

EXHIBIT A

SERVICE PROVIDER'S SCOPE OF WORK (ADDENDUM NO. 2)

General:

Thornton requires Service Provider to provide Mechanical Construction and Preventive Maintenance Services on an on-call, as-needed basis. These services may be required for routine scheduled maintenance for scheduled Projects, or on an emergency basis.

For emergency services, Service Provider shall work with Thornton's Representative to determine what services are required at the time of each call for service. The Service Provider shall work directly with Thornton's Representative as requested in carrying out and conducting all of the duties and responsibilities during the term of this Agreement. Thornton's Representative may give direction to Service Provider as to what Work shall be performed.

For non-emergency services, Service Provider shall perform the Work in accordance with the schedule and scope herein identified or with the specific task assignment Scope of Work for non-routine projects.

Nothing in this document shall be construed as obligating Thornton to any minimum number of on-call, as-needed services or new construction requests. Further, nothing in this document shall be considered to limit Thornton to the exclusive use of the Contractor under this Agreement. Other contractors may be used as Thornton deems in its best interest.

Description of Work:

Service Provider shall furnish all labor, equipment, and materials to perform any and all manner of Mechanical Construction and Preventive Maintenance services as may be required.

Service Provider shall be required to remove and dispose of all waste from the Work site. Handling and disposal of all waste shall be conducted by the Service Provider according to all most recent federal, state and local health and environmental regulations.

Standards:

All Work shall be conducted according to all most recent federal, state, and local regulations. Service Provider is responsible for obtaining any necessary permits and licenses to perform duties required. All employees and/or Subcontractors of the Service Provider shall be trained and adequately qualified and/or certified to efficiently, effectively, and lawfully execute the services being rendered.

The Service Provider shall be appropriately licensed as a Contractor in Thornton, and shall be responsible for all other licenses, certifications, and any permits that may be required.

Thornton shall reimburse the direct cost of any permit required to work in Thornton. All Work must meet all applicable codes and ordinances. In case of conflict or disagreement between codes, the more stringent code shall take precedence.

The Service Provider and any Subcontractors shall maintain a cooperative working relationship to assure the Service Provider can meet the scheduled and emergency response times.

Response Time:

For Emergency Services, as determined solely by Thornton, Service Provider shall be available to perform any and all services on a twenty-four (24) hour a day, seven (7) day a week basis. An emergency is defined as a situation endangering health, life, property, a chiller unit down, or heating down.

No later than two (2) hours after the call is placed by Thornton's Representative requesting an emergency response, Service Provider shall be on site and ready to provide consultation regarding the emergency Work and to commence the services necessary. Failure to reasonably comply with this maximum response time may result in the termination of this Agreement.

The Service Provider(s) shall respond to non-emergency requests for service or repairs within five (5) Calendar Days maximum. Response time to requests for new construction shall be as agreed upon by the Parties for each task assignment. Failure of the Service Provider to respond within the defined response times may result in termination of this Agreement.

Personnel:

Thornton reserves the right to request Service Provider to conduct thorough criminal background checks on all of its current employees and Subcontractor's personnel to ascertain the criminal history of all personnel proposed for assignment under this Agreement.

Task Authorization Procedure:

There are generally four (4) types of situations under which Thornton may assign Work under this Agreement:

1. Emergency Work that requires mobilization as soon as possible after notification is given to the Service Provider. Emergency is defined as a situation that endangers health or life safety.
2. Expedited, but non-emergency, non-scheduled Work that Thornton desires to expedite due to a benefit to Thornton, such as mitigating negative financial impact, which requires response by the Service Provider as soon as possible, but no later than within five (5) Calendar Days maximum, after notification is given to the Service Provider.

3. Non-emergency, non-scheduled Work that requires response by the Service Provider as negotiated in the schedule development phase of the Work. A task assignment will begin with a meeting of all Parties involved to coordinate plans and method of execution. Exceptions and procedures will be covered in the meeting.
4. Scheduled Work as defined herein.

Except in the case of Emergency Work or Scheduled Work, Thornton will develop a specific Scope of Work for each given task assignment prior to the commencement of Work on that assignment. The scope may include written description of the Work, sketches, drawings, and/or technical specifications. The scope of Emergency Work shall be to take whatever means are necessary to stabilize the situation to eliminate the emergency condition. Thornton, in consultation with the Service Provider, shall determine what steps are necessary to stabilize an emergency situation. Further remedial Work following stabilization of the emergency will then be handled on either an expedited basis or non-emergency basis. The Scope of Scheduled Work shall be as defined herein.

Prior to commencement of Work, Thornton and the Service Provider shall review all task assignment Scopes of Work to assure all Parties that the Scope and role of each Party is thoroughly defined. Scope shall address the physical features of the task assignment, the timeframe for completion of the Work, any necessary phasing, any required permits (such as NPDES, traffic control, etc.), and as a minimum shall include a written description of the Work to be done, but shall include sketches or engineering drawings when appropriate.

