

Memorandum



Date: August 15, 2012

To: Jack Osterholt, Deputy Mayor/Director
Regulatory and Economic Resources

From: Bill Johnson, Director
Port of Miami

Subject: Recommendation for Non-exclusive Professional Services Agreement for Geographic Information System Services, Contract No. E12-SEA-02, Project No. 2010-040

Your assistance in reviewing this request and forwarding the attached recommendation to the Division of Small Business Development (SBD) for consideration is respectfully requested.

It is recommended that SBD review the attached request for Community Business Enterprise (CBE) measures for this project, in order to proceed with the advertisement and subsequent bidding of the project.

Professional Services Agreement (PSA) for Geographic Information System (GIS) Services: The Consultant shall provide a complete Quality Level B (QLB) GIS, which includes but is not limited to: above-and-below-ground utility data surveying; verification; mapping; pre-processing; and uploading for a portion of the Port's area where only quality level D (As-Built) was completed. These professional services shall accomplish the following high-level goals:

- a. Have the verified QLB GIS data within the geographic project limits updated into Miami-Dade County's Spatial Database Engine (SDE) infrastructure, utilizing Miami-Dade County's ESRI's Enterprise License Agreement.
- b. Provide PortMiami with a fully-functional local Data Pre-Processing Site (including both hardware and fully-licensed software) capable to maintain QLB for all areas of PortMiami that have already been completed as well as for all future modifications after this project is finalized.
- c. Transfer all necessary data-preparation and upload knowledge to PortMiami GIS full time staff to maintain QLB for the Port in the future as utilities are added, demolished or modified (Surveying-knowledge and field-work knowledge transfer is excluded from this scope).

The primary scope of services includes, but is not limited to:

1. Accurately field-locate above and below ground utility assets according to nationally accepted methods and mapping standards;
2. Accurately field-locate Bollards and Bay Markers creating two separate layers dedicated to those two features;
3. Field locate and update PortMiami's ArcGIS utility data following the American Society of Civil Engineers' (ASCE) 38-02 QLB utility mapping guidelines, using PortMiami's ArcGIS Quality Level D Utility data; as-build information from PortMiami's most recent projects; and the partially created QLB data;

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4. Provide professional surveying and mapping Subsurface Utility Engineering (SUE) services at PortMiami. The principle guidelines for this SUE service will be the ASCE Construction Institute/ASCE 38-02, *Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data*, 2003. All survey work will be performed in accordance to Chapter 5J-17.052, (Florida Minimum Technical Standards), pursuant to Section 472 F.A.C. (Florida Administrative Code);
5. Update the existing PortMiami utility GIS geo-databases residing with Miami-Dade County Information Technology Department (ITD).
6. Create a fully-functional Data Pre-Processing Site (including both hardware and software) capable to maintain QLB for all the areas of PortMiami that have already been completed as well as for all the future modifications after this project is finalized. This site shall be the one used for the completion of all work, which implies that all data-preparation will happen at the POM rather than remotely at the consultant's premises. PortMiami GIS staff must be kept fully-aware of all work done in the site throughout the duration of this project; be granted read-only access to that site for the duration of the execution of the first seven (7) phases/zones; and full-access during the execution of the last two (2) phases when staff will do all the work under the consultant's supervision; and
7. Deliver a document delineating a Best Practice-based Standard Operating Procedure for the continued process to maintain the QLB GIS data including, but not limited to, a GIS-based data flow between the Capital Development, Facilities Maintenance, and ITD at PortMiami.

