

CITY OF NEWPORT
TASK ORDER NO. 4
TO ENGINEERING SERVICES AGREEMENT
FOR STREETS AND STORM SEWER
ENGINEERING SERVICES

This TASK ORDER NO. 4 to the Engineering Services Agreement dated January 3, 2012, hereinafter called Agreement, between the City of Newport, (CITY), and Civil West Engineering Services, Inc., (ENGINEER).

A. DESCRIPTION OF PROJECT

GIS Mapping Project Phase 1 as per the attached Proposed Scope of Services.

B. SCOPE OF SERVICES

CITY agrees to utilize the services of ENGINEER and ENGINEER agrees to perform GIS Mapping Services as required by the CITY. As per the Engineering Services Agreement, ENGINEER shall confirm the scope, schedule, and anticipated compensation for such services in writing prior to starting work (see attached Proposed Scope of Services). Email is acceptable written documentation.

C. CITY'S RESPONSIBILITIES

CITY to provide ENGINEER with the following information:

- CITY shall assign appropriate reviewers to the project and compile and provide a single consolidated, coordinated, legible, and internally consistent copy of written review comments to Consultant for all draft documents and work products, as appropriate.
- CITY shall provide timely review of submitted products (1-week turnaround), as appropriate.

C. COMPENSATION

1. CITY shall pay ENGINEER according to the fee schedule set forth in Exhibit A of the attached Proposed Scope of Services dated December 14, 2011.
2. Services provided under this Task Order may be a single project whose fee does not exceed One-hundred twenty thousand one hundred twenty four dollars (\$120,124.00), or multiple tasks may be performed under this Task Order as long as the total for all tasks does not exceed One-hundred twenty thousand one hundred twenty four dollars (\$120,124.00)

D. MISCELLANEOUS

All terms and conditions of the Engineering Services Agreement apply to this Task Order as though fully set forth therein. In the event of a conflict between this Task Order and the Engineering Services Agreement, the terms of this Task Order shall apply.

The parties do mutually agree to all mutual covenants and agreements contained within this Task Order No. 4.

CITY OF NEWPORT:

By: 
Title: City Manager
Date: 1-4-12

CIVIL WEST ENGINEERING SERVICES, INC.

By: 
Title: Vice President
Date: 1-6-12



PROPOSED SCOPE OF SERVICES

Date: December 14, 2011

Work Order Number:

To: Mr. Tim Gross, PE, Public Works Director, City of Newport

From: Garrett Pallo, PE, Principal, Civil West Engineering Services, Inc.

RE: **GIS Mapping Project – Phase 1: Scope of Services**
Civil West Project Number: 2302-010

This memorandum is provided to summarize the proposed scope of work, fee, schedule and other project issues related to the first phase of GIS Mapping for the City of Newport.

Background Summary

Like most communities, the City of Newport provides public infrastructure services to the residents in the City. This includes water, wastewater, stormwater, and transportation services. Having the best and most accurate information about these utilities is critical for the proper management and maintenance of the infrastructure systems. The most critical information is accurate mapping and information about the individual system components.

The City completed an aerial mapping projects in the late 90's that has been used for mapping purposes. However, the mapping lacks information on most of the critical infrastructure elements. Other information on the mapping is only approximate and has not been field located or confirmed.

A proper GIS system will include two major components or activities:

1. Infrastructure elements are to be accurately located and "placed" on the map. This is most efficiently accomplished through the use of GPS surveying tools. This equipment can be used to locate all of the elements spatially within a relatively small margin of error. This would include locating manholes, catch basins, water valve lids, meter boxes, fire hydrants, culvert ends, and other infrastructure elements.
2. Each element should be described using attribute information. This might include information such as size, color, depth, condition, make, model, etc. The amount of information that can be "attached" to each infrastructure element is endless and only limited by the ability to obtain the information.

By having accurate mapping with attribute information attached to the mapping elements, the City can utilize software to manage, organize, query, and track their infrastructure systems. This can include taking inventory, tracking maintenance needs, locating specific items, and much more. The uses of a GIS system are many and limited only by those using the software to manipulate and extract the data.

Developing a proper GIS system for the City of Newport is likely to take several years and a great deal of effort. The City is committed to developing a GIS system and is prepared to invest in this first phase of the project.

The purpose of this scope of services memorandum is to describe the steps, tasks, costs, and anticipated schedule that will be utilized for the completion of this first and most important phase of development for the Newport GIS system.

Goal for the Project

The main goal for this project is to complete the first phase of work on the development of a GIS system for Newport. This will include an organizational step to plan the remaining steps of the project as well as data collection and data management efforts.

