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**EXHIBITS**

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- B. FEE SCHEDULE**
- C. EQUAL EMPLOYMENT OPPORTUNITY**
- D. MWBE SUBCONTRACT TERMS**
- E. PERFORMANCE BOND**
- F. DRUG POLICY COMPLIANCE AGREEMENT**
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**H. DRUG POLICY COMPLIANCE DECLARATION**

**I. EQUIPMENT LIST**

**J. ANNUAL MAINTENANCE SHUTDOWN PROCEDURES**

**K. CORROSION TEST**

C. Parts Incorporated

All of the above-described sections and exhibits are incorporated into this Agreement.

D. Controlling Parts

If a conflict among the articles and exhibits occurs, the articles control over the exhibits.

E. Signatures

The Parties have executed this Agreement in multiple copies, each of which is an original.

ATTEST/SEAL (if a corporation):  
WITNESS (if not a corporation):

TDINDUSTRIES, Inc.  
"Contractor"

By: Kerri Lynne Embrey  
Name: Kerri Lynne Embrey  
Title:  
Tax Identification No: \_\_\_\_\_

By: W. Parten  
Name: William Parten  
Title: Executive Vice President



CITY OF HOUSTON, TEXAS  
Signed by:

W. Russell  
City Secretary

Arnise D. Parker  
Mayor Matthew G. Appel

APPROVED:

Mario C. Diaz  
Mario C. Diaz  
Director, Houston Airport System

APPROVED:

William J. Will  
Purchasing Agent

COUNTERSIGNED BY:

Ronald C. Guss  
City Controller Gerard Polk

APPROVED AS TO FORM:

[Signature]  
Sr. Assistant City Attorney  
L.D. File No.

DATE COUNTERSIGNED:

12-29-11

## II. DEFINITIONS

As used in this Agreement, the following terms have the meanings set out below:

**"Acceptable"** means that services, equipment, or performance, meet or exceed the requirements of this Agreement.

**"Acceptance"** shall be determined by the Director and occurs when the Director determines that the unit of Work specified under the Agreement is complete and acceptable.

**"Acceptable Equivalent"** means any equipment, part or product that complies with existing industry standards governing its manufacture or use, and that is a functional equivalent of any equipment, part, product or specification described herein, or, which functionally satisfies an approved, negotiated or specified use made a part hereof.

**"Air Operations Area (AOA)"** means any area of the airport used or intended to be used for the landing, takeoff, or surface maneuvering of aircraft. An air operations area shall include such paved and unpaved areas that are used or intended to be used for unobstructed movement of aircraft in addition to its associated runway, taxi-way or apron.

**"Airport(s)"** mean George Bush Intercontinental Airport/Houston (IAH), William P. Hobby Airport (HOU), and Ellington Airport (EFD).

**"ASC"** means the Airport Services Complex located at 4500 Will Clayton Parkway at IAH.

**"Basic Services"** mean those services described in Exhibit "A" – Performance/Work Statement.

**"Business Days"** mean all days of a calendar year.

**"CFM"** means a unit of measure for discharged air from a compressor in cubic feet per minute.

**"City"** is defined in Section I of this Agreement and includes its successors and assigns.

**"Company or Contractor"** is defined in Section I of this Agreement and includes its successors and assigns.

**"Contract or Agreement"** means the Agreement and written amendments authorized by City Council and Contractor or change orders authorized by this Agreement between the City and Contractor whereby Contractor shall provide all specified Work in connection with the Agreement, in the manner provided by the Agreement.

**"DDC"** means direct digital control for HVAC devices

**"Director"** means the Director of the Houston Airport System or the City Purchasing Agent, or their designee in writing. The Agreement designates certain functions to be performed by the Director. For the purposes of the Agreement, those functions are assigned to the Assistant Director of Aviation, Supply Chain Management. The Assistant Director of Aviation, Supply Chain Management may delegate certain functions to other HAS employees, in writing.

**"DX"** means direct expansion system that uses refrigerant instead of chilled water.

**"EFD"** means Ellington Airport.

**"Equipment"** means all machinery, together with the necessary supplies for upkeep and maintenance, and also all tools and apparatus necessary for the proper and acceptable completion of the specified Work.

**"First Class Condition"** refers to the quality of systems, parts, equipment and related components and appurtenances including replacements ("elements"). It also refers to the condition of the wear and operation of the elements. When referring to the quality of the elements, First Class Condition means of a quality equal to or better than the elements as originally installed. When referring to the wear and operation of the elements, First Class Condition means a standard that is within the manufacturer's published tolerances for safe, reliable operation, or if no published tolerances, within generally accepted tolerances within the HVAC and equipment maintenance industry.

**"Furnish"** means to supply and deliver to the appropriate Airport site, ready for unloading, unpacking, assembly, installation, use, etc., as applicable in each instance, except as otherwise defined in greater detail.

**"HOU"** means William P. Hobby Airport.

**"Houston Airport System (HAS)"** means the property and facilities of the City of Houston Department of Aviation which include, but are not limited to, George Bush Intercontinental Airport/Houston (IAH), William P. Hobby Airport (HOU), Ellington Airport (EFD), and the Houston Airport System Administration Buildings.

**"HVAC SYSTEMS"** means heating, ventilating, air conditioning systems and all associated plumbing, electrical, and control systems.

**"Include" and "Including"** and words of similar import, shall be deemed to be followed by the words "without limitation".

**"IAH"** means George Bush Intercontinental Airport/Houston.

**"Maintenance Facilities"** means the shop and office facilities the City provides to the Contractor. Such facilities are provided at each of the Airports.

**"Maintenance Service"** means both Preventive Maintenance and Remedial Maintenance.

**"Major Equipment"** means large mechanical and electrical machinery or apparatus including specifically electric and steam driven chillers, steam condensers, boilers, cooling towers, steam/hot water converters, deaerators, chilled and condenser water pumps within Central Plant systems, and related electrical switchboards and motor control centers, plus major parts of the above including, but not limited to, compressors, speed reducers and increasers, motors, heat exchangers, and related electrical switches and starters. For the purpose of providing Major Equipment Failure Insurance coverage pursuant to the terms of this Agreement, major equipment shall specifically exclude other mechanical and electrical machinery powered by motors of less than 100 horsepower, other heat exchangers and systems components, and appurtenances.

**"Manufacturer"** means the original manufacturer or producer of a part or component.

**"Materials"** means any substance specified for use in the accomplishment of the Work.

**"Notice to Proceed"** means a written communication from the Director to Contractor instructing Contractor to begin performance.

**"OEM"** means the Original Equipment Manufacturer.

**"Other Service Request (OSR)"** is the form used to request Other Work/Services within the scope of this Agreement.

**"Other Work/Services"** means those services described in Exhibit "A" – Performance/Work Statement and Exhibit "B" – Fee Schedule as Other Work/Services and other services related to operations and maintenance services, other than Basic Services. Such services are only provided upon the Director's written request.

**"Overtime"** is defined as being between the hours of 5:01 p.m. through 7:59 a.m.: Monday through Friday and any time Saturday, Sunday or during City holidays.

**"Preventive Maintenance (PM)"** The activities focus on scheduled maintenance activities recommended by the manufacturer and by industry best practice standards. They include proper inspections, proper lubrication, belts, filter changes, proper fastening procedures, determined by regularly scheduled work, etc. Preventive maintenance activities should be so effective that at least 80 to 90% of all maintenances activities occur on a planned and scheduled basis.

**"Predictive Maintenance (PdM)"** – Predictive Maintenance (PdM) is a carefully planned system of machinery analysis and diagnostics. (PdM) provides machinery "health condition: information, which prompts timely, corrective action". The expected result: optimum machine productivity, extended machine life, and reduced maintenance costs.

**"Provide"** means furnish and install, complete, and ready for intended use, as applicable in each instance, except as otherwise defined in greater action.

**"Reliability Centered Maintenance (RCM)"** – The application of predictive and preventive maintenance data to the preventive maintenance tasks. The process provides statistical method (s) of optimizing the preventive maintenance and predictive maintenance programs for the HVAC SYSTEMS with the goal of maximizing the component/equipment's availability and performance at the lowest life-cycle cost.

**"Remedial Maintenance (RM)"** means repair of equipment and systems with parts, materials, and labor to restore performance to the designed function in the event of any breakdown or stoppage of equipment or system where the equipment or system is unable to perform its designed function. RM includes repairs and replacement of related components, parts, and appurtenances that have failed, no longer perform reliably, or have worn beyond safe tolerances.

**"Repair"** means to restore to good or sound working condition.

**"Response Time"** means the maximum elapsed time in which Contractor must respond to an Emergency Service Request. The maximum elapsed time is measured from Contractor's receipt of an Emergency Service Request to Contractor's arrival at the specified work site.

**"Routine"** means those services that do not require emergency condition.

**"Schedule"** the planned periods of time the Contractor shall be allowed to perform contract Work on the pavement as determined by the Director and local airfield requirements.

**"SCM"** means Supply Chain Management Division located at 18600 Lee Rd., Humble TX. 77338

**"Service"** means to provide the labor, tools, equipment, and all items required to minimize maintenance requirements and ensure proper systems and equipment performance based on manufacturer's recommended procedures including, but not limited to, lubricating rotating equipment, changing filters, cleaning drains, verification of proper performance and calibration of controls and measurements devices, verifying proper operation of equipment and making adjustments in operating conditions, including operating positions and set points, pressures, and fluids.

**"Straight Time"** is defined as being between the hours of 8:00 a.m. through 5:00 p.m.; Monday through Friday.

**"Taxiway"** means the portion of the Air Operations Area of an Airport that has been designated by the HAS for movement of aircraft to and from the Airport's runways and aircraft parking areas.

**"Urgent Service Request"** is defined as a non-remedial maintenance request for immediate action. An urgent service request may be issued outside of Normal Business Hours, in which case additional labor charges will apply. (Exhibit "A" – Performance/Work Statement)

**"VFD"** means Variable Frequency Drive. A system for controlling the rotational speed of an alternating current (AC) electric motor by controlling the frequency of the electrical power supplied to the motor.

**"Work"** means all services to be provided by the Contractor under this Agreement.

### III. DUTIES OF CONTRACTOR

#### A. Scope of Services

In consideration of the payment specified in this Agreement, Contractor shall provide all labor, supervision, parts, equipment, materials, tools, instruments, expendable items, supplies, reports, transportation, insurance, subcontracts, bonds, and incidentals necessary to perform the Basic Services and, if requested, Other Work/Services described in the Performance/Work Statement set forth in Exhibit "A". Contractor shall operate and maintain all the Equipment set forth in Exhibit "I" in a First Class Condition. Also as a part of Basic Services, Contractor shall perform an annual electrical and maintenance shut down as described in Exhibit "J" and test and monitor corrosion rates for the chilled water, condensate, and condenser water as specified in Exhibit "K". Contractor shall not be paid for travel time to and from the job site. Except as provided in Exhibit "A", Contractor shall operate and maintain the HVAC Systems on a 24-hours-per-day, 7-days-per-week, 365 days-per-year basis, including holidays.

B. Duty to Inspect

Contractor represents that it or its agent has inspected all sites affected by this Agreement and that it is not entitled to additional compensation for its failure to accurately account for all of the work required to be performed under this Agreement.

C. Invoicing

Contractor shall submit its invoices on forms approved in advance by the Director. Each invoice must be accompanied by copies of certified time sheets and any other support documents as may be required by the Director. Each invoice Contractor submits must be in duplicate and each copy must include required support documents. Each invoice must be identified by the Contract name and Contract number. All invoices are to be delivered or mailed to the following location:

The City of Houston  
Houston Airport System  
Accounts Payable Section  
P.O. Box 60106  
Houston, Texas 77205-0106

D. Payment of Subcontractors

Contractor shall make timely payments to all persons and entities supplying labor, materials, services, or equipment for the performance of this Agreement. CONTRACTOR SHALL DEFEND AND INDEMNIFY THE CITY FROM ANY CLAIMS OR LIABILITY ARISING OUT OF CONTRACTOR'S FAILURE TO MAKE THESE PAYMENTS. Contractor shall submit disputes relating to payment of MWBE subcontractors to arbitration in the same manner as any other disputes under the MWBE subcontract.

E. Personnel of Contractor

Contractor shall provide sufficient, fully qualified personnel to meet the performance requirements set forth in Exhibit "A". The Contractor shall designate a Project Manager to act on behalf of Contractor who is authorized to make all decisions regarding the Work hereunder. Such Project Manager and any replacement Project Manager shall have a minimum of ten years experience on similar HVAC systems. The Director may rely on any decisions made by the Project Manager as being decisions of the Contractor. Such Project Manager shall not be replaced by Contractor during the Term of this Agreement without the prior written permission of Director (subject to all employment laws) and the mutual agreement by the Director and Contractor of a replacement Project Manager who is satisfactory to the Director. Contractor shall replace any of its personnel or subcontractors whose work product is deemed unsatisfactory by the Director.

F. RELEASE

**EXCEPT FOR THE CITY'S GROSS NEGLIGENCE OR WILFUL MISCONDUCT, CONTRACTOR AGREES TO AND SHALL RELEASE THE CITY, ITS AGENTS, EMPLOYEES, OFFICERS, AND LEGAL REPRESENTATIVES (COLLECTIVELY THE**

"CITY") FROM ALL LIABILITY FOR INJURY, DEATH, DAMAGE, OR LOSS TO PERSONS OR PROPERTY SUSTAINED IN CONNECTION WITH OR INCIDENTAL TO PERFORMANCE UNDER THIS AGREEMENT, EVEN IF THE INJURY, DEATH, DAMAGE, OR LOSS IS CAUSED BY THE CITY'S SOLE OR CONCURRENT NEGLIGENCE AND/OR THE CITY'S STRICT PRODUCTS LIABILITY OR STRICT STATUTORY LIABILITY.

**G. INDEMNIFICATION**

CONTRACTOR AGREES TO AND SHALL DEFEND, INDEMNIFY, AND HOLD THE CITY, ITS AGENTS, EMPLOYEES, OFFICERS, AND LEGAL REPRESENTATIVES (COLLECTIVELY THE "CITY") HARMLESS FOR ALL CLAIMS, CAUSES OF ACTION, LIABILITIES, FINES, AND EXPENSES (INCLUDING, WITHOUT LIMITATION, ATTORNEYS FEES, COURT COSTS, AND ALL OTHER DEFENSE COSTS AND INTEREST) FOR INJURY, DEATH, DAMAGE, OR LOSS TO PERSONS OR PROPERTY SUSTAINED IN CONNECTION WITH OR INCIDENTAL TO PERFORMANCE UNDER THIS AGREEMENT INCLUDING, WITHOUT LIMITATION, THOSE CAUSED BY:

- (1) CONTRACTOR'S AND/OR ITS AGENTS, EMPLOYEES, OFFICERS, DIRECTORS, CONTRACTORS, OR SUBCONTRACTORS (COLLECTIVELY IN NUMBERED PARAGRAPHS 1-3, "CONTRACTOR") ACTUAL OR ALLEGED NEGLIGENCE OR INTENTIONAL ACTS OR OMISSIONS;
- (2) THE CITY'S AND CONTRACTOR'S ACTUAL OR ALLEGED CONCURRENT NEGLIGENCE, WHETHER CONTRACTOR IS IMMUNE FROM LIABILITY OR NOT; AND
- (3) THE CITY'S AND CONTRACTOR'S ACTUAL OR ALLEGED STRICT PRODUCTS LIABILITY OR STRICT STATUTORY LIABILITY, WHETHER CONTRACTOR IS IMMUNE FROM LIABILITY OR NOT.

CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE CITY HARMLESS DURING THE TERM OF THIS AGREEMENT AND FOR FOUR YEARS AFTER THE AGREEMENT TERMINATES. CONTRACTOR'S INDEMNIFICATION IS LIMITED TO \$1,000,000 PER OCCURRENCE. CONTRACTOR SHALL NOT INDEMNIFY THE CITY FOR THE CITY'S SOLE NEGLIGENCE.

CONTRACTOR SHALL REQUIRE ALL OF ITS SUBCONTRACTORS (AND THEIR SUBCONTRACTORS) TO RELEASE AND INDEMNIFY THE CITY TO THE SAME EXTENT AND IN SUBSTANTIALLY THE SAME FORM AS ITS RELEASE AND INDEMNITY TO THE CITY.

**H. RELEASE AND INDEMNIFICATION - PATENT, COPYRIGHT, TRADEMARK, AND TRADE SECRET INFRINGEMENT**

CONTRACTOR AGREES TO AND SHALL RELEASE AND DEFEND, INDEMNIFY, AND HOLD HARMLESS THE CITY, ITS AGENTS, EMPLOYEES, OFFICERS, AND LEGAL REPRESENTATIVES (COLLECTIVELY THE "CITY") FROM ALL CLAIMS OR CAUSES OF ACTION BROUGHT AGAINST THE CITY BY ANY PARTY, INCLUDING CONTRACTOR, ALLEGING THAT THE CITY'S USE OF ANY EQUIPMENT, SOFTWARE, PROCESS, OR DOCUMENTS CONTRACTOR FURNISHES DURING THE TERM OF THIS AGREEMENT INFRINGES ON A PATENT, COPYRIGHT, OR TRADEMARK, OR MISAPPROPRIATES A

**TRADE SECRET. CONTRACTOR SHALL PAY ALL COSTS (INCLUDING, WITHOUT LIMITATION, ATTORNEYS FEES, COURT COSTS, AND ALL OTHER DEFENSE COSTS, AND INTEREST) AND DAMAGES AWARDED.**

**CONTRACTOR SHALL NOT SETTLE ANY CLAIM ON TERMS WHICH PREVENT THE CITY FROM USING THE EQUIPMENT, SOFTWARE, PROCESS, AND DOCUMENTS WITHOUT THE CITY'S PRIOR WRITTEN CONSENT.**

**WITHIN 60 DAYS AFTER BEING NOTIFIED OF THE CLAIM, CONTRACTOR SHALL, AT ITS OWN EXPENSE, EITHER (1) OBTAIN FOR THE CITY THE RIGHT TO CONTINUE USING THE EQUIPMENT, SOFTWARE, PROCESS, AND DOCUMENTS OR, (2) IF BOTH PARTIES AGREE, REPLACE OR MODIFY THEM WITH COMPATIBLE AND FUNCTIONALLY EQUIVALENT PRODUCTS. IF NONE OF THESE ALTERNATIVES IS REASONABLY AVAILABLE, THE CITY MAY RETURN THE EQUIPMENT, SOFTWARE, OR DOCUMENTS, OR DISCONTINUE THE PROCESS, AND CONTRACTOR SHALL REFUND THE PURCHASE PRICE.**

## **I. INDEMNIFICATION PROCEDURES**

- (1) Notice of Claims. If the City or Contractor receives notice of any claim or circumstances which could give rise to an indemnified loss, the receiving party shall give written notice to the other party within 10 days. The notice must include the following:
  - (a) a description of the indemnification event in reasonable detail,
  - (b) the basis on which indemnification may be due, and
  - (c) the anticipated amount of the indemnified loss.

This notice does not estop or prevent the City from later asserting a different basis for indemnification or a different amount of indemnified loss than that indicated in the initial notice. If the City does not provide this notice within the 10 day period, it does not waive any right to indemnification except to the extent that Contractor is prejudiced, suffers loss, or incurs expense because of the delay.

- (2) Defense of Claims
  - (a) Assumption of Defense. Contractor may assume the defense of the claim at its own expense with counsel chosen by it that is reasonably satisfactory to the City. Contractor shall then control the defense and any negotiations to settle the claim. Within 10 days after receiving written notice of the indemnification request, Contractor must advise the City as to whether or not it will defend the claim. If Contractor does not assume the defense, the City shall assume and control the defense, and all defense expenses constitute an indemnification loss.
  - (b) Continued Participation. If Contractor elects to defend the claim, the City may retain separate counsel to participate in (but not control) the defense and to participate in (but not control) any settlement negotiations. Contractor may settle the claim without the consent or agreement of the City, unless it (i) would result in injunctive relief or other equitable remedies or otherwise require the City to comply with restrictions or limitations

that adversely affect the City, (ii) would require the City to pay amounts that Contractor does not fund in full, (iii) would not result in the City's full and complete release from all liability to the plaintiffs or claimants who are parties to or otherwise bound by the settlement.

J. Insurance

Contractor shall maintain in effect certain insurance coverage, which is described as follows:

(1) Minimum Insurance Requirements. Contractor shall maintain the following insurance coverage in the following amounts:

<u>(Coverage)</u>	<u>(Limit of Liability)</u>
<b>Workers' Compensation</b>	<b>Statutory for Workers' Compensation</b>
<b>Employer's Liability</b>	<b>Bodily Injury by accident \$500,000 (each accident)</b> <b>Bodily Injury by Disease \$500,000 (policy limit)</b> <b>Bodily Injury by Disease \$500,000 (each employee)</b>
<b>Commercial General Liability: Including Broad Form Coverage, Contractual Liability, Bodily and Personal Injury, and Completed Operations</b>	<b>Bodily Injury and Property Damage, Combined Limits of \$2,000,000 each Occurrence and \$4,000,000 aggregate</b>
<b>Automobile Liability Insurance (for vehicles Contractor uses in performing under this Agreement, including Employer's Non-Owned and Hired Auto Coverage)</b>	<b>\$1,000,000 combined single limit</b>

**Defense costs are excluded from the face amount of the policy.  
Aggregate Limits are per 12-month policy period  
unless otherwise indicated.**

- (2) Form of Policies. The Director may approve the form of the insurance policies, but nothing the Director does or fails to do relieves Contractor from its duties to provide the required coverage under this Agreement. The Director's actions or inactions do not waive the City's rights under this Agreement.
- (3) Issuers of Policies. The issuer of any policy (1) shall have a Certificate of Authority to transact insurance business in Texas or (2) shall be an eligible non-admitted insurer in the State of Texas and have a Best's rating of at least B+ and a Best's Financial Size Category of Class VI or better, according to the most current edition Best's Key Rating Guide.
- (4) Insured Parties. Each policy, except those for Workers' Compensation, Employer's Liability, and Professional Liability, must name the City (and its officers, agents, and employees) as Additional Insured parties on the original policy and all renewals or replacements.

