

City of Houston



Administration & Regulatory Affairs

**CITY OF HOUSTON, TEXAS
NOTICE OF REQUEST FOR
PROPOSAL (RFP)
SOLICITATION NO.: S33-T24289**

**STRATEGIC
PURCHASING DIVISION
"PARTNERING TO
BETTER SERVE
HOUSTON"**

NIGP CODE:

936-09

**SOLICITATION DUE
DATE/TIME:**

July 13, 2012 at 2:00 P.M., CST

SUBMITTAL LOCATION:

**City Secretary's Office
City Hall Annex, Public Level
900 Bagby Street
Houston, Texas 77002**

DESCRIPTION:

**HVAC Operation and Maintenance Services for the Houston
Airport System (HAS)**

**MANDATORY PRE-
PROPOSAL CONFERENCE:**

<i>Date</i>	<i>Time</i>
June 11, 2012	9:00 A.M.

<i>Location</i>
HAS, 18600 Lee Rd., Conference Rm. 113 Humble, TX 77338

In accordance with T.L.G.C. § Chapter 252, competitive sealed Proposals for the services specified will be received by the City Secretary's Office of the City of Houston at the above specified location, until the time and date cited. Offers must be in the actual possession of the City Secretary's Office on or prior to the time and date, and at the location indicated above. Late offers will not be considered.

Offers must be submitted in a sealed envelope or package with the Solicitation Number and the Proposer's name and address clearly indicated on the envelope or package. All offers must be completed in ink or typewritten. Additional instructions for preparing an offer are included in this Solicitation.

PROPOSERS ARE STRONGLY ENCOURAGED TO CAREFULLY READ THE ENTIRE SOLICITATION

**Solicitation Contact Person:
Conley Jackson**

Name

conley.jackson@houstontx.gov

E-Mail Address

City Purchasing Agent

May 25, 2012

Date

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1.0 **INTRODUCTION**

- 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 operations and maintenance serves a vital role in the efficient operation of the Houston Airport System.
- 1.2 The Houston Airport System is seeking proposals for operations and maintenance of heating, ventilating, air conditioning (HVAC), associated plumbing, electrical, and control systems in the city's three major airports.

2.0 **SPECIAL INSTRUCTIONS TO PROPOSERS**

2.1 **SUBMITTAL PROCEDURE**

- 2.1.1 Eight (8) copies of the Proposal, including one (1) printed original signed in BLUE ink, and additional two (2) electronic CD copies are to be submitted in a sealed envelope bearing the assigned Solicitation Number, located on the first page of the RFP document to:

City Secretary's Office
City Hall Annex
900 Bagby
Houston, Texas 77002

- 2.1.2 The deadline for the submittal of the Proposal to the City Secretary's Office is no later than the date and time as indicated on the first page of the RFP document. Failure to submit the required number of copies as stated above may be subject for disqualification from the Proposal process.
- 2.1.3 Respondents may elect to either mail or personally deliver their Proposals to the City Secretary's Office.
- 2.1.4 The City of Houston shall bear no responsibility for submitting responses on behalf of any Proposer. Proposer(s) may submit their Proposal to the City Secretary's Office any time prior to the stated deadline.

2.2 **PROPOSAL FORMAT**

- 2.2.1 The Proposal should be electronically generated, and the printed original signed in ink. They should not be submitted in elaborate or expensive binders. Legibility, clarity, and completeness are important and essential. Refer to Section 3.2, Proposal Format, page 7.
- 2.2.2 The Proposal must be signed by an individual(s) legally authorized to bind the Proposer(s), and must contain a statement that the Proposal and the prices contained therein shall remain firm for a period of one hundred-eighty (180) days.

2.3 **MANDATORY PRE-PROPOSAL CONFERENCE AND SITE VISIT**

- 2.3.1 A Mandatory Pre-Proposal Conference will be held at the date, time, and location as indicated on the first page of the RFP document. Interested Proposer(s) should plan to attend. It will be assumed that potential Proposer(s) attending this meeting have reviewed the RFP in detail, and are prepared to bring up any substantive questions not already addressed by the City. Any revisions to be incorporated into this solicitation document arising from discussions before, during and subsequent to the Pre-Proposal Conference will be confirmed in writing by Letter(s) of Clarification prior to the bid proposal due date. Verbal responses will not otherwise alter the specifications, terms and conditions as stated herein. Proposers are strongly encouraged to forward all questions by e-mail to the responsible buyer after the pre-proposal conference.
- 2.3.2 **Site visit for George Bush Intercontinental (IAH) will start at 18600 Lee Road, Humble, Texas 77338 immediately after the pre-proposal conference. Transportation to George Bush Intercontinental Airport will be provided by the City. Proposers are required to have a valid identification card for security clearance when making the site visit. Proposers shall be responsible for the transportation to William P. Hobby Airport (HOU) and Ellington Airport (EFD).**

2.3.3 **Pre-proposal conference and site visits will be mandatory. Proposer(s) attending the site visits shall limit their representatives to three (3). Proposer(s) who fail to attend the pre-proposal conference and site visits, as verified by the sign-in sheets at the pre-proposal conference and sign-in sheets at each airport, will be disqualified.**

2.3.4 In addition to the site visit scheduled after the proposal conference on June 11, 2012, Proposers may schedule site visits to review HVAC facilities, equipment, records, etc., at each Airport any time after advertisement of this RFP until three (3) days prior to proposal submittal date. (For example, site visits can be scheduled prior to and after the pre-proposal conference)

Please contact Dallas Evans at 281-230-8008 to schedule all additional site visit(s).

2.4 **ADDITIONAL INFORMATION AND SPECIFICATION CHANGES**

2.4.1 Requests for additional information and questions should be addressed to the Administration and Regulatory Affairs Department, Strategic Purchasing Division Buyer, Conley Jackson, telephone: 832.393.8733, fax: 832.393. 8759, or e-mail (preferred method to): conley.jackson@houstontx.gov, no later than **Friday, June 22, 2012 at 1:00 p.m. CST**. The City of Houston shall provide written response to all questions received in writing before the submittal deadline. Questions received from all Proposer(s) shall be answered and sent to all Proposer(s) who are listed as having obtained the RFP. Proposer(s) shall be notified in writing of any changes in the specifications contained in this RFP.

2.5 **LETTER(S) OF CLARIFICATION**

2.5.1 All Letters of Clarification and interpretations to this Solicitation shall be in writing. Any Letter of Clarification(s) or interpretation that is not in writing shall not legally bind the City of Houston. Only information supplied by the City of Houston in writing or in this RFP should be used in preparing Proposal responses.

2.5.2 The City does not assume responsibility for the receipt of any Letters of Clarification sent to Proposer(s).

2.6 **EXAMINATION OF DOCUMENTS AND REQUIREMENTS**

2.6.1 Each Proposer shall carefully examine all RFP documents and thoroughly familiarize themselves with all requirements prior to submitting a Proposal to ensure that the Proposal meets the intent of this RFP.

2.6.2 Before submitting a Proposal, each Proposer shall be responsible for making all investigations and examinations that are necessary to ascertain conditions and requirements affecting the requirements of this RFP. Failure to make such investigations and examinations shall not relieve the Proposer from obligation to comply, in every detail, with all provisions and requirements of the RFP.

2.7 **EXCEPTIONS TO TERMS AND CONDITIONS**

2.7.1 All exceptions included with the Proposal shall be submitted in a clearly identified separate section of the Proposal in which the Proposer clearly cites the specific paragraphs within the RFP where the Exceptions occur. Any Exceptions not included in such a section shall be without force and effect in any resulting contract unless such Exception is specifically referenced by the City Purchasing Agent, City Attorney, Director or designee in a written statement. The Proposer's preprinted or standard terms will not be considered by the City as a part of any resulting contract.

7.2 All Exceptions that are contained in the Proposal may negatively affect the City's Proposal evaluation based on the evaluation criteria as stated in the RFP, or result in possible rejection of Proposal.

2.8 **POST-PROPOSAL DISCUSSIONS WITH PROPOSER(S)**

2.8.1 It is the City's intent to commence final negotiation with the Proposer(s) deemed most advantageous to the City. The City reserves the right to conduct post-Proposal discussions with any Proposer(s).

2.9 **PROTEST**

2.9.1 A protest shall comply with and be resolved, according to the City of Houston Municipal Code, Chapter 15, Article 1 and rules adopted thereunder. Protests shall be submitted in writing and filed with both, the City Secretary and the City Purchasing Agent. A pre-award protest of the RFP shall be received by the City Purchasing Agent prior to the contract award date. A post-award protest of an awarded contract shall be filed within ten (10) days after the protester knows, or should have known, the basis or outcome of the contract award.

2.9.2 A protest shall include the following:

2.9.3 The name, address, e-mail, and telephone number of the protester;

2.9.4 The signature of the protester or its representative who has the delegated authority to legally bind its company;

2.9.5 Identification of the RFP description and the RFP or contract number;

2.9.6 A detailed written statement of the legal and factual grounds of the protest, including copies of relevant documents, etc.; and

2.9.7 The desired form of relief or outcome, which the protester is seeking.

2.10 **LOBBYING AND OTHER FORMS OF INFLUENCE PROHIBITED**

2.10.1 Neither Proposer(s) nor any person acting on Proposer(s)' behalf shall attempt to influence the outcome of the contract award by the offer, presentation or promise of gratuities, favors, or anything of value to any member of the Proposal evaluation committee, any appointed or elected official or employee of the City of Houston, their families or staff members. All inquiries regarding the solicitation are to be directed to the designated City Buyer identified on the first page of the RFP. Upon issuance of the RFP through the pre-award phase and up to the award of a contract, aside from Proposer's formal response to the RFP, communications publically made during the official pre-bid conference, written requests for clarification during the period officially designated for such purpose by the City Buyer and communications during an oral interview, scheduled at the request of and for the benefit of the Proposal evaluation committee, if any, neither Proposer(s) nor persons acting on their behalf shall communicate with any member of the Proposal evaluation committee, appointed or elected official or employee of the City of Houston, their families or staff through written or oral means in an attempt to persuade or influence the outcome of the contract award or to obtain or deliver information intended to or which could reasonably result in an advantage to any Proposer. However, nothing in this paragraph shall prevent Proposer from making public statements to the City Council body convened for a regularly scheduled session after the Proposal evaluation committee has made its official selection and presented same to Council for action.

3.0 **QUALIFYING REQUIREMENTS FOR PROPOSER
(PROPOSER NOT MEETING THE FOLLOWING REQUIREMENTS (3.1.1 thru
3.1.7) WILL NOT BE CONSIDERED FURTHER)**

3.1 **In order to be evaluated as a respondent to this RFP, Proposers must submit the required documentation, as detailed herein with their proposal substantiating that they meet the following minimum requirements.**

3.1.1 The Proposer must be authorized to do business in the state of Texas, and be licensed/certified/registered to perform HVAC services as required in the statement of work SOW. The Proposer(s) must include in their proposal a "Certificate of Registration" which authorizes them to conduct business in the State of Texas. Such Registration is obtained from the Texas Secretary of State's Office, which will also provide the certification thereof.

- 3.1.2 The Proposer's core competency must be presently or have operated a HVAC operation and maintenance program as specified in the SOW with a minimum HVAC maintenance staff of twenty full-time employees or an operation similar to SOW as stated herein of at least three million dollars per year, excluding utilities cost, at one location for HVAC maintenance services.
- 3.1.3 Proposer must provide documentation that its company has been in business, as specified in the SOW, a minimum of five (5) years.
- 3.1.4 Proposer shall comply with the City of Houston's Minority and Women Business Enterprise (MWBE) program requirements as set out in Chapter 15, Article V of the City of Houston Code of Ordinances. The MWBE Goal on this project is **18%**. Proposer shall provide evidence and a detail plan that demonstrates the intended award, utilization and payment to City of Houston certified M/WBE's with subcontracts and supply agreements that are equal to or greater than 18% of the value of this Agreement or that proposer made a Good Faith Effort. Proposer acknowledges that it has reviewed the requirements for Good Faith Efforts on file with the Mayor's Office of Business Opportunity (OBO) and will comply with them Pre and Post award. (Refer to Exhibit II)
- 3.1.5 Proposer must submit a letter from a certified Surety/Bonding company, authorized to do business in the State of Texas stating the "Proposer's Bonding" capacity and provide the Surety listing with the U.S. Treasury. **The bond amount must cover at a minimum the total amount of the price proposed in Exhibit III.** Additionally, the letter shall include the largest sum that the Surety/Bonding Company would be willing to bond the Proposer for HVAC operation and maintenance. The Surety/Bonding Company may be contacted and interviewed by the City.
- 3.1.6 Proposer must submit a letter from the Insurance provider stating the Proposer's ability in obtaining insurance to meet the City's minimum insurance requirements (as stated in the GENERAL TERMS, SECTION 8.0 and Insurance providers A.M. Best rating. (Refer to Exhibit IV- Insurance Forms)
- 3.1.7 Proposer must attend the mandatory Pre-proposal conference & site visits at all HAS Airports.

3.2 **Proposal Format**

To simplify the review process and to obtain the maximum degree of comparability, the Proposal must follow the outline as set forth below and, at a minimum, contain the information as requested. Proposer(s) must include any additional relevant information.

3.2.1 **Title Page**

The title page should include the title and number of the RFP, name and address of the Proposer(s), and the date of the Proposal.

3.2.2 **Offer & Submittal Form**

PROPOSAL MUST BE SIGNED AND NOTORIZED BY AN AUTHORIZED REPRESENTATIVE(S) OF THE PROPOSER, WHICH MUST BE THE ACTUAL LEGAL ENTITY THAT WILL PERFORM THE CONTRACT IF AWARDED AND THE TOTAL FIXED PRICE CONTAINED THEREIN SHALL REMAIN FIRM FOR A PERIOD OF ONE-HUNDRED EIGHTY (180) DAYS.

3.2.3 **Letter Of Transmittal**

3.2.3.1 A letter of transmittal shall include the following:

3.2.3.1.1 The names, titles, addresses, and telephone numbers of the individuals who are authorized to make representation on behalf of the Proposer.

3.2.3.1.2 A statement that the person signing the letter of transmittal is authorized to legally bind the Proposer; that the Proposal and the total fixed price contained therein shall remain firm for a period of one hundred-eighty (180) days, and that the Proposal will comply with the requirements and arrangements stated in the RFP.

3.2.4 **Contents**

The contents should be identified by section, description, page number, and should include, at a minimum, the following sections:

3.2.5 Title Page

3.2.6 Signed and Notarized Offer and Submittal Form (Attachment A)

3.2.7 Letter of Transmittal

3.2.5 **Executive Summary**

3.2.5.1 Provide an executive summary, containing synopsis of Proposer's history, project development approach, pricing structure, and HVAC service capability.

3.2.6 Provide the required qualifying documentations described Section 3.0 above.

3.2.7 **PERSONNEL/STAFFING REQUIREMENTS (30%)**

3.2.7.1 Project Organization / Staffing

3.2.7.1.1 Describe Proposer's staffing for managing, operating, and maintaining the HVAC.

3.2.7.1.2 Describe Proposer's plan for transition during phase-in. Describe Proposer's staffing strategies to insure compliance with all phase-in requirements.

3.2.7.1.3 Proposer shall develop and submit with their proposal a full service 24/7, 365 days per year schedule detailing the responsibilities of assigned personnel as stated in the SOW. Describe positions, qualifications and duties for all proposed staffing. Provide an organizational chart detailing proposed staffing levels.

3.2.7.1.4 Describe Proposer's contingency plan in addressing additional staffing requirements that may be required for emergencies, equipment failure, inclement weather conditions, etc.

3.2.7.1.5 State how Proposer will ensure right sizing of personnel to effectively and efficiently accomplish SOW.

3.2.7.1.6 Describe Proposer's selection process and basis on hiring competent and qualified HVAC operation and maintenance personnel.

3.2.8 **PRICING (20%)**

3.2.8.1 Pricing Form/Fee Schedule (Exhibit III)

3.2.9 **TECHNICAL APPROACH/MANAGEMENT PLAN (15%)**

3.2.9.1 Management Approach

3.2.9.1.1 Define Proposers approach to managing, operating, and maintaining HVAC as described in SOW. Proposer's response must include, but is not limited to proposing/describing methodologies, approaches, and technical/ innovative solutions.

3.2.9.1.2 Provide Proposer's approach and methodology for Phase-In transition, Section 19.1, page 53.

3.2.9.1.3 Provide a chart showing corporate organization starting from the CEO to the Project Manager and indicate how this organization will interface with HAS.

3.2.9.1.4 Identify the on-site project manager who will have oversight of the Agreement and provide their resume.

3.2.9.1.5 Provide copies of key personnel resumes, certifications and licenses.

- 3.2.9.1.6 Discuss how Proposer will ensure that resources are effectively applied to accomplish the SOW defined herein.
- 3.2.9.2 Spare Parts
- 3.2.9.2.1 Describe Proposer's plan for providing and managing spare parts, replacement parts, equipment, expendables, and consumables required for maintenance and repair, as specified in the SOW.
- 3.2.9.3 Reliability Centered Maintenance (RCM)
- 3.2.9.3.1 Proposer must submit a narrative describing their understanding of RCM requirements, processes, and/or similar type program.
- 3.2.9.4 Quality
- 3.2.9.4.1 Describe Proposer's Quality Assurance Program or continuous improvement process program currently in place.
- 3.2.9.4.2 Describe Proposer's organization's program for ensuring a high quality of work.
- 3.2.9.4.3 Describe how Proposer's organization would manage and resolve complaints, including those of the City of Houston. How does Proposer capture and report customer feedback?
- 3.2.9.4.4 Describe Proposer's tracking and reporting mechanisms for documenting service and quality.
- 3.2.10 REPUTATION/QUALIFICATION/HVAC EXPERIENCE (15%)**
- 3.2.10.1 Reputation
- 3.2.10.1.1 Provide list of current/previous customers as described in Section 5.0, page 11.
- 3.2.10.2 Qualification/Experience
- 3.2.10.2.1 Describe Proposer's company experience in the services requested in this RFP. Proposer should highlight the improvement in performance or efficiency that Proposer has achieved for its clients on past HVAC service contracts.
- 3.2.10.2.2 Relate Proposer's company experience and the measures taken whenever essential equipment such as chillers/boilers failed on past service contracts.
- 3.2.10.2.3 Provide at least one (1) similar operation and maintenance projects and/or experiences for Proposer's firm and indicate which individuals (including their specific roles) proposed for this program were part of those projects. Similar experience preferred related to airports and systems larger than 10,000 tons of cooling and 75,000 lb/hour of steam. Include reference contact information per Exhibit I.
- 3.2.11 EFFICIENCY/INNOVATIONS/ENERGY SAVINGS/MMS (10%)**
- 3.2.11.1 Efficiency/Innovations
- 3.2.11.1.1 Describe any productivity enhancement/efficiency program(s) in the performance of SOW.
- 3.2.11.2 Energy Management Strategy - Describe Proposer's approach and methodology for:
- 3.2.11.2.1 Operating and maintaining HVAC in a manner to utilize the energy source which produces the lowest cost.
- 3.2.11.2.2 Evaluating energy usage and identifying opportunities for efficiencies/savings.
- 3.2.11.2.3 Identifying energy conservation strategies.
- 3.2.11.3 Maintenance Management System (MMS)

3.2.11.3.1 Describe your experience with INFOR referenced in Section 5.13, page 38.

3.2.12 TRAINING (5%)

3.2.12.1 Training

3.2.12.1.1 Describe Proposer's training program including but not limited to procedures and checklists for ensuring all personnel, including newly-hired workers, are familiar with all work of HVAC.

3.2.13 CONFORMITY WITH THE RFP REQUIREMENTS (Pass - 5% or Fail - 0%)

3.2.13.1 General Conformity Questionnaire (Section 6.0, page 12).

3.2.13.2 List of Proposed Sub-contractor(s) (Exhibit I)

3.2.13.3 Fair Campaign Ordinance Form "A" (Exhibit V)

3.2.13.4 Affidavit of Ownership or Control (Exhibit VI)

3.2.13.5 Drug Compliance Agreement Attachment "A" and Proposer's Certification of No Safety Impact Positions Attachment "C" (Exhibit VII)

3.2.13.6 Anti-Collusion Statement (Exhibit VIII)

3.2.13.7 Conflict of Interest Questionnaire (Exhibit IX)

3.2.13.8 City Proposers' Pay or Play Acknowledgement Form (Exhibit X)

4.0 EVALUATION/SELECTION PROCESS

4.1 The award of this contract(s) will be made to the respondent(s) offering the response which best meets the needs of the City. The City may make investigations, as it deems necessary, to determine the capabilities of the Proposer to create, modify and implement the required application modules. The Proposer shall furnish to the City such data as the City may request for this purpose. The City reserves the right to reject any offer if the evidence submitted by or the investigation of the Proposer fails to satisfy the City that the Proposer is properly qualified to provide the services contemplated as specified in Section 3.0, page 6. Each respondent will be evaluated on the basis of the following evaluation criteria that are listed in order of importance below:

4.1.1	PERSONNEL/STAFFING REQUIREMENTS	30%
4.1.2	PRICING	20%
4.1.3	TECHNICAL APPROACH/MANAGEMENT PLAN	15%
4.1.4	REPUTATION/QUALIFICATION/HVAC EXPERIENCE	15%
4.1.5	EFFICIENCY/INNOVATIONS/ENERGY SAVINGS/MMS	10%
4.1.6	TRAINING	5%
4.1.7	CONFORMITY WITH THE RFP REQUIREMENTS	5%
	TOTAL:	100%

- 4.2 Hire Houston First Preference Points (City Business = five (5) extra percentage points or Local Business = three (3) extra percentage points and Non-City and Non-Local Business will receive zero (0) extra percentage points).
- 4.3 The committee may arrive at a short list of respondents and these short listed respondents may be scheduled for a structured oral presentation and interview, which will be further evaluated based on your proposal and presentation. Such presentations will be at no cost to the City of Houston. At the end of the oral presentation and interview, the evaluation of the short listed respondents will be completed. The oral interview may be recorded and/or videotaped.
- 4.4 If a second round of evaluation (short listed Proposers) is held and scored, first round scores will be added to the second round scores and the average will be the final score.

5.0 REFERENCES

- 5.1 Proposers must be able to demonstrate that they have sufficient expertise, qualified personnel experienced in Operation, and Maintenance of HVAC specified in the RFP. Proposers must demonstrate that their company is currently providing HVAC services of similar size and statement of work specified in the Proposal. Proposers must have been actively engaged as an actual business entity in the activities described in this RFP for at least the five (5) years immediately prior to the submission of their Proposal.
- 5.2 The reference(s) must be included in the space provided below. Additional pages may be added if necessary. References must be included at the time of proposal submittal. **Proposer's capability and experience shall be a factor in Proposal evaluation.**

LIST OF CURRENT/PREVIOUS CUSTOMERS

1. Company Name: _____
 Contact Person/Title: _____ Phone No.: _____
 Address: _____
 Contract Award Date: _____ Contract Completion Date: _____
 Contract Name/Title: _____
 System Description: _____

2. Company Name: _____
 Contact Person/Title: _____ Phone No.: _____
 Address: _____
 Contract Award Date: _____ Contract Completion Date: _____
 Contract Name/Title: _____
 System Description: _____

3. Company Name: _____
Contact Person/Title: _____ Phone No.: _____
Address: _____
Contract Award Date: _____ Contract Completion Date: _____
Contract Name/Title: _____
System Description: _____

4. Company Name: _____
Contact Person/Title: _____ Phone No.: _____
Address: _____
Contract Award Date: _____ Contract Completion Date: _____
Contract Name/Title: _____
System Description: _____

5. Company Name: _____
Contact Person/Title: _____ Phone No.: _____
Address: _____
Contract Award Date: _____ Contract Completion Date: _____
Contract Name/Title: _____
System Description: _____

6.0 GENERAL CONFORMITY QUESTIONNAIRE

6.1 Special Instructions to Proposer(s)

Proposer fully understands the requirement and complies. ___ Yes ___ No

If "No" Explain: _____

6.2 Uniform Instructions to Proposer(s)

Proposer fully understands the requirement and complies. ___ Yes ___ No

If "No" Explain: _____

6.3 General Terms and Conditions

Proposer fully understands the requirement and complies. ___ Yes ___ No

If "No" Explain: _____

6.4 Special Terms and Conditions

Proposer fully understands the requirement and complies. ___ Yes ___ No

If "No" Explain: _____

6.5 Site Visit

Proposer fully understands the requirement and complies. ___ Yes ___ No

If "No" Explain: _____

6.6 **Proposal Outline and Minimum Content Requirements**
Proposer fully understands the requirement and complies. ___ Yes ___ No

If "No" Explain: _____

6.7 **Proposer's Qualifications**
Proposer fully understands the requirement and complies. ___ Yes ___ No

If "No" Explain: _____

6.8 **Performance Bond**
Proposer full understands the requirement and complies. ___ Yes ___ No

If "No" Explain: _____

6.9 **Sample Contract**
Proposer full understands the requirement and complies. ___ Yes ___ No

If "No" Explain: _____

7.0 **UNIFORM INSTRUCTIONS TO PROPOSER**

7.1 This RFP does not commit the City of Houston to award a contract, issue a purchase order, or to pay any costs incurred in the preparation of a Proposal in response to this request.

7.2 The Proposals will become part of the City's official files without any obligation on the City's part. All Responses shall be held confidential from all parties other than the City until after the contract is awarded. Afterward, the Proposals shall be available to the public.

7.3 The City of Houston shall not be held accountable if material from responses is obtained without the written consent of the Proposer by parties other than the City, at any time during the Proposal evaluation process.

7.4 In the event a Proposer submits trade secret information to the City, the information must be clearly labeled as a "***Trade Secret***." The City will maintain the confidentiality of such trade secrets to the extent provided by law.

7.5 Proposer(s) shall not offer any gratuities, favors, or anything of monetary value to any official or employee of the City of Houston (including any and all members of City evaluation committee).

7.6 Proposer(s) shall not collude in any manner, or engage in any practices, with any other Proposer(s), which may restrict or eliminate competition, or otherwise restrain trade. This is not intended to preclude subcontracts and joint ventures for the purposes of: a) responding to this RFP; or b) establishing a project team with the required experience and/or capability to provide the goods or services specified herein. Conversely, the City can combine or consolidate Proposals, or portions thereof, for the purposes mentioned above.

7.7 All Proposals submitted must be the original work product of the Proposer. The copying or paraphrasing of the work product of another Proposer is not permitted.

7.8 The RFP and the related responses of the selected Proposer will by reference (within either a contract or purchase order) become part of any formal Agreement between the selected Proposer and the City. The City and the selected Proposer may negotiate a Contract or contracts for submission to City Council for consideration and approval. In the event an Agreement cannot be reached with the selected Proposer, the City reserves the right to select an alternative Proposer. The City reserves the right to negotiate with alternative Proposer the exact terms and conditions of the contract.

- 7.9 Proposer(s), their authorized representatives and their agents are responsible for obtaining, and will be deemed to have, full knowledge of the conditions, requirements, and specifications of the RFP at the time a Proposal is submitted to the City.
- 7.10 The Agreement(s) shall become effective on or about **January 1, 2013** for a term of three (3) years. The City of Houston reserves the option of extending the Agreement(s) on an annual basis for two (2) additional one-year terms, or portions thereof.
- 7.11 If necessary for the completion of tasks required under the project, the City will provide reasonable working space to the Proposer.
- 7.12 Clerical support and reproduction of documentation costs shall be the responsibility of the Proposer. If required, such support and costs shall be defined in the negotiated Agreement.
- 7.13 Proposer personnel essential to the continuity, and the successful and timely completion of the project should be available for the duration of the project unless substitutions are approved in writing by the Director.
- 7.14 The Proposer will be expected to adhere to all standard contractual requirements of the City which shall include, but are not limited to, provisions for: Time Extensions; Appropriation of Available Funds; Approvals; Term and Termination; Independent Proposer; Business Structure and Assignments; Subcontractor; Parties in Interest; Non-Waiver; Applicable Laws; Notices; Use of Work Products; Equal Employment Opportunity; Force Majeure; and Inspections and Audits.
- 7.15 The City may terminate its performance under a contract in the event of a default by the Proposer and a failure to cure such default after receiving notice of default from the City. Default may result from the Proposer's failure to perform under the terms of the contract or from the Proposer becoming insolvent, having a substantial portion of its assets assessed for the benefit of creditors, or having a receiver or trustee appointed.
- 7.16 Proposer must promptly report to the Director any conditions, transactions, situation, or circumstances encountered by the Proposer which would impede or impair the proper and timely performance of the contract.
- 7.17 The City of Houston has sole discretion and reserves the right to cancel this RFP or to reject any or all Proposals received prior to contract award.
- 7.18 The City reserves the right to waive any minor informality concerning this RFP, or to reject any or all Proposals or any part thereof.
- 7.19 The City reserves the right to request clarity of any Proposal after they have been received.
- 7.20 The City reserves the right to select elements from different individual Proposals and to combine and consolidate them in any way that best serves the City's interest. The City reserves the right to reduce the scope of the project and evaluate only the remaining elements from all Proposals. The City reserves the right to reject specific elements contained in all Proposals and to complete the evaluation process based only on the remaining items.
- 7.21 The Proposer must be authorized to do business in the state of Texas, and be licensed/certified/registered to perform HVAC services as required in the statement of work (SOW). The Proposer(s) must include in their proposal a "Certificate of Registration" which authorizes them to conduct business in the State of Texas. Such Registration is obtained from the Texas Secretary of State's Office, which will also provide the certification thereof.
- 7.22 After contract execution, the successful Proposer shall be the Proposer and responsible party for contracting and communicating the work to be performed to subcontractors, and for channeling other information between the City and Sub-contractors. Any subcontracting must be specified in the Proposal. Any subcontracting not specified in the Proposal will need prior written approval from the City Purchasing Agent.

- 7.23 Proposer assumes total responsibility for the quality and quantity of all work performed, whether it is undertaken by the Proposer or is subcontracted to another organization.
- 7.24 If sub-contractor involvement is required in the use of license, patent, or proprietary process, the Proposer is responsible for obtaining written authorization from the sub-contractor to use the process, or provide another process comparable to that which is required and which is acceptable to the City, all at no additional cost or liability to the City.

8.0 GENERAL TERMS AND CONDITIONS

8.1 INDEMNITY AND RELEASE:

8.1.1 RELEASE

PRIME CONTRACTOR/SUPPLIER 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.

8.2 INDEMNIFICATION

PRIME CONTRACTOR/SUPPLIER 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:

- 8.2.1 PRIME CONTRACTOR/SUPPLIERS AND/OR ITS AGENTS', EMPLOYEES', OFFICERS', DIRECTORS', CONTRACTORS', OR SUBCONTRACTORS' (COLLECTIVELY IN NUMBERED PARAGRAPHS 1.1-1.3, "PRIME CONTRACTOR/SUPPLIER") ACTUAL OR ALLEGED NEGLIGENCE OR INTENTIONAL ACTS OR OMISSIONS;
- 8.2.2 THE CITY'S AND PRIME CONTRACTOR/SUPPLIER'S ACTUAL OR ALLEGED CONCURRENT NEGLIGENCE, WHETHER PRIME CONTRACTOR/SUPPLIER IS IMMUNE FROM LIABILITY OR NOT; AND
- 8.2.3 THE CITY'S AND PRIME CONTRACTOR/SUPPLIER'S ACTUAL OR ALLEGED STRICT PRODUCTS LIABILITY OR STRICT STATUTORY LIABILITY, WHETHER PRIME CONTRACTOR/SUPPLIER IS IMMUNE FROM LIABILITY OR NOT.
- 8.2.4 PRIME CONTRACTOR/SUPPLIER SHALL DEFEND, INDEMNIFY, AND HOLD THE CITY HARMLESS DURING THE TERM OF THIS AGREEMENT AND FOR FOUR YEARS AFTER THE AGREEMENT TERMINATES. PRIME CONTRACTOR/SUPPLIER'S INDEMNIFICATION IS LIMITED TO \$500,000 PER OCCURRENCE. PRIME CONTRACTOR/SUPPLIER SHALL NOT INDEMNIFY THE CITY FOR THE CITY'S SOLE NEGLIGENCE.
- 8.2.5 CONTRACTOR AGREES TO AND SHALL 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 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.

8.3 INDEMNIFICATION-SUBCONTRACTOR'S INDEMNITY

8.3.1 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.

8.4 INDEMNIFICATION PROCEDURES:

8.4.1 Notice of Claims. If the City or Prime 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 30 days. The notice must include the following:

8.4.1.1 a description of the indemnification event in reasonable detail,

8.4.1.2 the basis on which indemnification may be due, and

8.4.2 the anticipated amount of the indemnified loss.

8.4.3 This notice does not stop 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 30-day period, it does not waive any right to indemnification except to the extent that Prime Contractor/Supplier is prejudiced, suffers loss, or incurs expense because of the delay.

8.4.4 Defense of Claims.

8.4.4.1 Assumption of Defense. Prime Contractor may assume the defense of the claim at its own expense with counsel chosen by it that is reasonably satisfactory to the City. Prime Contractor/Supplier shall then control the defense and any negotiations to settle the claim. Within 10 days after receiving written notice of the indemnification request, Prime Contractor must advise the City as to whether or not it will defend the claim. If Prime Contractor does not assume the defense, the City shall assume and control the defense, and all defense expenses constitute an indemnification loss.

8.4.4.2 Continued Participation. If Prime 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. Prime 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 Prime 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.

8.5 INSURANCE REQUIREMENTS:

8.5.1 The Contractor shall obtain and maintain in effect during the term of this Agreement, insurance coverage as set forth below and shall furnish certificates of insurance showing the City as an additional insured, in duplicate form, prior to the beginning of the Contract. The City shall be named as an additional insured on all such policies except Professional Liability and Workers' Compensation, must contain an endorsement that the policy is primary to any other insurance available to the Additional Insured with respect to claims arising under the Agreement. **The issuer of any policy shall have a Certificate of Authority to transact insurance business in the State of Texas or 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 of Best's Key Rating Guide, Property-Casualty United States.**

8.5.2 Comprehensive General Liability including Contractual Liability and Automobile Liability insurance shall be in at least the following amounts:

8.5.2.1 Commercial General Liability Insurance including Contractual Liability:

8.5.2.1.1 \$2,000,000 per occurrence

8.5.2.1.2 \$4,000,000 aggregate,

8.5.2.2 Workers' Compensation:

8.5.2.2.1 Amount shall be statutory amount

8.5.2.3 **Employer's Liability cannot be used as a substitute for Workers' Compensation**

8.5.2.4 Automobile Liability (See Note Below):

8.5.2.4.1 \$1,000,000 Combined Single Limit per occurrence

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

8.5.2.5 Employer's Liability:

8.5.2.5.1 Bodily injury by accident \$500,000 (each accident)

8.5.2.5.2 Bodily injury by disease \$500,000 (policy limit)

8.5.2.5.3 Bodily injury by disease \$500,000 (each employee)

8.6 Automobile liability insurance for autos furnished or used in the course of performance of this contract including Owned, Non-owned and Hired Auto coverage (Any Auto coverage may be substituted for Owned, Non-owned and Hired Auto coverage.) If no autos are owned by the Contractor, coverage may be limited to Non-owned and Hired Autos. If Owned Auto coverage cannot be purchased by Contractor, Scheduled Auto coverage may be substituted for Owned Auto coverage. EACH AUTO USED IN PERFORMANCE OF THIS CONTRACT MUST BE COVERED IN THE LIMITS SPECIFIED.

- 8.7 If the City of Houston requires you to maintain in effect insurance coverage during the term of a contract resulting from the City's acceptance of your response to this request for proposal ("potential contract"), all of your insurance policies must require on their face, or by endorsement, that your insurance carrier waives any rights of subrogation against the City of Houston except for Professional Liability insurance. You must give 30-days' written notice to the City Purchasing Agent if any of your insurance policies are to be cancelled, materially changed, or not renewed. Within this 30-day period, you shall provide other suitable policies in lieu of those about to be canceled, materially changed, or not renewed so as to maintain in effect the required coverage. If you do not comply with this requirement, the Purchasing Agent, at his or her sole discretion, may: (1) immediately suspend you from any further performance under the potential contract 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 you under the potential contract.
- 8.8 If any part of the work is sublet, similar insurance shall be provided by or in behalf of the Subcontractor to cover their operations, and the Contractor shall furnish evidence of such insurance, satisfactory to the City. In the event a Subcontractor is unable to furnish insurance in the limits required under the contract, the Contractor shall endorse the Subcontractor as an Additional Insured on their policies excluding Workers' Compensation and Employer's Liability.
- 8.8.1 (See Insurance Requirements Exhibit for a sample insurance certificate format.)
- 8.8.2 Only unaltered original insurance certificates endorsed by the underwriter are acceptable. Photocopies are unacceptable.
- 8.8.3 Contractor shall maintain in effect certain insurance coverage, which is described as follows:
- 8.8.3.1.1 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 in-actions do not waive the City's right under this Agreement.
- 8.8.3.1.2 Issuers of Policies: The issuer of any policy shall have a Certificate of Authority to transact insurance business in Texas or 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, Property-Casualty United States.
- 8.8.3.1.3 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.
- 8.8.3.1.4 Deductibles: Contractor shall be responsible for and bear 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.
- 8.8.3.1.5 Cancellation: Each policy must state that it may not be canceled, materially modified, or non-renewed unless the contractor gives the Director 30 days' advance written notice. Contractor shall give written notice to the Director within five days of the date on which total claims by any party against Contractor reduce the aggregate amount of coverage below the amounts required by this Agreement. In the alternative, the policy may contain an endorsement establishing a policy aggregate for the particular project or location subject to this Agreement.
- 8.8.3.1.6 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, except for Professional Liability insurance.
- 8.8.3.1.7 Endorsement of Primary Insurance: Each policy, except Worker's 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.

- 8.8.3.1.8 All certificates of insurance submitted by Contractor shall be accompanied by endorsements for additional insured coverage in favor of the City for Commercial General Liability and Automobile Liability policies; and waivers of subrogation in favor of the City for Commercial General Liability, Automobile Liability, and Worker's Compensation/Employers' Liability policies. For a list of pre-approved endorsement, forms see <http://purchasing.houstontx.gov/forms.shtml>. The Director will consider all other forms on a case-by-case basis.
- 8.8.3.1.9 Liability for Premium: Contractor shall pay all insurance premiums, and the City shall not be obligated to pay any premiums.
- 8.8.3.1.10 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.
- 8.8.3.1.11 Proof of Insurance: On the effective date and at any time during the Term 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.
- 8.8.3.1.12 Contractor shall continuously and without interruption, maintain in force the required insurance coverage's specified in this Section. If Contractor does not comply with this requirement, the Director, at his or her sole discretion, may immediately suspend Contractor from any further performance under this Agreement and begin procedures to terminate for default, or
- 8.8.3.1.13 Purchase the required insurance with City funds and deducts the cost of the premiums from amounts due to Contractor under this Agreement.
- 8.8.3.1.14 The City shall never waive or be stopped to assert its right to terminate this Agreement because of its acts or omissions regarding its review of insurance documents.
- 8.8.3.1.15 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.

8.9 **PROPOSER PERFORMANCE LANGUAGE:**

- 8.9.1 Proposer should make citizen satisfaction a priority in providing services under this contract. Proposer's employees should be trained to be customer-service oriented and to positively and politely interact with citizens when performing contract services. Proposer's employees should be clean, courteous, and efficient and neat in appearance at all times and committed to offering the highest degree of service to the public. If, in the Director's determination, the Proposer is not interacting in a positive and polite manner with citizens, the Proposer shall take all remedial steps to conform to the standards set by this contract and is subject to termination for breach of contract.

8.10 **INSPECTIONS AND AUDITS:**

- 8.10.1 City representatives may have the right to perform, or have performed, (1) audits of Proposer's books and records, and (2) inspections of all places where work is undertaken in connection with this Agreement. Proposer shall keep its books and records available for this purpose for at least three (3) years after this Agreement terminates. This provision does not affect the applicable statute of limitations.

8.11 **INTERPRETING SPECIFICATIONS:**

8.11.1 *The specifications and product references contained herein are intended to be descriptive rather than restrictive. The City is soliciting Proposals to provide a complete product and service package, which meets its overall requirements. Specific equipment and system references may be included in this RFP for guidance, but they are not intended to preclude Proposer(s) from recommending alternative solutions offering comparable or better performance or value to the City. Unless specifically stated otherwise with regard to a specific item of equipment, it should be assumed that the City requires all equipment proposed for this project to be supported by a manufacturer's warranty, which is equal to or better than the prevailing standard in the industry.*

8.11.2 Changes in the specifications, terms and conditions of this RFP will be made in writing by the City prior to the Proposal due date. Results of informal meetings or discussions between a potential Proposer(s) and a City of Houston official or employee may not be used as a basis for deviations from the requirements contained in this RFP.

8.12 **PROPOSER DEBT:**

8.12.1 **IF PROPOSER, 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 PROPOSER HAS INCURRED A DEBT, HE SHALL IMMEDIATELY NOTIFY PROPOSER IN WRITING. IF PROPOSER 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 FROM ANY PAYMENTS OWED TO PROPOSER UNDER THIS AGREEMENT, AND PROPOSER WAIVES ANY RECOURSE THEREFOR.**

9.0 **SPECIAL TERMS AND CONDITIONS**

9.1 **CITY PROPOSERS' PAY OR PLAY PROGRAM:**

9.1.1 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 Agreement for all purposes. Proposer has reviewed Executive Order No. 1-7 and shall comply with its Terms and Conditions as they are set out at the time of City Council approval of this Agreement. This provision requires certain Proposers to offer to certain employees a minimal level of health benefits or to contribute a designated amount to be used to offset the costs of providing health care to uninsured people in the Houston/Harris County area. Failure to complete **Exhibit X** "Pay or Play" Acknowledgement Form & Certification of Agreement to Comply with Pay or Play Program may be just cause for rejection of your Proposal.

