

CITY OF SAN LEANDRO

REQUEST FOR QUOTATION

SUBMIT BID TO:	FOR FURTHER INFORMATION CALL:
City of San Leandro Purchasing Department 835 East 14th Street San Leandro, CA 94577	Darryl Sweet Purchasing Supervisor (510) 577-3377 fax (510) 577-3312

BID NO:	DATE MAILED:	THIS QUOTATION MUST BE DELIVERED TO THE CITY BEFORE:
01-02.037	May 17, 2002	3:00 P.M. , June 11, 2002

QTY.	DESCRIPTION	UNIT PRICE	EXTENSION
	<p>HVAC PREVENTATIVE MAINTENANCE At City Facilities</p> <p>Notice to Bidders</p> <p>The City of San Leandro shall receive bids for providing regularly scheduled preventative maintenance inspections and minor repairs for HVAC equipment at designated City facilities.</p> <p>Work to be done is based upon the detailed inspection list included in this bid package. Extra work as defined in the bid documents is not guaranteed to the recipient of the PM contract.</p> <p>A bid bond in the amount of 10% of the contractor's total bid is required with submission of a bid.</p> <p>Contract term is July 1, 2002 through June 30, 2003. This contract may be renewed by the City for up to two additional one-year periods at the discretion of the City. Renewal will be adjusted by the Oak/SFO/San Jose Metro. CPI.</p> <p>Bids will be opened and publicly read on Tuesday, June 11 at 3:00 PM local time in the Finance Dept. on the 2nd floor of City Hall, 835 E. 14th St., San Leandro, CA 94577.</p> <p>A pre-bid conference will be held on Tuesday, June 4th at 10:00 in the Finance Dept. conference room. Facilities will be available for inspection on this day only, following this meeting. Due to the extensive nature of this bid attendance at the pre-bid conference and site inspection is strongly recommended.</p> <p>See the attached Special Provisions for the work to be done related to this bid.</p>		See bid price schedule

A California contractor's license is required for this work. No bid shall be accepted from a contractor who has not been licensed in accordance with Chapter 9, Division 3 of the Business and Professional Code.

The City Council has ascertained the general prevailing rate of wages applicable to the work to be done. A tabulation of the various classifications of work persons to be employed and the prevailing rate of wages applicable thereto is on file in the City Clerk's Office.

Any bid may be withdrawn at any time prior to the time fixed for the opening of bids only by written request for the withdrawal of the bid filed with the City. The request shall be executed by the bidder or bidder's duly authorized representative. The withdrawal of a bid does not prejudice the right of the bidder to file a new bid. Whether or not bids are opened exactly at the time fixed in the public notice for opening bids, a bid will not be received after that time nor may any bid be withdrawn after the time fixed in the public notice for opening of bids.

As stated in Public Contract Code Section 5100 to 5108, inclusive (State Contract Act) concerning relief of bidders and in particular to the requirement therein, that if the bidder claims a mistake was made in his bid, the bidder shall give the City written notice within five (5) days after the opening of the bids of the alleged mistake, specifying in the notice, in detail how the mistake occurred.

All bidders shall verify if any addendum for this project has been issued by the City. It is the bidder's responsibility to ensure that all requirements of contract addendum are included in the bidder's submittal.

The successful bidder shall submit a certificate of insurance showing compliance with the enclosed insurance requirements. This insurance shall be maintained at all times during the course of any resulting agreement. In addition, the successful bidder, and subcontractors of said bidder, shall have, or be required to obtain, a City of San Leandro business license, as well as any and all other applicable licenses and permits related to the performance of this contract.

The award will be made to the lowest responsible bidder satisfactory to the City's best interests as determined by the City. The right is reserved, as the interest of the City may require, to reject any or all bids, or to waive any informality or minor irregularity in the bids.

To bid, complete and return a copy of the Request and the other required forms, sealed in the enclosed envelope. The envelope shall be marked with the project name and bid number. The bid must be received by the date and time shown in order to be considered. Please note that there is a one-day delay in mail delivery to City Hall by the U.S. Postal Service.

Firm _____

Date: _____

Address _____

Phone: _____

FAX: _____

By (Signature) _____

Print Name: _____

Title: _____

Darryl Sweet
Purchasing Supervisor

CONTRACTOR REFERENCES

The Bidder shall list the facility owner, location, contact person and phone number for all installation references completed in the past two years, comparable in size and scope to the referenced project.