The secondary scope of services includes, but is not limited to:

1. Complete assessments for the gravity sewer system, pump station, force main, water and storm water conditions, recording; documenting; and reporting current or potential problems that could affect flow and that the Port should address and/or resolve;
2. Create a mobile application to track electrical outlet and water usage at PortMiami to be wirelessly synchronized back to the host application; and refrigerated trailer electrical hookups to be wirelessly synchronized back to the host application;
3. Support and assist PortMiami's GIS staff in the implementation of a set of CAD and Building Information Modeling standards to facilitate populating the GIS in the future, with new as-built data to reduce Port data maintenance time and increase the quality of the GIS data created; the interface between Physical Security Information Management system and the required GIS Layers; and a building/land leasing application to manage the customer leasing process;
4. Support and assist PortMiami GIS staff to enhance the current PortMiami Berth Planning application with a dynamic GIS map (replacing the current static graphic);
5. Support and assist PortMiami GIS staff as well as the Port Miami Infor Enterprise Asset Management (EAM) System staff to integrate the GIS system with PortMiami's Infor EAM System to spatially show the location of assets (along with other available asset-related information);

6. Support and assist PortMiami GIS staff as well as PortMiami's Electronic Data Management System (EDMS) staff to integrate the GIS system with the Port's EDMS Documentum implementation; and any ancillary tasks primary to the scope of services.

A/E Technical Certification Categories required:

TC No.	Description	Percentage	Amount
15.01	Surveying and Mapping – Land Surveying (Prime)	30%	\$ 300,000.00
15.03	Surveying and Mapping – Underground Utility Location (Prime)	50%	\$ 500,000.00
06.01	Water and Sanitary Sewer Systems – Water Distribution Sewage Collection and Transmission Systems	4%	\$ 40,000.00
10.01	Environmental Engineering – Storm Water Drainage Design Services	4%	\$ 40,000.00
12.00	General Mechanical Engineering	4%	\$ 40,000.00
13.00	General Electrical Engineering	4%	\$ 40,000.00
16.00	General Civil Engineering	4%	\$ 40,000.00
Total Estimated Professional Fees		100%	\$ 1,000,000.00

The prime consultant must hold Technical Certifications 15.01 - Surveying and Mapping – Land Surveying and 15.03 – Surveying and Mapping – Underground Utility Location. Interested Professional Firms (Consultants) shall be certified by Miami-Dade County at the time of qualifications submittal in the Technical Certification Categories identified above. Interested Professional Engineering Firms must have the experience and qualifications listed below. This expertise must be met by qualified individual(s) of the prime consultant's team.

1. Three (3) or more years of relevant experience developing GIS projects of comparable scope;
2. NASSCO PACP/LACP/MACP certification for gravity sewer assessment (National Association of Sewer Service Companies' Pipeline, Lateral and Manhole Assessment Certification Programs);
3. ESRI business partner Gold Level or higher;
4. Demonstrated knowledge of utility networks, specifically water and sewer systems connectivity, and telecom, fiber, storm water, fuel and security network infrastructure architectures;
5. Demonstrated experience on creating building-information-modeling geo-databases; Geo-database XRAY and ArcDiagrammer; developing custom geometric network tracing using ArcGIS Server; utilizing Microsoft Visual Studio GIS tools and controls, Flex, and Silverlight Application Programming Interface within the ArcGIS Server framework to develop mid-to-high complexity level applications; ArcSDE version control; implementation of Infor EAM / GIS integration at the asset level; and use of ArcObjects within ArcGIS application development; and
6. Project Management Institute's Project Management certification (or equivalent) is desired along with experience working with National Association of GIS-centric solution.

Jack Osterholt
Deputy Mayor/Director
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The CBE Goal recommendation is 20.00%. The Agreement will be in the approximate amount of \$1,000,000.00, which includes the 10% contingency, and shall remain in effect for a total of two (2) years with two (2), one-year options to extend.

Should you have any questions, please feel free to contact Mr. Dorian K. Valdes, P.E., Assistant Port Director of Capital Development at (305) 347-4802.

