESSMENT, PREPARATION AND SYSTEM DESIGN

The first task will be to accurately scope the project with City staff. GISW will work with City staff to create a detailed scope document. The scope document will include all the deliverable details to clearly set the project completion expectations.

TASK II: DATA DEVELOPMENT

ASSEMBLE GIS DATA FROM EXTERNAL SOURCES

Some of the data required for the comprehensive use of the GIS will be acquired from outside sources. Examples of these types of data include parcels from the Otoe County Assessor, street centerlines from the Otoe County E911 system, and ancillary data sets from additional sources. GISW will aid the City in acquiring the following data for use in the city-wide system. GISW recommends the City and Otoe County enter into a mutually beneficial data sharing arrangement for these data. Data costs (if applicable) are not included.

GISW will acquire the following existing data, process the data to include only those data within the City corporate boundary (plus a two-mile buffer), and incorporate these data for implementation into the geodatabase:

- 1) CENTERLINE – from Otoe County E911
 - a) Streets – Including all attributes
- 2) PARCELS – from Otoe County Assessor
 - a) PID
 - b) Owner
 - c) Owner Address
 - d) Situs Address
 - e) Legal Description
- 3) FLOODPLAIN – from Nebraska Depart of Natural Resources
 - a) Floodplain zone

- 4) IMAGERY – from GIS Workshop
 - a) 2010 FSA NAIP 1m Color
 - b) Historical imagery for time slider
- 5) PLSS – from GIS Workshop
 - a) Sections – only those intersecting City boundary
- 6) RAILROAD LINES – from national database
 - a) Name of railroad

*****Please Note: These data are a preliminary list only. GIS Workshop will comprise a final list after further consultation with the City.*****

FIELD DATA COLLECTION

Our recommendation for field data collection is to contract the task to GISW staff. If requested, GISW will develop a proposal to have GISW staff training a City intern to do data collection. Other GISW clients, such as the City of Wayne, have used interns to do data collection in the past and it did not work well for them. We will use the latest Trimble mapping grade GPS technology that retails for over \$8,000 per unit. The new technology improves accuracy in urban and wooded environments. Our staff is expert at data collection.

GIS Workshop field technicians will collect street sign and storm sewer inlet/outlet locations and associated attribute information. The City does not have an accurate estimate of City-owned signs or storm sewer inlets/outlets/culverts. Since the number of features is unknown the totals in this proposal are estimates based on a fixed cost per number of features collected. A comprehensive cost estimate will require more scoping discussion.

STREET SIGNS

GIS Workshop will collect the following attribute information (in addition to the GPS location information) for the sign layer:

- 1) SIGNS
 - a) Basic (included in cost estimate)
 - i) SignType
 - (1) MUTCD (ID)
 - (2) Legend (Sign graphic for map)
 - ii) Condition
 - iii) Road name
 - iv) Photo link
 - v) Comment
 - b) Detailed (available, would require extra time and is not included in the attached cost estimate)
 - i) Orientation of sign
 - ii) Offset from pavement edge
 - iii) Position (left or right)
 - iv) Direction of travel
 - v) Sign shape
 - vi) Class
 - vii) Background color
 - viii) Backing
 - ix) Reflectivity meter reading

- x) Height above ground
- xi) Width
- xii) Height
- xiii) Owner
- xiv) Post
 - (1) Number of posts
 - (2) Type

At project completion GISW will load the sign data into the SimpleSigns database (see note in the Project Cost section). City staff expressed interest in using SimpleSigns for ongoing maintenance tracking. This database will provide a convenient way for City staff to update sign information and send the data back to GISW.

