



CITY OF HOUSTON

INVITATION TO BID

Issued: March 12, 2010

Bid Opening:

Sealed bids, in duplicate, will be received by the City Secretary of the City of Houston, in the City Hall Annex, Public Level, 900 Bagby, Houston, Texas 77002 until **10:30 A.M. Thursday, April 8, 2010**, and all bids will be opened and publicly read in the City Council Chamber, City Hall Annex, Public Level, 900 Bagby at 11:00 A.M. on that date for the purchase of:

**HVAC REPLACEMENTS
FOR THE PUBLIC WORKS AND ENGINEERING DEPARTMENT
Bid No. S50-C23580
NIGP Code: 910-36**

Buyer:

Questions regarding this solicitation should be addressed to Arturo Lopez, Senior Procurement Specialist, at **832-393-8731** or e-mail to arturo.lopez@cityofhouston.net

Electronic Bidding:

In order to submit a bid for the items associated with this procurement, you must fill in the pricing information on the "**PLACE BID**" page.

Prebid Conference:

A Pre-Bid Conference will be held for all Prospective Bidders in the Strategic Purchasing Division, Concourse Level (Basement), Conference Room, #1 City Hall, 901 Bagby, at **2:00 p.m. on Wednesday, March 24, 2010**. **The site visit will be scheduled at the pre-bid conference.**

All Prospective Bidders are urged to be present. It is the bidder's responsibility to ensure that they have secured and thoroughly reviewed all aspects of the solicitation documents prior to the Pre-Bid Conference. Any revisions to be incorporated into this solicitation document arising from discussions before, during and subsequent to the Pre-Bid Conference will be confirmed in writing by Letter(s) of Clarification prior to the bid due date. Verbal responses will not otherwise alter the specifications, terms and conditions as stated herein.

Bidding forms, specifications, and all necessary information should be downloaded from the Internet at <http://purchasing.houstontx.gov>. By registering and downloading this solicitation document, all updates to this solicitation document will be automatically forwarded via e-mail to any registered bidders. This information may also be obtained from the Supplier Assistance Desk, Strategic Purchasing Division, 901 Bagby, Concourse Level, Houston, Texas 77002.

The place of the bid opening may be transferred in accordance with Paragraph (b), (5) of Section 15-3 of The Code of Ordinances, Houston, Texas. The bid-opening meeting may be rescheduled in accordance with Paragraph (b), (6) of said Section 15-3.

The City reserves the right to reject any or all bids, or to accept any bid or combination of bids deemed advantageous to it.

City employees are prohibited from bidding on this solicitation in accordance with the Code of Ordinances Section 15-1.

***CONTENTS:**

- A. OFFER
- B. SCOPE OF WORK/SPECIFICATIONS
- C. GENERAL, SUPPLEMENTARY CONDITIONS AND BOND FORMS

*NOTE 1: Actual page numbers for each section may change when the solicitation document is downloaded from the Internet or because of letters of clarification. Therefore, bidders must read the solicitation document in its entirety and comply with all the requirements set forth therein.

***NOTE 2: To be considered for award please submit the electronic bid form and the forms listed in section A, including the signature page, which must be signed by a company official authorized to bind the company and a 10% Bid Bond.**

SECTION A



FORMAL ONE-TIME BID

**HVAC REPLACEMENTS
FOR THE PUBLIC WORKS AND ENGINEERING DEPARTMENT
Bid No. S50-C23580
NIGP Code: 910-36**

To The Honorable Mayor
and City Council Members
of the City of Houston, Texas (the "City"):

The undersigned hereby offers to provide services necessary for the **HVAC Replacements for the Public Works and Engineering Department, located at 2300 Federal Rd, and 12555 Clinton Dr**, F.O.B. destination point Houston, Texas, in accordance with the City's Specifications and General Terms & Conditions and/or samples/drawings provided herein. When issued by the City of Houston, Letters of Clarification shall automatically become part of this bid document and shall supersede any previous specifications or provisions in conflict with Letters of Clarification. It is the responsibility of the bidder to ensure that it has obtained all such letters. By submitting a bid on this project, bidder shall be deemed to have received all Letters of Clarification and to have incorporated them into the bid.

The City may accept this bid offer by issuance of a Notice of Award Letter and/or a Purchase Order at any time on or before the 120th day following the day this Official Bid Form is opened by the City. This offer shall be irrevocable for 120 days after bid opening or for 90 days after City Council awards the bid, whichever comes last, but this period may be extended by written agreement of the parties.

The City reserves the right to INCREASE quantities during the twelve-month period following the issuance of the first purchase order subject to agreement in writing by the Prime Contractor/Supplier to honor the same bid price.

The City reserves the option, after bids are opened, to adjust the quantities listed on the electronic bid form upward or downward, subject to the availability of funds, and/or make award (s) on a line item basis.

