



THE CORPORATION OF THE CITY OF WINDSOR

NEWS RELEASE

For Immediate Release
April 28, 2008

DRIC Changes Rules Again

In August 2007, the Detroit River International Crossing Project (DRIC) published their "Parkway" design alternative for the building of the 401 extension to the location of their proposed new border crossing between Windsor and Detroit. The estimated cost was \$1.5 Billion.

Following its review of the Parkway concept, Windsor City Council retained Parsons Brinckerhoff (PB), a major international engineering firm headquartered in New York, and Sam Schwartz PLLC, a firm specializing in transportation planning, to determine if DRIC's objectives could be more effectively achieved, and negative impacts more effectively mitigated by an alternative design for this access road. The result of this was the GreenLink Windsor plan, released in October 2007. Estimated cost for the GreenLink plan was \$1.67 billion (2007 dollars)

Following the release of GreenLink, DRIC questioned the GreenLink cost estimate, suggesting the cost would be substantially higher than claimed by the GreenLink team. In response, the City of Windsor assembled an independent peer review team comprised of two professional engineers with many years of specialized experience in major infrastructure project construction and costing:

- **Don Hilton, P.E., Boise Idaho.** Mr. Hilton is an independent consultant with more than 35 years of experience in many aspects of heavy civil and underground construction projects, including bridges, tunnels, and cut-and-cover projects. He has worked with the cities of Washington DC, Atlanta, Boston, Los Angeles, New York and Newark. He is a member of the American Society of Civil Engineers.
- **John Doody, P.E., of G.C. Solutions Inc. Franklin, Massachusetts.** Mr. Doody specializes in heavy civil projects, with over 28 years of experience in heavy civil and tunnel construction throughout the United States. As an estimate manager, he has worked on heavy highway, rapid transit and large bridge structures. He is a member of the American Society of Civil Engineers.

See attached Peer Reviewers CVs.

Visit the GreenLink Windsor website at www.greenlinkwindsor.com to view the complete report on the Constructability and Construction Cost Estimating Review.

In response to the DRIC study team's review of the GreenLink cost estimate, and in consultation with PB, we provide the following commentary.

At the outset, we note that the DRIC commentary that the GreenLink cost estimate was not 'an accurate cost estimate of the roadway'. We note that despite repeated requests, DRIC has not provided any breakdown of their cost estimate of the Parkway, in spite of an agreement to do so. Unfortunately a detailed examination of their costing cannot be completed as they have chosen to not release this information for public scrutiny.

-more-

Responding to the line-by-line critique, we offer the following:

1. GreenLink is based on a 7.3 km highway, not the 9 to 12 km highway needed.

Response

GreenLink is based on a 7.3 km highway and in fact mirrors the limits of the DRIC Parkway. In the material distributed in August 2007 at the DRIC open houses there are the following comments in the DRIC material:

“from Howard Avenue to E.C. Row Expressway” (The Parkway: A New Option)

“the Parkway would: provide for the portion of the access road from Howard Avenue to E.C. Row Expressway” (FAQ’s)

“An end-to-end tunneled access road, consisting of six kilometers of cut and cover tunneling” (FAQ’s)

“between Highway 401 and the E.C. Row Expressway” (Powerpoint presentation)

“from Howard Avenue to E.C. Row Expressway” (Powerpoint presentation)

DRIC has in fact acknowledged that their material did not indicate the limits of the Parkway. Given the above comments from their material coupled with the fact that the Parkway as presented at the August open house stopped just west of E.C. Row, and certainly did not identify a plaza location, the GreenLink team, given no information to the contrary by DRIC, and no information released by DRIC in the form of a cost estimate for the Parkway, relied on the Parkway limits that were presented in their August 2007 open house material and conceptual graphics. DRIC has yet to indicate a plaza location or the treatment of the roadway leading to the plaza location.

