Automated Logic Contracting Services Assurance Plans

Secure

Prepared For: Jeremiah Varco

Location: 18 North County Street, 9th Floor
Waukegan, IL

Date: November 21, 2019

AUTOMATEDLOGIC
United Technologies

Building automation, energy and environmental control
www.automatedlogic.com

Systems Included

Area	Systems/Equipment/Services	Quantity
Owner Directed Hours	Hours	200
Depke Juvenile Complex Center	Air Handling Unit	1
	Chilled Water System	1
	Hot Water System	1
	Rooftop Unit	12
	Chilled Water System	1
Central Permit Facility	Hot Water System	1
	Air Handling Unit	2
	Chilled Water System	1
18 N County - Central Plant	Chilled Water System	1
	Hot Water System	1
18 N County - Admin Tower (Bld A)	Air Handling Unit	4
	Rooftop Unit	2
18 N County - Bld B	Rooftop Unit	2
18 N County - Center Courts (Bld C)	Air Handling Unit	4
18 N County - Annex Courts (Bld D)	Air Handling Unit	2
Lake County Winchester	Hot Water System	1
	Chiller Water System	1
	Make-up Air Unit	2
Public Defender	Air Handling Unit	1
	Chiller Water System	1
	Hot Water System	1
Babcox Jail	Air Handling Unit	6

General Services Provided

SECURE

Included here is a brief overview and description of the different services provided in this Secure Assurance plan.

Owner Directed Hours
Owner directed hours that can be pre-scheduled with ALC. The agreement includes two days per month.

Facility management consulting
A dedicated system specialist provides on-site consulting services that specifically address your facility needs.

Service history and reporting
During each site visit, service technicians discuss material used, labor required and work performed along with any additional findings or concerns.

24/7 call-center support
Remote assistance is available 24 hours a day, seven days a week.

Onsite response < 1 business day
For time-sensitive matters that cannot be resolved remotely, a service technician will be onsite within one business day.

Online support
Automated Logic provides remote facility operation support during normal business hours.

Clarifications and Exclusions

Clarifications:

This proposal is based on labor during normal business hours. (8 am-5 pm weekdays)

Owner directed hours include two days per month. If more than two consecutive days are needed per month please reach out to Automated Logic.

Owner directed hours must be used in their entirety over a calendar year or they will be lost.

Owner directed hours must be scheduled in advance. The owner will be responsible to reach out and schedule these dates.

Owner directed hours must be used in 8 hour increments.

Exclusions:

Any scope relating to DOT buildings.

Premium Time for emergency or after regular hours calls

Mechanical repairs

Taxes are not included in price

Painting and/or patching of walls

Demolition and/or cleanup

Removal, handling, or transporting any hazardous material

Equipment Exclusions:

All items not directly terminated to an Automated Logic control module are excluded from this agreement. Such items include but are not limited to fan motors, pump motors, fuses, disconnects, motor starters, smoke detectors, fire alarms, variable speed drives, air compressors, exhaust air valves, humidifiers, heating coils or any computer hardware or DDC controllers not provided by Automated Logic.

Any control devices not originally installed by Automated Logic.

Any control wiring or pneumatic tubing outside Automated Logic control panels, variable speed drives, combination fire/smoke dampers and actuators.

Contacts

The following controls professionals at Automated Logic are listed for your convenience whenever you need to contact us:

Your Service Sales Contact: Jeff Schuurman has been instrumental in preparing this proposal.
Contact at: 630-734-6500 or jeffrey.schuurman@carrier.com

Your Service Contract Coordinator: Trina Marchionda schedules preventive maintenance visits and is responsible for the timely invoicing under this agreement. Contact at: 630-734-6509, or trina.marchionda@carrier.com

Your Service Coordinator: Michelle Thomas can be contacted to schedule or re-schedule service visits and handles emergency calls during normal business hours.
Contact at: 855-734-2521 (follow prompt for emergency) or michelle.thomas@carrier.com.

Your Account Manager: A service account manager provides overall support and ensures resource availability for your service agreement. Your account manager has the final responsibility to make sure your needs are met in the manner that meets your criteria. This person will be identified if this agreement moves forward.

Your Dispatch Supervisor: Chad Sells is responsible for providing Remote Technical support during normal business hours.
Contact at: 855-734-2521

Your Emergency After Hours Service: Automated Logic After Hours Call Center will connect you to the available on call System Specialist.
Contact at: 855-734-2521 (follow prompt for emergency)

Your Area Service Manager: Aaron Thomas serves as Head of Service Department.
Contact at: 630-734-6500 or aaron.thomas@carrier.com

Your Branch Manager: Rick Smith serves as General Manager of Automated Logic Midwest.
Contact at: 224-268-7254 or richard.w.smith@carrier.com

General Office Information:

Automated Logic Contracting Services
2400 Ogden Ave, Suite 100
Lisle, IL 60532

630-852-1700

Service Agreement

Customer Name: Jeremiah Varco **Submitted By:** Jeff Schuurman
Customer Address: 18 North County Street, 9th Floor
Waukegan, IL

Scope of Service

Automated Logic Contracting Services Inc. (ALCS) will perform scheduled maintenance visits during the term of this Agreement covering the automation equipment and systems listed in the Systems Included section of this Agreement. More detailed systems related tasks can be found in the Detailed Description of Work section of this Agreement.

Agreement Term

This Agreement shall become effective upon January 1st, 2020 and shall continue for a three year term.

Agreement Price

Agreement price in year one:	$89,723
Agreement price in year two:	$91,939
Agreement price in year three:	$94,221

Preferred rates for Assurance Plan customers

On Site System Specialist Labor, Normal Business Hours	$165.00/HR

Early Termination

In the event of early termination or other breach by the Customer, ALCS may, at its option, recover from Customer, and Customer agrees to pay any and all amounts which, under the terms of this Agreement, may be then due or which may have accrued to the date of such termination.

Service Agreement

Acceptance and Approval

This Agreement will become binding upon signature by Customer and signature by an ALCS representative.

This Agreement is subject to the Terms and Conditions attached and incorporated in this Agreement.

Customer Acceptance (typed/printed name)	Automated Logic Contracting Services Inc. Acceptance (typed/printed name)
Title	Title
Customer Acceptance (signature)	Automated Logic Contracting Services Inc. (signature)

Standard Terms & Conditions of Sale

1. PAYMENT AND TAXES – Payment shall be made net 30 days from date of invoice. Automated Logic reserves the right to require cash payment or other alternative method of payment prior to shipment or completion of work if Automated Logic determines, in its sole discretion, that Customer or Customer's assignee's financial condition at any time does not justify continuance of the net 30 days payment term. In addition to the price, the Customer shall pay Automated Logic any taxes or government charges arising from this Agreement. If Customer claims any such taxes do not apply to transactions covered by this Agreement, Customer shall provide Automated Logic with acceptable tax exemption certificates. Payment for service agreements shall be due and payable in advance of services being rendered.

