

## Mechanical Preventative Maintenance Agreement

THIS AGREEMENT made as of the 21<sup>st</sup> day of May, 2019.

**BETWEEN:**

**As per Schedule "E"**  
(hereinafter referred to as the "Owner")

OF THE FIRST PART

- and -

**Ainsworth Inc.**  
(hereinafter referred to as the "Contractor")

OF THE SECOND PART

**WHEREAS:**

- A. **As per Schedule "E"** (the "Owner") is the owner of the property municipally known as **per Schedule "E"** (the "Property") on which are situate certain buildings (the "Buildings") within which are installed equipment as per attached Schedule "A".
- B. The Owner wishes to engage the Contractor to provide preventive maintenance services in respect of the equipment listed on Schedule "A" (the "Equipment"); and
- C. The parties hereto have entered into this Mechanical Preventative Maintenance Agreement (the "Contract") to set forth their respective rights and obligations in respect of the provision of such Contract or maintenance services by the Contractor to the Owner;

**NOW THEREFORE THIS AGREEMENT WITNESSES** that in consideration of the mutual covenants herein contained and other good and valuable consideration, the receipt and sufficiency whereof is hereby acknowledged, the parties hereto agree as follows:

**1. TERM AND RENEWAL**

- 1.1 The Contractor shall provide and perform all equipment maintenance services set forth on Schedules "B" and "C" attached hereto (collectively, the "Services") in respect of the Equipment for a term of five (5) years (the "Term") commencing on **June 1, 2019** (the "Commencement Date") and expiring on **May 31, 2024** (the "Expiry Date"). In addition to providing the Services, the Contractor shall provide, at its own expense, all labour, materials and equipment necessary to perform the Services.
- 1.2 The Owner shall have the option of renewing this Contract for an additional term of five (5) years by giving written notice to the Contractor, at least **thirty (30) days** prior to the Expiry Date.
- 1.3 If the Contract is not renewed in accordance with section 1.2, the Contractor shall continue to perform the Services in accordance with this Contract on a month to month basis until it is renewed by the Owner or

terminated on **thirty (30) days** written notice from either party to the other.

## 2. FEE

- 2.1 The fee to be paid by the Owner to the Contractor (the "Fee") in respect of the Services shall be paid in equal monthly instalments (the "Monthly Instalment") **of as per Schedule "E"**, inclusive of all applicable sales or value added taxes including **GST** but subject to annual revision as set forth below. In addition, the Owner shall pay all new taxes imposed on the Services or the Fee after the Commencement Date by any government or regulatory authority having jurisdiction. There will be no overtime charges applicable. The Fee includes all truck and travel charges.
- 2.2 The Fee shall be revised annually on the anniversary date of this Contract, and the Monthly Instalment shall be increased or decreased in direct proportion to the change in the straight-time hourly rate of the Contractor (which hourly rate shall include the fringe benefits paid to its employees and agents); provided, however, that in no event shall the Fee be increased by more than three (3%) per cent annually during the Term hereof.
- 2.3 The Monthly Instalment shall be invoiced in advance on the first day of every month of the Term, and payment in respect of same shall be made by the Owner within thirty (30) days of the invoice date. The Contractor will offer a pre-authorized electronic payment option to the Owner to facilitate payment of the Monthly Instalment.

## 3. COMPLIANCE

- 3.1 The Contractor is responsible at its sole expense to comply with all applicable laws, ordinances, rules, regulations or codes which are or become in force during the performance of the Services, including without limitation, the following:
  - 3.1.1 Provincial workplace safety legislation;
  - 3.1.2 Municipal by-laws;
  - 3.1.3 Provincial technical and electrical safety legislation;
  - 3.1.4 The National Building Code of Canada (NBCC) and Provincial Building Code having jurisdiction;
  - 3.1.5 National Fire Code of Canada (NFCC); and
  - 3.1.6 Canadian Standards Association (CSA).
- 3.2 The Contractor shall comply with the Manager's Contractor Guidelines attached as Schedule "D".

## 4. NON-PERFORMANCE

- 4.1 Payment of the Fee or any Monthly Instalment shall not be conclusive evidence of the performance by the Contractor of the Services, either wholly or in part, nor shall it be construed as acceptance by the Owner of defective work. If the Services are not performed as agreed upon in this Contract and as verified by an independent reputable professional mechanical consultant, or the Contractor becomes insolvent or involved in bankruptcy proceedings, the Owner shall be entitled to:
  - 4.1.1 Withhold from the Fee an amount sufficient to engage a third party to have the Services satisfactorily performed; and/or
  - 4.1.2 Retain a third party to perform the Services and set off against the Fee the costs and expenses incurred

- by the Owner in connection therewith; and/or
- 4.1.3 Terminate this Contract in accordance with the provisions of section 10 hereof.

## 5. INSURANCE

- 5.1 The Contractor shall obtain and maintain, at its sole cost and expense, during the Term, comprehensive or commercial general liability insurance to respond to any and all incidents occurring on the Property as a result of the Contractor's presence or operations, in the minimum amount of \$5,000,000 per occurrence, including the following extensions: Owners' and Contractors' protective insurance coverage with respect to the Property; products and completed operations; personal injury; occurrence basis property damage; blanket contractual, non-owned automobile liability. The insurance shall name as additional insureds, the Owner and the Manager and such other parties as the Owner or the Manager (if applicable) may identify from time to time.
- 5.2 The Contractor shall also, during the Term, at its sole cost and expense, obtain and maintain employee fidelity bonds in an amount of not less than \$500,000 per occurrence.
- 5.3 Any and all deductibles in the Contractor's insurance policies shall be borne solely by the Contractor and shall not be recovered or attempted to be recovered from the Owner. In addition, all such insurance policies shall be non-contributing with, and will apply only as primary and not excess to, any insurance proceeds available to the Owner, its nominee (if any), or the Manager. Such insurance shall be with insurers acceptable to the Owner and with policies in form satisfactory from time to time to the Owner and a copy of all certificates of insurance shall be delivered to the Owner prior to the commencement of the Term and annually at the anniversary date of this Contract.
- 5.4 The Contractor shall obtain from the insurers under such policies, undertakings to notify the Owner or the Manager in writing at least thirty (30) days prior to any cancellation thereof.

## 6. WORKPLACE SAFETY AND INSURANCE BOARD

- 6.1 The Contractor acknowledges and agrees that neither it nor its employees are covered by the Owner under the Workplace Safety and Insurance Act (**British Columbia – Worksafe BC**) and the Contractor shall be responsible for and pay all dues and assessments payable thereunder. The Contractor shall furnish the Owner at the commencement of the Term and annually at the anniversary date of this Contract with a WSIB certificate.

## 7. OCCUPATIONAL HEALTH AND SAFETY

- 7.1 The Contractor shall be designated as the Constructor for the purposes of the Occupational Health and Safety Act (**British Columbia**) for any project undertaken by it on the Property and shall assume all the responsibilities of the Constructor as set out therein or in the regulations thereunder, notwithstanding references in this contract to the Contractor being a contractor.
- 7.2 The Contractor agrees that any damages or fines that may be assessed against the Owner by reason of breach of the Occupational Health and Safety Act by the Contractor or its subcontractor will entitle the Owner to set off the damages so assessed against any monies the Owner may owe to the Contractor hereunder and to claim and receive payment of the amount of any excess not so set off, from the Contractor.
- 7.3 The Contractor shall be solely responsible for safety on the site and for compliance with the rules, regulations and practices required by the applicable health and safety legislation, and shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the Services.

- 7.4 By agreeing to maintain the Equipment in accordance with the terms and conditions of this Contract, the Contractor hereby represents that it has, in its employment, duly trained, competent and qualified mechanics, knowledgeable and experienced in all aspects of risk assessment and planning in respect of the provision of the Services.
- 7.5 The Contractor shall supervise its employees to ensure that all inspections, testing and major work are performed in accordance with the Ministry of Labour's rules, regulations and practices. The Contractor shall perform an evaluation of risk related to specific tasks and moving equipment.
- 7.6 The Contractor shall take all proper and reasonable steps and precautions in order to avoid hazardous situations, and shall train its employees to work safely and in accordance with an established safety program.

## **8. OWNERSHIP OF EQUIPMENT**

- 8.1 The Equipment shall at all times remain the property of the Owner, and the Contractor shall not assume control, possession or management of any part thereof other than in the course of the performance of the Services. The Contractor shall have the right to remove any part(s) of the Equipment for the sole purpose of repairing such Equipment.

## **9. LIEN CLAIMS**

- 9.1 If a claim or lien arises in respect of the Property for which the Owner may become liable and which results from the provision by the Contractor of the Services, the Owner shall have the right to retain out of any Monthly Instalment then due, or thereafter to become due, an amount sufficient to completely satisfy such claim or lien, including legal expenses and costs. If the Fee has been completely paid to the Contractor prior to the time at which such claim or lien arises, the Contractor shall pay to the Owner an amount sufficient to completely satisfy such claim or lien, including legal expenses and costs.

## **10. INDEMNIFICATION**

- 10.1 The Contractor hereby assumes full liability for damage to the Property, Equipment, and injury to persons resulting from any act as a result of any default by the Contractor, negligence or omission on the part of the Contractor arising from the performance of the Services and agrees to indemnify the Owner and its Manager (if applicable) and their respective partners, directors, officers and employees and save them harmless from and against any and all losses, expenses, claims, damages, actions and causes of action, including legal expenses and costs, suffered or incurred by the Owner and/or the Manager in connection with the performance by the Contractor of the contracted services, provided such claims are made by notice in writing within a period of six (6) years from the date of substantial performance of the Services or within such shorter period as may be prescribed by any limitation statute of the province or territory of the place of the work.
- 10.2 The Contractor shall not be liable for any incidental or consequential loss or damages arising from the failure of the Equipment to operate, save where the same arises by virtue of its negligent conduct or wilful misconduct. Without limiting the generality of the foregoing, the Contractor shall not be liable for incidental or consequential damage or loss resulting from material and labour shortage, strikes, accidents, lockouts, fire, flood, storm, earthquake, acts of the public enemy, war or riot, or any other cause not within the reasonable control of the Contractor, but the Contractor shall continue to perform the Services as much as possible with a view to minimizing any inconvenience to the Owner, its residents and invitees.

## 11. TERMINATION

- 11.1 In addition to and notwithstanding any other provision herein which provides for termination, the Manager shall have the absolute and unfettered right to terminate this Contract at any time on **thirty (30) days'** written notice to Contractor, in which event the Manager shall pay the Contractor for Services rendered up to the date of termination, less any amounts owing to Manager or Owner as a result of a right of set-off or other rights of the Manager or Owner.

## 12. NOTICE

- 12.1 All notices and other communications shall be in writing and shall be personally delivered to responsible employee or sent by direct written electronic means such as telefacsimile or email, provided email communication shall request acknowledgment of receipt.

If to the Owner:

Name: As per Schedule "E"  
Address: 77 Bloor Street West  
Suite 2000  
Toronto, Ontario M5S 1M2

Telephone: (416) 923-2950  
Facsimile: (416) 923-6472  
Email: [lydia.atienza@realstar.ca](mailto:lydia.atienza@realstar.ca)  
Attention: Senior Manager, Purchasing

If to the Contractor:

Name: Ainsworth Inc.  
Address: 17741 65A Ave, #104  
Surrey, BC V1M 2B2

Telephone: 778-658-0263  
Facsimile: 604-579-1328  
Email: [Donna.Crawford@ainsworth.com](mailto:Donna.Crawford@ainsworth.com)

Any communication which is personally delivered shall be deemed to have been validly and effectively given on the date of such delivery if such date is a business day and such delivery was made during normal business hours of the recipient; otherwise, it shall be deemed to have been validly and effectively given on the next business day. Any communication which is transmitted by direct written electronic means with acknowledgment of receipt requested shall be deemed to have been validly and effectively given on the date of transmission if such date is a business day and such transmission was made during normal business hours of the recipient, unless a failure to transmit message is received by the sender; otherwise, it shall be deemed to have been validly and effectively given on the next business day.

## 13. LAW OF THE CONTRACT

- 13.1 This contract shall be governed by the laws of the Province of British Columbia.

## 14. NO WAIVER

- 14.1 No action or failure to act by the Owner shall constitute a waiver of any right hereunder, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach hereunder, except as may be specifically agreed to in writing by the parties.

## 15. WARRANTY

- 15.1 The Contractor shall guarantee the materials and workmanship of any installation required for the performance of the Services. The warranty is limited to the repair or replacement, at Contractor's discretion,

of defective materials and the correction of defective workmanship within a reasonable time for defects that are reported to the Contractor during the Term. This warranty excludes damages due to external causes such as fire, water and weather, improper use, misuse, neglect, or work by others. This warranty is in addition to and does not impact any manufacturer's warranty that may be in effect with respect to the equipment or any of it.

#### 16. ASSIGNMENT

16.1 The Contractor may not assign this Contract or any of its rights or obligations hereunder, without the prior written consent of the Owner or the Manager. No such permitted assignment by the Contractor of the Contract or any of its rights or obligations hereunder shall relieve the Contractor from any of its obligations under the contract. The Owner or the Manager may assign the Contract or any of its rights or obligations hereunder, without the consent of the Contractor to an affiliate (as defined in the provincial corporations' legislation having jurisdiction over the goods or services provided).

#### 17. EXECUTION BY MANAGER

17.1 The Contractor acknowledges that the Owner executes this contract and has full authority to act on behalf of the Owner, including the making of all determinations, receiving and giving notices, giving and withholding of approvals and payments, termination of this Agreement, making claims for damages and all other matters with regards to this Agreement.

IN WITNESS WHEREOF the parties hereto have executed this contract as of the date first above written.

As per Schedule "E"

Doing Business as per Schedule "E"

Per: Mark Hales

Name: Mark Hales

Title: Authorized Signing Officer

Ainsworth Inc.

Per: AL UNDERHILL

Name: AL UNDERHILL

Title: General Manager

Note: The following schedules, i.e., "A", "B", "C", "D" and "E" form part of the Preventive Maintenance Agreement:

Schedule "A" – Equipment Listing

Schedule "B" – Contractor Instructions and Responsibility

Schedule "C" – Scope of Work Specifications

Schedule "D" – Additional Contractor Guidelines

Schedule "E" – Building List

Property Name: Welsey Place Ltd  
Property Address: 1022 Nelson St, Vancouver, B.C.

Date of Inventory: \_\_\_\_\_

Typical Suite Mechanical Equipment			
HVAC System Type	Subcategory	DHW System Type	Subcategory

Common Area Mechanical Equipment							
Equipment Type	Equipment Subcategory	Manufacturer	Model No.	Qty.	Approx. Age	Location	Notes (Capacity, Rating, Pertinent Details)
Air Conditioning Systems	Common Area (Ductless Split-System)	Lennox	HP29-036-1Y	1	4	Parkade Stall 35	A/C #1
Air Conditioning Systems	Common Area (Ductless Split-System)	York	N/A	1	4	Parkade Stall 35 - serves comp room	A/C #2
Air Conditioning Systems	Common Area (Ductless Split-System)	York	N/A	1	4	Parkade Stall 34 - serves room 206	A/C #3
Air Conditioning Systems	Common Area (Ductless Split-System)	Lennox	HP29-036-1Y	1	4	Parkade Stall 33 - serves room 212	A/C #4
Air Conditioning Systems	Common Area (Ductless Split-System)	York	N/A	1	4	Parkade Stall 32 - serves room 211	A/C #5
Air Conditioning Systems	Common Area (Ductless Split-System)	Lennox	HP29-036-1Y	1	4	Parkade Stall 31	A/C #6
Air Conditioning Systems	Common Area (Ductless Split-System)	Lennox	HP29-036-1Y	1	4	Parkade Stall 31	A/C #7
Air Conditioning Systems	Common Area (Ductless Split-System)	Lennox	HP29-036-1Y	1	4	Parkade Stall #45	A/C #8
Air Conditioning Systems	Common Area (Ductless Split-System)	York	N/A	1	4	Parkade Stall #44	A/C #9
Air Conditioning Systems	Common Area (Ductless Split-System)	Lennox	HP29-036-1Y	1	4	Parkade Stall #43/4	A/C #10
Air Conditioning Systems	Common Area (Ductless Split-System)	Lennox	HP29-036-1Y	1	4	Parakde Stall #43	A/C #11
Air Conditioning Systems	Common Area (Ductless Split-System)	Lennox	HP29-036-1Y	1	4	Parakde Stall #20	A/C #12
Air Conditioning Systems	Common Area (Ductless Split-System)	Lennox	HP29-036-1Y	1	4	Parakde Stall #20	A/C #13
Air Conditioning Systems	Common Area (Ductless Split-System)	Lennox	HP29-036-1Y	1	4	Parkade Stall #18/19	A/C #14
Air Conditioning Systems	Common Area (Ductless Split-System)	Lennox	HP29-036-1Y	1	4	Parkade Stall #18	A/C #15
Air Conditioning Systems	Common Area (Ductless Split-System)	Lennox	HP29-018-4P	1	4	Parkade Stall #17/18	A/C #16
Air Conditioning Systems	Common Area (Ductless Split-System)	Lennox	HP29-018-4P	1	4	Parkade Stall #17	A/C #17
Air Conditioning Systems	Common Area (Ductless Split-System)	York	HS29-090-2Y	1	4	Parkade Stall #48 - serves electric vault	A/C #18
Air Conditioning Systems	Common Area (Ductless Split-System)	Lennox	HS29-090-2Y	1	4	Parkade Stall #48 - serves electric vault	A/C #19
Air Conditioning Systems	Common Area (Ductless Split-System)	Lennox	HS29-090-3Y	1	4	College Balcony	A/C #20
Air Conditioning Systems	Common Area (Ductless Split-System)	Lennox	HS29-060-3Y	1	4	College Balcony	A/C #21
Air Conditioning Systems	Common Area (Ductless Split-System)	Lennox	HS29-060-3Y	1	4	College Balcony	A/C #22
MAU Systems	Centralized (Gas-Fired Heat, No Cooling)	Eng-Air	DJE-100-0	1	19	Roof	Makeup Air Unit #1

