

## **ADDENDUM #1 - RFP#15-060-34-HVAC PSA HIGHWAY FACILITIES**

1. **Parts:** Are there any parts (filters, belts, etc.) that are included in the contract? If so, is there a list that includes quantities, sizes and part numbers?
  - All filters are to be supplied by the vendor. Belts to be billed above and beyond the service agreement. This includes roof-top units, air-handers and furnaces.
  
2. **Vibration analysis:** Can you provide a list of motors that require vibration analysis, including the following information:
  - A. Type of unit being served (chiller, pump, air handling unit, etc.).
  - B. Quantity.
  - C. Location of unit (courthouse, library, etc.).
  - No vibration analysis required at Highway facilities.
  
3. **Air compressors:** Can you identify which air compressors are included within the scope of the maintenance?
  - All system air compressors are required to be included. One operational and one comprehensive service per year.
  
4. **Scope of maintenance:** Can you define "Operational" versus "Comprehensive" scopes of maintenance?

Also, can a description of the current maintenance tasks be provided? This will be used to define what tasks are to be done by the contractor and what tasks are being done by in-house staff.

- See Johnson Controls list of Tasking List for minimal items covered. Vendors responsible to perform all work on equipment to ensure maximum safe operating condition.

5. **JC Metasys and Automated Logic DDC systems:**

- A. Will passwords be provided to allow programmers to access the system?
- B. Do the Metasys and Automated Logic control systems require planned software upgrades or program patches?

- No Metasys or Automated Logic software located at Highway facilities.

6. **Coil cleaning:** Who is responsible for cleaning the chiller coils & condensing unit coils; the contractor or the in-house maintenance staff?

- Contractor to provide all coil cleaning at Highway facilities.

7. Skills required

- All work must be performed by Journeyman technicians.

8. Labor rates

- Provide labor rates and other costs associated with T&M work.

## Equipment Tasking

<b>Air Compressor/Dryer, Air Compressor, Commercial, 5-20 HP</b>	
<b>Belt Change</b>	
	All work must be performed in accordance with Johnson Controls safety policies
	Check with appropriate customer representative for operational deficiencies
	Perform belt change procedures
	Remove and dispose any debris from any maintenance activity
	Document tasks performed during visit and report any observations to appropriate customer representative
<b>Comprehensive</b>	
	All work must be performed in accordance with Johnson Controls safety policies
	Check with appropriate customer representative for operational deficiencies
	Drain condensate from tank and check traps
	Check safety relief valve
	Check condition of pulley and belts (if applicable)
	Inspect air filters and wash or replace as needed
	Replace oil in compressor and check for proper level
	Lubricate motor bearings (per manufacturer's recommendations)
	Check PE switch and starter
	Check pressure reducing station for proper operation
	Inspect pressure reducing station filters and clean or replace as required
	Check for proper operation of air drier
	Check air drier condenser coil
	Brush air dryer, condenser and cover grills as required
	Check for unusual noise and vibration
	Check overall condition of unit
	Remove and dispose any debris from any maintenance activity
	Document tasks performed during visit and report any observations to appropriate customer representative
<b>Operational</b>	
	All work must be performed in accordance with Johnson Controls

	safety policies
	Check with appropriate customer representative for operational deficiencies
	Drain condensate from tank and check traps
	Check safety relief valve
	Check condition of pulley and belts (if applicable)
	Inspect air filters
	Check for proper oil level in compressor
	Lubricate motor bearings (per manufacturer's recommendations)
	Check PE switch and starter
	Check pressure reducing station for proper operation
	Check for proper operation of air drier
	Check air drier condenser coil
	Brush air dryer, condenser and cover grills as required
	Check for unusual noise and vibration
	Check overall condition of unit
	Document tasks performed during visit and report any observations to appropriate customer representative

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## Air Handling Unit (AHU), 100% Outside Air, 15-30 HP

### **Standard Filter Change**

	All work must be performed in accordance with Johnson Controls safety policies
	Check with appropriate customer representative for operational deficiencies
	Turn equipment off
	Remove dirty filters
	Install new filters
	Turn equipment on
	Dispose of dirty filter appropriately
	Document tasks performed during visit and report any observations to appropriate customer representative

