

RFQ # 13-001-36
VISUAL STREAM SURVEY SERVICES
SHELBY COUNTY ENGINEERING SECTION

Introduction

Shelby County Government, Tennessee, an Equal Opportunity, Affirmative Action Employer, seeks to retain the services of one or more engineering consulting firms to provide professional services for conducting a stream assessment survey along impaired streams within Shelby County's jurisdictional boundary following protocols issued by the Shelby County Stormwater Program to comply with the non-analytical monitoring requirements as stipulated in the TDEC *Small MS4 General NPDES Permit*. Information regarding the RFQ is located on the County's website at www.shelbycountyttn.gov. Go to "Purchasing" "Bids" under the Departments tab to locate the above-described RFQ. If you do not have access to the Internet and require us to send you a hard copy of the RFQ, please call us at (901) 222-2251 to request a copy.

Minimum Requirements:

Proposer must:

1. Have experience in conducting Visual Stream Surveys, Impairment Inventories or other related environmental services.
2. Have experience developing and working with GIS Geodatabases.
3. Have demonstrated knowledge of all environmental laws applicable to the Services, and rules and regulations of the Tennessee Department of Environment and Conservation ("TDEC") and Environmental Protection Agency ("EPA").
4. Have all appropriate licenses and certifications required to perform the Services.
5. **Apply** and **qualify** for an Equal Opportunity Compliance (EOC) certification number prior to submitting your response.
6. Adhere to the requirements of the "Living Wage Ordinance #328,"
7. Adhere to all Title VI requirements and provide proof/documentation if necessary.
8. Shelby County has determined that **20%** of the contract sum will be contracted with LOSB vendors. For assistance and information regarding LOSB participation, Bidders shall contact:

Ms. Carolyn Griffin
Office of Equal Opportunity Compliance
Board of Commissioners of Shelby County
160 North Main Street, Suite 969
Memphis, Tennessee 38103
Phone: 901-222-1100
Fax: 901-222-1101
E-mail: carolyn.griffin@shelbycountyttn.gov

Project Description:

The services shall include all necessary work to comply with section 5.2 of the TDEC Small MS4 General Permit and to deliver survey data in a format for seamless use within the Shelby County's GIS database architecture. Work will include pre-survey activities to determine reaches to be surveyed, preparing devices and database files for data entry and training of field crew in order to gather consistent and accurate data. Survey work will consist of gathering, entering and checking streams for environmental factors based on a ranking scale and recording data and pictures. Post survey activities will include quality control and assurance and preparing reports and maps as specified.

Scope of Services

1. Pre-Survey Activities

- i) Pre-determination of 303d listed streams impaired for siltation, habitat alteration and pathogens within the Shelby County Stormwater Program's jurisdictional boundaries. The location of man-made and/or tributary "outfalls" as defined by the permit shall be identified and entered into the GIS database. Approximately 300 miles, plus or minus, are expected require surveying.
- ii) Stream segments shall be divided into 0.25 mile or 0.5 mile segments in urban and rural areas respectively for sampling of representative sites.
- iii) Survey Protocol and GIS software necessary to conduct and record the data shall be specified and loaded into mobile collection devices to be used by survey teams. Protocol shall be based on survey protocols established by (1) the 2009 National Resource Conservation Service (NRCS) *Stream Visual Assessment Protocol Version 2* (Part 614) (2) Chapter 5 of the 1999 U.S. Environmental Protection Agency (USEPA) *Rapid Bioassessment Protocols for Use in Streams and Wadeable Rivers: Periphyton, Benthic Macroinvertebrates and Fish, Second Edition*; and (3) the 2001 Maryland Department of Natural Resources *Stream Corridor Assessment Survey Protocols*.
- iv) Field crews shall be trained on the proper assessment of impairments, interaction with property owners, and safety. All team members must be consistent in recording the basic mechanics of the local stream system (e.g., geomorphology) and identifying impacts including channel alteration, erosion, exposed pipes, pipe outfalls, fish barriers, inadequate buffer, in/near stream construction, and illegal dumping. Team members must be able to correctly identify healthy versus impaired streams and evaluate impairment severity, correctability, and accessibility.
- v) *Property Owner Notification*: Based on the EPA 303d listing of impaired streams within Shelby County (exclusive of other municipal boundaries),

approximately 95% of the properties adjacent to these stream corridors are privately owned; therefore, much effort will be required to notify these property owners in a timely manner both a couple of months prior to the survey and closer to the time of the survey. A letter discussing the survey and the fact that team members will be walking the stream corridors within or adjacent to their property will be drafted for review by Shelby County Public Works, and upon County's approval be printed on their letterhead. A request will be made in the letter for the property owner to inform us if they do not wish us on their property. The Shelby County Assessor's parcel database may be used to acquire the mailing addresses. The OWNDAT table in the Assessor's parcel database has two addresses; one for the property owner and one for the parcel, which in some cases may not be the same. To ensure that both owners and possible tenants are adequately notified of the survey activities that may be taking place on their property, letters will be sent to both addresses (owner and parcel) when the two entities are not the same. These notifications of the visual stream survey will be sent by mail to each property owner and/or tenant of the property about two months prior to any field activities to allow them time to respond to deny access. Property owner rights shall be respected and if access is denied a record of that shall be recorded in the assessment, but an attempt shall be made to assess that portion of the impaired stream by current aerial photographs to identify any major noticeable impairment to the stream.