Attachments

**DEPARTMENTAL INPUT
CONTRACT/PROJECT MEASURE ANALYSIS AND
RECOMMENDATION**

Contract/Project Title Geographic Information System Services
 Contract/Project No. E12-SEA-02 / 2010-040
 Description See attached Scope of Work
 Department Seaport Contact Hugo Hernandez Phone (305) 347-4807
 Estimated Cost 1 Agreement for \$1,000,000.00 Funding Source Seaport Loans

ANALYSIS

Commodity/Service No. _____ SIC _____

Trade/Commodity/Service Opportunities

Contract/Project History of Previous Purchases for Previous Three (3) years

Check Here if this is a New Contract/Purchase with Previous History

	<u>Existing</u>	<u>2nd Year</u>	<u>1st Year</u>
Contractor _____	_____	_____	_____
Ethnicity/Race _____	_____	_____	_____
Gender _____	_____	_____	_____
Contract Value _____	_____	_____	_____
Comments _____	_____	_____	_____

RECOMMENDATIONS

<u>CBE GOAL</u>	<u>BID PREFERENCE</u>	<u>NO MEASURE</u>	
<u>20.00%</u>	<u>N/A</u>	_____	
<u>Analysis for Goal Recommendation</u>			
<u>Sub-Trade</u>	<u>Est. Cost</u>	<u>% of Item to Base Bid</u>	<u>Availability</u>
<u>15.01 Surveying and Mapping – Land Surveying (Prime)</u>	<u>\$ 300,000.00</u>	<u>30%</u>	<u>>3</u>
<u>15.03 Surveying and Mapping – Underground Utility Location (Prime)</u>	<u>\$ 500,000.00</u>	<u>50%</u>	<u>>3</u>
<u>06.01 Water and Sanitary Sewer Systems Water Distribution Sewage Collection and Transmission Systems</u>	<u>\$ 40,000.00</u>	<u>4%</u>	<u>>3</u>
<u>10.01 Environmental Engineering – Storm Water Drainage Design Services</u>	<u>\$ 40,000.00</u>	<u>4%</u>	<u>>3</u>
<u>12.00 General Mechanical Engineering</u>	<u>\$ 40,000.00</u>	<u>4%</u>	<u>>3</u>
<u>13.00 General Electrical Engineering</u>	<u>\$ 40,000.00</u>	<u>4%</u>	<u>>3</u>
<u>16.00 General Civil Engineering</u>	<u>\$ 40,000.00</u>	<u>4%</u>	<u>>3</u>
<u>Total</u>	<u>\$ 1,000,000.00</u>	<u>100%</u>	_____
<u>Basis for Recommendation</u> _____			
<u>By: Seaport Department</u>		<u>Date to SBA/DPM</u>	

**MIAMI-DADE COUNTY, FLORIDA
NOTICE TO PROFESSIONAL CONSULTANTS (NTPC)
MIAMI-DADE SEAPORT DEPARTMENT (SEA)
GEOGRAPHIC INFORMATION SYSTEM SERVICES**

COMPLETION OF QUALITY LEVEL B GIS DATA SURVEYING, VERIFICATION, MAPPING AND UPLOADING FOR A PORTION (APROX. 55%) OF THE PORT AREA

1.2 SCOPE OF SERVICES

Port Miami is seeking consultant services to complete Quality Level B (QLB) GIS above-and-below-ground utility data surveying, verification, mapping, pre-processing, and uploading, for a portion of the Port's area where only quality level D (As-Built) has been completed. These professional services shall accomplish the following high-level goals:

- a. Having the verified QLB GIS data within the geographic project limits updated into the Countywide SDE infrastructure, utilizing Miami-Dade County's ESRI Enterprise License Agreement.
- b. Providing POM with a fully-functional local Data Pre-Processing Site (including both hardware and fully-licensed software) capable to maintain QLB for all the areas of the POM that have already been completed as well as for all future modifications after this project is finalized.
- c. Transfer all necessary data-preparation and upload knowledge to the existing POM GIS full time employee (FTE) so that he is able to maintain QLB for the Port in the future as utilities are added, demolished or modified. (Surveying-knowledge and field-work knowledge transfer is excluded from this scope).

Geographic project limits as well as the eight (8) predefined areal subdivisions will be provided during the Project Briefing, when project milestones will be also rolled out (i.e.: Setup of the on-site data-preparation environment, zone-by-zone data collection and uploading, continuity.).

