



## **Heating, Ventilation and Air Conditioning Final Inspection Guide**

The completion of the HVAC system is inspected to confirm that the supply and return air systems, mechanical ventilation system and furnace are complete and operational.

### **When must an inspection be requested**

The HVAC final inspection is normally conducted as part of the occupancy inspection of the dwelling and usually coincides with plumbing final inspection. Requesting an occupancy inspection will automatically include the final heating and plumbing inspections.

### **What is involved during an inspection**

A provincially qualified building inspector reviews the heating and mechanical ventilation systems for compliance with the building permit drawings and the Ontario Building Code. The following is a list of the major areas that are inspected.

- Supply and return air systems
- Mechanical ventilation
- Finished basements, basement walkouts

The construction progress, including Building Code deficiencies, are documented on a Field Inspection Report issued by the building inspector immediately after the site inspection.

### **How to prepare for the inspection**

A review of the construction prior to the inspector's arrival can help to ensure a smooth flow in the construction of your project. A checklist of the most common Building Code deficiencies found while performing HVAC final inspections follows.

### **How to request an inspection**

Inspections are requested online through the Cloudpermit portal.

### **Looking ahead**

The next inspection may be the occupancy or plumbing final inspection.

## **HVAC Final Inspection Checklist**

This checklist identifies the most common Ontario Building Code deficiencies found while performing final HVAC inspections. Use this checklist as a guide to reduce delays associated with Building Code deficiencies. Not all Building Code requirements are included in this checklist.

### **General**

- Revision approved for HVAC ductwork layout changes, including changes to the furnace capacity and model.
- Combustion air provided to enclosed furnace rooms.
- When the building inspector is unable to inspect the HVAC system in the basement area during the rough-in stage, the items contained on the HVAC Rough-in Information Sheet are applicable to this inspection.
- Exhaust ducts sealed to Class C level when located in a conditioned space

### **Supply and Return Air Systems**

- Furnace in operating condition.
- Supply ducts and associated fittings are non-combustible, except when they conform to test criteria.
- Ducts penetrating floors or walls are fire stopped with mineral wool between the duct and the construction.
- Connection of all return air ducts to riser with no blockage, i.e. pipes, joist bridging.
- The return air outlet for the basement is complete, including the damper.
- Clearance beneath all ducts is a minimum of 1.95 m.
- 150 mm clearance between a 'C' vent for the hot water tank and combustible materials.
- Neutralizer installed on condensing type furnaces.
- 19 mm undercuts above carpets on doors to rooms without a return-air inlet.
- Sealed to Class A level and insulated to not less than RSI 1.4 when exposed to unheated space or not protected by an insulated exterior wall

### **Mechanical Ventilation**

- All installed fuel-fired appliances and space heating equipment are installed according to the approved permit drawings. A change in the appliance classification requires a revision to the building permit.
- Verify the categorization of the dwelling unit (type I, II, III or IV) corresponds with the type of fuel-fired appliances or space heating equipment. A change in the dwelling categorization requires a revision to the building permit.
- The principal exhaust fan switch is centrally located in the dwelling unit and identified.
- Exhaust air intake when installed in the kitchen, is located on the ceiling or within 300 mm of the ceiling.

- Exhaust air intake (exhaust fan) containing a manual switch is installed in each kitchen, bathroom and water closet room. A switch is not required with a heat recovery ventilator (HRV).
- For dwelling units mechanically ventilated using a forced air system, the circulating fan switch is centrally located (usually on the thermostat) and is identified as “CIRCULATION FAN” and is adjacent to the ventilation fan.

### **Heat Recovery Ventilators**

- Free flow condensate has trap, or pump installed and drained to a floor drain.
- HRV system balanced. Permanent balancing dampers installed.
- Securely mounted using all hardware for noise and vibration transmission reduction.
- Maximum length of flexible duct is 4000 mm with no compressed areas.