2. SCOPE OF WORK/EXCLUSIONS – Repair to building construction, plastering, patching and painting are excluded. Customer agrees to provide Automated Logic with required field utilities (electricity, toilets, drinking water, receiving dock, project hoist, elevator service, etc.) without charge. Automated Logic agrees to keep the job site clean of debris arising out of its own operations. Customer shall not back charge Automated Logic for any costs or expenses without Automated Logic's written consent. Unless specifically noted in the statement of the scope of work or services undertaken by Automated Logic under this Agreement, Automated Logic's obligations under this agreement expressly exclude any work or service of any nature associated or connected with the identification, abatement, clean up, control, removal, or disposal of environment hazards or dangerous substances, to include but not be limited to asbestos or PCBs, discovered in or on the premises. Any language or provision of the Agreement elsewhere contained which may authorize or empower the Customer to change, modify, or alter the scope of work or services to be performed by Automated Logic shall not operate to compel Automated Logic to perform any work relating to Hazards without Automated Logic's express written consent. Services performed at customer's direction outside of the scope of this Agreement will be billed at our scheduled rates.

3. EXTRAS – Work and material in addition to or different from that stated herein, and changes in drawings, specifications or time of performance, shall be considered as extras, and shall entitle Automated Logic to an adjustment in the contract price and the delivery schedule.

4. EMERGENCY SERVICE WORK – If emergency service is performed at Customer's request and inspection does not reveal any defects for which Automated Logic is liable under this Agreement, Customer shall pay for such work at Automated Logic's prevailing time and material rate.

5. SHIPMENT/PARTIAL SHIPMENT/RETURNS – All product shipments shall be F.C.A. shipping point (Incoterms 2010), freight prepaid and allowed to the job site. Shipment dates quoted are approximate. Automated Logic does not guarantee a particular date for shipment or delivery. Automated Logic shall have the right to ship any portion of equipment, goods or other materials included in this Agreement and invoice Customer for such partial shipment. No goods will be accepted for return without prior written authorization. Returned goods may be subject to a restocking charge. Special order and non-stock items cannot be returned.

6. DELAYS – Automated Logic shall not be liable for any delay in the performance of the work resulting from or attributed to acts or circumstances beyond Automated Logic's control, including, but not limited to, acts of God or of the public, acts of government, acts of terrorism, fire, floods, epidemics, freight embargoes, unusually severe weather, riots, strikes or labor disputes, conditions of the premises, acts or omissions of the Customer, Owner or other contractors, or delays caused by suppliers or subcontractors ("Force Majeure Event(s)"). In the event Automated Logic is delayed in manufacturing, shipping, delivery or any other performance under this Agreement by a Force Majeure Event and without the fault or negligence of Automated Logic, Automated Logic agrees to notify Customer in writing as soon a practicable of the causes of such delay, and Automated Logic shall further be entitled to an extension of the time equivalent to the duration of any such delay and a reasonable time in which to recover from said delay to resume performance. In the event any materials or equipment to be provided by Automated Logic under this Agreement becomes permanently unavailable as a result of a Force Majeure Event, Automated Logic shall be excused from furnishing said materials or equipment.

7. WARRANTY – Automated Logic warrants to Customer that the Work performed by Automated Logic hereunder will comply in all material respects with the attached Scope of Work or Statement of Services and will be free from material defects in workmanship. Automated Logic warrants that all equipment manufactured by Automated Logic Corporation and all Automated Logic equipment, parts or components supplied hereunder will be free from defects in material and workmanship. Automated Logic shall at its option repair or replace, F.C.A. point of sale (Incoterms 2010), any equipment, part or component sold by Automated Logic and determined to be defective within one (1) year from the date Customer has beneficial use. Automated Logic does not warrant products not manufactured by Automated Logic, but it does pass on to Customer any available manufacturer's warranty for such products. Automated Logic warrants that all services provided by Automated Logic hereunder shall be performed in a workmanlike manner. In the event any such service is determined to be defective within ninety (90) days of completion of that service, Automated Logic shall at its option re-perform or issue a credit for such service. Automated Logic's obligations as set forth herein shall be Customer's exclusive remedy. Automated Logic shall not be responsible for labor charges for removal or reinstallation of defective equipment, parts or components, for charges for transportation, handling and shipping, or for repairs or replacement of such equipment, parts or components required as a consequence of faulty installation when not installed by Automated Logic, misapplication, vandalism, abuse, exposure to chemicals, improper servicing, unauthorized alteration or improper operation by persons other than Automated Logic. THIS WARRANTY IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESS, IMPLIED OR STATUTORY INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

Customer's use of any software provided under this Agreement is licensed (if applicable) and governed by the applicable end user license agreement.

8. WORKING HOURS – All services performed under this Agreement, including major repairs, are to be provided during Automated Logic's normal working hours unless otherwise agreed in writing.

9. CHANGE ORDERS/ADDITIONAL WORK – Automated Logic will not perform additional work until such time as Automated Logic receives a change order, duly executed by each party, setting forth the scope and an agreed upon price for the additional work, as well as any appropriate adjustments to the delivery schedule. Additional work and/or materials supplied under any change order shall be subject to the terms of this Agreement.

10. CUSTOMER RESPONSIBILITIES – Customer shall: provide safe and reasonable access to the job site and equipment being serviced; provide a safe work environment; keep areas adjacent to equipment free of extraneous material; move any stock, fixtures, walls, partitions, ceilings, enclosures or such other property as may be necessary to perform the specified work; promptly notify Automated Logic of any unusual operating conditions; operate any equipment supplied hereunder properly and in accordance with instructions; and identify and label any asbestos containing material that may be present. The Customer will provide, in writing, prior to the start of a job, a signed statement regarding the absence or presence of asbestos for any job where the building or the equipment to be serviced is older than 1981. Should this document state that no asbestos is present, the Customer will also provide in writing the method used to determine the absence of asbestos. If online service via modem is being provided, the Customer shall provide and maintain, at Customer's cost, a voice grade dial-up telephone line or internet connection installed in a mutually agreed upon location.

11. LIMITATION OF LIABILITY – Under no circumstances shall Automated Logic be liable for any indirect, incidental, special or consequential damages, including loss of revenue, loss of use of equipment or facilities, loss of data, or economic damages howsoever arising. Automated Logic shall be liable for damage to property, other than equipment provided under this Agreement, and to persons, to the extent that Automated Logic's negligent acts or omissions directly contributed to such injury or property damage. To the extent permitted by law, Automated Logic's aggregate liability for any reason, whether in contract, tort (including negligence) or otherwise, will be limited to the value of the payments received by Automated Logic under this Agreement. The aggregate liability shall not limit the liability of Automated Logic for any injury to, or death of a person, caused by its gross negligence.