SECTION A

Documents/forms must be downloaded from the City's Website

<http://purchasing.houstontx.gov>

Additional Required Forms to be Included with this bid:

In addition to the electronic Bid Form and the Official Signature Page, the Forms listed in Table 1 **must be completed and submitted to the Office of the City Secretary on or before the date and time the bid is due:**

Table 1
Affidavit of Ownership
Fair Campaign Ordinance
Statement of Residence
Conflict of Interest Questionnaire
10% Bid Bond
Contractor References

Table 2 lists other documents and forms that should be viewed/downloaded from the City's website, but are not required to be submitted with the bid. The City will request these forms, as applicable, to be completed and submitted to the City by the recommended/successful bidder:

Formal Instructions for Bid Terms
Sample Insurance Certificate / Over \$50,000
2009 Building Construction Wage Rate
Bonds for Construction, (Performance, Maintenance and Statutory Payment)
Drug Forms

Questions concerning the Bid should be submitted in writing to: City of Houston, Strategic Purchasing Division, 901 Bagby, Room B506, Houston, TX 77002, Attn: Arturo Lopez or via fax: 832-393-8759 or via email (preferred method) to arturo.lopez@cityofhouston.net no later than **4:00 PM, Friday, March 26, 2010.**

PERMITS:

Successful Contractor shall be responsible for securing any and all permits for proposed work. Any fee charged for these permits should be the responsibility of the Contractor and not the City of Houston.

CITY BUILDING CODES:

All work performed or equipment installed shall be in strict accordance with the City of Houston Building Codes. The Contractor will immediately correct any deficiencies discovered during work or after completion. Failure to correct deficiencies will result in the City having corrections made at the Contractor's expense.

PERFORMANCE BOND and PAYMENT BOND:

The successful Contractor(s) shall be required to provide a Performance and Payment Bond in the total amount (100%) of the Contract if the award is in excess of \$25,000.00.

The Performance and/or Payment Bond shall be in the same form as that distributed by the City, and attached hereto, all duly executed by this bidder (as "Principal") and by an incorporated surety company licensed to do business in the State of Texas. If the amount of the bond is greater than \$100,000.00 the surety must hold a certificate of authority from the United States Secretary of the Treasury.

The Contractor(s) shall be required to provide a Performance and/or Payment Bond as outlined above, which will be delivered to the City Purchasing Agent of the City, on or before the tenth (10th) day following the day the bidder receives notice from the City.

BID BOND:

The Contractor shall be required to provide and submit with the bid a Bid Bond in the amount of 10% of the total amount bid by the Contractor. The Bid Bond shall be in the same form as that distributed by the City, and attached hereto, all duly executed by this Bidder (as "Principal") and by a corporate surety company licensed to do business in the State of Texas, and if the amount of the bond is greater than \$100,000.00 the surety must hold a certificate of authority from the United States Secretary of the Treasury, or a Cashier's or a Certified check in a like amount. Company or personal checks are not acceptable.

MAINTENANCE BOND:

The Contractor shall furnish a maintenance bond in the total (100%) bid amount in the form required by the City (samples attached). One bond, also referred to as the One Year Maintenance Bond, will be conditioned upon Contractor's repair, replacement or restoration of any work or any portion of the work which is found to be defective or fails in any way to comply strictly with this contract or the plans and specifications for such work within a period of one (1) year from the date of acceptance of such work by the City Council or after the date that the "CO", or his designee in writing, determines, in a written notice to the Contractor, to be the date upon which the project is both substantially complete and available for the full and beneficial occupancy or use of the City.

QUALITY AND WORKMANSHIP

The bidder must be able to demonstrate upon request that it has performed satisfactorily, services similar to the services specified herein. The bidder will provide records of warranty and repair services performed for others upon request. The City of Houston shall be the sole judge whether the services performed are similar to the scope of services specified herein.

CONTRACTOR'S QUESTIONNAIRE

In order to receive bid award consideration, the bidder must be able to demonstrate that they are currently providing or have had at least one contract, for **HVAC Replacement Services** that is similar in size and scope to this contract. **Bidder must have references documenting that it has performed HVAC Replacement Services.** The reference(s) should be included in the space provided below. Please attach another piece of paper if necessary. If references are not included with the bid, the bidder shall be required to provide such references to the City of Houston within five working days from receipt of a written request from the City of Houston to do so. **Bidder's capability and experience shall be a factor in determining the Contractor's responsibility.**

1. Business Name: _____
Business Address: _____
City, State, Zip: _____
Name of Owner/Contact Person: _____
Phone: _____ Fax: _____ Email: _____
No. of Years providing Service to this business: _____

2. Business Name: _____
Business Address: _____
City, State, Zip: _____
Name of Owner/Contact Person: _____
Phone: _____ Fax: _____ Email: _____
No. of Years providing Service to this business: _____

3. Business Name: _____
Business Address: _____
City, State, Zip: _____
Name of Owner/Contact Person: _____
Phone: _____ Fax: _____ Email: _____
No. of Years providing Service to this business: _____

4. Business Name: _____
Business Address: _____
City, State, Zip: _____
Name of Owner/Contact Person: _____
Phone: _____ Fax: _____ Email: _____
No. of Years providing Service to this business: _____

SITE INSPECTION

The City of Houston reserves the right to inspect the bidder's current place of business to evaluate equipment condition and capabilities, staff experience, training and capabilities, and storage capabilities as they relate to the performance of this contract.

