

STATE OF NEW HAMPSHIRE
Department of Administrative Services
Division of Procurement and Support Services
Bureau of Purchase and Property
State House Annex
Concord, New Hampshire 03301

March 8, 2016

NOTICE OF CONTRACT - REVISED

COMMODITY: HVAC Preventative Maintenance, Repair and Emergency Services

CONTRACT NUMBER: 8001958

NIGP CODE: 941-5500

CONTRACTOR: **Control Technologies, Inc.** Vendor No.: 160482
111 Zachary Road
Manchester, NH 03109

Contact: Daryl Caron
Phone: 603-626-6070
Email: dcaron@ControlTechinc.com

CONTRACT PERIOD: JANUARY 1, 2016 THROUGH DECEMBER 31, 2018

INVOICING: Itemized invoices shall be submitted to the individual agency after the completion of the job/services and shall include a brief description of the work done along with the location of work.

The invoice shall be sent to the address of the using agency under agreement.

PAYMENTS: Payments shall be made via P-card upon receipt of properly documented invoice and acceptance of work to the State's satisfaction.

QUESTIONS: Danielle Ruest, Purchasing Agent
(E) Danielle.Ruest@nh.gov
(P) 603-271-3290

SPECIFICATIONS: Control Technologies, Inc. shall provide the State of New Hampshire with preventative maintenance and related services for the Heating, Ventilation, and Air Conditioning ("HVAC") equipment owned by the State of New Hampshire as described herein.

PRICING:**SECTION I: DEPARTMENT OF ADMINISTRATIVE SERVICES: BUREAU OF COURT FACILITIES**

FACILITY NAME	ADDRESS	TOWN	MONTHLY PRICE 1/1/2016 - 12/31/2018
Carroll County Court	96 Water Village Road	Ossipee	\$1,589.00
Concord Circuit Court	32 Clinton Street	Concord	\$1,827.00
Coos County Superior Court	55 School Street	Lancaster	\$1,946.00
Derry Circuit Court	10 Courthouse Lane	Derry	\$554.00
Dover Circuit Court	25 St. Thomas Street	Dover	\$847.00
Franklin Circuit Court	7 Hancock Terrace	Franklin	\$686.00
Hillsborough County Court South	30 Spring Street	Nashua	\$2,081.00
Jaffrey-Peterborough Circuit Court	84 Peterborough St/Rt. 202	Jaffrey	\$1,029.00
Laconia Circuit Court	26 Academy Street	Laconia	\$875.00
Lebanon Circuit Court	38 Centerra Parkway	Lebanon	\$828.00
Manchester Circuit Court	35 Amherst Street	Manchester	\$2,958.00
Merrimack Circuit Court	4 Baboosic Lake Road	Merrimack	\$687.00
Northern Carroll County Circuit Court	35 East Conway Road, Rt. 302	North Conway	\$568.00
Plymouth Circuit Court	26 Green Street	Plymouth	\$865.00
Portsmouth Circuit Court	111 Parrott Avenue	Portsmouth	\$1,281.00
Rochester Circuit Court	76 North Main Street	Rochester	\$1,347.00
Rockingham County Court	#10 Route 125	Brentwood	\$3,116.00
TOTAL, SECTION I			\$23,084.00
ANNUAL			\$277,008.00
CONTRACT PRICE			\$831,024.00

SECTION II: DEPARTMENT OF ADMINISTRATIVE SERVICES: GENERAL SERVICES

FACILITY NAME	ADDRESS	TOWN	MONTHLY PRICE 1/1/2016 - 12/31/2018
Admin Office of the Courts	1 Noble Drive	Concord	\$370.00
Supreme Court Building	1 Noble Drive	Concord	\$834.00
Department of Motor Vehicles	27 Hazen Drive	Concord	\$855.00
James H. Hayes Safety	33 Hazen Drive	Concord	\$1,637.00
DOT Materials & Research	5 Hazen Drive	Concord	\$1,100.00
Health & Human Services	29 Hazen Drive	Concord	\$3,858.00
Administrative Services Data Center	29 Hazen Drive	Concord	\$809.00
John O. Morton Building	7 Hazen Drive	Concord	\$1,314.00
Legislative Office Building	33 North State Street	Concord	\$944.00
M&S Building / Dept of Revenue	109 Pleasant Street	Concord	\$518.00
Records & Archives	71 South Fruit Street	Concord	\$220.00
Emergency Operations Center	224 Sheep Davis Road	Concord	\$518.00
McAuliffe-Shepard Discovery Center	2 Institute Drive	Concord	\$1,358.00
TOTAL, SECTION II			\$14,335.00
ANNUAL			\$172,020.00
CONTRACT PRICE			\$516,060.00

SECTION III: ADJUTANT GENERALS DEPARTMENT

FACILITY NAME	ADDRESS	TOWN	SEMI-ANNUAL PRICE (1/1/16-12/31/16)	SEMI-ANNUAL PRICE (1/1/17-12/31/17)	SEMI-ANNUAL PRICE (1/1/18-12/31/18)
AASF	26 Regional Drive	Concord	\$6,380.00	\$6,380.00	\$6,380.00
USPFO Building A	4 Pembroke Road	Concord	\$4,816.00	\$4,816.00	\$4,816.00
USPFO Building B/C	4 Pembroke Road	Concord	\$1,211.50	\$1,211.50	\$1,211.50
Building F SMR	4 Pembroke Road	Concord	\$811.00	\$811.00	\$811.00
Building G SMR	4 Pembroke Road	Concord	\$415.00	\$415.00	\$415.00
Building H SMR	4 Pembroke Road	Concord	\$1,700.00	\$1,700.00	\$1,700.00
Building L SMR	4 Pembroke Road	Concord	\$618.00	\$618.00	\$618.00
Building M SMR	4 Pembroke Road	Concord	\$1,236.00	\$1,236.00	\$1,236.00
Hillsboro FMS	140 West Main Street	Hillsborough	\$2,075.00	\$2,075.00	\$2,075.00
Keene RC	110 Hasting Road	Keene	\$1,450.00	\$1,450.00	\$1,450.00
Manchester	1059 Canal St	Manchester	\$1,450.00	\$1,450.00	\$1,450.00
Milford RC	154 Osgood Rd.	Milford	\$825.00	\$825.00	\$825.00
Nashua	154 Daniel Webster Hwy	Nashua	\$1,225.00	\$1,225.00	\$1,225.00
Portsmouth	801 McGee Rd	Portsmouth	\$720.00	\$720.00	\$720.00
Rochester	106 Brock Street	Rochester	\$625.00	\$625.00	\$625.00
Somersworth	15 Blackwater Road	Somersworth	\$1,550.00	\$1,550.00	\$1,550.00
Pembroke RTI (effective 1/1/17)	722 Riverwood Drive	Pembroke		\$6,500.00	\$6,500.00
Strafford Training Site	11 Academy Ave	Strafford	\$15,462.00	\$15,462.00	\$15,462.00
TOTAL, SECTION VII			\$42,569.50	\$49,069.50	\$49,069.50
ANNUAL			\$85,139.00	\$98,139.00	\$98,139.00

SECTION IV: ADJUTANT GENERALS DEPARTMENT, NORTH LOCATIONS

FACILITY NAME	ADDRESS	TOWN	SEMI-ANNUAL PRICE (1/1/16-12/31/16)	SEMI-ANNUAL PRICE (1/1/17-12/31/17)	SEMI-ANNUAL PRICE (1/1/18-12/31/18)
Berlin RC	2169 Riverside Drive	Berlin	\$572.00	\$572.00	\$572.00
Franklin RC	300 South Main St	Franklin	\$572.00	\$572.00	\$572.00
Lancaster RC	Groveton Road	Lancaster	\$572.00	\$572.00	\$572.00
Lebanon RC	174 Heater Road	Lebanon	\$572.00	\$572.00	\$572.00
Plymouth RC	19 Armory Road	Plymouth	\$825.00	\$825.00	\$825.00
Littleton RC	350 Meadow Street	Littleton	\$880.00	\$880.00	\$880.00
Littleton FMS	350 Meadow Street	Littleton	\$825.00	\$825.00	\$825.00
Littleton Addition (eff. 1/1/17)	350 Meadow Street	Littleton		\$425.00	\$425.00
TOTAL, SECTION IV			\$4,818.00	\$5,243.00	\$5,243.00
ANNUAL			\$9,636.00	\$10,486.00	\$10,486.00
CONTRACT TOTAL					\$30,608.00

SECTION V: ADJUTANT GENERALS DEPARTMENT, JFHQ #1

Effective 12/1/2016

FACILITY NAME	ADDRESS	TOWN	SEMI-ANNUAL PRICE (1/1/17-12/31/17)	SEMI-ANNUAL PRICE (1/1/18-12/31/18)
JFHQ Building #1	1 Minute Man Way	Concord	\$10,662.00	\$10,662.00
ANNUAL			\$21,324.00	\$21,324.00
CONTRACT TOTAL				\$42,648.00

PRICING QUOTATIONS FOR INDIVIDUAL PROJECTS, REPAIRS AND EMERGENCY CALLS (APPLIES TO ALL SECTIONS)

State will request quotations by providing a SOW describing the services required and the applicable technical qualifications. Contractor must return quotes within three (3) business days. The quoted hourly rates shall not exceed the rates established under this contract.