12. CUSTOMER TERMINATION FOR DEFAULT – Customer shall have the right to terminate this Agreement for Automated Logic's default provided Automated Logic fails to cure such default within thirty (30) days after having been given prior written notice of the default. Upon early termination or expiration of this Agreement, Automated Logic shall have free access to enter Customer locations to disconnect and remove any and all Automated Logic-owned parts, tools and personal property. Additionally, Customer agrees to pay Automated Logic for all incurred but unamortized service costs performed by Automated Logic including overhead and a reasonable profit.

13. AUTOMATED LOGIC TERMINATION – Automated Logic reserves the right to discontinue its service or performance under this Agreement any time payments have not been made as agreed or if alterations, additions or repairs are made to equipment during the term of this Agreement by others without prior agreement between Customer and Automated Logic. Should Customer fail to make payment in accordance with the terms of this Agreement and such failure continues without cure for a period of five (5) days following Customer's receipt of written notice of such payment default, Automated Logic may terminate this Agreement without liability.

Standard Terms & Conditions of Sale – Continued

14. **CLAIMS / ALC EMPLOYEES –** Any lawsuits arising from the performance or nonperformance of this Agreement, whether based upon contract, negligence, strict liability or otherwise, shall be brought within one (1) year from the date the claim arose. The Customer acknowledges that Automated Logic's employees are valuable assets to Automated Logic. During the Term of this Agreement or one hundred eighty (180) days from the effective date, whichever is greater, if Customer hires an Automated Logic employee who worked at the Customer's facility at any time, the Customer agrees to 1) pay Automated Logic an amount equal to twelve (12) months' salary for such employee, and 2) reimburse Automated Logic for all costs associated with any training Automated Logic provided to such employee.

15. **GOVERNMENT PROCUREMENTS** –

(a) **COMMERCIAL ITEMS** – The components, equipment and services provided by Automated Logic under this Agreement are "commercial items" as defined in Section 2.101 of the Federal Acquisition Regulations ("FAR"), and the prices of such components, equipment and services are based on Automated Logic's commercial pricing policies and practices (which do not consider any special requirements of U.S. Government cost principles, FAR Part 31, or any similar procurement regulations). As such, Automated Logic will not agree to provide or certify cost or pricing data, nor will Automated Logic agree to comply with the Cost Accounting Standards (CAS). In addition, no government procurement regulations, such as FARs or DFARs, shall apply to this Agreement except those regulations expressly accepted in writing by Automated Logic.

(b) **WHERE AUTOMATED LOGIC IS SUBCONTRACTOR** – Where Automated Logic is subcontractor, Automated Logic is agreeing to perform a private subcontract for the sale of a commercial item on a fixed-price basis to Customer (a private entity) and as such there shall be no Federal Acquisition Regulations (FARs), DFARS, CFRs, or any other government procurement regulations of any kind which apply to this Agreement, except those regulations expressly accepted in writing by Automated Logic. In addition, Automated Logic will not agree to provide or certify cost or pricing data nor will Automated Logic agree to comply with the Cost Accounting Standards (CAS). Automated Logic refers to FAR 52.244-6, "Subcontracts for Commercial Items and Commercial Components."

16. **HAZARDOUS MATERIALS** – If Automated Logic encounters any asbestos or other hazardous material while performing this Agreement, Automated Logic may suspend its work and remove its employees from the project, until such material and any hazards associated with it are abated. The time for Automated Logic's performance shall be extended accordingly, and Automated Logic shall be compensated for the delay.

17. **OCCUPATIONAL SAFETY AND HEALTH –** Automated Logic and Customer agree to notify each other immediately upon becoming aware of an inspection under, or any alleged violation of, the Occupational Safety and Health Act ("OSHA") relating in any way to the performance of work under this Agreement, the project or the job site.

18. **ENTIRE AGREEMENT, ASSIGNMENT and MODIFICATION** - This Agreement contains the complete and exclusive statement of the agreement between Automated Logic and Customer and supersedes all previous or contemporaneous, oral or written, statements. Customer may assign this Agreement only with Automated Logic's prior written consent. No change, modification, amendment or waiver of any of the terms or conditions of this Agreement shall be binding upon the parties unless made in writing and duly executed by both parties hereto.

19. **CUSTOMER CONSENT -** Customer consents and agrees that Automated Logic may, from time to time, publicize Automated Logic related projects with Customer, including the value of such projects, in all forms and media for advertising, trade, and any other lawful purposes.

20. **FOR WORK BEING PERFORMED IN CALIFORNIA** - Contractors are required by law to be licensed and regulated by the Contractors' State License Board which has jurisdiction to investigate complaints against contractors if a complaint regarding a patent act or omission is filed within four years of the date of the alleged violation. A complaint regarding a latent act or omission pertaining to structural defects must be filed within 10 years of the date of the alleged violation. Any questions concerning a contractor may be referred to the Registrar, Contractors' State License Board, P.O. Box 26000, Sacramento, California 95826.

21. **INTELLECTUAL PROPERTY** – Notwithstanding anything to the contrary stated herein, Automated Logic retains ownership of its intellectual property and no license to Automated Logic's intellectual property is granted except as necessary for Customer to use any deliverables and/or services provided hereunder.

22. **DATA PRIVACY** – Each party will comply with applicable data privacy laws governing personal information collected and processed under this Agreement.

23. REMOTE MONITORING

(a) DATA RIGHTS - Customer hereby grants and agrees to grant to Automated Logic a worldwide, non-exclusive, non-terminable, irrevocable, perpetual, paid-up, royalty free license to any Source Data, with the right to sub-license to its affiliates and suppliers for (i) Automated Logic's performance of services pursuant to this Agreement, (ii) the improvement of Automated Logic services, and Automated Logic's Analytics Platform; (iii) improving product performance, operation, reliability, and maintainability; (iv) to create, compile, and/or use datasets and/or statistics for the purposes of benchmarking, development of best practices, product improvement; (v) the provision of services to third parties, (vi) research, statistical, and marketing purposes, and/or (vii) in support of Automated Logic agreements.

Source Data – shall mean data that is produced directly from a system, or device and received at a collection point or a central server (e.g. a Automated Logic's database, data lake, or third party cloud service).

Analytics Platform – shall mean server algorithms or web interface systems used to (i) interpret, convert, manipulate, or calculate data, (ii) perform data processing, and/or (iii) the delivery of data to Automated Logic, affiliates or suppliers of Automated Logic, and/or Customer.