9.2 **CITY PROPOSER OWNERSHIP DISCLOSURE ORDINANCE:**

9.2.1 City Council requires knowledge of the identities of the owners of entities seeking to contract with the City in order to review their indebtedness to the City prior to entering into contracts. Therefore, all respondents to this RFP must comply with Houston Code of Ordinances Chapter 15, as amended (Sections 15-122 through 15-126) relating to the disclosure of owners of entities bidding on, proposing for or receiving City contracts.

9.2.2 Completion of Exhibit VI – "Affidavit of Ownership or Control" will satisfy this requirement. Failure to provide this information may be just cause for rejection of your Bid or Proposal.

9.3 **CITY OF HOUSTON FAIR CAMPAIGN ORDINANCE:**

9.3.1 The City of Houston Fair Campaign Ordinance makes it unlawful for a Proposer to offer any contribution to a candidate for City elective office. For purposes of this ordinance a contract is defined as any contract for goods or services having a value in excess of \$30,000 or more, regardless of the way by which it was solicited or awarded. **Exhibit V** of this RFP describes the contract and documentation requirements relating to this Ordinance.

9.4 **DRUG DETECTION AND DETERRENCE PROCEDURES FOR PROPOSERS:**

9.4.1 It is the policy of the City to achieve a drug-free workforce and to provide a workplace that is free from the use of illegal drugs and alcohol. It is also the policy of the City that the manufacture, distribution, dispensation, possession, sale or use of illegal drugs or alcohol by Proposers while on City premises is prohibited. Accordingly, effective September 1, 1994, and pursuant to the Mayor's Executive Order 1-31, as a condition to the award of any contract for labor or services, a successful Proposer(s) must certify to its compliance with this policy. **EXHIBIT VII** contains the standard language, which will be used in each contract for labor or services, as well as the Executive Order 1-31 disclosure and compliance forms (Attachments A, B, and C). These forms must be completed and returned prior to award.

9.5 **HIRE HOUSTON FIRST:**

9.5.1 **Designation as a City Business or Local Business**

9.5.1.1 To be designated as a City or Local Business for the purposes of the Hire Houston First Program, as set out in Article XI of Chapter 15 of the Houston City Code, a bidder or proposer must submit the **Hire Houston First Application and Affidavit ("HHF Affidavit")** to the Director of the Mayor's Office of Business Opportunities and receive notice that the submission has been approved prior to award of a contract. Bidders are encouraged to secure a designation prior to submission of a bid or proposal if at all possible.

9.5.1.2 **Download the HHF Affidavit** from the Office of Business Opportunities Webpage at the City of Houston e-Government Website at the following location:

www.houstontx.gov/obo/moreforms/hirehoustonfirstaffidavit.pdf

9.5.1.3 Submit the completed application forms to: Mayor's Office of Business Opportunity, One Stop Business Center, 900 Bagby St., Public Level, Houston, TX 77002 or Applications may be submitted via e-mail to HHF-MOBO@houstontx.gov or faxed to 832.393.0952.

9.5.2 **Award of Procurement Pursuant to a Request for Proposal, Best Value Solicitation or Alternative---Pursuant to Chapter --- of the Local Government Code**

9.5.3 IN EVALUATION OF A PROPOSAL SUBMITTED UNDER ANY OF THE ABOVE PROCUREMENT METHODS, THE CITY SHALL AWARD EXTRA POINTS EQUAL TO

- **THREE PERCENT** OF THE TOTAL EVALUATION POINTS AVAILABLE TO A "LOCAL BUSINESS," AS DEFINED IN SECTION 15-176 OF THE CITY OF HOUSTON CODE OF ORDINANCES, AND
- **FIVE PERCENT** OF THE TOTAL EVALUATION POINTS AVAILABLE TO A "CITY BUSINESS," AS DEFINED IN SECTION 15-176 OF THE CITY OF HOUSTON CODE OF ORDINANCES
- UNLESS THE USER DEPARTMENT DETERMINES THAT AN AWARD TO THE LOCAL OR CITY BUSINESS WOULD UNDULY INTERFERE WITH CONTRACT NEEDS, AS PROVIDED IN SECTION 15-181 OF THE CODE.

10.0 PROJECT ADMINISTRATION & PROCUREMENT TIMELINE/SCHEDULE:

10.1 Questions regarding the scope of the project, technical specifications, proposed applications, etc., may be addressed to Conley Jackson at the Pre-Proposal conference.

10.2 Listed below is the important and estimated completion dates and times for this Request for Proposal (RFP).

<u>EVENT</u>	<u>DATE</u>
Date of RFP Issued	May 25, 2012
Pre-Proposal Conference	June 11, 2012
Questions from Proposers Due to City	June 22, 2012
Proposals Due from Proposer(s)	July 13, 2012
Notification of Intent to Award (<i>Estimated</i>)	September 19, 2012
Council Agenda Date (<i>Estimated</i>)	November 14, 2012
Contract Start Date (<i>Estimated</i>)	January 1, 2013

11.0 **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)" means 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" means those services described in Specifications/Statement of Work.

"Business Days" means all days of a calendar year.

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

"City" is defined as the City of Houston a home rule city.

"Contractor or Proposer" is defined as company who is authorized to do business in Texas includes its successors and assigns.

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

"Core Competency" is defined as providing knowledge, ability, or expertise in specific areas of operations and maintenance of heating, ventilating, air conditioning (HVAC), associated plumbing, electrical, and control systems.

"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.

"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 Proposer. Such facilities are provided at each of the Airports.

"Maintenance Service" means Preventive Maintenance (PM), Predictive Maintenance (PdM), Reliability Centered Maintenance (RCM) and Remedial Maintenance (RM).

"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 Proposer instructing Proposer 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 Performance/Statement of Work and Exhibit III – 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.

"Preventive Maintenance (PM)" is any action performed on a time or run-hour based schedule that is designed to detect, preclude, or mitigate degradation of a component or system with the aim of sustaining or extending its useful life through controlling degradation to an acceptable level. 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. This includes measurements that detect the onset of system degradation, thereby allowing casual stressors to be eliminated or controlled prior to any significant deterioration in the component physical state. (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 Proposer must respond to an Emergency Service Request. The maximum elapsed time is measured from Proposer's receipt of an Emergency Service Request to Proposer's arrival at the specified work site.

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

"Schedule" the planned periods of time the Proposer 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.

"Statement of Work" (SOW) is defined as detailed description of the work that the Proposer will perform.

"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 Proposer under this Agreement.

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12.0 **BACKGROUND**

12.1 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 operations and maintenance serves a vital role in the efficient operation of the Houston Airport System.

12.2 Purpose of RFP

The Houston Airport System is seeking proposals for operations and maintenance of heating, ventilating, air conditioning (HVAC), associated plumbing, electrical, and control systems in the city's three major airports.

13.0 **STATEMENT OF WORK**

(The plan/design (Project 621) for the modernization of IAH chiller plant is in progress. Refer to Exhibit XV)

13.1 General – Operation and Maintenance Requirements

13.1.1 Facilities Included

Proposer 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 installed in the following airport facilities (Best-in-Practice Service as defined in the latest release of the Operations and Maintenance Best Practice manual developed by the U.S. Department of Energy):

13.1.1.1 George Bush Intercontinental Airport/Houston (IAH)

13.1.1.2 William P. Hobby Airport, Houston (HOU)

13.1.1.3 Ellington Airport (EFD)

13.1.2 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.

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

13.1.4 HOU includes the Main Terminal, Central Concourse, and Other Remote Buildings/Facilities.

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

13.2 Work Included – General

13.2.1 The Work provided by Proposer under the Agreement includes Basic Services and Other Work/Services.

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

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14.0 **BASIC SERVICES**

14.1 **IAH Basic Services**

14.1.1 Proposer 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. Proposer shall provide on-site staffing necessary to provide specified HVAC operation and maintenance services to all specified IAH facilities. Basic Services shall follow the guidelines established in the latest release of the Operations & Maintenance Best Practices manual developed by the U.S Department of Energy.

14.1.2 Basic Services monthly payments for IAH will include:

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

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

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

14.1.3 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 performance standards and Duties of Proposer detailed in the Agreement.

14.2 **HOU Basic Services**

14.2.1 Proposer 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. Proposer shall provide on-site staffing necessary to provide specified HVAC operation and maintenance services to all specified HOU facilities.

14.2.2 Basic Services monthly payments for HOU will include:

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

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

14.2.3 At HOU Proposer 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 III, Pricing Form, for Other Work/Services.

14.3 **EFD Basic Services**

14.3.1 Proposer 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. At EFD, Proposer shall provide emergency after-hour service between the hours of 10:00 p.m. and 6:00 a.m. within 2 hours of notification at the labor rates specified in Exhibit B, Pricing Form, for Other Work/Services

14.3.2 Basic Services monthly payments for EFD will include:

14.3.2.1 # 510 Building, A&G Building, Control Tower, Vault, North and South Generators.

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

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14.4 All Airports IAH, HOU & EFD:

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

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

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

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

14.5 Other Work/Services to be provided by Proposer under the Agreement includes other related required work that is beyond the scope of Basic Services.

14.6 Not less than one hundred eighty (180) days prior to the commencement of each Operating Year, Proposer shall submit a capital improvement plan to the Director. The plan will indicate the estimated capital cost and installation cost for each recommended capital improvement for the next 5 years in terms of improved performance (estimated cost per year savings) or enhanced reliability. An analysis of the best available emissions technology designed to further reduce the Airports' emissions shall also be provided. The Director agrees to approve or disapprove each recommended improvement not less than thirty (30) days prior to the commencement of said Operating Year.

15.0 **DUTIES OF PROPOSER - BASIC SERVICES**

15.1 Division of Responsibility

15.1.1 Proposer 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 Proposer.

15.1.2 The Director reserves the right to make final decisions related to HVAC operation and maintenance. If the Director chooses to override the Proposer's decisions, the Director shall inform Proposer in writing.

15.2 Direct Digital Control System IAH, HOU & EFD

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

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

15.2.3 Proposer shall maximize the use of the BAS to minimize the consumption of energy and to ensure environmental conditions are appropriate as required herein for the various space and areas within the Airport's facilities. Proposer shall use the BAS for building operational strategies, monitoring, and diagnostics. Proposer shall ensure all components – software and hardware – of the BAS are fully operational and the system is maintained in first class condition and in accordance with the manufacturer's requirements.

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- 15.2.4 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 manual and controls strategies. Routine daily operational checks and tests of the system must be performed by personnel who are trained on the operation of the 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.
- 15.2.5 The BAS shall utilize data trending and storage capabilities to log key performance variables to summarize energy efficiency and operational performance. Performance variables shall be trended on 5 minute intervals to provide adequate granularity of data for energy use and operational trend analysis. Recommended performance variable BAS points to be trended include but are not limited to:
- 15.2.5.1 Primary energy meters (Electric, Natural Gas, Steam, Water, or other services; consumption or volume on all meters, interval demand on electric meters).
 - 15.2.5.2 Energy sub-meters (Electric, Natural Gas, Water, Heating Btu, Cooling Btu, Steam, or other services; consumption or volume on all meters, interval demand on electric meters) dedicated to specific systems, building segments, plants or equipment.
 - 15.2.5.3 Chilled water supply and return temperatures (equipment and/or system specific)
 - 15.2.5.4 Chilled water supply flow rate (equipment and/or system specific)
 - 15.2.5.5 Chiller power (kilowatts, equipment and/or system specific)
 - 15.2.5.6 Chiller plant distribution loop differential pressure (system)
 - 15.2.5.7 Chiller load (Tons, equipment and/or system specific, calculated or provided by chiller control panel)
 - 15.2.5.8 Chiller efficiency (kW/Ton, calculated or provided by chiller control panel)
 - 15.2.5.9 Hot water, chilled water, condenser water, steam control valve positions (Trend can be on 15 minute interval)
 - 15.2.5.10 Hot water supply and return temperatures (equipment and/or system specific)
 - 15.2.5.11 Hot water supply flow rate (equipment and/or system specific)
 - 15.2.5.12 Steam flow rate (heating and/or cooling equipment and/or system specific)
 - 15.2.5.13 Primary, secondary, tertiary heating and/or cooling pump motor operating status (ON/OFF, start/stop)
 - 15.2.5.14 Primary, secondary, tertiary heating and/or cooling pump motor VSD feedback (Hz, % speed, or kilowatts)
 - 15.2.5.15 AHU heating and cooling valve positions (Trend can be on 15 minute interval)
 - 15.2.5.16 AHU damper positions (Trend can be on 15 minute interval)
 - 15.2.5.17 Outside air temperature
 - 15.2.5.18 Outside air humidity
 - 15.2.5.19 Zone air temperatures

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- 15.2.5.20 Zone air humidity
- 15.2.5.21 Occupancy sensors (ON/OFF, Occ/Unocc)
- 15.2.5.22 Boiler load
- 15.2.5.23 Boiler efficiency
- 15.2.5.24 Condensate return flow
- 15.2.5.25 Makeup water to heating, cooling, and condenser water systems.
- 15.2.6 Points currently not measured shall be included, with associated costs for implementation, as part of Annual Capital Improvement Plan
- 15.2.7 BAS database maintenance shall be performed by the Proposer on a monthly basis or more frequently as necessary to ensure that trended data storage will not compromise the computer, BAS software or system performance. Trend data files shall be archived using writable compact disk, external hard drives or tape backup system.
- 15.2.8 Proposer shall request any training or instruction from the BAS vendor to efficiently extract data from the BAS in electronic format for use in common spreadsheet or database software applications such as Microsoft Excel. Development of pre-formatted templates used for summarizing and periodic reporting of energy use and operational trends is the responsibility of the Proposer.
- 15.2.9 Energy and operational summaries and calculations developed either in the BAS or software templates are the responsibility of the Proposer. Energy and operational data should be compiled in a manner so data retrieved from the BAS or field measured data can be assessed relative to predetermined energy and operational efficiency goals as established by the City and/or Proposer.
- 15.2.10 Utility rates used to quantify the value of energy use should be consistent with current utility service rate tariffs or at a rate mutually agreed to by the City and Proposer for evaluating energy and operational cost savings.
- 15.2.11 The senior building controls technician or the next highest supervisor shall be responsible for the day-to-day review of these logs.
- 15.2.12 The BAS systems are included in Proposer's Reliability Centered Maintenance methodology. The BAS preventive and repair maintenance plan must be incorporated into and administered through the MMS.
- 15.3 Water Treatment Program IAH, HOU & EFD
- 15.3.1 Proposer 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. Proposer shall make necessary adjustments for minor differences between the Airports water treatment programs.
- 15.3.2 Based on Proposer's submittal of its Water Treatment Program, the Director and Proposer shall establish a mutually agreed-upon testing schedule. 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 XIII, Corrosion Test Requirements).

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15.4 Preventive Maintenance IAH,HOU & EFD

15.4.1 As a part of Basic Services throughout the term of the Agreement, Proposer shall perform preventive/predictive maintenance (MMS driven schedule of planned maintenance actions) on HVAC in accordance with OEM equipment manufacturer's instructions and in accordance with the best preventive maintenance industry practices for the prevention of equipment breakdowns and failures. Proposer shall develop a PM schedule so as to complete PM's on equipment within the manufactures recommendations. The PM Schedule is to be provided to the Director within 60 days after the commencement of each operating year. Changes from the previous year shall be clearly indicated. Failure to provide this and all additional PM reports will result in the application of liquidated damages in accordance with Section 30 of this Contract

15.4.2 The proper implementation of PM and PdM is to be utilized to ensure productive remedial maintenance, reduction of system down time, and effective cost control of system components by the timely planned replacement of components. Conditions to be addressed include, but are not limited to:

15.4.2.1 Hot calls.

15.4.2.2 High humidity.

15.4.2.3 Poor calibration.

15.4.2.4 Faulty operators.

15.4.2.5 Dirty filters.

15.4.2.6 Worn belts.

15.4.2.7 Dirty coils.

15.4.2.8 Duct leaks to include replacement of duct installation.

15.4.2.9 Water imbalances.

15.4.2.10 Stuck valves.

15.4.2.11 Equip. shutdown.

15.4.2.12 Loose wiring.

15.4.2.13 Valve leaks.

15.4.2.14 Pipe rust.

15.4.2.15 Excess noise.

15.4.2.16 Cold calls.

15.4.2.17 Poor control.

15.4.2.18 Control air losses.

15.4.2.19 Stuck dampers.

15.4.2.20 No belts.

15.4.2.21 Loose belts.

15.4.2.22 Dirty fans/vents.

15.4.2.23 Air imbalances.

15.4.2.24 Poor heat transfer.

15.4.2.25 Plugged strainers.

15.4.2.26 Equipment failure.

15.4.2.27 False trips.

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- 15.4.2.28 Fitting leaks.
- 15.4.2.29 Damaged insulation.
- 15.4.2.30 Excess vibration.
- 15.4.2.31 Degraded Painting.
- 15.4.2.32 Exercise isolation valves on a sixth month interval.
- 15.4.2.33 Register cleaning. Proposer shall create a cleaning schedule for all terminals and out buildings. One complete cleaning per year. To include all supply grills, return grills, and vents. Work will be scheduled at mutually agreed time.
- 15.4.2.34 Proposer is required to certify annually all backflow preventers in all mechanical rooms. To include, but not limited to approximately thirty (30) various sizes ranging from ¼ in. to 6 in. IAH - 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. Ellington Airport – 3 ea. and HOU – 6 ea.
- 15.4.2.35 Thoroughly clean all Mechanical Equipment Rooms (MER's) in all facilities throughout the Agreement. This includes floors, walls, mechanical and electrical equipment housings, panels, ductwork, piping, etc. Approximately 141 MER rooms for various sizes.
- 15.4.2.36 Replenishing all Charcoal/Potassium Permanente every 15 months regardless of HP rating. Approximately 2,725 cells of various sizes. Date will be decided by the Director. *Exclude EFD.*
- 15.4.2.37 Install an anti-bacteria agent in the drain pans of all air handlers. (Replenish the substance as needed).
- 15.4.2.38 Drain and clean cooling towers annually of silt deposits etc. - Exclude EFD.
- 15.4.2.39 Inspect condensers on chillers annually and brush and clean tubes - Exclude EFD.
- 15.4.2.40 All Ultra violet lighting bulbs are to be changed out once per year in March or more frequently if required. Exclude EFD. (Approximately 279 bulbs).
- 15.4.3 Proposer 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. Proposer shall provide documentation as requested by the Director upon completion.
- 15.4.4 At HAS, 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.
- 15.4.5 The following paint systems are recommended by HAS, however; Proposer must obtain the Director's approval of the painting system to be applied prior to performing the Work.
 - 15.4.5.1 Concrete Floors
 - 15.4.5.1.1 Epoxy – Benjamin Moore (M36/M39) Hi-Build Gloss Coating or City approved equal.
 - 15.4.5.1.2 Oil/Alkyd – Benjamin Moore (C112) Alkyd Porch & floor Enamel, or City approved equal.
 - 15.4.5.2 Walls
 - Latex – Benjamin Moore (276) Latex Semi-Gloss Enamel or City approved equal.
 - 15.4.5.2.1 Oil/Alkyd – Benjamin Moore (271) Alkyd Semi-Gloss Enamel or City approved equal.

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15.4.5.3 Metal

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

15.5 Parts/Materials

15.5.1 Furnished Parts IAH, HOU & EFD

15.5.1.1 \$25,000.00 Threshold - Proposer shall provide all replacement parts as per SOW equipment/appurtenances identified in Exhibits "XI" and "XVI" that cost \$25,000.00 or less. Such cost will not take into account Proposer's labor cost, rather just the actual cost of the parts which must be documented to the satisfaction of the Director. By way of example, if a compressor requires replacement, Proposer shall not be responsible for the cost, assuming that the cost of such compressor is over \$25,000.00 and the replacement is not due to Proposer's negligence. However, if only the fan motor of the compressor requires replacement and assuming the cost of the fan motor is \$25,000.00 or less, it shall be replaced at Proposer's sole cost. In other words, the Proposer will not be able to represent that the compressor is the part if only the fan motor requires replacement. Any dispute regarding the \$25,000.00 threshold shall be resolved at the sole discretion of the Director whose decision shall be final.

15.5.1.2 Proposer-Furnished Parts - Proposer shall continually restock its parts inventory throughout the term to levels that will ensure compliance with the performance requirements of this Agreement. All such parts shall be new OEM/ASHRAE approved. Where new OEM/ASHRAE parts are not available, Proposer may provide rebuilt OEM parts or use new parts of another manufacturer upon the prior written approval of the Director. In either case, parts must be equal or better in quality and performance than OEM/ASHRAE parts and must be free of all defects.

15.5.1.2.1 Proposer's responsibility is to provide equipment that, at a minimum, meets the latest edition of ASHRAE Standard 90.1. At least two options of further enhanced efficiencies shall be presented to HAS. At the Director's discretion, HAS shall be responsible for the cost premium associated with the purchase of the higher efficiency equipment. Also at the Director's discretion, the Proposer shall be allowed to absorb all or part of the cost premium and receive a portion of the savings generated by installing such equipment through a shared savings approach. Refer to Section 44 of the Agreement for further guidance on the shared savings process.

15.5.1.3 Disposal or Used Parts - As a part of Basic Services, Proposer shall dispose of all worn/defective scrap parts and waste or hazardous materials resulting from the work under the Agreement at Proposer's expense. 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. Proposer 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. Proposer shall notify the Director when these parts are to be removed from HAS property. Used parts at each Airport at the commencement of the Term of this Agreement are the property of HAS and shall remain at each Airport unless Proposer is instructed otherwise by HAS.

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- 15.5.1.4 Airport Parts Inventory - If the existing Proposer has an existing replacement parts inventory, and the incumbent HVAC Proposer is willing to sell all or a part of such inventory, then any arrangements by Proposer to purchase such inventory shall be solely the responsibility of Proposer and HAS shall have no obligations with respect to such purchase. If Proposer does arrange to make such purchase, then upon receipt of the Notice to Proceed, the Proposer shall immediately make arrangements to take possession of the incumbent HVAC Proposer's replacement parts inventory. Proposer shall be responsible for knowledge of condition, usability and inventory accuracy of parts purchased from the existing Proposer. Any relocation or storage costs associated with this inventory will be the Proposer's responsibility. This inventory shall become the full responsibility of the Proposer as to its use and disposition. At the end of the Agreement Term, all inventory as referenced shall have been used or remain the property of the Proposer.
- 15.5.1.5 Parts Storage - The spare parts inventory is the responsibility of Proposer. Proposer 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. Proposer shall maintain a parts log and submit monthly to Director.
- 15.6 Tools, Instruments, and Equipment IAH, HOU & EFD
- 15.6.1 As a part of Basic Services, the Proposer shall provide all supplies, materials, equipment, instruments, and tools required for the Work at Proposer'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 Proposer shall provide a list of the proposed equipment, including test/calibration/diagnostic equipment, tools, and supplies etc., as part of the Agreement.
- 15.6.2 Proposer 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.
- 15.6.3 Proposer shall provide lifts to service and maintain VAV boxes, exhaust systems, etc.
- 15.6.4 Proposer must keep two (2) lifts on-site, size appropriate as per SOW, 24/7 at IAH and one (1) lift on-site 24/7 at HOU. Proposer must provide transport of lifts around airport complex within two (2) hours as needed.
- 15.6.5 Proposer equipment brought into the facilities must not exceed the engineered floor load capacities of the facilities. It is the Proposer's responsibility to provide properly sized/rated equipment to perform all services specified.
- 15.6.6 All Proposer-furnished tools, equipment and instruments must be removed by Proposer at the termination or expiration of the Agreement.
- 15.7 Perform Annual Shutdown IAH & HOU
- 15.7.1 As part of Basic Services and at Proposer's expense, the Proposer shall perform an annual electrical and maintenance shutdown as specified in the Agreement and detailed in Exhibit XII.
- 15.7.2 During the period between January 1st to February 28th of each year, Proposer 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. Proposer shall provide all management, planning, scheduling, logistics, and quality control.

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- 15.7.3 Proposer shall also schedule and pay outside utility companies that may have to be involved in the shutdown. Annual shutdown will be at Proposer's expense including, but not limited to, spot coolers, trailer mounted DX units with generators capable of handling loads in IDF/MDF rooms, badged professional guards, electricity, gas, water, sewage, etc. Airline leased areas, HAS and FIS locations. Six months prior to shutdown, Proposer shall prepare and present to HAS for the Director's approval, an Activity Planning Program identifying the time schedule/ procedures for shutdown planning. Such time schedule 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.
- 15.7.4 At least two weeks prior to shutdown, Proposer shall deliver to Director the shutdown, work, and startup schedules. Following this activity, Proposer 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.
- 15.7.5 At IAH, Proposer shall have a minimum of 25 spot coolers ranging in size from 1.5 thru 5 tons in various MDF/IDF rooms in the Airport. Proposer is responsible to provide badged personnel to secure doors and verify that all persons entering have current Airport badges and security clearance. (Approximately 20 individuals).
- 15.7.6 Upon completion of the shutdown, work, and startup, Proposer shall schedule a debriefing meeting with HAS to review planning, execution and startup procedures, safety, expediting, manpower utilization, and work scheduling.
- 15.7.7 The minimum annual maintenance shutdown procedures are detailed in Exhibit XII.
- 15.8 Perform Corrosion Tests IAH, HOU & EFD
- 15.8.1 As a part of Basic Services, Proposer shall test and monitor corrosion rates for the steam, heating water, and chilled water, condensate and condenser water systems and report findings as specified in the Agreement and detailed in Exhibit XII. Failure to provide this and other Basic Service Test Reports upon completion of the associated task will result in the application of liquidated damages in accordance with Section 30 of this Agreement.
- 15.9 Other Basic Services Tests - IAH, HOU & EFD
- 15.9.1 Other test shall include, but not be limited to, the following test:
- 15.9.1.1 Hydro Static – perform hydro static on tubes once every 3 years on each boiler.
- 15.9.1.2 Eddy Current - perform Eddy Current Test on an alternating basis, on two (2) chillers per year, per Airport.
- 15.9.1.3 Oil/Refrigerant Analysis – perform oil/refrigerant analysis, quarterly, on all chillers.
- 15.9.1.4 Charcoal Filters - test charcoal filters quarterly and submit the results to the Director.
- 15.9.1.5 VFD's - calibrated and repaired as needed, regardless of horsepower rating yearly by a Certified VFD technician.
- 15.10 Cooling Tower Cleaning IAH & HOU
- 15.10.1 As a part of Basic Services, Proposer shall provide its approach and methodology for operating and maintaining the cooling towers at IAH and HOU. Cooling towers must be cleaned once per year.

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- 15.10.2 During cooling tower scheduled cleanings, Proposer 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 Agreement Term. Proposer shall keep the Director informed of such changes and the effect on the effective operation of the tower(s) involved.
- 15.10.3 As part of Basic Services, Proposer 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 Proposer's expense.
- 15.10.4 Failure of Proposer 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 shall be reimbursed to City by Proposer within 30 days of receipt of an invoice from the City for such fines or penalties.
- 15.10.5 Harmful Organisms - test for the presence of potentially harmful organisms in accordance with local, state or federal agencies regulation controlling such test. Testing shall be required monthly by Proposer and quarterly by a water treatment professional, approved in advance by Director, notwithstanding any additional regulations. The results of these tests are to be retained in accordance with the appropriate agency or current industry standards. The findings shall be considered an operational report and shall be reported to the Director immediately upon completion.
- 15.11 Filter Replacement IAQ, HOU & EFD
- 15.11.1 As part of Basic Services, Proposer shall inspect and replace HVAC filters in a timely manner, as required with the frequency of inspection based upon field conditions.
- 15.11.2 Proposer shall monitor all filters affected by construction projects and notify HAS of any deficiencies.
- 15.11.3 Replacement filters must meet or exceed the performance requirements of original OEM design matching the filtration requirements of specific HVAC and equipment.
- 15.11.4 Correct filters must ensure filtration at optimum efficiency consistent with minimum static pressure compensation.
- 15.11.5 Filter replacement requires the use of various types of filters properly located to ensure maximum indoor air quality at an economical cost.
- 15.11.5.1 Filter Selection Performance Factors
- 15.11.5.1.1 Filter type must be consistent with efficient operation at a minimum energy penalty for static pressure compensation.
- 15.11.5.1.2 Re-circulated filtered air shall provide superior indoor air quality with minimum effect of increasing the Airports ventilation load, energy consumption and operating costs in accordance with the most current version of ASHRAE Standard 62.1.
- 15.11.5.1.3 Filter type must be appropriate for specific mixing and distribution levels.
- 15.11.5.1.4 Filter selection must conform to current ASHRAE standards and existing EPA requirements.
- 15.11.5.1.5 Whenever possible, filters must utilize existing filter frames.
- 15.11.5.1.6 Filter selection must minimize any design modifications in both equipment and duct.

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- 15.11.5.1.7 Filter selection must be a pleat type with a minimum of MERV 8 rating for all 2 inch and 6 inch filters.
- 15.11.5.2 Filter Types
- 15.11.5.2.1 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 Proposer's off-site Sub-contractor for such services. During the time the charcoal filters are being regenerated, Proposer shall install spare filters until the filters are cleaned, regenerated, and reinstalled. To ensure minimum equipment shutdown, Proposer shall inventory an adequate number of replacement filters for this purpose. As part of Basic Services, Proposer shall be responsible, at its expense, for the maintenance, replacement, and regeneration of all such filters, both installed and in inventory for back-up. Proposer 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 the Director. Failure to provide this report will result in the application of liquidated damages in accordance with Section 30 of this contract.
- 15.11.5.2.2 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, Proposer shall keep a minimum of 1 additional replacement cell in inventory for this purpose.
- 15.11.5.2.3 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 not to exceed fifteen (15) months. 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.
- 15.11.5.2.4 Panel Filters, Media Filters, Roll Filters, Air Washers, etc -Various types and methods of filtration are utilized in the Airports' HVAC 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.
- 15.11.6 Filter Replacement Schedule - Proposer shall identify each piece of equipment that has a filtering system in place by the following parameters:
- 15.11.6.1 Equipment & Type.
- 15.11.6.2 Filter Material.
- 15.11.6.3 Filter Size.
- 15.11.6.4 Type of Filter.
- 15.11.6.5 Location of Filter.
- 15.11.6.6 Frequency of Changing.
- 15.11.6.7 Effectiveness.
- 15.11.7 Proposer shall collect this data and incorporate it into Proposer's filter maintenance schedule as part of its normal operations and maintenance responsibilities.

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15.12 Administrative Tasks IAH, HOU & EFD

15.12.1 As part of Basic Services, Proposer 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.

15.13 Maintenance Management System (MMS)

15.13.1 General Description

15.13.1.1 The contractor shall comply with HAS' Technology policies and best practices regarding the use of HAS infrastructure, technology assets, and HAS Enterprise Asset Management solution (currently Infor Enterprise Edition). The condition and disposition of all HVAC-related assets supported, on behalf of HAS, shall be documented and maintained in HAS' CMMS which includes scheduled preventive, corrective maintenance, and all other work order activity. Documented assets shall be in alignment with HAS asset hierarchy principles, location and asset naming convention. Technologies utilized as a result of this agreement are subjected to HAS Technology's governance, security, and life cycles.

15.13.1.2 HAS will retain all right, title, interest and full ownership of any work, invention, and all Agreement documents including all software, computer applications, preliminary plans, reports, or any modifications or improvements to the data at all times. In the event that modifications to the EAM database are required to move, enhance or manipulate HVAC-asset data, contractor shall subcontract an HAS-approved CMMS software vendor to perform IT-related tasks under the supervision of the HAS Technology Division and handled through OSR.

15.14 Reliability Centered Maintenance (RCM), IAH, HOU & EFD

15.14.1 As a part of Basic Services throughout the term of the Agreement, the Proposer shall provide Reliability Centered Maintenance on HVAC at minimum life-cycle costs.

15.14.2 Proposer must use the RCM to determine the most effective approach to maintenance and what must be done to ensure that the HVAC continues to perform as designed by the OEM within the present operating context. RCM is an ongoing process in which the Proposer gathers data from the HVAC performance and uses this data for future maintenance and/or recommend design changes.

15.14.3 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 will function in the required manner over their design life-cycle.

15.14.4 RCM requires that the Proposer make maintenance decisions based on maintenance requirements supported by sound technical and economic justification. RCM includes, but is not limited to:

15.14.4.1 Obtaining the highest level of performance and safety for the occupants and employees maintaining the Agreement.

15.14.4.2 Providing maximum functionality, availability, safety and reliability performance of HVAC at the lowest cost.

15.14.4.3 Identifying and implementing the most cost effective actions that reduce the probability of HVAC failure.

15.14.4.4 Provide statistical method of optimizing the preventive maintenance and predictive maintenance programs for HVAC.

15.14.4.5 Establish and identify issues of personnel performance and make any required corrections.

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- 15.14.4.6 Restore equipment to the required levels of performance when deterioration occurs, but before failure. "Required" shall be defined as a serviceable condition, not necessarily equal to new condition, which will allow the equipment to operate safely and at design capacity without any known deficiencies. Losses in efficiency and projects recommended to recover efficiency shall be provided as part of the annual Capital Improvements Plan described in Section 15.6 of this Agreement.
- 15.14.4.7 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.
- 15.14.4.8 Re-evaluate the workforce and identify efficiencies and changes in personnel for long-term productivity reductions.
- 15.14.4.9 Report monthly progress and areas of improvement in performance, personnel, equipment, and process in enough detail to cover the items specified above related to RCM. This report shall be provided to the Director monthly. Additionally, the monthly performance metrics listed below in Table 1 shall be met and included in this monthly report. Failure to provide this report will result in the application of liquidated damages in accordance with Section 30 of the Agreement.

Table 1 Monthly Performance Metrics

Metric	Variables and Equations	Benchmark
Equipment Availability	$\% = \frac{\text{Hours each unit is available to run at}}{\text{Total hours during the reporting time}}$	>95%
Schedule Compliance	$\% = \frac{\text{Total hours worked on scheduled jobs}}{\text{Total hours scheduled}}$	>90%
Emergency Maintenance Percentage	$\% = \frac{\text{Total hours worked on emergency jobs}}{\text{Total hours worked}}$	<10%
Maintenance Overtime Percentage	$\% = \frac{\text{Total maintenance overtime during}}{\text{Total regular maintenance hours dur}}$	<5%
Preventive Maintenance Completion Percentage	$\% = \frac{\text{Preventive maintenance actions comp}}{\text{Preventive maintenance actions sche}}$	>95%
Preventive Maintenance Budget/Cost	$\% = \frac{\text{Preventive maintenance cost}}{\text{Total maintenance cost}}$	15%-18%
Predictive Maintenance Budget/Cost	$\% = \frac{\text{Predictive maintenance cost}}{\text{Total maintenance cost}}$	10%-12%

Figure 4.1 adapted from Operations & Maintenance Best Practices Manual developed by the U.S. Department of Energy.

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15.15 CFC Refrigerants IAH, HOU & EFD

- 15.15.1 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.
- 15.15.2 Proposer 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.
- 15.15.3 Proposer shall ensure the necessary procedures and safeguards are in place to prevent the occurrence of a CFC Refrigerant discharge into the atmosphere. Proposer shall be required at the request of HAS to remove and dispose of any refrigerants from old and unused appliances within the airport complex.
- 15.15.4 All costs associated with removal of CFC Refrigerants for the purpose of recovery, recycling, or reclamation is at Proposer's sole expense and is included in Proposer's costs for Basic Services. No additional compensation will be allowed.
- 15.15.5 The use of new (unused), recovered, recycled or reclaimed refrigerant by Proposer shall be permitted under these specifications. However, Proposer 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.
- 15.15.6 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. Proposer 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.
- 15.15.7 Proposer 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.

15.16 Best in Practice Service IAH, HOU & EFD

- 15.16.1 Proposer shall implement industry best practices service through use of documented policies, procedures, processes, and employee training programs. Best-in-Practice Service is in accordance with the latest release of the Operations & Maintenance Best Practices developed by the U.S. Department of Energy.
- 15.16.2 Proposer's Best In Practice Service shall include, but not be limited to the following:
- 15.16.2.1 A central Help Desk to provide a focal point for operations planning, scheduling, communications with Proposer'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 the Proposer responds in the allotted time.
- 15.16.2.2 Efficient deployment and optimum use of all modules and capabilities of the MMS that includes electronic documentation and reporting of all HVAC activities.
- 15.16.2.3 An organizational model and work schedules that integrate all elements of strategic site leadership, field supervisory, customer service, and technical responsiveness.

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- 15.16.2.4 A model and management approach that considers and fosters internal departmental and external process handoffs, communications, teamwork, and process improvements.
- 15.16.2.5 A Reliability Centered Maintenance strategy that logically incorporates into a maintenance program the proper mix of reactive, preventive, predictive, and proactive maintenance practices.
- 15.16.2.6 A world-class performance measurement program. A world-class performance measurement program will be implemented by the Proposer and facilitated either internally by the Proposer or by a third party vendor with no less than 10 years of experience with performance measurement governed by the methodologies and techniques defined in the current revision of the International Performance Measurement and Verification Protocol (IPMVP). Cost and statement of work for enhancements and expansion of the BAS system and its functionality that accommodate or supplement IPMVP methodologies for performance measurement shall be the responsibility of the Proposer as a Basic Service.
- 15.16.2.7 Employee-training program that ensures Proposer's employees remain highly skilled and proficient.
- 15.16.2.8 Proposer's continuous improvement that incorporates the latest advances in Quality and Customer Satisfaction programs.
- 15.16.2.9 A communications and reporting program that stresses and mandates customer and internal formal and informal communications and reporting.
- 15.16.2.10 Proposer 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.
- 15.17 Third Party Audits IAH, HOU & EFD
- 15.17.1 Proposer must have a Third Party Audit of equipment specified by the Director performed during Proposer phase out. In addition HAS may at its discretion, request a third party audit, no more than once a year. A third party audit company must be approved by the Director.
- 15.17.2 Third Party Audits must verify quality of Operation and Maintenance of HVAC to include but not limited to:
 - 15.17.2.1 Operation & maintenance of HVAC.
 - 15.17.2.2 Operation of Thermal Utility Generation Systems
 - 15.17.2.3 Operation & Maintenance of DDC Systems.
 - 15.17.2.4 Preventive Maintenance.
 - 15.17.2.5 Condition of equipment.
 - 15.17.2.6 Energy Management, including analysis of energy usage data.
 - 15.17.2.7 Water Treatment Programs.
 - 15.17.2.8 Proficiency/accuracy of Work performed by Proposer's employees.
 - 15.17.2.9 House Keeping.
- 15.17.3 The cost for third party audits will be at HAS expense. An Independent and qualified third party agency must be selected by HAS. The third party agent/agency must be accountable to HAS. All reports must be sent directly to HAS with copies to Proposer.

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- 15.17.3.1 Any deficiencies discovered by third party audits which are the responsibility of Proposer, must be rectified by the Proposer at no cost to the City. Correction/Work shall commence within thirty (30) working days of receipt of the notice of any such deficiency. Proposer shall provide the Director with a written explanation for such deficiency in performance and a plan to prevent future such deficiencies within fifteen (15) days of receipt of such notice.
- 15.17.3.2 Failure of Proposer to correct deficiencies covered under the terms of the Agreement may be used by the Director as grounds for application of liquidated damages or termination of the Agreement within the meaning of the general provisions entitled "Default."
- 15.17.3.3 At the Director's discretion, Proposer 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.

16.0 PERSONNEL REQUIREMENTS IAH & HOU

- 16.1 Staffing – Proposer shall provide the necessary number of personnel required to operate and maintain the HVAC and equipment at all Airports. During the phase-in period, Proposer shall develop and implement a full project schedule detailing the responsibilities of personnel and submit this schedule to the Director for written approval. All personnel assigned by Proposer to perform in accordance with the terms of the Agreement will not be assigned to any other projects or contracts managed by Proposer unless approved in writing by the Director.
- 16.2 The Proposer's Project Manager, Central Plant Operations Manager, and Terminal Maintenance manager shall all have e-mail capabilities. Proposer shall answer correspondence via e-mail within 24 hours.
- 16.3 Should HAS determine that the Proposer is not meeting the Agreement responsibilities with the Proposer's on-site crew, then upon the Director's request, Proposer shall modify/increase its on-site crew in order to meet Agreement obligations. Proposer 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 Proposer is not meeting Agreement responsibilities; the Director will notify Proposer in writing. Proposer 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, Proposer shall pay for the cost of such additional staff.
- 16.4 Proposer 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 Proposer. The Project Manager shall not be a working technician/mechanic. The Project Manager shall be office at IAH, subject to change at the Director's discretion, from 8:30 a.m. through 5:30 p.m., Monday through Friday at a minimum. If Project Manager is on vacation, sick, etc., he will name a responsible subordinate to act on his behalf with full authority to represent the Proposer as if the subordinate was the Project Manager.
- 16.5 After execution of the Agreement the Project Manager shall attend a minimum of one meeting every month, or as requested by Director, with the Director to report on the status of the system/equipment and the Work/Services. Proposer 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. Liquidated damages may be assessed for failure of Proposer to comply with the above requirement.
- 16.6 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. Proposer shall provide a toll free telephone number if the Project Manager resides outside of the 713, 832, or 281 Area Codes.