SECTION B SCOPE OF WORK

1.0 General

- 1.1 The Contractor shall provide all materials, labor, equipment, transportation, insurance, permits, bonds and other services necessary to furnish the specified Heat Ventilation and Air Conditioning (HVAC) equipment with compatible refrigerant requirements according to the scope of work and technical specifications.
- 1.2 The Contractor shall provide all management, labor, supervision, tools, and equipment necessary to remove the existing HVAC equipment, furnish and install new HVAC equipment in accordance with the highest standards in the industry and the Original Equipment Manufacturers (OEM) recommendation.
- 1.3 The Contractor shall evacuate all fluids from existing equipment in preparation for disposal. The City will have first right of refusal on all salvage equipment where vendor will stage equipment at the City's direction. The vendor will otherwise be responsible for removal of existing equipment from site.
- 1.4 The Contractor shall provide refrigerant and lubricants required to properly recharge and operate HVAC systems.
- 1.5 The Contractor shall verify complete functionality and performance of new equipment, and ensure it is free of operational defects and/or leaks.
- 1.6 The Contractor shall be responsible for connecting new HVAC equipment into existing control system for proper operation.

2.0 Performance Time

- 2.1 The Contractor shall have **30 calendar days** to complete all work associated with and required after receipt of the notice to proceed from the City.

TECHNICAL SPECIFICATIONS

PART 1 - GENERAL

1.0 YORK Model YLAA, 70 Ton, 246–527 kW, 60 Hz, R-410A Air-Cooled Scroll Chiller, Style A. or City approved equal.

1.1 The equipment must be shipped complete from the factory ready for installation and use.

1.1.1 The unit must be pressure-tested, evacuated, and fully charged with a zero Ozone Depletion Potential Refrigerant R-410A and includes an initial oil change. After assembly, a complete operational test must be performed with water flowing through the cooler to assure that the refrigeration circuit operates correctly.

1.1.1.1 The unit structure must be heavy-gauge, galvanized steel. The galvanized steel shall be coated with baked-on powder paint, which, when subjected to ASTM B117 1000 hour, salt spray testing, shall yield a minimum ASTM 1654 rating of "6". The unit must be designed in accordance with NFPA 70 (National Electric Code), SHRAE/ANSI 15 Safety code for mechanical refrigeration, ASME and rated in accordance with ARI Standard 550/590.

1.2 COMPRESSORS:

1.2.1 The chiller shall be suction-gas cooled, hermetic, scroll compressors. The YLAA compressor must be a compliant scroll design in both the axial and radial direction. All rotating parts must be statically and dynamically balanced. Compressor-crankcase heaters shall be included for extra protection against liquid migration.

1.3 COOLER:

1.3.1 The cooler must be equipped with a heater controlled by a separate thermostat. The heater must provide freeze protection for the cooler down to -20oF (-29°C) ambient. The cooler must be covered with 3/4" flexible, closed-cell, foam insulation (K=0.25).

1.3.2 The water baffles must be constructed of brass to resist corrosion. The removable heads must allow access to the internally enhanced, seamless, copper tubes. Vent and drain connections must be included.

1.3.3 Water inlet and outlet connections must be grooved for compatibility with field supplied ANSI/AWWA C-606 couplings.

1.4 CONDENSER:

- 1.4.1 Coils – Fin and tube condenser coils of seamless, internally-enhanced, high-condensing-coefficient, corrosion resistant copper tubes must be arranged in staggered rows, mechanically expanded into aluminum fins. Integral subcooling must be included. The design working pressure of the coil must be 650 PSIG (45 bar).
- 1.4.2 Fans – The condenser fan must be composed of corrosion resistant aluminum hub and glass-fiber-reinforced polypropylene composite blades molded into a low-noise airfoil section. The condenser fan must be designed for maximum efficiency and must be statically and dynamically balanced for vibration-free operation. The condenser fan must be directly driven by independent motors, and positioned for vertical air discharge. The fan guards must be constructed of heavy-gauge, rust-resistant, coated steel. All blades must be statically and dynamically balanced for vibration-free operation.
- 1.4.3 Motors – The fan motor must be totally enclosed air-over, squirrel- cage type, current protected. The motor must feature ball bearings that are double-sealed and permanently lubricated.

PART 2 - TECHNICAL

2.0 MICROCOMPUTER CONTROL CENTER:

- 2.1 All controls must be contained in a NEMA 3R/12 cabinet with hinged outer doors and must include:
 - 2.1.1 A Liquid Crystal Display with Light Emitting Diode backlighting for outdoor viewing and:
 - 2.1.2 Two display lines, twenty characters per line, color coded 12-button non-tactile keypad with sections for:
 - 2.1.2.1 DISPLAY/PRINT: must provide the following information:
 - 2.1.2.1.1 Chilled liquid temperatures,
Ambient temperature,
System pressures (each circuit),
Operating hours and starts (each compressor), Print calls up to the liquid crystal display:
 - 2.1.2.1.2 Operating data for the systems,
History of fault shutdown data for up to the last six fault shutdown conditions, An RS-232 port, in

conjunction with this press-to-print button must be provided to permit the capability of hard copy print-outs via a separate printer.

