

APPENDIX O – CITY OF MISSISSAUGA PREVENTATIVE MAINTENANCE SCHEDULE

The General Contractor is to carry a one (1) year preventative quarterly maintenance service including labour & service parts for each VRF (variable refrigerant flow) system including all outdoor and indoor equipment, and ERV (energy recovery ventilators).

Reference the preventative maintenance schedule below for additional details required as part of the Component Price Schedule. Ensure all manufacturer recommendations specific to each system are included in the Component Price Schedule.

ERV Preventative Maintenance Checklist

Line Item	Components	PM Task	Frequency
1	Check air-filters and housing seal integrity	Replace filters.	Quarterly
2	Check for damage or evidence of leaks on the evaporator and condenser coils, check heat exchanger for cracks	Identify location and repair leaks	Semi Annually
3	Check fan blades and fan housing	Clean as needed.	Semi Annually
4	Check dampers for condition, setting, and operation.	Verify proper operation.	Quarterly
5	Check refrigeration system	Verify proper operation.	Semi Annually
6	Check motor and compressor contactors for pitting or other signs of damage.	When outside of recommended levels, find and record the cause	Semi Annually
7	Check compressor oil levels and / or pressure on refrigerant systems having oil level and/or pressure measurement means, where applicable.	Verify proper operation	Quarterly
8	Check fan and motor bearings	Clean, lubricate and verify proper operation	Quarterly
9	Check belt condition and tension	Check for proper operation and replace as needed	Quarterly
10	Check pulleys and sheaves	Clean, lubricate and verify proper operation	Quarterly
11	Check fan motor amp draw	Verify proper operation	Quarterly
12	Inspect electrical terminals	Clean and tighten electrical connections	Quarterly
13	Check drain pan, drain line, coil and other areas of moisture accumulation for visible signs of biological growth.	Clean and verify proper operation	Quarterly

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VRF Preventative Maintenance Checklist

1	Test enable of cooling	Verify proper operation	Quarterly
2	Check unit cabinet for signs of physical damage	Identify location and recommend repairs	Quarterly
3	Check the outdoor unit air intake and discharge clearances	Clean as needed	Quarterly
4	Ensure the outdoor cabinet drains are clear	Clean as needed	Quarterly
5	Check the condition of the heat exchanger (outdoor coil), clean the heat exchanger and repair any fin damage	Clean, identify location and repair leaks	Quarterly
6	Make sure the outdoor fan is free of dirt, debris, cracks, etc. and that it is securely connected to the fan motor	Clean and lubricate as needed. Tighten as needed	Quarterly
7	Ensure that the refrigeration piping insulation is not damaged	Identify location and recommend repairs	Quarterly
8	Ensure all refrigeration piping is insulated	Verify proper operation	Quarterly
9	Check for signs of refrigerant leakage, i.e. oil in base of unit and around the brazed joints	Identify location and repair leaks. Clean as needed	Quarterly
10	Tighten all electrical connectors	Clean and tighten electrical connections	Quarterly
11	Check that all connectors are securely connected to the outdoor unit Printed Circuit Board (PCB)	Clean and tighten electrical connections	Quarterly
12	Ensure all cabinet screws are secure	Check and tighten as needed	Quarterly
13	While operating, check the system for any abnormal noise or vibration from the condensing unit	Verify proper operation	Quarterly
14	Service Checker operational data observed, saved and logged (three times annually)	Verify proper operation	Quarterly
15	Ensure the VRV condenser has the proper clearances	Clean as needed	Quarterly
16	Ensure the inverter fans are clean and operational	Clean and lubricate as needed. Verify proper operation	Quarterly
17	Blow out drain line with nitrogen (once per year in June)	Clean and verify proper operation	Quarterly
18	Visually check the condition of the heat exchanger (indoor coil)	Verify proper operation	Quarterly
19	Make sure the indoor fan is free of dirt, debris, cracks, etc.	Clean as needed	Quarterly
20	Ensure all refrigeration piping is insulated	Verify proper operation	Quarterly
21	Check for signs of refrigerant leakage	Identify location and repair leaks	Quarterly
22	Tighten all electrical connections	Clean and tighten electrical connections	Quarterly
23	Check that all connectors are securely connected to the indoor unit Printed Circuit Board (PCB)	Clean and tighten electrical connections	Quarterly
24	Ensure all cabinet screws are secure	Check and tighten as needed	Quarterly
25	While operating, check for any abnormal noise or vibration	Verify proper operation	Quarterly
26	Check the set points for space cooling	Verify proper operation	Quarterly
27	All cooling zones should be tested for proper operation	Verify proper operation	Quarterly
28	Check filters/clean per contract	Clean filters as needed	Quarterly