2. GreenLink presented in 2007 dollars.

Response

Several requests were made to DRIC to release their costing data. This would have allowed a direct comparison. Unfortunately DRIC would not expand on their one statement of cost in the August 2007 material – “The Parkway is estimated to cost \$1.5 Billion.” The GreenLink team prepared a cost estimate for the GreenLink and has always indicated that the estimate was in 2007 dollars, despite the fact that DRIC has not provided details for their estimate.

3. Does not include engineering and contract administration.

Response

Both the GreenLink and DRIC Parkway contain contingency percentages. The initial GreenLink contingency was 35%, which was refined to 30% upon a more detailed analysis. DRIC indicated that their contingency was in the order of 30%.

4. Shoulder Widths and 20-year Storm.

Response

At the meeting held in New York with the DRIC team, the GreenLink team indicated their methodology for providing a modified shoulder width. As the GreenLink is 65% tunneled, PB relied upon their considerable expertise in the building of tunnels around the world to design the GreenLink. DRIC is attempting to suggest that the GreenLink does not meet Ontario highway standards, when in fact there are no Ontario minimum tunnel shoulder width specifications. U.S. Federal Highway Administration (FHWA) guidelines, the European Union Directive on Minimum Safety Requirements for Tunnels, and many other tunnel design standards worldwide permit the construction of modified shoulder widths in tunnels, because they create traffic hazards and instead use other techniques, such as lay-by areas for distressed vehicles where the tunnel length exceeds a certain value. In any event, the shoulder width issue is a design matter and the design would be adjusted as required. In fact, the GreenLink team did work through a cost estimate for a full shoulder cross-section, but preferred modified shoulders for the reasons stated above. DRIC was aware that the GreenLink team investigated the use of full shoulders as well as the reasons for the modified shoulder approach.

DRIC has indicated that the GreenLink was designed for a 20-year storm and not a 100-year storm. GreenLink has been designed for a 100-year storm.

5. Riskier approach to construction methods – Grand Marais Drain.

Response

The GreenLink team understands the complexity of the construction, has built many tunnels worldwide, and has included appropriate measures in the cost estimate to deal with this complexity, and has designed a solution for the Grand Marais Drain.

6. Does not include costs of having a tunnel control centre.

Response

The GreenLink team has included in the cost estimate the equipment necessary for a control centre – closed circuit tv's etc. – in the cost estimate. Regardless, it is envisioned that an international border crossing including a new bridge would include a control centre, which would act as a control centre for both the crossing and the approach road.

7. Ongoing operating and maintenance costs.

Response

Reiterating the above, an international border crossing including a new bridge location would include an operating and maintenance plan. Regardless, a capital cost estimate does not normally include yearly operating and maintenance costs.

Media contacts:

Mayor's Office
City of Windsor
Phone: (519) 255-6315

Resume



John Doody

Construction Consultant

Specializing in heavy civil projects

Dedicated professional with over 28 years of heavy civil construction experience throughout the United States. After 17 years with Kiewit Construction, formed G.C. Solutions, Inc. (GCS) in 1996 to assist contractors, surety firms, owners, law firms and engineering firms with complex construction issues in the following areas of expertise:

- Schedule Development and Analysis
- Claim/Change Order Development
- Training
- Estimate Manager
- Project Management
- Construction Means and Methods

Combines common sense management style with strong communication skills. Reputation for implementing innovative ideas for complex construction issues. Ability to quickly identify and resolve problems.

Career Experience and Achievements

G.C. Solutions, Inc. - 1996 to Present

- Formed GCS in 1996 after a successful 17-year career with Kiewit Construction. Implemented company estimating programs and procedures, developed and instituted a company marketing plan and performed oversight of company's financial records.
- Prepared a complex, 20 million dollar claim that our client successfully negotiated with the owner.
- Provided key estimate input for 1.5 billion dollar successful low bid by American Bridge/Fluor team.
- Assigned a lead role by St. Paul Travelers to manage more than 500 million dollars of active work in which the contractor was terminated. Consulted surety executive management team and proposed cost saving options to complete the work. The work was successfully completed under budget with no assessment of liquidated damages.

