

Incident Summary #II-1563089-2023 (#36114) (FINAL)

SUPPORTING INFORMATION	Incident Date	June 5, 2023	
	Location	Lake Cowichan	
	Regulated industry sector	Electrical - Low voltage electrical system (30V to 1000V)	
	Impact	Qty injuries	0
		Injury description	None
		Injury rating	None
	Damage	Damage description	Consumer cable damaged when struck by hammer drill while concrete drilling.
		Damage rating	Minor
Incident rating	Minor		
Incident overview	Worker was installing rebar into an existing foundation struck an energized cable when using a concrete drill.		
INVESTIGATION CONCLUSIONS	Site, system and components	<p>Consumer service cable installed in a foundation wall and encased in approximately 75mm of concrete.</p> <p>Current BC electrical code permits a minimum 50mm of concrete encasement for mechanical protection of service cables in walls of dwellings.</p>	
	Failure scenario(s)	<p>A worker was preparing to pour a new concrete walkway on the side of an existing foundation wall at a new dwelling. Typically, the new concrete slab is tied into the existing one with rebar to prevent settling. The rebar is installed into holes that are drilled out with a hammer drill.</p> <p>The main utility cable was run in 3" rigid PVC pipe which came up the outside of the wall to the surface mounted meter base. The ACWU (aluminum conductor wet underground) consumer service cable exited the back of the meter base via a 90-degree connector and ran down through the foundation wall via a PVC conduit sleeve that was located about 100mm to the left of the meter base.</p> <p>When drilling the holes for the rebar the hammer drill penetrated the conduit and struck the cable causing it to arc and spark.</p>	
	Facts and evidence	The above failure scenario was based on statements made by the general and electrical contractors (Image).	
	Causes and contributing factors	Based on the statements and the evidence examined on site the incident was caused by drilling into the foundation where there was a concealed cable. The installation was code compliant.	



[Image](#) - Location where the hammer drill contacted the consumer service cable in the foundation wall. (Rebar was inserted into the hole left of the 3" PVC for ease of viewing).