

**THE PORT AUTHORITY OF NY & NJ**  
**PROCUREMENT DEPARTMENT**  
**ATTN: BID/PROPOSAL CUSTODIAN**  
**TWO MONTGOMERY STREET, 3RD FLOOR**  
**JERSEY CITY, NEW JERSEY 07302**

**REQUEST FOR PROPOSALS**

**ISSUE DATE: December 5, 2012**

**TITLE: AIRPORT NOISE & OPERATIONS MANAGEMENT SYSTEM  
CONTRACT FOR JOHN F. KENNEDY INTERNATIONAL (JFK),  
LAGUARDIA (LGA), NEWARK LIBERTY INTERNATIONAL  
(EWR), STEWART INTERNATIONAL (SWF) AND TETERBORO  
(TEB) AIRPORTS.**

**RFP NO.: 31644**

**SUBMIT PROPOSALS NO LATER THAN THE DUE DATE AND TIME TO THE ABOVE  
ADDRESS**

**PRE-PROPOSAL MEETING: December 20, 2012                      TIME: 10:00 A.M.**

**QUESTIONS DUE BY: December 21, 2012                      TIME: 3:00 P.M.**

**PROPOSAL DUE DATE: January 15, 2013                      TIME: 2:00 P.M.**

**CONTACT: JEANETTE ANDERSON**

**PHONE: (201) 395-3430**

**FAX: (201) 395-3470**

**EMAIL: [jeanette.anderson@panynj.gov](mailto:jeanette.anderson@panynj.gov)**

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# 1. INFORMATION FOR PROPOSERS ON THIS REQUEST FOR PROPOSALS

## A. General Information: The Port Authority of New York and New Jersey

The Port Authority of New York and New Jersey (the "Port Authority" or the "Authority") is an agency of the States of New York and New Jersey, created and existing by virtue of the Compact of April 30, 1921, made by and between the two States, and thereafter consented to by the Congress of the United States. It is charged with providing transportation, terminal and other facilities of trade and commerce within the Port District. The Port District comprises an area of about 1,500 square miles in both States, centering about New York Harbor. The Port District includes the Cities of New York and Yonkers in New York State, and the cities of Newark, Jersey City, Bayonne, Hoboken and Elizabeth in the State of New Jersey, and over 200 other municipalities, including all or part of seventeen counties, in the two States. The Port Authority manages and/or operates all of the region's major commercial airports (Newark Liberty International, John F. Kennedy International, Teterboro, LaGuardia and Stewart International Airports), marine terminals in both New Jersey and New York (Port Newark and Elizabeth, Howland Hook and Brooklyn Piers); and its interstate tunnels and bridges (the Lincoln and Holland Tunnels; the George Washington, Bayonne, and Goethals Bridges; and the Outerbridge Crossing), which are vital "Gateways to the Nation."

In addition, the Port Authority operates the Port Authority Bus Terminal in Manhattan, the largest facility of its kind in the world, and the George Washington Bridge and Journal Square Transportation Center bus stations. A key link in interstate commuter travel, the Port Authority also operates the Port Authority Trans-Hudson Corporation (PATH), a rapid rail transit system linking Newark, and the Jersey City and Hoboken waterfronts, with midtown and downtown Manhattan. A number of other key properties are managed by the agency including but not limited to a large satellite communications facility (the Teleport) in Staten Island, and a resource recovery co-generation plant in Newark. Prior to September 11, 2001, the Port Authority's headquarters were located in the World Trade Center, and that complex is still owned and being partially redeveloped by the Authority.

The Port Authority is hereby seeking proposals from qualified firms to provide Airport Noise and Operations Monitoring System (NOMS), as more fully described herein.

## B. Brief Summary of Scope of Work

The Port Authority is seeking proposals for a Noise and Operations Monitoring System (NOMS) to serve all of its five airports. This opportunity involves designing, furnishing, installing, maintaining and supporting a NOMS for all five airports. The Port Authority intends to modernize its NOMS capabilities by replacing the existing system (hardware and software) with a new system that has additional enhancements and technological capabilities to serve both present and future needs of Airport Staff and other stakeholders. The selected NOMS shall be

a web-based application that provides comprehensive monitoring, control, reporting, and analytical capabilities to facilitate and optimize user functionality.

### **C. Deadline for Receipt of Proposals**

The due date specified on the cover page is the Proposal Due Date. Closing of due date is 2:00 P.M., Eastern Standard Time (EST).

The Port Authority assumes no responsibility for delays caused by any delivery service.

### **D. Vendor Profile**

To ensure maximum opportunities, it is vitally important that Proposers keep their vendor profiles up to date with an appropriate e-mail address, as this will enable their firm to receive timely notice of advertisements, reminders, solicitations and addenda. Proposers may update their vendor profile or register as a Port Authority Vendor by accessing the online registration system at <https://panynjprocure.com/VenLogon.asp>.

### **E. Submission of Proposals**

One reproducible original (containing original signatures and clearly designated as such) and Six (6) double-sided copies of the proposal must be submitted on or before the due date and time in accordance with the information on the cover page of this RFP and sent or delivered to the RFP Custodian at the address specified on the cover page. Each copy of the proposal as well as the parcel(s) used for shipping must be conspicuously marked with the Proposer's name and address as well as the Proposer's Vendor Number, if available. In addition, the outside of the package must clearly state the title of this RFP, the number of this RFP and the Proposal Due Date. Failure to properly label proposal submissions may cause a delay in identification, misdirection or disqualification of proposal submissions.

It is necessary to carry valid photo identification when attempting to gain access into the building to hand deliver proposals.

Consistent with environmentally preferable procurement practices, the Port Authority requests all documents submitted to be in a form that can be easily recycled (i.e., no plastic covers or binding) and to provide only supporting literature which directly relates to the proposal being submitted.

### **F. Communications Regarding this RFP**

All communications concerning this RFP should be directed to the Contracts Specialist listed on the cover page. All questions regarding this RFP should be submitted in writing to the Contracts Specialist at the address or facsimile number listed on the cover page no later than **3:00 p.m. (EST) December 21, 2012**.

The Contracts Specialist is authorized only to direct the attention of prospective Proposers to various portions of this RFP so that they may read and interpret such portions themselves.

Neither the Contracts Specialist nor any other employee of the Port Authority is authorized to interpret the provisions of this RFP or give additional information as to its requirements. If interpretation or other information is required, it will be communicated to Proposers by written addenda and such writing shall form a part of this RFP.

### **G. Proposal Acceptance or Rejection**

Acceptance shall be only by mailing to or delivering at the office designated by the Proposer in its proposal, a notice in writing signed by an authorized representative on behalf of the Port Authority specifically stating that the proposal is accepted or by execution of an agreement covering the subject matter of this RFP signed by authorized representatives of the Port Authority and the Proposer. No other act of the Port Authority, its Commissioners, officers, agents, representatives, or employees shall constitute acceptance of a proposal. Rejection of a proposal shall be only by either (a) a notice in writing specifically stating that the proposal is not accepted, signed by an authorized representative of the Port Authority and mailed to or delivered to the Proposer at the office designated in the Proposal, or (b) omission of the Port Authority to accept the proposal within 180 days after the Proposal Due Date. No other act of the Port Authority, its Commissioners, officers, agents, representatives or employees shall constitute rejection of a proposal.

### **H. Union Jurisdiction**

Proposers are advised to ascertain whether any union now represented or not represented at the facility will claim jurisdiction over any aspect of the operations to be performed hereunder and their attention is directed to the Section of this RFP entitled "Harmony" included in the "Standard Contract Terms and Conditions" hereunder.

### **I. City Payroll Tax**

Proposers should be aware of the payroll tax imposed by the:

- a. City of Newark, New Jersey for services performed in Newark, New Jersey;
- b. City of New York, New York for services performed in New York, New York; and
- c. City of Newburgh, New York for services performed in Newburgh, New York and
- d. Town of New Windsor, New York for services performed in New Windsor, New York.
- e. County of Bergen, New Jersey for services performed in Teterboro, and Moonachie New Jersey

These taxes, if applicable, are the sole responsibility of the Contractor. Proposers should consult their tax advisors as to the effect, if any, of these taxes. The Port Authority provides this notice for informational purposes only and is not responsible for either the imposition or administration of such taxes. The Port Authority exemption set forth in the Paragraph headed "Sales or Compensating Use Taxes", in the *Standard Contract Terms and Conditions* included herein, does not apply to these taxes.

#### **J. Pre-Proposal Meeting**

1. A Pre-Proposal Meeting is scheduled for **10:00 a.m., Tuesday, December 20, 2012**. Any questions concerning this RFP should be submitted in writing prior to the meeting so that the Port Authority may prepare responses in advance of the meeting. Additional questions may be permitted at the meeting; however, responses may be deferred and provided at a later date by written addenda.

Attendance is strongly recommended. Information conveyed may be useful to Proposers in preparing their proposals and Proposers not attending assume all risks which may ensue from non-attendance.

Attendees interested in attending should RSVP to Mr. Adeel Yousuf by phone at (212) 435-3784 or by email at [ayousuf@panynj.gov](mailto:ayousuf@panynj.gov) no later than 12 noon (EST) of the business day preceding the scheduled date(s) to confirm their attendance and/or receive traveling directions.

#### **K. Available Documents**

Certain documents, specified below, will be made available for examination by Proposers at the Pre-Proposal Meeting or by contacting Mr. Adeel Yousuf by phone at (212) 435-3784 or by email at [ayousuf@panynj.gov](mailto:ayousuf@panynj.gov), Monday through Friday between the hours of 9:00 a.m. and 5:00 p.m.

These documents were not prepared for the purpose of providing information for Proposers on this RFP but they were prepared for other purposes, such as for other contracts or for design purposes for this or other contracts, and they do not form a part of this RFP. The Port Authority makes no representation or guarantee as to, and shall not be responsible for, their accuracy, completeness or pertinence, and, in addition, shall not be responsible for inferences or conclusions drawn therefrom. They are made available to Proposers merely for the purpose of providing them with such information, whether or not such information may be accurate, complete, pertinent or of any value to Proposers.

Said documents are as follows:

- Copy of Existing Airport Noise Abatement Monitoring System (ANAMS) Maintenance Contract
- Noise Monitoring Terminal (NMT) Hardware user manuals
- Pictures and Locations of NMT sites
- Summary and screen snapshot of historical ANAMS data.

## **L. Additional Proposer Information**

Prospective Proposers are advised that additional vendor information, including, but not limited to forms, documents and other information, including M/WBE Participation Plan Submission Forms and protest procedures, may be found on the Port Authority website at:  
<http://www.panynj.gov/business-opportunities/become-vendor.html>

## **M. Contractor Staff Background Screening**

The Contractor awarded this contract will be required to have its staff, and any subcontractor's staff working under this Contract, authorize the Authority or its designee to perform background checks. Such authorization shall be in a form acceptable to the Authority. The Contractor (and subcontractor) may also be required to use an organization designated by the Authority to perform the background checks. The cost for said background checks for staff that pass and are granted a credential shall be reimbursable to the Contractor (and its subcontractors) as an out-of-pocket expense as provided herein. Staff that are rejected for a credential for any reason are not reimbursable.

As of January 29, 2007, the Secure Worker Access Consortium (S.W.A.C.) is the only Port Authority approved provider to be used to conduct background screening, except as otherwise required by federal law and/or regulation. Information about S.W.A.C., instructions, corporate enrollment, online applications, and location of processing centers can be found at <http://www.secureworker.com>, or S.W.A.C. may be contacted directly at (877)522-7922.

## **2. SCOPE OF WORK**

The full Scope of Work is set forth in detail in Attachment C.

## **3. PROPOSER PREREQUISITES**

Only Proposers who can demonstrate that they comply with the following should submit proposals as only proposals from such Proposers will be considered:

A. The Proposer shall have had at least five (5) years of continuous experience immediately prior to the date of the submission of its proposal in the development, installation, management, maintaining and supporting a Airport Noise & Operations Monitoring System, and shall be currently engaged in providing these services to at least one Commercial Airport and one General Aviation Airport in United States under the same or separate contract(s). The Proposer may fulfill this prerequisite if it can demonstrate that the persons or entities owning and controlling the Proposer have had a cumulative total of at least the same number of years and type of direct continuous experience immediately prior to the submission of this proposal as is required of the Proposer, or has owned and controlled other entities which meet the requirement.

B. During the time period stated in (A) above, the Proposer shall demonstrate satisfactory performance of at least two (2) contracts for similar services of similar scope.

C. The Proposer shall demonstrate that it has earned gross revenues of at least \$1,000,000 a year for the last two (2) fiscal or calendar year(s) from the type of services or products described herein. Provide a statement on company letterhead signed by company's CFO or a CPA certifying that your company meets the gross revenues specified above.

In the event a proposal is submitted by a joint venture the foregoing prerequisites will be considered with respect to such Proposal as follows:

With respect to subparagraph (A) and (B) above, the prerequisite will be considered satisfied if the joint venture itself, or any of its participants individually, can meet the requirements. With respect to subparagraph (C), the gross income of the joint venture itself may meet the prerequisites or the gross income of the participants in the joint venture may be considered cumulatively to meet the prerequisite.

If the proposal is submitted by a common law joint venture, a joint venture that has not been established as a distinct legal entity, each participant of the joint venture shall be held jointly and severally liable and must individually execute and perform all acts required by this proposal. Documents signed by a common law joint venture, in connection with this proposal, shall include the names of all participants of the joint venture followed by the words "acting jointly and severally". All joint venture proposers must provide documentation of their legal status.

All Proposers must include documentation that they meet the above prerequisites. By furnishing this solicitation document to Proposers, the Port Authority has not made a determination that the Proposers have met the prerequisites or have otherwise been deemed qualified to perform the services. In addition, a determination that a Proposer has met the prerequisites is no assurance that they will be deemed qualified in connection with other proposal requirements included herein.

#### **4. FINANCIAL INFORMATION**

The Proposer will be required to demonstrate that it is financially capable of performing the contract resulting from this RFP ("Contract"). The determination of the Proposer's financial qualifications and ability to perform this Contract will be in the sole discretion of the Port Authority. The Proposer shall submit, with its proposal, the following:

- A. (1) Certified financial statements, including applicable notes, reflecting the Proposer's assets, liabilities, net worth, revenues, expenses, profit or loss and cash flow for the most recent year or the Proposer's most recent fiscal year.
- (2) Where the certified financial statements in (1) above are not available, then reviewed statements from an independent accountant setting forth the aforementioned information shall be provided.

Where the statements submitted pursuant to subparagraphs (1) and (2) aforementioned do not cover a period which includes a date not more than forty-five days prior to the Proposal Due Date, then the Proposer shall also submit a statement in writing, signed by an executive officer or his/her designee, that the

present financial condition of the Proposer is at least as good as that shown on the statements submitted.

- B. A statement of work which the Proposer has on hand, including any work on which a bid and/or proposal has been submitted, containing a description of the work, the annual dollar value, the location by City and State, the current percentage of completion, the expected date for completion, and the name of an individual most familiar with the Proposer's work on these jobs.
- C. The name and address of the Proposer's banking institution, chief banking representative handling the Proposer's account, the Proposer's Federal Employer Identification Number (i.e., the number assigned to firms by the Federal Government for tax purposes), the Proposer's Dun and Bradstreet number, if any, the name of any credit service to which the Proposer furnished information and the number, if any, assigned by such service to the Proposer's account.

## **5. EVALUATION CRITERIA AND RANKING**

All proposals will be reviewed by the Port Authority to determine if they adhere to the format required in this RFP, if they contain all required submissions and if the Proposer meets the prerequisites required for submission of a Proposal. For Proposals meeting such requirements, the following criteria, set forth in order of importance, will be utilized in the evaluation of proposals.

### **A. Cost Proposal**

The Cost Proposal evaluates the financial terms and fees as proposed for all required services as set forth in RFP, including:

- The degree and extent to which the Proposal is cost effective to the Port Authority and the overall cost of the service. The Contract's methods, practices, tools and techniques that will result in cost containment, and the likelihood of those methods, practices, tools and techniques being successfully deployed.

### **B. Technical Expertise**

The extent to which the Proposer demonstrates its ability to execute the required services, including, but not limited to:

The degree to which the features and functions of the proposed solution will meet the stated functional requirements, goals and objectives as described in the Attachment C, "Scope of Work" of this RFP will be evaluated as follows:

- Staffing plans:
  - The Extent to which the Proposer, and the managerial and supervisory personnel proposed to be dedicated to this Contract have the demonstrated technical expertise and understanding in implementing, maintaining and operating similar services in similar environment.
- Quality of start-up approach and business transition plan for start of contract and termination of contract.

- Approach to new hardware installation and implementation of software solutions to meet goals and objectives of Port Authority as described in Attachment C, "Scope of Work and Specifications" of this RFP.
- Standard operating procedures related to System development, installation, maintenance and support.
- Approach to Maintenance Management Reporting.
- Quality of start-up approach and business transition plan for start of contract and termination of contract.
- Approach to each heading including in the Scope of Work, Attachment C of this RFP.
- The degree to which the Proposer's Implementation Schedule meets the target dates described in Scope of Work, Attachment C of this RFP.

#### C. Management Approach/Customer Service

The experience, qualifications and availability of the management and staff proposed to be assigned to provide the services (including subcontractors, if any) will be evaluated in the Management Approach/Customer Service section including the following:

- Nature and quality of the Proposer's Quality Assurance/Quality Control Program.
- The Proposer's maintenance and training methodology.
- The quality and extent of financial, reconciliation and auditing procedures.
- Prior experience between firms proposing a joint venture and prime subcontractor relationship.
- The Proposer's disaster recovery plan.
- The quality and effectiveness of the Proposer's M/WBE plan and the extent to which it meets or exceeds Port Authority Standards.
- The Proposer's ability to mitigate and eliminate business risk.

#### E. Background Check Plan

The Proposer must submit a Background Check plan in accordance with this document, which will be considered "pass/fail."

### 6. M/WBE SUBCONTRACTING PROVISIONS

The Port Authority has a long-standing practice of making its business opportunities available to Minority Business Enterprises (MBEs) and Women-Owned Businesses (WBEs) and has taken affirmative steps to encourage such firms to seek business opportunities with the Port Authority. The successful Proposer will use good faith efforts to provide for meaningful participation by the Port Authority certified M/WBEs as defined in this document, in the purchasing and subcontracting opportunities associated with this contract, including purchase of equipment, supplies and labor services.

Minority Business Enterprise (MBE) - shall mean a business entity which is at least 51% owned and controlled by one or more members of one or more minority groups, or, in the case of a publicly held corporation, at least 51% of the stock of which is owned by one or more minority groups, and whose management and daily business operations are

controlled by one or more such individuals who are citizens or permanent resident aliens.

"Minority Group" means any of the following racial or ethnic groups:

- (a) Black persons having origins in any of the Black African racial groups not of Hispanic origin;
- (b) Hispanic persons of Mexican, Puerto Rican, Dominican, Cuban, Central or South American culture or origin, regardless of race;
- (c) Asian and Pacific Islander persons having origins in any of the original peoples of the Far East, Southeast Asia, The Indian Subcontinent, or the Pacific Islands;
- (d) Native American or Alaskan native persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification.

Women-Owned Business Enterprise (WBE) - shall mean a business enterprise which is at least 51% owned by one or more women, or, in the case of a publicly held corporation, at least 51% of the stock of which is owned by one or more women and whose management and daily business operations are controlled by one or more women who are citizens or permanent or resident aliens.

The Contractor shall use good faith efforts to achieve participation equivalent to 12% of the total Contract price for MBEs and 5% of the total Contract price for WBEs.

Good faith efforts to include participation by M/WBEs shall include, but not be limited to the following:

- 1) Dividing the services and materials to be procured into small portions where feasible;
- 2) Giving reasonable advance notice of specific subcontracting and purchasing opportunities to such firms as may be appropriate;
- 3) Soliciting services and materials from M/WBEs, which are certified by the Port Authority;
- 4) Ensuring that provision is made for timely progress payments to the M/WBEs and;
- 5) Observance of reasonable commercial standards of fair dealing in the respective trade or business.

Proposers are directed to use form PA3749B as the recording mechanism for the M/WBE participation Plan, annexed hereto as Attachment E or may be downloaded at <http://www.panynj.gov/business-opportunities/become-vendor.html>

The M/WBE Plan submitted by the Contractor to the Port Authority shall contain, at a minimum, the following:

- Identification of M/WBE's: Provide the names and addresses of all M/WBEs included in the Plan. If none are identified, describe the process for selecting participant firms in order to achieve the good faith goals under this Contract.

- Level of Participation: Indicate the percentage of M/WBE participation expected to be achieved with the arrangement described in the Plan.
- Scope of Work: Describe the specific scope of work the M/WBE's will perform.
- Previous M/WBE Participation: Describe any previous or current M/WBE participation, which the Proposer has utilized in the performance of its contracts.

All M/WBE subcontractors listed on the M/WBE Participation Plan must be certified by the Port Authority in order for the Contractor to receive credit toward the M/WBE goals set forth in this Contract. Please go to <http://www.panynj.gov/business-opportunities/supplier-diversity.html> to search for M/WBEs by a particular commodity or service. The Port Authority makes no representation as to the financial responsibility of such firms or their ability to perform Work under this Contract.

Proposers shall include their M/WBE Participation Plan with their proposals, to be reviewed and approved by the Authority's Office of Business Diversity and Civil Rights (OBDCR).

Proposers may request a waiver of the M/WBE participation goals set forth in this Contract by providing with its proposal, information in accordance with this provision and the provision entitled "M/WBE Good Faith Participation" in the Standard Terms and Conditions of this Contract.

If the Contractor wishes to subcontract a portion of the Work through a firm not listed in the Directory, but which the Contractor believes should be eligible because it is (1) an M/WBE, as defined above and (2) competent to perform portions of the Work, the Contractor shall submit an M/WBE Uniform Certification Application to the Port Authority of New York and New Jersey, Office of Business Diversity and Civil Rights (OBDCR), 233 Park Avenue South, 4<sup>th</sup> Floor, New York, NY 10003. The application is available online at <http://www.panynj.gov/business-opportunities/sd-become-certified.html>. In addition, to update your certification file and to advise OBDCR of changes to any information, please email these changes to [OBJOcort@panynj.gov](mailto:OBJOcort@panynj.gov). Credit toward applicable goals will be granted only to Port Authority certified vendors. For more information about M/WBE Programs, call (212) 435-7819.

## **7. CERTIFICATION OF RECYCLED MATERIALS PROVISION**

Proposers shall submit, with their proposal, ATTACHMENT F, the Certified Environmentally Preferable Products / Practices Form attesting that the products or items offered by the Proposer contain the minimum percentage of post-consumer recovered material in accordance with the most recent guidelines issued by the United States Environmental Protection Agency (EPA), or, for commodities not so covered, the minimum percentage of post-consumer recovered materials established by other applicable regulatory agencies.

### **Recycling Definitions:**

For purposes of this solicitation, the following definitions shall apply:

- a. "Recovered Material" shall be defined as any waste material or by-product that has been recovered or diverted from solid waste, excluding those materials and by-products generated from, and commonly reused within, an original manufacturing process.
- b. "Post-consumer Material" shall be defined as any material or finished product that has served its intended use and has been discarded for disposal or recovery having completed its life as a consumer item. "Post-consumer material" is included in the broader category of "Recovered Material".
- c. "Pre-consumer Material" shall be defined as any material or by-product generated after the manufacture of a product but before the product reaches the consumer, such as damaged or obsolete products. Pre-consumer Material does not include mill and manufacturing trim, scrap, or broken material that is generated at a manufacturing site and commonly reused on-site in the same or another manufacturing process.
- d. "Recycled Product" shall be defined as a product that contains the highest amount of post-consumer material practicable, or when post-consumer material is impracticable for a specific type of product, contains substantial amounts of Pre-consumer Material.
- e. "Recyclable Product" shall be defined as the ability of a product and its packaging to be reused, reconditioned for use, or recycled through existing recycling collection programs.
- f. "Waste Reducing Product" shall be defined as any product that will result in less waste generated due to its use rather than another product designed to serve the same function with an greater waste generation rate. This shall include, but not be limited to, those products that can be reused, refilled or have a longer life expectancy and contain a lesser amount of toxic constituents.

## **8. PROPOSAL SUBMISSION REQUIREMENTS**

In order to expedite the evaluation of proposals, the Proposer's response to this RFP shall follow the format and order of items, using the same paragraph identifiers, as set forth below.

### **A. Letter of Transmittal**

The Proposer shall submit a letter on its letterhead, signed by an authorized representative, stating its experience and qualifications in meeting the requirements of this RFP. This letter shall include a statement on whether the Proposer is submitting a proposal as a single entity, a joint venture, or is partnering with another firm in a prime/subcontracting relationship. In all cases, information required for a single entity is required for each participant in a joint venture.

The Letter of Transmittal shall contain:

- (1) Name and address of the Proposer and an original signature on the Letter of Transmittal by an authorized representative on behalf of the Proposer;

- (2) Name(s), title(s) and telephone number(s) of the individual(s) who are authorize to negotiate and execute the Contract;
- (3) Name, title and telephone number of a contact person to which the Port Authority can address questions or issues related to this RFP;
- (4) Name and address of proposed subcontractors, if any;
- (5) If a corporation: (a) a statement of the names and residences of its officers, and (b) a copy of its Certificate of Incorporation, with a written declaration signed by the secretary of the corporation, with the corporate seal affixed thereto, that the copy furnished is a true copy of the Certificate of Incorporation as of the date of the opening of the Proposals;

If a partnership: a statement of the names and residences of its principal officers, indicating which are general and which are special partners;

If an individual: a statement of residence;

If a joint venture: information on each of the parties consistent with the information requested above; if the Contract is awarded to a common law joint venture (a partnership of business entities) each member will be jointly and severally liable under the Contract.

#### **B. Executive Summary**

The Proposer shall submit a summary presenting the major features of its proposal and how the proposal satisfies the requirements contained in this RFP, as well as the special competencies and expertise of the Proposer to meet the requirements of this RFP.

#### **C. Agreement on Terms of Discussion**

The Proposer shall submit a copy of the "Agreement on Terms of Discussion," signed by an authorized representative of the Proposer. The Agreement format is included as Attachment A and shall be submitted by the Proposer without any alterations or deviations. Any Proposer who fails to sign the Port Authority's "Agreement on Terms of Discussion" will not have its proposal reviewed. If the Proposer is a joint venture, an authorized representative of each party must sign the Agreement.

#### **D. Certifications With Respect to the Contractor's Integrity Provisions**

The Proposer, by signing the Letter of Transmittal, makes the certifications in the "Contractor's Integrity Provisions," included as Section XX of this RFP. If the Proposer cannot make any such certifications, it shall enclose an explanation of that inability.

## **E. Documentation of Proposer Prerequisites**

The Proposer shall submit documentation to demonstrate that it meets all prerequisites, if any, included herein.

## **F. Proposal**

The Proposer must submit a proposal that details and clearly describes its experience and capability to perform the work described in this RFP, its approach to such work and the cost of such work to the Port Authority. At a minimum, the proposal shall address the following:

### **1. Cost Proposal**

Using Attachment B, Part II, Cost Proposal Form, hereof, the Proposer shall complete and submit a Cost Proposal. The Proposer shall describe in detail all financial compensation it expects to receive from Port Authority for the performance of the work described in the Attachment C: Scope of Work. In addition, Proposers should identify any underlying cost-related assumptions in the section titled "Assumptions", in the Cost Proposal Form.

The Proposer must demonstrate that it is financially able to perform the requirements of this Contract, within the stated Implementation Schedule provided by the Proposer as part of its submission, including all costs.

### **2. Technical Proposal:**

Proposers are required to submit proposals, which describe in detail how the proposed System and Service meets the requirements set forth in Attachment C, "Scope of Work." The Proposer shall respond to each heading included in the Attachment C, "Scope of Work", describe its methodology and approach to the implementation of the NOMS, and maintenance of the NOMS including but not limited to the training, and troubleshooting support requirements. The Proposal must identify any requirements which cannot be met. It must describe any added functionality proposed that is not listed in the Scope of Work.

The Proposal shall discuss or describe the following:

- List all source(s) of data feed that comprise of the flight tracking and information data.
- Methods and expected accuracy of capturing Visual Flight Rules (VFR) traffic.
- Level of accuracy of the proposed flight tracking capabilities.
- Level of accuracy of runway assignments for arrivals and departures.

- Method of acquiring aircraft registration numbers and also include the cost of any associated program or software and its routine upgrade and/or maintenance.
- Methods that will be used in the System to correlate noise events to a specific aircraft, the expected accuracy, and the method of allocating the noise event in situations where it is not possible to assign an event to a specific aircraft.
- Methods of assigning noise events and operations to a complaint and the expected accuracy.
- Functionality and methods of generating custom reports.
- All security features, policies and practices for the System.
- Ownership of data collected by and used for System operation. The proposal shall include a detailed description of which data will be owned by the Port Authority and which will remain in ownership of the Contractor.
- Integrity of the data used in the System, including frequency of exchange of the identified data, accuracy, timeliness and standardization of shared data, shall be described in the proposal.
- Describe the documents to be provided to the Authority's Contract Manager to validate the test results (reports, database listings, statistical analyses, message displays, etc.).
- Copy of current SAS-70 Audit, or equivalent.
- Description of proposed system architecture.
- Sample reports that will be provided.
- Detailed description of the services that will be provided.
- The extent to which the Proposer, and the managerial and supervisory personnel proposed to be dedicated to this Contract have the technical expertise and experience in implementing and managing similar services in a similar environment using the staff comparable in size to that necessary for the services to be provided hereunder, the anticipated function of each person on the Contract, a summary of the relevant experience of each person. The resumes of the individuals who are being recommended for these positions should be included in the Proposal.
- Demonstrate experience in installing, operating and maintaining the service at other airports.

- Experience of Proposer's senior management team in managing employees and conducting employee management programs, including, but not limited to:
  - ✓ Staffing Plan
  - ✓ Contract Management
  - ✓ Proposed Maintenance Plan
- The Proposer shall submit a listing of all contracts involving the development, installation, management, testing and operation of system specifically tailored to the function of improving airport noise and operations monitoring systems that were performed by or are currently being performed by the Proposer within the last three (3) years. For each Contract list at a minimum:
  - ✓ The name and address of the Contracting party
  - ✓ The locations where the work was performed
  - ✓ Duration of the contract (commencement date and ending date)
  - ✓ The approximate dollar amount of the Contract
- The Proposer should provide a complete description of all employee management programs (covering both supervisory and non-supervisory personnel), currently utilized by Proposer, including but not limited to:
  - ✓ Quality Assurance/Quality Control Programs
  - ✓ Disciplinary procedures, etc. (include, if available, copies of manuals or other associated documents)
- The Proposer must demonstrate that it is financially able to perform the requirements of this Contract, with the stated Implementation Schedule, including all costs.

### 3. Management Proposal

The Proposer shall submit a Management Proposal with the following components:

- Describe your Company's plan to manage the NOMS Contract for all five Airports, including the quality and effectiveness of your M/W/SBE plan.
- Include detailed project schedules as set forth in Attachment C, Scope of Work. The Proposer shall provide key milestone dates on

the “milestone schedule” and describe all task interdependencies. (While not required, Proposers are encouraged to use GANNT charts and highlight critical path activities). The project schedule shall indicate when Authority-required tasks, including but not limited to providing test hardware, providing connectivity, etc., need to be performed.

- The Proposer shall describe in detail its experience, including relevant contracts performed during the last three (3) years, its financial capability, management structure and proposed staffing, detailing technical training, certifications, applicable licenses, skills and experiences and capability of proposed staff and other supporting documentation demonstrating its ability to perform the work.
- The Proposer shall provide a Detailed Implementation Plan that addresses all the requirements of Attachment C, Scope of Work, and anticipates a short-term transition from the current hosting vendor and environment to the proposed implementation for hosted managed services and administration of the NOMS. The Proposer should describe the methodology they have used successfully in the past and describe how existing system integrity will not be lost. The Contractor must propose how it will guarantee the Authority’s access to all data in the event of the termination or expiration of the new contract.
- The Proposer shall provide detailed descriptions of its pre-employment screening procedures; safety and emergency procedures including, but not limited to, disaster recovery plans.
- The Proposer shall include a detailed organizational chart identifying key staff.
- The Proposer shall provide a staffing plan that clearly outlines staffing needed to perform each function as described in the Scope of Work and submit training requirements for all technical employees. The Proposer shall describe how availability and response time requirements will be achieved. The Proposer shall describe the anticipated location of staff as well as the planned locations of the Proposers nearest offices.
- Proposers shall submit a list of the job titles, responsibilities qualifications and work associated with each job position listed in Supplemental Work.
- Describe the roles and responsibilities of the support team members that will be assigned to this contract.
- Provide qualifications of support team members.
- Describe technical customer services experience and capabilities.

- Identify the Account Manager and Contract manager.
- Qualifications of support team members.
- Describe technical customer services experience and capabilities.
- The Proposer shall submit a M/WBE Plan in accordance with the section of this RFP entitled “M/WBE Subcontracting Provisions.” The Proposer shall be required to report on actual achievement against plan goals on a quarterly basis.
- The Proposer’s Certified Environmentally Preferable Products/Practices Form ensuring compliance with all applicable federal, state and local standards in their business practices, in accordance with the Certified Environmentally Preferable Products/Practices Provision.
- The Proposers proven transition planning approach that covers transitions at contract commencement; during the course of the agreement and upon contract termination.
  - a. Transition Planning for seamless support – The Proposer shall provide detailed plan including approach methodology, number and skill set of resources (both from the Proposer side as well as from the Authority) and toolsets used for transition in the following circumstances:
    - i. At the commencement of the Contract (note – As stated herein, the transition period shall under no circumstances exceed three months);
    - ii. During the course of the Contract with additional integrators; and,
    - iii. At the completion of the Contract – i.e., the proposers ability to work effectively and in harmony with a potential new provider.

5. Contractor Identity Check/Background Screening Plan

The Proposer shall submit a Contractor Identity Check/Background Screening Plan, which demonstrates how the Proposer will ensure that only employees who were successfully prescreened and properly credentialed perform the services herein. This Plan shall be applicable to all years of the Contract and shall include, but not be limited to, the following:

The length of time researched for the identity check/background screening on new hires, which shall be at a minimum of 10 years of employment history or verification of what an employee documented they have done in the last 10 years preceding the date of the investigation, resources utilized to perform this, and the frequency at which it is performed on current employees.

## 6. Business Risk

The Proposer shall submit risk assessment and succession plans to the Contractor and the Port Authority, that assess the business risk in taking on the significant amount of new work that will be required under this Contract. The risk assessment plan should take into account all work currently under contract, as well as work that is under contract to companies which the Proposer owns, controls or has an interest.

The Proposer shall provide any other information that is related to the requirements in this Section (Section F), that the Proposer believes would be helpful to the Port Authority in the evaluation of its proposal.

## **G. Acknowledgment of Addenda**

If any Addenda are posted or sent as part of this RFP, the Proposer shall complete, sign and include with its Proposal the addenda form(s). In the event any Proposer fails to conform to these instructions, its proposal will nevertheless be construed as though the Addenda had been acknowledged.

If the Proposer downloaded this RFP document, it is the responsibility of the Proposer to periodically check the Port Authority website at <http://www.panynj.gov/business-opportunities/bid-proposal-advertisements.html> and download any addenda that might have been issued in connection with this solicitation.

## **H. Acceptance of Standard Contract Terms and Conditions**

The Port Authority has attached to this RFP as Attachment B, General Contract Provisions governing the Contract. The Proposer is expected to agree with these General Contract Provisions. However, if the Proposer has any specific exceptions, such exceptions should be set forth in a separate letter included with its response to this RFP. After the proposal due date, the Proposer will be precluded from raising any exceptions unless such exceptions are justified by and directly related to substantive changes in the business or technical requirements and are agreed to by the Proposer and the Port Authority.

## **I. M/WBE Plan**

The Proposer shall submit an M/WBE Plan in accordance with the M/WBE Subcontracting Provisions hereunder.

## **9. CONDITIONS FOR THE SUBMISSION OF A PROPOSAL**

In addition to all other requirements of this RFP, the Proposer agrees to the following conditions for the submission of its proposal.

#### **A. Changes to this RFP**

At any time, in its sole discretion, the Port Authority may by written addenda, modify, correct, amend, cancel and/or reissue this RFP. If an addendum is issued prior to the date proposals are due, it will be provided to all parties in the medium in which the parties obtained the RFP. If an addendum is issued after proposals have been received, the addendum will be provided only to those whose proposals remain under consideration at such time.

#### **B. Proposal Preparation Costs**

The Port Authority shall not be liable for any costs incurred by the Proposer in the preparation, submittal, presentation, or revision of its proposal, or in any other aspect of the Proposer's pre-contract activity. No Proposer is entitled to any compensation except under an agreement for performance of services signed by an authorized representative of the Port Authority and the Proposer.

#### **C. Disclosure of Proposal Contents / Use of Ideas and Materials**

Proposal information is not generally considered confidential or proprietary. All information contained in the proposal is subject to the "Agreement on Terms of Discussion" attached hereto as Attachment A.

#### **D. Ownership of Submitted Materials**

All materials submitted in response to or in connection with this RFP shall become the property of the Port Authority. Selection or rejection of a Proposal shall not affect this right.

#### **E. Subcontractors**

If a Proposer intends to use subcontractor(s) the Proposer must identify in its proposal the names of the subcontractor(s) and the portions of the work the subcontractor(s) will perform.

#### **F. Conflict of Interest**

If the Proposer or any employee, agent or subcontractor of the Proposer may have a possible conflict of interest, or may give the appearance of a possible conflict of interest, the Proposer shall include in its proposal a statement indicating the nature of the conflict. The Port Authority reserves the right to disqualify the Proposer if, in its sole discretion, any interest disclosed from any source could create a conflict of interest or give the appearance of a conflict of interest. The Port Authority's determination regarding any questions of conflict of interest shall be final.

#### **G. Authorized Signature**

Proposals must be signed by an authorized corporate officer (e.g., President or Vice President), General Partner, or such other individual authorized to bind the Proposer to the provisions of its proposal and this RFP.

## **H. References**

The Port Authority may consult any reference familiar with the Proposer regarding its current or prior operations and projects, financial resources, reputation, performance, or other matters. Submission of a proposal shall constitute permission by the Proposer for the Port Authority to make such inquiries and authorization to third parties to respond thereto.

## **I. Evaluation Procedures and Negotiation**

Only Proposers which meet the prerequisites, if any, may have their proposals evaluated based on the evaluation criteria set forth in this RFP. The Port Authority may use such procedures that it deems appropriate to evaluate such proposals. The Port Authority may elect to initiate contract negotiations with one or more Proposers including negotiation of costs/price(s) and any other term or condition, including modifying any requirement of this RFP. The option of whether or not to initiate contract negotiations rests solely with the Port Authority.

## **J. Taxes and Costs**

Purchases of services and tangible personal property by the Port Authority in the States of New York and New Jersey are generally exempt from state and local sales and compensating use taxes, and from most federal excises (Taxes). All costs associated with the Contract must reflect this exemption and be stated in U.S. currency.

## **K. Most Advantageous Proposal/No Obligation to Award**

The Port Authority reserves the right to award the Contract to other than the Proposer proposing the lowest price. The Contract will be awarded to the Proposer whose proposal the Port Authority believes, in its sole discretion, will be the most advantageous to the Port Authority. Neither the release of this RFP nor the acceptance of any response thereto shall compel the Port Authority to accept any proposal. The Port Authority shall not be obligated in any manner whatsoever to any Proposer until a proposal is accepted by the Port Authority in the manner provided in the Section of this RFP entitled "Proposal Acceptance or Rejection."

## **L. Multiple Contract Awards**

The Port Authority reserves the right to award multiple Contracts for the products, work and/or services that are the subject matter of this RFP and Proposers are hereby given notice that they may not be the Port Authority's only contractor for such products, work and/or services.

## **M. Right to Extend Contract**

If this is a proposal for a contract for a term of years, including specified options for renewal, the Port Authority reserves the additional right to extend the contract term

for an additional 120 days, upon the same terms and conditions of the original Contract negotiated between the Port Authority and the successful Proposer.

#### **N. Rights of the Port Authority**

- (1) The Port Authority reserves all its rights at law and equity with respect to this RFP including, but not limited to, the unqualified right, at any time and in its sole discretion, to change or modify this RFP, to reject any and all proposals, to waive defects or irregularities in proposals received, to seek clarification of proposals, to request additional information, to request any or all Proposers to make a presentation, to undertake discussions and modifications with one or more Proposers, or to negotiate an agreement with any Proposer or third person who, at any time, subsequent to the deadline for submissions to this RFP, may express an interest in the subject matter hereof, to terminate further participation in the proposal process by a Proposer or to proceed with any proposal or modified proposal, which in its judgment will, under all circumstances, best serve the Port Authority's interest. The Port Authority may, but shall not be obliged to, consider incomplete proposals or to request or accept additional material or information. The holding of any discussions with any Proposer shall not constitute acceptance of a proposal, and a proposal may be accepted with or without discussions.
- (2) No Proposer shall have any rights against the Port Authority arising from the contents of this RFP, the receipt of proposals, or the incorporation in or rejection of information contained in any proposal or in any other document. The Port Authority makes no representations, warranties, or guarantees that the information contained herein, or in any addenda hereto, is accurate, complete, or timely or that such information accurately represents the conditions that would be encountered during the performance of the contract. The furnishing of such information by the Port Authority shall not create or be deemed to create any obligation or liability upon it for any reason whatsoever and each Proposer, by submitting its proposal, expressly agrees that it has not relied upon the foregoing information, and that it shall not hold the Port Authority liable or responsible therefor in any manner whatsoever. Accordingly, nothing contained herein and no representation, statement or promise, of the Port Authority, its directors, officers, agents, representatives, or employees, oral or in writing, shall impair or limit the effect of the warranties of the Proposer required by this RFP or Contract and the Proposer agrees that it shall not hold the Port Authority liable or responsible therefor in any manner whatsoever.
- (3) At any time and from time to time after the opening of the proposals, the Port Authority may give oral or written notice to one or more Proposers to furnish additional information relating to its proposal and/or qualifications to perform the services contained in this RFP, or to meet with designated representatives of the Port Authority. The giving of such notice shall not be construed as an acceptance of a proposal. Information shall be submitted within three (3) calendar days after the Port Authority's request unless a shorter or longer time is specified therein.

### **O. No Personal Liability**

Neither the Commissioners of the Port Authority, nor any of them, nor any officer, agent or employee thereof shall be charged personally with any liability by a Proposer or another or held liable to a Proposer or another under any term or provision of this RFP or any statements made herein or because of the submission or attempted submission of a proposal or other response hereto or otherwise.

### **10. ATTACHMENTS**

ATTACHMENT A -	AGREEMENT ON TERMS OF DISCUSSION
ATTACHMENT B - PART I	GENERAL CONTRACT PROVISIONS
ATTACHMENT B - PART II	COST PROPOSAL FORM
ATTACHMENT C -	SCOPE OF WORK
ATTACHMENT D-	PROPOSER REFERENCE FORM
ATTACHMENT E -	M/WBE PARTICIPATION PLAN
ATTACHMENT F -	CERTIFIED ENVIRONMENTALLY PREFERABLE PRODUCTS/PRACTICES

**ATTACHMENT A**

**AGREEMENT ON TERMS OF DISCUSSION**

The Port Authority's receipt or discussion of any information (including information contained in any proposal, vendor qualification, ideas, models, drawings, or other material communicated or exhibited by us or on our behalf) shall not impose any obligations whatsoever on the Port Authority or entitle us to any compensation therefor (except to the extent specifically provided in such written agreement, if any, as may be entered into between the Port Authority and us). Any such information given to the Port Authority before, with or after this Agreement on Terms of Discussion ("Agreement"), either orally or in writing, is not given in confidence. Such information may be used, or disclosed to others, for any purpose at any time without obligation or compensation and without liability of any kind whatsoever. Any statement which is inconsistent with this Agreement, whether made as part of or in connection with this Agreement, shall be void and of no effect. This Agreement is not intended, however, to grant to the Port Authority rights to any matter, which is the subject of valid existing or potential letters patent. The foregoing applies to any information, whether or not given at the invitation of the Authority.