2. Survey Activities

i) Surveying will take place during the low-water months and when vegetation is sparser. Low-water and thus little rainfall are necessary to observe errant outfalls, fish barriers and ease access while supporting better safety. Less dense vegetation will ease access to streams, especially the tributaries to more substantial rivers, as the tributary corridors are narrow and dense vegetation will make walking cumbersome and increase time in the field. The months when these conditions exist are most typically September through December.

ii) Impairments, shown in the list below, will be mapped as a lines or point features in GIS. For example, an outfall location will be mapped as a point, whereas a section of stream channel that is undergoing erosion will be mapped as a line. The GIS architecture for mapping these impairments will be linear referencing (LR), once called dynamic segmentation. LR closely resembles the more familiar point and line GIS datasets, but it incorporates distance measurement along a line segment thus allowing one to associate point (e.g., outfall, exposed pipes, fish barrier, etc.) and line (e.g., trash, erosion, etc.) events (or occurrences) to specific places along the stream based on their measured distance from a reference point. Most streams will have a zero reference point at its confluence with another stream and distance will increase progressively upstream.

Channel Alteration – Identify concrete channels or significantly altered streams (channelization).

- Erosion – Unstable reaches with identifiable erosion.
- Exposed Pipes – Pipes that could be damaged in high flow event including manhole stacks, pipes along the stream bank, under the stream bed, and over the stream bed. This does not include pipe outfalls and pipes along support beams on bridges.
- Pipe Outfall – Any pipe that discharges into a stream or tributary.
- Fish Barrier – Any significant debris that interferes with movement of fish.
- Inadequate Buffer – Less than 50 feet of tree/vegetation on either side of the stream.
- In/Near Stream Construction – Document construction sites in or adjacent to the stream. Look for evidence of erosion or lack of sediment control.
- Illegal Dumping – Accumulation of trash inside the stream corridor.
- Unusual Condition/Comments – Anything out of the ordinary (i.e. unusual odor, scum, oil excessive algae, or other environmental issues).

As environmental issues are identified, field documentation at each site will include date and time, the location along the stream, a photograph or group of photographs that will be linked to the point or line that is representing the issue, and field team member names. Each issue will be assessed according to its severity, correctability, and accessibility. Each of these assessment criteria will be rated on a scale of 1 to 5 with 5 being the worst.

iii) Representative sites will describe the general condition of the stream habitat and adjacent stream banks. The following will be described at each representative site and rated optimal, suboptimal, marginal, or poor based on USEPA guidelines:

- Epifaunal Substrate/Available Cover
- Pool Substrate Characterization

- Pool Variability
- Sediment Deposition
- Channel Flow Status
- Channel Alteration
- Bank Vegetation
- Bank Condition
- Riparian Vegetation

Additional information including wetted width, thalweg depth, and bottom type will be collected at each representative site.

iv) Rating System: Environmental issues will be critiqued based on their severity, correctability and accessibility. Severity will allow the County to rank the worse impairment offenders, targeting them for corrective action. Correctability is an assessment of the complexity to resolve the environmental issue, bringing the stream back into its natural state. Accessibility is a determination of ease of approachability to the stream to address the environmental issue. All three of these critiques are based on subjective assessments. Training field team members well will greatly improve the accuracy of the assessment and consistency throughout the project period.

The severity rating will be based on a one (1) to five (5) scale with one (1) representing minor issues and five (5) representing the worst case scenario. Each environmental issue category will have a defined severity rating and field teams will carry photographic and descriptive examples to assist them with rating feature in the field. This process will ensure better continuity with the severity rating throughout the fieldwork portion of the survey.

The correctability rating will be based on the estimated degree of work needed to resolve the issue with one (1) representing a minimum amount of effort and funding to resolve the issue and five (5) representing the need for major engineering work and funding. Actual funding amounts for correcting environmental issues will not be assessed; however, a relative value (low, moderate, or high) will be used. Actual amounts will be assessed by the County. Similar to severity, each environmental issue category will have a defined correctability rating. Correctability ratings will be addressed in the field; however, further review of data will be done by the Project and/or Survey Manager to ensure that an accurate rating has been given.