### **Comprehensive**

	All work must be performed in accordance with Johnson Controls safety policies
	Check with appropriate customer representative for operational deficiencies
	Visually inspect damper(s)
	Check condition of pulleys and belts
	Check for proper fan operation
	Check condition of coils
	Check condition of filters
	Record temperatures and pressures (if applicable)
	Check for unusual noise and vibration
	Check for deterioration of gaskets and seals
	Check overall condition of unit
	Visually inspect for fluid leaks of coils and connecting piping
	Check starter/contactors
	Check and tighten electrical connections
	Check damper operation and lubricate as required
	Visually check control valve(s)
	Lubricate blower and motor bearings
	Clean condensate pan and clear drain line
	Check condition of blower assembly
	Remove and dispose any debris from any maintenance activity

	Document tasks performed during visit and report any observations to appropriate customer representative
<b>Operational</b>	
	All work must be performed in accordance with Johnson Controls safety policies
	Check with appropriate customer representative for operational deficiencies
	Inspect motor mounting isolators
	Check for integrity of cabinet hardware
	Visually inspect damper(s)
	Verify damper operation
	Check condition of pulleys and belts
	Check for proper fan operation
	Check condition of coils
	Check condition of filters
	Record temperatures and pressures (if applicable)
	Check condensate drain
	Visually inspect electrical connections
	Check for unusual noise and vibration
	Check overall condition of unit
	Visually inspect for fluid leaks of coils and connecting piping
	Document tasks performed during visit and report any observations to appropriate customer representative

**Air Handling Unit (AHU) , 100% Outside Air, <15 HP**

***Standard Filter Change***

	All work must be performed in accordance with Johnson Controls safety policies
	Check with appropriate customer representative for operational deficiencies
	Turn equipment off
	Remove dirty filters
	Install new filters
	Turn equipment on
	Dispose of dirty filter appropriately
	Document tasks performed during visit and report any observations to appropriate customer representative

***Comprehensive***

	All work must be performed in accordance with Johnson Controls safety policies
	Check with appropriate customer representative for operational deficiencies
	Visually inspect damper(s)
	Check condition of pulleys and belts
	Check for proper fan operation
	Check condition of coils
	Check condition of filters
	Record temperatures and pressures (if applicable)
	Check for unusual noise and vibration
	Check for deterioration of gaskets and seals
	Check overall condition of unit
	Visually inspect for fluid leaks of coils and connecting piping
	Check starter/contactors
	Check and tighten electrical connections
	Check damper operation and lubricate as required
	Visually check control valve(s)
	Lubricate blower and motor bearings
	Clean condensate pan and clear drain line
	Check condition of blower assembly
	Remove and dispose any debris from any maintenance activity

	Document tasks performed during visit and report any observations to appropriate customer representative
<b><i>Operational</i></b>	
	All work must be performed in accordance with Johnson Controls safety policies
	Check with appropriate customer representative for operational deficiencies
	Inspect motor mounting isolators
	Check for integrity of cabinet hardware
	Visually inspect damper(s)
	Verify damper operation
	Check condition of pulleys and belts
	Check for proper fan operation
	Check condition of coils
	Check condition of filters
	Record temperatures and pressures (if applicable)
	Check condensate drain
	Visually inspect electrical connections
	Check for unusual noise and vibration
	Check overall condition of unit
	Visually inspect for fluid leaks of coils and connecting piping
	Document tasks performed during visit and report any observations to appropriate customer representative

<b>Boiler, Gas-Fired, Atmospheric, 0-10 HP</b>	
<b>Combustion Analysis</b>	
	All work must be performed in accordance with Johnson Controls safety policies
	Check with appropriate customer representative for operational deficiencies
	Perform combustion analysis procedures
	Document tasks performed during visit and report any observations to appropriate customer representative
<b>Comprehensive</b>	
	All work must be performed in accordance with Johnson Controls safety policies
	Check with appropriate customer representative for operational deficiencies
	Inspect burner contactors for wear
	Check and tighten electrical connections
	Check for proper gas supply pressure
	Check and clean pilot assembly
	Clean combustion fan wheel
	Visually inspect combustion chamber, draft diverter and flue for accumulation of soot - clean as needed
	Check burner for proper sequence of operation
	Check operating controls
	Check all safety controls
	Lift relief valve to ensure proper operation
	Check boiler relief valves for leakage
	Check combustion damper operation (if applicable)
	Check operation of primary boiler pump (if applicable)
	Check factory supplied gas piping and components for leakage
	Drain boiler, open hand hole covers and clean as needed (if applicable)
	Disassemble and clean low water cut-out
	Fill boiler and check for proper operation of make-up water valve
	Verify proper operation of low water cut-out control
	Check overall condition of unit
	Record and log all operating parameters (including pressures and temperatures)
	Remove and dispose any debris from any maintenance activity