Monday thru Friday 8:00 AM to 4:30 PM Journeyman Mechanic	\$ 84.00 per hour/per person
Monday thru Friday 4:31 PM to 7:59 AM Journeyman Mechanic	\$ 126.00 per hour/per person
Saturday Work: Journeyman Mechanic	\$ 126.00 per hour/per person
Sunday Work: Journeyman Mechanic	\$ 126.00 per hour/per person

SECTION I: DEPARTMENT OF ADMINISTRATIVE SERVICES: BUREAU OF COURT FACILITIES

1. The Contractor shall provide the Bureau of Court Facilities with a **“total maintenance program”** and **“automatic temperature control system services”** for refrigerated water chillers, air conditioning systems, plate heat exchangers, boilers, burners, domestic hot water heating systems, air handlers, pumps, controls and associated devices (see attached equipment list, Appendix A, Section I, for the types of equipment covered) owned by the State of New Hampshire, Bureau of Court Facilities.
2. The term **“total maintenance program”** and **“automatic temperature control system services”** shall include providing all supervision, materials, equipment, labor and transportation necessary for the successful completion of the work under the terms and conditions contained herein. The equipment covered by this agreement, their respective locations and manufacturers are listed and attached in Appendix A.
3. The term **“total maintenance program”** as used above shall mean servicing, repairing, lubricating and/or replacing chiller, heat plate exchanger, air handling system, heating and air conditioning system components, all controls, valves, dampers, motors and associated devices as necessary, as well as providing all necessary fluid and refrigerants. This includes all controls for the boilers, all oil and gas fired burners and all supporting equipment. Mechanical system associated devices, shall include cooling towers, glycol coolers, air cooled condensers, humidifiers, condenser fans and motors, supply and return fans and motors, radiation convectors, unit heaters, and cabinet heaters, chilled water, heating, condenser water and glycol pumps, automatic controls, dampers, valves, all electrical components including coils and contactors (from the load side of the respective disconnect switches), automatic and manual valves, gauges, strainers, chilled water loop (to the main supply and return shutoff valves only), condenser water, glycol and refrigerant loops, and all other devices associated with the chilled water and condenser water systems. Shells, tubes, hot water tanks and actual boiler vessels are excluded.
4. The term **“automatic temperature control system services”** as used above shall include servicing, repairing, replacing, lubricating and calibrating all pneumatic, electric and electronic systems and associated devices as required. Pneumatic system associated devices shall include air compressors, motors, refrigerated air dryers, filters, pressure reducing stations and time clocks. Direct digital control systems shall include all hardware (terminals, printers, video stations and all other components, software and peripheral equipment (valves and motors).

5. The Contractor shall clean all condenser tubes once each year in order to remove all scale and sludge. The Contractor may use either chemical or mechanical means to accomplish the above, but if chemical means are used the Administrator, Bureau of Court Facilities must be notified so that he/she may inspect and approve the cleaning. The Contractor shall be responsible to clean evaporator tubes, if required, to maintain the chiller in proper operating condition.
6. The Contractor shall maintain all refrigerated chillers and air conditioning systems and make monthly visits from April through September, and additionally as required, to maintain them in proper operating condition by providing, at a minimum the following services:
 - Check unit thoroughly for refrigerant leaks and proper amount of refrigerant; add refrigerant as required(Contractor shall be responsible for the removal and disposal of used refrigerant),
 - Check and calibrate safety and operating controls,
 - Check and tighten all electrical terminals and terminations, check contacts for wear and replace and or repair all defective electrical components,
 - Check oil level in compressors and add as required,
 - Check glycol level and add as required,
 - Check crankcase heaters,
 - Check internal interlocks, flow switches and any associated pumps and fans,
 - Check oil samples for acid and change oil when so indicated by analysis,
 - Any other maintenance or component replacement or repair necessary to maintain the refrigerated chillers and air conditioning systems in accordance with manufacturers' specifications is included in this agreement. **Any associated costs for crane or hoist usage shall be included.**
7. The Contractor shall maintain all digital control systems and associated devices on a semi-annual basis, and as required to maintain them in proper operating condition by providing, at a minimum, the following services:
 - Review system for proper operation, verify that equipment starts and stops properly, check that set points are maintained, and verify scheduling
 - Provide parts and labor for proper system operation during scheduled preventative maintenance
 - Repair any system failures due to normal wear and tear
 - Repair and/or replace any defective valves, damper motors or actuators etc.
 - Provide emergency calls between inspections, diagnosis of trouble, make adjustments and supply parts and labor
 - Any other maintenance or component replacement or repair necessary to maintain the digital control systems in accordance with manufacturer's specifications is included.
8. The Contractor shall clean and check all cooling towers a minimum of once a year and as required to maintain them in proper operating condition. At a minimum, the services shall consist of the following:
 - Draining, flushing and cleaning towers
 - Clean and paint rusted areas
 - Check and clean or replace nozzles
 - Check float valves and repair or replace as necessary
 - Inspect and lubricate all bearings
 - Check fans for balance and repair /or replace if necessary
 - Clean fan blades
 - Check and tightening all electrical terminations. Check contacts for wear, repair and/or replace defective electrical components and check motor current against nameplate.
 - Any other maintenance or component replacement or repair necessary to maintain the cooling towers in accordance with manufacturer's specifications is included.
9. The Contractor shall clean and check all air-cooled condensers and glycol coolers a minimum of once a year and as required to maintain them in proper working condition. At a minimum, this service shall consist of the following:
 - Clean condenser completely including coil surfaces
 - Clean and painting rusted areas
 - Inspect and lubricate bearings
 - Check for refrigerant leaks, and repair (Contractor shall be responsible for the removal and disposal of used refrigerant)
 - Check fans for balancing and repair or replace if necessary

- Clean fan blades
 - Check and tighten all electrical terminations, check contacts for wear. Repair and/or replace defective electrical components and check motor current against nameplate.
 - Any other maintenance or component replacement or repair necessary to maintain the condensers in accordance with manufacturer's specifications is included.
10. The Contractor shall clean and check the Vicarb plate heat exchanger a minimum of once a year and as required to maintain it in proper working condition. The Contractor shall inspect the equipment completely and perform any required maintenance pursuant to the manufacturers' recommendations.
11. The Contractor shall maintain all condenser water, chilled water, circulator pumps and glycol pumps a minimum of once a year and as required to maintain them in proper operating condition by providing, at a minimum, the following services:
- Clean and paint pump housings when required
 - Inspect electrical connections and contactors
 - Check couplings for alignment and wear and realign or replace when necessary
 - Lubrication of all bearings
 - Check packing and adjust or replace if necessary
 - Clean strainers
 - Check impeller and wearing rings and replace if necessary
 - Check for bearing wear and replace if needed
 - Check and replace gaskets when needed
 - Tighten all nuts and bolts, check and tighten all electrical terminations; check contacts for wear, repair and/or replace defective electrical components, check motor current against nameplate and check motor mounts and vibrator pads
 - Any other maintenance or component replacement necessary to maintain the condenser water, chilled water, circulator pumps and glycol pumps in accordance with manufacturer's specifications is included.
12. The Contractor shall provide semi - annual inspections of all control systems including all components as described below. These inspections will take place in the spring and fall. The automatic temperature control system services shall consist, at a minimum, the following services:
- Calibrate all transmitter receiver gauges and controllers
 - Check all PE switches, solenoid air valves and limit controls
 - Check all control valves and pilot positioners
 - Check operation of all auxiliary devices
 - Review HVAC system sequence of operation
 - Check all dampers and lubricate
 - Check operational sequence of all VAV's, single duct terminal units, CAV's and related preheat, reheat and radiation valves and motors, if equipment is not working notify maintenance mechanics
 - Check operational sequence of all cabinet heaters, unit heaters and electric strip heaters
 - Check all room thermostats
 - Check time clock operation and settings
 - Check particle filters and oil filters (change as required)
 - Check pressure reducing valve settings
 - Check low-pressure safety valve
 - Check air dryer refrigerant pressure/temperatures
 - Check air dryer drain tap and by pass valves
 - Drain air compressor tank and check traps
 - Check air compressor oil pressure
 - Check air compressor belt and sheaves (change as required); Change air compressor suction filter as required
 - Check air compressor unloaders and check valve
 - Check air compressor operating controls including PE switch, starter and alternator
 - Check air compressor high-pressure safety valve
 - Perform any software changes, upgrades and back-ups as required
 - Repair or replace all defective components
 - Any other maintenance, or component replacement or repair necessary to maintain the control systems in accordance with manufacturer's specifications is included.