Notwithstanding the above, and without assuming any legal obligation, the Port Authority will employ reasonable efforts, subject to the provisions of the Port Authority Freedom of Information Code and Procedure adopted by the Port Authority's Board of Commissioners on March 29, 2012, which may be found on the Port Authority website at: <http://www.panynj.gov/corporate-information/pdf/foi-code.pdf>, not to disclose to any competitor of the undersigned, information submitted which are trade secrets or is maintained for the regulation or supervision of commercial enterprise which, if disclosed, would cause substantial injury to the competitive position of the enterprise, and which information is identified by the Proposer as proprietary, which may be disclosed by the undersigned to the Port Authority as part of or in connection with the submission of a proposal.

\_\_\_\_\_  
(Company)

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Title)

\_\_\_\_\_  
(Date)

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DO NOT RETYPE.

**ATTACHMENT B**

**PART I – GENRAL CONTRACT PROVISIONS**

## ATTACHMENT B

### GENERAL CONTRACT PROVISIONS

#### **1. GENERAL AGREEMENT**

The undersigned (hereinafter referred to as the "Contractor" or "you") agrees to provide, and The Port Authority of New York and New Jersey (hereinafter referred to as the "Authority" or the "Port Authority") agrees to accept **Airport Noise and Operations Monitoring Services** as more fully set forth in the Scope of Work (Attachment C) attached hereto and made a part hereof. The Scope of Work requires the doing of all things necessary or proper for or incidental to the requirements as set forth in the Scope of Work. All things not expressly mentioned in the Scope of Work but involved in carrying out their intent are required by the Scope of Work and the Contractor shall perform the same as though they were specifically mentioned, described and delineated.

Subject only to the provisions of the clause herein entitled "Extra Work", the Contractor's sole compensation in full consideration for the performance of all the Contractor's obligations under this Contract shall be in accordance with pricing sheets accepted by the Port Authority.

#### **2. DEFINITIONS**

As used herein, "Director" shall mean the Director of Aviation of the Authority acting either personally or through her duly authorized representatives acting within the scope of the particular authority vested in them unless specifically stated to mean acting personally. For the purpose of administering this Agreement, the Director has designated the Project Manager ("PM") to act as her duly authorized representative.

For the purposes of this Agreement the Project Manager (or "Manager") shall be the individual with day-to-day responsibility for managing the project on behalf of the Port Authority. The Project Manager will be Adeel Yousuf, Senior Airport Engineer, Aviation Department.

As used herein, the term "days" or "calendar days" in reference to a period of time shall mean consecutive calendar days, Saturdays, Sundays, and holidays included.

"Facility" Port Authority Facilities within the Port District, as set forth in Attachment C: "Port Authority Facilities".

"Services" or "Work" - shall mean all services, equipment and materials (including materials and equipment, if any, furnished by the Authority) and other facilities and all other things necessary or proper for, or incidental to the services to be performed or goods to be furnished in connection with the service to be provided hereunder, as set forth in the Scope of Work.

As used herein, the term "Work Day" shall mean a day between Monday and Friday with Monday and Friday included, and Holidays excluded.

As used herein the term "Specifications" shall mean all requirements of this RFP, technical and otherwise, for the performance of the Scope of Work and services hereunder.

As used herein, the term "Work Day" shall mean a day between Monday and Friday with Monday and Friday included.

Holidays: The following legal holidays will be observed at Port Authority offices and facilities:

New Year's Day	Columbus Day
Martin Luther King, Jr. Day	Veterans Day
Presidents' Day	Thanksgiving Day
Memorial Day	Day after Thanksgiving
Independence Day	Christmas Day
Labor Day	

As used herein, the terms "Port Authority" or "Authority" shall mean The Port Authority of New York and New Jersey.

Minority Business Enterprise (MBE) - shall mean a business entity which is at least 51% owned and controlled by one or more members of one or more minority groups, or, in the case of a publicly held corporation, at least 51% of the stock of which is owned by one or more members of one or more minority groups, and whose management and daily business operations are controlled by one or more such individuals who are citizens or permanent resident aliens.

"Minority Group" means any of the following racial or ethnic groups:

- Black persons having origins in any of the Black African racial groups not of Hispanic origin;
- Hispanic persons of Mexican, Puerto Rican, Dominican, Cuban, Central or South American culture or origin, regardless of race;
- Asian and Pacific Islander persons having origins in any of the original peoples of the Far East, Southeast Asia, The Indian Subcontinent, or the Pacific Islands;
- Native American or Alaskan native persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification.

Small Business Enterprise (SBE) - The criteria for a Small Business Enterprise are:

- The principal place of business must be located in New York or New Jersey;
- The firm must have been in business for at least three years with activity; and
- Average gross income limitations by industry as established by the Port Authority.

Women-Owned Business Enterprise (WBE) - shall mean a business enterprise which is at least 51% owned by one or more women, or, in the case of a publicly held corporation, at least 51% of the stock of which is owned by one or more women and whose management and daily business operations are controlled by one or more women who are citizens or permanent resident aliens.

Subcontractor - shall mean anyone who performs work (other than or in addition to the furnishing of materials, plant or equipment) in connection with the services to be provided hereunder, directly or indirectly for or on behalf of the Contractor (and whether or not in

privity of contract with the Contractor), but shall not include any person who furnished merely his own personal labor or his own personal services. "Subcontractor", however, shall exclude the Contractor or any subsidiary or parent of the Contractor or any person, firm or corporation which has a substantial interest in the Contractor or in which the Contractor or the parent or the subsidiary of the Contractor, or an officer or principal of the Contractor or of the parent of the subsidiary of the Contractor has a substantial interest, provided, however, that for the purpose of the clause hereof entitled "Assignments and Subcontracts" the exclusion in this paragraph shall not apply to anyone but the Contractor itself.

### 3. GENERAL PROVISIONS

- A. Under no circumstances shall you or your subcontractors communicate in any way with any department, board, agency, commission, or other organization or any person whether governmental or private in connection with the services to be performed hereunder except upon prior written approval and instructions of the Director, provided, however, that data from manufacturers and suppliers of materials, devices and equipment shall be obtained by you when you find such data necessary unless otherwise instructed by the Authority.
- B. Any services performed for the benefit of the Authority at any time by you or on your behalf, even if expressly and duly authorized by the Authority, shall be deemed to be rendered under and subject to this Contract (unless referable to another expressly written, duly executed contract by the same parties), whether such additional services are performed prior to, during or subsequent to the services described herein, and no rights or obligations shall arise out of such additional services except as provided under this Contract.
- C. The Contractor shall observe and obey (and compel its officers, employees, guests, invitees, and those doing business with it, to observe and obey) the rules and regulations of the Port Authority now in effect, and such further rules and regulations which may from time to time during the effective period of this Contract, be promulgated by the Port Authority for reasons of safety, health, preservation of property, or maintenance of a good and orderly appearance of the Facilities, or for the safe and efficient operation of the Facilities. The Port Authority agrees that, except in cases of emergency, it shall give notice to the Contractor of every rule and regulation hereafter adopted by it.
- D. This Contract does not constitute the Contractor as an agent or representative of the Port Authority for any purpose whatsoever. The Contractor shall perform all services hereunder as an independent Contractor and the Contractor, its officers, and employees shall not be deemed to be agents, servants, or employees of the Port Authority.

### 4. DURATION

This Contract shall commence on or about **May 1, 2013**, or on a date as mutually agreed upon and accepted by the Authority, and shall remain in effect for a period of **three (3) years (hereinafter the "Base Term") unless otherwise terminated in accordance with the provisions hereof. The Authority shall have the right to extend this Contract for up to three (3) additional two-year periods by written notice to the Contractor at least thirty (30) days prior to the expiration of the Base Term or the expiration of the option period, if applicable.**

The Authority shall also have the right to extend this Contract for an additional 120 day period, from the date originally fixed for expiration of the Base Term or any option period then in effect upon the same terms and conditions except as set forth elsewhere in this Contract, to be effected by written notice to the Contractor received no later than thirty (30) days prior to the expiration date of the Base Term or the expiration date of the option period, if applicable.

The amounts payable to the Contractor during any 120-day Extension Period shall be the same as the amounts payable in the immediately preceding period.

- (a) The Port Authority shall have the right to extend this Contract for three (3) additional two (2) year Option Periods (hereinafter called the "Option Period") following the Expiration Date, upon the same terms and conditions. If the Port Authority shall elect to exercise the Option(s) to extend this Contract, then, no later than thirty (30) days prior to the Expiration Date, the Port Authority shall send a notice that it is extending the Base Term of this Contract, and this Contract shall thereupon be extended for the applicable Option Period. If the Contract provides for more than one Option Period, the same procedure shall apply with regard to extending the term of this Contract for succeeding Option Periods.
- (c) The Port Authority shall have the absolute right to extend the Base Term for an additional period of up to one hundred and twenty (120) days subsequent to the Expiration Date of the Base Term, or the Expiration Date of the final exercised Option Period (hereinafter called the "Extension Period"), subject to the same terms and conditions as the previous contract period. The prices quoted by the Contractor for the previous contract period shall remain in effect during this Extension Period without adjustment. If it so elects to extend this Contract, the Port Authority will advise the Contractor, in writing, that the term is so extended, and stipulate the length of the extended term, at least thirty (30) days prior to the expiration date of the previous contract period.

## **5. EXTRA WORK**

Except as specifically hereinafter provided in this numbered clause, the Contractor shall immediately supply such modified or additional products and services as the Authority may direct ("Extra Work"). If such changes or additions are without fault on his part, or on the part of others performing on behalf of the Contractor whether or not in privity of contract with the Contractor, and if solely as a result thereof, the Contractor incurs additional costs in the performance of his obligations hereunder, the Contractor may request compensation for such changes or additions in addition to the compensation provided for elsewhere herein. Agreement by the Authority, if such is forthcoming, shall be in writing. The execution of the aforementioned written agreement shall be a condition precedent to payment of any additional compensation for changes or additions. Accordingly, if the Authority directs the Contractor to make any change in or addition to products or services which entitle him to compensation in addition to that provided for elsewhere herein, he shall not proceed with such changes or additions prior to execution of the aforementioned written agreement except as set forth in the clause hereof entitled "Compensation for Extra Work".

If, as a result of any changes in or additions to the products or services the Authority directs the Contractor to make, the costs of performance of his obligations hereunder are decreased, the parties agree to make such adjustments by way of reduction in the compensation provided for elsewhere herein as they may deem equitable and reasonable and, in making such adjustments, no allowance shall be made for anticipated profits.

The Director shall have the authority to order Extra Work up to an amount equal to six percent (6%) of the Total Estimated price for the base term plus that for any option years that have been exercised unless the Contractor is advised of a greater authorization in a letter signed by the Authority's Director of Procurement. Nothing herein shall be construed as a presentation that any changes or additions will be ordered.

## **6. COMPENSATION FOR EXTRA WORK**

The Director and the Contractor may agree, in writing, on lump sum or other compensation for Extra Work. In the event that no such agreement is reached compensation shall be increased by the sum of the following amounts and such amounts only:

- A. for labor, the applicable hourly rates for extra work set forth in the **Supplemental Work** section of **Attachment C**;
- B. the actual net cost in money of the materials required for the Work; and
- C. in addition to the foregoing, if the Extra Work is performed by a subcontractor, five percent (5%) of the amounts under (A) and (B). No Extra Work shall be performed by a subcontractor without the prior written approval of the Director.

## **7. EXTRA WORK PROCEDURES**

Whenever any Extra Work is performed by the Contractor on a basis other than on a lump sum basis, the Contractor shall, as a condition precedent to payment for such work, furnish to the Director or her authorized representative at the end of each day daily time slips showing (a) the name and employee number of each person employed thereon, and the number of hours in each day during which they performed Extra Work; (b) a brief description of the nature of the work performed and a list of material and equipment used and the Port Authority authorized representative who approved the Extra Work. Item (b) shall be supplemented by the Contractor at a later date with a statement indicating from whom materials were purchased and the amount paid therefor. Such daily time slips are for the purpose of enabling the Director or her authorized representatives to determine the accuracy of the amounts claimed by the Contractor.

## **8. PERFORMANCE OF EXTRA WORK**

The provisions of this Contract relating generally to the Work shall apply without exception to any Extra Work required and to the performance thereof, except to the extent that a written order in connection with any particular item of Extra Work may expressly provide otherwise.

## **9. PAYMENTS**

Subject to the provisions of this Contract, the Port Authority agrees to pay to the Contractor and the Contractor agrees to accept from the Port Authority as full and complete

consideration for the performance of all its obligations under this Contract and as sole compensation for the Services performed by the Contractor hereunder, a compensation calculated from the services performed and the respective unit prices inserted by the Contractor in the Cost Proposal Form in Attachment D, accepted by the Port Authority, forming a part of this Contract.

The manner of submission of all bills for payment to the Contractor by the Authority for Services rendered under this Contract shall be subject to the approval of the Contract Manager in all respects, including, but not limited to, format, breakdown of items presented and verifying records. All computations made by the Contractor and all billing and billing procedures shall be done in conformance with the following procedures:

- A. Payment shall be made in accordance with the prices for the applicable service as they appear on Attachment D entitled "Cost Proposal", accepted by the Port Authority, as same may have been adjusted hereunder minus any deductions for services not performed and/or any applicable liquidated damages. All Services must be completed within the time frames specified or as designated by the Contract Manager. Contractor shall submit to the Contract Manager by the fifth day of the month following the quarter of commencement of this Contract and on or by the fifth day following each quarter thereafter (including the month following the termination, revocation or expiration of this Contract) a complete and correct invoice for the Services performed during the preceding calendar quarter, accompanied by such information as may be required by the Contract Manager for verification. The invoice must show the Contractor's Federal Tax Identification Number. Payment will be made within thirty (30) days of Authority verification of the invoice. Each quarterly billing shall be  $\frac{1}{4}$  of the annual amount for services under this Contract, except for the hardware units (Noise Monitoring Terminals and associated hardware and computer hardware as specified in Attachment C, Scope of Work). Payment for hardware will be made within thirty (30) days after operational acceptance of each hardware unit. No certificate, payment, acceptance of any Services or any other act or omission of any representative of the Authority shall operate to release the Contractor from any obligation under or upon this Contract, or to stop the Authority from showing at any time that such certificate, payment, acceptance, act or omission was incorrect or to preclude the Authority from recovering any monies paid in excess of those lawfully due and any damage sustained by the Authority.
- B. In the event an audit of received invoices should indicate that the correct sum due the Contractor for the relevant billing period is less than the amount actually paid by the Authority, the Contractor shall pay to the Authority the difference promptly upon receipt of the Authority's statement thereof. The Authority may, however, in its discretion elect to deduct said sum or sums from any subsequent payments payable to the Contractor hereunder.

"Final Payment", as the term is used throughout this Contract, shall mean the final payment made for services rendered in the last month of the Contract Term. However should this Contract be terminated for any reason prior to the last month of the Contract Term, then Final Payment shall be the payment made for services rendered in the month during which such termination becomes effective. The Contractor's acceptance of any payment, including Final Payment, shall act as a full and complete release to the Authority of all claims of and of all liability to the Contractor for all things done or furnished in connection with this Contract

and for every act and neglect of the Authority and others relating to or arising out of this Contract, including claims arising out of breach of contract and claims based on claims of third persons. No payment, however, final or otherwise shall operate to release the Contractor from any obligations in connection with this Contract.

#### **10. FINAL PAYMENT**

After satisfactory completion of all services required hereunder, and upon receipt from the Contractor of such information as may be required, the Director shall certify in writing to the Contractor the total compensation earned by the Contractor. If so required, the Contractor shall thereupon furnish to the Authority a detailed sworn statement of all claims, just and unjust, of subcontractors, materialmen and other third persons then outstanding which he has reason to believe may thereafter be made on account of the services provided under this Contract. Within thirty (30) days after issuance of such certificate of total compensation earned (or within thirty days after receipt of the documents provided for in the immediately preceding paragraph, if required and if such date is later), the Port Authority shall pay to the Contractor by check the amount stated in said certificate, less all other payments and advances whatsoever to or for the account of the Contractor. All prior estimates and payments shall be subject to correction in this payment, which is throughout this Contract called the Final Payment. The acceptance by the Contractor, or by anyone claiming by or through him, of the Final Payment shall be and shall operate as a release to the Authority of all claims and of all liability to the Contractor for all things done or furnished in connection with this contract and for every act and neglect of the Authority and others relating to or arising out of this contract, including claims arising out of breach of the contract and claims based on claims of third persons.

The Contractor's agreement as provided in the immediately preceding paragraph shall be deemed to be based upon the consideration forming part of this Contract as a whole and not to be gratuitous; but in any event even if deemed gratuitous and without consideration, such agreement as provided in the immediately preceding paragraph shall nevertheless be effective. Such release shall include all claims, whether or not in litigation and even though still under consideration by the Authority. Such release shall be effective notwithstanding any purported reservation of right by the Contractor to preserve such claim. The acceptance of any check designated as "Final Payment" or bearing any similar designation shall be conclusively presumed to demonstrate the intent of the Contractor that such payment was intended to be accepted as final, with the consequences provided in this numbered clause, notwithstanding any purported reservation of rights.

The Contractor agrees that he shall not be entitled to, and hereby waives any right he might otherwise have to, and shall not seek any judgment whether under this Contract or otherwise for any such Final Payment or for an amount equivalent thereto or based thereon, or for any part thereof, if such judgment would have the effect of varying, setting aside, disregarding or making inapplicable the terms of this numbered clause or have the effect in any way of entitling the Contractor to accept such Final Payment or an amount equivalent thereto or based thereon or any part thereof other than in the same fashion as a voluntary acceptance of a Final Payment subject to all the terms of this Contract including this numbered clause, unless and until the Contractor should obtain a judgment on any claim arising out of or in connection with this Contract (including a claim based on breach of contract) for an amount not included in said Final Payment.

## **11. LIQUIDATED DAMAGES**

The Contractor's obligations for the performance and completion of the Work within the time or times provided for in this Contract are of the essence of this Contract. In the event the Contractor fails to satisfactorily perform all or part of the Work required hereunder in accordance with the requirements set forth in the Scope of Work (as the same may be modified in accordance with the provisions set forth elsewhere herein) then, inasmuch as the damage and loss to the Port Authority for such failure to perform includes items of loss whose amount will be incapable or very difficult of accurate estimation, the damages for such failure to perform shall be liquidated as stated below unless delay is not due to the fault of the Contractor. Under the following paragraph A that detail conditions in which liquidated damages may be imposed, the amounts listed below to each occurrence that exceeds the specified time required or scope outlined in the Scope of Work.

- A. If the Contractor fails to respond to reported malfunctions or repair reported malfunctions, as specified in Attachment C, Scope of Work, Section IX.C.1 entitled "On-Call Remedial Maintenance" as the same may, as hereinafter provided, be revised, within the time required herein, time being of the essence, damages shall be assessed in the amount of \$250.00 dollars per day per noise monitoring terminal (NMT) site starting on the eighth (8<sup>th</sup>) business day after the original trouble ticket was submitted, and shall be deducted from the amount payable for that calendar quarter for the Maintenance Costs.

The Authority's Project Manager shall determine whether the Contractor has performed in a satisfactory manner and his/her determination shall be final, binding and conclusive upon the Contractor. Failure of the Authority's Project Manager or the Port Authority to impose liquidated damages shall not be deemed Port Authority acceptance of unsatisfactory performance or a failure to perform on the part of the Contractor.

Nothing contained in this Section nor the exercise of any right by the Port Authority hereunder shall be deemed to be a waiver or relinquishment by the Port Authority of any other right it may have hereunder including any right to terminate this agreement based on the Contractor's breach at Law or in equity.

## **12. COMPENSATION FOR SUPPLEMENTAL WORK**

The Authority may direct the Contractor to perform Supplemental Work, as defined in the Attachment C, Scope of Work, Section IX. E. Supplemental Work, during the performance of the Contract. If such work is required and not due to a fault on the Contractor's part or on the part of others performing on behalf of the Contractor and if solely as a result thereof, the Contractor incurs additional costs in the performance of its obligations hereunder, the Contractor may request compensation for performing the Supplemental Work in addition to the compensation provided elsewhere herein.

If, as a result of any changes in or additions to the products or services the Authority directs the Contractor to make to the system or service, the costs of performance of its obligations

hereunder are decreased, the parties shall agree to make such adjustments by way of reduction in the compensation to be provided.

In response to the Authority's Directive, the Contract Manager shall submit a written proposal that describes the Supplemental Work to be performed, contain a detailed breakdown of the labor involved by labor category, a firm lump sum price and a proposed schedule for the Work. The work expended to prepare proposals for Supplemental Work is not a reimbursable expense. Unit labor costs submitted in each proposal for Supplemental Work shall not exceed the Unit Cost for each category of labor itemized in the Attachment B, Part II: Cost Proposal Form, Tables 5 and 6 for Unit Costs for Supplemental Work accepted by the Port Authority. Prior to performance of any Supplemental Work, the Authority's Project Manager shall approve any such Work in writing prior to execution.

The provisions of this Contract relating generally to the Work shall apply without exception to any Supplemental Work required and to the performance thereof. Moreover, the provisions of the Contract relating generally to the Work and its performance shall also apply to any Supplemental Work required and to the performance thereof, except to the extent that a written order in connection with any particular item of Supplemental Work may expressly provide otherwise.

### **13. LIMITATION ON USE OF INFORMATION AND COMPETITION**

(a) The Contractor understands and acknowledges that the Contractor will have access to data and information concerning aeronautical, airline and other transportation activity and business at the Airport. It is of the utmost importance to the Port Authority and of the essence of the Contractor's obligations hereunder that any such information available to the Contractor not be used by the Contractor or made available to others by the Contractor for any purpose or reason whatsoever other than to operate and provide the SMS Services under this Contract, except as required by law or approved or directed by the Port Authority. The Contractor further acknowledges and agrees that all such data and information shall be the sole and exclusive property of the Port Authority.

(b) During the term of this Contract, the Contractor shall not be or own or operate directly or indirectly or have any interest in, financial or otherwise, nor shall its executive management include individuals having or having had such interest in, any Firm, or any other entity including but not limited to, airlines, air cargo operators, airports, hotels, motels, restaurants or other related service industry operations which, in the opinion of the Port Authority, would create a conflict of interest or give the appearance of a conflict of interest.

### **14. SUBCONTRACTORS**

All subcontractors as may be consented to and approved by the Port Authority in writing who provide personnel to the Contractor for work under this Contract shall be given written notice by the Contractor to comply with all requirements of the Contract. The Contractor shall be responsible and liable for the performance and acts of each subcontractor.

## **15. NON-PERFORMANCE OF SERVICES**

(a) All assigned Contractor personnel shall perform duties as shall be established from time to time by the Contact Manager. The Contractor shall immediately, upon the direction of the Airport Manager, correct all matters, which shall have been determined to be unsatisfactory hereunder.

(b) The Contractor shall conduct all operations hereunder in an orderly and proper manner and so as not to annoy, disturb or be offensive to others at the Airport. The Port Authority shall have the right to object to the Contractor regarding the demeanor and conduct of the Contractor's employees, invitees and those doing business with it, whereupon the Contractor will take steps necessary to remove the cause of the objection.

## **16. INTELLECTUAL PROPERTY**

A. Except as provided below: as between the Port Authority and the Contractor all process flows, codes including, but not limited to machine code, scripts, programs, routines, processes, procedures, documentation, estimates, reports, records, data, charts, documents, models, designs, renderings, drawings, specifications, photographs, computations, computer tapes or discs, and other documentation of any type whatsoever, whether electronic or in the form of writing, figures or delineations, which are prepared or compiled in connection with this Contract, shall become the exclusive property of the Authority, and the Authority shall have the exclusive right to use or permit the use of them and any ideas or methods represented by them for any purpose and at any time without other compensation than that specifically provided for herein. With regard to training manuals or any other knowledge transfer documentation, communication or presentation prepared under this Contract the Authority shall expressly have the right to use, alter and reproduce including electronically, said manuals for its internal business purposes. The Contractor hereby warrants and represents that the Authority will have at all times the ownership and rights provided for in the immediately preceding sentence free and clear of all claims of third persons whether presently existing or arising in the future and whether presently known to either of the parties to this Contract or not. Any information given to the Port Authority before, with or after submission of the Agreement on Terms of Discussion, either orally or in writing, is not given in confidence and may be used, or disclosed to others, for any purpose at any time without obligation or compensation and without liability of any kind whatsoever except as otherwise set forth in the Agreement On Terms Of Discussion.

B. All preexisting information or documentation including computer programs or code including source code, of the Contractor, utilized by the Contractor hereunder in the performance of his services hereunder shall be deemed licensed to the Authority for the duration and purposes of this Contract, but shall remain the property of the Contractor.

C. When in the performance of the Contract the Contractor utilizes passwords or codes for any purpose, the Contractor, upon written request by the Authority, made at any time during or after the performance of such services, shall promptly make available to the designated Authority representative all such passwords and codes.

- D. Third party software not specially prepared for the purpose of this contract but utilized by the Contractor hereunder in the performance of his services hereunder shall be licensed to the Contractor and the Authority for the duration and purposes of this contract but shall remain the property of said third party.
- E. The above-described software shall be furnished by the Contractor without additional compensation.

#### **17. PROPRIETARY RIGHTS IN SUBJECT MATTER NOT WITHIN THE INTELLECTUAL PROPERTY CLAUSE**

If in accordance with this Contract the Contractor furnishes research, development or consultative services in connection with the performance of the Work and if in the course of such research, development, or consultation patentable or copyrightable subject matter or trade secrets or other proprietary matter is produced by the Contractor, its officers, agents, employees, subcontractors, or suppliers, not custom software, and not covered under the clause hereof entitled "Intellectual Property", the Authority shall have, without cost or expense to it, an irrevocable, non-exclusive, royalty-free license to make, have made, and use, either itself or by anyone on its behalf, such subject matter in connection with any activity now or hereafter engaged in or permitted by the Authority. Promptly upon request by the Authority, the Contractor shall furnish or obtain from the appropriate person a form of license satisfactory to the Authority, but it is expressly understood and agreed that as between the Contractor and the Authority the license herein provided for shall nevertheless arise for the benefit of the Authority immediately upon the production of said subject matter and shall not await formal exemplification in a written license agreement as provided for above. Such license may be transferred by the Authority to its successors, immediate or otherwise, in the operations of or ownership of any facility now or hereafter operated by the Authority but such license shall not be otherwise transferable.

The right of the Authority as well as the Contractor to use all patented material, compositions of matter, manufactures, apparatus, appliances, processes of manufacture or types of construction as well as any copyrightable matter, trade secrets or other proprietary matters, shall be obtained by the Contractor without separate or additional compensation whether the same is patented or copyrighted before, during or after the performance of the Work.

#### **18. INDEMNITY IN REGARD TO INFRINGEMENT MATTER**

The Contractor shall indemnify the Authority against and save it harmless from all loss and expense incurred in the defense, settlement or satisfaction of any claims in the nature of patent, copyright, or other proprietary rights infringement arising out of or in connection with the Authority's use, in accordance with the two immediately preceding clauses of any matter protected as intellectual property. If requested by the Authority and if notified promptly in writing of any such claims, the Contractor shall conduct all negotiations with respect to and defend such claim without expense to the Authority. If the Authority be enjoined from using any of the facilities which form the subject matter of this Contract, and as to which the Contractor is to indemnify the Authority against proprietary rights claims, the Authority may, at its option and without thereby limiting any other right it may have hereunder or at law or in equity, require the Contractor to supply, temporarily or permanently, facilities not subject to such injunction and not infringing any proprietary rights and if the Contractor shall fail to

do so, the Contractor shall, at its expense, remove all such facilities and refund the cost thereof to the Authority and otherwise equitably adjust compensation and take such steps as may be necessary to ensure compliance by the Authority with such injunction, to the satisfaction of the Authority.

The Contractor shall promptly and fully inform the Director of any claims or disputes for infringement or otherwise, whether existing or potential, of which it has knowledge relating to any Intellectual Property used, developed or licensed in connection with the performance of the Work or otherwise in connection with this Contract.

If so directed, the Contractor shall at its own expense defend any suit based upon any claim or demand, even if such suit, claim or demand is groundless, false or fraudulent, and in handling such shall not, without obtaining express advance permission from the General Counsel of the Port Authority, raise any defense involving in any way the jurisdiction of the tribunal over the person of the Port Authority, the immunity of the Port Authority, its Commissioners, officers, agents or employees, the governmental nature of the Port Authority or the provision of any statutes respecting suits against the Port Authority.

#### **19. TIME IS OF THE ESSENCE**

The Contractor's obligations for the performance and completion of all work within the time or times provided for in this Contract are of the essence of this Contract.

#### **20. DEFAULT, REVOCATION OR SUSPENSION OF CONTRACT**

A. If one or more of the following events shall occur:

1. Fire or other event which destroys all or a substantial part of the Facility, asset or infrastructure necessary to perform the Scope of Work;
2. Any governmental agency shall condemn or take a temporary or permanent interest in all or a substantial part of the Facility, or all of a part of the Port Authority's interest herein;

then upon the occurrence of such event or at any time thereafter during the continuance thereof, the Port Authority shall have the right on twenty-four (24) hours written notice to the Contractor to revoke this Contract, such revocation to be effective upon the date and time specified in such notice.

In such event this Contract shall cease and expire on the effective date of revocation as if said date were the date of the expiration of this Contract. Such revocation shall not, however, relieve the Contractor of any liabilities or obligations hereunder which shall have accrued on or prior to the effective date of revocation.

B. If one or more of the following events shall occur:

1. The Contractor shall become insolvent, or shall take the benefit of any present or future insolvency statute, or shall make a general assignment for the benefit of creditors, or file a voluntary petition in bankruptcy or a petition or answer seeking an arrangement or its reorganization or the readjustment of its indebtedness under the federal bankruptcy laws or under any other law or statute of the United States or of any State thereof, or consent to the appointment of a receiver, trustee, or liquidator of

all or substantially all its property; or

2. By order or decree of a court the Contractor shall be adjudged bankrupt or an order shall be made approving a petition filed by any of the creditors, or, if the Contractor is a corporation, by any of the stockholders of the Contractor, seeking its reorganization or the readjustment of its indebtedness under the federal bankruptcy laws or under any law or statute of the United States or of any State thereof; or
3. A petition under any part of the federal bankruptcy laws or an action under any present or future insolvency law or statute shall be filed against the Contractor and shall not be dismissed within thirty (30) days after the filing thereof; or
4. The interest of the Contractor under this Contract shall be transferred to, passed to or devolve upon, by operation of law or otherwise, any other person, firm or corporation; or
5. The Contractor, if a corporation, shall, without the prior written approval of the Port Authority, become a surviving or merged corporation in a merger, a constituent corporation in a consolidation, or a corporation in dissolution; or
6. If the Contractor is a partnership, joint-venture, or similar arrangement (referred to herein for convenience as the "partnership"), and the said partnership shall be dissolved as the result of any act or omission of its copartners or any of them, or by operation of law or the order or decree of any court having jurisdiction, or for any other reason whatsoever; or
7. By or pursuant to, or under authority of any legislative act, resolution or rule, or any order or decree of any court or governmental board, agency or officer having jurisdiction, a receiver, trustee, or liquidator shall take possession or control of all or substantially all of the property of the Contractor and such possession or control of all or substantially all of the property of the Contractor and shall continue in effect for a period of fifteen (15) days;

then upon the occurrence of any such event or at any time thereafter during the continuance thereof, the Port Authority shall have the right upon five (5) days notice to the Contractor to terminate this Contract and the rights of the Contractor hereunder; termination to be effective upon the date and time specified in such notice as if said date were the date of the expiration of this Contract. Termination shall not relieve the Contractor of any liabilities or obligations hereunder which have accrued on or prior to the effective date of termination.

C. If any of the following shall occur:

1. The Contractor shall cease, abandon any part of the service, desert, stop or discontinue its services in the premises for any reason whatsoever and regardless of the fault of the Contractor; or
2. The Contractor shall fail to keep, perform and observe each and every other promise, covenant and agreement set forth in this Contract on its part to be kept, performed or observed, within five (5) days after receipt of notice of default thereunder from the Port Authority (except where fulfillment of its obligations requires activity over a greater period of time, and the Contractor shall have commenced to perform whatever

may be required for fulfillment within five (5) days after receipt of notice and continues such performance without interruption except for causes beyond its control);

then upon the occurrence of any such event or during the continuance thereof, the Port Authority shall have the right on twenty four (24) hours notice to the Contractor to terminate this Contract and the rights of the Contractor hereunder, termination to be effective upon the date and time specified in such notice. Termination shall not relieve the Contractor of any liabilities, which shall have accrued on or prior to the effective date of termination.

- D. If any of the events enumerated in this Section shall occur prior to commencement date of this Contract the Port Authority upon the occurrence of any such event or any time thereafter during the continuance thereof by twenty-four (24) hours notice may terminate or suspend this Contract and the rights of the Contractor hereunder, such termination or suspension to be effective upon the date specified in such notice.
- E. No payment by the Port Authority of any monies to the Contractor for any period or periods after default of any of the terms, covenants or conditions hereof to be performed, kept and observed by the Contractor and no act or thing done or omitted to be done by the Port Authority shall be deemed to be a waiver of the right of the Port Authority to terminate this Contract or of any other right or remedies to which the Port Authority may be entitled because of any breach thereof. No waiver by the Port Authority of any default on the part of the Contractor in the performance of any of the terms, covenants and conditions hereof to be performed, kept or observed by the Contractor shall be or be construed to be a waiver by the Port Authority of any other subsequent default in the performance of any of the said terms, covenants and conditions.
- F. In addition to all other rights of revocation or termination hereunder and notwithstanding any other provision of this Contract the Port Authority may terminate this Contract and the rights of the Contractor hereunder without cause at any time upon five (5) days written notice to the Contractor and in such event this Contract shall cease and expire on the date set forth in the notice of termination as fully and completely as though such dates were the original expiration date hereof and if such effective date of termination is other than the last day of the month, the amount of the compensation due to the Contractor from the Port Authority shall be prorated when applicable on a daily basis. Such cancellation shall be without prejudice to the rights and obligations of the parties arising out of portions already performed but no allowance shall be made for anticipated profits.
- G. Any right of termination contained in this paragraph, shall be in addition to and not in lieu of any and all rights and remedies that the Port Authority shall have at law or in equity consequent upon the Contractor's breach of this Contract and shall be without prejudice to any and all such other rights and remedies. It is hereby specifically agreed and understood that the exercise by the Port Authority of any right of termination set forth in this paragraph shall not be or be deemed to be an exercise by the Port Authority of an election of remedies so as to preclude the Port Authority from any right to money damages it may have for the period prior to the effective date of termination to the original expiration date of the Contract, and this provision shall be deemed to survive the termination of this Contract as aforesaid.

- H. If (1) the Contractor fails to perform any of its obligations under this Contract or any other contract between the Port Authority and the Contractor (including its obligation to the Port Authority to pay any claim lawfully made against it by any supplier, subcontractor or worker or other person which arises out of or in connection with the performance of this Contract or any other contract with the Port Authority) or (2) any claim (just or unjust) which arises out of or in connection with this Contract or any other contract between the Port Authority and the Contractor is made against the Port Authority or (3) any subcontractor under this Contract or any other contract between the Port Authority and the Contractor fails to pay any claims lawfully made against it by any supplier, subcontractor, worker or other third person which arises out of or in connection with this Contract or any other contract between the Port Authority and the Contractor or if in the opinion of the Port Authority any of the aforesaid contingencies is likely to arise, then the Port Authority shall have the right, in its discretion, to withhold out of any payment (final or otherwise) such sums as the Port Authority may deem ample to protect it against delay or loss or to assure the payment of just claims of third persons, and to apply such sums in such manner as the Port Authority may deem proper to secure such protection or satisfy such claims. All sums so applied shall be deducted from the Contractor's compensation. Omission by the Port Authority to withhold out of any payment, final or otherwise, a sum for any of the above contingencies, even though such contingency has occurred at the time of such payment, shall not be deemed to indicate that the Port Authority does not intend to exercise its right with respect to such contingency. Neither the above provisions for rights of the Port Authority to withhold and apply monies nor any exercise or attempted exercise of, or omission to exercise, such rights by the Port Authority shall create any obligation of any kind to such supplier, subcontractors, worker or other third persons. If, however, the payment of any amount due the Contractor shall be improperly delayed, the Port Authority shall pay the Contractor interest thereon at the rate of 6% per annum for the period of the delay, it being agreed that such interest shall be in lieu of and in liquidation of any damages to the Contractor because of such delay.
- I. If the Port Authority has paid any sum or has incurred any obligation or expense which the Contractor has agreed to pay or reimburse the Port Authority, or if the Port Authority is required or elects to pay any sum or sums or incurs any obligations or expense by reason of the failure, neglect or refusal of the Contractor to perform or fulfill any one or more of the conditions, covenants, or agreements contained in this Contract, or as a result of an act of omission of the Contractor contrary to the said conditions, covenants and agreements, the Contractor shall pay to the Port Authority the sum or sums so paid or expense so incurred, including all interests, costs and damages, promptly upon the receipt of the Port Authority's statement therefore. The Port Authority may, however, in its discretion, elect to deduct said sum or sums from any payment payable by it to the Contractor.
- J. If the Port Authority pays any installment to the Contractor without reducing said installment as provided in this Contract, it may reduce any succeeding installment by the proper amount, or it may bill the Contractor for the amount by which the installment paid should have been reduced and the Contractor shall pay to the Port Authority any such amount promptly upon receipt of the Port Authority's statement therefore.

- K. Until actual payment to the Contractor, its right to any amount to be paid under this Contract (even though such amount has already been certified as due) shall be subordinate to the rights of the Authority under this clause.
- L. The Port Authority shall also have the rights set forth above in the event the Contractor shall become insolvent or bankrupt or if his affairs are placed in the hands of a receiver, trustee or assignee for the benefit of creditors.

## **21. CONTRACTOR PERSONNEL STANDARDS OF PERFORMANCE**

The Contractor shall furnish sufficiently trained management, supervisory, technical and operating personnel to perform the services required of the Contractor under this Contract. If, in the opinion of the Director, any of the Contractor's personnel are not satisfactory in the performance of services to be furnished hereunder, the Contractor shall remove such personnel and replace them with personnel satisfactory to the Director.

At the time the Contractor is carrying out its operations there may be other persons working physically in the vicinity or in the same logical or technical infrastructure. The Contractor shall so conduct its operations as to work in harmony and not endanger, interfere with or delay the operations of others, all to the best interests of The Authority and others and as may be directed by the Director.

## **22. HIGH SECURITY AREAS**

- A. Services under the Contract may be required in high security areas, as the same may be designated by the Manager from time to time. The Port Authority shall require the observance of certain security procedures with respect to the high security areas, which may include the escort to, at, and/or from said high security areas by security personnel designated by the Contractor or any subcontractor's personnel required to work therein.
- B. Twenty-four hours prior to the proposed performance of any work in a high security area, the Contractor shall notify the Manager. The Contractor shall conform to the procedures as may be established by the Manager from time to time and at any time for access to high security areas and the escorting of personnel hereunder. Prior to the start of work, the Contractor shall request a description from the Manager of the high security areas which will be in effect on the commencement date. The description of high security areas may be changed from time to time and at any time by the Manager during the term of the Contract.

## **23. NOTIFICATION OF SECURITY REQUIREMENTS**

The Authority has the responsibility of ensuring safe, reliable and secure transportation facilities, systems, and projects to maintain the well-being and economic competitiveness of the region. Therefore, the Authority reserves the right to deny access to certain documents, sensitive security construction sites and facilities (including rental spaces) to any person that declines to abide by Port Authority security procedures and protocols, any person with a criminal record with respect to certain crimes or who may otherwise poses a threat to the construction site or facility security. The Authority reserves the right to impose multiple layers of security requirements on the Contractor, its staff and subcontractors and their staffs

depending upon the level of security required, or may make any amendments with respect to such requirements as determined by the Authority.

These security requirements may include but are not limited to the following:

- Contractor/ Subcontractor identity checks and background screening

The Port Authority's designated background screening provider may require inspection of not less than two forms of valid/current government issued identification (at least one having an official photograph) to verify staff's name and residence; screening federal, state, and/or local criminal justice agency information databases and files; screening of any terrorist identification files; access identification to include some form of biometric security methodology such as fingerprint, facial or iris scanning, or the like.

The Contractor may be required to have its staff, and any subcontractor's staff, material-men, visitors or others over whom the Contractor/subcontractor has control, authorize the Authority or its designee to perform background checks, and a personal identity verification check. Such authorization shall be in a form acceptable to the Authority. The Contractor and subcontractors may also be required to use an organization designated by the Authority to perform the background checks.

As of January 29, 2007, the Secure Worker Access Consortium (S.W.A.C.) is the only Port Authority approved provider to be used to conduct background screening and personal identity verification, except as otherwise required by federal law and/or regulation (such as the Transportation Worker Identification Credential for personnel performing in secure areas at Maritime facilities). Information about S.W.A.C., instructions, corporate enrollment, online applications, and location of processing centers can be found at <http://www.secureworker.com>, or S.W.A.C. may be contacted directly at (877) 522-7922 for more information and the latest pricing. The cost for said background checks for staff that pass and are granted a credential shall be reimbursable to the Contractor (and its subcontractors) as an out-of-pocket expense as provided herein. Staff that are rejected for a credential for any reason are not reimbursable.

- Issuance of Photo Identification Credential

No person will be permitted on or about the Authority construction site or facility (including rental spaces) without a facility-specific photo identification credential approved by the Authority. If the authority requires facility-specific identification credential for the Contractor's and the subcontractor's staff, the Authority will supply such identification at no cost to the Contractor or its subcontractors. Such facility-specific identification credential shall remain the property of the Authority and shall be returned to the Authority at the completion or upon request prior to completion of the individual's assignment at the specific facility. It is the responsibility of the appropriate Contractor or subcontractor to immediately report to the Authority the loss of any staff member's individual facility-specific identification credential. The Contractor or subcontractor shall be billed for the cost of the replacement identification credential. Contractor's and subcontractor's staff shall display Identification badges in a conspicuous and clearly visible manner, when entering, working or leaving an Authority construction site or facility.

- Employees may be required to produce not less than two forms of valid/current government issued identification having an official photograph and an original, unlaminated social security card for identify and SSN verification. Where applicable, for sensitive security construction sites or facilities, successful completion of the application, screening and identity verification for all employees of the Contractor and subcontractors shall be completed prior to being provided a S.W.A.C. ID Photo Identification credential.
- Access control, inspection, and monitoring by security guards

The Authority may provide for Authority construction site or facility (including rental spaces) access control, inspection and monitoring by Port Authority Police or Authority retained contractor security guards. However, this provision shall not relieve the Contractor of its responsibility to secure its equipment and work and that of its subconsultant/subcontractor's and service suppliers at the Authority construction site or facility (including rental spaces). In addition, the Contractor, subcontractor or service provider is not permitted to take photographs, digital images, electronic copying and/or electronic transmission or video recordings or make sketches on any other medium at the Authority construction sites or facilities (including rental spaces), except when necessary to perform the Work under this Contract, without prior written permission from the Authority. Upon request, any photograph, digital images, video recording or sketches made of the Authority construction site or facility shall be submitted to the Authority to determine compliance with this paragraph, which submission shall be conclusive and binding on the submitting entity.

#### **24. INSURANCE PROCURED BY THE CONTRACTOR**

The Contractor shall take out, maintain, and pay the premiums on Commercial General Liability Insurance, including but not limited to premises-operations, products-completed operations, and independent contractors coverage, with a contractual liability endorsement covering the obligations assumed by the Contractor under this Contract, AND, if vehicles are to be used to carry out the performance of this Contract, then the Contractor shall also take out, maintain, and pay the premiums on Automobile Liability Insurance covering owned, non-owned, and hired autos in the following minimum limits:

Commercial General Liability Insurance - \$ 2 million combined single limit per occurrence for bodily injury and property damage liability.

