ISSUING DEPARTMENT INPUT DOCUMENT
CONTRACT/PROJECT MEASURE ANALYSIS AND RECOMMENDATION

☑ New ☐ OTR ☐ Sole Source ☐ Bid Waiver ☐ Emergency Previous Contract/Project No.: N/A

☐ Contract ☐ Re-Bid ☐ Other – Access of Other Entity Contract

LIVING WAGE APPLIES: ☐ YES ☐ NO

Requisition No./Project No.: RQAV1900050

TERM OF CONTRACT: 5 YEAR(S) WITH: 2 YEAR(S) OTR

Requisition /Project Title: BIOMETRICALLY ENABLED COMMON USE PASSENGER SOLUTION

Description: Miami-Dade County Aviation Department (MDAD), is soliciting proposals for a qualified and experienced firm to enter into a non-exclusive Agreement to implement, and maintain a biometric passenger processing system (BPPS) at Miami International Airport.

Issuing Department: ISD

Contact Person: Hendry Lopez

Phone: 305-375-3803

Estimate Cost: $10,000,000

	GENERAL	FEDERAL	OTHER
Funding Source:			Proprietary

ANALYSIS

Commodity Codes: 920-16 | 905-68 | 209-24 | 035-69 | 208-19

Contract/Project History of previous purchases three (3) years

Check here ☑ if this is a new contract/purchase with no previous history.

	EXISTING	2ND YEAR	3RD YEAR
Contractor:			
Small Business Enterprise:			
Contract Value:			

Comments:

Continued on another page (s): ☐ YES ☐ NO

RECOMMENDATIONS

	Set-Aside	Subcontractor Goal	Bid Preference	Selection Factor
SBE				

Basis of Recommendation:

Signed: Hendry Lopez

Date sent to SBD: 01.28.2020

Date returned to SPD:

Biometric Passenger Processing Solution

Attachment B - Scope of Work

1) OBJECTIVES

MDAD is seeking proposals for a turnkey biometrically enabled common use passenger processing system that complements and seamlessly integrates with the current common use passenger processing system deployed all the gates at MIA. The solution shall include a mix of automated boarding gates in accordance to the scope of work detailed below. The Contractor shall provide all software, hardware, training, professional services, maintenance, and support.

2) SOLUTION SPECIFICATIONS

2.1 Technical Specifications

a. Solution shall support IATA's One Identity / NEXXT program concepts for enabling the seamless travel journey as an end-to-end process.

b. Designed with configurations to support gate operations for multiple airlines using certified peripherals integrated with MDAD's common use system at MIA.

c. Support the use of all boarding applications whether they are designed for physical boarding gate readers or physical bar code readers.

d. Designed with technology to facilitate biometric data capture of exiting passengers for CBP.

e. Designed and installed to operate in a fully integrated manner consistent with CBP's biometric programs, especially CBP's biometric exit gate program and Traveler Verification System (TVS)

f. Provide operational flexibility to support automated or manual airline operations.

g. Be capable of automated collection and distribution of performance metrics per flight, such as passenger scanning, transaction counts and times and system fault reporting.

h. The system shall be designed and installed to fully integrate with the existing and future participating airlines system, and no additional cost to the County.

i.

2.2 Solution shall support "privacy by design" concepts:

a. Customer participation is voluntary
b. Opt-in process
c. Data is securely stored and used only for its intended purpose and duration
d. Data is removed from the system upon completion of the process, based upon configurable settings

2.3 Proposer shall describe its cybersecurity practices for the following:

a. Vulnerability assessment
b. Penetration testing
c. Other tools and mechanisms to provide system integrity checks

2.4 Solution shall support self-service capabilities for enabling integrated biometric-based identity verification at all possible touchpoints, such as but not limited to:
   a. Check-in (including agent-assisted, self-service, and mobile processes)
   b. Bag-drop
   c. Security checkpoint
   d. Airline lounge access
   e. Boarding
   f. Customs & immigration

2.5 Solution shall be integrated with the airport's common use passenger processing system and must provide documented proof that the solution is certified on the common use platform.

2.6 Proposer shall provide a solution architecture overview – logical, network, functional – and describe the implementation requirements and dependencies. E.g., Is the solution cloud-based (i.e., centralized) or local? How is communications and bandwidth utilization managed across network and/or touchpoints?

