

 DETROIT RIVER INTERNATIONAL CROSSING STUDY

Community Consultation Group Meeting #10

June 26th, 2006

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 Agenda

- Opening Remarks
- Review of April 27 CCG Meeting Notes
- Public Comment
- Update on Consultation Activities
 - June 8 Bus Tour of Bridges
 - June 26 Bus Tour of Delray with STCTF
- Context Sensitive Solutions- PMA Landscape Architects
- Drilling Program-Golder Associates
- Tunneling-Potential locations for Ventilation Buildings
- Next Steps
- Closing Remarks

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 Opening Remarks

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 Review of April 27 CCG Meeting Summary

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 Public Comment

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 Update on Consultation Activities

   6 









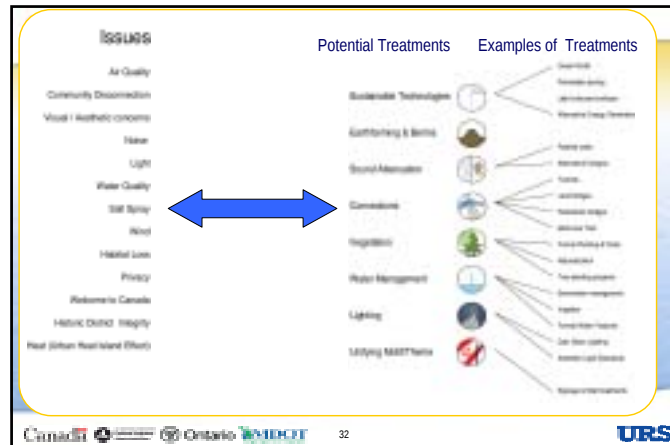
Detroit River
St. Clair

June 23 and 24 Context Sensitive Solutions Workshops
June 26 Bus Tour of Access Roads

Canada Ontario 26



Context Sensitive Solutions-PMA Landscape Architects





Aesthetics: Themes

Potential Themes for DRIC Crossing?

- Bi-National?
- Local Heritage?
- Local Symbols ("Motor City"?)
- Suggestions?

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Aesthetics: Colour

Golden Gate Bridge, San Francisco, CA

Bright

Sydney Harbour Bridge, Sydney, Australia

Natural

Tsing Ma Bridge, Hong Kong

Neutral

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Aesthetics: Lighting

Sydney Harbour Bridge, Sydney, Australia

Golden Gate Bridge, San Francisco, CA

Veterans' Glass City Skyway Bridge, Toledo, OH

Types:

- Soft
- Accent
- Dynamic

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Plazas Separation

Separation between functional plaza and adjacent land use ("Buffer")

Conceptual Visualizations

- Width varies depending on the plaza layout. Different widths allow different types of landscape.
- Residential Neighbourhood
- Industrial Area
- Natural Area
- Can be designed for air quality improvement, privacy screen, noise attenuation, public amenity, etc.