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- 16.7 The Project Manager, Central Plant Operations Manager, and Terminal Maintenance Manager shall not be reassigned and or be replaced from this Agreement without prior written approval of the Director.
- 16.8 Although personnel are assigned to specific Airports, every employee shall be cross trained and deployed as required.
- 16.9 Proposer shall notify Director of holiday/vacation schedules at least fourteen (14) days in advance.
- 16.10 The following job descriptions are intended to address minimum key personnel qualifications and are not intended to establish the level of staffing needed to operate and maintain the HVAC and equipment.
- 16.10.1 Project Manager – The Project Manager shall have minimum 2 years of HVAC central plant experience with a minimum 15,000 tons capacity or more.
- 16.10.1.1 A minimum of 10 years HVAC maintenance project experience with verifiable HVAC management capability and experience including but not limited to, Centrifugal and Reciprocal chillers 2000 tons or larger and water tube high-pressure boilers up to 600 degrees (F) @ 225 lbs. having a minimum capacity of 50,000 lbs per hour.
- 16.10.1.2 A minimum of 2nd Class Stationary Engineer License or Class A Texas Air Conditioning and Refrigeration Proposer License with “R” endorsement.
- 16.10.1.3 Minimum of five (5) years Energy Management experience.
- 16.10.1.4 Five (5) years cost forecasting and training and managing personnel.
- 16.10.1.5 Advanced computer skills and in-depth knowledge of complex DDC control systems.
- 16.10.1.6 HVAC Control experience is a plus.
- 16.10.1.7 The Project Manager shall communicate with the Director and shall be exclusively assigned to this Agreement. The Project Manager shall not be reassigned from this A without prior written approval of the Director. The Project Manager will be physically located at IAH but will operate between all facilities.
- 16.10.2 IAH Dispatch/Work Order Control –Generates work orders. Tracks and provides monthly, daily, weekly data on PM Logs and scheduling Parts Usage, Labor Hours and Warranty Reports:
- 16.10.2.1 2 to 4 years experience in Service Dispatch.
- 16.10.2.2 Excellent typing skills.
- 16.10.2.3 In-depth computer skills.
- 16.10.2.4 Proficiency with MS Office Applications and able to create and maintain spreadsheets.
- 16.10.2.5 Minimum coverage 16 hours a day, 6 days a week.
- 16.11 IAH Proposer’s personnel shall include professionals in the following job categories:
- 16.11.1 IAH Maintenance Manager - 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. At a minimum, experience and requirements will include, but not be limited to:
- 16.11.1.1 Five 5 years supervisory capacity.
- 16.11.1.2 A State of Texas HVAC License Class B or higher.

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- 16.11.1.3 A Universal Recovery Certificate.
- 16.11.1.4 Working knowledge of Variable Frequency Drives.
- 16.11.1.5 Knowledge of Complex Control Systems, BACNET.
- 16.11.1.6 Native language required with graphic capability.
- 16.11.1.7 Excellent Chemical Treatment knowledge.
- 16.11.1.8 Building Pneumatics and Compressors.
- 16.11.1.9 Building Chilled Water and Hot Water Pumps.
- 16.11.1.10 Excellent working knowledge of Heat Exchangers.
- 16.11.1.11 Basic Electrical Diagnostic Skills.
- 16.11.2 IAH Central Plant Operations Manager –Central Plant Operations Manager must have a minimum of ten (10) years experience in a large central plant (15,000 tons or higher) and at a minimum shall have experience and requirements which include, but not limited to:
 - 16.11.2.1 Maintenance and Operation of Steam Boilers 50,000 lbs or higher.
 - 16.11.2.2 A Stationary Engineering License.
 - 16.11.2.3 Maintenance on Steam Turbines and Electric Driven Chillers.
 - 16.11.2.4 Five (5) years of Energy Management Experience.
 - 16.11.2.5 Operating High Pressure Boilers, 600 °F, 225 lbs.
 - 16.11.2.6 Excellent Chemical Treatment knowledge.
 - 16.11.2.7 Experience in Operative Plant Automation Systems.
 - 16.11.2.8 Shift of five (5) days a week.
- 16.11.3 IAH Terminal Maintenance Supervisor - –Must have a minimum of five (5) years experience in Facility Maintenance, including but not limited to the following requirements:
 - 16.11.3.1 Three (3) years supervisory experience.
 - 16.11.3.2 Universal Recovery Certificate.
 - 16.11.3.3 State of Texas A/C License, Class B or higher.
 - 16.11.3.4 Working knowledge of Variable Frequency Drives.
 - 16.11.3.5 Excellent Chemical Treatment knowledge.
 - 16.11.3.6 Excellent working knowledge of Building Automation System.
 - 16.11.3.7 Experience with Pneumatics Control Systems and Compressors.
 - 16.11.3.8 Building Chilled Water and Hot Water Repair experience.
 - 16.11.3.9 Experience with repair and operation of Heat Exchangers.
 - 16.11.3.10 Basic Electrical Diagnostic Skills.
- 16.11.4 IAH Preventive Maintenance Technicians – Preventive Maintenance Technician must have three (3) years experience in a Facility Maintenance environment. Experience includes but not limited to:
 - 16.11.4.1 Preventive Maintenance on pumps, air compressors, electrical motors/starter, AHU, Mixing Boxes, Duct Work, Bearing Replacement and Centrifugal Blowers.
 - 16.11.4.2 Staffing Requirements for PM Technicians must be - - for 24 hours a day, 7 days a week coverage.

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- 16.11.4.3 Preventive Maintenance Technician are to be assigned full time to terminals A, B, C, D, & FIS.
- 16.11.5 IAH Preventive Maintenance Technician Helpers — 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.
- 16.11.6 IAH Electricians (Journeyman) - – Electrician Mechanic must have a minimum of three (3) years HVAC electrical experience and requirements including but not limited to:
- 16.11.6.1 Maintenance electrician and a Journeyman Electrician's license in conformance with the City of Houston Building Code.
- 16.11.6.2 Qualifications to perform most maintenance tasks on:
- 16.11.6.2.1 Variable Speed Drives.
- 16.11.6.2.2 High voltage experience.
- 16.11.6.2.3 480 V. 3 ph, switch gear.
- 16.11.6.2.4 12.47 KV systems.
- 16.11.6.2.5 Motor starters, transformers.
- 16.11.6.2.6 Buss distribution, buss-ties.
- 16.11.6.2.7 Automatic and manual transfer switches.
- 16.12 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).
- 16.12.1 IAH DX Maintenance Mechanics –DX Maintenance Mechanic must have a minimum of 5 years continuous HVAC installation/repair experience including but not limited to:
- 16.12.1.1 Journeyman experience.
- 16.12.1.2 Five 5 years of repair experience in commercial air conditioning.
- 16.12.1.3 Universal Refrigerant recovery license and minimum of class B state of Texas A/C license.
- 16.12.1.4 DX Maintenance Mechanic will maintain all stand alone facilities.
- 16.12.1.4.1 Quantities:
- Covering the 1st. shift - 7 am to 3 pm - (Monday - Friday).
- Covering the 2nd. Shift - 3 pm to 11 pm - (Monday - Friday).
- 16.12.2 IAH Central Plant Stationary Engineers – Sufficient for 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 and requirements include but not limited to:
- 16.12.2.1 A Universal Freon Recovery Certificate.
- 16.12.2.2 Operation of large tonnage chillers of 2,000 tons or higher.
- 16.12.2.3 Operation of boilers of 40,000 lbs of steam or higher.
- 16.12.2.4 Heat Exchangers.
- 16.12.2.5 Cooling Towers.
- 16.12.2.6 Plant Automation System.

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- 16.12.2.7 Air Compressors.
- 16.12.2.8 Chemical Treatment Systems.
- 16.12.3 IAH Senior Building Controls Technician – (Controls BACnet Native) - Senior Technicians must have a minimum of Ten (10) years continuous experience on BACNET controls, including but not limited to:
 - 16.12.3.1 Experience in the measurement, calibration, monitoring, testing and troubleshooting of electronic, pneumatic and electrical control systems.
 - 16.12.3.2 Experience must include communication; high speed modems and P.C. based HVAC networking systems.
 - 16.12.3.3 Capable of system management, repair and upgrades.
 - 16.12.3.4 Capable of creating and modifying graphics.
 - 16.12.3.5 Minimum of three (3) years in programming.
 - 16.12.3.6 Completed at least 400 hours of accredited technical schooling in electronic controls.
 - 16.12.3.7 Experience must include a minimum of four (4) years of Alerton Systems.
 - 16.12.3.8 Minimum of three (3) years in personnel management and work scheduling.
- 16.12.4 IAH Building Controls Technicians - (Controls BACnet Native) – Technician shall have a minimum of four (4) years continuous BAC net Controls experience including but not limited to:
 - 16.12.4.1 Capable of systems maintenance/ repair/upgrades.
 - 16.12.4.2 Minimum of 200 hours of accredited technical training in electronics or computer programming.
 - 16.12.4.3 Able to work with Star-Bus, BACnet Native and other industrial languages.
- 16.12.5 IAH Plant Maintenance Mechanic - Minimum of ten (10) years experience in large central plant (15,000) tons or larger. Experience to include but not limited to:
 - 16.12.5.1 Universal recovery certificate.
 - 16.12.5.2 Centrifugal chillers (2,000 tons or higher).
 - 16.12.5.3 York chiller experience a must.
 - 16.12.5.4 Steam turbine experience a must.
 - 16.12.5.5 Pneumatic air systems.
 - 16.12.5.6 Water treatment programs.
 - 16.12.5.7 Boiler experience of at least 40,000 lbs or higher.
 - 16.12.5.8 Experience on heat exchangers.
 - 16.12.5.9 Operation and maintenance on cooling towers and pump repairs.
- 16.12.6 IAH Administrative Assistant - 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.
- 16.12.7 IAH Painter –Painting of mechanical rooms, central plant, and duct work etc.
- 16.12.8 IAH Cleaner - (Central Plant Only) Cleaning experience includes but not limited to the following:

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- 16.12.8.1 Clean equipment, pads, floors, bathrooms, windows etc.
- 16.12.8.2 Wipe down piping in tunnels, equipment room.
- 16.12.8.3 Plant housekeeping, buff, and wax floors.
- 16.13 HOU Proposer's personnel shall include professionals in the following job categories, and is a shared resource with EFD:
 - 16.13.1 HOU Operations Supervisor - The Operations Supervisor shall have a minimum of ten (10) years 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.
 - 16.13.2 HOU First Grade Stationary Engineers - First Class Operating Engineers shall have First Grade Stationary Engineer's Licenses in conformance with the City of Houston Codes. Minimum of eight (8) years HVAC operating experience as a First Grade Stationary Engineer.
 - 16.13.3 HOU Operations Engineers - Operating Engineer shall have Second Grade Stationary Engineer's Licenses in conformance with the City of Houston Codes. Minimum of eight (8) years operating experience as a Second Grade Stationary Engineer.
 - 16.13.4 HOU Maintenance Mechanics - Maintenance Mechanic shall have a minimum of 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 from an accredited source(s) and instructor/training background.
 - 16.13.5 HOU Senior Building Controls Technician - Must have a minimum of ten (10) years continuous experience on BACNet Controls, including but not limited to:
 - 16.13.5.1 Experience in the measurement, calibration, monitoring, testing and troubleshooting of electronic, pneumatic and electrical control systems.
 - 16.13.5.2 Experience must include communication; high speed modems and P.C. based HVAC networking systems.
 - 16.13.5.3 Capable of system management, repair and upgrades.
 - 16.13.5.4 Capable of creating and modifying graphics.
 - 16.13.5.5 A minimum of three (3) years in programming.
 - 16.13.5.6 Must have completed minimum of 400 hours of accredited technical schooling in electronic controls.
 - 16.13.5.7 Experience must include at least four (4) years of Alerton Systems.
 - 16.13.5.8 Must have a minimum of three (3) years in personnel management and work scheduling.
 - 16.13.6 HOU DX Mechanic -Must have minimum of five (5) years of continuous HVAC installation/repair experience including but not limited to:
 - 16.13.6.1 Journeyman Level Experience.
 - 16.13.6.2 Minimum of two (2) years servicing and repair commercial air conditioning.
 - 16.13.6.3 Universal Refrigerant Recovery License.

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- 16.13.6.4 State of Texas Class B Proposer's License or higher
- 16.14 Personnel Approval IAH & HOU
- 16.14.1 The Proposer 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. Proposer may change personnel only with equally qualified personnel as approved by the Director.
- 16.15 EFD Personnel
- 16.15.1 HVAC requirements at Ellington Airport will be handled by personnel from HOU and supported by all Proposer personnel.
- 16.15.2 Proposer personnel reporting to EFD shall spend at least ten (10) hours per week on preventive maintenance.
- 16.16 Housekeeping Duties IAH & HOU
- 16.16.1 Central Plants Housekeeping Duties – As part of Basic Services
- 16.16.1.1 Proposer 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.
- 16.16.1.2 Proposer shall maintain all parts of all panel boards that have any device serving/affecting heating, ventilating and air conditioning systems.
- 16.16.1.3 Equipment, parts, supplies, materials etc., must not be stored in any areas unless specifically authorized in writing by the Director.
- 16.16.1.4 Central Plant Housekeeping Duties Include:
- 16.16.1.4.1 Furnishing the appropriate tools, equipment, and supplies.
- 16.16.1.4.2 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.
- 16.16.1.4.3 Maintain the condition of all ceiling, glass and wall areas to include painting as may be required to maintain a clean and neat appearance.
- 16.16.1.4.4 Clean and maintain ceiling tiles and floor tiles in offices.
- 16.16.1.4.5 Maintain the lighting in the Central Plant to include, but not be limited to, electrical, fixtures and lamps.
- 16.16.1.4.6 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.
- 16.16.1.4.7 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.
- 16.16.1.4.8 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.

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- 16.16.1.4.9 Maintain all drains, grease traps, toilets, etc., in the Central Plant that become clogged. The Proposer's responsibilities extend from the Central Plant to the main sewer line.
- 16.16.2 IAH Tunnel Area Housekeeping Duties
- 16.16.2.1 Proposer 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. Proposer shall also maintain the lighting in the IAH utility tunnel to include, but not be limited to, electrical, fixtures and lamps.
- 16.16.3 Terminal HVAC Equipment Rooms/Air Handler Rooms Housekeeping Duties
- 16.16.3.1 Proposer 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.
- 16.16.4 IAH Administration Building, ASC, SCM, & Remote Buildings/Facilities Housekeeping Duties
- 16.16.4.1 Proposer 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.
- 16.16.5 HOU Building at 8800 Paul B. Koonce and Remote Buildings/Facilities Housekeeping Duties
- 16.16.5.1 Proposer 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 the Director.
- 16.16.6 Miscellaneous DX Equipment Housekeeping Duties
- 16.16.6.1 Proposer 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.
- 16.17 Proposer shall provide, at its own expense:
- 16.17.1 All office furniture and incidentals required for Proposer'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. Proposer shall remove all Proposer-owned furniture and equipment upon termination or expiration of the Agreement.
- 16.17.2 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.
- 16.17.3 All telephone lines will be provided by the City, but all cost for use thereof will be at Proposer's expense.
- 16.17.4 Proposer 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, Proposer shall develop schedules for regular housekeeping of the central plant HVAC equipment areas.

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16.18 Uniforms - IAH,HOU & EFD

16.18.1 Proposer's personnel shall present a clean and neat appearance. Proposer's personnel shall wear a Proposer furnished uniform with Proposer's name clearly displayed on the front of the shirt and seasonal outerwear approved by the Director.

16.19 Training IAH,HOU & EFD

16.19.1 The Proposer'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 in Best-in-Practice Service. Best-in-Practice Service is in accordance with the latest release of the Operations & Maintenance Best Practices developed by the U.S. Department of Energy. The training program must include both comprehensive training needs analysis and subsequent training by staff professionals. The Proposer shall provide the Director with quarterly and annual training documentation, by employee, with topic and hours. This shall be considered an operational report. Failure to provide this report will result in the application of liquidated damages in accordance with Section 30 of this contract.

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

16.19.2.1 General Plant Safety.

16.19.2.2 Mathematics and Measurement.

16.19.2.3 Hand Tools & Power Tools.

16.19.2.4 Bearings & Drive Components.

16.19.2.5 Equipment Installation.

16.19.2.6 Steam Generation.

16.19.2.7 Air Conditioning & Refrigeration.

16.19.2.8 Applied Mech. Maintenance.

16.19.2.9 Pumps and Piping Systems.

16.19.2.10 Hydraulic, Pneumatic, Electric Systems.

16.19.2.11 Electric Troubleshooting.

16.19.2.12 Turbine & Boiler Operation.

16.19.2.13 Energy Conservation.

16.19.2.14 First Line Supervision.

16.19.2.15 Basic Mechanics

16.19.2.16 Lubrication

16.19.2.17 Basic Electricity

16.19.2.18 Working with Materials

16.19.2.19 Blueprints and Schematics

16.19.2.20 Non-specialized Welding

16.19.2.21 Electronics

16.19.2.22 Electric Systems

16.19.2.23 Applied Welding

16.19.2.24 Building and Grounds Maintenance

16.19.2.25 Pollution Control

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- 16.19.2.26 First Line Supervision
- 16.19.2.27 Safety and PPE
- 16.19.3 Training needs analysis and training for management/supervisory staff shall include, but not be limited to:
 - 16.19.3.1 Human Resource.
 - 16.19.3.2 Plant Maintenance.
 - 16.19.3.3 Regulatory Compliance.
 - 16.19.3.4 Human Resources
 - 16.19.3.5 Basic Supervision
 - 16.19.3.6 Interviewing
 - 16.19.3.7 Performance Evaluation
 - 16.19.3.8 EEO/ Mayor's Office of Business Opportunity
 - 16.19.3.9 Labor Relations
 - 16.19.3.10 Employee Counseling
 - 16.19.3.11 Work Order Systems
 - 16.19.3.12 Project Management
 - 16.19.3.13 Energy Management
 - 16.19.3.14 Preventative Maintenance
 - 16.19.3.15 Work Planning
 - 16.19.3.16 Federal, State, and Local Codes
 - 16.19.3.17 Computer Skills
 - 16.19.3.18 Job Costing/Estimating
 - 16.19.3.19 Written Communication
 - 16.19.3.20 Risk Management
 - 16.19.3.21 Safety and PPE
- 16.19.4 All costs for training must be provided by Proposer as part of Basic Services.

17.0 FACILITIES AND SERVICES PROVIDED BY HAS

17.1 Utilities

- 17.1.1 HAS will provide all electricity and natural gas required for the operation of HVAC. The existing service and distribution facilities for electricity and natural gas are in place and connected to the equipment.
- 17.2 HAS will also provide water necessary for use in the HVAC and for Proposer's employees on site.

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- 17.3 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.
- 17.4 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 and cost of Proposer. With Director's prior written permission, filters can be disposed of in HAS dumpsters.
- 17.5 Fire Safety Equipment - HAS will maintain existing fire extinguishers.
- 17.6 Office, Maintenance, and Storage Area – At IAH & HOU, HAS will provide an office, maintenance, and storage areas. Proposer shall provide, at its expense, any additional required facilities. Proposer shall be responsible at its cost for all housekeeping of such facilities including, but not limited to, sweeping, washing, cleaning, waxing, painting, dusting, etc., of all areas, fixtures, and equipment.
- 17.7 Access to Work Areas – Subject to HAS rules and regulations, Proposer may enter and leave work sites at all reasonable times. Proposer and its employees may use the common areas and roadways at the Airport where the work sites are located. This excludes parking for Proposer'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. Proposer shall repair any damage it or its employees cause as a result of its use of the common areas.
- 18.0 COORDINATE PERFORMANCE IAH, HOU & EFD**
- 18.1 HAS Contact – Proposer shall coordinate its performance with such person(s) as the Director designates in writing to Proposer. Proposer shall keep said person(s) currently advised of developments relating to the performance of the Agreement.
- 18.2 Pre-Performance Conference – Thirty (30) days prior to commencing performance under the Agreement, Proposer 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 Proposer. Representatives of Proposer attending the pre-performance conference include, but are not limited to, the Project Manager whom Proposer has assigned to the Agreement, together with an officer of Proposer who is authorized to bind Proposer in matters relating to the pre-performance conference items listed below to the extent the Project Manager is not so authorized to bind Proposer. In the above-mentioned notice, the Director may, in his sole discretion, further designate other representatives of Proposer who must attend the pre-performance conference and such designated representatives shall attend same. Items to be addressed at the pre-performance conference include, but are not limited to, the following:
- 18.2.1 Phase-in and Start-up schedules.
- 18.2.2 Contract administration.
- 18.2.3 Facilities utilization.
- 18.2.4 Channels of communication.
- 18.2.5 Review of key personnel resumes and certifications.
- 18.2.6 Organization and function charts reflecting the line of management authority.
- 18.2.7 Procedures to be used to ensure Agreement requirements are met (Quality Control Program).
- 18.2.8 Transition Planning, including the existing MMS and spare parts management.

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18.3 Coordination Meetings - Throughout the Agreement Term and any extensions hereto, Proposer shall meet with the Director to identify and resolve performance issues. Meetings will be scheduled bi-monthly or as determined by the Director. Notice of any such meeting may be given by the Director to Proposer either orally or in writing and will designate the time, date, location, Proposer attendees, and general purpose. The Proposer'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.

19.0 PHASE-IN/PHASE-OUT SERVICES IAH & HOU

19.1 Proposer's Phase-In

19.1.1 In order to accomplish a smooth and successful transition of operations and maintenance services and at no extra charge to the City, Proposer shall provide Phase-in services for up to thirty (30) days prior to Agreement expiration.

19.1.2 Proposer'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. Proposer shall have no responsibilities for operating or maintaining the HVAC during the Phase-in period.

19.1.3 During the phase-in period, the successful Proposer shall have access to the facilities and areas covered by the Agreement, access to personnel, and allowed to observe all operations.

19.1.4 The incumbent Proposer will perform the duties and services listed in its contract during the Proposer's Phase-In period, and will be available during the phase in period to answer questions and resolve issues or any misunderstandings.

19.1.5 The Proposer shall provide during Phase-in period, all required deliverables including but not limited to:

19.1.5.1 Review and verify Exhibit XI & XVI of the SOW Equipment List within the first ten (10) Phase-In days.

19.1.5.2 Arrange to have necessary supervisory, technical, and other personnel on site at the Airports to observe the operation and maintenance of the HVAC.

19.1.5.3 Recruit and transfer personnel, train personnel, arrange for security badging.

19.1.5.4 Establish management procedures, set up records, ensure adequate parts, tools and equipment in place for systems operation and maintenance.

19.1.5.5 Prepare for the assumption of technical control without disruption of operations.

19.1.5.6 Develop and implement a full project schedule detailing the responsibilities of assigned personnel and submit it to the Director for approval.

19.1.5.7 Coordinate Proposer's activities with Director.

19.1.5.8 Final transition and training plan addressing the Proposer staffing strategies in determining the necessary staffing and supervision required for compliance with the specified services.

19.1.5.9 Emergency phone numbers and verification of cell phones.

19.1.5.10 Certification of all Proposer Personnel requirements and training.

19.1.5.11 Reporting and approach plans.

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- 19.1.5.12 Inventory of supplies, materials, tools, equipment, etc., necessary to start.
- 19.1.5.13 Standard Operating Procedures (SOP).
- 19.1.5.14 Permits, licenses and certifications.
- 19.1.5.15 Security approval and access.
- 19.1.5.16 Sub-contractor & Sub-contractor agreements in place.
- 19.1.6 The Phase-in period will end twenty-four (24) hours prior to the effective contract start date shown in the official Notice to Proceed, at which time Proposer shall assume full responsibility for the operation and maintenance of the HVAC and equipment. The Proposer shall be prepared to perform fully all Work services upon receipt of notification to proceed document from the Director.
- 19.1.7 Within one month after the Agreement start date, the Proposer shall certify to the Director in writing that 100% of the Proposer's employees (fully trained and experienced) necessary for the effective and timely accomplishment of the Proposer's obligations under the Agreement are in place, and all Sub-contractors, if any, necessary for the effective and timely performance of the Proposer's obligations under the Agreement have been engaged by the Proposer and have commenced work under their respective Subcontracts.
- 19.2 Proposer's Phase-Out
- 19.2.1 Six (6) months prior to the Agreement expiration, the Proposer shall have a third party audit of equipment identified by the Director at Proposer's cost. The third party company must be approved in writing and in advance by the Director and agent/agency must be accountable to HAS. All reports must be sent to HAS with copies to the Proposer. Within these six (6) months, the Proposer shall also correct all deficiencies found by the third party auditor and certify in writing to the Director that all deficiencies have been corrected.
- 19.2.2 In order to accomplish a smooth and successful transition of operations and maintenance services and at no extra charge to the City, the Proposer shall provide Phase-out services for up to sixty (60) 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. Proposer shall be totally responsible for providing the services under the Agreement during its Phase-out period. Proposer shall cooperate with its successor Proposer 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.
- 19.2.3 Proposer shall disclose necessary personnel records and allow its successor to conduct on-site interviews with its employees, provided Proposer 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.
- 19.2.4 The Proposer shall provide all required deliverables including, but not limited to:
 - 19.2.4.1 List of qualified employees working at the Airport.
 - 19.2.4.2 Reporting requirements.
 - 19.2.4.3 Inventory of supplies, materials, tools, and equipment.
 - 19.2.4.4 Current Standard Operating Procedures.
 - 19.2.4.5 Permits, licenses, and certifications.
 - 19.2.4.6 Deficiency status and list.

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- 19.2.4.7 Detailed transition plan.
- 19.2.5 Proposer shall turn over all HVAC 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.
- 19.2.6 One year prior to the expiration of the Agreement Term, Proposer shall prepare and submit to the Director a complete equipment listing of all IAH, HOU, and EFD HVAC equipment. Listing must include identification number, description, location, model/serial number, area served, condition, and age of equipment.
- 19.2.7 Within sixty (60) days of the expiration of the Agreement Term, the Proposer shall perform a complete inspection of all controls and instrumentation. Any HVAC not in First Class Condition and/or not performing as designed by OEM within its present operating condition must be corrected.
- 19.2.8 Sixty (60) days prior to the expiration of the Agreement Term, the Proposer shall provide the Director with a complete final report on the condition of all HVAC, including inspection reports, and certified statements signed by an agent of Proposer, testifying to the Best-in-Practice Service of all equipment and systems and that all HVAC are in First Class Condition and performing as designed by OEM within present operating conditions. HAS will have 30 days to review the final report and respond to the Proposer. The Proposer will be required to correct any deficiencies identified by HAS prior to the expiration of the Agreement term.
- 19.2.9 HAS shall have the right of inspection during or after any of this work, and shall notify Proposer, within seven (7) calendar days of receipt of Proposer's certified statement, of any noted discrepancies. Proposer shall then proceed to correct any discrepancies within thirty (30) days and notify the Director in writing upon completion of all work. Proposer shall assist HAS with any inspections required by the Director at no additional cost to HAS.
- 19.2.10 Should Proposer fail in the performance of this portion of the Agreement, Proposer agrees that the Director may perform such Services and deduct costs from any amount that may be due Proposer. Should costs exceed amounts due Proposer, additional costs must be paid by Proposer to City or by Proposer's performance bond surety.
- 19.2.11 At the expiration or termination of the Agreement, the Proposer shall verify to HAS that all equipment is in Best-in-Practice Service and that all HVAC 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.

20.0 NOTICE TO PROCEED (NTP) REQUIREMENTS

- 20.1 Immediately after receipt of NTP, the Proposer 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).
- 20.2 Within thirty (30) days after the NTP, the Proposer 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.
- 20.3 Within thirty (30) days after the NTP, the Proposer shall certify to the Director in writing that 100% of the Proposer's employee (fully trained and experienced) necessary for the effective and timely accomplishment of the Proposer's obligations under the agreement are in place, and all Sub-contractors, if any, necessary for the effective and timely performance of the Proposer's obligations under the agreement have been engaged by the Proposer and have commenced work under their respective Sub-contracts.

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

20.5 Within sixty (60) days after the NTP, the Proposer 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.

20.6 Proposer Phase-in/Phase-out Period IAH, HOU & EFD

20.6.1 Within ninety (90) days from the NTP, the new Proposer shall provide to the Director its training program. Failure to provide this report will result in the application of liquidated damages in accordance with the Agreement.

21.0 TELEPHONE SERVICE

21.1 Proposer 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.

22.0 SECURITY AND BADGING IAH, HOU & EFD

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

22.1.1 All on-site personnel of Proposer, 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 Proposer personnel.

22.2 Proposer 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. Proposer is responsible for the cost of badges, including replacements thereof. Proposer personnel losing badges will be charged for replacement badges at the then current rate. Badge yearly renewal cost is \$16.00.

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

22.4 Airport Customs Security Area Bond:

Proposer 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.

23.0 INVOICING

23.1 Proposer 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.

23.2 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:

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

23.3 Invoicing:

23.3.1 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.

23.3.2 Requirements are as follows:

23.3.2.1 Submit invoices in "TIFF" format

23.3.2.2 Submit to has.accountspayable@houstontx.gov

23.4 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.

23.5 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.

24.0 TRANSPORTATION AND PARKING IAH, HOU & EFD

24.1 Proposer shall park its vehicles in areas designated by Director at its own cost. All transportation activities of Proposer or its Sub-contractor necessary to perform under the Agreement must be provided by Proposer.

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

25.0 PROPOSER'S RADIO COMMUNICATIONS REQUIREMENTS IAH, HOU & EFD

25.1 Proposer shall operate the radios within protocols established by HAS and the FAA.

25.2 HAS will provide the Proposer with handheld radios (2 at IAH & 2 at HOU) equipped with batteries and chargers for Proposer'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 Proposer shall return all radios to HAS. At all times the radios remains the property of the City.

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

26.0 SAFETY IAH, HOU & EFD

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

26.2 Proposer 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

26.3 Proposer personnel must wear applicable personal protection equipment at all times

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- 26.4 Proposer personnel operating equipment or handling materials must be fully trained in the safe operation of the equipment or materials.
- 26.5 Proposer personnel shall follow and apply safety practices prevailing in their applicable industry.
- 26.6 Proposer shall develop, implement and maintain an on-going safety program concerned with equipment, maintenance work, and related procedures. Proposer should present a written Safety Program (including Sub-contractors' services) to Director for approval no later than 60 days after Notice to Proceed. This shall include Security Identification Display Area (SIDA) training for IAH, HOU, and EFD. Proposer shall post safety warnings on equipment as necessary to ensure safe operations. Proposer shall not operate, install, or test any equipment in an unsafe condition. Proposer shall properly operate and maintain all safety equipment associated with its services.
- 26.7 When Proposer becomes aware constructively or actually of a hazardous or potentially hazardous condition during the course of performing services, Proposer shall verbally notify Director. Proposer shall immediately make such notification upon detection of the condition. Proposer shall detail conditions along with non-hazardous conditions and recommendations in its quarterly report.
- 27.0 MATERIAL SAFETY DATA SHEETS (MSDS) IAH, HOU & EFD**
- 27.1 The Proposer 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.
- 28.0 CONTROL OF PREMISES IAH, HOU & EFD**
- 28.1 Access to the HVAC
- 28.2 Proposer equipment brought into the facilities must not exceed the engineered floor load capacities of the facilities. Operations and maintenance areas must be limited to Proposer's personnel, HAS employees, and certain other individuals authorized by the Director. Access to the premises must be strictly controlled and Proposer shall keep a record of all keys distributed to its personnel. Officers, employees or agents of Proposer 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 Proposer hereby assumes full liability arising from any such unauthorized incursions.
- 28.2 All equipment PM sheets, schedules, and other records must be available at Proposer's Project Manager's office for inspection by HAS personnel. All documents generated or obtained by Proposer that pertain to the operation and maintenance of the HVAC and equipment shall become HAS property upon Agreement expiration or termination. All such documents shall be transferred to the Director within ten (10) days of expiration or termination.
- 29.0 INCLUSION/EXCLUSION**
- 29.1 Adjustment to the Fee Schedule shall be allowed only when the cumulative change is greater or less than 10% of the contract value of the total basic services at all three airports with the Proposer being responsible to monitor and value the changes to determine when the threshold is met. Historically the cost has been less than ½ percent the value of total basic services at all three airports. Proposer shall use the attached Inclusion/Exclusion Form to perform the contract evaluation.
- 29.2 Proposer Valuation Process
- 29.2.1 The MMS will establish the required Preventive Maintenance / Corrective Maintenance baseline labor hours by type of equipment which must be approved in writing by the Director.

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- 29.2.2 If no MMS historical data is available, the accepted source is Facilities Maintenance & Repair Cost Data, latest edition R.S. Means Company or later version and/or another HAS approved source.
- 29.2.3 Baseline staff hours will be based on productive hours. Assuming 2080 total hours per year productive hours equal 2080 with actual tool time at 65% or 1352 hours per year.
- 29.2.4 Additions or deletions of equipment that equal labor at or above the trigger point of 1352 hour / year indicating that a fulltime equivalent will be required or in excess of service delivery requirement.
- 29.2.5 Proposer Labor cost will be adjusted based on actual labor cost (addition/deletion) x 1.35%.
- 29.2.6 Additions: Proposer shall accurately document materials used and project costs for a 12 month period following additions, to be verified by HAS. The contract amount will be adjusted for the remainder of the contract term following the verification by HAS.
- 29.2.7 Deletions: Contract will be decreased by an amount equal to the total cost expended by the Proposer for the prior 12 months or applicable measurable period.
- 29.2.8 In the case of a large addition or deletion of 250,000 square feet of conditioned space both parties agree to negotiate cost based on the above criteria.

30.0 LIQUIDATED DAMAGES

30.1 In addition to the termination rights in Exhibit XVII - Sample Contract, Article V, Section C and D, and all other legal and equitable remedies, Director shall have the discretionary right to assess liquidated damages in amounts not to exceed the amounts set forth below on a per occurrence basis and as may be described in other sections of this Agreement. Proposer and City stipulate and agree that any such assessment shall not be construed as a penalty; rather, Proposer and City stipulate that the damages resulting from any such violation will be difficult to measure and ascertain and as such the necessity of liquidated damages. Proposer shall pay any assessment of liquidated damages by the Director to City within ten days of receipt of an invoice for such damages. Multiple Liquidated Damages may be applicable.

30.2 Liquidated Damages Matrix

Performance	Liquidated Damage
Failure to maintain critical equipment operational as per the agreement and as a result of Proposer's failure to perform as stated in Sections 38.2 and 38.3 (SOW).	\$3,000.00 deduct for every continuous 12 hour period temperatures or humidity are outside of acceptable limits
Failure to maintain temperatures/humidity in a specific area more than 3 times during any 30 day period (call backs)	\$1,000.00 per occurrence
Failure to perform other work services (OSR) in the time period specified in the OSR	\$250.00 per 24 hour period
Failure to provide a written OSR proposal within three days of receipt of Director's request for an OSR	\$150.00 per 24 hour period
Proposer fails to meet the minimum staffing levels as agreed for 2 consecutive weeks	\$1,000.00 per person per 24 hour period
Failure to meet response times as defined in the Agreement	\$2,000.00 per occurrence
Proposer fails to complete PMs for more than two weeks over schedule	\$1,000.00 per PM violation
Proposer fails to provide reports/ accurate operational data to HAS within defined reporting times	\$500.00 per day until report is provided

30.3 Notwithstanding the foregoing, the Director shall not be entitled to assess Liquidated Damages under any of the following circumstances:

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- 30.3.1 Force Majeure.
- 30.3.2 Annual shutdowns or upgrades/modifications set forth in the Agreement.
- 30.3.3 Damage to HVAC or equipment that is caused solely by the acts of the City.
- 30.3.4 Unplanned material changes to energy requirements not caused by Proposer. However, this exception is available to Proposer only at the sole discretion of the Director.
- 30.3.5 Assessment of Liquidated Damages 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.

31.0 RECORDS AND REPORTS IAH, HOU & EFD

- 31.1 As part of Basic Services, Proposer shall develop and maintain daily logs, weekly, monthly, and annual reports for operation and maintenance of HVAC and equipment as more specifically described in Sections 31.5, 31.6, 31.7, and 31.8. The logs and reports shall provide a record of all pertinent operating data and maintenance performed. Proposer's record keeping system must be first approved by the Director in writing prior to implementation by Proposer and all required records may be inspected by the Director at any time during normal business hours. The Proposer shall provide all maintenance records and history with one hard copy and three Compact Discs (CD's) to the Director. 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; Proposer shall submit all maintenance records to Director every 6 months. Proposer may retain all original employee and accounting files, but shall furnish a copy of the accounting files to Director, upon request. Failure to provide this and all additional reports in Section 31 will result in the application of liquidated damages in accordance with Section 30 of this contract.
- 31.2 Reports must be signed by the Proposer's 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.
- 31.3 Proposer's Logs provided to the Director must document all pertinent operating data and maintenance performed by Proposer or its Sub-contractors under the Agreement. Proposer shall describe any event or condition not readily discernible from recorded data in a "Remarks" section, including any task required under this Agreement but not performed. Failure to document this can result in the application of liquidated damages in accordance with Section 30 of this Agreement.
- 31.4 Proposer 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 any other documents reasonably required by the Director. Proposer shall coordinate with HAS CAD personnel to provide records of any equipment modifications or additions which will affect the utility plant drawings. The Proposer shall provide the CAD manager with the information required to update the drawings within 30 days of completion of any such modifications or additions.
- 31.5 Daily Records and Reports
- 31.5.1 Proposer shall develop and maintain an automated Daily Work Log to record HVAC 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 the Director. Additionally, Proposer shall provide a daily log of parts/materials used.

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31.6 Weekly Records and Reports

31.6.1 Proposer shall provide weekly reports to include but not limited to:

31.6.2 Boiler Flue Gas Analysis Report.

31.6.3 Equipment Status for Chiller Capacities and Redundancies.

31.6.4 Daily Chiller Water Tonnage Report.

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

31.6.6 Daily Steam and Hot Water BTU Report

31.6.7 Other information reasonably required by the Director.

31.7 Monthly Records and Reports

31.7.1 Proposer shall provide a monthly Operation and Maintenance report. The report must provide essentially the following information in a format acceptable to the Director. A compliance check list of all items required in this section shall be included with the report. The Monthly Operation & Maintenance Report must include, but is not limited to:

31.7.2 Daily Summary Maintenance Log Summary Report.

31.7.3 Status of Systems and Equipment Report.

31.7.4 Parts/Material Usage Report.

31.7.5 Summary of Maintenance Work Performed and all work that was scheduled but not performed for any reason.

31.7.6 The results of inspections and tests conducted (including but not limited to water treatment, harmful organism tests).

31.7.7 Reliability Centered Maintenance Report.

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

31.7.9 List of Equipment Breakdowns and Repair Time Report.

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

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

31.7.12 Warranty Report.

31.7.13 Employee Roster Report.

31.7.14 Other reports as may be required by the Director (including, but not limited to, filter replacement).

31.7.15 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 Director.

31.7.16 In addition to the above required reports, the Proposer shall provide a report comparing the current and previous month's data to the current month's data for the preceding year. This data shall include, but not be limited to, weather data, energy usage (overall individual utilities and individual thermal systems), individual equipment efficiencies, and energy cost by system and equipment.

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- 31.8 Annual Reports
- 31.8.1 Proposer shall provide an annual shutdown report. The Annual Summary Report must be submitted within 30 days after the shutdown work is completed.
- 31.9 Additional Reporting Requirements
- 31.10 Daily Work Log – Proposer 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.
- 31.11 Parts/Materials Usage - Proposer shall submit daily reports depicting parts/materials usage each day. Proposer shall also submit a monthly Parts/Materials Usage report indicating current materials, stock levels, and required restocking over the past month.
- 31.12 Water Treatment Records - Proposer shall maintain daily records of chemical analysis. At the end of each week, Proposer shall submit a summary of chemical treatment work performed and the effectiveness of the water treatment program. Proposer shall include any recommendations for improving the program, if any, as part of this report.
- 31.13 Central Plant On-Line/Standby Reports - Proposer shall provide as part of its monthly report the actual hours of utilization for all major equipment in the Central Plant.
- 31.14 Fuel/Air Ratio (Excess Air) in Boiler Firing Report/Flue Gas Analysis – Proposer 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, Proposer shall submit a summary of boiler firing effectiveness and include any recommendations for improving the program, if any, as part of this report.
- 31.15 Harmful Organism Test Report - Proposer shall report and submit all test results to the Director and maintain a permanent record in the HVAC Central Plant files for future reference.
- 31.16 Wastewater Report - Due to the loss of water that occurs through evaporation at the cooling towers, additional water must be added to the condenser water system as necessary to maintain the water volume for efficient operation of the HVAC. 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.
- 31.16.1 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.
- 31.16.2 Proposer 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.
- 31.16.3 The Director will provide Proposer with a form to be used to record the meter readings. Proposer 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. Proposer shall keep one copy in its contract files and one copy forwarded to Director for its records. A delivery receipt for this form from the City must be obtained and attached.
- 31.17 Employee Roster Report - Proposer shall maintain a weekly record of employee attendance records by date, title, attendance etc. and submit to Director monthly to the extent allowed by law.

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- 31.18 Hazardous Chemical Records – Proposer 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.
- 31.18.1 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.
- 31.18.2 Proposer’s Project Manager shall maintain the completed forms. All hazardous chemical records must be made available to the Director for periodic review.
- 31.19 Annual Shutdown Report - Proposer 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.
- 31.19.1 Proposer 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.
- 31.19.2 This report will be submitted as part of the annual shutdown report as specified elsewhere herein.
- 31.20 Hydrostatic Test Reports - provide hydrostatic reports every 3 years and when boiler tubes are replaced.
- 31.21 Warranty Report
- 31.21.1 As part of Basic Services throughout the Agreement Term, Proposer shall administer warranties on systems and equipment as may be applicable from time to time. Proposer shall maintain warranty records and submit documentation and follow-up procedures on all warranty work. Proposer shall enforce all warranties on behalf of HAS. Proposer 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.
- 32.0 OTHER WORK/SERVICES IAH, HOU & EFD**
- 32.1 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. Proposer 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. Proposer shall perform Other Work/Services to the same standards required for Basic Services.
- 32.2 Performing Other Work/Services
- 32.2.1 Other Work/Services shall be performed in accordance with the Agreement.
- 32.2.1.1 Other Work/Services shall be performed in accordance with all provisions of the Agreement and any special provisions issued with the Other Service/Request (OSR).
- 32.2.1.2 Before issuing an OSR, the Director will first issue a written notice to the Proposer detailing the specific OSR to be performed by the Proposer.
- 32.2.1.3 In response to any such written notice, the Proposer shall provide the Director with a written proposal within three (3) business days of receipt of OSR. Proposer 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 Proposer.