2.7 Proposer shall describe and provide technical information on the following:
   a. Camera solution (e.g., fixed mount vs. movable)
   b. Any biometrically integrated touchpoints such as bag-drop and self-boarding gate
   c. Other system specifications, including software licenses
   d. Support & maintenance requirements

2.8 Solution shall support biometric options for US domestic and international travel, in support of TSA and CBP regulatory requirements and considerations, including integration with the CBP Traveler Verification Service (TVS) for US Exit and Entry or other future touchpoints.

2.9 Provider shall demonstrate proven capability through referenced public works and references of production customer implementations.

2.10 Provider shall integrate its solution with the common use applications and Departure Control Systems (DCSs) of all airlines that provide scheduled service to MIA to maximize the use of existing processes and systems.

2.11 Solution shall support integration with proprietary as well as 3rd party hardware / software solutions. Proposer shall specify key partners or providers used to support the implementation for each touchpoint. In addition, the solution and equipment should allow for plug-in/plug-out integration with different peripheral devices from other manufacturers, e.g. scanners, code readers, biometric devices, etc.

2.12 Solution is capable of being used in different modes, including:
   a. A "one-step process", where biometrics and airline process is integrated into a single step process (traveler steps up to camera and all systems are integrated to execute programmatic processes seamlessly and automatically).
   b. A "two-step process", where biometrics is coupled with a boarding pass or other document scan, as a prompt to trigger a set of agreed actions (boarding pass is scanned, then the camera is triggered to initiate the biometric matching process).
   c. A non-biometric process, where the "as-is" process applies in an agent-assisted model (no biometrics).

3) FUNCTIONAL REQUIREMENTS

3.1 Solution shall support multiple implementation models to allow for configurable design based upon available space, positioning, and logistics (e.g., self-boarding gates as well as free-standing cameras, tablets, or other lean models).

3.2 Solution shall support the integration with airline boarding applications and devices such as tablets, smartphones, or iPads used by the airline or agency to support its operations.

3.3 Solution shall meet U.S. Americans with Disabilities Act (ADA) requirements for enabling passengers requiring special assistance, and passengers in a wheelchair, and passengers with reduced mobility to use the system. Proposer shall specify any limitations or required alternatives.

3.4 Solution shall support the integration of biometrics with the existing common use provider certified hardware and software systems. Proposer shall list its preferred partners and certified solutions.

3.5 Solution shall support the ability to alert agents when manual processing or support may be required.

3.6 Solution shall provide an agent override function to bypass the biometric process, if so required.

3.7 Solution shall provide simple, passenger-facing screens with an intuitive design to promote ease of use, such as:

a. Simple screen designs
b. Simple instruction
c. Visual guidance via a “digital mirror”
d. Pass/Fail simplicity

3.8 Solution shall support the integration with leading vendors of biometric-matching algorithms and systems. Proposer shall specify any known alternatives or limitations of its vendors.

3.9 Solution shall support the integration with other airport products and services used for business intelligence, passenger tracking, queue management, airport operations control & terminal management, or resource management.

3.10 Solution shall support the integration with US Customs & Border Protection (CBP)’s Traveler Verification Service (TVS) for the implementation of facial recognition in accordance with CBP’s specification at any touchpoint.

3.11 In the event of a failed match, the solution shall halt the process and direct the traveler to the appropriate agent or agency (e.g., airline, TSA, or other agent) to adjudicate the situation before allowing the process to proceed further.

3.12 Solution shall facilitate and support the integration with each airline application and DCS (Departure Control System) to allow acceptance of a UID (unique identifier) to facilitate airline processes.

3.13 Solution shall meet or exceed the following Key Performance Indicators (KPIs):

a. 99% or higher match-rate
b. Less than .01% false positive identification of participating travelers

3.14 Processing Times:

a. The total technology processing time to perform biometric verification and to complete the airline’s process (e.g., boarding) shall not exceed 5-7 seconds, excluding human factors or known DCS system limitations.
b. Where included, enrollment should take no more than 20-30 seconds for passport

capture, boarding scan, and biometric token creation. When integrated with airline process, this should be less.

c. Proposer shall explain its experience and metrics.