Common Area Mechanical Equipment							
Equipment Type	Equipment Subcategory	Manufacturer	Model No.	Qty.	Approx. Age	Location	Notes (Capacity, Rating, Pertinent Details)
AHU Systems	Common Area (Ductless Split-System)	ADP	BCRMB52365001	1	4	Front Reception	Air Handling Unit
AHU Systems	Common Area (Ductless Split-System)	ADP	BCRMB5236S001	1	4	Gym	Air Handling Unit
AHU Systems	Common Area (Ductless Split-System)	Lennox	CB23M-41-1P	1	4	Room 210A Gry Dr	Air Handling Unit #1
AHU Systems	Common Area (Ductless Split-System)	Lennox	CB29M-41-1P	1	4	Comp Lab	Air Handling Unit #2
AHU Systems	Common Area (Ductless Split-System)	Lennox	N/A	1	4	Room 206	Air Handling Unit #3
AHU Systems	Common Area (Ductless Split-System)	Lennox	CB29M-41-1P	1	4	Room 212	Air Handling Unit #4
AHU Systems	Common Area (Ductless Split-System)	Lennox	CB29M-41-1P	1	4	Room 211	Air Handling Unit #5
AHU Systems	Common Area (Ductless Split-System)	Lennox	CB29M-41-1P	1	4	Room 202	Air Handling Unit #6
AHU Systems	Common Area (Ductless Split-System)	Lennox	CB29M-41-1P	1	4	Room 207	Air Handling Unit #8
AHU Systems	Common Area (Ductless Split-System)	Lennox	CB29M-41-1P	1	4	Room 205	Air Handling Unit #11
AHU Systems	Common Area (Ductless Split-System)	Lennox	CB29M-41-1P	1	4	Room 203	Air Handling Unit #12
AHU Systems	Common Area (Ductless Split-System)	Lennox	CB29M-41-1P	1	4	Room 101	Air Handling Unit #13
AHU Systems	Common Area (Ductless Split-System)	Goodman	ARUF36421BCA	1	4	Room 101	Air Handling Unit #14
AHU Systems	Common Area (Ductless Split-System)	Lennox	CB29M-41-1P	1	4	Room 101	Air Handling Unit #15
AHU Systems	Common Area (Ductless Split-System)	Lennox	CB29M-21/26-1P	1	4	Room 101	Air Handling Unit #16
AHU Systems	Common Area (Ductless Split-System)	Lennox	CB29M-21/26-1P	1	4	Room 100	Air Handling Unit #17
AHU Systems	Common Area (Ductless Split-System)	York	CBH12-95V-2	1	4	Parkade Stall 49	Air Handling Unit #18
AHU Systems	Common Area (Ductless Split-System)	York	CBH17-95V-A	1	4	Parkade Stall 47	Air Handling Unit #19
AHU Systems	Common Area (Ductless Split-System)	Lennox	CB29M-65-IP	1	4	Room 216 Café	Air Handling Unit #20
AHU Systems	Common Area (Ductless Split-System)	Lennox	CB29M-65-IP	1	4	RCEP College	Air Handling Unit #21
AHU Systems	Common Area (Ductless Split-System)	Lennox	CB29M-65-IP	1	4	Room 215	Air Handling Unit #22
Exhaust Fans	Centralized	Carnes	VWB1L22151C1CA205P1	1	20	Roof Tower	Exhaust Fan #1
Exhaust Fans	Parking Garage	Carnes	N/A	1	20	Elec Room P4 Stall 57	Exhaust Fan #2
Exhaust Fans	Dedicated	Reversomatic	N/A	1	20	Elec Room P2	Exhaust Fan #3
Exhaust Fans	Centralized	Carnes	N/A	1	20	Elec Room P3 Stall 117	Exhaust Fan #4
Exhaust Fans	Centralized	Delhi	212	1	20	Comp Lab	Fan
Exhaust Fans	Parking Garage	Reversomatic	RBC-36	1	20	Parkade Stall 28	Fan #4
Exhaust Fans	Parking Garage	Reversomatic	RBC-36	1	20	Parkade P4 Stall 83	Fan #4A
Exhaust Fans	Parking Garage	Reversomatic	RBC-36	1	20	Parkade Stall 127	Fan #6
Exhaust Fans	Parking Garage	Reversomatic	RBC-36	1	20	Parkade Stall 67	Fan #6A

77 Bloor St. W., Suite 2000, Toronto, Ontario M5S 1M2  
P 416.923.2724 F 416.923.9315 E [info@realstar.ca](mailto:info@realstar.ca) W [realstar.ca](http://realstar.ca)

**SCHEDULE “B”****Contractor Instructions and Responsibilities**

1. The Contractor agrees to have qualified, experienced, and duly-licensed technicians undertake the Services throughout the Term of the Contract.
2. The Contractor is to assign technicians that are familiar with each property for consistency, and those with a strong knowledge base for how the various Equipment is intended to operate at each particular property.
3. The Contractor shall complete the Services to meet manufacturer requirements in regards to servicing, inspections, and adjustments for all Equipment, and where further services are required to meet manufacturer requirements and ensure safe and proper operation of the Equipment, the Contractor shall advise the Owner or Manager and perform such services under terms of the Contract.
4. All Services shall be performed during regular business hours from 8:00 a.m. to 5:00 p.m. on regular business days, Monday to Friday, except on statutory holidays unless otherwise agreed to with the Resident Manager.
5. Emergency calls for Equipment considered as vital to building comfort and operation shall be answered within two (2) hours, and if necessary, repairs that fall below \$1,500.00 inclusive of tax shall be completed immediately to bring the Equipment back to proper operation.
6. If repairs are required, as a result of performing the Services or a specific service call, and the overall cost will be less than \$1,500.00 including applicable taxes, the Contractor is to demonstrate the need for repairs to the Resident Manager and may then subsequently proceed with repairs. Resident Manager signature on the subsequent work order shall be considered approval of such work.
7. If repairs are required, as a result of performing the Services or a specific service call, and the overall cost will exceed \$1,500.00 including applicable taxes, a written quote from the Contractor will be required.
8. All quotations shall include manufacturer/model of any replacement components/equipment, details on the host piece of equipment/system requiring the repair/components, background information such as age of the equipment/component, applicable field observations, options for repair, including major advantages and/or disadvantages of each option, and some perspective on the remaining life expectancy of the equipment/component that is in need of repair. Written quotations shall be based on the approved labour rates, along with any other applicable charges. Contractor work completed without appropriate District Manager or Construction Manager approval is at risk of not being paid.
9. The Contractor shall render the Services and respond to all calls from the Owner or Manager for any conditions that require adjustments or repair. However, it shall be the responsibility of the Owner or Manager to notify the Contractor of any observations of erratic or excessively noisy operation and/or any other readily apparent situation deemed to be potentially dangerous or unsafe. The Contractor agrees to report forthwith any accidents, incidents or unsafe condition to the Owner or Manager in writing, as well as to the governing authority responsible for the specific equipment.
10. The Contractor shall ensure service vehicles are equipped with all items required for regular service calls and a comprehensive range of spare parts required for minor breakdowns and subsequent repairs, as known to exist in fulfilling the Services under the Contract. Major repair parts shall be stocked in Contractor's own warehouse for expedient delivery to site for major breakdowns and subsequent repairs.

11. Performing the Services shall not include the detection, abatement, encapsulation, or removal of asbestos containing materials nor any other form of hazardous materials. The Owner or Manager shall provide the Contractor available hazardous material reports upon request. The Contractor shall take adequate precautions to protect its employees, agents, subcontractors, and all Property residents and staff, from such materials of which it has actual knowledge and will work with the Owner or Manager to remove or encapsulate such hazardous materials as necessary in partnership with appropriate service providers at no cost to the Contractor.
12. Scope of work specifications and timing requirements for applicable equipment are provided in Schedule "C", and sections of the specifications have been assigned to the specific equipment for each Property within Schedule "A", which form the Services under this Contract for the Property.
13. In addition to the specific scope of work outlined within Schedule "C", the Contractor is responsible for seasonal startup, shutdown, and changeover of all centralized heating and cooling plants as part of the Services under the Contract. All applicable Equipment shall be tested, inspected, and commissioned to be ready for seasonal startup, shutdown, and changeover within a 48-hour window upon request from the Resident Manager. The expectation is for the heat plant operation to fall within September 1<sup>st</sup> and May 31<sup>st</sup>, and the cooling plant operation to fall within May 1<sup>st</sup> and October 31<sup>st</sup>. Each Property and jurisdiction will have different requests and requirements respectively; therefore, the Contractor shall ensure the timing for seasonal startup, shutdown, and changeover for centralized heating and cooling plants is scheduled well in advance of the expected operational window with the Resident Manager.
14. A logbook will be provided within the Rental Office at the Property, which will include copies of the applicable equipment listing (Schedule "A") and the applicable scope of work specifications (Schedule "C"). The Contractor shall ensure the representative responsible for the Services has signed and dated the appropriate scopes of work completed after each visit. A signing block for each Services interval has been provided on each of the scope of work specifications pages that will be included in the logbook. A copy of all reports for tests performed on the Equipment, as required per the Services, shall be maintained by the Contractor within the logbook for reference. The logbook shall be used by the Contractor and Manager to confirm the work required for the Equipment has been completed in the designated scheduling window.
15. During the first sixty (60) days of the Term of the Contract, or upon initial seasonal start-up, if the Contractor should find the Equipment covered under this Contract to be in need of repair and replacement, the Contractor will inform the Owner or Manager in writing of the condition(s) and the proposed corrective action. When the Contractor so notifies the Owner or Manager, it is understood that the Contractor will not be responsible for the present or future repair or replacement, or operability of the Equipment, until such time the Equipment is restored to a condition acceptable to the Contractor.
16. During the first sixty (60) days of the Term of the Contract, or upon initial seasonal start-up, the Contractor shall complete a thorough site inspection of the entire premises to ensure all equipment and systems requiring the Services have been properly detailed and accounted for within Schedule "A". All applicable updates shall be made by the Contractor to Schedule "A", and submitted to the Owner or Manager for review and subsequent redefining of the Equipment for the applicable Property. Adjustments to the Fee for each applicable Property can be subsequently proposed by the Contractor to the Owner or Manager for reasonable consideration of any applicable increase in the Equipment requiring the Services.
17. Throughout the Term of the Contract, the Contractor shall maintain Schedule "A" to include any changes or applicable additions to the Equipment listed therein, and provide the Owner or Manager with an updated Schedule "A" to ensure accurate documentation is maintained at all times.

18. It is understood that the following are not the responsibility of Contractor under this Contract:

- 18.1. Operation of the Equipment;
- 18.2. Services, repairs or replacement necessitated by misuse, improper operations, continued operation of the Equipment against written advice of the Contractor, or negligence of Owner or Manger, Owner's or Manager's employees, agents, other contractors or invitees;
- 18.3. Correction or replacement of the Equipment, or components, damaged due to corrosion, lack of historical water treatment, electrolytic action, or other causes beyond the control of Contractor within the Term; and
- 18.4. Inspections, alterations or replacements of the Equipment as required by insurance companies, municipal or governmental authorities;



## **Mechanical Preventative Maintenance Agreement**

### **SCHEDULE "C" – Scope of Work Specifications**

Rev. Date: Mar.12.19

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## 1. Air Compressors (Excluding Fire Protection Services)

Regular General Inspection	SCHEDULING WINDOW											
<div><div><input type="checkbox"/> Inspect air compressors and visual piping network to ensure they are free from general damage, leaks, corrosion, contaminants, or obstructions that would impair performance;</div><div><input type="checkbox"/> Inspect pressure gauges for proper operation, verify set pressure ranges, and adjust as required;</div><div><input type="checkbox"/> Isolate and shutdown air compressors as required;</div><div><input type="checkbox"/> Inspect motors, compressors, and pulleys/sheaves for proper operation and securement, adjust as required;</div><div><input type="checkbox"/> Inspect fan belts for wear, proper tension and operation, and replace as required;</div><div><input type="checkbox"/> Inspect and lubricate motor bearings, abiding by nameplate instructions, and wipe up excess lubricant;</div><div><input type="checkbox"/> Check compressor oil level, and adjust to appropriate levels as necessary;</div><div><input type="checkbox"/> Thoroughly inspect wiring systems for loose connections or damage, repair, tighten and clean connections;</div><div><input type="checkbox"/> Inspect air compressor starters and/or contactors for general wear;</div><div><input type="checkbox"/> Test and verify operation of pressure relief and system safety devices;</div><div><input type="checkbox"/> Reactivate air compressors and briefly monitor for proper operation;</div><div><input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</div></div>	J	F	M	A	M	J	J	A	S	O	N	D
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Annual Preventative Maintenance	SCHEDULING WINDOW											
<ul style="list-style-type: none"><li><input type="checkbox"/> Isolate and shutdown air compressors as required;</li><li><input type="checkbox"/> Complete “Regular General Inspection” scope of work;</li><li><input type="checkbox"/> Remove dirt accumulation from motors and compressors, and clean surfaces with a damp cloth;</li><li><input type="checkbox"/> Replace oil filters and gaskets, clean oil strainers, and adjust oil levels to manufacturer recommendations;</li><li><input type="checkbox"/> Reactivate air compressors and briefly monitor for proper operation;</li><li><input type="checkbox"/> Check voltage and amperage draws, and compare against nameplate ratings;</li><li><input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</li></ul>	J	F	M	A	M	J	J	A	S	O	N	D
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## 2. Chillers (Air-Cooled)