*****Please Note: These data are a preliminary list only. GIS Workshop will comprise a final list after further consultation with the City.*****

STORM SEWER FIELD DATA COLLECTION

GIS Workshop will utilize the following process to identify and collect these feature classes:

- 1) GISW will provide paper maps to City staff
- 2) City staff will review the paper maps and pre-locate all known storm sewer pipes, culverts, inlets and outlets
- 3) GISW will utilize mapping grade Trimble GPS equipment to collect location and attribute data
- 4) GISW will attribute the storm sewer inlets/outlets/culverts
- 5) GISW will take a photo of each stormwater inlet/outlet/culvert and associate the photo with the correlated feature
- 6) After collection and processing, GISW will provide the City with a map identifying the location of all collected storm sewer inlets/outlets/culverts
- 7) The City will have 4 weeks to identify any missing features (those features not collected in the field)
- 8) GISW will collect those identified missing features as identified and located in the field by the City and integrate them into the geodatabase
- 9) The City will be responsible for identifying, locating, and integrating any subsequent missing features or new features into the geodatabase

1) INLETS

- a) Street and bridge inlet (point)
 - i) Length
 - ii) Photo link
- b) Outlet
 - i) Requires scoping discussion

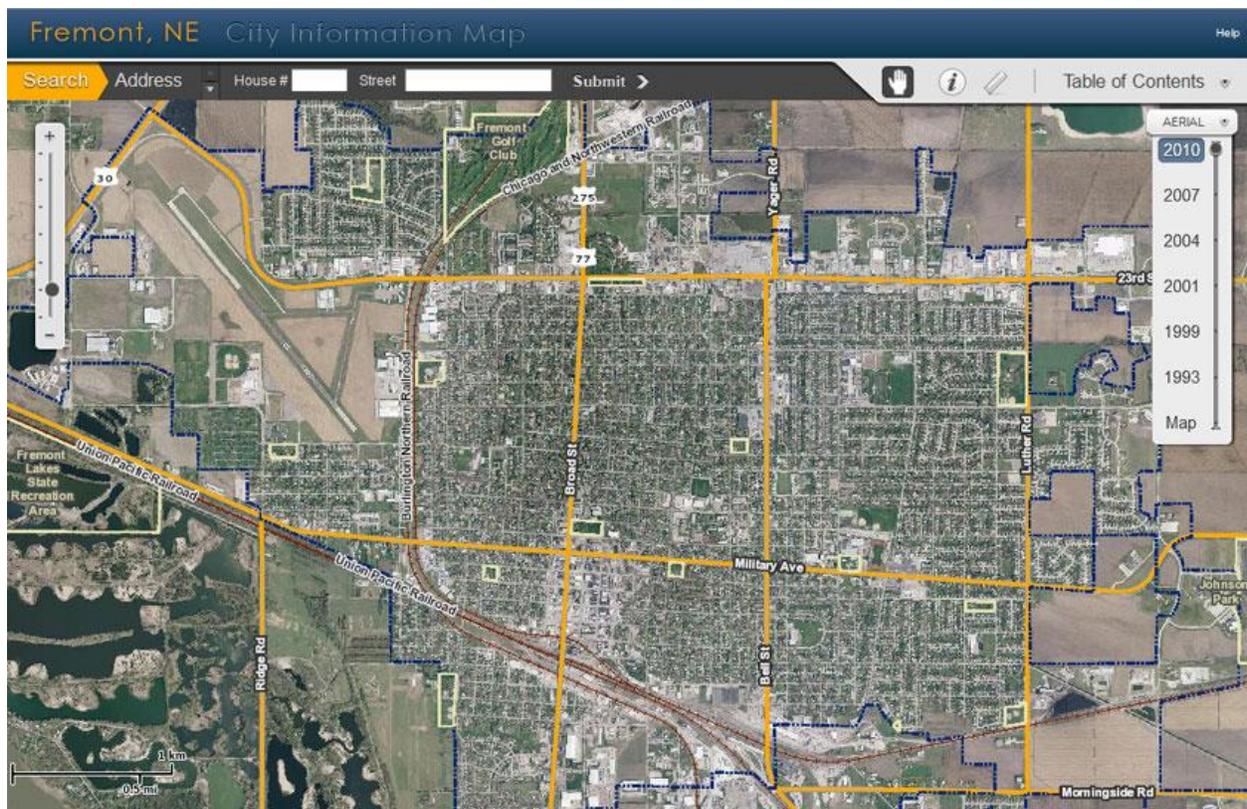
2) CULVERTS

- a) Inlet (point)
 - i) Length
 - ii) Size
 - iii) Type
 - iv) Photo link
- b) Outlet (point)
 - i) Photo link

TASK III: WEBGIS

GISW will load the GIS data layers into our WebGIS application template. The application will provide easy access to your GIS data without the need for complicated software. Users will be able to search for parcels by address or parcel identification number. If desired, the site can be protected with a common username and password for City staff.