2.1.3 ENTRY Section Requirements:

- 2.1.3.1 ENTER required set points and modify system values

2.1.4 SETPOINTS updating must be available to perform to:

- 2.1.4.1 Chilled liquid temperature setpoint and range,
Remote reset temperature range,
Set daily/holiday schedule, for start/stop,
Manual override servicing,
Low and high ambient cutouts
Number of compressors,
Low liquid temperature cutout,
Low suction pressure cutout,
High discharge pressure cutout,
Anti-recycle timer (compressor start cycle time),
Anti-coincident timer (delay compressor starts),

2.1.5 UNIT section requirements:

- 2.1.5.1 Must be able to set time
- 2.1.5.2 Must be able to set unit options

2.1.6 UNIT ON/OFF Switch Requirements:

- 2.1.6.1 The microprocessor control center must be capable of displaying the following:
- Return and leaving liquid temperature
 - Low leaving liquid temperature cutout setting
 - Low ambient temperature cutout setting
 - Outdoor air temperature
 - English or Metric data
 - Suction pressure cutout setting
 - Each system suction pressure
 - Discharge pressure (optional)
 - Liquid Temperature Reset via a Johnson Controls ISN DDC or Building Automation System (by others) via:
 - a pulse width modulated (PWM) input as standard
 - a 4-20 milliamp or 0 -10 VDC input, or contact closure with the optional B.A.S. interface option
 - Anti-recycle timer status for each system
 - Anti-coincident system start timer condition
 - Compressor run status

- No cooling load condition
- Day, date and time
- Daily start/stop times
- Holiday status
- Automatic or manual system lead/lag control
- Lead system definition
- Compressor starts & operating hours (each compressor)
- Status of hot gas valves, evaporator heater and fan operation
- Run permissive status
- Number of compressors running
- Liquid solenoid valve status
- Load & unload timer status
- Water pump status

2.1.6.2 Provisions must be included for: pumpdown at shutdown; requiring optional remote chilled water temperature reset and two steps of demand load limiting from an external building automation system. Unit alarm contacts must be standard. The operating program shall be stored in non-volatile memory (EPROM) to eliminate chiller failure due to AC powered failure/battery discharge. Programmed set points must be retained in lithium battery-backed RTC memory for 5 years minimum.

2.1.7 Building Automation System Interface Requirements:

2.1.7.1 The Building Automation System Interface must provide a Printed Circuit Board to accept a 4-20 milliamp, 0-10VDC or contact closure input to reset the leaving chiller liquid temperature from a Building Automation System. Additionally, the following options must be offered on the unit, the BAS, Remote Control Panel or Multi-unit Sequence Control.

2.1.8 Factory-Mounted Requirements:

2.1.8.1- The standard unit capabilities must include remote start/stop or up to two steps of demand (load) limiting depending on model. The standard control panel must be directly connected to a Johnson Controls Building Automated System or City Approved Equal via the standard on-board RS485 communication port.

2.1.9 Power Panel Requirements:

2.1.9.1 Each panel must contain:

- Compressor power terminals
- Compressor motor starting contactors per I.E.C.*
- Control power terminals to accept incoming for 115-1-60 control power
- Fan contactors & overload current protection

2.1.9.2 The power wiring must be routed through a liquid-tight conduit to the compressor and fan.

PART 3 - OUTDOOR EQUIPMENT

3.0 OUTDOOR, 20 TON AIR COOLED CHILLER:

3.1 Performance Requirements:

3.1.1 The Outdoor, 20 Ton Air Cooled Chiller, shall be required to provide the following performance features:

- Full-load EER values up to 10.1
- IPLV values up to 15.2
- Easy to use controls
- Low sound levels
- Operation from -20 F to 125 F ambient conditions
- High-efficiency scroll compressors
- Energy Management Module minimizes chiller energy consumption (factory-installed)
- Minimum load control (factory-installed option or field-installed accessory)
- ASHRAE 90.1 complaint
- AHRI certified

3.2 Reliability Requirements:

3.2.1 The Outdoor, 20 Ton Air Cooled Chiller, shall be required to provide the following reliability features:

- 2 independent refrigerant circuits (sizes 035-055)
- Factory full-load run tested
- Heavy-gage galvanized steel frame
- Coil protection grilles (factory-installed option or field-installed accessory)
- Hail guards (field-installed accessory)
- Redundant pump available with hydronic pump package (factory-installed)
- Coil corrosion coatings (factory-installed)

3.3 Maintenance Requirements:

3.3.1 The Outdoor, 20 Ton Air Cooled Chiller, shall be required

to provide the following maintenance features:

- Over 15 diagnostic functions
- Permanently lubricated fan motor bearings
- Unit-mounted, non-fused disconnect (factory-installed option)

3.4 Installation Requirements:

3.4.1 The Outdoor, 20 Ton Air Cooled Chiller, shall be required to provide the following installation features:

- Factory charged with R-22 refrigerant
- All-in-one package
- Low-profile construction
- Integrated hydronic pump package (factory-installed)
- Fluid loop expansion tank and circuit setter provided with optional pump package (factory-installed option)
- GFI (ground fault interrupter) convenience outlet (factory-installed option or field-installed accessory)
- Single-point electrical connection
- Integral control transformer
- Water storage tank designed to fit directly under unit

3.5 Standard Warranty Requirements:

3.5.1 If the manufacturer offers a warranty package for this equipment beyond what is required by the City's Document No. 0700, General Conditions, Section 3.12, then this warranty package must be passed on to the City.

