

July 20, 2009

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BY MAIL AND EMAIL (charles.wheeler@ttc.ca, joanna.kervin@ttc.ca)

Mr. Charles Wheeler
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Toronto Transit Commission (TTC)
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Ms. Joanna Kervin
Deputy Chief Project Manager
Toronto-York Spadina Subway Extension
(TYSSE)
1900 Yonge Street
Toronto, Ontario, M4S 1Z2

Dear Mr. Wheeler and Ms. Kervin:

**Re: Response to Request for TRCA Approval in Principle for Highway 407 Station Concept
Toronto-York Spadina Subway Extension (TYSSE) Project
Humber River Watershed; City of Toronto, North York
and City of Vaughan (York Region)**

Toronto and Region Conservation Authority (TRCA) staff received the Request for TRCA Approval in Principle for the Highway 407 Station concept on June 15, 2009, together with the following documents:

1. Strategic Overview of the TYSSE Project - TRCA Implications and TYSSE Commitments, prepared by TYSSE, dated June 2009;
2. Excel Sheet containing TYSSE responses to previously submitted TRCA comments, prepared by TYSSE, not dated;
3. Hydraulic Design Report (10% Design - Option E2.1) Highway 407 Station, prepared by AECOM Canada Limited, dated June 1, 2009; and,
4. Black Creek Geomorphic Component Report - Highway 407 Station 10% Design, prepared by Parish Geomorphic, dated June 2009.

TRCA staff has completed the review of the above-noted documents. Staff recognizes that TTC/TYSSE, in consultant with Hydro One, have identified the need to relocate the proposed subway alignment underneath Hydro Tower 158 due to significant technical and environmental concerns, and public safety that together, pose significant alignment constraints at this location. As a result, TTC/TYSSE have revised the design of the proposed tunnel and station to avoid significant impacts to the Hydro Tower. TRCA staff understands that a relocation of the Black Creek channel north of the CN Rail Tracks is required to accommodate the tunnel and new station location.

In consultation with TTC/TYSSE staff, it is our understanding that TTC/TYSSE will be filing a formal notice of addendum, together with the required documentation and public consultation, with the Ministry of the Environment (MOE). Further, it is our understanding that prior to the

submission of this information to the MOE, TTC/TYSSE is seeking TRCA's support of the rationale for the amendment, together with our support for the subway station site plan with the proposed modifications to the tunnel, station, and the preliminary concept for the Black Creek realignment.

As you are aware, TRCA staff has concerns with the recreation of a valley corridor, including its watercourse feature in order to support development. Additionally, construction in the flood plain is generally not accepted in accordance with the provincial policy statement for Flood Plain Management. However, staff understands the restrictive site conditions for locating the station, as well as prescriptive engineering requirements for ensuring safe station and tunnel design.

In light of the above, TRCA staff advises that based on the rationale for change provided by TTC/TYSSE, the concept design for the Highway 407 station as presented is generally acceptable. Our approval in principle is contingent upon the following conditions being satisfied through the formal EA Addendum and detailed design phases of the project. In the amendment document, it should be clearly stated that TTC/TYSSE will commit to the following to be undertaken during the detailed design of the project.

1. Completion of Outstanding Existing Conditions Studies

Commitment from TTC/TYSSE to complete outstanding studies including:

- a. Baseline investigations and studies to determine existing environment and ecological conditions including hydraulics, hydrogeological, geotechnical, aquatic, terrestrial, fluvial geomorphologic and storm water management components (*as per TTC/TYSSE Comment # G - see attached addendum*). Investigations are to be completed by personnel with appropriate technical skills to a level that will allow for a comprehensive (qualitative and quantitative) assessment of features and functions that will, or may, be affected.

2. Development of an Integrated Station Site Plan and Corridor

Commitment from TTC/TYSSE to assess and develop an integrated station site plan and creek corridor based on the results of the existing conditions studies, including:

- a. TTC/TYSSE will work with TRCA staff to develop a station site plan for the 407 station, inclusive of a naturalized channel corridor to demonstrate and achieve an overall net ecological gain within the restoration scheme (*as per TTC/TYSSE Comment # B - see attached addendum*).
- b. The station site plan, including orientation, views and vistas, platforms, art, bridges and other ancillary features, and exterior landscaping will be designed to showcase and enhance the natural landscape of the Black Creek valley.
- c. The new Black Creek bridge will be designed in accordance with TRCA's *Watercourse Crossing Design Requirements* to ensure maximum distance between the low flow channel and the bridge abutments based on the fluvial-geomorphology and flood plain analysis (*as per TTC/TYSSE Comment # I - see attached addendum*). Please note that the structures as shown in the submitted report indicate that the abutment is proposed to be located within the proposed low-flow channel. This design is not consistent with TRCA standards.

- d. All new valley slopes will be designed, with appropriate geotechnical feasibility work completed, and built with appropriate erosion control and slope protection measures.