The graphic below illustrates the GISW template. The template is a clean and simple interface that functions similar to popular websites such as Google Maps. The template includes a tool for panning around the map, a tool for identifying features (clicking on a feature opens up a window with more information) and a tool for measuring distance and area. The Table of Contents lists all available layers and allows the user to turn specific layers on/off. The historic aerial photography time slider allows users to see changes through space and time.



DISCLAIMER/SPLASH SCREEN

The application will load with a splash screen disclaimer using language provided by the City. The map will be “grayed out” and no interaction will be allowed until the user accepts the terms of the disclaimer. Once the terms of the disclaimer are accepted the splash screen will not appear to the user again for the remainder of that session.

PUBLIC INFORMATION DATA LAYERS

GIS is a valuable tool for presenting government information to the public. The GISW WebGIS template will provide the capability to share many data layers with Nebraska City residents, as well as potential businesses. WebGIS greatly reduces the number of phone calls for City staff and residents benefit from 24/7 access to information. The following data layers may be included in the application. All data for these layers will be provided by the City in paper or digital format for GIS conversion.

- 1) CITY LIMITS
 - a) Name
- 2) COUNCIL WARDS
 - a) Number or name
 - b) Name of elected official
 - i) Address, if desired
 - ii) Telephone, if desired
 - iii) Email address, if desired
 - iv) Photo, if desired
- 3) SUBDIVISIONS
 - a) Name
- 4) VOTER PRECINCTS
 - a) Name
- 5) ZONING
 - a) Zone
- 6) PARKS
 - a) Name
- 7) SCHOOL DISTRICT BOUNDARIES
 - a) Name
- 8) SCHOOLS
 - a) Name
- 9) POINTS OF INTEREST
 - a) Name

STAFF LOGIN

City staff will access a password-protected version of the WebGIS via a login link on the site banner. Logging in will give City staff access to asset management information such as signs and storm sewer layers.

TABLE OF CONTENTS

The Table of Contents gives the user complete control of the map layers. Each layer can be toggled on/off using checkboxes. Layers with more than one type of symbology have a plus sign next to them so the user can expand the list and see the details about each type of symbol.

The screenshot displays the 'Fremont, NE City Information Map' interface. At the top, there is a search bar with fields for 'Address', 'House #', and 'Street', and a 'Submit' button. The map itself is an aerial view with various colored overlays representing different data layers. A 'Table of Contents' panel is open on the right side, listing various layers with checkboxes and expandable icons. A callout box points to this panel.

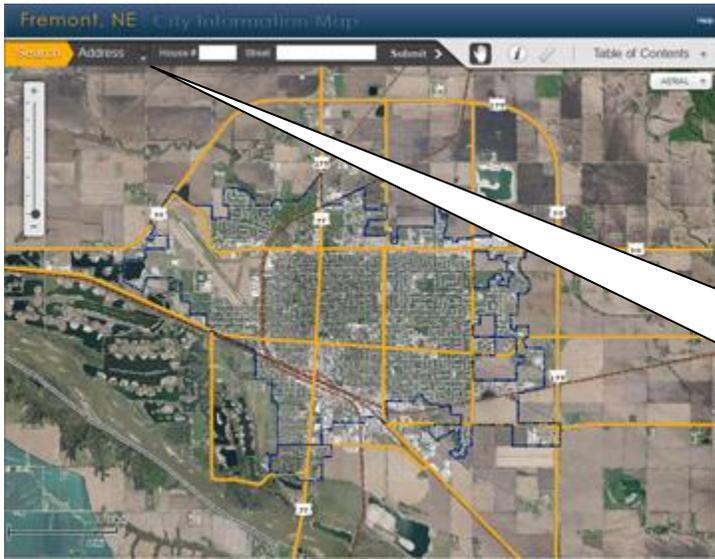
Table of Contents

- Parcels
- City Council Wards
- Voting Precincts
- Zoning
- Subdivisions
- School Districts
- School
- Parks
- Bus Routes
- City Limits
- County Line
- Two Mile Limit
- Major Streets
- Streets
- Floodplains
- Airport
- Railroad
- Lakes

The Table of Contents drops down from the menu bar. It lists all available data layers, includes toggle checkboxes for layer visibility and expandable lists for layers with multiple symbol categories.