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- 32.2.1.4 Proposer 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. Proposer shall complete all such Other Work/Services within the time specified in the OSR. Proposer can request in writing an extension to the completion date. However, Director may or may not allow the extension. Director's decision is final.
- 32.2.1.5 Upon receipt of the Proposer's proposal, the Director has the option to reject the Proposer's proposal, require resubmission with revised or additional information, or issue an OSR. Should the Director reject the Proposer's Proposal and require resubmission, the Proposer shall resubmit a modified proposal within three (3) business days of the rejection.
- 32.2.1.6 Upon approval by Director of the modified proposal, an OSR will be issued. Proposer shall commence work as stated in the OSR. Proposer shall diligently work to completion in accordance with the terms and conditions of this Agreement, and the approved OSR.
- 32.2.1.7 Labor cost must not exceed the rate stated in the "Price Sheet". Labor is inclusive of supervision, tools, and expendables.
- 32.2.1.8 Prices for equipment, parts, supplies, and sub-contracted work, which may be required for authorized Other/Work Services, shall be the Proposer's actual cost plus percent (%) mark-up proposed on the "Price Sheet" (*Mark-up excludes Freight and Travel*). Copies of invoices from the Proposer's suppliers for these items must be submitted with Proposer's invoices at the time of submittal to the City for payment. The mark-up percentages stated shall not increase during the term of the Agreement. The quantity of equipment, parts, and supplies will depend on the needs of the HAS.
- 32.2.1.9 If the OSR work is over \$5,000.00, the Proposer 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. Proposer 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 Proposer shall have written approval from the Director. Proposer shall be compensated at "Bid Cost" plus percent (%) mark-up proposed on the Price Sheet/Fee Schedule.
- 32.2.1.10 If the OSR work is under \$5,000.00, the Proposer shall obtain one (1) itemized bid/estimate from vendor/supplier within three (3) business days, for the required equipment, parts, supplies, and subcontracted works. Proposer 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 Proposer shall have written approval from the Director. Proposer shall be compensated at "Bid Cost" plus percent (%) mark-up proposed on the Price Sheet/Fee Schedule.
- 32.2.1.11 A copy of the approved OSR must accompany the monthly invoice for payment.
- 32.2.1.12 While performing work on any OSR, if hidden damage or additional cost is discovered, Proposer shall notify the Director immediately. After determining the extent of hidden damage a supplemental OSR proposal must be submitted to the Director.
- 32.2.1.13 Proposer shall submit to Director, copies of original purchase orders and invoices evidencing Proposer's acquisition costs.
- 32.2.1.14 In the case of emergency service, the Proposer 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 Proposer and the same process for non-emergency OSRs will apply.

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- 32.2.1.15 If it is subsequently determined this Scope of Work should be covered under Basic Services, any amount paid to the Proposer under Other/Services Request will be reimbursed to the City by the Proposer within thirty days of such determination. The City does not waive any of its rights and remedies whether by statute, at law, in equity, or under this Agreement.
- 32.2.1.16 If Other Work/Services are performed by the on-site crew in conjunction with their regular duties, the Proposer shall not receive additional compensation for their labor.
- 32.3 Other Work/Services may include, but are not limited to the following categories: IAH,HOU&EFD
- 32.3.1 Emergency After-Hours Services HOU & EFD only.
- 32.3.2 Systems and Equipment Upgrades/Modifications.
- 32.3.3 Special Energy Retrofits.
- 32.3.4 Hazard Materials Testing and Removal.
- 32.3.5 Certain O&M Service Requirements.
- 32.3.6 Visual inspection and testing of IAH fire dampers located in ductwork.
- 32.3.7 Air quality studies.
- 32.3.8 Air Balance Balancing Services
- 32.3.9 Systems and Equipment damaged by force majeure or vandalism
- 32.3.10 Replacement parts in excess of \$25,000.00 as described in Section 15.5.1.1
- 32.3.11 Sub-contract to HAS-approved CMMS software provider per Section 5.13.1.2, page 38 and no mark-up shall be applied.
- 32.4 Use of On-Site - Extra Work
- 32.4.1 When the Proposer's on-site crew performs extra or changed work covered by Change Orders or Other Work/Services during normal hours, Proposer shall not be relieved of its other performance responsibilities herein.
- 32.5 Remedial Maintenance (Other Works/Services) IAH, HOU & EFD
- 32.5.1 Proposer shall provide Remedial Maintenance (RM) to include individual parts up to \$25,000 or less as part of Basic Services. Remedial Maintenance (RM) with an individual cost of parts greater than \$25,000 shall be provided by Proposer when requested to do so by the Director at the labor (except as provided Section 32.2.1.16) and material rates specified in Exhibit III, Price Sheet/ Fee Schedule.
- 32.5.2 Documentation of Preventive Maintenance and inspections shall indicate all equipment deterioration, and shall be discussed with the Director and/or designee every two weeks. Director and/or designee shall provide guidance on which degraded equipment is to be replaced and which degraded equipment is to remain in service. Equipment replacements shall be according to the Remedial Maintenance guidelines listed above. If the Director dictates that certain degraded equipment is to remain in service and the equipment subsequently fails, it shall also be replaced according to the Remedial Maintenance guidelines listed above.
- 32.5.3 Proposer 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. Immediate notification of equipment or deficiency is to be provided with a detailed report of the equipment malfunction or deficiency shall be submitted to the Director within 7 calendar days of failure. Failure to provide this report will result in the application of liquidated damages in accordance with Section 30 of this contract.

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- 32.5.4 The Director will provide Proposer with instructions and schedules pertaining to the RM Work.
- 32.5.5 The remedial maintenance Sub-contractors and/or craftsmen used to perform Other Works/Services must be certified and/or approved by OEM equipment manufacturer prior to performing any Work.
- 32.5.6 RM performed due to Proposer's negligence, including, but not limited to, failure to perform proper preventive maintenance will be the responsibility of the Proposer at no cost to HAS.
- 32.5.7 Proposer 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 Proposer may be repaired at the Director's discretion by parties other than Proposer. If the repairs are determined by the Director to be the responsibility of the Proposer, the Proposer shall be back-charged by HAS for all associated costs.
- 32.5.8 RM equipment/materials will be obtained for the Agreement by the following methods:
 - 32.5.8.1 HAS shall have the option to supply the equipment / materials to Proposer at no cost to the Proposer.
 - 32.5.8.2 Proposer shall obtain (3) itemized bids/estimates from separate/different vendors/suppliers for the required equipment / materials.
- 32.5.9 Emergency After-Hour Services (Other Works/Services) HOU & EFD
 - 32.5.9.1 HOU When requested by Director, Proposer 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
 - 32.5.9.2 EFD - When requested by Director, Proposer 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.

33.0 WARRANTIES

- 33.1 Proposer 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. Proposer shall perform all work using trained and skilled persons having substantial experience performing the work required under this Agreement.
- 33.2 With respect to any parts, instruments, equipment, and goods it furnishes, Proposer warrants:
 - 33.2.1 that all items are free of defects in title, design, material, and workmanship,
 - 33.2.2 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.
 - 33.2.3 that each 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 item was new).
 - 33.2.4 that no items or their use infringe upon any patent, copyright, or other proprietary rights. In the event Proposer becomes aware of such an infringement, Proposer shall replace the items that are the subject of the infringement with non-infringing items in a timely manner; and
 - 33.2.5 that for one year from the date of any installation ("Warranty Period"), Proposer 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 Proposer'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.

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33.2.6 As part of Basic Services, Proposer 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. Proposer shall not be entitled to any additional compensation for the management and enforcement of these manufacturer warranties. If Proposer 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.

34.0 REGULATORY COMPLIANCE/CODES

34.1 Regulatory Compliance

34.1.1 The Proposer shall comply with all applicable Federal, State and local laws, HAS Regulations and policies, ordinances, rules, and regulations pertaining to the performance of the Work specified herein.

34.1.2 Licenses, Permits and Bonding: All personnel engaged in the maintenance activities must possess certificates of training, licenses, permits, and bonding as required by the Federal, State, City, County, HAS, and other local authorities having jurisdiction and as specified for each activity they will be directly engaged in or supervise. All certificates of training, licenses, permits and bonds shall be current and valid and available immediately upon request by HAS.

34.1.3 The Proposer shall obtain and pay for all permits, licenses, certifications and approvals required to perform services under the Agreement.

34.1.4 The Proposer shall schedule recurring inspections and certifications, and pay all associated fees.

34.1.5 The Proposer shall obtain any permits required to work on the Airports, including in restricted areas, as defined by Federal, State and local laws, City policies, procedures, ordinances, rules, codes and regulations. Both the Proposer's business and the Proposer's employees, including Sub-contractor's employees, must be certified to work on the Airports property, including restricted areas.

34.1.6 The Proposer shall be required to provide, as requested and on demand, all licenses, permits, certifications, and other such proof of qualifications for any personnel required to work on the Airports, including restricted areas, for proper execution of the Agreement.

34.2 Testing and Reporting Required by TCEQ and Federal Agencies

34.2.1 The Proposer shall take all steps necessary to operate and maintain boilers to ensure compliance with all current TCEQ regulations and those stipulated by Federal EPA New Source Performance Standards. Record keeping and compliance standards may be different for "new" boilers versus "grandfathered boilers," and Proposer shall implement the correct procedures for each. Proposer shall apply standard combustion control techniques such as proper excess air firing, flue gas analysis, and properly maintaining the burner/boiler packages. Within the first 90 days under the Agreement, Proposer shall study past stack tests for existing boilers to confirm that these systems are within the limits of the operating permits and the Maximum Allowable Emission Rate Tables furnished by the TCEQ.

34.2.2 As new or revised regulations are placed into effect, and HAS performs any replacement, retrofit, and/or reconstruction of the boiler packages to keep them in compliance with the new standard(s), Proposer shall modify its operation and maintenance procedures and its testing and reporting procedures to ensure compliance with regulations.

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34.3 Codes and Standards

34.3.1 Except where specified or exceeded by the requirements of the specification, the Proposer shall comply with to the latest edition of the following Codes:

34.3.1.1 Federal, state, and local building, plumbing, mechanical, electrical, safety and environmental codes.

34.3.1.2 National Electrical Code (NEC).

34.3.1.3 International Plumbing Code.

34.3.1.4 International Mechanical Code.

34.3.1.5 International Fire Code.

34.3.1.6 International Energy Conservation Code.

34.3.1.7 State and Local Building Codes and Ordinances.

34.3.1.8 State and Local Fire Codes and Regulations.

34.3.1.9 Federal Aviation Standards and Regulations.

34.3.1.10 Occupational Safety and Health Administration Regulations.

34.3.2 Codes and Standards listed above and throughout these specifications are minimum standards.

35.0 **OPERATING PHILOSOPHY IAH, HOU & EFD**

35.1 General Requirements

35.1.1 Best-in-Practice Service (as defined in accordance with Operations & Maintenance Best Practices Manual developed by the U.S. Department of Energy) of HVAC, maintaining specified environmental conditions, and cost-effective energy management are of paramount importance in operating and maintenance of the Airports HVAC. Proposer shall observe OEM recommended preventive maintenance and maintenance practices and procedures. Proposer shall comply with applicable Federal, State and Local regulations of Authorities having jurisdiction including regulations of Occupational Safety and Health Act (OSHA), Environmental Protection Agency (EPA) requirements and recommended practices of National Institute for Occupational Safety and Health.

35.1.2 The operating procedures used by Proposer must be in accordance with OEM instructions contained in applicable manufacturers' manuals for individual items of equipment, including the latest OEM technical/user manuals, service bulletins, service advisories, product/service information updates, and all other such OEM published information pertaining to the maintenance and operation of HVAC SYTEMS. Proposer's operating procedures must address overall operation of the plant, taking into account the interrelationships of various systems to ensure that proper sequences are followed in start-up, shutdown, or in making operating adjustments. All written operating instructions and procedures must be readily available to operating personnel at all times for reference.

35.1.3 It is recognized that Proposer has no responsibility regarding design of the facilities, which it will operate and maintain. However, where it is evident that safety, reliability or efficiency can be improved through capital investment in equipment, analyzers, instrumentation, etc., Proposer shall bring such matters to the attention of the Director in writing for his consideration and action as the Director deems appropriate.

35.1.4 Proposer shall operate and maintain HVAC equipment to provide optimum performance, energy usage, and reliability.

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35.2 IAH Operating Philosophy

The IAH chilled water system is a primary-secondary variable pumping system. The primary pumps, chillers and the automatic pressure bypass are located in the IAH Central Plant. Secondary pumps are located in the Terminals. Terminals A, B, C, D, and FIS have secondary pumps that are variable speed drives.

35.2.1 For the IAH Central Plant to deliver adequate chilled water (flow and pressure), it is imperative that the design chilled water rise (15°F) be maintained during all cooling load conditions. The IAH Central Plant is designed for a 40°F leaving water temperature. All existing air handling equipment is adjusted for 42°F entering water temperature and leaving air temperature and air quantity at the coils to provide for a 15°F chilled water rise. All new equipment is being designed for 42°F entering water temperature and a 15°F chilled water rise. Any cooling equipment and controls not maintaining design must be promptly identified, cleaned and/or repaired then, if not balanced, the Director shall be notified.

35.2.2 For the IAH Central Plant to deliver adequate heating water, it is imperative that the design heating water rise (40°F) be maintained during all heating load conditions. The IAH Central Plant is designed for a 190°F leaving water temperature. All existing air handling equipment is adjusted for an appropriate entering water temperature, leaving air temperature and air quantity at the coils to provide for a 40°F heating water rise. All new equipment is being designed for a 40°F heating water rise. Any heating equipment and controls not maintaining design must be promptly identified, cleaned and/or repaired. The Director shall be notified if deficiencies still exist after cleaning and repair.

35.2.3 HOU Operating Philosophy

35.2.3.1 The HOU existing chilled water system is a primary variable pumping system. The primary pumps and chillers are located in the Central Plant. Booster pumps exist at some AHUs. The new HOU chilled water system is a primary-secondary system with all pumps in the central plant. Secondary pumps are scheduled for variable speed drives. CW set points is designed at 42°F.

35.2.4 EFD Operating Philosophy

35.2.4.1 Proposer shall rotate the chilled water pumps and compressor usage on the units located at 510 Administration building.

36.0 OPERATE THE HVAC IAH & HOU

36.1 As a part of Basic Services throughout the term of the Agreement, Proposer shall operate all heating, ventilation, exhaust, re-circulating and air conditioning and related systems for IAH in the Central Plant, Terminals A, B, C and D, Aviation Administration Building, ASC facility, Remote Buildings/Facilities, Miscellaneous DX Equipment and all new facilities that may be built and start operation within the term of the Agreement.

36.2 Proposer shall operate all heating, ventilation, exhaust, re-circulating and air conditioning and related systems for HOU in the Central Plant, Terminal, Building at 8800 Paul B. Koonce Blvd., Remote Buildings/Facilities, Miscellaneous DX Equipment and all new facilities that may be built and start operation within the term of the Agreement.

36.3 Proposer shall operate and maintain HVAC and equipment that include, but are not limited to, the following:

36.3.1 All Central Plant mechanical and electrical systems for IAH and HOU, including chilled water generation system, condenser water system, steam generation system, high temperature and domestic hot water generation systems, pumping, controls, instrumentation, plumbing system, electrical system, heating system, pneumatic systems, ventilating, exhaust and re-circulating systems.

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- 36.3.1.1 Within the Central Plants, the Proposer shall maintain all plumbing systems back to the main line. The Proposer's responsibilities for the plumbing systems within peripheral areas are those HVAC related items such as drains in the mechanical rooms (air handlers, condenser drains, sewage/sump pump and pits, heat exchanger plumbing from tanks to pumps to walls, etc.).
- 36.3.1.2 Within the Central Plants, Proposer shall clean, inspect, maintain and repair the electrical distribution components as necessary from the point where the power comes into the transformer complex at the plant (refer also to the Annual Maintenance Shutdown Procedures, Exhibit XII). In peripheral areas, Proposer shall maintain the HVAC electrical systems from the existing panels.
- 36.3.1.3 The SW to MCC and MCC to Equipment at IAH and HOU.
- 36.4 All outdoor systems and equipment related to the Central Plant including piping, pumps, cooling towers, utility services, transformers, cables and switchgear.
- 36.5 All heating, ventilating, exhaust, re-circulating and air conditioning systems and related systems/equipment for IAH in Terminals A, B, C, D, FIS, Aviation Administration Building, ASC facility, Remote Buildings/ Facilities and Miscellaneous DX Equipment, including, but not limited to, heating, ventilating and air conditioning units, exhaust and re-circulating fans, automatic temperature controls, instrumentation, pumps, piping system, ductwork, mixing boxes, panel boards, motor starters, disconnect switches and wiring, VAV boxes and electronic air cleaners, etc.
- 36.6 All heating, ventilating, exhaust, re-circulating and air conditioning systems and related systems/equipment for the Airports in Terminal Areas, Old FAA Tower, FAA Motor Maintenance Building, Remote Buildings/Facilities and Miscellaneous DX Equipment, including, but not limited to, heating, ventilating and air conditioning units, exhaust and re-circulating fans, automatic temperature controls, instrumentation, pumps, piping system, ductwork – including all supply and return air components, mixing boxes, and panel boards, motor starters, disconnect switches and wiring, VAV boxes and electronic air cleaners, etc.
- 36.7 Clean and repair all HVAC vents, registers and intake grilles. Exception will be terminal A main lobby vents, until HAS completes a project upgrade.
- 36.8 Domestic hot water generating systems for the Terminals, and all related controls, plumbing and electrical equipment and systems within their respective equipment rooms. HAS personnel will maintain all domestic hot water and re-circulating hot water piping outside the mechanical room.
- 36.9 IAH - Maintain and monitor existing high/low temperature sensor alarms located in the telecommunication equipment/switch rooms located in Terminals A and Aviation Administration Building. Both are monitored from the Central Plant via Aviation provided cabling. Proposer is not responsible for the cabling of the sensors to the Central Plant. In the event of a problem associated with the cable, Director and AMIS are to be contacted.
- 36.10 Evaluate and troubleshoot electronic and electrical control systems to ensure appropriate repairs are made and maintained.
- 36.11 Replace lamps, ballast, sockets, photocells, etc., in the Central Plants (interior and exterior) and all mechanical rooms with air handling units or sump pits in the terminal(s) and remote buildings.
- 36.12 IAH - Operate and maintain the Terminal D -Alerton system.
- 36.12.1 IAH, HOU & EFD Operating Procedures and Manuals – Proposer is responsible for obtaining/providing the following manuals for use in the operation and maintenance of HVAC.
- 36.12.1.1 Operations Manual.
- 36.12.1.2 Equipment Manuals and Equipment Data Sheets.

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- 36.12.1.3 Systems Manual.
- 36.12.2 When available HAS will provide manuals etc. to Proposer.
- 36.12.3 Operations Manual, Equipment Manuals, and Equipment Data Sheets address the HVAC equipment from a component perspective. The Systems Manual details the operational procedures of the HVAC equipment from a procedural perspective. Proposer shall use these manuals in the operation and maintenance of the facilities.
- 36.12.4 Proposer shall follow the procedures in the Operations Manuals and ensure the Operations manuals and data sheets, technical/user manuals, service bulletins; service advisories, product/service information updates, and all such other OEM published information pertaining to the maintenance and operation of HVAC and equipment are regularly updated and maintained.
- 36.12.5 Some equipment installed by tenants and the City may not be included in the equipment manuals. Proposer shall obtain any missing pertinent data for the equipment manuals for any equipment installed by:
- 36.12.5.1 Tenants which has become the property of the City or,
- 36.12.5.2 By the Director, all being part of Proposer's responsibility.
- 36.12.6 HAS will assist in the transfer of available copies of the operations manuals and the equipment manuals to Proposer upon HAS issuance of notice to proceed document for each Airport.
- 36.12.7 Updating of the Equipment Manual shall be completed by the end of the first year of the Agreement and shall include development by Proposer of Equipment Data forms expanded to include all data pertinent to the normal operation and maintenance of each piece of mechanical and related electrical equipment. Such data shall include in addition to existing data, the sheave and belt sizes, motor data, starter and heater sizes, and the manufacturer's data identifying the equipment or component. Recommended changes in the Operations Manual, as a result of knowledge and experience with the systems, shall be submitted in writing for the Director's consideration. These suggestions will be taken under advisement by the Director. As required, the suggestions will be reviewed by the Director with Proposer. Resulting changes to the Operations Manual shall be the responsibility of Proposer. Once finalized and completed by the end of the first year of the Contract, Proposer shall maintain and update the documents.
- 37.0 PERFORMANCE STANDARDS IAH, HOU & EFD**
- 37.1 General
- 37.1.1 Proposer's operation and maintenance of Airports HVAC and equipment must be in accordance with the highest standards prevailing in the industry, including but not limited to the latest release of the Operations & Maintenance Best Practices developed by the U.S. Department of Energy, recommendations of the OEM, as well as all applicable codes, rules, regulations, and laws of any regulatory or legislative body having jurisdiction over IAH, HOU, and EFD which include, but are not limited to, State of Texas agencies having jurisdiction over boiler operations, Texas Commission on Environmental Quality (TCEQ) over certain environmental matters, and Federal regulatory bodies, including, but not limited to EPA, OSHA, TSA, and FAA. Proposer shall ensure full compliance and shall bear the cost of any additional work or materials not specified that may be required. Any violation, omission, or question of compliance must be brought to the attention of the Director within five days of Proposer's actual or constructive knowledge.
- 37.1.2 Proposer shall respond immediately to a request from the Director for emergency service to perform all steps reasonably necessary to protect persons and property from risk of harm due to a problem with the system. Priority must be given to requests for emergency service.

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38.0 ENVIRONMENTAL CONDITIONS IAH, HOU & EFD

38.1 As a part of Basic Services, Proposer shall maintain the following environmental conditions within occupied conditioned spaces, unless otherwise specified in the Agreement or requested by the Director.

<u>IAH, HOU, EFD</u>	<u>Summer</u>	<u>Winter</u>
Cooling Temperature	74°F ± 2°F	74°F ± 2°F
Design Day	97°Fdb and 80°Fwb	22°Fdb
Humidity	55% + 5%	40% max.
Heating Temperature	74°F ± 2°F	74°F ± 2°F

38.2 *IAH – Central Plant Reserve Capacities*

38.2.1 As part of the Basic Services, Proposer shall operate the (IAH) Central Plant facilities in such a manner as to have available capacity to meet 100% of the projected loads plus one redundant piece of equipment on the heating and cooling systems. Exceptions to this requirement will be allowed for disruptions to electric, water, or natural gas service, which do not result from Proposer’s actions. Equipment will be permitted to be taken offline to perform preventive maintenance or needed repairs. Preventive maintenance and service should be scheduled during times of reduced load and when service will not be interrupted.

38.3 *HOU – Central Plant Reserve Capacities*

38.3.1 As part of the Basic Services, Proposer shall operate the (HOU) Central Plant facilities in such a manner as to have available capacity to meet 100% of the projected loads plus one redundant piece of equipment on the heating and cooling systems. Exceptions to this requirement will be allowed for disruptions to electric, water, or natural gas service, which do not result from Proposer’s actions. Equipment will be permitted to be taken offline to perform preventive maintenance or needed repairs. Preventive maintenance and service should be scheduled during times of reduced load and when service will not be interrupted.

39.0 HVAC AND RELATED EQUIPMENT IAH, HOU, & EFD

39.1 The Airports HVAC and Related Equipment in the Central Plants covered under Basic Services include, but are not limited to:

39.1.1 All mechanical and specified plumbing systems and all related electrical systems to include heat exchanger tubing bundles.

39.1.2 Pneumatic and electronic systems associated with the generation of chilled water, steam, high temperature water, and heating water.

39.1.3 Cooling and heating water distribution and pumping systems within the Central Plant and Terminals.

39.1.4 Controls.

39.1.5 Instrumentation.

39.1.6 Central Plant lighting, inside and outside Building Lights and Cooling Tower Lighting.

39.1.7 Central Plant domestic cold and hot water.

39.1.8 Storm and sanitary sewer systems to the main line, including main room floor drains.

39.1.9 Water treatment services and water treatment chemicals.

39.1.10 Full housekeeping services in the Central Plants and Proposer’s office areas.

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- 39.2 The Airports Electrical Systems in the Central Plants covered under Basic Services include, but are not limited to:
- 39.2.1 All related pneumatic and electronic systems associated with the generation of chilled water, steam, high temperature water, heating water, cooling and heating water distribution and pumping systems
- 39.2.2 Controls.
- 39.2.3 Instrumentation.
- 39.3 The Airports HVAC and Related Equipment from the Airports Central Plants to the most remote points in the Terminals and Concourse covered under Basic Services include but are not limited to:
- 39.3.1 All associated HVAC, equipment and components including, but not limited to, all cooling and heating water - pumping systems including:
- 39.3.2 All pneumatic compressors and related controls.
- 39.3.3 All air side mechanical rooms.
- 39.3.4 All domestic hot water generation and storage water systems to include all backflow preventers in all mechanical rooms.
- 39.3.5 All related controls and electrical service.
- 39.3.6 All air handler units and air distribution systems and components including ductwork, mixing boxes and controls actuators and VSD's.
- 39.3.7 All exhaust and re-circulating fans and controls.
- 39.3.8 All automatic temperature controls and instrumentation.
- 39.3.9 All pumps described in Exhibit XVI.
- 39.4 The Airports Electrical Systems and Related Equipment from the Airports Central Plants to the most remote points in the Terminals and Concourse covered under Basic Services include, but are not limited to,:
- 39.4.1 All electrical service systems, equipment and components serving HVAC, equipment and components. (All encompassing with exception of high voltage transmission lines and sub-stations).
- 39.4.2 All electrical service to and electrical service of motor control centers.
- 39.4.3 Mechanical panel-boards, fused switches and circuit breakers, motor starters, disconnect switches, conduit, wiring, and related electrical controls.
- 39.4.4 All specified stand-alone A/C units, heaters, furnaces; and other related equipment.
- 40.0 IAH SYSTEM OVERVIEW - PERFORMANCE REQUIREMENT SYNOPSIS**
- 40.1 IAH Central Plant
- 40.1.1 The IAH Central Plant houses all of the major equipment providing closed loop chilled/hot water HVAC to Terminals A, B, C, D and FIS Building. As a part of Basic Services, Proposer shall operate and maintain all systems within the Central Plant. The major systems include, but are not limited to, the following:

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- 40.1.2 Steam Generating System.
- 40.1.3 Hot Water System.
- 40.1.4 Refrigeration Units.
- 40.1.5 Chilled Water System.
- 40.1.6 Condenser Water System.
- 40.1.7 Service Water System.
- 40.1.8 Compressed Air System.
- 40.1.9 Air Distribution, Heating, Ventilating and Exhaust Systems.
- 40.1.10 Auxiliary Systems.
- 40.1.11 Electrical Equipment, including emergency and backup power.
- 40.1.11.1 High Voltage Transformers for Chillers and Motor Control Centers (transformers located adjacent to the Central Plant building) and across the street in the electrical sub-station.
- 40.1.12 The primary heating and cooling mediums are conveyed from the Central Plant via tunnel to Terminal B and underground chilled water connecting west of Terminal C where distribution is accomplished to the rest of the complex.
- 40.1.13 The Central Plant also houses the Administration Offices for Proposer and the repair facilities for the Proposer's 24-hour on-site staff complete with break and restroom/shower facilities.
- 40.2 IAH Central Plant Equipment
- 40.2.1 Proposer shall operate and maintain all systems in or associated with the Central Plant. A detailed listing of Central Plant Equipment is provided in SOW Equipment List Exhibit XI.
- 40.2.2 Proposer shall operate and maintain all electrical power distribution from the point the power comes into the transformer complex at the plant.
- 40.2.3 Proposer shall operate and maintain all HVAC-related piping systems, electrical distribution systems and appurtenances from the Central Plant to the Terminals and Old FAA Tower.
- 40.2.4 Proposer shall maintain all domestic water components from the meter that supports the Central Plant functions (i.e. cooling towers, makeup water, standpipes, fill pipes, backflow preventers, and domestic water within the plant).
- 40.2.5 Proposer shall maintain all the chilled and hot water piping to all demarcation points (i.e. Old FAA Tower entrance valve point and all other IAH distribution side chilled and hot water).
- 40.2.6 HAS will provide access (digging, trenching, etc.) to piping outside the building envelope, which is not accessible through the tunnel system or other accessible means in order for Proposer to perform repairs.

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40.3 Performance Requirements at IAH - Terminals A, B, C, D, and FIS

40.3.1 General

40.3.1.1 IAH Terminal Buildings A, B, C, D, and FIS are supplied primary heating and cooling mediums from the remote Central Plant facilities located at the west end of Will Clayton Parkway. The Terminal systems are designed to maintain $74^{\circ}\text{F} \pm 2^{\circ}\text{F}$ indoor temperature through wide variations of outdoor temperature utilizing chilled and high temperature hot water. The mediums are conveyed in tunnels and pedestrian walkways to each terminal. The Central Plant system is capable of supplying chilled water at 40°F on demand to meet peak cooling demands with no more than 42°F at the coil. The Plant is also capable of supplying high temperature hot water at a temperature of 300°F on demand to meet peak heating requirements. Hot water for domestic use and kitchen use is converted by shell and tube heat exchangers in hot water generators at each Terminal Complex. The Domestic hot water systems are designed to provide 160°F water. HAS will select Primary and Domestic Hot Water Temperature settings as required to meet requirements in individual Terminals. Proposer shall maintain all primary water, air, and secondary air systems to meet design and performance requirements set forth in the specific Contract documents under which they were installed. A detailed listing of Terminals Equipment is provided in SOW Equipment List Exhibit XI, Coil leaving air temperatures are generally designed for 52.5°F leaving air temperature for all new equipment and new coils with 42°F entering water while maintaining a 15°F water temperature rise. Lowering leaving air temperatures below 52.5°F is not acceptable as a satisfactory solution to resolving any space temperature control problem. This Practice results in lower water temperature rise reducing Central Plant and Distribution System Deliverable Capacities. AHU system balancing including Fan and Coil, maintaining clean filters, and cleaning coils are the proper ways to maintain AHU System performance in accordance with design conditions. 2-inch, Merv 8 pleated filters need to be changed out at .8 inches on the magnehelic, and 6-inch box filters need to be changed out at 1.25 inches. NO EXCEPTIONS. Any time the Director finds dirty filters on any AHU that unit will have the coils cleaned immediately. Coil cleaning will be done on next third shift, NO EXCEPTIONS.

40.3.2 IAH Terminal Buildings A, B, C, FIS, and APM.

40.3.2.1 Air Handling Equipment or air handling units with new coils in these Terminals have been designed and selected for 52.5°F leaving air temperature. Equipment installed prior to 1990 is all designed to meet a performance requirement of 54°F with 42°F chilled water at the coil. Under these conditions all unit coils will produce a 15°F Water Temperature Rise. Air temperature leaving coils must not be set below a temperature resulting in less than a 15°F water temperature rise.

40.3.3 Below Grade – Inter-Terminal Train (ITT) Level.

40.3.3.1 The ITT Level of both Terminals consists of Mechanical and Electrical rooms to the south of the ITT Track area. The Electrical Rooms serve primary electric power to the Terminals. "Pump Rooms" in each Terminal contain pumps to provide adequate pressure and flow for cooling and heating water to the Terminals. High temperature water heat exchangers for generation of heating water are also located in the pump rooms. Domestic hot water generators/storage tanks in this same area provide domestic hot water for the Terminals.

40.3.3.1.1 Terminal A has developed areas north of the tracks at the ITT Level but Terminal B has not. This area in Terminal A contains the ITT Train service and maintenance area and other general airport service equipment and other service agencies. These areas are cooled and heated by multi-zone and single-zone units. All outside air is pretreated.

40.3.3.1.2 Below the elevator core area of the ITT Level in both Terminals A & B are elevator machine rooms. These rooms contain an air-handling unit to cool elevator machinery.

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40.3.3.2 Train-Pedestrian Tunnel

40.3.3.2.1 This area is served by low pressure single zone units located in fan rooms adjacent to Pump Rooms in Terminals A & B and in rooms at or under Stairwells #2, #4, #5, #7 and #9 and at the ITT Train Turn-around at Terminal D Train Stop. Low-pressure single zone variable temperature units without outside air pretreatment units serve the pedestrian Tunnel. The supply is routed above the ceiling to conventional diffusers with air returned through the ceiling plenum, then to a main return duct to the AHU mechanical room. The Pedestrian Tunnel will be maintained at $74^{\circ}\text{F} \pm 2^{\circ}\text{F}$.

40.3.4 Ground Level, Second Level and Mezzanine Level

40.3.4.1 The ground levels of both Terminals A & B are used as general terminal access, baggage handling and claim and private offices for Airport personnel and airline baggage services. The second floor is ticketing, food service and airline ticketing office areas. This level also provides access to arrival and departure areas in the concourses of Terminal A.

40.3.4.2 On the 1st parking level of Terminals A & B, four major quadrant air handling mechanical rooms serve the terminal building ground, second and mezzanine level areas. The mechanical rooms are positioned over the wings of the terminals and contain two recently upgraded AHU's, one double duct type and one multi-zone type, and one new outside air pretreatment unit (OAPU) to serve the primary terminal areas. The space temperature through the air distribution system is controlled with dual duct fan powered air terminal units. The new OAPUs provide outside air to the two AHUs serving general public and private office areas. Supply air is conveyed downward to the mezzanine, second and ground levels through supply/return air chases in the various quadrant wings of the Terminal below the mechanical equipment rooms. Cold supply air must be maintained at 52.5°F for humidity and temperature control on all these units.

40.3.4.3 The ground level baggage pick-up areas are served by the multi-zone systems and office areas by dual duct systems. Each office zone is controlled by local thermostats controlling a dual duct mixing box. Multi-zone systems are controlled by thermostats and the AHU mixing damper section at the unit.

40.3.4.4 The dual duct control settings for the new and existing upgraded units with new cooling coil systems are scheduled for 52.5°F cold deck settings. Hot deck settings will vary with the zone of greatest heating demand to maintain a $74^{\circ}\text{F} \pm 2^{\circ}\text{F}$ indoor temperature.

40.3.4.5 Pedestrian traffic, baggage and high infiltration rates create greater filter maintenance on the ground and second level AHU's. Filters on AHUs at these levels will be scheduled for more frequent replacement.

40.3.5 Ground Level, Ticket Level & Mezzanine Level – Terminals A

40.3.5.1 The outside air pretreatment unit serving air to all units should have the cold deck temperatures at 52.5°F .

40.3.5.2 Coil leaving air temperatures should be set on these units at a minimum of 54°F to assure adequate return water temperature.

40.3.6 Terminal Building D

40.3.6.1 Terminal D is situated directly east of Terminal C and north of the West bound terminal through road. It is essentially a four-story linearly configured structure with a two-story connecting corridor to the West, which connects Terminal D with Terminal "C." The remote Central Plant supplies primary heating and cooling mediums for the Terminal. The mediums are conveyed through primary piping systems in tunnels and pedestrian walkways connecting all terminals with the Central Plant.

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40.3.6.2 Terminal D HVAC Equipment

As a part of Basic Services, Proposer shall operate and maintain all HVAC in or associated with Terminal D. A detailed listing of Terminal D Equipment is provided in SOW Equipment List Exhibit XI. The following is a general description of Terminal D HVAC equipment.

- 40.3.6.2.1 Air Handling Units and associated Control Valves.
- 40.3.6.2.2 Outside Air Pretreatment Units.
- 40.3.6.2.3 Electronic Air Cleaners and Carbon Filter Systems.
- 40.3.6.2.4 Fan Powered Air Terminal Units w/ Heating Coils.
- 40.3.6.2.5 Exhaust/Circulating Fans (Baggage Make-Up).
- 40.3.6.2.6 Fan Coil Units.
- 40.3.6.2.7 Heating and Ventilating Units.
- 40.3.6.2.8 Heating Hot Water Converter/Generators.
- 40.3.6.2.9 Domestic Hot Water Converter/Generators with recirculation Water Pumps
- 40.3.6.2.10 Chilled Water Circulating Pumps.
- 40.3.6.2.11 Heating Water Circulating Pumps.
- 40.3.6.2.12 Domestic Hot Water Return Pumps.
- 40.3.6.2.13 Exhaust Fans for Inside Terminal Areas.
- 40.3.6.2.14 Alerton Building Management System.

40.3.6.3 In summary, there are 31 AHUs including outside air pretreatment units; Single zone, Multi-zone and Variable Volume units. There are 7 Fan coil units, 2 Heating ventilation units, 13 exhaust fans, 3 transfer fans, 1 DX split system, 16 relief fans, 7 electronic air cleaners, 4 Leibert units maintaining the requirements of the telephone and airlines file server system.

40.3.7 Performance Requirements – Terminal D

40.3.7.1 Water Side System

40.3.7.1.1 The chilled water and high temperature water systems deliver water from the Central Plant through primary water piping distribution systems in tunnels and pedestrian walkways. Chilled water is designed for delivery at 40°F supply. High temperature water is designed to deliver heating water to the Terminal at 180°F.

40.3.7.1.2 In Terminal D are two (2) variable speed control chilled water pumps. The control points for the network are a 44-66 PSI delta to be maintained in the branch circuits pressures at the ends of the network.

40.3.7.1.3 The hot water system has two (2) variable speed controls pumps. The superheated water is delivered through the tunnel and walkway. The system has two heat exchangers with a temperature reset schedule from supply water equal to 180°F at outside temperature of 20°F to 80°F.

40.3.7.2 Air Side System

40.3.7.2.1 Level 121 lobby - is served by several AHU's. Supply is through fan powered VAV boxes of various types, some of which have reheat capabilities. Fan powered VAV boxes without heat take care of the air conditioning requirements throughout the remaining areas with some of the small exclusive areas being handled by VAV boxes.

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- 40.3.7.2.2 Fixed Bridges - are all conditioned with single zone air handling units with 75°F setpoints within the space, controlling the heating and cooling valves. These units are all of the Constant Volume Type.
- 40.3.7.2.3 Level 106 - has the full variety of units used on this "site" from Fan Powered VAV boxes with and without heat to straight forward VAV boxes without fan assist. Temperature set point as with other levels is 74°F.
- 40.3.7.2.4 Level 100 - which interfaces directly with the outside, uses relief fans, outside air fans, heating ventilation units and air handling units along with fan coil units. At the eastern edge of Level 100, where the airline operations have their offices and work areas, there are the full assortment of VAV box types used on site, all with 74°F as their objective.
- 40.3.7.2.5 Level 88 - houses the majority of offices along the interior and per design should require no heating through straight VAV units serving these areas. The lobby is basically handled by two (2) AHU's each having multiple temperature sensors with the highest and the lowest of their respective AHU controlling its hot and cold deck accordingly. The western half of the level because of its diversity of loads has all types of VAV units.
- 40.3.7.2.6 Level 74 and Train Tunnel areas - are serviced by VAV AHU's with 74 ± 2°F set points.
- 40.3.7.2.7 Restricted Access Areas – Terminal D

Access to Terminal D Operations Areas is limited to Proposer's personnel, HAS employees, and certain individuals authorized by the Director, provided those persons identified by the Director do not interfere with or jeopardize the Proposer's responsibilities under the Agreement. Proposer shall conform to such identification and security procedures as the Director may deem necessary and as required by law and FAA regulations. Access must be strictly controlled and Proposer shall keep a record of all keys distributed to its personnel. Officers, employees or agents of Proposer shall never enter restricted or operational areas of Terminal D without the express permission of the Director or any other governmental bodies having jurisdiction, and Proposer hereby assumes full liability arising from any such unauthorized incursions.

40.4 Other Remote Facilities

40.4.1 Old FAA Tower

40.4.1.1 IAH primary distribution systems (PCHW & HTW) to the Old FAA Tower; Applies up to, but not including, Secondary CHW Pump Headers; Service Applies up to, but not including, Heating Water Heat Exchanger.

40.4.2 Airport Services Complex (ASC)

40.4.2.1 The Airport Services Complex (ASC) is located at 4500 Will Clayton Parkway and was put into service in March, 1992. The ASC comprises the following buildings and facilities.

40.4.2.2 Physical Plant Maintenance (PPM) Offices and Service Bays.

40.4.2.3 Airfield & Grounds Maintenance Building.

40.4.3 ASC HVAC Equipment

40.4.3.1 As part of Basic Services, Proposer shall maintain all HVAC in or associated with the ASC. A detailed listing of ASC Equipment is provided in SOW Equipment List Exhibit XI. The following is a general description of the ASC HVAC equipment.

40.4.3.1.1 Packaged Chiller.

40.4.3.1.2 Air Cooled Condensing Unit.

40.4.3.1.3 Air Handling Units.

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- 40.4.3.1.4 Air Handling Unit Filters.
- 40.4.3.1.5 Air Handling Unit Interlocks.
- 40.4.3.1.6 Ventilating Fans with thermostats, speed controls, etc.
- 40.4.3.1.7 Fire Dampers.
- 40.4.3.1.8 Electric Duct Heaters.
- 40.4.3.1.9 Gas-Fired Warm-Air Heating Units.
- 40.4.3.1.10 Air Distribution Devices.
- 40.4.3.1.11 Volume Dampers.
- 40.4.3.1.12 Liebert unit in Main Distribution Frame (MDF) Telephone Room.

40.4.3.2 Performance Requirements – ASC

Proposer shall operate the HVAC to maintain a year-around interior ambient of 74 ± 2 degrees temperature and a maximum of 50% $\pm 5\%$ relative humidity in summer within the building envelope, except for the MDF Telephone room in which Proposer shall operate the Liebert unit to maintain a year-around ambient of 68 degrees with a non-condensing relative humidity.

40.4.4 Aviation Administration Building

40.4.4.1 Proposer shall maintain all HVAC in or associated with the Aviation Administration Building. A detailed listing of Administration Complex HVAC Equipment is provided in SOW Equipment List Exhibit XI. The following is a general description of the Administration Building HVAC equipment.