3.6 Dimensions

Size	Nominal Capacity 60 Hz		Dimensions						Approx Weight	
			Length		Width		Height			
	Tons	kW	in.	mm	in.	mm	in.	mm	lbs	kg
010	9	31	82	2083	43	1092	52	1321	930	422
015	13	45	82	2083	43	1092	52	1321	1046	474
018	16	56	82	2083	43	1092	52	1321	1182	536
022	20	70	108	2743	43	1092	52	1321	1491	676
025	24	84	108	2743	43	1092	52	1321	1551	704
030	27	94	108	2743	43	1092	52	1321	1660	753

035	34	119	108	2743	90	2286	52	1321	2815	1277
040	37	130	108	2743	90	2286	52	1321	2874	1304
045	42	147	108	2743	90	2286	52	1321	3220	1461
050	47	165	108	2743	90	2286	52	1321	3319	1505
055	53	186	108	2743	90	2286	52	1321	3520	1597

PART 4 – PACKAGED CONDENSING SYSTEM

4.0 REQUIRED PRODUCT DATA

4.1 Packaged Condensing System, YORK Model 38AUZ07—14 C09227 Or City Approved Equal

4.1.1 The equipment must be designed and manufactured to meet Energy Star® criteria for energy efficiency. Installation of this product must follow all manufacturers' refrigerant charging and air flow instructions.

4.1.1.1 The equipment must provide air-cooled, air conditioning split system features:

- provide a logical solution for commercial needs
- have a rugged, dependable construction
- must be available in single circuit scroll compressor capacity control

4.2 Required Features:

4.2.1 The outdoor air cooled condensing unit must match the indoor-air handler to meet a wide selection of cooling solutions.

4.3 Required Construction:

4.1.3 Single circuit, scroll compressor must be designed and built to last. The Novationt aluminum tube-aluminum fin outdoor coil construction shall allow for a more efficient design in a smaller cabinet size that must utilize an overall reduction in refrigerant charge. If necessary, the E--coat coil protection option must be made available. The cabinets must be constructed of prepainted galvanized steel that shall deliver an unparallel protection from the environment. Inside and outside surfaces must be protected to ensure long life, good looks, and reliable operation. Safety controls must be used for enhanced system protection and reliability.

4.4 Required Features for Efficient Operation:

4.4.1 The air cooled condensing unit must provide energy efficiency ratings (EER's) up to 11.2 which shall exceed both ASHRAE and Energy Star efficiency levels.

4.5 Required Controls for Performance Dependability:

4.5.1 The condensing unit must offer operating controls and components designed for performance dependability. The high efficiency hermetic scroll compressor must be engineered for long life and durability. The compressor shall include vibration isolation for quiet operation. The high-pressure switch must protect the entire refrigeration system from abnormally high operating pressures. The low-pressure switch must protect the system from loss of charge. The units must also include an anti-short-cycling protection, to protect the units against compressor failure. The unit must include a crankcase heater to eliminate liquid slugging at start-up. The unit must come standard with the comfort alert control system.

4.5.1.1 The Comfort / Alert Control System shall provide the following features:

- System Go LED indicator
- Fault LED indicator
- Compressor fault LED indicator
- Phase loss protection
- Phase reversal protection
- Safety pressure indicator
- Anti--short cycle protection

4.6 Requirements for Coil Flexibility:

4.6.1 The direct- expansion coil must have galvanized steel casings; the inlet and outlet connections shall be on the same end. The coils must be designed for use with Puron (R--410A) refrigerant and have 3/8-in. diameter copper tubes mechanically bonded to aluminum sine-wave fins. The coils must include matched, factory-installed thermostatic expansion valves (TXVs) with matching distributor nozzles and must offer a removable power element and extended connections.

4.7 Requirements for Easier Installation and Service:

4.7.1 The multipoise design and component layout must ensure quick unit installation and operation. The unit must be able to be converted from horizontal to vertical operation by simply repositioning the unit. The drain pan connections must be duplicated on both sides of the unit. The filters, motor, drive, TXVs, and coil connections shall be all easily accessible by removing a single side panel.

4.8 The Required Air Conditioning, Heating and Refrigeration Institute (AHRI)* Capacity Ratings

4.8.1 The chart below shows the minimum specifications required from the AHRI Capacity Rating

UNIT	COOLING STAGES	NOM. CAPACITY (TONS)	NET COOLING CAPACITY (MBH)	TOTAL POWER (KW)	EER	IPLV
38AUZ07	1	6	71.0	6.1	11.20	N/A
38AUZ08	1	7.5	92.0	8.2	11.20	N/A