The accessibility rating is a reasonable measurement of difficulty to reach the environmental issue with one (1) representing easy accessibility by foot or vehicle

and five (5) representing difficult access by foot or vehicle. Accessibility ratings will be estimated in the field; however, further analysis of accessibility based on aerials, buildings, roads and bridge crossing, and other factors will be performed in the lab where a bird's-eye view is possible and more powerful GIS spatial analyses can be performed.

3) **Data Management**

Data management includes the data schema design, quality control and quality assurance, and the geodatabase architecture for storing/hosting the data. A data schema describes the data format which includes whether it is a point, line or table, the attributes or descriptive values associated with each feature or table record, and the metadata. The metadata shall include but is not limited to who created it, how was it created, the data owner, description of the attributes, and other pertinent information that builds (provides) trust in the data. Metadata will be required by the Shelby County Information Technology GIS department.

Data Schema Design - The stream survey will be built as LR. LR uses the stream network as its base and associates all environmental issue assessment information through data tables (e.g., site table, issue table, photograph table, representative site table, etc.). The association between the table information and the stream will be made through assignment of a unique "route ID" or unique identifier. The sites table contains attributes common to all potential environmental issues including the site identified, survey identifier, team identifier, and survey date. The issue table will include the environmental issue and the ranking of severity, correctability, and accessibility. The photograph table will list every photograph and its association to the corresponding issue. Photographs will not be stored within the database. Instead the photograph table will include an attribute that lists the computer path to the actual photograph that is stored locally on a hard drive. When the results of this project are turned over to the County, the path to the photographs shall be modified to reflect their physical location on the County servers. Because representative sites assess a different set of criteria from the regular survey (i.e., the data schema is different), this information will be stored in its own table. Other tables that may be built in the future as part of this project could be a maintenance table, historical archive, and cost analysis as well as others.

Quality Control and Assurance - Quality control and quality assurance (QAQC) is an important aspect to any data collection project. All team members will be trained at the same time so the how-to of the survey is conveyed in a single, consistent message. Ensure that the software is functioning properly (quality control) and data are being recorded correctly (quality assurance) via thorough testing of the forms prior to deployment. Functioning of the software with the hardware will also be thoroughly tested. Additionally, quality control on data entry will be better attained by utilizing dropdown values, check boxes and data entry lists. Any means of reducing data entry errors through mis-typing, variation in descriptors by different team members, or neglecting to enter information will improve upon quality assurance in the data. Automation in association of

photographs to environmental issues will also reduce error and thus provide an improved means of QAQC.

During the survey, team members will have access to reference library material that provides examples of severity on the various environmental issues. Direct access to this library while in the field will reduce assessment subjectivity, increase consistency and thus provide a level of quality control in the ranking of issues.

Geodatabase Architecture - The geodatabase will be developed with Microsoft SQL and reside as a versioned database. The Shelby County Information Technology division is developing their GIS geodatabase using the same architecture so transferability between our system and the County's will be seamless. The geodatabase will be secured, accessible only to those working on the project. We will be using ESRI® ArcGIS software (v.10.1 or higher) for this effort.

The County wishes to engage in a contractual relationship with the best-qualified Contractor selected through a competitive process that will work well with the County in the performance of the Services in a manner that is cost-effective and practical. The Contractor must be prepared to begin immediately upon receipt of a Notice to Proceed. The term of the Contract for the Services shall be a period of no more than three (3) years, renewable July 1 of each year.

Submittal Format/Evaluation Criteria:

Submittals shall be organized in a manner requested in the RFQ. Submittals shall contain all pertinent information requested and will be evaluated based on adherence to the following:

1. General Requirements
 - Cover letter
 - Firm name, address, and telephone number
 - Point of contact: name and telephone number
 - Written statement of compliance with Title VI and the Living Wage Ordinance
 - Proof of Licensure
2. Capacity to perform required services
 - Areas of expertise addressed by the team members presented in submittal
3. Qualifications
 - Company overview for all consulting firms participating as team members
 - Resumes for proposed project manager and staff from each participating firm
4. Experience
 - Provide case study information documenting relevant experience from public and private sector projects within the past five years. Case studies shall list the following as a minimum:
 - Client and client's point of contact information
 - Firm's role in project
 - Design fee, construction cost and change order amounts

- Project staff and their role
5. Methodology
 - Summary of suggested approach and methodology shall include:
 - Clearly defined scope of work
 - Proposed distribution of tasks among team members
 - Organizational chart, including all team members
 - Proposed evaluation methods, calculations, software modeling, etc. to accomplish the scope
 6. Project Schedule
 - Provide project timeline including major tasks and/or milestones
 7. Level of certified Locally Owned Small Business (LOSB) participation
 - LOSB participation percentage must be calculable from distribution of tasks outlined in the Methodology section

Inclusion of a fee is not required. A cost proposal will be negotiated with the selected consultant.