Invoicing and Applications for Payment:

Charges shall comply with Exhibit "C", Schedule of Charges. For any services required by Thornton in or on Thornton-owned property or in or on non-Thornton owned property, but for which Thornton is responsible to pay, Service Provider shall provide detailed invoices or Applications for Payment for each task assignment. Invoices may be used for smaller assignments that require less than one (1) month to complete or for routine scheduled maintenance. Applications for Payment shall be used for more complex Project Work that requires more than one (1) month to complete. Applications for Payment will be submitted on forms provided by Thornton. Invoices may be on the Service Provider's standard form, and shall include the following, at a minimum:

- Thornton's Purchase Order number;
- Dates and times of services performed;
- Location of the services performed;
- The name of the Thornton Representative who authorized each task assignment;
- An itemized list of all services performed;
- Hours for all Service Provider personnel if billing based on hourly rates;
- Subcontractor costs;
- Itemization of material and equipment costs; and
- Calculation of fee markups if using the Cost of Work plus Fee method of compensation.

Documentation of the costs acceptable to Thornton as defined in Exhibit "C" shall be attached to each of Service Provider's invoices and Applications for Payment. Invoices, including all documentation, may be scanned and emailed to ap.invoices@cityofthornton.net. Alternatively, a hard copy may be mailed to the attention of Accounts Payable. Applications for Payment shall be submitted directly to Thornton's Project Manager assigned to the specific task.

Scheduled Work:

The Service Provider may be required to perform scheduled Preventive Maintenance Services (PM) for HVAC systems at various City of Thornton facilities.

A full description of the Preventive Maintenance Services is listed in the schedules which follow. The Service Provider shall perform all Preventative Maintenance Services in accordance with the schedule herein.

While occasionally it may be required to complete maintenance operations after normal working hours (7:00 a.m. to 3:30 p.m.), Thornton does not anticipate any preventative maintenance tasking being completed after hours.

At Thornton's request, the Service Provider's Service Technicians, Service Manager, Account Representative, and Thornton personnel will meet once a month to review all outstanding proposals, work orders, completed Work, and performance levels.

Preventive Maintenance Services (PM) shall be completed when directed by Thornton as shown in Exhibit "A", "PREVENTIVE MAINTENANCE SERVICE TASKS AND SCHEDULE" specific for each Thornton facility.

Preventive Maintenance (PM) Records - Service Provider shall record all Preventive Maintenance Work completed, including all checks, replacements, and adjustments made to facility equipment. Written reports on condition of equipment will be provided to Thornton within one (1) week after the completion of the inspection and servicing.

Preventive Maintenance (PM) Inspections will be performed based on the attached OEM guidelines as shown in "IX. OEM EXAMPLES".

- Code Compliance – Service Provider shall clean all facility coils in compliance with all local, state, and federal regulations.

General Notes:

- All filters will be supplied by Thornton.
- Filter changes will be performed by Service Provider, based on provided schedule or as required by the identified manometer readings.
- All belts will be supplied by Thornton.
- Unless otherwise noted, Service Provider will replace all belts once a year during the annual inspection.

Preventative Maintenance Primary Facility Locations:

- Thornton City Hall – 9500 Civic Center Drive, Thornton, CO 80229.
- Margaret Carpenter Recreation Center - 11151 Colorado Boulevard, Thornton, CO 80233.
- Trailwinds Recreation Center – 13495 Holly Street, Thornton, CO 80241
- Thornton Justice Center – 9551 Civic Center Drive, Thornton, CO 80229.
- Thornton Wes Brown Water Treatment Plant – 3651 East 86th Avenue, Thornton, CO 80229.
- Thornton Public Safety Facility - 13150 Quebec Street, Thornton, CO 80602
- Thornton Active Adult Center – 11181 Colorado Boulevard, Thornton, CO 80233

Additional Facilities Shall Receive Coil Cleaning and Boiler Maintenance

- IMC Complex, Admin Building and WVS Building – 12450 Washington Street, Thornton, CO 80241
- Fleet Maintenance Facility – 1330 East 126th Avenue, Thornton, CO 80241
- Community Center – 2211 Eppinger Boulevard, Thornton, CO 80229
- Community Building – 2141 E. 95th Avenue, Thornton, CO 80229
- Thornton Parkway Treatment Plant – 920 Thornton Parkway, Thornton, CO 80229
- Fire Station No. 1 – 2300 Thornton Parkway, Thornton, CO 80229
- Fire Station No. 2 – 9667 Huron Street, Thornton, CO 80260
- Fire Station No. 3 – 11257 Birch Drive, Thornton, CO 80233
- Fire Station No. 4 – 1400 East 128th Avenue, Thornton, CO 80241
- Fire Station No. 5 – 14051 Colorado Boulevard, Thornton, CO 80602
- Fossil Ridge Public Safety Center & Fire Station No. 6 – 13150 Quebec Street, Thornton, CO 80602
- Fire Station No. 7 – 15705 York Street, Thornton, CO 80602
- Fire Station No. 8 – 15343 Monaco Street, Thornton, CO 80602
- Municipal Service Center – 8651 Colorado Boulevard, Thornton, CO 80229
- Zone 2, 3 Pump Station – 1000 Thornton Parkway, Thornton, CO 80229
- Zone 3A Pump Station – 14055.5 Colorado Boulevard, Thornton, CO 80602
- Thorncreek Golf Course – 13555 North Washington Street, Thornton, CO 80241
- Big Dry Creek Lift Station – 16400 Colorado Boulevard, Thornton, CO 80602
- Arts and Culture Center -- 9209 Dorothy Boulevard, Thornton, Colorado 80229
- Community Connections -- 9471 Dorothy Boulevard, Thornton, CO 80229