4.8.2 The chart below shows the minimum specifications required from the Physical Data

	38AUZ07	38AUZ08
Refrigeration System # Circuits / # Comp. / Type R---410A charge A/B (lbs) Metering device High---press. Trip / Reset (psig) Low---press. Trip / Reset (psig)	1 / 1 / Scroll 4.4 TXV 630 / 505 54 / 117	1 / 1 / Scroll 4.9 TXV 630 / 505 54 / 117
Compressor Model No. of Cylinders Speed (rpm)	ZP61 N/A 3500	ZP83 N/A 3500
Cond. Coil Material (Tube/Fin) Coil type Rows / FPI total face area (ft2)	Al/Al Novation 1 / 17 17.5	Al/Al Novation 1 / 17 20.5
Cond. fan / motor Qty / Motor drive type Motor HP / RPM Fan diameter (in) Nominal Airflow (cfm) Watts (total)	2 / direct 1/4 / 1100 22 6000 610	2 / direct 1/4 / 1100 22 6000 610
Piping Connections (in. ODS) Qty / Suction Qty / Liquid	1 / 1 1/8 1 / 3/8	1 / 1 1/8 1 / 1/2

**SECTION C
GENERAL TERMS AND CONDITIONS AND BOND FORMS**

BUILDING WAGE SCALE

A PDF version of this Building Wage Scale
can be viewed on the following web link

<https://purchasing.houstontx.gov/buyer/BidDocumentManager.aspx?id=C23580>

**Document 00700
GENERAL CONDITIONS**

A PDF version of the General Conditions can be viewed on the following web link:
<https://purchasing.houstontx.gov/buyer/BidDocumentManager.aspx?id=C23580>

**Document 00800
SUPPLEMENTARY CONDITIONS**

The following Paragraphs amend and supplement the 2005 edition of General Conditions. Unaltered portions of General Conditions remain in effect.

ARTICLE 3 - THE CONTRACTOR

3.5 *LABOR: Insert the following Paragraph 3.5.3.1.1.*

3.5.3.1.1 Contractor shall make good faith efforts to comply with the City ordinances regarding Minority and Women Business Enterprises (MWBE) and Persons with Disabilities Business Enterprises (PDBE) participation goals which are as follows:

- .1 the MWBE goal is 0 percent, and
- .2 the PDBE goal is 0 percent.

3.28 CONTRACTOR DEBT

3.28.1 IF CONTRACTOR, AT ANY TIME DURING THE TERM OF THIS AGREEMENT, INCURS A DEBT, AS THE WORD IS DEFINED IN SECTION 15-122 OF THE HOUSTON CITY CODE OF ORDINANCES, IT SHALL IMMEDIATELY NOTIFY CITY CONTROLLER IN WRITING. IF CITY CONTROLLER BECOMES AWARE THAT CONTRACTOR HAS INCURRED A DEBT, IT SHALL IMMEDIATELY NOTIFY CONTRACTOR IN WRITING. IF CONTRACTOR DOES NOT PAY THE DEBT WITHIN 30 DAYS OF EITHER SUCH NOTIFICATION, CITY CONTROLLER MAY DEDUCT FUNDS IN AN AMOUNT EQUAL TO THE DEBT FROM ANY PAYMENTS OWED TO CONTRACTOR UNDER THIS AGREEMENT, AND CONTRACTOR WAIVES ANY RECOURSE THEREFORE.

ARTICLE 8 - TIME

- 8.1 *PROGRESS AND COMPLETION: Delete Paragraph 8.1.6. and replace with the following 8.1.6.*
- 8.1.6.1 Contractor shall credit the City by Change Order for inspection services for overtime work or work performed on Sundays or Legal Holidays. The amount Contractor credits the City will be **\$50.00 per hour** per inspector for inspection services.

ARTICLE 9 - PAYMENTS AND COMPLETION

- 9.1 *UNIT PRICE WORK: Delete Section 9.1 in its entirety and insert the following Section 9.1.*
- 9.1 References to Unit Prices in individual Specification sections are not applicable to the Contract. Include payment for portions of the Work required by these sections in the Stipulated Price for the Contract.
- 9.12 ***LIQUIDATED DAMAGES:*** *Insert the following Paragraph 9.12.1.1.*
- 9.12.1.1 The amount of liquidated damages provided in General Conditions Paragraph 9.12.1 payable by Contractor or Surety for each and every day of delay beyond Contract Time, are **\$500.00 per day.**

ARTICLE 11 - INSURANCE AND BONDS

- 11.2 *INSURANCE TO BE PROVIDED BY CONTRACTOR: Delete Paragraph 11.2.8. and replace with the following 11.2.8.*
- 11.2.1.4 Contractor shall provide Owners and Contractor's Protective Liability Insurance only if the contractor's bid price is equal to or greater than \$100,000.00.
- 11.2.8 *Endorsement of Primary Insurance:* Each policy except Workers' Compensation Insurance must contain an endorsement that the policy is primary insurance to any other insurance available to additional insured with respect to claims arising under the Contract.

CITY OF HOUSTON -- BIDDER'S BOND

(Must be in an amount at least 10% of the bid. If the bid is upon alternates this bond must be for at least 10% of the highest amount for which the bidder offers to do any or all the work bid upon.)

THE STATE OF TEXAS §

3

KNOW ALL MEN BY

THESE PRESENTS:

COUNTY OF HARRIS §

THAT WE, _____ as principal and the other subscriber hereto as Surety, do hereby acknowledge ourselves to be held and firmly bound to the City of Houston, a municipal corporation in the sum of \$ _____ Dollars (\$ _____).

