The following ***Radon Mitigation System Installation Checklist*** has been developed in accordance with ***National Standard of Canada: Radon Mitigation options for existing low-rise residential buildings: P29-149-012-2017-eng.pdf***

This is not meant to be complete guidance for installation, but rather a tool to use in conjunction with the proper guidelines.

Mitigation Guidance documents

1. Health Canada's Reducing Radon Levels in Existing Homes: A Canadian Guide for Professional Contractors
2. National Standard of Canada: Radon Mitigation options for existing low-rise residential buildings: P29-149-012-2017-eng.pdf

Sealing the Foundation:

This will involve sealing dirt-floor crawlspaces, floor to wall ceiling joint of a foundation, sump pits, gaps around any openings and cracks in the foundation. This is a measure that is required to isolate the soil space from the building envelope in order to properly and efficiently install a radon mitigation system. This is an obvious point of entry for the gas, but sealing alone is rarely enough to achieve sufficient radon reduction.

When choosing a location for Mitigation Mentorship, we recommend choosing a simplified situation for your first installation which includes a dwelling with a concrete foundation.

		Check if Completed
Sealing Entry Points to the Slab	Section 6.0 identifies that sealing entries to the slab should be done to improve the performance of the radon mitigation system. These are often identified throughout the installation process (not all areas are obvious at the start). Please list the areas that were identified and sealed.	

List areas to be sealed: (blanks are for student to add more house specific areas)	***If not sealed, note why.***	**Check if completed.**
1. Around the perimeter		
2. Clean outs covers, embedded in the slab.		
3. Under the bathtub/shower		
4. Under the furnace		
5. Underneath the stair landing		
6. Walkout wall		
7.		
8.		
9.		

Pre-Installation Feasibility/Communication and System Design

Active Soil Depressurization: This method involves installing a venting system and fan which enters the sub-slab or sub-membrane space and removes the gas from the space and vents it directly outside. It is

installed in such a way that the fan would run continually. The benefit of this system is that it reduces levels to very low levels, achieving the goal of reducing levels to as low as achievable; it is consistent in its effectiveness over a period of time, and in fact it is often increasing in effectiveness as it runs; it prevents the gas from entering the system, providing the best protection from occupants from exposure to both radon and radon decay products; and it is a system which requires little future maintenance. The key to this system is ensuring it is properly installed which involves conducting a **Feasibility/Communication test and System Design** prior to installation.

The purpose will be to:

- confirm the suction point chosen and resulting installed system will be effective;
- it will identify areas of sealing required,
- the proper size of fan to be installed,
- increase efficiency and decrease potential depressurization and possible back-drafting issues.

		Check if Completed
Conduct Feasibility Test (Communication Test)	Complete System Design Worksheet using **Section 4.2 Feasibility Test** in ***Health Canada's Reducing Radon Levels in Existing Homes: A Canadian Guide for Professional Contractors*** which references Section 5.1.1 and 5.1.2 in the National Standard of Canada: Radon Mitigation options for existing low-rise residential buildings: P29-149-012-2017-eng.pdf	
Pipe used for installation:	4" (100mm) Schedule 40 PVC pipe was used.	
	3" (75mm) Schedule 40 PVC pipe was used.	
	The following changes were made because: (add ability for comments if this box is checked)	
	I confirm this alternate pipe conforms to section 5.1.4.4 and 5.1.4.10	
Pipe installation:	Pipe was installed in accordance with 5.1.4.5-5.1.4.9	
	Proper pipe supports and fittings were used in accordance with 5.1.4.5-5.1.4.10	
	All horizontal runs of the pipe are installed with a 1% slope to return water to the soil or in accordance with Table 1. (5.1.4.9)	
	The following changes were made because: (add ability for comments if this box is checked)	
	Pipe was installed in a way to minimize vibrations of the fan. The following steps were taken to minimize vibrations/fan noise. (best practices)	
Discharge Clearances:	The discharge pipe was installed in such a way that it conforms with section 5.1.8	
	This confirms that all clearances in 5.1.8.2 and Table 2 were met.	
	The discharge pipe was also installed in a way that conforms to these clearances with respect to the neighbours house.	
	The following changes were made because: (add ability for comments if this box is checked)	

Fan Installation:	The fan specified in the System Design Worksheet was used.	
	(add this if box is checked) The fan was:	
	A different fan was used.	
	(add this if box is checked) The fan was:	
	(add this if box is checked) An alternate fan was used because… comments	
	The fan meets the characteristics required in 5.1.5.2.	
	The fan was installed in a way to minimize vibrations. The following steps were taken to minimize vibrations/fan noise. (see 5.1.5.4)	
	The fan was installed with wiring which conforms to requirements in 5.1.6.1 and 5.1.6.2	
	The following changes were made because: (add ability for comments if this box is checked)	
Fan monitoring:	The fan was installed with a device to monitor fan performance.	
	The u-tube manometer was properly zero'd prior to starting the fan.	
	The label for the fan performance is affixed in such a way to the pipe by the U-tube manometer that the homeowner will be able to reference the pressures and monitor fan performance.	
	The following changes were made because: (add ability for comments if this box is checked)	
Post-Installation Pressure Measurements:	Pressure field extension results after fan was installed will confirm effectiveness of design. Provide the pressure measurement from hole(s) at far area of the house:	
	- Closed house conditions Fan on:	
	- Closed house conditions Fan off:	
Leak test	Leak test was conducted on all pipe joints and fan in accordance with **5.1.8.4.1.3.**	
Depressurization Test	Section 8.1.3 states that a Radon Mitigation System should not be turned on until A Residential depressurization F300-13 test be conducted.	
	Check off if the house: ☐ Conformed ☐ Non-Conformed	
	The following actions were taken:	
	The following information was given to the homeowner:	
Labels	Labels were installed to the system in conformance with section 7 including labels for:	
	- Pipe label	
	- Fan label	

	- Active system start up label including proper wording for Start up pressure; surveillance device; maintenance and information	
Post -Mitigation Testing	A short-term test was conducted. (it was started 24 hrs after the start of the mitigation and lasted a minimum of 48 hrs)	
	Radon level was:	
	Information was left with the homeowner to conduct a long-term test during the next winter season.	
	Long-term radon test (minimum 91 days) was left activated with instructions for the homeowner on returning the test to the lab or contacting the mentee to pick up at the end long-term test period.	
Homeowner radon mitigation system package.	Homeowner was provided with a radon mitigation system package including:	
	Information from 7.1.1.7	
	Manuals from fans and radon monitoring devices	
	All radon test data for the property, if applicable	
	Installed fan's estimated annual energy consumption	
	Recommended inspection and retest schedule.	
	Scheme of the communication testing results and other applicable diagrams.	