13. The Contractor shall provide annual fall cleaning and inspections of all heating systems including boilers and domestic hot water tanks as described below:
- Remove all cleaning access panels
 - Wire brush and vacuum all fireside surfaces free of soot
 - Wash coat all refractory; perform patching of refractory as required
 - Replace all gaskets as required
 - Reseal boiler access panels
 - Inspect all burners; Adjust spark gap and test pilots
 - Test fire all burners
 - Test all safety devices including but not limited to fire eye controls, pressure relief valves and low water cut offs
 - Test and ensure that all operating controls for the respective heating systems are working properly
 - Collect and properly dispose of all waste products that result from the cleaning or repairs to the above mentioned boilers
 - Any other maintenance or component replacement or repair necessary to maintain the boilers, burners, domestic hot water systems and associated controls in proper working order in accordance with manufacturer's specifications is included.
14. Air handler systems shall be inspected semi-annually in the spring and the fall. Maintenance shall be performed on the air handlers during these semi-annual inspections and shall include, at a minimum, the following services:
- Repair or replace defective bearings as required
 - Check fans and fan shafts for proper balance and repair or replace as necessary
 - Check all belts for proper tension, alignment and wear, replace belts as required
 - Check all air handling systems for proper flow, operation and control sequence (All related controls are included)
 - Clean all heating and cooling coils (2) two times a year **(this work to be completed after 4:00 PM)**
 - Clean and scrub all condensation pans and check to make sure that pans are pitched correctly for proper drainage **(this work is to be performed off hours, weekday nights, or weekends)**
 - Biocide tablets will be used in the condensation pans so that the pans are clean and in good working order
 - Air filters will be provided by the State and shall be replaced by the Contractor semi-annually
 - Align all sheaves and repair or replace as required
 - Check and tighten all electrical terminations; check contacts for wear; and/or replace defective electrical components and check motor current against nameplate
 - Any other maintenance or component replacement or repair necessary to maintain the air handlers in accordance with manufacturer's specifications is included.
15. In addition to annual start up and shut down and any emergency required, the contractor shall provide monthly inspections during the months of April through September of each chilled water and air conditioning system. During these monthly visits, the Contractor shall completely inspect the equipment and perform any required maintenance pursuant to the manufacturers' recommendation.
16. Prior to April 1 of each year, the Contractor shall retain the services of a competent independent electrical testing company to provide electrical testing of all disconnect switches, motor starters, wiring and all other electrical devices associated with the water chiller and all air conditioning systems. At a minimum, the following services must be done:
- Megger all motors
 - Check over current settings
 - Check insulation resistance
 - Check contact resistance
 - Check all connections for tightness and
 - Clean, service, and repair and/or replace all defective components

A complete report of the results from the electrical testing company shall be submitted directly to the Administrator, Bureau of Court Facilities or his/her designated representative within thirty (30) days of completing the work.

17. The Contractor shall, in performing the services as described herein utilize mechanics skilled in the service of large water chillers and air conditioning systems that have obtained a "journeyman" level of competence. Apprentices may be used only for work of a routine nature and then only when accompanied by and under the direction of a qualified journeyman. Further, the Contractor shall maintain all necessary certifications and/or licensing as required by state and/or federal law (e.g. NH Gas Fitter's License for all persons engaged in the installation, servicing and/or repair of gas fired appliances; EPA Certification for CFC (chlorofluorocarbons) Recovery).
18. The Contractor shall make service available twenty-four (24) hours per day, seven (7) days per week. The Contractor shall employ a sufficient number of trained mechanics so that calls of any emergency nature can be answered promptly with the mechanic arriving at the job site no later than three hours (five hours for Coos County Superior Court, Carroll County Superior Court and Northern Carroll County District Court) after the call is entered. If overtime is necessary as a result of late arrival, the State may deduct the additional time, over three hours from any overtime payment, except for Coos County Superior Court, Carroll County Superior Court and Northern Carroll County District Court where the State may deduct the additional time over five hours from any overtime payment.
19. All replacement parts shall be new and of the same quality and brand name as that being replaced. All supplies such as oils and refrigerants shall be as specified by the equipment manufacturer. Substitutions will be permitted only with prior authorization of the Administrator, Bureau of Court Facilities or his/her designated representative.
20. The Contractor shall, after each scheduled or emergency call and before leaving the job site, present a written summary of the work performed and obtain the signature thereon from the Administrator, Bureau of Court Facilities or his/her designated representative.
21. The Contractor shall present two copies of a Final Report of work completed the previous calendar year. The report may be in a narrative format for each month of the contract year. The report shall be submitted to the Administrator, Bureau of Court Facilities, on or before January 15.
22. The Contractor shall furnish and maintain a performance bond or other security acceptable to the Administrator, Bureau of Court Facilities for 100% of this Section (Section I: Department of Administrative Services, Bureau of Court Facilities). The bond shall cover the contract period and must be executed by a company authorized to do business in the State of New Hampshire.
23. The Administrator, Bureau of Court Facilities, or his/her designated representative shall:
 - a. Provide the Contractor with all pertinent information regarding the requirements for this contract within two working days of receiving a request for information from the Contractor.
 - b. Examine any documents submitted by the Contractor and rendering decisions pertaining thereto promptly to avoid delay in the progress of the contractor's work.
24. The Contractor shall warranty all of the parts supplied for a period of not less than the manufacturer's standard period of time, from the date the items are received, inspected and accepted by the State. The warranty shall cover 100% of all supplies, parts, shipping, labor, travel, lodging and expenses.

SECTION II: DEPARTMENT OF ADMINISTRATIVE SERVICES: GENERAL SERVICES

1. The Contractor shall provide the Bureau of General Services with a "**total maintenance program**" for refrigerated water chillers, air conditioning systems, plate heat exchangers, and associated devices (see attached equipment list, Appendix A, Section II, for the types of equipment to be covered) owned by the State of New Hampshire
2. The term "total maintenance program" as used above shall include providing all supervision, materials, equipment, labor and transportation necessary for the successful completion of the work under the terms and conditions contained herein. The equipment covered by this agreement, their respective locations and manufacturers are listed and attached in Appendix A.
3. The term "total maintenance program" as used above shall mean servicing, repairing, lubricating and/or replacing chillers and air conditioning system components, and associated devices as necessary, as well as providing all necessary fluid and refrigerants. Mechanical system associated devices, shall include cooling

towers, glycol coolers, air cooled condensers, condenser fans and motors, chilled water, condenser water and glycol pumps, automatic controls, dampers, valves, all electrical components including coils and contactors (from the load side of the respective disconnect switches), automatic and manual valves, gauges, strainers, chilled water loop (to the main supply and return shutoff valves only), condenser water, glycol and refrigerant loops, and all other devices associated with the chilled water and condenser water systems. Shells and tubes are excluded from this agreement.