- 40.4.4.1.1 Air Cooled Chillers.
- 40.4.4.1.2 Air Cooled Condensers.
- 40.4.4.1.3 Air Handler Units.
- 40.4.4.1.4 Chilled Water Pumps.
- 40.4.4.1.5 Air Compressor with Air Dryer for instrument air.
- 40.4.4.1.6 Boilers and associated pumps.

40.4.4.2 Performance Requirements - Administration Complex

The HVAC should maintain a year-around interior ambient of 74 ± 2 degrees temperature and a maximum of 50% $\pm 5\%$ relative humidity in summer within the building envelope.

40.4.5 Supply Chain Management

40.4.5.1 Proposer shall maintain all HVAC in or associated with the Supply Chain Management. A detailed listing of Supply Chain Management HVAC Equipment is provided in the SOW Equipment List Exhibit XI. The following is a general description of the Supply Chain Management HVAC equipment.

- 40.4.5.1.1 Chillers (1) 80 Ton & (1) 50 Ton.
- 40.4.5.1.2 Chilled Water Pumps.
- 40.4.5.1.3 Air Handler Units.
- 40.4.5.1.4 Controls.
- 40.4.5.1.5 Ductwork & Grilles.

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40.4.5.2 Performance Requirements – Supply Chain Management

The Proposer shall operate the HVAC to maintain a year-around interior ambient of 74 ± 2 degrees temperature and a maximum of $50\% \pm 5\%$ relative humidity in summer within the building envelope.

40.4.6 Other Remote Buildings/Facilities

40.4.6.1 In several remote buildings and structures at the Airport, Proposer shall maintain the HVAC equipment as part of basic services. It is anticipated that quantities of Security Guard/Taxi Booths may increase or decrease during the Agreement Term. Remote buildings and structures include but not limited to the following:

40.4.6.1.1 *18845 Col. Fischer Dr. (Fleet Maintenance Facility).

40.4.6.1.2 Vault 927.

40.4.6.1.3 Vault 826.

40.4.6.1.4 *5051 Wright Road.

40.4.6.1.5 3060 Air Freight (Freight Forwarder Building).

40.4.6.1.6 Security and Taxi Booths.

40.4.6.1.7 Cargo Building N Suites A & B1, 18500 Lee Road (Airport Engineers).

40.4.6.1.8 ARFF Fire Stations.

40.4.6.1.9 Equestrian Center on Luthe Rd.

**(Locations marked with asterisk indicate facilities most likely to be affected by future lease agreements).*

40.4.7 Remote HVAC Equipment

40.4.7.1 Proposer shall maintain all HVAC in or associated with the remote buildings and structures. A detailed listing of Remote Equipment is provided in the SOW Equipment List Exhibit XI. A general description of the remote HVAC equipment follows:

40.4.7.1.1 Air Cooled Condenser Units.

40.4.7.1.2 Air Handler Units.

40.4.7.1.3 Fan Coil Units.

40.4.7.1.4 Gas Flow Furnaces.

40.4.7.1.5 Forced Air Furnaces.

40.4.7.1.6 Boiler.

40.4.7.1.7 Air Compressor w/ air dryer.

40.4.7.2 Performance Requirements – Remote

The HVAC should maintain a year-around interior ambient of 74 ± 2 degrees temperature and $50\% \pm 5\%$ relative humidity within the building envelop.

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40.4.8 Miscellaneous DX Equipment

40.4.8.1 IAH includes certain buildings housing both HAS employees and airport tenants that fall outside the chilled water closed loop system including Airport Services Complex, HAS Administration Building, Supply Chain Management buildings, and Other Remote Buildings/ Facilities. The designation (DX) in these documents identifies those specific stand alone systems for which O&M HVAC services Proposer is responsible to operate and maintain. The systems in these facilities range from stand alone 3/4-ton window units to complete packaged heating and cooling units.

40.4.9 Miscellaneous (DX) HVAC Equipment

40.4.9.1 Proposer shall maintain certain DX HVAC equipment. A detailed listing of Miscellaneous (DX) HVAC Equipment is provided in the SOW Equipment List Exhibit XI.

40.4.9.1.1 Window Units.

40.4.9.1.2 Packaged Units.

40.4.9.1.3 Roof Unit.

40.4.9.1.4 Blower Unit.

40.4.9.2 Performance Requirements Miscellaneous (DX).

The HVAC should maintain a year-around interior ambient of 74 °F \pm 2° F temperatures and 50% relative humidity within the building envelope.

41.0 HOU AIRPORT SYSTEM OVERVIEW - PERFORMANCE REQUIREMENT SYNOPSIS

41.1 HOU Central Plant

41.1.1 The Central Plant houses all of the major equipment providing closed loop chilled/hot water HVAC to the Terminal. Proposer shall operate and maintain all systems within the Central Plant. The major systems are as follows:

41.1.1.1 Hot Water System.

41.1.1.2 Refrigeration Units.

41.1.1.3 Chilled Water System.

41.1.1.4 Condenser Water System.

41.1.1.5 Service Water System.

41.1.1.6 Compressed Air System.

41.1.1.7 Air Distribution, Cooling and Heating Air Systems.

41.1.1.8 Make-up Air, Ventilating and Exhaust Systems.

41.1.1.9 Control Systems.

41.1.1.10 Auxiliary Systems.

41.2 Existing HOU Central Plant Equipment

41.2.1 The Central Plant houses the Administration Offices for Proposer and the repair facilities for the Proposer's on-site staff. Proposer shall operate and maintain all systems in or associated with the Central Plant. A detailed listing of Central Plant Equipment is provided in the SOW Equipment List Exhibit XI. The following is a general description of the existing Central Plant HVAC equipment.

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41.2.1.1 Hot Water Boilers

41.2.1.1.1 Two (2) HVAC hot water circulating pumps - 30 HP.

41.2.1.2 Domestic Water System

41.2.1.2.1 Water heater – 260,000 BTU.

41.2.1.2.2 Domestic hot water circulation pump – ½ HP.

41.2.1.3 Refrigeration Units – Centrifugal Water Chillers

41.2.1.3.1 Four York Chillers, (2) 1025 ton, (1) 1039 ton, (1) 811 ton

41.2.1.3.2 One York Water Source Heat Pump

41.2.1.3.3 Four chilled water pumps, 1200 gpm @ 80Ft. head.

41.2.1.4 Chilled Water System

41.2.1.4.1 Five (5) secondary chilled water circulating pumps.

41.2.1.4.2 Chilled water expansion tanks.

41.2.1.4.3 Four primary chilled water pumps, 1200 gpm @ 80Ft. head.

41.2.1.5 Condenser Water System

41.2.1.5.1 Four Cell 1500 gpm cooling towers @ 96 F to 86 F.

41.2.1.5.2 Four 50 HP each cooling tower fan motors.

41.2.1.5.3 Four (4) Ceramic/cellular w/ 3' PVC tower cell fill. (500 tons Ea.).

41.2.1.5.4 Four (4) chilled water circulating pumps.

41.2.1.5.5 Four (4) chilled water circulation pumps, horizontal split case.

41.2.1.5.6 One (1) Condenser water filter system.

41.2.1.6 Refrigerant Recovery Unit - One (1) ¾ HP Low pressure recovery unit.

41.2.1.7 Condenser Tube Cleaner - One (1) pneumatic condenser tube cleaner.

41.2.1.8 Compressed Air Systems

41.2.1.8.1 Two (2) twin air compressor.

41.2.1.8.2 Air dryer.

41.3 HOU Main Terminal and Concourse Areas

41.3.1 The HOU Main Terminal Building houses the HOU Central Plant. The Main Terminal Building handles Ticketing and Baggage and presents access to Concourse. Air handling systems currently serving the upper and lower terminal areas are principally constant volume and multi-zone types. For most multi-zone units, the Mechanical Rooms are a common return plenum. Newer air handling units use ducted returns. Units installed in recent years including the baggage claim areas, west end, and east end ramps are in good condition.

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41.3.2 Proposer shall operate and maintain all existing HVAC and equipment in or associated with the Terminal and Concourse, plus other Remote Facilities. The environmental systems utilized in the Terminal at HOU employ many different types of air conditioning systems, heating and ventilating units, heat transfer systems, etc. Proposer shall minimize exhaust air requirements and maximize outside air intake requirements, both in accordance applicable codes, to minimize fumes and humidity. A detailed listing of Terminal and Concourse equipment is provided in the SOW Equipment List Exhibit XI.

41.3.3 Building pressurization shall be in accordance with ASHRAE Standard 62.1. It is difficult to recommend specific guidelines for building pressurization as this will vary by building and is determined through calculations and engineering judgment.

41.3.4 The City of Houston has adopted 2006 UMC, which references ASHRAE 62.1 as the ventilation standard.

41.4 Existing HOU Terminal and Concourse Equipment

41.4.1 The following is a general description of the HVAC equipment.

41.4.1.1 Air Handling Units/Filters.

41.4.1.2 Control Air Compressors.

41.4.1.3 Air Driers.

41.4.1.4 Exhaust/Circulating Fans.

41.4.1.5 Supply Fans.

41.4.1.6 Heating and Ventilating Units.

41.4.1.7 Hot Water Boilers.

41.4.1.8 Chilled Water Circulating Pumps.

41.4.1.9 Hot Water Circulating Pumps.

41.4.1.10 Outside Air Fans.

41.4.1.11 Exhaust Fans for Inside of Terminal Areas.

41.4.1.12 Unitary DX HVAC Equipment.

41.4.1.13 Fan Coil Units.

41.4.1.14 Air Curtains.

41.4.1.15 Air Distribution Devices.

41.5 HOU Energy Management and Control.

41.5.1 Existing Control Systems:

41.5.1.1 Existing Controls are a combination of electric/pneumatic and Metasys' DDC system. Some of these controls will all be demolished as a part of the renovation and expansion projects. Proposer shall maintain existing controls and make adjustments as required to make the construction phasing, sequencing and transitions as painless as possible. Proposer shall work with the construction Proposers to assure that existing controls are left in service until new controls are ready for service.

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41.5.2 New Control Systems:

41.5.2.1 BacNet protocols of Local Intelligent Control Panels are in place at HOU for each air handling system, the chillers, and heat exchangers. The local intelligent panels have stand-alone capability, and contain all programs necessary for equipment operation. The local intelligent panels will be able to interface with the centralized control system.

41.5.2.2 The control system is an open protocol BACnet Building Automation and Control System, which includes UES and Alerton. Included in the Hardware for the system is EMI/RFI remediation in component and control panel selection and in construction procedures. HAS requires all systems not BACnet to provide Owner release of the Propriety Protocol and to have a gateway for permitting full communication capabilities. Specific controls systems include:

41.5.2.2.1 Chiller Controls

Chiller controls should follow manufacturer's guidelines.

41.5.2.2.2 Control panel is able to control the chiller's operation through diagnostics and diagnostic history that are time/date stamped. Diagnostics include among many others (1) sensor and switch faults, (2) excessive purge activity, (3) overload trips, (4) loss of flows, (5) high motor winding temperature.

41.5.2.2.3 The control panel is able to communicate with a BACnet Compatible Building Automation System.

41.5.2.2.4 Pump Control

The BACnet Compatible Energy Management and Control System for the primary variable speed pump operation will be capable of performing the following:

41.5.2.2.4.1 Alternating pumps.

41.5.2.2.4.2 Staging pumps.

41.5.2.2.4.3 Controlling AFD speed.

41.5.2.2.4.4 Monitoring of motor performance.

41.5.2.2.4.5 PID functions and set point modifications.

41.5.2.2.4.6 Energy management through a de-coupled system.

41.6 HVAC Air Side Systems Controls

41.6.1 Variable Air Volume Air Handling Units include a factory furnished and mounted direct digital control panel for temperature control and energy management function. The system includes electronic actuators for coil control valves, dampers and duct pressure sensors for variable fan speed operation. DDC controllers are of modular construction and be able to withstand vibrations if mounted inside the AHU. The system is capable of controlling all the air handling unit operational parameters including:

41.6.1.1 Discharge temperature reset.

41.6.1.2 Supply fan state control and status.

41.6.1.3 Supply/return air temperature monitoring and control.

41.6.1.4 Outdoor air flow monitoring control. (For 100% O.A. Units).

41.6.1.5 Night set back, warm-up and cooling down cycles.

41.6.1.6 Space and duct humidity control.

41.6.1.7 AQ monitoring through CO2 sensors with O.A. control.

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41.6.1.8 Variable frequency drives control from static pressure transducer.

41.6.1.9 Optimum start/stop, soft start.

41.6.1.10 Fan over pressurization safety switch.

41.6.1.11 Smoke control functions.

41.6.1.12 Chilled and hot water valves control.

41.6.1.13 Fan Operation status.

41.6.1.14 Filter status.

41.7 Inter-operability with BACnet-Compatible Building Management Systems

41.7.1 Constant Volume Air Handling Units are controlled by a general type direct digital control system for temperature control and energy management functions. DDC controllers are of modular construction and be able to withstand vibrations if mounted inside the AHU.

41.7.2 Variable Air Volume Modules are controlled using a general type direct digital control system. Individual space temperature sensors as part of a sensor group will be used as an input for a master zone controller.

41.8 Compressor Air System

41.8.1 The existing air compressor is providing air for the existing pneumatic control systems.

41.9 Performance Requirements – HOU Main Terminal and Concourse.

41.9.1 General – The Terminal Building is supplied primary heating and cooling mediums from the Central Plant facility. The systems are designed to maintain 74 °F ± 2°F indoor temperature through wide variations of outdoor temperature utilizing chilled and hot water. The mediums are conveyed through various piping throughout the terminal. The system should be capable of supplying chilled water at 42°F on demand with no less than 42.5°F at the coil, and hot water should be delivered at a temperature of 165°F. Hot water for domestic use and kitchen use is converted by shell and tube heat exchangers. HAS will select Primary and Domestic Hot Water Temperature setting. Proposer shall maintain all primary water, air, and secondary air systems to meet design performance requirements.

41.9.2 Special Conditions

41.9.2.1 HVAC Design Conditions. Carrier E20-11 cooling load calculation program was used to calculate the building cooling/heating block load. The air conditioning system is designed to maintain the specified indoor conditions at the specified outdoor weather conditions.

Outdoor Conditions

Summer: 97° F DB 77° F WB

Winter: 28° F DB

These temperatures are based on ASHRAE 1% design conditions.

Indoor Conditions

Area Designation	<u>Cooling</u> RH Control	<u>Heating</u> RH Control
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Concourse, Baggage Claim, Gates, Ticketing	74°Fdb±2°F No RH Control	74°Fdb±2°F No RH Control
Office & Other Areas	74°Fdb±2°F 50% RH±5%	74°Fdb±2°F No RH Control
Mechanical Rooms	104°F (Max) No RH Control	60°F DB No RH Control

The Total Estimated Building Cooling Loads:

Ticketing Building Lower (Level 1)	650 tons
Ticketing Building Upper (Level 2)	450 tons
Central Concourse	1,150 tons
Central Concourse expansion – Bridge	100 tons 50 tons
Total	2,400 tons

- 41.9.2.2 A central dedicated ventilation unit will handle transmission and internal loads. Unit is a modular double skin construction complete with a centrifugal or airfoil supply fan section, cooling coil section with copper coil/copper fin construction, a heating coil section with copper coil/copper fin construction, an access door section wide enough to allow for adequate maintenance, a filter section comprising a 2" thick 30% efficiency pre-filter section, an electric excitation field and a 12" thick 85% efficiency cartridge filter, and a mixing box with O.A. measuring station (VAV units only).
- 41.9.2.3 An airflow measuring probe station is mounted on the supply ducts to provide for flow balancing and measuring.
- 41.9.2.4 A dedicated outdoor air handling unit (O.A. AHU) will handle the outside air sensible and latent loads. This unit is of modular double skin construction complete with copper coil/copper fin cooling coil section, a copper coil/copper fin heating section, an 85% efficiency 12" cartridge filter section, and a centrifugal fan supply section. A 2-speed fan motor is used and controlled through return air duct mounted CO₂ sensors. The O.A. AHU is complete with unit-mounted starters and DDC control panel for its operation. Two-way modulating temperature control valves with electric actuators and automatic flow control valves are used to control chilled water flow. Three-way control valves are used on the most remote units in the loop to prevent loss of flow conditions.
- 41.9.2.5 Outbound Baggage Handling Areas. Fresh outside air from a clean source are carried and supplied to dedicated O.A. AHUs in the baggage handling areas. Air will then be treated and tempered to a minimum temperature of 65°F in summer and maximum of 75°F in winter and supplied through a duct distribution system to spot cool the work areas. Drum louvers with adjustable cylindrical drums are used to adjust for season change air pattern distribution. Air delivery will be at a speed of 1,500 FPM. Redundancy will be used as each conveyor belt is supplied by two overhead supply air ducts from two independent units.
- 41.9.2.6 Baggage Claim Conveyor Belt Area. Air curtains are installed on all baggage claim area conveyor belts to prevent air infiltration from the tug drive area. Air curtains are interlocked with the security door operation.
- 41.9.2.7 Ventilation for Toilet Rooms. Toilet room ventilation is designed to come from adjacent areas. Hence, Proposer shall maintain toilet areas at negative pressure conditions at all times. The air requirement for ventilation will be the highest of the following:
 - 41.9.2.7.1 1 CFM/sq. ft. of toilet room floor areas.
 - 41.9.2.7.2 15 ACH in the toilet room areas.

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- 41.9.2.7.3 50 CFM/WC or 50 CFM/Urinal.
- 41.9.2.8 Backwardly inclined in-line centrifugal exhausters are used to push the air outdoors. For VAV air handling systems, Proposer shall coordinate operation of the exhausters with the air handling system operation to avoid building loss of pressurization problems.
- 41.9.2.9 Concession Kitchen Ventilation. Make-up air provided for the concession areas exhaust will not be provided from adjoining spaces. Concession vendors will supply all make-up air quantity required for the kitchen exhaust equipment. Vendors will supply the heating, ventilation and air condition equipment. Chilled/heating water supply and return tapings will be only provided for concession vendor's use. To provide for tenant billing, energy or BTU meters will be used for each independent tenant. Flow meter and temperature sensors in the supply/return piping are installed and connected to the BTU meter. Proposer to provide and monitor the meters. Providing meters is outside of Basic Services and included as an OSR.
- 41.10 HOU - BUILDING AT 8800 PAUL B. KOONCE BOULEVARD*
- 41.10.1 HVAC Equipment – Building at 8800 Paul B. Koonce Boulevard
- Proposer shall operate and maintain all HVAC in or associated with the building at 8800 Paul B. Koonce Boulevard (former FAA facility). A detailed listing of Equipment is provided in SOW Equipment List Exhibit XI. HVAC equipment includes, but is not limited to, the following:
- 41.10.1.1 Packaged Chiller.
- 41.10.1.2 Air Cooled Condensing Unit.
- 41.10.1.3 Air Handling Units.
- 41.10.1.4 Air Handling Unit Filters.
- 41.10.1.5 Air Handling Unit Interlocks.
- 41.10.1.6 Ventilating Fans with thermostats, speed controls, etc.
- 41.10.1.7 Fire Dampers.
- 41.10.1.8 Electric Duct Heaters.
- 41.10.1.9 Gas-Fired Hot Water Boiler Unit.
- 41.10.1.10 Air Distribution Devices.
- 41.10.1.11 Volume Dampers.
- 41.10.2 Performance Requirements – Building at 8800 Paul B. Koonce Boulevard
- 41.10.2.1 Proposer shall operate the HVAC to maintain a year-round interior ambient of 74 ± 2 degrees F temperature and $50\% \pm 5\%$ relative humidity within the building envelope.
- 41.11 HOU Remote Buildings/Facilities*
- 41.11.1 Proposer shall maintain the HVAC equipment in several remote buildings and structures at the Airport. Remote buildings and structures that include, but are not limited to, the following.
- 41.11.1.1 Public Safety/TSA/H.P.D. buildings.
- 41.11.1.2 Fire Station No. 81.
- 41.11.1.3 Airfield & Grounds Building.
- 41.11.1.4 Vehicle Maintenance Shop.
- 41.11.1.5 North Ramp Electrical Vault.

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- 41.11.1.6 South Ramp Electrical Vault.
- 41.11.1.7 Cab Drivers' Break Room.
- 41.11.1.8 Parking Garage Ground Transport Building.
- 41.11.1.9 Electrical Hangar.
- 41.11.1.10 Guard Shacks (N60).
- 41.11.1.11 Fuel Farm A/C Unit.
- 41.11.1.12 All domestic water pumps.
- 41.11.1.13 All circulating pumps.

41.12 *Remote HVAC Equipment*

41.12.1 Proposer shall operate and maintain all HVAC in or associated with the remote buildings and structures. A detailed listing of Remote Equipment is provided in SOW Equipment List Exhibit XI. Remote HVAC equipment includes, but is not limited to, the following:

- 41.12.1.1 Air Cooled Condenser Units.
- 41.12.1.2 Air Handler Units.
- 41.12.1.3 Fan Coil Units.
- 41.12.1.4 Gas Flow Furnaces.
- 41.12.1.5 Forced Air Furnaces.
- 41.12.1.6 Boiler.
- 41.12.1.7 Air Compressor w/air dryer.

41.13 *Performance Requirements – Remote Facilities*

41.13.1 The HVAC should maintain a year-around interior ambient of 75 degrees F temperature and 50% relative humidity within the building envelope.

41.14 *Miscellaneous DX Equipment at HOU*

41.14.1 The HOU airport system includes certain buildings housing both HAS employees and airport tenants that fall outside the chilled water closed loop system, the building at 8800 Paul B. Koonce Boulevard, and Remote Buildings/Facilities. The designation (DX) in these documents identify those specific stand alone systems for which O&M HVAC services for which Proposer is responsible to operate and maintain. The systems in these facilities range from stand-alone 3/4-ton window units to complete packaged heating and cooling units.

41.15 *Miscellaneous (DX) HVAC Equipment*

41.15.1 Proposer shall maintain certain DX HVAC equipment. A detailed listing of Miscellaneous (DX) HVAC Equipment is provided in SOW Equipment List, Exhibit XI.

- 41.15.1.1 Window Units.
- 41.15.1.2 Packaged Units.
- 41.15.1.3 Roof Unit.
- 41.15.1.4 Blower Unit.

SPECIFICATIONS / STATEMENT OF WORK
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- 41.16 Performance Requirements - Miscellaneous (DX)
- 41.16.1 The HVAC should maintain a year-around interior ambient of 74°F ± 2 degrees F temperature and in summer a 50% ± 5% relative humidity within the building envelope.
- 41.17 HOU Offices under the East and West U-Ramp
- 41.17.1 The HVAC equipment comprised within vacant offices under the East U-Ramp and PPM offices under the West U-Ramp are fan coil units. A detailed list of the equipment to be maintained is provided in SOW Equipment List, Exhibit XI.
- 42.0 ESTIMATED RENOVATION, UPGRADE, EXPANSION AND DEMOLITION WORK:**
- 42.1 IAH
- 42.1.1 Project 621- Central Plant expansion - Construction to provide up to two (2) 50,000 pounds per hour boilers and associated equipment, pumps etc. and up to one 3,000 ton electric chiller and associated equipment, pumps etc. Refer to Exhibit XV for anticipated replacement equipment (Estimate project completion 2014).
- 42.1.2 Project 500N- T-D Renovations- Construction to remove existing Andover DDC control system and replace with a Bac-net non proprietary system. (Estimate project completion 2015).
- 43.0 PROPOSER RESPONSIBILITY DURING IMPLEMENTATION OF NEW FACILITIES AND EQUIPMENT IAH, HOU & EFD**
- 43.1 As part of the Basic Services, Proposer shall work with HAS and construction Proposer to meet operational and capacity requirements during renovations, upgrades, expansion, and demolitions for any future projects. Proposer shall provide optimum system operations during any construction /project work to meet additional cooling and heating load requirements from on-line facilities, systems, and equipment as new systems and equipment are being readied to come on line for full cooling and heating operating service.
- 43.2 Upon issuance of a certificate of substantial completion and/or beneficial use and the equipment is put into revenue service the Proposer shall take full responsibility of equipment maintenance and manage any warranties in effect.
- 43.3 System Upgrades/Modifications Testing and Acceptance
- 43.3.1 Acceptance Tests. New system modifications and upgrades performed by the Proposer will be subject to individual thirty (30) day Acceptance Test(s) to verify successful startup and proper performance and functionality in an operational environment. Unless specified in a change order or otherwise, the following items are the necessary elements of an Acceptance Test:
- 43.3.1.1 After startup the Proposer will operate the new equipment for thirty (30) days as the initial step in the Acceptance Test(s).
- 43.3.2 Test procedures shall determine whether the equipment is fully operational and performing in accordance with product specifications and performance requirements provided in this Agreement. The Airport, at its sole option and expense, may perform additional acceptance testing to verify that the equipment is installed correctly and functioning in accordance with the terms of the Agreement. In the event that Airport conducts its own tests, the Proposer will be given advance written notification and will be afforded the opportunity to witness and observe the Airport tests. Notwithstanding any Airport test(s), the Airport shall be entitled to rely on results obtained and recommendations made by the Proposer regarding the operation and performance of new equipment. Testing by Airport shall not relieve the Proposer of its obligations to test and determine that the equipment is properly installed, adjusted, and functioning. Neither observations by the Airport nor inspections, tests, or approvals by others shall relieve the Proposer from its obligations to perform in accordance with this Agreement.

SPECIFICATIONS / STATEMENT OF WORK
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- 43.3.3 During the thirty-day acceptance test period, the Proposer shall notify the Director in writing within twenty-four (24) hours of the occurrence of any downtime. Equipment downtime will be computed according to the following guidelines:
- 43.3.3.1 Downtime will accumulate during any period when the equipment is not able to perform its scheduled function or meet performance requirements, as specified, due to a failure of hardware or software.
- 43.3.3.2 Downtime will not accumulate if a failure occurs due to Force Majeure.
- 43.3.4 If no more than a cumulative total of three hours of system downtime occurs within the thirty-day period, the new equipment will be deemed to have passed the Acceptance Test.
- 43.3.5 If more than three hours of system downtime occurs at any point-during the thirty day Acceptance Test, the Airport may, at its sole option, require the Proposer to conduct a new thirty-day Acceptance Test.
- 43.3.6 If more than a cumulative total of seven hours of system downtime occur during the thirty-day acceptance period, the Airport may elect to:
- 43.3.6.1 Request the Proposer to begin a new thirty (30) day Acceptance Test within seven days; or
- 43.3.6.2 Notify the Proposer that the specific modification or upgrade is not acceptable and seek remedy through the Proposer's Performance Bond or other available remedies. The Proposer shall remove the failed new component or equipment. Title to the failed item(s) will then be transferred to the Proposer and Airport will not be responsible for the condition of, or any loss or damage to, the said item(s); or Waive the defect(s) and accept the item, if the demonstrated operation of the equipment is such that reliable and efficient operation and performance of the Airport systems and all associated Warranties shall not be compromised. The Proposer shall bear all direct costs attributable to Airport's performance evaluation and determination to waive any defect and accept equipment (such costs to be approved by Airport as to reasonableness and to include, but not be limited to: fees and charges of engineers, architects, attorneys and other professionals). If any such acceptance occurs, the Airport shall be entitled to an appropriate negotiated decrease in the Agreement Price. If the acceptance occurs after such recommendation, a written Change Order will be issued and an appropriate amount will be paid by the Proposer to Airport.
- 43.3.7 The Proposer shall be responsible for all costs associated with the Acceptance Test(s) including the costs for any independent tests or certifications (except as noted above).
- 43.3.8 Notice of Acceptance. If the new equipment passes the Acceptance Test, the Airport will provide written notice of acceptance within five (5) working days following the completed thirty consecutive day Acceptance Test period. The official date of acceptance shall be the first day following successful completion of the acceptance test.
- 43.3.9 Title - Risk of Loss. For items provided or furnished by Proposer, title to any new upgrade or modification component of the Airport systems or equipment will vest in the Airport upon date of installation; however, the obligation to pay the Proposer remaining progress payments will not accrue until the date of acceptance by the Airport.
- 43.3.10 The Warranty Period shall begin to run upon Airport's date of acceptance.

44.0 ENERGY MANAGEMENT - IAH, HOU & EFD

- 44.1 At the inception of Project 621, any payments will cease for Energy Management Savings. After completion of Project 621, an eighteen (18) month base line shall be established for any renewal of credits. Estimated Project 621 completion is thirty (30) months.
- 44.2 Any new energy management system installed under the scope of future projects shall be compatible with existing energy management system.

SPECIFICATIONS / STATEMENT OF WORK

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- 44.3 Proposer for performance measurement, whether implemented internally by the Proposer or by contract with a third party vendor, shall implement a comprehensive M&V plan using the guidelines and methodologies defined by the International Performance Measurement and Verification Protocol (IPMVP). This will include but not be limited to baseline evaluation and development, independent variable analysis, monitoring strategies, savings calculations, error analysis, documentation, and reporting. Per IPMVP recommendations, Proposer is to use one or a combination of the following four methodologies for effective performance measurement.
- 44.3.1 Option A – Retrofit Isolation:
- 44.3.2 Key Parameter Measurement
- 44.3.3 Option B – Retrofit Isolation: All Parameter Measurement
- 44.3.4 Option C - Whole Facility
- 44.3.5 Option D - Calibrated Simulation
- 44.4 The Proposer assumes the responsibility for all processes needed to develop and maintain energy baselines, establish energy savings goals, and monitor and track energy use and report on energy savings. At the discretion of the Director, the Proposer may engage a third party vendor to provide the monitoring services specified above, at the Proposer's expense. The roles and responsibilities for a third party vendor shall be negotiated based on a defined statement of work at the discretion of the Director.
- 44.5 Baseline Development & Maintenance Guidelines
- 44.5.1 Where savings strategies will be relatively isolated from one another, Option A or Option B shall be utilized to develop a baseline independent of utility bill records. Where multiple savings strategies are installed and become highly interactive with one another or other building systems, the use of Option C is required. 24 months of utility bill records are required for Option C baseline evaluation and development. Option D is reserved for applications where either an energy baseline does not exist, meter data is not available, or a facility will be remodeled and space utilization will dramatically change. In these instances, the baseline shall be modeled using energy modeling software.
- 44.5.2 For overall tracking and baseline development independent of incorporating new strategies, option C shall be utilized. Proposer to provide plan and methodology to the Director for approval.
- 44.6 Independent Variable Evaluation
- 44.6.1 Independent variables should be monitored and included in the energy savings analysis and baseline analysis. The variables may include but are not limited to: climate data, operating schedules, occupancy, equipment inventories, and population.
- 44.7 Baseline Development and Maintenance
- 44.7.1 Baseline maintenance is critical to accurate measurement of energy savings and overall Proposer performance. This often involves tracking and evaluation of independent variables or other conditions that cause energy use to deviate from anticipated performance. In addition to independent variables, this may include but is not limited to building additions, scheduling, changes in energy density, control strategies, personal preferences, etc. Data collection, monitoring, documentation, and calculations to evaluate the value of each variable or condition are required for acceptance in the energy savings analysis. Two separate comparisons shall be tracked and utilized to develop and maintain the baseline:
- 44.7.1.1 Current month data versus same month data during previous year
- 44.7.1.2 Rolling 12 month data versus previous year rolling 12 month data

SPECIFICATIONS / STATEMENT OF WORK

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44.8 Measurement & Verification

- 44.8.1 The key performance variables listed in Section 15.2.5 shall be tracked via utility bills, BAS trending and monitoring, or field observation and measurement.
- 44.8.2 At the sole discretion of the Director, field measurement of pre-retrofit and post-retrofit variables may be sufficient to quantify energy savings on an on-going basis. If utility bill records and/or meter and sub-meter data is used to evaluate energy savings, the comprehensive M&V plan shall define the process and frequency of data collection, baseline modifications, documentation, system monitoring, savings calculations and reporting.
- 44.8.3 The Proposer shall submit to the Director justification related to the adjustment or normalization of the baseline for events or occurrences not directly attributable to the Proposer. This shall be evaluated by the Director and feedback shall be provided to the Proposer within thirty (30) days of receipt. The Director will have sole authority to accept or deny all justifications provided.
- 44.8.4 At any time during the course of the Agreement, the Proposer may submit a request to reset the baseline. The Proposer shall submit justification to the Director, who shall have the sole authority to accept or deny all requests.
- 44.8.5 Proposer, at Director's discretion, shall implement a shared energy savings approach whereby 80% of the savings will be retained by HAS and 20% will be shared with Proposer, for initiatives developed solely by the Proposer. Dollar amounts must be calculated monthly based on the energy unit cost for the particular month, multiplied by the units saved (verified and validated with International Performance Measurement and Verification Protocol – IPMVP). Incentives will be paid quarterly upon the Director's approval. Energy reduction reporting shall include a detailed description of the Proposer's actions to which the savings are directly attributable. The Proposer shall submit a preliminary assessment of any operational change that is being contemplated showing projected energy impact. Upon approval and implementation, a completion report certifying that the change has been implemented and any performance test data to support the defined M&V protocol and resulting determination of cost reduction.

44.9 Shared Energy Savings Award Fee

- 44.9.1 The savings will be calculated as the difference between the monthly utility cost (of the utility being considered) and the cost during the corresponding baseline period, plus or minus any adjustments approved by the Director. For all no cost improvements, HAS shall retain 80% of the savings and shall share the remaining 20% with the Proposer for the remaining term of the Agreement. For all additional capital improvements funded by HAS, HAS shall retain 90% of the savings and shall share the remaining 10% with the Proposer for one year. After 1 year, HAS retains all savings. All other provisions of this Agreement must be satisfied in order to receive this savings.
- 44.9.2 At the Director's discretion, the Proposer shall be allowed to fund all or part of the cost of any efficiency improvement project and receive a larger portion of the savings generated by installing such equipment through the shared savings approach. If the Proposer wishes to negotiate the terms of the shared savings agreement, the Proposer shall submit this request along with the Proposer's required preliminary assessment.
- 44.9.3 All utilities, including water, are eligible for savings incentives.
- 44.10 Propose a detailed description for:
- 44.10.1 Operating the chiller equipment and system in a manner to utilize the energy source (gas for steam turbine drive versus electric drive chillers), which produces the lowest cost per ton. (IAH only).

SPECIFICATIONS / STATEMENT OF WORK
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- 44.10.2 Optimizing energy usage, balancing operating hours on all equipment, and determining optimum modes of operations for all HVAC.
- 44.10.3 Exploring Load share plans.
- 44.10.4 Evaluating energy usage and identifying opportunities for efficiencies/savings.
- 44.10.5 Identifying and implementing additional energy conservation strategies.
- 44.10.6 Operating and maintaining HVAC and monitoring and controlling performance related items at optimum efficiency for control including but not limited to the following:
 - 44.10.6.1 Fuel/Air ratio (excess air) in boiler firing.
 - 44.10.6.2 Chillers, boilers, pumps, and all utility production equipment.
 - 44.10.6.3 Management control system(s).
 - 44.10.6.4 Blow-off and Blow-downs of boilers.
 - 44.10.6.5 Blow-down on cooling tower systems.
 - 44.10.6.6 De-aerator venting and operating pressure.
 - 44.10.6.7 Operation of constant and variable speed parallel pumping units.
 - 44.10.6.8 Operation of cooling towers and fans.
 - 44.10.6.9 Centrifugal chiller oil analysis.
 - 44.10.6.10 Water softening system.
 - 44.10.6.11 Monitoring of Cathodic protection.
- 44.11 Propose shared savings/incentives that includes, but is not limited to:
 - 44.11.1 Methods of tracking and identifying savings.
 - 44.11.2 Auditing utility bills.
- 44.12 Proposer shall reduce energy usage without adversely impacting tenant comfort using the following approaches:
 - 44.12.1 A comprehensive maintenance program that helps to ensure that equipment and systems are running at peak efficiency.
 - 44.12.2 High efficiency rated replacement parts.
 - 44.12.3 BAS control software must be regularly adjusted to provide maximum benefit from free cooling and outside air-reset technologies.

SPECIFICATIONS / STATEMENT OF WORK
SOLICITATION NO.: S33-T24289

45.0 **PERFORMANCE BOND**

45.1 The successful Proposer shall furnish and maintain throughout the Agreement term a Performance Bond in the amount of 100% of the annual applicable Agreement year. Proposer shall renew this bond for each renewal year of this Agreement in an amount equal to the Agreement amount for the applicable renewal term. The bond shall be conditioned upon Proposer's full and timely performance of this Agreement and must be issued by a corporate surety authorized to write surety bonds in the State of Texas and be in the form set out in the Sample Contract, Exhibit XVII.

45.2 The Performance Bond shall be in the same form as that distributed by the City, all duly executed by this bidder (as "Principal") and by a corporate surety company licensed to do business in the State of Texas. The surety must be listed on the current list of accepted sureties on federal bonds published by the United States Treasury Department.

46.0 **INCLUSION/EXCLUSION FORM**

46.1 Proposer shall review Exhibit XIV and retain for future use.

ATTACHMENT A - OFFER AND SUBMITTAL
SOLICITATION NO.: S33-T24289

NOTE: PROPOSAL MUST BE SIGNED AND NOTORIZED BY AN AUTHORIZED REPRESENTATIVE(S) OF THE PROPOSER, WHICH MUST BE THE ACTUAL LEGAL ENTITY THAT WILL PERFORM THE CONTRACT IF AWARDED AND THE TOTAL FIXED PRICE CONTAINED THEREIN SHALL REMAIN FIRM FOR A PERIOD OF ONE-HUNDRED EIGHTY (180) DAYS.

"THE RESPONDENT WARRANTS THAT NO PERSON OR SELLING AGENCY HAS BEEN EMPLOYED OR RETAINED TO SOLICIT OR SECURE THIS CONTRACT UPON AN AGREEMENT OR UNDERSTANDING FOR A COMMISSION, PERCENTAGE, BROKERAGE, OR CONTINGENT FEE, EXCEPTING BONA FIDE EMPLOYEES. FOR BREACH OR VIOLATION OF THIS WARRANTY, THE CITY SHALL HAVE THE RIGHT TO ANNUL THIS AGREEMENT WITHOUT LIABILITY OR, AT ITS DISCRETION, TO DEDUCT FROM THE CONTRACT PRICES OR CONSIDERATION, OR OTHERWISE RECOVER THE FULL AMOUNT OF SUCH COMMISSION, PERCENTAGE, BROKERAGE OR CONTINGENT FEE."

Respectfully Submitted:

(Print or Type Name of Proposer – Full Company Name)

City of Houston Vendor No. (If already doing business with City): _____

Federal Identification Number: _____

By: _____
(Signature of Authorized Officer or Agent)

Printed Name: _____

Title: _____

Date: _____

Address of Proposer: _____
Street Address or P.O. Box

City – State – Zip Code

Telephone No. of Proposer: (_____) _____

Signature, Name and title of Affiant: _____

(Notary Public in and for)

_____ County, Texas

My Commission Expires: _____ day of _____ 20_____

**EXHIBIT II – ATTACHMENT “A”: SCHEDULE OF M/WBE PARTICIPATION
SOLICITATION NO.: S33-T24289**

DATE OF REPORT: _____

BID NO.: _____

FORMAL BID TITLE: _____

NAME OF MINORITY/WOMEN SUBCONTRACTOR	OFFICE OF BUSINESS OPPORTUNITY CERTIFICATION NO.	STREET ADDRESS AND CITY, STATE, ZIP CODE	TELEPHONE NO.	SCOPE OF WORK	AGREE PRICE
<p align="right">TOTAL..... \$_____</p> <p align="right">M/WBE PARTICIPATION AMOUNT..... \$_____%</p> <p align="right">TOTAL BID AMOUNT..... \$_____</p>					

**EXHIBIT II – ATTACHMENT “A” (CONTINUED): SCHEDULE OF M/WBE PARTICIPATION
SOLICITATION NO.: S33-T24289**

IF YOU HAVE USED YOUR BEST EFFORTS TO CARRY OUT THE CITY’S M/WBE POLICY BY SEEKING SUBCONTRACTS AND SUPPLY AGREEMENTS WITH MINORITY AND WOMEN BUSINESS ENTERPRISES, YET FAILED TO MEET THE STATED PERCENTAGE GOAL OF THIS BID DOCUMENT, LIST BELOW YOUR GOOD FAITH EFFORTS FOR COMPLIANCE (DEFINITION OF REQUIREMENTS CAN BE OBTAINED THROUGH THE OFFICE OF BUSINESS OPPORTUNITY AT (713) 837-9000).

THE UNDERSIGNED WILL ENTER INTO A FORMAL AGREEMENT WITH THE MINORITY AND/OR WOMEN SUBCONTRACTORS AND SUPPLIERS LISTED IN THIS SCHEDULE CONDITIONED UPON AWARD OF A CONTRACT FROM THE CITY.

NOTE:
ALL FIRMS LISTED ABOVE MUST BE CERTIFIED (OR ELIGIBLE FOR CERTIFICATION) BY THE OFFICE OF BUSINESS OPPORTUNITY.
THIS SCHEDULE OF M/WBE PARTICIPATION SHOULD BE RETURNED, IN DUPLICATE, WITH THE BID FORM.

BIDDER COMPANY NAME

SIGNATURE OF AUTHORIZED OFFICER OR AGENT OF BIDDER

NAME (TYPE OR PRINT)

TITLE

**EXHIBIT II – ATTACHMENT “B”: M/WBE LETTER OF INTENT
SOLICITATION NO.: S33-T24289**

THIS AGREEMENT IS SUBJECT TO BINDING ARBITRATION ACCORDING TO THE TEXAS GENERAL ARBITRATION ACT.

