

9 THINGS TO KNOW ABOUT...

WICK DRAIN INSTALLATION AT THE CANADIAN POE

The Ports of Entry (POE) will include several buildings, canopies, roadways, parking lots and bridge ramps. All of these structures will require a solid base on which they can be built. Under natural conditions, it could take ten-to-twenty years for the underlying soil to consolidate and ensure that there is a solid base on which to build the structures. To expedite the consolidation process and the construction schedule thousands of wick drains are being installed. At the Canadian POE specifically, approximately 150,000 wick drains are being installed.

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DEFINITION OF A WICK DRAIN

Wick drains are man-made vertical drainage paths that expedite the consolidation of soils. In addition, they provide greater strength in areas where significant amount of fill will be placed.

2

INNOVATION

Innovative solutions are being used on the Gordie Howe International Bridge project, and that includes wick drain installation. Bridging North America is using wick drains to assist in maintaining an aggressive construction schedule.

3

TOTAL AREA

Wick drains currently being installed by Bridging North America cover a total area of 189,000 m²/2,034,00 ft². This is the equivalent to 120 hockey rinks.

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GRID INSTALLATION

The wick drains are installed on a grid up to 1.5 metres/5 feet apart and to a depth of 20 metres/65 feet. The spacing between each wick drain allows them to properly consolidate and drain the soil.

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INSTALLED USING A STITCHER

A specialized piece of equipment known as a stitcher is used to install the wick drains. The stitcher is attached to an excavator and consists of a vertical mast housing a hollow mandrel. The mandrel houses the spool of wick drains which is hydraulically pushed into the ground to a depth of 20 metres/65 feet.

6

AROUND THE CLOCK

Bridging North America is currently working on a 24 hours a day/6 days a week schedule for the installation of wick drains on the Canadian POE.

7

DISTANCE OF WICK DRAINS

Bridging North American is installing more than 150,000 wick drains at the Canadian POE. That's more than 2,000 km/1243 miles, or the distance from Windsor, Ontario to Miami, Florida.

8

1,000,000 MILESTONE

Factoring in the Early Works contract, there has been approximately 1,000,000 metres/3,280,839 feet of wick drains installed at the Canadian POE to date. That's about two times as long as the Grand Canyon.

9

TRUCK LOADS

Once the wick drains are installed, approximately 200 truck loads of aggregate will be delivered to the site each day. Trucks will deliver aggregate to the site for fill placement on top of the wick drains to build up the area in preparation for the construction of buildings, roads, and pavement.



PONT INTERNATIONAL
**GORDIE
HOWE**
INTERNATIONAL BRIDGE