Plazas Separation

Examples of Treatments Adjacent to Residential Land Use

Ashbridges Bay Area, Toronto



Plazas Interior Landscape



Gateway Centre, Ames, Iowa

Conceptual Visualization

Example of Gateway Features

Plazas Interior Landscape



Sudbury, Ontario

Kenora, Ontario

Wawa, Ontario

Example of large objects

Plazas Sustainable Technologies



Example of Extensive Green Roofs

Ford Plant, Dearborn, MI

Plazas Sustainable Technologies



Example of Shaded Parking

Netherlands

Plazas Sustainable Technologies



Examples of Permeable Paving

Morton Arboretum, Dupage Co., IL

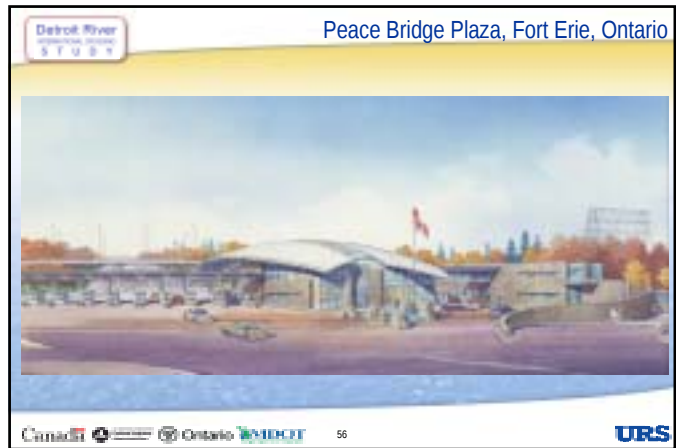
Plazas Phasing



•Poplars achieve a height of up to 20 feet in as little as 10 years

•Aesthetic effects can be achieved through designed mow / no mow regimes

Examples of Temporary Landscapes



Detroit River International Crossing STUDY

Access Roads

1 Route - 3 Landscapes

- Straight Pieces
Areas where the Right-of-Way is at its narrowest.
- Interchanges and Major Bends
Areas where the Right of way will widen.
- Reconnections
Potential bridges that will reconnect the communities on either side of the access road.



Detroit River
 River Detroit, MI, Canada
 S T U D Y

Access Roads Straight Pieces



Various North American Locations

Detroit Führer

Access Roads Straight Pieces



Switzerland

Detroit River
BROWDER'S CHICKADEE
S. T. U. Q. W.

Access Roads Straight Pieces



Examples of Transparent Sound Wall (Concrete & Transparent Material)

Southern Ontario

Detroit River
INTERNATIONAL CELEBRATION
SEPTEMBER 12-15

Access Roads Straight Pieces



Examples of Sound Walls with Ivy

Detroit River
INTERNATIONAL CROSSING
S T U D I O

Access Roads Interchanges & Bends



Detroit River
 NEW-GENUINE CHOCOLATE
 S T U D I O

Access Roads Interchanges & Bends



Examples of Aesthetic Berm Design



Public Art in Traffic Circle "She Changes" by Janet Echelman

Example of Public Art

Porto, Portugal



Examples of Stormwater Management Facilities



Examples of Revegetation

Gateway to Randstadt, Netherlands



Examples of low maintenance planting on highway slopes & berms



- Re-integrating Neighbourhoods, Creating new Places
- Parkettes, Land Bridges, Pedestrian Bridges, Multi-use trails



Example of Pedestrian Bridge & Associated Parkette

Gardiner Expressway, Toronto, Canada

Access Roads Reconnections



Example of a Pedestrian Bridge

Borneo Sporenburg, Amsterdam, Netherlands

Access Roads Reconnections



Example of Pedestrian Bridge/Parkette

Barcelona, Spain

Access Roads Reconnections



Examples of landbridges for people & wildlife

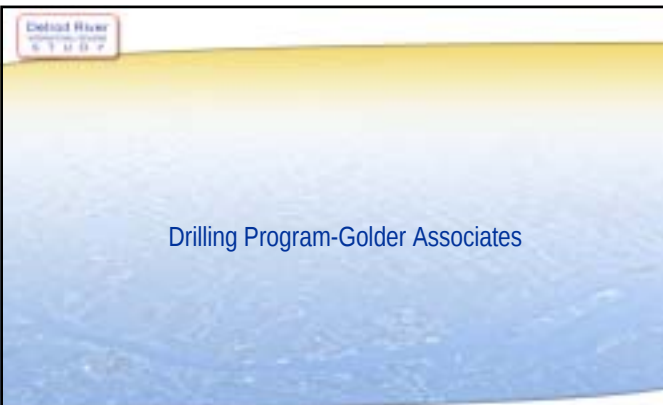
Various locations, Netherlands

Aesthetic Treatments-Access Roads-At Grade



Various locations, Michigan

Drilling Program-Golder Associates



Golder Associates



- Canadian employee-owned company
- Started in Toronto in 1960
- 4,500 employees (2,000 in Canada)
- > 100 offices world-wide
- Specialize in earth and environmental sciences and engineering