(b) RETURN OF DATA - Customer understands and acknowledges that Automated Logic will collect Source Data that will be stored on and/or transmitted to Automated Logic's servers and to suppliers or affiliates that are contracted by Automated Logic and used to transmit, process, extract or store such Source Data for purposes of Automated Logic's performance of the service in accordance with this Agreement. Once such data and information has been stored and/or transmitted to Automated Logic's servers, Customer agrees that such data and information shall become part of Automated Logic's database and therefore subject to the license terms under section 23(a).

(c) DATA DELIVERY - During the term of the Agreement Customer shall (i) make reasonable efforts to ensure that the hardware remains powered on, (ii) avoid intentional action to impede, block or throttle collection and transmission of Source Data by Automated Logic, and (iii) avoid intentional action to disable, turn off, or remove the data collection hardware or software without Automated Logic's express written consent, which consent shall not be unreasonably withheld.

Owner Directed Hours - Hours

Owner Directed Hours – 200 Hours / year

Tasks to be performed on a Scheduled Basis:

- Hours must be scheduled by the Owner
- Two days per month. If more than two consecutive days per month are needed the customer will need to reach out to Automated Logic to check technician availability.
- Owner directed hours must be used in their entirety over a calendar year or they will be lost.
- Owner directed hours must be scheduled in advance. The owner will be responsible to reach out and schedule these dates.
- Minimum 8 hour increment per visit.

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Detailed Description of Work

Depke Juvenile Complex Center - Air Handling Unit

AIR HANDLING UNITS (AHU-1 CPF - Large, AHU-2 CFP)

Tasks to be performed on a Scheduled Basis:

- Verify that AHU is being controlled at the appropriate values, while the fan is operating.
- Change one set point value; verify smooth transition and stable control at the new set point.
- Return set point to original value. Repeat for each additional control loop, if any.
- Verify that controlled valves and dampers will stroke fully in both directions, sealing tightly where appropriate.
- Verify the proper operation of critical control processes and points associated with this unit. Make adjustments if necessary.
- Verify the setting/operation of the low temperature safety device, if applicable.
- Verify the operation of the cooling, pre-heat, reheat, & humidity control device, if applicable.
- Field test any alarm device or sensor and verify alarm condition is reported properly.
- Verify sensors are within acceptable range, calibrate if applicable.
- Check associated controller(s) and expansion modules for proper 24 Volt power and communication.
- Inspect wiring for signs of corrosion, fraying and discoloration, defective shielding or shield grounding.
- Clean enclosure exterior surfaces & Remove excessive dust from internal surfaces.
- Document any issues and discuss "Corrective Maintenance" options with customer.

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Detailed Description of Work

Depke Juvenile Complex Center - Chilled Water System

CHILLED WATER SYSTEM

Tasks to be performed on a Scheduled Basis: (Ideally prior to seasonal use)

- Verify system is enabled and system components are in the automatic position.
- Verify reasonable readings are received into the system from the Outside Air Temperature/Relative Humidity sensor.
- Ensure enable/disable or lockout setpoints are reasonable for the application and equipment i.e. air cooled, liquid cooled etc.
- Confirm setpoints or optimized setpoints are in the proper range for equipment
- Confirm chilled water supply and return temperature readings are reasonable for the condition of the system (prior to startup).
- Confirm with the operator the system water levels are full i.e. chilled water, condenser water etc.
- Start system and confirm the lead equipment i.e. pumps; chillers, towers etc. started as expected note any deficiencies.
- Confirm chilled water supply and return temperature readings are reasonable for the condition of the system (post startup).
- Note any deficiencies.
- Confirm flow readings are reasonable for the amount of pumps running.
- Enable Pump rotation sequence to confirm failure recovery. This process should be initiated once for the amount of pumps present. Note any deficiencies.
- If equipped with VFD's adjust setpoint of process variable i.e. flow or differential pressure and confirm the control loop responds appropriately. Restore setpoint to original setting and note any deficiencies.
- Enable chiller rotation as applicable and be sure to allow for adequate runtime in between rotation in order to avoid the short-cycle of the cooling equipment. Note any deficiencies.
- Adjust parameters to allow for staging of equipment as applicable. Return parameters to original values once complete.
- Verify critical alarm reporting & Trend Configuration
- Test Chiller Manager roll-over sequence of recovery if equipped.
- Return parameters to original values once complete.
- Note any deficiencies of all of the above tests in detail on service report.
- Make any recommendations on findings to Facility Manager.

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Detailed Description of Work

Depke Juvenile Complex Center - Hot Water System - 047A Depke

HOT WATER SYSTEM

Tasks to be performed on a Scheduled Basis: (ideally prior to seasonal use)

- Verify system is enabled and system components are in the automatic position.
- Verify reasonable readings are received into the system from the Outside Air Temperature/Relative Humidity sensor.
- Ensure enable/disable or lockout setpoints are reasonable for the application and equipment.
- Confirm setpoints, reset schedules or optimized setpoints are in the proper range for equipment.
- Confirm hot water supply and return temperature readings are reasonable for the condition of the system (prior to startup).
- Confirm with the operator the system water levels are full to appropriate levels.
- Start system and confirm the lead equipment i.e. pumps, boilers, etc. started as expected note any deficiencies.
- Confirm hot water supply and return temperature readings are reasonable for the condition of the system (post startup). Note any deficiencies.
- Confirm flow readings (if applicable) are reasonable for the amount of pumps running.
- Enable Pump rotation sequence to confirm proper failure recovery. This process should be initiated once for the amount of pumps present. Note any deficiencies.
- If equipped with VFD's adjust setpoint of process variable i.e. flow or differential pressure and confirm the control loop responds appropriately. Restore setpoint to original setting and note any deficiencies.
- If equipped with a mixing valve, adjust setpoint or reset schedule to force a response from valve. Verify the system responded appropriately and achieved setpoint. Restore setpoint to original and note any deficiencies.
- If equipped with a heat exchanger, adjust setpoint or reset schedule to force a response from valve. Verify the system responded appropriately and achieved setpoint. Restore setpoint to original and note any deficiencies.
- Enable boiler rotation as applicable and be sure to allow for adequate runtime in between rotation in order to avoid the short-cycle of the heating equipment. Note any deficiencies.
- Adjust parameters to allow for staging of equipment as applicable. Return parameters to original values once complete.
- Note any deficiencies of all of the above tests in detail on service report. & Make any recommendations on findings to Facility Manager.