- Holly Street Pump Station – 12663 Holly Street, Thornton, CO 80241
- Police Training Center – 9000 Colorado Boulevard, Thornton, CO 80229
- McAllister Park Center – 750 West 96th Avenue, Thornton, CO 80260
- Hilltop Repeater Station – 4500 140th Avenue, Thornton, CO 80206
- Hammer Pump Station – 14790 Riverdale Road, Thornton, CO 80601
- Tuscan Rogers Pump Station – 13600 East 168th Avenue, Thornton, CO 80233
- East Cooley Pump Station – 9800 McKay Street, Thornton, CO 80229
- Park Village Pool – 4051 Summit Grove Parkway, Thornton, CO 80241

**PREVENTIVE MAINTENANCE
SERVICE TASKS AND SCHEDULE
THORNTON CITY HALL**

9500 Civic Center Drive, Thornton, CO 80229

SERVICES PERFORMED & FREQUENCY	J	F	M	A	M	J	J	A	S	O	N	D
AIR HANDLERS												
Replace disposable filters provided by Thornton					X							
Replace belts provided by Thornton					X							
Lubricate bearings		X			X						X	
Check and record motor lubrication		X			X						X	
Inspect and clean heating/cooling coils					X			X				
Inspect unit casing for corrosion		X			X			X			X	
Check and record fan wheel & shaft		X			X			X			X	
Inspect drain pans, clean if needed					X							
Inspect condensate drain					X			X			X	
Check and record damper linkage		X			X			X			X	
Check and record voltage and amperage for each phase		X			X			X			X	
Check alignment of belts					X			X			X	
Check condition of pulleys and replace belts					X			X			X	
PUMPS												
Check and record pump and manifold piping for leaks	X	X		X	X	X		X	X	X		X
Clean all strainers			X			X			X			
Check and record all pressure readings			X	X	X	X	X	X	X	X		
Check and record voltage and amperage for each phase			X	X	X	X	X	X	X	X		X
Check and record bearings for lube and temperature			X	X	X	X	X	X	X	X		X
Replace couplings provided by Thornton as required												
Check and record alignment record				X	X	X		X	X	X		
Check and record rotating element for wear				X		X		X		X		X
CHILLERS (4 Modules)												
Check and record oil level					X		X		X			
Check and record oil pressure					X		X		X			
Check and record refrigerant flow in sight glass					X		X		X			
Inspect entire system for proper operation	X		X		X		X		X		X	
Check and record discharge and suction pressure			X		X		X		X			
Check and record TXV operation					X		X		X			
Check and record voltage and amperage for each phase			X		X		X		X			
Inspect motor starter					X		X		X			
Check and record all associated temperature controls					X		X		X			
Visual check for refrigerant leaks			X		X		X		X			
Check and record crankcase heater	X		X		X		X		X		X	
Clean strainers (multi-stack)			X						X			
Inspect and clean heat exchangers			X						X			

**PREVENTIVE MAINTENANCE
SERVICE TASKS AND SCHEDULE
THORNTON CITY HALL (CONTINUED)**
9500 Civic Center Drive, Thornton, CO 80229

SERVICES PERFORMED & FREQUENCY	J	F	M	A	M	J	J	A	S	O	N	D
COOLING TOWERS												
Check and clean strainers and record			X		X		X		X			
Check for proper operation and record	X		X		X		X		X		X	
Lube and check motor amperages and record			X		X		X		X			
Check and adjust water level and record			X		X		X		X			
Check for proper bleed off and record			X		X		X		X			
Check for algae and record			X		X		X		X			
Check for unusual vibration and record	X		X		X		X		X		X	
Check tower fan drives, adjust and replace belts			X		X		X		X			
Check sump heaters											X	
Inspect, drain & clean sump			X									
VAV BOXES												
Test operation of velocity controllers									X			
Visibly c Inspect stroke of actuator and damper movement									X			
Visibly check and record airflow interlocks									X			
Visibly check and record all electrical connections									X			
Visibly check and record duct work transitions and connections									X			
FAN POWERED BOXES												
Amp draw				X					X			
Replace filter				X					X			
Check and record motor amperage				X					X			
Check and record blower wheel condition				X					X			
Verify EP switch operation				X					X			
Check and record overall cabinet condition				X					X			
Check and record amps, pressure switches, electrical connections, and safeties				X					X			
Check and record ductwork transitions and connections				X					X			
Inspect stroke and damper movement				X					X			