Primary Services shall include:

1. Accurately field-locate above and below ground utility assets according to nationally accepted methods and mapping standards. The consultant will provide Professional Surveying and Mapping Subsurface Utility Engineering (SUE) services at PortMiami. The principle guidelines for this SUE service will be the American Society of Civil Engineers (ASCE) CI/ASCE 38-02, *Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data*, 2003. All survey work will be performed in accordance to Chapter 5J-17.052, (Florida Minimum Technical Standards), pursuant to Section 472 F.A.C.
2. Accurately field-locate Bollards and Bay Markers creating two separate layers dedicated to those two features.
3. Using the PortMiami's ArcGIS Quality Level D Utility data, the as-build information coming from most recent projects, and the partially created Quality Level B data, the consultant will field locate and update the ArcGIS utility data following the ASCE 38-02 Quality Levels B utility mapping guidelines.

4. Update the existing Port Miami utility GIS geo-databases residing with Miami-Dade County Information Technology Department (ITD).
5. Creation of a fully-functional Data Pre-Processing Site (including both hardware and software) capable to maintain QLB for all the areas of the POM that have already been completed as well as for all the future modifications after this project is finalized. This site shall be the one used for the completion of all work which implies that all data-preparation will happen at the POM rather than remotely at the consultant's premises. The POM GIS FTE will be kept fully-aware of all work done in the site throughout the duration of this project; he will be granted read-only access to that site for the duration of the execution of the first seven (7) phases/zones and full-access during the execution of the last two (2) phases when he will be doing all the work under the consultant's supervision.
6. Deliver a document delineating a Best Practice-based Standard Operating Procedure (SOP) for the continued process to maintain the QLB GIS data including (but not limited to) a GIS-based data flow between Capital Development, Maintenance, and IT, at the POM.

Secondary services may include, but are not limited to:

1. Complete assessments for the gravity sewer system, pump station, force main, water and storm water conditions, recording; documenting; and reporting current or potential problems that could affect flow and that the Port should address and/or resolve;
2. Create a mobile application to track electrical outlet and water usage at the Port to be wirelessly synchronized back to the host application.
3. Create a mobile application to track refrigerated trailer electrical hookups to be wirelessly synchronized back to the host application.
4. Support and assist the POM GIS FTE in the implementation of a set of CAD and Building Information Modeling (BIM) standards to facilitate populating the GIS in the future, with new as-built data. Standards will reduce Port data maintenance time and increase the quality of the GIS data created.
5. Support and assist the POM GIS FTE in the implementation of the interface between Physical Security Information Management system and the required GIS Layers.
6. Support and assist the POM GIS FTE in the implementation of a building/land leasing application to manage the customer leasing process.
7. Support and assist the POM GIS FTE in the effort to enhance the current Port of Miami Berth Planning application with a dynamic GIS map (replacing the current static graphic).
8. Support and assist the POM GIS FTE as well as the POM EAM FTE in their effort to integrate the GIS system with the Port's Infor EAM Asset Management system to spatially show the location of assets (along with other available asset-related information).
9. Support and assist the POM GIS FTE as well as the POM EDMS FTE in their effort to integrate the GIS system with the Port's EDMS Documentum implementation.

Total value of the services for this scope is estimated to be at or under \$1,000,000.00 (including contingencies) and the term of the contract is for a 2-year period.