TO: **City of Houston**
City Purchasing Agent

MINORITY/WOMEN BUSINESS ENTERPRISE (M/WBE) AND SUPPLIER

LETTER OF INTENT

Contract Bid Number: _____

Bid Title: _____

Bid Amount: _____

M/WBE Participation Amount: \$ _____ **M/WBE GOAL** _____%

1. _____ agrees to perform work/supply goods and/or **(Name of Minority/Women Business Enterprise)** Services in connection with the above-named contract and _____ as: **Name of Prime Contractor**
 - (a) _____ An Individual
 - (b) _____ A Partnership
 - (c) _____ A Corporation
 - (d) _____ A Joint Venture

2. _____ status is confirmed by M/WBE Directory made **(Name of Minority/Women Business Enterprise)** available through the City of Houston Office of Business Opportunity. Certificate No.: _____.

3. _____ and _____ **(Name of Prime Contractor)** **(Minority/Women Business Enterprise)** intend to work on the above-named contract in accordance with the M/WBE Participation Section of the City of Houston Contract Bid Provision.

The Terms & Conditions of Attachment “C” attached hereto are incorporated into this Letter of Intent for all purposes.

(Signed -- Prime Contractor)

(Signed -- Minority/Women Business Enterprise)

(Title)

(Title)

(Date)

(Date)

**EXHIBIT II – ATTACHMENT “C”: CERTIFIED M/WBE SUBCONTRACT TERMS
SOLICITATION NO.: S33-T24289**

Contractor shall insure that all subcontracts with M/WBE subcontractors and suppliers are clearly labeled “**THIS CONTRACT IS SUBJECT TO BINDING ARBITRATION ACCORDING TO THE TEXAS GENERAL ARBITRATION ACT**” and contain the following terms:

1. _____ (M/WBE subcontractor) shall not delegate or subcontract more than 50% of the work under this subcontract to any other subcontractor or supplier without the express written consent of the City of Houston’s Office of Business Opportunity (“the Director”).
2. _____ (M/WBE subcontractor) shall permit representatives of the City of Houston, at all reasonable times, to perform 1) audits of the books and records of the subcontractor, and 2) inspections of all places where work is to be undertaken in connection with this subcontract. Subcontractor shall keep such books and records available for such purpose for at least four (4) years after the end of its performance under this subcontract. Nothing in this provision shall affect the time for bringing a cause of action nor the applicable statute of limitations.
3. Within five (5) business days of execution of this subcontract, Contractor (prime contractor) and Subcontractor shall designate in writing to the Director an agent for receiving any notice required or permitted to be given pursuant to Chapter 15 of the Houston City Code of Ordinances, along with the street and mailing address and phone number of such agent.
4. As conclude by the parties to this subcontract, and as evidenced by their signatures hereto, any controversy between the parties involving the construction or application of any of the terms, covenants or conditions of this subcontract shall, on the written request of one party served upon the other or upon notice by Director served on both parties, be submitted to binding arbitration, under the Texas General Arbitration Act (Tex. Civ. Prac. & Rem. Code Ann., Ch. 171 – “the Act”). Arbitration shall be conducted according to the following procedures:
 - a. Upon the decision of the Director or upon written notice to the Director from either party that a dispute has arisen, the Director shall notify all parties that they must resolve the dispute within thirty (30) days or the matter may be referred to arbitration.
 - b. If the dispute is not resolved within the time specified, any party or the Director may submit the matter to arbitration conducted by the American Arbitration Association under the rules of the American Arbitration Association, except as otherwise required by the City’s contract with American Arbitration Association on file in the Office of the City’s Office of Business Opportunity.
 - c. Each party shall pay all fees required by the American Arbitration Association and sign a form releasing the American Arbitration Association and its arbitrators from liability for decisions reached in the arbitration.
 - d. In the event the American Arbitration Association no longer administers Office of Business Opportunity arbitration for the City, the Director shall prescribe alternate procedures as necessary to provide arbitration by neutrals in accordance with the requirements of Chapter 15 of the Houston City Code of Ordinances.

These provisions apply to goal oriented contracts. A goal oriented contract means any contract for the supply of goods or non-personal or non-professional services in excess of \$100,000.00 for which competitive bids are required by law; not within the scope of the MBE/WBE program of the United States Environmental Protection Agency on the United States Department of Transportation; and ;, which the City Purchasing Agent has determined to have significant M/WBE subcontracting potential in fields which there are an adequate number on known MBE’s and/or WBE’s to compete for City contract.

The M/WBE policy of the City of Houston will discussed during the pre-bid. For information assistance, and/or to receive a copy of the City’s Affirmative action policy and/or ordinance contact the Office of Business Opportunity at (713) 837-9000, 611 Walker, 7th Floor, Houston, Texas 77002.

**EXHIBIT II – ATTACHMENT “D”: MAYOR’S OFFICE OF BUSINESS OPPORTUNITY M/WBE
UTILIZATION REPORT
SOLICITATION NO.: S33-T24289**

Report Period: _____

PROJECT NAME & NUMBER: _____

AWARD DATE: _____

PRIME CONTRACTOR: _____

CONTRACT NO.: _____

ADDRESS: _____

CONTRACT AMOUNT: _____

LIAISON/PHONE NO.: _____

M/WBE GOAL: _____

M/WBE SUB/VENDOR NAME	DATE OF OBO CERTIFICATION	DATE OF SUBCONTRACT	SUBCONTRACT AMOUNT	% OF TOTAL CONTRACT	AMOUNT PAID TO DATE	% OF CONTRACT TO DATE

Use additional pages if needed. Submit by the 15th day of the following month.
Provide support documentation on all revenues paid to end of the report period to:
M/WBE's to reflect up/down variances on Contract amount.

Office of Business Opportunity
ATTN: Carlecia Wright 713-837-9000
611 Walker, 7th Floor
Houston, Texas 77002

EXHIBIT III – SAMPLE PRICE SHEET / FEE SCHEDULE
SOLICITATION NO.: S33-T24289

For the prices quoted, Proposer shall furnish all necessary labor, equipment, material, supplies, personnel, services, and all activity necessary for, or incidental, to perform the Work as specified in the Proposal. Price sheets by Proposal Years (1-5) must be completed in their entirety with no blanks and entered on the appropriate lines of the summary Sheet(s).

All quantities listed are estimated quantities for budgetary purposes only. The actual quantities may be higher or lower than any estimates, and Proposer shall be paid only for actual Work performed, subject to prior HAS direction and approval.

YEARS (1- 5) SAMPLE PRICE SHEET TOTAL SUMMARY

YEAR ONE RATES – PROPOSAL PRICE SHEET TOTAL SUMMARY

I-a.	Total Basic Services (IAH)	\$ _____
I-b.	Total Basic Services (HOU)	\$ _____
I-c.	Total Basic Services (EFD)	\$ _____
II-a.	Total Other Work/Services (IAH)	\$ _____
II-b.	Total Other Work/Services (HOU)	\$ _____
II-c.	Total Other Work/Services (EFD)	\$ _____
TOTAL BASIC SERVICES & OTHER WORK /SERVICES YEAR ONE RATES (IAH)(HOU)&(EFD)		\$ _____

YEAR TWO RATES – PROPOSAL PRICE SHEET TOTAL SUMMARY

I-a.	Total Basic Services (IAH)	\$ _____
I-b.	Total Basic Services (HOU)	\$ _____
I-c.	Total Basic Services (EFD)	\$ _____
II-a.	Total Other Work/Services (IAH)	\$ _____
II-b.	Total Other Work/Services (HOU)	\$ _____
II-c.	Total Other Work/Services (EFD)	\$ _____
TOTAL BASIC SERVICES & OTHER WORK /SERVICES YEAR TWO RATES (IAH)(HOU)&(EFD)		\$ _____

YEAR THREE RATES – PROPOSAL PRICE SHEET TOTAL SUMMARY

I-a.	Total Basic Services (IAH)	\$ _____
I-b.	Total Basic Services (HOU)	\$ _____
I-c.	Total Basic Services (EFD)	\$ _____
II-a.	Total Other Work/Services (IAH)	\$ _____
II-b.	Total Other Work/Services (HOU)	\$ _____
II-c.	Total Other Work/Services (EFD)	\$ _____
TOTAL BASIC SERVICES & OTHER WORK / SERVICES YEAR THREE RATES (IAH)(HOU)&(EFD)		\$ _____

EXHIBIT III – SAMPLE PRICE SHEET / FEE SCHEDULE
SOLICITATION NO.: S33-T24289

YEAR FOUR (OPTION YEAR 1) RATES – PROPOSAL PRICE SHEET TOTAL SUMMARY

I-a.	Total Basic Services (IAH)	\$ _____
I-b.	Total Basic Services (HOU)	\$ _____
I-c.	Total Basic Services (EFD)	\$ _____
II-a.	Total Other Work/Services (IAH)	\$ _____
II-b.	Total Other Work/Services (HOU)	\$ _____
II-c.	Total Other Work/Services (EFD)	\$ _____

TOTAL BASIC SERVICES & OTHER WORK /SERVICES OPTION YEAR 1 RATES (IAH)(HOU)&(EFD) \$ _____

YEAR FIVE (OPTION YEAR 2) RATES – PROPOSAL PRICE SHEET TOTAL SUMMARY

I-a.	Total Basic Services (IAH)	\$ _____
I-b.	Total Basic Services (HOU)	\$ _____
I-c.	Total Basic Services (EFD)	\$ _____
II-a.	Total Other Work/Services (IAH)	\$ _____
II-b.	Total Other Work/Services (HOU)	\$ _____
II-c.	Total Other Work/Services (EFD)	\$ _____

TOTAL BASIC SERVICES & OTHER WORK /SERVICES OPTION YEAR 2) RATES (IAH)(HOU)&(EFD) \$ _____

FIVE YEAR GRAND TOTAL	\$ _____
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The Above Rates Are “Summary “Roll-Up” Pricing” From Attached Pages Of The Proposal Price Sheet.

EXHIBIT III – SAMPLE PRICE SHEET / FEE SCHEDULE

SOLICITATION NO.: S33-T24289

YEAR ONE – (IAH) BASIC SERVICES

	<u>Cost per Month</u>	(x)	<u>Cost per Year</u>
HVAC Operation and Maintenance. Includes all Basic Services specified in the required SOW	\$ _____	(12)	\$ _____

(IAH) BASIC SERVICES

* \$ _____

* Enter the above (IAH) Basic Services Total Cost to the Year One Rates Proposal Price Sheet Total Summary on price line I-a.

EXHIBIT III – SAMPLE PRICE SHEET / FEE SCHEDULE

SOLICITATION NO.: S33-T24289

YEAR ONE – (IAH) OTHER WORK/SERVICES

Other Work/Services may be required for the HVAC to meet desired conditions and/or repairs not covered in the Basic Services of the Proposal. Any estimated quantities, labor hours, and remedial maintenance and supplies expenditures listed below are estimated amounts for Other Work/Services for each year of the Proposal. Consequently, the actual dollar amount for Other Work/Services may be higher or lower than the estimates, and the Proposer shall only be paid for actual work performed, subject to City direction and approval. **If Other Work/Services are performed by the on-site crew in conjunction with their regular duties, Proposer shall not receive additional compensation for their labor.**

A. Estimated (IAH) Other Work/ Services Labor (Quantities are estimated for budget purposes only)

No.	Description	Est. Annual Labor Hours	X	Cost per Hour	=	Annual Cost
1.	<u>HVAC MAINTENANCE MECHANIC</u>					
	a. Normal Work Hours	1,650	X	\$/hr.	=	\$
	b. After Normal Work Hours	800	X	\$/hr.	=	\$
2.	<u>DDC MAINTENANCE TECHNICIAN</u>					
	a. Normal Work Hours	1,600	X	\$/hr.	=	\$
	b. After Normal Work Hours	300	X	\$/hr.	=	\$
3.	<u>DX MAINTENANCE MECHANIC</u>					
	a. Normal Work Hours	450	X	\$/hr.	=	\$
	b. After Normal Work Hours	200	X	\$/hr.	=	\$
Total Estimated Other Work / Services Labor Annual Costs						\$
<i>(add items 1 - 3)</i>						

EXHIBIT III – SAMPLE PRICE SHEET / FEE SCHEDULE

SOLICITATION NO.: S33-T24289

B. ESTIMATED (IAH) OTHER WORK/SERVICES SUBCONTRACTS / MATERIALS / SUPPLIES
 (Quantities are estimated for budget purposes only)

PRICES SHALL BE BASED ON THE PROPOSER'S ACTUAL COST PLUS THE FOLLOWING MARK-UP PERCENTAGES:

	ITEM	ESTIMATED ANNUAL COST	PROPOSER PERCENT MARK-UP (Maximum of 15%)	TOTAL ANNUAL ESTIMATED COST
	MATERIALS	\$ 925,000	_____ %	\$ _____
TOTAL ESTIMATED OTHER WORK/SERVICES (SUBCONTRACTS / MATERIALS / SUPPLIES) ANNUAL COSTS (item B total)				\$ _____

Proposer must fill in the above maximum percent mark-up (not to exceed 15%) and complete Total Annual Estimated Cost.

TOTAL ESTIMATED (IAH) OTHER WORK/SERVICES LABOR & MATERIAL ANNUAL COST *(add A & B)* * \$ _____

* Enter The Above Estimated (IAH) Other Work/Services Annual Cost To The– Year One Rates - Proposal Price Sheet Total Summary On Price Line II-a.

EXHIBIT III – SAMPLE PRICE SHEET / FEE SCHEDULE

SOLICITATION NO.: S33-T24289

YEAR ONE – (HOU) BASIC SERVICES

	<u>Cost per</u> <u>Month</u>	(x)	<u>Cost per</u> <u>Year</u>
HVAC Operation and Maintenance. Includes all Basic Services specified in the required SOW	\$ _____	(12)	\$ _____

HOU BASIC SERVICES

* \$ _____

* Enter the above (HOU) Basic Services Total Cost to the Year One Rates Proposal Price Sheet Total Summary on price line I-b.

EXHIBIT III – SAMPLE PRICE SHEET / FEE SCHEDULE

SOLICITATION NO.: S33-T24289

YEAR ONE – (HOU) OTHER WORK/SERVICES

Other Work/Services may be required for the HVAC to meet desired conditions and/or repairs not covered in the Basic Services of the Proposal. Any estimated quantities, labor hours, and remedial maintenance and supplies expenditures listed below are estimated amounts for Other Work/Services for each year of the Proposal. Consequently, the actual dollar amount for Other Work/Services may be higher or lower than the estimates, and the Proposer shall only be paid for actual work performed, subject to City direction and approval. **If Other Work/Services are performed by the on-site crew in conjunction with their regular duties, Proposer shall not receive additional compensation for their labor.**

A. Estimated (HOU) Other Work/ Services Labor (Quantities are estimated for budget purposes only)

No.	Description	Est. Annual Labor Hours	X	Cost per Hour/Unit	=	Annual Cost
1.	<u>HVAC MAINTENANCE MECHANIC</u>					
	a. Normal Work Hours	500	X	\$ _____/hr.	=	\$ _____
	b. After Normal Work Hours	130	X	\$ _____/hr.	=	\$ _____
2.	<u>DDC MAINTENANCE TECHNICIAN</u>					
	a. Normal Work Hours	200	X	\$ _____/hr.	=	\$ _____
	b. After Normal Work Hours	120	X	\$ _____/hr.	=	\$ _____
3.	<u>DX MAINTENANCE MECHANIC</u>					
	a. Normal Work Hours	100	X	\$ _____/hr.	=	\$ _____
	b. After Normal Work Hours	40	X	\$ _____/hr.	=	\$ _____
Total Estimated Other Work / Services Labor Annual Costs						\$ _____
<i>(add items 1 - 3)</i>						

EXHIBIT III – SAMPLE PRICE SHEET / FEE SCHEDULE

SOLICITATION NO.: S33-T24289

B. ESTIMATED (HOU) OTHER WORK/SERVICES SUBCONTRACTS / MATERIALS / SUPPLIES
 (Quantities are estimated for budget purposes only)

PRICES SHALL BE BASED ON THE PROPOSER'S ACTUAL COST PLUS THE FOLLOWING MARK-UP PERCENTAGES:

	ITEM	ESTIMATED ANNUAL COST	PROPOSER PERCENT MARK-UP (Maximum of 15%)	TOTAL ANNUAL ESTIMATED COST
	MATERIALS	\$ 160,000	_____ %	\$ _____
TOTAL ESTIMATED OTHER WORK/SERVICES (SUBCONTRACTS / MATERIALS / SUPPLIES) ANNUAL COSTS (item B total)				\$ _____

Proposer must fill in the above maximum percent mark-up (not to exceed 15%) and complete Total Annual Estimated Cost.

TOTAL ESTIMATED (HOU) OTHER WORK/SERVICES LABOR & MATERIAL ANNUAL COST *(add A & B)* * \$ _____

* Enter The Above Estimated (HOU) Other Work/Services Annual Cost To The Year One Rates - Proposal Price Sheet Total Summary On Price Line II-b.

EXHIBIT III – SAMPLE PRICE SHEET / FEE SCHEDULE

SOLICITATION NO.: S33-T24289

YEAR ONE – (EFD) BASIC SERVICES

	<u>Cost per</u> <u>Month</u>	(x)	<u>Cost per</u> <u>Year</u>
HVAC Operation and Maintenance. Includes all Basic Services specified in the required SOW	\$_____	(12)	\$_____

EFD BASIC SERVICES

* \$_____

* Enter the above (EFD) Basic Services Total Cost to the Year One Rates Proposal Price Sheet Total Summary on price line I-c.

EXHIBIT III – SAMPLE PRICE SHEET / FEE SCHEDULE

SOLICITATION NO.: S33-T24289

YEAR ONE – (EFD) OTHER WORK/SERVICES

Other Work/Services may be required for the HVAC to meet desired conditions and/or repairs not covered in the Basic Services of the Proposal. Any estimated quantities, labor hours, and remedial maintenance and supplies expenditures listed below are estimated amounts for Other Work/Services for each year of the Proposal. Consequently, the actual dollar amount for Other Work/Services may be higher or lower than the estimates, and the Proposer shall only be paid for actual work performed, subject to City direction and approval. **If Other Work/Services are performed by the on-site crew in conjunction with their regular duties, Proposer shall not receive additional compensation for their labor.**

A. Estimated (EFD) Other Work/ Services Labor (Quantities are estimated for budget purposes only)

No.	Description	Est. Annual Labor Hours	X	Cost per Hour/Unit	=	Annual Cost
1.	<u>HVAC MAINTENANCE MECHANIC</u>					
	a. Normal Work Hours	310	X	\$ _____/hr.	=	\$ _____
	b. After Normal Work Hours	30	X	\$ _____/hr.	=	\$ _____
2.	<u>DDC MAINTENANCE TECHNICIAN</u>					
	a. Normal Work Hours	140	X	\$ _____/hr.	=	\$ _____
	b. After Normal Work Hours	20	X	\$ _____/hr.	=	\$ _____
3.	<u>DX MAINTENANCE MECHANIC</u>					
	a. Normal Work Hours	60	X	\$ _____/hr.	=	\$ _____
	b. After Normal Work Hours	5	X	\$ _____/hr.	=	\$ _____
Total Estimated Other Work / Services Labor Annual Costs						\$ _____
<i>(add items 1 - 3)</i>						

EXHIBIT III – SAMPLE PRICE SHEET / FEE SCHEDULE
SOLICITATION NO.: S33-T24289

B. ESTIMATED (EFD) OTHER WORK/SERVICES SUBCONTRACTS / MATERIALS / SUPPLIES
 (Quantities are estimated for budget purposes only)

PRICES SHALL BE BASED ON THE PROPOSER'S ACTUAL COST PLUS THE FOLLOWING MARK-UP PERCENTAGES:

	ITEM	ESTIMATED ANNUAL COST	PROPOSER PERCENT MARK-UP (Maximum of 15%)	TOTAL ANNUAL ESTIMATED COST
	MATERIALS	\$ 55,000	_____ %	\$ _____
TOTAL ESTIMATED OTHER WORK/SERVICES (SUBCONTRACTS / MATERIALS / SUPPLIES) ANNUAL COSTS (item B total)				\$ _____

Proposer must fill in the above maximum percent mark-up (not to exceed 15%) and complete Total Annual Estimated Cost.

TOTAL ESTIMATED (EFD) OTHER WORK/SERVICES ANNUAL COST (add A & B) * \$ _____

* Enter the Above Estimated (EFD) Other Work/Services Annual Cost To Year One Rates - Proposal Price Sheet Total Summary On Price Line II-c.

EXHIBIT III – SAMPLE PRICE SHEET / FEE SCHEDULE

SOLICITATION NO.: S33-T24289

YEAR TWO – (IAH) BASIC SERVICES

	<u>Cost per</u> <u>Month</u>	(x)	<u>Cost per</u> <u>Year</u>
HVAC Operation and Maintenance. Includes all Basic Services specified in the required SOW	\$ _____	(12)	\$ _____

(IAH) BASIC SERVICES

* \$ _____

* Enter the above (IAH) Basic Services Total Cost to the Year One Rates Proposal Price Sheet Total Summary on price line I-a.

EXHIBIT III – SAMPLE PRICE SHEET / FEE SCHEDULE

SOLICITATION NO.: S33-T24289

YEAR TWO – (IAH) OTHER WORK/SERVICES

Other Work/Services may be required for the HVAC to meet desired conditions and/or repairs not covered in the Basic Services of the Proposal. Any estimated quantities, labor hours, and remedial maintenance and supplies expenditures listed below are estimated amounts for Other Work/Services for each year of the Proposal. Consequently, the actual dollar amount for Other Work/Services may be higher or lower than the estimates, and the Proposer shall only be paid for actual work performed, subject to City direction and approval. **If Other Work/Services are performed by the on-site crew in conjunction with their regular duties, Proposer shall not receive additional compensation for their labor.**

A. Estimated (IAH) Other Work/ Services Labor (Quantities are estimated for budget purposes only)

No.	Description	Est. Annual Labor Hours	X	Cost per Hour	=	Annual Cost
1.	<u>HVAC MAINTENANCE MECHANIC</u>					
	a. Normal Work Hours	1,650	X	\$ _____/hr.	=	\$ _____
	b. After Normal Work Hours	800	X	\$ _____/hr.	=	\$ _____
2.	<u>DDC MAINTENANCE TECHNICIAN</u>					
	a. Normal Work Hours	1,600	X	\$ _____/hr.	=	\$ _____
	b. After Normal Work Hours	300	X	\$ _____/hr.	=	\$ _____
3.	<u>DX MAINTENANCE MECHANIC</u>					
	a. Normal Work Hours	450	X	\$ _____/hr.	=	\$ _____
	b. After Normal Work Hours	200	X	\$ _____/hr.	=	\$ _____
Total Estimated Other Work / Services Labor Annual Costs						\$ _____
<i>(add items 1 - 3)</i>						

EXHIBIT III – SAMPLE PRICE SHEET / FEE SCHEDULE

SOLICITATION NO.: S33-T24289

B. ESTIMATED (IAH) OTHER WORK/SERVICES SUBCONTRACTS / MATERIALS / SUPPLIES
 (Quantities are estimated for budget purposes only)

PRICES SHALL BE BASED ON THE PROPOSER'S ACTUAL COST PLUS THE FOLLOWING MARK-UP PERCENTAGES:

	ITEM	ESTIMATED ANNUAL COST	PROPOSER PERCENT MARK-UP (Maximum of 15%)	TOTAL ANNUAL ESTIMATED COST
	MATERIALS	\$ 700,000	_____ %	\$ _____
TOTAL ESTIMATED OTHER WORK/SERVICES (SUBCONTRACTS / MATERIALS / SUPPLIES) ANNUAL COSTS (item B total)				\$ _____

Proposer must fill in the above maximum percent mark-up (not to exceed 15%) and complete Total Annual Estimated Cost.

TOTAL ESTIMATED (IAH) OTHER WORK/SERVICES LABOR & MATERIAL ANNUAL COST (add A & B) * \$ _____

* Enter The Above Estimated (IAH) Other Work/Services Annual Cost To Year Two Rates - Proposal Price Sheet Total Summary On Price Line II-a.

EXHIBIT III – SAMPLE PRICE SHEET / FEE SCHEDULE

SOLICITATION NO.: S33-T24289

YEAR TWO – (HOU) BASIC SERVICES

	<u>Cost per</u> <u>Month</u>	(x)	<u>Cost per</u> <u>Year</u>
HVAC Operation and Maintenance. Includes all Basic Services specified in the required SOW	\$ _____	(12)	\$ _____

HOU BASIC SERVICES

* \$ _____

* Enter the above (HOU) Basic Services Total Cost to the Year One Rates Proposal Price Sheet Total Summary on price line I-b.

EXHIBIT III – SAMPLE PRICE SHEET / FEE SCHEDULE

SOLICITATION NO.: S33-T24289

YEAR TWO – (HOU) OTHER WORK/SERVICES

Other Work/Services may be required for the HVAC to meet desired conditions and/or repairs not covered in the Basic Services of the Proposal. Any estimated quantities, labor hours, and remedial maintenance and supplies expenditures listed below are estimated amounts for Other Work/Services for each year of the Proposal. Consequently, the actual dollar amount for Other Work/Services may be higher or lower than the estimates, and the Proposer shall only be paid for actual work performed, subject to City direction and approval. **If Other Work/Services are performed by the on-site crew in conjunction with their regular duties, Proposer shall not receive additional compensation for their labor.**

A. Estimated (HOU) Other Work/ Services Labor (Quantities are estimated for budget purposes only)

No.	Description	Est. Annual Labor Hours	X	Cost per Hour/Unit	=	Annual Cost
1.	<u>HVAC MAINTENANCE MECHANIC</u>					
	a. Normal Work Hours	500	X	\$ _____/hr.	=	\$ _____
	b. After Normal Work Hours	130	X	\$ _____/hr.	=	\$ _____
2.	<u>DDC MAINTENANCE TECHNICIAN</u>					
	a. Normal Work Hours	200	X	\$ _____/hr.	=	\$ _____
	b. After Normal Work Hours	120	X	\$ _____/hr.	=	\$ _____
3.	<u>DX MAINTENANCE MECHANIC</u>					
	a. Normal Work Hours	100	X	\$ _____/hr.	=	\$ _____
	b. After Normal Work Hours	40	X	\$ _____/hr.	=	\$ _____
Total Estimated Other Work / Services Labor Annual Costs						\$ _____
<i>(add items 1 - 3)</i>						

EXHIBIT III – SAMPLE PRICE SHEET / FEE SCHEDULE

SOLICITATION NO.: S33-T24289

B. ESTIMATED (HOU) OTHER WORK/SERVICES SUBCONTRACTS / MATERIALS / SUPPLIES
 (Quantities are estimated for budget purposes only)

PRICES SHALL BE BASED ON THE PROPOSER'S ACTUAL COST PLUS THE FOLLOWING MARK-UP PERCENTAGES:

	ITEM	ESTIMATED ANNUAL COST	PROPOSER PERCENT MARK-UP (Maximum of 15%)	TOTAL ANNUAL ESTIMATED COST
	MATERIALS	\$ 100,000	_____ %	\$ _____
TOTAL ESTIMATED OTHER WORK/SERVICES (SUBCONTRACTS / MATERIALS / SUPPLIES) ANNUAL COSTS (item B total)				\$ _____

Proposer must fill in the above maximum percent mark-up (not to exceed 15%) and complete Total Annual Estimated Cost.

TOTAL ESTIMATED (HOU) OTHER WORK/SERVICES LABOR & MATERIAL ANNUAL COST *(add A & B)* * \$ _____

* Enter The Above Estimated (HOU) Other Work/Services Annual Cost To Year Two Rates – Proposal Price Sheet Total Summary On Price Line II-b.

EXHIBIT III – SAMPLE PRICE SHEET / FEE SCHEDULE

SOLICITATION NO.: S33-T24289

YEAR TWO – (EFD) BASIC SERVICES

	<u>Cost per</u> <u>Month</u>	(x)	<u>Cost per</u> <u>Year</u>
HVAC Operation and Maintenance. Includes all Basic Services specified in the required SOW	\$_____	(12)	\$_____

EFD BASIC SERVICES

* \$_____

* Enter the above (EFD) Basic Services Total Cost to the Year One Rates Proposal Price Sheet Total Summary on price line I-c.

EXHIBIT III – SAMPLE PRICE SHEET / FEE SCHEDULE

SOLICITATION NO.: S33-T24289

II. YEAR TWO – (EFD) OTHER WORK/SERVICES

Other Work/Services may be required for the HVAC to meet desired conditions and/or repairs not covered in the Basic Services of the Proposal. Any estimated quantities, labor hours, and remedial maintenance and supplies expenditures listed below are estimated amounts for Other Work/Services for each year of the Proposal. Consequently, the actual dollar amount for Other Work/Services may be higher or lower than the estimates, and the Proposer shall only be paid for actual work performed, subject to City direction and approval. **If Other Work/Services are performed by the on-site crew in conjunction with their regular duties, Proposer shall not receive additional compensation for their labor.**

A. Estimated (EFD) Other Work/ Services Labor (Quantities are estimated for budget purposes only)

No.	Description	Est. Annual Labor Hours	X	Cost per Hour/Unit	= Annual Cost
1.	<u>HVAC MAINTENANCE MECHANIC</u>				
	a. Normal Work Hours	310	X	\$ _____/hr.	= \$ _____
	b. After Normal Work Hours	30	X	\$ _____/hr.	= \$ _____
2.	<u>DDC MAINTENANCE TECHNICIAN</u>				
	a. Normal Work Hours	140	X	\$ _____/hr.	= \$ _____
	b. After Normal Work Hours	20	X	\$ _____/hr.	= \$ _____
3.	<u>DX MAINTENANCE MECHANIC</u>				
	a. Normal Work Hours	60	X	\$ _____/hr.	= \$ _____
	b. After Normal Work Hours	5	X	\$ _____/hr.	= \$ _____
Total Estimated Other Work / Services Labor Annual Costs					\$ _____
<i>(add items 1 - 3)</i>					

EXHIBIT III – SAMPLE PRICE SHEET / FEE SCHEDULE
SOLICITATION NO.: S33-T24289

B. ESTIMATED (EFD) OTHER WORK/SERVICES SUBCONTRACTS / MATERIALS / SUPPLIES
 (Quantities are estimated for budget purposes only)

PRICES SHALL BE BASED ON THE PROPOSER'S ACTUAL COST PLUS THE FOLLOWING MARK-UP PERCENTAGES:

ITEM	ESTIMATED ANNUAL COST	PROPOSER PERCENT MARK-UP (Maximum of 15%)	TOTAL ANNUAL ESTIMATED COST
MATERIALS	\$ 40,000	_____ %	\$ _____
TOTAL ESTIMATED OTHER WORK/SERVICES (SUBCONTRACTS / MATERIALS / SUPPLIES) ANNUAL COSTS (item B total)			\$ _____

Proposer must fill in the above maximum percent mark-up (not to exceed 15%) and complete Total Annual Estimated Cost.

TOTAL ESTIMATED (EFD) OTHER WORK/SERVICES ANNUAL COST (add A & B) * \$ _____

* Enter The Above Estimated (EFD) Other Work/Services Annual Cost To Year Two Rates - Proposal Price Sheet Total Summary On Price Line II-c.

EXHIBIT III – SAMPLE PRICE SHEET / FEE SCHEDULE

SOLICITATION NO.: S33-T24289

YEAR THREE – (IAH) BASIC SERVICES

	<u>Cost per</u> <u>Month</u>	(x)	<u>Cost per</u> <u>Year</u>
HVAC Operation and Maintenance. Includes all Basic Services specified in the required SOW	\$ _____	(12)	\$ _____

(IAH) BASIC SERVICES

* \$ _____

* Enter the above (IAH) Basic Services Total Cost to the Year One Rates Proposal Price Sheet Total Summary on price line I-a.

EXHIBIT III – SAMPLE PRICE SHEET / FEE SCHEDULE

SOLICITATION NO.: S33-T24289

II. YEAR THREE – (IAH) OTHER WORK/SERVICES

Other Work/Services may be required for the HVAC to meet desired conditions and/or repairs not covered in the Basic Services of the Proposal. Any estimated quantities, labor hours, and remedial maintenance and supplies expenditures listed below are estimated amounts for Other Work/Services for each year of the Proposal. Consequently, the actual dollar amount for Other Work/Services may be higher or lower than the estimates, and the Proposer shall only be paid for actual work performed, subject to City direction and approval. **If Other Work/Services are performed by the on-site crew in conjunction with their regular duties, Proposer shall not receive additional compensation for their labor.**

A. Estimated (IAH) Other Work/ Services Labor (Quantities are estimated for budget purposes only)

No.	Description	Est. Annual Labor Hours	X	Cost per Hour	=	Annual Cost
1.	<u>HVAC MAINTENANCE MECHANIC</u>					
	a. Normal Work Hours	1,650	X	\$ _____/hr.	=	\$ _____
	b. After Normal Work Hours	800	X	\$ _____/hr.	=	\$ _____
2.	<u>DDC MAINTENANCE TECHNICIAN</u>					
	a. Normal Work Hours	1,600	X	\$ _____/hr.	=	\$ _____
	b. After Normal Work Hours	300	X	\$ _____/hr.	=	\$ _____
3.	<u>DX MAINTENANCE MECHANIC</u>					
	a. Normal Work Hours	450	X	\$ _____/hr.	=	\$ _____
	b. After Normal Work Hours	200	X	\$ _____/hr.	=	\$ _____
Total Estimated Other Work / Services Labor Annual Costs						\$ _____
<i>(add items 1 - 3)</i>						

EXHIBIT III – SAMPLE PRICE SHEET / FEE SCHEDULE

SOLICITATION NO.: S33-T24289

B. ESTIMATED (IAH) OTHER WORK/SERVICES SUBCONTRACTS / MATERIALS / SUPPLIES
 (Quantities are estimated for budget purposes only)

PRICES SHALL BE BASED ON THE PROPOSER'S ACTUAL COST PLUS THE FOLLOWING MARK-UP PERCENTAGES:

	ITEM	ESTIMATED ANNUAL COST	PROPOSER PERCENT MARK-UP (Maximum of 15%)	TOTAL ANNUAL ESTIMATED COST
	MATERIALS	\$ 700,000	_____ %	\$ _____
TOTAL ESTIMATED OTHER WORK/SERVICES (SUBCONTRACTS / MATERIALS / SUPPLIES) ANNUAL COSTS (item B total)				\$ _____

Proposer must fill in the above maximum percent mark-up (not to exceed 15%) and complete Total Annual Estimated Cost.

TOTAL ESTIMATED (IAH) OTHER WORK/SERVICES LABOR & MATERIAL ANNUAL COST *(add A & B)* * \$ _____

* Enter The Above Estimated (IAH) Other Work/Services Annual Cost To The Year Three Rates - Proposal Price Sheet Total Summary On Price Line II-a.

EXHIBIT III – SAMPLE PRICE SHEET / FEE SCHEDULE

SOLICITATION NO.: S33-T24289

I. YEAR THREE – (HOU) BASIC SERVICES

	<u>Cost per</u> <u>Month</u>	(x)	<u>Cost per</u> <u>Year</u>
HVAC Operation and Maintenance. Includes all Basic Services specified in the required SOW	\$ _____	(12)	\$ _____

HOU BASIC SERVICES

* \$ _____

* Enter the above (HOU) Basic Services Total Cost to the Year One Rates Proposal Price Sheet Total Summary on price line I-b.

EXHIBIT III – SAMPLE PRICE SHEET / FEE SCHEDULE

SOLICITATION NO.: S33-T24289

II. YEAR THREE – (HOU) OTHER WORK/SERVICES

Other Work/Services may be required for the HVAC to meet desired conditions and/or repairs not covered in the Basic Services of the Proposal. Any estimated quantities, labor hours, and remedial maintenance and supplies expenditures listed below are estimated amounts for Other Work/Services for each year of the Proposal. Consequently, the actual dollar amount for Other Work/Services may be higher or lower than the estimates, and the Proposer shall only be paid for actual work performed, subject to City direction and approval. **If Other Work/Services are performed by the on-site crew in conjunction with their regular duties, Proposer shall not receive additional compensation for their labor.**

A. **Estimated (HOU) Other Work/ Services Labor** (Quantities are estimated for budget purposes only)

No.	Description	Est. Annual Labor Hours	X	Cost per Hour/Unit	=	Annual Cost
1.	<u>HVAC MAINTENANCE MECHANIC</u>					
	a. Normal Work Hours	500	X	\$ _____/hr.	=	\$ _____
	b. After Normal Work Hours	130	X	\$ _____/hr.	=	\$ _____
2.	<u>DDC MAINTENANCE TECHNICIAN</u>					
	a. Normal Work Hours	200	X	\$ _____/hr.	=	\$ _____
	b. After Normal Work Hours	120	X	\$ _____/hr.	=	\$ _____
3.	<u>DX MAINTENANCE MECHANIC</u>					
	a. Normal Work Hours	100	X	\$ _____/hr.	=	\$ _____
	b. After Normal Work Hours	40	X	\$ _____/hr.	=	\$ _____
Total Estimated Other Work / Services Labor Annual Costs						\$ _____
<i>(add items 1 - 3)</i>						

EXHIBIT III – SAMPLE PRICE SHEET / FEE SCHEDULE

SOLICITATION NO.: S33-T24289

B. ESTIMATED (HOU) OTHER WORK/SERVICES SUBCONTRACTS / MATERIALS / SUPPLIES
 (Quantities are estimated for budget purposes only)

PRICES SHALL BE BASED ON THE PROPOSER'S ACTUAL COST PLUS THE FOLLOWING MARK-UP PERCENTAGES:

	ITEM	ESTIMATED ANNUAL COST	PROPOSER PERCENT MARK-UP (Maximum of 15%)	TOTAL ANNUAL ESTIMATED COST
	MATERIALS	\$ 100,000	_____ %	\$ _____
TOTAL ESTIMATED OTHER WORK/SERVICES (SUBCONTRACTS / MATERIALS / SUPPLIES) ANNUAL COSTS (item B total)				\$ _____

Proposer must fill in the above maximum percent mark-up (not to exceed 15%) and complete Total Annual Estimated Cost.

TOTAL ESTIMATED (HOU) OTHER WORK/SERVICES LABOR & MATERIAL ANNUAL COST (add A & B) * \$ _____

* Enter The Above Estimated (HOU) Other Work/Services Annual Cost To Year Three Rates - Proposal Price Sheet Total Summary On Price Line II-b.

EXHIBIT III – SAMPLE PRICE SHEET / FEE SCHEDULE

SOLICITATION NO.: S33-T24289

I. YEAR THREE – (EFD) BASIC SERVICES

	<u>Cost per</u> <u>Month</u>	(x)	<u>Cost per</u> <u>Year</u>
HVAC Operation and Maintenance. Includes all Basic Services specified in the required SOW	\$ _____	(12)	\$ _____

EFD BASIC SERVICES

* \$ _____

* Enter the above (EFD) Basic Services Total Cost to the Year One Rates Proposal Price Sheet Total Summary on price line I-c.

EXHIBIT III – SAMPLE PRICE SHEET / FEE SCHEDULE

SOLICITATION NO.: S33-T24289

II. YEAR THREE – (EFD) OTHER WORK/SERVICES

Other Work/Services may be required for the HVAC to meet desired conditions and/or repairs not covered in the Basic Services of the Proposal. Any estimated quantities, labor hours, and remedial maintenance and supplies expenditures listed below are estimated amounts for Other Work/Services for each year of the Proposal. Consequently, the actual dollar amount for Other Work/Services may be higher or lower than the estimates, and the Proposer shall only be paid for actual work performed, subject to City direction and approval. **If Other Work/Services are performed by the on-site crew in conjunction with their regular duties, Proposer shall not receive additional compensation for their labor.**

A. Estimated (EFD) Other Work/ Services Labor (Quantities are estimated for budget purposes only)

No.	Description	Est. Annual Labor Hours	X	Cost per Hour/Unit	= Annual Cost
1.	<u>HVAC MAINTENANCE MECHANIC</u>				
	a. Normal Work Hours	310	X	\$ _____/hr.	= \$ _____
	b. After Normal Work Hours	30	X	\$ _____/hr.	= \$ _____
2.	<u>DDC MAINTENANCE TECHNICIAN</u>				
	a. Normal Work Hours	140	X	\$ _____/hr.	= \$ _____
	b. After Normal Work Hours	20	X	\$ _____/hr.	= \$ _____
3.	<u>DX MAINTENANCE MECHANIC</u>				
	a. Normal Work Hours	60	X	\$ _____/hr.	= \$ _____
	b. After Normal Work Hours	5	X	\$ _____/hr.	= \$ _____
Total Estimated Other Work / Services Labor Annual Costs					\$ _____
<i>(add items 1 - 3)</i>					

EXHIBIT III – SAMPLE PRICE SHEET / FEE SCHEDULE
SOLICITATION NO.: S33-T24289

B. ESTIMATED (EFD) OTHER WORK/SERVICES SUBCONTRACTS / MATERIALS / SUPPLIES
 (Quantities are estimated for budget purposes only)

PRICES SHALL BE BASED ON THE PROPOSER'S ACTUAL COST PLUS THE FOLLOWING MARK-UP PERCENTAGES:

	ITEM	ESTIMATED ANNUAL COST	PROPOSER PERCENT MARK-UP (Maximum of 15%)	TOTAL ANNUAL ESTIMATED COST
	MATERIALS	\$ 40,000	_____ %	\$ _____
TOTAL ESTIMATED OTHER WORK/SERVICES (SUBCONTRACTS / MATERIALS / SUPPLIES) ANNUAL COSTS (item B total)				\$ _____

Proposer must fill in the above maximum percent mark-up (not to exceed 15%) and complete Total Annual Estimated Cost.

TOTAL ESTIMATED (EFD) OTHER WORK/SERVICES ANNUAL COST (add A & B) * \$ _____

* Enter The Above Estimated (EFD) Other Work/Services Annual Cost To Year Three Rates - Proposal Price Sheet Total Summary On Price Line II-c.