The condition of this obligation is that: ---

WHEREAS, the said principal is submitting to the City of Houston his or its bid for the doing for the City of Houston of certain work and construction of which the following is a brief description, to-wit: ---

Bid No. S50-C23580

HVAC Replacements for the Public Works and Engineering Department:

in accordance with the plans and specifications for such work upon which such bid is made, to which plans and specifications reference is made for a more full description of the work and construction referred to.

NOW, THEREFORE, if the said bidder is awarded the contract for such work, the said bidder will, within the time provided in the specifications, enter into a contract with the City therefore upon the form and to the purpose and intent provided in the specifications, will furnish insurance as required in the specifications and will furnish a good and sufficient construction surety bond executed by said bidder and one corporate surety organized under the laws of the State of Texas or authorized to do business in the State of Texas and having a fully paid up capital stock of not less than \$100,000.00 and duly licensed and qualified by the Board of Insurance Commissioners of the State of Texas, which bond shall be for an amount equal to 100 percent of the contract price and shall be conditioned in accordance with the requirements stated in the specifications upon which such bid is being submitted.

In the event said bidder is unable or fails to execute said contract for the work proposed to be done, is unable or fails to furnish insurance as specified or is unable or fails to furnish said construction bond in the amount and condition as aforesaid, the undersigned principal and surety shall be liable to said City of Houston for the full amount of this obligation which is here and now agreed upon and admitted as the amount of the damages which will be suffered by the City of Houston on account of the failure of such bidder to so comply with the terms of this bid.

Executed this _____ day of _____, A.D. 2010.

PRINCIPAL

By_____

By_____

Surety

ONE-YEAR MAINTENANCE BOND

THAT WE, _____, as Principal, hereinafter called Contractor, and the other subscriber hereto, _____, as Surety, do hereby acknowledge ourselves to be held and firmly bound to the City of Houston, a municipal corporation, in the sum of \$_____, for the payment of which sum well and truly to be made to the City of Houston and its successors, the said Contractor and Surety do bind themselves, their heirs, executors, administrators, successors, jointly and severally.

THE CONDITIONS OF THIS OBLIGATION ARE SUCH THAT:

WHEREAS, the Contractor has on or about this day executed a Contract in writing with the City of Houston for _____, all of such work to be done as set out in full in said Contract documents therein referred to and adopted by the City Council, all of which are made a part of this instrument as fully and completely as if set out in full herein.

NOW THEREFORE, if the said Contractor shall comply with the provisions of Paragraph 11.5.1 of the General Conditions, and correct work not in accordance with the Contract documents discovered within the established one-year period, then this obligation shall become null and void, and shall be of no further force and effect; otherwise, the same is to remain in full force and effect.

Notices required or permitted hereunder shall be in writing and shall be deemed delivered when actually received or, if earlier, on the third day following deposit in a United States Postal Service post office or receptacle, with proper postage affixed (certified mail, return receipt requested), addressed to the respective other party at the address prescribed in the Contract documents, or at such other address as the receiving party may hereafter prescribe by written notice to the sending party.

IN WITNESS THEREOF, the said Contractor and Surety have signed and sealed this instrument on the respective dates written below their signatures and have attached current Power of Attorney.

**HVAC REPLACEMENTS
FOR THE PUBLIC WORKS AND ENGINEERING DEPARTMENT**

BID NUMBER C23580

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

Name of Contractor

By: _____
Name:
Title:

By: _____
Name:
Title:
Date:

ATTEST/SURETY WITNESS:

(SEAL)

Full Name of Surety

Address of Surety for Notice

Telephone Number of Surety

By: _____
Name:
Title:
Date:

By: _____
Name:
Title: Attorney-in-Fact
Date:

This Ordinance or Contract has been reviewed as to form by the undersigned legal assistant and have been found to meet established Legal Department criteria. The Legal Department has not reviewed the content of these documents.

Legal Assistant

Date

PERFORMANCE BOND

THAT WE, _____, as Principal, (the "Contractor"), and the other subscriber hereto, _____, as Surety, do hereby acknowledge ourselves to be held and firmly bound to the City of Houston (the "City"), a municipal corporation, in the penal sum of \$_____ for the payment of which sum, well and truly to be made to the City, its successors and assigns, Contractor and Surety do bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally.

THE CONDITIONS OF THIS OBLIGATION ARE SUCH THAT:

WHEREAS, the Contractor has on or about this day executed a Contract in writing with the City for _____, all of such work to be done as set out in full in said Contract documents therein referred to and adopted by the City Council, all of which are made a part of this instrument as fully and completely as if set out in full herein.

NOW THEREFORE, if the said Contractor shall faithfully and strictly perform the Contract in all its terms, provisions, and stipulations in accordance with its true meaning and effect, and in accordance with the Contract documents referred to therein and shall comply strictly with each and every provision of the Contract and with this Bond, then this obligation shall become null and void and shall have no further force and effect; otherwise the same is to remain in full force and effect. Should the Contractor fail to faithfully and strictly perform the Contract in all its terms, including but not limited to the indemnifications thereunder, the Surety shall be liable for all damages, losses, expenses and liabilities that the City may suffer in consequence thereof, as more fully set forth herein.