3.15 Solution shall support the following remote monitoring and management capabilities:

a. Centralized administration
b. Monitoring
c. Reporting
d. Support capabilities to manage the distribution and maintenance of software releases and configuration management.

3.16 Proposer shall include a solution roadmap that demonstrates how Proposer's solution will be future-proof and support upgrades.

3.17 The proposed solution shall be designed for industrial use and take into consideration environmental factors such as continual use, bright lighting conditions, and potential contact with liquids and dust.

4. PROJECT REQUIREMENTS

4.1 Proposer shall demonstrate access to best-practice industry expertise, project leadership, and implementation support for project delivery and management of solution requirements to ensure successful project delivery: networking, logistics, installation, onboarding of airlines, system training, testing, launch support (on-site and remote) for the duration of implementation program.

4.2 Proposer must demonstrate experience working with multiple airlines, their Departure Control System (DCS) providers and application developers, and with airports to implement biometric self-service solutions.

4.3 Proposer shall list the airport names, airlines, and DCSs already supported and identify which airlines/Departure Control System (DCS) have been integrated to use CBP's UID, via the TVS (Traveler Verification Service), in lieu of a boarding pass for passenger identification.

4.4 Proposer shall perform a site survey and provide guidance and instruction for the following:

a. Best-practice installation, tuning & optimization
b. Recommendation of appropriate solution quantities to support optimum passenger processing performance requirements.

4.5 Proposer shall provide a delivery plan that includes the ability to support a full or staggered roll-out of the biometric end-to-end process, according to customer's current and future business direction.

4.6 Proposer shall define the KPI's that shall be actively measured during the defined implementation period, including the ability to achieve the targeted opt-in rate, match-rate, and reduced current processing time per passenger per touchpoint by at least x%.

4.7 Proposer's delivery plan shall include a project plan to the provide implementation strategy and timelines, as well as any procurement or development dependencies and timelines.

4.8 Proposer shall include services such as:

a. On-site and remote support
b. Proactive relationship management for duration of the contract term – provide SLA commitments associated with solution.

4.9 Proposer shall provide training and other materials to allow airline or airport to self-manage support processes.

4.10 Proposer shall provide dedicated, on-site solutions support as well as Level 2 (local troubleshooting) and Level 3 support (subject matter expert troubleshooting).

4.11 Proposer's solution and project delivery plan shall meet all health, environmental safety and security requirements and must adherence to all applicable Federal, State, City and Airport rules and regulations.

5. SECURITY DESIGN AND REVIEW

a. It is desired that Proposer submit a network diagram for approval by MDAD IT.
b. It is desired that Proposer submit an application flow diagram for approval by MDAD IT.
c. It is desired that Proposer be required to show that the network and/or application flow design conforms to security best practices.
d. Documentation – It is desired that Proposer provide a security plan that includes, but is not limited to:
    1. An overview of the information system security posture
    2. Technical details regarding information system implementation strategy, documentation or guidelines that vendor follows to implement and deliver the information system.
    3. Technical details regarding security strategy - patches applied, operating system hardening steps, services enabled/disabled, TCP/UDP ports opened/closed, authentication requirements, etc.
    4. Any deviations from the security best practices shall be documented by the Selected Proposer and must be approved by MDAD IT
e. Log all security-related events including unauthorized attempts to access privileged services.
f. Proposer shall protect passwords, and required for passwords to be changed every 90 days.
g. All management and configuration interfaces are to be secured using multi-factor authentication for administrative access.
h. Proposer should provide to the County a copy of their Information Security Policy detailing an overview of the firm's security posture and system implementation policy.
i. Proposer should provide a SSAE 18 SOC 2 complaint report, and maintain certification throughout the term of the resultant contract. The County reserves the right to request the latest available report in an as needed basis.