Cooling Season Start-up	SCHEDULING WINDOW														
<div><div><div><input type="checkbox"/> Contractor shall complete necessary preseason items below, along with any further preseason services required, in sufficient time to ensure that the cooling plant is ready for activation within (48) hours of notice given by the Resident Manager, no earlier than May 1<sup>st</sup> and no later than June 1<sup>st</sup>, with all preseason deficiencies rectified;</div><div><input type="checkbox"/> Inspect exterior of chillers, compressors, refrigerant circulation system, condensing coils, visual piping network, and all remaining ancillary equipment to ensure they are free from general damage, fluid/refrigerant leaks, corrosion, contaminants, or obstructions that would impair performance;</div><div><input type="checkbox"/> Inspect, test, and calibrate refrigerant monitoring and alarm systems in accordance with local regulations and manufacturer recommendations;</div><div><input type="checkbox"/> Inspect chillers and visible piping network for damaged/missing insulation, complete minor repairs as required;</div><div><input type="checkbox"/> Perform chemical analysis on oils, and provide a detailed quote outlining any recommendations for adjusting/replacing oils based on analysis results;</div><div><input type="checkbox"/> On applicable chillers, replace oil filters and gaskets, clean oil strainers, adjust oil levels to manufacturer recommendations, and verify that any oil heaters are working;</div><div><input type="checkbox"/> De-winterize the chillers, all ancillary equipment, and associated piping network through closing up drain valves/plugs, and removal of any glycol from the system for future use;</div><div><input type="checkbox"/> Service ancillary equipment according to start-up and/or maintenance instructions provided by the respective manufacturers;</div><div><input type="checkbox"/> Perform refrigerant leak tests and analyses abiding by manufacturer recommendations, and provide a detailed quote outlining any recommendations for adjusting/replacing refrigerant based on analysis results, and investigating/repairing potential refrigerant leaks;</div><div><input type="checkbox"/> Flush and recharge source water through the chilled water plants, activate chilled water pumps, and thoroughly inspect chilled water plants for leaks or damage;</div><div><input type="checkbox"/> Cycle and verify operation of all isolation valves serving the chillers and visible piping network;</div><div><input type="checkbox"/> Thoroughly inspect wiring systems for loose connections or damage, repair, tighten and clean connections;</div><div><input type="checkbox"/> Megger test compressors, pumps, and motors, and note any anomalies;</div><div><input type="checkbox"/> Thoroughly inspect the condensing coil surfaces, obstructions are to be removed, and any corrosion or damage to be noted for correction;</div><div><input type="checkbox"/> Use manufacturer-approved processes to remove any remaining sediment on condenser coils, rinse clean from inside out, and use a fin comb to straighten any damaged or bent fins;</div></div></div>	J	F	M	A	M	J	J	A	S	O	N	D			
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<ul style="list-style-type: none"> <li><input type="checkbox"/> Inspect and clean condensate management systems, and flush condensate lines free of debris/sludge through to drains with use of nitrogen gas;</li> <li><input type="checkbox"/> Remove dirt accumulation from condenser fan blades, and clean surfaces with a damp cloth;</li> <li><input type="checkbox"/> Remove dirt accumulation from fan motors and compressors, and clean with a damp cloth;</li> <li><input type="checkbox"/> Inspect and lubricate fan motor bearings, abiding by nameplate instructions, and wipe up excess lubricant;</li> <li><input type="checkbox"/> Verify operation and cut-out points for all safety devices and interlocks, and validate sufficient flow through evaporators;</li> <li><input type="checkbox"/> Remove dirt accumulation from control panels and all other sensitive control equipment;</li> <li><input type="checkbox"/> Start the chillers and verify that the starter, amperages, voltages, sequence timers, temperature settings, and all other internal controls are operating correctly, and service as required;</li> <li><input type="checkbox"/> Review control panels and ensure no fault messages are displayed, and rectify as required;</li> <li><input type="checkbox"/> Verify refrigerant levels, temperatures, and pressures/charges, and adjust (operating) levels to manufacturer recommendations;</li> <li><input type="checkbox"/> Thoroughly inspect oiling system components for signs of leaks, damage, or malfunction, and perform minor repairs as required;</li> <li><input type="checkbox"/> Verify local and/or central automation controls for the chilled water system are set with appropriate and energy-efficient outdoor air reset and cold-weather shutdown configurations, adjust as necessary;</li> <li><input type="checkbox"/> Record chiller operating temperatures, pressures, voltages, amperages, and set points in a log book that is to be maintained on site;</li> <li><input type="checkbox"/> Verify suitable water treatment in the chilled water plant, and abide by the applicable "Water Treatment" scope of work;</li> <li><input type="checkbox"/> Monitor chillers for two to three complete operating cycles, and ensure proper operation is sustained;</li> <li><input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</li> </ul>	
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Mid-Season Preventative Maintenance	SCHEDULING WINDOW											
<div><div><div><input type="checkbox"/> Inspect exterior of chillers, compressors, refrigerant circulation system, condensing coils, visual piping network, and all remaining ancillary equipment to ensure they are free from general damage, fluid/refrigerant leaks, corrosion, contaminants, or obstructions that would impair performance;</div><div><input type="checkbox"/> Inspect, test, and maintain refrigerant monitoring and alarm systems in accordance with local regulations and manufacturer recommendations;</div><div><input type="checkbox"/> Inspect chillers and visible piping network for damaged/missing insulation, complete minor repairs as required;</div><div><input type="checkbox"/> Review control panels and ensure no fault messages are displayed, and rectify as required;</div><div><input type="checkbox"/> Check oil and refrigerant levels, temperatures, and pressures/charges, and provide a detailed quote outlining any recommendations for adjusting/replacing oil and/or refrigerant to satisfy manufacturer’s recommendations, along with any leak detection exercises that may be warranted;</div><div><input type="checkbox"/> Thoroughly inspect wiring systems for loose connections or damage, repair, tighten and clean connections;</div><div><input type="checkbox"/> Thoroughly inspect the condensing coil surfaces, obstructions are to be removed, and any corrosion or damage to be noted for correction;</div><div><input type="checkbox"/> Inspect and lubricate fan motor bearings, abiding by nameplate instructions, and wipe up excess lubricant;</div><div><input type="checkbox"/> Monitor and test approach temperature for heat exchangers and, where performance falls outside of specification, provide a quote to flush heat exchangers with processes approved by manufacturer to mitigate accumulated scale/debris that has impaired heat transfer performance;</div><div><input type="checkbox"/> Verify operation and cut-out points for all safety devices and interlocks, and validate sufficient flow through evaporators;</div><div><input type="checkbox"/> Remove dirt accumulation from control panels and all other sensitive control equipment;</div><div><input type="checkbox"/> Verify local and/or central automation controls for the chilled water systems are set with appropriate and energy-efficient outdoor air resets and cold-weather shutdown configurations, adjust as necessary;</div><div><input type="checkbox"/> Record chiller operating temperatures, pressures, voltages, amperages, and set points in a log book that is to be maintained on site;</div><div><input type="checkbox"/> Verify suitable water treatment in the chilled water plant, and abide by the applicable “Water Treatment” scope of work;</div><div><input type="checkbox"/> Monitor chillers for one to two complete operating cycles, and ensure proper operation is sustained;</div><div><input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</div></div></div>	J	F	M	A	M	J	J	A	S	O	N	D
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Cooling Season Shutdown	SCHEDULING WINDOW											
<div><div><div><input type="checkbox"/> Inspect exterior of chillers, compressors, refrigerant circulation system, condensing coils, visual piping network, and all remaining ancillary equipment to ensure they are free from general damage, fluid/refrigerant leaks, corrosion, contaminants, or obstructions that would impair performance;</div><div><input type="checkbox"/> Review control panels and ensure no fault messages are displayed, and rectify as required;</div><div><input type="checkbox"/> Inspect and lubricate fan motor bearings, abiding by nameplate instructions, and wipe up excess lubricant;</div><div><input type="checkbox"/> Verify suitable water treatment in the chilled water plant, and abide by the applicable “Water Treatment” scope of work;</div><div><input type="checkbox"/> Shutdown the chillers according to system configuration and abiding by manufacturer recommendations;</div><div><input type="checkbox"/> Shutdown chilled water pumps, isolate the chilled water plants, drain equipment and piping network free of water that will be sensitive to freezing temperatures;</div><div><input type="checkbox"/> Winterize chillers, all ancillary equipment, and associated piping network through opening up drain valves/plugs, and addition of glycol to the system, as applicable and per manufacturer recommendations;</div><div><input type="checkbox"/> Check oil and refrigerant levels/pressures, and adjust to manufacturer’s recommendations for winterization;</div><div><input type="checkbox"/> Power down the electrical service to the chillers, and verify all manufacturer winterization requirements and recommendations have been implemented;</div><div><input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</div></div></div>	J	F	M	A	M	J	J	A	S	O	N	D
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### 3. Chillers (Water-Cooled)

Cooling Season Start-up	SCHEDULING WINDOW											
<div><div><div><input type="checkbox"/> Contractor shall complete necessary preseason items below, along with any further preseason services required, in sufficient time to ensure that the cooling plant is ready for activation within (48) hours of notice given by the Resident Manager, no earlier than May 1st and no later than June 1<sup>st</sup>, with all preseason deficiencies rectified;</div><div><input type="checkbox"/> Inspect exterior of chillers, compressors, refrigerant circulation system, visual piping network, and all remaining ancillary equipment to ensure they are free from general damage, fluid/refrigerant leaks, corrosion, contaminants, or obstructions that would impair performance;</div><div><input type="checkbox"/> Inspect, test, and calibrate refrigerant monitoring and alarm systems in accordance with local regulations and manufacturer recommendations;</div><div><input type="checkbox"/> Inspect chillers and visible piping network for damaged/missing insulation, complete minor repairs as required;</div><div><input type="checkbox"/> Perform chemical analysis on oils, and provide a detailed quote outlining any recommendations for adjusting/replacing oils based on analysis results;</div><div><input type="checkbox"/> On applicable chillers, replace oil filters and gaskets, clean oil strainers, adjust oil levels to manufacturer recommendations, and verify that any oil heaters are working;</div><div><input type="checkbox"/> De-winterize chillers, all ancillary equipment, and associated piping network through closing up drain valves/plugs, and removal of any glycol from the system for future use;</div><div><input type="checkbox"/> Service ancillary equipment according to start-up and/or maintenance instructions provided by the respective manufacturers;</div><div><input type="checkbox"/> Perform refrigerant leak tests and analyses abiding by manufacturer recommendations, and provide a detailed quote outlining any recommendations for adjusting/replacing refrigerant based on analysis results, and investigating/repairing potential refrigerant leaks;</div><div><input type="checkbox"/> Open all condenser-side loop valves, flush, fill and purge the cooling towers and condenser circuits with source water;</div><div><input type="checkbox"/> Open all evaporator-side loop valves, and flush, fill and purge the chilled water circuits with source water;</div><div><input type="checkbox"/> Activate chilled water and condenser pumps, and thoroughly inspect complete chilled water and condenser plants for leaks or damage;</div><div><input type="checkbox"/> Cycle and verify operation of all isolation valves serving the chillers and visible piping network;</div><div><input type="checkbox"/> Thoroughly inspect wiring systems for loose connections or damage, repair, tighten and clean connections;</div><div><input type="checkbox"/> Megger test compressors, pumps, and motors, and note any anomalies;</div></div></div>	J	F	M	A	M	J	J	A	S	O	N	D
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- ☐ Inspect and clean condensate management systems, and flush condensate lines free of debris/sludge through to drains with use of nitrogen gas;
- ☐ Remove dirt accumulation from compressors, and clean with a damp cloth;
- ☐ Remove dirt accumulation from inlet vane control actuators/linkages, check adjustment and calibration of the actuators, and lubricate the control linkages;
- ☐ Verify operation and cut-out points for all safety devices and interlocks, and validate sufficient flow through evaporators;
- ☐ Verify operation of purge units, operate to obtain sufficient vacuum, and check for leaks;
- ☐ Activate the cooling towers, and ensure the "Cooling Season Start-Up" for the cooling towers has been completed in advance;
- ☐ Remove dirt accumulation from control panels and all other sensitive control equipment;
- ☐ Start the chillers and verify that the starters, amperages, voltages, sequence timers, temperature settings, and all other internal controls are operating correctly, and service as required;
- ☐ Review control panels and ensure no fault messages are displayed, and rectify as required;
- ☐ Verify refrigerant levels, temperatures, and pressures/charges, and adjust (operating) levels to manufacturer recommendations;
- ☐ Thoroughly inspect oiling system components for signs of leaks, damage, or malfunction;
- ☐ Verify local and/or central automation controls for the chilled water systems are set with appropriate and energy-efficient outdoor air resets and cold-weather shutdown configurations, adjust as necessary;
- ☐ Record chiller operating temperatures, pressures, voltages, amperages, and set points in a log book that is to be maintained on site;
- ☐ Verify suitable water treatment in the chilled water plant, and abide by the applicable "Water Treatment" scope of work;
- ☐ Monitor chillers for two to three complete operating cycles, and ensure proper operation is sustained;
- ☐ For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;

Mid-Season Preventative Maintenance	SCHEDULING WINDOW															
<div><div><div><input type="checkbox"/> Inspect exterior of chillers, compressors, refrigerant circulation system, visual piping network, and all remaining ancillary equipment to ensure they are free from general damage, fluid/refrigerant leaks, corrosion, contaminants, or obstructions that would impair performance;</div><div><input type="checkbox"/> Inspect, test, and maintain refrigerant monitoring and alarm systems in accordance with local regulations and manufacturer recommendations;</div><div><input type="checkbox"/> Inspect chillers and visible piping network for damaged/missing insulation, complete minor repairs as required;</div><div><input type="checkbox"/> Review control panels and ensure no fault messages are displayed, and rectify as required;</div><div><input type="checkbox"/> Check oil and refrigerant levels, temperatures, and pressures/charges, and provide a detailed quote outlining any recommendations for adjusting/replacing oil and/or refrigerant to satisfy manufacturer’s recommendations, along with any leak detection exercises that may be warranted;</div><div><input type="checkbox"/> Thoroughly inspect wiring systems for loose connections or damage, repair, tighten and clean connections;</div><div><input type="checkbox"/> Verify operation and cut-out points for all safety devices and interlocks, and validate sufficient flow through evaporators;</div><div><input type="checkbox"/> Verify local and/or central automation controls for the chilled water systems are set with appropriate and energy-efficient outdoor air resets and cold-weather shutdown configurations, adjust as necessary;</div><div><input type="checkbox"/> Record chiller operating temperatures, pressures, voltages, amperages, and set points in a log book that is to be maintained on site;</div><div><input type="checkbox"/> Verify suitable water treatment in the chilled water plant, and abide by the applicable “Water Treatment” scope of work;</div><div><input type="checkbox"/> Monitor chillers for one to two complete operating cycles, and ensure proper operation is sustained;</div><div><input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</div></div></div>	J	F	M	A	M	J	J	A	S	O	N	D				
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Cooling Season Shutdown	SCHEDULING WINDOW											
<div><div><div><input type="checkbox"/> Inspect exterior of chillers, compressors, refrigerant circulation system, visual piping network, and all remaining ancillary equipment to ensure they are free from general damage, fluid/refrigerant leaks, corrosion, contaminants, or obstructions that would impair performance;</div><div><input type="checkbox"/> Review control panels and ensure no fault messages are displayed, and rectify as required;</div><div><input type="checkbox"/> Verify suitable water treatment in the chilled water plant, and abide by the applicable “Water Treatment” scope of work;</div><div><input type="checkbox"/> Shutdown the chillers according to system configuration and abiding by manufacturer recommendations;</div><div><input type="checkbox"/> Shutdown chilled water and condenser pumps, isolate the chilled water plants, drain equipment and piping network free of water that will be sensitive to freezing temperatures;</div><div><input type="checkbox"/> Winterize chillers, all ancillary equipment, and associated piping network through opening up drain valves/plugs, and addition of glycol to the system, as applicable and per manufacturer recommendations;</div><div><input type="checkbox"/> Check oil and refrigerant levels/pressures, perform any minor adjustments to manufacturer’s recommendations for winterization, and provide a detailed quote outlining any recommendations for adjusting/replacing oil and/or refrigerant to satisfy manufacturer’s recommendations, along with any leak detection exercises that may be warranted;</div><div><input type="checkbox"/> Power down the electrical service to the chillers, and verify all manufacturer winterization requirements and recommendations have been implemented;</div><div><input type="checkbox"/> Inspect evaporator and condenser tubes for scaling/fouling, and subsequently descale and clean tubes with methods aligning with manufacturer recommendations;</div><div><input type="checkbox"/> On applicable chillers, review the necessity for performing an Eddy current test on both evaporator and condenser tubes, and provide a quote to perform the test prior to closing up the evaporator and condenser tubes;</div><div><input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</div></div></div>	J	F	M	A	M	J	J	A	S	O	N	D
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## 4. Cooling Towers (Open-Loop, Closed-Loop)

Cooling Season Start-up	SCHEDULING WINDOW															
<div><div><div><input type="checkbox"/> Contractor shall complete necessary preseason items below, along with any further preseason services required, in sufficient time to ensure that the cooling plant is ready for activation within (48) hours of notice given by the Resident Manager, no earlier than May 1st and no later than June 1<sup>st</sup>, with all preseason deficiencies rectified;</div><div><input type="checkbox"/> Inspect exterior of cooling towers, condensing coils, fan blades and motors, visual piping network, and all remaining ancillary equipment to ensure they are free from general damage, leaks, corrosion, contaminants, or obstructions that would impair performance;</div><div><input type="checkbox"/> Inspect cooling towers and visible piping network for damaged/missing insulation, complete minor repairs as required;</div><div><input type="checkbox"/> De-winterize cooling towers, all ancillary equipment, and associated piping network through closing up drain valves/plugs, and removal of any glycol from the system for future use;</div><div><input type="checkbox"/> Service ancillary equipment according to start-up and/or maintenance instructions provided by the respective manufacturers;</div><div><input type="checkbox"/> Open all condenser circulation loop valves, flush, fill and purge the cooling towers and condenser circuits with source water;</div><div><input type="checkbox"/> Cycle and verify operation of all isolation valves serving the cooling towers and visible piping network;</div><div><input type="checkbox"/> Thoroughly inspect wiring systems for loose connections or damage, repair, tighten and clean connections;</div><div><input type="checkbox"/> Megger test fan motors and pumps, and note any anomalies;</div><div><input type="checkbox"/> Thoroughly inspect the condensing coil surfaces and/or spray nozzles, obstructions are to be removed, and any corrosion, damage, or obstructions to be noted for correction;</div><div><input type="checkbox"/> Use manufacturer-approved processes to remove any remaining sediment on condenser coils and/or spray nozzles, rinse clean from inside out, and use a fin comb to straighten any damaged or bent coil fins;</div><div><input type="checkbox"/> Remove dirt accumulation from condenser fan blades, and clean with a damp cloth;</div><div><input type="checkbox"/> Remove dirt accumulation from fan motors and compressors, and clean with a damp cloth;</div><div><input type="checkbox"/> Inspect fan belts and pulley/sheaves for wear, proper tension and operation, and replace fan belts as required;</div><div><input type="checkbox"/> Inspect spray pumps, sump heaters, and damper controls as applicable;</div><div><input type="checkbox"/> Inspect and lubricate fan motor bearings, abiding by nameplate instructions, and wipe up excess lubricant;</div><div><input type="checkbox"/> Verify operation and cut-out points for all safety devices and interlocks, and validate sufficient flow through cooling towers;</div></div></div>	J	F	M	A	M	J	J	A	S	O	N	D				
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<ul style="list-style-type: none"> <li><input type="checkbox"/> Remove dirt accumulation from control panels and all other sensitive control equipment;</li> <li><input type="checkbox"/> Start the cooling towers and verify that the starters, amperages, voltages, sequence timers, and all other internal controls are operating correctly, and service as required;</li> <li><input type="checkbox"/> Review control panels and ensure no fault messages are displayed, and rectify as required;</li> <li><input type="checkbox"/> Verify local and/or central automation controls for the cooling towers are set with appropriate and energy-efficient outdoor air resets and cold-weather shutdown configurations, adjust as necessary;</li> <li><input type="checkbox"/> Verify suitable water treatment in the chilled water plant, and abide by the applicable "Water Treatment" scope of work;</li> <li><input type="checkbox"/> Monitor cooling towers for two to three complete operating cycles, and ensure proper operation is sustained;</li> <li><input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</li> </ul>	
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Mid-Season Preventative Maintenance	SCHEDULING WINDOW											
<div><div><div><input type="checkbox"/> Inspect exterior of cooling towers, condensing coils, fan blades and motors, visual piping network, and all remaining ancillary equipment to ensure they are free from general damage, leaks, corrosion, contaminants, or obstructions that would impair performance;</div><div><input type="checkbox"/> Inspect cooling towers and visible piping network for damaged/missing insulation, complete minor repairs as required;</div><div><input type="checkbox"/> Review control panels and ensure no fault messages are displayed, and rectify as required;</div><div><input type="checkbox"/> Thoroughly inspect wiring systems for loose connections or damage, repair, tighten and clean connections;</div><div><input type="checkbox"/> Thoroughly inspect the condensing coil surfaces, obstructions are to be removed, and any corrosion or damage to be noted for correction;</div><div><input type="checkbox"/> Inspect and lubricate fan motor bearings, abiding by nameplate instructions, and wipe up excess lubricant;</div><div><input type="checkbox"/> Verify operation and cut-out points for all safety devices and interlocks, and validate sufficient flow through cooling towers;</div><div><input type="checkbox"/> Remove dirt accumulation from control panels and all other sensitive control equipment;</div><div><input type="checkbox"/> Verify local and/or central automation controls for the cooling towers are set with appropriate and energy-efficient outdoor air resets and cold-weather shutdown configurations, adjust as necessary;</div><div><input type="checkbox"/> Verify suitable water treatment in the chilled water plant, and abide by the applicable “Water Treatment” scope of work;</div><div><input type="checkbox"/> Monitor cooling towers for one to two complete operating cycles, and ensure proper operation is sustained;</div><div><input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</div></div></div>	J	F	M	A	M	J	J	A	S	O	N	D
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Cooling Season Shutdown	SCHEDULING WINDOW														
<div><div><input type="checkbox"/> Inspect exterior of cooling towers, condensing coils, fan blades and motors, visual piping network, and all remaining ancillary equipment to ensure they are free from general damage, leaks, corrosion, contaminants, or obstructions that would impair performance;</div><div><input type="checkbox"/> Inspect cooling towers and visible piping network for damaged/missing insulation, complete minor repairs as required;</div><div><input type="checkbox"/> Review control panels and ensure no fault messages are displayed, and rectify as required;</div><div><input type="checkbox"/> Verify suitable water treatment in the chilled water plant, and abide by the applicable “Water Treatment” scope of work;</div><div><input type="checkbox"/> Inspect and lubricate fan motor bearings, abiding by nameplate instructions, and wipe up excess lubricant;</div><div><input type="checkbox"/> Shutdown the cooling towers according to system configuration and abiding by manufacturer recommendations;</div><div><input type="checkbox"/> Shutdown condenser water pumps, isolate the cooling towers, drain equipment and piping networks free of water that will be sensitive to freezing temperatures;</div><div><input type="checkbox"/> Winterize cooling tower, all ancillary equipment, and associated piping network through opening up drain valves/plugs, and addition of glycol to the system, as applicable and per manufacturer recommendations;</div><div><input type="checkbox"/> Power down the electrical service to the cooling towers, and verify all manufacturer winterization requirements and recommendations have been implemented;</div><div><input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</div></div>	J	F	M	A	M	J	J	A	S	O	N	D			
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## 5. Domestic Hot Water Heaters (Electric)