Automobile Liability Insurance - \$ 2 million combined single limit per accident for bodily injury and property damage liability.

In addition, the liability policy (ies) shall name The Port Authority of NY and NJ and its related entities as additional insureds, including but not limited to premise-operations, products-completed operations on the Commercial General Liability Policy. Moreover, the Commercial General Liability Policy shall not contain any provisions for exclusions from liability other than provisions for exclusion from liability forming part of the most up to date ISO form or its equivalent unendorsed Commercial General Liability Policy. The liability policy (ies) and certificate of insurance shall contain cross-liability language providing severability of interests so that coverage will respond as if separate policies were in force for

each insured. These insurance requirements shall be in effect for the duration of the contract to include any warrantee/guarantee period.

The certificate of insurance and liability policy (ies) must contain the following endorsement for the above liability coverages:

“The insurer(s) shall not, without obtaining the express advance written permission from the General Counsel of the Port Authority, raise any defense involving in any way the jurisdiction of the Tribunal over the person of the Port Authority, the immunity of the Port Authority, its Commissioners, officers, agents or employees, the governmental nature of the Port Authority, or the provisions of any statutes respecting suits against the Port Authority.”

The Contractor shall also take out, maintain, and pay premiums on Workers' Compensation Insurance in accordance with the requirements of law in the state(s) where work will take place, and Employer's Liability Insurance with limits of not less than \$1 million each accident.

In addition, the policy (ies) shall include the Authority and its wholly owned entities as an additional insured and the policy (ies) and its certificate must be specifically endorsed to contain a provision that the policy may not be canceled, terminated, or modified without thirty (30) days' prior written notice to the Port Authority of NY and NJ, Attn: Facility Contract Administrator, at the location where the work will take place and to the General Manager, Risk Financing.

The Port Authority may at any time during the term of this agreement change or modify the limits and coverages of insurance. Should the modification or change results in an additional premium, The General Manager, Risk Financing for the Port Authority may consider such cost as an out-of-pocket expense.

Within five (5) days after the award of this agreement or contract and prior to the start of work, the Contractor must submit an original certificate of insurance, to the Port Authority of NY and NJ, Facility Contract Administrator, at the location where the work will take place. This certificate of insurance MUST show evidence of the above insurance policy (ies), stating the agreement/contract number prior to the start of work. The General Manager, Risk Financing must approve the certificate(s) of insurance before any work can begin. Upon request by the Port Authority, the Contractor shall furnish to the General Manager, Risk Financing, a certified copy of each policy, including the premiums.

If at any time the above liability insurance should be canceled, terminated, or modified so that the insurance is not in effect as above required, then, if the Manager shall so direct, the Contractor shall suspend performance of the contract at the premises. If the contract is so suspended, no extension of time shall be due on account thereof. If the contract is not suspended (whether or not because of omission of the Manager to order suspension), then the Authority may, at its option, obtain insurance affording coverage equal to the above required, the cost of such insurance to be payable by the Contractor to the Port Authority.

Renewal certificates of insurance or policies shall be delivered to the Facility Contract Administrator, Port Authority at least fifteen (15) days prior to the expiration date of each expiring policy. The General Manager, Risk Financing must approve the renewal certificate(s) of insurance before work can resume on the facility. If at any time any of the certificates or policies shall become unsatisfactory to the Port Authority, the Contractor shall promptly obtain a new and satisfactory certificate and policy.

The requirements for insurance procured by the Contractor shall not in any way be construed as a limitation on the nature or extent of the contractual obligations assumed by the Contractor under this contract. The insurance requirements are not a representation by the Authority as to the adequacy of the insurance to protect the Contractor against the obligations imposed on them by law or by this or any other Contract. [CITS#4076N]

## **25. CERTAIN CONTRACTOR'S WARRANTIES**

The Contractor represents and warrants:

- a. That it is financially responsible and experienced in, and competent to perform this Contract; that no representation, promise or statement, oral or in writing, has induced it to submit its Proposal, saving only those contained in the papers expressly made part of this Contract; that the facts stated or shown in any papers submitted or referred to in connection with his Proposal are true; and, if the Contractor be a corporation, that it is authorized to perform this Contract;
- b. That it has carefully examined and analyzed the provisions and requirements of this Contract, that from its own investigations it has satisfied itself as to the nature of all things needed for the performance of this Contract, the general and local conditions and all other matters which in any way affect this Contract or its performance, and that the time available to it for such examination, analysis, inspection and investigations was adequate;
- c. That the Contract is feasible of performance in accordance with all its provisions and requirements and that it can and will perform it in strict accordance with such provisions and requirements;
- d. That no Commissioner, officer, agent or employee of the Authority is personally interested directly or indirectly in this Contract or the compensation to be paid hereunder;
- e. That, except only for those representations, statements or promises expressly contained in this Contract, no representation, statement or promise, oral or in writing, of any kind whatsoever by the Authority, its Commissioners, officers, agents, employees or consultants has induced the Contractor to enter into this Contract or has been relied upon by the Contractor, including any with reference to: (1) the meaning, correctness, suitability or completeness of any provisions or requirements of this Contract; (2) the nature, existence or location of materials, structures, obstructions, utilities or conditions, which may be encountered at the installation sites; (3) the nature, quantity, quality or size of the materials, equipment, labor and other facilities needed for the performance of this Contract; (4) the general or local conditions which may in any way affect this Contract or its performance; (5) the price of the Contract; or (6) any other matters, whether similar to or different from those referred to in (1) through (5) immediately above, affecting or

having any connection with this Contract, the bidding thereon, any discussions thereof, the performance thereof or those employed therein or connected or concerned therewith.

- f. That, notwithstanding any requirements of this Contract, any inspection or approval of the Contractor's services by the Authority, or the existence of any patent or trade name, the Contractor nevertheless warrants and represents that the services and any intellectual property supplied to the Authority hereunder shall be of the best quality and shall be fully fit for the purpose for which they are to be used. The Contractor unconditionally guarantees against defects or failures of any kind, including defects or failures in design, workmanship and materials, excepting solely defects or failures which the Contractor demonstrates to the satisfaction of the Authority have arisen solely from accident, abuse or fault of the Authority occurring after issuance of Final Payment hereunder and not due to fault on the Contractor's part. In the event of defects or failures in said services, or any part thereof, then upon receipt of notice thereof from the Authority, the Contractor shall correct such defects or failures as may be necessary or desirable, in the sole opinion of the Authority, to comply with the above guaranty.
- g. Moreover, the Contractor accepts the conditions at the sites of work as they may eventually be found to exist and warrants and represents that it can and will perform the Contract under such conditions and that all materials, equipment, labor and other facilities required because of any unforeseen conditions (physical or otherwise) shall be wholly at its own cost and expense, anything in this Contract to the contrary notwithstanding. The Authority is responsible for all facility power.
- h. Nothing in the Scope of Work or any other part of the Contract is intended as or shall constitute a representation by the Authority as to the feasibility of performance of this Contract or any part thereof. Moreover, the Authority does not warrant or represent either by issuance of the Scope of Work or by any provision of this Contract as to time for performance or completion or otherwise that the Contract may be performed or completed by the times required herein or by any other times.
- i. The Contractor further represents and warrants that it was given ample opportunity and time and by means of this paragraph was requested by the Authority to review thoroughly all documents forming this Contract prior to execution of this Contract in order that it might request inclusion in this Contract of any statement, representation, promise or provision which it desired or on which it wished to place reliance; that it did so review said documents; that either every such statement, representation, promise or provision has been included in this Contract or else, if omitted, that it expressly relinquishes the benefit of any such omitted statement, representation, promise or provision and is willing to perform this Contract without claiming reliance thereon or making any other claim on account of such omission.
- j. The Contractor further recognizes that the provisions of this clause (though not only such provisions) are essential to the Authority's consent to enter into this Contract and that without such provisions; the Authority would not have entered into this Contract.

## **26. RIGHTS AND REMEDIES OF THE CONTRACTOR**

Inasmuch as the Contractor can be adequately compensated by money damages for any breach of this Contract which may be committed by the Authority, the Contractor expressly

agrees that no default, act or omission of the Authority shall constitute a material breach of this Contract, entitling him to cancel or rescind it or (unless the Director shall so direct) to suspend or abandon performance.

## **27. TAX EXEMPTIONS**

Purchases of services and tangible personal property by the Port Authority are exempt from New York and New Jersey state and local sales and compensating use taxes. (Sales Taxes). Therefore, the Port Authority's purchase of the Contractor's services under this Contract is exempt from Sales Taxes. Accordingly, the Contractor must not include Sales Taxes in the price charged to the Port Authority for the Contractor's services under this Contract.

## **28. TITLE TO EQUIPMENT**

Title to all equipment to be furnished hereunder by the Contractor shall be transferred to the Authority upon its delivery to the installation site.

The Contractor shall furnish such bills of sale and affidavits of title as the Authority shall reasonably request.

## **29. NOTICE REQUIREMENTS**

No claim against the Authority shall be made or asserted in any action or proceeding at law or in equity, and the Contractor shall not be entitled to allowance of such claim, unless the Contractor shall have complied with all requirements relating to the giving of written notice and of information with respect to such claim as provided in this clause. The failure of the Contractor to give such written notice and information as to any claim shall be conclusively deemed to be a waiver by the Contractor of such claim, such written notice and information being conditions precedent to such claim. As used herein "claim" shall include any claim arising out of this Contract (including claims in the nature of breach of contract or fraud or misrepresentation before or subsequent to execution of this Contract and claims of a type which are barred by the provisions of this Contract) for damages, payment or compensation of any nature or for performance of any part of this Contract.

The requirements as to the giving of written notice and information with respect to claims shall be as follows:

- A. In the case of any claims for which requirements are set forth elsewhere in this Contract as to notice and information, such requirements shall apply.
- B. In the case of all other types of claims, notice shall have been given to the Director, as soon as practicable, and in any case within forty eight (48) hours after occurrence of the act, omission, or other circumstances upon which the claim is or will be based, stating as fully as practicable at the time all information relating thereto. Such information shall be supplemented with any further information as soon as practicable after it becomes or should become known to the Contractor, including daily records showing all costs which the Contractor may be incurring or all other circumstances which will affect any claim to be made which records shall be submitted to the Authority.
- C. The above requirements for notices and information are for the purpose of enabling the Authority to avoid waste of public funds by affording it promptly the opportunity to cancel or revise any order, change its plans, mitigate or remedy the effects of

circumstances giving rise to a claim or take such other action as may seem desirable and to verify any claimed expense or circumstance as they occur and the requirements herein for such notice and information are essential to this Contract and are in addition to any notice required by statute with respect to suits against the Authority.

The above referred to notices and information are required whether or not the Authority is aware of the existence of any circumstances which might constitute a basis for a claim and whether or not the Authority has indicated it will consider a claim.

No, act, omission or statement of any kind shall be regarded as a waiver of any of the provisions of this clause or may be relied upon as such waiver except only either a written statement signed by the Executive Director of the Authority or a resolution of the Commissioners of the Authority expressly stating that a waiver is intended as to any particular provision of this clause, and more particularly, no discussion, negotiation, consideration, correspondence or requests for information with respect to a claim by any Commissioner, officer, employees or agent of the Authority shall be construed as a waiver of any provision of this clause or as authority or apparent authority to effect such a waiver.

Since merely oral notice or information may cause disputes as to the existence or substance thereof, and since notice, even if written, to other than the Authority representative above designated to receive it may not be sufficient to come to the attention of the representative of the Authority with the knowledge and responsibility of dealing with the situation, only notice and information complying with the express provisions of this clause shall be deemed to fulfill the Contractor's obligation under this Contract.

### **30. SERVICE OF NOTICES ON THE CONTRACTOR**

Whenever provision is made in this Contract for the giving of any notice to the Contractor, its deposit in any post office box, enclosed in a postpaid wrapper addressed to the Contractor at its office, or its delivery to its office, shall be sufficient service thereof as of the date of such deposit or delivery, except to the extent, if any, otherwise provided in the clause entitled "Submission to Jurisdiction". Until further notice to the Authority the Contractor's office will be that stated in his/her Proposal. Notices may also be served personally upon the Contractor; or if a corporation, upon any officer, director or managing or general agent; or if a partnership upon any partner.

### **31. NO THIRD PARTY RIGHTS**

Nothing contained in this Contract is intended for the benefit of third persons, except to the extent that the Contract specifically provides otherwise by use of the words "benefit" or "direct right of action".

### **32. INDEMNIFICATION AND RISKS ASSUMED BY THE CONTRACTOR**

To the extent permitted by law, the Contractor shall indemnify and hold harmless the Port Authority, its Commissioners, officers, representatives and employees from and against all claims and demands, just or unjust, of third persons (including employees, officers, and agents of the Port Authority) arising out of or in any way connected or alleged to arise out of or alleged to be in any way connected with the Contract and all other services and activities of the Contractor under this Contract and for all expenses incurred by it and by them in the defense, settlement or satisfaction thereof, including without limitation thereto, claims and

demands for death, for personal injury or for property damage, direct or consequential, whether they arise from the acts or omissions of the Contractor, of the Port Authority, of third persons, or from the acts of God or the public enemy, or otherwise, including claims and demands of any local jurisdiction against the Port Authority in connection with this Contract.

The Contractor assumes the following risks, whether such risks arise from acts or omissions (negligent or not) of the Contractor, the Port Authority or third persons or from any other cause, excepting only risks occasioned solely by affirmative willful acts of the Port Authority done subsequent to the opening of proposals on this Contract, and shall to the extent permitted by law indemnify the Port Authority for all loss or damage incurred in connection with such risks:

The risk of any and all loss or damage to Port Authority property, equipment (including but not limited to automotive and/or mobile equipment), materials and possessions, on or off the premises, the loss or damage of which shall arise out of the Contractor's operations hereunder. The Contractor shall if so directed by the Port Authority, repair, replace or rebuild to the satisfaction of the Port Authority, any and all parts of the premises or the Facility which may be damaged or destroyed by the acts or omissions of the Contractor, its officers, agents, or employees and if the Contractor shall fail so to repair, replace, or rebuild with due diligence the Port Authority may, at its option, perform any of the foregoing work and the Contractor shall pay to the Port Authority the cost thereof.

The risk of any and all loss or damage of the Contractor's property, equipment (including but not limited to automotive and/or mobile equipment) materials and possessions on the Facility.

The risk of claim, whether made against the Contractor or the Port Authority, for any and all loss or damages occurring to any property, equipment (including but not limited to automotive and/or mobile equipment), materials and possessions of the Contractor's agents, employees, materialmen and others performing work hereunder.

The risk of claims for injuries, damage or loss of any kind just or unjust of third persons arising or alleged to arise out of the performance of work hereunder, whether such claims are made against the Contractor or the Port Authority.

If so directed, the Contractor shall at its own expense defend any suit based upon any such claim or demand, even if such suit, claim or demand is groundless, false or fraudulent, and in handling such shall not, without obtaining express advance permission from the General Counsel of the Port Authority, raise any defense involving in any way the jurisdiction of the tribunal over the person of the Port Authority, the immunity of the Port Authority, its Commissioners, officers, agents or employees, the governmental nature of the Port Authority or the provision of any statutes respecting suits against the Port Authority.

Neither the requirements of the Port Authority under this Contract, nor the approval by the Port Authority of the methods of performance hereunder nor the failure of the Port Authority to call attention to improper or inadequate methods or to require a change in the method of performance hereunder nor the failure of the Port Authority to direct the Contractor to take any particular precaution or other action or to refrain from doing any particular thing shall

relieve the Contractor of its liability for injuries to persons or damage to property or environmental impairment arising out of its operations.

The provisions of this numbered clause shall also be for the benefit of the Commissioners, officers, agents, and employees of the Authority, so that they shall have all the rights which they would have under this numbered clause if they were named at each place above at which the Authority is named, including a direct right of action against the Contractor to enforce the foregoing indemnity, except, however, that the Authority acting through its Commissioners may at any time in its sole discretion and without liability on its part cancel the benefit conferred on any of them by this numbered clause, whether or not the occasion for invoking such benefit has already arisen at the time of such cancellation.

Neither the Authority's acceptance of the performance by the Contractor in part or in whole, nor the making of a payment shall release the Contractor from its obligations under this numbered clause.

Moreover, neither the enumeration in this numbered clause nor the enumeration elsewhere in this Contract of particular risks assumed by the Contractor or of particular claims for which it is responsible shall be deemed (a) to limit the effect of the provisions of this numbered clause or of any other clause of this Contract relating to such risks or claims, (b) to imply that it assumes or is responsible for risks or claims only of the type enumerated in this numbered clause or in any other clause of this Contract, or (c) to limit the risks which it would assume or the claims for which it would be responsible in the absence of such enumerations.

### **33. SUBMISSION TO JURISDICTION**

This Contract shall be construed in accordance with the laws of the State of New York. The Contractor hereby consents to the exercise by the courts of the States of New York and New Jersey of jurisdiction *in personam* over it with respect to any matter arising out of or in connection with this Contract and waives any objection to such jurisdiction which it might otherwise have; and the Contractor agrees that mailing of process by registered mail addressed to it at the address of the Contractor set forth in the Proposal, shall have the same effect as personal service within the States of New York or New Jersey upon a domestic corporation of said State.

### **34. AUTHORITY OF THE DIRECTOR**

Inasmuch as the public interest requires that the project to which this Contract relates shall be performed in the manner which the Authority, acting through the Director deems best, the Director shall have absolute authority to determine what is or is not necessary or proper for or incidental thereto and the Specifications shall be deemed merely the Director's present determination on this point. In the exercise of this authority, the Director shall have power to alter the Specifications, to require the performance of Work not required by them in their present form, even though of a totally different character from that required, and to vary, increase and diminish the character, quantity and quality of, or to countermand any Work now or hereafter required. If at any time it shall be, from the viewpoint of the Authority, impracticable or undesirable in the judgment of the Director to proceed with or continue the performance of the Contract or any part thereof, whether or not for reasons beyond the control of the Authority, the Director shall have authority to suspend performance of any part or all of the Contract until such time as the Director may deem it practicable or desirable to

proceed. Moreover, if at any time it shall be, from the viewpoint of the Authority impracticable or undesirable in the judgment of the Director to proceed with or continue the performance of the Contract or any part thereof for reasons within or beyond the control of the Authority, the Director shall have authority to cancel this Contract as to any or all portions not yet performed and as to any materials not yet installed even though delivered. Such cancellation shall be without prejudice to the rights and obligations of the parties arising out of portions already satisfactorily performed, but no allowance shall be made for anticipated profits. To resolve all disputes and to prevent litigation, the parties to this Contract authorize the Director to decide all questions of any nature whatsoever arising out of, under, or in connection with, or in any way related to or on account of, this Contract (including claims in the nature of breach of contract or fraud or misrepresentation before or subsequent to acceptance of the Contractor's Proposal and claims of a type which are barred by the provisions of this Contract) and such decision shall be conclusive, final and binding on the parties. The Director's decision may be based on such assistance as he may find desirable. The effect of the decision shall not be impaired or waived by any negotiation or settlement offers in connection with the question decided, whether or not he participated therein, or by any prior decision of him or others, which prior decisions shall be deemed subject to review, or by any termination or cancellation of this Contract.

All such questions shall be submitted in writing by the Contractor to the Director for a decision together with all evidence and other pertinent information in regard to such questions, in order that a fair and impartial decision may be made. In any action against the Authority relating to any such question the Contractor must allege in the complaint and prove such submission, which shall be a condition precedent to any such action. No evidence or information shall be introduced or relied upon in such an action that has not been so presented to the Director.

In the performance of the Contract, the Contractor shall conform to all orders, directions and requirements of the Director and shall perform the Contract to his satisfaction at such times and places, by such methods and such manner and sequence as he may require, and the Contract shall at all stages be subject to his inspection. The Contractor shall employ no equipment, materials, methods or men to which he objects, and shall remove no materials, equipment or other facilities from the Authority site without permission. Upon request, he shall confirm in writing any oral order, direction, requirements or determination.

The enumeration herein or elsewhere of particular instances in which the opinion, judgment, discretion or determination of the Director shall control or in which the Contract shall be performed to his satisfaction or subject to his inspection, shall not imply that only the matters of a nature similar to those enumerated shall be so governed and performed, but without exception the entire Contract shall be so governed and performed.

This provision shall be construed in accordance with the laws of the State of New York excluding its conflict of law provisions.

### **35. APPROVALS BY THE DIRECTOR**

The approval by the Director of any service required hereunder, shall be construed merely to mean that at that time the Director knows of no good reason for objecting thereto and no such approval shall release the Contractor from its full responsibility for the satisfactory

performance of the services to be supplied. "Approved equal" shall mean approved by the Director.

### **36. CONTRACT REVIEW AND COMPLIANCE AUDITS**

The Contractor, and any subcontractors, shall provide prompt system access and reasonable assistance to the Authority's External and Internal Audit staff or its consultants in their performance of work under the contract, including producing specific requested information, extraction of data and reports. The Contractor, and any subcontractors, shall promptly support requests related to audits of the contract and administration tasks and functions covered by this Contract. The Authority will require access to the Contractor's Network Monitoring data center on a periodic basis; the hours to be determined, at the convenience of the authority.

The Authority reserves the right to use and load security and system software to evaluate the level of security and vulnerabilities in all systems which control, collect, dispense, contain, manage, administer, or monitor information or data "owned" by the Port Authority.

### **37. AUTHORITY ACCESS TO RECORDS**

The Authority shall have access during normal business hours to all records and documents of the Contractor relating to any service provided under this Contract, amounts for which it has been compensated, or claims the Contractor should be compensated, by the Authority above those included in the compensation set forth elsewhere herein. All Contractor records shall be kept in the Port District (as defined in McKinney's Unconsolidated Laws §6403). The Contractor shall obtain for the Authority similar access to similar records and documents of subcontractors. Such access shall be given or obtained both before and within a period of three (3) years after Final Payment to the Contractor, provided, however, that if within the aforesaid one year period the Authority has notified the Contractor in writing of a pending claim by the Authority under or in connection with this Contract to which any of the aforesaid records and documents of the Contractor or of his subcontractors relate either directly or indirectly, then the period of such right of access shall be extended to the expiration of six (6) years from the date of Final Payment with respect to the records and documents involved.

The Contractor shall provide, at no cost to the Authority, access for and reasonable assistance to such auditors from the Authority or the Authority's external auditors that may, from time to time, be designated to audit detail records which support Contractor charges to the Authority. The Authority shall have access to the detail records that support Contractor charges to the Authority for up to three (3) years following the termination of the Contract.

No provision in this Contract giving the Authority a right of access to records and documents is intended to impair or affect any right of access to records and documents that the Authority would have in the absence of such provision.

### **38. CLAIMS OF THIRD PERSONS**

The Contractor undertakes to pay all claims lawfully made against him by subcontractors, materialmen and workmen, and all claims lawfully made against him by other third persons arising out of or in connection with or because of the performance of this Contract and to

cause all subcontractors to pay all such claims lawfully made against them.

### **39. NO DISCRIMINATION IN EMPLOYMENT, EQUAL EMPLOYMENT OPPORTUNITY**

During the performance of this Contract, the Contractor agrees as follows:

- A. The Contractor is advised to ascertain and comply with all applicable federal, state and local statutes, ordinances, rules and regulations and Federal Executive Orders pertaining to equal employment opportunity, affirmative action and non-discrimination in employment.
- B. Without limiting the generality of any other term or provision of this Contract, in the event of the Contractor's non-compliance with any such statutes, ordinances, rules, regulations or orders, this Contract may be canceled, terminated, or suspended in whole or in part.

### **40. INTEGRITY**

- A. Certification of No Investigation (criminal or civil anti-trust), Indictment, Conviction, Debarment, Suspension, Disqualification and Disclosure of Other Information.

By bidding on this Contract, each Proposer and each person signing on behalf of any Proposer certifies, and in the case of a joint bid each party thereto certifies as to its own organization, that the Proposer and each parent and/or affiliate of the Proposer has not:

- 1. been indicted or convicted in any jurisdiction;
- 2. been suspended, debarred, found not responsible or otherwise disqualified from entering into any contract with any governmental agency or been denied a government contract for failure to meet standards related to the integrity of the Proposer;
- 3. had a contract terminated by any governmental agency for breach of contract or for any cause based in whole or in part on an indictment or conviction;
- 4. ever used a name, trade name or abbreviated name, or an Employer Identification Number different from those inserted in the Bid;
- 5. had any business or professional license suspended or revoked or, within the five years prior to bid opening, had any sanction imposed in excess of \$50,000 as a result of any judicial or administrative proceeding with respect to any license held or with respect to any violation of a federal, state or local environmental law, rule or regulation;
- 6. had any sanction imposed as a result of a judicial or administrative proceeding related to fraud, extortion, bribery, bid rigging, embezzlement, misrepresentation or anti-trust regardless of the dollar amount of the sanctions or the date of their imposition; and
- 7. been, and is not currently, the subject of a criminal investigation by any federal, state or local prosecuting or investigative agency and/or a civil anti-trust investigation by any federal, state or local prosecuting or investigative agency.

**B NON-COLLUSIVE BIDDING, AND CODE OF ETHICS CERTIFICATION, CERTIFICATION OF NO SOLICITATION BASED ON COMMISSION, PERCENTAGE, BROKERAGE, CONTINGENT OR OTHER FEES**

By bidding on this Contract each Proposer and each person signing on behalf of any Proposer certifies, and in the case of a joint bid, each party thereto certifies as to its own organization, that

1. the prices in its bid have been arrived at independently without collusion, consultation, communication or agreement for the purpose of restricting competition, as to any matter relating to such prices with any other Proposer or with any competitor;
2. the prices quoted in its bid have not been and will not be knowingly disclosed directly or indirectly by the Proposer prior to the official opening of such bid to any other Proposer or to any competitor;
3. no attempt has been made and none will be made by the Proposer to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition;
4. this organization has not made any offers or agreements or taken any other action with respect to any Authority employee or former employee or immediate family member of either which would constitute a breach of ethical standards under the Code of Ethics dated April 11, 1996 (a copy of which is available upon request) nor does this organization have any knowledge of any act on the part of an Authority employee or former Authority employee relating either directly or indirectly to this organization which constitutes a breach of the ethical standards set forth in said Code;
5. no person or selling agency other than a bona fide employee or bona fide established commercial or selling agency maintained by the Proposer for the purpose of securing business has been employed or retained by the Proposer to solicit or secure this Contract on the understanding that a commission, percentage, brokerage, contingent, or other fee would be paid to such person or selling agency;
6. has not offered, promised or given, demanded or accepted, any undue advantage, directly or indirectly, to or from a public official or employee, political candidate, party or party official, or any private sector employee (including a person who directs or works for a private sector enterprise in any capacity), in order to obtain, retain, or direct business or to secure any other improper advantage in connection with this Contract; and
7. no person or organization has been retained, employed or designated on behalf of the Bidder to impact any Port Authority determination with respect to (i) the solicitation, evaluation or award of this Contract; or (ii) the preparation of specifications or request for submissions in connection with this Contract.

The foregoing certifications shall be deemed to be made by the Proposer as follows:

\* if the Proposer is a corporation, such certification shall be deemed to have been made not only with respect to the Proposer itself, but also with respect to each parent, affiliate, director, and officer of the Proposer, as well as, to the best of the

certifier's knowledge and belief, each stockholder of the Proposer with an ownership interest in excess of 10%;

\* if the Proposer is a partnership, such certification shall be deemed to have been made not only with respect to the Proposer itself, but also with respect to each partner.

Moreover, the foregoing certifications, if made by a corporate Proposer, shall be deemed to have been authorized by the Board of Directors of the Proposer, and such authorization shall be deemed to include the signing and submission of the bid and the inclusion therein of such certification as the act and deed of the corporation.

In any case where the Bidder cannot make the foregoing certifications, the Bidder shall so state and shall furnish with the signed bid a signed statement that sets forth in detail the reasons therefor. If the Bidder is uncertain as to whether it can make the foregoing certifications, it shall so indicate in a signed statement furnished with its bid, setting forth in such statement the reasons for its uncertainty. With respect to the foregoing certification in paragraph "B.7", if the Bidder cannot make the certification, it shall provide, in writing, with the signed bid: (i) a list of the name(s), address(es), telephone number(s), and place(s) of principal employment of each such individual or organization; and (ii) a statement as to whether such individual or organization has a "financial interest" in this Contract, as described in the Procurement Disclosure policy of the Authority (a copy of which is available upon request to the Director of the Procurement Department of the Authority). Such disclosure is to be updated, as necessary, up to the time of award of this Contract. As a result of such disclosure, The Port Authority shall take appropriate action up to and including a finding of non-responsibility.

Failure to make the required disclosures shall lead to administrative actions up to and including a finding of non-responsibility.

Notwithstanding that the Proposer may be able to make the foregoing certifications at the time the Proposal is submitted, the Proposer shall immediately notify the Authority in writing during the period in which its Proposal is under consideration of any change of circumstances which might under this clause make it unable to make the foregoing certifications or require disclosure. The foregoing certifications or signed statement shall be deemed to have been made by the Proposer with full knowledge that they would become a part of the records of the Authority and that the Authority will rely on their truth and accuracy in awarding this Contract. In the event that the Authority should determine at any time prior or subsequent to the award of this Contract that the Proposer has falsely certified as to any material item in the foregoing certifications or has willfully or fraudulently furnished a signed statement which is false in any material respect, or has not fully and accurately represented any circumstance with respect to any item in the foregoing certifications required; to be disclosed, the Authority may determine that the Proposer is not a responsible Proposer with respect to its bid on the Contract or with respect to future bids on Authority contracts and may exercise such other remedies as are provided to it by the Contract with respect to these matters. In addition, Proposers are advised that knowingly providing a false certification or statement pursuant hereto may be the basis for prosecution for offering a false instrument for filing (see, e.g. New York

Penal Law, Section 175.30 et seq.). Proposers are also advised that the inability to make such certification will not in and of itself disqualify a Proposer, and that in each instance the Authority will evaluate the reasons therefor provided by the Proposer.

Under certain circumstances the Proposer may be required as a condition of Contract award to enter into a Monitoring Agreement under which it will be required to take certain specified actions, including compensating an independent Monitor to be selected by the Port Authority, said Monitor to be charged with, among other things, auditing the actions of the Proposer to determine whether its business practices and relationships indicate a level of integrity sufficient to permit it to continue business with the Port Authority.

#### **C PROPOSER ELIGIBILITY FOR AWARD OF CONTRACTS - DETERMINATION BY AN AGENCY OF STATE OF NEW YORK OR NEW JERSEY CONCERNING ELIGIBILITY TO RECEIVE PUBLIC CONTRACTS**

Proposers are advised that the Authority has adopted a policy to the effect that in awarding its contracts it will honor any determination by an agency of the State of New York or New Jersey that a Proposer is not eligible to bid on or be awarded public contracts because the Proposer has been determined to have engaged in illegal or dishonest conduct or to have violated prevailing rate of wage legislation.

The policy permits a Proposer whose ineligibility has been so determined by an agency of the State of New York or New Jersey to submit a bid on a Port Authority contract and then to establish that it is eligible to be awarded a contract on which it has bid because (i) the state agency determination relied upon does not apply to the Proposer, or (ii) the state agency determination relied upon was made without affording the Proposer the notice and hearing to which the Proposer was entitled by the requirements of due process of law, or (iii) the state agency determination was clearly erroneous or (iv) the state agency determination relied upon was not based on a finding of conduct demonstrating a lack of integrity or violation of a prevailing rate of wage law.

The full text of the resolution adopting the policy may be found in the Minutes of the Authority's Board of Commissioners meeting of September 9, 1993.

#### **D. NO GIFTS, GRATUITIES, OFFERS OF EMPLOYMENT, ETC.**

During the term of this Contract, the Proposer shall not offer, give or agree to give anything of value either to a Port Authority employee, agent, job shopper, consultant, construction manager or other person or firm representing the Port Authority, or to a member of the immediate family (i.e., a spouse, child, parent, brother or sister) of any of the foregoing, in connection with the performance by such employee, agent, job shopper, consultant, construction manager or other person or firm representing the Port Authority of duties involving transactions with the Proposer on behalf of the Port Authority, whether or not such duties are related to this Contract or any other Port Authority contract or matter. Any such conduct shall be deemed a material breach of this Contract.

As used herein "anything of value" shall include but not be limited to any (a) favors, such as meals, entertainment, transportation (other than that contemplated by the Contract or any other Port Authority contract), etc., which might tend to obligate the Port Authority

employee to the Proposer, and (b) gift, gratuity, money, goods, equipment, services, lodging, discounts not available to the general public, offers or promises of employment, loans or the cancellation thereof, preferential treatment or business opportunity. Such term shall not include compensation contemplated by this Contract or any other Port Authority contract. Where used herein, the term "Port Authority" shall be deemed to include all subsidiaries of the Port Authority.

The Proposer shall insure that no gratuities of any kind or nature whatsoever shall be solicited or accepted by it and by its personnel for any reason whatsoever from the passengers, tenants, customers or other persons using the Facility and shall so instruct its personnel.

In addition, during the term of this contract, the Proposer shall not make an offer of employment or use confidential information in a manner proscribed by the Code of Ethics and Financial Disclosure dated April 11, 1996 (a copy of which is available upon request to the Office of the Secretary of the Port Authority).

The Proposer shall include the provisions of this clause in each subcontract entered into under this Contract.

## **E. DEFINITIONS**

As used in this section, the following terms shall mean:

Affiliate - Two or more firms are affiliates if a parent owns more than fifty percent of the voting stock of each of the firms, or a common shareholder or group of shareholders owns more than fifty percent of the voting stock of each of the firms, or if the firms have a common proprietor or general partner.

Agency or Governmental Agency - Any federal, state, city or other local agency, including departments, offices, public authorities and corporations, boards of education and higher education, public development corporations, local development corporations and others.

Investigation - Any inquiries made by any federal, state or local criminal prosecuting agency and any inquiries concerning civil anti-trust investigations made by any federal, state or local governmental agency. Except for inquiries concerning civil anti-trust investigations, the term does not include inquiries made by any civil government agency concerning compliance with any regulation, the nature of which does not carry criminal penalties, nor does it include any background investigations for employment, or Federal, State, and local inquiries into tax returns.

Officer - Any individual who serves as chief executive officer, chief financial officer, or chief operating officer of the Bidder by whatever titles known.

Parent - An individual, partnership, joint venture or corporation which owns more than 50% of the voting stock of the Bidder.

If the solicitation is a Request for Proposal:

Bid - shall mean Proposal;

Bidder - shall mean Proposer;

Bidding - shall mean submitting a Proposal.

In a Contract resulting from the taking of bids:

Bid - shall mean bid;

Bidder - shall mean Bidder;

Bidding - shall mean executing this Contract.

In a Contract resulting from the taking of Proposals:

Bid - shall mean Proposal;

Bidder - shall mean Proposer;

Bidding - shall mean executing this Contract.

## **F. CONFLICT OF INTEREST**

During the term of this Contract, you shall not participate in any way in the preparation, negotiation or award of any contract (other than a contract for your own services to the Authority) to which it is contemplated the Authority may become a party or participate in any way in the review or resolution of a claim in connection with such a contract, if you have substantial financial interest in the contractor or potential contractor of the Authority or if you have an arrangement for future employment or for any other business relationship with said contractor or potential contractor, nor shall you at any time take any other action which might be viewed as or give the appearance of a conflict of interest on your part. If the possibility of such an arrangement for future employment or for another business arrangement has been or is the subject of a previous or current discussion or if you have reason to believe such an arrangement may be the subject of future discussion, or if you have any financial interest, substantial or not, in a contractor or potential contractor of the Authority, and your participation in the preparation, negotiation or award of any contract with such a contractor or the review or resolution of a claim in connection with such a contract is contemplated or if you have reason to believe that any other situation exists which might be viewed as or give the appearance of a conflict of interest you shall immediately inform the Director in writing of such situation giving the full details thereof. Unless you receive the specific written approval of the Director, you shall not take the contemplated action which might be viewed as or give the appearance of a conflict of interest. In the event the Director shall determine that the performance by you of a portion of your services under this Contract is precluded by the provisions of this numbered paragraph, or a portion of your said service is determined by the Director to be no longer appropriate because of such preclusion, then the Director shall have full authority on behalf of both parties to order that such portion of your services not be performed by you, reserving the right, however, to have the services performed by others and reserving the right to reduce the lump sum compensation as he/she may deem reasonable in his/her sole discretion. Your execution of this Contract shall constitute a representation by you that at the time of such execution you know of no circumstances, present or anticipated, which come within the provisions of this paragraph or which might otherwise be viewed as or give the appearance of a conflict of interest on your part.

## **41. CONFIDENTIAL INFORMATION/NON-PUBLICATION**

- A. As used herein, confidential information ("CI") shall mean all information disclosed to the Contractor or the personnel provided by the Contractor hereunder which relates to the

Authority's and/or PATH's past, present, and future research, development and business activities including, but not limited to, software and documentation licensed to the Authority or proprietary to the Authority and/or PATH and all associated software, source code procedures and documentation. Confidential information shall also mean any other tangible or intangible information or materials including but not limited to computer identification numbers, access codes, passwords, and reports obtained and/or used during the performance of the Contractor's Services under this Contract

- B. Confidential information shall also mean and include collectively, as per *The Port Authority of New York & New Jersey Information Security Handbook (October 15, 2008, corrected as of February, 9 2009)*, Confidential Proprietary Information, Confidential Privileged Information and information that is labeled, marked or otherwise identified by or on behalf of the Authority so as to reasonably connote that such information is confidential, privileged, sensitive or proprietary in nature. Confidential Information shall also include all work product that contains or is derived from any of the foregoing, whether in whole or in part, regardless of whether prepared by the Authority or a third-party or when the Authority receives such information from others and agrees to treat such information as Confidential.

The Handbook and its requirements are hereby incorporated into this agreement and will govern the possession, distribution and use of CI if at any point during the lifecycle of the project or solicitation it becomes necessary for the Contractor to have access to CI. Protecting sensitive information requires the application of uniform safeguarding measures to prevent unauthorized disclosure and to control any authorized disclosure of this information within the Port Authority or when released by the Port Authority to outside entities. The following is an outline of some of the procedures, obligations and directives contained in the Handbook:

- (1) require that the Contractor and subcontractors, when appropriate, sign Non-Disclosure Agreements (NDAs), or an Acknowledgment of an existing NDA, provided by the Authority as a condition of being granted access to Confidential Information categorized and protected as per the Handbook;
- (2) require that individuals needing access to CI be required to undergo a background check, pursuant to the process and requirements noted in § 3.2 of the Information Security Handbook.
- (3) require Contractors and commercial enterprises to attend training to ensure security awareness regarding Port Authority information;
- (4) specific guidelines and requirements for the handling of CI to ensure that the storage and protection of CI;
- (5) restrictions on the transfer, shipping, and mailing of CI information;
- (6) prohibitions on the publication, posting, modifying, copying, reproducing, republishing, uploading, transmitting, or distributing CI on websites or web pages. This may also include restricting persons, who either have not passed a pre-screening background check, or who have not been granted access to CI, from viewing such information;
- (7) require that CI be destroyed using certain methods, measures or technology pursuant to the requirements set forth in the Handbook;

- (8) require the Contractor to mandate that each of its subcontractors maintain the same levels of security required of the Contractor under any Port Authority awarded contract.
  - (9) prohibit the publication, exchange or dissemination of CI developed from the project or contained in reports, except between Contractors and subcontractors, without prior approval of the Port Authority;
  - (10) require that CI only be reproduced or copied pursuant to the requirements set forth in the Handbook.
- C. The Contractor shall hold all such confidential information in trust and confidence for the Authority, and agrees that the Contractor and the personnel provided by the Contractor hereunder shall not, during or after the termination or expiration of this Contract, disclose to any person, firm or corporation, nor use for its own business or benefit, any information obtained by it under or in connection with the supplying of services contemplated by this Contract. The Contractor and the personnel provided by the Contractor hereunder shall not violate in any manner any patent, copyright, trade secret or other proprietary right of the Authority or third persons in connection with their services hereunder, either before or after termination or expiration of this Contract. The Contractor and the personnel provided by the Contractor hereunder shall not willfully or otherwise perform any dishonest or fraudulent acts, breach any security procedures, or damage or destroy any hardware, software or documentation, proprietary or otherwise, in connection with their services hereunder.

D. Audits for Compliance with Security Requirements

The Port Authority may conduct random or scheduled examinations of business practices under this section entitled "CONFIDENTIAL INFORMATION/NON-PUBLICATION" and the Handbook in order to assess the extent of compliance with security requirements, Confidential Information procedures, protocols and practices, which may include, but not be limited to, verification of background check status, confirmation of completion of specified training, and/or a site visit to view material storage locations and protocols.

- E. The Contractor shall not issue nor permit to be issued any press release, advertisement, or literature of any kind, which refers to the Port Authority or to the fact that goods have been, are being or will be provided to it and/or that services have been, are being or will be performed for it in connection with this Contract, unless the vendor first obtains the written approval of the Port Authority. Such approval may be withheld if for any reason the Port Authority believes that the publication of such information would be harmful to the public interest or is in any way undesirable.

**42. PROVISIONS OF LAW DEEMED INSERTED**

Each and every provision of law and clause required by law to be inserted in this Contract shall be deemed to be inserted herein and the Contract shall be read and enforced as though it were included therein, and if through mistake or otherwise any such provision is not inserted, or is not correctly inserted, then upon the application of either party, the Contract shall forthwith be physically amended to make such insertion.

#### **43. INVALID CLAUSES**

If any provision of this Contract shall be such as to destroy its mutuality or to render it invalid or illegal, then if it shall not appear to have been so material that without it the Contract would not have been made by the parties, it shall not be deemed to form part thereof but the balance of the Contract shall remain in full force and effect.

#### **44. NO ESTOPPEL OR WAIVER**

The Authority shall not be precluded or estopped by any acceptance, certificate or payment, final or otherwise, issued or made under this Contract or otherwise issued or made by it, the Director or any officer, agent or employee of The Authority, from showing at any time the true amount and character of Work performed, or from showing that any such acceptance, certificate or payment is incorrect or was improperly issued or made; and The Authority shall not be precluded or estopped, notwithstanding any such acceptance, certificate or payment, from recovering from the Contractor any damages which it may sustain by reason of any failure on his part to comply strictly with this Contract, and any monies which may be paid to him or for his account in excess of those to which he is lawfully entitled.

#### **45. NON-LIABILITY OF THE AUTHORITY REPRESENTATIVES**

Neither the Commissioners of the Authority, nor any officer, agent, or employee thereof shall be charged personally by the Contractor with any liability or held liable under any term or provision of this Contract, or because of its execution or attempted execution, or because of any breach hereof.

#### **46. MODIFICATION OF CONTRACT**

No change in or modification, termination or discharge of this Contract, in any form whatsoever, shall be valid or enforceable unless it is in writing and signed by the party to be charged therewith or his duly authorized representative, provided, however, that any change in or modification, termination or discharge of this Contract expressly provided for in this Contract shall be effective as so provided.

#### **47. M/WBE GOOD FAITH PARTICIPATION**

The Contractor shall use every good-faith effort to meet the goals set forth in the clause of the RFP entitled "M/WBE Subcontracting Provisions" for participation by Port Authority certified M/WBEs as defined in this document, in the purchasing and subcontracting opportunities associated with this contract, including purchase of equipment, supplies and labor services.

Good Faith efforts to include participation by MBEs/WBEs shall include the following:

- a. Dividing the services and materials to be procured into small portions, where feasible.
- b. Giving reasonable advance notice of specific contracting, subcontracting and purchasing opportunities to such MBEs/WBEs as may be appropriate.
- c. Soliciting services and materials, to be procured, from the Directory of MBEs/WBEs. The Authority has a list of certified MBE/WBE service firms which is available to you at <http://www.panynj.gov/business-opportunities/supplier-diversity.html>.

- d. Insuring that provision is made to provide progress payments to MBEs/WBEs on a timely basis.
- e. Observance of reasonable commercial standards of fair dealing in the respective trade or business.