EXHIBIT III – SAMPLE PRICE SHEET / FEE SCHEDULE

SOLICITATION NO.: S33-T24289

YEAR FOUR (OPTION YEAR ONE) – (IAH) BASIC SERVICES

	<u>Cost per Month</u>	(x)	<u>Cost per Year</u>
HVAC Operation and Maintenance. Includes all Basic Services specified in the required SOW	\$ _____	(12)	\$ _____

(IAH) BASIC SERVICES

* \$ _____

* Enter the above (IAH) Basic Services Total Cost to the Year One Rates Proposal Price Sheet Total Summary on price line I-a.

EXHIBIT III – SAMPLE PRICE SHEET / FEE SCHEDULE

SOLICITATION NO.: S33-T24289

II. YEAR FOUR (OPTION YEAR ONE) – (IAH) OTHER WORK/SERVICES

Other Work/Services may be required for the HVAC to meet desired conditions and/or repairs not covered in the Basic Services of the Proposal. Any estimated quantities, labor hours, and remedial maintenance and supplies expenditures listed below are estimated amounts for Other Work/Services for each year of the Proposal. Consequently, the actual dollar amount for Other Work/Services may be higher or lower than the estimates, and the Proposer shall only be paid for actual work performed, subject to City direction and approval. **If Other Work/Services are performed by the on-site crew in conjunction with their regular duties, Proposer shall not receive additional compensation for their labor.**

A. Estimated (IAH) Other Work/ Services Labor (Quantities are estimated for budget purposes only)

No.	Description	Est. Annual Labor Hours	X	Cost per Hour	=	Annual Cost
1.	<u>HVAC MAINTENANCE MECHANIC</u>					
	a. Normal Work Hours	1,650	X	\$ _____/hr.	=	\$ _____
	b. After Normal Work Hours	800	X	\$ _____/hr.	=	\$ _____
2.	<u>DDC MAINTENANCE TECHNICIAN</u>					
	a. Normal Work Hours	1,600	X	\$ _____/hr.	=	\$ _____
	b. After Normal Work Hours	300	X	\$ _____/hr.	=	\$ _____
3.	<u>DX MAINTENANCE MECHANIC</u>					
	a. Normal Work Hours	450	X	\$ _____/hr.	=	\$ _____
	b. After Normal Work Hours	200	X	\$ _____/hr.	=	\$ _____
Total Estimated Other Work / Services Labor Annual Costs						\$ _____
<i>(add items 1 - 3)</i>						

EXHIBIT III – SAMPLE PRICE SHEET / FEE SCHEDULE

SOLICITATION NO.: S33-T24289

B. ESTIMATED (IAH) OTHER WORK/SERVICES SUBCONTRACTS / MATERIALS / SUPPLIES
 (Quantities are estimated for budget purposes only)

PRICES SHALL BE BASED ON THE PROPOSER'S ACTUAL COST PLUS THE FOLLOWING MARK-UP PERCENTAGES:

	ITEM	ESTIMATED ANNUAL COST	PROPOSER PERCENT MARK-UP (Maximum of 15%)	TOTAL ANNUAL ESTIMATED COST
	MATERIALS	\$ 700,000	_____ %	\$ _____
TOTAL ESTIMATED OTHER WORK/SERVICES (SUBCONTRACTS / MATERIALS / SUPPLIES) ANNUAL COSTS (item B total)				\$ _____

Proposer must fill in the above maximum percent mark-up (not to exceed 15%) and complete Total Annual Estimated Cost.

TOTAL ESTIMATED (IAH) OTHER WORK/SERVICES LABOR & MATERIAL ANNUAL COST (add A & B) * \$ _____

* Enter The Above Estimated (IAH) Other Work/Services Annual Cost To Year Four (Option Year One) Rates - Proposal Price Sheet Total Summary On Price Line II-a.

EXHIBIT III – SAMPLE PRICE SHEET / FEE SCHEDULE

SOLICITATION NO.: S33-T24289

II. YEAR FOUR (OPTION YEAR ONE) – (HOU) BASIC SERVICES

	<u>Cost per</u> <u>Month</u>	(x)	<u>Cost per</u> <u>Year</u>
HVAC Operation and Maintenance. Includes all Basic Services specified in the required SOW	\$_____	(12)	\$_____

HOU BASIC SERVICES

* \$_____

* Enter the above (HOU) Basic Services Total Cost to the Year One Rates Proposal Price Sheet Total Summary on price line I-b.

EXHIBIT III – SAMPLE PRICE SHEET / FEE SCHEDULE

SOLICITATION NO.: S33-T24289

II. YEAR FOUR (OPTION YEAR ONE) – (HOU) OTHER WORK/SERVICES

Other Work/Services may be required for the HVAC to meet desired conditions and/or repairs not covered in the Basic Services of the Proposal. Any estimated quantities, labor hours, and remedial maintenance and supplies expenditures listed below are estimated amounts for Other Work/Services for each year of the Proposal. Consequently, the actual dollar amount for Other Work/Services may be higher or lower than the estimates, and the Proposer shall only be paid for actual work performed, subject to City direction and approval. **If Other Work/Services are performed by the on-site crew in conjunction with their regular duties, Proposer shall not receive additional compensation for their labor.**

A. **Estimated (HOU) Other Work/ Services Labor** (Quantities are estimated for budget purposes only)

No.	Description	Est. Annual Labor Hours	X	Cost per Hour/Unit	=	Annual Cost
1.	<u>HVAC MAINTENANCE MECHANIC</u>					
	a. Normal Work Hours	500	X	\$ _____/hr.	=	\$ _____
	b. After Normal Work Hours	130	X	\$ _____/hr.	=	\$ _____
2.	<u>DDC MAINTENANCE TECHNICIAN</u>					
	a. Normal Work Hours	200	X	\$ _____/hr.	=	\$ _____
	b. After Normal Work Hours	120	X	\$ _____/hr.	=	\$ _____
3.	<u>DX MAINTENANCE MECHANIC</u>					
	a. Normal Work Hours	100	X	\$ _____/hr.	=	\$ _____
	b. After Normal Work Hours	40	X	\$ _____/hr.	=	\$ _____
Total Estimated Other Work / Services Labor Annual Costs						\$ _____
<i>(add items 1 - 3)</i>						

EXHIBIT III – SAMPLE PRICE SHEET / FEE SCHEDULE

SOLICITATION NO.: S33-T24289

B. ESTIMATED (HOU) OTHER WORK/SERVICES SUBCONTRACTS / MATERIALS / SUPPLIES
 (Quantities are estimated for budget purposes only)

PRICES SHALL BE BASED ON THE PROPOSER'S ACTUAL COST PLUS THE FOLLOWING MARK-UP PERCENTAGES:

	ITEM	ESTIMATED ANNUAL COST	PROPOSER PERCENT MARK-UP (Maximum of 15%)	TOTAL ANNUAL ESTIMATED COST
	MATERIALS	\$ 100,000	_____ %	\$ _____
TOTAL ESTIMATED OTHER WORK/SERVICES (SUBCONTRACTS / MATERIALS / SUPPLIES) ANNUAL COSTS (item B total)				\$ _____

Proposer must fill in the above maximum percent mark-up (not to exceed 15%) and complete Total Annual Estimated Cost.

TOTAL ESTIMATED (HOU) OTHER WORK/SERVICES LABOR & MATERIAL ANNUAL COST *(add A & B)* * \$ _____

* Enter The Above Estimated (HOU) Other Work/Services Annual Cost To Year Four (Option Year One) Rates - Proposal Price Sheet Total Summary On Price Line II-b.

EXHIBIT III – SAMPLE PRICE SHEET / FEE SCHEDULE

SOLICITATION NO.: S33-T24289

II. YEAR FOUR (OPTION YEAR ONE) – (EFD) BASIC SERVICES

	<u>Cost per</u> <u>Month</u>	(x)	<u>Cost per</u> <u>Year</u>
HVAC Operation and Maintenance. Includes all Basic Services specified in the required SOW	\$_____	(12)	\$_____

EFD BASIC SERVICES

* \$_____

* Enter the above (EFD) Basic Services Total Cost to the Year One Rates Proposal Price Sheet Total Summary on price line I-c.

EXHIBIT III – SAMPLE PRICE SHEET / FEE SCHEDULE

SOLICITATION NO.: S33-T24289

II. YEAR FOUR (OPTION YEAR ONE) – (EFD) OTHER WORK/SERVICES

Other Work/Services may be required for the HVAC to meet desired conditions and/or repairs not covered in the Basic Services of the Proposal. Any estimated quantities, labor hours, and remedial maintenance and supplies expenditures listed below are estimated amounts for Other Work/Services for each year of the Proposal. Consequently, the actual dollar amount for Other Work/Services may be higher or lower than the estimates, and the Proposer shall only be paid for actual work performed, subject to City direction and approval. **If Other Work/Services are performed by the on-site crew in conjunction with their regular duties, Proposer shall not receive additional compensation for their labor.**

A. Estimated (EFD) Other Work/ Services Labor (Quantities are estimated for budget purposes only)

No.	Description	Est. Annual Labor Hours	X	Cost per Hour/Unit	= Annual Cost
1.	<u>HVAC MAINTENANCE MECHANIC</u>				
	a. Normal Work Hours	310	X	\$ _____/hr.	= \$ _____
	b. After Normal Work Hours	30	X	\$ _____/hr.	= \$ _____
2.	<u>DDC MAINTENANCE TECHNICIAN</u>				
	a. Normal Work Hours	140	X	\$ _____/hr.	= \$ _____
	b. After Normal Work Hours	20	X	\$ _____/hr.	= \$ _____
3.	<u>DX MAINTENANCE MECHANIC</u>				
	a. Normal Work Hours	60	X	\$ _____/hr.	= \$ _____
	b. After Normal Work Hours	5	X	\$ _____/hr.	= \$ _____
Total Estimated Other Work / Services Labor Annual Costs					\$ _____
<i>(add items 1 - 3)</i>					

EXHIBIT III – SAMPLE PRICE SHEET / FEE SCHEDULE
SOLICITATION NO.: S33-T24289

B. ESTIMATED (EFD) OTHER WORK/SERVICES SUBCONTRACTS / MATERIALS / SUPPLIES
 (Quantities are estimated for budget purposes only)

PRICES SHALL BE BASED ON THE PROPOSER'S ACTUAL COST PLUS THE FOLLOWING MARK-UP PERCENTAGES:

ITEM	ESTIMATED ANNUAL COST	PROPOSER PERCENT MARK-UP (Maximum of 15%)	TOTAL ANNUAL ESTIMATED COST
MATERIALS	\$ 40,000	_____ %	\$ _____
TOTAL ESTIMATED OTHER WORK/SERVICES (SUBCONTRACTS / MATERIALS / SUPPLIES) ANNUAL COSTS (item B total)			\$ _____

Proposer must fill in the above maximum percent mark-up (not to exceed 15%) and complete Total Annual Estimated Cost.

TOTAL ESTIMATED (EFD) OTHER WORK/SERVICES ANNUAL COST (add A & B) * \$ _____

* Enter The Above Estimated (EFD) Other Work/Services Annual Cost To Year Four (Option Year One) Rates - Proposal Price Sheet Total Summary On Price Line II-c.

EXHIBIT III – SAMPLE PRICE SHEET / FEE SCHEDULE

SOLICITATION NO.: S33-T24289

YEAR FIVE (OPTION YEAR TWO) – (IAH) BASIC SERVICES

	<u>Cost per Month</u>	(x)	<u>Cost per Year</u>
HVAC Operation and Maintenance. Includes all Basic Services specified in the required SOW	\$ _____	(12)	\$ _____

(IAH) BASIC SERVICES

* \$ _____

* Enter the above (IAH) Basic Services Total Cost to the Year One Rates Proposal Price Sheet Total Summary on price line I-a.

EXHIBIT III – SAMPLE PRICE SHEET / FEE SCHEDULE

SOLICITATION NO.: S33-T24289

II. YEAR FIVE (OPTION YEAR TWO) – (IAH) OTHER WORK/SERVICES

Other Work/Services may be required for the HVAC to meet desired conditions and/or repairs not covered in the Basic Services of the Proposal. Any estimated quantities, labor hours, and remedial maintenance and supplies expenditures listed below are estimated amounts for Other Work/Services for each year of the Proposal. Consequently, the actual dollar amount for Other Work/Services may be higher or lower than the estimates, and the Proposer shall only be paid for actual work performed, subject to City direction and approval. **If Other Work/Services are performed by the on-site crew in conjunction with their regular duties, Proposer shall not receive additional compensation for their labor.**

A. Estimated (IAH) Other Work/ Services Labor (Quantities are estimated for budget purposes only)

No.	Description	Est. Annual Labor Hours	X	Cost per Hour	=	Annual Cost
1.	<u>HVAC MAINTENANCE MECHANIC</u>					
	a. Normal Work Hours	1,650	X	\$ _____/hr.	=	\$ _____
	b. After Normal Work Hours	800	X	\$ _____/hr.	=	\$ _____
2.	<u>DDC MAINTENANCE TECHNICIAN</u>					
	a. Normal Work Hours	1,600	X	\$ _____/hr.	=	\$ _____
	b. After Normal Work Hours	300	X	\$ _____/hr.	=	\$ _____
3.	<u>DX MAINTENANCE MECHANIC</u>					
	a. Normal Work Hours	450	X	\$ _____/hr.	=	\$ _____
	b. After Normal Work Hours	200	X	\$ _____/hr.	=	\$ _____
Total Estimated Other Work / Services Labor Annual Costs						\$ _____
<i>(add items 1 - 3)</i>						

EXHIBIT III – SAMPLE PRICE SHEET / FEE SCHEDULE

SOLICITATION NO.: S33-T24289

B. ESTIMATED (IAH) OTHER WORK/SERVICES SUBCONTRACTS / MATERIALS / SUPPLIES
 (Quantities are estimated for budget purposes only)

PRICES SHALL BE BASED ON THE PROPOSER'S ACTUAL COST PLUS THE FOLLOWING MARK-UP PERCENTAGES:

	ITEM	ESTIMATED ANNUAL COST	PROPOSER PERCENT MARK-UP (Maximum of 15%)	TOTAL ANNUAL ESTIMATED COST
	MATERIALS	\$ 700,000	_____ %	\$ _____
TOTAL ESTIMATED OTHER WORK/SERVICES (SUBCONTRACTS / MATERIALS / SUPPLIES) ANNUAL COSTS (item B total)				\$ _____

Proposer must fill in the above maximum percent mark-up (not to exceed 15%) and complete Total Annual Estimated Cost.

TOTAL ESTIMATED (IAH) OTHER WORK/SERVICES LABOR & MATERIAL ANNUAL COST (add A & B) * \$ _____

* Enter The Above Estimated (IAH) Other Work/Services Annual Cost To Year Five (Option Year Two) Rates - Proposal Price Sheet Total Summary On Price Line II-a.

EXHIBIT III – SAMPLE PRICE SHEET / FEE SCHEDULE

SOLICITATION NO.: S33-T24289

III. YEAR FIVE (OPTION YEAR TWO) – (HOU) BASIC SERVICES

	<u>Cost per</u> <u>Month</u>	(x)	<u>Cost per</u> <u>Year</u>
HVAC Operation and Maintenance. Includes all Basic Services specified in the required SOW	\$ _____	(12)	\$ _____

HOU BASIC SERVICES

* \$ _____

* Enter the above (HOU) Basic Services Total Cost to the Year One Rates Proposal Price Sheet Total Summary on price line I-b.

EXHIBIT III – SAMPLE PRICE SHEET / FEE SCHEDULE

SOLICITATION NO.: S33-T24289

II. YEAR FIVE (OPTION YEAR TWO) – (HOU) OTHER WORK/SERVICES

Other Work/Services may be required for the HVAC to meet desired conditions and/or repairs not covered in the Basic Services of the Proposal. Any estimated quantities, labor hours, and remedial maintenance and supplies expenditures listed below are estimated amounts for Other Work/Services for each year of the Proposal. Consequently, the actual dollar amount for Other Work/Services may be higher or lower than the estimates, and the Proposer shall only be paid for actual work performed, subject to City direction and approval. **If Other Work/Services are performed by the on-site crew in conjunction with their regular duties, Proposer shall not receive additional compensation for their labor.**

A. **Estimated (HOU) Other Work/ Services Labor** (Quantities are estimated for budget purposes only)

No.	Description	Est. Annual Labor Hours	X	Cost per Hour/Unit	=	Annual Cost
1.	<u>HVAC MAINTENANCE MECHANIC</u>					
	a. Normal Work Hours	500	X	\$ _____/hr.	=	\$ _____
	b. After Normal Work Hours	130	X	\$ _____/hr.	=	\$ _____
2.	<u>DDC MAINTENANCE TECHNICIAN</u>					
	a. Normal Work Hours	200	X	\$ _____/hr.	=	\$ _____
	b. After Normal Work Hours	120	X	\$ _____/hr.	=	\$ _____
3.	<u>DX MAINTENANCE MECHANIC</u>					
	a. Normal Work Hours	100	X	\$ _____/hr.	=	\$ _____
	b. After Normal Work Hours	40	X	\$ _____/hr.	=	\$ _____
Total Estimated Other Work / Services Labor Annual Costs						\$ _____
<i>(add items 1 - 3)</i>						

EXHIBIT III – SAMPLE PRICE SHEET / FEE SCHEDULE

SOLICITATION NO.: S33-T24289

B. ESTIMATED (HOU) OTHER WORK/SERVICES SUBCONTRACTS / MATERIALS / SUPPLIES
 (Quantities are estimated for budget purposes only)

PRICES SHALL BE BASED ON THE PROPOSER'S ACTUAL COST PLUS THE FOLLOWING MARK-UP PERCENTAGES:

	ITEM	ESTIMATED ANNUAL COST	PROPOSER PERCENT MARK-UP (Maximum of 15%)	TOTAL ANNUAL ESTIMATED COST
	MATERIALS	\$ 100,000	_____ %	\$ _____
TOTAL ESTIMATED OTHER WORK/SERVICES (SUBCONTRACTS / MATERIALS / SUPPLIES) ANNUAL COSTS (item B total)				\$ _____

Proposer must fill in the above maximum percent mark-up (not to exceed 15%) and complete Total Annual Estimated Cost.

TOTAL ESTIMATED (HOU) OTHER WORK/SERVICES LABOR & MATERIAL ANNUAL COST *(add A & B)* * \$ _____

* Enter The Above Estimated (HOU) Other Work/Services Annual Cost To Year Five (Option Year Two) Rates – Proposal Price Sheet Total Summary On Price Line II-b.

EXHIBIT III – SAMPLE PRICE SHEET / FEE SCHEDULE

SOLICITATION NO.: S33-T24289

III. YEAR FIVE (OPTION YEAR TWO) – (EFD) BASIC SERVICES

	<u>Cost per</u> <u>Month</u>	(x)	<u>Cost per</u> <u>Year</u>
HVAC Operation and Maintenance. Includes all Basic Services specified in the required SOW	\$ _____	(12)	\$ _____

EFD BASIC SERVICES

* \$ _____

* Enter the above (EFD) Basic Services Total Cost to the Year One Rates Proposal Price Sheet Total Summary on price line I-c.

EXHIBIT III – SAMPLE PRICE SHEET / FEE SCHEDULE

SOLICITATION NO.: S33-T24289

II. YEAR FIVE (OPTION YEAR TWO) – (EFD) OTHER WORK/SERVICES

Other Work/Services may be required for the HVAC to meet desired conditions and/or repairs not covered in the Basic Services of the Proposal. Any estimated quantities, labor hours, and remedial maintenance and supplies expenditures listed below are estimated amounts for Other Work/Services for each year of the Proposal. Consequently, the actual dollar amount for Other Work/Services may be higher or lower than the estimates, and the Proposer shall only be paid for actual work performed, subject to City direction and approval. **If Other Work/Services are performed by the on-site crew in conjunction with their regular duties, Proposer shall not receive additional compensation for their labor.**

A. Estimated (EFD) Other Work/ Services Labor (Quantities are estimated for budget purposes only)

No.	Description	Est. Annual Labor Hours	X	Cost per Hour/Unit	= Annual Cost
1.	<u>HVAC MAINTENANCE MECHANIC</u>				
	a. Normal Work Hours	310	X	\$ _____/hr.	= \$ _____
	b. After Normal Work Hours	30	X	\$ _____/hr.	= \$ _____
2.	<u>DDC MAINTENANCE TECHNICIAN</u>				
	a. Normal Work Hours	140	X	\$ _____/hr.	= \$ _____
	b. After Normal Work Hours	20	X	\$ _____/hr.	= \$ _____
3.	<u>DX MAINTENANCE MECHANIC</u>				
	a. Normal Work Hours	60	X	\$ _____/hr.	= \$ _____
	b. After Normal Work Hours	5	X	\$ _____/hr.	= \$ _____
Total Estimated Other Work / Services Labor Annual Costs					\$ _____
<i>(add items 1 - 3)</i>					

EXHIBIT III – SAMPLE PRICE SHEET / FEE SCHEDULE
SOLICITATION NO.: S33-T24289

B. ESTIMATED (EFD) OTHER WORK/SERVICES SUBCONTRACTS / MATERIALS / SUPPLIES
 (Quantities are estimated for budget purposes only)

PRICES SHALL BE BASED ON THE PROPOSER'S ACTUAL COST PLUS THE FOLLOWING MARK-UP PERCENTAGES:

	ITEM	ESTIMATED ANNUAL COST	PROPOSER PERCENT MARK-UP (Maximum of 15%)	TOTAL ANNUAL ESTIMATED COST
	MATERIALS	\$ 40,000	_____ %	\$ _____
TOTAL ESTIMATED OTHER WORK/SERVICES (SUBCONTRACTS / MATERIALS / SUPPLIES) ANNUAL COSTS (item B total)				\$ _____

Proposer must fill in the above maximum percent mark-up (not to exceed 15%) and complete Total Annual Estimated Cost.

TOTAL ESTIMATED (EFD) OTHER WORK/SERVICES ANNUAL COST (add A & B) * \$ _____

* Enter The Above Estimated (EFD) Other Work/Services Annual Cost To Year Five (Option Year Two) Rates - Proposal Price Sheet Total Summary On Price Line II-c.

**EXHIBIT IV – INSURANCE REQUIREMENTS AND SAMPLE
INSURANCE CERTIFICATE
SOLICITATION NO.: S33-T24289**

To comply with the Terms & Conditions for insurance in a City of Houston Service Contract, the Contractor's Insurance Certificate must be prepared as follows and shall meet the requirements set forth in this Solicitation:

- A. The City of Houston must be listed as an **additional insured** on the face of the Certificate, except those for Worker's Compensation and Employer's Liability.
- B. Each Policy must contain an endorsement to the effect that **the issuer waives any claim or right in the nature of subrogation** to recover against the City, its officers, agents or employees.
- C. The City of Houston must be included in the Insurer's Notification Requirement, which may be accomplished in one of the following ways:
 - 1. By the Contractor's Insurance Agent revising the standard cancellation clause to read substantially as follows (all handwritten strike-outs, additions, and changes to the original text, must all be initialed by the Insurance Agent authorized to make such changes):

=====~~CANCELLATION~~=====

J. D.

NON-RENEWED

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION

J. D.

DATE THEREOF, THE ISSUING COMPANY WILL ~~ENDEAVOR TO MAIL~~ 30 DAYS WRITTEN NOTICE OF SUCH CHANGE TO THE CERTIFICATE HOLDER NAMED (TO THE LEFT), ~~BUT FAILURE TO MAIL SUCH NOTICE SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND~~

J. D.

~~UPON THE COMPANY, ITS AGENTS OR REPRESENTATIVES.~~

=====

AUTHORIZED REPRESENTATIVE OF INSURER John Doe

- O R -

- 2. By Attaching Endorsements in the form attached.
- D. Contractor shall require all subcontractors to carry insurance naming the City as an additional insured and meeting the all of the above requirements except as to amount. The amount shall be commensurate with the amount of the subcontract, but not in no case shall it be less than \$500,000 per occurrence.

**EXHIBIT IV – INSURANCE REQUIREMENTS AND SAMPLE
INSURANCE CERTIFICATE
SOLICITATION NO.: S33-T24289**

Revised - 03/09/95

CERTIFICATE OF INSURANCE EXPLANATIONS

1. Certificate must not be more than 90 days old.
2. Name and Address of Producer writing coverage.
3. Name of each insurance company providing coverage (as listed in Best's Key Rating Guide or on company's Certificate of Authority on file with Texas Department of Insurance). Each company must have (1) a Certificate of Authority to transact insurance business in Texas or (2) be an eligible non-admitted insurer in the State of Texas and have a Best's rating of B+ or better and a Best's financial size category of class VI or better according to the most current edition Best's Key Rating Guide.
4. Name and address of Insured (as shown on policy)
5. Letter in the column must reference the insurer of the policy being described
6. Must be a policy number; no binders will be accepted
7. Date policy became effective
8. Expiration date must be at least **30** days from date of delivery of certificate
9. Name and file number of project
10. Name of project manager
11. Signature or facsimile signature of authorized representative of Producer (blue ink preferred)
12. All required endorsements must accompany the certificate

EXHIBIT IV – SAMPLE INSURANCE CERTIFICATE FOR CONTRACT AWARD (\$50K OR MORE) SOLICITATION NO.: S33-T24289

ACORD. CERTIFICATE OF INSURANCE Issue Date (MM/DD/YY)

PRODUCER

ISSUERS OF POLICIES. THE ISSUER SHALL HAVE A RATING OF AT LEAST B + AND FINANCIAL SIZE OF CLASS VI OR BETTER ACCORDING TO THE CURRENT YEAR'S BEST RATING.

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.

INSURED

SAMPLE FORM

COMPANIES AFFORDING COVERAGE

- COMPANY A
- COMPANY B
- COMPANY C
- COMPANY D
- COMPANY E

COVERAGE'S

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED, NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN. THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

CO LTR.	TYPE OF INSURANCE	POLICY NUMBER	EFFECTIVE DATE (MM/DD/YY)	POLICY EXPIRATION (MM/DD/YY)	POLICY LIMITS
A.	General Liability <input checked="" type="checkbox"/> Commercial General Liability Claims Made <input checked="" type="checkbox"/> Occur. Owners & Proposers Prot.			General Aggregate Products-Comp/Op Agg. Personal & Adv. Injury Each Occurrence Fire Damage (Any one fire) Med. Expense (Any one person)	\$1,000,000 \$1,000,000 \$1,000,000 \$ 500,000 \$ 50,000 \$ 5,000
A.	Automobile Liability <input checked="" type="checkbox"/> Any Auto <input checked="" type="checkbox"/> All Owned Autos <input type="checkbox"/> Scheduled Autos <input type="checkbox"/> Hired Autos <input type="checkbox"/> Non-Owned Autos Garage Liability		Auto Liability Insurance for autos furnished or used in the course of performance of this Contract. Including Owned, Non-owned, and Hired Auto coverage. (Any Auto coverage may be substituted for Owned, Non-owned and Hired Auto Coverage.) If no autos are owned by Proposer, coverage may be limited to Non-owned and Hired Autos. If Owned Auto coverage cannot be purchased by Proposer, Scheduled Auto coverage may be substituted for Owned Auto coverage. EACH AUTO USED IN PERFORMANCE OF THIS CONTRACT SHALL BE COVERED IN THE LIMITS SPECIFIED.	Combined Single Limit Bodily Injury (Per person) Bodily Injury (Per Accident) Property Damage	\$1,000,000 \$ \$ \$
	Excess Liability			Each Occurrence Aggregate	\$ \$
	Worker's Compensation and Employee Liability	Statutory Limits	<input checked="" type="checkbox"/>	Statutory Limits Each Accident Disease - Policy Limit Disease - Each Employee	\$ 100,000 \$ 100,000 \$ 100,000
	Other				

DESCRIPTION OF OPERATION/LOCATIONS/VEHICLES/SPECIAL ITEMS

City of Houston is named as additional insured on Auto and General Liability policies, and Waiver of Subrogation on Auto, General Liability, and Worker's Compensation.
For (Project Name)

CERTIFICATE HOLDER

SHALL BE MODIFIED AS FOLLOWS: **CANCELLATION**
SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED NON-RENEWED BEFORE THE EXPIRATION DATE THERE OF, THE ISSUING COMPANY WILL MAIL THIRTY (30) DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT. CITY OF HOUSTON / FINANCE AND ADMINISTRATION

DEPARTMENT – STRATEGIC PURCHASING DIVISION

P.O. BOX 1562
HOUSTON, TEXAS 77251

AUTHORIZED REPRESENTATIVE

EXHIBIT IV – SAMPLE INSURANCE CERTIFICATE FOR CONTRACT AWARD (\$50K OR MORE) SOLICITATION NO.: S33-T24289

ISO | Commercial Auto Forms | 06/01/04
POLICY NUMBER:

COMMERCIAL AUTO
CA 04 03 06 04

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

TEXAS ADDITIONAL INSURED

This endorsement modifies insurance provided under the following:

**BUSINESS AUTO COVERAGE FORM
GARAGE COVERAGE FORM
MOTOR CARRIER COVERAGE FORM
TRUCKERS COVERAGE FORM**

With respect to coverage provided by this endorsement, the provisions of the Coverage Form apply unless modified by the endorsement.

This endorsement changes the policy effective on the inception date of the policy unless another date is indicated below.

Endorsement Effective:	Countersigned By:
Named Insured:	(Authorized Representative)

SCHEDULE

Name and Address of Additional Insured:

(If no entry appears above, information required to complete this endorsement will be shown in the Declarations as applicable to this endorsement.)

- A. Who Is An Insured (Section II) is amended to include as an "insured" the person(s) or organization(s) shown in the Schedule, but only with respect to their legal liability for acts or omissions of a person for whom Liability Coverage is afforded under this policy.
- B. The additional insured named in the Schedule or Declarations is not required to pay for any premiums stated in the policy or earned from the policy. Any return premium and any dividend, if applicable, declared by us shall be paid to you.
- C. You are authorized to act for the additional insured named in the Schedule or Declarations in all matters pertaining to this insurance.
- D. We will mail the additional insured named in the Schedule or Declarations notice of any cancellation of this policy. If we cancel, we will give 10 days notice to the additional insured.
- E. The additional insured named in the Schedule or Declarations will retain any right of recovery as a claimant under this policy.

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**EXHIBIT IV – SAMPLE INSURANCE CERTIFICATE FOR
CONTRACT AWARD (\$50K OR MORE)
SOLICITATION NO.: S33-T24289**

POLICY NUMBER:

COMMERCIAL AUTO
CA 04 44 03 10

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

**WAIVER OF TRANSFER OF RIGHTS OF RECOVERY
AGAINST OTHERS TO US (WAIVER OF SUBROGATION)**

This endorsement modifies insurance provided under the following:

BUSINESS AUTO COVERAGE FORM
BUSINESS AUTO PHYSICAL DAMAGE COVERAGE FORM
GARAGE COVERAGE FORM
MOTOR CARRIER COVERAGE FORM
TRUCKERS COVERAGE FORM

With respect to coverage provided by this endorsement, the provisions of the Coverage Form apply unless modified by the endorsement.

This endorsement changes the policy effective on the inception date of the policy unless another date is indicated below.

Named Insured:

Endorsement Effective Date:

SCHEDULE

Name(s) Of Person(s) Or Organization(s):

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

The **Transfer Of Rights Of Recovery Against Others To Us** Condition does not apply to the person(s) or organization(s) shown in the Schedule, but only to the extent that subrogation is waived prior to the "accident" or the "loss" under a contract with that person or organization.

**EXHIBIT IV – SAMPLE INSURANCE CERTIFICATE FOR
CONTRACT AWARD (\$50K OR MORE)
SOLICITATION NO.: S33-T24289**

ENDORSEMENT

This endorsement, effective 12:01 AM

Forms a part of policy no.:

Issued to:

By:

**THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.
ADDITIONAL INSURED REQUIRED BY WRITTEN CONTRACT**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY POLICY, COVERAGE APPLICABLE TO COVERAGE A. BODILY
INJURY AND PROPERTY DAMAGE (SECTION I - COVERAGES) ONLY

- A. Section II - Who Is An Insured** is amended to include any person or organization you are required to include as an additional insured on this policy by a written contract or written agreement in effect during this policy period and executed prior to the "occurrence" of the "bodily injury" or "property damage."
- B.** The insurance provided to the above described A additional insured under this endorsement is limited as follows:
1. COVERAGE A BODILY INJURY AND PROPERTY DAMAGE (Section I - Coverages) only.
 2. The person or organization is only an additional insured with respect to liability arising out of "your work" or "your product".
 3. In the event that the Limits of Insurance provided by this policy exceed the Limits of Insurance required by the written contract or written agreement, the insurance provided by this endorsement shall be limited to the Limits of Insurance required by the written contract or written agreement. This endorsement shall not increase the Limits of Insurance shown in the Declarations pertaining to the coverage provided herein.
 4. The insurance provided to such an additional insured does not apply to "bodily injury" or "property damage" arising out of an architect's, engineer's, or surveyor's rendering of or failure to render any professional services, including, but not limited to:
 - i. The preparing, approving, or failing to prepare or approve maps, shop drawings, opinions, reports, surveys, field orders, change orders, or drawings and specifications; and
 - ii. Supervisory, inspection, architectural, or engineering activities.
- 5.** This insurance does not apply to "bodily injury" or "property damage" arising out of "your work" or "your product" included in the "product-completed operations hazard" unless you are required to provide such coverage by written contract or written agreement and then only for the period of time required by the written contract or written agreement and in no event beyond the expiration date of the policy.
- 6.** Any coverage provided by this endorsement to an additional insured shall be excess over any other valid and collectible insurance available to the additional insured whether primary, excess, contingent or on any other basis.
- C.** In accordance with the terms and conditions of the policy and as more fully explained in the policy, as soon as practicable, each additional insured must give us prompt notice of any "occurrence" which may result in a claim, forward all legal papers to us, cooperate in the defense of any actions, and otherwise comply with all of the policy's terms and conditions. Failure to comply with this provision may, at our option, result in the claim or "suit" being denied.

**EXHIBIT IV – SAMPLE INSURANCE CERTIFICATE FOR
CONTRACT AWARD (\$50K OR MORE)
SOLICITATION NO.: S33-T24289**

ENDORSEMENT No.

This endorsement, effective 12:01 AM:

Forms a part of policy no:

Issued to:

By:

Commercial Umbrella Liability Policy with CrisisResponse®

Additional Insured Endorsement - Products-Completed Operations and Primary Non-Contributing

This policy is amended as follows:

Section VII. DEFINITIONS, Paragraph M. is amended to include the following additional provision:

Insured means:

Any person or organization for whom you are performing operations when you and such person or organization have agreed in writing in a contract or agreement that such person or organization is an additional insured on your policy, but only if such person or organization is included under the coverage provided by **Scheduled Underlying Insurance**. Such person or organization is an additional insured only with respect to liability:

1. arising out of **Your Work** at the location designated; or
2. included within the **Products-Completed Operations Hazard**.

This provision does not apply to liability arising out of the sole negligence of such person or organization for its own acts or omissions or those of its employees or anyone else acting on its behalf.

Coverage afforded to these additional insured parties will be primary to, and non-contributory with, any other insurance available to that person or organization.

**EXHIBIT IV – SAMPLE INSURANCE CERTIFICATE FOR
CONTRACT AWARD (\$50K OR MORE)
SOLICITATION NO.: S33-T24289**

ISO | Commercial General Liability Forms | 07/01/04

POLICY NUMBER:

**COMMERCIAL GENERAL
LIABILITY**

CG 20 10 07 04

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

**ADDITIONAL INSURED – OWNERS, LESSEES OR
CONTRACTORS – SCHEDULED PERSON OR
ORGANIZATION**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

Name Of Additional Insured Person(s) Or Organization(s):	Location(s) Of Covered Operations
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.	

A. Section II – Who Is An Insured is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by:

1. Your acts or omissions; or
2. The acts or omissions of those acting on your behalf,
in the performance of your ongoing operations for the additional insured(s) at the location(s) designated above.

B. With respect to the insurance afforded to these additional insureds, the following additional exclusions apply:

This insurance does not apply to "bodily injury" or "property damage" occurring after:

1. All work, including materials, parts or equipment furnished in connection with such work, on the project (other than service, maintenance or repairs) to be performed by or on behalf of the additional insured(s) at the location of the covered operations has been completed; or
2. That portion of "your work" out of which the injury or damage arises has been put to its intended use by any person or organization other than another contractor or subcontractor engaged in performing operations for a principal as a part of the same project.

CG 20 10 07 04

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**EXHIBIT IV – SAMPLE INSURANCE CERTIFICATE FOR
CONTRACT AWARD (\$50K OR MORE)
SOLICITATION NO.: S33-T24289**

ISO | Commercial General Liability Forms | 07/01/04

POLICY NUMBER:

**COMMERCIAL GENERAL
LIABILITY**

CG 20 37 07 04

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

**ADDITIONAL INSURED – OWNERS, LESSEES OR
CONTRACTORS – COMPLETED OPERATIONS**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

Name Of Additional Insured Person(s) Or Organization(s):	Location And Description Of Completed Operations
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.	

Section II – Who Is An Insured is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury" or "property damage" caused, in whole or in part, by "your work" at the location designated and described in the schedule of this endorsement performed for that additional insured and included in the "products-completed operations hazard".

CG 20 37 07 04

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**EXHIBIT IV – SAMPLE INSURANCE CERTIFICATE FOR
CONTRACT AWARD (\$50K OR MORE)
SOLICITATION NO.: S33-T24289**

ISO | Commercial General Liability Forms | 01/01/96

POLICY NUMBER:

**COMMERCIAL GENERAL
LIABILITY
CG 20 11 01 96**

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

**ADDITIONAL INSURED – MANAGERS OR LESSORS OF
PREMISES**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART

SCHEDULE

1. Designation of Premises (Part Leased to You):
2. Name of Person or Organization (Additional Insured):
3. Additional Premium:

(If no entry appears above, the information required to complete this endorsement will be shown in the Declarations as applicable to this endorsement.)

WHO IS AN INSURED (Section II) is amended to include as an insured the person or organization shown in the Schedule but only with respect to liability arising out of the ownership, maintenance or use of that part of the premises leased to you and shown in the Schedule and subject to the following additional exclusions:

This insurance does not apply to:

1. Any "occurrence" which takes place after you cease to be a tenant in that premises.
2. Structural alterations, new construction or demolition operations performed by or on behalf of the person or organization shown in the Schedule.

CG 20 11 01 96

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**EXHIBIT IV – SAMPLE INSURANCE CERTIFICATE FOR
CONTRACT AWARD (\$50K OR MORE)
SOLICITATION NO.: S33-T24289**

ISO | Commercial General Liability Forms | 07/01/04

POLICY NUMBER:

**COMMERCIAL GENERAL
LIABILITY
CG 20 15 07 04**

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

ADDITIONAL INSURED – VENDORS

This endorsement modifies insurance provided under the following:

**COMMERCIAL GENERAL LIABILITY COVERAGE PART
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART**

SCHEDULE

Name Of Additional Insured Person(s) Or Organization(s) (Vendor)	Your Products
Information required to complete this Schedule, if not shown above, will be shown in the Declarations.	

A. Section II – Who Is An Insured is amended to include as an additional insured any person(s) or organization(s) (referred to below as vendor) shown in the Schedule, but only with respect to "bodily injury" or "property damage" arising out of "your products" shown in the Schedule which are distributed or sold in the regular course of the vendor's business, subject to the following additional exclusions:

1. The insurance afforded the vendor does not apply to:
 - a. "Bodily injury" or "property damage" for which the vendor is obligated to pay damages by reason of the assumption of liability in a contract or agreement. This exclusion does not apply to liability for damages that the vendor would have in the absence of the contract or agreement;
 - b. Any express warranty unauthorized by you;
 - c. Any physical or chemical change in the product made intentionally by the vendor;
 - d. Repackaging, except when unpacked solely for the purpose of inspection, demonstration, testing, or the substitution of parts under instructions from the manufacturer, and then repackaged in the original container;
 - e. Any failure to make such inspections, adjustments, tests or servicing as the vendor has agreed to make or normally undertakes to make in the usual course of business, in connection with the distribution or sale of the products;
 - f. Demonstration, installation, servicing or repair operations, except such operations performed at the vendor's premises in connection with the sale of the product;
 - g. Products which, after distribution or sale by you, have been labeled or relabeled or used as a container, part or ingredient of any other thing or substance by or for the vendor; or
 - h. "Bodily injury" or "property damage" arising out of the sole negligence of the vendor for its own acts or omissions or those of its employees or anyone else acting on its behalf. However, this exclusion does not apply to:
 - (1) The exceptions contained in Sub-paragraphs d. or f.; or
 - (2) Such inspections, adjustments, tests or servicing as the vendor has agreed to make or normally undertakes to make in the usual course of business, in connection with the distribution or sale of the products.
2. This insurance does not apply to any insured person or organization, from whom you have acquired such products, or any ingredient, part or container, entering into, accompanying or containing such products.

CG 20 15 07 04

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**EXHIBIT IV – SAMPLE INSURANCE CERTIFICATE FOR
CONTRACT AWARD (\$50K OR MORE)
SOLICITATION NO.: S33-T24289**

ISO | Commercial General Liability Forms | 05/01/09

POLICY NUMBER:

COMMERCIAL GENERAL LIABILITY

CG 24 04 05 09

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

**WAIVER OF TRANSFER OF RIGHTS OF RECOVERY
AGAINST OTHERS TO US**

This endorsement modifies insurance provided under the following:

COMMERCIAL GENERAL LIABILITY COVERAGE PART
PRODUCTS/COMPLETED OPERATIONS LIABILITY COVERAGE PART

SCHEDULE

Name Of Person Or Organization:

Information required to complete this Schedule, if not shown above, will be shown in the Declarations.

The following is added to Paragraph 8. **Transfer Of Rights Of Recovery Against Others To Us** of Section IV – **Conditions:**

We waive any right of recovery we may have against the person or organization shown in the Schedule above because of payments we make for injury or damage arising out of your ongoing operations or "your work" done under a contract with that person or organization and included in the "products-completed operations hazard". This waiver applies only to the person or organization shown in the Schedule above.