**PREVENTIVE MAINTENANCE
SERVICE TASKS AND SCHEDULE
THORNTON CITY HALL (CONTINUED)**
9500 Civic Center Drive, Thornton, CO 80229

SERVICES PERFORMED & FREQUENCY	J	F	M	A	M	J	J	A	S	O	N	D
RADIO ROOM & COMPUTER ROOM UNITS												
Clean and check humidifier pan and record		X		X		X		X		X		X
Adjust water level if necessary		X		X		X		X		X		X
Check drain and make up solenoid and record		X		X		X		X		X		X
Check humidifier lamp and replace (furnished by Thornton)		X		X		X		X		X		X
Check and record humidistat		X		X		X		X		X		X
Clean condenser and evaporative coils		X				X		X		X		
Check and record operation of condenser fans				X				X				X
Replace belts on indoor fans (furnished by Thornton)		X				X				X		X
Check and record volts and amps on compressors				X				X				
Check and record amps and voltages on motors				X				X				
Check and record all electrical connections		X						X				
Change filters (furnished by Thornton)		X				X				X		

**PREVENTIVE MAINTENANCE
SERVICE TASKS AND SCHEDULE
THORNTON CITY HALL (CONTINUED)**
9500 Civic Center Drive, Thornton, CO 80229

SERVICES PERFORMED & FREQUENCY	J	F	M	A	M	J	J	A	S	O	N	D
ROOF TOP UNITS												
Check and record evaporator temperature rise or drop		X			X			X			X	
Visual check for refrigerant leaks		X			X			X			X	
Check and record all electrical connections		X			X			X			X	
Check condition of condenser and evaporative coil, clean as needed or if required		X			X			X			X	
Replace filters (furnished by Thornton)		X			X			X			X	
Check condition of pulleys and replace belts		X			X			X			X	
Check and record all safeties		X			X			X			X	
Check and record fan wheel and shaft		X			X			X			X	
Lubricate motor and fan wheel bearings		X										
Check and record condenser fan blades		X			X			X			X	
Check and record amperages on compressor		X			X			X			X	
Check and record discharge and suction pressure		X			X			X			X	
Check and record amperages on condenser fan		X			X			X			X	
Check and record amperages on indoor motor		X			X			X			X	
Check and record crankcase heater		X			X			X			X	
Check and record economizer operation		X			X			X			X	
Check and record pilot assembly												
Check and record flue for blockages												
CHAMBERS, COMMUNICATIONS, PBX SPLIT SYSTEMS												
Wash filters		X			X			X			X	
Check like RTU above		X			X			X			X	

**PREVENTIVE MAINTENANCE
SERVICE TASKS AND SCHEDULE
MARGARET W. CARPENTER RECREATION CENTER
11151 Colorado Boulevard, Thornton, CO 80233**

SERVICES PERFORMED & FREQUENCY	J	F	M	A	M	J	J	A	S	O	N	D
ERU's and PU-3												
Replace belts				X								
Check and record condition of supply and return belts	X			X		X		X				
Check alignment of pulleys and replace belts	X			X		X		X				
Check and record crankcase heater	X			X		X		X				
Check and record oil level	X			X		X		X				
Check and record refrigerant levels	X			X		X		X				
Visual check for refrigerant leaks	X			X		X		X				
Visual check for water leaks	X			X		X		X				
Change filters	X			X		X		X				
Check and tighten all electrical connections	X			X		X		X				
Check and record compressor amperages	X			X		X		X				
Check and record amperages of supply and return fan motors	X			X		X		X				
Check and record economizer functions	X			X		X		X				
Check and record condenser coils				X		X						
Clean Energy Wheel and Exhaust Screens	X			X		X		X				
Complete ERU check list (see attached)	X			X		X		X				
Check and record discharge and suction pressure	X			X		X		X				
COMPRESSORS – ERU's, PU-3, Chiller												
Check and record discharge pressure on all circuits	X			X		X		X				
Check electrical components				X		X						
Check and record suction pressure on all circuits	X			X		X		X				
Inspect for refrigerant and oil leaks	X			X		X		X				
Perform annual spectral oil analysis				X		X						
Test crankcase heater	X			X		X		X				

**PREVENTIVE MAINTENANCE
SERVICE TASKS AND SCHEDULE
MARGARET W. CARPENTER RECREATION CENTER (CONTINUED)
11151 Colorado Boulevard, Thornton, CO 80233**