Either prior or subsequent to Contract award, the Contractor may request a full or partial waiver of the M/WBE participation goals set forth in this Contract by providing documentation demonstrating to the Manager, for approval by the Port Authority's Office of Business Diversity and Civil Rights, that its good faith efforts did not result in compliance with the goals set forth above because participation by eligible M/WBEs could not be obtained at a reasonable price or that such M/WBEs were not available to adequately perform as subcontractors. The Contractor shall provide written documentation in support of its request to the Manager. The documentation shall include, but not be limited to, documentation demonstrating good faith efforts as described above, which may include, proof that the Authority's directory does not contain M/WBEs in this specific field of work, a list of organizations contacted to obtain M/WBEs, and/or a list of M/WBEs contacted and their price quotes. If approved by the Authority's Office of Business Diversity and Civil Rights, the Manager will provide written approval of the modified or waived M/WBE Participation Plan.

Subsequent to Contract award, all changes to the M/WBE Participation Plan must be submitted via a modified M/WBE Participation Plan to the Manager for review and approval by the Authority's Office of Business Diversity and Civil Rights. For submittal of modifications to the M/WBE Plan, Contractors are directed to use form PA3749C, which may be downloaded at <http://www.panynj.gov/business-opportunities/become-vendor.html>. The Contractor shall not make changes to its approved M/WBE Participation Plan or substitute M/WBE subcontractors or suppliers for those named in their approved plan without the Manager's prior written approval. Unauthorized changes or substitutions, including performing the work designated for a subcontractor with the Contractor's own forces, shall be a violation of this section. Progress toward attainment of M/WBE participation goals set forth herein will be monitored throughout the duration of this Contract.

The Contractor shall also submit to the Manager, along with invoices, the Statement of Subcontractor Payments as the M/WBE Participation Report, form PA3968, which may be downloaded at <http://www.panynj.gov/business-opportunities/become-vendor.html>. The Statement must include the name and business address of each M/WBE subcontractor and supplier actually involved in the Contract, a description of the work performed and/or product or service supplied by each such subcontractor or supplier, the date and amount of each expenditure, and such other information that may assist the Manager in determining the Contractor's compliance with the foregoing provisions.

If, during the performance of this Contract, the Contractor fails to demonstrate good faith efforts in carrying out its M/WBE Participation Plan and the Contractor has not requested and been granted a full or partial waiver of the M/WBE participation goals set forth in this Contract, the Authority will take into consideration the Contractor's failure to carry out its M/WBE Participation Plan in its evaluation for award of future Authority contracts.

#### 48. HARMONY

- a. The Contractor shall not employ any persons or use any labor, or use or have any equipment, or permit any condition to exist which shall or may cause or be conducive to any labor complaints, troubles, disputes or controversies at the Facility which interfere or are likely to interfere with the operation of the Port Authority or with the operations of lessees, licensees or other users of the Facility or with the operations of the Contractor under this Contract.

The Contractor shall immediately give notice to the Port Authority (to be followed by written notices and reports) of any and all impending or existing labor complaints, troubles, disputes or controversies and the progress thereof. The Contractor shall use its best efforts to resolve any such complaint, trouble, dispute or controversy. If any type of strike, boycott, picketing, work stoppage, slowdown or other labor activity is directed against the Contractor at the Facility or against any operations of the Contractor under this Contract, whether or not caused by the employees of the Contractor, and if any of the foregoing, in the opinion of the Port Authority, results or is likely to result in any curtailment or diminution of the services to be performed hereunder or to interfere with or affect the operations of the Port Authority, or to interfere with or affect the operations of lessees, licensees, or other users of the Facility or in the event of any other cessation or stoppage of operations by the Contractor hereunder for any reason whatsoever, the Port Authority shall have the right at any time during the continuance thereof to suspend the operations of the Contractor under this Contract, and during the period of the suspension the Contractor shall not perform its services hereunder and the Port Authority shall have the right during said period to itself or by any third person or persons selected by it to perform said services of the Contractor using the equipment which is used by the Contractor in its operations hereunder as the Port Authority deems necessary and without cost to the Port Authority. During such time of suspension, the Contractor shall not be entitled to any compensation. Any flat fees, including management fees, shall be prorated. Prior to the exercise of such right by the Port Authority, it shall give the Contractor notice thereof, which notice may be oral. No exercise by the Port Authority of the rights granted to it in the above subparagraph shall be or be deemed to be a waiver of any rights of termination or revocation contained in this Contract or a waiver of any rights or remedies which may be available to the Port Authority under this Contract or otherwise.

- b. During the time that the Contractor is performing the Contract, other persons may be engaged in other operations on or about the worksite including Facility operations, pedestrian, bus and vehicular traffic and other Contractors performing at the worksite, all of which shall remain uninterrupted.

The Contractor shall so plan and conduct its operations as to work in harmony with others engaged at the site and not to delay, endanger or interfere with the operation of others (whether or not specifically mentioned above), all to the best interests of the Port Authority and the public as may be directed by the Port Authority.

\* \* \*

**ATTACHMENT B**

**PART II – COST PROPOSAL FORM**

## ATTACHMENT B

### PART III (A) - COST PROPOSAL FORM

COMPANY NAME \_\_\_\_\_

Vendor's pricing shall be "all inclusive" and firm for the term of the agreement. The prices shall include, but not be limited to, all delivery, installation, removal, equipment, labor, training, maintenance & support, insurance, project management and administrative services that the company provides in order to deliver Services that meet or exceed the requirements set forth in the Scope of Work of this RFP.

#### Entry of Prices:

1. The prices quoted shall be written in figures, in ink, preferably in black ink where required in the spaces provided on the Cost Proposal Form attached hereto and made a part hereof.
2. All Proposers are asked to ensure that all charges quoted for similar operations in the Contract are consistent.
3. Prices must be submitted for each Item required on the Cost Proposal Form.
4. All Proposers are asked to ensure that all figures are inserted as required, and that all computations made have been verified for accuracy.
5. The request for Hourly Rates apply to work associated with the Supplemental Work provision of the contract, which the Port Authority may or may not implement at its sole discretion.
6. Proposers shall identify any underlying cost-related assumptions in the section named "Assumptions", in the Cost Proposal Form.

**COST PROPOSAL FORM**

**HARDWARE SERVICES**

**TABLE 1A - Permanent and Portable Noise Monitoring Terminal Units**

<b>Equipment</b>	<b>Cost by Type of Telecommunication Mode (\$)</b>		
	<b>Phone Land line</b>	<b>Broadband (Cable/DSL)</b>	<b>Wireless (3G or 4G)</b>
Permanent NMT (Per Unit)			
Total Cost for Eleven (11) Units			
Portable NMT (Per Unit)			
Total Cost for Eleven (11) Units			
Grand Total (\$):			

Note: Cost for Permanent and Portable NMT shall be inclusive of all accessories and peripherals including but not limited to housing (cabinet), power supply, back-up battery, telecommunication cables, conduits, carrying/transportation case, and climate control devices inside the cabinet.

**TABLE 1B – Handheld South Level Meters**

<b>Equipment</b>	<b>Cost (\$)</b>
Handheld Sound Level Meter (Per Unit)	
Total Cost for Two (2) Units	
Handheld Calibrator (Per Unit)	
Total Cost for Two (2) Units	
Grand Total (\$):	

Note: Cost for handheld sound level meters and handheld calibrators unit shall include the carrying case for each unit.

**COST PROPOSAL FORM**

**HARDWARE SERVICES**

**TABLE 1C - Computer Hardware**

<b>Equipment</b>	<b>Cost (\$)</b>
One (1) Computer/Server for NY TRACON to Collect and Transfer Flight Tracking Data	
One (1) Computer/Server for TEB to Record ATC Transmissions	
Grand Total (\$):	

Note: Computer Systems for both TEB and NY TRACON facilities shall include all the necessary hardware, software, peripheral devices, and accessories to perform functions defined in the Scope of Work.

## COST PROPOSAL FORM

### HARDWARE SERVICES

**TABLE ID – Hardware Installation**

Task	Cost for Each Following Category (\$)			Total Quantity	Total Cost (\$)
	Removal of old Unit	Installation of New Unit	Materials/Tools		
Installation of Permanent NMT Unit				11	
Installation of Portable NMT Unit				11	
Installation of Computer/Server for NY TRACON to Collect and Transfer Flight Tracking Data				1	
Computer/Server for TEB to Record ATC Transmissions				1	
Grand Total:					

- Notes: 1. Equipment installation cost shall be inclusive of labor and all materials and/or tools necessary for installation.
2. Equipment installation cost shall be inclusive of retrofitting or replacing the existing infrastructure including but not limited to NMT housing (cabinet), power supply, telecommunication connection line, cables, conduits, and climate control device(s) inside the cabinet.

## COST PROPOSAL FORM

### SOFTWARE SERVICES

**TABLE 2 - Software Services**

Task	Cost (\$)			
	Base 3 Years	First - 2 Yr Option	Second - 2 Yr Option	Third - 2 Yr Option
Transfer of 10 Year Historical Data		Not Applicable	Not Applicable	Not Applicable
Flight Data and Tracking Information				
NOMS Software (8 User Licenses)				
Web Based Software (Public Web Portal)				
Web Site Hosting for General Noise Information				
Noise Complaint Hotline with Automated Voice Prompts (Toll Free No. for All Five Airports)				
Voice To Data Transcription Service for Noise Complaints				
INM Noise Contour Calculation				
Noise Calculation at a Certain Chosen Location on a GIS Map				
Software Upgrades				
Additional User License				
Total Cost (\$):				

Note: Cost for each term of the contract shall be inclusive of full cost of labor, any equipment and miscellaneous costs to provide the all software services as described in the Scope of Work.

## COST PROPOSAL FORM

### CONTRACT SERVICES

**TABLE 3 - Contract Requirements**

Task	Cost (\$)			
	Base 3 Years	First - 2 Yr Option	Second - 2 Yr Option	Third - 2 Yr Option
Contract Management and Administrative Services				
System Testing Requirements		Not Applicable	Not Applicable	Not Applicable
Training during Project Implementation		Not Applicable	Not Applicable	Not Applicable
Ongoing Training				
Documentation - Hardware Documentation and Manuals - Software Documentation and Manuals - Training Manuals				
System Maintenance & Repair (Hardware & Software)				
System Support (On-Site Troubleshooting Support)				
Hardware and Software Warranty				
Total Cost (\$):				

Note: Cost for each term of the contract shall be inclusive of full cost of labor, any equipment and miscellaneous costs to provide the all contract services as described in the Scope of Work.

## COST PROPOSAL FORM

### TOTAL COST

**TABLE 4 - Estimated Total Contract Costs**

		Total Cost (\$)
TABLE 1A	Permanent and Portable Noise Monitoring Terminal Units	
TABLE 1B	Handheld Sound Level Meters	
TABLE 1C	Computer Hardware	
TABLE 1D	Hardware Installation	
TABLE 2	Software Services	
TABLE 3	Contract Requirements	
Grand Total:		

Note: For TABLE 1A Total Cost include the highest cost out of the three (3) telecommunication options quoted.

## COST PROPOSAL FORM

### HOURLY RATES

**Table 5 - Hourly Rates for Supplemental Work – Straight Time**

Resource	Hourly Rate (\$)			
	Base Term (3 yrs)	First Option (2yrs)	Second Option (2 yrs)	Third Option (2 yrs)
Contract Manager				
Project Manager				
Software Developer/Engineer				
Trainer				
Report Writer				
Installation Technician				
Technical Support (Hardware/Software)				

Note: Straight time is defined as normal business hours between 8:00 AM and 5:00 PM EST

**Table 6 - Hourly Rates for Supplemental Work – Overtime**

Resource	Hourly Rate (\$)			
	Base Term (3 yrs)	First Option (2yrs)	Second Option (2 yrs)	Third Option (2 yrs)
Contract Manager				
Project Manager				
Software Developer/Engineer				
Trainer				
Report Writer				
Installation Technician				
Technical Support (Hardware/Software)				

Note: Overtime is defined as time between 5:01 PM and 7:59 AM EST

## **COST PROPOSAL FORM**

### **ASSUMPTIONS**

Proposers should identify any underlying cost-related assumptions in this in the space below or on additional sheets if the space provide below is insufficient.

3g	3rd generation mobile telecommunications is a generation of standards for mobile phones and mobile telecommunication services fulfilling the International Mobile Telecommunications-2000 (IMT-2000) specifications by the International Telecommunication Union. Application services include wide-area wireless voice telephone, mobile Internet access, video calls and mobile TV, all in a mobile environment.
ADS-B	Automatic Dependent Surveillance-Broadcast, is a surveillance technology for tracking aircraft as part of the Next Generation Air Transportation System (NextGen)
ANOMS	Airport Noise & Operations Monitoring Study
ARR	Arrival, a type of runway operation
ARTSIII	Abbreviation for Automated Radar Tracking System (US DoD)
ASDI	<p>Aircraft Situation Display to Industry (ASDI),the Federal Aviation Administration (FAA) is making air Traffic Flow Management (TFM) data, such as filtered Aircraft Situation Display (ASD) and National Airspace System (NAS) Status Information (NASSI) data, as well as subsets of that data, available to the aviation and other industries based on defined classes of users.</p> <p>The ASD data includes the near real time position and other relevant flight data for every civil instrument flight rules (IFR) aircraft receiving radar services within the NAS. The filtered data, meaning that military and sensitive operations are not included, is referred to as ASD to Industry (ASDI) data. The NASSI data includes a wide range of information regarding the status of NAS components, such as airport Runway Visual Range (RVR) and special use airspace data. "</p>
ASDE-X	Airport Surface Detection Equipment - X (frequency). Airport Surface Detection Equipment, Model X, or ASDE-X, is a runway-safety tool that enables air traffic controllers to detect potential runway conflicts by providing detailed coverage of movement on runways and taxiways. By collecting data from a variety of sources, ASDE-X is able to track vehicles and aircraft on airport surfaces and obtain identification information from aircraft transponders.
ASR	An Airport Surveillance Radar (ASR) is a radar system used at airports to detect and display the position of aircraft in the terminal area.
ASTA	Airport Surface Traffic Automation
ATC	Air Traffic Control
B&K	Brüel & Kjær (Sound and Vibration Measurement A/S) is a manufacturer and supplier of sound and vibration measurement apparatus.

CALL SIGN	The Federal Aviation Administration regulates call sign standards within United States airspace. These conventions are generally used world wide. Call signs in aviation are derived from several different policies, depending upon the type of flight operation and whether or not the caller is in an aircraft or at a ground facility. In most countries, unscheduled general aviation flights identify themselves using the call sign corresponding to the aircraft's registration number (also called N-number in the U.S., or tail number). In this case, the call sign is spoken using the International Civil Aviation Organization (ICAO) phonetic alphabet. Aircraft registration numbers internationally follow the pattern of a country prefix, followed by a unique identifier made up of letters and numbers. For example, an aircraft registered as N978CP conducting a general aviation flight would use the call sign November-niner-seven-eight-Charlie-Papa. However, in the United States a pilot aircraft would normally omit saying November, since that would be assumed
DVR	Abbreviation for Digital Voice Recorder
DATIS	Stands for Digital Automatic Terminal Information Service (recorded messages that provide weather and airport services information).
dB	Abbreviation for Decibel(s)
dBA	Stands for Decibels A-weighted. The A-weighted Decibel (dBA) is the most common unit used for measuring environmental sound levels. It adjusts, or weights, the frequency components of sound to conform with the normal response of the human ear at conversational levels. dBA is an international metric that is used for assessing environmental noise exposure of all noise sources
DEP	Departure
DNL	Day-Night Equivalent Sound Level (Also called Ldn)
EWR	Newark Liberty International Airport (IATA: EWR, ICAO: KEWR, FAA LID: EWR), first named Newark Metropolitan Airport and later Newark International Airport, is an international airport which straddles the municipal boundary between Newark and Elizabeth, New Jersey, United States. The airport is owned by the city of Newark and operated by the Port Authority of New York and New Jersey. It is about 15 miles (24 km) southwest of Midtown Manhattan in New York City.
FAA	The Federal Aviation Administration (FAA) is the national aviation authority of the United States. An agency of the United States Department of Transportation, it has authority to regulate and oversee all aspects of civil aviation in the U.S.
GA	General aviation (GA) is one of the two categories of civil aviation. It refers to all flights other than military and scheduled airline and regular cargo flights, both private and commercial. General aviation flights range from gliders and powered parachutes to

large, non-scheduled cargo jet flights. The majority of the world's air traffic falls into this category, and most of the world's airports serve general aviation exclusively.

- GIS A geographic information system is a system designed to capture, store, manipulate, analyze, manage, and present all types of geographical data.
- GPS The Global Positioning System (GPS) is a space-based satellite navigation system that provides location and time information in all weather, anywhere on or near the Earth, where there is an unobstructed line of sight to four or more GPS satellites. It is maintained by the United States government and is freely accessible to anyone with a GPS receiver.
- IFR Instrument Flight Rules (IFR) govern flight procedures by FAA during limited visibility or other operational constraints. Under IFR, pilots fly under the guidance of radar
- INM The FAA Integrated Noise Model (INM) is a computer model that evaluates aircraft noise impacts in the vicinity of airports. It is developed based on the algorithm and framework from SAE AIR 1845 standard, which used Noise-Power-Distance (NPD) data to estimate noise accounting for specific operation mode, thrust setting, and source-receiver geometry, acoustic directivity and other environmental factors. The INM can output either noise contours for an area or noise level at pre-selected locations.
- ITT Exelis ITT Exelis (NYSE: XLS), also known as Exelis Inc., is an aerospace, technology and security company created in October 2011 as a result of the spinoff of ITT Corporation's defense business into an independent, publicly traded company. The company is headquartered in McLean, Virginia and is led by CEO and President David F. Melcher. The Washington Post highlighted Exelis as a top company in the Washington, DC region in 2011.
- IVR Interactive Voice Response System
- JFK John F. Kennedy International Airport (IATA: JFK, ICAO: KJFK, FAA LID: JFK) is an international airport located in the borough of Queens in New York City, about 12 miles (19 km) southeast of Lower Manhattan. In 2011 it was the busiest international air passenger gateway to the United States, handling more international traffic than any other airport in North America.
- LD Larson Davis (LD) was founded in 1981, as a manufacturer of precision acoustic test and vibration measurement instrumentation. After joining the PCB Group in 1999, Larson Davis is a division of PCB Piezotronics, Inc. ([www.pcb.com](http://www.pcb.com)) with ISO 9001:2008 certified manufacturing and engineering in Provo, Utah and sales and marketing in Depew, New York. LD has grown into a globally recognized source for seamless sound and vibration systems with the PCB® guarantee of Total Customer Satisfaction.
- LEQ Equivalent continuous sound level, express in db

LEN	Stage Length used by Airline to mark/determine Fuel onboard to a single Destination from an Origin, usually assigned a numeric value from 1 to 9, where the lower the number would represents a shorter trip.
LGA	LaGuardia Airport (IATA: LGA, ICAO: KLGA, FAA LID: LGA) is an airport located in the northern part of the New York City borough of Queens. The airport is located on the waterfront of Flushing Bay and Bowery Bay, and borders the neighborhoods of Astoria, Jackson Heights and East Elmhurst.
MLAT	Multilateration is commonly used in civil and military surveillance applications to accurately locate an aircraft, vehicle or stationary emitter by measuring the time difference of arrival (TDOA) of a signal from the emitter at three or more receiver sites.
METAR	METAR is a format for reporting weather information. A METAR weather report is predominantly used by pilots in fulfillment of a part of a pre-flight weather briefing, and by meteorologists, who use aggregated METAR information to assist in weather forecasting.
NEM	Stands for Noise Exposure Map. A noise map is a graphic representation of the sound level distribution existing in a given region, for a defined period. In the case of aircraft noise, the INM generally produces these maps to highlight or encompass a contour line around the geographical area of impacted by jet noise.
NFTMS	Noise and Flight Track Monitoring System see also NOMS
NMT	Abbreviation for Noise Monitoring Terminals. Hardward belonging to The Port Authority of NY & NJ for aircraft noise abatement system - see ANAMS.
NOISE	In common use, the word noise means any unwanted sound.
NOISE ABATEMENT	Procedure or technique used by aircraft at an airport to minimize the impact of noise on the communities surrounding an airport.
NOISE EVENT	A Noise Event is the measured sound produced by a single source of noise over a particular period of time. An aircraft noise event begins when the sound level of an over-flight exceeds a noise threshold and ends when the level drops down below that threshold.
NOMS	Defined as Noise & Operations Monitoring System. ITT Exelis' proprietary Airport Management & Analytical software that contracts out airport services throughout the U.S.A. & the U.K.
NOTAM	Quasi-acronym for "Notices To Airmen". NOTAMs are created and transmitted by government agencies and airport operators under guidelines specified by Annex 15:

Aeronautical Information Services of the Convention on International Civil Aviation (CICA). A NOTAM is filed with an aviation authority to alert aircraft pilots of any hazards en route or at a specific location. The authority in turn provides a means of disseminating relevant NOTAMs to pilots.

NWS National Weather Service

NYTRACON The New York Terminal Radar Approach Control (TRACON) is located in Westbury, New York. New York TRACON, also known as N90, is a consolidated TRACON meaning that a single location provides approach service for several large airports. The primary responsibility of the New York TRACON is the safe, orderly, and expeditious flow of arrival, departure, and en-route traffic. N90 is responsible for three major airports, all located within the same New York Class B airspace: John F. Kennedy International Airport, Newark Liberty International Airport, and LaGuardia Airport.

OAG Official Airline Guide. The Official Airline Guide provides passengers with flight times, schedules, airline information and other travel issues related to air travel.

PA Port Authority

PANYNJ Port Authority of New York & New Jersey

PCA Stands Point of Closest Approach. Also known as "CPA = Closest Point of Approach"

PNdB Abbreviation for Perceived Noise Decible(s). A unit for measuring perceived levels of noise by comparison with the sound pressure level of a reference sound judged equally noisy by a normal listener.

RMS Stands for Remote Monitoring System, also known as an NMT - see NMT.

RW or RWY Stands for Runway

SLA Service Level Agreement

SPL Sound pressure level (SPL) or sound level is a logarithmic measure of the effective sound pressure of a sound relative to a reference value. It is measured in decibels (dB) above a standard reference level. The commonly used ""zero"" reference sound pressure in air is 20  $\mu$ Pa RMS, which is usually considered the threshold of human hearing (at 1 kHz).

SQUAWK CODE A Transponder is an electronic device that produces a response when it receives a radio-frequency interrogation. Aircraft have transponders to assist in identifying them on radar and on other aircraft's collision avoidance systems. Air traffic control units use the term "squawk" when they are assigning an aircraft a transponder code, e.g., "Squawk 7421".

SWF	Stewart International Airport (IATA: SWF, ICAO: KSWF) is a public use, joint civil-military, airport located in the southern Hudson Valley, west of Newburgh, New York and over 60 miles (97 km) north of Midtown Manhattan, New York City.[1] The airport is located in the Town of Newburgh and the Town of New Windsor
TEB	Teterboro Airport (IATA: TEB, ICAO: KTEB, FAA LID: TEB) is a general aviation relief airport located in the Boroughs of Teterboro, Moonachie, and Hasbrouck Heights in Bergen County, New Jersey, United States.[2] It is owned and operated by the Port Authority of New York and New Jersey. The airport is 12 miles (19 km) from midtown Manhattan in the New Jersey Meadowlands, which makes it very popular for private and corporate aircraft.[3] The airport has a weight limit of 100,000 lbs on aircraft meant to make it nonviable as a commercial airport.
TRACON	Many airports have a radar control facility that is associated with the airport. In most countries, this is referred to as Terminal Control; in the U.S., it is referred to as a TRACON (Terminal Radar Approach Control.) While every airport varies, terminal controllers usually handle traffic in a 30-to-50-nautical-mile (56 to 93 km) radius from the airport.
UPS	Stands for Uninterruptible Power Supply. An uninterruptible power supply, also uninterruptible power source, UPS or battery/flywheel backup, is an electrical apparatus that provides emergency power to a load when the input power source, typically mains power, fails. A UPS differs from an auxiliary or emergency power system or standby generator in that it will provide near-instantaneous protection from input power interruptions, by supplying energy stored in batteries or a flywheel.
VFR	Visual flight rules (VFR) are a set of FAA regulations under which a pilot operates an aircraft in weather conditions generally clear enough to allow the pilot to see where the aircraft is going. Specifically, the weather must be better than basic weather minimums.
VRS	Voice Recording System

## ATTACHMENT B

### PART II - COST PROPOSAL FORM

COMPANY NAME \_\_\_\_\_

Vendor's pricing shall be "all inclusive" and firm for the term of the agreement. The prices shall include, but not be limited to, all delivery, installation, removal, equipment, labor, training, maintenance & support, insurance, project management and administrative services that the company provides in order to deliver Services that meet or exceed the requirements set forth in the Scope of Work of this RFP.

#### Entry of Prices:

1. The prices quoted shall be written in figures, in ink, preferably in black ink where required in the spaces provided on the Cost Proposal Form attached hereto and made a part hereof.
2. All Proposers are asked to ensure that all charges quoted for similar operations in the Contract are consistent.
3. Prices must be submitted for each Item required on the Cost Proposal Form.
4. All Proposers are asked to ensure that all figures are inserted as required, and that all computations made have been verified for accuracy.
5. The request for Hourly Rates apply to work associated with the Supplemental Work provision of the contract, which the Port Authority may or may not implement at its sole discretion.
6. Proposers shall identify any underlying cost-related assumptions in the section named "Assumptions", in the Cost Proposal Form.

## COST PROPOSAL FORM

### HARDWARE SERVICES

**TABLE 1A - Permanent and Portable Noise Monitoring Terminal Units**

Equipment	Cost by Type of Telecommunication Mode (\$)		
	Phone Land line	Broadband (Cable/DSL)	Wireless (3G or 4G)
Permanent NMT (Per Unit)			
Total Cost for Eleven (11) Units			
Portable NMT (Per Unit)			
Total Cost for Eleven (11) Units			
Grand Total (\$):			

Note: Cost for Permanent and Portable NMT shall be inclusive of all accessories and peripherals including but not limited to housing (cabinet), power supply, back-up battery, telecommunication cables, conduits, carrying/transportation case, and climate control devices inside the cabinet.

**TABLE 1B – Handheld South Level Meters**

Equipment	Cost (\$)
Handheld Sound Level Meter (Per Unit)	
Total Cost for Two (2) Units	
Handheld Calibrator (Per Unit)	
Total Cost for Two (2) Units	
Grand Total (\$):	

Note: Cost for handheld sound level meters and handheld calibrators unit shall include the carrying case for each unit.

## COST PROPOSAL FORM

### HARDWARE SERVICES

**TABLE 1C - Computer Hardware**

<b>Equipment</b>	<b>Cost (\$)</b>
One (1) Computer/Server for NY TRACON to Collect and Transfer Flight Tracking Data	
One (1) Computer/Server for TEB to Record ATC Transmissions	
Grand Total (\$):	

Note: Computer Systems for both TEB and NY TRACON facilities shall include all the necessary hardware, software, peripheral devices, and accessories to perform functions defined in the Scope of Work.

## COST PROPOSAL FORM

### HARDWARE SERVICES

**TABLE ID – Hardware Installation**

Task	Cost for Each Following Category (\$)			Total Quantity	Total Cost (\$)
	Removal of old Unit	Installation of New Unit	Materials/Tools		
Installation of Permanent NMT Unit				11	
Installation of Portable NMT Unit				11	
Installation of Computer/Server for NY TRACON to Collect and Transfer Flight Tracking Data				1	
Computer/Server for TEB to Record ATC Transmissions				1	
Grand Total:					

- Notes: 1. Equipment installation cost shall be inclusive of labor and all materials and/or tools necessary for installation.
2. Equipment installation cost shall be inclusive of retrofitting or replacing the existing infrastructure including but not limited to NMT housing (cabinet), power supply, telecommunication connection line, cables, conduits, and climate control device(s) inside the cabinet.

## COST PROPOSAL FORM

### SOFTWARE SERVICES

**TABLE 2 - Software Services**

Task	Cost (\$)			
	Base 3 Years	First - 2 Yr Option	Second - 2 Yr Option	Third - 2 Yr Option
Transfer of 10 Year Historical Data		Not Applicable	Not Applicable	Not Applicable
Flight Data and Tracking Information				
NOMS Software (8 User Licenses)				
Web Based Software (Public Web Portal)				
Web Site Hosting for General Noise Information				
Noise Complaint Hotline with Automated Voice Prompts (Toll Free No. for All Five Airports)				
Voice To Data Transcription Service for Noise Complaints				
INM Noise Contour Calculation				
Noise Calculation at a Certain Chosen Location on a GIS Map				
Software Upgrades				
Additional User License				
Total Cost (\$):				

Note: Cost for each term of the contract shall be inclusive of full cost of labor, any equipment and miscellaneous costs to provide the all software services as described in the Scope of Work.

## COST PROPOSAL FORM

### CONTRACT SERVICES

**TABLE 3 - Contract Requirements**

Task	Cost (\$)			
	Base 3 Years	First - 2 Yr Option	Second - 2 Yr Option	Third - 2 Yr Option
Contract Management and Administrative Services				
System Testing Requirements		Not Applicable	Not Applicable	Not Applicable
Training during Project Implementation		Not Applicable	Not Applicable	Not Applicable
Ongoing Training				
Documentation - Hardware Documentation and Manuals - Software Documentation and Manuals - Training Manuals				
System Maintenance & Repair (Hardware & Software)				
System Support (On-Site Troubleshooting Support)				
Hardware and Software Warranty				
Total Cost (\$):				

Note: Cost for each term of the contract shall be inclusive of full cost of labor, any equipment and miscellaneous costs to provide the all contract services as described in the Scope of Work.

**COST PROPOSAL FORM**

**TOTAL COST**

**TABLE 4 - Estimated Total Contract Costs**

		Total Cost (\$)
TABLE 1A	Permanent and Portable Noise Monitoring Terminal Units	
TABLE 1B	Handheld Sound Level Meters	
TABLE 1C	Computer Hardware	
TABLE 1D	Hardware Installation	
TABLE 2	Software Services	
TABLE 3	Contract Requirements	
Grand Total:		

Note: For TABLE 1A Total Cost include the highest cost out of the three (3) telecommunication options quoted.

## COST PROPOSAL FORM

### HOURLY RATES

**Table 5 - Hourly Rates for Supplemental Work – Straight Time**

Resource	Hourly Rate (\$)			
	Base Term (3 yrs)	First Option (2yrs)	Second Option (2 yrs)	Third Option (2 yrs)
Contract Manager				
Project Manager				
Software Developer/Engineer				
Trainer				
Report Writer				
Installation Technician				
Technical Support (Hardware/Software)				

Note: Straight time is defined as normal business hours between 8:00 AM and 5:00 PM EST

**Table 6 - Hourly Rates for Supplemental Work – Overtime**

Resource	Hourly Rate (\$)			
	Base Term (3 yrs)	First Option (2yrs)	Second Option (2 yrs)	Third Option (2 yrs)
Contract Manager				
Project Manager				
Software Developer/Engineer				
Trainer				
Report Writer				
Installation Technician				
Technical Support (Hardware/Software)				

Note: Overtime is defined as time between 5:01 PM and 7:59 AM EST

## **COST PROPOSAL FORM**

### **ASSUMPTIONS**

Proposers should identify any underlying cost-related assumptions in this in the space below or on additional sheets if the space provide below is insufficient.

**ATTACHMENT C  
SCOPE OF WORK**

# ATTACHMENT C

## SCOPE OF WORK

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# ATTACHMENT C

## SCOPE OF WORK

### I. General Description of Services

#### A. Overview

The Port Authority of NY & NJ, hereafter referred to as the “Authority”, has a commitment to reduce aircraft noise exposure for residents in the vicinity of the Airports it operates: John F. Kennedy International (JFK), Newark-Liberty International (EWR), LaGuardia (LGA), Stewart International (SWF) and Teterboro (TEB) Airports. In order to meet its commitment, the Port Authority currently uses a Noise & Operations Monitoring System (NOMS) consisting of permanent and portable noise monitoring stations manufactured by Bruel & Kjaer and Larson Davis, and the AirScene/FlightGraph software package for analysis of aircraft noise and flight track data. Permanent and portable noise monitoring stations are deployed in communities surrounding the Airports with few spare units in the storage. The AirScene/FlightGraph portion of the system is remotely hosted with no system components present at Authority facilities. The existing noise monitoring units are over twenty years old, and the noise and flight-tracking analysis software requires upgrades for modern capabilities. Replacement of noise monitoring stations will be phased in over a three (3) year period with JFK Airport being the first Airport scheduled for replacement, and EWR and LGA during the second phase. None of the noise monitors at TEB will be required to be replaced under this Contract; further, there are no noise monitors at SWF currently. Total contract term is 9 years of which 3 years will be the base contract and the remaining six (6) years will be divided into three (3) two-yr options, to be exercised solely at the discretion of the Authority.

The Port Authority intends to modernize its NOMS capabilities by replacing the existing system (hardware and software) with a new system that has additional enhancements and technological capabilities to serve both present and future needs of Airport Staff and other stakeholders. The selected NOMS shall be a web-based application that provides comprehensive monitoring, control, reporting, and analytical capabilities to facilitate and optimize user functionality. The new NOMS must integrate the existing historical data that is currently used by the Airport Staff including flight data and tracks, noise readings, noise violations, and noise complaints. The new system must also modernize Port Authority’s noise complaint collection system with the ability to file noise complaints electronically through a website. The new system must have robust reliability, allow for back-ups with off-site data storage, and remote archival and retrieval capabilities.

The following scope of work and technical specifications are intended to provide guidelines for the preparation of proposals. These specifications are Authority’s desired minimum performance goals as the Authority prefers to allow Proposers maximum flexibility to achieve the NOMS design objectives. Therefore, proposals may include variations in

specific system design features, especially where current technology provides cost-effective solutions to the Authority's needs.

## **B. Summary of Services**

The Contractor shall design, furnish, install, host, operate and maintain a secure Noise & Operations Monitoring System (NOMS), hereafter referred to as the "System," that will provide the necessary tools to Airport Staff in dealing with noise issues in communities surrounding John F. Kennedy International (JFK), LaGuardia (LGA), Newark Liberty International (EWR), Stewart International (SWF), and Teterboro (TEB) Airports. Elements of the service shall align with industry best practices and be adapted to meet Airport needs. The Contractor shall furnish and install necessary field hardware and software in locations selected (i.e. Noise monitoring terminals (NMTs) in surrounding communities and software at Authority facilities), host the System, establish connectivity between the System and external systems, and enable secure remote access through the Internet and provide maintenance of the System. The Contractor shall provide all hardware, software, specialized equipment, communications, tools, transportation and labor required to design, build, install, host, and transfer existing data (to be provided by the Authority) in order to make the System operational and provide the Services as described herein.

## **II. Project Delivery**

### **A. Implementation Schedule**

The project shall be delivered in two phases or "Implementation Periods". The two Implementation Periods are Phase A and Phase B. Phase A shall be the implementation and commencement of a system software to replace the existing system software and services that presently exist and are being provided under the current NOMS contract as described in Section III.D., Software Requirements, with a final delivery/completion to be on a date as mutually agreed upon and accepted by the Authority (Base Date of Operational Usage).

Also beginning on the Base Date of Operational Usage, the Contractor shall assume responsibility for hosting, operation, administration and maintenance of the System, which shall continue, to the end of the contract.

Phase B shall consist of the delivery, installation, and operation of the Hardware units, as described in Section III.C. Hardware Requirements. Implementation of Phase B shall be based on the schedule provided in Section III.B.3, Table 1.

### **B. Base Date of Operational Usage**

The Base Date of Operational Usage shall be a date as mutually agreed upon and accepted by the Authority. The Contractor shall complete all work, finish the Operational Acceptance Test and begin to provide the System and Services as described herein prior to the Base Date of Operational Usage. Noise monitoring terminal (NMT) installation shall take place in accordance with the schedule presented in Section III.B.3, Table 1.

### III. System and Functional Requirements

#### A. System Hosting

The Contractor shall host the System and its components in a protected, secure environment that is not on Port Authority property. The System shall be built using a fault tolerant architecture, and the backup or failover servers and components shall be installed in a diversely located data center to maintain operational availability specified in Section IX.A.3.

#### B. Existing Hardware

The list of all existing hardware associated with the NOMS system is provided in Exhibit 1. This information is being provided for informational purposes only. The Contractor shall use the list as a reference to select and provide equipment suitable to meet the functional requirements of the NOMS in this Contract.

#### C. Hardware Requirements

The Contractor shall provide the following services to the Port Authority as described below:

##### 1. Equipment to be Replaced

*For JFK, EWR, and LGA, the Contractor shall:*

- i) Replace existing eleven (11) permanent NMTs and associated hardware (as listed in Section III.C.3) for JFK, LGA, and EWR Airports.
- ii) Replace existing eleven (11) portable NMTs and associated hardware that are either deployed in communities or currently in storage.
- iii) Communication devices for NMTs shall include the option of using either wireless, broadband or landline connection, depending on the availability and cost of type of connection at each NMT site. Authority's contract manager will determine the type of communication connection to be used for each NMT site.
- iv) Replace the existing stainless steel housing cabinets for both portable and permanent NMT units along with any mounting brackets. The new housing cabinets shall be built out of durable material such as stainless steel and be able to house all the supporting hardware and equipment for the NMT unit. Dimensions of existing housing units are approximately 3 ft. by 3 ft., which are installed on wooden poles approximately 14 feet from the ground. Existing housing cabinets can support up to 50 lbs. of equipment weight.

***For TEB, the Contractor shall:***

- v) Provide computer system (DVR Computer System and PC MON – Data Acquisition System listed in Table 2) at TEB to record transmissions from the FAA’s Air Traffic Control Tower (ATCT). The digital voice recorder shall be integrated into the personal computer and must record Air Traffic control (ATC) frequencies and correlate transmissions in time to specific flights arriving at and departing from the Airport.
- vi) None of TEB’s NMTs are required to be replaced as part of this Contract.

***For SWF:***

- vii) There are no NMTs currently installed at SWF Airport. The Authority is not requiring any new installation at SWF Airport at this time. However, the Contractor shall be responsible for flight tracking services for SWF Airport under this Contract as specified in Section III.D.2.

***General Hardware Requirement:***

- viii) The Contractor shall replace the existing two (2) handheld sound level meters with two (2) new handheld meters that must be able to operate on alkaline batteries. The Contractor shall also provide two (2) handheld sound level calibrators for calibrating both the handhelds and NMT units.
- ix) The Contractor shall evaluate the existing NMT units being replaced for salvageable value, which can be credited towards the new NMT units and handheld devices.
- x) The Contractor shall be responsible to disconnect, remove and dispose all hardware components of the existing System.

**2. Hardware Specifications**

All the hardware provided by the Contractor shall meet the following requirements.

- i) The NMT hardware, including portable, permanent and handheld units, shall be capable of measuring sound levels in D-weighted frequency using ANSI slow response with measurement accuracy of less than +/-0.1 dB.
- ii) Each NMT shall be approved to IEC 61672 Class 1 specification with dynamic range in excess of 120 dB.
- iii) NMT units shall be capable of storing at least 10 days of hourly noise readings and event data, sampling data, and recorded noise event sound files, in case of telecommunication equipment failure, malfunction of NMT units, or due to disruptions of telecommunication connection service.
- iv) NMT units shall be capable of initiating a self-calibration of its microphone assembly as recommended by manufacture specifications.
- v) NMT units shall be capable of calibration by the Contractor as deemed necessary due to any power outage or resetting of the NMT. The Contractor shall be able to perform the calibration remotely via manual or automated process.
- vi) NMT units shall be equipped with an option of using either analog phone line or broadband connection including wireless. Currently all NMTs,

except for TEB Airport, use landline analog phone connection. However, the Authority requires to have all connectivity options available for future upgrades based on availability of type of connection and associated costs. The Port Authority will be responsible for paying for telecommunication line for each NMT.

- vii) Each NMT installed shall be housed in a weatherproof cabinet that will protect the equipment, including telephone and electrical lines, from adverse weather conditions. The cabinet shall be made of rust-resistant material and shall provide protection from vandalism and tempering. Entry points for electrical and telephone connections must be weather-sealed and tamper resistant. Surge protection shall be provided for all electrical equipment to protect from voltage spikes. A surge protector shall have joule energy rating of 720 joules or higher with a minimum of 5 outlets.
- viii) NMT units shall be capable of operating on standard 110 V AC power and shall include a backup battery to ensure operation of the unit of at least 96 hours (four days) in case of power outages.
- ix) NMT units shall check the current date and time on a daily basis against a coordinated universal time (UTC) reference and adjust its own time clock to maintain accuracy with the UTC within 1 second. If global positioning system (GPS) is used for time synchronization then the GPS antenna shall be mounted outside the housing cabinet to allow seamless connectivity to satellites. be capable of performing a check on time daily and adjust time clock within 1 second accuracy automatically. If global positioning system (GPS) is used for time synchronization then the GPS antenna shall be mounted outside the housing cabinet to allow seamless connectivity to satellites.
- x) NMT units shall have available the option of transmitting audio files (in wave or other formats compatible with Microsoft Windows Operating System) of noise events and real-time noise level data.
- xi) Microphones shall be equipped with an internal calibrator and capable of external acoustical calibration. The microphone assembly shall also be waterproof (protected from precipitation) and equipped with a windscreen and bird spikes for reliable and consistent operational performance.
- xii) All cables for each new NMT installation shall be placed inside a conduit for protection from adverse weather and vandalism.
- xiii) The Contractors shall provide appropriate carrying case for each portable noise monitor assembly for easy storage and transportation. The carrying case shall contain the packaging foam, be waterproof and durable for long-term use.
- xiv) The Contractor shall provide appropriate hardware capable of continuously receiving and recording ATC and Pilot communications at TEB Airport. The intent of this capability is to provide Airport staff with a system for reviewing radio communications related to aircraft operations that are under investigation for aircraft noise violations.

### 3. **Hardware Installation**

The Contractor shall fulfill the following requirements regarding all hardware installation:

- i) The Contractor shall replace and install all permanent NMTs for JFK, LGA, and EWR Airports at existing locations. This shall include installation of six (6) NMTs at JFK, three (3) NMTs at EWR, and two (2) NMTs at LGA Airports (total of 11 NMTs). For each NMT installation, the Contractor shall replace all the existing infrastructure including but not limited to NMT housing (cabinet), power supply, telephone line, cables, conduits, and climate control device(s) inside the cabinet.
- ii) The Contractor shall replace all portable noise monitors for JFK, LGA, and EWR (total of 10 NMTs). This shall include the installation of all the portable NMTs that are currently deployed into communities surrounding JFK, LGA, and EWR Airports. For each portable NMT installation at a community site, the Contractor shall replace all the existing infrastructure including but not limited to NMT housing (cabinet), power supply, telephone line, cables, conduits, and climate control device(s) inside the cabinet. For the portable NMTs in storage, the Contractor shall provide all the necessary components of a NMT for an easy installation at a new undetermined location in future.
- iii) The Authority will provide at least one personnel for the installation of portable NMTs and help facilitate site access for each site.

The Contractor shall:

- iv) Provide all equipment, labor, materials, and tools necessary for each NMT installation which shall include providing and operating a bucket truck with a 40 foot boom for permanent NMT installations. The Contractor shall be responsible for maintaining traffic and/or applying lane closures while bucket truck is in use at each permanent NMT site in accordance with local traffic rules and regulations.
- v) Coordinate appropriate disposal of salvaged units with the Authority's Contract Manager. Equipment/units deemed unsalvageable by the Authority Staff must be disposed of properly, along with any associated scrap and debris cleanup, at the Contractor's own cost. The Contractor shall provide the Authority a proof of proper disposal for each salvaged unit.
- vi) Provide cleanup and restoration of any damage caused by any work performed at the Airport or NMT site locations. All restoration shall be done in coordination with the Authority's Contract Manager.
- vii) Install a computer systems (DVR Computer System and PC-MON Data Acquisition Computer System listed in Table 2) at TEB for recording ATC and pilot communication. The digital voice recorder shall be integrated in the new computer system and must record ATC communication at all frequencies and correlate transmission in time to specific flights arriving and departing at the Airport.