4. The Contractor shall perform the procedures necessary to "startup" and "shutdown" the chillers in accordance with the manufacturers' recommendations. Start and shutdown times will be determined by the State, and will vary from location to location. Should startup be required before May 1st or shutdown after September 30th, the State will be responsible for cooling tower draining and refilling in the event of freezing temperatures.
5. The Contractor shall clean all condenser tubes once each year in order to remove all scale and sludge. The Contractor shall use either chemical or mechanical means to accomplish the above, but if chemical means are used the Administrator, Bureau of General Services must be notified so that he/she may inspect and approve the cleaning. The Contractor shall be responsible to clean evaporator tubes if required to maintain the chiller in proper operating condition.
6. The Contractor shall maintain all refrigerated chillers and air conditioning systems and as required to maintain them in proper operating condition by providing, at a minimum the following services:
 - Check unit thoroughly for refrigerant leaks and proper amount of refrigerant; add refrigerant as required (Contractor shall be responsible for the removal and disposal of used refrigerant)
 - Check and calibrate safety and operating controls
 - Check and tighten all electrical terminals and terminations, check contacts for wear and replace and/or repair all defective electrical components
 - Check oil level in compressors and add as required
 - Check glycol level and add as required
 - Check crankcase heaters
 - Check internal interlocks, flow switches and any associated pumps and fans
 - Check oil samples for acid and change oil when so indicated by analysis
 - Any other maintenance or component replacement or repair necessary to maintain the refrigerated chillers and air conditioning systems in accordance with manufacturer's specifications. **Any associated costs for crane or hoist usage shall be included.**
7. The Contractor shall clean and check all cooling towers a minimum of once a year and as required to maintain them in proper operating condition. At a minimum, the services shall consist of the following:
 - Draining, flushing and cleaning towers
 - Clean and painting rusted areas
 - Check and clean or replace nozzles
 - Check float valves and repair or replace if necessary
 - Inspect and lubricate all bearings
 - Check fans for balance and repair or replace if necessary
 - Clean fan blades
 - Check and tightening all electrical terminations. Check contacts for wear; repair and/or replace defective electrical components and check motor current against nameplate.
 - Any other maintenance or component replacement or repair necessary to maintain the cooling towers in accordance with manufacturer's specifications is included.
8. The Contractor shall maintain all condenser water, chilled water, circulator pumps and glycol pumps a minimum of once a year and as required to maintain them in proper operating condition by providing, at a minimum, the following services:
 - Clean and painting of pump housings when required
 - Inspect electrical connections and contactors
 - Check couplings for alignment and wear and realign or replace when necessary
 - Lubrication of all bearings
 - Check packing and adjust or replace if necessary
 - Clean strainers
 - Check impeller and wearing rings and replace if necessary

- Check for bearing wear and replace if needed
 - Check and replace gaskets when needed
 - Tighten all nuts and bolts, check and tighten all electrical terminations, check contacts for wear, repair and/or replace defective electrical components, check motor current against nameplate and check motor mounts and vibrator pads.
 - Any other maintenance or component replacement necessary to maintain the condenser water, chilled water, circulator pumps and glycol pumps in accordance with manufacturer's specifications is included in this agreement.
9. The Contractor shall clean and check the Plate Heat Exchanger a minimum of once a year and as required to maintain it in proper working condition. The Contractor shall inspect the equipment completely and perform any required maintenance in accordance with the manufacturer's recommendations.
10. Air handler systems shall be inspected semi-annually in the spring and the fall. Maintenance shall be performed on the air handlers during these semi-annual inspections and shall include, at a minimum, the following services:
- Repair or replace defective bearings as required
 - Check fans and fan shafts for proper balance and repair or replace as necessary
 - Check all belts for proper tension, alignment and wear, replace belts as required
 - Check all air handling systems for proper flow, operation and control sequence (All related controls are included)
 - Align all sheaves and repair or replace as required
 - Check and tighten all electrical terminations, check contacts for wear; Repair and/or replace defective electrical components and check motor current against nameplate
 - Any other maintenance or component replacement or repair necessary to maintain the air handlers in accordance with manufacturer's specifications is included in this agreement.
11. In addition to annual start up and shut down and any emergency requirement, the contractor shall provide a monthly inspection visit for each chilled water and air conditioning system. During these monthly visits, they shall completely inspect the equipment and perform any required maintenance pursuant to the manufacturers' recommendation.
12. In March of each year, the Contractor shall provide electrical testing of all disconnect switches, motor starters, wiring and all other electrical devices associated with the water chiller and all air conditioning systems. At a minimum the following must be done:
- Megger all motors
 - Check over current settings
 - Check insulation resistance
 - Check contact resistance
 - Check all connections for tightness, and
 - Clean service and repair and/or replace all defective components.
 - A complete report of the results from the electrical testing company shall be submitted directly to the Administrator, Bureau of General Services within thirty days of completing the work.
13. The Contractor shall, in performing the services as described herein, utilize mechanics skilled in the service of large water chillers and air conditioning systems that have obtained a "journeyman" level of competence. Apprentices may be used only for work of a routine nature and then only when accompanied by and under the direction of a qualified journeyman. Further, the Contractor shall maintain all necessary certifications and/or licensing as required by state and/or federal law (e.g. NH Gas Fitter's License for all persons engaged in the installation, servicing and/or repair of gas fired appliances; EPA Certification for CFC (chlorofluorocarbons) Recovery).
14. The Contractor shall make service available twenty-four (24) hours per day, seven (7) days per week. The Contractor shall employ a sufficient number of trained mechanics so that calls of any emergency nature can be answered promptly with the mechanic arriving at the job site no later than three hours after the call is entered. If overtime is necessary as a result of late arrival, the State may deduct the additional time, over three hours from any overtime payment.
15. All replacement parts shall be new and of the same quality and brand name as that being replaced. All supplies such as oils and refrigerants shall be as specified by the equipment manufacturer. Substitutions will

be permitted only with prior authorization of the Administrator, Bureau of General Services or his/her designated representative.

16. The Contractor shall, after each scheduled or emergency call and before leaving the job site, present a written summary of the work performed and obtain the signature thereon from the Administrator, Bureau of General Services or his/her designated representative.
17. The Contractor shall present two copies of a Final Report of work completed the previous calendar year. The report may be in a narrative format for each month of the contract year. The report shall be submitted to the Administrator, Bureau of General Services, on or before January 15.
18. The Contractor shall furnish and maintain a performance bond or other security acceptable to the Administrator, Bureau of General Services for 100% of this Section (Section II: Department of Administrative Services, General Services). The bond shall cover the contract period and must be executed by a company authorized to do business in the State of New Hampshire.
19. The Administrator, Bureau of General Services, shall:
 - a. Provide the Contractor with all pertinent information regarding the requirements for this contract within two working days of receiving a request for information from the Contractor.
 - b. Examine any documents submitted by the Contractor and rendering decisions pertaining thereto promptly to avoid delay in the progress of the contractor's work.
20. The Contractor shall warranty all of the parts supplied for a period of not less than the manufacturer's standard period of time, from the date the items are received, inspected and accepted by the State. The warranty shall cover 100% of all supplies, parts, shipping, labor, travel, lodging and expenses.

SECTION III: ADJUTANT GENERALS DEPARTMENT

1. The Contractor shall provide the Adjutant General's Department with "preventative maintenance" and emergency services for the Heating, Ventilation, and Air Conditioning ("HVAC") equipment and associated devices (see attached equipment list, Appendix B, Section III for the types of equipment to be covered) owned by the State of New Hampshire, Adjutant General's Department, as described throughout this contract.
2. The term "preventative maintenance" as used above shall include providing all supervision, materials, equipment, labor and transportation necessary for the successful completion of the work under the terms and conditions contained herein. The equipment covered by this agreement, their respective locations and manufacturers are listed and attached in Appendix B.
3. The Contractor shall provide an annual fall cleaning and inspections of all heating systems including boilers, furnaces and domestic hot water tanks as described below:
 - Remove all cleaning access panels
 - Wire brush and vacuum all fireside surfaces free of soot
 - Wash coat all refractory; perform patching of refractory as required
 - Replace all gasketing as required
 - Reseal boiler access panels
 - Inspect all burners; Adjust spark gap and test pilots
 - Test fire all burners
 - Test all safety devices including but not limited to fire eye controls, pressure relief valves and low water cut offs
 - Test and ensure that all operating controls for the respective heating systems are working properly
 - Collect and properly dispose of all waste products that result from the cleaning or repairs to the above mentioned boilers.
4. The Contractor shall provide an annual fall maintenance inspection* of the unit heaters, radiant heat panels, baseboards, make-up air units, infrared heaters and cabinet heaters as described herein. The maintenance inspection shall include the following services:
 - Brush or vacuum grilles, coils, fans, baseboards, fin tubes, etc.
 - Lubricate fan and motor bearings where applicable
 - Check belts and sheaves where applicable

- Check steam traps, valves, etc. where applicable
- Check and tighten all electrical connections
- Check all control operations
- Lubricate and adjust dampers and linkages
- Check heat exchanger for leaks where applicable
- Check gas valve and controls where applicable
- Check oil burner and controls where applicable
- Check and tighten electric heater connections
- Check amps/volts where applicable
- Check filters
- Check fan assembly
- Check and tighten all mounting hardware
- Check overall operation
- Check hardware and gaskets.