	Document tasks performed during visit and report any observations to appropriate customer representative
<b><i>Fireside Cleaning (gaskets not included)</i></b>	
	All work must be performed in accordance with Johnson Controls safety policies
	Check with appropriate customer representative for operational deficiencies
	Remove access panels
	Brush fireside surfaces
	Reinstall access panels
	Remove and dispose any debris from any maintenance activity
	Document tasks performed during visit and report any observations to appropriate customer representative

## Boiler, Gas-Fired, Fire Tube, 151-300 HP

### *Combustion Analysis*

	All work must be performed in accordance with Johnson Controls safety policies
	Check with appropriate customer representative for operational deficiencies
	Perform combustion analysis procedures
	Document tasks performed during visit and report any observations to appropriate customer representative

### *Operational*

	All work must be performed in accordance with Johnson Controls safety policies
	Check with appropriate customer representative for operational deficiencies
	Blow down boiler
	Check for proper operation of low and high gas pressure cut-out switches
	Check factory supplied gas piping and components for leakage
	Check burner for proper sequence of operation
	Check flame quality
	Visually inspect combustion chamber, draft diverter and flue for accumulation of soot
	Check boiler relief valves for leakage
	Verify proper operation of low water cut-out control
	Check combustion blower motor operation
	Check hot water/steam temperature and pressure
	Check proper operation of make-up water valv
	Check overall condition of unit
	Document tasks performed during visit and report any observations to appropriate customer representative

<b>Boiler, Gas-Fired, Fire Tube, 301-600 HP</b>	
<b>Combustion Analysis</b>	
	All work must be performed in accordance with Johnson Controls safety policies
	Check with appropriate customer representative for operational deficiencies
	Perform combustion analysis procedures
	Document tasks performed during visit and report any observations to appropriate customer representative
<b>Operational</b>	
	All work must be performed in accordance with Johnson Controls safety policies
	Check with appropriate customer representative for operational deficiencies
	Blow down boiler
	Check for proper operation of low and high gas pressure cut-out switches
	Check factory supplied gas piping and components for leakage
	Check burner for proper sequence of operation
	Check flame quality
	Visually inspect combustion chamber, draft diverter and flue for accumulation of soot
	Check boiler relief valves for leakage
	Verify proper operation of low water cut-out control
	Check combustion blower motor operation
	Check hot water/steam temperature and pressure
	Check proper operation of make-up water valve
	Check overall condition of unit
	Document tasks performed during visit and report any observations to appropriate customer representative

## Chiller, Air Cooled, Screw, 251-400 Tons

### Vibration Analysis

	All work must be performed in accordance with Johnson Controls safety policies
	Check with appropriate customer representative for operational deficiencies
	Record equipment specific information for reference
	Install pads and labels (if applicable)
	Install sensors in proper location.
	Start equipment and run at normal operating conditions.
	Record readings and remove sensors.
	Submit readings for report generation and deliver to customer with recommendations.
	Document tasks performed during visit and report any observations to appropriate customer representative

### Oil Analysis (2 Circuits)

	All work must be performed in accordance with Johnson Controls safety policies
	Check with appropriate customer representative for operational deficiencies
	Remove sample in approved container
	Drop off for analysis
	Label and complete paperwork indicating present operating conditions
	Document tasks performed during visit and report any observations to appropriate customer representative

### Operational

	All work must be performed in accordance with Johnson Controls safety policies
	Check with appropriate customer representative for operational deficiencies
	Review control panel for proper operation and recorded fault histories
	Check for proper chilled water flow
	Check system pressures and temperatures
	Check refrigerant charge (sight glass)
	Check oil separator level
	Check for proper capacity control operation