Some of our smiling staff at 2465 McDougall Street

- Windsor Office Since 1970
- 30 to 40 Employees
- Thousands of geotechnical projects in Windsor
- Largest geotechnical engineering consultant office in Windsor
- Longest continuous history of staff and office
- Involved in many major local roadway and civil construction projects

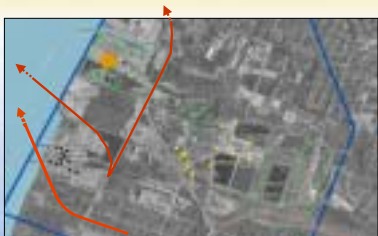
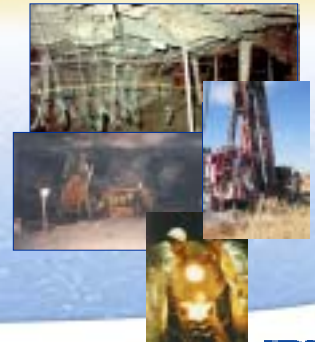
- Alex Fraser Bridge, Vancouver
- Confederation Bridge, PEI/NB
- Peace Bridge, Fort Erie
- Rainbow Bridge, Niagara
- Blue Water Bridge, Sarnia
- Humber River Bridges, Toronto
- Garden City Skyway, St. Catharines
- Golden Ears, Vancouver
- Big Qualicum River, Vancouver Island
- Port Mann Bridge, Vancouver
- Ah Kai Sha, Guangzhou
- Messina Strait, Italy/Sicily
- Mesovounio, Egnatia Odos Highway, Greece



