

Under Ground Tank Installation Checklist

Complete the following checklist and submit with your building permit application package.

Tank installation details

Tank size(L):	
Product type:	
ULC listing:	
Construction type:	
Type of overfill protection:	

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Check all that apply

Manitoba Fire Code 2024	Code Requirement	Complies
4.3.8.1.	Underground storage tanks are double walled and conform to the standards listed in MFC 4.3.1.2.(1).	☐
4.3.8.2.	Location:	
	a) Minimum 600 mm from adjacent tanks/structures	☐
	b) Minimum 1 m from building foundation or street (no loads from building)	☐
	c) Minimum 1.5 m from other property lines	☐
4.3.8.3.	Ground cover:	
	a) Minimum 600 mm cover	☐
	b) Minimum 1 m cover if subjected to vehicular traffic	☐
	c) 150 mm reinforced slab or 200 mm unreinforced slab over 450 mm of sand provided slab extends 300 mm beyond storage tank	☐
4.3.8.6.	Installation:	
	a) Underground steel tanks installed in conformance with Appendix A of CAN/ULC-S603.1	☐
	b) Underground reinforced plastic installed in conformance with Appendix B of ULC-S615	☐
	c) Minimum 150 mm sand to support tank if placed on reinforced concrete	☐
4.3.8.9.	Anchorage:	
	a) Tanks anchored	☐
	b) Anchors are electrically isolated	☐
	c) Anchors do not cause undue stress on tank	☐
4.3.9.1.	Sumps:	
	a) A dispenser sump shall be provided under a dispenser, unless the dispenser is located on top of an aboveground storage tank	☐
	b) A spill containment sump is provided at the underground storage tank fill point	☐
	c) A transition sump shall be provided for all mechanical pipe connections located below grade.	☐
	d) A turbine sump is provided for below grade turbine pump assemblies or above grade assemblies that are not readily visible	☐
	e) Sump construction conforms to the MFC 4.3.9.2. and will be installed in conformance to manufacturer's instructions	☐
4.3.9.3.	Where sumps referred to in MFC 4.3.9.1. are used in underground applications, they are provided with electronic leak detection monitoring	☐
4.3.10.1.	Corrosion Protection is provided	☐
	Vents for Underground Storage Tanks	
4.3.11.1.	Sufficient vent sizing, design, and materials	☐
4.3.11.3.(1)	Vents for Class I Liquids:	
	a) Minimum 3.5 m above grade	☐
	b) Minimum 1.5 m from building openings	☐
	c) Minimum 7.5 m from nearest dispenser	☐
	d) Vapour discharge shall not enter buildings or be trapped near buildings	☐

Manitoba Fire Code 2024	Code Requirement	Complies
4.3.11.3.(2)	Vents for Class II or III A Liquids are a minimum of 2 m above grade	☐
4.3.11.3.(3)	Vent pipes are not obstructed by any device that may cause excessive back pressure	☐
4.3.11.3.(3)	Class II or III Liquids have return bends, coarse screens, or other devices to keep out foreign material	☐
4.3.11.3.(4)	Vent pipe enters top of tank and extends max 25 mm into tank	☐
4.3.11.3.(5)	Vent piping horizontal run slopes towards the tank, is constructed without traps, is properly supported, and if necessary protected from mechanical damage	☐
4.3.11.3.(6)	Vent piping will be tested for leaks at the commissioning stage in conformance with MFC 4.4.1.2(1)(a), and indicated on the leak test report	☐
4.3.11.4.	Where 2 vent pipes are connected, vent piping is sized to accommodate the maximum vapour flow possible in the system	☐
4.3.11.4.	Vent piping from a Class I Liquid is not connected to the venting of a Class II or Class III A storage tank	☐
Openings other than Vents in Underground Storage Tanks		
4.3.12.2.	Openings used for measuring liquid levels are equipped with vapour tight cap or cover	☐
4.3.12.3.	a) Remote fill outlets are located higher than other tank outlets.	☐
	b) Connections for filling or emptying tanks are located at a location outside buildings, free of ignition sources, and not less than 1.5m from building openings	☐
	c) Fill connection located inside building when:	
	i) indoor process associated with tank	☐
	ii) tank is for collection of used liquids	☐
	iii) means are provided to prevent flammable vapours from returning to building	☐
Piping and Transfer Systems		
4.5.	All piping and transfer systems comply to Section 4.5 of the Manitoba Fire Code	☐
4.5.2.1(3)	Metallic and non-metallic piping systems are permitted to be used for underground installations, provided they conform to CAN/ULC-S679, "Standard for Metallic and Nonmetallic Underground Piping for Flammable and Combustible Liquids."	☐
4.5.	A piping layout is included	☐
4.5.6.1.	Except for vents, risers, and vertical fill piping systems, underground piping shall be of double-walled construction	☐

This checklist is not intended to replace any requirements under the Manitoba Fire Code or any City of Winnipeg By-laws. Complete requirements may be obtained by referring to the applicable bylaw or section under the Manitoba Fire Code. The permit applicant/contractor is responsible for ensuring that all applicable provisions are in compliance.

Completed by:

Petroleum Contractor:	
Signature:	
Date:	