	Check for proper oil temperature and pressure
	Check for visual signs of refrigerant/oil leak(s)
	Check for unusual noise and vibration
	Check for proper condenser fan operation
	Check overall condition of unit
	Record and log all operating parameters
	Document tasks performed during visit and report any observations to appropriate customer representative
<b>Seasonal Start-up</b>	
	All work must be performed in accordance with Johnson Controls safety policies
	Check with appropriate customer representative to coordinate the startup of the system
	Remove shutdown tag from unit
	Verify the chilled water valves are in their proper operating position
	Check for proper chilled water flow
	Start the chiller
	Review control panel for proper operation and recorded fault histories
	Check system pressures and temperatures
	Check refrigerant charge (sight glass)
	Check oil separator level
	Check for proper capacity control operation
	Check for proper oil temperature and pressure
	Check for visual signs of refrigerant/oil leak(s)
	Check for unusual noise and vibration
	Check overall condition of unit
	Check for proper condenser fan operation
	Record and log all operating parameters
	Document tasks performed during visit and report any observations to appropriate customer representative

<b>Chiller, Air Cooled, Scroll, 101-140 Tons</b>	
<b>Operational</b>	
	All work must be performed in accordance with Johnson Controls safety policies
	Check with appropriate customer representative for operational deficiencies
	Review control panel for proper operation and recorded fault histories
	Check for proper chilled water flow
	Check system pressures and temperatures
	Check refrigerant charge (sight glass)
	Check for proper capacity control operation
	Check for proper crank case heater operation (if applicable)
	Check for visual signs of refrigerant/oil leak(s)
	Check for unusual noise and vibration
	Check for proper condenser fan operation
	Check overall condition of unit
	Record and log all operating parameters
	Document tasks performed during visit and report any observations to appropriate customer representative
<b>Refrigerant Analysis (2 Circuits)</b>	
	All work must be performed in accordance with Johnson Controls safety policies
	Check with appropriate customer representative for operational deficiencies
	Remove sample in approved container
	Drop off for analysis
	Label and complete paperwork indicating present operating conditions
	Document tasks performed during visit and report any observations to appropriate customer representative
<b>Seasonal Start-up</b>	
	All work must be performed in accordance with Johnson Controls safety policies
	Check with appropriate customer representative to coordinate the startup of the system
	Remove shutdown tag from unit
	Verify the chilled water valves are in their proper operating

	position
	Check for proper chilled water flow
	Start the chiller
	Review control panel for proper operation and recorded fault histories
	Check system pressures and temperatures
	Check refrigerant charge (sight glass)
	Check for proper capacity control operation
	Check for visual signs of refrigerant/oil leak(s)
	Check for unusual noise and vibration
	Check overall condition of unit
	Check for proper condenser fan operation
	Record and log all operating parameters
	Document tasks performed during visit and report any observations to appropriate customer representative

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<b>Fan, Exhaust Fan, Ceiling Mounted, 0 - 5HP</b>	
<b>Comprehensive</b>	
	Check with appropriate customer representative for operational deficiencies
	Check rain guard
	Check and tighten electrical connections
	Clean area around equipment
	Inspect starter
	Lubricate as required
	Motor operating amps
	Check bearing wear
	Check belt guard
	Check belt(s) (if applicable)
	Check drive condition
	Check electrical contacts
	Check fan blades
	Check for proper rotation
	Complete any required maintenance checklists, report observations to appropriate customer representative

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## Fan, Exhaust Fan, Roof Mounted, 0-5 HP

### *Comprehensive*

	Check with appropriate customer representative for operational deficiencies
	Check rain guard
	Check and tighten electrical connections
	Clean area around equipment
	Inspect starter
	Lubricate as required
	Motor operating amps
	Check bearing wear
	Check belt guard
	Check belt(s) (if applicable)
	Check drive condition
	Check electrical contacts
	Check fan blades
	Check for proper rotation
	Complete any required maintenance checklists, report observations to appropriate customer representative