6. DESIRED PHYSICAL SPECIFICATIONS FOR BOTH TYPES OF UNITS
(i.e. self-boarding gates and camera solution fixed or mobile)

A. It is desirable that the Automated Biometric Boarding Gate solution have the following capabilities:

    1. Prevent passengers from circumventing the moving gate doors using force.

    2. Prevent passengers from bypassing the moving gate doors when closed.

    3. Include moving gate doors that are transparent or translucent.

    4. Include options for moving gate panels in overall height for increased security.

    5. Be locked so that it is not possible to make unauthorized changes to software and hardware.

B. Design:

    a. It is desirable that the Automated Biometric Boarding Gate have the following capabilities:

b. Branding and colors decided by MDAD for both types of hardware (i.e. Self- boarding gates and camera fixed or mobile solution).

c. The moving gate doors in the units should have branding or colors decided by MDAD.

d. The Proposer will demonstrate in a specific appendix which elements are optional/customizable to the client within the overall design of the units.

C. Wear and Tear:

a. It is desirable that the units be built for use in a public indoor environment with expected usage 24 hours a day all year round.

b. Be constructed of materials selected to minimize wear and the need for maintenance.

c. Be constructed such as it can endure and maintain function even after continual minor collisions from luggage trolleys and cleaning machines.

d. Have external surface areas resistant to stains and fingerprints

D. Biometrics:

a. The Biometric solution should be fitted with a high-resolution camera capable of capturing images suitable for biometric evaluation and passenger identification.

b. Solution should provide for camera that can adjust to meet the height of the passenger or otherwise offers wide-angle image capture to sufficiently capture all required biometric information.

E. Audible Device Features:

It is desirable that the Biometric solution is fitted with an audible device and have configurable tones (audible alarms) to signal, at a minimum the following events:

a. tailgating

b. exit blocked

c. crawling under

d. reverse direction

e. boarding pass validation complete

f. boarding pass validation incomplete

F. Be configurable for, as a minimum:

g. Volume

h. Different tones or audio clips for different audible alarm events and

i. Duration of the audible alarm.

G. Occupancy Sensor Features:

a. It is desirable that the solution include occupancy sensors that aide in detecting anomalous behaviors.

b. It is desirable that the solution include occupancy sensors designed to minimize false positive alarms.

H. Battery Backup Function:

a. It is desirable that the units include the option to house an Uninterruptible Power Supply.

b. UPS should be rated for a minimum of 20 minutes of runtime.

I. Additional functionalities:

a. Solution should include a printer for printing updated seat notifications. Ground staff should be able to refill paper. Proposer to provide ink/toner consumables at no additional cost to MDAD.

b. It is desirable that the unit's printer include sensors that detect and notify the system administrator when the printer is low on paper and ink/toner.

c. Units should support dynamic and/or manual triggers that allow them to act as a standard Boarding Gate Reader.

d. Units should include the ability to modulate flap open speed for purposes of metering passenger throughput. Control of this modulation should be available on a per-airline basis and rest within the airline DCS and boarding application.

J. Desirable Accessibility:

a. Units should provide a clear, unobstructed walkway.

b. Units should have the capability of being available in a combination of widths to satisfy accessibility needs, including, but not limited to, access for wheelchairs, pushchairs, etc.

K. Emergency Opening:

The boarding gates should have an emergency opening function with the following desired functions:

a. In case of emergency have the capability to open the doors on an active unit by force. This should generate an alarm and not cause permanent damage to the unit.

b. Emergency opening function mounted on the rear end-leg of the gate as a recessed

but accessible button. This function should both be able to open and close the unit.

c. In case of a power failure it will be possible to, with no or little force, open the doors in either direction of the unit.

L. Alarms:

It is desired that the Biometric solution have various alarm types to support a minimum:

a. When the unit is entering an unusable state, there should be a severe alarm requesting an agent to physically inspect and reset it.

b. There should be a warning alarm that warns in case of an intrusion, tailgating or if someone tries to tamper with the unit. This alarm should trigger both the remote system and a visual and sounding alarm at the unit.

c. There should be a warning alarm informing the passenger that something is wrong. For example, in the situation where a passenger has been standing too long at the unit. This alarm should trigger both the remote system and have a softer sounding alarm. The unit should return to operational mode automatically after the issue is resolved.

d. Information about the alarm should be presented to the passenger and airline staff on the color display of unit.

e. All alarms should be saved in a log file.