Regular General Inspection	SCHEDULING WINDOW											
<ul style="list-style-type: none"> <li>Inspect exterior of water heaters and visual piping network to ensure they are free from general damage, leaks, corrosion, contaminants, or obstructions that would impair performance;</li> <li>Inspect the water heaters and visible piping network for damaged/missing insulation, complete minor repairs as required;</li> <li>Inspect expansion tanks to ensure they are free from general damage, leaks, and corrosion, and that they are holding appropriate pressure;</li> <li>Thoroughly inspect wiring systems for loose connections or damage, repair, tighten and clean connections;</li> <li>Inspect temperature/pressure gauges and operating controls for proper operation;</li> <li>Test all safety devices and relief valves for proper operation;</li> <li>Cycle and test operation of all isolation valves serving the water heaters and visible piping network;</li> <li>Verify and adjust DHW system controls to maintain storage and delivery water temperatures compliant with all applicable Code requirements, and where delivery temperatures are regulated at 120°F or below, adjust storage water temperatures to 130°F;</li> <li>Where DHW thermostatic mixing valves are present, verify supply hot water temperature is set for 125°F and DHW system controls are set to maintain 140 - 150°F storage water temperature, adjust as necessary;</li> <li>For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</li> </ul>	J	F	M	A	M	J	J	A	S	O	N	D
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Annual Preventative Maintenance	SCHEDULING WINDOW											
<ul style="list-style-type: none"> <li>Isolate and shutdown DHW system as required;</li> <li>Complete "Regular General Inspection" scope of work;</li> <li>Drain and flush water heaters free of sediment/deposits, abiding by manufacturer recommended procedures;</li> <li>Inspect the sacrificial anode rods;</li> <li>Refill water heaters while checking for leaks, reactivate the system, and test under one complete cycle, abiding by manufacturer recommended procedures;</li> <li>For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</li> </ul>	J	F	M	A	M	J	J	A	S	O	N	D
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## 6. Domestic Hot Water Heaters (Gas-Fired)

Regular General Inspection	SCHEDULING WINDOW											
<div><div><div><input type="checkbox"/> Inspect exterior of water heaters, gas connections/regulators, and visual piping network, to ensure they are free from general damage, leaks, corrosion, contaminants, or obstructions that would impair performance;</div><div><input type="checkbox"/> Inspect the water heaters and visible piping network for damaged/missing insulation, complete minor repairs as required;</div><div><input type="checkbox"/> Inspect expansion tanks to ensure they are free from general damage, leaks, and corrosion, and that they are holding appropriate pressure;</div><div><input type="checkbox"/> Thoroughly inspect venting and air intake systems for obstructions, leakage paths or deterioration;</div><div><input type="checkbox"/> Inspect intake blower/ventilator motor assemblies, clean inlet air filters free of dirt/debris, and replace as required with filter selection that meets manufacturer recommendations/requirements;</div><div><input type="checkbox"/> Inspect temperature/pressure gauges and operating controls for proper operation;</div><div><input type="checkbox"/> Inspect the high limit controls for proper operation, and adjust to manufacturer recommendations;</div><div><input type="checkbox"/> Test remaining safety devices, gas control valves, and operational controls for proper operation;</div><div><input type="checkbox"/> Inspect condensate pans and management systems for cleanliness, secure piping to drain, and sufficient neutralization media;</div><div><input type="checkbox"/> Cycle and test operation of all isolation valves serving the water heaters and visible piping network;</div><div><input type="checkbox"/> Visually inspect the pilot and main burner flames, and subsequently adjust combustion air, draft regulators, and gas control valves to ensure flame quality and proper operation;</div><div><input type="checkbox"/> Verify DHW system controls are set to maintain 130°F storage water temperature, adjust as necessary;</div><div><input type="checkbox"/> Where DHW thermostatic mixing valves are present, verify supply hot water temperature is set for 125°F and DHW system controls are set to maintain 140 - 150°F storage water temperature, adjust as necessary;</div><div><input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</div></div></div>	J	F	M	A	M	J	J	A	S	O	N	D
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Annual Preventative Maintenance	SCHEDULING WINDOW														
<div><div><input type="checkbox"/> Isolate and shutdown DHW system as required;</div><div><input type="checkbox"/> Complete “Regular General Inspection” scope of work;</div><div><input type="checkbox"/> Drain and flush water heaters free of sediment/deposits, abiding by manufacturer recommended procedures;</div><div><input type="checkbox"/> Inspect the sacrificial anode rods;</div><div><input type="checkbox"/> Thoroughly inspect wiring systems for loose connections or damage, repair, tighten and clean connections;</div><div><input type="checkbox"/> Refill water heaters while checking for leaks, reactivate the system, and test under one complete cycle, abiding by manufacturer recommended procedures;</div><div><input type="checkbox"/> Replace neutralization media, flush condensate lines free of debris/sludge through to drains with use of nitrogen gas, and ensure condensate lines are securely piped to drain;</div><div><input type="checkbox"/> Perform a CO test to ensure levels are safe and within regulated levels, and tag/label equipment with results and date/time of the test;</div><div><input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</div></div>	J	F	M	A	M	J	J	A	S	O	N	D			
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## 7. Domestic Hot Water Storage Tanks

Regular General Inspection	SCHEDULING WINDOW											
<ul style="list-style-type: none"> <li>Inspect exterior of the storage tanks and visible piping network for apparent leaks and general damage/corrosion;</li> <li>Inspect the storage tanks and visible piping network for damaged/missing insulation, complete minor repairs as required;</li> <li>Inspect temperature/pressure gauges for proper operation;</li> <li>Test all safety devices and relief valves for proper operation;</li> <li>Cycle and test operation of all isolation valves serving the storage tanks and visible piping network;</li> <li>Verify DHW system controls are set to maintain 130°F storage water temperature, adjust as necessary;</li> <li>Where DHW thermostatic mixing valves are present, verify supply hot water temperature is set for 125°F and DHW system controls are set to maintain 140 - 150°F storage water temperature, adjust as necessary;</li> <li>For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</li> </ul>	J	F	M	A	M	J	J	A	S	O	N	D
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Annual Preventative Maintenance	SCHEDULING WINDOW											
<ul style="list-style-type: none"> <li>Isolate and shutdown DHW system as required;</li> <li>Complete "Regular General Inspection" scope of work;</li> <li>Drain storage tanks and inspect inside surface/lining;</li> <li>Clean inside surfaces free of sediment/deposits, abiding by manufacturer recommended procedures;</li> <li>Inspect the sacrificial anode rods;</li> <li>Refill storage tanks while checking for leaks, and reactivate the DHW system;</li> <li>For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</li> </ul>	J	F	M	A	M	J	J	A	S	O	N	D
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## 8. Dry/Fluid Coolers

Cooling Season Start-up	SCHEDULING WINDOW											
<div><div><div><input type="checkbox"/> Contractor shall complete necessary preseason items below, along with any further preseason services required, in sufficient time to ensure that the dry/fluid cooler is ready for activation within (48) hours of notice given by the Resident Manager, no earlier than May 1<sup>st</sup> and no later than June 1<sup>st</sup>, with all preseason deficiencies rectified;</div><div><input type="checkbox"/> Inspect exterior of dry/fluid coolers, coils, fan blades and motors, visual piping network, and all remaining ancillary equipment to ensure they are free from general damage, leaks, corrosion, contaminants, or obstructions that would impair performance;</div><div><input type="checkbox"/> Inspect dry/fluid coolers and visible piping network for damaged/missing insulation, complete minor repairs as required;</div><div><input type="checkbox"/> De-winterize dry/fluid coolers, all ancillary equipment, and associated piping network;</div><div><input type="checkbox"/> Service ancillary equipment according to start-up and/or maintenance instructions provided by the respective manufacturers;</div><div><input type="checkbox"/> Open all dry/fluid circulation loop valves, flush, fill and purge the dry/fluid coolers with source medium (i.e. water/glycol/brine);</div><div><input type="checkbox"/> Cycle and verify operation of all isolation valves serving the dry/fluid coolers and visible piping network;</div><div><input type="checkbox"/> Thoroughly inspect wiring systems for loose connections or damage, repair, tighten and clean connections;</div><div><input type="checkbox"/> Megger test fan motors and pumps, and note any anomalies;</div><div><input type="checkbox"/> Thoroughly inspect the coil surfaces, obstructions are to be removed, and any corrosion or damage to be noted for correction;</div><div><input type="checkbox"/> Use manufacturer-approved processes to remove any remaining sediment on coils, rinse clean from inside out, and use a fin comb to straighten any damaged or bent coil fins;</div><div><input type="checkbox"/> Remove dirt accumulation from fan blades and motors, and clean with a damp cloth;</div><div><input type="checkbox"/> Inspect and lubricate fan motor bearings, abiding by nameplate instructions, and wipe up excess lubricant;</div><div><input type="checkbox"/> Verify operation and cut-out points for all safety devices and interlocks, and validate sufficient flow through dry/fluid coolers;</div><div><input type="checkbox"/> Remove dirt accumulation from control panels and all other sensitive control equipment;</div><div><input type="checkbox"/> Start the dry/fluid coolers and verify that the starters, amperages, voltages, sequence timers, and all other internal controls are operating correctly, and service as required;</div><div><input type="checkbox"/> Review control panels and ensure no fault messages are displayed, and rectify as required;</div></div></div>	J	F	M	A	M	J	J	A	S	O	N	D
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<ul style="list-style-type: none"> <li>❑ Verify local and/or central automation controls for the dry/fluid coolers are set with appropriate and energy-efficient outdoor air resets and cold-weather shutdown configurations, adjust as necessary;</li> <li>❑ Verify suitable water treatment in the dry/fluid cooler plant, and abide by the applicable "Water Treatment" scope of work;</li> <li>❑ Monitor dry/fluid coolers for two to three complete operating cycles, and ensure proper operation is sustained;</li> <li>❑ For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</li> </ul>	
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Mid-Season Preventative Maintenance	SCHEDULING WINDOW											
<div><div><div><input type="checkbox"/> Inspect exterior of dry/fluid coolers, coils, fan blades and motors, visual piping network, and all remaining ancillary equipment to ensure they are free from general damage, leaks, corrosion, contaminants, or obstructions that would impair performance;</div><div><input type="checkbox"/> Inspect dry/fluid coolers and visible piping network for damaged/missing insulation, complete minor repairs as required;</div><div><input type="checkbox"/> Review control panels and ensure no fault messages are displayed, and rectify as required;</div><div><input type="checkbox"/> Thoroughly inspect wiring systems for loose connections or damage, repair, tighten and clean connections;</div><div><input type="checkbox"/> Thoroughly inspect the coil surfaces, obstructions are to be removed, and any corrosion or damage to be noted for correction;</div><div><input type="checkbox"/> Inspect and lubricate fan motor bearings, abiding by nameplate instructions, and wipe up excess lubricant;</div><div><input type="checkbox"/> Verify operation and cut-out points for all safety devices and interlocks, and validate sufficient flow through dry/fluid coolers;</div><div><input type="checkbox"/> Remove dirt accumulation from control panels and all other sensitive control equipment;</div><div><input type="checkbox"/> Verify local and/or central automation controls for the dry/fluid coolers are set with appropriate and energy-efficient outdoor air resets and cold-weather shutdown configurations, adjust as necessary;</div><div><input type="checkbox"/> Verify suitable water treatment in the dry/fluid cooler plant, and abide by the applicable “Water Treatment” scope of work;</div><div><input type="checkbox"/> Monitor dry/fluid coolers for one to two complete operating cycles, and ensure proper operation is sustained;</div><div><input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</div></div></div>	J	F	M	A	M	J	J	A	S	O	N	D
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Cooling Season Shutdown	SCHEDULING WINDOW											
<div><div><div><input type="checkbox"/> Inspect exterior of dry/fluid coolers, coils, fan blades and motors, visual piping network, and all remaining ancillary equipment to ensure they are free from general damage, leaks, corrosion, contaminants, or obstructions that would impair performance;</div><div><input type="checkbox"/> Inspect dry/fluid coolers and visible piping network for damaged/missing insulation, complete minor repairs as required;</div><div><input type="checkbox"/> Review control panels and ensure no fault messages are displayed, and rectify as required;</div><div><input type="checkbox"/> Verify suitable water treatment in the dry/fluid cooler plant, and abide by the applicable “Water Treatment” scope of work;</div><div><input type="checkbox"/> Inspect and lubricate fan motor bearings, abiding by nameplate instructions, and wipe up excess lubricant;</div><div><input type="checkbox"/> Shutdown the dry/fluid coolers according to system configuration and abiding by manufacturer recommendations;</div><div><input type="checkbox"/> Winterize dry/fluid coolers, all ancillary equipment, and associated piping network, as applicable and per manufacturer recommendations;</div><div><input type="checkbox"/> Power down the electrical service to the dry/fluid coolers, and verify all manufacturer winterization requirements and recommendations have been implemented;</div><div><input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</div></div></div>	J	F	M	A	M	J	J	A	S	O	N	D
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## 9. Ductless-Split Air-Conditioners

Annual Preventative Maintenance	SCHEDULING WINDOW											
<div><div><div><input type="checkbox"/> Inspect cooling systems to ensure they are free from general damage, leaks, corrosion, contaminants, or obstructions that would impair performance;</div><div><input type="checkbox"/> Remove dirt accumulation from condenser fan blades, motors, and compressors, and clean with a damp cloth;</div><div><input type="checkbox"/> Inspect visible refrigerant line sets for damaged/missing insulation, complete minor repairs as required;</div><div><input type="checkbox"/> Thoroughly inspect the condensing coil surfaces, obstructions are to be removed, and any corrosion or damage to be noted for correction;</div><div><input type="checkbox"/> Inspect compressors and fan motors for proper operation, and verify voltage and amperage draws relative to nameplate ratings;</div><div><input type="checkbox"/> Inspect and lubricate fan motors, abiding by nameplate instructions, and wipe up excess lubricant;</div><div><input type="checkbox"/> Check oil levels and refrigerant pressures/temperatures, and adjust to appropriate levels as necessary;</div><div><input type="checkbox"/> Remove dirt accumulation from return- and supply-air grilles, and clean with a damp cloth;</div><div><input type="checkbox"/> Remove re-usable air filters, clean free of dirt/debris, and reinstall;</div><div><input type="checkbox"/> Thoroughly inspect the evaporating coils for dirt/debris that would obstruct heat transfer or airflow, loosen major sediment from coils, and use low pressure water, air, steam, or approved cleansers to clean remaining sediment;</div><div><input type="checkbox"/> Inspect and clean condensate pans and management system, flush condensate lines free of debris/sludge through to drains with use of nitrogen gas, and ensure condensate line is securely piped to drain;</div><div><input type="checkbox"/> Thoroughly inspect wiring systems for loose connections or damage, repair, tighten and clean connections;</div><div><input type="checkbox"/> Test and verify operation of all system safety devices, control valves, and thermostat controls;</div><div><input type="checkbox"/> Reactivate the systems and test under one complete cycle;</div><div><input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</div></div></div>	J	F	M	A	M	J	J	A	S	O	N	D
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## 10. Energy/Heat Recovery Ventilators (ERV/HRV)