- (5) Deductibles. Contractor shall be responsible for and pay any claims or losses to the extent of any deductible amounts and waives any claim it may have for the same against the City, its officers, agents, or employees.
- (6) Cancellation. Contractor shall notify the Director in writing 30 days prior to any cancellation or reduction in coverage or limits to Contractor's insurance coverage. Within the 30 day period, Contractor shall provide other suitable policies in lieu of those about to be canceled or nonrenewed so as to maintain in effect the required coverage. If Contractor does not comply with this requirement, the Director, at his or her sole discretion, may:
  - (i) immediately suspend Contractor from any further performance under this Agreement and begin procedures to terminate for default, or
  - (ii) purchase the required insurance with City funds and deduct the cost of the premiums from amounts due to Contractor under this Agreement.
- (7) Subrogation. Each policy must contain an endorsement to the effect that the issuer waives any claim or right of subrogation to recover against the City, its officers, agents, or employees.
- (8) Endorsement of Primary Insurance. Each policy, except Workers' Compensation and Professional Liability (if any), must contain an endorsement that the policy is primary to any other insurance available to the Additional Insured with respect to claims arising under this Agreement.
- (9) Liability for Premium. Contractor shall pay all insurance premiums, and the City shall not be obligated to pay any premiums.
- (10) Subcontractors. Contractor shall require all subcontractors to carry insurance naming the City as an additional insured and meeting all of the above requirements except amount. The amount must be commensurate with the amount of the subcontract, but in no case less than \$500,000 per occurrence. Contractor shall provide copies of insurance certificates to the Director.
- (11) Proof of Insurance.
  - (a) Prior to execution of this Agreement, Contractor shall furnish the Director with Certificates of Insurance, along with an Affidavit from Contractor confirming that the Certificates accurately reflect the insurance coverage maintained. If requested in writing by the Director, Contractor shall furnish the City with certified copies of Contractor's actual insurance policies.
  - (b) Contractor shall continuously and without interruption, maintain in force the required insurance coverages specified in this Section. If Contractor does not comply with this requirement, the Director, at his or her sole discretion, may
    - (1) immediately suspend Contractor from any further performance under this Agreement and begin procedures to terminate for default, or
    - (2) purchase the required insurance with City funds and deduct the cost of the premiums from amounts due to Contractor under this Agreement.

The City shall never waive or be estopped to assert its right to terminate this Agreement because of its acts or omissions regarding its review of insurance documents.

(12) Other Insurance. If requested by the Director, Contractor shall furnish adequate evidence of Social Security and Unemployment Compensation Insurance, to the extent applicable to Contractor's operations under this Agreement.

K. Warranties

Contractor warrants that it shall perform all Work in a good and workmanlike manner meeting the standards of quality prevailing in Harris County, Texas, for work of this kind. Contractor shall perform all Work using trained and skilled persons having substantial experience performing the work required under this Agreement.

With respect to any parts, instruments, equipment, and goods it furnishes, Contractor warrants:

- (1) that all items are free of defects in title, design, material, and workmanship,
- (2) that each item meets or exceeds the manufacturer's specifications and requirements for the equipment, structure, or other improvement in which the item is installed,
- (3) that each replacement item is new, in accordance with original equipment manufacturer's specifications, and of a quality at least as good as the quality of the item which it replaces (when the replaced item was new),
- (4) that no items or their use infringe any patent, copyright, or other proprietary rights. In the event Contractor becomes aware of such an infringement, Contractor will replace the items that are the subject of the infringement with non-infringing items in a timely manner; and
- (5) that for one year from the date of any installation ("Warranty Period"), Contractor shall provide all parts, instruments, equipment, and goods required to complete all Preventive and Remedial Maintenance required under this Agreement at no cost to the City. This warranty is in addition to Contractor's obligation to provide Basic Services under this Agreement. When the manufacturer's warranty period for any parts, instruments, equipment, and goods is greater than 1 year, the longer period prevails.

Contractor shall manage and enforce on the City's behalf all manufacturer warranties issued before the Effective Date of this Agreement, during the Term of this Agreement, and any extensions. Contractor shall not be entitled to any additional compensation for the management and enforcement of these manufacturer warranties. If Contractor does not exhaust all remedies, including litigation, against a manufacturer who fails to honor all or a part of a warranty, it shall not receive additional compensation from the City for the labor and material costs it incurs to repair or replace the item that otherwise would have been under warranty.

L. Maintenance Audit

- (1) At any time during the Term of this Agreement or any extensions, the Director, without notice to the Contractor and at HAS' expense, may provide for a third party maintenance audit. Contractor shall rectify any deficiencies in performance discovered by such audit for which Contractor is responsible to the Director's satisfaction at no cost to the City within ten (10) days of receipt of a notice of any deficiency. Further, the Contractor shall provide the Director with a written

explanation for such deficiency in performance and a plan to prevent future deficiencies within fifteen (15) days of receipt of such notice. Failure of the Contractor to timely rectify the deficiency or provide the written explanation and plan to the Director shall be grounds for termination for cause as provided in Section V.

- (2) At any time during the Term of this Agreement or any extensions, the Director, without notice to the Contractor, may conduct his own inspections of Contractor's work performance, equipment, inventory, logs and work sites. Contractor shall rectify any deficiencies discovered by such inspection to the Director's satisfaction within ten (10) days of receipt of a notice of any such deficiency at no cost to the City if caused by the Contractor or its subcontractors.

M. Confidentiality

Contractor, its agents, employees, contractors, and subcontractors shall hold all City information, data, and documents (collectively, "the Information") that they receive, prepare, or to which they have access, in strictest confidence. Contractor, its agents, employees, contractors, and subcontractors shall not disclose, disseminate, or use the Information unless the Director authorizes it in writing. Contractor shall establish procedures to ensure confidentiality of the Information and to prevent its unauthorized use and disclosure. Contractor shall obtain written agreements from its agents, employees, contractors, and subcontractors who perform work under this Agreement, which bind them to the terms in this paragraph.

N. Use of Work Products

Any interest of Contractor or its subcontractors in drawings, plans, specifications, studies, reports, memoranda, computations sheets, data, software, or other documents prepared by Contractor or its subcontractors in connection with this Agreement is or shall become property of and shall be transmitted to the City. However, Contractor may retain and use copies for reference and as documentation of its experience and capabilities. City shall have the non-exclusive right to use or permit the use of all such data, software, related documentation, and papers and any ideas or methods represented thereby for the operation and maintenance of the HVAC Systems at any time without additional compensation to the Contractor. All materials to become part of the HVAC Systems including but not limited to, spare parts, equipment, expendables, and consumables inventory shall be and become property of the City upon delivery or upon being specially adapted for use in or as part of the HVAC System whichever occurs first.

Contractor shall promptly furnish to City such bills of sale and other instruments as may be required by it, properly executed, acknowledged and delivered, assuring to it title to such materials, free from encumbrances and shall mark or otherwise identify all such materials as property of the City.

Any and all artwork, copy, posters, billboards, photographs, videotapes, audiotapes, systems designs, software, reports, diagrams, surveys, source codes or any other original works of authorship created by Contractor or its subcontractors in connection with the services performed under this Agreement or the shall be works for hire as defined under Title 17 of the United States Code, as may be amended, and all copyrights in such works are the property of the City. In the event that it is determined that any works created by Contractor or its subcontractors under this Agreement are not works for hire under U.S. law, Contractor hereby assigns all copyrights to such works to the City. With the approval of the Director, Contractor may retain and use copies of such works for reference and as documentation of its experience and capabilities.

O. Licenses and Permits

Contractor shall obtain, maintain, and pay for all licenses, permits, and certificates including all professional licenses required by this Agreement, any statute, ordinance, rule, or regulation. This requirement includes, without limitation, certification of the on-site technicians. Contractor shall immediately notify the Director of any suspension, revocation, or other detrimental action against required licenses or certifications.

P. Compliance with Laws

Contractor shall comply with all applicable state and federal laws and regulations, including without limitation, the Americans with Disabilities Act of 1990, as amended and OSHA; the City Charter and Code of Ordinances; and HAS' rules and regulations.

Q. Compliance with Equal Opportunity Ordinance

Contractor shall comply with the City's Equal Employment Opportunity Ordinance as set out in Exhibit "C."

R. Minority and Women Business Enterprises

Contractor shall comply with the City's Minority and Women Business Enterprise ("MWBE") programs as set out in Chapter 15, Article V of the City of Houston Code of Ordinances. Contractor shall make good faith efforts to award subcontracts or supply agreements in at least 18% of the value of this Agreement to MWBEs. Contractor acknowledges that it has reviewed the requirements for good faith efforts on file with the City's Office of Business Opportunities ("OBO"), and will comply with them.

Contractor shall require written subcontracts with all MWBE subcontractors and shall submit all disputes with MWBEs to binding arbitration to be conducted in Houston, Texas, if directed to do so by the OBO Director. MWBE subcontracts must contain the terms set out in Exhibit "D".

S. Performance Bond

Contractor shall, within ten (10) days of the date the Director issues the Notice to Proceed to begin performance hereunder, furnish and maintain a performance bond in the amount of \$1,000,000 conditioned on Contractor's full and timely performance of the Agreement (and payment of subcontractors). Contractor shall maintain the bond throughout the Term and any exercised option years. The bond must be in substantially the form attached as Exhibit "E" and issued by a corporate surety authorized and admitted to write surety bonds in Texas. If the amount of the bond exceeds \$100,000, the surety must be listed on the current list of accepted sureties on federal bonds published by the United States Treasury Department or reinsured for any liability in excess of \$100,000 by a reinsurer listed on the U.S. Treasury list.

In addition to the termination rights set forth in Article V. D of this Agreement, should Contractor fail to provide the Performance Bond within the time set forth above, City shall have the right to withhold and retain any payments due Contractor without interest or penalty of any kind, until such time as an acceptable Performance Bond is provided to the City as required by this Agreement. At such time as a Performance Bond is accepted by the City Attorney, the withheld and retained payments shall be released by the City to Contractor in the next monthly billing cycle, without interest or penalty of any kind imposed upon City.

T. Drug Abuse Detection and Deterrence

(1) It is the policy of the City to achieve a drug-free workforce and workplace. The manufacture, distribution, dispensation, possession, sale, or use of illegal drugs or alcohol by contractors while on City Premises is prohibited. Contractor shall comply with all the requirements and procedures set forth in the Mayor's Drug Abuse Detection and Deterrence Procedures for Contractors, Executive Order No. 1-31 ("Executive Order"), which is incorporated into this Agreement and is on file in the City Secretary's Office.

(2) Before the City signs this Agreement, Contractor shall file with the Contract Compliance Officer for Drug Testing ("CCODT"),

- (a) a copy of its drug-free workplace policy,
- (b) the Drug Policy Compliance Agreement substantially in the form set forth in Exhibit "F," together with a written designation of all safety impact positions and,
- (c) if applicable (e.g. no safety impact positions), the Certification of No Safety Impact Positions, substantially in the form set forth in Exhibit "G."

If Contractor files a written designation of safety impact positions with its Drug Policy Compliance Agreement, it also shall file every six (6) months during the performance of this Agreement or on completion of this Agreement if performance is less than six (6) months, a Drug Policy Compliance Declaration in a form substantially similar to Exhibit "H." Contractor shall submit the Drug Policy Compliance Declaration to the CCODT within thirty (30) days of the expiration of each six (6) month period of performance and within thirty (30) days of completion of this Agreement. The first six (6) month period begins to run on the date the Director issues his Notice to Proceed to begin performance under this Agreement.

- (3) Contractor also shall file updated designations of safety impact positions with the CCODT if additional safety impact positions are added to Contractor's employee work force.
- (4) Contractor shall require that its subcontractors comply with the Executive Order and Contractor shall secure and maintain the required documents for City inspection.

#### U. Environmental Laws

(1) Contractor shall comply with all federal, state, and local statutes, ordinances, regulations, rules, policies, codes, or guidelines now or hereafter in effect, as they may be amended from time to time, that govern Hazardous Materials or relate to the protection of human health, safety, or the environment, including but not be limited to:

- (a) the Federal Insecticide, Fungicide, and Rodenticide Act, 7 U.S.C. Section 136 et seq.;
- (b) the Safe Drinking Water Act, 44 U.S.C. Section 300(f) et seq.;
- (c) the Oil Pollution Control Act of 1990, 33 U.S.C. Section 270 et seq.;
- (d) the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, 42 U.S.C., Section 9601 et seq., and as amended by the Superfund Amendments and Reauthorization Act of 1986, Pub. Law No. 99-499, 100 Stat. 1613;
- (e) the Toxic Substances Control Act, 15 U.S.C., Section 2601 et seq.;
- (f) the Clean Air Act as amended, 42 U.S.C. 7401 et seq.;
- (g) the Clean Water Act, 33 U.S.C., Section 1251, et seq.;

- (h) the Hazardous Materials Transportation Act, 49 U.S.C., Section 1801 et seq.;
- (i) the Resources Conservation and Recovery Act, 42 U.S.C., Section 6901 et seq.;

and those substances defined as hazardous waste or as hazardous substances under the laws of Texas and/or the United States or in regulations promulgated under these laws (collectively, "Environmental Laws").

(2) Within ten (10) days of receipt of an invoice, Contractor shall reimburse the City for any fines or penalties that may be levied against the City by the Environmental Protection Agency, the Texas Commission on Environmental Quality, or any other governmental agency for Contractor's (or its agents' and employees') failure to comply with the Environmental Laws.

(3) Contractor shall not possess, use, generate, release, discharge, store, dispose of, or transport any Hazardous Materials on, under, in, above, to or from the Airport, or any other areas or facilities subject to this Agreement, except in strict compliance with the Environmental Laws. "Hazardous Materials" include:

- (a) all substances, materials, wastes, pollutants, oils, or governmentally regulated substances or contaminants defined or designated as hazardous, toxic, radioactive, dangerous, or any other similar term in or under any of the Environmental Laws,
- (b) asbestos and asbestos-containing materials, petroleum products including crude oil or any fraction thereof, gasoline, aviation fuel, jet fuel, diesel fuel, lubricating oils and solvents, urea formaldehyde, flammable explosives, PCBs, radioactive materials or waste, or
- (c) any other substance that, because of its quantity, concentration, physical, chemical, or infectious characteristics may cause or threaten a present or potential hazard to human health or the environment when improperly generated, used, stored, handled, treated, discharged, distributed, disposed of, or released.

(4) The Airport is subject to the National Pollution Discharge Elimination System Program ("NPDES"), and the regulations, 40 CFR Part 122, relating to stormwater discharges, for operations at the Airport. Contractor is familiar with these NPDES stormwater regulations, and shall conduct operations in accordance with 40 CFR Part 122, as amended from time to time. Contractor understands that there are significant penalties for submitting false information, including fines and imprisonment for knowing violations.

(5) Close cooperation is necessary to ensure compliance with any NPDES stormwater discharge permit terms and conditions, as well as to ensure safety and to minimize costs. Contractor shall implement Best Management Practices as defined in 40 CFR, Part 122.2, as amended from time to time, if necessary to minimize the exposure of stormwater to significant materials generated, stored, handled, or otherwise used by Contractor as defined in the federal stormwater regulations.

(6) The City's NPDES stormwater discharge permit and any subsequent amendments, extensions, or renewals are incorporated into this Agreement. Contractor shall be bound by all applicable portions of the permit.

(7) Contractor shall implement the NPDES requirements at its sole expense, unless otherwise agreed to in writing between the City and Contractor. Contractor shall meet all deadlines that may be imposed or agreed to by the City and Contractor. Time is of the essence.

(8) If either party asks, the other party shall provide any non-privileged information submitted to a government entity(ies) under applicable NPDES stormwater regulations.

(9) Contractor appoints the City as its agent to negotiate with the appropriate governmental entity(ies) any modifications to the City's permit.

(10) Contractor shall participate in any City organized task force or other work group established to coordinate stormwater activities at the Airport.

(11) The City may enter upon Contractor's Premises at any time for purposes of inspection to ensure that Contractor is complying with this Section and any other provisions in this Agreement without committing a trespass.

(12) The City's remedies with regard to Environmental Requirements are cumulative and survive termination of this Agreement.

**(13) WITH NO INTENT TO LIMIT CONTRACTOR'S INDEMNIFICATION TO THE CITY SET FORTH IN SECTION III (F), CONTRACTOR SHALL PROTECT, DEFEND AND INDEMNIFY THE CITY AND ITS OFFICERS, AGENTS, AND EMPLOYEES AGAINST ANY LOSS, COST, CLAIM, DEMAND, PENALTY, FINE, SETTLEMENT, LIABILITY, OR EXPENSE (INCLUDING BUT NOT LIMITED TO REASONABLE ATTORNEYS' AND CONSULTANTS' FEES, COURT COSTS, AND LITIGATION EXPENSES) RELATED TO:**

**(a) ANY INVESTIGATION, MONITORING, CLEANUP, CONTAINMENT, REMOVAL, STORAGE, OR RESTORATION WORK PERFORMED BY THE CITY OR A THIRD PARTY DUE TO CONTRACTOR'S, ITS EMPLOYEES', OR AGENTS' USE OR PLACEMENT OF HAZARDOUS MATERIALS (OF WHATEVER KIND OR NATURE, KNOWN OR UNKNOWN) ON THE AIRPORT PREMISES, OR ANY OTHER AREAS IMPACTED BY THIS AGREEMENT;**

**(b) ANY ACTUAL, THREATENED, OR ALLEGED HAZARDOUS MATERIALS CONTAMINATION OF THE AIRPORT PREMISES BY CONTRACTOR, ITS EMPLOYEES, OR AGENTS;**

**(c) THE DISPOSAL, RELEASE, OR THREATENED RELEASE OF HAZARDOUS MATERIALS BY CONTRACTOR, ITS EMPLOYEES, OR AGENTS AT THE AIRPORT THAT AFFECTS THE SOIL, AIR, WATER, VEGETATION, BUILDINGS, PERSONAL PROPERTY, OR PERSONS;**

**(d) ANY PERSONAL INJURY, DEATH, OR PROPERTY DAMAGE (REAL OR PERSONAL) ARISING OUT OF OR RELATED TO HAZARDOUS MATERIALS USE BY CONTRACTOR, ITS EMPLOYEES, OR AGENTS AT THE AIRPORT; OR**

**(e) ANY VIOLATION BY CONTRACTOR, ITS EMPLOYEES, OR AGENTS OF ANY ENVIRONMENTAL LAWS.**

**THIS INDEMNITY IS NOT APPLICABLE TO LOSSES, CLAIMS, PENALTIES, FINES, SETTLEMENTS, LIABILITIES, AND EXPENSES THAT RESULT FROM CONDITIONS EXISTING ON THE EFFECTIVE DATE OF THIS AGREEMENT.**

V. Airport Security and Badging

Contractor shall comply with all HAS, TSA, FAA and any other governmental agency security directives, rules and regulations. The FAA and/or the TSA may assess fines and/or penalties for Contractor's non-compliance with the provisions of 49 CFR 1540 and 1542, as amended from time to time, or by other agencies for noncompliance with laws or regulations applicable to Contractor's operations. Within 10 days of notification in writing, Contractor shall reimburse the City for any fine or penalty assessed against the City because of Contractor's non-compliance with 49 CFR 1540 and 1542 or other applicable laws or regulations.

All on-site personnel of Contractor, including subcontractors, who perform services under this Agreement are required to undergo a fingerprint-based criminal history records check. Fingerprints will be collected at the Airport Badging Office and submitted electronically for investigation. At Contractor's expense, Contractor shall obtain HAS security badges for its personnel performing services on-site, including its subcontractors' personnel. On-site personnel shall wear identification badges at all times while on Airport property. Costs for the fingerprint-based criminal history records checks are reflected in the cost of the badges. Contractor is responsible for the cost of badges, including replacements thereof. Contractor personnel and its subcontractors losing badges will be charged for replacement badges at the then current rate.

W. Conflicts of Interest

If a potential or actual conflict of interests arises between the City's interests and the interests of other clients Contractor represents, Contractor shall immediately notify the City Attorney and Mayor by fax transmission or telephone and request consent. The City shall be deemed to consent to the conflict unless the Mayor or City Attorney sends a written notice that the City declines to consent within 3 business days after the City receives the notice. If the City does not consent, Contractor shall immediately take steps to resolve the conflict.

X. City's Right to Stop Work

If Contractor fails to perform in accordance with this Agreement, the Director may order to stop performance, or any portion thereof. City may, after seven (7) days advance written notice to Contractor, and without prejudice to any other remedy available to City, perform the Work stopped by the Director. In such a case, an appropriate deduction shall be made from the payments then or thereafter due Contractor for the cost of the performance conducted by City, including the cost of additional services made necessary for Contractor's failure to perform. If the payments then or thereafter due Contractor are not sufficient to cover such amount, the Contractor shall pay the difference to the City within ten days of receiving an invoice therefore.

**IV. DUTIES OF CITY**

A. Payment Terms

- (1) Subject to all the terms and conditions of this Agreement, the City shall pay to Contractor, and Contractor accepts the fees specified in Exhibit "B," Fee Schedule, paid monthly, based upon invoices submitted to the Director from the Contractor indicating in detail the Work performed by Contractor (and its subcontractors) for the invoiced month. If Other Work/Services are required

during the Term, hourly rates and fees will be based on the labor rates set forth in Exhibit "B", subject to Section IV.E below.

- (2) If the City pays Contractor for work performed by any subcontractor or for parts, supplies, equipment, or materials provided by any supplier, and Contractor withholds or has withheld payment to the subcontractor or supplier because of a deficiency in the quality or quantity of that subcontractor's or supplier's work or materials, the City may withhold a corresponding amount from any pending or future payments to Contractor until the next regular payment to Contractor occurring after the City receives reasonable documentation that the deficiency has been remedied.
- (3) All Contractor invoices are subject to approval by the Director and are due and payable on or about thirty (30) days after receipt and approval by the Director. The Director shall have the continuing right to request and receive from Contractor evidence which validates Contractor's invoices. All payments must be made by check made payable to Contractor. The City will not unreasonably delay or withhold payment or approval of any invoice. Neither payments made nor approval of invoices or services by the Director shall be construed as final acceptance or approval of that part of Contractor's services to which such payment or approval relates. Such payments do not relieve Contractor of any of its obligations under this Agreement.