7 WARRANTY, OPERATIONS AND MAINTENANCE

1. Provide at a minimum one-year warranty from time of written acceptance of the complete system on equipment, material, and labor unless noted otherwise. If the manufacturer's standard offering is longer than one year, then Contractor shall provide the longer warranty.

2. Execute and assemble warranties from subcontractors, suppliers, and manufacturers.

3. Provide one (1) hard copy of warranties with a table of contents and assemble in a three-ring binder with a hard-durable plastic cover. Internally subdivide the binder contents with permanent page dividers, with tab titling clearly typed under reinforced laminated plastic tabs. Also include one (1) electronic copy of the same in PDF format.

discretion of the County.

6. The hardware and software warranty shall allow for the replacement or repair at the discretion of MDAD. All software and hardware necessary to compile, change and maintain the systems are included in this warranty. Software upgrades and updates shall be provided during the warranty period and their implementation shall be coordinated with the Project Manager through the change management process. All software shall be licensed to MDAD unless an exception is provided by MDAD IT.

7. Warranty shall begin after Final Acceptance of any equipment and/or software.

9. Warranty Includes repair of equipment or request for Proposer to return to site to address workmanship issues.

9. Proposer to be responsible for shipment of non-functioning device to the manufacturer for repair via their RMA (Return Merchandise Authorization) process.

10. Proposer returning to the site to resolve system issues, perform move/add/change (MAC) work due to system stability issues, or to resolve catastrophic outages for system operation prior to Final acceptance.

11. Repair of software/hardware defects via firmware upgrades or software patches.

12. Creation and maintenance of a warranty log to be submitted at project completion.

13. Operations & Maintenance Support includes: The Proposer be responsible for providing on-site operations and maintenance support of the units and installed system 24 hours a day, 7 days a week, 365 days a year.

14. Throughout the operation and maintenance period stated above, the Proposer shall monitor the performance of the respective units during each scheduled departure.

15. Requires that the Proposer meet a service level agreement (SLA) (with determined response time, time to restore system to operation, and explanation of cause and cure).

16. Attends regular meetings to review/discuss/plan outstanding system problems.

17. Proposer performs triage to assess system/device problem and resolves or reports to Proposer's maintenance team for resolution.

18. Preventative maintenance (PM) including cleaning field equipment.

19. Performs daily system health checks.

20. Creates and maintains PM/service logs.

21. Maintains a log of all configuration changes.

22. Performs configuration changes as needed to support the project, airport operations.

23. Updates logical documentation (i.e., Logical names for network ports to identify where the device using that port terminates in the field) to reflect current system environment.

24. Follows MDAD's Change Management process, used to detail planned system changes, updates, and upgrades. Information that must be provided includes Justification for the change, implementation plan, schedule risk and impact analysis, rollback/backout plan, test plan, and communications plan.

25. Performs system backups, system failover/failback tests, and other scheduled activities.

25. Proposer shall provide upgrades, updates or patches of software or new versions of standards to the County, in a format approved by the County, within three (3) months from release, at no additional cost to the County, throughout the term of the resulting contract.

8. Service Level Agreement (SLA)

a. Contractor shall be responsible for providing operation and maintenance support for the BPPS throughout the term of the resulting agreement.

b. Response time for all incident calls shall be within ten (10) minutes. In addition, the table below reflects the resolution time for the types of incidents. This information is subject to change based on the County's discretion.

Incident Category	General Description	Resolution Time
Category 1 (Major/Urgent)	System is non-functional. This includes but is not limited to the following: - Severely impacting the ability to process passengers. - - Loss of date and connection failure.	Resolution of the problem shall be resolved within 30 minutes following the initial call by the County to the selected proposer.
Category 2 (Medium)	The system is functional but the ability to process passengers effectively has been affected.	Resolution of the problem shall be resolved within 60 minutes following the initial call by the County to the selected proposer.
Category 3 (Minor)	System errors not consider a category 1 or 2, but is affecting the passenger processing negatively.	Resolution of the problem shall be resolved within 90 minutes following the initial call by the County to the selected proposer.

c. .

d. Infrastructure availability time shall be 99.9%. The selected proposer may be subject a monthly credit based on the criteria below if the BPPS system does not meet the availability time. The table is based on a 24 hours, seven (7) days a week, and 365 days a year.