Kiewit Construction – 1979 to 1996

- **Area Manager** – Profitably managed over 100 million dollars of work in the Northeast for two years. Assisted in the preparation and successful negotiation of multi-million dollar change orders. Instituted project training programs for engineers and superintendents.
- **Project Manager** – Was the project manager on a 248 million dollar Central Artery project. Supervised 50 engineers and coordinated a team of 300 craftspeople and 25 subcontractors. Project turned in record profits for the Northeast District of Kiewit.
- **Estimate Manager** – Led a team of seasoned estimators and submitted over two billion dollars of bids for various types of projects including heavy highway, rapid transit, large bridge structures and water treatment facilities. Developed pre-bid value engineering ideas that lead to successful low bids. Initiated estimating procedures to minimize pre-bid mistakes.
- **Other Projects** – 3rd Lake Washington Floating Bridge, MBTA Boston Engine Terminal, New Bedford Swing Bridge, I-5 Tacoma Viaduct, MBTA Wonderland Station, Naselle River Bridge, Yakima River Bridges.

Education

- B.S. Civil Engineering Technology – Fairleigh Dickinson University

Memberships/Organizations

- Member, American Society of Civil Engineers

RESUME

DONALD E. HILTON P.E.

Donald Hilton & Associates Inc.
195 E. Rush Dr.
Eagle, ID 83703
Ph.: 208-939-4798
E-mail DEHilton@AOL.COM

EDUCATIONAL BACKGROUND

May 1963 Graduate Public High School - Pine Bluff Arkansas
May 1972 Graduate BSCE University of Arkansas

PROFESSIONAL LICENSES

Professional Engineer - State of New York - #59875
Professional Engineer - State of Georgia - #15149

PROFESSIONAL ORGANIZATIONS

American Society of Civil Engineers
National Society of Professional Engineers
American Underground-Construction Association
Society for Mining Engineering
Disputes Review Board Foundation
Executive Committee Rapid Excavation and Tunneling Conference

PUBLICATIONS

Economics - When to go Trenchless {Recipient of AUA- Ken Lane Award.}
Editor 1999 RETC Proceedings

EXPERIENCE SUMMARY

Mr. Hilton has more than 35 years of experience in many aspects of heavy civil and underground construction. The varied nature of this experience gives a broad knowledge of different construction and management methods to apply to a particular project. His construction, engineering management and estimating experience includes mine development, lock and dam, bridge, tunnel and cut and cover projects in the United States as well as foreign assignments. He has worked as a field engineer, quality control inspector and project engineer for underground as well as surface construction projects. The knowledge of construction methods gained from these projects has been applied to estimating, corporate cost control systems and constructibility reviews for tunnel engineering firms. His corporate management experience includes responsibilities of Chief Estimator, Assistant Division Engineer Area Engineer and Chief Engineer.

EXPERIENCE DETAIL

ENGINEERING AND MANAGEMENT

- ❖ Mr. Hilton's engineering and management experiences have been both for owner and contractor. He has served as the owner's representative for the construction of The Entrenchment Creek Tunnel in Atlanta, Georgia. He was responsible for the oversight of inspection staff assuring compliance with contract specifications. The duties included approval of pay estimates, coordination of submittal reviews, negotiation of change orders with the contractor and maintenance of project progress records.
- ❖ His positions as Assistant Division Engineer and Area Engineer for the Morrison Knudsen Corporation required the management of estimating functions as well as support of engineering staff on tunnel construction projects in the Southwestern United States.
- ❖ As Chief Estimator for both Walsh Northwest and Frontier-Kemper Constructors he managed a diversified staff of estimators and consultants in the bidding efforts for various projects. He also coordinated the efforts of Joint Venture Partners.
- ❖ As an independent consultant he has prepared bid level estimates for both contractors and engineering firms. He assisted in change order preparation for the Hudson Bergen Light Rail project in North East New Jersey. He provided constructibility reviews and cost estimates for various alternatives for the 6.4 billion dollar East Side Access Project in New York City, water tunnel repair projects for New York City as well as various options for the New Croton water treatment system in New York City. He also provided constructibility review and engineers estimate for outlet tunnels and shafts for a water supply dam and lake in Denver, sewer tunnels in Seattle and post bid alternative evaluations Sound Transit tunnels in Seattle as well as Preliminary Engineering estimates for the future North Link Transit Tunnels in Seattle Washington.

