

# Memorandum



**Date:** October 3, 2012

**To:** Mario Goderich, Deputy Director  
Miami-Dade Department of Regulatory & Economic Resources,  
Small Business Development Division

**From:** Milton L. Collins, Associate Director *MLC*  
Miami-Dade Aviation Department, Minority Affairs Division

**Subject:** REVISED Invitation To Bid - Satellite E APM Replacement and O&M Services Project  
Phase 1 and 2  
ITB-MDAD-04-12

## REVISED RECOMMENDATION:

The MDAD Minority Affairs Division was advised to proceed with the Satellite E project as an Invitation to Bid, in lieu of an Invitation to Negotiate. The new Project Number that has been assigned is ITB-MDAD-04-12. The Scope and Term(s) remain the same.

This is a request for the Small Business Development Division to approve the attached Invitation to Negotiate in order for the Aviation Department to proceed with the **Satellite E APM Replacement and O&M Services Project Phase 1 and 2, Project No. ITB-MDAD-04-12**. The Miami-Dade Aviation Department requires the services of a qualified team under a Design, Build, Operation and Maintenance (DBOM) contract arrangement and will be divided into two phases. Phase 1 involves the design, construction, manufacture, installation and testing/commissioning of the replacement APM System and Phase II involves the follow-on Operations and Maintenance (O&M) of the System. As was done for the MIA Mover Project, due to the specialized nature of the APM system portion of this project, the breakdown presented herein is divided into work that will be done on-site versus off-site work.

The estimated project cost for Phase I is \$30,000,000.00. The estimated project cost for Phase II is \$10,000,000.00. This project will be funded from the Reserve Maintenance Funds. The term for Phase I will be for Three (3) years. Phase II of the contract will include Operations and Maintenance of the System for a five (5) year period with options for the County to extend Phase II in two, five (5) year increments for an additional ten (10) years. The estimated annual cost (in Year 2012 dollars) for Phase II work is \$2,000,000.00 which will be subject to escalation under the terms of the contract. **Attachment A** provides an estimated breakdown of the different types of work to be performed in Phase II.

The Minority Affairs Division staff has evaluated the subject project and recommends the following Contract Measure Goals:

CSBE – Construction Component 12.69%  
CBE-A/E – Design 22.24%  
CBE-A/E-CIS - 35%  
SBE – Procurement of Replacement APM System 1.42%  
Community Workforce Program (CWP) – Currently 10%

The DBOM contract will occur in two distinct phases as described below:

**Phase 1 includes:** (1) the design of the Operating System and Fixed Facilities and the removal/demolition of the existing APM System; (2) the construction of the Fixed Facilities and removal/demolition of the existing APM System; (3) analysis, manufacture, supply, fabrication, assembly, factory testing, shipping, and installation of the APM System; (4) on-site inspection and testing of the Fixed Facilities; (5) on-site integration and verification testing and other preparations for start-up of the APM Operating System; and (6) related project management, control and administration.

### **Breakdown for Phase 1**

The work to be done under Phase 1 of the DBOM contract is distinguished between (1) the supply/installation of the proprietary APM Operating System Technology (train) and (2) the design and construction of the Fixed Facility infrastructure which will support the operation of the APM System technology (train).

**Attachment A** provides a summary breakdown of the budget costs for the Operating System, Fixed Facility Construction and Fixed Facility Design in current 2012 dollars.

Details on each aspect of the Phase 1 work are provided below:

### **Phase 1 APM Operating System Work**

APM Operating Systems use proprietary designs that must be procured as complete packages. The major subsystems (e.g., vehicles, tracks, switches, control systems, station equipment, etc.) from different suppliers cannot be mixed to form a system. Therefore, the Operating System must be procured under a turnkey design, supply and installation contract. The Operating System of an APM application is specially configured using "off the shelf" equipment designs that are applied to satisfy site-specific requirements. The APM system equipment designs are proprietary and are different for each of the suppliers. Due to the highly specialized nature of this work, there is a limited number of qualified, responsible suppliers for the APM system. Known AGT manufacturing firms that may be capable of meeting the requirements of this contract are located in Pennsylvania, Canada, Europe and Japan; there are no known local AGT manufacturing firms.

The work associated with adapting the proprietary designs to site specific conditions is performed at the suppliers' engineering facilities. The manufacturing of the specialty equipment is expected to be performed at the site of their factories. The installation of the equipment is expected to occur at the project site.

Estimated budget costs for the work associated with the APM Operating System supply/installation are provided in **Attachment B**.

The costs have been broken down in accordance with the CSI Divisions; additionally, these budget costs have been further broken down into work that can be expected to be performed at the local project site and at the "APM Factory".