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Detailed Description of Work

Depke Juvenile Complex Center - Rooftop Units

ROOF TOP UNITs (AC 9, 10, 12, 22-25, 34, 37, RTU 1, RTU 2, RTU 4)

Tasks to be performed on a Scheduled Basis:

- Verify that RTU is being controlled at the appropriate values, while the fan is operating.
- Change one set point value; verify smooth transition and stable control at the new set point.
- Return set point to original value. Repeat for each additional control loop.
- Verify that heating stages & cooling stages enable & disable.
- Verify the proper operation of critical control processes and points associated with this unit. Make adjustments if necessary.
- Field test any alarm device or sensor and verify alarm condition is reported properly.
- Verify sensors are within acceptable range, calibrate if applicable.
- Check associated controller(s) and expansion modules for proper 24 Volt power and communication.
- Inspect wiring for signs of corrosion, fraying and discoloration, defective shielding or shield grounding.
- Clean enclosure exterior surfaces & Remove excessive dust from internal surfaces.
- Document any issues and discuss "Corrective Maintenance" options with customer.

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Detailed Description of Work

Central Permit Facility - Hot Water System

HOT WATER SYSTEM

Tasks to be performed on a Scheduled Basis: (ideally prior to seasonal use)

- Verify system is enabled and system components are in the automatic position.
- Verify reasonable readings are received into the system from the Outside Air Temperature/Relative Humidity sensor.
- Ensure enable/disable or lockout setpoints are reasonable for the application and equipment.
- Confirm setpoints, reset schedules or optimized setpoints are in the proper range for equipment.
- Confirm hot water supply and return temperature readings are reasonable for the condition of the system (prior to startup).
- Confirm with the operator the system water levels are full to appropriate levels.
- Start system and confirm the lead equipment i.e. pumps, boilers, etc. started as expected note any deficiencies.
- Confirm hot water supply and return temperature readings are reasonable for the condition of the system (post startup). Note any deficiencies.
- Confirm flow readings (if applicable) are reasonable for the amount of pumps running.
- Enable Pump rotation sequence to confirm proper failure recovery. This process should be initiated once for the amount of pumps present. Note any deficiencies.
- If equipped with VFD's adjust setpoint of process variable i.e. flow or differential pressure and confirm the control loop responds appropriately. Restore setpoint to original setting and note any deficiencies.
- If equipped with a mixing valve, adjust setpoint or reset schedule to force a response from valve. Verify the system responded appropriately and achieved setpoint. Restore setpoint to original and note any deficiencies.
- If equipped with a heat exchanger, adjust setpoint or reset schedule to force a response from valve. Verify the system responded appropriately and achieved setpoint. Restore setpoint to original and note any deficiencies.
- Enable boiler rotation as applicable and be sure to allow for adequate runtime in between rotation in order to avoid the short-cycle of the heating equipment. Note any deficiencies.
- Adjust parameters to allow for staging of equipment as applicable. Return parameters to original values once complete.
- Note any deficiencies of all of the above tests in detail on service report. & Make any recommendations on findings to Facility Manager.

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Detailed Description of Work

Central Permit Facility - Air Handling Units

AIR HANDLING UNITS (AHU-1 CPF, AHU-2 CPF)

Tasks to be performed on a Scheduled Basis:

- Verify that AHU is being controlled at the appropriate values, while the fan is operating.
- Change one set point value; verify smooth transition and stable control at the new set point.
- Return set point to original value. Repeat for each additional control loop, if any.
- Verify that controlled valves and dampers will stroke fully in both directions, sealing tightly where appropriate.
- Verify the proper operation of critical control processes and points associated with this unit. Make adjustments if necessary.
- Verify the setting/operation of the low temperature safety device, if applicable.
- Verify the operation of the cooling, pre-heat, reheat, & humidity control device, if applicable.
- Field test any alarm device or sensor and verify alarm condition is reported properly.
- Verify sensors are within acceptable range, calibrate if applicable.
- Check associated controller(s) and expansion modules for proper 24 Volt power and communication.
- Inspect wiring for signs of corrosion, fraying and discoloration, defective shielding or shield grounding.
- Clean enclosure exterior surfaces & Remove excessive dust from internal surfaces.
- Document any issues and discuss "Corrective Maintenance" options with customer.

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Detailed Description of Work

Central Permit Facility - Chilled Water System

CHILLED WATER SYSTEM

Tasks to be performed on a Scheduled Basis: (Ideally prior to seasonal use)

- Verify system is enabled and system components are in the automatic position.
- Verify reasonable readings are received into the system from the Outside Air Temperature/Relative Humidity sensor.
- Ensure enable/disable or lockout setpoints are reasonable for the application and equipment i.e. air cooled, liquid cooled etc.
- Confirm setpoints or optimized setpoints are in the proper range for equipment
- Confirm chilled water supply and return temperature readings are reasonable for the condition of the system (prior to startup).
- Confirm with the operator the system water levels are full i.e. chilled water, condenser water etc.
- Start system and confirm the lead equipment i.e. pumps; chillers, towers etc. started as expected note any deficiencies.
- Confirm chilled water supply and return temperature readings are reasonable for the condition of the system (post startup).
- Note any deficiencies.
- Confirm flow readings are reasonable for the amount of pumps running.
- Enable Pump rotation sequence to confirm failure recovery. This process should be initiated once for the amount of pumps present. Note any deficiencies.
- If equipped with VFD's adjust setpoint of process variable i.e. flow or differential pressure and confirm the control loop responds appropriately. Restore setpoint to original setting and note any deficiencies.
- Enable chiller rotation as applicable and be sure to allow for adequate runtime in between rotation in order to avoid the short-cycle of the cooling equipment. Note any deficiencies.
- Adjust parameters to allow for staging of equipment as applicable. Return parameters to original values once complete.
- Verify critical alarm reporting & Trend Configuration
- Test Chiller Manager roll-over sequence of recovery if equipped.
- Return parameters to original values once complete.
- Note any deficiencies of all of the above tests in detail on service report.
- Make any recommendations on findings to Facility Manager.

AUTOMATEDLOGIC
United Technologies

Detailed Description of Work

18 N County - Central Plant - Chilled Water System

CHILLED WATER SYSTEM

Tasks to be performed on a Scheduled Basis: (Ideally prior to seasonal use)

- Verify system is enabled and system components are in the automatic position.
- Verify reasonable readings are received into the system from the Outside Air Temperature/Relative Humidity sensor.
- Ensure enable/disable or lockout setpoints are reasonable for the application and equipment i.e. air cooled, liquid cooled etc.
- Confirm setpoints or optimized setpoints are in the proper range for equipment
- Confirm chilled water supply and return temperature readings are reasonable for the condition of the system (prior to startup).
- Confirm with the operator the system water levels are full i.e. chilled water, condenser water etc.
- Start system and confirm the lead equipment i.e. pumps; chillers, towers etc. started as expected note any deficiencies.
- Confirm chilled water supply and return temperature readings are reasonable for the condition of the system (post startup).
- Note any deficiencies.
- Confirm flow readings are reasonable for the amount of pumps running.
- Enable Pump rotation sequence to confirm failure recovery. This process should be initiated once for the amount of pumps present. Note any deficiencies.
- If equipped with VFD's adjust setpoint of process variable i.e. flow or differential pressure and confirm the control loop responds appropriately. Restore setpoint to original setting and note any deficiencies.
- Enable chiller rotation as applicable and be sure to allow for adequate runtime in between rotation in order to avoid the short-cycle of the cooling equipment. Note any deficiencies.
- Adjust parameters to allow for staging of equipment as applicable. Return parameters to original values once complete.
- Verify critical alarm reporting & Trend Configuration
- Test Chiller Manager roll-over sequence of recovery if equipped.
- Return parameters to original values once complete.
- Note any deficiencies of all of the above tests in detail on service report.
- Make any recommendations on findings to Facility Manager.