DOMESTIC CONSTRUCTION

- ❖ Mr. Hilton has been involved in the construction of lock and dam projects with positions of Draftsman, Field Engineer as well as Quality Control Inspector. These projects were part of the Arkansas River Navigation System the De Gray Re-regulating Dam on the Quachita River in Arkansas and the Little Sunflower River Dam in Mississippi. He was involved field operation for both the excavation and concrete construction portion of the projects.
- ❖ Experience in construction of highways and bridges was gained as Project Engineer for the building of two concurrent interstate highway projects in Birmingham, Alabama. The projects involved the construction of 29 Bridges. Earthwork involved moving of four million CY of embankment using truck haul across town on one project, the second project required the cut and fill of over six million CY of soil, using scrapers. Both projects included the construction of numerous smaller structures such as retaining walls and culverts. Duties included formwork design, purchasing and cost engineering.
- ❖ Additional bridge construction experience was gained during construction of 19 interstate bridges north of Atlanta, Georgia. The project included building reinforced earth retaining walls. His duties were the same as above with the addition of surveying.
- ❖ Mr. Hilton's underground construction experience includes several projects: He has acted as Project Manager / Engineer for a small pipe jacking project in East St. Louis, Illinois. This assignment required that he perform a wide variety of functions including purchasing, payroll,

cost accounting as well as normal engineering duties.

During the construction of Buffalo Subway project his initial position was Field Engineer with subsequent promotion to Project Engineer. His duties included supervision of surveying and engineering staff, management of subcontractor's staff and coordination of engineering functions with field supervisory personnel. The project was the construction of twin ten thousand-foot rock tunnels. Excavation was accomplished with two Robbins TBM's.

INTERNATIONAL CONSTRUCTION

- ❖ Mr. Hilton has international construction experience in two countries. The first is Kuwait. The project was the construction of a cooling water intake plant. The facilities built included an Intake Structure built in a dry dock and floated into position, four 10 ft Diameter Pipe Lines 2000 lf into the Gulf, and an On-Shore Pumping Plant and Discharge Lines. His position was originally Area Engineer and later Project Engineer. The construction included on-sight fabrication of rebar, casting of the concrete intake pipes, fabrication of all formwork and batching of concrete. He was also Project Engineer for a concurrent project for the discharge of spent cooling water.
- ❖ The second location was Taipei, Taiwan. The work here involved the initial phase of a soft-ground subway project. He developed CPM schedule for submittal to the owner and assisted in the selection of subcontractors and basic construction methods.