SERVICES PERFORMED & FREQUENCY	J	F	M	A	M	J	J	A	S	O	N	D
ELECTRICAL – ERU's, PU-3, ERV												
Check and record compressor current on all circuits	X			X			X			X		
Check and record condenser fan current(s)	X			X			X			X		
Check and record supply voltage	X			X			X			X		
Inspect all contactors for burns and pitting	X			X			X			X		
Inspect all wiring and electrical connections (tighten if required)	X			X			X			X		
Test all fan staging thermostats/ pressure switches and variable speed fan	X			X			X			X		
FANS- ERU's, PU-3, ERV												
Inspect fan blades and slingers for cracks				X			X			X		
Lubricate motor and or fan bearings (If applicable)				X			X			X		
Test operation of all fans	X			X			X			X		
Check pumps on ERU's	X			X			X			X		
NATATORIUM CIRCULATION FANS												
Test and Inspect per manufacturer instructions										X		

QUARTERLY ERU, PU-3 and ERV PREVENTIVE MAINTENANCE

Site: _____

January, April, July, October

Unit #: _____ Location: _____
Model #: _____ SN: _____

Date: _____ OSA Temp : _____ Indoor Air Temp : _____ Indoor Air Temp: _____

Air Filters: OK Replace No. of Filters: _____ Size of Filters: _____x _____x

SF Belts: OK Replace Condition: _____ Size of Belt: _____

RF Belts: OK Replace Condition: _____ Size of Belt: _____

SF Sheeves: Condition: _____

RF Sheeves: Condition: _____

Crankcase Heater: OK Defective

Oil Level (check after 1/2 hour of operation): _____

Refrigerant Level: OK Needs adjustment

Visual Inspect Electrical and Contactors:

Unit Voltage: L1 to N _____, L2 to N _____, L3 to N _____
L1 to L2 _____, L1 to L3 _____, L2 to L3 _____

Compressor Amps (fully loaded): L1 _____ L2 _____ L3 _____

Supply Fan Amps: L1 _____, L2 _____ L3 _____

Return Fan Amps: L1 _____, L2 _____ L3 _____

EA, OSA MA Damper Operation and Condition: _____

Coil Condition:

Notes:

Technician: _____ Assistant: _____

**PREVENTIVE MAINTENANCE
SERVICE TASKS AND SCHEDULE
TRAILWINDS RECREATION CENTER
13495 Holly Street, Thornton, CO 80241**

SERVICES PERFORMED & FREQUENCY	J	F	M	A	M	J	J	A	S	O	N	D
PDU-1												
Replace belts				X								
Check and record condition of supply and return belts	X			X			X			X		
Check alignment of pulleys and replace belts	X			X			X			X		
Check and record crankcase heater	X			X			X			X		
Check and record oil level	X			X			X			X		
Check and record refrigerant levels	X			X			X			X		
Visual check for refrigerant leaks	X			X			X			X		
Visual check for water leaks	X			X			X			X		
Change filters	X			X			X			X		
Check and tighten all electrical connections	X			X			X			X		
Check and record compressor amperages	X			X			X			X		
Check and record amperages of supply and return fan motors	X			X			X			X		
Check and record economizer functions	X			X			X			X		
Check and record condenser coils				X			X					
Clean Exhaust Screens				X			X			X		
Complete PDU check list (see attached)	X			X			X			X		
Check and record discharge and suction pressure	X			X			X			X		
COMPRESSORS PDU-1, RTUs 1-4												
Check and record discharge pressure on all circuits	X			X			X			X		
Check electrical components				X			X					
Check and record suction pressure on all circuits	X			X			X			X		
Inspect for refrigerant and oil leaks	X			X			X			X		
Perform annual spectral oil analysis				X			X					
Test crankcase heater	X			X			X			X		

**PREVENTIVE MAINTENANCE
SERVICE TASKS AND SCHEDULE
TRAILWINDS RECREATION CENTER (CONTINUED)**
13495 Holly Street, Thornton, CO 80241

SERVICES PERFORMED & FREQUENCY	J	F	M	A	M	J	J	A	S	O	N	D
ELECTRICAL – PDU-1, RTUs 1-4, ERV												
Check and record compressor current on all circuits	X			X			X			X		
Check and record condenser fan current(s)	X			X			X			X		
Check and record supply voltage	X			X			X			X		
Inspect all contactors for burns and pitting	X			X			X			X		
Inspect all wiring and electrical connections (tighten if required)	X			X			X			X		
Test all fan staging thermostats/ pressure switches and variable speed fan	X			X			X			X		
FANS- PDU-1, RTUs 1-4, ERV												
Inspect fan blades and slingers for cracks				X			X					
Lubricate motor and or fan bearings (if applicable)				X			X					
Test operation of all fans	X			X			X			X		
Check pumps on PDU-1	X			X			X			X		
NATATORIUM & GYM CIRCULATION FANS												
Test and Inspect per manufacturer instructions										X		