3. **Design of appropriate Flood/Stormwater Management Plan**

Commitment from TTC/TYSSE to design a naturalized stream corridor to meet TRCA's Flood and Stormwater Management program requirements in the context of the 407 to the CN bridge corridor, including:

- a. The realigned Black Creek valley corridor will be designed in accordance with TRCA's *Valley and Stream Corridor Management Program - VSCMP (1994)* relating to floodplain management.
- b. The design and development of the station box will not result in negative flood impacts upstream or downstream of the Black Creek in this location (as per *TTC/TYSSE Comment # C - see attached addendum*).
- c. TTC/TYSSE will continue to coordinate with the Ministry of Transportation (MTO) on the 407 Transitway project to ensure that appropriate TRCA's flood plain management requirements for the stream reach are adequately incorporated into their respective projects. TTC/TYSSE will build in preliminary reach management assumptions for the MTO 407 Transitway (northern part of the reach) into their comprehensive reach management assessment (as per *TTC/TYSSE Comment # F - see attached addendum*).
- d. TTC/TYSSE will flood-proof station structures located within or adjacent to the flood plain in accordance with provincial standards based on the assumption that there will be no improvements to the capacity of the CN culvert located immediately downstream of the project site (as per *TTC/TYSSE Comment # D see attached addendum*).
- e. Safe access will be provided consistent with TRCA's VSCMP and Provincial policy for this proposal.
- f. TTC/TYSSE will continue to participate in the Black Creek Optimization Study (BCOS) and work with TRCA staff to incorporate applicable design standards and requirements as recommended in the BCOS into the design of the TYSSE station structures and creek channel (as per *TTC/TYSSE Comment # N - see attached addendum*).
- g. The stormwater management systems required for this project will be appropriately sized and designed to satisfy TRCA's and the City of Vaughan's Stormwater Management criteria (as per BCOS) . This may require new low impact design (LID) approaches such as bio-retention and wet ponds for the initial TYSSE development, with opportunities for future expansion to accommodate developments, including the MTO 407 Transitway, that are being planned for the adjacent sites (as per *TTC/TYSSE Comments # J and E - see attached addendum*).

4. Provision of Integrated Mitigation and Monitoring plans

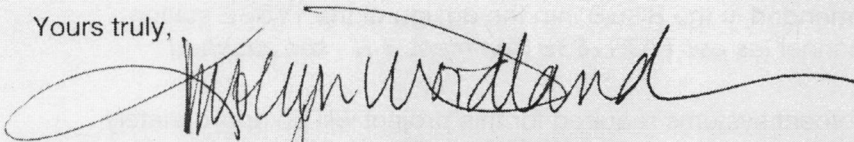
Commitment from TTC/TYSSE to provide the required ecological mitigation, restoration, compensation and monitoring plans that are based on a comprehensive analysis of existing and proposed ecological conditions, including:

- a. A valley restoration plan that addresses both terrestrial, riparian and aquatic losses associated with the realigned Black Creek, will be provided and implemented in conjunction with the watercourse realignment work.
- b. A fish habitat compensation plan for the realigned creek area will be provided based on the evaluation of net impacts, with the intention to ensure a net improvement for fish and fish habitat is achieved. Compensation will be agreed upon through consultation with TRCA in accordance with its Level III Agreements with Fisheries and Oceans Canada (DFO) in order to satisfy requirements under Section 35(2) of the *Fisheries Act*. Please note that Authorization from DFO will be required from DFO for the realignment.
- c. A detailed construction staging plan will be provided showing the timing and sequence of construction for the access road, temporary and permanent Black Creek bridges, Black Creek realignment, site restoration and the municipal sewer.
- d. An Environmental Management Plan (EMP) will be prepared in consultation with TRCA staff, at the detailed design and contract documentation phases, with detailed attention paid to the Highway 407 station, and creek and valley realignment (as per *TTC/TYSSE Comment # K - see attached addendum*).

TTC/TYSSE commits to provide formal response and consult with TRCA staff on the baseline studies and integrated station site plan and provide formal submissions/response to TRCA's questions consistent with the project commitments (as per *TTC/TYSSE Comments # L and H - see attached addendum*).

If there are any queries or areas of clarification, TRCA staff will be glad to set up a working meeting to further discuss them.

Yours truly,



Carolyn Woodland, OALA, FCCLA, MCIP, RPP
Director, Planning and Development

Encl: ADDENDUM - TTC/TYSSE Commitments

BY EMAIL

TYSSE Judith Witzig, TYSSE, (judith.witzig@ttc.ca)
 Katharine Jurcic, TYSSE, (katharine.jurcic@ttc.ca)

TRCA: Deborah Martin-Downs, Director of Ecology
 Beth Williston, Manager of Environmental Assessment Planning
 Bill Kiru, Manager of Development Planning and Regulations
 Renée Afoom, Planner II, Environmental Assessments
 Gary Wilkins, Humber Watershed Specialist

ADDENDUM**TTC/TYSSE Commitments listed on Pages 14 and 15 of the Strategic Overview of the TYSSE Project - TRCA Implications and TYSSE Commitments; prepared by TTC/TYSSE, dated June 2009;**

- A. execution of an Service Level Agreement and an interim allowance for staff costs until an SLA is in place;
- B. the relocation and rehabilitation of Black Creek to TRCA/DFO standards for the net environmental gain;
- C. demonstration to TRCA that the hydraulic flooding impact of the station box location is acceptable;
- D. flood-proofing TYSSE structures to the requirements of TRCA assuming no improvements in the CN culvert capacity;
- E. wet stormwater ponds for initial TYSSE development and identification of expansion opportunities for subsequent MTO development phases;
- F. coordination with Highway 407 Transitway for TRCA interrelated design/construction issues to the extent practical
- G. completion of baseline environment condition investigation as the basis of the development of design concepts/mitigation strategies;
- H. Phase 2 submittals to TRCA consist with project commitments;
- I. design of Black Creek bridge consistent with TRCA policies/standards;
- J. stormwater bio-retention commitments as outline in design submission;
- K. development of the EMP in consultation with TRCA
- L. formal response/discussion of TRCA design comments/questions;
- M. fulfillment of provincial EA/CEAA commitments; and,
- N. continued participation in Black Creek Optimization Study.