Availability	Credit %
99.99% or above	0%
Less than 99.99% but greater than or equal to 98.99%	5%
Less than 98.99% but greater than or equal to 97.99%	10%
Less than 97.99%	15%

e. The Proposer shall record all tickets and associated resolution times and the percentage shall be measured over each calendar month.

f. The Proposer shall work with designated Airport Staff on various levels of support, including working to resolve Help Desk Tickets related to the installed system.

g. The Proposer shall be primary contact for MDAD IT Service Desk Tickets associated with the installed System.

h. The Proposer shall meet the Service Levels for problem resolution and escalation as shown herein.

i. The Proposer shall anticipate and be responsive to high call volumes during the peak travel times such as Thanksgiving and Christmas.

j. The Proposer shall document and report operational metrics, including activity logs and Service Level Agreements.

k. The Service Levels stated herein define the minimum levels that the Proposer shall deliver to the Owner and its Users during the maintenance period.

l. The Service Levels and Escalation procedures may be modified by mutual agreement of both parties throughout the term of the Maintenance Period.

m. Any failure caused by malfunction of an interfaced system or associated third party network communications are excluded from these Service Levels. However, all such problems shall be assigned to Proposer for "Ownership" until the problem is resolved.

n. In the event of illness or staff changes, the Proposer shall adjust shift time, until such time as local manpower coverage is normalized at no additional cost to the MDAD.

9. LIQUIDATED DAMAGES-MONETARY PENALTY

MDAD shall impose a monetary penalty on the Proposer for; failing to achieve the required service levels, non-responsiveness, or failure to complete scheduled Move Add and Change (MAC) work within the designated time schedule, and other performance measurements as more fully described below:

	Performance Measurement	**Penalty Summary**
1.	Failure of Proposer to meet the monthly service levels as stated herein.	Proposer shall credit MDAD at a rate of $500 per incident.
2.	Failure of Proposer to resolve or implement an MDAD approved work-around within four (4) hours from notification and approval from MDAD of critical or major problems.	Proposer shall credit MDAD at a rate of $2,500 per day for every critical or major classified problem that is either not resolved or implemented and does not have an MDAD approved workaround within four (4) hours of the problem.
3.	All projects, MACs, new installations, or provisioning shall be completed per the mutually agreed upon schedule and or the time frame if specified in this Agreement. If completion is not within ten percent (10%) of the schedule/goal, penalties will be invoked.	Missed deadlines will be assessed by MDAD that are within the control of the Proposer. Proposer shall credit back MDAD at a rate of $500 per day in the event Proposer does not complete the work within ten percent (10%) of the agreed upon schedule/goal.
4.	Three or more documented complaints in any given month from MDAD Management or Users / Tenants regarding the Proposers responsiveness, or inability to complete restoration in a timely manner shall result in penalties being invoked.	Proposer shall credit MDAD at a rate of $250 per incident.

The Parties recognize that the extent and calculation of damages may be difficult to ascertain, therefore, they agree that penalties in the amount stated are reasonable and is in lieu of all other remedies.

All performance measurement penalties shown above shall be cumulative. The cumulative amount of all performance measurement penalties shall not exceed $125,000 per calendar year. The monetary penalties shall be deducted from the Proposer's invoice amount for the month. These monetary penalties shall not apply to the Proposer's invoice amounts that are attributable to third party intervention, or any external events outside the Proposer's control.

10. PROJECT COORDINATION REQUIREMENTS

Selected Proposer shall provide the following items:

a. Coordinate all work of this specification with the responsibilities under the Proposer's dedicated Project Manager.

b. Coordinate with millwork and power trades to assure proper fit and functionality of MIA's Common Use System equipment sets in gate check-in desk millwork.

c. Coordinate with MIA's Common Use System provider to assure full functionality of airline boarding applications at each biometric lane as a peripheral under control of the common use platform.

d. Coordinate with Electrical Proposer and Telecommunications Proposer. Provide all necessary technical support to the network Proposer and the Systems or Project Manager to successfully develop, test, implement and configure interfaces between the network and the Common Use system.

e. Coordinate with MIA IT, MIA's Common Use System Provider, and Airline Users to plan activation, training and testing of the system.

