


# Memorandum



**Date:** June 12, 2019

**To:** Gary Hartfield, Division Director  
Internal Services Department, Small Business Development

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

**Subject:** Contract Measures Request:  
CC E New PCA Chiller Plant  
ISD Project No. E19-MDAD-01

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## **RECOMMENDATION:**

This is a request for Small Business Development (SBD) to approve the subject project in order for the Aviation Department to proceed in obtaining an SBD Project Worksheet for the CC E New PCA Chiller Plant, ISD Project No. E19-MDAD-01. The Minority Affairs Division and the User Division Staff have reviewed the subject project and are recommending an SBE A/E Goal of 25% and an SBE G/S Goal of .50% (Office Supplies – Commodity Code 61500). Breakdown of Services to be performed are attached (Service Description).

The Estimated Contract amount will be \$2,000,000 (Base Estimate). The Term of the Agreement will be for Five (5) years.

## **BACKGROUND:**

The Miami International Airport (MIA) is seeking a Mechanical, Electrical (ME) Engineering Consulting Firm to be selected for subject project will utilize the Design Development Project Book dated December 2016 as reference material towards the completion of the 100% Construction Documents. The selected ME Firm will be Prime Consultant, and will engage other required engineering disciplines such as Civil and Structural. Design of the Central Plant will be in compliance with MDAD Design Guidelines and all applicable Codes.

Mechanical and Electrical plan drawings in the Project Book are currently at 60% Design Development Level.

Some of the features of the New PC AIR Central Plant Project's design include but are not limited to the following:

- The Central plant will serve nine gates at Satellite E and nine gates at Low E and will serve the new Aircraft mix and Passenger Boarding Bridge configurations anticipated at each of the eighteen gates.
- Due to the expansion capacity and the proposed location of the Plant, the EG/W piping circuit serving the eighteen gates will need to be upgraded.
- A temporary air cooled EG/W plant (two 280 ton chillers) to decouple Low E gates from the current central loop is in the permitting process for construction at this time. The selected ME consultant for the New Central Plant will include in its scope the removal of the temporary plant once the Central Plant is operational.

- The existing cooling tower and associated structure between grid lines 12 and 16 will be demolished under the New Central Plant project.
- The Central Plant will comprise a modular building that is metal-framed, pre-assembled.
- Two chillers will operate in series, and an additional chiller will be future standby. Each chiller has 750 ton capacity. The Central plant is therefore rated for 1500 tons.
- A Primary, Secondary EG/W pumping system will serve the loop. (2) Primary pumps, each 2000 GPM at 105 feet of head; one a standby. (2) Secondary pumps, each 1800 GPM at 200 feet of head; one a standby.
- Condenser Water for the water-cooled chillers will be drawn from one of the main chilled water return lines of the airport loop. (3) condenser water pumps, each 1065 GPM at 50 feet of head; one pump for each chiller.
- Microprocessor based controls, fully BACnet and able to integrate to the airport's BACnet Honeywell BAS.
- Normal Power for the new PC Air Plant will be taken from "existing" (to be installed under temporary plant project) 4000A, 277/480 volt, 3 phase 4 wire Service Rated Switchboard ("2F-CP") which is fed from FP&L vault (5290 NW 22st) located at Satellite E, Room 1052.
- The Switchboard is Free Standing in a NEMA 3R enclosure located outdoors outside the FPL vault north exterior wall. This switchboard is intended to serve the PC Air Temporary Chillers Project and it is equipped to serve the proposed new Central chiller plant.
- The Central plant building shall be electrically complete with all the necessary electrical equipment and accessories. This building shall be equipped with energy efficient lighting required for the proper illumination of the facility including illumination of all points of entrance, as well as, the necessary emergency lighting of all means of egress and exit signage using lighting fixtures equipped with emergency battery and control accessories. Convenience outlets are to be provided, within and outside the building, as necessary to properly serve the facility and their maintenance requirements.
- If required, Emergency electrical power with generator backup, can be obtained from the existing panels 2FC-FFC (277/480 volt, 3 phase, 4 wire) and 1F-FFC (120/208 volt, 3 phase, 4 wire), located in electrical Room S1049.
- Extend Voice and Data Systems and tie into the existing Satellite E communication room.
- Provide Fire Alarm and Detection System for the PC Air plant in compliance with FBC, MDAD Design Guidelines and Master Life Safety Plan. New initiating and annunciation devices will be tied to the existing Fire Alarm Control Panel located in Electrical Room S1049.
- Provide UL Lighting Protection System for the building and tie into the building grounding system.

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**Desired Experience:**

Preferred design of similar sized Chiller Plant, including Mechanical, Electrical and Plumbing experience, at other airport facilities or other large facilities of similar size and scope.

