



RHINO
CARBON FIBER
REINFORCEMENT PRODUCTS

CONCRETE CRACK LOCK® STITCHES CASE STUDY

SLAB STRENGTHENING WITH CONCRETE CRACK LOCK® STITCHES



LOCATION

Vaudreuil-Dorion, Quebec

PRODUCT USED

- Rhino Carbon Fiber™ Concrete Crack Lock® Kit

CASE BACKGROUND

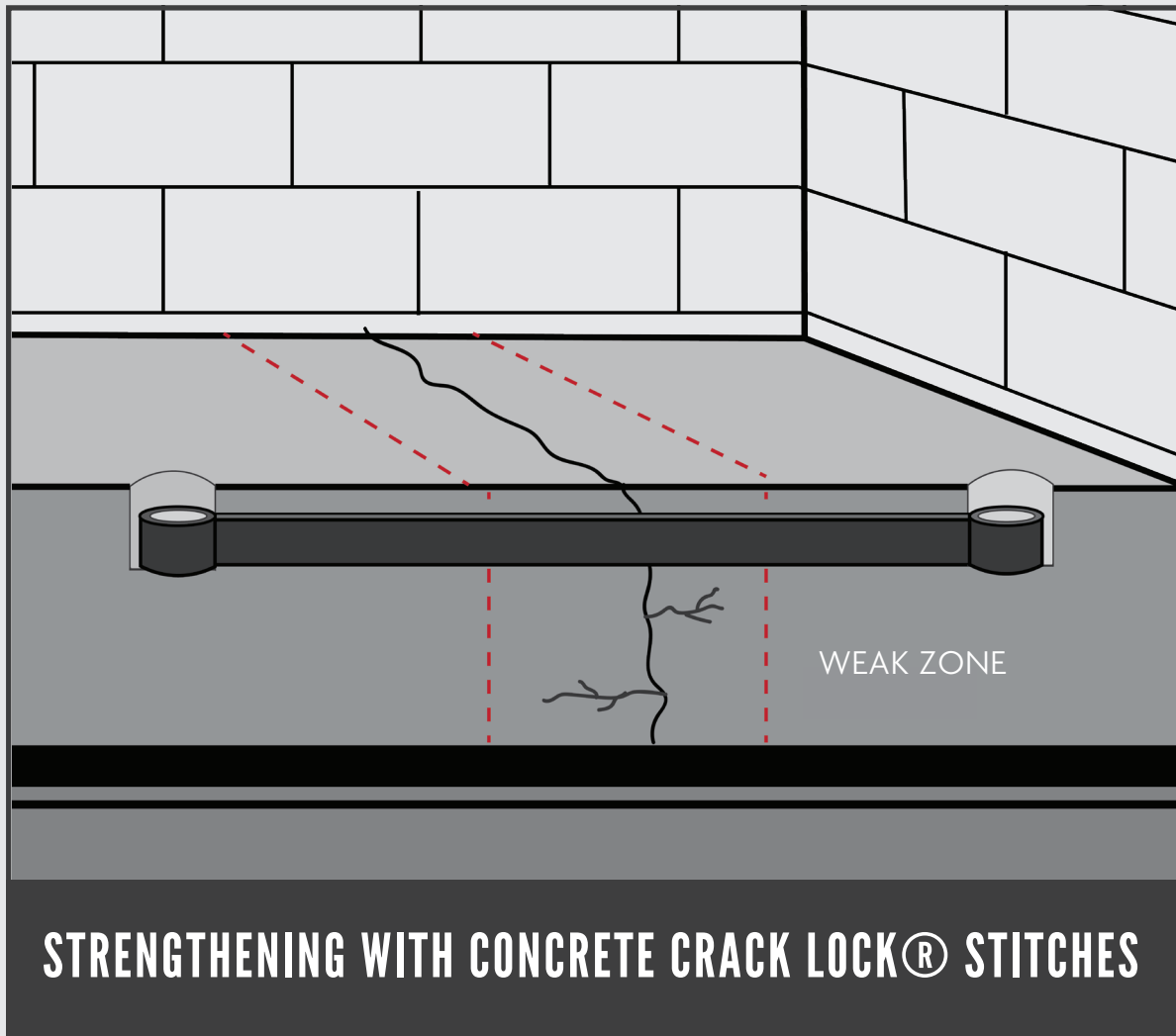
An excavation company in Vaudreuil-Dorion, Quebec noticed dynamic cracks along an 8" thick concrete slab in their warehouse. The warehouse is a storage facility for heavy equipment, and the equipment compacted the soil underneath the slab to a point that the slab started to crack under the load. In addition, the concrete expanded and contracted due to recurring forces that included live loads, freeze and thaw cycles and soil expansion, which made the cracking in the concrete worse. The concrete joints also had not been designed to withstand these forces.

In an effort to avoid the expense of demolishing and re-pouring the concrete, the excavation company chose to stitch the dynamic cracks together to avoid further expansion while strengthening the area. They determined that the **Rhino Carbon Fiber™ Concrete Crack Lock® Kit** would be the perfect solution for the repair as there were no other viable options that could deliver the benefits the Concrete Crack Lock® stitches did, being cost-effective, high-strength, light-weight, resistant to corrosion and easy-to-install.

THE SOLUTION

The excavation company ordered and received their repair materials quickly, then installed the Concrete Crack Lock® stitches themselves given the ease of installation. They first prepared the concrete surface to ensure a strong epoxy bond. The crack was v-grooved with a grinder at a 45-degree angle, and debris was removed. They inserted the Concrete Crack Lock® stitches along the crack every 8-12 inches, varying the angle of each stitch slightly so that it was roughly perpendicular to the crack, to strengthen the crack in all directions. After the **RCF™ High Strength Anchoring Epoxy Paste** cured, the v-groove was filled with a hybrid urethane repair liquid to create a smooth and even surface.

Upon completion, the repair was barely noticeable. The excavation company put the newly strengthened slab to the test by driving a 35,700 kg excavator over the repaired area. They continue to use Concrete Crack Lock® stitches in other projects and are recommending the product to contractors within their network.



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