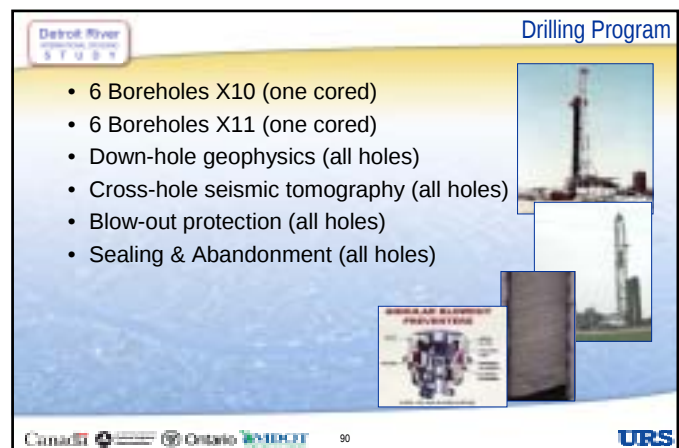
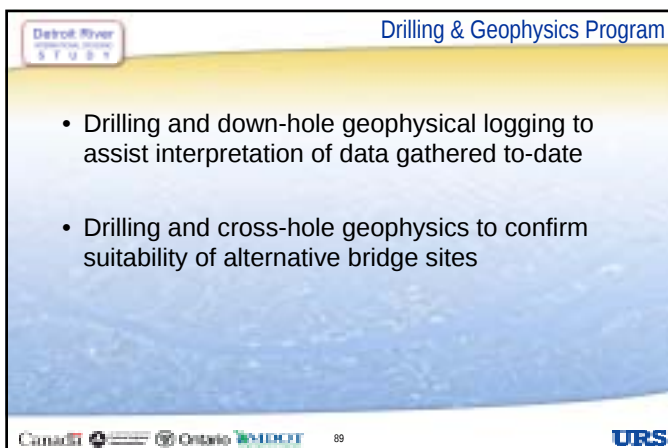
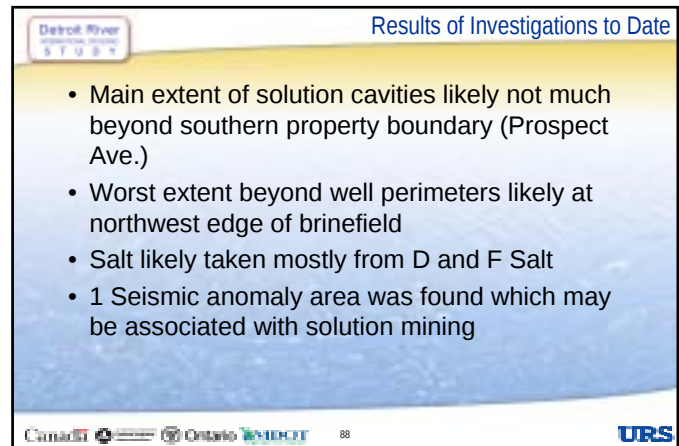
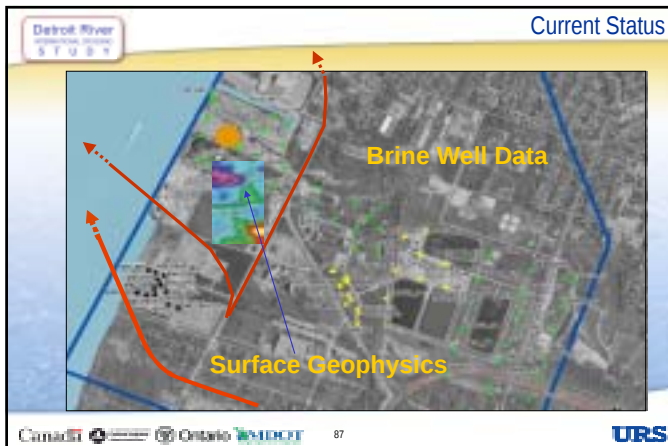
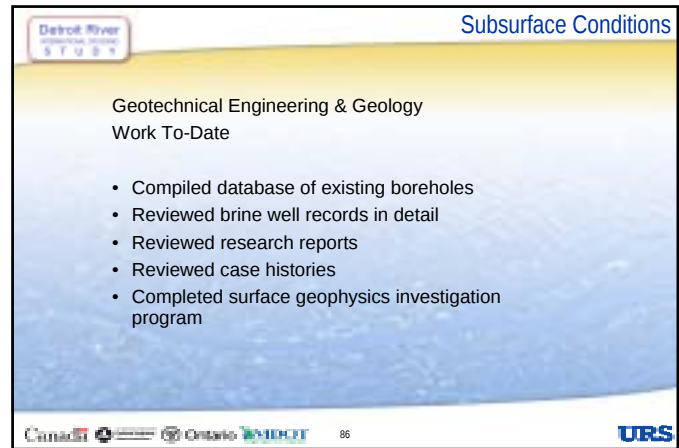
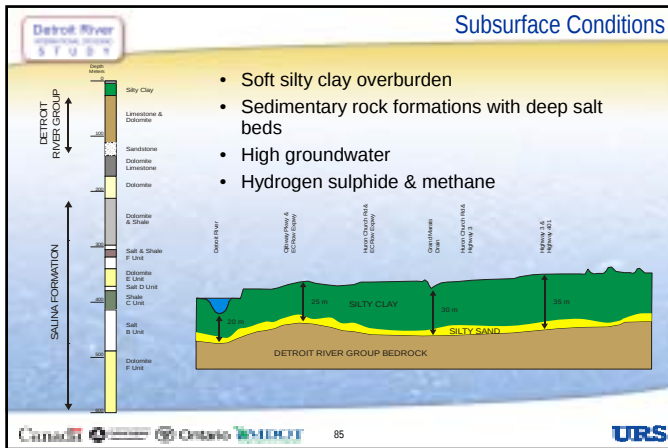
- Highway Tunnels:
Brisbane Bypass, Coronado (CA), Crystal Springs Bypass (CA), Cumberland Gap (TN), Hayward (CA), M5 Motorway (Sydney), Melbourne City Link, Shawsville (VA), Tuen Mun Hwy (HK), Valesia (Italy)
- Subway Systems:
Amsterdam, Atlanta, Bologna, Edmonton, Hong Kong, London (UK), Toronto, Newark, NYC, San Diego, San Juan, San Francisco, Seattle, Seoul, Singapore, Taiwan, Vancouver, Washington (DC)
- Rail Tunnels:
CN Rail Tunnel (Sarnia & Port Huron), Rockport (MD), Storebælt (Denmark/Sweden), Turin-Lyon Base Tunnel (France & Italy), Weehawken (NJ)