QUARTERLY PDU-1, RTU, ERV PREVENTIVE MAINTENANCE

Site: _____

January, April, July, October

Unit #: _____ Location: _____
Model #: _____ SN: _____

Date: _____ OSA Temp : _____ Indoor Air Temp : _____ Indoor Air Temp: _____

Air Filters: OK Replace No. of Filters: _____ Size of Filters: _____x _____x

SF Belts: OK Replace Condition: _____ Size of Belt: _____

RF Belts: OK Replace Condition: _____ Size of Belt: _____

SF Sheeves: Condition: _____

RF Sheeves: Condition: _____

Crankcase Heater: OK Defective

Oil Level (check after 1/2 hour of operation): _____

Refrigerant Level: OK Needs adjustment

Visual Inspect Electrical and Contactors:

Unit Voltage: L1 to N _____, L2 to N _____, L3 to N _____
L1 to L2 _____, L1 to L3 _____, L2 to L3 _____

Compressor Amps (fully loaded): L1 _____ L2 _____ L3 _____

Supply Fan Amps: L1 _____, L2 _____ L3 _____

Return Fan Amps: L1 _____, L2 _____ L3 _____

EA, OSA MA Damper Operation and Condition: _____

Coil Condition:

Notes:

Technician: _____ Assistant: _____

**PREVENTIVE MAINTENANCE
SERVICE TASKS AND SCHEDULE
WES BROWN WATER TREATMENT PLANT
3651 East 86th Avenue, Thornton, CO 80229**

SERVICES PERFORMED & FREQUENCY	J	F	M	A	M	J	J	A	S	O	N	D
CHILLERS												
Check and record oil level				X			X			X		
Check and record oil pressure				X			X			X		
Check refrigerant flow in sight glass				X			X			X		
Inspect and record entire system for proper operation				X			X			X		
Check and record discharge and suction pressure				X			X			X		
Check and record hot gas bypass				X			X			X		
Check and record unloader operation				X			X			X		
Check and record TXV operation				X			X			X		
Check and record voltage and amperage for each phase				X			X			X		
Inspect motor starter				X			X			X		
Check and record all associated temperature controls				X			X			X		
SERVICES PERFORMED & FREQUENCY	J	F	M	A	M	J	J	A	S	O	N	D
CHILLERS CONTINUED												
Visual check for refrigerant leaks				X						X		
Check and record crankcase heater				X						X		
Calibrate DDC												
Clean strainers (once a year)				X								

**PREVENTIVE MAINTENANCE
SERVICE TASKS AND SCHEDULE
WES BROWN WATER TREATMENT PLANT (CONTINUED)**

3651 East 86th Avenue, Thornton, CO 80229

SERVICES PERFORMED & FREQUENCY	J	F	M	A	M	J	J	A	S	O	N	D
MAKE-UP AIR UNITS												
Replace disposable filters provided by Thornton			X						X			
Replace belts provided by Thornton			X						X			
Lubricate bearings			X						X			
Check and record motor lubrication			X						X			
Inspect and clean heating/cooling coils			X						X			
Inspect unit casing for corrosion			X						X			
Check and record fan wheel & shaft			X						X			
Inspect drain pans, clean if needed			X						X			
Inspect condensate drain			X						X			
Check and record damper linkage			X						X			
Check and record voltage and amperage for each phase			X						X			
Check alignment of belts			X						X			
Check heating section and gas valve			X						X			
Check condition of pulleys			X						X			

**PREVENTIVE MAINTENANCE SERVICES SCHEDULE
THORNTON JUSTICE CENTER
9551 Civic Center Drive, Thornton, CO 80229**

SERVICES PERFORMED & FREQUENCY	J	F	M	A	M	J	J	A	S	O	N	D
AIR HANDLERS												
Replace disposable filters		X			X			X			X	
Lubricate bearings					X						X	
Check and record motor lubrication		X			X			X			X	
Inspect coils and clean if required					X							
Inspect for corrosion		X			X			X			X	
Check fan wheel and shaft and record		X			X			X			X	
Inspect drain pans, clean if needed					X			X				
Inspect condensate drain					X			X				
Check damper linkage and record		X			X			X			X	
Check and record voltage and amperage for each phase and connectors					X			X			X	
Replace belts and adjust alignment		X			X			X			X	
Check and record condition of belts and pulleys		X			X			X			X	
Calibrate DDC												
PUMPS												
Check and record pump and manifold piping for leaks	X			X			X		X			
Clean all strainers	X			X			X		X			
Check and record all pressure readings	X			X			X		X			
Check and record voltage and amperage for each phase	X			X			X		X			
Check and record bearings for lube and temperature	X			X			X		X			
Check and record alignment	X			X			X		X			
Check and record rotating elements for wear	X			X			X		X			
MAKE UP AIR UNITS												
Replace filters		X						X				
Clean coils												
Check and record all electrical connections		X			X			X			X	
Check and record heat and cool staging		X			X			X			X	
Check and record fan blower wheel		X			X			X			X	
Replace belts and check pulleys		X			X			X			X	
Visual inspection of cabinetry		X			X			X			X	
VAV BOXES												
Test operation of controllers			X						X			
Inspect stroke of actuator and damper movement			X						X			