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**EXHIBIT IV – SAMPLE INSURANCE CERTIFICATE FOR
CONTRACT AWARD (\$50K OR MORE)
SOLICITATION NO.: S33-T24289**

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

**TEXAS WAIVER OF OUR RIGHT TO
RECOVER FROM OTHERS ENDORSEMENT**

Policy Number:
Effective Date:
Named Insured and Address:

Endorsement Number:
Effective hour is the same as stated on the Information Page of the policy.

This endorsement applies only to the insurance provided by the policy because Texas is shown in Item 3.A. of the Information Page.

We have the right to recover our payments from anyone liable for an injury covered by this policy. We will not enforce our right against the person or organization named in the Schedule, but this waiver applies only with respect to

bodily injury arising out of the operations described in the Schedule where you are required by a written contract to obtain this waiver from us.

This endorsement shall not operate directly or indirectly to benefit anyone not named in the Schedule.

The premium for this endorsement is shown in the Schedule.

SCHEDULE

1. () Special Waiver
Name of person or organization
2. () Blanket Waiver
Any person or organization for whom the Named Insured has agreed by written contract to furnish this waiver.
3. Premium:
The premium charge for this endorsement shall be _____ percent of the premium developed on payroll in connection with work performed for the above person(s) or organization(s) arising out of the operations described.
4. Advance Premium:

Countersigned by _____
Authorized Representative

**EXHIBIT IV – SAMPLE INSURANCE CERTIFICATE FOR
CONTRACT AWARD (\$50K OR MORE)
SOLICITATION NO.: S33-T24289**

WORKERS COMPENSATION AND EMPLOYERS LIABILITY INSURANCE POLICY

WC 42 03 04 A

(Ed. 1-00)

TEXAS WAIVER OF OUR RIGHT TO RECOVER FROM OTHERS ENDORSEMENT

This endorsement applies only to the insurance provided by the policy because Texas is shown in Item _____ of the Information Page.

We have the right to recover our payments from anyone liable for an injury covered by this policy. We will not enforce our right against the person or organization named in the Schedule, but this waiver applies only with respect to bodily injury arising out of the operations described in the Schedule where you are required by a written contract to obtain this waiver from us.

This endorsement shall not operate directly or indirectly to benefit anyone not named in the Schedule.

The premium for this endorsement is shown in the Schedule.

Schedule

1. Specific Waiver

Name of person or organization

Blanket Waiver

Any person or organization for whom the Named Insured has agreed by written contract to furnish this waiver.

2. Operations:

ALL TEXAS OPERATIONS

3. Premium:

The premium charge for this endorsement shall be _____ percent of the premium developed on payroll in connection with work performed for the above person(s) or organization(s) arising out of the operations described.

4. Advance Premium:

This endorsement changes the policy to which it is attached and is effective on the date issued unless otherwise stated.

(The information below is required only when this endorsement is issued subsequent to preparation of the policy.)

Endorsement Effective
Insured

Endorsement No.
Premium \$

**EXHIBIT IV – SAMPLE INSURANCE CERTIFICATE FOR
CONTRACT AWARD (\$50K OR MORE)
SOLICITATION NO.: S33-T24289**

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

**LIMITED WAIVER OF TRANSFER OF RIGHTS OF RECOVERY
AGAINST OTHERS TO US ENDORSEMENT**

.....This endorsement modifies insurance provided under the following:.....

COMMERCIAL GENERAL LIABILITY COVERAGE FORM
COMMERCIAL GENERAL LIABILITY SELF-INSURED RETENTION COVERAGE FORM

Schedule

Name of Person or Organization: Where required by written contract.

Under **SECTION IV – COMMERCIAL GENERAL LIABILITY CONDITIONS**, Condition **8. Transfer Of Rights Of Recovery Against Others To Us** is amended by the addition of the following provision:

We waive any right of recovery we may have against the person or organization shown in the **Schedule** above because of payments we make for injury or damage arising out of your ongoing operations done under a contract with that person or organization.

All other terms and conditions of this Policy remain unchanged.

EXHIBIT V – FAIR CAMPAIGN ORDINANCE
SOLICITATION NO.: S33-T24289

The City of Houston Fair Campaign Ordinance makes it unlawful for a Contractor to offer any contribution to a candidate for City elective office (including elected officers and officers-elect). All respondents to this invitation to bid must comply with Houston Code of Ordinances Chapter 18 as amended relating to the contribution and solicitation of funds for election campaigns. Provisions of this ordinance are provided in part in the paragraphs that follow. Complete copies may be obtained from the office of the City Secretary.

Candidates for city office may neither solicit nor receive contributions except during a period commencing 270 calendar days prior to an election date for which a person is a candidate for such office and ending 90 calendar days after the election date, including run off elections if such candidate is on the ballot.

Further, it shall be unlawful either for any person who submits a Bid or Proposal to contribute or offer any contribution to a candidate or for any candidate to solicit or accept any contribution from such person for a period commencing at the time of posting of the City Council Meeting Agenda including an item for the award of the Contract and ending upon the 30th day after the award of the Contract by City Council.

For the purposes of this Ordinance, a **Contract** is defined as each Contract having a value in excess of \$30,000 that is let by the City for professional services, personal services, or other goods or services of any other nature whether the Contract is awarded on a negotiated basis, request for Proposal basis, competitive Proposal basis or formal sealed competitive Bids. The term **Contractor** includes proprietors of proprietorships, partners having an equity interest of 10% or more of partnerships, (including limited liability partnerships and companies), all officers and directors of corporations (including limited liability corporations), and all holders of 10% or more of the outstanding shares of corporations.

A STATEMENT DISCLOSING THE NAMES AND BUSINESS ADDRESSES EACH OF THOSE PERSONS WILL BE REQUIRED TO BE SUBMITTED WITH EACH BID OR PROPOSAL FOR A CITY CONTRACT. Completion of the attached form entitled "**Contractor Submission List**" will satisfy this requirement. Failure to provide this information may be just cause for rejection of your Bid or Proposal.

EXHIBIT V – FORM “A”: FAIR CAMPAIGN
SOLICITATION NO.: S33-T24289

List all officers of the corporation (if none state none”):

Name _____
Officer _____ Address _____

Name _____
Officer _____ Address _____

Name _____
Officer _____ Address _____

List all individuals owning 10% or more of outstanding shares of stock of the corporation (if none state “none”):

Name _____
Address _____

Name _____
Address _____

Name _____
Address _____

I certify that I am duly authorized to submit this list on behalf of the firm, that I am associated with the firm in the capacity noted below and that I have personal knowledge of the accuracy of the information provided herein.

Preparer

Printed Name

Title

Note: This list constitutes a **government record** as defined by § 37.01 of the Texas Penal Code.

8/23/01

EXHIBIT VI: AFFIDAVIT OF OWNERSHIP OR CONTROL
SOLICITATION NO.: S33-T24289

5. The information shown below is true and correct for the Contracting Entity and all owners of 5% or more of the Contracting Entity and, where the Contracting Entity is a non-profit entity, the required information has been shown for each officer, *i.e.*, president, vice-president, secretary, treasurer, etc. **[NOTE: IN ALL CASES, USE FULL NAMES, LOCAL BUSINESS AND RESIDENCE ADDRESSES AND TELEPHONE NUMBERS. DO NOT USE POST OFFICE BOXES FOR ANY ADDRESS. INCLUSION OF E-MAIL ADDRESSES IS OPTIONAL, BUT RECOMMENDED. ATTACH ADDITIONAL SHEETS AS NEEDED.]**

Contracting Entity

Name: _____

Business Address **[No./STREET]** _____

[CITY/STATE/ZIP CODE] _____

Telephone Number (_____) _____

Email Address **[OPTIONAL]** _____

Residence Address **[No./STREET]** _____

[CITY/STATE/ZIP CODE] _____

Telephone Number (_____) _____

Email Address **[OPTIONAL]** _____

5% Owner(s) or More (IF NONE, STATE "NONE.")

Name: _____

Business Address **[No./STREET]** _____

[CITY/STATE/ZIP CODE] _____

Telephone Number (_____) _____

Email Address **[OPTIONAL]** _____

Residence Address **[No./STREET]** _____

[CITY/STATE/ZIP CODE] _____

Telephone Number (_____) _____

Email Address **[OPTIONAL]** _____

EXHIBIT VI: AFFIDAVIT OF OWNERSHIP OR CONTROL
SOLICITATION NO.: S33-T24289

6. Optional Information

Contracting Entity and/or _____ [**NAME OF OWNER OR NON-PROFIT OFFICER**] is actively protesting, challenging or appealing the accuracy and/or amount of taxes levied against _____ [**CONTRACTING ENTITY, OWNER OR NON-PROFIT OFFICER**] as follows:

Name of Debtor: _____
Tax Account Nos. _____
Case or File Nos. _____
Attorney/Agent Name _____
Attorney/Agent Phone No. (_____) _____
Tax Years _____

Status of Appeal [**DESCRIBE**] _____

Affiant certifies that he or she is duly authorized to submit the above information on behalf of the Contracting Entity, that Affiant is associated with the Contracting Entity in the capacity noted above and has personal knowledge of the accuracy of the information provided herein, and that the information provided herein is true and correct to the best of Affiant's knowledge and belief.

Affiant

SWORN TO AND SUBSCRIBED before me this _____ day of _____, 20_____.

(Seal)

Notary Public

NOTE:

This affidavit constitutes a **government record** as defined by Section 37.01 of the Texas Penal Code. Submission of a false government record is punishable as provided in Section 37.10 of the Texas Penal Code. Attach additional pages if needed to supply the required names and addresses.

**EXHIBIT VII: DRUG DETECTION AND DETERRENCE
PROCEDURES FOR CONTRACTORS
SOLICITATION NO.: S33-T24289**

It is the policy of the City to achieve a drug-free workforce and to provide a workplace that is free from the use of illegal drugs and alcohol. It is also the policy of the City that the manufacture, distribution, dispensation, possession, sale or use of illegal drugs or alcohol by contractors while on City premises is prohibited. By executing this Contract, Contractor represents and certifies that it meets and shall comply with all the requirements and procedures set forth in the Mayor's Policy on Drug Detection and Deterrence, City Council Motion No. 92-1971 ("Mayor's Policy") and the Mayor's Drug Detection and Deterrence Procedures for Contractors, Executive Order No. 1-31 ("Executive Order"), both of which are on file in the Office of the City Secretary.

- (b) Confirming its compliance with the Mayor's Policy and Executive Order, Contractor, as a condition precedent to City's obligations under this Contract, will have filed with the Contract Compliance Officer for Drug Testing ("CCODT"), prior to execution of this Contract by the City, (i) a copy of its drug-free workplace policy, (ii) the Drug Policy Compliance Agreement substantially in the format set forth in Attachment "A" to the Executive Order, together with a written designation of all safety impact positions, and (iii) if applicable (e.g. no safety impact positions), the Certification of No Safety Impact Positions, substantially in the format set forth in Attachment "C" to the Executive Order. If Contractor files 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 Contract or upon the completion of this Contract if performance is less than six (6) months, a Drug Policy Compliance Declaration in a form substantially similar to Attachment "B" to the Executive Order. The Drug Policy Compliance Declaration shall be submitted to the CCODT within thirty days of completion of this Contract. The first six (6) month period shall begin to run on the date City issues its notice to proceed hereunder or if no notice to proceed is issued, on the first day Contractor begins work under this Contract.
- (c) Contractor shall have the continuing obligation to file with the CCODT written designations of safety impact positions and Drug Policy Compliance Declarations at anytime during the performance of this Contract that safety impact positions are added if initially no safety impact positions were designated. Contractor also shall have the continuing obligation to file updated designations of safety impact positions with the CCODT when additional safety impact positions are added to Contractor's employee work force.
- (d) The failure of Contractor to comply with the above Sections shall be a breach of this Contract entitling City to terminate in accordance with Article IV.

EXHIBIT VII – ATTACHMENT “A”
DRUG POLICY COMPLIANCE AGREEMENT
SOLICITATION NO.: S33-T24289

I, _____ as an owner or officer of
(Name) (Print/Type) (Title)

(Name of Company) (Contractor)

have authority to bind Contractor with respect to its bid, offer or performance of any and all contracts it may enter into with the City of Houston; and that by making this Agreement, I affirm that the Contractor is aware of and by the time the Contract is awarded will be bound by and agree to designate appropriate safety impact positions for company employee positions, and to comply with the following requirements before the City issues a notice to proceed.

1. Develop and implement a written Drug Free Workplace Policy and related drug testing procedures for the Contractor that meet the criteria and requirements established by the Mayor's Amended Policy on Drug Detection and Deterrence (Mayor's Drug Policy) and the Mayor's Drug Detection and Deterrence Procedures for Contractors (Executive Order No. 1-31).
2. Obtain a facility to collect urine samples consistent with Health and Human Services (HHS) guidelines and a HHS certified drug testing laboratory to perform the drug tests.
3. Monitor and keep records of drug tests given and the results; and upon request from the City of Houston, provide confirmation of such testing and results.
4. Submit semi-annual Drug Policy Compliance Declarations.

I affirm on behalf of the Contractor that full compliance with the Mayor's Drug Policy and Executive Order No. 1-31 is a material condition of the contract with the City of Houston.

I further acknowledge that falsification, failure to comply with or failure to timely submit declarations and/or documentation in compliance with the Mayor's Drug Policy and/or Executive Order No. 1-31 will be considered a breach of the contract with the City and may result in non-award or termination of the Contract by the City of Houston.

Date

Contractor Name

Signature

Title

**EXHIBIT VII – ATTACHMENT “C” AND “D”
 CONTRACTOR’S CERTIFICATION OF NO SAFETY IMPACT POSITIONS
 SOLICITATION NO.: S33-T24289**

I, _____
 (Name) (Print/Type) (Title)

as an owner or officer of _____
 (Contractor) have authority to bind the Contractor with respect to its bid, and I hereby certify that Contractor has no employee safety impact positions as defined in §5.18 of Executive Order No. 1-31 that will be involved in performing this City Contract. Contractor agrees and covenants that it shall immediately notify the City's Director of Personnel if any safety impact positions are established to provide services in performing this City Contract.

 Date Contractor Name

 Signature

 Title

**CONTRACTOR'S CERTIFICATION OF NON-APPLICATION OF
 CITY OF HOUSTON DRUG DETECTION AND DETERRENCE PROCEDURES
 FOR CONTRACTORS**

ATTACHMENT “D”

I _____ as an owner or officer of
 (NAME) (PRINT/TYPE)

_____ (Contractor) have authority to bind the Contractor with respect to its bid, and I hereby certify that Contractor has fewer than fifteen (15) employees during any 20-week period during a calendar year and also certify that Contractor has no employee safety impact positions as defined in 5.18 of Executive Order No. 1-31 that will be involved in performing this City Contract. Safety impact position means a Contractor's employment position involving job duties that if performed with inattentiveness, errors in judgment, or diminished coordination, dexterity, or composure may result in mistakes that could present a real and/or imminent threat to the personal health or safety of the employee, co-workers, and/or the public.

DATE CONTRACTOR’S NAME

SIGNATURE

TITLE

EXHIBIT VIII – ANTI-COLLUSION STATEMENT
SOLICITATION NO.: S33-T24289

Anti-Collusion Statement

The undersigned, as Proposer, certifies that the only person or parties interested in this Proposal as principals are those named herein; that the Proposer has not, either directly or indirectly entered into any Agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with the award of this Contract.

Date

Proposer Signature

EXHIBIT IX – CONFLICT OF INTEREST QUESTIONNAIRE

SOLICITATION NO.: S33-T24289

Chapter 176 of the Local Government Code requires every Vendor or Contractor with the City of Houston (“City”) to file a Conflict of Interest Questionnaire with the City Secretary of the City of Houston by the **seventh** business day after:

- (1) any contract discussions or negotiations begin, or
- (2) submitting an application, responses to requests for proposals, bids, correspondence, or any writing related to a potential Agreement with the City.

The Conflict of Interest Questionnaire is available for downloading from the Texas Ethics Commission’s website at <http://www.ethics.state.tx.us/forms/CIQ.pdf>. The completed Conflict of Interest Questionnaires will be posted on the City Secretary’s website. There will also be a list of the City’s Local Government Officers on the City of Houston’s website.

Additionally, each Vendor or Contractor must file updated questionnaires no later than **September 1st** of each year that the Vendor or Contractor seeks to contract with the City, or the **seventh** business day after the date of an event that would render the questionnaire incomplete or inaccurate.

However, a Vendor or Contractor is not required to file a new questionnaire in any year if the vendor has completed a questionnaire between June 1st and September 1st of that year, unless the previous questionnaire is incomplete or inaccurate.

Original Conflict of Interest Questionnaire shall be filed with Houston’s Records Administrator (Ms. Anna Russell, City Secretary, 900 Bagby, First Floor, Houston, Texas 77002). Vendors and Contractors shall include a copy of the form that was submitted to the City Secretary as part of the Bid Package. Any questions about filling out this form should be directed to your attorney

Failure of any Vendor or Contractor to comply with this law is a Class-C misdemeanor.

EXHIBIT IX – CONFLICT OF INTEREST QUESTIONNAIRE

SOLICITATION NO.: S33-T24289

CONFLICT OF INTEREST QUESTIONNAIRE

FORM CIQ

For vendor or other person doing business with local governmental entity

This questionnaire reflects changes made to the law by H.B. 1491, 80th Leg., Regular Session.
 This questionnaire is being filed in accordance with Chapter 176, Local Government Code by a person who has a business relationship as defined by Section 176.001(1-a) with a local governmental entity and the person meets requirements under Section 176.006(a).
 By law this questionnaire must be filed with the records administrator of the local governmental entity not later than the 7th business day after the date the person becomes aware of facts that require the statement to be filed. See Section 176.006, Local Government Code.
 A person commits an offense if the person knowingly violates Section 176.006, Local Government Code. An offense under this section is a Class C misdemeanor.

OFFICE USE ONLY

Date Received

1 Name of person who has a business relationship with local governmental entity.

2 Check this box if you are filing an update to a previously filed questionnaire.

(The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than the 7th business day after the date the originally filed questionnaire becomes incomplete or inaccurate.)

3 Name of local government officer with whom filer has employment or business relationship.

_____ Name of Officer

This section (item 3 including subparts A, B, C & D) must be completed for each officer with whom the filer has an employment or other business relationship as defined by Section 176.001(1-a), Local Government Code. Attach additional pages to this Form CIQ as necessary.

A. Is the local government officer named in this section receiving or likely to receive taxable income, other than investment income, from the filer of the questionnaire?

Yes No

B. Is the filer of the questionnaire receiving or likely to receive taxable income, other than investment income, from or at the direction of the local government officer named in this section AND the taxable income is not received from the local governmental entity?

Yes No

C. Is the filer of this questionnaire employed by a corporation or other business entity with respect to which the local government officer serves as an officer or director, or holds an ownership of 10 percent or more?

Yes No

D. Describe each employment or business relationship with the local government officer named in this section.

4

Signature of person doing business with the governmental entity

Date

EXHIBIT X – PAY OR PLAY PROGRAM REQUIREMENTS

SOLICITATION NO.: S33-T24289

I. Pay or Play Program Elements

A. Purpose

Authorized by Ordinance 2007-534 and Executive Order 1-7, the purpose of the Pay or Play Program is (1) to create a more level playing field among competing Proposers so that those who provide health benefits to their employees are not disadvantaged in the bidding process; and 2) to recognize and account for the fact that there are costs associated with the health care of the uninsured.

B. Program Elements

1. Covered Contracts: Contracts covered by the program are those that are advertised after July 1, 2007, which are valued at or above \$100,000 and are not primarily for the procurement of property, goods, supplies or equipment.
2. Covered employees: This program applies to employees of a covered Proposer or Sub-contractor, including Contract labor, who are over age 18, work at least 30 hours per week and work any amount of time under a covered city Contract or Subcontract.
3. Compliance with the program means that the Proposer either:
 - “Pays” by contributing \$1.00 per covered employee per hour for work performed under the Contract with the City; or
 - “Plays” by offering health benefits to covered employees. Health benefits must meet or exceed the following standards:
 - The employer will contribute no less than \$150 per covered employee per month toward the total premium cost.
 - The employee contribution, if any amount, will be no greater than 50% of the total monthly premium cost.
4. Subcontracts: The Proposer is responsible for compliance on behalf of covered employees, including Contract labor, of Sub-contractors with subcontracts valued at or greater than \$200,000, if the Subcontract is not primarily for the procurement of property, goods, supplies or equipment. Sub-contractor compliance includes submission of applicable reports and/or payments to the Prime, as well as maintenance of records.
5. Exemptions/Waivers: The City of Houston will award a Contract to a Proposer that neither Pays nor Plays only if the Proposer has received an approved waiver.
6. Administration: Proposer performance in meeting Pay or Play program requirements will be managed by the contracting department. The Mayor’s Office of Business Opportunity and Contract Compliance will have administrative oversight of the program, including audit responsibilities. Questions about the program should be referred to the department POP Liaison or the Mayor’s Office of Business Opportunity and Contract Compliance.

EXHIBIT X – PAY OR PLAY PROGRAM REQUIREMENTS

SOLICITATION NO.: S33-T24289

II. Documentation and Reporting Requirements

A. Document that must be signed and returned to administering department with the Bid/Proposal.

1. Notice to Prospective City Proposers (Form POP-1A) acknowledges Bidder/Proposers' knowledge of the program and its requirements, and the intention to comply.

B. Documents that must be signed and returned to administering department within a period designated by the department's Contract Administrator, upon notification of low Bidder or successful Proposer status:

1. Certification of Proposer's Intent to Comply with Pay or Play Program (Form POP-2). Note Proposers that opt to "play" must provide proof of coverage, including documentation from insurance provider, and names of covered employees.
2. List of Participating Sub-contractors (Form POP-3).

C. The Proposer will comply with the following reporting requirements:

1. Proposers that opt to Play
Provide periodic reports to the Contract administrator showing proof of coverage. Reporting schedule will be determined by administering department based on length of Contract. (Form POP-7.)
2. Proposers that opt to Pay
Provide monthly reports to administering department, detailing names of employees, hours worked, exemptions (if any) and amount owed. (Form POP-5.)

Proposers shall submit an initial report with the second invoice to the department. Payments based on monthly reports are due to the contracting department with submission of the following month's invoice. Payments may be made via wire transfer, provided that proof of transaction is submitted to administering department.

III. Compliance and Enforcement

The Mayor's Office of Business Opportunity will audit program compliance. Proposers willfully violating or misrepresenting POP program compliance will be subject to corrective and/or punitive action, including but not limited to the assessment of fines and penalties and/or debarment.

The Pay or Play Program Requirements Form (POP-1) and all other POP Forms are available for downloading from the City of Houston's Website at <http://www.houstontx.gov/aacc/popforms.html>

EXHIBIT X – FORM “1A”
PAY OR PLAY PROGRAM ACKNOWLEDGEMENT FORM
SOLICITATION NO.: S33-T24289



What this form does. This form acknowledges your awareness of the Pay or Play program. Your signature affirms that you will comply with the requirements of the program if you are the successful Bidder/Proposer, and ensure the same on behalf of subcontracts subject to the Pay or Play Program.

If you cannot make this assurance now, do not return this form.

For more information, contact the Contract Administrator.

Routing. Return this form with your Bid or Proposal.

I declare under penalty of perjury under the laws of the State of Texas that if awarded a contract, I will comply with the requirements of the Pay or Play Program.

Signature

Date

Print Name

City Vendor ID

Company Name

Phone Number

E-Mail Address

Proposer Name: _____ \$ _____
 (Proposer/Sub-contractor) (Amount of Contract)

Proposer Address: _____

Project No.: [GFS/CIP/AIP/File No.] _____

Project Name: [Legal Project Name] _____

In accordance with the City of Houston Pay or Play Program authorized by Ordinance 2007-534, Proposer agrees to abide by the terms of this Program. This certification is required of all Proposers for Contracts subject to the program. You must agree EITHER to PAY or to PLAY for each covered employee, including those of Sub-contractors subject to the program.

Yes No Proposer agrees to Pay \$1.00 per hour for work performed by covered employees, including covered Sub-contractors' employees, under the Contract with the City.

Yes No Proposer agrees to offer health benefits to each covered employee, including covered Sub-contractors' employees that meet or exceed the following criteria:
 (1) the employer will contribute no less than \$150 per employee per month toward the total premium cost; and
 (2) the employee contribution, if any amount, will be no greater than 50% of the total premium cost.

Yes No Proposer agrees to pay of behalf of some covered employees and play on behalf of other covered employees, in accordance with program requirements, including Sub-contractors' employees, if applicable.

Yes No If contract labor is utilized the Proposer agrees to report hours worked by the contract laborer and Pay \$1.00 per hour for work performed.

Yes No Proposer will comply with all provisions of the Pay or Play Program and will furnish all information and reports requested to determine compliance with program provisions.

Yes No For Proposers Only: Proposer will file compliance reports with the City, which will include activity for Sub-contractors subject to the program, in the form and to the extent requested by the administering department or the Mayor's Office of Business Opportunity. Compliance reports shall contain information including, but not limited to, documentation showing employee health coverage and employee work records.

*Estimated Number of:	Proposer	Sub-contractor
Total Employees on City Job		
Covered Employees		
Non-Covered Employees		
Exempt Employees		

*Required

I hereby certify that the above information is true and correct.

 PROPOSER (Signature)

 DATE

 NAME AND TITLE (Print or Type)

EXHIBIT XI
SOW EQUIPMENT LIST
SOLICITATION NO.: S33-T24289

INSERT LIST OF EQUIPMENT IN EXCEL FILE

THE EQUIPMENT LIST IS NOT COMPREHENSIVE AND FULLY INCLUSIVE AND PROPOSER WILL BE RESPONSIBLE FOR ALL EQUIPMENT, REGARDLESS OF ITS INCLUSION OR EXCLUSION ON THE LIST.

EXHIBIT XII
ANNUAL MAINTENANCE SHUTDOWN
SOLICITATION NO.: S33-T24289

1.0 **GENERAL**

Proposer shall prepare a formal "Annual Shutdown Report" and present it to the Director within 3 months days before the scheduled shutdown date. This report must summarize preplanning, execution, and startup procedures.

The report must also include Contingency Planning for worst-case scenarios to minimize outage time due to equipment failures, manpower shortages, and unforeseen Airport operational requirements.

At the end of the first full year of the Agreement or within 120 days after Proposer's first annual shutdown, Proposer shall present to the Director for first review, a complete operation and maintenance shutdown procedures manual. This manual will serve as a road map for planning, systems shutdown, and direction in execution of work, time scheduling, startup, debriefing and preparation of "Annual Shutdown Reports." Based upon comments provided by HAS, Proposer shall revise the manual and submit a final "camera-ready" draft within 30 days from the date of written comments by the Director.

2.0 **ANNUAL MAINTENANCE SHUTDOWN PROCEDURES**

The annual shutdown must include, but is not limited to two primary areas: Electrical and Mechanical. Both are to be scheduled and executed at the same time in order to reduce the downtime of all major equipment.

The annual maintenance shutdown must be tentatively scheduled six months in advance, but not later than June 1st. To maintain Airport terminal temperatures that ensure passenger comfort with equipment out of service, the schedule date must be selected based on projected ambient conditions. In order to balance operating inconvenience with manpower availability, preferably the shutdown should be scheduled at the beginning of a weekend (i.e. from 10:00 a.m. Friday to 6:00 a.m. Saturday). In addition, if anything occurs that makes the scheduled date impractical, the shutdown must roll over to the same day of the following week, then the next, and the next.

A. Pre-Shutdown Milestones

1. 6 months
2. 3 months
3. 1 month
4. 1 week
5. 2 days

B. Shutdown Execution

C. Post Shutdown

3.0 **ELECTRICAL AND MECHANICAL MAINTENANCE SHUTDOWN REQUIREMENTS**

Proposer is responsible for providing at a minimum the following requirements for the electrical and mechanical maintenance shutdown. It is Proposer's responsibility to verify, update and revise these procedures consistent with sound and proven industry standards. All changes must be submitted to the Director for review prior to any formal changes being made.

- 3.1 Electrical and Mechanical Shutdown Procedures - Proposer shall follow the guidelines specified below to ensure all shutdown requirements are scheduled and performed in a timely manner. In addition, Proposer shall follow the recommended Practice for Electrical Equipment Maintenance as stated in the NFPA 70-B code. Proposer will also follow the standard for Maintenance Testing Specification for Electrical Power Equipment systems as stated in the American and International Testing Association Standards (ANSI/NETA MTS 2007).

EXHIBIT XII
ANNUAL MAINTENANCE SHUTDOWN
SOLICITATION NO.: S33-T24289

3.1.1 Pre-Shutdown

A. Six (6) months prior to shutdown, Proposer shall:

1. Make a selection of dates for work needed to be done prior to shutdown; select a date for the annual shutdown. Shutdown dates shall be between January 1 and March 1 of each year.
2. Identify work that cannot be performed during normal operation of plant, and begin development of shutdown outline to structure a plan of execution for Proposer personnel in draft format.
3. Make a visual inspection of all equipment to be serviced.
 - a) Make a list of any potential problems or difficulties.
 - b) Prepare an estimate of personnel required to perform tasks during the shutdown.
4. Schedule and hold necessary meetings to discuss goals and objectives of the shutdown.

B. Three (3) months prior to shutdown, Proposer shall:

1. Review with the Director the dates selected for shutdown to ensure no problems or conflicts exist with the dates selected. This review shall include any updated dates or newly added objectives.
2. Make a visual inspection of all equipment to identify any new problems that may have surfaced.
3. Submit a shutdown procedure report for HAS approval. Report shall include all schedules for the work to be performed.
4. Coordinate with the Central Plant operations Manager and Terminal Maintenance Manager to determine if specialized equipment will be needed for the shutdown.
5. Contact vendors for availability of rental equipment to be used.
6. Contact Sub-contractors involved in the shutdown; verify their involvement schedule.
7. Make an inventory of on-site replacement parts and determine availability of parts. Materials, etc needed for shutdown.
8. Prepare an emergency "call-out" list of electrical suppliers that could supply critical repair parts during the shutdown.

C. One (1) month prior to shutdown, Proposer shall:

1. Set up meeting with Sub-contractors and shutdown evaluation personnel.
2. Contact Reliant Energy HL&P to schedule shutdown date and time.
3. Collect all repair and service material needed for the shutdown. Verify that tools and replacement parts necessary to complete scheduled work assignments are inventories and any not in stock are placed on order.
4. Request and obtain electrical permits through the City of Houston.
5. Prepare a list of tasks to be performed and discuss with Proposer's maintenance staff and Director.

EXHIBIT XII
ANNUAL MAINTENANCE SHUTDOWN
SOLICITATION NO.: S33-T24289

6. Verify all repair items are red tagged and numbered according to priority of completion.
7. Verify IAH Water Plant #1 is notified in writing of shutdown date.
8. Make final visual inspection to identify potential problems that could need special attention, not previously identified.

D. One (1) week prior to shutdown, Proposer shall:

1. Contact Reliant Energy HL&P to confirm shutdown schedule.
2. Obtain re-connect permit from the City of Houston.
3. Contact outside Proposers to confirm the shutdown schedule and verify that all personnel assigned to work shutdown are scheduled.
4. Make confirmation calls on all rental equipment.
5. Install temporary lights where needed.
6. Acquire all parts and material needed for shutdown. Order lighting generator for plant
7. Hold a safety meeting covering the dangerous or hazardous aspects of the shutdown with all personnel.
8. Ensure rental scaffold, as required, is delivered and set up in designated areas.

E. Two (2) days prior to shutdown, Proposer shall:

1. Verify all materials, parts, supplies, etc. required to support the shutdown are accounted for and are in the appropriate work sites.
2. Hold a final briefing with all personnel scheduled as part of the shutdown team to ensure assigned duties and responsibilities are clear.

3.1.2 Shutdown Execution

A. Safety Briefing

1. Schedule a meeting for all operators, mechanics, PMI's and electricians working on the shutdown to review all aspects of safety procedures that must include but are not limited to the following:
 - a) Electrical Tag-out and Lock-out procedures. Provide a clear delineation of responsibilities for personnel from each of the participating organizations—with special emphasis on power de-energization and emergency rescue techniques.
 - b) Working from scaffolding and ladders.
 - c) Working with power tools.
 - d) The importance of safety glasses.
 - e) Availability of other safety equipment if needed is on hand.
2. Answer any questions on safety procedures.

EXHIBIT XII
ANNUAL MAINTENANCE SHUTDOWN
SOLICITATION NO.: S33-T24289

B. Staff Briefing

1. Cover all shutdown procedures.
2. Assign people to specific tasks.
3. Explain the use and operation of any new equipment being used.

C. Shutdown Procedure

1. Proposer shall proceed with the shutdown schedule involving equipment to be inspected and serviced during normal work hours as follows:
 - a) Motor Control Center #1 (MCC #1)
 - b) Motor Control Center #2 (MCC #2)
All starters to be cleaned and inspected, changing any component necessary.
 - c) Motor Control Center #3 (MCC #3)

 - d) Motor Control Center #4 (MCC #4)
Entire MCC to be cleaned and inspected.

2. Proposer shall proceed with the shutdown schedule involving equipment to be serviced during scheduled shutdown hours as follows:
 - a) Inside Central Plant
 - 1) Motor Control Center #1 (MCC #1)
 - 2) Motor Control Center #2 (MCC #2)
 - 3) Motor Control Center #4 (MCC #4)
 - 4) 480 Volt Power House Switchboard (MCC #1, MCC #4)
 - 5) 4160 Volt Motor Starter (Chiller #4)
 - 6) 4160 Volt Motor Starter (Chiller #5)
 - 7) 4160 Volt Motor Starter (Chiller #7)
 - 8) 4160 Volt Motor Starter (Chiller #9)
 - 9) Motor Control Centers 1-17

 - b) Outside Central Plant
 - 1) Transformer 12470/480/277 - T-3
 - 2) Transformer 12470/4160 (Chiller #4) - T-1
 - 3) 15KV Westinghouse Fused Air Disconnects
 - 4) All related secondary high voltage panels in white building across the street from central plant.

 - c) Cooling Towers

EXHIBIT XII
ANNUAL MAINTENANCE SHUTDOWN
SOLICITATION NO.: S33-T24289

- 1) Motor Control Center #3 (MCC #3)
- 2) All pumps, cooling tower fan motor control centers
- 3) Shutdown and Service Procedures
 - a) Clean and vacuum insulators and check buss support.
 - b) Clean and vacuum buss bars.
 - c) Clean and vacuum components.
 - d) Tighten all electrical connections.
 - e) Visually inspect for any signs of overheating or damaged parts.
 - f) Check contacts on all starters for excessive pitting.
 - g) Check contacts and arc shields on all breakers.
 - h) Check for evidence of corona on insulators, barriers and cable terminations.
 - i) Take transformer oil sample for testing PCB content and conductivity.
 - j) Check transformers for signs of oil leakage.
4. Materials Orientation and Location

Prior to work being performed, the electrical staff will be shown repair parts and equipment locations within the Central Plant facility.

D. If any work involves steam or hot water lines and/or related equipment, Proposer shall insure:

1. The boilers are secured and equipment allowed to cool sufficiently to prevent a hazardous work condition.
2. All lines or appliances to be drained are done at this time.
3. Power generators are started, all panel switchgear is turned off, main power is secured by Reliant Energy HL&P, temporary lighting is wired into power generator, chiller oil heaters are wired to generator, and scheduled work is started.
4. After all work is completed, all lines and appliances are to be refilled, boilers slowly brought up to temperature and put into service, and hot water generators brought up to temperature slowly to allow for thermal expansion.

3.1.3 Post Shutdown

A. Proposer debriefing of Shutdown Team

1. Debriefing will be scheduled as soon as practical following the shutdown and accomplishments and problems discussed. Corrective actions or solutions for problems encountered will be noted. Any incomplete project will be rescheduled by Proposer.
2. Prepare a list of additional work to be completed after shutdown period.

B. Work Summary Report (outline)

EXHIBIT XII
ANNUAL MAINTENANCE SHUTDOWN
SOLICITATION NO.: S33-T24289

1. An outline of the shutdown is to be prepared from the operational data covered and must be submitted in draft form. This outline shall be provided to the Director and Assistant Airport Manager, Maintenance, for review and comment before the final report is submitted by Proposer. The outline shall be submitted within 5 (five) working days after the completion of the shutdown period. Failure to provide this report will result in the application of liquidated damages in accordance with Section 19 of this contract.

EXHIBIT XIII
CORROSION TEST REQUIREMENTS
SOLICITATION NO.: S33-T24289

1.0 **GENERAL**

Proposer shall test and monitor corrosion rates for the chilled water, heating hot water, condensate, and condenser water systems. The acceptable operating ranges are set forth in Section 3.0 below. Proposer shall provide Coupon Racks at the Central Plants; one (1) in each of the water piping systems, to allow scheduled monitoring of both mild steel and copper corrosion rates. In addition, Proposer shall install, approximately eight (8) coupon racks, in any closed loop systems in the terminals that don't have them. These are to be included in the require test procedures. Operating ranges to be within acceptable industry standards for this type of treatment program.

2.0 **PROCEDURES**

Each of the coupon racks must contain, or be fitted for, both mild steel and copper coupons to measure corrosion rates for each metal.

Each coupon insert carrier must be fitted with a ring for attachment of a serially numbered meter band that is secured to the outer portion of the coupon rack. Once each coupon is inserted and securely tightened, a tamper-proof metal band must be attached. The number on the metal band shall be the same as the number stamped on the coupon.

Proposer shall remove and replace the coupons at 90-day intervals and send the exposed coupons to an independent testing laboratory that specializes in or routinely provides analysis of corrosion rates for the metals utilized for coupons (copper and mild steel). A City representative must be present during removal and replacement of all coupons to verify the coupon has not been tampered with and that the new coupon is properly installed and secured. The testing lab must provide the following certified information concerning the test results for each test coupon.

1. Coupon number
2. Period of exposure
3. Coupon weight loss
4. Corrosion rate in mils per year
5. Type of corrosion observed; general, pitting, etc.
6. Percentage of deviation of corrosion rates from established industry standards for systems of like type, size and complexity.
7. Lab technician's certified professional assessment of the test results as it relates to the affect on equipment, piping and the system as a whole.

Proposer shall forward a copy of the independent testing laboratory's report to the Director along with the coupons tested within three (3) days of receiving the report. At the option of the Director, Proposer may be instructed to have a second analysis performed on the coupons. This option applies for any testing cycle at any time.

EXHIBIT XIII
CORROSION TEST REQUIREMENTS
SOLICITATION NO.: S33-T24289

If this option is exercised, the Director will select the testing lab to be utilized. Proposer shall deliver the coupons to the testing lab for analysis. The test information requested will be the same as specified in the initial test. The results, with coupons, will be delivered to the Director. Upon receipt, results of the two tests will be compared. Significant deviations in the two independent tests will result in a scheduled meeting of both parties to verify the accuracy of both tests and appropriate action for securing a valid analysis mutually acceptable to both parties. If, based on the results of the tests referenced above, the Director determines that the system is being negatively impacted due to corrosion beyond standards established by the industry, then proposed liquidated damages may be invoked for that test interval; it being understood between the parties that such negative impact will cause damage to the City.

3.0 ACCEPTABLE OPERATING RANGES

A.	Cooling Towers:	Operating Range
	PH	7.8 - 8.3
	Molybdate	5 - 6 ppm
	Conductivity	2800 - 3200 μ mhos
B.	Steam Boilers:	Operating Range
	Hydrate Alkalinity	200 ppm (minimum)
	Total Alkalinity	1500 ppm (maximum)
	Phosphate	20 - 40 ppm
	Sulfite	20 - 40 ppm
	Conductivity	2200 - 2600 μ mhos
C.	Closed Loops:	Operating Range
	Hot Water Nitrite	600 - 800 ppm
D.	Condensate:	Operating Range
	PH	7.6 - 8.4

EXHIBIT XIV
INCLUSION/EXCLUSION FORM
SOLICITATION NO.: S33-T24289

Contract Type
Services Contract #xxxxxxxxxx
Contract Name

INCLUSION or EXCLUSION NUMBER: _____

DATE: _____

A: INCLUDE: _____ **EXCLUDE:** _____ **EFFECTIVE DATE:** _____

B: DESCRIPTION OF UNIT INCLUDING AREA MEASUREMENT AND/OR UNIT#:

C: LOCATION:

D: REASON FOR ADDITION / DELETION OF UNIT:

PRORATE AMOUNT: _____ **MONTHLY AMOUNT:** _____

Verified By TSD: _____ **Date:** _____

Print Name:

Title: Senior Procurement Specialist

Proposer Signature: _____ **Date:** _____

Print Name:

Title: Project Manager

HAS Validation: _____ **Date:** _____

Print Name:

Title: Project Manager

EXHIBIT XV
SOLICITATION NO.: S33-T24289

Project 621 Anticipated IAH Equipment List

1. Cooling tower
Composite cooling solutions
6, 000 tons, 4 cells, 18000 gpm, 4500 gpm cell, EWT 104, LWT 86. Four 100hp fan motors, 480/3
2. Pump schedule
6 American Turbine 2 stage pump, model 14m270
3000 gpm, 120ft heat, 150 hp, 480/3, 1750 rpm
3. Chiller
3,000 ton York model ykeb888k7q3-dkefa
Evaporator- 4800 gpm, ewt 55, lwt 40
Condenser- 9,000 gpm ewt 86, lwt 95
4. Chilled water pump
450 hp, 4800 gpm, 1750 rpm, 480/3
5. 15 Chilled water pump VFD drives
6. 7 Hot water pump VFD drives
7. 5 Boilers
Unilux Advanced mfg. mod zf1600w
470 gpm,, 20 hp, 480/3

EXHIBIT XVI
SOLICITATION NO.: S33-T24289

(Insert IAH Pumps added to the Agreement)

EXHIBIT XVII
SAMPLE CONTRACT
SOLICITATION NO.: S33-T24289