Facility Owner	Location	Contact	Phone #

Name of Bidder: _____

Acknowledgment: _____

(Sign and return with bid)

SPECIAL PROVISION

I hereby affirm that the firm submitting this bid is a licensed California contractor, No. _____, expiration date _____ and the license is in full force and effect. This representation is made under the penalty of perjury. Any bid not containing this information, or a bid containing information, which is subsequently proven false, shall be considered nonresponsive and shall be rejected.

Name of Bidder: _____

Acknowledgment: _____

(Sign and return with bid.)

SPECIAL PROVISIONS
FOR HVAC PREVENTATIVE MAINTENANCE
At City Facilities
Bid 01-02.037

ACCESSIBILITY. The Contractor shall fully inform himself regarding any peculiarities and limitations of the spaces available for the performance of work under this contract. They shall exercise due and particular caution to determine that all parts of this work are made quickly and easily accessible. Contractor shall be issued keys for the facilities on a daily basis. Any and all keys shall be returned to the City's representative at the end of each day.

AUTHORITY OF THE CITY. Subject to the power and authority of the City as provided by law in this contract, the City shall in all cases determine the quantity, quality, and acceptability of the work, materials and supplies for which payment is to be made under this contract. The City shall have final determination questions or issues related to the fulfillment of the contract or the obligations of the contractor hereunder.

BONDS - BID SECURITY. Bids shall be accompanied by cash, a money order, or a cashier's certified check, payable to the order of the City, amounting to ten percent (10%) of the bid, or by a bond in said amount and payable to said City, signed by the Bidder and a corporate surety, or by the Bidder and two sureties who shall justify before any officer competent to administer oaths, in double said amount over and above all statutory exemption. Said check shall be forfeited, or said bond shall become payable in case the Bidder depositing same does not within ten (10) consecutive calendar days after written notice, execute this contract. See below for "Substitution of Securities for Retained Funds".

BONDS - PAYMENT BOND (Labor & Materials). Successful Bidder shall furnish within ten (10) consecutive calendar days after written notice, a Payment Bond in an amount equal to one hundred percent (100%) of the total amount of the contract. See below for "Substitution of Securities for Retained Funds".

BONDS - PERFORMANCE BOND. Successful Bidder shall furnish within ten (10) consecutive calendar days after written notice, a Performance Bond in an amount equal to one hundred percent (100%) of the total amount of the contract.

SUBSTITUTION OF SECURITIES FOR RETAINED FUNDS. The contractor shall be permitted to substitute securities for any monies withheld by the City to ensure performance under this contract, such substitution to be subject to the limitations and requirements of Public Contract Code Part 5, §22300.

BUSINESS LICENSE. If the scope of work under this bid includes performing services or installation on City property, the SUCCESSFUL BIDDER must have current City Business License. Inquiries regarding Business License may be directed to City of San Leandro Finance Department Business

License section at 510-577-3378. Business Licenses are not required for

**SPECIAL PROVISIONS
FOR SERVICES – Continued**

materials or equipment shipped by U.S. mail or common carrier.

CLEAN-UP. During performance and upon completion of work on this project contractor will at the end of each work day remove all unused equipment and instruments of service, all excess or unsuitable material, trash, rubbish and debris, and legally dispose of same, unless otherwise directed by these specifications. Contractor shall leave entire area in a neat, clean and acceptable condition as approved by the City.

CONTRACTOR EMPLOYEES. Contractor shall provide a Journeyman or equal level Technician for the inspections and/or repair work under or as a result of this contract. Contractor's technician shall be supplied with a clean uniform displaying the Company and technician's name. Contractor's company name shall be displayed on all vehicles.

COMPLIANCE WITH FAIR EMPLOYMENT PRACTICE ACT. Contractor agrees in accordance with Section 1735 and 1777.6 of California Labor Code, and the California Fair Employment Practice Act (Sections 1410-1433) that in the hiring of common or skilled labor for the performance of any work under this contract or any subcontract hereunder, no contractor, material supplier or vendor shall, by reason of race, color, national origin or ancestry, or religion, discriminate against any person who is qualified and available to perform the work to which such employment relates.

CONTACT. Contractor shall supply a single point of contact for the City regarding any and all work under this contract.