It is further understood and agreed that the Surety does hereby relieve the City or its representatives from the exercise of any diligence whatever in securing compliance on the part of the Contractor with the terms of the Contract, and the Surety agrees that it shall be bound to take notice of and shall be held to have knowledge of all acts or omissions of the Contractor in all matters pertaining to the Contract. The Surety understands and agrees that the provision in the Contract that the City will retain certain amounts due the Contractor until the expiration of 30 days from the acceptance of the Work is intended for the City's benefit, and the City will have the right to pay or withhold such retained amounts or any other amount owing under the Contract without changing or affecting the liability of the Surety hereon in any degree.

It is further expressly agreed by Surety that the City or its representatives are at liberty at any time, without notice to the Surety, to make any change in the Contract documents and in the Work to be done hereunder, as provided in the Contract, and in the terms and conditions thereof, or to make any change in, addition to, or deduction from the Work to be done hereunder; and that such changes, if made, shall not in any way vitiate the obligation in this Bond and undertaking or release the Surety there from.

It is further expressly agreed and understood that the Contractor and Surety will fully indemnify and save harmless the City from any liability, loss, cost, expense, or damage arising

out of Contractor's performance of the Contract.

If the City gives Surety notice of Contractor's default, Surety shall, within 45 days, take one of the following actions:

1. Arrange for Contractor, with consent of the City, to perform and complete the Contract;
or
2. Take over and assume completion of the Contract itself, through its agents or through independent contractors, and become entitled to the payment of the balance of the Contract Price.

If the Surety fails to take either of the actions set out above, it shall be deemed to have waived its right to perform and complete the Contract and receive payment of the balance of the Contract Price and the City shall be entitled to enforce any remedies available at law, including but not limited to completing the Contract itself and recovering any cost in excess of the Original Contract Price from the Surety.

This Bond and all obligations created hereunder shall be performable in Harris County, Texas. This Bond is given in compliance with the provisions of Chapter 2253, Texas Government Code, as amended, which is incorporated herein by this reference.

Notices required or permitted hereunder shall be in writing and shall be deemed delivered when actually received or, if earlier, on the third day following deposit in a United States Postal Service post office or receptacle, with proper postage affixed (certified mail, return receipt requested), addressed to the respective other Party at the address prescribed in the Contract documents, or at such other address as the receiving party may hereafter prescribe by written notice to the sending party.

**HVAC REPLACEMENTS
FOR THE PUBLIC WORKS AND ENGINEERING DEPARTMENT**

BID NUMBER C23580

EXECUTED in multiple originals this _____ day of _____, 20____.

ATTEST/SEAL: (if a corporation)

WITNESS: (if not corporation)

(Name of Principal)

(Address of Principal)

By: _____

Name:

Title:

Date:

By: _____

Name:

Title:

Date:

ATTEST/SEAL

SURETY WITNESS:

(Name of Surety)

(Address of Surety)

By: _____

Name:

Title:

Date:

By: _____

Name:

Title:

Date:

REVIEWED:

This Bond has been reviewed as to form by the undersigned Paralegal and has been found to meet established Legal Department criteria.

Date

Paralegal

STATUTORY PAYMENT BOND

THAT WE, _____, as Principal, hereinafter called Contractor and the other subscriber hereto, _____, as Surety, do hereby acknowledge ourselves to be held and firmly bound unto the City of Houston, a municipal corporation, in the sum of \$_____ for the payment of which sum, well and truly to be made to the City of Houston, and its successors, the said Contractor and Surety do bind themselves, their heirs, executors, administrators, successors, jointly and severally.

THE CONDITIONS OF THIS OBLIGATION ARE SUCH THAT:

WHEREAS, the Contractor has on or about this day executed a contract in writing with the City of Houston for _____,
_____,
all of such work to be done as set out in full in said Contract documents therein referred to and adopted by the City Council, all of which are made a part of this instrument as fully and completely as if set out in full herein;

NOW, THEREFORE, if the said Contractor shall pay all claimants supplying labor and materials to him or a Subcontractor in the prosecution of the Work provided for in the Contract, then, this obligation shall be void; otherwise the same is to remain in full force and effect;

PROVIDED HOWEVER, that this Bond is executed pursuant to the provisions of Chapter 2253, Texas Government Code, as amended, and all liabilities on this Bond shall be determined in accordance with the provisions of said Article to the same extent as if it were copied at length herein.

IN WITNESS THEREOF, the said Contractor and Surety have signed and sealed this instrument on the respective dates written below their signatures and have attached current Power of Attorney.

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

Name of Contractor

By: _____
Name:
Title:

By: _____
Name:
Title:
Date:

ATTEST/SURETY WITNESS:
(SEAL)

Full Name of Surety

Address of Surety for Notice

Telephone Number of Surety

By: _____
Name:
Title:
Date:

By: _____
Name:
Title: Attorney-in-Fact
Date:

This Ordinance or Contract has been reviewed as to form by the undersigned legal assistant and have been found to meet established Legal Department criteria. The Legal Department has not reviewed the content of these documents.

Legal Assistant

Date