The schedule for Hardware installation is as follows:

TABLE 1

<b>Year/Quarter</b>	<b>No of NMTs</b>	<b>Airport</b>
2013 – 4th Quarter	7	6 Permanent NMTs for JFK 1 Portable NMT for JFK 1 DVR Computer System for TEB
2014 – 2 <sup>nd</sup> and 3 <sup>rd</sup> Quarters	7	3 Permanent NMTs for EWR 2 Permanent NMTs for LGA 2 Portable NMTs for JFK 2 Handheld Sound Level Meters and Calibrators
2015 – 2 <sup>nd</sup> and 3 <sup>rd</sup> Quarters	8	8 Portable NMTs in communities surrounding JFK, LGA, and EWR (Installation at a site or parts replacement in storage)

The Authority shall reserve the right to change the order of priority of NMT installation deemed necessary at any given Airport. An updated schedule will be provided upon any changes to the schedule.

## **D. Software Requirements**

The Port Authority currently uses a NOMS system to record noise monitoring readings, noise violations, noise complaints (via manual entry), and flight tracks. The system is remotely hosted by the current vendor and allows password-protected login from any personal computer on Authority’s network via internet. The Port Authority plans to expand the current system to include newly available features and technologies to make the task of noise management more efficient and streamlined for all of its five Airports. The “System” shall be able to provide the following services:

### **1. General System Requirements**

- i) The System shall provide Authority staff with password protected web-based access to the System in accordance to Authority Standards provided in Exhibit 2, Web Based Application Checklist.
- ii) The System shall provide general public with non-password protected web-based access to various features of the application, such as flight tracking, analysis of flights that caused noise disturbance, and submitting noise complaints online.
- iii) The System software shall be compatible with Microsoft Windows 7 operating system and later versions.
- iv) The System software shall include a graphical user interface with simple on-screen management of information, data transposition and layering. The graphical user interface is described in Section IV.H.
- v) All licenses, including for System users and any third party software required for System operations and functions, shall be provided by the Contractor.

## 2. **Flight Tracking & Information**

- i) The System shall have the ability to acquire flight tracking data from next generation flight tracking technology such as ADS-B/UAT, ASDE-X, MLAT, ASDI, PASSUR data etc. The Contractor shall provide flight tracking data from the FAA's approved, secure and controlled connections (e.g., Internet Enterprise gateways or similar) consistent with latest National Institute and Technology (NIST) standards and FAA Order 1200.22E, *External Requests for National Airspace System (NAS)* data. The flight tracking data shall be available and accessible in the System within 24 hours of actual flight operations.
- ii) The System shall be able to capture flight information and tracks for Visual Flight Rules (VFR) traffic including helicopters to the greatest extent possible.
- iii) The positional accuracy of flight track shall meet or exceed current industry standards. Flight tracks shall be available in terminal airspace with at-least 40 NM radius from each Airport and as close to the runway as possible. The minimum data collection ceiling shall be no less than 20,000 feet above Airport elevation.
- iv) The System shall be modular and readily expandable to support additional data feeds from the FAA or other sources for flight tracking and radar. The Contractor shall be able to integrate the System with the new data feeds as the new data feeds become available.
- v) The System shall provide automatic daily downloading of flight track data on daily basis from the data source(s) available.
- vi) The System shall be capable of assigning aircraft operations to the runway used for departures and arrivals at each Airport with an accuracy of 96% or better.
- vii) The System shall be able to acquire and record the following flight identification data for each operation:
  - a. Airport ID.
  - b. Type of operation (e.g. arrival, departure, overflight, touch and go, and missed approach).
  - c. Runway used.
  - d. Flight operator category (e.g. air carrier, commuter, cargo, general aviation, and military).
  - e. Aircraft propulsion categories (e.g. air carrier jets, corporate/regional jets, turboprops, piston propeller, helicopter).
  - f. Aircraft registration number (for commercial and general aviation aircraft).
  - g. Aircraft type.
  - h. Available flight plan data.
  - i. Flight time (actual and scheduled).
  - j. Beacon code.
  - k. Aircraft altitude, speed, and navigation fixes.
  - l. Airline ID and flight number associated with filed flight plan.
  - m. Flight origin and destination.

- n. Aircraft owner and/or operator (if available).
  - o. INM stage based on distance traveled.
  - p. Day/Night operation for INM input.
  - q. Specific airframe and engine specification (if available).
- viii) The System shall have the ability to plot flight tracks on latest available GIS maps with option of adding GIS layers showing noise sensitive entities such as schools, hospitals, city and county boundaries, zip code boundaries, etc. The map shall also provide the ability to toggle between roadmap, satellite and hybrid imagery.
  - ix) The System shall provide all necessary analytical tools needed to analyze flight tracks associated with noise complaints including, but not limited to, gates, point of closest approach (pca), corridors, flight track density etc. The System shall allow to save the results of the flight track analysis in a spreadsheet (MS Excel compatible) and database file format (SQL compatible).
  - x) The System shall include the ability to 1) playback flight tracks in 2D and 3D, 2) depict aircraft operations in plan view and 3D, and 3) calculate and show lateral distance over ground, vertically and at closest point of approach to any location within the mapping area. The playback of a particular flight track shall be available in slow motion, real time, and fast forward modes.
  - xi) The System shall display flight tracks of multiple Airports in different colors and allow filtering of flight tracks based on following criterions: airport, flight equipment, call sign, flight type, operation type, runway, stage length, corridor, gate, pca, route, air carrier, time of day, time of week, flight Id, aircraft registration number, navigational fix, propulsion type, squawk code, flight scheduled time, and noise levels.
  - xii) The System shall provide the ability to easily save and output flight tracks in format that is compatible to FAA's INM and AEDT models input.
  - xiii) The System shall include the aircraft registration number for operations at all Airports. This shall include the registration numbers of general aviation aircraft operations at TEB Airport. If a special software or program is required to locate specific records, or to correlate tail numbers with aircraft ownership then that software or program must be integrated in to the System database.
  - xiv) The Contract shall create, operate and maintain a website to enable the general public to view the flight tracks in near real-time or playback stored aircraft flight tracks over specified time period through the standard web browsers listed above in Section IV.C.4. The website shall provide an analysis tool with will enable the user to determine which aircraft was likely to have caused the noise event of concern by entering their home address and time of the event. The System shall provide information such as flight ID, time, pca, speed, and altitude by clicking on the aircraft icon or flight track.
  - xv) The public web portal shall allow the user to select a specific flight track to view flight information and be able to click on the flight track anywhere to view the speed and altitude of the selected track.

- xvi) The public web portal shall be designed to allow login or access for 1,000 concurrent users.

### 3. **Noise Monitoring**

- i) The System shall provide automatic daily download of noise monitoring data from each NMT in service.
- ii) All NMTs that are equipped with a broadband connection shall be able to provide at a minimum the following features:
  - a. Display real time noise readings and provide graphic representation of the instantaneous sound levels.
  - b. Provide the ability to troubleshoot the NMT and its components remotely
  - c. Allow a calibration check of any NMT using the System software on a PC.
  - d. Ability to record noise events in audio files in wave (\*.wav), Windows Meta files (\*.wmf), or other Authority approved formats compatible with Microsoft Windows Operating System.
- iii) All NMTs shall be able to provide at a minimum the following features:
  - a. Allow the application administrator to modify the NMT parameters such as noise measurement thresholds and other basic parameters remotely via a computer connected to the System.
  - b. Allow to set up a new NMT or remove an existing NMT in the System Software.
- iv) The System software shall email the daily status of each NMT to a distribution list of Authorized Users indicating whether the NMT data download was successful or not. The Authority shall have the ability to modify the distribution list of Authorized Users who will receive the download status.
- v) The System software shall provide a record of each noise event at each NMT listing the date and time of occurrence, the maximum sound level ( $L_{max}$ ), the event duration, and the sound exposure level (SEL). The noise monitored data shall be available in following metrics:
  - a. Hourly equivalent noise level ( $Leq$ ) for aircrafts, community and total combined.
  - b. Daily  $Leq$  for aircrafts, community and total combined.
  - c. Monthly  $Leq$  for aircrafts, community and total combined.
  - d. Daily Day Night Level (DNL) for aircrafts, community and total combined.
  - e. Monthly DNL for aircrafts, community and total combined.
  - f. Annual DNL for aircrafts, community and total combined.
- vi) The System software shall automatically correlate each noise event with an aircraft operation to the maximum extent possible.
- vii) The System software shall differentiate between an aircraft noise event and a community noise event and store each one separately.
- viii) The System software shall automatically distinguish between noise events associated with operations from the Airports versus operations from over flights to or from other nearby Airports. Noise events due to over flights

from Airports other than Authority's shall be excluded from the System noise event database but shall be retained as a component of background community noise.

- ix) The System software shall perform automatic calibrations daily for each NMT, and record the time and results of the calibration. The noise readings during both manual and automatic calibrations shall be excluded from aircraft, community and total noise levels.
- x) The System shall be capable of calculating noise levels based on flight tracks at a certain chosen location on a GIS map. This capability to calculate noise shall be based on FAA's INM model or similar methods and shall be available for any location within 40 NM radius of each Airport.

#### **4. Noise Complaints**

- i) The Contractor shall create a standard noise complaint entry form for manual noise complaint entry into the System database for Authority approval. The format of the form and information needed shall be established in coordination with the Authority's Contract Manager.
- ii) The System shall provide means of correlating each noise complaint with an associated aircraft operation and noise event. The System shall readily show the correlated flight track of the aircraft that likely caused the noise complaint.
- iii) The System shall provide the information on weather conditions and runway use during the period of the reported noise complaint.
- iv) The System shall allow to map the location of the noise complainant on the GIS map based on the address entered on the complaint entry form.
- v) The System shall provide a built in query function to search for noise complaint by different parameters such as address, name, date, time, airport, etc.
- vi) The Contractor shall design, for Authority's approval, and host a website for filing noise complaints online via a web entry form. The System must be able to recognize repeat noise complainants by a unique identifier such as their phone number or login ID. The noise complaint web entry shall be set up in such a way to avoid bulk or spam noise complaints by integrating technologies such as CAPTCHA defined as "Completely Automated Public Turing test to tell Computers and Humans Apart".
- vii) The Contractor shall create and host a website for general public with its link embedded in the noise complaint entry form. The content of this website, to be provided by the Authority, will contain general information on aviation noise, frequently asked questions about Airport noise, and Airport construction announcements. The Contractor shall update the website upon Authority's request.
- viii) The System shall be capable of generating both standard and custom complaint response letter or email incorporating the data collected from the complaint and noise event databases. The System shall allow authorized users to send response emails to noise complainants directly from the System.

- ix) The Contractor shall design, for Authority approval, build, operate and host an interactive voice response system (IVR) that uses a toll free number for collecting noise complaints. The information collected via the IVR shall match the information required in the noise complaint form.
- x) The IVR shall be designed to convert noise complaint received in voicemail format to wav files and automatically translate to text using "voice to text" transcription technology and save directly in to the System's database.
- xi) The System database and interface shall be designed to allow import of noise complaints into the new System from Authority's existing noise complaint database system.

## **5. Noise Violations**

- i) The System software shall calculate the noise for each noise event in terms of Perceived Noise Decibel Level (PNDB in terms of D-weighted frequency) at each noise monitor for JFK, LGA, and EWR Airports. The System must be able to generate a bi-weekly report of all noise events exceeding a configurable noise limit, currently set to 112 PNDB for departures. The noise violation report shall contain the following parameters for each event:
  - a. Airport ID
  - b. Airline name and flight ID
  - c. Aircraft type
  - d. Noise event date and time
  - e. Time difference between noise event and PCA time
  - f. PCA time
  - g. Name of the NMT
  - h. Calculated PNDB
  - i. Noise level in SEL for the particular aircraft
  - j. Event duration
  - k. Runway utilized
  - l. Type of operation
  - m. PCA altitude
  - n. PCA range
  - o. Difference between PNDB and SEL
- ii) The System software shall filter out all the departures at TEB exceeding the specified maximum noise level (Lmax) in decibels (A-weighted frequency) for a given time of day (i.e. day or night time) and by Runway utilized.
- iii) The System software shall maintain a record of individual aircraft that are assessed with noise violations, including date/time, number of violations and incident noise levels.

## **6. Weather Data**

- i) The System shall integrate the weather information for each Airport from Digital Automatic Terminal Information Service (D-ATIS). The database shall consist at a minimum of the following weather parameters:
  - a. Date and time
  - b. Wind speed and direction

- c. Wind gust alerts
- d. Runways in use
- e. Visibility and ceiling
- f. Precipitation
- g. Temperature
- h. Dew point
- i. Altimeter
- j. Instrument approach
- k. Notices to Airmen (NOTAMs)

The System shall acquire this data on an hourly basis and should be stored in the System database for linking with noise events, flight tracks, noise complaints and violations.

## **E. Reporting Requirements**

The Contractor shall provide standard and custom reports module within the System to produce reports in accordance with the requirements described herein.

The System shall provide the capability to export report data in a format that can be imported into standard Microsoft 2007 Office suite of tools and later versions, including but not limited to the following formats:

- Microsoft Word (\*.Docx)
- Microsoft Word 97- 2003 (\*.Doc)
- Web pages (HTM, HTML, MHT and MHTML)
- Microsoft Excel (\*.xls)
- Comma Separated Value (\*.Csv)
- Text (ASCII).
- Adobe Acrobat Readable Files (\*.Pdf)
- Microsoft Access database format (\*.mdb)

The System shall provide advanced data querying and reporting capabilities enabling Users to create tabular and graphical reports from a database. Upon initial implementation, the System shall begin saving and storing data, which shall be used to generate the Reports. Last ten (10) years of stored historical data shall be available for generating reports as well. The System shall provide the flexibility to create, save, execute, and download comprehensive reports on flight operations (Over-flights, Touch & Go, Arrivals and Departures), runway utilization, gate/corridors/pca analysis, noise events, NMT calibrations, noise complaints, noise violations, weather conditions, system status, and database audit reports. Reports shall be sortable by each parameter included in the report.

In addition to the ability to generate reports “on demand,” the System shall have a scheduling capability that enables Users to schedule the automatic generation of periodic reports on a daily, weekly, monthly, quarterly, and yearly basis, and include the capability to schedule reports on specific days of the year. The System User who scheduled a report

shall have the ability to configure the System to automatically receive a report via email once it is generated.

**1. General Reporting Requirements**

- i) Headings on all reports shall be standardized (Report Name, Airport ID, Date Report Run, Date Range of Report, Page Numbers, Column Headings on every page, Totals, etc.) and appear in a consistent manner throughout all report formats.
- ii) All reports shall be easily displayed and navigated on the User's access terminals, sent to a choice of any email address, network printer at the user's facility and saved to the User's desktop over the Port Authority's existing wide area network.
- iii) All reports shall be easily sorted by each parameter included in the report.
- iv) Each report shall bear the time and date stamp when the report was generated in the lower left hand corner.

**2. Standard Reports**

The Contractor shall include the standard reports that are normally included in the System and Services that it provides. At a minimum, the following standard reports shall be included in the System:

- i) Noise Event Report – The System shall provide noise event reports that exceed the noise event trigger threshold for each NMT. The report shall include the data such as duration of the noise event, measure noise values (available in various noise metrics). The report shall have for each noise event the associated flight information, runway use and weather conditions. The report shall also be able to indicate whether the noise event was associated with an aircraft or community.
- ii) Daily System Status Report – The System shall generate a daily system report showing the status of each NMT (i.e. data download success or failure), total number of noise events and calculated DNL value for each NMT, number of noise violations, and status of flight tracking data download.
- iii) Runway Utilization Report – The System shall generate aggregate runway utilization report listing the arrivals and departures by each runway on hourly, daily, monthly or annual basis. The report shall list each individual operation tied with parameters such as aircraft type, airline name, propulsion type, date, time of day, wind speed, wind direction, precipitation and other parameters on a daily, monthly or annual basis.
- iv) Noise Complaints Report – The System shall provide detailed noise complaint report with option of including or excluding various parameters. These parameters, at a minimum, shall include a listing of total number of complaints by each complainant, date, time, nature of complaint, address, jurisdiction, complaint airport, etc. on daily, weekly, monthly, or annual basis. The System shall provide graphical reports showing the location of noise complaints on a GIS map and listing of complaint statistics graphically

- based on daily, weekly, monthly, annual, certain day of the week, or certain time of day.
- v) Noise Violation Report – The System shall provide noise violation report listing the Airport, airline/operator, flight id, equipment type, pca time, time difference between noise event and pca time, NMT site, calculated PNDB value, SEL, event duration, runway used, operation type, pca altitude, pca range, and difference between PNDB and SEL. The System shall allow to generate this report for JFK, LGA, and EWR Airports on daily, weekly, monthly, or annual basis. The report shall include graphical depiction of noise violations by noise monitor, airline/operator, or runway utilization.
  - vi) Gate/Corridors/PCA Analysis Report - The System shall generate a report on a particular gate/corridor/pca generated graphically on a GIS map. The report shall provide the flight events information for a given gate/corridor/pca by day of the week, or time of day on daily, weekly, monthly, or annual basis. The report shall include graphical depiction of flight tracks associated with the gate/corridor/pca and tabular listing of date/time, flight id, penetration time, aircraft type, altitude, aircraft speed, and average wind speed and direction reported for the time of the flight time.
  - vii) Weather Report – The system shall provide a report on Airport weather conditions (i.e. wind speed & direction, precipitation, ceiling, humidity level, etc.) by airport, and date/time based on hourly, daily, weekly, monthly or annual basis. The report shall include the runway(s) utilized for the hourly weather data. The System shall provide the predominant wind directions and speed for weekly, monthly, and annual reports. For example, within a certain time frame as chosen by the User, the System shall provide the percentage of predominant wind direction and speed such as 90% of wind out of southeast direction while 10% of wind out of east direction, and 80% of wind speed over 10 knots while 20% of wind speed under 10 knots, etc.
  - viii) Maintenance Report – The System shall generate report listing the time and results of daily automatic and/or manual calibration of each NMT. The maintenance report shall also be able to provide the current settings and various parameters of each NMT such as location, coordinates, threshold settings, pca settings, etc.
  - ix) Database Audit Report – The System shall generate report containing edit logs associated with any editing or modifications made to the System databases. The report shall document the nature of changes made, the date and time stamp for the change, any comments made by the authorized user for the change, and the original values of the information that were changed.
  - x) Event Log Report – The System shall provide the capability to enable the Application Administrator to filter and sort the event log and generate a customized event log report.
  - xi) User Access Report – The System shall provide a report on authorized users' access permissions, logins/passwords, and history of past logins into the System.

### **3. Database Query Reports**

- i) In addition to the established predefined reports, the System shall feature an advanced database query or *ad-hoc* reporting capability that generates reports based on customizable User-defined criteria. This shall be a free-form query capability where Users would be able to generate reports identifying the various data fields to be included and by selecting time period(s) and other parameters. The ad-hoc queries or reports created in the System shall belong to the Authority.

The Contractor shall provide additional, custom reports, beyond those reports specified herein when requested by the Authority throughout the term of the contract period. Once the Port Authority identifies the content of the reports, the Contractor shall submit a report proposal that contains a scope of work, detailed labor breakdown, schedule and a cost proposal for approval by the Authority's Contract Manager. The labor cost to provide custom reports shall not be included in the cost to provide the basic System and Services, but shall be compensated in accordance with the provisions stated in Section IX.E. Supplemental Work.

## **IV. General System Design Requirements**

### **A. Overview of Application**

The System shall provide the following:

- Secure access and protection of Authority data against intrusions and internal misuse of data.
- Continuous operations in the event of a catastrophic failure.
- Consistent user interface.
- Interface with external systems through an open systems architecture.

The Contractor shall build the System to comply with the most current version of the Authority's Audit Department's Control Guidelines included in Exhibit 3 and satisfy the checklist therein.

All computing and networking equipment shall comply with the Standards and Guidelines for Port Authority Technology, included in Exhibit 4, unless written approval is received from the Technology Services Department.

### **B. Security Requirements**

#### **1. Data Security**

The System shall provide secured access and protection of Authority data against intrusions and internal misuse of that data. The techniques used to secure access and protect the data shall include, but not be limited to the following:

- Transparent Data Encryption
- Secure transmission of data

- Secure encryption of data
- Strong, best practices password policy
- Record all User logins (both successful and unsuccessful login attempts) and activities

**2. Physical Security**

The Contractor shall provide secured access and protection of the System against unauthorized physical contact to ensure that System operations are never compromised. Only authorized personnel shall be permitted access to the System to perform their designated assignments. The Contractor shall control, monitor and document access to the System and all System components. Protect the System and the building(s) where the System components are located from theft, vandalism, natural disaster, manmade catastrophes, and accidental damage and provide an appropriate environment that is conducive for proper System operation in accordance with the requirements stated herein.

**C. System Architecture**

**1. Redundancy**

The System shall be redundant and configured to provide for continuous operation in the event of the failure of any server or software component. Once implemented, the hardware and application shall continue to operate if one server fails. The System may be designed to automatically failover from the failed component to its secondary counterpart, otherwise, the Contractor shall manually failover from the active primary server(s) to the secondary server(s) within four (4) hours of detection of a hardware failure in any of the system servers.

**2. Diversely Located Secondary/Redundant System**

The secondary/redundant components of the system shall be diversely located, both physically and logically, in an alternate computer site, to ensure continuity of operations in event a catastrophic event adversely affects the site where the primary components are located.

**3. Fault Tolerance**

A fault tolerant computing solution shall be provided so that the system may continue to run upon detection of a communications failure between the central servers and the NMT's. Once communications is restored, the central servers shall upload the field data from the NMT's and resume normal processing.

**4. Web-Enabled**

The System shall be web-enabled to the extent that allows the general public to access various features of the application, such as flight tracking, submitting complaint forms, through a secure, web-enabled interface on normal desktop or laptop computers using standard Internet Browsers in their native operating systems, including, but not limited to, the following:

- Internet Explorer, version 7 (and later)

- FireFox 3 (and later)
- Safari 4 (and later)
- Chrome (all versions)
- Opera 9 (and later)

## **D. Database Requirements**

### **1. Data Ownership**

The Contractor shall propose ownership rights of the data collected by and used for the System operation. The Contractor shall include a detailed description of which data will be owned by the Authority and which data will remain in ownership of the Contractor. The Contractor shall guarantee that at the end of the Contract the data owned by the Authority will be transferred back to the Authority in a usable format specified by the Authority.

### **2. Data Security**

The Contractor shall take all appropriate actions and measures to protect the data from unauthorized access and describe its approach in the proposal. Within 30 days of the end of the contract period including any extension periods, a copy of the data collected throughout the entire time period of the contract shall be provided in a digital format to the Port Authority. Data should be stored in a database which is physically and logically separated from other customers.

### **3. Historical Data**

The Contractor shall transfer 10 years of data (from April 1, 2003 through May 31, 2013) and System shall maintain this historical data in the new System. The historical data shall be available in the new System within thirty (30) calendar days of May 31, 2013. The data, to be provided by Authority in external hard drive in database format, shall include noise monitor readings, noise violations, noise complaints and flight information and tracks.

### **4. Database Replication**

The System database(s) shall be replicated onto the backup application server, (and/or backup database server if a separate server is used), which is located in a different data center for diversity in order to maintain System operation in the event that the primary application server (or primary database server if used) fails without loss of data or user control.

### **5. Data Storage and Archive**

The System shall provide online storage of data for a minimum of ten (10) years of data without any degradation in System performance. For each month beyond the current ten (10) years of storage, the System shall automatically archive the data for long-term storage to a external hard drive, tape or R/W-DVD, and deleted from the online database storage.

**6. Database Backups**

The Contractor shall backup all servers at the hosting facility that are used as part of the application. The backup shall contain all data, application and system files and be performed as follows:

- A full backup of each server shall be performed on a weekly basis.
- An incremental backup of each server shall be performed on a daily basis and backup all files that have changed since the last backup.
- After the commencement of this new Contract, the backed-up data shall be provided to the Authority on a quarterly basis or anytime upon request (i.e. last 3 months of data starting from the date of new contract and so on). The data shall include flight information and tracks, noise monitor readings, noise complaints, noise violations, and weather data. The data shall be provided on a DVD and shall be in an approved database file format, either SQL or Oracle database.

**7. Testing the Restore Procedure**

The Contractor shall verify that system backups can be used to successfully restore the backed up data. The Contractor shall perform the test restore on a single non-critical directory only, not the entire server. When incremental or differential backups are routinely used, the test restore procedure shall incorporate the following:

- Immediately prior to performing the test restore procedure, do a special full backup on the directory being tested.
- Testing a full restore shall only be performed on a non-production server.
- Testing shall be performed, at a minimum, at least annually.
- Test results shall be documented.

**8. Database Setup**

The Contractor shall provide a fully functional system that includes the configuration, data entry and fine-tuning of a database and configuration of the system to meet the requirements of the Contract.

**E. Screen Display and User Control**

The System shall provide critical information on all screens to provide a context for Users of the application (i.e. flight tracking window, noise event window, etc.). Report headings shall be standardized, and shall appear in a consistent manner throughout all presentation formats of the application on both the standard or custom reports.

**F. Access Privileges**

The Contractor shall provide at-least three (3) user accounts with full access to the System and at-least seven (7) user accounts with limited access (i.e. read only access). The primary user or Application administrator must be able to create and reset passwords for all other user accounts.

The System software shall be configured to handle two level of access privileges. The first level shall be for 'System Users' which shall be dependent on access permissions/restrictions as set by the Application Administrator (i.e. read only access, access to only flight tracks or noise event data, etc.). The second level shall provide full system access to a user termed as a 'Application Administrator' including the ability to edit database, add or remove users, create login and passwords for users, grant access to various system modules to users, and allowing read only or read/write access to other users. The System software shall provide the capability to allow the System Administrator to examine, modify and print the list of user access permissions/restrictions and functions associated with each System User.

The default user privileges associated with each access level are defined as follows:

- Level One – System User  
This level will provide users with read-only access to monitor all system data and obtain all reports including standard report and custom reports. User with level one access shall not be able to modify any data.
  
- Level Two – Application Administrator  
This level will provide authorized users with the ability to administer and maintain the application. Level two users shall have the ability to maintain a list of authorized users and their passwords, access to all Level one function and be able to do the following:
  - i. Make operational adjustments to system thresholds and parameters.
  - ii. Examine, modify, print database entries and perform all database maintenance function.
  - iii. Backup and restore the system configuration, libraries, database.
  - iv. Maintain user and password controls and application access permissions.
  - v. Assign user access permissions to different modules of the System such as noise monitoring, noise violation, weather data, etc.
  - vi. Access and maintain the event log.

The Contractor shall provide three (3) user accounts with Level Two access and seven (7) user accounts with Level One access.

## **G. Event Logging**

The System shall record all system activity and maintain the activity log for subsequent reporting. The System shall record all events and changes made by the users. Each record shall contain, at a minimum, the User name, time, and date of the event/activity occurred, and include the event or activity performed. The log record shall include, but not be limited to the following information:

- Log in and log out activity by each user

- All events and changes made by the users to operational data
- All changes made to the setup or configuration
- All equipment failure and restoration

Description for each change shall include the values of the data both before and after the changes were applied.

## **H. Graphical User Interface**

A user-friendly graphical user interface (GUI) shall be furnished that is ergonomically designed to facilitate user operation in an intuitive manner and to minimize operator actions for information retrieval and system operation. The user shall be able to invoke any action or command with no more than three (3) mouse clicks and any additional required data. The user interface shall be designed with streamlined display screens to facilitate easy data entry and general viewing. Navigation tools/menus/keys shall be prominently displayed and provide consistent, easy movement within and between screens.

All control and reporting features shall have a logical hierarchical arrangement to engage the user through such features as pull-down menus, interactive graphics, dialog boxes, or other user-friendly means. The user interface shall prompt the operator with instructions or for additional information when user entry is required. Context sensitive help or another form of on-line documentation for all functions and operations shall be provided.

## **I. System Sizing**

The System shall be capable of supporting the following:

- 10 user licenses including 3 for System Administrators and 7 for System Users
- Maximum of up to 50 NMTs
- New NMTs for SWF Airport in the future, if needed
- Storage for 10 years of flight tracking, noise event, noise violation, and noise complaint online data.
- The website for general public for investigation noise events shall support 1,000 concurrent users with no degradation in system performance or discernable delay.

## **J. Equipment Failure Management**

The System shall:

1. Provide a Failure Management capability that will perform the following functions for the equipment and systems as follows and specified below:
  - monitor system components for equipment failures and when the equipment operation is restored.
  - log an error message, noting the equipment failure, type of failure, location of the failed equipment, time and date the failure occurred.

- Notify the system users of the equipment failure
  - Log a message once the system detects when the equipment is repaired and operation is restored
2. Provide a graphical display to view equipment status on a workstation or as a hardcopy report. This display shall illustrate in a geographically correct manner the location of all field equipment and indicate the failure status of each device.
  3. Provide the User with the capability to search the Failure logs, perform targeted searches, and sort log entries by the following:
    - Time and Date
    - Location or range of locations
    - Type of event, or failure
    - Type of equipment
    - Filter out equipment or failures from report
  4. Flight tracking data - If the download fails or is interrupted, the System shall notify automatically both the Contractor and the Authority's Contract Manager and allow the Contractor to download the data manually.
  5. Noise monitoring data download - If the download fails or is interrupted, the System shall automatically notify, via an email message, to the Contractor and the Authority's Contract Manager and allow the Contractor to download the data manually.
  6. In case of data download failure, the Contractor's technical support team shall identify the possible reason such as power failure or communication device/line failure, etc. and recommend possible solutions via telephone call or email to Authority's Contract Manager. If a site visit is required to troubleshoot then the Contractor shall dispatch its own technician to troubleshoot within the time period as specified in Section VIII.5.c.2.

## **V. General System Performance Requirements**

### **A. General System Performance Requirements:**

The System shall consist of readily available, proven hardware and software elements, which are fully consistent with the System's design and operation as specified. It shall have the throughput, capacity, and availability, as specified herein, to provide the required functionality. It shall meet the performance requirements identified herein and under the maximum loading when all Users, as specified in Section IV.I. System Sizing, are connected and interacting with the System and all System devices are engaged and performing their specified functions, with no loss of data or user control.

At a minimum, the System shall:

1. Update user workstation display within 10 seconds of user action/request if Workstation is connected to the Internet through a broadband Internet connection, except for reports or database queries, animation, and GIS mapping.
2. Use a maximum of 50% of internal random access memory and disk storage in the servers and Workstations.
3. Use a maximum of 50% loading on individual processors under worst case loading when all devices are engaged and all System elements are in operation.
4. Provide the capability for the numbers of users, specified in Section IV.I System Sizing, at different Workstations to access the same application concurrently without any degradation of system performance.

## **B. System Availability**

The System shall be a redundant, fault tolerant architecture with an availability of 99%. The application software furnished and installed by the Contractor shall be designed and built so that the applications software always operates properly on an active server and meet the availability requirement of 99%.

During periods of outages, disruption and maintenance, periodic updates shall be emailed to System Users highlighting the impact to the service. The updates shall include, at a minimum, the following information:

1. Work to be performed
2. Date and Time of Maintenance Activity
3. Anticipated impact on System performance
4. Notification about how the Contractor plans to capture information about the specific activity
5. Timeframe describing the forecasted outage, disruption or maintenance completion time
6. A follow-up message indicating completion of the event and System restoration.
7. A phone number and email address where the User can call or write with questions regarding the activity.

## **VI. Training**

Training shall be provided to maximum of ten (10) Authority users after the System is up and running and in future with introduction of new System features. Refresher training shall also be provided on as needed basis. The location of the training will be at one of the Port Authority's facilities to be determined at a later time.

The Contractor shall provide operation and administrative training for the entire System to designated Authority staff through the means of practical demonstrations, seminars and other related technical teaching procedures. The training program shall be implemented with formal classroom training and/or other forms of presentation as recommended by the

Contractor. The curriculum shall be designed so that trainees shall be trained in the full repertoire of system commands that they may have to use in the course of performing their designated functions. Trainees shall be provided with complete sets of training materials during the training sessions, which they shall retain for use on the job at the completion of training. The Contractor shall complete all training on-site prior to the commencement of the System Inspection and Testing.

The Contractor shall also provide supplemental refresher training on as needed basis, when requested by the Authority's Contract Manager. The refresher training can be provided via teleconferencing and/or web meetings utilizing the training material provided previously.

## **VII. Acceptance and Testing**

### **A. System Inspection & Tests**

After the Contractor completes its integration with existing NMTs, development, internal testing and configuration of its application to meet the contract requirements, the System shall be formally tested in its entirety at an Authority's facility to be determined at a later date. System Inspection & Tests for Phase A are due within ninety (90) days after the Contract award date. The System test must cover testing of all equipment, hardware, networking, software and application functionality. The Contractor shall conduct two tests on the System, one involving the applications and software and second for the NMT installation (when any one of the NMT installation is complete).

The Contractor shall notify the Authority's Contract Manager that it is ready to schedule a System Inspection and Tests. The Authority's Contract Manager has the right to include not more than two additional Authority professionals, who have been deemed the technical and operational experts to assist in witnessing the System Inspection and Tests.

1. Testing shall be performed by the Contractor and witnessed by the Authority's Contract Manager using test procedures submitted by the Contractor and approved by the Authority.
2. Testing shall be conducted with all devices and components integrated as a System with use of real data. Testing shall demonstrate proper System operation in the fully integrated environment to validate the intended function and performance of all field devices and infrastructure components functioning in accordance with the Contract requirements and operating as a fully integrated system.
3. The Inspection and Tests shall be conducted in their entirety in order to demonstrate that every feature and function of the hardware, software, firmware and network components of the System is fully integrated and is in conformance with the Contract documents. Testing shall demonstrate end-to-end connectivity and full functionality of all System components. Testing shall include a stress test to demonstrate that the System meets the performance requirements when processing all devices in the final system configuration.
4. The success (pass) or failure of each test and any detailed test results will be recorded by the Authority's Contract Manager.
5. All hardware, software, network, equipment, external connectivity, licenses and labor required for the test shall be furnished by the Contractor.

6. The Inspection and Tests shall be conducted in their entirety in order to demonstrate that every feature and function of the hardware, software, firmware and network components of the System is fully integrated and is in conformance with the Contract documents. Testing shall demonstrate end-to-end connectivity and full functionality of all System components.
7. The Contractor shall demonstrate that Users can access all features of and control the System from a minimum of two (2) User Workstations simultaneously.
8. In the event of a test failure, the Contractor shall make all repairs or modifications required for passing the test. The failed test shall be repeated, from the point of failure, until the results are satisfactory to the Authority's Contract Manager. Any subsequent planned tests that, in the opinion of the Authority's Contract Manager, are dependent on the satisfactory passing of the failed test shall not be performed until the failed test is repeated and has satisfactorily passed. To demonstrate a satisfactory resolution of a failed test, the Authority's Contract Manager may require that the Contractor perform additional tests. These additional tests shall be made at the expense of the Contractor.
9. If, in the opinion of the Authority's Contract Manager, there are an excessive number of failed tests, the System Inspection and Test shall be halted and the Contractor shall repeat all or part of the Inspection and Test, at the discretion of the Authority's Contract Manager, at a later date.
10. At the conclusion of the test, the Contractor shall submit to the Authority's Contract Manager an acceptance test report for the purpose of verifying and validating the accuracy and integrity of the System as installed. The Port Authority's Contract Manager will review the report and respond within five (5) business days; indicating approval or noting changes required either in the performance of the work or in the report. The Contractor shall make all changes and perform such necessary work as the Authority's Contract Manager's direction.
11. Neither the witnessing of a test by the Authority's Contract Manager, or the waiving of a right to witness a test shall relieve the Contractor of the responsibility of furnishing the System that is in compliance with the Contract requirements. The witnessing of any tests by the Authority's Contract Manager's designated representative, or the approval for shipment of System shall not be deemed as acceptance of the System, the associated hardware, applications, electronics and communications equipment.

Any System malfunction or problems discovered during the testing shall be corrected by the Contractor at no cost to the Port Authority. Problems identified in each test shall be corrected and the percentage of the entire system as determined by the Authority's Contract Manager shall be re-tested before any subsequent testing phase is performed. Acceptance of any test will be the sole discretion of the Authority's Contract Manager.

## **B. Field Acceptance Testing**

In Phases B of the project, as each new NMT is installed and agreement by the Contract manager to initiate testing is received, the Contractor shall conduct a two-part Field Acceptance Test. Initial testing shall be conducted on the stand-alone NMT to demonstrate the NMT and local infrastructure components were installed in accordance with the approved design, provide the contract-required functionality and perform in compliance

with the Contract documents herein. Subsequent to approval of the Contract Manager to continue to the second part of the Field Acceptance Test, the Contractor shall connect the NMT to the approved communications provider and configure the System to commission the NMT for operational usage. The NMT and all associated control, electronics, and communications equipment and the System as a whole shall be tested to show the NMT is fully integrated with the System and complies with the Contract documents.

Testing shall be performed by the Contractor and witnessed by the Contract Manager using the test plan submitted by the Contractor and approved by the Contract Manager. All items and functions of the NMT's, all associated control, electronics, and communications equipment shall be tested in their entirety and all portions of the System that are impacted by the addition of a NMT shall be tested as well in accordance with the Field Acceptance Test procedures. The Contractor shall develop separate test scripts to demonstrate the stand-alone functionality and performance of the NMT's. All portions of the System that are impacted by the addition of a NMT's shall be tested using, at a minimum, all tests and procedures incorporated in the System Inspection and Test that was approved by the Contract Manager. Actual inputs and outputs shall be used for the field test as they become available. Simulated inputs and outputs may only be used in the field test to demonstrate compliance with the Contract documents if the actual inputs and outputs are not available at the time the field tests are being conducted. Said testing shall continue until the results are satisfactory to the Contract Manager. The Contractor shall perform any repairs, construction, or modifications necessary to comply with these requirements.

Subsequent to testing, submit to the Contract manager a Field Acceptance Test Report at the conclusion of the test for the purpose of verifying and validating the accuracy and integrity of the System as installed. The Contract manager will review the report and respond; indicating approval or noting changes required either in the performance of the Work or in the report. Make all changes or perform additional Work as the Contract manager may direct prior to the start of the 14-Day Operational Test for the NMT's.

## **C. 14 Day Operational Test**

Upon notification from the Port Authority's Project Manager of approval of the System Inspection and Test Report and the Contractor's certification that the System is ready for operational testing, an Operational Test phase shall commence for each phase of the project. The Port Authority operating staff with the advice and assistance of the Contractor shall perform the Operational Test during a 14 consecutive day period. During this period, Authority staff will operate the System using the latest version of all applicable manuals, printed guides and procedures.

### **1. Failures during Operational Test**

If there is a major system or component failure during the 14 day Operational Test, the Contractor shall correct any malfunctions as they occur. After the Contractor corrects a malfunction, the 14 day test shall restart, at day one, and shall continue until the System and all associated control, electronics, and communications equipment have operated without interruption or malfunction for 14 days, and the

results are satisfactory, with the written approval of the Port Authority's Project Manager.

**2. Performance Period**

The Performance Period for operational testing shall begin on the date operational testing commences. It shall end when the System has met the 14 consecutive days of operation in conformance with the Contract requirements at the required availability level stated herein.

**D. Submittal Requirements for Testing**

1. A test plan shall be submitted to the Authority's Contract Manager for approval not less than 14 days prior to the proposed start of the System Inspection and Test and shall include, at a minimum, the following details:
  - a. A summary statement of the purpose and goal of each portion of the test.
  - b. The method of testing. Functional procedure, including use of any test equipment.
  - c. Hardware and software used for the test.
  - d. Detailed test procedures that demonstrate that the features and functions to be provided in the furnished hardware and software conforms to the requirements of the Contract.
2. The Contractor shall identify the:
  - a. Steps for each test to be performed.
  - b. Purpose of the test.
  - c. Conditions which exist at the start of each test procedure.
  - d. Conditions/results expected at the conclusion of each test procedure.
  - e. The specification requirement that will be demonstrated by the test procedure.
3. The record keeping document for the testing shall include the following:
  - a. the actual test results
  - b. check boxes for the test outcome (pass or fail)
  - c. dated signatures of both the person performing the test and the Authority's authorized (witness) representative, and
  - d. Comments of the test witness(es).
4. A request to conduct the test shall be submitted to the Authority's Contract Manager for approval, not less than 14 calendar days prior to the proposed start of the test. The request shall include the estimated length of time required to complete the testing and shall include an agenda that identifies when each of the tests are scheduled to be conducted. The Contractor shall submit copies of all user manuals to enable test participants to become familiar with the System's operation.
5. A test report shall be submitted to the Authority's Contract Manager after the completion of the test. The report shall include the signed test document, including all annotations and notes from the actual tests and all failed test reports. The test report shall also state the test results and indicate the nature of any failure(s), the reasons for

the failure(s), what corrective actions were taken and on which units the corrections were made, and a list of any outstanding items.

### **E. Acceptance of the System**

Acceptance of the System, indicating its ability to perform in accordance with the Specifications provided in the Scope of Work, will be determined by the Authority's Contract Manager. Performance of the System shall equal or exceed the Specifications stated for each individual System component or feature. If the System does not perform satisfactorily, the Contractor shall make corrections and modifications and schedule a new acceptance test with the Authority's Contract Manager. Determinations as to the System's compliance with the Specifications shall be at the sole discretion of the Authority's Contract Manager.

## **VIII. Submittal and Documentation Requirements**

Unless specifically stated otherwise, the Contractor shall submit to the Authority's Contract Manager following items:

### **A. General Submittal Requirements**

#### **1. Submittal Review**

Allow the Authority's Contract Manager a minimum of five (5) workdays to review each Contractor submittal and re-submittal. The Contractor is responsible for maintaining the approved schedule even if multiple review cycles are required for each submittal.

#### **2. Submittal Format**

The Contractor shall submit all narrative text or tabular list-based submittals as follows:

- a. No documentation shall be smaller than 8.5" x 11". Document pages shall be numbered sequentially. Revised documentation shall be identified with a version number and revision date on the cover and each page. For all hard copies submittals, bind all 8.5" x 11" documentation, except standard spiral bound materials, in logical groupings in 3-ring loose-leaf binders. Each bound grouping of documentation shall be permanently and appropriately labeled.
- b. Three sets of hardcopy documents.
- c. One set in a electronic format that shall be viewable and easily modifiable with the Microsoft Office 2007 suite of tools.

## **B. Submittal Schedule**

### **1. Project Plan and Schedule**

Within fourteen (14) days after receipt by the Contractor of Contract Award, the Contractor shall submit a Project Plan and Schedule to the Authority's Contract Manager. Elements of the Plan shall include, but are not limited to: overall project implementation plan; installation plan drawings; product installation literature for all primary components of the System, plans and schedule for transferring historical data to the new System; a schedule and plan for the installation of all noise monitoring hardware/devices, computer hardware, development of custom software features and the loading of all software (with emphasis on what precautions shall be taken to minimize disruption of current operations); plans for loading of the initial database, training; and, responsibilities for application administration during installation.

The Project Schedule shall be presented in a graphical format showing when tasks occur, when resources are required, and what task dependencies exist. The Project Schedule shall be of sufficient detail and clarity so that all work can be reviewed and the Authority's Contract Manager can monitor progress. The charts shall indicate a logical sequence of work and identify all dependencies, personnel resources, material, equipment, and work areas required for completion of the work. The Project Schedule shall be submitted both electronically and in hard copy.

The degree of detail shall be sufficient to identify at a minimum:

- a. All activities, tasks and stages of construction, milestones and deliverables as specified both within the Contractor's system development and installation methodology and those specifically identified herein.
- b. All the activities and tasks associated with the development, installation, integration, configuration and preparation of the System and all subsystem components, submittals, testing and training.
- c. Project activities with associated tasks and sub-tasks.
- d. Interfaces and dependencies with preceding, concurrent, and succeeding work effort.
- e. Resources needed and assignments down to the task level for staff, material, and equipment.

### **2. Progress Schedule - Preparation, Updating & Reporting**

The Contractor shall prepare and submit updated progress schedules to the Authority's Contract Manager every other week, with a complete outline of all tasks and activities required for the execution of this project.