*NOTE: AASF Facility. The Contractor shall provide a semi-annual inspection in the spring (March – May) and fall (September – November) of the unit heaters (Make-up heaters Jackson/Church) as identified.

5. The Contractor shall provide an annual maintenance inspection of the exhaust fans in the fall (September - November) as described herein. The maintenance inspection shall include the following services:
 - Brush, vacuum or clean grills, coils and fans
 - Lubricate fan and motor bearings where applicable
 - Check belts and sheaves where applicable
 - Check and tighten all electrical connections
 - Check all control operations
 - Lubricate and adjust any dampers or linkages
 - Check amps/volts where applicable
 - Check fan assembly
 - Check and tighten all mounting hardware
 - Check overall operation
6. The Contractor shall provide an annual inspection in the spring (March – May) of the air handler systems. Inspections shall include the following:
 - Check bearings for wear
 - Checking fans and fan shafts for proper balance
 - Checking all belts for proper tension, alignment and wear
 - Checking all air handling systems for proper flow, operation and control sequence. All related controls are included.
 - Clean all heating and cooling coils
 - Clean and scrub all condensation pans and check to make sure that pans are pitched correctly for proper drainage
 - Biocide tablets will be used in the condensation pans so that the pans are clean and in good working order
 - Check all sheaves for proper alignment
 - Check and tighten all electrical terminations
 - Check contacts for wear
 - Check and record motor current against nameplate
 - Check all safety controls
 - Lubricate motors/bearings where applicable
 - Check fan wheels - clean as required
 - Check fan scrolls - clean as required
 - Check fan bearing supports
 - Check motor supports
 - Check damper operation
 - Check damper linkages
 - Check motor damper operation
 - Inspect and clean condensate pumps where applicable
 - Replace air filters (**Contractor shall provide filters; Filters to meet or exceed existing filters for efficiency and quality**)
 - Check humidifier strainer where applicable

- Check and clean humidifier float assembly
- Check humidifier level controls
- Check and clean humidifier drain/pan
- Check humidifier heating elements
- Check all humidifier controls
- Check and clean outside air intakes
- Check for any unusual noises or vibrations
- Check structural integrity of the unit.

7. The Contractor shall inspect and complete preventative maintenance on all air conditioning and chiller systems annually in the spring (March- May)* as required to maintain them in proper operating condition by providing, at a minimum the following services:

- Check and record volts/amps of compressors
- Check and record volts/amps of condenser fan motor where applicable
- Check starter and contact surfaces
- Check and record operating temperatures
- Check refrigerant charge (Contractor shall be responsible for the removal and disposal of any used refrigerant)
- Check moisture indicators and sight glasses
- Check oil level
- Check oil contamination
- Check all belts where applicable
- Check all safety controls
- Check superheat and adjustment
- Check hot gas by pass controls where applicable
- Check head pressure controls where applicable
- Check unloader operation where applicable
- Check all operating controls
- Check and tighten all electrical connections
- Lubricate motors/bearings where applicable
- Inspect and clean condenser coil
- Clean and paint rusted areas
- Check water cooled condenser coil where applicable
- Check water regulating valve where applicable
- Check cap tubes/piping for chafing
- Check crankcase heaters
- Visual check for oil refrigerant leaks (Contractor shall be responsible for the removal and disposal of any used refrigerant)
- Check fan wheels - clean as required
- Check fan scrolls - clean as required
- Check fan sheave wear
- Check fan sheave alignment
- Check fan bearing supports
- Check motor supports
- Check damper operation
- Check damper linkages
- Check motor damper operation
- Inspect and clean evaporator coils
- Inspect and clean condensate pans
- Inspect and clean condensate pumps where applicable
- Replace air filters (Contractor shall provide filters; Air filters to meet or exceed existing filters for efficiency and quality)
- Check humidifier strainer where applicable
- Check and clean humidifier float assembly
- Check humidifier level controls
- Check and clean humidifier drain/pan
- Check humidifier heating elements
- Check all humidifier controls

- Check and clean outside air intakes
- Check for any unusual noises or vibrations
- Check structural integrity of the unit
- Check glycol level if applicable

*NOTE: Liebert Air Conditioning Systems. The Contractor shall provide a semi-annual inspection in the spring (March – May) and fall (September – November) of the Liebert Air Conditioning Systems identified for:

- USPFO Building A SMR (Concord),
 - Building H SMR (Concord) facilities
 - Manchester RC (Manchester)
8. The Contractor shall maintain all digital control systems and associated devices on a semi-annual basis; spring (March-May) and fall (Sept-Nov) as required to maintain them in proper operating condition by providing, at a minimum the following services:
 - Review system for proper operation, verify that all associated devices start and stop properly, check that set points are maintained, and verify scheduling
 - Check operational sequence of all VAV's, and related preheat, reheat and radiation valves and motors
 - Check operational sequence of all cabinet heaters, unit heaters and electric strip heaters
 - Test and calibrate all devices including but not limited to thermostats, actuators, controls, dampers, valves, variable air volume devices
 - Make back-up copies of software configurations and operating system. Provide customer with access to most recent copy.
 - Check and record and system abnormalities or deficiencies
 9. The Contractor shall provide a semi-annual inspection in the spring (March – May) and fall (September – November) of the pneumatic control systems including all components as described below. The automatic temperature control system services shall consist, at a minimum, the following services:
 - Calibrate all transmitter receiver gauges and controllers
 - Check all PE switches, solenoid air valves and limit controls
 - Check all control valves and pilot positioners
 - Check operation of all auxiliary devices
 - Review HVAC system sequence of operation
 - Check all dampers and lubricate
 - Check operational sequence of all VAV's, CAV's and related preheat, reheat and radiation valves and motors, if equipment is not working notify maintenance mechanics
 - Check operational sequence of all cabinet heaters, unit heaters and electric strip heaters
 - Check all room thermostats
 - Check time clock operation and settings
 - Check particle filters and oil filters (change as required)
 - Check pressure reducing valve settings
 - Check low-pressure safety valve
 - Check air dryer refrigerant pressure/temperatures
 - Check air dryer drain tap and by pass valves
 - Drain air compressor tank and check traps
 - Check air compressor oil pressure
 - Check air compressor belt and sheaves (change as required); Change air compressor suction filter as required.
 - Check air compressor unloaders and check valve
 - Check air compressor operating controls including PE switch, starter and alternator
 - Check air compressor high-pressure safety valve
 - Repair or replace all defective components
 10. The Contractor shall inspect all condenser water, and chilled water pumps as well as any glycol pumps annually in the spring (March- May). In addition the Contractor shall inspect all forced hot water pumps and circulators in the fall (September - November) as required to maintain them in proper operating condition by providing, at a minimum, the following services:
 - Inspect electrical connections and contactors
 - Check couplings for alignment and wear and realign or replace when necessary
 - Lubricate all bearings