AUTOMATEDLOGIC
United Technologies

Detailed Description of Work

18 N County - Central Plant - Hot Water System

HOT WATER SYSTEM

Tasks to be performed on a Scheduled Basis: (ideally prior to seasonal use)

- Verify system is enabled and system components are in the automatic position.
- Verify reasonable readings are received into the system from the Outside Air Temperature/Relative Humidity sensor.
- Ensure enable/disable or lockout setpoints are reasonable for the application and equipment.
- Confirm setpoints, reset schedules or optimized setpoints are in the proper range for equipment.
- Confirm hot water supply and return temperature readings are reasonable for the condition of the system (prior to startup).
- Confirm with the operator the system water levels are full to appropriate levels.
- Start system and confirm the lead equipment i.e. pumps, boilers, etc. started as expected note any deficiencies.
- Confirm hot water supply and return temperature readings are reasonable for the condition of the system (post startup). Note any deficiencies.
- Confirm flow readings (if applicable) are reasonable for the amount of pumps running.
- Enable Pump rotation sequence to confirm proper failure recovery. This process should be initiated once for the amount of pumps present. Note any deficiencies.
- If equipped with VFD's adjust setpoint of process variable i.e. flow or differential pressure and confirm the control loop responds appropriately. Restore setpoint to original setting and note any deficiencies.
- If equipped with a mixing valve, adjust setpoint or reset schedule to force a response from valve. Verify the system responded appropriately and achieved setpoint. Restore setpoint to original and note any deficiencies.
- If equipped with a heat exchanger, adjust setpoint or reset schedule to force a response from valve. Verify the system responded appropriately and achieved setpoint. Restore setpoint to original and note any deficiencies.
- Enable boiler rotation as applicable and be sure to allow for adequate runtime in between rotation in order to avoid the short-cycle of the heating equipment. Note any deficiencies.
- Adjust parameters to allow for staging of equipment as applicable. Return parameters to original values once complete.
- Note any deficiencies of all of the above tests in detail on service report. & Make any recommendations on findings to Facility Manager.

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Detailed Description of Work

18 N County - Admin Tower (Bld A) - Air Handling Units

AIR HANDLING UNITS (AHU A-S3, AHU A-S4, AHU A-S5, AHU A-S6)

Tasks to be performed on a Scheduled Basis:

- Verify that AHU is being controlled at the appropriate values, while the fan is operating.
- Change one set point value; verify smooth transition and stable control at the new set point.
- Return set point to original value. Repeat for each additional control loop, if any.
- Verify that controlled valves and dampers will stroke fully in both directions, sealing tightly where appropriate.
- Verify the proper operation of critical control processes and points associated with this unit. Make adjustments if necessary.
- Verify the setting/operation of the low temperature safety device, if applicable.
- Verify the operation of the cooling, pre-heat, reheat, & humidity control device, if applicable.
- Field test any alarm device or sensor and verify alarm condition is reported properly.
- Verify sensors are within acceptable range, calibrate if applicable.
- Check associated controller(s) and expansion modules for proper 24 Volt power and communication.
- Inspect wiring for signs of corrosion, fraying and discoloration, defective shielding or shield grounding.
- Clean enclosure exterior surfaces & Remove excessive dust from internal surfaces.
- Document any issues and discuss "Corrective Maintenance" options with customer.

AUTOMATEDLOGIC
United Technologies

Detailed Description of Work

18 N County - Admin Tower (Bld A) - Rooftop Units

ROOF TOP UNITS (031-A-RTU-01, 031-A-RTU-02)

Tasks to be performed on a Scheduled Basis:

- Verify that RTU is being controlled at the appropriate values, while the fan is operating.
- Change one set point value; verify smooth transition and stable control at the new set point.
- Return set point to original value. Repeat for each additional control loop.
- Verify that heating stages & cooling stages enable & disable.
- Verify the proper operation of critical control processes and points associated with this unit. Make adjustments if necessary.
- Field test any alarm device or sensor and verify alarm condition is reported properly.
- Verify sensors are within acceptable range, calibrate if applicable.
- Check associated controller(s) and expansion modules for proper 24 Volt power and communication.
- Inspect wiring for signs of corrosion, fraying and discoloration, defective shielding or shield grounding.
- Clean enclosure exterior surfaces & Remove excessive dust from internal surfaces.
- Document any issues and discuss "Corrective Maintenance" options with customer.

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Detailed Description of Work

18 N County - Bld B - Rooftop Units

ROOF TOP UNITS (Café 031-A-RTU-04, Café 031-A-RTU-05)

Tasks to be performed on a Scheduled Basis:

- Verify that RTU is being controlled at the appropriate values, while the fan is operating.
- Change one set point value; verify smooth transition and stable control at the new set point.
- Return set point to original value. Repeat for each additional control loop.
- Verify that heating stages & cooling stages enable & disable.
- Verify the proper operation of critical control processes and points associated with this unit. Make adjustments if necessary.
- Field test any alarm device or sensor and verify alarm condition is reported properly.
- Verify sensors are within acceptable range, calibrate if applicable.
- Check associated controller(s) and expansion modules for proper 24 Volt power and communication.
- Inspect wiring for signs of corrosion, fraying and discoloration, defective shielding or shield grounding.
- Clean enclosure exterior surfaces & Remove excessive dust from internal surfaces.
- Document any issues and discuss "Corrective Maintenance" options with customer.

