

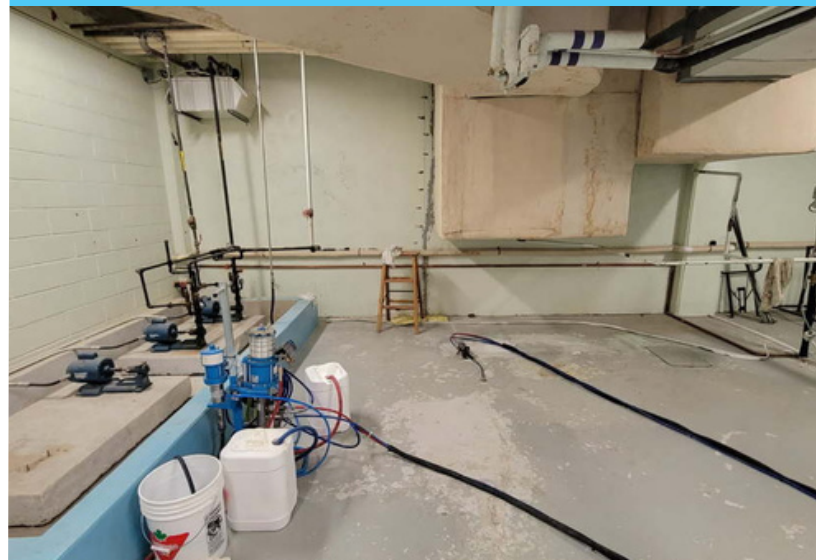
CASE STUDY - FOUNDATION CRACK INJECTION

Telecommunication company in Yorkton, SK



THE PROBLEM

A switching station, owned by a telecommunication company, located in Yorkton Sk. was experiencing persistent water seepage through multiple thin cracks in the foundation walls. The various sized cracks had gradually worsened over time, allowing moisture intrusion in areas throughout the lower level filled with electronic equipment and communication lines. Due to excessive costs, traditional repair methods from the exterior were not an option. The company Engineer sought a permanent, minimally invasive solution to stop water infiltration and protect the lower level.





THE SOLUTION

Eco Seal proposed Acrylate Grout Injection, an ideal solution for sealing hairline cracks in below-grade structures. The acrylate grout's low viscosity allowed it to penetrate deep into the crack, ensuring a watertight seal. The project followed a precise six-step injection process:

1. **Drilling:** Small-diameter holes were strategically drilled along the crack to intercept it and allow injection points.
2. **Injection Port Installation & Water Testing:** Ports were installed at drilled points and tested with water to confirm crack interception and flow paths.
3. **Injector Ports & Gel Sealing:** The surface of the crack was sealed with hydraulic cement to contain the injection.
4. **Mixing & Testing:** The acrylate grout components were mixed, and small test batches were used to confirm reaction times and ensure optimal gel formation.
5. **Injection & Solidification:** Using a WiWa pump, the Acrylit Gel was injected, filling the entire crack from bottom to top, penetrating tight spaces, and forming a flexible, watertight seal.
6. **Port Removal & Patching:** Once the grout was fully cured, the ports were removed, and the drilled holes were patched for a clean, finished appearance.



THE SUMMARY

The Eco Seal Acrylate Grout Injection successfully sealed the foundation cracks, eliminating water seepage and restoring the lower level to a dry condition. The low-viscosity acrylate gel effectively permeated the narrow crack, forming a long-lasting waterproof barrier. Unlike rigid repair materials, the flexible nature of the acrylate grout allows for minor foundation movement without compromising the seal. The use of a pump made the injection process efficient and precise. The project provided a non-invasive, cost-effective, and permanent solution, preventing further water damage, giving the company peace of mind and a safe environment for the electronic equipment.