CONTRACT INCORPORATION. This contract embodies the entire contract between the City and the Contractor. The parties shall not be bound by or be liable for any statement, representation, promise, inducement or understanding of any kind or nature not set forth herein. No changes, amendments, or modifications of any of the terms or conditions of the contract shall be valid unless reduced to writing and signed by both parties. The complete contract shall include the entire contents of the bid solicitation, all addenda, all of Bidder's successful submittal, supplemental agreements, change orders, performance bond(s), and any and all written agreements which alter, amend or extend the contract.

COORDINATION WITH AGENCIES. The contractor shall coordinate their activities with the proper regulatory agencies and have their representative on site at the proper times.

DAMAGE. The contractor shall be held responsible for any breakage, loss of the City's equipment or supplies through negligence of the contractor or their employee while working on the City's premises. The contractor shall be responsible for the restoration or replacement of any equipment, facilities, etc. so damaged. The contractor shall immediately report to the City any damages to the premises resulting

from services performed under this contract. Failure or refusal to restore or replace such damaged property will be considered breach of this contract. The City

SPECIAL PROVISIONS FOR SERVICES – Continued

reserves the right to have the work performed by another contractor and the cost of said work will be deducted from the contract amount.

EXAMINATION OF SPECIFICATIONS AND SITES. Bidder is expected to carefully examine the site of the proposed work and all bid specifications, documents, and forms. They shall satisfy themselves as to the character, quality, and quantities of work to be performed, materials to be furnished and the requirements of the proposed specifications.

EXTRA WORK. Extra work shall require a signed Contract Change Order, or a written order from the City, authorizing Contractor to proceed with extra work for an agreed upon price. The expressed terms of the signed Change Order shall govern over any conflicting documents, including but not limited to, any proposals for Change Orders. Work performed in response to an emergency shall be performed on an Extra Work basis (time and material basis) and shall be governed by this Section. This contract does not grant the Contractor any or all rights to repair or service work found to be necessary as a result of this contract.

BASIS FOR ESTABLISHING COSTS:

A. Labor - The cost of labor for the workers used in the actual and direct performance of the work, whether the employer is the Contractor, subcontractor, or other forces, will be the sum of the following:

Actual Wages - The actual wages paid to a rate not to exceed the State of California Department of Industrial Relations General Prevailing Wage Rates. The wages shall include any employer payments to or on behalf of the workers for liability insurance, health and welfare, pension, vacation, apprenticeship funds and similar purposes. Travel and subsistence allowances actually paid to the workers shall be in accordance with Labor Code Section 1773.8.

To the actual wages, as defined above will be added all payments imposed by State and Federal laws and for all other payments made to, or on behalf of, the workers, other than actual wages as defined above. The six items included are Workers Compensation, Social Security, Medicare, Federal Unemployment, State Unemployment and State Training Taxes.

Certified payrolls, fringe benefit statements from applicable collective bargaining units, documentation of liability insurance and all payroll taxes shall be provided for verification.

B. Materials - No addition, deletions, revisions.

SPECIAL PROVISIONS
FOR SERVICES – Continued

C. Tool and Equipment Rental

The rates to be used in determining equipment rental costs of Contractor owned and maintained equipment shall be the lesser of listed rates prevailing locally at equipment rental agencies, or distributors or of listed rates in the California Department of Transportation publication entitled Labor Surcharge and Equipment Rental Rates, at the time the work is performed. The rates to be used in determining equipment rental costs of equipment obtained at local equipment rental agencies or distributors shall be paid per invoice. The contractor shall use their own equipment to the greatest extent possible, renting equipment only when absolutely necessary.

Rental rates for Contractor owned/maintained equipment not in actual use which remains at the work site exclusively to perform the Extra Work shall be adjusted by the Delay Factor Rate up to eight (8) hours and equipment used in excess of eight (8) hours per day or on weekends and holidays shall be adjusted by the Overtime Factor per the Labor Surcharge and Equipment Rental Rates.

D. Other Items - No additions, deletions, revisions.

E. Invoices - No additions, deletions, revisions.

MARK UP

A. Work by Contractor - The following percentages shall be added to the Contractor's costs and shall constitute the markup for all overhead and profits:

1) Labor	20%
2) Materials	15%
3) Equipment Rental	15%
4) Other Items and Expenditures	15%

To the sum of the costs and markups provided for in this subsection, 1 percent (1%) shall be added as compensation for bonding.