AUTOMATEDLOGIC
United Technologies

Detailed Description of Work

18 N County - Center Courts (Bld C) - Air Handling Units

AIR HANDLING UNITS (AHU C-S10, AHU C-S11, AHU C-S12, AHU C-S13)

Tasks to be performed on a Scheduled Basis:

- Verify that AHU is being controlled at the appropriate values, while the fan is operating.
- Change one set point value; verify smooth transition and stable control at the new set point.
- Return set point to original value. Repeat for each additional control loop, if any.
- Verify that controlled valves and dampers will stroke fully in both directions, sealing tightly where appropriate.
- Verify the proper operation of critical control processes and points associated with this unit. Make adjustments if necessary.
- Verify the setting/operation of the low temperature safety device, if applicable.
- Verify the operation of the cooling, pre-heat, reheat, & humidity control device, if applicable.
- Field test any alarm device or sensor and verify alarm condition is reported properly.
- Verify sensors are within acceptable range, calibrate if applicable.
- Check associated controller(s) and expansion modules for proper 24 Volt power and communication.
- Inspect wiring for signs of corrosion, fraying and discoloration, defective shielding or shield grounding.
- Clean enclosure exterior surfaces & Remove excessive dust from internal surfaces.
- Document any issues and discuss "Corrective Maintenance" options with customer.

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United Technologies

Detailed Description of Work

18 N County - Annex Courts (Bld D) - Air Handling Units

AIR HANDLING UNITS (AHU-D-SF1, AHU-D-SF2)

Tasks to be performed on a Scheduled Basis:

- Verify that AHU is being controlled at the appropriate values, while the fan is operating.
- Change one set point value; verify smooth transition and stable control at the new set point.
- Return set point to original value. Repeat for each additional control loop, if any.
- Verify that controlled valves and dampers will stroke fully in both directions, sealing tightly where appropriate.
- Verify the proper operation of critical control processes and points associated with this unit. Make adjustments if necessary.
- Verify the setting/operation of the low temperature safety device, if applicable.
- Verify the operation of the cooling, pre-heat, reheat, & humidity control device, if applicable.
- Field test any alarm device or sensor and verify alarm condition is reported properly.
- Verify sensors are within acceptable range, calibrate if applicable.
- Check associated controller(s) and expansion modules for proper 24 Volt power and communication.
- Inspect wiring for signs of corrosion, fraying and discoloration, defective shielding or shield grounding.
- Clean enclosure exterior surfaces & Remove excessive dust from internal surfaces.
- Document any issues and discuss "Corrective Maintenance" options with customer.

AUTOMATEDLOGIC
United Technologies

Detailed Description of Work

Lake County Winchester - Hot Water System

HOT WATER SYSTEM

Tasks to be performed on a Scheduled Basis: (ideally prior to seasonal use)

- Verify system is enabled and system components are in the automatic position.
- Verify reasonable readings are received into the system from the Outside Air Temperature/Relative Humidity sensor.
- Ensure enable/disable or lockout setpoints are reasonable for the application and equipment.
- Confirm setpoints, reset schedules or optimized setpoints are in the proper range for equipment.
- Confirm hot water supply and return temperature readings are reasonable for the condition of the system (prior to startup).
- Confirm with the operator the system water levels are full to appropriate levels.
- Start system and confirm the lead equipment i.e. pumps, boilers, etc. started as expected note any deficiencies.
- Confirm hot water supply and return temperature readings are reasonable for the condition of the system (post startup). Note any deficiencies.
- Confirm flow readings (if applicable) are reasonable for the amount of pumps running.
- Enable Pump rotation sequence to confirm proper failure recovery. This process should be initiated once for the amount of pumps present. Note any deficiencies.
- If equipped with VFD's adjust setpoint of process variable i.e. flow or differential pressure and confirm the control loop responds appropriately. Restore setpoint to original setting and note any deficiencies.
- If equipped with a mixing valve, adjust setpoint or reset schedule to force a response from valve. Verify the system responded appropriately and achieved setpoint. Restore setpoint to original and note any deficiencies.
- If equipped with a heat exchanger, adjust setpoint or reset schedule to force a response from valve. Verify the system responded appropriately and achieved setpoint. Restore setpoint to original and note any deficiencies.
- Enable boiler rotation as applicable and be sure to allow for adequate runtime in between rotation in order to avoid the short-cycle of the heating equipment. Note any deficiencies.
- Adjust parameters to allow for staging of equipment as applicable. Return parameters to original values once complete.
- Note any deficiencies of all of the above tests in detail on service report. & Make any recommendations on findings to Facility Manager.

AUTOMATEDLOGIC
United Technologies

Detailed Description of Work

Lake County Winchester - Chilled Water System

CHILLED WATER SYSTEM

Tasks to be performed on a Scheduled Basis: (Ideally prior to seasonal use)

- Verify system is enabled and system components are in the automatic position.
- Verify reasonable readings are received into the system from the Outside Air Temperature/Relative Humidity sensor.
- Ensure enable/disable or lockout setpoints are reasonable for the application and equipment i.e. air cooled, liquid cooled etc.
- Confirm setpoints or optimized setpoints are in the proper range for equipment
- Confirm chilled water supply and return temperature readings are reasonable for the condition of the system (prior to startup).
- Confirm with the operator the system water levels are full i.e. chilled water, condenser water etc.
- Start system and confirm the lead equipment i.e. pumps; chillers, towers etc. started as expected note any deficiencies.
- Confirm chilled water supply and return temperature readings are reasonable for the condition of the system (post startup).
- Note any deficiencies.
- Confirm flow readings are reasonable for the amount of pumps running.
- Enable Pump rotation sequence to confirm failure recovery. This process should be initiated once for the amount of pumps present. Note any deficiencies.
- If equipped with VFD's adjust setpoint of process variable i.e. flow or differential pressure and confirm the control loop responds appropriately. Restore setpoint to original setting and note any deficiencies.
- Enable chiller rotation as applicable and be sure to allow for adequate runtime in between rotation in order to avoid the short-cycle of the cooling equipment. Note any deficiencies.
- Adjust parameters to allow for staging of equipment as applicable. Return parameters to original values once complete.
- Verify critical alarm reporting & Trend Configuration
- Test Chiller Manager roll-over sequence of recovery if equipped.
- Return parameters to original values once complete.
- Note any deficiencies of all of the above tests in detail on service report.
- Make any recommendations on findings to Facility Manager.

AUTOMATEDLOGIC
United Technologies

Detailed Description of Work

Lake County Winchester - Make-up Air Units

MAKE-UP AIR UNITS (MAU.2, MAU.4)

- Run locked value report, log report and discuss locked values with customer representative.
- Create performance historical trends, analyze the operation of equipment and document any abnormalities
- Verify unit is operating per the As-built ATC drawings and document any abnormalities.
- Change critical set point value; verify smooth transition and stable control at the new set point.
- Return set point to original value. Repeat for each additional control loop, if any.
- Verify that controlled dampers will stroke fully in both directions, sealing tightly where appropriate.
- Verify the proper operation of critical control processes and points associated with this unit. Make adjustments if necessary.
- Verify the setting/operation of the low temperature safety device, if applicable.
- Verify the operation of the cooling, pre-heat, reheat, & humidity control device, if applicable.
- Field test any critical alarm device or sensor and verify alarm condition is reported properly.
- Verify sensors are within acceptable range, calibrate if applicable.
- Check associated controller(s) and expansion modules for proper 24 Volt power and communication.
- Document any issues and discuss "Corrective Maintenance" options with customer.