f. Coordinate all work with MIA IT, but are not limited to: Network cabling and outlet assignments , Data circuit requirements, IP address assignments and VLAN allocation, Scheduling activation, equipment labeling, naming conventions, and MIA asset management tracking, Software Change Management approval through MIA IT and System Training, Testing and Commissioning.

g. The biometric unit's solution should utilize common physical telecommunications infrastructure. Proposer will provide whatever active data network components are required to interface and integrate with MIA's Common Use System and MIA IT data networks.

h. Proposer is responsible for providing all data cabling information and closely coordinating with data cabling subcontractor to ensure that all conduit and Category 6A cabling is provided and tested wherever needed. Proposer is responsible for providing all power load information, single line diagrams and closely coordinating with electrical subcontractor to ensure that all conduit, cabling, power circuits (particularly for special needs such as core network switches or servers that require extra power) needed for the components of the units in this RFP.

i. Provide all labor, materials, tools, transportation, storage costs, training, equipment, insurance, temporary protection, permits, inspections, taxes, installation, software licenses, software, firmware, software integration, all required testing/documentation and all necessary and related items required to provide a complete and operational system shown and described in this RFP.

j. The Proposer is responsible for providing logistics, and coordinating delivery, final equipment arrangements and placement, including coordinating with US Customs to clear delivery and receipt of biometric units into the United States. The Proposer is responsible for coordinating with MIA the delivery to the required terminal or MIA Proposer location, using phased activities and construction methods that minimize disruption to Terminal operations and provide complete and operational systems.

k. The Proposer shall coordinate with electrical Proposer for provision of horizontal conduit and field boxes required to accommodate cabling and other system equipment.

l. The Proposer shall coordinate specialty electronic, Information Technology (IT) data networks and any other IT infrastructure systems that depend on or are interfaced to Common Use Systems.

m. The Proposer will provide Coordination Drawings that indicate locations where space is limited for installation and access.

n. Submit floor plans, elevations, and details indicating major equipment and end device locations. Indicate all floor, wall and ceiling penetrations.

o. Training Manuals shall be submitted for approval 120 days prior to training sessions with airlines and MIA. Training manuals shall include user's troubleshooting guides providing resolution to common problems with software and hardware. Admin Training Manuals shall include physical and logical data flow and interface diagrams, rack elevations, system configurations, and users troubleshooting guides providing resolution to common problems with software and hardware.

p. Drawings will be updated electronically and submitted to MIA in accordance with the schedule provided.

11 FIELD / ON-SITE CHARACTERISTICS

a. The Proposer shall obtain the approval of MIA for the final layout of any equipment to be installed in new or existing telecommunications rooms, tenant wiring closets, and casework prior to the installation of any materials or equipment. Shop drawings showing proposed installation details shall be submitted for approval before beginning installation.

b. The Proposer shall furnish an adequate supply of technicians and materials always and shall perform the work in the most appropriate expeditious, and economical manner consistent with the interests of MIA.

c. The Proposer shall be responsible to MIA for the acts and omissions of its employees, subcontractors and their agents and employees, and other persons performing any of the work under a contract with Proposer.

d. The Proposer shall not unreasonably encumber the site with any material or equipment. Operations shall be confined to areas permitted by law, permits, and contract documents.

e. The Proposer shall have an experienced IT project manager on site, always, when work is in progress on any project. The individual who represents the Proposer shall be the single point of contact between the Proposer and MIA and shall be responsible for the entire project. This

representative shall be able to communicate with MIA whenever requested throughout the life of the project.

f. While working in the facility, the Proposer shall not block any entrances, egresses, or other passageways that are necessary for normal, safe operation. It should be noted that the Proposer is responsible to provide any lifts, hand trucks, etc., that it will need to transport its materials and equipment throughout the site.

g. The Proposer shall protect all buildings, walls, floors, and property from damage resulting from the installation. Any and all damage to property shall be repaired by the Proposer at its expense. If any Proposer enters an area that has damage (not caused by the Proposer), the Proposer shall immediately bring this to the attention of MIA so the area can be appropriately noted.

h. Following each day's work, the Proposer shall clean up the areas in which it has been working and dump all trash in the appropriate designated areas.