- Solution Mining & Subsidence:
Alberta, Arizona, Argentina, Louisiana, New York, Nova Scotia, Ohio, Ontario, Quebec, Saskatchewan, United Kingdom
- Coal/Salt/Mineral Mine Subsidence:
Alberta, Austria, Louisiana, Nevada, New York, Ohio, Ontario, Peru, Saskatchewan, United Kingdom, Wyoming
- Mine Design:
Throughout Canada, USA, South America, Australia, New Zealand, Southeast Asia



To confirm the suitability of the bedrock to site the new bridge crossing and approaches.



Canadian Borehole Program – Sterling Fuels



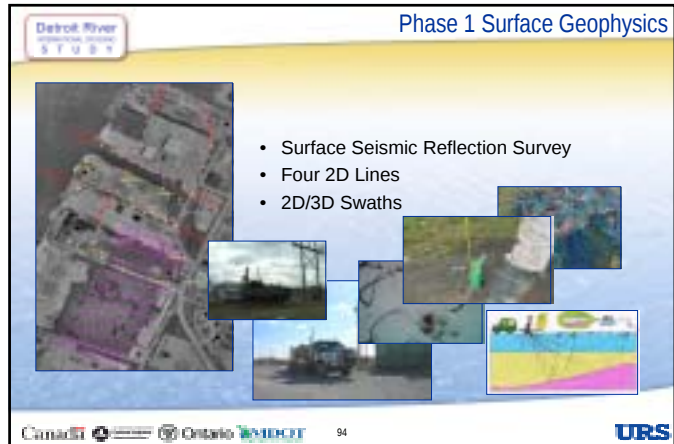
Canadian Borehole Program – Brighton Beach



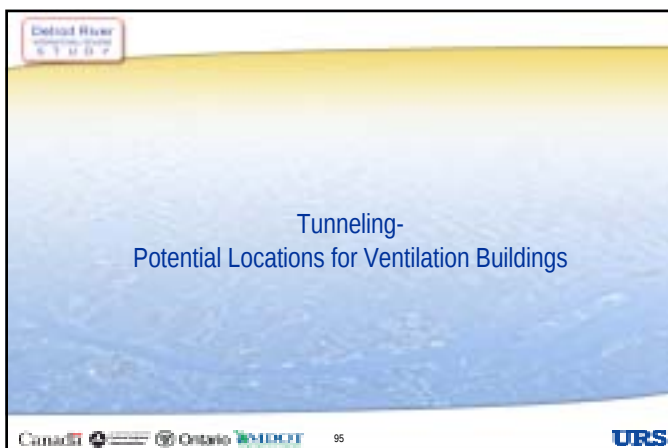
Schedule

Retain Drilling Contractors	July '06
Mobilization	July '06
Drilling	August – Nov. '06
Analysis/Evaluation	Dec. '06 – Feb. '07