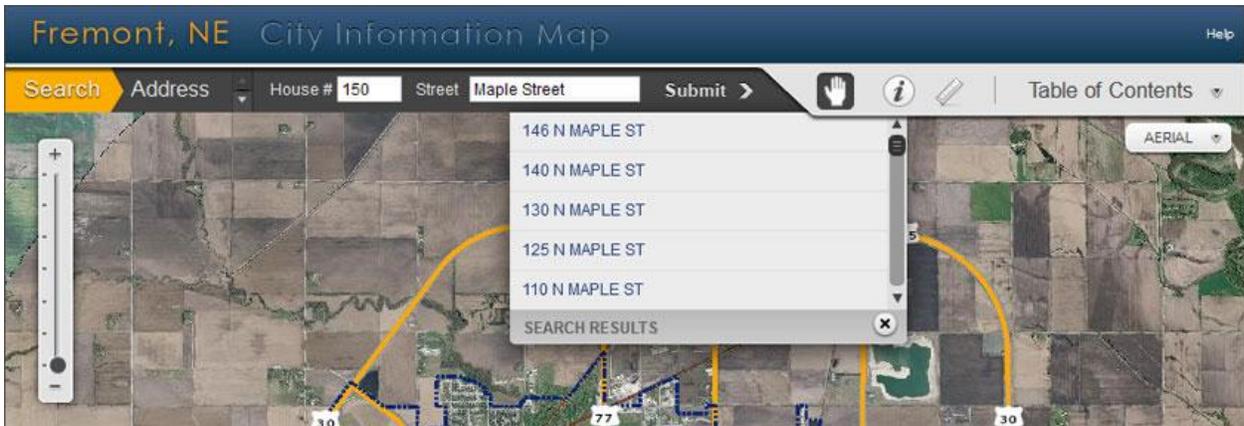
This list shows the public information layers.

MAP SEARCH TOOLS



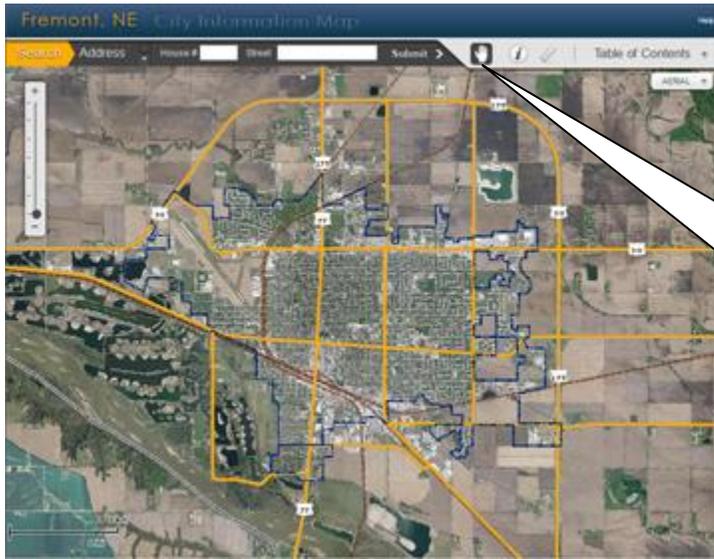
The default search method is by address. Parcel ID is the second option. Other searches may be incorporated at a later date via this drop down menu choice (name search, other ID, etc)

An address search bar will allow the user to zoom to a given address or parcel identification number. Once a user performs a search then a list of possible matches, if there is more than one possible match, will appear below the search box and allow the user to select a specific record that they wish to zoom to. If the search yields only one possible result, it will instead zoom to that result.



The application will “auto complete” any available address. This reduces the possibility of incorrect data entry on the part of the user.