Regular General Inspection	SCHEDULING WINDOW											
<div><div><div><input type="checkbox"/> Inspect ERV/HRV assemblies, housings, and ductwork to ensure they are free from general damage, corrosion, contaminants, or obstructions that would impair performance;</div><div><input type="checkbox"/> Inspect visible duct network for damaged/missing insulation, complete minor repairs as required;</div><div><input type="checkbox"/> Isolate and shutdown ERV/HRV units as required;</div><div><input type="checkbox"/> Inspect intake/exhaust grilles and air filters, clean free of dirt/debris, and replace air filters as required with filter selection that meets manufacturer recommendations/requirements;</div><div><input type="checkbox"/> Thoroughly inspect wiring systems for loose connections or damage, repair, tighten and clean connections;</div><div><input type="checkbox"/> Test all safety devices and operational controls for proper operation;</div><div><input type="checkbox"/> Reactivate HRV/ERV units and briefly monitor for proper operation;</div><div><input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</div></div></div>	J	F	M	A	M	J	J	A	S	O	N	D
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Annual Preventative Maintenance	SCHEDULING WINDOW											
<div><div><input type="checkbox"/> Isolate and shutdown ERV/HRV units as required;</div><div><input type="checkbox"/> Complete “Regular General Inspection” scope of work;</div><div><input type="checkbox"/> Dismantle ERV/HRV units to allow necessary servicing, and abide by manufacturer precautions and recommendations;</div><div><input type="checkbox"/> Thoroughly inspect energy/heat recovery media, loosen major sediment from coils, and use a vacuum to clean remaining sediment, with equipment utilizing HEPA filtration with minimum collection efficiency of 99.97% at 0.3-micron particle size, abiding by manufacturer recommendations;</div><div><input type="checkbox"/> Vacuum interior surfaces of ERV/HRV cabinets free of dust/debris, with equipment utilizing HEPA filtration with minimum collection efficiency of 99.97% at 0.3-micron particle size;</div><div><input type="checkbox"/> Reassemble ERV/HRV units, ensuring all components, bolts/washers, and seals are properly seated and torqued to manufacturer recommendations;</div><div><input type="checkbox"/> Reactivate ERV/HRV units and briefly monitor for proper operation;</div><div><input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</div></div>	J	F	M	A	M	J	J	A	S	O	N	D
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## 11. Exhaust Fans (Centralized, Dedicated, Parking Garage)

Regular General Inspection	SCHEDULING WINDOW																
<div><div><input type="checkbox"/> Inspect fan assemblies, housings, and ductwork to ensure they are free from general damage, corrosion, contaminants, or obstructions that would impair performance;</div><div><input type="checkbox"/> Inspect visible duct network for damaged/missing insulation, complete minor repairs as required;</div><div><input type="checkbox"/> Isolate and shutdown fans as required;</div><div><input type="checkbox"/> Inspect motors, fan blades and/or blower cages, and pulleys/sheaves for proper operation and securement, adjust as required;</div><div><input type="checkbox"/> Inspect fan belts for wear, proper tension and operation, and replace as required;</div><div><input type="checkbox"/> Inspect motor/fan bearings and lubricate abiding by nameplate instructions, and wipe up excess lubricant;</div><div><input type="checkbox"/> Inspect dampers and linkages/actuators for proper operation and securement, and lubricate;</div><div><input type="checkbox"/> Inspect intake grilles and air filters, clean free of dirt/debris, and replace air filters as required with filter selection that meets manufacturer recommendations/requirements;</div><div><input type="checkbox"/> Thoroughly inspect wiring systems for loose connections or damage, repair, tighten and clean connections;</div><div><input type="checkbox"/> Inspect motor starters and/or contactors for general wear;</div><div><input type="checkbox"/> Inspect and tighten loose nuts/bolts/fasteners around fan assemblies;</div><div><input type="checkbox"/> Test all safety devices and operational controls for proper operation;</div><div><input type="checkbox"/> Reactivate fans and briefly monitor for proper operation;</div><div><input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</div></div>	J	F	M	A	M	J	J	A	S	O	N	D					
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Annual Preventative Maintenance	SCHEDULING WINDOW											
<div><input type="checkbox"/> Isolate and shutdown fans as required;</div> <div><input type="checkbox"/> Complete “Regular General Inspection” scope of work;</div> <div><input type="checkbox"/> Remove dirt accumulation from fan blades and/or blower cages, and clean surfaces with a damp cloth;</div> <div><input type="checkbox"/> Remove dirt accumulation from fan motors, and clean with a damp cloth;</div> <div><input type="checkbox"/> Remove dirt accumulation from dampers and linkages/actuators, and clean with a damp cloth;</div> <div><input type="checkbox"/> Remove dirt accumulation from intake grilles, and clean with a damp cloth;</div> <div><input type="checkbox"/> Check fan motor voltage and amperage draws, and compare against nameplate ratings;</div> <div><input type="checkbox"/> Reactivate fans and briefly monitor for proper operation;</div> <div><input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</div>	J	F	M	A	M	J	J	A	S	O	N	D
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## 12. Fan Coil Units (Hydronic)

Annual Preventative Maintenance	SCHEDULING WINDOW											
<div><div><div><input type="checkbox"/> Inspect fan coil units and visual ductwork to ensure they are free from general damage, leaks, corrosion, contaminants, or obstructions that would impair performance;</div><div><input type="checkbox"/> Remove dirt accumulation from return- and supply-air grilles, and clean with a damp cloth;</div><div><input type="checkbox"/> Inspect interior of cabinets for damaged/missing insulation, complete minor repairs as required;</div><div><input type="checkbox"/> Inspect and clean condensate pans and management systems, flush condensate lines free of debris/sludge through to drains with use of nitrogen gas, and ensure condensate line is securely piped to drain;</div><div><input type="checkbox"/> Thoroughly inspect the hydronic coils for dirt/debris that would obstruct heat transfer or airflow, loosen major sediment from coils, and use low pressure water, air, steam, or approved cleansers to clean remaining sediment;</div><div><input type="checkbox"/> Thoroughly inspect wiring systems for loose connections or damage, repair, tighten and clean connections;</div><div><input type="checkbox"/> Inspect blower assemblies for proper operation and securement, adjust as required, remove dirt accumulation, and clean with a damp cloth;</div><div><input type="checkbox"/> Inspect blower motors for proper operation, and verify voltage and amperage draws relative to nameplate ratings;</div><div><input type="checkbox"/> Lubricate blower motor bearings, abiding by nameplate instructions, and wipe up excess lubricant;</div><div><input type="checkbox"/> Inspect any supplemental electric heating coils for proper operation, and verify voltage and amperage draws relative to nameplate ratings;</div><div><input type="checkbox"/> Test and verify operation of all system safety devices, control valves, and thermostat controls;</div><div><input type="checkbox"/> Provide two air filters per unit, with filter selection that meets manufacturer recommendations/requirements – Replace one as part of the annual preventative maintenance, and leave the remaining one for replacement by site staff at a later date;</div><div><input type="checkbox"/> Vacuum interior surfaces of fan coil cabinets free of dust/debris, with equipment utilizing HEPA filtration with minimum collection efficiency of 99.97% at 0.3-micron particle size;</div><div><input type="checkbox"/> Reactivate the fan coil units and test under one complete cycle;</div><div><input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</div></div></div>	J	F	M	A	M	J	J	A	S	O	N	D
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### 13. Forced-Air Systems (Dedicated)

Annual Preventative Maintenance	SCHEDULING WINDOW											
<div><div><input type="checkbox"/> Inspect forced-air systems and visual ductwork to ensure they are free from general damage, leaks, corrosion, contaminants, or obstructions that would impair performance;</div><div><input type="checkbox"/> Inspect interior of cabinets for damaged/missing insulation, complete minor repairs as required;</div><div><input type="checkbox"/> Inspect blower assemblies for proper operation and securement, adjust as required, remove dirt accumulation, and clean with a damp cloth;</div><div><input type="checkbox"/> Inspect blower motor for proper operation, and verify voltage and amperage draws relative to nameplate ratings;</div><div><input type="checkbox"/> Thoroughly inspect wiring systems for loose connections or damage, repair, tighten and clean connections;</div><div><input type="checkbox"/> Lubricate blower motor bearings, abiding by nameplate instructions, and wipe up excess lubricant;</div><div><input type="checkbox"/> Test and verify operation of all system safety devices, control valves, and thermostat controls;</div><div><input type="checkbox"/> Provide two air filters per unit, with filter selection that meets manufacturer recommendations/requirements – Replace one as part of the annual preventative maintenance, and leave the remaining one for replacement by site staff at a later date;</div><div><input type="checkbox"/> Vacuum forced-air cabinet free of dust/debris;</div><div><input type="checkbox"/> Reactivate the forced-air systems and test under one complete cycle;</div><div><input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</div></div>	J	F	M	A	M	J	J	A	S	O	N	D
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## 14. Forced-Air Systems (Gas-Fired Furnaces)

Annual Preventative Maintenance	SCHEDULING WINDOW											
<div><div><div><input type="checkbox"/> To be completed in conjunction with “Forced-Air Systems (Dedicated)” scope of work;</div><div><input type="checkbox"/> Inspect furnaces, gas connections/regulators, and visual ductwork, and ensure they are free from general damage, leaks, corrosion, contaminants, or obstructions that would impair performance;</div><div><input type="checkbox"/> Thoroughly inspect venting and air intake systems for obstructions, leakage paths or deterioration;</div><div><input type="checkbox"/> Inspect intake blower/ventilator motor assemblies, clean inlet air filters free of dirt/debris, and replace as required with filter selection that meets manufacturer recommendations/requirements;</div><div><input type="checkbox"/> Test and verify operation of all system safety devices, gas control valves, and thermostat controls;</div><div><input type="checkbox"/> Inspect and ensure flame/combustion quality and proper operation;</div><div><input type="checkbox"/> Thoroughly inspect wiring systems for loose connections or damage, repair, tighten and clean connections;</div><div><input type="checkbox"/> Inspect and clean condensate pans and management system, flush condensate lines free of debris/sludge through to drains with use of nitrogen gas, and ensure condensate line is securely piped to drain;</div><div><input type="checkbox"/> Reactivate the furnaces and test under one complete cycle;</div><div><input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</div></div></div>	J	F	M	A	M	J	J	A	S	O	N	D
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## 15. Forced-Air Systems (Electric Furnaces)

Annual Preventative Maintenance	SCHEDULING WINDOW											
<div><div><input type="checkbox"/> To be completed in conjunction with “Forced-Air Systems (Dedicated)” scope of work;</div><div><input type="checkbox"/> Inspect furnaces and visual ductwork, and ensure they are free from general damage, leaks, corrosion, contaminants, or obstructions that would impair performance;</div><div><input type="checkbox"/> Thoroughly inspect wiring systems for loose connections or damage, repair, tighten and clean connections;</div><div><input type="checkbox"/> Inspect electric heating coils for proper operation, and verify voltage and amperage draws relative to nameplate ratings;</div><div><input type="checkbox"/> Test and verify operation of all system safety devices, control valves, and thermostat controls;</div><div><input type="checkbox"/> Reactivate the furnaces, pending seasonal restraints, and test under one complete cycle;</div><div><input type="checkbox"/> Perform a CO test to ensure levels are safe and within regulated levels, and tag/label equipment with results and date/time of the test;</div><div><input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</div></div>	J	F	M	A	M	J	J	A	S	O	N	D
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## 16. Forced-Air Systems (Gas-Fired Combined Heating/DHW)

Annual Preventative Maintenance	SCHEDULING WINDOW															
<div><div><div><input type="checkbox"/> To be completed in conjunction with “Forced-Air Systems (Dedicated)” scope of work;</div><div><input type="checkbox"/> Inspect combined heating/DHW systems and visual ductwork/piping network, and ensure they are free from general damage, leaks, corrosion, contaminants, or obstructions that would impair performance;</div><div><input type="checkbox"/> Inspect visible piping network for damaged/missing insulation, complete minor repairs as required;</div><div><input type="checkbox"/> Thoroughly inspect venting and air intake systems for obstructions, leakage paths or deterioration;</div><div><input type="checkbox"/> Inspect intake blower/ventilator motor assemblies, clean inlet air filters free of dirt/debris, and replace as required with filter selection that meets manufacturer recommendations/requirements;</div><div><input type="checkbox"/> Test and verify operation of tank pressure relief devices, and inspect for leaks;</div><div><input type="checkbox"/> Test and verify operation of all system safety devices, gas control valves, and thermostat controls;</div><div><input type="checkbox"/> Inspect and ensure flame/combustion quality and proper operation;</div><div><input type="checkbox"/> Inspect and clean inlet water filters free of dirt/debris, and replace as required with filter selection that meets manufacturer recommendations/requirements;</div><div><input type="checkbox"/> Thoroughly inspect wiring systems for loose connections or damage, repair, tighten and clean connections;</div><div><input type="checkbox"/> Flush open-loop side of heat exchangers, as required, with processes approved by manufacturer to mitigate accumulated scale/debris that has impaired heat transfer performance;</div><div><input type="checkbox"/> Inspect diverting valves and ensure proper operation;</div><div><input type="checkbox"/> Inspect pumps for proper operation, and verify voltage and amperage draws relative to nameplate ratings;</div><div><input type="checkbox"/> Inspect and clean condensate pans and management system, flush condensate lines free of debris/sludge through to drains with use of nitrogen gas, and ensure condensate line is securely piped to drain;</div><div><input type="checkbox"/> Thoroughly inspect the hydronic coils for dirt/debris that would obstruct heat transfer or airflow, loosen major sediment from coils, and use low pressure water, air, steam, or approved cleansers to clean remaining sediment;</div><div><input type="checkbox"/> Verify DHW system controls are set to maintain 130°F storage water temperature, adjust as necessary;</div><div><input type="checkbox"/> Where DHW thermostatic mixing valves are present, verify supply hot water temperature is set for 125°F and DHW system controls are set to maintain 140 - 150°F storage water temperature, adjust as necessary;</div><div><input type="checkbox"/> Cycle and test operation of isolation valves serving the systems, and reactivate the systems and test under one complete cycle;</div><div><input type="checkbox"/> Perform a CO test to ensure levels are safe and within regulated levels, and tag/label equipment with results and date/time of the test;</div><div><input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</div></div></div>	J	F	M	A	M	J	J	A	S	O	N	D				
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## 17. Forced-Air Systems (DX Cooling)

Annual Preventative Maintenance	SCHEDULING WINDOW											
<div><div><div><input type="checkbox"/> To be completed in conjunction with “Forced-Air Systems (Dedicated)” scope of work;</div><div><input type="checkbox"/> Inspect DX cooling systems and visual ductwork, and ensure they are free from general damage, leaks, corrosion, contaminants, or obstructions that would impair performance;</div><div><input type="checkbox"/> Inspect visible refrigerant line sets for damaged/missing insulation, complete minor repairs as required;</div><div><input type="checkbox"/> Thoroughly inspect the condensing coil surfaces, obstructions are to be removed, and any corrosion or damage to be noted for correction;</div><div><input type="checkbox"/> Remove dirt accumulation from condenser fan blades, motors, and compressors, and clean with a damp cloth;</div><div><input type="checkbox"/> Inspect compressors and fan motors for proper operation, and verify voltage and amperage draws relative to nameplate ratings;</div><div><input type="checkbox"/> Inspect and lubricate fan motor bearings, abiding by nameplate instructions, and wipe up excess lubricant;</div><div><input type="checkbox"/> Check oil levels and refrigerant pressures/temperatures, and adjust to appropriate levels as necessary;</div><div><input type="checkbox"/> Thoroughly inspect the evaporating coils for dirt/debris that would obstruct heat transfer or airflow, loosen major sediment from coils, and use low pressure water, air, steam, or approved cleansers to clean remaining sediment;</div><div><input type="checkbox"/> Inspect and clean condensate pans and management system, flush condensate lines free of debris/sludge through to drains with use of nitrogen gas, and ensure condensate line is securely piped to drain;</div><div><input type="checkbox"/> Thoroughly inspect wiring systems for loose connections or damage, repair, tighten and clean connections;</div><div><input type="checkbox"/> Test and verify operation of all system safety devices, control valves, and thermostat controls;</div><div><input type="checkbox"/> Reactivate the systems and test under one complete cycle, and update system tag as required;</div><div><input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</div></div></div>	J	F	M	A	M	J	J	A	S	O	N	D
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## 18. Heating Boilers (Gas-Fired)