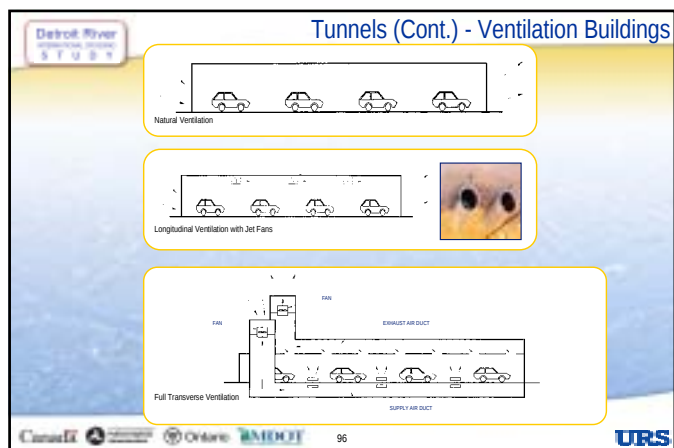
Phase 1 Surface Geophysics



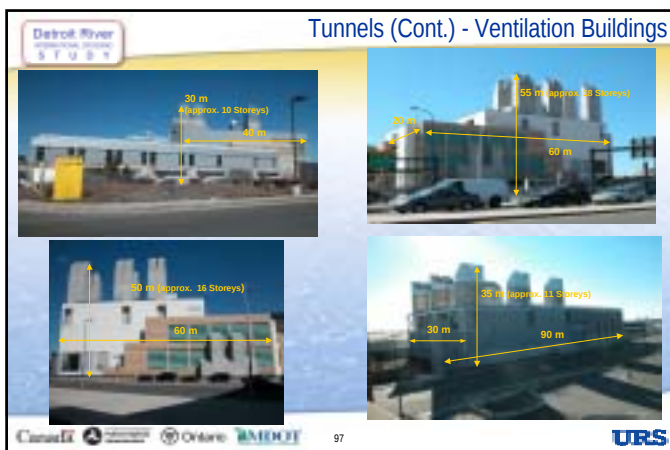
Tunneling- Potential Locations for Ventilation Buildings



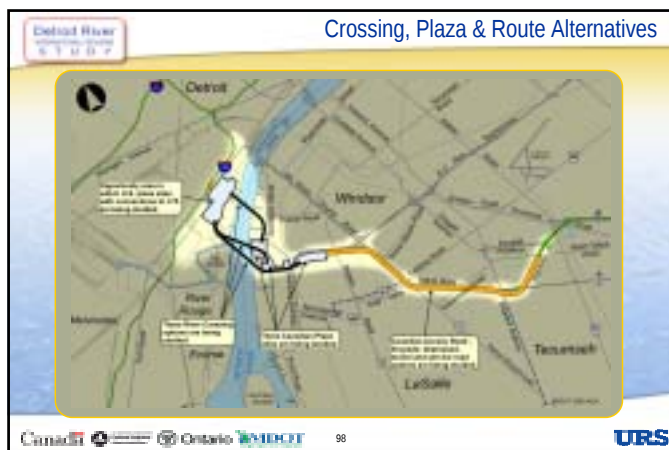
Tunnels (Cont.) - Ventilation Buildings



Tunnels (Cont.) - Ventilation Buildings



Crossing, Plaza & Route Alternatives



Public Comment



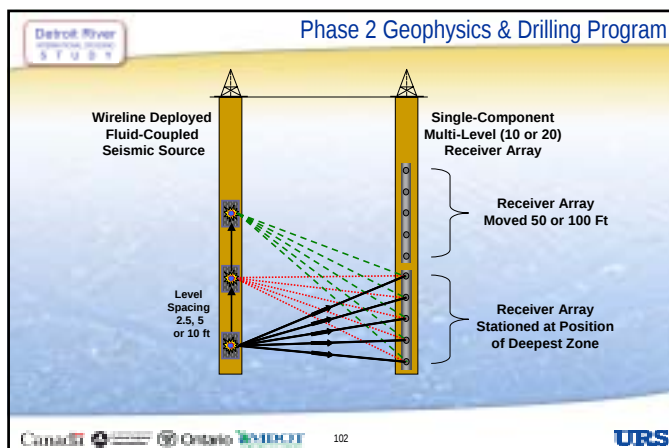
Next Steps



Closing Remarks



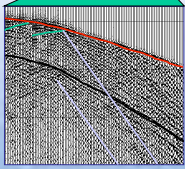
Phase 2 Geophysics & Drilling Program



Phase 2 Geophysics & Drilling Program

Detroit River
International Crossing
STUDY

Each Complete
Source Travel
Results in a "Fan"



Receiver Array
Position of 2nd Fan

- Properties
- Structure

Advanced
Interpretation