MAP INTERACTION TOOLS



The default tool selection is the “Pan” button. The user may select the “ID” or “measure” tool at any time.

 PAN

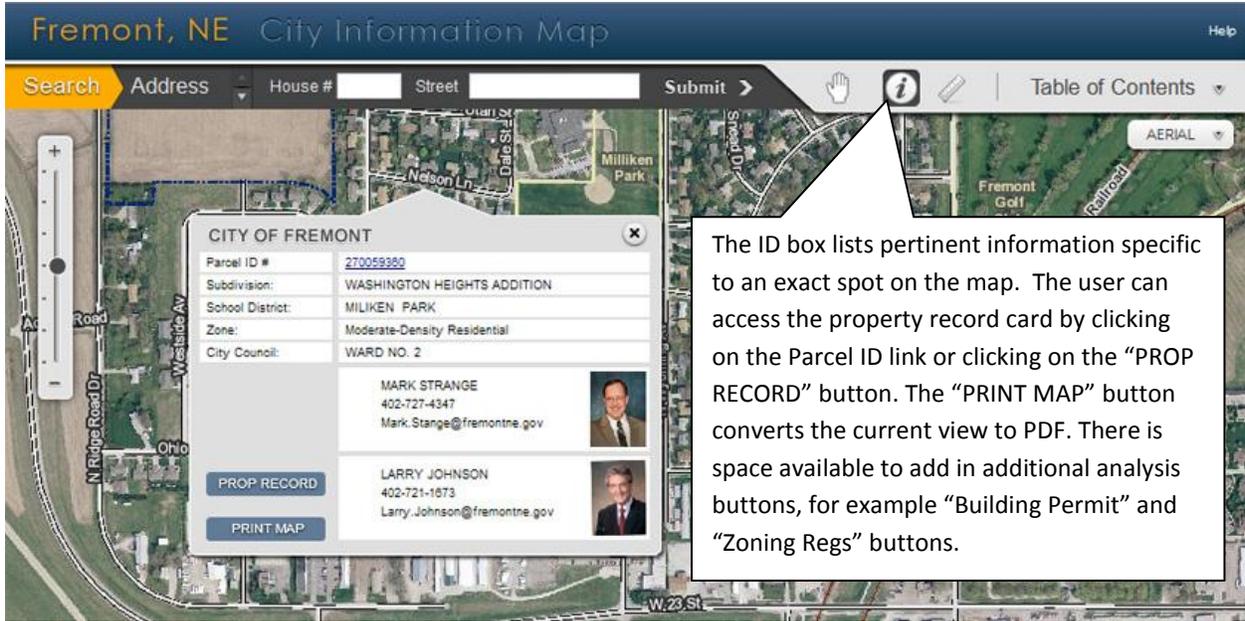
The pan tool allows for the user to pan around the map. This is the default button when the user first loads the WebGIS application.

 ID TOOL (PUBLIC VERSION)

When the user selects the ID tool and clicks on the map, the ID tool window will pop up. The pop-up window will contain information about the location the user selected, such as zoning, local council member, etc. This information will consist of the same information in the current pop window, but also contain:

- A link to the assessor property record cards (if available)
- Map print button
- Space for further enhancements, e.g., ability to locate all building permits for a property.

The new link to the assessor property record card will only be generated if a parcel id is present in the parcel layer provided by Otoe County. The link will open the assessor record in a new window. Also within the ID tool will be a link to print the map. The print map link will create and open a PDF document in a new window; it will contain an image of the current map extent along with the data that is displayed in the ID box.