**B. Submitted False Claims, Monetary Penalties**

Where the Contractor, or any of its subcontractors commit any of the following acts, the Contractor shall be liable to the City for the amount of damages which the City sustains because of the act of the Contractor or its subcontractors. The Contractor or its subcontractors who commits any of the following acts shall also be liable to the City for the costs, including attorney's fees, of any civil action brought to recover any of those penalties or damages. (a) knowingly presents or causes to be presented to the City a false claim or request for payment or approval; (b) knowingly makes, uses or causes to be made or used a false record or statement to get a false claim or invoice paid or approved; (c) conspires to defraud the City by getting a false claim or invoice allowed or paid by the City; (d) knowingly makes, uses, or causes to be made or used as a false record or statement to conceal, avoid, or decrease an obligation to pay or transmit money or property of the City; (e) is a beneficiary of an inadvertent submission of a false claim or invoice to the City, subsequently discovers the falsity of the claim, and fails to disclose the false claim to the City within a reasonable time after discovery of the false claim or invoice.

**C. Taxes**

The City is exempt from payment of Federal Excise and Transportation Tax and Texas Limited Sales and Use Tax. Contractor's invoices to the City must not contain assessments of any of these taxes. The Director will furnish the City's exemption certificate and federal tax identification number to Contractor if requested.

**D. Method of Payment - Disputed Payments**

If the City disputes any items in an invoice Contractor submits for any reason, including lack of supporting documentation, the Director shall temporarily delete the disputed item and pay the remainder of the invoice. The Director shall promptly notify Contractor of the dispute and request remedial action. After the dispute is settled, Contractor shall include the disputed amount on a subsequent regularly scheduled invoice or on a special invoice for the disputed item only.

E. Limit of Appropriation

- (1) The City's duty to pay money to Contractor for any purpose under this Agreement is limited in its entirety by the provisions of this Section.
- (2) In order to comply with Article II, Sections 19 and 19a of the City's Charter and Article XI, Section 5 of the Texas Constitution, the City has appropriated and allocated the sum of \$3,151,131.68 (inclusive of the 10% change order contingency) to pay money due under this Agreement (the "Original Allocation"). The executive and legislative officers of the City, in their discretion, may allocate supplemental funds for this Agreement, but they are not obligated to do so. Therefore, the parties have agreed to the following procedures and remedies.
- (3) The City makes a supplemental allocation by sending a service release order, or similar form approved by the City Controller, containing the language set out below. When necessary the supplemental allocations shall be approved by motion or ordinance of City Council.

**"NOTICE OF SUPPLEMENTAL ALLOCATION OF FUNDS"**

By signature below, the City Controller certifies that, upon request of the responsible director, the supplemental sum set out below has been allocated for the purposes of this Agreement out of funds appropriated for this purpose by the City Council of the City of Houston. This supplemental allocation has been charged to such appropriation.

\$ \_\_\_\_\_

- (4) City Council delegates to the Director the authority to approve up to \$3,151,131.67 in supplemental allocations (inclusive of the 10% change order contingency) for this Agreement without returning to Council.
- (5) The Original Allocation plus all supplemental allocations are the Allocated Funds, which include a 10% contingency in the amount of \$572,933.03 (inclusive of the 10% change order contingency appropriated as part of the Original Allocation). For purposes of Change Orders in Section IV.F. (3)(c) below, the Original Agreement amount is \$5,729,330.32. The City shall never be obligated to pay any money under this Agreement in excess of the Allocated Funds. Contractor must assure itself that sufficient allocations have been made to pay for services it provides. If Allocated Funds are exhausted, Contractor's only remedy is suspension or termination of its performance under this Agreement and it has no other remedy in law or in equity against the City and no right to damages of any kind.

F. Changes

- (1) At any time during the Agreement Term, the Director may issue a Change Order to increase or decrease the scope of services or change plans and specifications, as he or she may find necessary to accomplish the general purposes of this Agreement. Contractor shall furnish the services or deliverables in the Change Order in accordance with the requirements of this Agreement plus any special provisions, specifications, or special instructions issued to execute the extra work.

- (2) The Director will issue the Change Order in substantially the following form:

**CHANGE ORDER**

TO: [Name of Contractor]  
FROM: City of Houston, Texas (the "City")  
DATE: [Date of Notice]  
SUBJECT: Change Order under the Agreement between the City and [Name of Contractor] countersigned by the City Controller on [Date of countersignature of the Agreement]

Subject to all terms and conditions of the Agreement, the City requests that Contractor provide the following:

**[Here describe the additions to or changes to the equipment or services and the Change Order Charges applicable to each.]**

Signed:

[Signature of Director]

- (3) The Director may issue more than one Change Order, subject to the following limitations:
- (a) Council expressly authorizes the Director to approve a Change Order up to \$50,000. A Change Order in excess of \$50,000 must be approved by the City Council.
  - (b) If a Change Order describes items that Contractor is otherwise required to provide under this Agreement, the City is not obligated to pay any additional money to Contractor.
  - (c) The Total of all Change Orders issued under this section may not increase the Original Agreement amount by more than 25%.
- (4) Whenever Contractor receives a Change Order, Contractor shall furnish all material, equipment, and personnel necessary to perform the work described in the Change Order. Contractor shall complete the work within the time prescribed. If no time for completion is prescribed, Contractor shall complete the work within a reasonable time. If the work described in any Change Order causes an unavoidable delay in any other work Contractor is required to perform under this Agreement, Contractor may request a time extension for the completion of the work. The Director's decision regarding a time extension is final.
- (5) A product or service provided under a Change Order is subject to inspection, acceptance, or rejection in the same manner as the work described in the Original Agreement, and is subject to the terms and conditions of the Original Agreement as if it had originally been a part of the Agreement.
- (6) Change Orders are subject to the Allocated Funds provisions of this Agreement.

(6) Change Orders are subject to the Allocated Funds provisions of this Agreement.

G. Access to Site

Subject to FAA, TSA and HAS rules and regulations, Contractor may enter and leave Work sites at all reasonable times without charge. Contractor and its employees and subcontractors may use the common areas and roadways at the Airports where the Work sites are located. This excludes parking for Contractor's personnel and subcontractors and does not extend to any restricted area of the Airport, including without limitation, the AOA, unless the person is properly badged or under HAS escort. Contractor shall repair any damage caused by it or its employees, suppliers or subcontractors as a result of their use of the common areas. The Contractor assumes all liability for any unauthorized incursions into restricted areas at the Airport. Contractor shall keep a record of all keys distributed to its employees and subcontractors.

City personnel or its authorized contractors shall, at all times, have access to the HVAC Systems and the Work. The Contractor shall provide whatever is necessary to facilitate such access, including but not limited to, personnel and equipment. Persons authorized by the City to access the

HVAC Systems or Work shall not interfere with or jeopardize the Contractor's responsibility for safely performing Work under this Agreement.

H. Exercise of Contract Responsibilities

The City, in exercising its responsibilities and authorities under the Agreement, does not assume any duties or responsibilities to any subcontractor or supplier, nor does City assume any duty of care to Contractor, its subcontractors or suppliers, except as may be expressly set forth herein or by law. However, City shall be entitled to performance and enforcement of Contractor's obligations under this Agreement intended to facilitate performance of the City's duties.

## V. TERM AND TERMINATION

A. Contract Term

This Agreement is effective on the Effective Date and continues for one year from the date set forth in the Notice to Proceed, unless sooner terminated under this Agreement. Performance begins on the date specified in the Notice to Proceed issued by the Director. Contractor acknowledges that time is of the essence of this Agreement.

B. Renewals

[Deleted by Motion 2011-943]

C. Termination for Convenience by City

The Director may terminate this Agreement at any time by giving thirty (30) days written notice to Contractor. The City's right to terminate this Agreement for convenience is cumulative of all rights and remedies which exist now or in the future.

On receiving the notice, Contractor shall, unless the notice directs otherwise, immediately discontinue all services under this Agreement and cancel all existing orders and subcontracts that are chargeable to this Agreement. As soon as practicable after receiving the termination notice, Contractor shall submit an invoice showing in detail the services performed under this Agreement up to the termination date. The City shall then pay the fees to Contractor for services actually performed, but not already paid for, in the same manner as prescribed in Section IV(A) unless the fees exceed the allocated funds remaining under this Agreement.

TERMINATION OF THIS AGREEMENT AND PAYMENT FOR SERVICES RENDERED ARE CONTRACTOR'S ONLY REMEDIES FOR THE CITY'S TERMINATION FOR CONVENIENCE, WHICH DOES NOT CONSTITUTE A DEFAULT OR BREACH OF THIS AGREEMENT. CONTRACTOR WAIVES ANY CLAIM (OTHER THAN ITS CLAIM FOR PAYMENT AS SPECIFIED IN THIS SECTION), IT MAY HAVE NOW OR IN THE FUTURE FOR FINANCIAL LOSSES OR OTHER DAMAGES RESULTING FROM THE CITY'S TERMINATION FOR CONVENIENCE.

D. Termination for Cause by City

If Contractor defaults under this Agreement, the Director may either terminate this Agreement or allow Contractor to cure the default as provided below. The City's right to terminate this Agreement for Contractor's default is cumulative of all rights and remedies which exist now or in the future. Default by Contractor occurs if:

- (1) Contractor fails to perform any of its duties under this Agreement;
- (2) Contractor becomes insolvent;
- (3) all or a substantial part of Contractor's assets are assigned for the benefit of its creditors; or
- (4) a receiver or trustee is appointed for Contractor.

If a default occurs, the Director may, but is not obligated to, deliver a written notice to Contractor describing the default and the termination date. The Director, at his or her sole option, may extend the termination date to a later date. If the Director allows Contractor to cure the default and Contractor does so to the Director's satisfaction before the termination date, then the termination is ineffective. If Contractor does not cure the default before the termination date, then the Director may terminate this Agreement on the termination date, at no further obligation of the City.

To effect final termination, the Director must notify Contractor in writing. After receiving the notice, Contractor shall, unless the notice directs otherwise, immediately discontinue all services under this Agreement, and promptly cancel all orders or subcontracts chargeable to this Agreement.

If, after termination for failure to fulfill contract obligations, it is determined that Contractor had not so failed, the termination shall be deemed to have been effected for the convenience of the City. In such event, Contractor shall be paid in accordance with the provisions of Section V.C. of the Agreement.

E. Termination for Cause by Contractor

Contractor may terminate its performance under this Agreement only if the City defaults and fails to cure the default after receiving written notice of it. Default by the City occurs if the City fails to perform one or more of its material duties under this Agreement. If a default occurs and Contractor wishes to

terminate the Agreement, then Contractor must deliver a written notice to the Director describing the default and the proposed termination date. The date must be at least thirty (30) days after the Director receives the notice. Contractor, at its sole option, may extend the proposed termination date to a later date. If the City cures the default before the proposed termination date, then the proposed termination is ineffective. If the City does not cure the default before the proposed termination date, then Contractor may terminate its performance under this Agreement on the termination date.

## VI. MISCELLANEOUS

### A. Independent Contractor

Contractor is an independent contractor and shall perform the services provided for in this Agreement in that capacity. The City has no control or supervisory powers over the manner or method of Contractors' performance under this Agreement. All personnel Contractor uses or provides are its employees or subcontractors and not the City's employees, agents, or subcontractors for any purpose whatsoever. Contractor is solely responsible for the compensation of its personnel, including but not limited to: the withholding of income, social security, and other payroll taxes and all worker's compensation benefits coverage.

### B. Force Majeure

1. Timely performance by both parties is essential to this Agreement. However, neither party is liable for reasonable delays in performing its obligations under this Agreement to the extent the delay is caused by Force Majeure that directly impacts the City or Contractor. The event of Force Majeure may permit a reasonable delay in performance but does not excuse a party's obligations to complete performance under this Agreement. Force Majeure means: fires, drought, interruption of utility services, epidemics in the City, floods, hurricanes, tornadoes, ice storms and other natural disasters, explosions, war, terrorist acts against the City or Contractor, riots, strikes, court orders, and the acts of superior governmental or military authority, and which the affected party is unable to prevent by the exercise of reasonable diligence. The term does not include any changes in general economic conditions such as inflation, interest rates, economic downturn or other factors of general application; or an event that merely makes performance more difficult, expensive or impractical. Force Majeure does not entitle Contractor to extra Reimbursable Expenses or payment.

2. This relief is not applicable unless the affected party does the following:

- (a) uses due diligence to remove the effects of the Force Majeure as quickly as possible and to continue performance notwithstanding the Force Majeure; and
- (b) provides the other party with prompt written notice of the cause and its anticipated effect.

3. The Director will review claims that a Force Majeure that directly impacts the City or Contractor has occurred and render a written decision within 14 days. The decision of the Director is final.

4. The City may perform contract functions itself or contract them out during periods of Force Majeure. Such performance is not a default or breach of this Agreement by the City.

5. If the Force Majeure continues for more than 14 days from the date performance is affected, the Director may terminate this Agreement by giving 7 days' written notice to Contractor. This termination is

not a default or breach of this Agreement. **CONTRACTOR WAIVES ANY CLAIM IT MAY HAVE FOR FINANCIAL LOSSES OR OTHER DAMAGES RESULTING FROM THE TERMINATION EXCEPT FOR AMOUNTS DUE UNDER THE AGREEMENT UP TO THE TIME THE WORK IS HALTED DUE TO FORCE MAJEURE.**

C. Severability

If any part of this Agreement is for any reason found to be unenforceable, all other parts remain enforceable unless the result materially prejudices either party.

D. Entire Agreement

This Agreement merges the prior negotiations and understandings of the Parties and embodies the entire agreement of the Parties. No other agreements, assurances, conditions, covenants (express or implied), or other terms of any kind, exist between the Parties regarding this Agreement.

E. Written Amendment

Unless otherwise specified elsewhere in this Agreement, this Agreement may be amended only by written instrument executed on behalf of the City (by authority of an ordinance adopted by the City Council) and Contractor. The Director is only authorized to perform the functions specifically delegated to him or her in this Agreement.

F. Applicable Laws

This Agreement is subject to the laws of the State of Texas, the City Charter and Ordinances, the laws of the federal government of the United States, and all rules and regulations of any regulatory body or officer having jurisdiction.

Venue for any litigation relating to this Agreement is Harris County, Texas.

G. Notices

All notices to either party to the Agreement must be in writing and must be delivered by hand, facsimile, United States registered or certified mail, return receipt requested, United States Express Mail, Federal Express, Airborne Express, UPS or any other national overnight express delivery service. The notice must be addressed to the party to whom the notice is given at its address set out in Section I of this Agreement or other address the receiving party has designated previously by proper notice to the sending party. Postage or delivery charges must be paid by the party giving the notice.

H. Captions

Captions contained in this Agreement are for reference only, and, therefore, have no effect in construing this Agreement. The captions are not restrictive of the subject matter of any section in this Agreement.

I. Non-Waiver

If either party fails to require the other to perform a term of this Agreement, that failure does not prevent the party from later enforcing that term and all other terms. If either party waives the other's breach of a term, that waiver does not waive a later breach of this Agreement.

An approval by the Director, or by any other employee or agent of the City, of any part of Contractor's performance does not waive compliance with this Agreement or establish a standard of performance other than that required by this Agreement and by law. The Director is not authorized to vary the terms of this Agreement.

J. Inspections and Audits

City representatives may perform, or have performed, (1) audits of Contractor's books and records, (2) inspections of all places where Work is undertaken in connection with this Agreement, and (3) all costs and underlying expenses relating to Contractor's performance, including but not limited to, all fees paid to Contractor. Contractor shall keep its books and records available for this purpose for at least 6 years after this Agreement terminates. This provision does not affect the applicable statute of limitations.

K. Enforcement

The City Attorney or his or her designee may enforce all legal rights and obligations under this Agreement without further authorization. Contractor shall provide to the City Attorney all documents and records that the City Attorney requests to assist in determining Contractor's compliance with this Agreement, with the exception of those documents made confidential by federal or State law or regulation.

L. Ambiguities

If any term of this Agreement is ambiguous, it shall not be construed for or against any party on the basis that the party did or did not write it.

M. Survival

Contractor shall remain obligated to the City under all clauses of this Agreement that expressly or by their nature extend beyond the expiration or termination of this Agreement, including but not limited to, the indemnity provisions.

N. Publicity

Contractor shall make no announcement or release of information concerning this Agreement unless the release has been submitted to and approved, in writing, by the Director.

O. Parties In Interest

This Agreement does not bestow any rights upon any third party, but binds and benefits the City and Contractor only.

P. Successors and Assigns

This Agreement binds and benefits the Parties and their legal successors and permitted assigns; however, this provision does not alter the restrictions on assignment and disposal of assets set out in the following paragraph. This Agreement does not create any personal liability on the part of any officer or agent of the City.

Q. Business Structure and Assignments

Contractor shall not assign this Agreement at law or otherwise or dispose of all or substantially all of its assets without the Director=s prior written consent. Nothing in this clause, however, prevents the assignment of accounts receivable or the creation of a security interest under Section 9.406 of the Texas Business & Commerce Code. In the case of such an assignment, Contractor shall immediately furnish the City with proof of the assignment and the name, telephone number, and address of the Assignee and a clear identification of the fees to be paid to the Assignee.

Contractor shall not delegate any portion of its performance under this Agreement without the Director=s written consent.

R. Dispute Resolution

For purposes of this Section "Project Administrator" means the person the Director designates to monitor the progress of all Parties' performance under this Agreement.

Except as may otherwise be provided by law, a dispute that (1) does not involve a question of law; (2) arises during the performance of this Agreement; and (3) is not resolved between the Project Administrator and Contractor must be handled as described below:

- (a) The Project Administrator shall put its decision in writing and mail or otherwise furnish Contractor with a copy. Contractor may abide by the decision or may appeal the decision to the Director.
- (b) If Contractor desires to appeal a decision of the Project Administrator, Contractor must submit a written appeal to the Director. Contractor must file its written appeal within 7 working days following receipt of the Project Administrator's original decision. The Director shall provide Contractor with a written response to the appeal within 14 working days following its receipt. The decision of the Director is final.

S. Remedies Cumulative

Unless otherwise specified elsewhere in this Agreement, the rights and remedies contained in this Agreement are not exclusive, but are cumulative of all rights and remedies which exist now or in the future. Neither party may terminate its duties under this Agreement except in accordance with its provisions.

T. Contractor Debt

IF CONTRACTOR, AT ANY TIME DURING THE TERM OF THIS AGREEMENT, INCURS A DEBT, AS THE WORD IS DEFINED IN SECTION 15-122 OF THE HOUSTON CITY CODE OF ORDINANCES, IT SHALL IMMEDIATELY NOTIFY THE CITY CONTROLLER IN WRITING. IF THE CITY CONTROLLER BECOMES AWARE THAT CONTRACTOR HAS INCURRED A DEBT,

SHE SHALL IMMEDIATELY NOTIFY CONTRACTOR IN WRITING. IF CONTRACTOR DOES NOT PAY THE DEBT WITHIN 30 DAYS OF EITHER SUCH NOTIFICATION, THE CITY CONTROLLER MAY DEDUCT FUNDS IN AN AMOUNT EQUAL TO THE DEBT FOR ANY PAYMENTS OWED TO CONTRACTOR UNDER THIS AGREEMENT, AND CONTRACTOR WAIVES ANY RECOURSE THEREFOR.

U. Pay or Play

The requirements and terms of the City of Houston Pay or Play program, as set-out in Executive Order 1-7 are incorporated into this Contract by reference. Consultant has reviewed Executive Order 1-7 and shall comply with its terms and conditions. Consultant shall include the foregoing language in its agreements with its subcontractors whose subcontracts have a dollar value of \$200,000 or more. Consultant shall complete and submit to the Director POP-2 Form on or before execution of this Contract. POP-2 is available at <http://www.houstontx.gov/aacc/payorplay/pop2.pdf>

V. Title VI Assurances

The Contractor shall comply with the applicable non-discrimination provisions required by the United States of America, including but not limited to the provisions of 49 CFR Part 21. These provisions are inclusive of any amendments which may be made to such regulations. Further, the Contractor shall include the summary of the provisions of 49 CFR Part 21, as may be amended, in subcontracts it enters into under this Contract.

**EXHIBIT "A"**

**PERFORMANCE/WORK STATEMENT**

## EXHIBIT "A"

### PERFORMANCE/WORK STATEMENT

#### 1.0 **BACKGROUND**

- 1.1 The Houston Airport System (HAS) operates the City of Houston's three (3) major airports: George Bush Intercontinental Airport/Houston (IAH), William P. Hobby Airport (HOU), and Ellington Airport (EFD). HAS passenger traffic is approximately 50 million passengers per year. Management of the Airports includes coordination with FAA, air carriers, and other Federal and State agencies to maintain the highest standards of service and safety to Airport patrons. HVAC SYSTEMS operations and maintenance serves a vital role in the efficient operation of the Houston Airport System.

#### 2.0 **SCOPE OF WORK**

##### 2.1 General – Operation and Maintenance Requirements

##### 2.1.1 Facilities Included

Contractor shall provide all management, supervision, skilled and unskilled labor, tools, service and maintenance materials, equipment, outside services, replacement equipment and parts, components and appurtenances, instruments, expendables, supplies, training, and insurance as required for Operation and Maintenance to ensure Best-in-Practice Service of all Work described in the Agreement for HVAC SYSTEMS installed in the following airport facilities:

2.1.1.1 George Bush Intercontinental Airport/Houston (IAH)

2.1.1.2 William P. Hobby Airport, Houston (HOU)

2.1.1.3 Ellington Airport (EFD)

2.1.2 These three airport facilities hereinafter may also be referred to jointly as Airports. These facilities are under the supervision of HAS for the City of Houston.