The Contractor shall also schedule and conduct regular status meetings on strategic, tactical and operational issues via telephone conference calls no less frequently than on a weekly basis with the Authority's Contract Manager, and other service providers as necessary for resolution of agenda items. At the sole discretion of the

Authority, the frequency of meetings may be adjusted. The purpose of these meetings shall be, (but is not limited) to:

- tracking the status of the work activities;
- reporting on the operational status of the services, infrastructure and communications links and availability of connectivity between the Authority and the Contractor;
- reviewing and reporting on any operational issues;
- reviewing Contractor's invoices for services provided;
- reporting or communicating on all availability of services and the environment directly impacting the Port Authority's services; and
- resolving any disputes.

The Contractor shall produce and deliver to the Authority's Contract Manager, at least 24 hours prior to each status meeting, an agenda that includes a status report listing strategic, tactical, and operational items and issues and the status of each. The report shall at a minimum provide a complete statement of the system's status through performance measure reporting, and indicate progress made on operational, project or task issues or activities during the reporting period.

**3. System Diagrams**

Within thirty (30) days after Contract Award, the Contractor shall submit to the Authority's Contract Manager for review and approval the following detailed system design documentation:

- a. System Block Diagram illustrating the interrelationship between all system components.
- b. Connectivity Diagrams to illustrate the connections among all system components including, but not limited to, the primary and backup application and database servers, workstations, communications network and any proposed external connections. The connectivity diagram shall identify the use of all ports and communications protocols.
- c. Schematic diagrams to show the proposed locations of the equipment that are to be furnished and installed.

**4. Security Practices and Policies**

Within thirty (30) days after Contract Award, the Contractor shall submit to the Authority's Contract Manager a description of all system security features, practices and policies that are designed into the System to protect, control and monitor access to the System and its components (e.g., hardware, software and data) to achieve the security requirements as described herein.

**5. System Documentation**

Within thirty (30) days after Contract Award, the Contractor shall submit to the Authority's Contract Manager for review and approval a detailed description of the products to be furnished for installation as part of the Contract. System

documentation shall include comprehensive and detailed technical descriptions of the System hardware, software, and communications architecture.

**6. System Hardware Documentation**

Within thirty (30) days after Contract Award, the Contractor shall submit to the Port Authority's Contract Manager for review and approval a detailed description of the system hardware. Hardware documentation shall include:

- a. Hardware Specifications  
Complete specifications for each hardware component of the System.
- b. Component Drawings  
Drawings that clearly and completely indicate the function of each System hardware component.
- c. Computer Hardware Requirements  
Provide detailed requirements of the computer hardware that is required by the applications software to satisfy the functional and performance requirements of the Contract. The requirements shall state all computer hardware considerations, and include, at a minimum the computer architecture, processor speed, memory, secondary storage and peripheral considerations.
- d. Commercial Off-the-Shelf Products  
The Contractor shall furnish a complete list of Commercial Off-the-Shelf (COTS) products furnished as part of the Contract. Include the name, manufacturer, part number and material specifications as applicable.

**7. Manuals**

Within thirty (30) calendar days prior to the start of the System Inspection and Test, prepare and submit, for approval, all manuals for the Authority review and approval. A site-specific manual shall also be provided to document the specific site-related configuration and operations / maintenance. Additionally, all Manuals shall be available electronically for local and geographically disbursed Users. All manuals shall be specifically written for this Contract. Pages from the original equipment manufacturers standard operations and maintenance manuals can be referenced in the manuals written for this Contract, provided all of the referenced items are included in the manuals.

**a. Operations Manuals**

A set of Operations Manuals shall be provided that clearly describes all User operations. The manuals shall explain all the features and functions of the System for day-to-day operations and how to use the system to manage more complex situations.

The Operations Manual(s) shall contain detailed description of system operations and procedures on how to perform all user functions, including but not limited to the following: using analytical tools for investigating noise complaints, editing database, entering data into the database, various NMT operations and functions, creating reports both standard and custom, explanation

of various system features and uses, filter and sort the event log, error handling procedures, etc.

The Operations Manual shall be written for intermediate computer users who are familiar with basic computer operations and terms. The Operations Manual shall contain step-by-step procedures with examples containing pictures of the computer screens, explanation of the user interfaces and graphics to illustrate the overall concepts. The manual shall be for instructional, study and refresher use.

**b. Application Administration Manual**

The Application Administration Manual shall include, but not be limited to all sections covering administration of the application, configuration functions, including but not limited to the following items:

- Detailed instructions and procedures for the installation and configuration of the software;
- Detailed description and procedures for configuration of user access privileges and access levels to use of all application functions;
- Detailed description and procedures for the configuration and management of the application and its databases;
- Detailed description and procedures for installing the application software;
- Detailed description and procedures for event logs maintenance activities including downloading, sorting, printing and clearing;
- Detailed instructions on how to manage multiple users accessing the System.

**8. Disaster Recovery Plan**

Prior to the completion and acceptance of the System Inspection and Test, the Contractor shall obtain and submit, for the Authority's Contract Manager's approval, a disaster recovery plan to recover all System components and data operating as part of this Contract, to ensure continuity of operations in case a catastrophic event eliminates one or more of the locations where the System is housed. See Exhibit 5 for Disaster Recovery requirements.

**9. System Security and Audit**

Prior to the completion and acceptance of the System Inspection and Test, the Contractor shall obtain and submit, for the Authority's Contract Manager's approval, SSAE 16 SOC 2 certification of the security policies and practices employed in its System operation which demonstrate that the following protections are provided:

- Physical access to the production environment, stored data, and documentation is restricted to prevent unauthorized destruction, modification, disclosure, or use.
- Logical access to the production environment, data files, and sensitive system transactions, is restricted to authorized users only.
- The production environment is protected against environmental hazards and related damage.

- Regularly scheduled processes that are required to maintain continuity of operations in the event of a catastrophic loss of data, facilities, or to minimize the impact of threats to data, facilities or equipment, are performed as scheduled.
- System hardening measures have been adequately applied to protect the System against risks to which it is exposed.
- Logging of IT security events is enabled for the System, security logs are reviewed in a timely manner, and appropriate actions are taken by Contractor IT staff in response to System security events.
- Routine virus scanning and web application security.

**10. Training**

**a. Training Plan**

Submit to the Authority's Contract Manager for approval, not less than fourteen (14) days prior to the intended start date for training, a Training Plan that includes, but is not limited to the following for each training class:

1. Detailed description of the course curriculum;
2. Draft copies of the course material including but not limited to manuals, study guides, workbooks, technical reference material, etc.;
3. Technique that will be used to provide training to the System Users;
4. Comprehensive schedule for the delivery of all training classes. The schedule shall include the dates, times and exact locations for the training courses. The training courses shall be held at the Authority facility, at a location designated by the Port Authority's Contract Manager. The dates and times shall be coordinated with and approved by the Authority's Contract Manager.

**b. After completion of all Training Courses, submit the following:**

1. One unbound, reproducible master set of all manuals and a copy of each manual in a digital format. These master sets shall include a written non-disclosure and copyright waiver allowing the Authority to make unlimited copies, for its own use, of any copyrighted material within, royalty free, during the term of the Contract.
2. Six (6) bound sets of operations manuals.
3. Six (6) bound sets of Applications Administration and System Administration.

**11. Change Management**

Prior to the completion and acceptance of the System Inspection and Test, the Contractor shall submit procedures that will be performed before attempting to effect a change to any part of the system, whether hardware, software, database or network. The Contractor shall notify the Authority's Contract Manager and seek approval before making any changes to the System.

**12. Database Documentation**

Prior to the completion and acceptance of the System Inspection and Test, the Contractor shall submit to the Authority's Contract Manager for review and

approval a detailed description of the database. Database documentation shall include:

**a. Database Schema**

Database schema is a description of the overall organization of the files and tables to be used in the System. This description shall include an identification of all data files, tables, and fields, and the relationships between fields and tables and demonstrate compliance with the data requirements specified herein. This description shall also include, but not be limited to full details regarding any third party database products including version, release, functional characteristics, operation requirements and any other relevant characteristics of the product.

**b. Data Dictionary**

A listing of all System data elements, including the size, definition, validation rules and other information pertaining to the data elements.

**c. Data Storage Analysis**

The techniques employed to ensure that the System can meet the storage requirements for on-line and historical data and expansion capabilities. The analysis shall include identification of all files (e.g., system, message, report files), databases, and their retention cycles and indicate the accessibility to the data, i.e. whether the information will be available for on-line retrieval or archived in off-line storage.

**d. Data Flow Diagram**

A graphical depiction of the logical processes that comprise the System and an illustration that depicts the data flow as the data moves between these processes. This description shall identify all of the System's functional processes and show the flow from the data's inception to its long-term storage. The documentation shall include data flow diagrams and other necessary documentation to understand how the data is handled and stored.

**e. Entity-Relationship Diagram**

A graphical illustration of the interactions between the various entities for which data is collected in the System that depicts the relationships between the entities and their associated data. This description shall identify all significant System entities (person, object, place, events, etc.) and show the nature of all significant interactions from the data's inception to storage.

**13. Final Versions of the Documentation**

Prior to certification by the Authority that the Contractor has completed all work as specified in the Detailed Project Plan (except for maintenance), the Contractor shall submit all design documentation, manuals, and/or drawings, which have been revised to reflect the as-built conditions. System Documentation shall be provided in both a bound copy and an electronic version in a machine-readable form, which is

viewable with the Microsoft Office 2007 suite of tools. System documentation submittal(s) shall include but not be limited to versions of the System Drawings and System Documentation that have been updated to reflect the as-built conditions.

**14. Annual Calibration Reports**

The Contractor shall provide a detailed report listing the results of annual NMT calibration during the term of the Contract. This report shall be provided within sixty (60) days after the completion of annual NMT calibration.

## **IX. Maintenance of the System**

### **A. Maintenance Requirements:**

Upon certification by the Authority that the System has satisfactorily completed Inspection and Test and that the Contractor has completed all work as specified in the Detailed Project Plan (except for warranty and maintenance), the Contractor shall then provide the maintenance required for the System to perform in accordance with, but not limited to, the following requirements:

**1. Maintenance and Warranty Period**

The maintenance & support tasks identified in this section must be performed:

- Under the warranty period for the system which extends Twelve (12) months from the successful completion of the System Inspection and Test.
- Under the maintenance provisions which starts one (1) day after the one (1) year warranty period.
- Under the warranty period for the new NMTs installed, which start after the successful installation of each new NMT deemed satisfactory by the Port Authority's Contract Manager.

**2. Maintenance and support tasks**

Maintenance and support tasks shall include all expenses (parts, labor, tools, equipment, software, travel, signage, shipping costs, etc.), without additional cost to the Authority, required to perform (but not limited to) the following:

- a. Host, operate and maintain the System in a secure and protected environment in order to meet the functional, performance and availability requirements as defined herein.
- b. On-call remedial and scheduled preventive maintenance in order to meet the availability requirements stated herein.
- c. Provide on-site repair of NMT and associated equipment (existing or new) that cannot be repaired remotely by the Contractor. The Contractor shall dispatch its own technician(s) for any on-site troubleshooting or repair needed to have the NMT in working condition.
- d. On-Call Help Desk Support by telephone during weekdays between 9:00 AM to 5:00 PM (EST) is required, except during holidays observed by the Contractor.

Note: Help Desk Support is intended for User questions on the use of the application and is independent of any notifications made to report errors or maintenance issues with the System or application.

- e. Resolve any problems with telecommunication connection for NMTs by directly contacting the Service provider. The Contractor shall arrange a vendor meet with its own technician if needed for repair to telecommunication connection(s).
- f. Correct defects in the furnished applications software.
- g. Validate and correct (when necessary) the applications software furnished by the Contractor to ensure that it performs in accordance with the specifications of the Contract within ten (10) days after Microsoft and other software providers release patches and updates to the operating system, database and other third-party software that is furnished or used in the System;
- h. User support to administer the application;
- i. System Administration (See Exhibit 6 for the System Administration Requirements);
- j. Update and Test disaster recovery plan on an annual basis.
- k. Provide maintenance and support services for all existing NMT and associated hardware listed in Exhibit 1 until each is replaced.
- l. Provide maintenance support services for all new NMTs and associated hardware installed under this Contract.
- m. Establish spare components and parts levels necessary to maintain optimum level of reliability for the existing NMTs as well as for newly installed NMTs and associated hardware.
- n. Provide parts and labor necessary to keep the existing and newly installed NMTs and associated equipment in good operating condition. Replacement part shall be new or reconditioned parts that meet the original functional requirements, and, upon installation, become the property of the Port Authority. While the replaced parts removed from the equipment will become the property of the contractor.
- o. Monitor the System and its components and effect all repairs to maintain the System and Services identified herein in accordance with Section IX.A.3 Operational Availability.
- p. Provide on-site manual calibration of each NMT unit once per year. All the necessary equipment and tools, including ladders and 40 ft boom bucket truck, shall be supplied by the Contractor.

Note: The Contractor, may, with prior approval from the Authority, elect to subcontract maintenance and support services from qualified third-party service vendors. All subcontractors must be approved by the Authority.

**3. Operational Availability**

The Operational Availability of the System and Services shall meet the percentages stipulated below each calendar month for the term of this Contract:

System Hardware (NMTs)	98%
System Software and Database	99%

As used in this numbered Clause (and in this clause only) "Operational Availability" means the time during any twenty-four (24) hour period the System Software and Hardware is Available to Airport Staff. "Available" means that during any twenty-four (24) hour period, the furnished and installed software applications and any Contractor furnished equipment perform according to the manufacturer's specifications.

In the event that Operational Availability fails to meet the percentage stipulated herein, and is not responded to or repaired within the Service Level Agreement time requirements, damage amounts for unavailability for operation are as specified herein.

**4. Maintenance Work**

The Contractor shall perform complete scheduled preventive maintenance and on-call remedial maintenance so that the System meets the Operational Availability (Section IX.A.3). The maintenance program shall be performed with all reasonable care to keep the System in a proper, safe, and efficient operating condition capable of correct operation and reporting. The Contractor shall furnish all labor, travel, materials, supplies, parts, equipment, warning signs, other safety devices, and all other things necessary or proper for, or incidental to, such maintenance.

The Contractor, at its option, shall repair or replace System components maintaining all original specified performance requirements, within the time(s) stipulated in Section IX.C, Time to Repair, for any part, component, equipment item, software or firmware of the System that become unsuitable for continued use. Replacement parts or components shall be identical to the original, or equal, as approved by the Authority's Contract Manager.

The maintenance performed by the Contractor shall include, but not be limited to, scheduled preventive maintenance, error correction, hardware, software and firmware diagnostics and corrections, validation that the applications software continues to work (in accordance with the Contract requirements) with manufacturer-released patches to third-party software and engineering updates of the System as described below. The Contractor shall submit to the Authority's Contract Manager for review a schedule of preventive maintenance activities and a description of preventive maintenance procedures no less than 30 days prior to the Warranty Start Date and each anniversary thereof. The Authority's Contract Manager will review the submission, and make comments, within ten (10) working days.

In order to make replacements and repairs as expeditiously as possible, the Contractor shall stock, keep and maintain a sufficient supply of parts and materials, tools or other equipment as may be necessary to make such replacements and repairs.

In order to meet the requirements stipulated in Section IX.C, Time to Repair, in this contract, the Contractor shall maintain an adequate number of qualified staff to provide the required technical support.

**5. Maintenance Description**

All maintenance shall be performed in accordance with the equipment and component manufacturers' recommendations. The results from all inspections, tests, diagnostics, equipment repairs, calibrations, and corrective actions shall be reported to the Authority's Contract Manager.

The maintenance performed by the Contractor shall include, but not be limited to on-site maintenance of NMTs, error correction, and software and firmware diagnostics and corrections of the System as described herein.

**a. On-Site Maintenance**

On-Site maintenance includes the following:

1. One annual trip for manual calibration of each NMT that is deployed in the community. During this annual visit, the Contractor shall inspect each NMT and associated component and must replace any part or equipment in need of replacement. The Contractor shall provide all the necessary tools and vehicles required for the calibrations. The schedule and plan for annual calibration must be submitted to the Authority's Contract Manager thirty (30) days prior to the actual calibration date.
2. The Contractor shall be responsible for on-site repair work pursuant to On-Call Remedial Maintenance Requirements in accordance with Section IX.C, Time to Repair. Note: The Contractor shall be responsible for notifying the Authority about malfunction of telecommunication lines and the Authority will coordinate the repair of telecommunication lines through third party provider/vendor.

**b. Scheduled Preventive Maintenance**

Scheduled preventive maintenance shall consist of all actions necessary to inspect, test, diagnose, repair equipment failures, correct System malfunctions and restore System operation to perform in accordance with the manufacturer's stated specification, performance and tolerances. Scheduled preventive maintenance shall include, but not be limited to adjustment, repairs, the replacement of field installable parts that are approaching unserviceable status, all actions necessary to prevent System failures and extend the System's useful life, verify adequate empty disk space available for program usage (i.e., temporary files, logs, etc.), verify log files are saved to removable media and log files are purged on a regular basis, review reports on communications throughput and errors and perform communications diagnostics on each communications channel to identify equipment or cabling problems.

**c. On-call remedial maintenance**

On-call remedial maintenance shall consist of all unscheduled actions necessary to obtain the Operational Availability (Section IX.A.3), diagnose and correct all System malfunctions and failures and restore the equipment in accordance with the manufacturer's stated specification, performance and tolerances and the System to perform in accordance with the Contract requirements. The Contractor shall provide a specified telephone number and FAX number and email address at no additional cost to the Authority, which shall be in operation twenty-four (24) hours a day and seven (7) days per week and staffed only during regular business hours (9:00 AM to 6:00 PM EST, Monday through Friday), to enable the Users to report System errors and malfunctions.

Within twenty-four (24) hours of each reported on-call remedial maintenance problem, the Contractor shall provide written documentation of the reported problem and all actions performed related to the maintenance call in a computer-readable format to Authority's Contract Manager.

**6. Loss of Service**

The Users will notify the Contractor via the 24-hour telephone or fax number or email, described above, when the System does not perform in accordance with the Contract requirements due to a loss of service. The Contractor shall provide support to diagnose, debug, repair, replace and correct all malfunctions or restore lost services required for the System to perform in accordance with the Contract requirements within the time(s) stipulated in Section IX.C, Time to Repair.

**7. Error Correction**

The Users will notify the Contractor via the 24-hour telephone, fax number or email, described above, when the System does not perform in accordance with the Specifications stipulated in the Contract due to error in the applications software (including firmware) or any modifications thereto. Hardcopy documentation of the error condition will be mailed, faxed or emailed to the Contractor. The Contractor shall correct any such error in the System as identified by the Authority or through the Contractor's investigation of the reported error(s). Errors shall include, but not be limited to, flaws in operations and errors due to flaws in the design and coding of the System.

The Contractor shall diagnose, debug, repair, replace and correct all malfunctions required for the System to perform in accordance with the Contract requirements within the time(s) stipulated in this Maintenance Section IX.C, Time to Repair. The Contractor shall provide documentation in machine-readable format, if any, relating to the error correction. The Contractor in an off-line test environment shall test the corrected software. The Contractor shall then prepare a test report and submit it to the Authority for review and approval before the corrected software is installed into the System. Such corrections to the software shall be provided at no additional cost to the Authority.

The Contractor shall repair all software malfunctions maintaining all original specified performance requirements, within the time(s) stipulated in Attachment C, Section IX.C, Time to Repair.

## **B. Time to Respond**

In response to a call for maintenance by the Authority, the Contractor shall acknowledge the receipt of such inquiry within eight (8) hours of the initial notification via an email or a phone call to the Authority's Contract Manager. The acknowledgement shall provide the time expected for a response or resolution to the problem.

## **C. Time to Repair**

### **1. On-Call Remedial Maintenance**

The Contractor shall reply back with a resolution to the problem or status update if more time is needed for a resolution within twenty four (24) hours of the time the loss of service or maintenance request was submitted by the Authority's Staff. If an on-site troubleshooting or repair is needed, the Contractor shall dispatch its own technician to troubleshoot or repair the NMT site within seven (7) business days of the time the original trouble ticket was submitted. Failure to provide on-site repair service within seven (7) business days will result in liquidated damages as described in the Attachment B – General Contract Provisions– 10. Liquidated Damages.

### **2. Validate and Correct Applications Software with Patches and Updates to Third Party Software**

The Contractor shall complete performance of such testing, validation and correction to ensure that the software furnished by the Contractor performs in accordance with the Contract requirements with the released patches and updates within ten (10) business days from the date that Microsoft and other software providers used in the System release patches and updates to fix software defects or security vulnerabilities to the operating system, database and other third-party software that are furnished or used in the System.

### **3. Error Correction**

The Contractor shall investigate System errors to diagnose, debug, test, repair, replace and correct all malfunctions required for the System to perform in accordance with the Specifications stipulated in the Contract within ten (10) business days from the date of notification of System malfunction.

## **D. Upgrades and Enhancements**

The Contractor shall notify the Authority's Contract Manager whenever upgrades and/or enhancements to operating system, the software provided under the Contract or third party software become available and provide a proposal for the proposed enhancement and upgrade. The proposal shall describe the work to be performed, contain a detailed estimate

of the labor involved by labor category, a lump sum price and a proposed schedule for the work, if applicable. The Contractor shall also provide the Authority's Contract Manager with an analysis of the potential effects of such upgrades/enhancements on the System. This analysis shall include, at a minimum, the following:

- Compatibility of the application software with the new operating system or third-party software
- Potential increases or decreases in System performance
- The availability of product support for the current (older) version of the operating system or third party software
- The testing required ensuring that the upgrade will perform as expected
- The cost of the software upgrade, including testing and any other tasks which may be associated with the upgrade

The Authority's Contract Manager will then determine whether to order the upgrade. If the Authority's Contract Manager selects the upgrade, the Contractor shall perform the recommended testing. The testing shall be conducted at the Contractor's facility in an environment designed to support the Authority's site implementation. If there is an incremental cost involved with the System upgrade then this work shall be completed under the Supplemental Work provision of the Contract.

## **E. Supplemental Work**

The Authority's Contract Manager will notify the Contractor whenever Supplemental Work is requested. In response to the request, the Authority's Contract Manager shall submit a proposal that describes the work to be performed, contain a detailed estimate of the labor involved by labor category, a lump sum price and a proposed schedule for the work. The Contractor shall also provide the Authority's Contract Manager with an analysis of the potential effects of the requested supplemental work on the System. Supplemental work may include, but not limited to, design, development and implementation of custom reports, development of new enhanced features to the System, installation of new permanent NMT unit, purchase of new NMT unit(s), etc.

In response to the Authority's Directive, the Authority's Contract Manager shall submit a written proposal that describes the work to be performed, contain a detailed breakdown of the labor involved by labor category, and state a firm lump sum price and a proposed schedule for the Work. The Work expended to prepare proposals is not a reimbursable expense. Labor costs to perform the work shall reflect the unit cost for labor itemized in the Attachment B, Part II - Cost Proposal Tables, accepted by the Authority and made a part of the Contract, for Unit Costs for Supplemental Work. Prior to performance of any Supplemental Work, the Authority's Contract Manager shall approve any such Work in writing prior to execution.

## **F. Hours of Scheduled Maintenance**

Scheduled preventive maintenance of System components shall be conducted between the hours of 8:00 PM and 5:00 AM EST:

## **G. System Administration**

The Contractor shall perform all system administration tasks and functions in accordance with the Contract and best industry Information Technology IT Standards, Guidelines and practices. The Contractor shall be responsible for routine operation of the system, management of the hardware configuration, files and data, diagnosing and effecting correction of all problems that impact system operations. The Contractor shall perform all tasks necessary to assure functioning of the system at the required standards of performance and availability defined herein and in Section IX.A.3 "Operational Availability".

## **H. Disaster Recovery Plan**

The Contractor shall create, review and test the Disaster Recovery Plan in accordance with the requirements stated in Exhibit 5. In the event a catastrophic event causes damage to the System or a portion of the System's components, the Contractor shall restore the System and its operation in accordance with the approved Disaster Recovery Plan.

**ATTACHMENT D - PROPOSER REFERENCE FORM**

Name of Proposer: \_\_\_\_\_

Please provide a list of references on the firm's performance of similar work within the last five years, including all current contracts. Use additional sheets as necessary.

Include the following information for each reference:

Customer Name: \_\_\_\_\_

Address: \_\_\_\_\_

Contact Name and Title: \_\_\_\_\_

Phone and Fax Numbers of Contact: \_\_\_\_\_

Contract date(s): \_\_\_\_\_

Contract cost: \_\_\_\_\_

Description of work: \_\_\_\_\_

\_\_\_\_\_

Customer Name: \_\_\_\_\_

Address: \_\_\_\_\_

Contact Name and Title: \_\_\_\_\_

Phone and Fax Numbers of Contact: \_\_\_\_\_

Contract date(s): \_\_\_\_\_

Contract cost: \_\_\_\_\_

Description of Work: \_\_\_\_\_

\_\_\_\_\_

Customer Name: \_\_\_\_\_

Address: \_\_\_\_\_

Contact Name and Title: \_\_\_\_\_

Phone and Fax Numbers of Contact: \_\_\_\_\_

Contract date (s): \_\_\_\_\_

Contract cost: \_\_\_\_\_

Description of work: \_\_\_\_\_

**ATTACHMENT E - M/WBE PARTICIPATION PLAN**





Office of Business Diversity and Civil Rights

NOTE: The Proposer/Bidder shall submit to the Manager, Line/Facility Dept. Form PA 3749C - MODIFIED PLAN for any changes to the original plan: i.e.; subcontractor, dollar amount or work performed. If more than 1 page is used, complete totals on last page.

PAGE: \_\_\_\_\_ OF \_\_\_\_\_

Purchase Order #: \_\_\_\_\_ Contract Description: \_\_\_\_\_  
 Proposer/Bidder Name: \_\_\_\_\_

Mailing Address: \_\_\_\_\_ Contract Amount: \_\_\_\_\_  
 Telephone Number: \_\_\_\_\_ Contract Goals: MBE \_\_\_\_\_ WBE \_\_\_\_\_

Name, Address, Phone Number of PA Certified M/WBE subcontractor (including name of contact person)	Indicate MBE or WBE	Description of Work, Services to be provided. Where applicable, specify, "supply" or "install" or both "supply" and "install."	Anticipated date work will start and finish	Approximate \$ amount of M/WBE Subcontract	M/WBE % of Total Contract Amount
<b>TOTAL:</b>					

Signature of Contractor: \_\_\_\_\_  
 Print Name: \_\_\_\_\_ Date: \_\_\_\_\_  
 Title: \_\_\_\_\_ Date: \_\_\_\_\_

FOR OBDCR USE ONLY  
 Contract Goals:  Approved  Waived  Rejected  
 Reviewed by: \_\_\_\_\_ OBDCR Business Development Representative  
 Print Name: \_\_\_\_\_ Date: \_\_\_\_\_

## INSTRUCTIONS

**PROPOSER INSTRUCTIONS:** In accordance with Section 6. MWBE Subcontracting Provisions, the proposer shall submit this form as the MWBE Participation Plan and/or good faith documentation as part of Section 8. Proposal Submission Requirements.

**BIDDER INSTRUCTIONS:** In accordance with Part 1, Section 17 of the contract book, the bidder shall submit this form as the MWBE Participation Plan and/or best efforts documentation with their bid to the Procurement Department.

**MANAGER/DESIGNEE INSTRUCTIONS:** After a review of the submitted MWBE Participation plan, forward to the Office of Business Diversity and Civil Rights via fax at (212) 435-7828 or PAD to 233PAS 4th Floor for review and approval. Approved/waived/rejected plan will be returned within 5 business days of receipt of this document. Manager/Designee will advise vendor of the results of the MWBE Participation Plan review.

**EXHIBIT 1**  
**EXISTING HARDWARE**

The Authority currently owns total of 29 noise monitoring terminals (NMTs) consisting of microphones, noise analyzers, and communication devices. Most of the hardware equipment except for TEB NMTs are more than 20 years old and in need of replacement. Each NMT is connected with a telephone landline or broadband internet connection (TEB only) for downloading data. Following table lists the existing NMT inventory by each Airport:

**TABLE 1 – Noise Monitoring Equipment**

<b>Airport</b>	<b>No. of NMT Sites</b>	<b>Brand/Model No.</b>	<b>Status</b>
JFK	6 Permanent 3 Portable	Bruel & Kjaer Model No.: 3597C	Currently Deployed
LGA	2 Permanent 2 Portable	Bruel & Kjaer Model No.: 3597C	Currently Deployed
EWR	3 Permanent	Bruel & Kjaer Model No.: 3597C	Currently Deployed
TEB	6 Permanent	Larson-Davis Model No.: LD831	Currently Deployed
Spare Inventory	- 1 Portable for TEB  - 6 Portable for JFK, LGA, & EWR  - 2 Handheld Sound Level Meters	- Larson-Davis Model No.: LD831  - Bruel & Kjaer Model No.: 3597C  - Bruel & Kjaer Model No.: BZ7126	In Storage

Notes:

- 1) Portable NMTs are temporarily located in communities surrounding the airport and subject to be removed or rotated after a certain time period.
- 2) All B&K NMT units were acquired about 20 years ago while L&D NMTs for TEB were acquired about 2 years ago. TEB monitors are not being requested to be replaced in the new Contract.
- 3) Currently all existing NMT units communicate via telephone line.

**TABLE 2 – Computer Systems**

<b>System Name/Function</b>	<b>System Components/Brand</b>	<b>Location</b>
PC MON – Data Acquisition System / Acquires ATC Communication on multiple radio scanners	- Optiplex GX1 450 MHz Pentium III, 128 MB RAM, 10 GB EIDE HDD / Dell - 15" Monitor / Dell - Digiboard, Digi PC/8 ISA, (PC MON) / Digiboard - Digiboard Cable, RJ45 Connector / Digiboard - UPS (3 ea) Batteries Excluded / APC - Modem, 56K, External (5 ea) / US Robotics - Radio Scanner (10 ea) / Bearcat Uniden - Smart Antenna / Acutime - 2 Port KVM Switch (2 ea) / Cybex - PS-2 Cable Set (4 ea)	TEB Airport

DVR / Digital Voice Recorder	<ul style="list-style-type: none"> <li>- Pentium III 1.0 GHz, 256 MB SDRAM (2 x 128 MB), 60 GB IDE HDD (3 ea), Windows 2000 OS, Mouse, Onboard NIC, 48X IDE CD ROM / Dell</li> <li>- 8 Port Loop Start PCI Voice Card (2 ea) / Brooktrout</li> <li>- PC Anywhere / Symantec</li> <li>- KVM Switch, 4 Port / Avocent</li> </ul>	TEB Airport
TRACON – ARTS IIIE Gateway #2 / Acquires ARTS flight track data from FAA and transfer to NOMS System Vendor	<ul style="list-style-type: none"> <li>- Optiplex GX150 Pentium III 933 MHz, 256K Cache, 128 MB SDRAM (1 DIMM), 40 GB ATA HDD, Windows 2000 OS, Zip 250 MB, 17” Monitor / Dell</li> <li>- Modem, 56K / US Robotics</li> <li>- UPS / APC</li> </ul>	FAA TRACON Facility in NY

## ***Web Based Application Checklist***

### Web Environment Controls

- Network Architecture:
  - Ensure firewall hides the structure of the internal network.
  - Ensure outside traffic is filtered by the external firewall, and should be allowed to access the DMZ with only those services that are required (i.e. HTTP, HTTPS, FTP)
  - Ensure that all traffic passing between the internal and external networks pass through the DMZ.
  - Intrusion Response Controls Intrusion Detection/Prevention:
    - Use intelligent IDS (intrusion detection system) or IPS (intrusion prevention system) to detect or block DoS (denial of service) attacks.
    - Prepare an intrusion response strategy and document and test policies and procedures to respond to intrusions in a timely manner and eliminate potential errors, and omissions.
- Hardening of Host/Operating System:
  - Disable unnecessary ports/services
  - Remove all sample sites from the box
  - Change all default passwords; delete all default content and scripts.
  - Limit user account access.
  - Follow PA password standards (i.e. 90-day expiration, minimum of 6 alphanumeric characters, lock account after 3 incorrect passwords)
  - Set “automatic session logout” to 15 minutes of inactivity and require user to log back in with a valid ID and password.
  - Implement access control at the database level (i.e. user roles and permissions, passwords, secure links)
  - Apply all new patches and fixes to operating system and application software for security.
  - Use secure and encrypted remote access methods.
  - Log (and monitor) web traffic and trend the activity looking for abnormal activity.
- Directory Structure for Web Server:
  - Use separate directories, partitions or disk locations for web server logs, contents, scripts and other information vs. system directories and user information. In addition, use a single directory exclusively for all programs executed as part of web server content
- Web Server Security Related Configuration Settings
  - Block an IP if there are numerous requests for the URL to prevent a possible attack. (IP scan)

### Web Site Management Issue

- Use certificates on the site. So users can confirm they are on the right site.
- A formal “content management” process (and supporting tools) should be in place to provide change controls, approvals, version controls, and security over changes to web site content to prevent unauthorized changes.
- Validate links periodically to identify dead or misdirected links for correction
- Ensure compliance with Payment Card Industry (PCI) Data Security Standard (DSS) Requirements (e.g. Visa, Master Card, etc).

## ***Web Based Application Checklist***

- Systems monitoring should be in place for the server and other relevant devices including the use of automated systems management tools.
- Backups of the website including web server configuration files, static content files, script directories and etc. regularly.
- Secure application, logs, encryption keys, certificates and passwords on the production box. If possible move them to another secured or restrict access to administrators only.
- In the System Development Life Cycle (SDLC), ensure that there are application development and coding standards.
- Legal Issues:
  - The site should have a privacy statement and term of usage.
  - American Disability Act – Section 508 should be consider during the development process due to the requirement that federal agencies' electronic and information technology is accessible to people with disabilities.
- Web Authentication: To prevent passwords from being passed in the clear, have authentication occur within an SSL encrypted tunnel. Use SSL (certificate) to protect the password.
- Access Controls:
  - Ensure that separation of duties occur at the two levels of access control for web applications: Functional access controls (URL –based) and Data-level access control (handled within application)
- Password Reset:
  - For internal applications, reset passwords via the helpdesk or security administrator of the site
  - Send forgotten password to known e-mail address or via customer service screens after the user has been validated for customer service application.
- Conduct regular audits, vulnerability testing, security scanners and MD5 hash comparisons of the production site. (MD5 – An algorithm that produces a checksum that is revalidated to detect any modification to sensitive hidden form fields, files, directories, etc.)
- All sensitive or confidential data (including passwords, session IDs for sensitive applications, confidential or sensitive business transactions, etc.) should be transmitted between browser and server within an SSL-encrypted session.

### *Web Application Vulnerabilities and Controls*

- Best Practice and Standards:
  - The Open Web Application Security Project (OWASP) - [www.owasp.org](http://www.owasp.org)
  - [www.webappsec.org](http://www.webappsec.org) (a consortium of web application security professionals)
  - Center for Internet Security (CIS) – [www.cisecurity.org](http://www.cisecurity.org)
- Sessions IDs:
  - Ensure sessions IDs are difficult to spoof/guess.
    - Session IDs should be long (at least 30-40 digits for secured applications) and contain alphanumeric characters
    - Session Ids should be unique, random and non-predictable.
    - Session Ids should expire after a reasonable time limit (1-3 hours) or for inactivity (10-15 minutes)

## **Web Based Application Checklist**

- Ensure session IDs are negotiated whenever a user crosses a secured boundary (from an unsecured to a secured portion of the site)
- Ensure session IDs are transferred only within an SSL session.
- Cookies:
  - Session cookies should be assigned randomly (non-sequential).
  - Ensure that session cookies/tokens are non-persistent and are not written to a user's browser history or cache. Use a server-based session cookie/token.
  - Ensure session cookies expire and are removed from the server for elapsed time (30 minutes-2 hours) or inactivity (10-15 minutes)
  - Invalidate the session cookie/token on the server when the user logs out or leaves the site.
- Use the Post HTTP Methods to transfer information from the browser to the server.
- Preventing Hacking Reconnaissance:
  - HTTP Status Error Codes should be monitored.
  - Never use default names for directories, (e.g document root, CGI directories, etc.)
  - DNS (Domain Name Services) zone transfer – Ensure default names are changed because these are keywords hackers are searching, (e.g. “gateway”, “firewall”, and “proxy”).
- Store User dependent Data in a Session table:
  - Whenever possible, only the session ID should be stored on the browser and sent with each request
  - All other user-specific and session-specific variables should be stored on the server in a session table.
- Perform data validation & integrity checks for field values and ensure the HTML special characters are stripped for all HTML request.
- At a minimum, applications should strip all (HTML) meta-characters (e.g. <, >, &, etc.), including OS and related SQL meta characters, from user input.
- Restrict the use of the hidden fields.
- Ensure that ID, passwords and system comments are not be included in scripts and pages.
- Ensure the application will not process SQL commands from the user browser
- Do not allow site pages to be cached by user browsers.
- Error Messages:
  - Applications should trap all specific system error messages, especially those from other infrastructure components that reveal information about the application internals.
  - Ensure that only generic messages with little to no information content should be sent to the user's browser.

## **Audit Department Controls Requirement Contract Checklist**

### **General**

- Documented procedures, flowcharts and process maps for the application.
- Conduct regular audits, vulnerability testing, security scanners.
- SSAE 16 (previously known as SAS 70 Level 2)
- ISO27001 Certification
- Physical access to the application hardware should be appropriately restricted.
- The application should have a warning banner, terms of use, and/or privacy statement that was approved by the PA Law Department on the login screen.
- Remote access should be restricted and documented in accordance with PA policy.
- Background check should be performed on all personnel.

### **System/Security Administration**

- Administrative personnel should receive adequate training.
- System and security administration procedures should be documented and distributed.
- Administrator(s) roles and responsibilities should be documented.
- Developers and/or programmers should not have access to the production server.
- Operating system administrators should not have access to the production database and application.

### **Hardening of operating system/database that supports the application:**

- Disable and/or remove unnecessary ports/services.
- Remove all sample from the box.
- Default, public, and guest accounts should be secured/locked/removed.
- Change all passwords; delete all default content and login scripts.
- Limit administrative and user account privilege and access.
- Document system accounts like administrator, root, oracle, and sys.
- Document user/group access rights
  - Users/groups should be setup with least access required to perform job responsibilities.
- Follow PA password standards or better (90-day expiration, lockout after 3 incorrect password attempts, no concurrent logins, 6 alphanumeric characters)
- Set “automatic session timeout” to 15 minutes of inactivity and require user to log back in with valid ID and password.
- Implement access control at the database level (i.e. user roles and permissions, passwords, secure links)
- Use secure encrypted remote access methods.
- If the application is a web application, log (and monitor) web traffic and trend the activity looking for abnormal activity.
- Ensure that appropriate security and vulnerability assessment tools are running.
- At login, last user login should not display.
- Inventory listing of hardware and software should be current and maintained.

### **License Management**

- Ensure that application licensing requirements are documented, reviewed and maintained.
- Application licenses should be current/valid and individuals/groups with application access should have completed the necessary access request forms and adhere to licensing requirements.

### **Logical Access Controls**

- Procedures to grant/modify/delete access should be documented.
  - Access request forms for adding/modifying/deleting users should be used.
  - Account expiration for contractors and consultants.
  - Accounts adequately identify the user – no generic accounts
- Ensure that security administrator procedures exist to:
  - Create/remove application access in a timely manner
  - Review user roles/permissions
- Validate that all users have accessed the application within the past 90 days.
  - Review dormant accounts
  - Inactive accounts should be removed.
- Each user has a unique user ID as described in the Port Authority Standard and Guidelines.
  - All user accounts profile should include Employee ID# and full user name.
- Roles should have a segregation of duties/roles.
  - Roles are setup with least access required to perform job responsibilities.
- Access Control List (ACL) should include:
  - Current list of ACL
  - Creation and updates to ACL
  - Testing and approvals of ACL
- The application should have the PA's warning banner on the login screen.
- Remote access should be approved, secured, and documented in accordance with PA policy.
- Encryptions level at a minimum should be AES 256bit when encryption is used.

### **Password Controls**

- Ensure that password controls for the application are consistent with PA requirements
  - Passwords must be at least 6 alphanumeric characters long
  - Passwords must be changed every 90 days
  - Passwords must not be shared
  - Accounts should be locked after a three logon failures
  - Passwords should not be the same account name
  - No concurrent login capabilities
- Password file should be securely stored with limited access and encrypted.
- Application forces initial passwords to be changed and the initial passwords should not be easily guessable.
- Maintain a password dictionary and password history should be set to 5.

## **Application Controls**

### *Data Validation & Input Controls*

- The application should have input controls to verify the validity of the data entered.

### *Data Retention and Management*

- All data should be classified according to its sensitivity (confidential, etc) and protected accordingly.
- Data archive strategy should be documented and in place.
  - Should specify how long active data is kept.

### *Data Integrity and Security*

- Sensitive data, such as credit card #s and social security #s, should be encrypted.
- Data should be restricted and audit trails should be available to identify all user activity include view access to sensitive data.
- Data should be stored in the database encrypted and blocked from user views in the application unless it is authorized.

### *Application Interfaces*

- Interface file should be secured and archived.
- Reconciliation of data should be done on a batch record and totals. Detail data reconciliations should be completed on periodic basis.

### *Processing Controls*

- Application databases/interfaces should have the necessary controls to prevent processing of inaccurate, duplicate, or unauthorized transactions and producing inaccurate outputs.
- Controls to ensure that all data is processed and accounted for should be in place.
- Rejected items should be logged, tracked and resolved in a timely manner.

## **Change Management**

- Processes and tools should be used to report, track, approve, fix, and monitor changes on the application.
- The application and all changes to the application should be tested before being put into production.
  - Documentation of approval for change and evidence of testing should be in place.
  - Specific timetable/schedule should be documented.
- Emergency procedures should be documented and distributed.

## **Application Logging, Audit Trails and Record Retention**

- Audit trails for operating, application, and database systems should exist and reviewed.
- Users and roles should be tracked and reviewed
  - Maintain documentation
- All failed logon attempts should be logged.
- All sensitive transactions and changes should be logged and an audit trail created.

- Audit trails should contain who made the change, when it was made, and what was changed.
- Only the security administrator should have access to change or delete these logs or audit trails.
- Audit trails should be reviewed by the business owner(s) and security administrator.

### **Management Reporting**

- Management reporting should be produced through the application.
- Transaction logs should be maintained and reviewed periodically.
- Access reports by user and privilege should be produced and reviewed periodically including access violation reports and exception transaction reporting.

### **Contingency Planning, Disaster Recovery and Backup Management**

- A business contingency plan and a disaster recovery plan for the application should be documented and stored off-site, including escalation plan and current call tree.
- Plans should be tested and the outcomes of the tests (success/failure) should be documented.
- Regular backups of the application and the application data should be stored off-site.
- Application executables should be stored off-site or in escrow.
- Application configurations should be documented and backed-up.
- Full system backup should be encrypted.
- Backup procedures should be documented.
- Tape maintenance should include:
  - Periodically testing integrity of tape
  - Procedures for tape destruction due to faulty or scratched hardware.

### **Performance Monitoring**

- Incident monitoring procedures should be documented and incidents logs should be reviewed to ensure that appropriate action is taken.
- Performance statistics should be examined and reviewed periodically by system administrators/business owner(s).
  - If vendor(s) support the application, a vendor contract and service level agreement should be in place. The SLA should have provisions for uptime, performance monitoring, updates, etc.
- Baseline tools or security products should be used and checked on a quarterly basis.

### **Patch Management**

- Patch management procedures and documentation
  - Procedures should include testing, approvals, and distribution.
  - Documentation should include emergency procedures.
- Apply all new patches and fixes to operating system and application software for security.

### **Physical Protection**

- Physical access to the application hardware should be appropriately restricted.