ESTIMATING

- ❖ A varied background of estimating and building heavy civil projects provides an excellent base for cost estimates for both contractors and owners. More than 35 years of experience provides a solid base to draw on in determining cost and production rates for a wide range of projects. Estimating experience includes Bridges, Tunnels of all types, Cut and Cover Subway Line and Station Projects as well as Mine Development Projects such as Conventional Shafts, Raise Bore Shafts and Drill-Shoot Slopes. The estimating required the tracking of projects to bid, evaluation of the probability of being successful. The responsibilities included leading of teams in the development of technical as well as commercial proposals to the owners.
- ❖ Tunnel Projects include a wide spectrum of those requiring excavation and support methods varying from soft ground compressed air or EPB shields to rock tunnels excavated using conventional drill & blast methods or TBM's. These projects were located throughout North America and the Far East. They incorporated innovative methods such as temporary precast segments for preliminary support on successful bids in Houston Texas and Tucson Arizona. The use of continuous conveyors for muck removal was used on other successful bids in Milwaukee Wisconsin, Colorado Springs Colorado and Tucson Arizona. The list of successful bids include Tunnels for Subways for the City of Los Angeles, California and Design Build Interceptor Sewers in Toronto, Canada.
- ❖ Preparation of bids for Cut and Cover Subway Projects include work in Washington, D.C., Atlanta, Boston and Los Angeles. The bidding required the preliminary design of excavation support systems, street decking as well as underpinning of existing structures. The projects were simple line sections, basic station structure as well as fully finished stations. Cut and Cover Projects were not limited to those for Subways. Mr. Hilton also successfully bid the very large cut and cover "Experimental Halls" for the Super Collider Project near Dallas Texas.
- ❖ Bids for Mine Development Projects encompassed a wide range of minerals including Coal,

Limestone, Lead, Salt as well as precious metals such as Gold and Platinum. The scopes of these jobs varied from simple unlined raise bore shafts to those requiring multiple shafts, underground processing facilities as well as surface product packaging and shipping facilities.

- ❖ Bids for bridges construction projects were located in Alabama, Georgia, Missouri, Illinois and Idaho. The types of bridges were simple precast concrete or steel beams with cast-in-place decks as well as complex river crossing bridges with steel truss superstructures. The construction sites were rural, urban and those in environmentally sensitive areas.
- ❖ As an independent consultant estimates Mr. Hilton has prepared cost estimates for several projects including:
 1. Underground storage caverns for liquefied natural gas storage.
 2. Cut and cover station and line excavation and support for a Boston subway project.
 3. A highway enlargement project in Phoenix.
 4. Change order for the Hudson-Bergen Light Rail project in Northeast New Jersey.
 5. Tunnel enlargement and station construction in Wehawken NJ for the Hudson -Bergen Light Rail Project.
 6. Cost estimates based on conceptual design thru final design for the East Side Access Project in NY City.
 7. Preliminary engineering level cost estimates for tunnel and underground stations #7 Line Subway extension New York City.
 8. Repair of Delaware Aqueduct NY State
 9. Intake tunnels, shafts and outlet tunnels for an existing water supply lake in Denver, Co.
 10. Various tunnel and shaft options for the Croton Water Treatment Facilities in New York City.
 11. Repair and stabilization of collapsed water supply tunnel north of Denver Co.
 12. Large diameter sewer tunnel Milwaukee Wisconsin
 13. Conceptual Estimates for National Engineering Labs for underground experimental facilities requiring tunnels and shafts at various locations in the United States.
 14. Cost estimates and Constructability reviews for preliminary engineering of “THE Tunnel”, a new passenger rail tunnel for service from Newark New Jersey to Pen Station New York City for New Jersey Transit

CONSTRUCTABILITY REVIEWS & VALUE ENGINEERING

- ❖ He has provided constructability reviews for the Hudson-Bergen Light Rail project. This involved review of 30% design drawings to determine possible problems with sequencing and construction methods proposed or a major change order significantly changing the scope of the project.
- ❖ Constructability review input was provided for various configurations proposed in the preliminary design phases of the East Side Access project. These reviews were for several different areas of the project including, underpinning of existing rail facilities, construction of underground station and tunnels, excavation of mixed face tunnels and cut and cover excavation.
- ❖ Reviewed proposed construction methods #7 Line Subway extension New York City.
- ❖ Reviews of the proposed construction methods for repairs to be proposed for one of the Delaware Aqueduct Tunnels in New York State were provided along with the cost and schedule analysis.
- ❖ Participated in peer review panel and value engineering panel for the bright water sewer tunnels in Seattle.