**PREVENTIVE MAINTENANCE SERVICES SCHEDULE
 THORNTON JUSTICE CENTER (CONTINUED)
 9551 Civic Center Drive, Thornton, CO 80229**

SERVICES PERFORMED & FREQUENCY	J	F	M	A	M	J	J	A	S	O	N	D
VAV BOXES CONTINUED												
Check and record airflow interlocks			X						X			
Check and record all electrical connections			X						X			
Calibrate DDC												
Inspect heat valve and inspect coils			X									
FAN POWERED BOXES												
Replace filter two times per year			X						X			
Check and record motor amperages			X						X			
Check blower wheel condition			X						X			
Verify EP switch operation			X						X			
Check overall cabinet condition			X						X			
Calibrate DDC												
Check and record ductwork transitions and connections			X						X			
Inspect heat valve and inspect coils			X									
IN-RACK COMPUTER ROOM UNITS												
Check and record operation of condenser fans	X			X				X			X	
Check and record voltages and amperages on compressors	X			X				X			X	
Check and record amps and voltages on motors	X			X				X			X	
Check and record all electrical connections	X			X				X			X	
Other maintenance required by manufacturer												

**PREVENTIVE MAINTENANCE SERVICES SCHEDULE
THORNTON JUSTICE CENTER (CONTINUED)
9551 Civic Center Drive, Thornton, CO 80229**

SERVICES PERFORMED & FREQUENCY	J	F	M	A	M	J	J	A	S	O	N	D
CHILLER												
Check and record oil level				X			X			X		
Check and record oil pressure				X			X			X		
Check refrigerant flow in sight glass				X			X			X		
Inspect entire system for proper operation				X			X			X		
Check and record discharge and suction pressure				X			X			X		
Check and record hot gas bypass				X			X			X		
Check and record unloader operation				X			X			X		
Check and record TXV operation				X			X			X		
Check and record voltage and amperage for each phase				X			X			X		
Inspect motor starter				X			X			X		
Check and record all associated temperature controls				X			X			X		
Visual check for refrigerant leaks				X			X			X		
Check and record crankcase heater				X			X			X		
Calibrate DDC				X								
Clean strainers (twice a year)				X						X		
Check and clean heat exchangers				X						X		
COOLING TOWERS												
Check and clean strainers and record				X					X			
Check for proper operation and record	X		X		X		X		X		X	
Lube and check motor amperages and record			X		X		X		X			
Check and adjust water level and record			X		X		X		X			
Check for proper bleed off and record			X		X		X		X			
Check for algae and record			X		X		X		X			
Check for unusual vibration and record	X		X		X		X		X		X	
Check tower fan drives, adjust and replace belts			X		X		X		X			
Check sump heaters											X	

**PREVENTIVE MAINTENANCE
SERVICE TASKS AND SCHEDULE
PUBLIC SAFETY FACILITY**

13150 Quebec Street, Thornton, CO 80602

SERVICES PERFORMED & FREQUENCY	J	F	M	A	M	J	J	A	S	O	N	D
MAKE UP AIR UNITS												
Replace filters		X						X				
Check and record all electrical connections		X			X			X			X	
Check and record heat and cool staging		X			X			X			X	
Check and record fan blower wheel		X			X			X			X	
Replace belts and check pulleys		X			X			X			X	
Visual inspection of cabinetry		X			X			X			X	
INFRA-RED RADIANT TUBE HEATERS												
Check and record motor and amperages									X			
Check gas valves (if applicable)									X			
Check and record thermostat operation									X			
Check and record heating element and contactors									X			
Change filters (if applicable) (furnished by Thornton)									X			
ROOF TOP UNITS												
Check and record evaporator temperature rise or drop		X			X			X			X	
Visual check for refrigerant leaks		X			X			X			X	
Check and record all electrical connections		X			X			X			X	
Check conditions of condenser and evaporative coil, clean as needed or if required		X			X			X			X	
Change filters (furnished by Thornton)		X			X			X			X	
Check condition of pulleys and replace belts		X			X			X			X	
Check and record all safeties		X			X			X			X	
Check and record fan wheel and shaft		X			X			X			X	
Lubricate motor and fan wheel bearings		X			X			X			X	
Check and record condenser fan blades		X			X			X			X	
Check and record amperages on compressor		X			X			X			X	
Check and record discharge and suction pressure		X			X			X			X	
Check and record amperages on condenser fan		X			X			X			X	
Check and record amperages on indoor motor		X			X			X			X	
Check and record crankcase heater		X			X			X			X	
Check and recode economizer operation		X			X			X			X	

**PREVENTIVE MAINTENANCE
SERVICE TASKS AND SCHEDULE
PUBLIC SAFETY FACILITY (CONTINUED)**
13150 Quebec Street, Thornton, CO 80602