Regular General Inspection	SCHEDULING WINDOW																
<div><div><div><input type="checkbox"/> Inspect exterior of boilers, gas connections/regulators, and visual piping network, to ensure they are free from general damage, leaks, corrosion, contaminants, or obstructions that would impair performance;</div><div><input type="checkbox"/> Inspect visible piping network for damaged/missing insulation, complete minor repairs as required;</div><div><input type="checkbox"/> Inspect expansion tanks to ensure they are free from general damage, leaks, and corrosion, and that they are holding appropriate pressure;</div><div><input type="checkbox"/> Thoroughly inspect venting and air intake systems for obstructions, leakage paths or deterioration;</div><div><input type="checkbox"/> Inspect intake blower/ventilator motor assemblies, clean inlet air filters free of dirt/debris, and replace as required with filter selection that meets manufacturer recommendations/requirements;</div><div><input type="checkbox"/> Inspect temperature/pressure gauges and operating controls for proper operation;</div><div><input type="checkbox"/> Inspect low water cutoffs for proper operation;</div><div><input type="checkbox"/> Inspect the high limit controls for proper operation, and adjust to manufacturer recommendations;</div><div><input type="checkbox"/> Test remaining safety devices, gas control valves, and operational controls for proper operation;</div><div><input type="checkbox"/> Cycle and verify operation of all isolation valves serving the boilers and visible piping network;</div><div><input type="checkbox"/> Visually inspect the pilot and main burner flames, and subsequently adjust combustion air, draft regulators, and gas control valves to ensure flame quality and proper operation;</div><div><input type="checkbox"/> For DHW heating boilers, verify local and/or central automation DHW system controls are set to maintain 130°F storage water temperature, adjust as necessary;</div><div><input type="checkbox"/> For DHW heating boilers and where DHW thermostatic mixing valves are present, verify local and/or central automation controls are set to supply hot water temperatures for 125°F and storage water temperature for 140 - 150°F, adjust as necessary;</div><div><input type="checkbox"/> For space heating boilers, verify local and/or central automation controls are set with appropriate and energy-efficient outdoor air reset and warm-weather shutdown configurations, adjust as necessary;</div><div><input type="checkbox"/> For pool heating boilers, verify local and/or central automation controls are set with appropriate and energy-efficient pool water temperatures, and set approximately 2°F below controlled space temperatures to limit pool water evaporation;</div><div><input type="checkbox"/> Inspect condensate pans and management systems for cleanliness, secure piping to drain, and sufficient neutralization media;</div><div><input type="checkbox"/> Verify suitable water treatment in the heating plant, and abide by the applicable “Water Treatment” scope of work;</div><div><input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</div></div></div>	J	F	M	A	M	J	J	A	S	O	N	D					
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Annual Preventative Maintenance	SCHEDULING WINDOW															
<div><div><div><input type="checkbox"/> Isolate and shutdown boiler plant system as required;</div><div><input type="checkbox"/> Complete “Regular General Inspection” scope of work;</div><div><input type="checkbox"/> Dismantle boilers to allow necessary servicing, and abide by manufacturer precautions and recommendations;</div><div><input type="checkbox"/> Thoroughly inspect all exterior panels, perimeter seals/gaskets, and internal structure/supports for damage and deterioration;</div><div><input type="checkbox"/> Thoroughly inspect refractory sections for damage and deterioration;</div><div><input type="checkbox"/> Remove and thoroughly inspect burners and burner gaskets for damage or signs of deterioration, and use a brush and/or compressed air to remove any debris from the burner ports;</div><div><input type="checkbox"/> Remove and thoroughly inspect heat exchangers, clean with water and soft brush to ensure the surfaces of the tubes are sufficiently free of any black soot or corrosion, and re-inspect surfaces;<div><div><div><input type="checkbox"/> If black soot deposits are present, complete system calibration/adjustments to improve combustion quality;</div><div><input type="checkbox"/> If corrosion or green deposits are present, adjust centralized and/or local controls to eliminate low return water temperature feeds to the boilers;</div><div><input type="checkbox"/> If heat exchanger sags or has become distorted, review water circulation systems to ensure water flow through the boilers meets manufacturer requirements;</div></div></div><div><div><div><input type="checkbox"/> Thoroughly inspect wiring systems for loose connections or damage, repair, tighten and clean connections;</div><div><input type="checkbox"/> Thoroughly inspect and clean ignition and flame sense assemblies to ensure proper operation;</div><div><input type="checkbox"/> Reassemble boilers, ensuring all components, bolts/washers, and seals are properly seated and torqued to manufacturer recommendations;</div><div><input type="checkbox"/> Replace neutralization media, flush condensate lines free of debris/sludge through to drains with use of nitrogen gas, and ensure condensate lines are securely piped to drain;</div><div><input type="checkbox"/> Verify combustion efficiency, and enclose final combustion analysis reports in the master Preventative Maintenance binder located in the site management office;</div><div><input type="checkbox"/> Perform a CO test to ensure levels are safe and within regulated levels, and tag/label equipment with results and date/time of the test;</div><div><input type="checkbox"/> Verify suitable water treatment in the heating plant, and abide by the applicable “Water Treatment” scope of work;</div><div><input type="checkbox"/> Reactivate the boilers and test under one complete cycle, and abide by manufacturer recommended procedures;</div><div><input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</div></div></div></div></div></div>	J	F	M	A	M	J	J	A	S	O	N	D				
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## 19. Heat Exchangers (Flat-Plate, Tube-Shell, Brazed-Plate)

Regular General Inspection	SCHEDULING WINDOW											
<div><div><input type="checkbox"/> Inspect heat exchangers and visual piping network to ensure they are free from general damage, leaks, corrosion, contaminants, or obstructions that would impair performance;</div><div><input type="checkbox"/> Inspect heat exchangers and visible piping network for damaged/missing insulation, complete minor repairs as required;</div><div><input type="checkbox"/> Monitor and test approach temperature for closed-loop side(s) of heat exchangers and, where performance falls outside of specification, provide a quote to flush heat exchangers with processes approved by manufacturer to mitigate accumulated scale/debris that has impaired heat transfer performance;</div><div><input type="checkbox"/> Monitor and test approach temperature for open-loop side(s) of heat exchangers and, where performance falls outside of specification, provide a quote to flush heat exchangers with processes approved by manufacturer to mitigate accumulated scale/debris that has impaired heat transfer performance;</div><div><input type="checkbox"/> Cycle and verify operation of all isolation valves serving the heat exchangers and visible piping network;</div><div><input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</div></div>	J	F	M	A	M	J	J	A	S	O	N	D
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Annual Preventative Maintenance	SCHEDULING WINDOW											
<div><div><input type="checkbox"/> Complete “Regular General Inspection” scope of work;</div><div><input type="checkbox"/> Based on the approach temperature testing results, flush closed-loop side(s) of heat exchangers with processes approved by manufacturer to mitigate accumulated scale/debris that has impaired heat transfer performance;</div><div><input type="checkbox"/> Flush open-loop side(s) of heat exchangers, once per year, with processes approved by manufacturer to mitigate accumulated scale/debris that has impaired heat transfer performance;</div><div><input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</div></div>	J	F	M	A	M	J	J	A	S	O	N	D
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## 20. Heat Pump Units (Water-Source)

Annual Preventative Maintenance	SCHEDULING WINDOW											
<div><div><div><input type="checkbox"/> Inspect heat pump units and visual ductwork to ensure they are free from general damage, leaks, corrosion, contaminants, or obstructions that would impair performance;</div><div><input type="checkbox"/> Remove dirt accumulation from return- and supply-air grilles, and clean with a damp cloth;</div><div><input type="checkbox"/> Inspect interior of cabinets for damaged/missing insulation, complete minor repairs as required;</div><div><input type="checkbox"/> Dismantle or remove heat pump units from the chassis to allow necessary servicing, and abide by manufacturer precautions and recommendations;</div><div><input type="checkbox"/> Inspect and clean primary and secondary condensate pans and management systems, flush condensate lines free of debris/sludge through to drains with use of nitrogen gas, and ensure condensate line is securely piped to drain;</div><div><input type="checkbox"/> Thoroughly inspect the evaporating coils for dirt/debris that would obstruct heat transfer or airflow, loosen major sediment from coils, and use low pressure water, air, steam, or approved cleansers to clean remaining sediment;</div><div><input type="checkbox"/> Thoroughly inspect wiring systems for loose connections or damage, repair, tighten and clean connections;</div><div><input type="checkbox"/> Inspect blower assemblies for proper operation and securement, adjust as required, remove dirt accumulation, and clean with a damp cloth;</div><div><input type="checkbox"/> Inspect compressors and blower motors for proper operation, and verify voltage and amperage draws relative to nameplate ratings;</div><div><input type="checkbox"/> Lubricate blower motor bearings, abiding by nameplate instructions, and wipe up excess lubricant;</div><div><input type="checkbox"/> Check oil levels and refrigerant pressures/temperatures, and adjust to appropriate levels as necessary;</div><div><input type="checkbox"/> Reinstall heat pump units within the chassis, and abide by manufacturer precautions and recommendations;</div><div><input type="checkbox"/> Test and verify operation of all system safety devices, control valves, and thermostat controls;</div><div><input type="checkbox"/> Provide two air filters per unit, with filter selection that meets manufacturer recommendations/requirements – Replace one as part of the annual preventative maintenance, and leave the remaining one for replacement by site staff at a later date;</div><div><input type="checkbox"/> Vacuum interior surfaces of heat pump cabinets free of dust/debris, with equipment utilizing HEPA filtration with minimum collection efficiency of 99.97% at 0.3-micron particle size;</div><div><input type="checkbox"/> Reactivate the heat pump units and test under one complete cycle;</div><div><input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</div></div></div>	J	F	M	A	M	J	J	A	S	O	N	D
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## 21. Heat Pump Units (Air-Source)

Annual Preventative Maintenance	SCHEDULING WINDOW											
<div><div><div><input type="checkbox"/> Inspect heat pump units and visual ductwork to ensure they are free from general damage, leaks, corrosion, contaminants, or obstructions that would impair performance;</div><div><input type="checkbox"/> Remove dirt accumulation from return- and supply-air grilles, and clean with a damp cloth;</div><div><input type="checkbox"/> Inspect interior of cabinets for damaged/missing insulation, complete minor repairs as required;</div><div><input type="checkbox"/> Dismantle or remove heat pump units from the chassis to allow necessary servicing, and abide by manufacturer precautions and recommendations;</div><div><input type="checkbox"/> Inspect and clean primary and secondary condensate pans and management systems, flush condensate lines free of debris/sludge through to drains with use of nitrogen gas, and ensure condensate line is securely piped to drain;</div><div><input type="checkbox"/> Thoroughly inspect the evaporating coils for dirt/debris that would obstruct heat transfer or airflow, loosen major sediment from coils, and use low pressure water, air, steam, or approved cleansers to clean remaining sediment;</div><div><input type="checkbox"/> Thoroughly inspect the condensing coil surfaces, obstructions are to be removed, and any corrosion or damage to be noted for correction;</div><div><input type="checkbox"/> Thoroughly inspect wiring systems for loose connections or damage, repair, tighten and clean connections;</div><div><input type="checkbox"/> Inspect blower assemblies for proper operation and securement, adjust as required, remove dirt accumulation, and clean with a damp cloth;</div><div><input type="checkbox"/> Inspect compressors and blower motors for proper operation, and verify voltage and amperage draws relative to nameplate ratings;</div><div><input type="checkbox"/> Lubricate blower motor bearings, abiding by nameplate instructions, and wipe up excess lubricant;</div><div><input type="checkbox"/> Check oil levels and refrigerant pressures/temperatures, and adjust to appropriate levels as necessary;</div><div><input type="checkbox"/> Reinstall heat pump units within the chassis, abiding by manufacturer precautions and recommendations, and test and verify operation of all system safety devices, control valves, and thermostat controls;</div><div><input type="checkbox"/> Provide two air filters per unit, with filter selection that meets manufacturer recommendations/requirements – Replace one as part of the annual preventative maintenance, and leave the remaining one for replacement by site staff at a later date;</div><div><input type="checkbox"/> Vacuum interior surfaces of heat pump cabinets free of dust/debris, with equipment utilizing HEPA filtration with minimum collection efficiency of 99.97% at 0.3-micron particle size;</div><div><input type="checkbox"/> Reactivate the heat pump units and test under one complete cycle;</div><div><input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</div></div></div>	J	F	M	A	M	J	J	A	S	O	N	D
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## 22. MAU/AHU Supply Air Fans (Centralized, Dedicated)

Regular General Inspection	SCHEDULING WINDOW																
<div><div><input type="checkbox"/> Inspect fan assemblies, housings, and ductwork to ensure they are free from general damage, corrosion, contaminants, or obstructions that would impair performance;</div><div><input type="checkbox"/> Inspect visible duct network for damaged/missing insulation, complete minor repairs as required;</div><div><input type="checkbox"/> Isolate and shutdown fans as required;</div><div><input type="checkbox"/> Inspect motors, fan blades and/or blower cages, and pulleys/sheaves for proper operation and securement, adjust as required;</div><div><input type="checkbox"/> Inspect fan belts for wear, proper tension and operation, and replace as required;</div><div><input type="checkbox"/> Inspect motor/fan bearings and lubricate abiding by nameplate instructions, and wipe up excess lubricant;</div><div><input type="checkbox"/> Inspect dampers and linkages/actuators for proper operation and securement, and lubricate;</div><div><input type="checkbox"/> Inspect intake grilles and air filters, clean free of dirt/debris, and replace air filters as required with filter selection that meets manufacturer recommendations/requirements;</div><div><input type="checkbox"/> Thoroughly inspect wiring systems for loose connections or damage, repair, tighten and clean connections;</div><div><input type="checkbox"/> Inspect motor starters and/or contactors for general wear;</div><div><input type="checkbox"/> Inspect and tighten loose nuts/bolts/fasteners around fan assemblies;</div><div><input type="checkbox"/> Test all safety devices and operational controls for proper operation;</div><div><input type="checkbox"/> Reactivate fans and briefly monitor for proper operation;</div><div><input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</div></div>	J	F	M	A	M	J	J	A	S	O	N	D					
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Annual Preventative Maintenance	SCHEDULING WINDOW											
<div><input type="checkbox"/> Isolate and shutdown fans as required;</div> <div><input type="checkbox"/> Complete “Regular General Inspection” scope of work;</div> <div><input type="checkbox"/> Remove dirt accumulation from fan blades and/or blower cages, and clean surfaces with a damp cloth;</div> <div><input type="checkbox"/> Remove dirt accumulation from fan motors, and clean with a damp cloth;</div> <div><input type="checkbox"/> Remove dirt accumulation from dampers and linkages/actuators, and clean with a damp cloth;</div> <div><input type="checkbox"/> Remove dirt accumulation from intake grilles, and clean with a damp cloth;</div> <div><input type="checkbox"/> Check fan motor voltage and amperage draws, and compare against nameplate ratings;</div> <div><input type="checkbox"/> Reactivate fans and briefly monitor for proper operation;</div> <div><input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</div>	J	F	M	A	M	J	J	A	S	O	N	D
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## 23. MAU/AHU Supply Air Fans (Hydronic Heating/Cooling Sections)

Regular General Inspection	SCHEDULING WINDOW																	
<input type="checkbox"/> To be completed in conjunction with "MAU/AHU Supply Air Fans (Centralized, Dedicated)" scope of work; <input type="checkbox"/> Inspect visible piping network for damaged/missing insulation, complete minor repairs as required; <input type="checkbox"/> Isolate and shutdown fans as required; <input type="checkbox"/> Inspect hydronic coils and control valves/actuators for proper operation and securement, adjust as required; <input type="checkbox"/> Verify local thermostats and/or central automation controls are set to maintain 65°F supply air temperature during the heating season within interior residential spaces, and 50°F for underground parking garages, adjust as necessary; <input type="checkbox"/> Verify local thermostats and/or central automation controls are set to maintain 75-78°F supply air temperature during the cooling season, adjust as necessary; <input type="checkbox"/> Cycle and verify operation of all isolation valves serving the hydronic coils and visible piping network; <input type="checkbox"/> Reactivate fans and briefly monitor for proper operation; <input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;	J	F	M	A	M	J	J	A	S	O	N	D						
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Annual Preventative Maintenance	SCHEDULING WINDOW															
<input type="checkbox"/> To be completed in conjunction with "MAU/AHU Supply Air Fans (Centralized, Dedicated)" scope of work; <input type="checkbox"/> Isolate and shutdown fans as required; <input type="checkbox"/> Complete "Regular General Inspection" scope of work; <input type="checkbox"/> Dismantle hydronic heating/cooling sections to allow necessary servicing, and abide by manufacturer precautions and recommendations; <input type="checkbox"/> Thoroughly inspect the hydronic coils for dirt/debris that would obstruct heat transfer or airflow, loosen major sediment from coils, and use low pressure water, air, steam, or approved cleansers to clean remaining sediment; <input type="checkbox"/> Reassemble hydronic heating/cooling sections, ensuring all components, bolts/washers, and seals are properly seated and torqued to manufacturer recommendations; <input type="checkbox"/> Reactivate fans and briefly monitor for proper operation; <input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;	J	F	M	A	M	J	J	A	S	O	N	D				
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## 24. MAU/AHU Supply Air Fans (Electric Heating Sections)

Regular General Inspection	SCHEDULING WINDOW											
<ul style="list-style-type: none"> <li>To be completed in conjunction with "MAU/AHU Supply Air Fans (Centralized, Dedicated)" scope of work;</li> <li>Isolate and shutdown fans as required;</li> <li>Thoroughly inspect wiring systems for loose connections or damage, repair, tighten and clean connections;</li> <li>Test and verify operation of all system safety devices;</li> <li>Verify local thermostats and/or central automation controls are set to maintain 65°F supply air temperature during the heating season within interior residential spaces, and 50°F for underground parking garages, adjust as necessary;</li> <li>Reactivate fans and briefly monitor for proper operation;</li> <li>For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</li> </ul>	J	F	M	A	M	J	J	A	S	O	N	D
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Annual Preventative Maintenance	SCHEDULING WINDOW											
<ul style="list-style-type: none"> <li>To be completed in conjunction with "MAU/AHU Supply Air Fans (Centralized, Dedicated)" scope of work;</li> <li>Isolate and shutdown fans as required;</li> <li>Complete "Regular General Inspection" scope of work;</li> <li>Dismantle electric heating sections to allow necessary servicing, and abide by manufacturer precautions and recommendations;</li> <li>Thoroughly inspect electric heating coils for proper operation, and verify voltage and amperage draws relative to nameplate ratings;</li> <li>Reassemble electric heating sections, ensuring all components, bolts/washers, and seals are properly seated and torqued to manufacturer recommendations;</li> <li>Reactivate fans and briefly monitor for proper operation;</li> <li>For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</li> </ul>	J	F	M	A	M	J	J	A	S	O	N	D
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## 25. MAU/AHU Supply Air Fans (Gas-Fired Heating Sections)