- Check packing and adjust if necessary
 - Clean strainers
 - Check impeller and wearing rings
 - Check for any bearing wear
 - Check gaskets
 - Check for proper operation
 - Check for any improper vibration or noise
 - Tighten all nuts and bolts
 - Check and tighten all electrical terminations
 - Check contacts for wear
 - Check and record motor current against nameplate
 - Check motor mounts and vibrator pads.
11. The annual preventative maintenance inspections shall be scheduled and completed prior to the heating/cooling season, subject to the approval of Paul Annis, Plant Maintenance Engineer, Adjutant General's Department, or his designated representative.
 12. The Contractor shall, in performing the services as described herein, utilize mechanics skilled in the service of large water chillers and air conditioning systems that have obtained a "journeyman" level of competence. Further, the Contractor shall maintain all necessary certifications and/or licensing as required by state and/or federal law (e.g. Gas Fitter's License for all persons engaged in the installation, servicing and/or repair of gas fired appliances; EPA Certification for CFC (chlorofluorocarbons) Recovery).
 13. The Contractor shall make service available twenty-four (24) hours per day, seven (7) days per week. The Contractor shall employ a sufficient number of trained mechanics so that calls of any emergency nature can be answered promptly with the mechanic arriving at the job site no later than three hours after the call is entered. If overtime is necessary as a result of late arrival, the State may deduct the additional time, over three hours from any overtime payment.
 14. Request to repair and/or replace parts shall be approved by Paul Annis, Plant Maintenance Engineer, Adjutant General's Department, or his designated representative. Materials shall be invoiced not to exceed 10% above contractor's cost. All replacement parts shall be new and of the same quality and brand name as that being replaced. All supplies such as oils and refrigerants shall be as specified by the equipment manufacturer. Substitutions will be permitted only with prior authorization of Paul Annis, Plant Maintenance Engineer, Adjutant General's Department, or his designated representative.
 15. The Contractor shall, after each scheduled or emergency call and before leaving the job site, present a written summary of the work performed and obtain signature thereon from Paul Annis, Plant Maintenance Engineer, Adjutant General's Department.
 16. The Contractor shall present two copies of a Final Report of work done the previous calendar year. The report may be in a narrative during each month of the contract year. The report shall be submitted to the Paul Annis, Plant Maintenance Engineer, Adjutant General's Department, on or before January 15 of the following year.
 17. Paul Annis, Plant Maintenance Engineer, Adjutant General's Department, or his designated representative shall:
 - a. Provide the Contractor with all pertinent information regarding the requirements within two working days of receiving a request for information from the Contractor.
 - b. Examine any documents submitted by the Contractor and rendering decisions pertaining thereto promptly to avoid delay in the progress of the contractor's work.
 18. If applicable, as determined by the Adjutant General's Department, the Contractor (to include each employee and any approved sub-contractor(s) working in a state office or externally with the State's records) shall be required to sign the State of New Hampshire's Confidentiality Form and Criminal Record Authorization Form. Prior to placing an individual in a State facility, all prospective personnel must receive clearance from the NH Department of Safety, Division of State Police, Criminal Bureau. Said clearance shall be obtained by submitting a Criminal Record Release Authorization Form on behalf of all personnel/employees and sub-contractor(s) to the Requesting Agency.

SECTION IV: ADJUTANT GENERALS DEPARTMENT, NORTH LOCATIONS

1. The Contractor shall provide the Adjutant General's Department with "preventative maintenance" and emergency services for the Heating, Ventilation, and Air Conditioning ("HVAC") equipment and associated devices (see attached equipment list, Appendix B, Section IV for the types of equipment to be covered) owned by the State of New Hampshire, Adjutant General's Department, as described throughout this contract.
2. The term "preventative maintenance" as used above shall include providing all supervision, materials, equipment, labor and transportation necessary for the successful completion of the work under the terms and conditions contained herein. The equipment covered by this agreement, their respective locations and manufacturers are listed and attached as part of this contract in Appendix B, Section IV.
3. The Contractor shall provide an annual fall cleaning and inspections of all heating systems including boilers and domestic hot water tanks as described below:
 - Remove all cleaning access panels
 - Wire brush and vacuum all fireside surfaces free of soot
 - Wash coat all refractory; perform patching of refractory as required
 - Replace all gasketing as required
 - Reseal boiler access panels
 - Inspect all burners; Adjust spark gap and test pilots
 - Test fire all burners
 - Test all safety devices including but not limited to fire eye controls, pressure relief valves and low water cut offs
 - Test and ensure that all operating controls for the respective heating systems are working properly
 - Collect and properly dispose of all waste products that result from the cleaning or repairs to the above mentioned boilers
 - Any other maintenance or component replacement or repair necessary to maintain the boilers, burners, domestic hot water systems and associated controls in proper working order in accordance with manufacturer's specifications is included in this agreement.
4. The Contractor shall provide an annual maintenance inspection of the unit heaters as described herein. The maintenance inspection shall include the following services:
 - Brush or vacuum grilles, coils, fan, etc.
 - Lubricate fan and motor bearings where applicable
 - Check belts and sheaves where applicable
 - Check steam traps, valves, etc. where applicable
 - Check and tighten all electrical connections
 - Check all control operations
 - Lubricate and adjust dampers and linkages
 - Check heat exchanger for leaks where applicable
 - Check gas valve and controls where applicable
 - Check oil burner and controls where applicable
 - Check and tighten electric heater connections
 - Check amps/volts where applicable
 - Check filters
 - Check fan assembly
 - Check and tighten all mounting hardware
 - Check overall operation
 - Check hardware and gaskets.
5. Air handler systems shall be inspected annually in the spring (March-May). Inspections shall include the following:
 - Check bearings for wear
 - Checking fans and fan shafts for proper balance
 - Checking all belts for proper tension, alignment and wear
 - Checking all air handling systems for proper flow, operation and control sequence. All related controls are included.
 - Clean all heating and cooling coils

- Clean and scrub all condensation pans and check to make sure that pans are pitched correctly for proper drainage
 - Biocide tablets will be used in the condensation pans so that the pans are clean and in good working order
 - Check all sheaves for proper alignment
 - Check and tighten all electrical terminations
 - Check contacts for wear
 - Check and record motor current against nameplate
 - Check all safety controls
 - Lubricate motors/bearings where applicable
 - Check fan wheels - clean as required
 - Check fan scrolls - clean as required
 - Check fan bearing supports
 - Check motor supports
 - Check damper operation
 - Check damper linkages
 - Check motor damper operation
 - Inspect and clean condensate pumps where applicable
 - Replace air filters (**Contractor shall provide filters; Filters to meet or exceed existing filters for efficiency and quality**)
 - Check and clean outside air intakes
 - Check for any unusual noises or vibrations
 - Check structural integrity of the unit
 - Any other maintenance or component replacement or repair necessary to maintain the air handlers in accordance with manufacturer's specifications is included in this agreement.
6. The Contractor shall provide an annual maintenance inspection of the exhaust fans in the fall (September - November) as described herein. The maintenance inspection shall include the following services:
- Brush, vacuum or clean grills, coils and fans
 - Lubricate fan and motor bearings where applicable
 - Check belts and sheaves where applicable
 - Check and tighten all electrical connections
 - Check all control operations
 - Lubricate and adjust any dampers or linkages
 - Check amps/volts where applicable
 - Check fan assembly
 - Check and tighten all mounting hardware
 - Check overall operation.
7. In addition to the services described herein, the Contractor shall inspect and complete preventative maintenance on all air conditioning systems in the spring (March- May) as required to maintain them in proper operating condition by providing, at a minimum the following services:
- Check and record volts/amps of compressors
 - Check and record volts/amps of condenser fan motor where applicable
 - Check starter and contact surfaces
 - Check and record operating temperatures
 - Check refrigerant charge (Contractor shall be responsible for the removal and disposal of any used refrigerant)
 - Check moisture indicators and sight glasses
 - Check oil level
 - Check oil contamination
 - Check all belts where applicable
 - Check all safety controls
 - Check superheat and adjustment
 - Check hot gas by pass controls where applicable
 - Check head pressure controls where applicable
 - Check unloader operation where applicable
 - Check all operating controls
 - Check and tighten all electrical connections

- Lubricate motors/bearings where applicable
- Inspect and clean condenser coil
- Clean and paint rusted areas
- Check water cooled condenser coil where applicable
- Check water regulating valve where applicable
- Check cap tubes/piping for chafing
- Check crankcase heaters
- Visual check for oil refrigerant leaks (Contractor shall be responsible for the removal and disposal of used refrigerant)
- Check fan wheels - clean as required
- Check fan scrolls - clean as required
- Check fan sheave wear
- Check fan sheave alignment
- Check fan bearing supports
- Check motor supports
- Check damper operation
- Check damper linkages
- Check motor damper operation
- Inspect and clean evaporator coils
- Inspect and clean condensate pans
- Inspect and clean condensate pumps where applicable
- Replace air filters (**Contractor shall provide filters; Air filters to meet or exceed existing filters for efficiency and quality**)
- Check and clean outside air intakes
- Check for any unusual noises or vibrations
- Check structural integrity of the unit
- Check glycol level if applicable.