Please advise if additional information is needed to complete this process.

Attachments

c: L. Johnson, SBD  
M. Clark-Vincent, MDAD  
F. Pereira, MDAD  
R. Abrahante, MDAD  
S. Novela, MDAD  
C. Corrales, MDAD  
Project File

## MDAD's CONTRACT MEASURES AND ANALYSIS WORKSHEET

**To:** Gary Hartfield, Division Director  
Internal Services Department, Small Business Development

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

**PROJECT/CONTRACT TITLE:** CC "E" New PCA Chiller Plant  
**PROJECT/CONTRACT NUMBER:** ISD Project No. E19-MDAD-01  
**DEPARTMENT:** Miami Dade Aviation Department  
**PROJECT ESTIMATED COST:** \$2,000,000.00  
**FUNDING SOURCE:** Aviation Bonds

### DESCRIPTION OF PROJECT/BID:

The Miami International Airport is seeking a Mechanical, Electrical (ME) Engineering Consulting Firm to be selected for the subject project will utilize the Design Development Project Book dated December 2016 as reference material towards the completion of the 100% Construction Documents. The selected ME Firm will be Prime Consultant, and will engage other required engineering disciplines such as Civil and Structural. Design of the Central Plant will be in compliance with MDAD Design Guidelines and all applicable Codes.

### CONTRACT MEASURES RECOMMENDATION:

Measures: SBE-A&E 25%  
SBE- G&S .50%

### REASONS FOR RECOMMENDATION:

Analysis of the factors contained in Implementing Order #3-32 indicate that an SBE-Architectural & Engineering Program Goal and Implementing Order #3-41 SBE-Goods & Services Program Goal are applicable for this contract.



MDAD Assistant Director

CAT. NO.	SERVICE DESCRIPTION *	PRIME CONSULTANT	SUB-CONSULTANT	PERCENT OF TOTAL CONSULTANT FEE
1.00	TRANSPORTATION PLANNING			
	1.01 URBAN AREA AND REGIONAL TRANSPORTATION PLANNING			
	1.02 MASS AND RAPID TRANSIT PLANNING			
	1.03 AVIATION SYSTEMS AND AIRPORT MASTER PLANNING			
	1.04 PORT AND WATERWAY SYSTEMS PLANNING			
2.00	MASS TRANSIT SYSTEMS			
	2.01 MASS TRANSIT PROGRAM (SYSTEMS) MANAGEMENT			
	2.02 MASS TRANSIT FEASIBILITY & TECHNICAL STUDIES			
	2.03 MASS TRANSIT VEHICLE & PROPULSION STUDIES			
	2.04 MASS TRANSIT CONTROLS, COMMUNICATIONS, & INFORMATION SYSTEMS			
	2.05 GENERAL QUALITY ENGINEERING			
	2.06 MASS TRANSIT SAFETY CERTIFICATION FOR SYSTEM ELEMENTS			
3.00	HIGHWAY SYSTEMS			
	3.01 SITE DEVELOPMENT AND PARKING LOT DESIGN			
	3.02 HIGHWAY DESIGN			
	3.02A TUNNEL DESIGN			
	3.03 BRIDGE DESIGN			
	3.04 TRAFFIC ENGINEERING STUDIES			
	3.05 TRAFFIC COUNTS			
	3.06 TRAFFIC CALMING			
	3.07 TRAFFIC SIGNAL TIMING			
	3.08 INTELLIGENT TRANSPORTATION SYSTEMS ANALYSIS, DESIGN, AND IMPLEMENTATION			
	3.09 SIGNING, PAVEMENT MARKING, AND CHANNELIZATION			
	3.10 LIGHTING			
	3.11 SIGNALIZATION			
	3.12 UNDERWATER ENGINEERING INSPECTION			
4.00	AVIATION SYSTEMS			