B. Work By Subcontractor - When all or any part of the extra work is performed by a Subcontractor, the markup established in (a) shall be applied to the Subcontractor's actual cost of such work. A markup of 10 percent on the first \$5,000 of the subcontracted portion of the extra work and a markup of 5 percent on work added in excess of \$5,000 of the subcontracted portion of the extra work may be added by the Contractor. Subcontractors are required to have a current City of San Leandro business license at the time they perform any work under this contract.

**SPECIAL PROVISIONS
FOR SERVICES – Continued**

DAYS OF WORK. All work shall be done Monday through Friday between the hours of 7:00 a.m. to 4:00 p.m. excluding designated City holidays, unless otherwise directed by a City official.

The following are the designated City holidays:

- January 1 (New Year's Day).
- The third Monday in January (Martin Luther King's Birthday).
- February 12 (Lincoln's Birthday).
- The third Monday in February (Washington's Birthday).
- The last Monday in May (Memorial Day).
- July 4 (Independence Day).
- The first Monday in September (Labor Day).
- November 11 (Veterans' Day).
- The fourth Thursday in November (Thanksgiving Day).
- The day after Thanksgiving Day.
- December 24 (Christmas Eve).
- December 25 (Christmas Day).
- December 31 (New Year's Eve).

INDEPENDENT CONTRACTOR. In accepting this contract, Contractor covenants that it presently has no interest, and shall not acquire any interest, direct or indirect, financial or otherwise, which would conflict in any manner or degree with the performance of the services hereunder. Contractor further covenants that, in the performance of this contract, no subcontractor or person having such an interest shall be employed. Contractor certifies that to the best of their knowledge, no one who has or will have any financial interest under this contract is an officer or employee of City. It is expressly agreed by Contractor that in the performance of the services required under this contract, Contractor, and any of its subcontractors or employees, shall at times be considered independent contractors and not agents of City.

INSURANCE REQUIREMENTS. Within ten (10) consecutive calendar days of award of contract, Successful Bidder must furnish the City with the Certificates of Insurance proving coverage as specified in the attached insurance requirements and naming the City of San Leandro, its officers and agents, Additional Insured by endorsement. Failure to furnish the required certificates within the time allowed will result in forfeiture of Bidder's Bid Security. Insurance requirements are attached included with this bid package.

INVENTORY. Contractor shall provide the City within 60 days of first inspection, a complete and detailed inventory of all equipment categorized by facility, and a schedule for each facility visit. This inventory shall contain a list of spare-parts (i.e. belts, control fuses) for each facility, parts deemed as "spare" by the City shall be kept on the job site for use and/or replacement during the Preventative

Maintenance inspections. Replacements shall be restocked during the next inspection and material billed for during the invoice cycle.

**SPECIAL PROVISIONS
FOR SERVICES – Continued**

LAWS - ADHERENCE TO ALL LOCAL, STATE, AND FEDERAL LAWS AND REQUIREMENTS. The contractor shall adhere to all applicable health and safety laws and regulations including, but not limited to, those promulgated by CAL-OSHA, FED-OSHA, EPA, the California State Department of Health Services, and County Environmental Health Department.

PERMITS. Unless otherwise specified herein, Contractor shall obtain all permits and licenses necessary for the performance of the contract, and shall give all public notices necessary for the lawful performance of the contract. Any and all permit fees shall be paid by the City.

Contractor shall pay all taxes, levies, duties and assessments of every nature due in connection with any work under the contract, shall make any and all payroll deductions required by law, and shall indemnify and hold harmless the City from any liability on account of any and all such taxes, levies, duties, assessments and deductions.

PROTECTION OF PUBLIC. Adequate warning devices, barricades, guards, flagmen or other necessary precautions shall be taken by the contractor to give advised and reasonable protection, safety and warning to persons and vehicular traffic concerned in the area.

FAILURE TO PERFORM The City reserves the right to use other contractors to perform any and all work not completed within the contract inspection schedule or for the failure to correct unsatisfactory work. The cost of this work will be deducted from the current contract.

QUALITY CONTROL. The City retains the right to use other contractors for quality control inspections of any or all work performed under this contract.

REJECTION OF WORK. Contractor agrees that the City has the right to make all final determinations as to whether the work has been satisfactorily completed.