### **Phase 1 Fixed Facility Design and Construction**

Phase 1 of the DBOM contract will also include the design and construction of all fixed facilities required for the APM System.

The exact scope of work may vary depending on the selected supplier but will largely involve refurbishment and/or modifications to the running surface for the train and refurbishment passenger station doors, system support facilities and equipment rooms. Maintenance of traffic on the AOA will also be a critical component of this work.

The Fixed Facility designs and construction are similar to that expected for the traditional design-build project, with the added special requirements for integrating the requirements of the proprietary AGT system that may be proposed.

### **Fixed Facility Design**

The teaming structure of the DBOM Team can be in several forms such as a General Contractor may be Prime, a System Supplier may Prime or it may be a Joint-Venture between a General Contractor and the System Supplier. However, it can be reasonably assumed that the design A/E type effort for the Fixed Facilities work will be performed by A/E firm team members who are either part of the Joint-Venture or under subcontract to the Prime (or Joint Venture) leading the DBOM Team. However, all work related to the adaptation of proprietary Operating System technologies to the project would be performed by the Operating System supplier and not by A/E firms.

**Attachment C** provides a breakdown of the estimated budget costs for the different design services broken down between "prime" and sub-consultant A/E firms; in this case, the "prime" is assumed to be a primary design firm that would still be part of the DBOM Team Joint-Venture or under subcontract to the DBOM team Prime (or Joint venture). The sub-consultant could be smaller design A/E firms supporting the "prime", and may be under direct subcontract to the DBOM Team Prime.

### **Fixed Facility Construction**

The estimated budget cost in 2012 dollars is provided in **Attachment D** and distributed by CSI division. The Fixed Facility construction budget costs are based on a concept level engineer's estimate. Design development and further designs (to 100% completion) will be performed by the design A/E firms that are expected to be part of the DBOM Team. Since the distribution is based on the concept level work, it must be noted that the actual distribution may vary based on each DBOM Teams' proposed designs for the project to be provided in their proposals.

**Attachment D-II** provides the estimated breakdown for the Community Workforce Program (CWP).

### **Phase II Operation and Maintenance (O&M) of the APM System**

The APM System requires proprietary and specialty equipment. Its operations and maintenance are performed by personnel who are trained and certified by the APM System supplier.

As part of the O&M work, the APM System supplier also provides spare parts and other equipment necessary for the performance of the operation and maintenance functions. **Attachment E** provides an estimated breakdown of the different types of work to be performed in Phase II.

If you have questions, I can be reached at (305) 876-7221 or C. Corrales at (305) 876-7991. For Technical questions, you can contact Pedro Hernandez, Division Director MDAD at (305) 876-7928, or Dan McFadden, Lea & Elliott at (305) 869-1621.

Attachments (Project Breakdown Estimates)

cc: P. Hernandez, MDAD  
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Project File

**SUMMARY OF PROJECT BUDGET COST  
SATELLITE E APM REPLACEMENT DBOM**

(See Attachment B, C, D for detailed breakdowns for work aspects noted below)

**ATTACHMENT A**

SATELLITE E APM SYSTEM REPLACEMENT- DBOM CONTRACT PROJECT BUDGET		
		Prepared - 7/31/2012
Project No.	Description	Estimated Equipment and Construction Value
		Year 2012 Dollars
<b>Project #</b>	<b>Satellite E APM Replacement DBOM</b>	
<b>CONSTRUCTION COST</b>		<b>\$ 29,558,003</b>
Operating System (DBOM)	<i>Operating System - supply/install/commission proprietary technology; including O/S General Conditions (See Attachment B - O/S for breakdown of estimate of work)</i>	\$26,986,920
Fixed Facilities (construction)	<i>Construction Costs and General Conditions. (See Attachment D-1 for breakdown of estimate of work)</i>	\$2,571,083
<b>DESIGN COST</b>		<b>\$ 403,431</b>
Fixed Facilities (Design)	<i>Design Services under DBOM (See Attachment C-I for breakdown of estimate of work)</i>	\$89,711
Fixed Facilities (Construction Inspection Services)	<i>Construction Oversight (CA) Services under DBOM but by Design Team (See Attachment C-II for breakdown of estimate of work) (See Attachment B: Note -B1 at the bottom for breakdown of estimate of work)</i>	\$313,720
<b>SUBTOTAL</b>		<b>\$ 29,961,434</b>
<b>Other Costs</b>		
3	Fixed Facility Allowance Account	\$ -
4	AIPP for Fixed Facility (1.5% of FF Contr. cost)	\$ 38,566
<b>TOTAL Project Budget</b>		<b>\$ 30,000,000</b>

MDAD's CONTRACT MEASURES AND ANALYSIS WORKSHEET

To: Mario Goderich, Deputy Director  
Sustainability, Planning and Economic Enhancement Department (SPEED)