	4.01 ENGINEERING DESIGN	20		20
	4.02 ARCHITECTURAL DESIGN		5	5
5.00	PORT AND WATERWAY SYSTEMS			
	5.01 ENGINEERING DESIGN			
	5.02 ARCHITECTURAL DESIGN			
	5.03 CRUISE TERMINAL DESIGN			
	5.04 CRUISE TERMINAL EQUIPMENT DESIGN			
	5.05 CARGO TERMINAL DESIGN			
	5.06 CARGO TERMINAL EQUIPMENT DESIGN			
	5.07 SECURITY SYSTEMS			
	5.08 MARINE ENGINEERING DESIGN			
	5.09 ENVIRONMENTAL DESIGN			
	5.10 TRANSPORTATION SYSTEMS DESIGN			
	5.11 CONSTRUCTION MANAGEMENT			
6.00	WATER AND SANITARY SEWER SYSTEMS			
	6.01 WATER DISTRIBUTION AND SANITARY SEWAGE COLLECTION AND TRANSMISSION SYSTEMS			
	6.02 MAJOR WATER AND SANITARY SEWAGE PUMPING FACILITIES			
	6.03 WATER AND SANITARY SEWAGE TREATMENT PLANTS			
7.00	SOLID WASTE COLLECTION AND DISPOSAL SYSTEMS			
8.00	TELECOMMUNICATION SYSTEMS		2	2
9.00	SOILS, FOUNDATIONS AND MATERIALS TESTING			
	9.01 DRILLING, SUBSURFACE INVESTIGATION AND SEISMOGRAPHIC SERVICES			
	9.02 GEOTECHNICAL AND MATERIALS ENGINEERING SERVICES			
	9.03 CONCRETE AND ASPHALT TESTING SERVICES			
	9.04 NON-DESTRUCTIVE TESTING AND INSPECTIONS			
	9.05 ROOF TESTING AND CONSULTING			
	9.06 MATERIALS TESTING/CONSULTING/TRAINING			
	INDUSTRIAL HYGIENE			
	ASBESTOS			
	AMBIENT AIR			
	BIO-HAZARDOUS			



	OSHA			
10.00	ENVIRONMENTAL ENGINEERING			
	10.01 STORMWATER DRAINAGE DESIGN ENGINEERING SERVICES			
	10.02 GEOLOGY SERVICES			
	10.03 BIOLOGY SERVICES			
	10.04 CHEMISTRY SERVICES			
	10.05 CONTAMINATION ASSESSMENT AND MONITORING			
	10.06 REMEDIAL ACTION PLAN DESIGN			
	10.07 REMEDIAL ACTION PLAN IMPLEMENTATION/OPERATION/MAINTENANCE			
	10.08 PATHOGEN AND CONTAINMENT RISK ANALYSIS			
	10.09 WELLFIELD, GROUNDWATER, AND SURFACE WATER PROTECTION AND MANAGEMENT			
	10.10 COASTAL PROCESSES AND OCEAN ENGINEERING			
11.00	GENERAL STRUCTURAL ENGINEERING		10	10
12.00	GENERAL MECHANICAL ENGINEERING	20		20
13.00	GENERAL ELECTRICAL ENGINEERING	20		20
14.00	ARCHITECTURE		5	5
15.00	SURVEYING AND MAPPING			
	15.01 LAND SURVEYING			
	15.02 AERIAL PHOTOGRAMMETRY			
	15.03 UNDERGROUND UTILITY LOCATION			
	15.04 HYDROGRAPHIC SURVEYS			
16.00	GENERAL CIVIL ENGINEERING		3	3
17.00	ENGINEERING CONSTRUCTION MANAGEMENT	10		10
18.00	ARCHITECTURAL CONSTRUCTION MANAGEMENT		5	5
19.00	VALUE ANALYSIS AND LIFE-CYCLE COSTING			
	19.02 MASS TRANSIT SYSTEMS			
	19.03 HIGHWAY SYSTEMS			
	19.04 AVIATION SYSTEMS			
	19.05 PORT AND WATERWAY SYSTEMS			
	19.06 WATER AND SANITARY SYSTEMS			
	19.07 SOLID WASTE COLLECTION AND DISPOSAL SYSTEMS			



	19.08 TELECOMMUNICATION SYSTEMS			
	19.09 SOILS, FOUNDATIONS, AND MATERIALS TESTING			
	19.10 ENVIRONMENTAL ENGINEERING			
	19.11 GENERAL STRUCTURAL ENGINEERING			
	19.12 GENERAL MECHANICAL ENGINEERING			
	19.13 GENERAL ELECTRICAL ENGINEERING			
	19.14 ARCHITECTURE			
	19.15 GENERAL CIVIL ENGINEERING			
	19.20 LANDSCAPE ARCHITECTURE			
20.00	LANDSCAPE ARCHITECTURE			
21.00	LAND USE PLANNING			
22.00	ADA TITLE II CONSULTANT			
23.00	AVIATION ACOUSTICAL AND LAND USE COMPATIBILITY PLANNING			
24.00	BUILDING PRODUCT EVALUATION SERVICES			
	24.01 PANEL WALLS			
	24.02 EXTERIOR DOORS			
	24.03 ROOFING PRODUCTS			
	24.04 SKYLIGHTS			
	24.05 WINDOWS			
	24.06 SHUTTERS			
	24.07 STRUCTURAL COMPONENTS			
25.00	AVIATION PLANNING CONSULTANT SERVICES			
26.00	CLAIMS ANALYSIS SERVICES			

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