2.1.3 (IAH) includes the Central Plant, Old FAA Tower, Terminals A, B, C, D, FIS, and Other Remote Facilities not connected to the Central Plant's Primary Cooling and Heating water distribution systems.

2.1.4 (HOU) includes the Main Terminal, Central Concourse, and Other Remote Buildings/Facilities.

2.1.5 (EFD) includes the Airport Administration Building # 510, Airfield & Grounds Building, Control Tower, Vault, North Generator, and South Generator.

##### 2.2 Work Included – General

2.2.1 The Work provided by Contractor under the Agreement includes Basic Services and Other Work/Services.

2.2.2 Work to proceed will be initiated by a notice to proceed for each Airport.

#### 3.0 **BASIC SERVICES**

##### 3.1 (IAH) Basic Services

3.1.1 Contractor shall provide Basic Services specified in the Agreement at (IAH) twenty-four (24) hours-per-day, seven (7) days per week, 365 days per year, including holidays. Contractor shall provide on-site

staffing necessary to provide specified HVAC SYSTEMS operation and maintenance services to all specified (IAH) facilities.

3.1.2 Basic Services monthly payments for (IAH) will include:

3.1.2.1 Central Plant, Old FAA Tower, Terminals A, B, C, D, FIS, and Other Remote Facilities:

3.1.2.1.1 Operation, Preventive Maintenance (PM) /Predictive Maintenance (PdM), Remedial Maintenance, and Reliability Centered Maintenance (RCM) for all HVAC SYSTEMS.

3.1.2.1.2 Remedial Maintenance (RM) for all HVAC SYSTEMS with 50 HP rating and under to include, but be not limited to, blower/fan motors, compressors, contactors, relays, etc.

3.1.2.1.3 Maintain and operate Utilivisor Energy Monitoring System (UEMS), including all software, hardware, and upgrades.

3.1.3 The monthly lump sum payments for Basic Services encompass all overtime, after-hours labor, additional staffing, and emergency labor required to meet the Airports HVAC SYSTEMS performance standards and Duties of Contractor detailed in the Agreement.

3.1.4 Projects, Tips, and Job Order Contract (JOC) Oversight

3.1.4.1 Contractor shall assist IAH as requested, each time there is a Capital Project, Tenant Improvement Project, or a Job Order Contract (JOC). Contractor shall observe such projects in a non-supervisory capacity as to all work relating to HVAC Systems. Contractor shall conduct routine walk-throughs from time to time and report back to IAH Project Manager any work that is not compliant to applicable codes or in the Contractor's opinion not in the best interest of IAH. At completion of project, the Contractor shall do a final walk-through with the Project and notify IAH in writing of any deficiencies.

**NOTE:** Remedial maintenance (RM) performed on HVAC SYSTEMS over 50 hp will be provided under Other Works/Services.

3.2 (HOU) Basic Services

3.2.1 Contractor shall provide Basic Services specified in the Agreement at (HOU) 18-hours-per-day between the hours of 5:00 a.m. to 11:00 p.m., (7) days-per-week, 365 days per year, including holidays. Contractor shall provide on-site staffing necessary to provide specified HVAC SYSTEMS operation and maintenance services to all specified (HOU) facilities.

3.2.2 Basic Services monthly payments for (HOU) will include:

3.2.2.1 Central Plant, Main Terminal, Central Concourse, and Other Remote Facilities:

3.2.2.1.1 Operation, Preventive Maintenance (PM)/Predictive Maintenance (PdM), Remedial Maintenance, and Reliability Centered Maintenance (RCM) for all HVAC SYSTEMS.

3.2.2.1.2 Remedial Maintenance (RM) for all HVAC SYSTEMS with 50 HP rating and under to include but not be limited to blower/fan motors, compressors, contactors, relays, etc.

**NOTE:** Remedial maintenance (RM) performed on HVAC SYSTEMS over 50 hp will be provided under Other Works/Services.

3.2.3 At (HOU) Contractor shall provide emergency after-hour service between the hours of 11:00 p.m. and 5:00 a.m. within 1 hour of notification at the labor rates specified in Exhibit B, Pricing Form, for Other Work/Services.

3.3 (EFD) Basic Services

3.3.1 Contractor shall provide Basic Services specified in the Agreement as required at (EFD), 16 hours-per day between the hours of 6:00 a.m. to 10:00 p.m., seven (7) days-per-week, 365 days per year, including

holidays. (No staffing is required, however when requested by Director in writing, Contractor shall provide the services within 1 hour of notification.)

3.3.2 Basic Services monthly payments for (EFD) will include:

3.3.2.1 # 510 Building, A&G Building, Control Tower, Vault, North and South Generators.

3.3.2.1.1 Preventive Maintenance (PM)/Predictive Maintenance (PdM) and Reliability Centered Maintenance (RCM) for all HVAC SYSTEMS.

3.3.2.2 Remedial Maintenance (RM) for all HVAC SYSTEMS with 50 HP rating and under to include, but not be limited to, blower/fan motors, compressors, contactors, relays, etc.

**NOTE:** Remedial maintenance (RM) rated over 50 HP HVAC SYSTEMS will be provided under Other Works/Services.

3.4 All Airports (IAH), (HOU) & (EFD):

3.4.1 Contractor shall pay 100% of the total costs for all repairs and/or replacement cost should failure occur to HVAC SYSTEMS maintained by Contractor under Basic Services.

3.4.2 Repairs and/or replacement of HVAC SYSTEMS due to Contractor's failure to perform proper preventive maintenance will be the responsibility of the Contractor at no cost to HAS.

3.4.3 Contractor shall bear all costs associated with any repairs or replacement required as the result of Contractor's negligence or deliberate act.

3.5 Other Work/Services to be provided by Contractor under the Agreement includes other related required work that is beyond the scope of Basic Services, as determined by the Director in his sole discretion.

#### **4.0 DUTIES OF CONTRACTOR - BASIC SERVICES**

4.1 Division of Responsibility

4.1.1 Subject to Section 4.1.2, Contractor shall make all routine operation and maintenance decisions. Changes in operation and maintenance philosophy, schedules, and the existing preventive maintenance program must be mutually agreed to in writing by the Director and the Contractor prior to change.

4.1.2 The Director reserves the right to make final decisions related to HVAC SYSTEMS operation and maintenance. If the Director choose to override the Contractor's decisions, the Director shall inform Contractor in writing.

4.2 Direct Digital Control System (IAH), (HOU) & (EFD)

4.2.1 Contractor shall operate, maintain, and repair direct digital control systems (BACnet, Alerton, etc.) where applicable at all three Airports.

4.2.2 Contractor shall be responsible for the preventive and repair maintenance of the Building Automation System (BAS) system CPU/executive controllers, hardware and software to include system software upgrades within current generation software revision levels. Contractor shall perform preventive and repair maintenance of all ancillary components such as input-output devices, unitary controllers, and sensors.

4.2.3 Contractor shall maximize the use of the BAS to minimize the consumption of energy and to ensure environmental conditions are appropriate for the various space and areas within the airport facilities. Contractor shall use the BAS for building operational strategies, monitoring, and diagnostics. Contractor shall ensure all components – software and hardware – of the BAS are fully operational and the system is maintained in first class condition.

- 4.2.4 Fully qualified and certified technicians with experience on the same or similar type systems shall perform all preventive and repair maintenance on the BAS systems. All maintenance on the BAS must be accomplished in accordance with the original equipment manufacturers (OEM) specifications and recommendations as documented in the BAS Operations Manual and attendant notices and amendments. Daily operation of the system must be in accordance with the OEM operations manuals and controls strategies. Routine daily operational checks and tests of the BAS systems must be performed by personnel who are trained on the operation of the BAS system and any anomalies or malfunctions as a result of the checks/tests or experienced during normal operation must be addressed immediately. Daily operational tests and checks must be documented.
- 4.2.5 The BAS systems are included in Contractor's Reliability Centered Maintenance methodology. The BAS preventive and repair maintenance plan must be incorporated into and administered through the MMS.
- 4.3 Water Treatment Program (IAH), (HOU) & (EFD)
- 4.3.1 Contractor shall provide the water treatment program specified in the HAS HVAC Water Treatment Manual, Volumes I, II and III, which are incorporated herein by reference. Contractor shall make necessary adjustments for differences between the Airports water treatment programs.
- 4.3.2 Based on Contractor's submittal of its Water Treatment Program, the Director and Contractor shall establish a written mutually agreed-upon testing schedules. Schedules are required for daily, weekly and monthly testing. Each test or function must be assigned a standard or acceptable range with acceptable maximum or minimum, plus (+) or minus (-) deviation, based on accepted industry standards for equipment, chemicals, etc., utilized in the Water Treatment Program. These tests and task schedules, once established, may be changed only upon agreement by both parties and must be supported by appropriate documentation such as published bulletins from equipment manufacturers, chemical companies, etc. that have evidence to support such recommended changes in the industry standards (Refer to Exhibit K, Corrosion Test Requirements).
- 4.4 Preventive Maintenance (IAH),(HOU) & (EFD)
- 4.4.1 As a part of Basic Services throughout the Term of the Agreement, Contractor shall perform preventive/predictive maintenance (MMS driven schedule of planned maintenance actions) on HVAC SYSTEMS in accordance with OEM equipment manufacturer's instructions and manuals and in accordance with the best preventive maintenance industry practices for the prevention of equipment breakdowns and failures so that HVAC SYSTEMS are operated in a First Class Conditions. Contractor shall develop a PM schedule so as to complete PM on equipment within the manufacturer's recommendations.
- 4.4.2 The level of PM and PdM must reduce remedial maintenance; decreased replacement cost, decreased system down time, prevent the failure of equipment before it actually occurs, preserve and improve equipment reliability by replacing worn components before they actually fail, and immediately resolve conditions that include, but are not limited to, the following:
- 4.4.2.1 Hot calls.
  - 4.4.2.2 High humidity.
  - 4.4.2.3 Poor calibration.
  - 4.4.2.4 Faulty operators.
  - 4.4.2.5 Dirty filters.
  - 4.4.2.6 Worn belts.
  - 4.4.2.7 Dirty coils.
  - 4.4.2.8 Duct leaks to include replacement of duct installation.
  - 4.4.2.9 Water imbalances.
  - 4.4.2.10 Stuck valves.
  - 4.4.2.11 Equip. shutdown.

- 4.4.2.12 Loose wiring.
- 4.4.2.13 Valve leaks.
- 4.4.2.14 Pipe rust.
- 4.4.2.15 Excess noise.
- 4.4.2.16 Cold calls.
- 4.4.2.17 Poor control.
- 4.4.2.18 Control air losses.
- 4.4.2.19 Stuck dampers.
- 4.4.2.20 No belts.
- 4.4.2.21 Loose belts.
- 4.4.2.22 Dirty fans/vents.
- 4.4.2.23 Air imbalances.
- 4.4.2.24 Poor heat transfer.
- 4.4.2.25 Plugged strainers.
- 4.4.2.26 Equipment failure.
- 4.4.2.27 False trips.
- 4.4.2.28 Fitting leaks.
- 4.4.2.29 Damaged insulation.
- 4.4.2.30 Excess vibration.
- 4.4.2.31 Degraded Painting.
- 4.4.2.32 Exercise valves.
- 4.4.2.33 Register cleaning. Contractor shall create a cleaning schedule for all terminals and out buildings, on a four month rotation. This will allow for three complete cleaning per year. To include all supply grills, return grills, and vents. This work will be done on second and third shifts.
- 4.4.2.34 Contractor is required to certify annually all backflow preventers in all mechanical rooms. Approximately thirty (30) various size ranging from  $\frac{3}{4}$  in. to 6 in. To include 2 ea at the Central Plant, 4 ea. Terminal A, 4 ea at Terminal B, 4 ea at Terminal C, and 4 ea at Terminal D.
- 4.4.2.35 Thoroughly clean all Mechanical Equipment Rooms (MER's) in all facilities within the first six months of the Agreement. This includes floors, walls, mechanical and electrical equipment housings, panels, ductwork, piping, etc. Approximately 141 MER rooms for various sizes.
- 4.4.2.36 Replenishing all Charcoal/Potassium Permanente at 75% of HP rating. Unless damage, corrosion or abnormal wear is present, then that would supersede the 75 % rating.
- 4.4.2.37 Install an anti-bacteria agent in the drain pans of all air handlers. (Replenish the substance as needed).
- 4.4.2.38 Drain and clean cooling towers annually of silt deposits etc. - Exclude (EFD).
- 4.4.2.39 Inspect condensers on chillers annually and brush and clean tubes - Exclude (EFD).
- 4.4.2.40 All Ultra violet lighting bulbs are to be changed out once per year in March. Exclude (EFD). (Approximately 401 bulbs).
- 4.4.3 Contractor shall apply the same type paint system that currently exists on floors, walls, equipment, piping systems, accessories etc. in accordance with paint manufacturer's recommendations. All unpainted mechanical room floors must be painted or sealed with industrial floor sealant, within the first six months of the Agreement.

4.4.4 At HOU, all mechanical room floors, equipment, and piping systems, which are currently painted, must be maintained. The only wall areas to be maintained with respect to painting are located in the cooling tower and in the central plant.

4.4.5 The following paint systems are recommended by HAS, however; Contractor must obtain the Director's approval of the painting system to be applied prior to performing the Work.

4.4.5.1 Concrete Floors

4.4.5.1.1 Epoxy – Benjamin Moore (M36/M39) Hi-Build Gloss Coating or City approved equal.

4.4.5.1.2 Oil/Alkyd – Benjamin Moore (C112) Alkyd Porch & floor Enamel, or City approved equal.

4.4.5.2 Walls

4.4.5.2.1 Latex – Benjamin Moore (276) Latex Semi-Gloss Enamel or City approved equal.

4.4.5.2.2 Oil/Alkyd – Benjamin Moore (271) Alkyd Semi-Gloss Enamel or City approved equal.

4.4.5.3 Metal

4.4.5.3.1 Benjamin Moore (M29) Acrylic Semi-Gloss or City approved equal.

4.5 Materials

4.5.1 *Furnished Parts (IAH), (HOU) & (EFD)*

4.5.1.1 Contractor-Furnished Parts - As a part of Basic Services, Contractor shall provide all replacement parts required for HVAC SYSTEMS preventive maintenance and remedial maintenance for HVAC SYSTEMS equipment /appurtenances etc. Contractor shall develop a spare parts inventory sufficient to maintain the highest levels of performance and Service. Contractor-furnished parts may include parts recommended by the OEM or selected on the basis of the Contractor's own past experience upon approval of the Director. If new OEM parts are available, replacement parts must be new OEM parts. Where new OEM parts are not available, Contractor may provide rebuilt OEM parts or use new parts of another manufacturer. In either case, parts must be equal or better in quality and performance than OEM parts and must be free from all defects. Contractor shall continually restock its inventory to levels that will ensure compliance with performance requirements of the Agreement.

4.5.1.2 Disposal or Used Parts - As a part of Basic Services, Contractor shall dispose of all worn/defective scrap parts and waste or hazardous materials resulting from the work under the Agreement. Handling, transport, and disposal of worn/defective scrap parts and waste or hazardous materials must be done in such a manner as to ensure the highest level of safety to the environment and to public health and in compliance with all applicable laws and governmental regulations. Contractor shall assume full responsibility and liability for and act prudently in all aspects of handling, transport, and disposal of any hazardous materials, securing all licenses and permits required by law and ensuring that any disposal facilities to which any scrap, waste, or hazardous materials may be moved are in full compliance with federal, state, and local laws and regulations. Worn or defective parts must not be stored on Airport premises. Contractor shall notify the Director when these parts are to be removed from HAS property.

4.5.1.3 Parts Storage - The spare parts inventory is the responsibility of Contractor. Contractor shall have limited area within the Central Plants to store equipment and supplies. HAS will provide rooms IAO.0801.M and IAO.0407 in the baggage level of the FIS building.

4.6 *Tools, Instruments, and Equipment (IAH),(HOU) & (EFD)*

4.6.1 As a part of Basic Services, the Contractor shall provide all supplies, materials, equipment, instruments, and tools required for the Work at Contractor's expense. Materials and equipment shall be of the type and quality used in large-scale airport operations and shall meet the requirements specified herein. The

Contractor shall provide a list of the proposed equipment, including test/calibration/diagnostic equipment, tools, and supplies etc., as part of the Agreement.

4.6.2 Contractor shall have available "on-site" at all times, test/calibration equipment such as, electronic flow meters, hood vents etc. required to perform testing specified in the Agreement.

4.6.3 Contractor shall provide lifts to service and maintain VAV boxes, exhaust systems, etc.

4.6.4 Contractor must keep two (2) lifts on-site 24/7 at (IAH) and one (1) lift on-site 24/7 at HOU. Contractor must provide transport of lifts around airport complex within two (2) hours as needed.

4.6.5 Contractor equipment brought into the facilities must not exceed the engineered floor load capacities of the facilities. It is the Contractor's responsibility to provide properly sized/rated equipment to perform all services specified.

4.6.6 All Contractor-furnished tools, equipment and instruments must be removed by Contractor at the termination or expiration of the Agreement.

#### 4.7 Perform Annual Shutdown (IAH) & (HOU)

4.7.1 As part of Basic Services and at Contractor's expense, the Contractor shall perform an annual electrical and maintenance shutdown as specified in the Agreement and detailed in Exhibit J.

4.7.2 During the period between January 1<sup>st</sup> to February 28th of each year, Contractor shall schedule an annual electrical and mechanical maintenance shutdown for repair or replacement of equipment which cannot be serviced with the systems in operation and to perform certain unscheduled maintenance work within limited time. Contractor shall provide all management, planning, scheduling, logistics, and quality control.

4.7.3 Contractor shall also schedule and pay outside utility companies that may have to be involved in the shutdown. Annual shutdown will be at Contractor's expense including, but not limited to, spot coolers, trailer mounted DX units with generators capable of handling loads in IDF rooms, badged professional guards, electricity, gas, water, sewage, etc. Airlines, HAS and FIS locations. Six months prior to shutdown, Contractor shall prepare and present to the Director for his written approval, an Activity Planning Program identifying the time schedule/procedures for shutdown planning. Such Activity Planning Program must include start times for preparation of (1) a shutdown procedures guideline; (2) work orders for each work item to be accomplished; (3) planning sheets showing individual tasks, tools, manpower and materials required to complete a work item; (4) a maintenance priority list; (5) a shutdown materials list and manpower schedule; (6) a job plan with a related critical path network, and; (7) shutdown, work, and startup schedules.

4.7.4 At least two weeks prior to shutdown, Contractor shall deliver to Director the shutdown, work, and startup schedules for his review and written approval. Following this activity, Contractor shall schedule a mock shutdown with the shutdown team to work out any last minute problems and ensure smooth execution of the entire shutdown program. Any preliminary work that can be done prior to shutdown must be accomplished in order to expedite the shutdown work.

4.7.5 At (IAH), Contractor shall have a minimum of 25 spot coolers ranging in size from 1.5 thru 5 tons in various MDF/IFD rooms in the Airport. Contractor at its sole cost, shall provide badged personnel to secure doors and verify that all persons entering have current Airport badges and security clearance. (Approximately 20 individuals).

4.7.6 Upon completion of the shutdown, work, and startup, Contractor shall schedule a debriefing meeting with the Director to review planning, execution and startup procedures, safety, expediting, manpower utilization, and work scheduling.

4.7.7 The minimum annual maintenance shutdown procedures are detailed in Exhibit J.

#### 4.8 Perform Corrosion Tests (IAH), (HOU) & (EFD)

- 4.8.1 As a part of Basic Services, Contractor shall test and monitor corrosion rates for the chilled water, condensate and condenser water systems and report findings as specified in the Agreement and detailed in Exhibit K.
- 4.9 Other Basic Services Tests - (IAH), (HOU) & (EFD)
- 4.9.1 Other tests shall include, but not be limited to, the following:
- 4.9.1.1 Hydro Static – perform hydro static test on tubes on each boiler during the Term.
- 4.9.1.2 Eddy Current - perform Eddy Current Test on an alternating basis, on two (2) chillers per year.
- 4.9.1.3 Oil/Refrigerant Analysis – perform oil/refrigerant analysis, quarterly, on all chillers.
- 4.9.1.4 CFM's For Air Balance – Using the Alerton system, Contractor shall monitor HVAC Systems to stay within air balance parameters. Charcoal Filters - test charcoal filters quarterly and submit the results to the Facilities Administration Sections at the Airports.
- 4.9.1.5 VFD's - calibrated and repaired as needed, regardless of horsepower rating yearly by a Certified VFD technician.
- 4.9.1.6 Legionnaire's Disease - test for the presence of Legionella and/or other potentially harmful organisms in accordance with local, state or federal agencies regulation controlling such test. The results of these tests are to be retained in accordance with the appropriate agency or current industry standards.
- 4.10 Cooling Tower Cleaning (IAH) & (HOU)
- 4.10.1 As a part of Basic Services, Contractor shall operate and maintain the cooling towers at (IAH) and (HOU). Cooling towers must be cleaned once per year.
- 4.10.2 During cooling tower scheduled cleanings, Contractor shall ensure that all water and/or sediment discharged from the tower into storm or sanitary drains is in compliance with all state and federal EPA and/or TCEQ regulations controlling such discharges and any subsequent changes to these regulations that may occur during the Term. Contractor shall keep the Director informed of such changes and the effect on the effective operation of the tower(s) involved.
- 4.10.3 Contractor shall, at its expense, remove and dispose of all sediment and materials from the cooling towers and cooling tower filtration systems, whether by approved discharge into existing sanitary sewage drains or physical removal and disposal off site at approved dumping locations. Approved as specified above means approved by the EPA and, if applicable, the TCEQ. All permits associated with the removal, discharge/disposal is at Contractor's expense.
- 4.10.4 Failure of Contractor to fully comply with those regulations established by the EPA and TCEQ for disposal of specified materials that result in fines or penalties to the City, and the payment of all such fines and penalties is the Contractor's responsibility at Contractor's expense.
- 4.11 Filter Replacement (IAH), (HOU) & (EFD)
- 4.11.1 As part of Basic Services, Contractor shall inspect and replace HVAC SYSTEMS filters in a timely manner, as required with the frequency of inspection based upon field conditions.
- 4.11.2 Contractor shall monitor all filters affected by construction projects and notify the Director of any deficiencies.
- 4.11.3 Replacement filters must meet or exceed the performance requirements of original OEM design matching the filtration requirements of specific HVAC systems and equipment.
- 4.11.4 Correct filters must ensure filtration at optimum efficiency consistent with minimum static pressure compensation.