From: Milton L. Collins, Associate Director *MJC*  
Minority Affairs Division  
Miami-Dade Aviation Department

PROJECT/CONTRACT TITLE: Satellite E APM Replacement and O & M Services  
Phase 1 and 2

PROJECT NUMBER: Project No. ITB-MDAD-04-12

DEPARTMENT: Aviation

ESTIMATED PROJECT COST: \$313,720.00 Attachment C-II

FUNDING SOURCE: Reserve Maintenance

DESCRIPTION OF PROJECT:

The Miami-Dade Aviation Department requires the services of a qualified team under a Design, Build, Operation and Maintenance (DBOM) contract arrangement and will be divided into two phases. Phase 1 involves the design, construction, manufacture, installation and testing/commissioning of the replacement APM System and Phase II involves the follow-on Operations and Maintenance (O & M) of the System. Due to the specialized nature of the APM system portion of this project, the breakdown presented herein is divided into work that will be done on-site versus off-site work.

CONTRACT MEASURES RECOMMENDATION:

Trade Set-Aside \_\_\_\_\_ Set-Aside \_\_\_\_\_ CBE X Subcontractor Goal \_\_\_\_\_  
Project Goal \_\_\_\_\_ No Measure \_\_\_\_\_ Selection Factor \_\_\_\_\_

REASONS FOR RECOMMENDATION:

Analysis of the factors contained in Ordinance 01-103 as amended and A.O. 3-32 indicates that a CBE Subcontractor Goal is appropriate for this portion of the contract.

ANALYSIS FOR RECOMMENDATION OF A SUBCONTRACTOR GOAL:

SEE ATTACHED BREAKDOWN Attachment C-II

ESTIMATED PROJECT COST: \$30,000,000.00 TOTAL \$313,720.00 TOTAL: 35%

**ATTACHMENT C - II**  
**Breakdown of Fixed Facility Construction Inspection Services (CIS work – by A/E firms)**  
**Satellite E APM Replacement DBOM CONTRACT**  
 (See Attachment A for Summary of All Work)

CAT. NO.	SERVICE DESCRIPTION *	LEAD DESIGN / CIS (under subcontract to DBOM Team Prime)	SUB-CONSULTANT (supporting A/E firms, likely under subcontract to DBOM Team Prime)	PERCENT OF TOTAL CONSULTANT FEE	PERCENT OF TOTAL DESIGN FEE (for - CBE - POTENTIAL WORK)
1.02	MASS and RAPID TRANSIT PLANNING				
1.03	AVIATION SYSTEMS AND AIRPORT MASTER PLANNING				
2.02	MASS TRANSIT FEASIBILITY AND TECHNICAL STUDIES				
3.00	HIGHWAY SYSTEMS				
4.00	AVIATION SYSTEMS				
5.00	PORT AND WATERWAY SYSTEMS				
6.00	WATER AND SANITARY SEWER SYSTEMS				
7.00	SOLID WASTE COLLECTION AND DISPOSAL SYSTEMS				
8.00	TELECOMMUNICATION SYSTEMS		x	3	3
9.02	GEO TECHNICAL AND MATERIALS ENGINEERING SERVICES		x	7	7
9.04	NON DESTRUCTIVE TESTING AND INSPECTIONS		x	7	7
10.00	ENVIRONMENTAL ENGINEERING				
11.00	GENERAL STRUCTURAL ENGINEERING	x	x	20	10
12.00	GENERAL MECHANICAL ENGINEERING		x	15	15
13.00	GENERAL ELECTRICAL ENGINEERING		x	15	15
14.00	ARCHITECTURE	x	x	30	20
15.01	LAND SURVEYING				
15.03	UNDERGROUND UTILITY LOCATION		x	3	3
16.00	GENERAL CIVIL ENGINEERING				
17.00	ENGINEERING CONSTRUCTION MANAGEMENT				
18.00	ARCHITECTURAL CONSTRUCTION MANAGEMENT				
19.00	VALUE ANALYSIS AND LIFE-CYCLE COSTING				
20.00	LANDSCAPE ARCHITECTURE				
				100%	80%

\*Detailed descriptions of certification categories may be obtained from MDAD Contracts Administration.

**Total Estimated Value of A/E's work for CIS Services: \$319,720 – will be part of overall Satellite E APM Replacement DBOM's Bid Price. (See Attachment B: Note -B1 at the bottom for breakdown of estimate of work)**

**Total Estimated CBE potential participation: \$26,913 (see Attachment C-I) + \$250,976 (80% of \$ 313,720 this sheet) = \$277,889 (approx 69% of Design Cost or 1% of Project Cost)**

**MIAMI INTERNATIONAL AIRPORT**

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