Regular General Inspection	SCHEDULING WINDOW																
<div><div><input type="checkbox"/> To be completed in conjunction with “MAU/AHU Supply Air Fans (Centralized, Dedicated)” scope of work;</div><div><input type="checkbox"/> Inspect exterior of heating sections, gas connections/regulators, and visual piping network, to ensure they are free from general damage, leaks, corrosion, contaminants, or obstructions that would impair performance;</div><div><input type="checkbox"/> Isolate and shutdown fans as required;</div><div><input type="checkbox"/> Thoroughly inspect venting and air intake systems for obstructions, leakage paths or deterioration;</div><div><input type="checkbox"/> Inspect intake blower motor/ventilator assemblies, clean inlet air filters free of dirt/debris, and replace as required with filter selection that meets manufacturer recommendations/requirements;</div><div><input type="checkbox"/> Inspect the high limit controls for proper operation, and adjust to manufacturer recommendations;</div><div><input type="checkbox"/> Test remaining safety devices, gas control valves, and operational controls for proper operation;</div><div><input type="checkbox"/> Visually inspect the pilot and main burner flames, and subsequently adjust combustion air, draft regulators, and gas control valves to ensure flame quality and proper operation;</div><div><input type="checkbox"/> Inspect condensate pans and management systems for cleanliness, secure piping to drain, and sufficient neutralization media;</div><div><input type="checkbox"/> Verify local thermostats and/or central automation controls are set to maintain 65°F supply air temperature during the heating season within interior residential spaces, and 50°F for underground parking garages, adjust as necessary;</div><div><input type="checkbox"/> Reactivate fans and briefly monitor for proper operation;</div><div><input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</div></div>	J	F	M	A	M	J	J	A	S	O	N	D					
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Annual Preventative Maintenance	SCHEDULING WINDOW											
<div><div><div><input type="checkbox"/> To be completed in conjunction with “MAU/AHU Supply Air Fans (Centralized, Dedicated)” scope of work;</div><div><input type="checkbox"/> Complete “Regular General Inspection” scope of work;</div><div><input type="checkbox"/> Dismantle gas-fired heating sections to allow necessary servicing, and abide by manufacturer precautions and recommendations;</div><div><input type="checkbox"/> Thoroughly inspect all exterior panels, perimeter seals/gaskets, and internal structure/supports for damage and deterioration;</div><div><input type="checkbox"/> Thoroughly inspect refractory sections for damage and deterioration;</div><div><input type="checkbox"/> Remove and thoroughly inspect burners and burner gaskets for damage or signs of deterioration, and use a brush and/or compressed air to remove any debris from the burner ports;</div><div><input type="checkbox"/> Thoroughly inspect heat exchangers for cracks/damage, clean with water and soft brush to ensure the surfaces of the tubes are sufficiently free of any black soot or corrosion, and re-inspect surfaces;</div><div><input type="checkbox"/> Thoroughly inspect wiring systems for loose connections or damage, repair, tighten and clean connections;</div><div><input type="checkbox"/> Thoroughly inspect and clean ignition and flame sense assemblies to ensure proper operation;</div><div><input type="checkbox"/> Reassemble gas-fired heating sections, ensuring all components, bolts/washers, and seals are properly seated and torqued to manufacturer recommendations;</div><div><input type="checkbox"/> Replace neutralization media, flush condensate lines free of debris/sludge through to drains with use of nitrogen gas, and ensure condensate lines are securely piped to drain;</div><div><input type="checkbox"/> Verify combustion efficiency, and enclose final combustion analysis reports in the master Preventative Maintenance binder located in the site management office;</div><div><input type="checkbox"/> Perform a CO test to ensure levels are safe and within regulated levels, and tag/label equipment with results and date/time of the test;</div><div><input type="checkbox"/> Reactivate fans and briefly monitor for proper operation;</div><div><input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</div></div></div>	J	F	M	A	M	J	J	A	S	O	N	D
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## 26. MAU/AHU Supply Air Fans (DX Cooling Sections)

Regular General Inspection	SCHEDULING WINDOW											
<input type="checkbox"/> To be completed in conjunction with "MAU/AHU Supply Air Fans (Centralized, Dedicated)" scope of work; <input type="checkbox"/> No further requirements;	J	F	M	A	M	J	J	A	S	O	N	D
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Annual Preventative Maintenance	SCHEDULING WINDOW											
<div><div><div><input type="checkbox"/> To be completed in conjunction with “MAU/AHU Supply Air Fans (Centralized, Dedicated)” scope of work;</div><div><input type="checkbox"/> Isolate and shutdown fans as required;</div><div><input type="checkbox"/> Dismantle DX cooling sections to allow necessary servicing, and abide by manufacturer precautions and recommendations;</div><div><input type="checkbox"/> Thoroughly inspect the condensing coil surfaces, obstructions are to be removed, and any corrosion or damage to be noted for correction;</div><div><input type="checkbox"/> Use manufacturer-approved processes to remove any remaining sediment on condenser coils, rinse clean from inside out, and use a fin comb to straighten any damaged or bent fins;</div><div><input type="checkbox"/> Thoroughly inspect the evaporating coils for dirt/debris that would obstruct heat transfer or airflow, loosen major sediment from coils, and use low pressure water, air, steam, or approved cleansers to clean remaining sediment;</div><div><input type="checkbox"/> Inspect and clean condensate pans and management system, flush condensate lines free of debris/sludge through to drains with use of nitrogen gas, and ensure condensate line is securely piped to drain;</div><div><input type="checkbox"/> Thoroughly inspect wiring systems for loose connections or damage, repair, tighten and clean connections;</div><div><input type="checkbox"/> Remove dirt accumulation from condenser fan blades, fan motors, and compressors, and clean surfaces with a damp cloth;</div><div><input type="checkbox"/> Inspect compressors and fan motors for proper operation, and verify voltage and amperage draws relative to nameplate ratings;</div><div><input type="checkbox"/> Inspect and lubricate fan motors, abiding by nameplate instructions, and wipe up excess lubricant;</div><div><input type="checkbox"/> Check oil levels and refrigerant pressures/temperatures, and adjust to appropriate levels as necessary;</div><div><input type="checkbox"/> Reactivate fans and briefly monitor for proper operation;</div><div><input type="checkbox"/> Verify local thermostats and/or central automation controls are set to maintain 75-78°F supply air temperature during the cooling season, adjust as necessary;</div><div><input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</div></div></div>	J	F	M	A	M	J	J	A	S	O	N	D
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## 27. MAU/AHU Supply Air Fans (Energy Recovery Wheels)

Regular General Inspection	SCHEDULING WINDOW											
<ul style="list-style-type: none"> <li><input type="checkbox"/> To be completed in conjunction with "MAU/AHU Supply Air Fans (Centralized, Dedicated)" scope of work;</li> <li><input type="checkbox"/> Isolate and shutdown fans as required;</li> <li><input type="checkbox"/> Inspect energy recovery wheels for proper operation and securement, adjust as required;</li> <li><input type="checkbox"/> Inspect motors, bearings, pillow blocks, seals, speed reducers, and pulleys/sheaves for proper operation and securement, adjust as required;</li> <li><input type="checkbox"/> Lubricate bearings abiding by nameplate instructions, and wipe up excess lubricant;</li> <li><input type="checkbox"/> Inspect belts/chains for wear, proper tension and operation, and adjust as required;</li> <li><input type="checkbox"/> Thoroughly inspect wiring systems for loose connections or damage, repair, tighten and clean connections;</li> <li><input type="checkbox"/> Verify local thermostats and/or central automation controls are set to restrict supplemental heat demand to when supply air temperatures fall below 65°F, adjust as necessary;</li> <li><input type="checkbox"/> Verify local thermostats and/or central automation controls are set to restrict supplemental heat systems to regulate supply air temperatures at 65°F, adjust as necessary;</li> <li><input type="checkbox"/> Reactivate fans and briefly monitor for proper operation;</li> <li><input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</li> </ul>	J	F	M	A	M	J	J	A	S	O	N	D
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Annual Preventative Maintenance	SCHEDULING WINDOW											
<div><div><input type="checkbox"/> To be completed in conjunction with “MAU/AHU Supply Air Fans (Centralized, Dedicated)” scope of work;</div><div><input type="checkbox"/> Isolate and shutdown fans as required;</div><div><input type="checkbox"/> Complete “Regular General Inspection” scope of work;</div><div><input type="checkbox"/> Dismantle energy recovery wheels to allow necessary servicing, and abide by manufacturer precautions and recommendations;</div><div><input type="checkbox"/> Thoroughly inspect energy recovery media, loosen major sediment from coils, and use compressed air and a vacuum to clean remaining sediment, abiding by manufacturer recommendations;</div><div><input type="checkbox"/> Reassemble energy recovery wheels, ensuring all components, bolts/washers, and seals are properly seated and torqued to manufacturer recommendations;</div><div><input type="checkbox"/> Reactivate fans and briefly monitor for proper operation;</div><div><input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</div></div>	J	F	M	A	M	J	J	A	S	O	N	D
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## 28. PTAC Units (Gas-Fired Heating)

Annual Preventative Maintenance	SCHEDULING WINDOW															
<div><div><div><input type="checkbox"/> Inspect PTAC units, gas connections/regulators, and visual ductwork, and ensure they are free from general damage, leaks, corrosion, contaminants, or obstructions that would impair performance;</div><div><input type="checkbox"/> Remove dirt accumulation from return- and supply-air grilles, and clean with a damp cloth;</div><div><input type="checkbox"/> Inspect interior of cabinets for damaged/missing insulation, complete minor repairs as required;</div><div><input type="checkbox"/> Thoroughly inspect venting and air intake systems for obstructions, leakage paths or deterioration;</div><div><input type="checkbox"/> Inspect intake blower/ventilator motor assemblies, clean inlet air filters free of dirt/debris, and replace as required with filter selection that meets manufacturer recommendations/requirements;</div><div><input type="checkbox"/> Inspect and ensure flame/combustion quality and proper operation;</div><div><input type="checkbox"/> Inspect and clean condensate pans and management system, flush condensate lines free of debris/sludge through to drains with use of nitrogen gas, and ensure condensate line is securely piped to drain;</div><div><input type="checkbox"/> Thoroughly inspect the condensing coil surfaces, obstructions are to be removed, and any corrosion or damage to be noted for correction;</div><div><input type="checkbox"/> Thoroughly inspect the evaporating coils for dirt/debris that would obstruct heat transfer or airflow, loosen major sediment from coils, and use low pressure water, air, steam, or approved cleansers to clean remaining sediment;</div><div><input type="checkbox"/> Inspect blower assemblies for proper operation and securement, adjust as required, remove dirt accumulation, and clean with a damp cloth;</div><div><input type="checkbox"/> Inspect compressors and fan motors for proper operation, and verify voltage and amperage draws relative to nameplate ratings;</div><div><input type="checkbox"/> Lubricate blower motor bearings, abiding by nameplate instructions, and wipe up excess lubricant;</div><div><input type="checkbox"/> Check oil levels and refrigerant pressures/temperatures, and adjust to appropriate levels as necessary;</div><div><input type="checkbox"/> Thoroughly inspect wiring systems for loose connections or damage, repair, tighten and clean connections;</div><div><input type="checkbox"/> Test and verify operation of all system safety devices, control valves, and thermostat controls;</div><div><input type="checkbox"/> Provide two air filters per unit, with filter selection that meets manufacturer recommendations/requirements – Replace one as part of the annual preventative maintenance, and leave the remaining one for replacement by site staff at a later date;</div><div><input type="checkbox"/> Vacuum interior surfaces of PTAC cabinets free of dust/debris, with equipment utilizing HEPA filtration with minimum collection efficiency of 99.97% at 0.3-micron particle size;</div><div><input type="checkbox"/> Reactivate the PTAC units and test under one complete cycle;</div><div><input type="checkbox"/> Perform a CO test to ensure levels are safe and within regulated levels, and tag/label equipment with results and date/time of the test;</div><div><input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</div></div></div>	J	F	M	A	M	J	J	A	S	O	N	D				
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## 29. PTAC Units (Electric Heating)

Annual Preventative Maintenance	SCHEDULING WINDOW														
<div><div><div><input type="checkbox"/> Inspect PTAC units and visual ductwork to ensure they are free from general damage, leaks, corrosion, contaminants, or obstructions that would impair performance;</div><div><input type="checkbox"/> Remove dirt accumulation from return- and supply-air grilles, and clean with a damp cloth;</div><div><input type="checkbox"/> Inspect interior of cabinets for damaged/missing insulation, complete minor repairs as required;</div><div><input type="checkbox"/> Inspect and clean condensate pans and management system, flush condensate lines free of debris/sludge through to drains with use of nitrogen gas, and ensure condensate line is securely piped to drain;</div><div><input type="checkbox"/> Thoroughly inspect the condensing coil surfaces, obstructions are to be removed, and any corrosion or damage to be noted for correction;</div><div><input type="checkbox"/> Thoroughly inspect the evaporating coils for dirt/debris that would obstruct heat transfer or airflow, loosen major sediment from coils, and use low pressure water, air, steam, or approved cleansers to clean remaining sediment;</div><div><input type="checkbox"/> Inspect blower assemblies for proper operation and securement, adjust as required, remove dirt accumulation, and clean with a damp cloth;</div><div><input type="checkbox"/> Inspect compressors and fan motors for proper operation, and verify voltage and amperage draws relative to nameplate ratings;</div><div><input type="checkbox"/> Lubricate blower motor bearings, abiding by nameplate instructions, and wipe up excess lubricant;</div><div><input type="checkbox"/> Check oil levels and refrigerant pressures/temperatures, and adjust to appropriate levels as necessary;</div><div><input type="checkbox"/> Thoroughly inspect wiring systems for loose connections or damage, repair, tighten and clean connections;</div><div><input type="checkbox"/> Inspect electric heating coils for proper operation, and verify voltage and amperage draws relative to nameplate ratings;</div><div><input type="checkbox"/> Test and verify operation of all system safety devices, control valves, and thermostat controls;</div><div><input type="checkbox"/> Provide two air filters per unit, with filter selection that meets manufacturer recommendations/requirements – Replace one as part of the annual preventative maintenance, and leave the remaining one for replacement by site staff at a later date;</div><div><input type="checkbox"/> Vacuum interior surfaces of PTAC cabinets free of dust/debris, with equipment utilizing HEPA filtration with minimum collection efficiency of 99.97% at 0.3-micron particle size;</div><div><input type="checkbox"/> Reactivate the PTAC units and test under one complete cycle;</div><div><input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</div></div></div>	J	F	M	A	M	J	J	A	S	O	N	D			
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### 30. PTAC Units (Hydronic Heating)

Annual Preventative Maintenance	SCHEDULING WINDOW															
<div><div><div><input type="checkbox"/> Inspect PTAC units and visual ductwork to ensure they are free from general damage, leaks, corrosion, contaminants, or obstructions that would impair performance;</div><div><input type="checkbox"/> Remove dirt accumulation from return- and supply-air grilles, and clean with a damp cloth;</div><div><input type="checkbox"/> Inspect interior of cabinets for damaged/missing insulation, complete minor repairs as required;</div><div><input type="checkbox"/> Inspect and clean condensate pans and management system, flush condensate lines free of debris/sludge through to drains with use of nitrogen gas, and ensure condensate line is securely piped to drain;</div><div><input type="checkbox"/> Thoroughly inspect the condensing coil surfaces, obstructions are to be removed, and any corrosion or damage to be noted for correction;</div><div><input type="checkbox"/> Thoroughly inspect the evaporating coils for dirt/debris that would obstruct heat transfer or airflow, loosen major sediment from coils, and use low pressure water, air, steam, or approved cleansers to clean remaining sediment;</div><div><input type="checkbox"/> Thoroughly inspect the hydronic coils for dirt/debris that would obstruct heat transfer or airflow, loosen major sediment from coils, and use low pressure water, air, steam, or approved cleansers to clean remaining sediment;</div><div><input type="checkbox"/> Inspect blower assemblies for proper operation and securement, adjust as required, remove dirt accumulation, and clean with a damp cloth;</div><div><input type="checkbox"/> Inspect compressors and fan motors for proper operation, and verify voltage and amperage draws relative to nameplate ratings;</div><div><input type="checkbox"/> Lubricate blower motor bearings, abiding by nameplate instructions, and wipe up excess lubricant;</div><div><input type="checkbox"/> Check oil levels and refrigerant pressures/temperatures, and adjust to appropriate levels as necessary;</div><div><input type="checkbox"/> Thoroughly inspect wiring systems for loose connections or damage, repair, tighten and clean connections;</div><div><input type="checkbox"/> Test and verify operation of all system safety devices, control valves, and thermostat controls;</div><div><input type="checkbox"/> Provide two air filters per unit, with filter selection that meets manufacturer recommendations/requirements – Replace one as part of the annual preventative maintenance, and leave the remaining one for replacement by site staff at a later date;</div><div><input type="checkbox"/> Vacuum interior surfaces of PTAC cabinets free of dust/debris, with equipment utilizing HEPA filtration with minimum collection efficiency of 99.97% at 0.3-micron particle size;</div><div><input type="checkbox"/> Reactivate the PTAC units and test under one complete cycle;</div><div><input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</div></div></div>	J	F	M	A	M	J	J	A	S	O	N	D				
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### 31. Pumps/Motors (Heating/Cooling, DHW, DCW)