Part A: Scope of Work

The following tasks have been identified to be used to track project progress during the planning project. Each task will be assigned a certain number of man hours for completion. While there may be many subtasks included within these major task areas, only the major tasks will be discussed below.

I. Newport GIS Mapping Project: Phase 1 - Scope of Services

- 1. Task 1 – Project Management and Administrative Services** – This task includes administrative and project management efforts related to the management of this project. This shall include processing of paperwork and correspondence between Civil West and the City, coordination on financial matters, directing resources internally, meeting with staff on routine issues, and other project management activities.
- 2. Task 2 – GIS Action Plan** – Under this task, we will prepare a GIS Action Plan that the City can use to guide and direct the progress and approach of the GIS development efforts. The purpose of the GIS Action Plan is to set up protocols, goals, objectives, and guidelines for the orderly and planned development of the GIS system in Newport. We will provide guidance and recommendations on the collection of data, the format and setup of the attributes for each infrastructure element category, prioritize areas and issues for data collection, and other planning direction to ensure the success of the program. We will team up with our strategic Partner, North Wind Resource Consulting, who specializes in developing GIS systems to utilize their expertise and guidance for Newport. A written plan will be prepared to outline all of the plan and recommendations to be used over a period of several years as the City methodically works to develop their GIS program.
- 3. Task 3 – Data Collection** – Under this task, we will undertake the task of data collection for information on Newport public infrastructure. This will include using the City's GPS unit to survey the location of manholes, catch basins, valve boxes, meters, culverts, hydrants, and other infrastructure elements. Each element type will be programmed into the GPS data collector complete with GIS attribute inputs for collectible information. For example, when surveying a fire hydrant, the surveyor will also record the make of the hydrant, its color, its general outward condition, and other pertinent information. This information will be imported into the mapping with the data when reduced in the next task. We will utilize a local student who has worked for the City in the past as an intern. As the City already has a trust level with this person, we are confident that he will be capable of collecting data in a reasonably efficient manner. This task will include training for the surveyor, daily collection of data, transfer of data to the project manager, and management of the data collection effort. We see this task as a multi-year effort

with various levels of detail that can be obtained depending on the desires of the City and the available funding.

4. **Task 4 – Data Reduction and Mapping** – Under this task, the data will be received and reviewed by the project manager. Field collection data files will be reduced and imported into the City’s base maps for further processing. Existing mapping information, as well as coordination with City staff, will be utilized to create accurate line work representing the alignment of existing pipelines. Pipelines will be organized by layer according to their diameter. Each layer will be distinct so as to clearly display the pipeline information. Our engineering tech will refine and correlate the field data as it is collected and transmitted to our office. We anticipate that a weekly “packet” of information from the surveyor will be sent to our office for reduction and development. We will follow the guidance and protocol established in the GIS Action Plan to set up the mapping, the layers, and the information. This will ensure an orderly and efficient approach to mapping development. Proofs and prints will be provided to the City on a regular rotation. The City will be able to mark-up and comment on the mapping and corrections will be made to the digital versions of the files. As mapping is completed, we will provide the City with prints, map books, and digital versions of the GIS products.
5. **Task 5 –Reimbursables/Direct Costs** – This item will cover direct reimbursable expenses anticipated for the project. These include travel and per diem costs, reproduction and office expenses, and other reimbursable costs.

Part B: Project Fee Proposal

This project is likely to span several years and budget cycles as the mapping is refined and improved. As such, it should be phased to provide value and utility to the City as it moves forward. It is our understanding that the city will have around \$120,000 to budget to this project during the 2012 calendar year with an additional \$60k available at the end of 2012. For the purposes of this fee proposal, we have developed a budget structure with tasks and hours to undertake the first phase of this project.

A detailed budget breakdown has been developed as shown on Exhibit A. This exhibit shows the major tasks and estimated hours to undertake the tasks. It is important to note that, because we do not anticipate completing this project in a single year, the hours and budget for the tasks should be considered estimated allowances. It will be our intent to complete as much as possible within the given budget and continue to move forward under new funding in future phases of the project.

A summary of this first phase of the GIS project is as follows:

Summary of Proposed Engineering Budget:	Budget
Project Management and Coordination	\$4,296.00
GIS Action Plan	\$29,996.00
Data Collection Services	\$39,208.00
Data Reduction and Mapping Services	\$43,624.00
Reimbursable Expenses	\$3,000
Total Proposed Budget	\$120,124.00

More detailed information on the proposed budget is provided on the attached Exhibit A.