Experience and Qualification(s):

1. Must be a licensed Professional Surveying and Mapping firm within the state of Florida.
2. Must be pre-qualified to perform Surveying and Mapping services for Miami-Dade County (Category 15.01).
3. Must be pre-qualified to perform Underground Utility Location services for Miami-Dade County (Category 15.03).
4. Must be pre-qualified to perform Water and Sanitary Sewer System Services for Miami-Dade County (Category 06.01).
5. Must be pre-qualified to perform Environmental Engineering Services for Miami-Dade County (Category 10.01).
6. Must be pre-qualified to perform General Mechanical Engineering services for Miami-Dade County (Category 12.00).
7. Must be pre-qualified to perform General Electrical Engineering services for Miami-Dade County (Category 13.00).
8. Must be pre-qualified to perform General Civil Engineering services for Miami-Dade County (Category 16.00).
9. Company must demonstrate three or more years of relevant experience developing GIS projects of comparable scope.
10. NASSCO PACP/LACP/MACP certification for gravity sewer assessment
11. Should be an ESRI business partner Gold Level or higher.
12. Demonstrated knowledge of utility networks, specifically water and sewer systems connectivity, and telecom, fiber, storm water, fuel and security network infrastructure architectures.
13. Must be able to demonstrate experience on creating building-information-modeling geo-databases.
14. Must be able to demonstrate experience on GDB XRAY and ArcDiagrammer.
15. Must be able to demonstrate experience on developing custom geometric network tracing using ArcGIS Server.
16. Must be able to demonstrate experience on utilizing MS Visual Studio GIS tools and controls, Flex, and Silverlight API within the ArcGIS Server framework to develop mid-to-high complexity level applications.
17. Must be able to demonstrate experience on ArcSDE version control.
18. Must be able to demonstrate practical experience on the implementation of Infor EAM / GIS integration at the asset level.
19. Must be able to demonstrate experience on the use of ArcObjects within ArcGIS application development.
20. PMI Project Management certification (or equivalent) is desired.
21. Experience working with National Association of GIS-centric solution (NAGCS) is desired.

1.6 A/E TECHNICAL CERTIFICATION REQUIREMENTS

CODE	DESCRIPTION	PERCENTAGE OF THE TOTAL (%)
15.01	Professional Surveying and Mapping (Prime)	30
15.03	Underground Utility Location Services (Prime)	50
06.01	Water and Sanitary Sewer Systems – Water Distribution Sewage Collection and Transmission Systems	4
10.01	Environmental Engineering – Storm Water Drainage Design Services	4
12.00	General Mechanical Engineering	4
13.00	General Electrical Engineering	4
16.00	General Civil Engineering	4
		100

Walters, Vivian (RER)

From: Smith, Leticia (Seaport)
Sent: Monday, August 20, 2012 9:13 AM
To: Walters, Vivian (RER)
Cc: Valdes, Dorian (Seaport); Pino, Gyselle (Seaport); Hernandez, Hugo (Seaport); Millan, Luisa M. (ISD); Johnson, Laurie (RER); Quintana, Ileana (RER)
Subject: Signed SBD Memo - Project No. 2010-040/Contract No. E12-SEA-02: Geographic Information System Services



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memo_2010-040.doc

Good morning Vivian:

Attached please find the signed memo for the subject project. The estimate was increased from \$715,000.00 to \$1,000,000.00. The additional \$285,000.00 was equally distributed among the technical certification categories; therefore the CBE goal recommendation remains unchanged. Also included is the word version for your use. The original will be delivered via Interoffice Mail.

Regards,

Leticia Smith, AO3

PORT MIAMI

Contracts, Procurement and Materials Management

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305-347-4893 Fax

lsmith@miamidade.gov

“Delivering Excellence Every Day”

From: Quintana, Ileana (RER)
Sent: Tuesday, July 31, 2012 3:54 PM
To: Smith, Leticia (Seaport)
Cc: Pino, Gyselle (Seaport); Walters, Vivian (RER)
Subject: RE: Revised SBD Memo - Project No. 2010-040/Contract No. E12-SEA-02: Geographic Information System Services

Leticia please submit the official memo.
Thanks,

Ileana Quintana <<OLE Object: Picture (Device Independent Bitmap) >>

Construction Project Manager

Regulatory and Economic Resources Department

Small Business Development

Miami Dade County

111 N.W. 1st Street - 19th Floor

Miami, Florida 33128

☎ (305) 375-3148 - 📠 Fax (305) 372-3170

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