

# WATERLOO BARRIER®

## CUT-OFF WALL

FORMER MANUFACTURING FACILITY, OSHAWA, ON

Case History, No. 67

July, 2009

### Problem

A soil bentonite slurry wall was installed around the foundation footprint of a planned regional courthouse, to isolate the building from surrounding contamination. A reinforced concrete caisson wall was then installed and the enclosed soil was removed prior to the building foundations being installed. During the construction of the building foundation, contamination was observed leaking through the caisson wall. This indicated that the slurry wall was performing below the design specifications.

### Solution

A Waterloo Barrier® cut-off wall was driven through the existing slurry wall to enhance the hydraulic containment around the courthouse. The surrounding property contained high concentrations of chlorinated solvents from previous manufacturing on the property. Therefore, a low-permeability cut-off wall was required to isolate the clean building footprint from the contaminated surrounding area. The Waterloo Barrier® was selected due to the low hydraulic conductivity provided by the system ( $10^{-7}$  cm/sec maximum).

The sheet piles were driven from 25 to 45 feet in depth along three sides, within the existing slurry wall.



Figure 1. Sheet Pile Installation

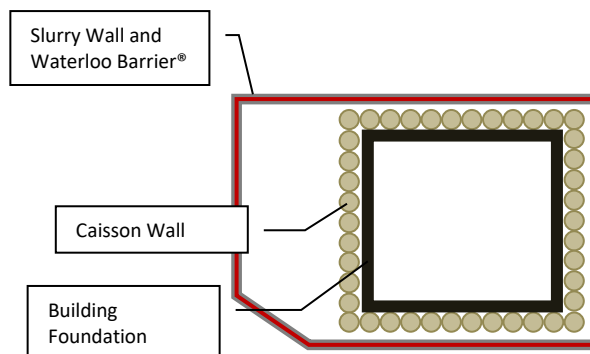


Figure 2. Site Plan View

### SITE SUMMARY

**Barrier:** 43,574 square feet of Waterloo Barrier® WZ75      **Depth:** 25 to 45 feet