HOURS OF LABOR Eight hours of labor constitutes a legal day's work. The contractor shall forfeit, as a penalty to the Agency, \$25.00 for each workman employed in the execution of the contract by the contractor or any subcontractor under him for each calendar day during which such workman is required or permitted to work more than eight (8) hours in any one calendar day and forty (40) hours in any one calendar week in violation of the provision of the Labor code, and in particular, Section 1810 to Section 1815, thereof, inclusive, except that work performed by employees of contractors in excess of eight (8) hours per day, and forty (40) hours during any one week, shall be permitted upon compensation for all hours worked in excess of eight (8) hours per day not less than one and one-half times the basic rate of pay, as provided in said Section 1815.

**SPECIAL PROVISIONS
FOR SERVICES – Continued**

PREVAILING WAGE The City Council by Resolution No. 77-236 has adopted the general prevailing wage rates determined by the Director of Industrial Relations, State of California, to be part of this contract. The general prevailing wage rates applicable to the County of Alameda are listed in the publication entitled “General Prevailing Wage Rates.” This document is hereby made part of this contract by reference. Copies of the current versions of this document are on file in the office of the City Clerk, Civic Center, 835 East 14th Street, San Leandro, California.

The City will not recognize any claim for additional compensation because of payment by the Contractor of any wage in excess of the prevailing wage rates set forth in the General Prevailing Wage Rates which is part of this contract. The possibility of wage increases is one element to be considered by the Contractor in determining his bid, and will not under any circumstances be considered as a basis of claim against the City on the contract.

The Contractor shall comply with Labor Code Sections 1774 and 1775. The Contractor shall forfeit, as a penalty, \$50.00 per each calendar day or portion thereof for each worker paid less than the stipulated prevailing rates in violation of the provisions of the Labor Code and in particular Labor Code Section 1770 to 1780 inclusive. In addition to said penalty, the difference between such stipulated prevailing wage rates and the amounts paid for each worker paid less than the stipulated prevailing wage rates shall be paid to each of said workers by the Contractor.

DAILY REPORTS BY CONTRACTOR. Daily work logs shall be dated and signed by both the Contractor’s technician and the City’s Representative. These logs shall be submitted to the City on a daily basis and copies shall be included with the monthly invoices.

CONTRACT TERM. The initial term of the contract is from July 1, 2002 through June 30, 2003 with the option to renew for up to two (2) one-year periods, at the mutual agreement of the City and the successful bidder. The City reserves the right to terminate this contract with or without cause with a minimum of 15 days written notice.

JOB WALK. The facilities and equipment will be made available prior to bidding on Tuesday, June 4th, as stated on page 1 of this bid package.

All Roof Curb Mounted Exhaust Fans

\$ _____ x 6 \$ _____
per visit per year

FACILITY LOCATIONS AND EQUIPMENT LIST (CONTINUED)
Bid Price Schedule

Median Crew Shed – 10 North Dike Road

Site Visit Quarterly

1 – Forced Air Upflow Furnace With Split A/C \$ _____ x 4 \$ _____
All Roof Curb Mounted Exhaust Fans per visit per year

Manor Professional Building – 1241 Manor Building

Site Visit Quarterly

7- Forced Air Upflow Furnace \$ _____ x 4 \$ _____
7 – Window A/C’s per visit per year
All Roof Curb Mounted Exhaust Fans

Fire Station #9 – 450 Estudillo Avenue

Site Visit Quarterly

2 - Packaged Rooftop Unit \$ _____ x 4 \$ _____
All Roof Curb Mounted Exhaust Fans per visit per year

Fire Station #10 – 1040 Davis Street

Site Visit Quarterly

1 – Forced Air Upflow Furnace \$ _____ x 4 \$ _____
2 – Window A/C’s per visit per year
All Roof Curb Mounted Exhaust Fans

Fire Station #11 – 2101 Marina Boulevard

Site Visit Quarterly

1 – Forced Air Upflow Furnace \$ _____ x 4 \$ _____
3 – Window A/C’s per visit per year
All Roof Curb Mounted Exhaust Fans

Inspection Check List

Air Conditioning Units

Inspection:

- Prove refrigeration charge
- Check coil condition
- Check all belts
- Amperage draw on motor(s)
- Clean condensate drain and pan at the unit
- Check all wiring
- Prove controls
- Check starter and tighten electrical connections
- Lubricate fan bearings and motor bearings
- Prove damper operation
- Check economizer operation
- Check filters
- Prove all safeties
- Clean humidifier and prove operation
- Check all humidifier elements

Extra Work:

- Electronic freon leak test
- Clean all coils and calibrate controls

Air Handlers

Inspection:

- Check coil condition
- Check all belts
- Amperage draw on motor(s)
- Clean condensate drain at the unit
- Check all wiring
- Prove Controls
- Check starter and tighten electrical connections
- Lubricate fan bearings and motor bearings
- Prove damper operation
- Check economizer operation
- Check / change belts
- Check filters
- Prove all safeties
- Clean all coils
- Clean unit condensate pan
- Calibrate controls

Boiler

Hot Water – Pool Heaters

Inspection:

- Inspect main burner condition and operation
- Inspect pilot operation and safety control calibration
- Inspect gas controls operation and piping
- Inspect flue and stack condition
- Check low water controls and expansion tank
- Check boiler pressure and PRV
- Check closed loop water treatment

Extra Work:

- Combustion analysis
- Tear down and inspect tubes
- Add closed loop treatment
- Set burner gas pressure
- Clean pilot assembly or plug as expectable
- Clean strainer on PRV

Cooling Tower

Inspection:

- Check fan and motor bearings, lubricate if needed
- Check tightness and adjust thrust collars on sleeve bearing units and locking collars on ball bearing units
- Check belt tension and adjust if needed
- Clean strainers
- Check for biological growth in sump
- Check operating water level
- Check bleed-off rate
- Check fans and inlet screens
- Check spray nozzle system
- Inspect protective finish inside and out, look particularly for any sign of spot corrosion
- Clean flush sump

Extra Work:

- Clean and refinish any damaged protective coating

Computer Room Environmental Air Conditioning Units

Inspection:

- Prove refrigeration charge
- Check coil condition
- Check all belts
- Amperage draw on motor(s)

Computer Room Environmental Air Conditioning Units (Continued)

Inspection:

- Clean condensate drain and pan at unit
- Check all wiring
- Prove controls
- Check starter and tighten electrical connections
- Lubricate fan bearings and tighten electrical connections
- Prove damper operation
- Check economizer operation
- Check belts
- Check filters
- Prove all safeties
- Clean humidifier and prove operation
- Check all humidifier elements

Extra Work:

- Electronic freon leak test
- Clean coils
- Change belts
- Calibrate controls

Exhaust Fans

Monthly Inspection:

- Check all belts
- Grease or oil bearing and motors
- Amp the motors
- Check rotation
- Tighten all electrical connections
- Check inlet/outlet dampers (when applicable)

Evaporative Coolers

Inspection:

- Annual start-up
- Clean sumps
- Lubrication of blowers and blower motors
- Check all belts
- Tighten electrical connections
- Clean all spray nozzles
- Clean pump inlet screen
- Adjust float assembly
- Check drain
- Amp motors
- Check and lubricate all bearings

Furnace

Inspection:

- Check all belts.
- Amperage draw on motor(s)
- Check all wiring
- Prove controls
- Check starter and tighten electrical connections
- Lubricate fan bearings and motor bearings
- Check filters
- Prove all safeties

Heat Pumps – Water Source – Air Cooled

Inspection:

- Check all pressures
- Check all temperatures – inlet & outlet
- Inspect coil cleanliness
- Clean condensate line at the unit
- Check water regulating valve
- Check reversing valve operation
- Tighten all electrical connections – relays and switches
- Amperage draw on the compressor and blower section
- Adjust belt tension
- Check all bearings for excessive wear, temp and end play
- Lubrication on blower fan section
- Prove all controls
- Clean coils

Main Building Supply & Return Fans

Inspection:

- Lubricate fan motor bearing (factory recommended grease)
- Lubricate fan bearings (factory recommended grease)
- Inspect blades
- Squirrel cage type – inspect belts and change once per year
- Inspect and tighten all electrical connections
- Amperage check on motors

Extra work:

- Check main bearings – temperature and wear
- Meg motor windings

Pumps

Heating – Condenser Water - Chilled Water – Domestic Water – Pools

Inspection:

- Lubricate pump and motor bearings
- Check coupling condition
- Check pump seal for leakage
- Amperage draw on motors
- Check motor and pump mounts
- Clean starter contacts
- Tighten all electrical connections

Extra Work:

- Replace couplings and mounts
- Alignment of coupling

Reciprocating Air Conditioning Compressor

Inspection:

- Compressor – Pump down efficiency test
- Check oil level
- Visual inspection for oil/refrigerant leaks
- Check for excessive vibration and heat
- Amperage draw recorded
- Start-up and operational check
- Written report made with any additional repairs needed
- Tighten all electrical connections
- Pressure – temperature readings
- Clean condenser coil