- Physical access secured by single authentication mechanism i.e. swipe card.
- Physical security adequate for equipment (locked cabinets).
- Appropriate fire suppression systems should be in place.
- Environmental condition adequately controlled (no water, dirt, clutter) and monitored.
  - Temperature and humidity monitoring should be implemented.
- Security cameras installed in sensitive areas
- Power surge protection and emergency power backup are in place.

### **Anti-virus Management**

- Virus patch management procedures should be documented, including emergency update procedures.
- Virus software should be implemented and up-to-date.
- An engine and definition management should be in place.
- A remote distribution server should be implemented
  - Documentation on remote distribution should be current and maintained.
- Intrusion detection system should be in place, including incident response procedures.
- Firewalls should be implemented
  - Firewall rules documentation should be up-to-date.

### **Wireless Device**

- Devices should be using WPA/WPA2 and AES encryption or better.
- Devices should disallow broadcasting of the SSID.
- All default parameters should be changed.
- Devices should have MAC address filtering enable or some type of authentication mechanism in place.

### **Web Application Vulnerabilities and Controls**

- Best Practice and Standards:
  - The Open Web Application Security Project (OWASP) - [www.owasp.org](http://www.owasp.org)
  - [www.webappsec.org](http://www.webappsec.org) (a consortium of web application security professionals)
  - Center for Internet Security (CIS) – [www.cisecurity.org](http://www.cisecurity.org)
- Perform data validation & integrity checks for field values and ensure the HTML special characters are stripped for all HTML request.
- Do not allow site pages to be cached by user browsers.
- All sensitive, personal or confidential data (including SSN, passwords, session IDs for sensitive applications, confidential or sensitive business transactions, etc.) should be transmitted between browser and server within an SSL-encrypted session (or other encrypted transmission) and are encrypted in the database at rest.
- All sensitive and personal data should be masked and encrypted where possible.
- Legal Issues:
  - The site should have a privacy statement and term of usage.
  - American Disability Act – Section 508 should be considered during the development process due to the requirement that federal agencies' electronic and information technology is accessible to people with disabilities.

- **Web Authentication:** To prevent passwords from being passed in the clear, have authentication occur within an SSL encrypted tunnel. Use SSL (certificate) to protect the password.
- **Password Reset:**
  - For internal applications, reset passwords via the helpdesk or security administrator of the site
  - For external applications, send temporary password to known e-mail address, that must be changed upon login and/or
  - Have customer service reset after the user has been validated.
  - If possible, use two factor authentication like Secure ID fobs.

### **Credit Card Processing Checklist**

- PCI Standards should be enabled and be PCI compliant. Ensure all vendors and consultants are required to be PCI compliant. Attachment - PCI DSS v1-2
- A segregated network and/or an approved Point of Sale terminal should be in place for the system or terminal used to process credit card transactions.
- The credit card processor standard and requirements should be enabled, i.e. maintain transaction data for two years.
- Maintain the security of the customer information, including not storing credit numbers, the cardholder CVC/CVV numbers or any of the data from the magnetic strip on the credit card.
- Maintain the transaction data for contesting chargebacks, ensure that the processor fees are appropriate and do reconciliations of the transactions processed and the money deposited in the Port Authority bank accounts.
- Make Treasury (Cash Mgmt) and Comptroller's (Revenue Accounting) aware credit card processing. Have Treasury fill out the Merchant form to get a Merchant ID for MasterCard/Visa, Discover and American Express.
- Have Treasury and Procurement enter into an agreement for credit card processing.
- Create a privacy policy and procedure for staff and consultants.
- Perform quarterly vulnerability scans of the network that contains the credit card processing, annual PCI reviews according to the PCI DSS, and annual system penetration testing.



**THE PORT AUTHORITY OF NY & NJ**

# Standards & Guidelines

## for Port Authority Technology

(for distribution in RFP's)

Technology Services Department

Version 7.2  
March 25, 2010

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## **Introduction**

The purpose of this document is to communicate the standards established by the Technology Services Department (TSD) and provide guidance in proposing IT solutions for the Port Authority of New York & New Jersey (PANYNJ), the Agency.

To that end, these guidelines are intended to help RFP Submitters do the following:

- Implement computing and networking solutions that ensure the utmost reliability, availability and security.
- Procure hardware and software that advances current and mandated business needs and enables departments to work with other departments/offices more effectively.
- Easily and efficiently communicate and exchange information throughout the agency.
- Achieve greater systems integration through leveraging and building upon standardized infrastructure and facilitating systems management.
- Adherence to these standards ensures that IT investments achieve Enterprise connectivity, interoperability, consistency, and will enhance performance in a cost-effective way.

## **1.0 The Port Authority Wide Area Network (PAWANET)**

### **1.1 PAWANET Overview**

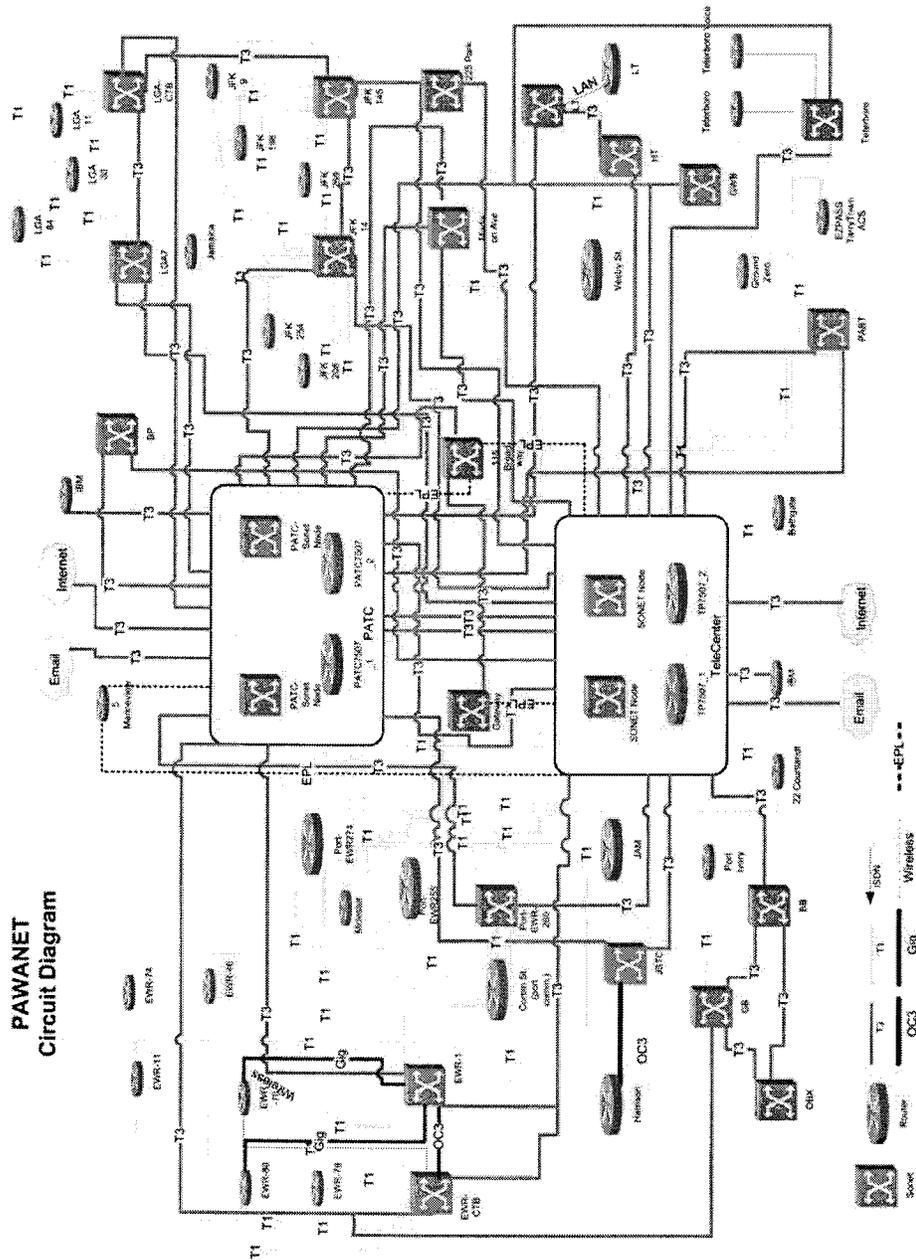
The Port Authority has a modern distributed computing network, called the Port Authority Wide Area Network (PAWANET), which is managed as an Enterprise resource. It connects all the various Port Authority facilities and transportation systems using high-speed voice, data, and video lines or links.

This network is crucial to all Port Authority businesses because it provides the connections for applications such as e-Mail, Internet and Intranet access, SAP, PeopleSoft, Electronic Toll Collection, CADD, Lease Image, Closed Circuit Television (CCTV) surveillance systems, and in the future, videoconferencing, and more.

PAWANET consist of a Managed Fiber Optic SONET network, provided by Verizon Select Services. This network consists of two dual OC48 SONET Rings that connects key Port Authority facilities, and intersects the Port Authority's two Data Centers. High-speed DS1, DS3, and Resilience Packet Ring (RPR) links are allocated on this network to form PAWANET's Wide Area Network (WAN) topology. Additional high-speed Ethernet Private Lines (EPL) has been deployed to support Key Port Authority's off-ring facilities. Remote nodes are linked using high-speed dedicated communication lines. Alternate high speed dedicated communications lines and high-speed dial up communication links (ISDN Lines), provide back up paths should the primary links fail.

The network consists of state-of-the-art Cisco Systems equipment and services, such as, high performance Cisco Catalyst switches and routers. The Port Authority use Cisco Systems SMARTnet hardware/software maintenance services, and Cisco's Technical Assistance Center (TAC) to support and maintain the network.

## 1.2 PAWANET Circuit Diagram (Note: IGXs are no longer in the network)



Remote nodes are linked using high-speed dedicated communication lines. Alternate high speed dedicated communications lines and high-speed dial up communication links (ISDN Lines), provide back up paths should the primary links fail.

### **1.3 Inter-site Services Providers**

The Technology Services Department (TSD) has contracted with a variety of companies to provide inter-site services. Companies providing communications services for the Wide Area Network are listed below.

- AT&T Local Services
- Verizon

### **1.4 PAWANET Functions**

Currently PAWANET provides the following functions:

Data	Supports the low and high volume transfer of data used for applications, such as SAP and PeopleSoft, and for network communications, such as e-Mail. Provides a data path for off-site, data backup of file, print and application servers. Enables the use of Storage Attached Network (SAN) for network storage of user files and routing jobs to shared network printers.
CCTV	The transfer of Closed Circuit TV (CCTV) data is supported across the entire network to provide security for the Port Authority's key facilities.
Voice	The network provides the hardware capabilities for voice transmission for future implementation.
Videoconferencing	The network switches and transmission lines are capable of handling videoconferencing to support the agency's future needs.

### **1.5 Features of PAWANET**

PAWANET provides a high performance and reliable fail-safe communications network. These are its key features:

- Alternate paths of communication
- Support of high volume traffic such as CADD, CCTV and others
- Catalyst 3000, 4000 and 6500 switches at all the major sites, and at the Teleport.
- Cisco high performance 2000, 7200 and 7507 router family products with redundant power supplies.

### **1.6 Supported Protocols**

The network supports the following network protocols, allowing dissimilar platforms to communicate within PAWANET:

TCP/IP:	TCP/IP is the universal protocol that allows communications between all systems within the Port Authority's network, as well as other networks.
IPX/SPX:	This protocol allows communications between all Novell platforms.

SNA/SDLC This protocol allows communications between all IBM systems and other systems that support SNA.

### **1.7 PAWANET Switches and Routers**

The current standard switches and routers used on PAWANET are:

- Dual SONET OC48 Rings that connects key Port Authority facilities and data centers.
- Cisco 7200 high performance routers  
Provide high-speed connectivity and routing capabilities across the ATM network in support of TCP/IP, IPX/SPX and bridging functions and provides routing capabilities for Port Authority Internet access.
- Cisco 7500 series high-capacity redundant routers  
Serve as the -network backbone core router that provides high speed routing functions between the, Teleport, Port Authority Technical Center and all PAWANET connected facilities as well as the IBM mainframe. Also provide high-speed connection and routing capabilities to the disaster site for data recovery in the event of a catastrophe.
- Cisco 2000 series medium capacity routers  
Provide high-speed connectivity and routing capabilities to the Port Authority's remote locations.

### **1.8 Approved Servers**

IBM File/ Print/ Application and NEC Express 5800 series servers may be connected to PAWANET. The use of VMware's ESX virtual infrastructure is also an approved configuration, Specialized servers (e.g., appliances) to support a specific line department application will be reviewed on a 'case-by-case' basis.

Replacement server must conform to the category listed above. Deviation from this policy will not be allowed without prior approval of the Chief Technology Officer or her/his designee.

### **1.9 Enterprise Addressing Scheme (including IP addressing)**

The Port Authority's Enterprise network is a TCP/IP Class B network allowing for a maximum of 255 subnet assignments. Subnets are assigned on a geographical basis according to the number of resources required. Workstations are configured for dynamic assignment of IP addresses via Dynamic Host Configuration Protocol (DHCP).

### **1.10 Enterprise Network Monitoring Software**

The Port Authority continually monitors its WAN and the availability of its links. To provide for real time monitoring, the following software utilities are used:

- HP Open View Network Management software
- Cisco Works for Switched Internetworks

## **2.0 Network Resources**

### **2.1 Network Overview**

The Port Authority has a modern distributed computing network, which is managed as an Enterprise resource. The network connects all individual PCs, servers, printers, and other devices in a unified computing infrastructure that makes it possible for the Port Authority to conduct its business.

The Enterprise Network consists of the PAWANET (see Section 1.1) and connected Local Area Networks (LAN's). The line of demarcation between the cable and wiring which is the responsibility of the carrier and the Port Authority's area of responsibility is usually a wiring closet. The Port Authority's Enterprise Network consists of the following components on the Port Authority side of demarcation:

- Enterprise Devices
  - Cabling
  - Routers
  - Switches
  - Wiring Closets
  - Communications Equipment Racks
  - Server Racks
  - File and Print Servers
  - Application Servers
  - Storage Area Networks (SAN)
  - Network Printers
- LAN Devices
  - Desktop PCs
  - Workstations
  - Laptops
  - Local Printers
  - Scanners
  - Copiers
  - PC Peripherals

### **2.2 Enterprise Network Architecture**

The Port Authority operates an extensive network of Enterprise file, print and application servers. These devices are linked to an Enterprise Wide Area Network. The

flexibility provided by the use of multiple servers, server clusters and Storage Area Networks (SAN) offers users improved network response, greater reliability, increased data security and reduced operating cost. Adherence to the standards outlined in this section allows the Port Authority to manage their systems, applications and data in a way that best meets our business needs while maintaining interoperability and safeguarding Port Authority's information assets.

### 2.2.1 Operating System and Software

All Enterprise File & Print services in the Port Authority are currently based on the Novell Netware 6.5 operating system (the agency will be migrating to Microsoft networking services during Y2010). Microsoft Windows 2003 and 2008 servers (Standard and Enterprise) are the primary operating system in use. Sun Solaris is also supported as application servers and only when required for functionality. In addition to the base operating system, all servers must include the following components:

- Virus Protection (minimum: McAfee Engine 8.5.0i, with current DAT files)
- Network Security
- Remote Monitoring and Management
- Intrusion Detection
- Systems Backup (minimum: Upstream 3.5.0c)
- Uninterrupted Power Supply (If central UPS is not installed at the location)
- Current Service Packs and security patches (minimum: SP1)

Note: All operating system and server software will be provided by the Technology Services Department.

### 2.2.2 Configuration

All network devices—including servers, workstations, network printers, and network faxes—must use IP addresses which conform to the standards outlined in sections, 1.9 *Enterprise Addressing Scheme*, and 2.3.1, *Server Names*. All servers will be configured using the following parameters:

Base Configuration:

- C: (OS Drive)                      Minimum 25 GB
- D: (Application Drive)        Minimum Based on Application's space requirements
- IP Protocol

#### 2.2.2.1 Drive Mapping Conventions and Organization

Mapping of workstation drive pointers to SAN or server disk volumes or folders is currently accomplished through a Novell NetWare Login Script or the Microsoft equivalent. The following drive letters are reserved for Novell installations:

Pointer	Volume or Folder
---------	------------------

H:	Novell login (first network drive)
M:	Reserved
P:	Public Applications
Q:	Installation and Upgrade Utilities
S	Departmental shared directories and files
T:	Reserved
U:	Users Private Home Directory
Z	Novell system files (Search mapping)

- Public (Shared) application software installed on file and print servers, or server cluster must reside on a separate volume named "APPS".  
Example: P:\APPS
- Each software application installed on file and print servers, or server cluster, must have its own sub-folder.  
Examples: P:\APPS\EXCEL  
P:\APPS\LOTUS
- SYS volume must be used for operating system and support software only.
- Shared Data stored on file and print servers, or server cluster, shall reside in a volume named Data, and shall be mapped to the "S\" drive pointer.  
Example <Server\_name>:\DATA\SHARE on a single server  
<Cluster\_name>:\DATA\<Department\_NAME>\SHARE on a server cluster
- Each Department's SHARE folder will contain at least three sub-folders titled Org, Everyone and Projects.
- The Projects folder is provided for storage of project related files. All departmental projects will be kept in a sub-folder under the Projects folder and the folder will be named using the same name as the project. User rights will be assigned by a group having the same name as the project folder. Only colleagues requiring access to the project files should be granted rights to that project folder.
- Under the Projects folder will be two additional folders, one called "Active" and one called "Completed". Active projects reside in the "Active" folder.
- When staff identify a project as being completed, the project folder will be moved to the "Completed" folder and all rights, except for "Read" and "FileScan" will be removed from the folder. This will ensure that the final project documents remain unchanged, while still allowing authorized staff to review the old documents and use them as templates for new documents if desired. The "Completed" folder will be set to archive its data.
- Under the "ORG" folder will be subfolders with names corresponding to the various divisions within the department. By default, only staff within a division will have access to a division's folder. These folders are intended to hold data for a specific division that would not normally be shared departmentally. Staff from other divisions would not have access to these folders unless the division manager of the

owning division gives their approval. Having folders setup by divisions will simplify the process of identifying who is responsible for the contents of a folder.

- The “S” and “U” drives should only be used to store business related files.
- The Systems Administrator, at the direction of the Director, may from time to time remove any data deemed to be non-business related.
- A folder called “Everyone” will be created in the Share folder. All staff in the department will have full access to this folder to store and retrieve files that are not related to a project or a division’s day-to-day operations.
- Additional shared folders, with access restricted to only specific users, if required, will be created in the Share folder. Access will be restricted through the use of Inherited Rights and access will be granted through the use of groups. These groups will be named using the same name as the folder name.
- In general, rights to any folder will be granted through the use of a group having the same name as the folder. The group would have trustee rights to the folder, and users would be added to or removed from the group as needed. All rights would be granted or revoked through an internal workflow approval process.
- A user “U” drive will be assigned to each standard network account for use by each individual user to store business related data on the network. Access to the “U” drive is restricted to the account owner only. Users receive all rights to this folder except for “Access Control” and “Supervisory”. Users cannot share data on their “U” drive. Files should be shared only by using the Share, (“S”) drive.
- Access to a user’s home directory, by anyone other than the owning user is prohibited and will be removed after notifying the end-user.
- Installation files used in the installation of desktop software must reside in a sub-folder under the “APPS” volume

Example P:\APPS\Psoft

### **2.2.2.2 Connecting LAN Devices to the Enterprise Network**

The Technology Services Department (TSD) is responsible for connecting all LAN devices to the Enterprise Network (PAWANET) provided they meet the Port Authority’s standards.

## **2.2.3 Network Resources Security**

### **2.2.3.1 Server Physical Security**

All network equipment must be physically secured in a locked room.

### **2.2.3.2 Server Logical Security**

To safeguard the Port Authority’s Information Technology (IT) systems and data, TSD has implemented a number of processes and procedures, including the requirement that all users accessing the Port Authority’s networks authenticate to a Directory Service

(using either Novell Netware e-Directory or Microsoft Active Directory (AD). Both Directory Services contain descriptions of all network devices including servers, printers, shared drives and user accounts.

TSD is responsible for providing all Enterprise servers with the following protection of their logical resources:

- Guard against unauthorized access by making sure that servers cannot be booted from a floppy.
- Scan all workstations for viruses daily.
- Scan all laptops for viruses at log-in.
- Scan all incoming data from users, server peripherals, diskette, CD-ROM, tape drives, other servers, and the Internet for viruses
- Perform regularly (daily and/or weekly) backups as defined by the Technology Services Department. (see section 2.5 - System Backup and Recovery)
- Test recovery procedures annually.
- Use system and application passwords that conform to the Technology Services Department standards.
- Configurations must conform to security parameters identified by NetVision Suite software.
- Perform deleted file purges immediately or no later than 6 days after file deletion.
- Control all remote access using the Port Authority's Remote Access System.

## **2.2.4 Network Access and User Account Security**

### **2.2.4.1 Account Creation**

User and Application accounts are unique and provisioned and managed in our Directory Service for both the Novell and Windows network resources. Documentation for the creation of user accounts and authority for access is maintained by the System Administrator.

### **2.2.4.2 Time Restrictions**

Due to the fact that The Port Authority serves its clients 24 hours a day, we do not have Login Time Restrictions on network resources. All staff may access their Novell account 24 X7.

### **2.2.4.3 Concurrent Logins**

Login sessions will be limited to one connection per user. User accounts should not have the ability to login to multiple workstations after establishing one active connection to the network.

### **2.2.4.4 Intruder Detection**

These system-monitoring features must be active:

- Restrict the count of incorrect login attempts to three before the account is locked out.
- The time for which unsuccessful login attempts are retained to determine a possible intruder attack should be a minimum of 30 minutes before the counter is reset to zero.
- The time for which a user account remains disabled before the account can be used again should be a minimum of 30 minutes.

### **2.2.4.5 Passwords**

All user accounts must have passwords conforming to the following standards:

- Minimum length is six (6) characters.
- Should not be easily guessed. It should not be related to one's job and should not be a word in the dictionary or a proper name.
- Should be set to expire at least every 90 days and 30 days for accounts with system or application administrator access.
- Grace Logins should be activated and limited to three.
- Users should be notified several days in advance of password expiration.
- Users should be forced to change their password on initial login and once it expires.
- Unique passwords should be required when changed. Users should be prevented from reusing a previous password for a minimum of one-year.
- Users should not be permitted to change their passwords more than once a day.
- Passwords should be encrypted in storage.
- Passwords must be entered in a non-display field with a re-enter verify function for new passwords.
- Passwords must not be available on hard copy.
- Passwords used in system startup files and login scripts must be encrypted.
- If an application uses a default password, change it on installation.
- Do not use cyclical passwords, such as the word, February, during the month of February.
- Do not reveal your password to anyone except authorized persons.
- Use both upper and lower case characters and special characters where possible.
- Change password if it has been disclosed or compromised.
- Protect by using a screen saver password with a recommended 15-minute time-out period.
- Passwords should not be the same as the user ID

Passwords are considered confidential data. They protect the Port Authority's network resources and grant system privileges and access. Disclosure may result in unauthorized access to data, system files and transactions. Passwords are also your signature and identify you as the individual who is responsible for the system activity.

#### **2.2.4.6 Modems**

Staff are prohibited from connecting dial-up modems to workstations that are simultaneously connected to PAWANET or another internal communication network unless approved by the Technology Services Department (TSD).

Where modems have been approved, users must not leave modems connected to personal computers in autoanswer mode, such that they are able to receive in-coming dial-up calls.

#### **2.2.5 Remote Access System**

The use of local modems to establish direct dial connections to devices on the Port Authority's network is prohibited. Exceptions to this policy require the approval of the Technology Services Department (TSD).

The approved mechanism for remote access to the Port Authority network is through the Remote Access System (RAS). The Remote Access System utilizes an Internet-based Virtual Private Network (VPN) tunnel established over the Internet linking remote users to the Port Authority Wide Area Network (PAWANET) (remote client to PA site). It is designed to provide authorized Port Authority users with secure access to corporate applications and to files available on their departmental file servers. This access to applications and resources is delivered through a thin-client environment consisting of a farm of Citrix MetaFrame/Microsoft Terminal Services servers capable of supporting 200 or more simultaneous users each. There is no provided access to the user's office PC desktop. The system also provides access to IBM enterprise server ("mainframe") applications. Port Authority offices without direct connection to the Port Authority Wide Area Network (PAWANET) can use this system to establish remote access to corporate applications located on PAWANET.

RAS provides multiple security mechanisms to ensure that only authorized users gain access to the Port Authority's computing resources and systems. Through multiple security steps, the user must respond to security challenges. After successful authentication verification, authorized users are provided with access to corporate applications and their departmental network resources through the thin-client environment.

The Port Authority also supports corporate site-to-site VPN connections and utilizes Cisco equipment for these connections.

## 2.2.6 Network Resources Hardware Standards

### 2.2.6.1 Standard Servers

A representative sample of standard servers is as follows:

#### PORT AUTHORITY SERVER STANDARDS

Server Description	IBM Model
WEB Server, Small applications server	xSeries 3550M2
Medium applications server	xSeries 3650M2
Database Server, Multiple and Large application server	xSeries 3850M2

Each server shall have at least 3 network interface ports to support a production, management and backup network, and redundant power supplies.

The Port Authority manages servers models via a lifecycle process with a minimum 'in service' life of three (3) years.

## 2.3 Network Naming Conventions

### 2.3.1 Server Names

The Port Authority employs a naming convention for all servers within PAWANET. That convention will be discussed during a solution implementation phase, Static IP addresses for servers, printers and faxes will be assigned by Technology Services Department (TSD).

## 2.4 Directory Services and Structure

The Port Authority uses Novell e-Directory and Microsoft Active Directory to manage network resources and user access. Port Authority departments are designated as organizational units (OU) and servers are network objects contained within the OU. All network printers should be created as e-Directory objects. NDPS should be utilized. Applications are distributed using Novell's ZENworks. Applications are distributed based on the type of workstation and user definitions. Scheduling of distributions is done in conjunction with client departments.

## 2.5 System Backup and Recovery

The Port Authority, for distributed servers, has standardized on FDR Upstream software for data backups.

- The System Administrator is responsible for verifying that system backups, both local and remote can be used to restore the data. Tests of the ability to successfully restore from the backup system will be performed annually. It is recommended that the test data restore be performed on a single non-critical directory only, not the entire server. Tests of the ability to restore system and application files will be

performed on a non-production server in a controlled environment. When incremental or differential backups are routinely used, the test restore procedure should incorporate both.

- Immediately prior to performing the test restore procedure, do a special full backup on the directories being tested.
- Testing a full restore should only be performed on a non-production server.

Depending on the criticality of the data and the redundancy needs, other products are in use within the Port Authority. Double-Take software is used for 'file-level' copies across distributed servers. IBM's SAN-to-SAN replication (block level copy) for database protection. All backup media and records must be treated with the same level of security and confidentiality as the original data.

### **2.5.1 Backup Logs**

The System Administrator will maintain the following logs for a period of two years:

- Back-up activity
- Rotation of back-ups,
- Usage/rotation of back-up media
- Off-site data storage.

### **2.5.2 Backup Scheduling**

The System Administrator is responsible for performing back ups of data, application and system files. This must be as follows:

- Weekly full back up of each server. A full back up is a back up of all files on the server.
- Daily differential, incremental or full back up of each server or server cluster. The type of back up performed is dependent on time constraints and the amount of data to be backed up. Incremental back ups are back ups of all files changed since the last back up. Differential back ups are back ups of all files changed since the last full back up.
- A Grandfather, Father, Son (GFS) scheme based on a 33 tape rotation should be used to ensure complete back up and recovery.
- Store daily and weekly back-up media in a locked fire proof cabinet outside of the server room. Monthly media must be stored outside the immediate building at a location defined by the Port Authority.

## **2.6 Business Resumption Plan**

The Vendors will work with the Technology Services Department (TSD) to develop a disaster recovery and contingency plan. The System Administrator will participate in the planning, design, implementation, testing, updating and documentation of the plan. Appendix 1 shows a recommended outline for such a plan. The Business Resumption Plan will be reviewed quarterly and tested at least annually.

## **2.7 Telecommunications Standards for Enterprise Network Resources**

To see the standards and guidelines for the following telecommunications components, please see the Appendix.

Appendix 2 -- Standards for Setting up Closets & Communication Rooms

Appendix 3 -- Standard Cabling Schemes

Appendix 4 -- Unified Wiring Specifications

Appendix 5 -- Telephone Closet / IDF Termination Blocks

Appendix 6 -- Workstation Jacks

Appendix 7 -- Standard Switches

Appendix 8 -- Workstation and Lateral Cable Identification Management

Appendix 9 -- Fiber Optics Specifications for Network Services - PAWANET

### **2.7.1 Closet and Telecommunications Room Access**

The following standards must be followed regarding access to closets and communication rooms.

- All telecommunications rooms must be physically secured. Remote locations which are not secured by a guard or within line of sight of personnel must be secured by a card access system and/or video cameras.
- The Network Connections (NC) group is responsible for installing routers, switches (along with Cisco Staff when applied) and station drops. They also patch connections and troubleshoot LAN cabling.

System Administrators requiring routine maintenance of data communications equipment should call the Customer Support Desk when new devices or reconfigurations are required.

### **2.7.2 Telecommunications Installation Contractor's Responsibilities**

1. Adherence to all of the above specifications.
2. Assurance of labor harmony by providing installation technicians whom currently maintains appropriate union membership.

3. The contractor must supply all cable, blocks, brackets, connectors, jacks, housings, face plates, special tools, etc., as necessary to perform an installation which is satisfactory to the Port Authority.
4. The contractor must label every workstation (jack faceplate) and the corresponding cross connect point (punch down block or patch panel) in accordance with the cable identification management plan, as previously described.
5. Install all Category 5e cabling in the proper manner, with the appropriate number of twists, so as to maintain Category 5e integrity and capabilities, as outlined in the TIA/EIA 568-B.2 standard.
6. The contractor must ensure that cable connections are in accordance with standard telecommunications practices and that all cabling maintains normal connectivity and continuity.
7. All materials must be agreed upon by PA Network Services prior to the start of installation.
8. All computer or network communication rooms and closets are to be isolated, locked, and secured. No other equipment, storage area, or smoking area are to be located in this room. This room must provide appropriate cooling and ventilation. Access to this room will be reserved to TSD staff and an agreed upon member of the site where the PAWANET equipment is located. This procedure is to ensure the security and the integrity of the Port Authority's computer network and its users.

### **2.7.3 Electrical Requirements**

The following power and receptacles should be installed to support different equipment requirements such as:

- Standard 110/ 120 volt power receptacles
- Standard and/or NEMA L6-30P 208/ 220 volt power receptacles
- Dedicated circuit breaker per ACfeed, with alternate power source.
- Server rack electrical requirements are specified in the appropriate design document.

Currently, services obtained through the PA's contract are required to have the APC (American Power Conversion) UPS included in the delivered service if central UPS is not installed at the equipment location.

#### **2.7.4 Telephone Company Interface**

The following items are needed for the telephone company interface, if needed for a specific vendor solution::

- a) Install a dedicated wallboard for Telco demarcs (if none available for implementation)
- b) Standard Telco Demarcs:
  - P66 Block
  - Network Termination Unit (RJ48 interface) Smartjacks
  - Network Termination Unit (DB15-pin female interface)
  - Network Termination Unit (V.35/V.36 female interface)
  - Digital Signal X-connect (DSX)
  - Basic T1 CSU/DSU
  - Basic DS3 handoff coax/HSSI unit
  - High-speed dialup modems for network trouble-shooting when needed

#### **2.8 Documentation**

It is the responsibility of the System Administrator to establish and maintain a library of all documentation designated as standard by the Port Authority. These include archived system files and system backups. Vendors will be provided our "Guide to Systems Administration" during the implementation phase of a project. The "Guide to Systems Administration" covers the provisioning and setup of computing & networking resources to successfully implement a project within the Port Authority.

## **3.0 Virus Scanning & Management**

### ***3.1 Overview***

This section describes the standards and guidelines for the prevention, detection and removal of computer viruses, (malware). Its purpose is to minimize the risk and negative impact of computer virus infections in the work environment by establishing clearly defined roles, responsibilities and procedures for the effective management of computer viruses.

### ***3.2 Standards***

Standard virus protection software must be installed on all network servers and personal computers, and updated on a regular basis. To that end, the Technology Services Department (TSD) has designated McAfee VirusScan Enterprise + AntiSpyware Enterprise 8.5.0i (at the time of this writing) as the standard for virus management on both Windows desktops and servers.

### ***3.3 Acquisition and Installation***

The Technology Services Department (TSD) maintains current versions of standard virus protection software and virus detection files, (DATs), including configuration-specific instructions for downloading and installing the software on network servers and desktops.

## **4.0 Electronic Mail**

### **4.1 E-Mail Overview**

The Port Authority's Electronic Mail System (E-Mail) is designed to facilitate business communication among employees, job shoppers, contractors, consultants, and outside business associates. This E-Mail system is comprised of Microsoft Outlook desktop software accessing e-mail stored on Microsoft Exchange servers. This solution also includes group calendaring and workgroup collaboration.

### **4.2 E-Mail System Architecture**

The Port Authority's E-Mail system is hosted by AT&T Corp. who acquired USInternetworking, a managed application service provider, and consists of Microsoft Exchange servers connected to the Port Authority's enterprise network. Authorized Port Authority staff access their corporate e-mail through Microsoft Outlook desktop software on the network. The system has multiple Exchange servers containing mailboxes and Public Folders. Additional servers host Outlook Web Access, Blackberry services, and perform Internet-based e-mail services including anti-spam and anti-virus e-mail checking.

The hosted Exchange site is on a Windows resource domain with a one-way trust to the Port Authority's corporate user account Windows domain located on the Port Authority network. This Port Authority Windows domain is used for Windows authentication services when the Outlook client is opened. In addition, the Port Authority hosts DNS servers to satisfy requests from the Outlook client as needed.

High-speed, secure, and redundant network connections connect the AT&T's data center and network to the Port Authority network.

### **4.3 E-Mail Environment: Design Considerations and Infrastructure**

The E-mail environment is further described below:

- The E-Mail system is comprised of Microsoft Outlook 2007 desktop software accessing e-mail (via MAPI mail protocol) stored on several Microsoft Exchange 2007 servers
- The servers are currently configured for the following messaging protocols:
  - MAPI (Microsoft's Messaging Mail protocol)
  - Internally for X400 mail protocol (which Exchange servers use)
- IMAP4 and POP3 mail protocols, NNTP news protocol, and LDAP directory protocol are disabled.
- RIM's Blackberry Enterprise Server software for Exchange provides wireless e-mail and calendar access to Blackberry wireless handheld device users.
- The two supported forms of SMTP addresses are:

- Primary form: Flastname@panynj.gov  
Flastname where F is the first initial of the user's first name and Lastname is the last name, and Flastname conforms to the corporate standards for a unique Novell user's username (also known as Novell ID). Flastname is also used as the Alias for a user in the Global Address List. Note that an earlier format with truncating the above to a maximum of eight characters is still in use for accounts created prior to Sept. 2001 (example: Flastnam@panynj.gov).
- Secondary form: Firstname.Lastname@panynj.gov
- Exceptions are governed by Novell directory structure and user account requirements.

## **4.4 Integrating Applications Server with Port Authority Email System**

### **4.4.1 Requesting SMTP Services**

The vendor will request SMTP services from and coordinate its work with the Technology Services Department

If the server is Windows-based and has an antivirus program installed, its settings will need to be changed if port 25 is blocked.

### **4.4.2 Email Restrictions**

The following restrictions are in place to protect the SMTP system and the "credibility" of Agency mail servers on the Net:

- Forged email headers are **STRONGLY discouraged**, but applications for circumvention will be entertained, and valid business justifications must be included. The "From" and "Reply-to" fields should be valid users on the system sending email.
- Settings: The maximum number of recipients per email is currently 30. This includes "To", "cc", and "bcc"; maximum size with attachments is 5MB. Emails that do not conform to these restrictions will be rejected by the SMTP servers.
- Mail will be relayed only if your server has an entry in the SMTP access database.

Note: SMTP logs are checked periodically for policy violations. Repeated violations and failure to correct them will result in SMTP services being disabled for the offending system.

## **6.0 Workstation and Workstation Operating System**

### **6.1 Overview**

The Port Authority makes extensive use of workstations networked into an Enterprise Wide Area Network to accomplish its business objectives. In order to ensure compatibility with the agency's Enterprise network and to make optimal use of its resources, this section defines the standards governing workstations and their configuration and use.

### **6.2 Workstation Operating System Standard**

The Port Authority's standard operating systems for workstations is Microsoft's Windows XP Professional (32-bit), Service Pack 2.

In limited circumstances, where business objectives warrant, alternative operating systems may be deployed with the approval of the department director and concurrence with the Chief Technology Officer.

### **6.3 Workstation Configuration**

#### **6.3.1 Workstation Naming Conventions**

All departmental workstations must contain a unique computer name which is the machine's serial number.

Example:                      Workstation name: 23AAH86

System Administrators are responsible for naming workstations and maintaining an up-to-date inventory of equipment and names used.

#### **6.3.2 Workstation User Accounts**

Windows workstations must have user accounts that correspond to the user's network user identification.

#### **6.3.3 Remote Workstation Management**

The Port Authority also distributes software applications and upgrades via Novell's ZENworks. Each workstation should have Novell's Workstation Management module installed as part of the NetWare workstation client. This will enable remote distribution and updates of software, hardware inventory and workstation troubleshooting.

#### **6.3.4 Drive Mappings**

Drive mappings for workstations should be accomplished only through a Novell login script and should conform to the standard outlined.

### 6.3.5 Standard Workstation Hardware Configurations

There are standard configurations established for workstations and laptops. The current configurations are managed via a 'lifecycle' process within the Technology Services Department (TSD).

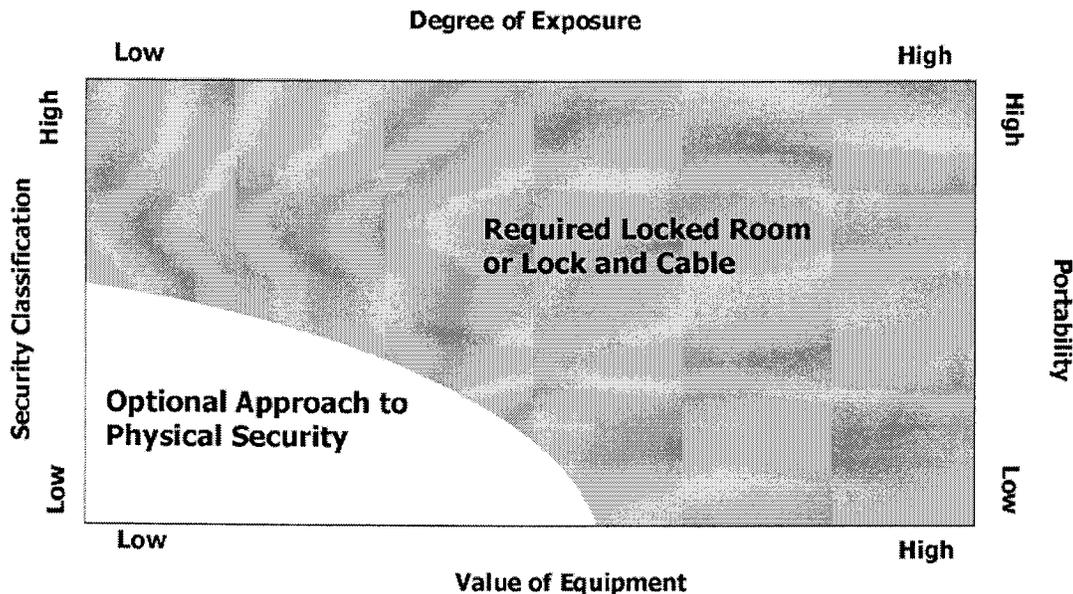
The standard for Workstations include the following Lenovo models (Computer models are subject to change):

- Lenovo ThinkCentre M57 or M58 for a desktop personal computer
- Lenovo Thinkstation D10 for CAD workstations
- Lenovo ThinkPad T400, ThinkPad X200 for laptop computers

### 6.4 Physical Security

The method of control should be based on the value of the equipment, the sensitivity of the data, its portability and the degree of exposure to theft. The department's Business Manager should make the appropriate determination of physical security required based on their best business judgment.

The graph below provides general guidance to Business Managers in determining the level of physical security required.



In all cases, laptops must be secured with a Lock/Cable product (e.g., Kensington).

### 6.5 Logical Security

The Technology Services Department (TSD) is responsible for providing for the security of computer resources and devices:

- Workstations are protected with Novell and Microsoft directory security mechanisms.
- Screen saver passwords are implemented with a maximum of a fifteen (15) minute time-out.
- All critical data are backed up nightly onto either external media or a network drive.

## **6.6 Printers**

The Port Authority's Standard for printers is Hewlett Packard, and the following models are currently available. Contact the Procurement Department for acquisition.

## **7.0 Distributed Systems Environment**

### **7.1 Overview**

A number of department and enterprise servers provide critical application and system services. This section provides information on the standards and guidelines for supported systems within the Port Authority. Solutions requiring different operating system environments must have approval from the Chief Technology Officer.

### **7.2 Microsoft Windows Servers**

The standard for general purpose application servers and File and Print Computing is IBM servers. Microsoft Windows 2003 & 2008 Server (Standard and Enterprise) are supported Operating Systems for application servers.

#### **7.2.1 Virtual Environment**

The standard for Virtualization Computing is both IBM and NEC FT host servers. The Port Authority will provide a VMware ESX-based Guest Virtual Machine (VM) to operate all Contractor-provided applications software on one of the above host computing platforms depending on the critical nature of the application.

All applications software shall be capable of operating in a virtual environment under VMware ESX server and shall operate in a VMware ESX-based Guest Virtual Machine (VM) on a 'shared' host computing platform for Contractor application, unless performance requirements mandate a dedicated server as described in Section 7.2 above.

#### **7.2.2 Windows Data Encryption**

For those applications that require additional data security measures, TSD offers additional tools that provide encryption services to protect "data at rest" (e.g. file

system storage and database). Prior to implementation, the Business System Manager should consult with the Technology Services Department to implement the Encrypting File System feature on Windows XP, 2003 and 2008 Servers (See <http://technet.microsoft.com/en-us/library/cc700811.aspx>).

### **7.3 Unix**

Sun's Solaris is a supported UNIX operating system for infrastructure (e.g., SMTP services) and corporate servers (e.g., SAP, Peoplesoft).

#### **7.3.1 Unix Security**

Unix servers must be physically and logically secured from unauthorized access. Operating system logical security is defined by the Technology Services Department (TSD).

#### **7.3.2 Backup**

Critical system backup must be performed regularly (daily and/or weekly) utilizing our centralized backup strategy and associated tools as defined by the Technology Services Department. (see prior section on backup software standards)

### **7.4 Databases**

Oracle 10.2.0.4 or higher and MS SQL 2005 Server or higher are the supported database platforms for Port Authority systems. Auditing trail shall be enabled for all database accounts with administrator privileges.

### **7.5 Application Security**

Depending on the application, security may be administered at the application, database, module, screen, data field, and/or transaction level in addition to network authentication. Prior to implementation, the Business System Manager should review the capabilities of the application and consult with Technology Services Department (TSD) staff to ensure implementation of the appropriate security levels. When in production, the administrator responsible for day-to-day administration of the application (Application Administrator) is responsible for maintaining the selected security profiles. At a minimum, all applications must require authentication to Microsoft Active Directory by way of a network login.

### **7.6 Server Physical Security**

All servers and communication equipment must be located in the Port Authority's centralized data centers. On occasion, and with Chief Technology Officer approval, local (e.g., in facility) computing resources may be required. For those occasions, servers must be located in an environmentally controlled and locked rooms or secured with a cable and lock with the keyboard secured to prevent tampering and unauthorized usage. Technology Services Department (TSD) staff must be consulted during the implementation phase of a project.

## **7.7 Load Balancing – Failover Architecture**

Depending on the requirements of the application, load balancing and failover architectures are supported. Appendix 13 contains a typical diagram of the load balancing/failover architecture.