8. In addition to the services described herein, the Contractor shall maintain all digital control systems and associated devices on a semi-annual basis; spring (March-May) and fall (Sept-Nov) as required to maintain them in proper operating condition by providing, at a minimum the following services:
- Review system for proper operation, verify that all associated devices start and stop properly, check that set points are maintained, and verify scheduling
 - Check operational sequence of all VAV's, and related preheat, reheat and radiation valves and motors
 - Check operational sequence of all cabinet heaters, unit heaters and electric strip heaters
 - Test and calibrate all devices including but not limited to thermostats, actuators, controls, dampers, valves, variable air volume devices
 - Make back-up copies of software configurations and operating system. Provide customer with access to most recent copy.
 - Check and record and system abnormalities or deficiencies.
9. In addition to the services described herein, the Contractor shall inspect all condenser water, and chilled water pumps as well as any glycol pumps in the spring (March- May). In addition the Contractor shall inspect all forced hot water pumps and circulator in the fall (September - November) as required to maintain them in proper operating condition by providing, at a minimum, the following services:
- Inspect electrical connections and contactors
 - Check couplings for alignment and wear and realign or replace when necessary
 - Lubricate all bearings
 - Check packing and adjust if necessary
 - Clean strainers
 - Check impeller and wearing rings
 - Check for any bearing wear
 - Check gaskets
 - Check for proper operation
 - Check for any improper vibration or noise
 - Tighten all nuts and bolts
 - Check and tighten all electrical terminations
 - Check contacts for wear
 - Check and record motor current against nameplate

- Check motor mounts and vibrator pads.
10. The annual preventative maintenance inspections shall be scheduled and completed prior to the heating/cooling season, subject to the approval of Paul Annis, Plant Maintenance Engineer, Adjutant General's Department, or his designated representative.
 11. The Contractor shall, in performing the services as described herein utilize mechanics skilled in the service of large water chillers and air conditioning systems that have obtained a "journeyman" level of competence. Further, the Contractor shall maintain all necessary certifications and/or licensing as required by state and or federal law (e.g. NH Gas Fitter's License for all persons engaged in the installation, servicing and/or repair of gas fired appliances; EPA Certification for CFC (chlorofluorocarbons) Recovery).
 12. The Contractor shall make service available twenty-four (24) hours per day, seven (7) days per week. The Contractor shall employ a sufficient number of trained mechanics so that calls of any emergency nature can be answered promptly with the mechanic arriving at the job site no later than three hours after the call is entered. If overtime is necessary as a result of late arrival, the State may deduct the additional time, over three hours from any overtime payment.
 13. Request to repair and/or replace parts shall be approved by Paul Annis, Plant Maintenance Engineer, Adjutant General's Department, or his designated representative. Materials shall be invoiced not to exceed 10% above contractor's cost. All replacement parts shall be new and of the same quality and brand name as that being replaced. All supplies such as oils and refrigerants shall be as specified by the equipment manufacturer. Substitutions will be permitted only with prior authorization of Paul Annis, Plant Maintenance Engineer, Adjutant General's Department, or his designated representative.
 14. The Contractor shall, after each scheduled or emergency call and before leaving the job site, present a written summary of the work performed and obtain signature thereon from Paul Annis, Plant Maintenance Engineer, Adjutant General's Department, or his designated representative.
 15. The Contractor shall present two copies of a Final Report of work done the previous calendar year. The report may be in a narrative during each month of the contract year. The report shall be submitted to the Administrator, Adjutant General's Department, on or before January 15 of the following year.
 16. Paul Annis, Plant Maintenance Engineer, Adjutant General's Department, or his designated representative shall:
 - a. Provide the Contractor with all pertinent information regarding the requirements for this contract within two working days of receiving a request for information from the Contractor.
 - b. Examine any documents submitted by the Contractor and rendering decisions pertaining thereto promptly to avoid delay in the progress of the contractor's work.
 17. The Contractor shall warranty all of the parts supplied for a period of not less than the manufacturer's standard period of time, from the date the items are received, inspected and accepted by the State. The warranty shall cover 100% of all supplies, parts, shipping, labor, travel, lodging and expenses.

SECTION V: ADJUTANT GENERALS DEPARTMENT, JFHQ #1 (DECEMBER 1, 2016 to DECEMBER 31, 2018)

1. The Contractor shall provide The Adjutant General's Department with "preventative maintenance" and emergency services for the Heating, Ventilation, and Air Conditioning ("HVAC") equipment and associated devices (see attached equipment list, Appendix B, Section V for the types of equipment to be covered) owned by the State of New Hampshire, Adjutant General's Department, as described throughout this contract.
2. The term "preventive maintenance" as used above shall include providing all supervision, materials, equipment, labor and transportation necessary for the successful completion of the work under the terms and conditions contained herein. The equipment covered by this agreement, their respective locations and manufacturers are listed and attached as part of this contract in Appendix B.
*NOTE: Services for JFHQ #1 shall not commence under this contract until December 1, 2016
3. The Contractor shall make annual fall cleaning and inspections of all heating systems including boilers, furnaces and domestic hot water tanks as described below:
 - Remove all cleaning access panels,

- Wire brush and vacuum all fireside surfaces free of soot,
 - Wash coat all refractory; perform patching of refractory as required,
 - Replace all gasketing as required,
 - Reseal boiler access panels,
 - Inspect all burners; Adjust spark gap and test pilots,
 - Test fire all burners,
 - Test all safety devices including but not limited to fire eye controls, pressure relief valves and low water cut offs,
 - Test and ensure that all operating controls for the respective heating systems are working properly,
 - Collect and properly dispose of all waste products that result from the cleaning or repairs to the above mentioned boilers.
4. The Contractor shall provide a semi-annual inspection in the spring (March – May) and fall (September – November) of the air handler systems. Inspections shall include the following:
- Check bearings for wear,
 - Check fans and fan shafts for proper balance,
 - Check all belts for proper tension, alignment and wear,
 - Check all air handling systems for proper flow, operation and control sequence. All related controls are included,
 - Clean all heating and cooling coils,
 - Clean and scrub all condensation pans and check to make sure that pans are pitched correctly for proper drainage,
 - Biocide tablets will be used in the condensation pans so that the pans are clean and in good working order,
 - Check all sheaves for proper alignment,
 - Check and tighten all electrical terminations,
 - Check contacts for wear,
 - Check and record motor current against nameplate,
 - Check all safety controls,
 - Lube motors/bearings where applicable,
 - Check fan wheels - clean as required,
 - Check fan scrolls - clean as required,
 - Check fan bearing supports,
 - Check motor supports,
 - Check damper operation,
 - Check damper linkages,
 - Check motor damper operation,
 - Inspect and clean condensate pumps where applicable,
 - Replace air filters (**Contractor shall provide filters. Filters to meet or exceed existing filters for efficiency and quality**),
 - Check humidifier strainer where applicable,
 - Check and clean humidifier float assembly,
 - Check humidifier level controls,
 - Check and clean humidifier drain/pan,
 - Check humidifier heating elements,
 - Check all humidifier controls,
 - Check and clean outside air intakes,
 - Check for any unusual noises or vibrations,
 - Check structural integrity of the unit.
5. The Contractor shall provide an annual fall maintenance inspection of the unit heaters, radiant heat panels, baseboards, make-up air units, infrared heaters and cabinet heaters as described herein. The maintenance inspection shall include the following services:
- Brush or vacuum grilles, coils, fans, baseboards, fin tubes, etc.,
 - Lubricate fan and motor bearings where applicable,
 - Check belts and sheaves where applicable,
 - Check steam traps, valves, etc. where applicable,
 - Check and tighten all electrical connections,
 - Check all control operations,