- 4.11.5 Filter replacement requires the use of various types of filters properly located to ensure maximum indoor air quality at an economical cost.
- 4.11.5.1 Filter Selection Performance Factors
- 4.11.5.1.1 Filter type must be consistent with efficient operation at a minimum energy penalty for static pressure compensation.
- 4.11.5.1.2 Re-circulated filtered air shall provide superior indoor air quality with minimum effect of increasing the facility ventilation load, energy consumption and operating costs.
- 4.11.5.1.3 Filter type must be appropriate for specific mixing and distribution levels.
- 4.11.5.1.4 Filter selection must conform to current ASHRAE standards and existing EPA requirements.
- 4.11.5.1.5 Whenever possible, filters must utilize existing filter frames.
- 4.11.5.1.6 Filter selection must minimize any design modifications in both equipment and duct.
- 4.11.5.1.7 Filter selection must be a pleat type with a minimum of MERV 8 rating for all 2 inch and 6 inch filters.
- 4.11.5.2 Filter Types
- 4.11.5.2.1 Charcoal Filters - Charcoal Filters are utilized at (IAH) in Terminals A, B, C, D, and FIS and require periodic removal for regeneration or replacement. Regeneration may be accomplished by delivering the filters to the Contractor's off-site sub-Contractor for such services. During the time the charcoal filters are being regenerated, Contractor shall install spare filters until the filters are cleaned, regenerated, and reinstalled. To ensure minimum equipment shutdown, Contractor shall inventory an adequate number of replacement filters for this purpose. Contractor shall be responsible, at its expense, for the maintenance, replacement, and regeneration of all such filters, both installed and in inventory for back-up. Contractor shall ensure all such filters are tested, at a minimum, every six months and changed as required by filter manufacturers. Efficiency rating of particulate filters is to be stamped on filter. Test results must be submitted to Sr. Superintendent, Facilities Administration Section.
- 4.11.5.2.2 Electronic Air Cleaners - The electronic air cleaners at (IAH) in Terminal D require periodic maintenance. Collection units must be washed in an appropriate solvent, returned, and installed. To ensure minimum equipment shutdown, Contractor shall inventory a number of replacement cells for this purpose.
- 4.11.5.2.3 Carbon and Potassium Permanganate Filter Systems – These systems must be sampled quarterly and samples sent to a laboratory to determine useful life remaining. These filters must be changed at the end of their useful life. The replacement filter or media must be on site at replacement time. Once the projected useful life is determined for each exposure (i.e., aircraft apron level, ground terminal area, parking third level, etc.) the sampling period for laboratory can be revised, but must not exceed 75% of projected useful life.
- 4.11.5.2.4 Panel Filters, Media Filters, Roll Filters, Air Washers, etc -Various types and methods of filtration are utilized in the Airports' HVAC systems to meet specific levels of air contaminants and environmental requirements. These filter media must be maintained to provide effective air filtration and efficient air movement. Efficiency rating of particulate filters is to be stamped on filter. 2-inch pleated filters need to be changed out at .8 inches on the magnehilic, 6-inch box filters need to be changed out at 1.25 inches. NO EXCEPTIONS.
- 4.11.6 Filter Replacement Schedule - Contractor shall identify each piece of equipment that has a filtering system in place by the following parameters:
  - 4.11.6.1 Equipment & Type.
  - 4.11.6.2 Filter Material.
  - 4.11.6.3 Filter Size.

- 4.11.6.4 Type of Filter.
- 4.11.6.5 Location of Filter.
- 4.11.6.6 Frequency of Changing.
- 4.11.6.7 Effectiveness.
- 4.11.7 Contractor shall collect this data and incorporate it into Contractor's filter maintenance schedule as part of its normal operations and maintenance responsibilities.
- 4.12 Odor Management (IAH), (HOU) & (EFD)
- 4.12.1 As part of Basic Services throughout the Term, Contractor shall provide its total airstreams Odor Management including all equipment, supplies, chemicals and maintenance at:
  - 4.12.1.1 (IAH) facilities including, but not limited to, Terminals A, B, C, D, FIS, ASC, HAS Administration Building, and Remote Buildings/Facilities.
  - 4.12.1.2 (HOU) facilities including, but not limited to, Main Terminal, Concourse, NR& FAA, and other remote facilities.
- 4.12.2 Odor Masking - Contractor shall continue the existing HAS Odor Masking program of evaporating odor masking materials into the airstreams, masking most odors that are present, by substituting a floral perfume. The Odor Masking Units must free all Treatment Areas from all unpleasant odors and operate at an even distribution rate for periods of at least thirty (30) days. All installed Odor Masking Units must be held in place by a holding device firmly secured to the air handler unit or adjacent fixtures: free-standing Odor Masking Units will not be allowed for safety reasons. All Odor Masking Units must be self-powered, not requiring electrical power. Contractor shall not be allowed to connect to electrical outlets. Odor masking units are located in all AHU's in terminal areas.
- 4.12.3 Storage of Contractor's Equipment and Supplies - Contractor shall store its equipment and supplies in the Central Plant area. HAS will not provide Contractor with space in the treatment areas for storage of equipment or material for airstreams odor masking. All materials and supplies must be removed from the work site upon completion or cessation of work.
- 4.12.4 Cessation of Services - Contractor shall stop providing odor masking services for any Treatment Area if requested by the Director. Contractor may remove odor masking equipment and materials from Treatment Areas only after receiving written permission from the Director. After removing its equipment Contractor shall ensure that any holes/openings made by Contractor (air handlers/ducts) are securely covered with patches made from materials that are similar to the materials removed and the patched area repainted to match existing surfaces.
- 4.12.5 Contractor's Response to Problems - Upon oral or written notification by HAS of any problems, Contractor shall have competent maintenance/repair personnel with appropriate equipment and parts dispatched to the problem area within one (1) hour. Service credits may be assessed for failure of the above requirement.
- 4.13 Administrative Tasks (IAH), (HOU) & (EFD)
- 4.13.1 As part of Basic Services, Contractor shall perform certain administrative tasks which include implementation, operation, and maintenance of data systems, radio communications, security and badging requirements, preparation of work orders, generating reports, attending meetings, administering a quality control program, and performing certain housekeeping duties.
- 4.14 Maintenance Management System (MMS)
- 4.14.1 General Description
- 4.14.1.1 As part of Basic Services the Contractor shall implement a computer-based Maintenance Management System ("MMS"), which is approved in advance by the Director.

- 4.14.1.2 Contractor shall provide and maintain all computer hardware, servers, software, cabling and infrastructure to support the MMS specified in this Section as part of Basic Services throughout the Agreement Term. Contractor shall download all essential data from the existing MMS system into new Contractor's MMS system.
- 4.14.1.3 Contractor shall provide all integration of data etc., from the existing MMS system to the new MMS system and operate and maintain all MMS software and equipment or equivalent replacement/upgrades, at its sole expense.
- 4.14.1.4 All supplies, expendables etc. required for operating the complete MMS system must be provided by Contractor at its expense. Contractor shall also bear all costs for telecommunications associated with line charges, long distance, installations, etc. required for the equipment/system operations.
- 4.14.1.5 At the end of the Agreement Term, the MMS computer hardware, software, cabling, and incidentals remain the property of HAS. All data, files, and records generated for all Airports on the software remains the exclusive property of HAS at the expiration or termination of the Agreement.
- 4.14.2 Maintenance & Operation
- 4.14.2.1 Maintenance and operation of the MMS to include but not limited to, systems for preventive/predictive maintenance scheduling, work order generation, inventory/cost management, manpower scheduling etc. System must be a City approved system, with approximately seven (7) ea. full-access and ten (10) ea. non-access stations. System must be web-based ("fully" accessible to HAS). Contractor shall provide all required integration including downloading existing/prior maintenance data into the new system.
- 4.14.2.2 At no additional cost to the City, Contractor shall install bar codes and location identifiers on the equipment, printed on "metallic paper" equipment tags, to have total linkage back to the PM system.
- 4.14.2.3 The City will own all the data, both in electronic format and a hard copy, and all work plans at the expiration or termination of the Agreement term. Upon termination of the Agreement, Contractor shall provide all data files in ASCII format with documented file layouts on CD-ROM.
- 4.14.3 System to Provide
- 4.14.3.1 Redundant environment to ensure that data is not lost should the primary database fail.
- 4.14.3.2 On call 24 hour/7-days-per-week database administration management and technical support.
- 4.14.3.3 24-hour archiving to remote storage as a minimum.
- 4.14.3.4 Unlimited server storage capacity to allow development of a wide range of statistical analysis.
- 4.14.3.5 Contractor shall operate a MMS work control center at the Project Manager's office at IAH. The work control center will receive maintenance/repair calls, dispatch personnel, and generate work orders during contract hours at each airport.
- 4.14.3.6 Contractor shall provide all necessary hardware, application software, networking, management services, turnkey installation/implementation, training, acceptance testing, and on-going system support.
- 4.14.3.7 MMS shall employ a graphical user interface (GUI) to access information on equipment, work orders, parts, and other system data. It shall provide on-line search functions; produce ad-hoc reports/lists of selected information and standard reports.
- 4.14.3.8 System shall include:
- 4.14.3.8.1 Equipment Inventory that tracks equipment and information associated with each unit, including, equipment records, history, PM, parts issued, warranties, equipment disposal.
- 4.14.3.8.2 Parts Inventory that includes, inventory management, order search, records, and history.

- 4.14.3.8.3 Equipment downtime statistics.
- 4.14.3.8.4 Preventive maintenance scheduling.
- 4.14.3.8.5 Pre-programmed and user-definable reports.
- 4.14.3.8.6 Tracking of deferred maintenance.
- 4.14.3.8.7 Enable to process work orders from a mobile device.
- 4.14.3.8.8 All status changes made digitally to a work order shall be time stamped and posted on the work order.
  
- 4.15 Reliability Centered Maintenance (RCM), (IAH), (HOU) & (EFD)
- 4.15.1 As a part of Basic Services throughout the Term of the Agreement, the Contractor shall provide Reliability Centered Maintenance on HVAC SYSTEMS at minimum life-cycle costs.
- 4.15.2 Contractor must use the RCM to determine the most effective approach to maintenance and what must be done to ensure that the HVAC SYSTEMS continues to perform as designed by the OEM within the present operating context. RCM is an ongoing process in which the Contractor gathers data from the HVAC SYSTEMS performance and uses this data to future maintenance and/or recommend design changes.
- 4.15.3 RCM must employ Preventive Maintenance, Predictive Testing/Inspection, Reactive Maintenance, and Proactive Maintenance techniques in an integrated manner to increase the probability that the HVAC SYSTEMS will function in the required manner over their design life-cycle.
- 4.15.4 RCM requires that the Contractor make maintenance decisions based on maintenance requirements supported by sound technical and economic justification. RCM includes, but is not limited to:
  - 4.15.4.1 Obtaining the highest level of performance and safety for the occupants and employees maintaining the Agreement.
  - 4.15.4.2 Providing maximum functionality, availability, safety and reliability performance of HVAC SYSTEMS at the lowest cost.
  - 4.15.4.3 Identifying and implementing the most cost effective actions that reduce the probability of HVAC SYSTEMS failure.
  - 4.15.4.4 Provide statistical method of optimizing the preventive maintenance and predictive maintenance programs for HVAC SYSTEMS.
  - 4.15.4.5 Establish and identify issues of personnel performance and make any required corrections.
  - 4.15.4.6 Restore equipment to the required levels of performance when deterioration occurs, but before failure.
  - 4.15.4.7 Collect the data, during the life of the Agreement and/or equipment, to change the workflow or design of the equipment in order to improve its reliability.
  - 4.15.4.8 Re-evaluate the workforce and identify efficiencies and changes in personnel for long-term productivity reductions.
  - 4.15.4.9 Report monthly progress and areas of improvement in performance, personnel, equipment, and process.
  
- 4.16 CFC Refrigerants (IAH), (HOU) & (EFD)
- 4.16.1 Title VI of the Clean Air Act of 1990, as amended from time to time, concerns the depletion of the stratospheric ozone layer, and specifically addresses the use of CFC Refrigerants and regulations to significantly limit their production and venting.
- 4.16.2 Contractor shall comply with Title VI, Clean Air Act of 1990, together with any amendments thereto, and together with any other applicable governmental regulations related to the use of CFC Refrigerants. The City strictly prohibits the discharge of CFC Refrigerants into the atmosphere resulting from the installation,

repair, maintenance, or any condition requiring the release of CFC Refrigerants from any City-owned equipment, system, etc., new or existing.

- 4.16.3 Contractor shall ensure the necessary procedures and safeguards are in place to prevent the occurrence of a CFC Refrigerant discharge into the atmosphere. Contractor shall be required at the request of HAS to remove and dispose of any refrigerants from old and unused appliances within the airport complex.
- 4.16.4 All costs associated with removal of CFC Refrigerants for the purpose of recovery, recycling, or reclamation is at Contractor's sole expense and is included in Contractor's costs for Basic Services. No additional compensation will be allowed.
- 4.16.5 The use of new (unused), recovered, recycled or reclaimed refrigerant by Contractor shall be permitted under these specifications. However, Contractor must provide a written statement indicating which it will utilize; new (unused), recovered, recycled or reclaimed and will warrant the refrigerant by any of these methods, to be within the nine (9) physical properties standards set by: ARI Standard 700-88, Table 1 - Physical Properties of Fluorocarbon Refrigerant and Maximum Contaminated Levels.
- 4.16.6 Any refrigerant that has been reclaimed must meet the then current ARI Standard 700-88 before it may be introduced into any City system. Appropriate test results must be submitted supporting the reclaimed refrigerant as being within the established maximums. Contractor shall attest to the test results as being applicable to the recycled refrigerant presented for use in the specified system in accordance with ARI Standard 700-88.
- 4.16.7 Contractor shall be responsible and wholly liable, for any and all fines, penalties, taxes, judgments, settlements or liabilities arising out of any violation or infraction of the Clean Air Act of 1990, any amendments thereto, or any other applicable governmental regulations related to the use of CFC Refrigerants.
- 4.17 Best in Practice Service (IAH), (HOU) & (EFD)
- 4.17.1 Contractor shall implement industry best practices service through use of documented policies, procedures, processes, and employee training programs.
- 4.17.2 Contractor's best in practice service shall include, but not be limited to the following:
  - 4.17.2.1 A central Help Desk to provide a focal point for operations planning, scheduling, communications with Contractor's customers, and control of all contract activities; and provide an integrating function for all HVAC program activities including a priority response system and fail-safe process to ensure we respond in the allotted time.
  - 4.17.2.2 Efficient deployment and optimum use of all modules and capabilities of the MMS that includes electronic documentation and reporting of all HVAC activities.
  - 4.17.2.3 An organizational model and work schedules that integrate all elements of strategic site leadership, field supervisory, customer service, and technical responsiveness.
  - 4.17.2.4 A model and management approach that considers and fosters internal departmental and external process handoffs, communications, teamwork, and process improvements.
  - 4.17.2.5 A reliability centered maintenance strategy that logically incorporates into a maintenance program the proper mix of reactive, preventive, predictive, and proactive maintenance practices.
  - 4.17.2.6 An integrated strategic sourcing strategy that combines all elements of vendor integration, supplier diversity, e-commerce, and MRO supply chain management.
  - 4.17.2.7 A world-class performance measurement program.
  - 4.17.2.8 Employee-training program that ensures Contractor's employees remain highly skilled and proficient.

- 4.17.2.9 Contractor's continuous improvement that incorporates the latest advances in Quality and Customer Satisfaction programs.
- 4.17.2.10 A communications and reporting program that stresses and mandates customer and internal formal and informal communications and reporting.
- 4.17.2.11 Contractor must deploy best practices in HVAC maintenance programs that are integral to the HAS facilities which includes mission critical environments, vendor management, energy management, phase-in processes, HR support, and account planning and reporting.
- 4.18 Third Party Audits (IAH), (HOU) & (EFD)
- 4.18.1 Contractor must have a Third Party Audit of equipment specified by the Director performed during Contractor phase out. In addition, HAS may at its discretion, request a third party audit, no more than two (2) additional times during the Term of the Agreement. A third party audit company must be approved by the Director.
- 4.18.2 Propose third party Audits must verify quality of Operation and Maintenance of HVAC SYSTEMS to include but not limited to:
  - 4.18.2.1 Operation & maintenance of HVAC Systems.
  - 4.18.2.2 Operation & Maintenance of DDC Systems.
  - 4.18.2.3 Preventive Maintenance.
  - 4.18.2.4 Condition of equipment.
  - 4.18.2.5 Energy Management.
  - 4.18.2.6 Water Treatment Programs.
  - 4.18.2.7 Proficiency/accuracy of Work performed by Contractor's employees.
  - 4.18.2.8 House Keeping.
- 4.18.3 The cost for third party audits will be at the Contractor's expense. An Independent and qualified third party agency must be selected by HAS/Contractor. The third party agent/agency must be accountable to HAS. All reports must be sent directly to HAS with copies to Contractor.
  - 4.18.3.1 Any deficiencies discovered by third party audits which are the responsibility of Contractor, must be rectified by the Contractor at no cost to the City. Correction/Work shall commence within thirty (30) working days of receipt of the notice of any such deficiency. Contractor shall provide the Director with a written explanation for such deficiency in performance and a plan to prevent future deficiencies within fifteen (15) days of receipt of such notice.
  - 4.18.3.2 Failure of Contractor to correct deficiencies covered under the terms of the Agreement may be used by the Director as grounds for termination of the Agreement within the meaning of the general provisions entitled "Default."
  - 4.18.3.3 At the Director's discretion, Contractor shall submit a revised Quality Control Program for review and approval by the Director within thirty (30) working days. The Quality Control Program must detail how future occurrences as identified in the above audit will be prevented.

## **5.0 PERSONNEL REQUIREMENTS (IAH) & (HOU)**

- 5.1 Staffing – The staffing listed in this specification is a "minimum staffing" only. Contractor shall provide the necessary number of personnel required to operate and maintain the HVAC systems and equipment at all Airports. All personnel assigned by Contractor to perform in accordance with the terms of the Agreement will not be assigned to any other projects or contracts managed by Contractor unless approved in writing by the Director.

- 5.2 The Contractor's Project Manager, Central Plant Operations Manager, and Terminal Maintenance manager shall all have e-mail capabilities. Contractor shall answer correspondence via e-mail within 24 hours.
- 5.3 Should HAS determine that the Contractor is not meeting the Agreement responsibilities with the Contractor's on-site crew, then upon the Director's request, Contractor shall modify/increase its on-site crew in order to meet Agreement obligations. Contractor shall increase its on-site crew at no cost to HAS as required to fulfill the requirements of the Agreement. Should the Director determine that Contractor is not meeting Agreement responsibilities; the Director will notify Contractor in writing. Contractor shall address and cure performance issues relating to personnel immediately. A plan to cure must be approved in writing by the Director at his sole discretion. If Agreement responsibilities can only be met with additional permanent staff, Contractor shall pay for the cost of such additional staff.
- 5.4 Contractor shall provide a dedicated Project Manager for all of HAS, skilled and experienced in the operation and maintenance of the type of systems/equipment identified in the Agreement, who will be actively included in the system maintenance and who will serve as the main point of contact for Contractor. The Project Manager shall not be a working technician/mechanic. The Project Manager shall be on duty from 8:30 a.m. through 5:30 p.m., Monday through Friday at a minimum.
- 5.5 After execution of the Agreement the Project Manager shall attend a minimum of one meeting every month, or as requested, with the Director to report on the status of the system/equipment and the Work/Services. Contractor shall prepare a typed agenda covering the topics to be discussed, keep minutes of the meetings in a form satisfactory to the Director, and issue copies of the minutes to all attendees within four (4) business days of each meeting. Service credits may be assessed for failure of the above requirement.
- 5.6 The Project Manager shall be the communications contact with the Director and shall be exclusively assigned to this project. The Project Manager shall not be reassigned from this project without prior approval of the Director. Contractor shall provide a toll free telephone number if the Project Manager resides outside of the 713 or 281 Area Codes.
- 5.7 The Project Manager, Central Plant Operations Manager, and Terminal Maintenance Manager shall not be reassigned and or be replaced from this project without prior written approval of the Director.
- 5.8 Although personnel are assigned to specific airports, every employee shall be cross trained and deployed as required.
- 5.9 Contractor shall notify HAS of holiday/vacation schedules at least fourteen (14) days in advance.
- 5.10 Contractor's personnel shall include management professionals shared between IAH, HOU, and EFD.
- 5.10.1 Project Manager -(Minimum Quantity 1 ea.) – The Project Manager shall have at least 10 years of HVAC continuous maintenance project experience with verifiable HVAC management capability and experience including but not limited to:
- 5.10.1.1 Centrifugal and Reciprocal chillers 2000 tons or larger.
- 5.10.1.2 Water tube high-pressure boilers up to 600 degrees (F) @ 225 lbs. having a minimum capacity of 50,000 lbs per hour.
- 5.10.1.3 Must have a minimum of 2<sup>nd</sup> Class Stationary Engineer License.
- 5.10.1.4 Minimum of five (5) years Energy Management experience.
- 5.10.1.5 Five (5) years cost forecasting and training and managing personnel.
- 5.10.1.6 Advanced computer skills and in-depth knowledge of complex DDC control systems.
- 5.10.1.7 Alerton Control experience is a plus.