LIVING WAGE ORDINANCE AND PREVAILING WAGE ORDINANCE

Living Wage - In accordance with Ordinance Number 328, commonly referred to as the Living Wage Ordinance, all persons/entities engaged in service contracts with the County, including but not limited to both prime and subcontractors, shall pay a Living Wage to employees for all work performed on said service contract, as defined in the Living Wage Ordinance. Proof of such compensation must be evidenced as required in the Living Wage Ordinance.

Prevailing Wage – Any firm, individual, partnership or corporation awarded a contract by the COUNTY for the construction of, improvement, enlargement, alteration or replacement of a public work or project in excess of \$500,000 and any subcontractors of such public work or project in excess of \$100,000 (“Recipient”) shall be required to pay local prevailing wages and benefits for laborers, mechanics, or other listed classifications as defined by the Tennessee Department of Labor. The prevailing wage rate shall be the most current State of Tennessee prevailing wage established by the Tennessee Department of Labor For Region 1 (Shelby County). The benefit rates shall be the most current rates described in the published schedule by the Memphis and West Tennessee County Code of Ordinances. The applicable rate shall be determined at the time that the project is awarded. In instances where Prevailing wage applies, Prevailing Wage will override the Living Wage requirement.

Non-Discrimination and Title VI

The contractor hereby agrees, warrants, and assures compliance with the provisions of Title VI and VII of the Civil Rights Act of 1964 and all other federal statutory laws which provide in whole or in part that no person shall be excluded from participation or be denied benefits of or be otherwise subjected to discrimination in the performance of this Contract or in the employment practices of the contractor on the grounds of handicap

and/or disability, age, race, color, religion, sex, national origin, or any other classification protected by federal, Tennessee State Constitutional or statutory law. The contractor shall upon request show proof of such non-discrimination and shall post in conspicuous places available to all employees and applicants notices of non-discrimination.

Any recipient entity shall be subject to the requirements of Title VI of the Civil Rights Act of 1964, 42 U.S.C. 2000d et seq., and regulations promulgated pursuant thereto. It shall develop a Title VI implementation plan with participation by protected beneficiaries as may be required by such law or regulations. To the extent applicable, such plan shall include Title VI implementation plans sub-recipients of federal funds through the entity. The contractor shall produce the plan upon request of Shelby County Government. Failure to provide same shall constitute a material breach of contract.

Disclosure of Proposal Contents

Provider understands and acknowledges that the County is a governmental entity subject to the laws of the State of Tennessee and that any reports, data, or other information supplied to the County is subject to being disclosed as a public record in accordance with the laws of the State of Tennessee. All proposals and other materials submitted become the property of Shelby

Correspondence:

Respondents requesting additional information or clarification are to contact Nelson Fowler in writing at nelson.fowler@shelbycountyttn.gov or at the address listed below. Questions should reference the section of the RFQ to which the question pertains and all contact information for the person submitting the questions. ***IN ORDER TO PREVENT AN UNFAIR ADVANTAGE TO ANY RESPONDENT, VERBAL QUESTIONS WILL NOT BE ANSWERED. The deadline for submitting questions will be Friday, February 15, 2013 by 12:00 p.m. (CST)***

All written questions submitted by the deadline indicated above will be answered and posted on the County's website at www.shelbycountyttn.gov within forty eight (48) hours of the above cut-off date.

All correspondence, including PROPOSALS statement and questions concerning the RFQ are to be submitted to:

**Nelson Fowler, Manager A
Shelby County Government
160 N. Main St. Suite 550
Memphis, TN 38103
(901) 222-2251**

These guidelines for communication have been established to ensure a fair and equitable process for all respondents.

Please be aware that contact with any other personnel (other than the person clearly identified in this document) within Shelby County or its benefit administrators regarding this RFQ may disqualify your company from further consideration.

Proposals:

Firms may request consideration by submitting an original and five copies of a letter of interest and statement of qualifications to Mr. Nelson Fowler, Manager A, Purchasing Department, Shelby County Government, 160 North Main Street, Suite 550, Memphis, TN 38103.

All qualifications must be received by Mr. Fowler's office on or before 4:00 PM (Central Time) February 22, 2013.

Submittals will be reviewed by a Consultant Review Committee (CRC) that will identify the most qualified proposers. At the discretion of the CRC, selected consultants may be interviewed to determine the most qualified firm or firms.

Evaluation proceedings will be conducted within the established guidelines regarding equal employment opportunity and nondiscriminatory action based upon the grounds of race, color, sex and creed or national origin. Interested certified Disadvantaged Business Enterprise (DBE) firms as well as other minority-owned and women-owned firms are encouraged to respond to all advertisements.