Extra Work:

- Change oil with oil disposal
- Remove and replace freon liquid line core driers
- Perform acid oil and moisture test on oil
- Meg OHM compressor motor windings
- Electronic freon leak test

Rooftop Unit

Electrical and Control Section

Inspection:

- Check main wiring to see that all connections are tight
- Check for arcing on contact
- Inspect electrical relays and switches

Extra Work:

- Replace contactors and /or contact points as needed

Rooftop Unit (Continued)

Furnace Section (RTU Only)

Inspection:

- Inspect main burners condition and operation
- Inspect pilot operation and safety control calibration
- Inspect gas controls and operation and piping
- Prove operating limit, prove hi-safety
- Prove induced draft operation and all air switches
- Check heat exchanger for cracks or defects
- Set burner gas pressure
- Clean pilot assembly
- Clean out burner section

Fan Section

Inspection:

- Lubricate fan and motor
- Check rubber Isolators

Extra Work:

- Set super heat
- Wash evaporator coils

Economizer Section

Inspection:

- Inspect operation of damper system
- Check operation of controls and damper motors
- Check minimum outside air damper position
- Inspect outside air inlet filters
- Lubricate dampers and linkages
- Track dampers and adjust as needed
- Tighten down all damper motors and linkages

Compressor

Inspection:

- General condition - Operation
- Oil Level
- Head pressure
- Suction Pressure
- Oil pressure
- Moisture indicator

- Check capacity control
- Check freon charge and system condition

Rooftop Unit (Continued)

Compressor (Continued)

Inspection:

- Check crankcase heater
- Check voltage and amperage of compressor motor
- Check for oil leaks

Extra Work:

- Change oil and drier as needed
- Efficiency check on valves
- Megger motor windings
- Oil analysis
- Ultra violet leak test freon system

Air Cooled Condenser Section

Inspection:

- Check Condenser fins for damage and cleanliness
- Inspect coils and piping for oil and refrigerant leaks
- Check condenser brackets and blades for fatigue
- Check operation of head pressure control
- Lubricate motors

Extra Work:

- Straighten condenser fins as needed
- Pressure wash condenser coil

Fan Section

Inspection:

- Adjust fan belt tension and inspect condition
- Check condensate pans and traps
- Inspect cooling coil – report condition
- Inspect motor and sheaves
- Check belt alignment
- Check set collars and any unusual wear
- Check fan rotation
- Check air filters for cleanliness

- Check filters
- Check static pressure controller and safeties

Split System

Air Cooled Condenser Section

Inspection:

- Check condenser fins for damage and cleanliness
- Inspect coils and piping for oil and refrigerant leaks
- Check condenser brackets and blades for fatigue
- Check operation of head pressure controls
- Lubricate motors

Extra Work:

- Straighten condenser fins as needed
- Pressure wash condenser coil

Fan Section

Inspection:

- Adjust fan belt tension and inspect condition
- Check condensate pans and traps
- Inspect cooling coil – report condition
- Inspect motor and sheaves
- Check belt alignment
- Check set collars and unusual wear
- Check air filters for cleanliness
- Check static pressure controller and safeties
- Lubricate fan and motors
- Check Rubber isolators

Extra Work:

- Check bearing temperature
- Clean motor frame, particularly air passages
- Tighten anchor bolts
- Wash evaporator coils
- Set super heat

Electrical and Control Section

Inspection:

- Check main wiring to see that all connections are tight
- Check for arcing on contact
- Inspect electrical relays and switches
- Check control sequencing

Extra Work:

- Replace contactors and/or contactor points as needed

Split System (Continued)

Furnace Section

Inspection:

- Inspect main burners condition and operation
- Inspect pilot operation and safety control calibration
- Inspect gas controls and operation and piping
- Prove operating limit, prove hi-safety
- Prove induced draft operation and all air switches
- Set burner gas pressure
- Clean pilot assembly
- Clean out burner section

Unit Heater

Inspection:

- Inspect main burners condition and operation
- Inspect pilot operation and safety control calibration
- Inspect gas control and operation and piping
- Prove operating limit, prove hi-safety
- Prove induced draft operation and all air switches
- Check heat exchanger for cracks and defects
- Set burner gas pressure
- Clean pilot assembly
- Clean out burner section

York Centrifugal Chiller

Inspection Done by Others