

# **Overview**

The Border Transportation Partnership, representing the governments of Canada, the United States, Ontario, and Michigan, is moving forward with the Environmental Assessment phase of the Detroit River International Crossing (DRIC) study to improve traffic flow and trade movement at the Windsor-Detroit border.

The Ontario Ministry of Transportation continues to lead the Canadian work program of the DRIC study in co-ordination with Transport Canada. For more details on the DRIC study, please go to the Partnership website at <u>www.partnershipborderstudy.com</u>.

The need for a two-part foundations investigations program has been identified under the Canadian work plan to better understand the effects of the solution mining of salt deposits on the bedrock stability in areas where a new international bridge spanning the Detroit River could be located. The solution mining of salt is the process by which water is injected through a well or wells drilled at various depths into an underground salt bed. The force of the water flushes the salt from the ground resulting in the formation of large caverns. Some of the wells in this area date back nearly 100 years.

The first part of these investigations includes the drilling of up to 12 boreholes at specified locations along the Practical Alternative Crossing 'B' and Crossing 'C' alignments in the vicinity of the Sterling Fuels, Southwestern Sales and Ontario Power Generation properties. Each borehole location will be drilled in order to produce a stable and cased borehole to a total depth of up to 500 metres.

The second part of these investigations includes specific geophysical and photometric testing as well as cross-borehole seismic tomography.

The drilling of boreholes is not proposed at Practical Alternative Crossing 'A', as this alignment is sufficiently removed from areas of solution mining.

## General Description of the Foundations Investigations

## Part 1 - Borehole Drilling

Each location will be drilled to a depth of up to 500 metres.

Drilling will be conducted utilizing two types of drill rigs: core drill rigs and rotary drill rigs.

In an effort to alleviate potential concerns with respect to noise, all drill rigs on both crossing alignments are required to be equipped with noise baffling devices.

All drilling north of Prospect Street will be restricted to between the hours of 7:00 am and 7:00 pm Monday to Saturday. Drilling will not occur on Sundays.

The drilling south of Prospect Street will be permitted 24 hours a day, seven days a week.





On a daily basis, it is anticipated that 5-10 workers will be present at each drill site. Intermittent truck traffic will be associated with drilling operations to deliver and remove materials from each drill site. Contractors have been advised to follow an established truck route away from residential uses.

For safety reasons, all drill sites will be fenced to prevent unauthorized access. Provisions have been included in each contract to minimize dust generated by drilling operations and its associated truck traffic. Upon the completion of drilling and testing, each borehole will be abandoned by filling it with cement and capped.

# Part 2 - Geophysical and Photometric Testing and Cross-hole Seismic Tomography

The ground between boreholes will be characterized using cross-hole seismic tomography. Seismic tomography is similar to a CAT scan where signals are sent through an object in different directions and the signals are compiled to construct a cross section of the object or, in this case, a land mass. The results of the cross-hole tomography survey will lead to the identification of anomalies that may exist between boreholes, as well as imaging of individual soil layers.

DRIC Foundations Investigations	
Drilling Contract Preparation	Complete Late May 2006
Drilling Contract Tendering	Complete Early July 2006
Drilling Contract Award	Complete Early August 2006
Drilling Preparation	Began Early August 2006
Drilling Operations Begin	September 2006
Drilling Operations Complete	December 2006
Cross-Hole Seismic Tomography Begins	December 2006
Cross-hole Seismic Tomography Complete	February 2007
Borehole Abandonment Begins	March 2007
Borehole Abandonment Complete	April 2007

### Anticipated Drilling Schedule

#### Contact Information

Should you have any comments or concerns regarding the DRIC foundations investigations please contact:

## **Drilling Contract Administrator**

David Mitchell Senior Technologist Golder Associates Limited 2465 McDougall Street, Suite 100 Windsor, Ontario Ph: (519) 652-0099 Fax: (519) 652-6299 Email: mitch@golder.com Cell: (519) 859-2412

## **Designated MTO Contact**

Steve Killaire, P.Eng. Area Contracts Engineer Ministry of Transportation 659 Exeter Road London, Ontario Ph: (519) 873-4725 Fax: (519) 873-4789 Email: Steve.Killaire@ontario.ca Cell: (519) 661-7673

September 1, 2006