Regular General Inspection	SCHEDULING WINDOW											
<div><div><input type="checkbox"/> Inspect pumps/motors and visual piping network to ensure they are free from general damage, leaks, corrosion, contaminants, or obstructions that would impair performance;</div><div><input type="checkbox"/> Inspect visible piping network for damaged/missing insulation, complete minor repairs as required;</div><div><input type="checkbox"/> Inspect pressure gauges for proper operation, verify suction/discharge pressures, and adjust as required;</div><div><input type="checkbox"/> Isolate and shutdown pumps/motors as required;</div><div><input type="checkbox"/> Inspect pumps/motors for proper operation, alignment, and securement, adjust as required;</div><div><input type="checkbox"/> Inspect and lubricate pump/motor bearings, abiding by nameplate instructions, and wipe up excess lubricant;</div><div><input type="checkbox"/> Thoroughly inspect wiring systems for loose connections or damage, repair, tighten and clean connections;</div><div><input type="checkbox"/> Inspect pump/motor starters and/or contactors for general wear;</div><div><input type="checkbox"/> Clean/flush strainers;</div><div><input type="checkbox"/> Test all safety devices, operational/sequencing controls, and variable frequency drives for proper operation and energy-efficient configuration;</div><div><input type="checkbox"/> Cycle and verify operation of all isolation valves serving the pumps and visible piping network;</div><div><input type="checkbox"/> Reactivate pumps/motors and briefly monitor for proper operation;</div><div><input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</div></div>	J	F	M	A	M	J	J	A	S	O	N	D
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Annual Preventative Maintenance	SCHEDULING WINDOW											
<div><div><input type="checkbox"/> Isolate and shutdown pumps/motors as required;</div><div><input type="checkbox"/> Complete “Regular General Inspection” scope of work;</div><div><input type="checkbox"/> Remove dirt accumulation from motors, and clean surfaces with a damp cloth;</div><div><input type="checkbox"/> Reactivate pumps/motors and briefly monitor for proper operation;</div><div><input type="checkbox"/> Check voltage and amperage draws, and compare against nameplate ratings;</div><div><input type="checkbox"/> Megger test motors, and note any anomalies;</div><div><input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;</div></div>	J	F	M	A	M	J	J	A	S	O	N	D
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## 32. Sump Pumps

Regular General Inspection	SCHEDULING WINDOW											
<input type="checkbox"/> Inspect sump pumps/motors and visual piping network to ensure they are free from general damage, leaks, corrosion, contaminants, or obstructions that would impair performance; <input type="checkbox"/> Confirm sump pump floats, controls, and alarm systems are operating to control/monitor appropriate water levels; <input type="checkbox"/> Thoroughly inspect wiring systems for loose connections or damage, repair, tighten and clean connections; <input type="checkbox"/> Inspect sump pump/motor starters and/or contactors for general wear; <input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;	J	F	M	A	M	J	J	A	S	O	N	D
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Annual Preventative Maintenance	SCHEDULING WINDOW											
<input type="checkbox"/> Isolate and shutdown sump pumps/motors as required; <input type="checkbox"/> Complete "Regular General Inspection" scope of work; <input type="checkbox"/> Review the degree of accumulated debris and sediment within the sump pits, and provide recommendation on whether the sump pits require cleaning; <input type="checkbox"/> Reactivate sump pumps/motors and briefly monitor for proper operation; <input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;	J	F	M	A	M	J	J	A	S	O	N	D
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### 33. Unit Heaters (Hydronic)

Regular General Inspection	SCHEDULING WINDOW											
	J	F	M	A	M	J	J	A	S	O	N	D
<input type="checkbox"/> Inspect unit heaters and visual piping network, to ensure they are free from general damage, leaks, corrosion, contaminants, or obstructions that would impair performance; <input type="checkbox"/> Inspect visible piping network for damaged/missing insulation, complete minor repairs as required; <input type="checkbox"/> Verify local thermostats and/or central automation controls, are set to maintain 65°F supply air temperature within interior residential spaces, and 50°F for underground parking garages, adjust as necessary; <input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;		X										X
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Annual Preventative Maintenance	SCHEDULING WINDOW											
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<input type="checkbox"/> Isolate and shutdown unit heaters as required; <input type="checkbox"/> Complete "Regular General Inspection" scope of work; <input type="checkbox"/> Inspect fan blades, remove dirt accumulation, and clean with a damp cloth; <input type="checkbox"/> Inspect fan motors, remove dirt accumulation, and clean with a damp cloth; <input type="checkbox"/> Lubricate fan motors, abiding by nameplate instructions, and wipe up excess lubricant; <input type="checkbox"/> Thoroughly inspect the hydronic coils for dirt/debris that would obstruct heat transfer or airflow, loosen major sediment from coils, and use low pressure water, air, steam, or approved cleansers to clean remaining sediment; <input type="checkbox"/> Thoroughly inspect wiring systems for loose connections or damage, repair, tighten and clean connections; <input type="checkbox"/> Tighten fan guards, motor frames and bolts, and ensure clearances for proper operation; <input type="checkbox"/> Cycle and verify operation of all isolation valves serving the heaters and visible piping network; <input type="checkbox"/> Reactivate the unit heaters and test under one complete cycle; <input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;							X					
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### 34. Unit Heaters (Gas-Fired)

Regular General Inspection	SCHEDULING WINDOW																	
<input type="checkbox"/> Inspect unit heaters and gas connections/regulators to ensure they are free from general damage, leaks, corrosion, contaminants, or obstructions that would impair performance; <input type="checkbox"/> Thoroughly inspect venting and air intake systems for obstructions, leakage paths or deterioration; <input type="checkbox"/> Inspect intake blower motor/ventilator assemblies, clean inlet air filters free of dirt/debris, and replace as required with filter selection that meets manufacturer recommendations/requirements; <input type="checkbox"/> Test safety devices, gas control valves, and operational controls for proper operation; <input type="checkbox"/> Visually inspect the pilot and main burner flames, and subsequently adjust combustion air, draft regulators, and gas control valves to ensure flame quality and proper operation; <input type="checkbox"/> Verify local thermostats are set to maintain 65°F supply air temperature within interior residential spaces, and 50°F for underground parking garages, adjust as necessary; <input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;	J	F	M	A	M	J	J	A	S	O	N	D						
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Annual Preventative Maintenance	SCHEDULING WINDOW															
<input type="checkbox"/> Isolate and shutdown unit heaters as required; <input type="checkbox"/> Complete "Regular General Inspection" scope of work; <input type="checkbox"/> Inspect fan blades, remove dirt accumulation, and clean with a damp cloth; <input type="checkbox"/> Inspect fan motors, remove dirt accumulation, and clean with a damp cloth; <input type="checkbox"/> Lubricate fan motors, abiding by nameplate instructions, and wipe up excess lubricant; <input type="checkbox"/> Thoroughly inspect wiring systems for loose connections or damage, repair, tighten and clean connections; <input type="checkbox"/> Tighten fan guards, motor frames and bolts, and ensure clearances for proper operation; <input type="checkbox"/> Reactivate the unit heaters and test under one complete cycle; <input type="checkbox"/> Perform a CO test to ensure levels are safe and within regulated levels, and tag/label equipment with results and date/time of the test; <input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;	J	F	M	A	M	J	J	A	S	O	N	D				
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### 35. Unit Heaters (Electric)

Regular General Inspection	SCHEDULING WINDOW											
<input type="checkbox"/> Inspect unit heaters to ensure they are free from general damage, corrosion, contaminants, or obstructions that would impair performance; <input type="checkbox"/> Thoroughly inspect wiring systems for loose connections or damage, repair, tighten and clean connections; <input type="checkbox"/> Test safety devices and operational controls for proper operation; <input type="checkbox"/> Verify local thermostats are set to maintain 65°F supply air temperature within interior residential spaces, and 50°F for underground parking garages, adjust as necessary; <input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;	J	F	M	A	M	J	J	A	S	O	N	D
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	DATE						CONTRACTOR INITIAL					

Annual Preventative Maintenance	SCHEDULING WINDOW											
<input type="checkbox"/> Isolate and shutdown unit heaters as required; <input type="checkbox"/> Complete "Regular General Inspection" scope of work; <input type="checkbox"/> Inspect fan blades, remove dirt accumulation, and clean with a damp cloth; <input type="checkbox"/> Inspect fan motors, remove dirt accumulation, and clean with a damp cloth; <input type="checkbox"/> Lubricate fan motors, abiding by nameplate instructions, and wipe up excess lubricant; <input type="checkbox"/> Tighten fan guard, motor frame and bolts, and ensure clearances for proper operation; <input type="checkbox"/> Reactivate the unit heaters and test under one complete cycle; <input type="checkbox"/> For all noted deficiencies or areas of concern, report findings for repair or replacement on associated work order and issue to the Resident Manager;	J	F	M	A	M	J	J	A	S	O	N	D
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### 36. Water Treatment (Heating Plants, Hydronic Ramp Heating)

Regular General Inspection	SCHEDULING WINDOW											
<ul style="list-style-type: none"> <li><input type="checkbox"/> Inspect water treatment systems and visual piping network to ensure they are free from general damage, leaks, corrosion, contaminants, or obstructions that would impair performance;</li> <li><input type="checkbox"/> Check system for evidence of corrosion, algae growth, scale, lime, or other harmful deposits;</li> <li><input type="checkbox"/> Thoroughly test all chemical monitoring and injection equipment, adjust as required;</li> <li><input type="checkbox"/> Perform a thorough chemical analysis of all applicable water samples, that shall include, but not be limited to, pH, conductivity, iron, corrosion inhibitor level, glycol concentration and freeze point for all glycol loops;</li> <li><input type="checkbox"/> Based on analysis results, adjust chemical auto-feeders and chemical addition rates accordingly;</li> <li><input type="checkbox"/> Inspect all pot feeders and filter housings, along with O-rings for damage or breakage;</li> <li><input type="checkbox"/> Ensure chemical reservoirs and/or pot feeders are maintained at sufficient levels, and that adequate chemical is available on-site to meet any immediate needs to treat the system;</li> <li><input type="checkbox"/> Check filters, and replace as required with filter selection that meets manufacturer recommendations/requirements;</li> <li><input type="checkbox"/> Inspect all pumps/motors for proper operation and securement, adjust as required;</li> <li><input type="checkbox"/> Thoroughly inspect wiring systems for loose connections or damage, repair, tighten and clean connections;</li> <li><input type="checkbox"/> For all noted deficiencies, chemical additions, or areas of concern, report findings on associated work order and provide the chemical analysis report with associated quote within (48) hours of completing the water treatment service to the Resident Manager;</li> </ul>	J	F	M	A	M	J	J	A	S	O	N	D
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### 37. Water Treatment (Chilled Water Plants)

Regular General Inspection	SCHEDULING WINDOW											
<ul style="list-style-type: none"> <li><input type="checkbox"/> Inspect water treatment systems and visual piping network to ensure they are free from general damage, leaks, corrosion, contaminants, or obstructions that would impair performance;</li> <li><input type="checkbox"/> Check system for evidence of corrosion, algae growth, scale, lime, or other harmful deposits;</li> <li><input type="checkbox"/> Thoroughly test all chemical monitoring and injection equipment, adjust as required;</li> <li><input type="checkbox"/> Perform a thorough chemical analysis of all applicable water samples, that shall include, but not be limited to, hardness, pH, conductivity, alkalinity, iron, and bacteria count;</li> <li><input type="checkbox"/> Based on analysis results, adjust chemical auto-feeders and chemical addition rates accordingly;</li> <li><input type="checkbox"/> Inspect all pot feeders and filter housings, along with O-rings for damage or breakage;</li> <li><input type="checkbox"/> Ensure chemical reservoirs and/or pot feeders are maintained at sufficient levels, and that adequate chemical is available on-site to meet any immediate needs to treat the system;</li> <li><input type="checkbox"/> Check filters, and replace as required with filter selection that meets manufacturer recommendations/requirements;</li> <li><input type="checkbox"/> Inspect all pumps/motors for proper operation and securement, adjust as required;</li> <li><input type="checkbox"/> Thoroughly inspect wiring systems for loose connections or damage, repair, tighten and clean connections;</li> <li><input type="checkbox"/> For all noted deficiencies, chemical additions, or areas of concern, report findings on associated work order and provide the chemical analysis report with associated quote within (48) hours of completing the water treatment service to the Resident Manager;</li> </ul>	J	F	M	A	M	J	J	A	S	O	N	D
					X		X		X			
	DATE						CONTRACTOR INITIAL					

### 38. Water Treatment (Dual Temperature Plants)

Regular General Inspection	SCHEDULING WINDOW											
<div><div><div><input type="checkbox"/> Inspect water treatment systems and visual piping network to ensure they are free from general damage, leaks, corrosion, contaminants, or obstructions that would impair performance;</div><div><input type="checkbox"/> Check system for evidence of corrosion, algae growth, scale, lime, or other harmful deposits;</div><div><input type="checkbox"/> Thoroughly test all chemical monitoring and injection equipment, adjust as required;</div><div><input type="checkbox"/> Perform a thorough chemical analysis of all applicable water samples, that shall include, but not be limited to, hardness, pH, conductivity, alkalinity, iron, bacteria count, corrosion inhibitor level, glycol concentration and freeze point for all glycol loops;</div><div><input type="checkbox"/> Based on analysis results, adjust chemical auto-feeders and chemical addition rates accordingly;</div><div><input type="checkbox"/> Inspect all pot feeders and filter housings, along with O-rings for damage or breakage;</div><div><input type="checkbox"/> Ensure chemical reservoirs and/or pot feeders are maintained at sufficient levels, and that adequate chemical is available on-site to meet any immediate needs to treat the system;</div><div><input type="checkbox"/> Check filters, and replace as required with filter selection that meets manufacturer recommendations/requirements;</div><div><input type="checkbox"/> Inspect all pumps/motors for proper operation and securement, adjust as required;</div><div><input type="checkbox"/> Thoroughly inspect wiring systems for loose connections or damage, repair, tighten and clean connections;</div><div><input type="checkbox"/> For all noted deficiencies, chemical additions, or areas of concern, report findings on associated work order and provide the chemical analysis report with associated quote within (48) hours of completing the water treatment service to the Resident Manager;</div></div></div>	J	F	M	A	M	J	J	A	S	O	N	D
	X		X		X		X		X		X	
	DATE						CONTRACTOR INITIAL					

## SCHEDULE “D”

### Additional Contractor Guidelines

The listed safety rules and guidelines below are only a minimum, and are in addition to those deployed by the Contractor and those enforced by the applicable Occupational Health and Safety Act in affect.

#### 1. General Guidelines

- 1.1. The Contractor shall recognize that their work may be performed while the Property is in operation and occupied by residents, and that they are responsible for establishing the necessary safety precautions to permit the performance of work under operating conditions without endangering the Manager’s personnel, the Property, residents, and the general public.
- 1.2. The Contractor is expected to have complete familiarity with the applicable Health and Safety Act in affect, regulations and general duty obligations applicable to its work and to direct and require its employees to comply with it. The Contractor also has the responsibility to correct any violative conditions that it creates.
- 1.3. The Contractor and/or sub-contractors must report all injuries and accidents occurring while on the Property to the Owner or Manager, and the incident must be recorded on Owner’s or Manager’s accident investigation form.
- 1.4. All Contractor’s vehicles, operated on the Property, must observe all warning and traffic signs and park only where instructed by the Resident Manager.
- 1.5. The Contractor’s on-site supervisor should contact the Owner or Manager when any questions arise regarding the safe performance of a job or activity.
- 1.6. The Contractor must review with the Owner or Manager the use of hazardous materials or processes that may introduce hazardous or harmful substances to the work environment prior to use.
- 1.7. Violations of safety rules and/or applicable federal, provincial, or municipal ordinances will result in expulsion from the Property.
- 1.8. Contractor’s on-site employees must conduct and present themselves in a manner conducive to first class multi-residential properties and consistent with the Owner’s and Manager’s service culture. All on site employees of the Contractor shall wear respectable clothing or uniforms, designating the Contractor’s name or logo.
- 1.9. The Owner or Manager has the unilateral and absolute right to approve or disapprove of any Contractor’s employees working on the Property.
- 1.10. Contractor’s employees must wear appropriate personal protection equipment such as, but not limited to, safety shoes, safety glasses, hearing protection, hard hats and/or other safety equipment as assigned while on the Property.
- 1.11. All job sites must be kept clean and orderly at all times.
- 1.12. Materials and equipment must be stored in such a manner that they will not hinder access to stretchers, valves, hose drops, fire extinguishers, electrical equipment, ladders, entrances and exits.

1.13. It is the Contractor's responsibility to dispose of all scrap and rubbish.

1.14. Open fires are not permitted.

**2. Overhead Work, Scaffolds, and Barricades**

2.1. Contractors shall be responsible for barricading grounds or floors when working above ground level to protect employees and residents from falling debris.

2.2. Barricades or guard rails meeting the applicable Occupational Health and Safety Act standards in affect must be provided around all openings, excavations, pits, open sewers, catch basins or any other "opening" in grounds, roofs, or floors. These barricades or guardrails must be kept in place at all times and adequately illuminated at night.

2.3. Contractor is to furnish all required safety warning lights and signs.

2.4. Ladders must be properly constructed and securely braced and tied-off to prevent shifting.

2.5. Contractor's employees shall not work off of lift truck forks unless approved type work platform is used on it.

**3. Propane, Acetylene, and Oxygen**

3.1. Propane, acetylene and oxygen cylinders must be used and stored in an upright position, secured to prevent falling, not subjected to misuse, and stored per Provincial regulations.

3.2. It is the Contractor's responsibility to have a proper "Hot Work" policy in place and abided by all employees, and to ensure fire protection equipment is provided along with adequate "fire-watch" while performing any "Hot Work" on the Property.

MECHANICAL PMA - June 1, 2019 - May 31, 2024

SCHEDULE "E"

BUILDING NAME	LEGAL (Billing Name)	ADDRESS	POSTAL CODE	CITY	PROV	Tel. No.	SERVICE PROVIDER June 1, 2019 to May 31, 2024	BASE RATE ANNUAL FEE  (Tax NOT included)	BASE RATE MONTHLY FEE  (Tax NOT included)
								GL #4313	GL #4313
WESLEY PLACE	Wesley Place LTD	1022 Nelson St	V6E 4S7	Vancouver	BC	604-682-1022	Ainsworth	4,392.00	366.00