- ❖ Value engineering team member block 39 subway project Chicago Illinois
- ❖ Contract packaging peer review Seattle North Link Subway project.

DISPUTES REVIEW BOARDS

He has as served as a member of the following DRB panels on these completed projects.

- ❖ Chattahoochee Sewer Tunnel in Atlanta GA
- ❖ Capital Peak Tunnel Complex in New Mexico
- ❖ Idaho Transportation Department I84-Hw93 Intersection Upgrade at Twin Falls, Idaho
- ❖ Tom Cat Hill Highway project for the Idaho Transportation Department

Mr. Hilton is currently a DRB member for the

- ❖ Big Walnut Interceptor sewer project in Columbus Ohio
- ❖ Riverbank Tunnel project Louisville, KY.
- ❖ Topaz to Lava Springs project for Idaho Transportation Department

He is an alternate member for standing disputes advisory board to Chief Engineer Idaho Highway Department

DRB Training Completed

1. DRB Foundation administration and practice workshop March 17, 2001
2. Completed DRB Foundation chairing workshop March 18, 2001
3. DRBF practice & procedures update training May 23,2006

Background

An interfacing meeting was held on November 14, 2007 between the City of Windsor (City) along with its consultants [Sam Schwartz PLLC (SSC) and PB Americas (PB)] and the Detroit River International Crossing (DRIC) team consisting of representatives of the Ministry of Transport Ontario (MTO), Transport Canada, and URS.

Construction Cost Estimate

DRIC questioned the validity of the GreenLink cost estimate considering that the estimated costs of the two alternatives (Parkway and GreenLink) are very close, in spite of the fact that the covered lengths of each are dramatically different.

The City indicated that the GreenLink cost estimate was developed using the unit price approach. The following points are noted:

- The City team used the unit price method and broke up the route into more than 30 segments. The unit price included labour, material and equipment.
- The City team used PB historical costing database from the US (mainly New York) and applied the Construction ENR index for the Windsor area to adjust the unit prices.
- The City team used Geotechnical information based on Golder's report from the DRIC website
- The City team performed an assessment of the support of excavation and the open excavation stability.
- The City team performed structural analyses to determine the main structural member thicknesses.
- The City team listed 20 to 30 major cost items to detail their costs including excavation, support of excavation, tie backs, backfill, concrete base slab, concrete top slab, concrete walls, waterproofing, drainage and pump stations, jet fans, tunnel lighting, tunnel signage, fire standpipe and hydrants, CCTV and SCADA, park and painting, etc.
- The estimate includes the service roads and the ramps to and from tunneled sections as well as the two covered segments of the service road.
- The estimate includes the service roads and the ramps to and from tunneled sections as well as the two covered segments of the service road.
- The estimate includes the basic park cost including the shaping, seeding, tree planting, utilities, pedestrian walks, etc. It does not include major amenities such as ice rinks or amphitheatres, as such items will be built by potential developers.
- Due to the limited time and the limited existing information, a contingency of 35% is used. This is above the traditional 30% contingency for a conceptual level cost estimate.

- The estimate is in 2007 dollars and does not include soft cost such as owner's cost, engineering, construction management, insurance, etc.
- The cost estimate then reflected per linear meter and per lane linear meter to compare with other projects as a sanity check.

DRIC stated that its cost estimate was based on calculating the cost per linear meter and applying this cost to the applicable lengths.

The City indicated that based on published information in DRIC's website the cost estimate of the Parkway is not available and the available data is hard to understand. The City requested a detailed cost estimate of the Parkway Alternative. DRIC stated it has not performed a bottom up cost estimate for the Parkway alternative, and this is being done presently. The Parkway cost estimate that was revealed is based on previous alternatives (Alt 1B and 2B) and added costs of the land bridges. DRIC is presently doing a bottom up estimate for the Parkway Alternative. The data is not available for review and the value may change from \$1.5B.