- 5.10.1.8 The Project Manager shall communicate with the Director and shall be exclusively assigned to this project. The Project Manager shall not be reassigned from this project without prior written approval of the Director. The Project Manager will be physically located at IAH but will operate between all facilities.
- 5.10.2 IAH Dispatch/Work Order Control – (Minimum Quantity 1 ea.) Generates work orders. Tracks and provides monthly, daily, weekly data on PM Logs and scheduling Parts Usage, Labor Hours and Warranty Reports:
  - 5.10.2.1 2 to 4 years experience in Service Dispatch.
  - 5.10.2.2 Excellent typing skills.
  - 5.10.2.3 In-depth computer skills.
  - 5.10.2.4 Proficiency with MS Office Applications and able to create and maintain spreadsheets.
  - 5.10.2.5 Minimum coverage 16 hours a day, 6 days a week.
- 5.11 (IAH) Contractor's personnel shall include professionals in the following job categories:
  - 5.11.1 Terminal Maintenance Manager - (Minimum Quantity 1 ea.) Maintenance Manager shall have at least ten (10) years HVAC Facility Maintenance Experience in a large facility environment of at least 1.0 million sq. ft. Experience will include, but not limited to:
    - 5.11.1.1 Five 5 years supervisory capacity.
    - 5.11.1.2 Must have a State of Texas HVAC License Class B or higher.
    - 5.11.1.3 A Universal Recovery Certificate.
    - 5.11.1.4 Working knowledge of Variable Frequency Drives.
    - 5.11.1.5 Knowledge of Complex Control Systems, BACNET.
    - 5.11.1.6 Native language absolutely necessary with graphic capability.
    - 5.11.1.7 Good Chemical Treatment knowledge.
    - 5.11.1.8 Building Pneumatics and Compressors.
    - 5.11.1.9 Building Chill Water and Hot Water Pumps.
    - 5.11.1.10 Good working knowledge of Heat Exchangers.
    - 5.11.1.11 Must have a Basic Electrical Diagnostic Skills.
  - 5.11.2 IAH Central Plant Operations Manager - (Minimum Quantity 1 ea.) –Central Plant Operations Manager must have a minimum of ten (10) years experience in a large central plant (15,000 tons or higher) and shall include, but not limited to:
    - 5.11.2.1 Maintenance and Operation of Steam Boilers 50,000 lbs or higher.
    - 5.11.2.2 Must have a Stationary Engineering License.
    - 5.11.2.3 Maintenance on Steam Turbines and Electric Driven Chillers.
    - 5.11.2.4 Five (5) years of Energy Management Experience.
    - 5.11.2.5 Operating High Pressure Boilers, 600 °F, 225 lbs.
    - 5.11.2.6 Excellent Chemical Treatment knowledge.
    - 5.11.2.7 Experience in Operative Plant Automation Systems.
    - 5.11.2.8 Shift of five (5) days a week.

- 5.11.3 IAH Terminal Maintenance Supervisor - (Minimum Quantity 1 ea.) –Must have a least five (5) years experience in Facility Maintenance, including but not limited to:
  - 5.11.3.1 Three (3) years supervisory experience.
  - 5.11.3.2 Universal Recovery Certificate.
  - 5.11.3.3 State of Texas A/C License, Class B or higher.
  - 5.11.3.4 Working knowledge of Variable Frequency Drives.
  - 5.11.3.5 Good Chemical Treatment knowledge.
  - 5.11.3.6 Good working knowledge of Building Automation System.
  - 5.11.3.7 Experience with Pneumatics Control Systems and Compressors.
  - 5.11.3.8 Building Chill Water and Hot Water Repair experience.
  - 5.11.3.9 Experience with repair and operation of Heat Exchangers.
  - 5.11.3.10 Must have Basic Electrical Diagnostic Skills.
- 5.11.4 IAH Preventive Maintenance Technician - (Minimum Quantity 6 ea.) – Preventive Maintenance Technician must have three (3) years experience in a Facility Maintenance environment. Experience includes but not limited to:
  - 5.11.4.1 Preventive Maintenance on pumps, air compressors, electrical motors/starter, AHU, Mixing Boxes, Duct Work, Bearing Replacement and Centrifugal Blowers.
  - 5.11.4.2 Staffing Requirements for PM Technicians must be - - for 24 hours a day, 7 days a week coverage.
  - 5.11.4.3 Preventive Maintenance Technician are to be assigned full time to terminals A, B, C, D, & FIS.
- 5.11.5 IAH Preventive Maintenance Technician Helper – (Minimum Quantity 6 ea.) – Preventive Maintenance Technician Helpers must have at least one (1) year experience in a Facility Maintenance environment. Staffing requirement for Preventive Maintenance Technician Helpers must be for 24 hours a day 7 days week coverage.
- 5.11.6 IAH Electrician (Journeyman or higher) - (Minimum Quantity 1 ea.) – Electrician Mechanic must have a minimum of three (3) years HVAC electrical experience including but not limited to:
  - 5.11.6.1 Electrician shall posses a license in conformance with the State of Texas Electrician's License requirements.
  - 5.11.6.2 Qualifications to perform most maintenance tasks on:
    - 5.11.6.2.1 Variable Speed Drives.
    - 5.11.6.2.2 High voltage experience.
    - 5.11.6.2.3 480 V. 3 ph, switch gear.
    - 5.11.6.2.4 12.47 KV systems.
    - 5.11.6.2.5 Motor starters, transformers.
    - 5.11.6.2.6 Buss distribution, buss-ties.
    - 5.11.6.2.7 Automatic and manual transfer switches.
- 5.12 The following Controls personnel shall be OEM certified. Candidates must be approved by the Director: (These controls personnel will be use to dispatch trouble tickets calls after reviewing the DDC system).
- 5.12.1 IAH DX Maintenance Mechanic – (Minimum Quantity 2 ea ) DX Maintenance Mechanic must have 5 years continuous HVAC installation/repair experience including but not limited to:
  - 5.12.1.1 Journeyman experience.

- 5.12.1.2 Five 5 years of repair experience in commercial air conditioning.
- 5.12.1.3 Universal Refrigerant recovery license and minimum of class B state of Texas A/C license.
- 5.12.1.4 DX Maintenance Mechanic will maintain all stand alone facilities.
- 5.12.1.4.1 Quantities:
  - (1 ea.) – 1<sup>st</sup>. shift - 7 am to 3 pm - (Monday - Friday).
  - (1 ea.) – 2<sup>nd</sup>. Shift - 3 pm to 11 pm - (Monday - Friday).
- 5.12.2 IAH Central Plant Stationary Engineer - (Minimum Quantity 8 ea. – 24/7 Coverage) Stationary Engineers must have a Stationary Engineer License, Second Grade or higher and have a minimum of five (5) years experience in Central Plant Operations, 8,000 tons of higher and 50,000 lbs of steam. At a minimum, four of these positions will be required to be First Grade. Experience including but not limited to:
  - 5.12.2.1 Must have a Universal Freon Recovery Certificate.
  - 5.12.2.2 Operation of large tonnage chillers of 2,000 tons or higher.
  - 5.12.2.3 Operation of boilers of 40,000 lbs of steam or higher.
  - 5.12.2.4 Heat Exchangers.
  - 5.12.2.5 Cooling Towers.
  - 5.12.2.6 Plant Automation System.
  - 5.12.2.7 Air Compressors.
  - 5.12.2.8 Chemical Treatment Systems.
- 5.12.3 IAH Senior Building Controls Technician – (Controls BACnet Native) - (Minimum Quantity 1 ea.) Senior Technicians must have at least Ten (10) years continuous experience on BACNET controls, including but not limited to:
  - 5.12.3.1 Experience in the measurement, calibration, monitoring, testing and troubleshooting of electronic, pneumatic and electrical control systems.
  - 5.12.3.2 Experience must include communication; high speed modems and P.C. based HVAC networking systems.
  - 5.12.3.3 Capable of system management, repair and upgrades.
  - 5.12.3.4 Capable of creating and modifying graphics.
  - 5.12.3.5 At least three (3) years in programming.
  - 5.12.3.6 Must have completed at least 400 hours of accredited technical schooling in electronic controls.
  - 5.12.3.7 Experience must include at least four (4) years of Alerton Systems.
  - 5.12.3.8 Must have at least (3) three years in personnel management and work scheduling.
- 5.12.4 IAH Building Controls Technician - (Controls BACnet Native) (Minimum Quantity 2 ea.) – Technician shall have four (4) years continuous BAC net Controls experience including but not limited to:
  - 5.12.4.1 Capable of systems maintenance/ repair/upgrades.
  - 5.12.4.2 Have at least 200 hours of accredited technical training in electronics or computer programming.
  - 5.12.4.3 Able to work with Star-Bus, BACnet Native and other industrial languages.

- 5.12.5 IAH Plant Maintenance Mechanic - (Minimum Quantity 1 ea.) Must have at least ten (10) experience in large Central Plant (15,000) tons or larger. Experience to include but not limited to:
  - 5.12.5.1 Universal recovery certificate.
  - 5.12.5.2 Centrifugal chillers (2,000 tons or higher).
  - 5.12.5.3 York chiller experience is a must.
  - 5.12.5.4 Steam turbine experience is a must.
  - 5.12.5.5 Pneumatic air systems.
  - 5.12.5.6 Water treatment programs.
  - 5.12.5.7 Boiler experience of at least 40,000 lbs or higher.
  - 5.12.5.8 Experience on heat exchangers.
  - 5.12.5.9 Operation and maintenance on cooling towers and pump repairs.
- 5.12.6 IAH Administrative Assistant - (Minimum Quantity 1 ea.) Must have five (5) to ten (10) year experience as an administrative and operations support assistant. Experience should include but not limited to excellent typing skills, proficiency with MS Office applications (Word, Excel, PowerPoint, Access, and Outlook). Experience with MS Excel, database, spreadsheets and software.
- 5.12.7 IAH Painter – (Minimum Quantity 1 ea.) Painting of mechanical rooms, central plant, and duct work etc.
- 5.12.8 IAH Cleaner - (Minimum Quantity 1 ea.) Cleaning experience includes but not limited to the following:
  - 5.12.8.1 Clean equipment, pads, floors, bathrooms, windows etc.
  - 5.12.8.2 Wipe down piping in tunnels, equipment room.
  - 5.12.8.3 Plant housekeeping, buff, and wax floors.
- 5.13 (HOU) Contractor's personnel shall include professionals in the following job categories, and is a shared resource with EFD:
  - 5.13.1 HOU Operations Supervisor - (Minimum Quantity 1 ea.) The Operations Supervisor shall have at least ten (10) year's project or similar HVACM experience with verifiable management capability and experience. The Operations Supervisor will report to the Project Manager and shall not be a working technician/mechanic. The Operations Supervisor shall be on duty from 8:30 a.m. through 5:30 p.m., Monday through Friday or as dictated by job requirements.
  - 5.13.2 HOU First Grade Stationary Engineer - (Minimum Quantity 1 ea.) First Class Operating Engineers shall have First Grade Stationary Engineer's Licenses in conformance with the City of Houston Codes. Minimum eight (8) years HVAC operating experience as a First Grade Stationary Engineer.
  - 5.13.3 HOU Operations Engineer - (Minimum Quantity 3 ea.) Operating Engineer shall have Second Grade Stationary Engineer's Licenses in conformance with the City of Houston Codes. Minimum eight (8) years operating experience as a Second Grade Stationary Engineer.
  - 5.13.4 HOU Maintenance Mechanic - (Minimum Quantity 2 ea.) Maintenance Mechanic shall have at least ten (10) years experience in preventive/repair maintenance of HVAC equipment in an environment similar to Houston, Texas. Must have certification of experience on HVAC Systems from an accredited source(s) and instructor/training back-ground.
  - 5.13.5 HOU Senior Building Controls Technician - (Minimum Quantity 1 ea.) Must have at least ten (10) years continuous experience on BACNet Controls, including but not limited to:
    - 5.13.5.1 Experience in the measurement, calibration, monitoring, testing and troubleshooting of electronic, pneumatic and electrical control systems.

- 5.13.5.2 Experience must include communication; high speed modems and P.C. based HVAC networking systems.
- 5.13.5.3 Capable of system management, repair and upgrades.
- 5.13.5.4 Capable of creating and modifying graphics.
- 5.13.5.5 At least three (3) years in programming.
- 5.13.5.6 Must have completed at least 400 hours of accredited technical schooling in electronic controls.
- 5.13.5.7 Experience must include at least four (4) years of Alerton Systems.
- 5.13.5.8 Must have at least three (3) years in personnel management and work scheduling.
- 5.13.6 HOU DX Mechanic – (Minimum Quantity 1 ea.) Must have five (5) years of continuous HVAC installation/repair experience including but not limited to:
  - 5.13.6.1 Journeyman Level Experience.
  - 5.13.6.2 Minimum of two (2) years servicing and repair commercial air conditioning.
  - 5.13.6.3 Universal Refrigerant Recovery License.
  - 5.13.6.4 State of Texas Class B Contractor's License or higher
- 5.14 Personnel Approval (IAH) & (HOU)
  - 5.14.1 The Contractor shall furnish adequate documentation of the assigned personnel's qualifications for the on-site crew and obtain written approval of acceptance of such qualifications by the Director. Contractor may change personnel only with equally qualified personnel as approved by the Director.
- 5.15 EFD Personnel
  - 5.15.1 HVAC requirements at Ellington Airport will be handled by personnel from HOU and supported by all Contractor personnel.
  - 5.15.2 Contractor personnel reporting to EFD shall spend at least ten (10) hours per week on preventive maintenance.
- 5.16 Housekeeping Duties (IAH) & (HOU) – Contractors shall provide their approach and methodology for the following housekeeping duties:
  - 5.16.1 Central Plants Housekeeping Duties – As part of Basic Services
    - 5.16.1.1 Contractor shall perform all work and provide all materials for the housekeeping of the total Central Plants to keep the Central Plants clean at all times including but not limited to break room, bath/restroom and upstairs control room.
    - 5.16.1.2 Contractor shall maintain all parts of all panel boards that have any device serving/affecting heating, ventilating and air conditioning systems.
    - 5.16.1.3 Equipment, parts, supplies, materials etc., must not be stored in any areas unless specifically authorized in writing by the Director.
    - 5.16.1.4 Central Plant Housekeeping Duties Include:
      - 5.16.1.4.1 Furnishing the appropriate tools, equipment, and supplies.

- 5.16.1.4.2 Cleaning, waxing and maintenance as appropriate: all floors, walls, ceiling and glass areas on a scheduled basis, meeting or exceeding acceptable industry standards for like areas.
- 5.16.1.4.3 Maintain the condition of all ceiling, glass and wall areas to include painting as may be required to maintain a clean and neat appearance.
- 5.16.1.4.4 Clean and maintain ceiling tiles and floor tiles in offices.
- 5.16.1.4.5 Maintain the lighting in the Central Plant to include, but not be limited to, electrical, fixtures and lamps.
- 5.16.1.4.6 Maintain the Central Plant floor areas, including cleaning and frequent painting. All colors for painting must be approved by the Director. No refuse, trash, etc., is to be left on the Central Plant floor areas. All trash receptacles must be properly maintained and all refuse removed from the Central Plant daily.
- 5.16.1.4.7 All equipment, including piping, valves, etc., must be wiped down on a periodic basis to reduce the dust build-up on the equipment and to eliminate potential problems with equipment that may be sensitive to such dust particles.
- 5.16.1.4.8 All pipe insulation must be painted on a frequent basis as needed to ensure its protection and appearance is maintained. All motors, pumps, valves and other pieces of equipment must also be kept in a painted condition as appropriate for the equipment's use. Color coding must be utilized throughout the Central Plant for ease of identification for piping, motors, valves, etc.
- 5.16.1.4.9 Maintain all drains, grease traps, toilets, etc., in the Central Plant that become clogged. The Contractor's responsibilities extend from the Central Plant to the main sewer line.

5.16.2 (IAH) Tunnel Area Housekeeping Duties

- 5.16.2.1 Contractor shall ensure the utility tunnel area from the (IAH) Central Plant to Terminal B, containing the chilled and Primary Hot Water piping for the terminal facilities, is free of all trash and debris and is properly maintained on a regularly scheduled basis. All piping insulation must be coated or painted as appropriate for maintenance and appearance. Contractor shall also maintain the lighting in the (IAH) utility tunnel to include, but not be limited to, electrical, fixtures and lamps.

5.16.3 Terminal HVAC Equipment Rooms/Air Handler Rooms Housekeeping Duties

- 5.16.3.1 Contractor shall maintain all HVAC Equipment Rooms/Air Handler Rooms in all terminals and keep them free of all trash and debris. Rooms must be cleaned and maintained on a regularly scheduled basis. Equipment, piping, insulation, etc. must be maintained in a painted condition at all times, consistent with appropriate protection and appearance requirements. All colors for painting must be approved by HAS.

5.16.4 (IAH) Administration Building, ASC, SCM, & Remote Buildings/Facilities Housekeeping Duties

- 5.16.4.1 Contractor shall maintain HVAC Equipment Rooms and Areas for these facilities in a trash and debris free environment. Equipment, piping, insulation, etc. must be maintained in a painted condition at all times consistent with protection and appearance requirements. All colors for painting must be approved by HAS.

5.16.5 (HOU) Building at 8800 Paul B. Koonce and Remote Buildings/Facilities Housekeeping Duties

- 5.16.5.1 Contractor shall maintain HVAC Equipment Rooms and Areas for these facilities in a trash and debris free environment. Rooms and equipment must be cleaned and maintained on a regularly scheduled basis. Equipment, piping, insulation, etc. must be maintained in a painted condition at all times consistent with protection and appearance requirements. All colors for painting must be approved by Sr. Superintendent, Facilities Administration Section.

5.16.6 Miscellaneous DX Equipment Housekeeping Duties

- 5.16.6.1 Contractor shall maintain a clean work area and shall remove all trash and debris from the area of the equipment upon completion of any O&M or remedial service.

5.17 Contractor shall provide, at its own expense:

5.17.1 All office furniture and incidentals required for Contractor's operation of the Central Plant Offices, including but not limited to compatible PC's, copy machine, fax machine, pagers, office supplies, and miscellaneous office equipment. Contractor shall remove all Contractor-owned furniture and equipment upon termination or expiration of the Agreement.

5.17.2 All expendable items required for the proper operation and maintenance of the facilities. Expendable items include, but are not limited to, the following: mops; floor cleaning agents; paper towels; soap; brooms; toilet tissue; paper, etc.

5.17.3 All telephone lines will be provided by the City, but all cost for use thereof will be at Contractor's expense.

5.17.4 Contractor shall, at its own expense, replace damaged or lost material, parts, equipment, etc., and repair damaged parts of the Work or facility. As part of the maintenance requirements, Contractor shall develop schedules for regular housekeeping of the central plant HVAC system equipment areas.

5.18 Uniforms - (IAH),(HOU) & (EFD)

5.18.1 Contractor's personnel shall present a clean and neat appearance. Contractor's personnel shall wear a Contractor furnished uniform with Contractor's name clearly displayed on the front of the shirt and seasonal outerwear.

5.19 Training (IAH),(HOU) & (EFD)

5.19.1 The Contractor's training program must be directed towards developing appropriate levels of expertise for skilled trades and management/ supervisory personnel in order that they have the expertise to maintain the HVAC SYSTEMS in Best-in-Practice Service. The training program must include both comprehensive training needs analysis and subsequent training by staff professionals.

5.19.2 Training needs analysis and training for skilled trades must include, but not be limited to,:

5.19.2.1 General Plant Safety.

5.19.2.2 Mathematics and Measurement.

5.19.2.3 Hand Tools & Power Tools.

5.19.2.4 Bearings & Drive Components.

5.19.2.5 Equipment Installation.

5.19.2.6 Steam Generation.

5.19.2.7 Air Conditioning & Refrigeration.

5.19.2.8 Applied Mech. Maintenance.

5.19.2.9 Pumps and Piping Systems.

5.19.2.10 Hydraulic, Pneumatic, Electric Systems.

5.19.2.11 Electric Troubleshooting.

5.19.2.12 Turbine & Boiler Operation.

5.19.2.13 Energy Conservation.

5.19.2.14 First Line Supervision.

5.19.3 Training needs analysis and training for management/supervisory staff shall include, but not be limited to,:

5.19.3.1 Human Resource.

5.19.3.2 Plant Maintenance.

5.19.3.3 Regulatory Compliance.

5.19.4 All costs for training must be provided by Contractor at no additional compensation.

## **6.0 FACILITIES AND SERVICES PROVIDED BY HAS**

### **6.1 Utilities**

6.1.1 HAS will provide all electricity and natural gas required for the operation of HVAC SYSTEMS. The existing service and distribution facilities for electricity and natural gas are in place and connected to the equipment.

6.2 HAS will also provide water necessary for use in the HVAC SYSTEMS and for Contractor's employees on site.

6.3 480V Electrical Distribution - HAS' responsibility for power distribution is limited to service to the main 480-volt disconnect switches; there is currently a switch in each Terminal.

6.4 Non-Hazardous Solid Waste Pickup - HAS will provide pick-up of non-hazardous solid waste from Airport dumpsters. Disposal of hazardous, unusual (or) heavy items is the sole responsibility of Contractor. With HAS permission filters can be disposed of in HAS dumpsters.

6.5 Fire Safety Equipment - HAS will maintain existing fire extinguishers.

6.6 Office, Maintenance, and Storage Area – At (IAH) & (HOU), HAS will provide an office, maintenance, and storage areas. Contractor shall provide, at its expense, any additional required facilities. Contractor shall be responsible for all housekeeping of such facilities including, but not limited to, sweeping, washing, cleaning, waxing, painting, dusting, etc., of all areas, fixtures, and equipment.

6.7 Access to Work Areas – Subject to HAS rules and regulations, Contractor may enter and leave work sites at all reasonable times. Contractor and its employees may use the common areas and roadways at the Airport where the work sites are located. This excludes parking for Contractor's personnel and does not extend to any restricted area of the Airport, including without limitation, the AOA, which requires the Director's prior written approval and an HAS escort. Contractor shall repair any damage it or its employees cause as a result of its use of the common areas.

## **7.0 COORDINATE PERFORMANCE (IAH), (HOU) & (EFD)**

7.1 HAS Contact – Contractor shall coordinate its performance with such person(s) as the Director designates in writing to Contractor. Contractor shall keep said person(s) currently advised of developments relating to the performance of the Agreement, and Contractor shall at all appropriate times advise and consult with the Director's designee(s) as determined by the Director.