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<b>Furnace, All</b>	
<b>Comprehensive</b>	
	Check with appropriate customer representative for operational deficiencies
	Cycle thermostat and check for proper operation
	Check fan operation
	Check for unusual noise or vibration
	Clean area around equipment
	Complete any required maintenance checklists, report observations to appropriate customer representative
<b>Filter Replacement</b>	
	Check with appropriate customer representative for operational deficiencies
	Replace air filters per agreement
	Turn equipment off
	Remove dirty filters
	Install new filters
	Turn equipment on
	Dispose of dirty filter appropriately
	Complete any required maintenance checklists, report observations to appropriate customer representative
<b>Filters, Standard Pleated</b>	
	Check with appropriate customer representative for operational deficiencies
	Replace air filters per agreement
	Turn equipment off
	Remove dirty filters
	Install new filters
	Turn equipment on
	Dispose of dirty filter appropriately
	Complete any required maintenance checklists, report observations to appropriate customer representative
<b>Operational</b>	
	Check with appropriate customer representative for operational deficiencies
	Cycle thermostat and check for proper operation
	Check fan operation
	Check for unusual noise or vibration

	Clean area around equipment
	Complete any required maintenance checklists, report observations to appropriate customer representative

<b>Heater, Gas Infrared-All</b>	
<b>Comprehensive</b>	
	Check with appropriate customer representative for operational deficiencies
	Check operating and safety controls, adjust as needed
	Clean pilot assembly, including electrode spark gap, orifice, and ignition wire
	Check and tighten electrical connections
	Inspect for leaks and report
	Check alignment of thermo-sensor bulb
	Check and clean pilot sight glass
	Clean area around equipment
	Complete any required maintenance checklists, report observations to appropriate customer representative

**Roof Top Unit (RTU) , Cooling/Gas Heating,  
without Economizer, <8 Tons**

***Return Air Filter Change***

	All work must be performed in accordance with Johnson Controls safety policies
	Check with appropriate customer representative for operational deficiencies
	Turn equipment off
	Remove dirty filters
	Install new filters
	Turn equipment on
	Dispose of dirty filter appropriately
	Document tasks performed during visit and report any observations to appropriate customer representative

***Condenser Coil Cleaning***

	All work must be performed in accordance with Johnson Controls safety policies
	Check with appropriate customer representative for operational deficiencies
	Rinse coil(s) thoroughly with water
	Remove and dispose any debris from any maintenance activity
	Document tasks performed during visit and report any observations to appropriate customer representative

***Cooling Comprehensive (without Economizer)***

	All work must be performed in accordance with Johnson Controls safety policies
	Check with appropriate customer representative for operational deficiencies
	Review control panel for proper operation and recorded fault histories (if applicable)
	Check and tighten electrical connections
	Check VFD operation and clean cooling fan intake (if applicable)
	Check contactor(s)
	Check condition of condenser coil
	Check condition of evaporator coil
	Check condenser fan motors and blades
	Check blower motor operation

	Lubricate blower and motor bearings
	Check condition and alignment of pulley and belts
	Check condition of filters
	Clean condensate pan and clear drain line
	Check for visual signs of refrigerant/oil leak(s)
	Check for unusual noise and vibration
	Record and log all operating parameters
	Check overall condition of unit
	Remove and dispose any debris from any maintenance activity
	Document tasks performed during visit and report any observations to appropriate customer representative
<b>Gas Heating Comprehensive (without Economizer)</b>	
	All work must be performed in accordance with Johnson Controls safety policies
	Check with appropriate customer representative for operational deficiencies
	Check and tighten electrical connections
	Check contactor(s)
	Check combustion blower motor operation
	Check igniter and pilot operation
	Check condition of heat exchanger
	Check condition of burners and clean as required in place
	Check for proper venting
	Check for leaks on gas line (within cabinet)
	Check condition of pulley and belts
	Check condition of filters
	Check for unusual noise and vibration
	Check overall condition of unit
	Remove and dispose any debris from any maintenance activity
	Document tasks performed during visit and report any observations to appropriate customer representative

## Unit Heater, Gas Fired, <300000 BTU

### Comprehensive

	All work must be performed in accordance with Johnson Controls safety policies
	Check with appropriate customer representative for operational deficiencies
	Check integrity of unit heater supports
	Check and tighten electrical connections
	Check igniter and pilot operation
	Check condition of heat exchanger
	Check condition of burners and clean as required in place
	Check for proper venting
	Check for leaks on gas line down stream of manual shutoff
	Check condition of pulley and belts (if applicable)
	Cycle thermostat and check for proper operation
	Check for unusual noise and vibration
	Check overall condition of unit
	Remove and dispose any debris from any maintenance activity
	Document tasks performed during visit and report any observations to appropriate customer representative

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