Part C: Project Schedule

It will be our intent to begin this project as soon as we are authorized to do so. We will seek to have a project kickoff meeting as soon as possible and then concentrate on getting the data collection protocol established. Once that is completed, we will have our GPS surveyor begin collecting data while the rest of the team completes the GIS Action Plan.

A potential project schedule could move forward as follows:

1. It is assumed that we will be authorized to proceed in early January 2012. Work will begin immediately on the project after being given a notice to proceed.
2. Kickoff meeting and data gathering trip – to be scheduled for mid January
3. Data collection protocols established and data collection to begin before the end of January.
4. GIS action plan completed by mid February.
5. Data collection and mapping to proceed through fall of 2012.
6. Mapping activities to proceed through the end of 2012.
7. Phase 2 to begin upon availability of additional funding or at the direction of the City – late 2012 or early 2013

A project such as this is difficult to establish an exact budget and schedule estimate due to the many unknowns that exist with the proposed work. We will provide regular updates to the City so that you are aware of the progress of the work and, at any point, can halt or change the trajectory of the GIS project, as needed.

We are prepared to begin this work on this important planning effort as soon as we are authorized to do so. Please let me know if you have any questions or if you wish to see any alterations to our proposed approach. If this proposed approach is acceptable, please sign below and return a copy to our office for our records.

Sincerely,

Civil West Engineering Services, Inc.



J. Garrett Pallo, PE
Principal

Authorized Representative Signature Accepting Scope of Services

Date

Engineering Fee Structure - WWFP Project											
	Principal Engineer	Project Manager	Senior Project Engineer	Project Engineer	Engr Tech	GIS Mapping Tech	GPS Surveyor Technician	Clerical	North Wind Resource Consulting Support	Total Hours	Total Fee
	\$132.00	\$121.00	\$115.00	\$108.00	\$94.00	\$64.00	\$40.00	\$42.00	Lump Sum		
Tasks											
1	Project Management & Coordination										
1a	Overall project Management										\$4,296.00
	30							8		38	
	Task Total	30	0	0	0	0	0	8	\$0.00	38	\$4,296.00
2	GIS Action Plan										
2a	Kickoff Meeting and establishment of project goals and objectives										\$5,504.00
	8	16				8			\$2,000.00	32	
2b	Setup of GPS equipment parameters, data dictionary, protocols, and procedures										\$4,212.00
	2	16				8			\$1,500.00	26	
2c	Setup of CAD files, layers, attributes, file management, and mapping protocols										\$3,212.00
	2	16				8			\$500.00	26	
2d	Identification of resources (available), what resources will be needed over time, and an equipment and software list for the future										\$2,488.00
	2	8				4			\$1,000.00	14	
2e	Identify priority areas and features, set up a phasing plan and schedule, establish project milestones and timeline										\$4,004.00
	8	16				8			\$500.00	32	
2f	Setup the data conversion and processing steps that will be required, establish the protocol for sending files										\$3,712.00
	2	16				8			\$1,000.00	26	
2g	Prepare written plan with recommendations and procedures										\$6,864.00
	16	24				8		8	\$1,000.00	56	
	Task Total	40	112	0	0	52	0	8	\$7,500.00	212	\$29,996.00
3	Data Collection Services - Allowance										
3a	Training and management of GPS surveyor and data collection effort										\$5,800.00
		40					24			64	
3b	Field visits for coordination and assistance with data collection										\$2,904.00
		24								24	
3c	Data collection by GPS surveyor										\$28,000.00
							650			650	
3d	Transfer of data to mapping staff										\$4,504.00
		24					40			64	
	Task Total	0	88	0	0	0	714	0	\$0.00	802	\$39,208.00
4	Data Reduction and Mapping Services - Allowance										
4a	Receiving, converting, and processing data from field surveyor										\$9,820.00
		60				40				100	
4b	Preparation of line work, refining of infrastructure elements, organizing elements on layers, etc.										\$22,620.00
		60				240				300	
4c	Coordinating with City staff on existing mapping information, reviewing mapping and updating data for pipe size, material, and other GIS worthy information										\$6,744.00
		24				60				84	
4d	Providing draft mapping submittals for review by staff, processing staff comments and correcting and updating mapping										\$4,440.00
		24				24				48	
	Task Total	0	188	0	0	364	0	0	\$0.00	532	\$43,624.00
5	Reimbursables										
5a	Travel and Per Diem Costs										\$2,000
5b	Reproduction, copies, and office expenses										\$1,000
	Task Total										\$3,000
Total	70	368	0	0	0	416	714	18	\$7,500.00	1584	\$120,124.00