7.2 Pre-Performance Conference - Prior to commencing performance under the Agreement, Contractor shall attend a pre-performance conference with the Director and other representatives of HAS. The Director shall specify the time and place of such meeting in a written notice to Contractor. Representatives of Contractor attending the pre-performance conference include, but are not limited to, the Project Manager whom Contractor has assigned to the Agreement, together with an officer of Contractor who is authorized to bind Contractor in matters relating to the pre-performance conference items listed below to the extent the Project Manager is not so authorized to bind Contractor. In the above-mentioned notice, the Director may, in his sole discretion, further designate other representatives of Contractor who must attend the pre-performance conference and such designated representatives shall attend the same. Items to be addressed at the pre-performance conference include, but are not limited to, the following:

7.2.1 Phase-in and Start-up schedules.

7.2.2 Contract administration.

7.2.3 Facilities utilization.

7.2.4 Channels of communication.

7.2.5 Review of key personnel resumes and certifications.

- 7.2.6 Organization and function charts reflecting the line of management authority.
- 7.2.7 Procedures to be used to ensure Agreement requirements are met (Quality Control Program).
- 7.3 Coordination Meetings - Throughout the Agreement Term and any extensions hereto, Contractor shall meet with the Director to identify and resolve performance issues. Meetings will be scheduled on a bi-weekly basis or as determined by the Director. Notice of any such meeting may be given by the Director to Contractor either orally or in writing and will designate the time, date, location, Contractor attendees, and general purpose. The Contractor's designated attendees shall be present at any such performance meeting for its duration and shall prepare a typed agenda covering the topics to be discussed; keep minutes of the meetings in a form satisfactory to the Director; and issue copies of the minutes to all attendees within four business days of each meeting.

## **8.0 PHASE-IN/PHASE-OUT SERVICES (IAH) & (HOU)**

### **8.1 Contractor's Phase-In**

- 8.1.1 Contractor shall provide its approach and methodology for the Phase-In transition in their Executive Summary submitted with its Agreement, which is incorporated herein by reference.
- 8.1.2 In order to accomplish a smooth and successful transition of operations and maintenance services and at no extra charge to the City, Contractor shall provide Phase-in services for up to thirty (30) days prior to Agreement expiration.
- 8.1.3 Contractor's Phase-In period begins upon receipt of a "Start Phase-in Notice" from the Director and continues until receipt of "official Notice to Proceed" (Start Date of the Contract). The "Start phase-in Notice" is different than the official Notice to Proceed. Contractor shall have no responsibilities for operating or maintaining the HVAC SYSTEMS during the Phase-in period.
- 8.1.4 During the phase-in period, the successful Contractor shall have access to the facilities and areas covered by the Agreement, access to personnel, and allowed to observe all operations.
- 8.1.5 The incumbent Contractor will perform the duties and services listed in its contract during the Contractor's Phase-In period, and will be available during the phase in period to answer questions and resolve issues or any misunderstandings.
- 8.1.6 The Contractor shall provide during Phase-in period, all required deliverables including but not limited to:
  - 8.1.6.1 Review and verify Exhibit I, HVAC Equipment List within the first five (5) Phase-In days.
  - 8.1.6.2 Arrange to have necessary supervisory, technical, and other personnel on site at the Airports to observe the operation and maintenance of the HVAC SYSTEMS.
  - 8.1.6.3 Recruit and transfer personnel, train personnel, arrange for security badging.
  - 8.1.6.4 Establish management procedures, set up records, ensure adequate parts, tools and equipment in place for systems operation and maintenance.
  - 8.1.6.5 Prepare for the assumption of technical control without disruption of operations.
  - 8.1.6.6 Develop and implement a full project schedule detailing the responsibilities of assigned personnel and submit it to the Director for approval.
  - 8.1.6.7 Coordinate Contractor's activities with Facilities Administration.
  - 8.1.6.8 Final transition and training plan addressing the Contractor staffing strategies in determining the necessary staffing and supervision required for compliance with the specified services. (HAS required staffing is a minimum staffing only).

- 8.1.6.9 Emergency phone numbers and verification of cell phones.
- 8.1.6.10 Certification of all Contractor Personnel requirements and training.
- 8.1.6.11 Reporting and approach plans.
- 8.1.6.12 Inventory of supplies, materials, tools, equipment, etc., necessary to start.
- 8.1.6.13 Standard Operating Procedures (SOP).
- 8.1.6.14 Permits, licenses and certifications.
- 8.1.6.15 Security approval and access.
- 8.1.6.16 Sub-Contractor & Sub-Contractor agreements in place.
- 8.1.7 The Phase-in period will end twenty-four (24) prior to the effective contract start date shown in the official Notice to Proceed, at which time Contractor shall assume full responsibility for the operation and maintenance of the HVAC systems and equipment. The Contractor shall be prepared to perform fully all Work services upon receipt of notification to proceed document from the Director.
- 8.1.8 Within one month after the Agreement start date, the Contractor shall certify to the Director in writing that 100% of the Contractor's employees (fully trained and experienced) necessary for the effective and timely accomplishment of the Contractor's obligations under the Agreement are in place, and all Sub-Contractors, if any, necessary for the effective and timely performance of the Contractor's obligations under the Agreement have been engaged by the Contractor and have commenced work under their respective Subcontracts.
- 8.2 Contractor's Phase-Out
- 8.2.1 Six (6) months prior to the Agreement expiration, the Contractor shall have a third party audit of equipment identified by the Director at Contractor's cost. The third party company must be approved by the Director and agent/agency must be accountable to HAS. All reports must be sent to HAS with copies to the Contractor. Within these six (6) months, the Contractor shall also correct all deficiencies found by the third party auditor and certify in writing to the Director that all deficiencies have been corrected.
- 8.2.2 In order to accomplish a smooth and successful transition of operations and maintenance services and at no extra charge to the City, the Contractor/incumbent shall provide Phase-out services for up to thirty (30) calendar days following the successor's receipt of "Start Phase-in Notice" from the Director and continue until successor's receipt of "official Notice to Proceed". Phase-out orientation comprises a maximum of 30 working days, 8 hours per day for successor's personnel. Orientation includes, but is not limited to, system operations and maintenance procedures, record keeping, reports, and procurement procedures, etc. Contractor/incumbent shall be totally responsible for providing the services under the Agreement during its Phase-out period. Contractor shall cooperate with its successor Contractor in allowing as many personnel as practical to remain on the job in order to enhance the continuity and consistency of the services in the Agreement.
- 8.2.3 Contractor/incumbent shall disclose necessary personnel records and allow its successor to conduct on-site interviews with its employees, provided Contractor/incumbent obtains the consent of said employees to disclose their records and to conduct such interviews and provided such disclosure and interviews are conducted in accord with all applicable laws, statutes, rules, regulations, and ordinances which have been passed, enacted or promulgated by any governmental body having jurisdiction over such matters.
- 8.2.4 The Contractor/incumbent shall provide all required deliverables including, but not limited to:
  - 8.2.4.1 List of qualified employees working at the Airport.
  - 8.2.4.2 Reporting requirements.
  - 8.2.4.3 Inventory of supplies, materials, tools, and equipment.

- 8.2.4.4 Current Standard Operating Procedures.
- 8.2.4.5 Permits, licenses, and certifications.
- 8.2.4.6 Deficiency status and list.
- 8.2.4.7 Detailed transition plan.
- 8.2.5 Contractor shall turn over all HVAC SYSTEMS in First-Class Condition. Any item not operating in accordance with its required function must be repaired or replaced. Preventive maintenance work must have been performed as required per the PM schedule.

8.2.6 [Deleted by Motion 2011-943]

8.2.7 Within sixty (60) days of the expiration of the Agreement Term, the Contractor shall perform a complete inspection of all controls and instrumentation. Any HVAC SYSTEM not in First Class Condition and/or not performing as designed by OEM within its present operating condition must be corrected.

8.2.8 Within thirty (30) days of the expiration of the Agreement Term, the Contractor shall provide the Director with a complete final report on the condition of all HVAC SYSTEMS, including inspection reports, and certified statements signed by an agent of Contractor, testifying to the Best-in-Practice Service of all equipment and systems and that all HVAC SYSTEMS are in First Class Condition and performing as designed by OEM within present operating conditions.

8.2.9 HAS shall have the right of inspection during or after any of this work, and shall notify Contractor, within seven (7) calendar days of receipt of Contractor's certified statement, of any noted discrepancies. Contractor shall then proceed to correct any discrepancies within thirty (30) days and notify the Director in writing upon completion of all work. Contractor shall assist HAS with any inspections required by the Director at no additional cost to HAS.

8.2.10 Should Contractor fail in the performance of this portion of the Agreement, Contractor agrees that the Director may perform such Services and deduct costs from any amount that may be due Contractor. Should costs exceed amounts due Contractor, additional costs must be paid by Contractor to City or by Contractor's performance bond surety.

8.2.11 At the expiration or termination of the Agreement, the Contractor shall verify to HAS that all equipment is in Best-in-Practice Service and that all HVAC SYSTEMS are in First Class Condition and performing as designed by OEM within present operating conditions. Such responsibility at Agreement expiration includes all equipment, components, software, appurtenances, controls, and instrumentation in all systems identified in The HVAC Equipment Inventory List.

**9.0 NOTICE TO PROCEED (NTP) REQUIREMENTS**

9.1 Immediately after receipt of NTP, the Contractor shall implement a computer-based Maintenance Management System ("MMS"), or City Approved Equal. The system must be web-based ("fully" accessible at all times by HAS).

9.2 Within thirty (30) days after the NTP, the Contractor shall submit an emergency procedures plan for the Director's approval. This plan shall contain procedures in advance for all foreseeable emergency situations including but not limited to, personal injuries, sickness, vandalism, intoxication, fire, smoke, power outage, etc. Emergency procedures shall include communications with the Airports and coordination with Airport emergency procedures.

9.3 Within thirty (30) days after the NTP, the Contractor shall certify to the Director in writing that 100% of the Contractor's employee (fully trained and experienced) necessary for the effective and timely accomplishment of the Contractor's obligations under the agreement are in place, and all Sub-Contractors, if any, necessary for the effective and timely performance of the Contractor's obligations

under the agreement have been engaged by the Contractor and have commenced work under their respective Sub-contracts.

9.4 Within thirty (30) days after the NTP, the Contractor shall provide training on the MMS for up to 5 HAS employees.

9.5 Within sixty (60) days after the NTP, the Contractor shall provide a list of the proposed tools, instruments, and equipment, including test/calibration/diagnostic equipment, tools, and supplies etc., to be provided and used as part of the Agreement.

9.6 Base Line Audit (IAH), (HOU) & (EFD)

9.6.1 Within ninety (90) days after the NTP, the Contractor shall conduct a **Base Line Audit** of the Airports (IAH, HOU, & EFD) major HVAC SYSTEMS, to determine that the HVAC SYSTEMS (excluding expendables) are up to standard and within manufacturer's tolerances etc.

9.6.2 The Base Line Audit will be conducted at the Contractor's expense, and the Contractor shall document its findings with photographs, listing with descriptions of equipment deficiencies, and suggested corrective measures. Deficiency list shall be approved by the Director.

9.6.3 The Director will respond in writing regarding the listed equipment deficiencies. The Director will provide a list to the Contractor itemizing equipment which Director agrees is deficient and should (or) should not be brought up to standard. The Contractor shall maintain items not to be brought up to standard at equal or better condition until the end of the Agreement.

9.7 Within ninety (90) days from the NTP, the Contractor shall provide to the Director its training program.

9.8 Within one hundred and eighty (180) days from NTP, the Contractor shall identify and install odor control to all AHU rated 7.5 hp and higher without odor control in place.

10.0 TELEPHONE SERVICE

10.1 Contractor shall pay for any and all costs associated with the use of HAS-furnished telephone line(s), including but not limited to any and all charges for long distance service.

11.0 SECURITY AND BADGING (IAH), (HOU) & (EFD)

11.1 Contractor shall comply with all applicable Federal rules governing security at the Airport, as may be amended from time to time.

11.1.1 All on-site personnel of Contractor, including sub-Contractor's, who perform services under the Agreement, are required to undergo a fingerprint-based criminal history records check. Fingerprints are collected at the Airport Badging Office and submitted electronically for investigation. The Project Manager shall have additional training at HAS to approve badging requests for Contractor personnel.

11.2 Contractor shall obtain HAS security badges for its personnel performing services on-site, including its sub-Contractor's personnel. On-site personnel shall wear identification badges at all times while on Airport property. The cost of badges, which is subject to change, is currently \$55.00 each at (IAH)/ (HOU) and \$16.00 each at (EFD). Costs for the fingerprint-based criminal history records check are reflected in the cost of the badges. Contractor is responsible for the cost of badges, including replacements thereof. Contractor personnel losing badges will be charged for replacement badges at the then current rate. Badge yearly renewal cost is \$16.00.

11.3 Contractor acknowledges that fines or penalties associated with non-compliance with security regulations must be reimbursed to HAS.

11.4 Airport Customs Security Area Bond:

If required, Contractor shall obtain an Airport Customs Security Area Bond in order to have access to the Federal Inspection Station (FIS) located at George Bush Intercontinental Airport (IAH). The bond

amount is determined by calculating \$1,000.00 times the number of employees needed to provide the service.

## **12.0 INVOICING**

12.1 Contractor shall submit its invoices for work completed on a form(s) approved in advance by the Director; invoices must be accompanied by support documents requested by the Director.

12.2 Each invoice submitted must be in duplicate and each copy must include required attachments. The invoice must be identified by the Agreement name and Agreement number. All invoices are to be delivered or mailed to the following location:

City of Houston  
Houston Airport System  
Finance Division/Accounts Payable  
P.O. Box 60106  
Houston, Texas 77205-0106

12.3 Invoicing:

12.3.1 The Houston Airport system will accept invoices submitted electronically along with required support information; such as Outline Agreement Number(s), Service Release Orders (SRO) Numbers, and etc. Each invoice should be in a TIFF format. Multiple invoices can be submitted in a single email.

12.3.2 Requirements are as follows:

12.3.2.1 Submit invoices in "**TIFF**" format

12.3.2.2 Submit to [has.accountspayable@houstontx.gov](mailto:has.accountspayable@houstontx.gov)

12.4 Invoices submitted for services performed as the result of change orders require copies of the applicable change order are attached to the original and each of the two (2) invoice copies.

12.5 Invoices submitted for services performed as the result of Other Work/Services require a copy of the Director's written request to be attached to the original and each of the two (2) invoice copies.

## **13.0 TRANSPORTATION AND PARKING (IAH), (HOU) & (EFD)**

13.1 Contractor shall park its vehicles in areas designated by Director at its own cost. All transportation activities of Contractor or its sub-Contractors necessary to perform under the Agreement must be provided by Contractor.

13.2 All of Contractor's vehicles, including those owned by its employees and sub-Contractors, must be clearly marked with identification indicating Contractor's name. Such identification must be placed on both sides of each vehicle and may be removable, e.g. magnetic.

## **14.0 CONTRACTOR'S RADIO COMMUNICATIONS REQUIREMENTS (IAH), (HOU) & (EFD)**

14.1 HAS will provide the Contractor with two handheld radios equipped with batteries and chargers for Contractor's use on this contract. The radios will be programmed to transmit and receive on Harris County trunked frequencies. Upon cancellation or termination of Agreement, the Contractor shall return all radios provided to HAS.

14.1.1 Contractor shall operate the radios within protocols established by HAS and the FAA.

14.1.2 Contractor shall be assessed a one-time service credit in the amount of \$10.00 each, for initial programming of each radio.

14.1.3 Contractor will be assessed a monthly service credit in the amount of \$10.00 each, for maintenance of each radio. Contractor shall return radios requiring maintenance to HAS.

14.1.4 Contractor shall pay for time and materials to repair any damaged radio(s) and full replacement costs for any radio(s) that are lost.

14.1.5 Upon termination of the Agreement, the radios remain the property of HAS.

**15.0 SAFETY (IAH), (HOU) & (EFD)**

15.1 Contractor shall not require any person to work in surroundings or under working conditions that are unsanitary, hazardous, or dangerous to their health or safety. Contractor shall comply with all provisions of the Occupational Health and Safety Act (OSHA).

15.2 Contractor shall be completely familiar with, and shall enforce all City, State of Texas and Federal OSHA regulations and requirements as applicable, including, but not limited to, the following:

15.2.1 Contractor personnel must wear applicable personal protection equipment at all times.

15.2.2 Contractor personnel operating equipment or handling materials must be fully trained in the safe operation of the equipment or materials.

15.2.3 Contractor personnel shall follow and apply safety practices prevailing in their applicable industry.

15.3 Contractor shall develop, implement and maintain an on-going safety program concerned with equipment, maintenance work, and related procedures. Contractor shall post safety warnings on equipment as necessary to ensure safe operations. Contractor shall not operate, install, or test any equipment in an unsafe condition. Contractor shall properly operate and maintain all safety equipment associated with its services.

15.4 When Contractor becomes aware of a hazardous or potentially hazardous condition during the course of performing services, Contractor shall verbally notify Director. Contractor shall immediately make such notification upon detection of the condition. Contractor shall detail conditions along with non-hazardous conditions and recommendations in its quarterly report.

**16.0 MATERIAL SAFETY DATA SHEETS (MSDS) (IAH), (HOU) & (EFD)**

16.1 The Contractor shall furnish to each Facility Superintendent all MSDS, (OSHA Form 174), for each product used in each facility. A Material Safety Data Sheet must accompany each product shipment to the facilities.

**17.0 CONTROL OF PREMISES (IAH), (HOU) & (EFD)**

17.1 Access to the HVAC SYSTEMS

17.1.1 Contractor equipment brought into the facilities must not exceed the engineered floor load capacities of the facilities. Operations and maintenance areas must be limited to Contractor's personnel, HAS employees, and certain other individuals authorized by the Director. Access to the premises must be strictly controlled and Contractor shall keep a record of all keys distributed to its personnel. Officers, employees or agents of Contractor shall never enter restricted or operational areas of the Airport without the express permission of the Director or any other governmental bodies having jurisdiction, and Contractor hereby assumes full liability arising from any such unauthorized incursions.

17.1.1.1 All equipment PM sheets, schedules, and other records must be available at Contractor's Project Manager's office for inspection by HAS personnel. All documents generated or obtained by Contractor that pertain to the operation and maintenance of the HVAC systems and equipment must become HAS property upon contract completion.

**18.0 INCLUSION/EXCLUSION**

- 18.1 Contractor will not submit a request for Inclusion/Exclusion unless the dollar amount of the inclusions/exclusions exceeds \$10,000 dollar during the contract year. Example of the process is as follows:
  - 18.1.1 HAS makes formal request for Contractor to take over maintenance/repair of one or more pieces of equipment.
  - 18.1.2 Contractor inspects equipment to confirm it is operating at industry standards and there are no pre-existing deficiencies.
  - 18.1.3 Any deficiencies found will be repaired under the change order process by HAS.
  - 18.1.4 Once repairs are completed, Contractor will add the equipment to their maintenance management system and begin maintaining the equipment and systems as defined in the Basic Services Agreement.
  - 18.1.5 If in the same contract year, there are one or more inclusions/exclusions requested by HAS that exceed the \$10,000 dollar threshold, Contractor will formally notify HAS that it has exceeded the agreed upon dollar amount within the contract year.
  - 18.1.6 Contractor will then follow the contract process for inclusions/exclusions.
  - 18.1.7 If no MMS historical data is available, use the source Facilities Maintenance & Repair Cost Data, 16<sup>th</sup> Edition 2009 R.S. Means Company or later version and/or another HAS approved source.
  - 18.1.8 Once the pricing package is completed, Contractor will submit the package for HAS approval.
  - 18.1.9 Once approval is received, Contractor adds/subtracts to their monthly invoice.

**19.0 SERVICE CREDITS**

At the Director's discretion, the following Service Credits may be applied. Multiple Service Credits may be applicable.

Performance	Criteria	Service Credit
Failure to maintain critical environmental conditions per contract as a direct result of Contractor's failure to perform critical tasks	Durations over 2 hours periods	\$1,000.00 credit for every 12 hour period temperatures and or humidity are outside of acceptable limits
Continual failure to maintain environmental conditions as defined in the contract	Failure to maintain temperatures in a specific area for more than 3 occurrences within a 90 day period (call backs)	\$1,000.00 per occurrence
Failure to Provide Agreements for other work services (OSR) in the time period promised	Upon requests made by HAS for OSR pricing Agreements, Contractor and HAS define a reasonable time period in which the response will be delivered to HAS	Contractors failure to meet the time frame or receive an extension from HAS Contractor shall credit \$100.00 per 24 hours.
Staff positions not filled	Contractor fails to fill a position for 2 consecutive weeks	Position pay grade times 1.47 for the total shift hours the position is not staffed
Failure to meet response times	Contractor fails to respond allocated manpower to calls for service defined in the contract	\$100.00 per occurrence
Failure to perform preventative maintenance tasks on equipment	Contractor fails to complete PM's for more than 30 days over schedule	\$1,000.00 per PM violation
Failure to provide operational reports	Contractor fails to provide reports/ accurate operational data to HAS within defined reporting times	\$500.00 per occurrence plus \$100.00 per day until report is provided

- 19.1 Notwithstanding the foregoing, the Director shall not be entitled to assess Service Credits under any of the following circumstances:

- 19.1.1 Force Majeure.
- 19.1.2 Annual shutdowns or upgrades/modifications set forth in the Agreement.
- 19.1.3 Third-party damage (does not apply to Contractor's sub-Contractor).
- 19.1.4 Damage to HVAC Systems or equipment that is caused solely by the acts of the City.
- 19.1.5 Unplanned material changes to energy requirements not caused by Contractor. However, this exception is available to Contractor only at the sole discretion of the Director.

19.2 Remedies

- 19.2.1 Assessment of Service Credits must never be construed as an exclusive remedy for any other damage incurred as the result of the breach of any other covenants, conditions, or obligations contained in the Agreement, and the City will always have the right to avail itself of other remedies available to it in law or equity.