SERVICES PERFORMED & FREQUENCY	J	F	M	A	M	J	J	A	S	O	N	D
PUMPS												
Check and record pump and manifold piping for leaks	X			X			X			X		
Clean all strainers	X			X			X			X		
Check and record all pressure readings	X			X			X			X		
Check and record voltage and amperage for each phase	X			X			X			X		
Check and record bearings for lube and temperature	X			X			X			X		
Check and record alignment	X			X			X			X		
Check and record rotating elements for wear	X			X			X			X		
VAV BOXES												
Test operation of velocity controllers			X						X			
Visibly inspect stroke of actuator and damper movement			X						X			
Visibly check airflow interlocks			X						X			
Visibly check all electrical connections			X						X			
Calibrate DDC through SSC			X						X			
Visibly check and record heating element and contactors			X						X			
Visibly check and record duct transitions and connections			X						X			
Calibrate T-stat/sensor			X						X			
COMPUTER ROOM UNITS												
Clean and check humidifier pan	X			X			X			X		
Check and record humidifier bulb	X			X			X			X		
Check and record condenser coils (clean 1/yr)	X			X			X			X		
Check and record operations of condenser fans	X			X			X			X		
Check and record amps and voltages and amperages on compressors	X			X			X			X		
Check and record amps and voltages on motors	X			X			X			X		
Check and record all electrical connections	X			X			X			X		

**PREVENTIVE MAINTENANCE
COIL CLEANING**

COIL CLEANING FACILITIES & FREQUENCY	J	F	M	A	M	J	J	A	S	O	N	D
IMC Complex, Admin Building., Fleet Building, and WVS Building.					X				X			
Community Center					X				X			
Community Building					X				X			
Thornton Parkway Treatment Plant					X				X			
Fire Station #1					X				X			
Fire Station #2					X				X			
Fire Station #3					X				X			
Fire Station #4					X				X			
Fire Station #5					X				X			
Fire Station #6/Public Safety Facility					X				X			
Fire Station #7					X				X			
Fire Station #8					X				X			
Municipal Service Center					X				X			
Zone 2, 3 Pump Station					X				X			
Zone 3A Pump Station					X				X			
Thorncreek GC					X				X			
Big Dry Creek Lift Station					X				X			
Thornton Arts and Culture Center					X				X			
Community Connections					X				X			
Wes Brown Water Treatment Plant					X				X			
Holly Street Pump Station					X				X			
Margaret Carpenter Recreation Center					X				X			
Active Adult Center					X				X			
Police Training Facility					X				X			
McAllister Building					X				X			
Thornton City Hall					X				X			
Hilltop Repeater Station					X				X			
Hammer Pump Station					X				X			
Tuscan Rogers Pump Station					X				X			
East Cooley Pump Station					X				X			
Fleet Maintenance Facility					X				X			
Trailwinds Recreation Center					X				X			

**PREVENTIVE MAINTENANCE
BOILERS**

SERVICES PERFORMED & FREQUENCY	J	F	M	A	M	J	J	A	S	O	N	D
BOILERS												
Check all gauge readings and record pressure/temperature			X							X		
Check and record all safety devices			X							X		
Check and record gas valve operation			X							X		
Check and record pilot assemblies			X							X		
Check and record integrity of boiler vessel			X							X		
Check and record water leaks			X							X		
Check and record any flow switches			X							X		
Check and record boiler operating sequence			X							X		
Check/calibrate resets and record			X							X		
Check and record flues for blockage and or leaks			X							X		
LOCATIONS												
IMC Complex, Admin Building., Fleet Building, and WVS Building.			X							X		
Community Center			X							X		
Community Building			X							X		
Thornton Parkway Treatment Plant			X							X		
Fire Station #1			X							X		
Fire Station #2			X							X		
Fire Station #3			X							X		
Fire Station #4			X							X		
Fire Station #5			X							X		
Fire Station #6/Public Safety Facility			X							X		
Fire Station #7			X							X		
Fire Station #8			X							X		
Municipal Service Center			X							X		
Zone 2, 3 Pump Station			X							X		
Zone 3A Pump Station			X							X		
Thorncreek GC			X							X		
Big Dry Creek Lift Station			X							X		
Thornton Arts and Culture Center			X							X		
Community Connections			X							X		
Wes Brown Water Treatment Plant			X							X		
Holly Street Pump Station			X							X		
Margaret Carpenter Recreation Center			X							X		
Active Adult Center			X							X		
Police Training Facility			X							X		
McAllister Building			X							X		
Thornton City Hall			X							X		
Hilltop Repeater Station			X							X		
Hammer Pump Station			X							X		
Tuscan Rogers Pump Station			X							X		
East Cooley Pump Station			X							X		
Fleet Maintenance Facility			X							X		
Park Village Pool			X							X		
Trailwinds Recreation Center			X							X		