- Lubricate and adjust dampers and linkages,
 - Check heat exchanger for leaks where applicable,
 - Check gas valve and controls where applicable,
 - Check oil burner and controls where applicable,
 - Check and tighten electric heater connections,
 - Check amps/volts where applicable,
 - Check filters,
 - Check fan assembly,
 - Check and tighten all mounting hardware,
 - Check overall operation,
 - Check hardware and gaskets.
6. The Contractor shall provide annual maintenance inspection of the exhaust fans in the fall (September - November) as described herein. The maintenance inspection shall include the following services:
- Brush, vacuum or clean grills, coils and fans,
 - Lubricate fan and motor bearings where applicable,
 - Check belts and sheaves where applicable,
 - Check and tighten all electrical connections,
 - Check all control operations,
 - Lube and adjust any dampers or linkages,
 - Check amps/volts where applicable,
 - Check fan assembly,
 - Check and tighten all mounting hardware,
 - Check overall operation.
7. The Contractor shall inspect and complete preventive maintenance on all air conditioning and chiller systems annually in the spring (March- May) as required to maintain them in proper operating condition by providing, at a minimum the following services:
- Check and record volts/amps of compressors,
 - Check and record volts/amps of condenser fan motor where applicable,
 - Check starter and contact surfaces,
 - Check and record operating temperatures,
 - Check refrigerant charge (Contractor shall be responsible for the removal and disposal of any used refrigerant),
 - Check moisture indicators and sight glasses,
 - Check oil level,
 - Check oil contamination,
 - Check all belts where applicable,
 - Check all safety controls,
 - Check superheat and adjustment,
 - Check hot gas by pass controls where applicable,
 - Check head pressure controls where applicable,
 - Check unloader operation where applicable,
 - Check all operating controls,
 - Check and tighten all electrical connections,
 - Lube motors/bearings where applicable,
 - Inspect and clean condenser coil,
 - Clean and paint rusted areas,
 - Check water cooled condenser coil where applicable,
 - Check water regulating valve where applicable,
 - Check cap tubes/piping for chafing,
 - Check crankcase heaters,
 - Visual check for oil refrigerant leaks (Contractor shall be responsible for the removal and disposal of any used refrigerant),
 - Check fan wheels - clean as required,
 - Check fan scrolls - clean as required,
 - Check fan sheave wear,
 - Check fan sheave alignment,
 - Check fan bearing supports,

- Check motor supports,
 - Check damper operation,
 - Check damper linkages,
 - Check motor damper operation,
 - Inspect and clean evaporator coils,
 - Inspect and clean condensate pans,
 - Inspect and clean condensate pumps where applicable,
 - Replace air filters (**Contractor shall provide filters. Air filters to meet or exceed existing filters for efficiency and quality**),
 - Check humidifier strainer where applicable,
 - Check and clean humidifier float assembly,
 - Check humidifier level controls,
 - Check and clean humidifier drain/pan,
 - Check humidifier heating elements,
 - Check all humidifier controls,
 - Check and clean outside air intakes,
 - Check for any unusual noises or vibrations,
 - Check structural integrity of the unit,
 - Check glycol level if applicable
8. The Contractor shall maintain all digital control systems and associated devices on a semi-annual basis: spring (March-May) and fall (September - November) as required to properly maintaining their operating condition by providing, at a minimum the following services:
- Review system for proper operation, verify that all associated devices start and stop properly, check that set points are maintained, and verify scheduling,
 - Check operational sequence of all VAV's, and related preheat, reheat and radiation valves and motors,
 - Check operational sequence of all cabinet heaters, unit heaters and electric strip heaters,
 - Test and calibrate all devices including but not limited to thermostats, actuators, controls, dampers, valves, variable air volume devices,
 - Make backup copies of software configurations and operating system. Provide customer with access to most recent copy,
 - Check and record any system abnormalities or deficiencies
9. The Contractor shall inspect all condenser water, and chilled water pumps as well as any glycol pumps annually in the spring (March- May). In addition the Contractor shall inspect all forced hot water pumps and circulators in the fall (September - November) as required to properly maintain their operating condition by providing, at a minimum, the following services:
- Inspect electrical connections and contactors,
 - Check couplings for alignment and wear and realign or replace when necessary,
 - Lubricate all bearings,
 - Check packing and adjust if necessary,
 - Clean strainers,
 - Check impeller and wearing rings,
 - Check for any bearing wear,
 - Check gaskets,
 - Check for proper operation,
 - Check for any improper vibration or noise,
 - Tighten all nuts and bolts,
 - Check and tighten all electrical terminations,
 - Check contacts for wear,
 - Check and record motor current against nameplate,
 - Check motor mounts and vibrator pads.
10. The Contractor shall replace all 11" cartridge filters (on AHU 1 thru 5) on a semi-annual basis. The Contractor shall supply such filters.
11. The Contractor shall clean and check the cooling tower at a minimum of once a year and as required maintaining it in proper operating condition. At a minimum, the services shall consist of the following:
- Drain, flush and clean towers,

- Clean and paint rusted areas,
 - Check and clean or replace nozzles,
 - Check float valves and repair or replace if necessary,
 - Inspect and lubricate all bearings,
 - Check fans for balance and repair or replace if necessary,
 - Clean fan blades,
 - Check and tighten all electrical terminations, checking contacts for wear and checking motor current against nameplate.
12. The Contractor shall clean and check the glycol cooler at a minimum of once a year and as required to maintain it in proper working condition. At a minimum, this service shall consist of the following:
- Clean condenser completely including coil surfaces,
 - Clean and paint rusted areas,
 - Inspect and lubricate bearings,
 - Check for refrigerant leaks and repair (Contractor shall be responsible for the removal and disposal of used refrigerant),
 - Check fans for balancing and repair or replace if necessary,
 - Clean fan blades,
 - Check and tighten all electrical terminations, checking contacts for wear and checking motor current against nameplate.
13. The Contractor shall clean and replace the two (2) cotton bag filters on a semi-annual basis; the bag filters are located in the output side of the well system. The Contractor shall remove the existing cotton bags, flush out and leave to dry. The State shall provide the replacement filters.
14. The annual preventive maintenance inspections shall be scheduled and completed prior to the heating/cooling season, subject to the approval of Paul Annis, Plant Maintenance Engineer, or his designated representative John Garrett, Maintenance Technician.
15. The Contractor shall, in performing the services as described herein, utilize mechanics skilled in the service of large water chillers and air conditioning systems that have obtained a "journeyman" level of competence.
16. The Contractor shall make service available twenty-four (24) hours per day, seven (7) days per week. The Contractor shall employ a sufficient number of trained mechanics so that calls of any emergency nature can be answered promptly with the mechanic arriving at the job site no later than three hours after the call is entered. If overtime is necessary as a result of late arrival, the State may deduct the additional time, over three hours from any overtime payment.
17. Request to repair and/or replace parts shall be approved (in advance of any repair work) by Paul Annis, Plant Maintenance Engineer, or his designated representative John Garrett, Maintenance Technician. Materials shall be invoiced not to exceed 10% above contractor's cost. All replacement parts shall be new and of the same quality and brand name as that being replaced. All supplies such as oils and refrigerants shall be as specified by the equipment manufacturer. Substitutions will be permitted only with prior authorization of Paul Annis, or his designated representative John Garrett.
18. The Contractor shall, after each scheduled or emergency call and before leaving the job site, present a written summary of the work performed and obtain signature thereon from Paul Annis, Plant Maintenance Engineer, or his designated representative John Garrett, Maintenance Technician.
19. The Contractor shall present two copies of a Final Report of work done the previous calendar year. The report shall be a service report, listing the work done each month of the contract year. The report may be submitted electronically or in hard copy to Paul Annis, Plant Maintenance Engineer, on or before January 15 of the following year.
20. Paul Annis, Plant Maintenance Engineer, or his designated representative John Garrett, Maintenance Technician, shall:
- a. Provide the Contractor with all pertinent information regarding the requirements for this contract within two working days of receiving a request for information from the Contractor.
 - b. Examine any documents submitted by the Contractor and rendering decisions pertaining thereto promptly to avoid delay in the progress of the contractor's work.

21. The Contractor shall warranty all of the parts supplied for a period of not less than the manufacturer's standard period of time, from the date the items are received, inspected and accepted by the State. The warranty shall cover 100% of all supplies, parts, shipping, labor, travel, lodging and expenses.
22. The Contractor (to include each employee and any approved subcontractor working in a state office or externally with the State's records) will be required to sign the State of New Hampshire's Confidentiality Form and Criminal Record Authorization Form. Prior to placing an individual in a State facility, all prospective personnel must receive clearance from the NH Department of Safety, Division of State Police, Criminal Bureau. Said clearance shall be obtained by submitting a Criminal Record Release Authorization Form on behalf of all personnel/employees and subcontractor to the Requesting Agency.