**20.0 RECORDS AND REPORTS (IAH), (HOU) & (EFD)**

- 20.1 As part of Basic Services, Contractor shall develop and maintain daily logs, weekly, monthly, and annual reports for operation and maintenance of HVAC systems and equipment. The logs shall provide a record of all pertinent operating data and maintenance performed. Contractor's record keeping system is subject to approval by the Director, and all records required may be inspected by the Director at any time during normal business hours. The Contractor shall provide all maintenance records and history with one hard copy and three Compact Discs (CD's) to the Sr. Superintendent, Facilities Administration Section. Upon expiration or termination of the Agreement, all manual and automated records (including software data) produced and maintained on file become the property of HAS; Contractor shall submit all maintenance records to Sr. Superintendent, Facilities Administration Section. Contractor may retain all original employee and accounting files, but shall furnish a copy of the accounting files to Sr. Superintendent, Facilities Administration Section upon request.

- 20.1.1 Reports must be signed by the Project Manager. Such signature is certification that all reports and information are truthful and accurate. Falsification of any records is grounds for termination of the Agreement.

- 20.1.2 Contractor's Logs provided to the Director must document all pertinent operating data and maintenance performed by Contractor or its sub-Contractors under the Agreement. Contractor shall describe any event or condition not readily discernible from recorded data in a "Remarks" section.

- 20.1.3 Contractor shall develop and maintain on site records, including but not limited to, Agreement documents, inventory records, accounting and procurement records, system documents and manuals and any other documents necessary to meet reporting requirements or requests by the Director.

20.2 Daily Records and Reports

- 20.2.1 Contractor shall develop and maintain an automated Daily Work Log to record HVAC systems and equipment daily operation and maintenance events and to produce a Daily Work Log Summary. The Daily Work Log must record all pertinent daily operating and maintenance data, including but not limited to date, time, service performed, status or results, and person who performed service or inspection. Relevant events or conditions not readily discernible from the recorded data must be described in a "Remarks" section. The Daily Work Log and Summary must be in a format acceptable to HAS. Contractor shall provide a daily log of parts/materials used.

20.3 Weekly Records and Reports

- 20.3.1 Contractor shall provide weekly reports to include but not limited to:

- 20.3.1.1 Boiler Flue Gas Analysis Report.

- 20.3.1.2 Equipment Status for Chiller Capacities and Redundancies.

- 20.3.1.3 Daily Chiller Water Tonnage Report.

20.3.1.4 Cooling Tower, Make Up Water, and Blow Down Reports.

20.4 Monthly Records and Reports

20.4.1 Contractor shall provide a monthly Operation and Maintenance report. The report must provide essentially the following information in a format acceptable to HAS. The Monthly Operation & Maintenance Report must include, but is not limited to:

20.4.1.1 Daily Summary Maintenance Log Summary Report.

20.4.1.2 Status of Systems and Equipment Report.

20.4.1.3 Parts/Material Usage Report.

20.4.1.4 Summary of Maintenance Work Performed.

20.4.1.5 The results of inspections and tests conducted (including but not limited to water treatment, legionnaire's disease tests).

20.4.1.6 Reliability Centered Maintenance Report.

20.4.1.7 Two (2) month schedule of upcoming inspections or tests, and projection of major equipment shutdowns required for maintenance.

20.4.1.8 List of Equipment Breakdowns and Repair Time Report.

20.4.1.9 Statistical Operating Data Report (including, but not limited to, equipment on-line/standby report).

20.4.1.10 Summary of Cooling Tower, Make-up Water, and Blow Down Reports.

20.4.1.11 Warranty Report.

20.4.1.12 Employee Roster Report.

20.4.1.13 Other reports (including, but not limited to, filter replacement; odor management/control).

20.4.2 Monthly maintenance reports must be submitted to the Director by the fifteenth (15th) day following the reported month. Maintenance reports are to be submitted on CD's, with one hard copy delivered to the following HAS sections; Sr. Contract Administrator, SCM Section, and the appropriate Airport Sr. Superintendent, Facilities Administration Section.

20.5 Annual Reports

20.5.1 Contractor shall provide an annual shutdown report. The Annual Summary Report must be submitted within 30 days after the shutdown work is completed.

20.6 Report Clarifications

20.6.1 Daily Work Log – Contractor shall submit a daily work log depicting the work completed or performed for each day. Work log summaries must also be included in monthly reports.

20.6.2 Parts/Materials Usage - Contractor shall submit daily reports depicting parts/materials usage each day. Contractor shall also submit a monthly Parts/Materials Usage report indicating current materials, stock levels, and required restocking over the past month.

20.6.3 Water Treatment Records - Contractor shall maintain daily records of chemical analysis. At the end of each week, Contractor shall submit a summary of chemical treatment work performed and the effectiveness of the water treatment program. Contractor shall include any recommendations for improving the program, if any, as part of this report.

20.6.4 Central Plant On-Line/Standby Reports - Contractor shall provide as part of its monthly report the actual hours of utilization for all major equipment in the Central Plant.

20.6.5 Fuel/Air Ratio (Excess Air) in Boiler Firing Report/Flue Gas Analysis – Contractor shall maintain a weekly record of flue gas analysis for oxygen to determine "excess air," incomplete combustion, and NOX

emissions. At the end of each week, Contractor shall submit a summary of boiler firing effectiveness and include any recommendations for improving the program, if any, as part of this report.

- 20.6.6 Legionnaire's Disease Test Report - Contractor shall report and submit all Legionnaire's Disease test results to the Director and maintain a permanent record in the HVAC Central Plant files for future reference.
- 20.6.7 Wastewater Report - Due to the loss of water that occurs through evaporation at the cooling towers, additional water must be added to the condensed water system as necessary to maintain the water volume for efficient operation of the HVAC System. It is also necessary to release water into the City's sewage system to control the amount of total dissolved solids in the system. This results in greater amounts of water being utilized that are not in direct proportion to the amount being released into the City sewage system.
  - 20.6.7.1 HAS pays a sewage fee based on the amount of water it utilizes unless it provides a method to show that all the water it utilizes does not end up as discharge into the sewage system. Therefore, make-up and blow-down meters have been installed to ensure the HAS does not pay a sewage fee for water that is evaporated during the heating and cooling process.
    - 20.6.7.1.1 Contractor shall read the make-up meters and blow-down meters on (IAH) and (HOU) cooling towers on the last day of each calendar month and deliver the data to the City of Houston, Water Customer Service, no later than the fifth (5th) day of the following calendar month.
    - 20.6.7.1.2 The Director will provide Contractor with a form to be used to record the meter readings. Contractor shall be fully responsible for obtaining the required meter readings, completing the form in its entirety and delivering it to the address specified within the time periods specified. Contractor shall keep one copy in its contract files and one copy forwarded to Facilities Administration for its records. A delivery receipt for this form from the City must be obtained and attached.
- 20.6.8 Employee Roster Report - Contractor shall maintain a weekly record of employee attendance records by date, title, attendance etc. and submit to HAS monthly to the extent allowed by law.
- 20.6.9 Odor Management/Control Records -Material Safety Data Sheets (MSDS) forms are required for all chemicals utilized and must meet Federal, State and Local laws regarding the movement of chemicals through air handling systems.
- 20.6.10 Hazardous Chemical Records – Contractor and its Sub-Contractor shall provide a completed Material Safety Data Sheet (MSDS) as required by applicable laws for each and every hazardous chemical as used in performance of the work or stored on City property.
  - 20.6.10.1 Any material declared as hazardous by the Texas Department of Health, Austin, the EPA or the TCEQ requires an MSDS. That Department also will provide standard MSDS forms upon request.
  - 20.6.10.2 Contractor's Project Manager shall maintain the completed forms. All hazardous chemical records must be made available to the Director for periodic review.
- 20.6.11 Annual Shutdown Report - Contractor shall prepare a formal "Annual Shutdown Report" and present it to the Director within 30 days after the shutdown work is completed. This report must summarize preplanning, execution, startup and debriefing activities and resulting recommendations and follow-up assignments.
  - 20.6.11.1 Contractor shall provide a certified report from the testing lab for tests performed on PCB Transformers indicating which tests were performed, the level of PCB contamination, and recommended action required, if any.
  - 20.6.11.2 This report will be submitted as part of the annual shutdown report as specified elsewhere herein.
- 20.6.12 Hydrostatic Test Reports – provide hydrostatic reports during the Term and when boiler tubes are replaced.
- 20.6.13 Warranty Report

- 20.6.13.1 As part of Basic Services throughout the Agreement Term, Contractor shall administer warranties on systems and equipment as may be applicable from time to time. Contractor shall maintain warranty records and submit documentation and follow-up procedures on all warranty work. Contractor shall enforce all warranties on behalf of HAS. Contractor shall provide service regardless of whether equipment is wholly or partially under warranty. Warranty data must be maintained in a format acceptable to the Director and current data must be available for inspection by the Director at his/her discretion.

## **21.0 OTHER WORK/SERVICES (IAH), (HOU) & (EFD)**

### 21.1 General

Within the general scope of the Agreement, Other Work/Services may be required to meet desired conditions and/or services not covered in Basic Services. Contractor shall perform Other Work/Services in accordance with all provisions of the Agreement plus any special provisions issued with authorization for work, so long as the specific provisions are consistent with, and related to the scope of the Agreement. With the exception of Emergency Service Requests or Urgent Service Requests, where a request may be verbal and followed immediately in writing, all requests for Other Work/Services will be in writing in the form of an Other Service Request (OSR) provided by the Director and signed by the Director or his/her designated representative. Contractor shall perform Other Work/Services to the same standards identified for Basic Services.

### 21.2 Performing Other Work/Services

21.2.1 Other Work/Services shall be performed in accordance with the Agreement.

21.2.1.1 Other Work/Services shall be performed in accordance with all provisions of this Proposal and any special provisions issued with the Other Service/Request (OSR).

21.2.1.2 Before issuing an OSR, the Director will first issue a written notice to the Contractor detailing the specific OSR to be performed by the Contractor.

21.2.1.3 In response to any such written notice, the Contractor shall provide the Director with a written proposal within three (3) business days of receipt of OSR. Contractor must include a description of the services to be performed, applicable labor rates, estimated labor hours, performance schedule, total estimated cost, and other requirements set forth in the written notice to the Contractor.

21.2.1.4 Contractor shall furnish all materials, labor, tools, equipment, transportation, and incidentals for accomplishing the described services or as otherwise specified by Director. Director will not approve an OSR without a specified completion date. Contractor shall complete all such Other Work/Services within the time specified in the OSR. Contractor can request in writing an extension to the completion date. However, Director may or may not allow the extension. Director's decision is final.

21.2.1.5 Upon receipt of the Contractor's Proposal, the Director has the option to reject the Contractor's Proposal, require resubmission with revised or additional information, or issue an OSR. Should the Director reject the Contractor's Proposal and require resubmission, the Contractor shall resubmit a modified Proposal within three (3) business days of the rejection.

21.2.1.6 Upon approval by Director of the modified proposal, an OSR will be issued. Contractor shall commence work as stated in the OSR. Contractor shall diligently work to completion in accordance with the terms and conditions of this Agreement, and the approved OSR.

21.2.1.7 Labor cost must not exceed the rate stated in the "Price Sheet". Labor is inclusive of supervision, tools, and expendables.

21.2.1.8 Prices for equipment, parts, supplies, and sub-contracted work, which may be required for authorized Other/Work Services, shall be the Contractor's actual cost plus percent (%) mark-up proposed on the "Price Sheet" (*Mark-up excludes Freight and Travel*). Copies of invoices from the Contractor's suppliers for these items must be submitted with Contractor's invoices at the time of submittal to the City for payment. The mark-up percentages stated shall not increase during the term of this Proposal. The quantity of equipment, parts, and supplies will depend on the needs of the City.

- 21.2.1.9 Over \$3,000.00, the Contractor shall obtain three (3) itemized bids/estimates within three (3) business days from separate/different vendors/ suppliers for the required equipment, parts, supplies, and subcontracted works. Contractor shall submit the bids/estimates to Director and obtain written approval from Director before proceeding with the work. Any bids/estimates obtained from vendors/suppliers affiliated with the Contractor shall have written approval from the Director. Contractor shall be compensated at "Bid Cost" plus percent (%) mark-up proposed on the Price Sheet/Fee Schedule.
- 21.2.1.10 Under \$3,000.00, the Contractor shall obtain one (1) itemized bid/estimate from vendor/supplier within three (3) business days, for the required equipment, parts, supplies, and subcontracted works. Contractor shall submit the bid/estimate to the Director and obtain written approval from the Director before proceeding with the Work. Any bids/estimates obtained from vendors/suppliers affiliated with the Contractor shall have written approval from the Director. Contractor shall be compensated at "Bid Cost" plus percent (%) mark-up proposed on the Price Sheet/Fee Schedule.
- 21.2.1.11 When Other Work/Services have been completed, a copy of the approved OSR must accompany the monthly invoice.
- 21.2.1.12 While performing work on any OSR, if hidden damage or additional cost is discovered, Contractor shall notify the Director immediately. After determining the extent of hidden damage a supplemental OSR must be submitted.
- 21.2.1.13 Contractor shall submit to Director, copies of original purchase orders and invoices evidencing Contractor's acquisition costs.
- 21.2.1.14 In the case of emergency service, the Contractor may perform Other Work/Services upon the verbal approval of the Director. However, during the next business day, the Director will submit a written Emergency Service Request to the Contractor.
- 21.2.1.15 If it is determined this Scope of Work should be covered under Basic Services, any amount paid to the Contractor under Other/Services Request will be reimbursed to the City by the Contractor. The City does not waive any of its rights and remedies whether by statute, at law, in equity, or under this Contract.
- 21.2.1.16 If Other Work/Services are performed by the on-site crew in conjunction with their regular duties, the Contractor shall not receive additional compensation for their labor.
- 21.3 Other Work/Services may include, but are not limited to the following categories: (IAH),(HOU)&(EFD)
- 21.3.1 Remedial Maintenance on HVAC SYSTEMS, over 50HP.
- 21.3.2 Emergency After-Hours Services (HOU) & (EFD) only.
- 21.3.3 Systems and Equipment Upgrades/Modifications.
- 21.3.4 Special Energy Retrofits.
- 21.3.5 Hazard Materials Testing and Removal.
- 21.3.6 Certain O&M Service Requirements.
- 21.3.7 Visual inspection and testing of (IAH) fire dampers located in ductwork.
- 21.3.8 Air quality studies.
- 21.3.9 Duct cleaning/dusting of all tubular ductwork in Terminal D (Level 88) at the request of HAS officials and with a minimum scheduled cleaning of once per year. This work must be done as to not interfere with the traveling public, i.e. 11:00 p.m. to 6:00 a.m.
- 21.3.10 Equipment with a value greater than \$10,001, which has met or exceed its useful life as defined by Facilities Maintenance & Repair Cost Data, 16<sup>th</sup> Edition 2009 by R. S. Means Company or later version and/or another HAS approved source, can be replaced, repaired, or rebuilt at the discretion of the Director. Equipment under \$10,000.00 and under 50HP shall be replaced under Basic Services.

- 21.3.11 Equipment on the HAS accepted deficiency list shall be replaced or repaired at the discretion of the Director provided the current Contractor did not contribute to its placement on the list.
- 21.4 Use of On-Site - Extra Work
- 21.4.1 When the Contractor's on-site crew performs extra or changed work covered by Change Orders or Other Work/Services during normal hours, Contractor shall not be relieved of any responsibilities for operation, performing preventive and remedial maintenance, or replacing equipment as defined in the Agreement unless otherwise authorized by the Director.
- 21.5 Remedial Maintenance (Other Works/Services) (IAH), (HOU) & (EFD)
- 21.5.1 When requested by Director, Contractor shall provide Remedial Maintenance (RM) services on HVAC SYSTEMS rated above 50 HP at the labor and material rates specified in Exhibit B, Price Sheet/Fee Schedule, for Other Work/Services.
- 21.5.2 All chillers in the Central Plant, including associated equipment located on the chiller and chiller floor pad shall be included in the 50 hp provisions, to include, but not limited to: compressors, turbines, Kimbel valves, oil pumps, oil coolers, actuators, seals, bearings and all control devices, and Freon replacement and or additions. Specific exceptions to this, routine preventive maintenance requirements, including Eddy Current test, condenser and cooler tube cleaning, epoxy painting, vessel gaskets, oil change outs, oil filtration, oil analysis and Freon clean up due to contamination. Additional exceptions shall be all electrical control and supply devices not mounted on chiller pad. Including but not limited to: control panels, breakers, monitors, computer control panels, and all UPS's, program battery backups, and motor starters (which refer only electric chillers), and these will be exempt from the fifty HP clause. All chiller starters because of voltage (4160) will be Other Work Services. Also excepted shall be steam piping, water piping, valves, and all flow sensors up or down stream of chiller pad.
- 21.5.3 COOLING TOWERS - The 50 hp provisions shall only include all condenser pumps and motors, Fans, Fan Hub assemblies, Gear boxes, drive shafts and Fan motors.
- 21.5.4 Exceptions to this shall be, but not limited to: Drain valves, fill valves, [auto & manual] Tower media side panels, all control sensors, electrical breakers, motor starters, chemical treatment systems and all chemical pumps.
- 21.5.5 REMOTE BUILDINGS - The 50 hp provision shall apply to all equipment design as a package unit with a rating of 50 tons of cooling or 50 electrical hp. or higher, included but not limited to, all controls, breakers, compressors, condenser fan motors and other equipment within the unit. Exceptions shall be all connected piping, controls, pumps, chemical treatment devices, disconnects, and Freon.
- 21.5.6 TERMINALS - 50 hp. provision shall include motors and attached pumps, mechanical drives, all AHU motors 50 hp or larger. Exceptions to this shall include controls, belts heat exchangers, VFD's and piping.
- 21.5.7 IAH BOILERS - All the following boilers: Boilers 4 & 5 at the central plant, boilers 1 & 2 at the Administration building, and boilers 1 & 2 at Supply Chain Management building will be under basic services. Services to include, but not limited to, inspections, permits & fees, flow meters, gas meters, boiler mounted controls, chemical treatment, and inspection required repairs. Specifically excepted are feed water pumps & motors; heat exchangers and circulating pumps; polisher system; polisher pumps and motors; all piping and steam apparatus downstream from the boilers.
- 21.5.8 Contractor shall repair/restore HVAC equipment/systems performance to designed function with parts, materials, and labor. RM includes repairs and replacement of related components, parts, and appurtenances that have failed, no longer perform reliably, or have worn beyond safe tolerances.
- 21.5.9 The Director will provide Contractor with instructions and schedules pertaining to the RM Work.
- 21.5.10 The remedial maintenance sub-Contractor and/or craftsmen used to perform Other Works/Services must be certified and/or approved by OEM equipment manufacture prior to performing any Work.

- 21.5.11 RM performed due to Contractor's negligence, including, but not limited to, failure to perform proper preventive maintenance will be the responsibility of the Contractor at no cost to HAS.
- 21.5.12 Contractor shall complete required RM work to the satisfaction of the Director. Any RM items not repaired on a timely basis and/or found to be deficient after being repaired by Contractor may be repaired at the Director's discretion by parties other than Contractor. If the repairs are determined by the Director to be the responsibility of the Contractor, the Contractor shall be back-charged by HAS for all associated costs.
- 21.5.13 RM equipment/materials will be obtained for the Agreement by the following methods:
  - 21.5.13.1 HAS shall have the option to supply the equipment / materials to Contractor at no cost to the Contractor.
  - 21.5.13.2 Contractor shall obtain (3) itemized bids/estimates from separate/different vendors/suppliers for the required equipment / materials.
- 21.5.14 Emergency After-Hour Services (Other Works/Services) (HOU) & (EFD)
  - 21.5.14.1 (HOU) When requested by Director, Contractor shall provide - after-hour service between the hours of 11:00 p.m. and 5:00 a.m. within 1 hour of notification - Under basic service
  - 21.5.14.2 (EFD) - When requested by Director, Contractor shall provide - after-hour service between the hours of 10:00 p.m. and 6:00 a.m. within 2 hours of notification - -under basic service.

## **22.0 WARRANTIES**

- 22.1 Contractor warrants that it shall perform all work in a good and workmanlike manner meeting the standards of quality prevailing in Harris County, Texas, for work of this kind. Contractor shall perform all work using trained and skilled persons having substantial experience performing the work required under this Agreement.
- 22.2 With respect to any parts, instruments, equipment, and goods it furnishes, Contractor warrants:
  - 22.2.1 that all items are free of defects in title, design, material, and workmanship,
  - 22.2.2 that each item meets or exceeds the manufacturer's specifications and requirements for the equipment, structure, or other improvement in which the item is installed,
  - 22.2.3 that each replacement item is new, in accordance with original equipment manufacturers specifications, and of a quality at least as good as the quality of the item which it replaces (when the replaced item was new),
  - 22.2.4 That no items or their use infringe any patent, copyright, or other proprietary rights. In the event Contractor becomes aware of such an infringement, Contractor shall replace the items that are the subject of the infringement with non-infringing items in a timely manner; and
  - 22.2.5 That for one year from the date of any installation ("Warranty Period"), Contractor shall provide all parts, instruments, equipment, and goods required to complete all Preventive and Remedial Maintenance required under the Agreement at no cost to the City. This warranty is in addition to Contractor's obligation to provide Basic Services under the Agreement. When the manufacturer's warranty period for any parts, instruments, equipment, and goods is greater than 1 year, the longer period prevails.
- 22.3 Contractor shall manage and enforce on the City's behalf all manufacturer warranties issued before the Effective Date of this Agreement, during the Term of the Agreement, and any extensions. Contractor shall not be entitled to any additional compensation for the management and enforcement of these manufacturer warranties. If Contractor does not exhaust all remedies, including litigation, against a manufacturer who fails to honor all or a part of a warranty, it shall not receive additional compensation from the City for the labor and material costs it incurs to repair or replace the item that otherwise would have been under warranty.