## **8.0 Vendor Provided Dedicated Systems**

### **Overview**

Vendor provided dedicated systems refers to the Information Technology software, hardware and infrastructure furnished and installed through a contract with an external provider. Generally, this refers to systems that are designed to support a large Capital Project, multi-year engagements, requiring specialized technical and management staff, as well as, Systems Integration support. These projects normally have significant construction components and require the coordination, design and support from many diverse Engineering and Technology disciplines

A representative from the Technology Services Department (TSD) provides a single point of contact for technology oversight, accountability, adhering to Standards and systems integration, which is required under the Roles and Responsibilities of the Chief Technology Officer (CTO) and is expected by our client departments.

To ensure a successful project, and honor our responsibility to our customers and the Port Authority, one of the steps undertaken by TSD, is to provide guidance with, and focus attention on, adherence to and compliance with our Technology Standards and Guidelines (as described in this document). Deployment, integration and testing will be monitored by TSD to ensure that equipment or infrastructure is not duplicated, that the integration and migration plan will not adversely impact existing systems, and to integrate new systems under existing maintenance contracts where applicable.

In cases where a specific vendor or system is so specialized that it normally does not adhere to the hardware, software, infrastructure and operations guidelines of this document, the vendor will be directed to work with TSD in exploring all options, and if an exception is deemed required, the vendor will work with TSD to prepare the necessary Business Case to receive written concurrence from the Chief Technology Officer for this deviation from the Port Authority Technology standards.





## **Appendices**

### ***Appendix 1 -- Business Resumption Plan Document Format***

#### **I. PURPOSE**

Goals and objectives of plan

Benefits obtained if plan properly implemented

#### **II. SCOPE OF PLAN**

Planning assumptions

Facilities and resources included in plan

#### **III. NOMENCLATURE**

Recovery terms

Definitions and acronyms

#### **IV. DISASTER SEVERITY DEFINITION**

Define level of potential disaster based on impact to critical functions. Explain what degree of operational disruption would constitute each level of disaster:

catastrophic

serious

major

limited

#### **V. OPERATIONS RECOVERY PROCEDURES**

(Procedures for recovering services)

1. Indicate time frames in which essential operational/business functions must be resumed.
2. Specify sequence of operations recovery events and individuals responsible for activity. Note any specific activities required for particular levels of disaster severity. For example:

Notifications

Preliminary evaluation

Activate operations recovery personnel

Coordinate with emergency personnel

Evaluate recovery options and issue directive which details:

Assigned tasks

Project schedule/time frame

Coordination required

Identify relocation activities, if required

External/internal status updates

3. Identify items required for backup of critical functions. For example:

alternate work site

hardware/software

Personal computers

Necessary software packages

Documentation

Peripherals (printers, modems, etc.)

Databases

Emergency equipment

Communications

Transportation

Supplies

Security

Operations and procedures manuals

VI. OFFICE/ FACILITY BUSINESS SITE RESTORATION PROCEDURES

(Procedures for restoring physical facilities)

identify restoration responsibilities

assess damage

develop restoration plan/time frames

VII. BRP UPDATE PROCEDURES

responsibility for updating and communicating BRP changes

frequency of review/ update

## **Appendix 2 -- Communication Rooms/ Closets Standards**

### **SPACE**

All data communication rooms must be designed with required and estimated space to meet immediate requirements, as well as, future growth..

### **ENVIRONMENTAL**

The following conditions must be met:

- a) Doorways/ Entrances must be designed to support at least the minimum space requirements of 90" Hx72" Wx60" D.
- b) The room's cooling capabilities must be sufficient to support the heat dissipation requirements for the equipment. This requirement will be measured in minimum and maximum BTUs powered by AC-powered systems. Equipment specs will be supplied by TSD upon request.
- c) Backup UPS systems are necessary to avoid equipment damage in case of site power failure. Vendors must consult with the Technology Services Department (TSD) for the approved UPS systems.
- d) Telco demarcs must be located in a central location with sufficient space to house Telco termination equipment.
- e) The room should be designed with the appropriate fire safety regulations such as a FM200.
- f) Cables trays must also be installed in the communications room ceiling where appropriate, to support the routing of data communications and Telco cables.
- g) Basic 19" W/ 72" H cabinets or racks must be installed to house communications equipment such as: routers, switches, hubs, DSUs/ CSUs and monitors.
- h) To create more wall space the use of wall mount racks can be installed. Appropriate sized plywood must be installed prior to mounting racks.
- i) Category 5e cable must be terminated in wall/ rack mounted patch panel.
- j) Fiber patch panel must be installed in fiber IDF panel with SC female interface.
- k) The fiber must be neatly tie wrapped and enclosed in flexible inner-duct.
- l) Telephone access must be installed in the appropriate location to provide for basic trouble-shooting and vendor support.
- m) All communications equipment and cabinets must have ample room for easy access and proper ventilation.

**Appendix 3 -- Cabling**

- a) Teflon-coated cables will be installed per fire code regulations.
- b) Overhead cable trays and drop post must be installed for cable routing.
- c) Cabling scheme must be used to label and identify all cables. All cables must be neatly tie-wrapped.

**Appendix 4 -- Port Authority Unified Wiring Plan**

Original: 01/90  
8th Revision: 03/02

To satisfy existing and future voice and data communications requirements, while minimizing the need for wiring changes and additions, the Port Authority has adopted the following lateral wiring specifications for all workstations being constructed. This plan is applicable to all PA locations, except when specifically noted.

**LATERAL CABLE:**

Voice and data telecommunications requirements for each workstation will be provided by a combination of three individual cables, installed between the workstation and the serving telephone closet / intermediate distribution frame (IDF), in a "home run" configuration. All cabling installed will be of plenum type, fire retardant (FEP) rated.

Cable specifications:

- (3) Cables capable of supporting Category 5e capabilities as outlined in the TIA/EIA-568-B.2 standard. Specifically:

Gauge: 24 AWG

Pair Size: 4

Insulation: Plenum, fire code rating (FEP)

Cable allocations will be as following:

- Cable #1: Voice\*\*
- Cable #2: Data
- Cable #3: Data

- \*100.0MHz is the speed the PA wants to deliver to the desktop.
- \*\*Cable #1 is to be split in the workstation to support 2 telephones.

Technical specs for the Cat 5e cable is as follows.

<b>TECHNICAL DATA--ELECTRICAL</b>				
	Horizontal		Patch	
Frequency MHz	Attenuation dB/100 m max.	Next dB min.	Attenuation dB/100 m max.	Next dB min.

1	2	62.3	2.4	62.3
4	4.1	53.2	4.9	53.2
10	6.5	47.3	7.8	47.3
16	8.2	44.2	9.8	44.2
20	9.3	42.7	11.1	42.7
31.25	11.7	39.8	14.1	39.8
62.5	17	34.3	20.4	34.3
100	22	32.3	26.4	32.3

<b>TECHNICAL DATA--PHYSICAL</b>			
	CMR	CMP	CM (Patch)*
Conductor diameter-in. (mm)	.020 (0.52)	.020 (0.52)	.024 (0.61)
Cable diameter-in. (mm)	.195 (5.0)	.165 (4.2)	.215 (5.5)
Nominal cable weight-lb./kft. (kg/km)	21 (31)	21 (31)	23 (34.2)
Max. installation tension-lb. (N)	25 (110)	25 (110)	25 (110)
Min. bend radius-in. (mm)	1.0 (25.4)	1.0 (25.4)	1.0 (25.4)

\* Patch cables utilize stranded tinned copper conductors

<b>PARAMETRIC MEASUREMENTS</b>		
	Horizontal	Patch
Mutual Capacitance	4.6 nF/ 100 m nom.	5.6 nF/ 100 m nom.
DC resistance	9.38 Ohms/ 100 m Max.	9.09 Ohms/ 100 m max.
Skew	45 ns/ 100 m max.	45 ns/ 100 m max.
Velocity of Propagation	72% nom. Non Plenum	72% nom.
Input Impedance	100 + 15% 0.7772-100 MHz	100 + 15% 0.772-100MHz
	ISO/IEC 11801	

<b>COLOR CODE</b>			<b>TEMPERATURE RATING</b>	
Pair 1	White/Blue	Blue	Installation	0 degrees C to +50 degrees C
Pair 2	White/Orange	Orange	Operation	-10 degrees C to +60 degrees C
Pair 3	White/Green	Green		
Pair 4	White/Brown	Brown		

### ***Appendix 5 -- Telephone Closet / IDF Termination Blocks***

Lateral Data cabling serving each workstation will be terminated on a CAT5e patch panel (RJ45 face, 110 punch rear ) in the telephone closet. For phone service, termination is to be on 110 blocks in telephone closet, allowing access to the telephone riser. For data, a patch cord is installed between patch panel and IT device. The patch panel can be mounted on the wall with a wall mount kit or in a rack if one is needed and should be appropriately numbered with the workstation number. The patch panel must be capable of supporting Category 5e the TIA/EIA-568-B.2 standard. The patch panel shall have a swing away faceplate or rack mountable.

NOTE: The Category 5e patch panel should be equivalent to the AMP SL series 110Connect Category 5e patch panel. The number of ports may vary.

Each workstation will be assigned a unique station identification number.

### ***Appendix 6 -- Workstation Jacks***

Workstations will be equipped with various components of the AMP Communications Outlet system (AMP equivalent can be used with TSD approval). Each workstation will be installed with (1) double-gang jack housing box and matching face plate, capable of securely mounting three Category 5e cables and four modular data connectors, maintaining the integrity of category 5e capabilities as outlined in the the TIA/EIA-568-B.2 standard. All workstation jacks will be wired in accordance with the the TIA/EIA-568-B.2 standard. All modular jacks are to be appropriately labeled.

### ***Appendix 7 -- Standard Switches Inside the Department***

Any switches in the following Cisco series are acceptable (Vendors will consult with the Technology Services Department (TSD) to determine the appropriate switch configuration at the time of proposal submission):

- Cisco 5500
- Cisco 3500 series – low capacity
- Cisco 4000 series – medium capacity
- Cisco 6000 series – high capacity
- Cisco 4507 series – high capacity – New

### ***Appendix 8 -- Desktop and Lateral Cable Identification Management***

#### **WORKSTATION AND LATERAL CABLE IDENTIFICATION/MANAGEMENT (Facility)**

All lateral cabling installed to workstations at the Port Authority Facilities must be designated in accordance with the Port Authority's workstation and lateral cable identification code: This code consists of two elements, as follows:

- 1 - Room number or department name (acronyms are acceptable).

2 - Workstations (3 numeric digits)

The cable identification code for Workstation 10 in room 3801 at LGA CTB is 3801-010.

The cable identification code for Workstation 15 in PA Automotive shop is Auto-015



## **Appendix 10 – Fiber Optic Specification for Network Services - PAWANET**

### **General Scope of Work**

1. Conduct a walk thru based on the specific Scope of Work for the job in question.
2. Note that all diagrams and or sketches that may be provided are approximates and not to scale.
3. All fiber optic cable is to be installed in rigid conduit or, where applicable, in plenum rated flexible inner duct.
4. Contractor shall furnish and install fiber optic cable as designated in the specific Scope of Work.
5. Fiber optic cable type will be loose tube, gel filled, with aramid yarn water block:
  - a. Multimode Fiber – **50/ 125\*** micron diameter. Manufacturer of cable TBD
6. Fiber optic cable attenuation from the factory, before installation, shall not exceed:
  - a. For multimode – 3.5 db per km @ 850nm / 1.0 db per km @ 1300nm
7. All fiber optic cable is to be labeled on each end and at any junction or patch panel with, 28 gauge, 2" wide embossed with ¼" high letters. The labels are to be fastened to the fiber optic cable using sealed wrap around labels or pliable Velcro ties.
8. Fiber optic cable shall be installed in accordance with the manufacturer's specifications. Any portion of the cable damaged during installation will be repaired or replace by the contractor without any additional cost to the Port Authority of New York New Jersey.

### **Fiber Optic Terminations**

1. Fiber optic terminations will use **SC\*** connectors unless otherwise specified in the Scope of Work.
2. Fiber optic terminations shall not yield more than 1db per mated (at the bulkhead) connector.

### **Fiber Optic Testing**

1. Fiber optic testing shall be performed by the contractor and certified fiber optic technicians.

Fiber optic technicians will be prepared to complete test procedures with the following equipment:

- Source and power meter testing to provide optical loss measurements.

- Reference test cables and mating adapters that match the cables to be tested.
  - Cleaning materials – lint free cleaning wipes and pure alcohol.
  - OTDR test set with the proper launch cables and adapter types.
2. Fiber optic technicians will perform OTDR test on all terminated fibers unless otherwise noted in the Scope of Work.
  3. Fiber optic test results shall be recorded, and reports provided to the PA in hardcopy and via a readable txt file (PDF or RTF is acceptable).
- \* 50/125 micron fiber has been chosen over 62.5/125 micron fiber by Network Services:
1. Greater speeds achieved. 62.5/125 fiber will deliver 1 gigabit per second (Gbps). 50/125 fiber will deliver up to 10 Gbps. This allows for equipment upgradeability.
  2. Greater distances. 62.5/125 fiber will go up to 275 meters from source. 50/125 will achieve up to 550 meters from source. We can cover greater distances in an installation without having to go to the more expensive single mode fiber installation.

\*\* **SC** connectors have been chosen over **ST** connectors by Network Services due to the fact that we utilize Cisco equipment, which come furnished with **SC** connectors on their fiber interface blades. It is more cost effective to use the standard **SC-SC** patch cable with Cisco equipment than to add the additional cost of having hybrid **SC-ST** cables made. **SC** connectors are also easier to work with and use less space in an installation.

## ***Appendix 11 -- Public Telephone Ordering Guidelines***

Technology Services (TSD) staff is responsible for the management of the permit for public telephone service are available to answer any questions and provide direction for any matter relating to public telephones. The names and contact numbers are listed below

### **General Guidelines**

All public telephone requests – that is both coin and non coin in any Port Authority space or any area of the tenant space – both “public” and “club” locations will be coordinated by the Port Authority to cover both New York and New Jersey.

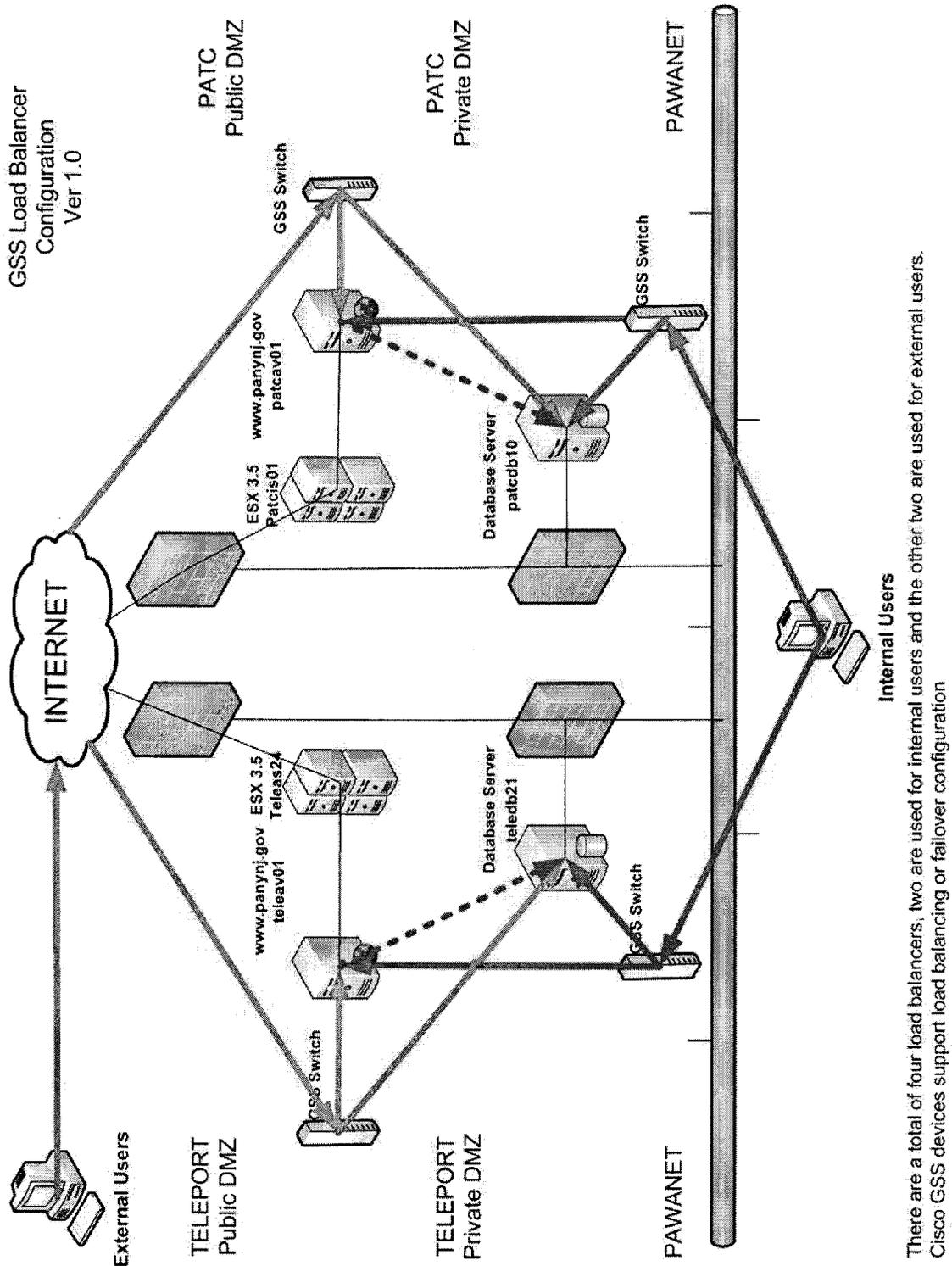
### **Process**

When the Facility, Property Manager, tenant or their representative (e.g. designer, architect, general contractor) has a public telephone requirement, they will contact the Technology Services Department (TSD) whom will review the request and provide coordination with the appropriate service provider.

## **Appendix 12 – Standard Printers**

HP LaserJet P1006 Stand Alone Laser Printer	17 ppm Black resolution 1200 dpi/Memory 8Mb	CB411A#ABA
HP LaserJet 5200dtn - Network Printer	35 ppm Black resolution - 1200 x 1200 dpi Memory - 128Mb Duplex	Q7546A
HP Color LaserJet 4700dn Network Printer	31ppm black, 31ppm color Black/Color Resolution 600X600 dpi Memory 288 Mb Auto Duplex	Q7493A
HP LaserJet P4014n - Org Unit Network Printer	45 ppm Black resolution - 1200 x 1200 dpi/Memory - 128 Mb	CB507A#ABA
HP Automatic two-sided printing module	Optional for LaserJet 4014n printer	CB519A
HP LaserJet 5550dtn Color Printer	27 ppm black/color Processor speed 533 Mhz Media 11x17	Q3716A
HP OfficeJet Pro K5400 Stand Alone Color Printer	36 ppm black, 35 ppm color Color resolution 4800 x 1200 dpi Memory 32 Mb	C8184A
HP Automatic two-sided printing accessory	Optional for HP OfficeJet Pro K5400	C9278A

# Appendix 13 – Load Balancing/ Failover Diagram



There are a total of four load balancers, two are used for internal users and the other two are used for external users. Cisco GSS devices support load balancing or failover configuration

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## ***DISASTER RECOVERY PLAN CHECKLIST***

Disaster recovery is a plan which could be executed in the event of a total disaster in order to bring the computer systems back to a functioning whole. Typically, the disaster in question is one, which destroys a complete site that requires restoration of support, particularly Information Technology support. Most commonly considered causes of disasters are fire, explosion, flooding, hurricanes and tornados. Disaster recovery planning normally involves alternate locations for major systems as well as the planning and testing of switch over measures, emergency transportation and so on.

The Disaster Recovery plan should include at a minimum the following areas.

### 1. Disaster Recovery

- Manager Responsibilities
- Plan Administration
  - Distribution of the Disaster Recovery Plan – All team members, LAN and an offsite location should have a copy of the current plan and its attachments.
  - Maintenance of the Business Impact Analysis
  - Training of the Disaster Recovery Team
  - Testing of the Disaster Recovery Plan
  - Evaluation/Review of the Disaster Recovery Plan and Tests – the DR Plan should be reviewed and the DR Test should be performed at a minimum twice a year. Update the plan to reflect changes in activities, procedures, performance, staff, and etc. Set a regular time for the review.
  - Maintenance of the Disaster Recovery Test Results – Maintain copies of the test results and what scenarios and areas of the plan were tested.

### 2. Business Impact Analysis - Minimize the impact on the business with respect to dollar losses and operational interference

- Critical Time Frame - Recover the system and/or component of the system within the critical time frames established and accepted by the user community. This should include the time estimate of how long it would take to recover the whole system or any sub components.
- Application System Impact Statements - This area is where a business owner decision of what areas of the system has a priority in how it is brought back into normal operation. How long could these operations be performed without computer support?
  - Essential – Are systems or components of the system that are very critical and need to be back in operation immediately because the business cannot function.
  - Delayed – Are systems that are needed but could be delayed and could not adversely effect the business process.
  - Suspended – Are system or components that are not critical and can wait until the full system is back to normal operation.
- Recovery Strategy & Approach

### 3. Disaster Definition – All possible interruptions should be defined, and then the steps to minimize their impact need to be documented. This includes disk array failure, power loss, loss of network, loss of wireless network, loss remote access, equipment, computer processor failures, etc.

## ***DISASTER RECOVERY PLAN CHECKLIST***

- Detailed Recovery Steps for each Disaster Definition - This should be the technical steps to recover the different areas of the system like the Operating system, database, application, routers, firewall, and etc.
  - Escalation Plans and Decision Points
4. Data Center Systems – Dependencies should be notated.
- System Components- A copy of all essential office equipment and records should be stored off-site. Specify any special computer hardware, software, databases, networks or other technology.
    - Backup Strategy
      - Storage Rotation
      - Back-up Files
      - Off Site Storage of Back-up Files
      - Back-up Files Retrieval Process, Vendor information and Forms for Off Site Storage
    - Hardware -
      - Hardware inventory for system in operation
      - Desktop Workstations (In Office)
      - Desktop Workstation location
      - Desktop Workstations (Offsite including at home users)
      - Laptops
    - Software -
      - Software inventory of the system in operation
      - Systems, Applications and Network Software
      - Communications
      - Operations
    - Off-Site Inventory
    - Supplemental Hardware/Software Inventory
5. Escalation Plans and Decision Points
6. Disaster Recovery Emergency Procedures
- Plan Procedure Checklist - should have a checklist of the plan procedures and area for documenting exceptions where the plan was not adhere to and what was done in its place. Disaster Recovery Procedures in a check list with approval format.
  - Disaster Recovery Organization – should have the full disaster recovery team listed by position or individual and what are their responsibilities. This section of the plan should include Port Authority and PATH personnel, PA/PATH management, and all vendors that work or have responsibilities during a disaster. This area should be reviewed semi-annually for updates and changes.
    - Recovery Organization Chart

## ***DISASTER RECOVERY PLAN CHECKLIST***

- Disaster Recovery Team & Recovery Team Responsibilities
- Recovery Management & Senior Manager Responsibilities
- Damage Assessment and Salvage Team & Team Responsibilities

Problems and Changes - Need to be documented and what was done to rectify them.

Essential Position – Require back-up personnel to be assigned.

7. Pre-Disaster - What steps need to be in place prior to a disaster for this plan to work? If there are any assumptions, they should be notated here.
  - Recovery Management
  - Damage Assessment and Salvage
  - Hardware Installation
  
8. Contacts information - This area should be reviewed semi-annually for updates and changes.
  - Disaster Recovery Team - This should include primary and secondary phone numbers, home address, emergency contact information, and their backups information.
  - Vendor Phone/Address List – Include account information and account representative information.
  - Command Center – Primary and Alternative site locations, hot spots, phone numbers, time scheduling
  
9. Post-Disaster – Detail what steps need to be taken to move from disaster mode back to normal operations.

**EXHIBIT 3**  
**SYSTEM ADMINISTRATION REQUIREMENTS**

## **I. Standard System Administration:**

The Contractor shall perform all system administration tasks and functions in accordance with the Contract and best industry Information Technology IT Standards, Guidelines and practices. The Contractor shall be responsible for routine operation of the system, management of the hardware configuration, files and data, diagnosing and effecting correction of all problems that impact system operations, including, but not limited to, the tasks listed below in this Exhibit. The Contractor shall perform all tasks necessary to assure functioning of the system at the required standards of performance and availability defined herein and in Attachment C, Scope of Work, Section X Maintenance of the System, paragraph A.3. Operational Availability.

In addition to the support it shall provide for the hardware, operating system software, database, utilities, and communications facilities, the Contractor shall be thoroughly familiar with, and provide comprehensive support for the applications software. The Contractor shall also provide direct support to end users in the use of the applications furnished as part of this Contract.

Support for the systems shall include providing end-user access to such applications, routine monitoring and system maintenance, system backup, data replication, file retention and archiving services, security, performing operating system upgrades and maintenance of databases, which conform to the Contract and best industry IT Standards, Guidelines and practices.

### **A. System Monitoring**

The Contractor shall monitor the operating system, database, application, and error logs, and check the hardware and software components of the system to ensure that all components are present and operating within specified parameters. Based on these reviews the Contractor shall perform needed system activities (e.g., de-fragmenting disk files, purging obsolete files from directories, etc.) to ensure uninterrupted operation of the system. The Contractor shall check system monitoring devices and programs, run-time system utilization parameters, and other diagnostic tools (e.g., disk usage, file size and allocations, processor loading, page faults, response times, etc.) to ensure that all aspects of the system are operating properly and the system is meeting all specified performance criteria. \*\*

The Contractor shall monitor the state of the system's operating environment(s) including, but not limited to: temperature, humidity control, power conditioning/supply (e.g., uninterruptible power supplies), lighting, etc., to ensure appropriate and continuous environmental support for the system.

The Contractor shall service and test the fire and smoke-detection, fire-extinguishing equipment, emergency lighting, backup power supply, and surge protection equipment on a regular basis, consistent with the manufacturer's recommendations.

The Contractor shall review system databases (tables, indexes, views/queries. etc.) to ensure that all databases are properly updated, and appropriate integrity and synchronization of all system databases is maintained. The Contractor shall maintain logs or other appropriate records of all monitoring and system upkeep activities and logs of all anomalies found during any monitoring

activities and measures taken to correct those anomalies. The Contractor shall provide, semiannual reports of system performance.

The Contractor shall report all deficiencies and anomalies to the Contract Manager within 24 hours of observation through normal system monitoring.

## **B. Operational Requests**

### **1. Critical Requests**

The Contractor shall respond to critical requests (e.g., resetting a user password, unlocking intruder detection lockouts, etc.) in a timely fashion as specified in the SLA.

### **2. Routine operational requests**

The Contractor shall perform work to satisfy all routine operational requests (e.g., adding a new user; configuring a workstation for a new user, creating a network directory; granting a user access to an existing application, modifying approved access permission changes, etc.) as specified in the SLA.

### **3. System and Application/Database Back-ups and Archiving**

The Contractor shall perform scheduled data, application, and system backups to ensure that back-up media are properly stored and rotated on schedule, and replaced appropriately.

#### **a. Maintaining off-site back-ups**

The Contractor shall perform scheduled back-ups for off-site storage or rotate back-up media to and from the off-site storage location as appropriate. The Contractor shall ensure that viable and complete back-ups are delivered to the off-site storage location when scheduled and that media to be rotated is returned from off-site storage location and returned to usage on the system as appropriate.

#### **b. Maintaining records of back-up**

The Contractor shall maintain logs of all back-up activity, rotation of back-ups, and usage/rotation of back-up media and records of all off-site data storage.

#### **c. Testing backup/restore procedures**

The Contractor shall perform tests to verify that the backup tapes can be used for restoring data/files. These tests shall be conducted at least twice annually. The backup solution should work at a speed which ensures that backups or restores do not impact the bandwidth during the workday.

#### **4. Archiving data**

The Contractor shall follow system archiving procedures to capture data to be archived to permanent storage media as required to maintain proper system functioning or as scheduled in the system operating procedures (whichever occurs first). The Contractor shall ensure that archive media is properly stored, logged and maintained and that archived data is viable and accessible throughout the required archive retention period for the data.

The Contractor shall also be responsible for ensuring that an adequate inventory of media for primary and backup purposes is available and for providing additional media when needed in a timely manner.

##### **a. Accessing archived data**

The Contractor shall be responsible for loading archived historic data onto the system as needed to generate reports, doing required searches and clearing loaded historic data from system when it is no longer needed for immediate access.

##### **b. Monitoring inventory of media**

The Contractor shall be responsible to ensure that an adequate inventory of media for primary and backup purposes is available.

#### **5. Database Administration**

The Contractor shall be responsible for monitoring and maintaining the database(s) that are used to support the application.

#### **6. Fault Detection, Diagnosis, Alarms and Correction Diagnosing system faults:**

##### **a. Diagnosing system faults**

The Contractor shall be responsible for the following with respect to diagnosing system faults:

- Reacting to system faults detected through either monitoring and observation, or by reports from users;
- Log fault and capture pertinent data (e.g., record state of system components, take appropriate system dumps, record observations of users, etc.);
- Make necessary and appropriate notifications (e.g., Authority Contract Manager, affected users, etc.);
- Diagnose the nature/cause of problem(s); and
- Determine responsibility for correction of fault.

##### **b. Alarms**

The Contractor shall configure the system to issue alarms that notify the system administration staff of any condition which would adversely impact system operation, including but not limited to the following:

- Hardware faults,
- Applications software faults,
- CPU, Memory or utilization exceeding stated threshold value,
- Environmental conditions

**c. Correction of system faults:**

The Contractor shall correct faults or follow procedures to contact the appropriate service provider and initiate response from/resolution by that provider. The Contractor shall then monitor and log response of service provider to trouble call.

**d. Following up on corrective action:**

The Contractor shall verify that the fault has been appropriately and completely corrected and that there are no uncorrected collateral problems either from the original fault or from the measures taken to correct the fault.

**e. Maintaining records of system faults:**

The Contractor shall log return to proper operation and record all pertinent data regarding fault including:

- Fault description and symptoms,
- How fault was detected,
- Impact on system operation,
- How fault was diagnosed,
- Diagnosis and response times,
- How fault was corrected, and
- Elapsed time to restored system operation.

**f. Production of operations reports**

The Contractor shall provide system-generated and/or manual log reports as required; and collect, maintain, and provide regular reports on computer room and system administration activities, etc., which are necessary for auditable reports of Contractor performance on the Contract.

**7. Monitor inventory of consumables**

The Contractor shall monitor the inventory of consumables used by the Contractor, e.g. , backup tapes, and order additional consumables as needed.

**8. Capacity Management and Performance Monitoring**

The Contractor shall be responsible for and shall provide non-intrusive system and database monitoring to ensure that the System's performance and responsiveness meets the operational needs of the users. All measures shall be taken to ensure the continued effective operations of the System through the accepted industry capacity management and performance monitoring

procedures and techniques, including recommending corrective actions to correct capacity or performance inadequacies.

The scope of the capacity management and performance monitoring portion of the System Administration services furnished shall include, but not be limited to, the activities identified below in this section, and comply with the best industry IT Standards and Guidelines.

**a. Maintaining records:**

The Contractor shall maintain records on system performance and resource usage, message queuing, system and user response times, etc., adequate to project needed upgrades to hardware and software based on current performance and expected growth.

The Contractor shall maintain communication with the Contract Manager and users concerning plans for system expansion or modification that will affect system capacity or performance.

**b. Performance Monitoring**

The Contractor shall maintain the proper allocation of resources, alter file distribution on direct access storage devices and reconfigure the system as needed to maintain adequate system performance.

**c. Troubleshooting:**

The Contractor shall investigate and diagnose system problems resulting in unsatisfactory system performance and take all steps to remedy the problem.

**d. Maintaining data structures:**

The Contractor shall de-fragment files and purge, reorganize, and optimize databases on a scheduled and as needed basis.

**9. Coordinate with Hardware/Software Service Providers**

**a. Hardware Maintenance**

The Contractor shall schedule regular preventive maintenance service with the hardware vendor in accordance with service contracts and in coordination with the Contract Manager so as to limit disruption of operations, and maintain records of service visits to ensure that vendors' contractual obligations are met.

**b. Software Upgrades**

Contractor shall perform the installation of operating system upgrades and/or patches on host processors and servers, ensuring software is maintained at a release level supported by the vendor and as appropriate within two release levels of the most current release for both the operating system and third-party products.

**c. Maintaining currency of application software**

The Contractor shall perform the installation of application software, upgrades and/or patches on host processors and servers, including packaged software products, as well as new releases of custom software in order to maintain the application at a current release level. The Contractor shall support the installation of any software or configuration of the Internet browser on Users' personal computers when requested.

**d. Software Patches**

Upon notification of a critical security patch, the Contractor shall deploy it within 24 hours. This includes the preparation, testing, quality assurance of the patch, and reporting to and consultation with the Authority. Non-critical security and non-security related patches, fixes and service packs are to be scheduled with Port Authority staff, but in general shall be deployed within 10 business days of their release. Any patch or update shall also include an automated method for removing the patch or update in the event that the new software causes an adverse effect on the system to which it was deployed. Any patch or update shall include a test to ensure that it does not adversely impact the application and to determine if the patch or update is already on the desktop. Both the operating system and the applications software shall be appropriately maintained.

**e. Software Maintenance/Support**

The Contractor shall report required fixes to correct software deficiencies, maintain records and track the status of all reported problems and requests for enhancements, maintain contact with vendors and Agencies to keep current on the latest releases of and fixes to software and keep the Authority's Contract Manager aware of the status of all such releases, fixes and requests.

**f. Change Management Administration**

The Contractor will be responsible for ensuring that all changes to hardware and/or software occur in a controlled manner. The Contractor shall be responsible for determining that all hardware and software changes are properly authorized, tested and documented prior to implementation in the production environment, and shall describe the testing environment. Testing would be in reference to new versions of applications, operating systems, or other relevant changes.

The scope of the change management portion of the System Administration services furnished shall include but not be limited to the activities identified below in this section:

**g. Hardware Configuration Changes**

The Contractor shall make provisions for the orderly implementation of hardware changes and upgrades minimizing the disruption of system services to users. The Contractor shall oversee and control changes to the hardware configuration and supervise the area during installation.

**h. Testing new hardware**

The Contractor shall ensure that all hardware configuration changes "are tested prior to use" in the production environment. Where possible and appropriate, the Contractor shall arrange for factory testing prior to acceptance of new hardware.

**i. Establish a segregated test environment**

The Contractor shall maintain a segregated test environment insulated from the production environment for testing of all changes to software prior to introduction to the production environment. The Contractor shall provide a description of the planned testing environment to support testing of new versions of applications, operating systems, etc.

**j. Controlling software migrations:**

The Contractor shall establish and enforce procedures to ensure only approved changes are implemented by ensuring the following:

- modification request forms have been received for all changes to be made to software
- software version/revision level is identified
- new application and system software versions are tested prior to use on the production system
- new application and system software versions are documented

**k. Maintaining prior versions of software**

The Contractor shall exercise control over software versions, ensuring the proper version of software is migrated and that prior versions are available for roll back in the event of an emergency.

**l. Testing new software**

The Contractor shall maintain a set of test transactions and known results to verify the integrity of the system along with new software releases. The test transactions shall be updated to include test data for all new conditions arising out of maintenance or enhancement of the system.

**10. Security Administration - User Accounts**

The Contractor shall be responsible for creating and maintaining a secure system environment in a manner consistent with the terms of this Contract. The scope of the security administration portion of the System Administration services furnished shall include but not be limited to the activities identified below in this section.

**a. Maintaining lists of authorized users**

The Contractor shall establish a listing of users authorized by the Contract Manager to access the system and the system functions that user is authorized to exercise. The Contractor shall also provide a means for immediate communication with the Contract Manager, or other designated person, when changes in employment status occur, which may require updating of said list.

**b. Limiting access to the system**

The Contractor shall create logon privileges for only those persons authorized by the Contract Manager and periodically reconcile the list of users to the authorized list. The Contractor shall institute a policy of password assignment, expiration and change to limit the exposure to unauthorized access and limit access by individuals to the functions authorized through user profiles or other such means as are available through the application or operating system. The Contractor shall institute controls over super-passwords or other special passwords so that their

use is documented and approved by the Contract Manager. The Contractor shall research sign-on violations to determine if a pattern is evident and report any findings to the Contract Manager. The Contractor shall review and monitor the security configurations, user accounts, passwords, and user security permissions established for all components of the system the Contractor is responsible. These include the operating system, database, application, file system rights, Web services and applicable middleware software.

The Contractor shall review and monitor the security associated with information transfers between the system managed by the Contractor, other systems and with outside entities such as file transfers (outgoing and incoming), monitoring actions, and traffic that is allowed to reach the servers the Contractor is managing. The Contractor shall document on how these configurations have been set and controls have been performed following the Contract and best business practices. The Contractor shall use the best monitoring, auditing and reporting tools available. The Authority reserves the right to request any additional security and system software be used to evaluate the level of security and vulnerabilities in all systems under this contract. The Contractor shall develop an acceptable procedure to notify users and correct unsatisfactory conditions, e.g., email notification of login lockouts, password expirations, etc.

#### **11. User Assistance:**

The Contractor shall:

- Provide assistance to Users on the use of the application
- Provide technical assistance to Users on the setup, if any, of the application on the Users' personal computer, to make the application operational for the User
- Research and take corrective action on hardware/software malfunctions
- Conduct User training.
- Provide a toll-free telephone number, in North America, for placing service calls, requesting assistance and responding to questions on how to use the application during regular business hours (9:00 AM to 5:00 PM EST).
- Add and delete Users from the System
- Setup/Change User Access Permissions
- Reset User Passwords

#### **II. Management of the Work**

The management work shall include the provision of a Contractor Administrator who will report and respond to an Authority-assigned Contract Manager.

The Work Approach shall adhere to the following format:

##### **A. Organization**

The Contractor shall be responsible for establishing and maintaining an organization appropriate to the scope of work to be performed under this Contract. This shall include, but not be limited to, the following:

- Assigning appropriate numbers of staff with skills appropriate to the tasks to be performed. All assigned staff shall be accessible either through a paging device or a cell phone. A list of

assigned staff and their contact information shall be provided to the Authority's Contract Manager, at the time of assignment.

- Ensuring that staffing requirements are satisfied by having a sufficient number of staff with the appropriate skills to operate the System.
- Providing qualified persons, acceptable to the Authority, for relief of the assigned staff, in the event of vacation, illness, personal business or any other absence of the assigned staff.
- Providing the assigned staff with a procedure for escalating technical issues, which cannot be solved on-site, and providing for the support of these individuals where such support is required.
- Providing a hotline during regular business hours to respond to the requests for services in a timely manner and to meet service requirements.
- Ensuring that the staff is proficient in the software applications and its usage.

## **B. Schedules**

The Contractor shall manage the work according to schedules published by the Contractor and approved by the Authority's Contract Manager. The schedules shall include but not be limited to:

- Ongoing recurrent duties.
- Maintenance activities.

Changes to the work schedules shall be pre-approved by the Authority's Contract Manager.

## **C. Security Measures for Contractor's Staff**

This section is intended for the creation of security controls relative to the Contractor's own staff. The Contractor shall be responsible for maintaining secure environment and supplying personnel who satisfy Authority and/or regulatory requirements.

### **1. Limiting access to the system**

The Authority shall issue appropriate logon IDs for only those persons authorized by the Authority's Systems Manager to have access, and periodically reconcile the list of logon IDs to the authorized list. The Contractor shall institute controls over super-passwords or other special passwords so that their use is documented and approved by the Authority's Contract Manager. Any request by the Contractor to increase access shall be documented in writing, with full backup information to document the need for the increased access.

### **2. Data Security**

All information concerning the business of the Authority which becomes accessible, or known, to the Contractor, their employees or subcontractors, including but not limited to financial information, customers, customer lists, business plans, operational plans, data and computer programs, documentation, engineering/technical data, drawings, design process, pricing, research and development, strategic plans, and operating data resident on magnetic media, or other media processed, stored, archived or maintained, shall be protected from loss, erroneous alteration, and shall be held in strict confidence and protected from unauthorized access. All confidential data shall be protected at all times. The Contractor shall provide the same care and processes to prevent unauthorized access, modification or loss of the Authority data via the same, or

enhanced, processes that it presently employs to protect its own information of a similar nature. In the event of any non-authorized access, modification, disclosure, loss or inability to account for any Authority data, the Contractor will provide immediate notification to the Authority's Contract Manager.

#### **D. Quality Assurance/Auditing**

The Contractor shall establish and maintain a quality assurance program, which the Contractor will utilize to assure that all work is performed in accordance with the terms of this agreement including compliance with and at a level consistent with acceptable industry's best practices. The Contractor shall employ procedures to assure the timely and effective execution of all tasks required by this Contract. The program is expected to include a measurement program that tracks the quality and productivity of services provided by the Contractor. The Contractor shall issue reports regarding this Quality Assurance activity when requested.

The Contractor shall be responsible for maintaining the appropriate knowledge, certifications skills and abilities of the staff assigned to administer the target system by providing a regular ongoing training program appropriate to the needs of each system administered and the staff assigned.

### **III. Service Level Agreement (SLA)**

The above tasks and work approach shall be performed in accordance with the service level agreements stated below. The Contractor shall provide quarterly reports demonstrating its performance against all the SLA standards.

#### **A. Server availability:**

All servers and associated storage and applications shall be on-line and available for general use 99 % of the time per server as measured on a monthly basis.

#### **B. Patch/version maintenance:**

The Contractor shall apply all critical security/operating patches within 24 hours of their approval by the Authority. All other patches and service packs shall be deployed within 10 business days. Software version upgrades shall be deployed within 6 months of general release.

#### **C. User/group account maintenance:**

All routine operational requests shall be satisfied within 48 hours. Additional operational requests, not requiring dedicated Contractor staff and without a pre-established contractual deadline, shall be performed as a part of this contract by the deadline negotiated between the Contractor and the Contract Manager.

#### **D. Operational Requests**

- Resetting a user password within 2 hours.
- Routine operational request is satisfied within 2 working days (e.g. adding a new user, assisting the configuration of a User's personal computer; granting a user access to an existing application).
- Assisting Users in setting up simple database queries within 1 working day. Assisting Users in setting up more complex queries may take up to 3 working days.

### **E. Backups and Archiving**

Minimum frequency and type of backup (incremental daily; once a week full backup)  
Minimum frequency of archive (as required to maintain server capacity)

### **F. System Monitoring**

System monitoring shall be performed once a day at a minimum.

### **G. Hours of Service**

For purposes of staffing and service level agreements, the Contractor's hours of service shall be daily from 0900 to 1700 EST . In some instances, specific and ongoing schedule requirements may necessitate the permanent assignment of support staff outside these standard times, such as the field work involving maintenance and installation of NMTs. Such permanent assignments should not entail overtime charges where the standard workday duration is not exceeded. The Contractor's proposed minimum of qualified staff shall be maintained throughout the term of the Contract. Should the Contractor fail to provide and maintain the required amount of qualified staff at any time during the term of the Contract, the Authority (at the Authority Contract Manager's authorization) may reduce the Contractor's fee in an amount corresponding to the cost of providing such staff. Furthermore, the Authority Contract Manager shall pre-approve anticipated reductions in the Contractor's staff. It is understood that reductions in staff levels, may result in corresponding reductions of the Contractor's fee.

### **H. Conventional Systems Administration activities**

Conventional Systems Administration activities, must take place outside of normal business hours and are to be considered part of the Contract and are not to be considered extra work.

### **I. Audit**

Shall satisfy all of the terms, conditions, and requirements stated herein, specifically the above service-level tasks, and the tasks stated in section 2 (Application/Database Systems), above. Satisfaction of such terms, conditions, requirements, and tasks shall be determined by an annual audit by the Authority and by adherence to the Contract and best industry IT Standards, Guidelines and practices.