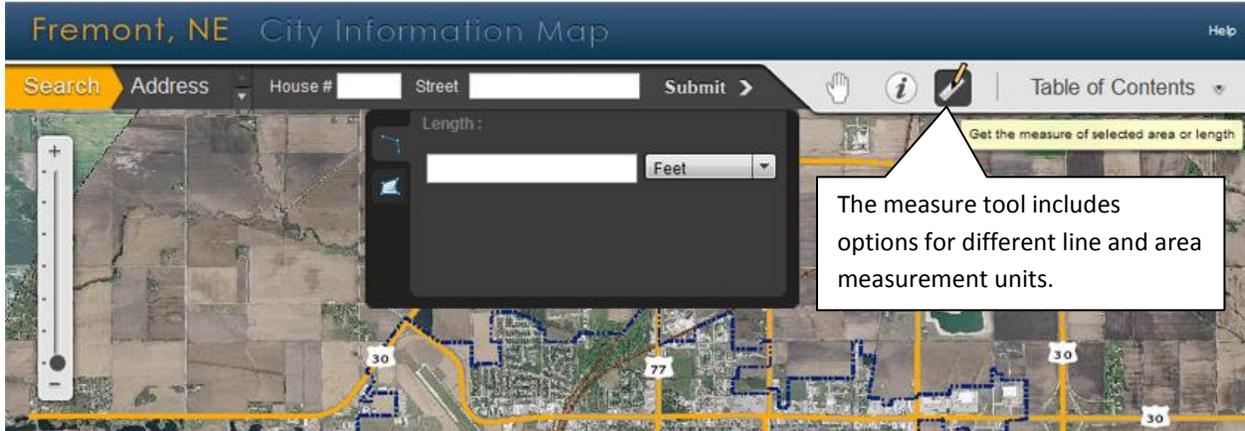


ID TOOL (STAFF VERSION)

If a City staff member has logged into the site the asset management layers will be available and an asset ID tool will allow them to retrieve information from protected layers. When the user selects the ID tool and clicks on the map, the ID tool window will pop up. The pop-up window will contain information about the location the user selected, such as signs, inlets, culverts, etc.

MEASURE TOOL

When the measure tool is selected, a small box will slide down from the tool bar allowing the user to choose what type of measurement and unit they would like to use.



TASK IV: ONGOING HOSTING, SUPPORT AND MAINTENANCE

DATA MAINTENANCE

GIS Workshop specializes in helping clients not only build their initial GIS database but keeping it up-to-date. Our ongoing support will help Nebraska City keep the WebGIS running at 100 percent. Bad data will quickly erode user confidence and the capability of the system.

City staff will provide updates using the following methods:

- 1) Updated SimpleSign database
- 2) CAD file of as-built assets
- 3) Excel spreadsheet with attributes and coordinates
- 4) Markups on paper maps

GISW will provide quarterly updates of the Otoe County parcel information on the WebGIS application (with approval from Otoe County).

PHONE AND ONLINE SUPPORT

GISW will provide telephone & online support for 12 months after final product delivery. Telephone and online support is provided for City staff only and is intended to aid city employees use the site. GISW will not supply user support to the public.

HOSTING

GISW will provide web-hosting services on our dedicated server farm in Lincoln, NE. This triple-redundant server farm ensures the City website will remain available to the public 24 hours a day, 7 days a week. Our hosting services also include system backup capabilities, providing the City with off-site backup capabilities for all data utilized in the City Website. Hosting fees include maintenance for the site such as bug fixes.

PROJECT COSTS

The following provides the total and detailed costs for the services and deliverables described in this proposal. Variations and/or additions to those tasks, features and services stated within are subject to additional costs at our standard consulting rate of \$125/hour. Any change orders must be documented, signed by both parties and added as an addendum to this scope with the additional costs for said change order added to the following costs.

Task	Cost
1. Assessment	\$2,000
2. Data Development	
a. External data sources	\$2,000
b. Signs (up to 2,000 features)	\$15,000
c. Inlets (up to 500 features)	\$4,250
d. Outlets (up to 200 features)	\$2,500
e. Culverts (up to 500 features)	\$4,250
3. WebGIS	\$20,000
Total	\$50,000
<i>Ongoing Hosting, Support and Maintenance*</i>	<i>\$9,500</i>
<i>* This fee will not be due until after the initial 12-month support period</i>	

Note: GISW will integrate sign data collection with the SimpleSigns database from Rowekamp Associates. City staff expressed interest in using the Simple Signs database for data collection and maintenance tracking. The SimpleSigns database retails for \$1,500 and the mapping component is an extra \$500 if the City wants additional capability. The SimpleSigns database cost is not included in this proposal. The City would purchase SimpleSigns directly from Rowekamp Associates.