AUTOMATEDLOGIC
United Technologies

Detailed Description of Work

Public Defender - Air Handling Unit

AIR HANDLING UNITS (AHU-1 PDO)

Tasks to be performed on a Scheduled Basis:

- Verify that AHU is being controlled at the appropriate values, while the fan is operating.
- Change one set point value; verify smooth transition and stable control at the new set point.
- Return set point to original value. Repeat for each additional control loop, if any.
- Verify that controlled valves and dampers will stroke fully in both directions, sealing tightly where appropriate.
- Verify the proper operation of critical control processes and points associated with this unit. Make adjustments if necessary.
- Verify the setting/operation of the low temperature safety device, if applicable.
- Verify the operation of the cooling, pre-heat, reheat, & humidity control device, if applicable.
- Field test any alarm device or sensor and verify alarm condition is reported properly.
- Verify sensors are within acceptable range, calibrate if applicable.
- Check associated controller(s) and expansion modules for proper 24 Volt power and communication.
- Inspect wiring for signs of corrosion, fraying and discoloration, defective shielding or shield grounding.
- Clean enclosure exterior surfaces & Remove excessive dust from internal surfaces.
- Document any issues and discuss "Corrective Maintenance" options with customer.

AUTOMATEDLOGIC
United Technologies

Detailed Description of Work

Public Defender - Chilled Water System

CHILLED WATER SYSTEM

Tasks to be performed on a Scheduled Basis: (Ideally prior to seasonal use)

- Verify system is enabled and system components are in the automatic position.
- Verify reasonable readings are received into the system from the Outside Air Temperature/Relative Humidity sensor.
- Ensure enable/disable or lockout setpoints are reasonable for the application and equipment i.e. air cooled, liquid cooled etc.
- Confirm setpoints or optimized setpoints are in the proper range for equipment
- Confirm chilled water supply and return temperature readings are reasonable for the condition of the system (prior to startup).
- Confirm with the operator the system water levels are full i.e. chilled water, condenser water etc.
- Start system and confirm the lead equipment i.e. pumps; chillers, towers etc. started as expected note any deficiencies.
- Confirm chilled water supply and return temperature readings are reasonable for the condition of the system (post startup).
- Note any deficiencies.
- Confirm flow readings are reasonable for the amount of pumps running.
- Enable Pump rotation sequence to confirm failure recovery. This process should be initiated once for the amount of pumps present. Note any deficiencies.
- If equipped with VFD's adjust setpoint of process variable i.e. flow or differential pressure and confirm the control loop responds appropriately. Restore setpoint to original setting and note any deficiencies.
- Enable chiller rotation as applicable and be sure to allow for adequate runtime in between rotation in order to avoid the short-cycle of the cooling equipment. Note any deficiencies.
- Adjust parameters to allow for staging of equipment as applicable. Return parameters to original values once complete.
- Verify critical alarm reporting & Trend Configuration
- Test Chiller Manager roll-over sequence of recovery if equipped.
- Return parameters to original values once complete.
- Note any deficiencies of all of the above tests in detail on service report.
- Make any recommendations on findings to Facility Manager.

AUTOMATEDLOGIC
United Technologies

Detailed Description of Work

Public Defender - Hot Water System

HOT WATER SYSTEM

Tasks to be performed on a Scheduled Basis: (ideally prior to seasonal use)

- Verify system is enabled and system components are in the automatic position.
- Verify reasonable readings are received into the system from the Outside Air Temperature/Relative Humidity sensor.
- Ensure enable/disable or lockout setpoints are reasonable for the application and equipment.
- Confirm setpoints, reset schedules or optimized setpoints are in the proper range for equipment.
- Confirm hot water supply and return temperature readings are reasonable for the condition of the system (prior to startup).
- Confirm with the operator the system water levels are full to appropriate levels.
- Start system and confirm the lead equipment i.e. pumps, boilers, etc. started as expected note any deficiencies.
- Confirm hot water supply and return temperature readings are reasonable for the condition of the system (post startup). Note any deficiencies.
- Confirm flow readings (if applicable) are reasonable for the amount of pumps running.
- Enable Pump rotation sequence to confirm proper failure recovery. This process should be initiated once for the amount of pumps present. Note any deficiencies.
- If equipped with VFD's adjust setpoint of process variable i.e. flow or differential pressure and confirm the control loop responds appropriately. Restore setpoint to original setting and note any deficiencies.
- If equipped with a mixing valve, adjust setpoint or reset schedule to force a response from valve. Verify the system responded appropriately and achieved setpoint. Restore setpoint to original and note any deficiencies.
- If equipped with a heat exchanger, adjust setpoint or reset schedule to force a response from valve. Verify the system responded appropriately and achieved setpoint. Restore setpoint to original and note any deficiencies.
- Enable boiler rotation as applicable and be sure to allow for adequate runtime in between rotation in order to avoid the short-cycle of the heating equipment. Note any deficiencies.
- Adjust parameters to allow for staging of equipment as applicable. Return parameters to original values once complete.
- Note any deficiencies of all of the above tests in detail on service report. & Make any recommendations on findings to Facility Manager.

AUTOMATEDLOGIC
United Technologies

Detailed Description of Work

Babcox Jail - Air Handling Units

AIR HANDLING UNITS (AHU 1 Jail NW, AHU Jail NE, AHU Jail SE, AHU Jail SW, AHU 16 Jail Stairwell, New AHU)

Tasks to be performed on a Scheduled Basis:

- Verify that AHU is being controlled at the appropriate values, while the fan is operating.
- Change one set point value; verify smooth transition and stable control at the new set point.
- Return set point to original value. Repeat for each additional control loop, if any.
- Verify that controlled valves and dampers will stroke fully in both directions, sealing tightly where appropriate.
- Verify the proper operation of critical control processes and points associated with this unit. Make adjustments if necessary.
- Verify the setting/operation of the low temperature safety device, if applicable.
- Verify the operation of the cooling, pre-heat, reheat, & humidity control device, if applicable.
- Field test any alarm device or sensor and verify alarm condition is reported properly.
- Verify sensors are within acceptable range, calibrate if applicable.
- Check associated controller(s) and expansion modules for proper 24 Volt power and communication.
- Inspect wiring for signs of corrosion, fraying and discoloration, defective shielding or shield grounding.
- Clean enclosure exterior surfaces & Remove excessive dust from internal surfaces.
- Document any issues and discuss "Corrective Maintenance" options with customer.